

**THE STUDY ON  
CAPACITY DEVELOPMENT FOR  
JENERANG RIVER BASIN  
MANAGEMENT  
IN  
THE REPUBLIC OF INDONESIA**

**FINAL REPORT**

**VOLUME IV-2  
DATA BOOK 2 – DATA**

**March 2005**

Japan International Cooperation Agency

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## Composition of Final Report

<b>Volume I</b>	<b>Executive Summary</b>
<b>Volume II</b>	<b>Main Report</b>
<b>Volume III-1</b>	<b>Supporting Report 1</b>
<b>Volume III-2</b>	<b>Supporting Report 2</b>
<b>Volume IV-1</b>	<b>Data Book 1-Guidelines and Manuals</b>
<b>Volume IV-2</b>	<b>Data Book 2-Data</b>

### Cost Estimate : October 2004 Price

**Exchange Rate:** IDR 1,000 = JPY 11.92 = USD 0.1094  
JPY 100 = IDR 8,387 = USD 0.9174  
USD 1 = JPT 109.0 = IDR 9,142  
(Bank Indonesia, October 2004 average TT selling rate)

## ABBREVIATIONS (1/5)

ABBREVIATION	BAHASA INDONESIA	ENGLISH
<b>ADB</b>	Bank Pembangunan Asia	Asian Development Bank
<b>Amdal</b>	Analisa Mengenai Dampak Lingkungan	Environmental Impact Assessment (EIA)
<b>Andal</b>	Analisa Dampak Lingkungan	Environmental Impact Analysis
<b>APBD</b>	Anggaran Pendapatan dan Belanja Daerah	Regional Government Revenue and Expenditure Budget (Province/Regency Budget)
<b>APBN</b>	Anggaran Pendapatan dan Belanja Negara	Central Government Revenue and Expenditure Budget (National Budget)
<b>ASA</b>	Air dan Sumber-sumber Air	Water and Water Resources
<b>ASGL</b>	Sistem Akuntansi Buku Besar	Accounting System General Ledger
<b>Askes</b>	Asuransi Kesehatan	Health Insurance
<b>AWLR</b>	Alat Pencatat Tinggi Muka Air Otomatis	Automatic Water Level Recorder
<b>Bakornas PB</b>	Badan Kordinasi Nasional-Penanggulangan Bencana	National Coordination Board for Disaster Management
<b>Balai PSDA</b>	Unit Pelaksana Teknis Dinas Balai Pengelolaan	Provincial River Basin Management Unit
<b>Bapedal</b>	Badan Pengendalian Dampak Lingkungan	Environmental Impact Management Agency
<b>Bappeda</b>	Badan Perencanaan Pembangunan Daerah	Regional Development Planning Agency
<b>Bapedalda</b>	Badan Pengendalian Dampak Lingkungan Daerah	Provincial Environmental Impact Agency
<b>Bappenas</b>	Badan Perencanaan Pembangunan Nasional	National Development Planning Agency
<b>Bili-Bili HEPP</b>	Pembangkit Listrik Tenaga Air Bili-bili	Bili-Bili Hydro Electric Power Plant
<b>BKPM</b>	Badan Kerjasama Pengembangan Metropolitan Mamminasata	Mamminasata Metropolitan Development Cooperation Board
<b>BLK</b>	Balai Latihan Kerja	Government Work Training Office
<b>BMG</b>	Badan Meterologi dan Geofisika	Meteorology and Geophysics Agency
<b>BOD</b>	Kandungan Oksigen dari Bahan Biologi dan Kimia	Biological Oxygen Demand
<b>BOD</b>	Direksi	Board of Directors
<b>BODD</b>	Surat Keputusan Direksi	Board of Directors Decree
<b>BPDAS</b>	Balai Pengelolaan Daerah Aliran Sungai	Watershed Management Office (under National Ministry of Forestry; formerly Land Rehabilitation and Soil Conservation Office, Balai RLKT)
<b>BPK</b>	Badan Pemeriksa Keuangan	Government Audit Agency
<b>BPKP</b>	Badan Pemeriksa Keuangan dan Pembangunan	Finance and Development Control Agency
<b>BPP</b>	Balai Penyuluhan Pertanian	Agricultural Extension Office
<b>BPTH</b>	Balai Pembenuhan Tanaman Hutan	Forest Tree Seedling Office
<b>BPS</b>	Biro Pusat Statistik	Central Bureau of Statistics
<b>BUMD</b>	Badan Usaha Milik Daerah	Regional Government-owned Corporation
<b>BUMN</b>	Badan Usaha Milik Nasional	State-owned Corporation
<b>BWRM</b>	Pengelolaan Sumber Daya Air DAS	Basin Water Resources Management
<b>CDP</b>	Rencana Pengembangan Kapasitas	Capacity Development Plan
<b>CDMP</b>	Rencana Pengelolaan dan Pengembangan Menyeluruh	Comprehensive Development and Management Plan
<b>CEPI</b>	Kerjasama Program Lingkungan di Indonesia -	Collaborative Environmental Program in Indonesia
<b>CES/PPLH-UNHAS</b>	Pusat Penelitian Lingkungan Hidup - Universitas Hasanuddin Pusat Studi Lingkungan - Universitas Hasanuddin (PSL-UNHAS)	Center of Environmental Studies-Hasanuddin University
<b>CG</b>	Pemerintah Pusat	Central Government
<b>CP</b>	Periode Penagihan	Collection Periods
<b>COD</b>	Kandungan Oksigen dari Bahan Kimia	Chemical Oxygen Demand
<b>CSSP</b>	Standar Kompetensi Posisi Struktural	Competence Standard for Structural Position
<b>DAK</b>	Dana Alokasi Khusus	Special Allocations Fund
<b>Danrem</b>	Komandan Resort Militer	Commander of Regional Military Administrative Unit
<b>DASK</b>	Dokumen Anggaran Satuan Kerja	Work Unit Budget Document
<b>DAU</b>	Dana Alokasi Umum	General Allocations Fund
<b>DFWL</b>	Muka Air Banjir Rencana	Design Flood Water Level
<b>DG</b>	Direktorat Jenderal	Directorate General
<b>DGWR</b>	Direktorat Jenderal Sumber Daya Air	Directorate General of Water Resources
<b>DIK</b>	Daftar Isian Kegiatan	Activities Implementation Plan
<b>DIP</b>	Daftar Isian Proyek	Project Implementation Plan
<b>DIP</b>	Daftar Isian Proyek	Project Budget Allocation
<b>DO</b>	Oksigen Terlarut	Dissolved Oxygen
<b>DOMC</b>	Direktorat Kota Metropolitan	Directorate of Metropolitan City
<b>DPR</b>	Dewan Perwakilan Rakyat	House of Representatives
<b>DPRD</b>	Dewan Perwakilan Rakyat Daerah	Regional House of Representatives

## ABBREVIATIONS (2/5)

ABBREVIATION	BAHASA INDONESIA	ENGLISH
<b>DPSDA</b>	Dinas Pengelolaan Sumber Daya Air	Provincial Water Resources Services (PWRS)
<b>DPS</b>	Daerah Pengaliran Sungai	Watershed
<b>DWRS</b>	Dinas PSDA Kabupaten	District Water Resources Services
<b>EC</b>	Komisi Eropa	European Commission
<b>FAO</b>	Organisasi Pertanian dan Pangan PBB	United Nations Food and Agriculture Organization
<b>FFWS</b>	Sistem Peringatan dan Peramalan Banjir	Flood Forecasting and Warning System
<b>FIK-ORNOP/LSM</b>	Forum Informasi Komunikasi-Organisasi Non Profit/ Lembaga Swadaya Masyarakat	Communication & Information Forum - Non-Profit Organizations/Non-Governmental Organizations
<b>FMISP</b>	Proyek Sistem Irigasi Dikelola Petani	Farmer Managed Irrigation System Project
<b>FRAP</b>	Perencanaan Pemulihan Keuangan	Financial Recovery Action Plan
<b>F/S</b>	Studi Kelayakan	Feasibility Study
<b>FY</b>	Tahun Anggaran	Fiscal Year
<b>GBHN</b>	Garis Garis Besar Haluan Negara	Broad Outlines of the Nation's Direction
<b>GDP</b>	Produk Domestik Bruto	Gross Domestic Product
<b>GIS</b>	Sistem Informasi Geografik	Geographic Information System
<b>GMTDC</b>	PT. Gowa Makassar Tourism Development (GMTD)	Gowa Makassar Tourism Development Corporation
<b>GNRHL</b>	Gerakan Nasional Rehabilitasi Hutan dan Lahan	National Campaign for Land and Forest Rehabilitation
<b>GOI</b>	Pemerintahan Republik Indonesia	Government of Indonesia
<b>GR</b>	Peraturan Pemerintah (PP)	Government Regulation (GR)
<b>GRDP</b>	Produk Domestik Bruto Daerah	Gross Regional Domestic Product
<b>GWUA</b>	Perkumpulan Pemakai Air Tanah	Ground Water Users Association
<b>HEPP</b>	Pembangkit Listrik Tenaga Air	Hydro Electric Power Plant
<b>HO</b>	Kantor Pusat	Head Office
<b>HR</b>	Sumber Daya Manusia	Human Resources
<b>HRA</b>	Administrasi Sumber Daya Manusia	Human Resources Administration
<b>HRD</b>	Pengembangan Sumber Daya Manusia	Human Resources Development
<b>HRM</b>	Pengelolaan Sumber Daya Manusia	Human Resource Management
<b>HWL</b>	Tinggi Muka Air	High Water Level
<b>IKMN</b>	Inventarisasi Kekayaan Milik Negara	National Treasury Inventory System
<b>ORARI</b>	Organisasi Radio Amatir Indonesia	Indonesian Amateur Radio Organization
<b>IMT</b>	Penyerahan Pengelolaan Irigasi	Irrigation Management Transfer
<b>Inpres</b>	Instruksi Presiden	Presidential Instruction
<b>Inhutani</b>	PT. Industri Kehutanan dan Pertanian	Government-owned Forestry and Agricultural Industry Company
<b>IOMP</b>	Kebijakan Pengoperasian dan Pemeliharaan Irigasi	Irrigation O&M Policy
<b>IP3A</b>	Induk P3A	Main Water Users Association (at primary irrigation system level )
<b>IPAIR</b>	Iuran Pelayanan Air Irigasi	Irrigation Service Fee ( ISF)
<b>IPABP</b>	Iuran Penggunaan Air Bawah Permukaan	Underground Water Use Fee
<b>IPAP</b>	Iuran Penggunaan Air Permukaan	Surface Water Use Fee
<b>IPLC</b>	Iuran Pembuangan Limbah Cair	Liquid Waste Disposal Fee
<b>IPEP</b>	Iuran Pembiayaan Eksplotasi dan Pemeliharaan	Fee for Financing Exploitation and Maintenance
<b>IR</b>	Komponen dari Kajian Khusus WATSAL yg bertujuan untuk peningkatan pengelolaan irigasi	A component of WATSAL Special Study aiming at improvement of irrigation management
<b>ISF</b>	Iuran Pelayanan Air Irigasi (IPAIR)	Irrigation Service Fee
<b>ISO</b>	Pengoperasian Standar International	International Standard Operation
<b>IWIRIP</b>	Proyek Pelaksanaan Pembaharuan Irigasi & Sumber Daya Air Indonesia	Indonesian Water Resources & Irrigation Reform Implementation Project
<b>IWRM</b>	Pengelolaan Sumber Daya Air Terpadu	Integrated Water Resources Management
<b>Jamsostek</b>	Jaminan Sosial Tenaga Kerja	Labor Social Insurance
<b>JBIC</b>	Bank Jepang untuk Kerjasama Internasional	Japan Bank for International Cooperation
<b>JBIC-SAPS</b>	Bank Jepang untuk Kerjasama Internasional - Bantuan Khusus untuk Keberlanjutan Proyek	Japan Bank for International Cooperation - Special Assistance for Project Sustainability
<b>JDESS</b>	Uraian Tugas dan Persyaratan Pegawai	Job Descriptions and Employee Specifications
<b>JICA</b>	Badan Kerjasama Internasional Jepang	Japan International Cooperation Agency
<b>JIWMP</b>	Proyek Pengembangan Irigasi dan Pengelolaan Sumber Daya Air di Jawa	Java Irrigation Improvement and Water Resources Management Project
<b>JRB</b>	Wilayah Sungai Jeneberang	Jeneberang River Basin
<b>JSUIT</b>	Tim Investigasi Khusus JICA Sabo	JICA Sabo Urgent Investigation Team
<b>Kapolda</b>	Kepala Polisi Daerah	Head of the Provincial Police

## ABBREVIATIONS (3/5)

ABBREVIATION	BAHASA INDONESIA	ENGLISH
<b>Kapolwil</b>	Kepala Polisi Wilayah	Head of the Regional Police
<b>Kepmen</b>	Keputusan Menteri	Ministerial Decree
<b>Keppres</b>	Keputusan Presiden	Presidential Decree
<b>KIMA</b>	Kawasan Industri Makassar	Makassar Industrial Zone
<b>Kimpraswil</b>	Departemen Pemukiman dan Prasarana Wilayah	Ministry of Settlement and Regional Infrastructure
<b>KPH</b>	Kelompok Pengaman Hutan	Forest Protector Group
<b>KPSA</b>	Kelompok Pelestari Sumber Daya Alam	Natural Resources Conservation Group
<b>KSM</b>	Kelompok Sosial Masyarakat	Social Community Group
<b>KT</b>	Kelompok Tani	Farmer's Group
<b>KTH</b>	Kelompok Tani Hutan	Forest Farmers Group
<b>KTP</b>	Kelompok Tani Penghijauan	Reforestation Farmers Group
<b>KUD</b>	Koperasi Unit Desa	Village Unit Cooperatives
<b>LAN</b>	Lembaga Administrasi Negara	State Administration Institute
<b>LHP</b>	Laporan Hasil Penelitian	Report on Research Result
<b>LKMD</b>	Lembaga Ketahanan Masyarakat Desa	Village Social Activities Group
<b>LWL</b>	Muka Air Rendah	Low Water Level
<b>MCM</b>	Juta m <sup>3</sup>	Million Cubic Meter
<b>M&amp;E</b>	Pemantauan & Evaluasi	Monitoring & Evaluation
<b>Menko-Ekuin</b>	Menteri Koordinator Ekonomi, Keuangan dan Industri	Coordinating Minister for Economy, Finance and Industry
<b>Meneg LH</b>	Menteri Negara Lingkungan Hidup	State Minister of Environment
<b>MoHA</b>	Departemen Dalam Negeri	Ministry of Home Affairs
<b>MEI</b>	Laporan Monitoring, Evaluasi dan Implementasi	Monitoring, Evaluation and Implementations
<b>MENR</b>	Departemen Energi dan Sumber Daya Alam	Ministry of Energy and Natural Resources
<b>MoA</b>	Departemen Pertanian	Ministry of Agriculture
<b>MoF</b>	Departemen Keuangan	Ministry of Finance
<b>MoU</b>	Nota Kesepakatan	Memorandum of Understanding
<b>MPW</b>	Departemen Pekerjaan Umum	Ministry of Public Works
<b>MSOE</b>	Departemen BUMN	Ministry of Stated-Owned Enterprises
<b>MSRI</b>	Departemen Permukiman dan Prasarana Wilayah (Kimpraswil)	Ministry of Settlement and Regional Infrastructure
<b>NDF</b>	Dana Pembangunan Nasional	National Development Fund
<b>N-1</b>	Suatu komponen WATSAL Studi Khusus tentang peningkatan kerangka kelembagaan nasional	A component of WATSAL Special Study aiming at improvement of national institutional framework
<b>N-2</b>	Suatu komponen WATSAL Studi Khusus tentang peningkatan pengelolaan wilayah sungai	A component of WATSAL Special Study aiming at improvement of river basin management
<b>N-3</b>	Suatu komponen Watsal Studi Khusus mengenai pengelolaan kualitas air	A component of WATSAL Special Study aiming at water quality management
<b>NGO</b>	Lembaga Swadaya Masyarakat (LSM)	Non-Government Organization
<b>NTU</b>	Satuan Turbiditas Nephlometrik	Nephlometric Turbidity Unit
<b>NWL</b>	Muka Air Normal	Normal Water Level
<b>NWRC</b>	Dewan Sumber Daya Air Nasional	National Water Resources Council
<b>NWRP</b>	Kebijakan Sumber Daya Air Nasional	National Water Resources Policy
<b>O&amp;M</b>	Operasi & Pemeliharaan (O&P)	Operation & Maintenance
<b>OECD</b>	Organisasi Kerjasama Ekonomi & Pembangunan	Organization for Economic Co-operation & Development
<b>OECF</b>	Pendanaan Kerjasama Ekonomi Luar Negeri Jepang	Overseas Economic Cooperation Fund of Japan
<b>OJT Training</b>	Pelatihan Kerja di Tempat	On the Job Training
<b>P.T.</b>	Perseroan Terbatas	Limited Liabilities Corporation
<b>PAB</b>	Penyediaan Air Baku	Raw Water Supply (RWS)
<b>PABJ</b>	Penyediaan Air Baku Jeneberang	Jeneberang Raw Water Supply
<b>PAD</b>	Pendapatan Asli Daerah	Regional Government Revenue
<b>Pangdam</b>	Panglima Daerah Militer	Territorial Military Commander
<b>PBB</b>	Pajak Bumi dan Bangunan	Land and Building Tax
<b>PBPP</b>	Pengendalian Banjir dan Pengamanan Pantai	Flood Control and Coastal Protection
<b>PCM</b>	Manajemen Siklus Proyek	Project Cycle Management
<b>PDAM</b>	Perusahaan Daerah Air Minum	Regional Drinking Water Supply Company
<b>PDM</b>	Matriks Disain Proyek	Project Design Matrix
<b>Perda</b>	Peraturan Daerah	Regional Regulation (RR)
<b>Permen</b>	Peraturan Menteri	Ministerial Regulation
<b>Perum</b>	Perusahaan Umum	Public Corporation

## ABBREVIATIONS (4/5)

ABBREVIATION	BAHASA INDONESIA	ENGLISH
<b>Persero</b>	Perusahaan Perseroan	Copartnership / Shareholding Corporation
<b>PGPNS</b>	Peraturan Gaji Pegawai Negeri Sipil	Government Employee Salary Rule
<b>PHU</b>	Unit Hidrologi Propinsi	Provincial Hydrology Unit
<b>PIPWSJ</b>	Proyek Induk Pengembangan Wilayah Sungai Jeneberang	Jeneberang River Basin Development Project (JRBDP)
<b>PIRASS</b>	Proyek Irigasi dan Rawa Andalan Sulawesi Selatan	South Sulawesi Major Swamp and Irrigation Project
<b>PISP</b>	Proyek Irigasi Partisipatif	Participatory Irrigation Sector Project
<b>PJT</b>	Perum Jasa Tirta	Jasa Tirta Public Corporation
<b>PKK</b>	Pendidikan Keterampilan Keluarga	Skills Training for Housewives
<b>PKPI</b>	Pembaharuan Kebijakan Pengelolaan Irigasi	Irrigation Management Policy Reform (IMPR)
<b>PKPT</b>	Program Kerja Pengawasan Tahunan	Work Program for Annual Inspection (Audit)
<b>PLN</b>	Perusahaan Listrik Negara	State Electricity Company
<b>PLTA</b>	Pembangkit Listrik Tenaga Air	Hydro Electric Power Plant
<b>PNS</b>	Pegawai Negeri Sipil	Government Employees
<b>PO</b>	Rencana Pengoperasian	Plan of Operation
<b>POJ</b>	Perum Otorita Jatiluhur	Jatiluhur Authority Public Corporation
<b>Pokja</b>	Kelompok Kerja	Working Group
<b>POWAA</b>	Pola Operasi Waduk & Alokasi Air	Semiannual Water Allocation Plan
<b>PP</b>	Perencanaan Partisipatif	Participatory Plan
<b>PPAP</b>	Pajak Pengambilan Air Permukaan	Surface Water Use Tax
<b>PPABP</b>	Pajak Pengambilan Air Bawah Permukaan	Underground Water Use Tax
<b>PPh</b>	Pajak Penghasilan	Income Tax
<b>PPL</b>	Penyuluh Pertanian Lapangan	Field Extension Workers
<b>PPSA</b>	Pengembangan dan Pengelolaan Sumber Air	Water Resources Development and Management
<b>PPSAJ</b>	Pengembangan & Pengelolaan Sumber Air Jeneberang	Jeneberang Water Resources Development and Management
<b>PTPA</b>	Panitia Tata Pengaturan Air	Provincial Water Resources Coordination Committee(PWRC)
<b>PPTPA</b>	Panitia Pelaksana Tata Pengaturan Air	River Basin Water Resources Coordination Committee (RBWRC)
<b>PRA</b>	Identifikasi Desa secara Partisipatif	Participatory Rural Appraisal
<b>Prokasih</b>	Program Kali Bersih	Clean River Campaign Program
<b>Propeda</b>	Program Pembangunan Daerah	Regional Development Program
<b>Propenas</b>	Program Pembangunan Nasional	National Development Program
<b>PSB</b>	Petunjuk Siaga Banjir	Flood Alert Manual
<b>PSO</b>	Kewajiban Pelayanan Umum (KPU)	Public Service Obligation
<b>PSP</b>	Partisipasi Pihak Swasta	Private Sector Participation
<b>PUKK</b>	Pembinaan Usaha Kecil dan Koperasi	Small Business and Cooperative Guidance
<b>PWRC</b>	Panitia Pelaksana Tata Pengaturan Air (PPTA)	Provincial Water Resource Coordination Committee
<b>QMS</b>	Sistem Pengelolaan Mutu	Quality Management System
<b>RBPC</b>	Badan (Perum) Pengelola Wilayah Sungai	River Basin Public Corporation
<b>RBM</b>	Pengelolaan Wilayah Sungai	River Basin Management
<b>RBMC</b>	Korporasi Pengelola Wilayah Sungai	River Basin Management Corporation
<b>RBWRC</b>	Panitia Pelaksana Tata Pengaturan Air (PPTPA)	River Basin Water Resources Coordination Committee
<b>RD</b>	Rapat Direksi	Board of Director's Meeting
<b>Repetada</b>	Rencana Pembangunan Tahunan Daerah	Regional Annual Development Plan
<b>RC</b>	Kurva Dasar Pengoperasian Waduk	Reservoir Operation Curve
<b>RJP</b>	Rencana Jangka Panjang	Long Term Plan
<b>Renstra</b>	Rencana Strategis	Strategic Plan
<b>RIM</b>	Pengelolaan Prasarana Wilayah	River Infrastructure Management
<b>RKAP</b>	Rencana Kerja Anggaran Perusahaan	Corporate Work Plan Budget
<b>RKM</b>	Rapat Koordinasi Manajemen	Management Coordination Meeting
<b>RKOP</b>	Rencana Kerja Operasional Perusahaan	Corporate Work Plan Operations
<b>RKU</b>	Rapat Koordinasi Unit	Unit Coordination Meeting
<b>RLKT</b>	Rehabilitasi Lahan dan Konservasi Tanah	Land Rehabilitation and Soil Conservation
<b>RMCD</b>	Proyek Pengembangan Kapasitas Pemantauan Daerah	Regional Monitoring Capacity Development Project
<b>ROE</b>	Laba atas Modal Sendiri	Return on Equity
<b>ROI</b>	Laba atas Investasi	Return on Investment
<b>RPH</b>	Polisi Hutan	Forest Ranger Resort
<b>RTM-P</b>	Rapat Tinjauan Manajemen - Pusat	Central Management Evaluation Meeting

## ABBREVIATIONS (5/5)

ABBREVIATION	BAHASA INDONESIA	ENGLISH
<b>RTM-U</b>	Rapat Tinjauan Management - Unit	Unit Management Evaluation Meeting
<b>RWL</b>	Muka Air Waduk	Reservoir Water Level
<b>RWTM</b>	Pipa Transmisi Utama Air Baku	Raw Water Transmission Main
<b>Satlak-PB</b>	Satuan Pelaksana-Penanggulangan Bencana	Implementation Unit for Disaster Management ( District Level)
<b>Satkorlak</b>	Satuan Coordinator Pelaksana	Implementation Coordination Unit ( Province Level)
<b>SDA</b>	Sumber Daya Air	Water Resources
<b>SEC</b>	Komisi Pertukaran Sekuriti	Security Exchange Commission
<b>SKI</b>	Surat Ketetapan Iuran	Fee Enactment
<b>SMEs</b>	Usaha Kecil Menengah (UKM)	Small and Medium Size Enterprises
<b>SMSOE</b>	Menteri Negara BUMN	State Minister of State-Owned Enterprises
<b>SOE</b>	Badan Usaha Milik Negara (BUMN)	State-Owned Enterprises
<b>SP3AP</b>	Surat Penetapan Pengambilan dan Penggunaan Air Permukaan	Surface Water Abstraction and Utilization Enactment
<b>SPI</b>	Satuan Pengawas Internal	Internal Control Unit
<b>SPK</b>	Surat Perjanjian Kerja	Work Agreement Letter
<b>SPTP</b>	Surat Perintah Tugas Pemeriksaan	Inspection Letter
<b>SS</b>	South Sulawesi	Sulawesi Selatan
<b>SS</b>	Padatan Tersuspensi	Suspended Solid
<b>SuSEnas</b>	Survey Sosial Ekonomi Nasional	National Socio-Economic Survey
<b>SWL</b>	Muka Air Tambahan	Surcharge Water Level
<b>SWOT Analysis</b>	Analisa Kekuatan, Kelemahan, Peluang dan Ancaman	Strength, Weakness, Opportunity and Threat Analysis
<b>SWS</b>	Satuan Wilayah Sungai	River Basin Unit
<b>TA</b>	Bantuan Tekhnis	Technical Assistance
<b>TATO</b>	Perputaran Total Aset	Total Asset Turn Over
<b>T-C</b>	Total Bakteri Coli	Total Coliforms
<b>TDS</b>	Total Padatan Terlarut	Total Dissolved Solid
<b>TET</b>	Tim Evaluasi Tarif	Tariff Evaluation Team
<b>TIU</b>	Unit Pelaksana Teknis	Technical Implementation Unit
<b>TNA</b>	Pelatihan Analisa Kebutuhan	Training Needs Analysis
<b>TSS</b>	Total Padatan Tersuspensi	Total Suspended Solid
<b>ToR</b>	Kerangka Acuan	Term of Reference
<b>UFW</b>	Air yang hilang	Unaccounted-for Water
<b>UKL/UPL</b>	Upaya Kelola Lingkungan / Upaya Pemantau Lingkungan	Environmental Management Effort / Environmental Monitoring Effort
<b>UNWB</b>	Unit Usaha Non-Air	Non-Water Business Unit
<b>UPTD/Balai PSDA</b>	Unit Pelaksana Teknis Daerah/Balai PSDA	Local Technical Implementation Unit/Balai PSDA
<b>WATSAL</b>	Penyesuaian Pinjaman Sektor Sumber Daya Air	Water Resources Sector Adjustment Loan
<b>WATSAP</b>	Program Penyesuaian Sektor Air	Water Sector Adjustment Programme
<b>WB</b>	Bank Dunia	World Bank
<b>WiD</b>	Wanita dalam Pembangunan	Women in Development
<b>WISMP</b>	Proyek Pengelolaan Sektor Irigasi dan Sumber Air	Water Resources and Irrigation Sector Management Program
<b>WMO</b>	Badan Meteorologi Dunia	World Meteorological Organization (WMO)
<b>WPM</b>	Pemantauan Pencemaran Air	Water Pollution Monitoring
<b>WQM</b>	Pemantauan Kualitas Air	Water Quality Monitoring
<b>WRM</b>	Pengelolaan Sumber Daya Air (PSDA)	Water Resource Management
<b>WS</b>	Wilayah Sungai	River Basin (RB)
<b>WTP</b>	Instalasi Pengelolaan Air (IPA)	Water Treatment Plant
<b>WUA</b>	Perkumpulan Petani Pemakai Air (P3A)	Water User Association
<b>WUAF</b>	Gabungan Perkumpulan Petani Pemakai Air (GP3A)	Water User Association Federation
<b>WUR</b>	Hak Guna Air	Water Use Right



***Data Book A***

***HYDROLOGICAL DATA***

***Part-I***

***Results of Water Demand and***

***Supply Simulation***

# 1. Calculation Conditions

## 1. Irrigation Efficiency

Tertiary	0.8500
Secondary	0.9000
Main	0.9000
Overall (Ie)	0.6885
1/Ie	1.4524

## 2. Cropping Intensity

	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Wet Paddy	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Dry Paddy	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Palawija	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	

## 3. H-V-A Curve

Water level to Volume

H	V
56.48	1.52
V	H
0.00	56.49
V	A
56.48	59.01

Volume to Water Level

Water level to Area

	V-Calc from H		H-Calc from V		Area-Calc
	Series V1	Series V2	Series H1	Series H2	
a	-4.99E-04	2.76E-03	2.55E-12	2.22E-09	
b	3.98E-01	-4.24E-01	-4.27E-09	-8.18E-07	
c	-4.69E+01	2.21E+01	2.83E-06	1.70E-04	
d	1.54E+03	-3.91E+02	-9.79E-04	-1.66E-02	2.86E-04
e			2.41E-01	8.73E-01	-2.51E-01
f			6.62E+01	5.65E+01	1.03E+02
g					8.36E+02

## 4. Irrigation Area

Bili-Bili	2,360 ha
Kampili+Bissua	21,330 ha

## 5. Maintenance Flow and Municipal Water Supply

WTP at Bili-Bili	1.3245 m3/s	Borong Loe, Somba Opu	} Other Use
WTP at down stream	0.3371 m3/s	Bajeng, Tompo Balang, Ratulangi, Pandang-Pandang, Maccini Sombala	
WTP for dry season	0.5000 m3/s	Panaaikang	
Maintenance Flow	1.00 m3/s	Takalar	
Sugar Factory	0.50 m3/s		

Originally Programmed	
Municipal Water Supply	3.30
Other Use	0.75 0.25+0.4+0.1
Maintenance Flow	1.00

## 6. Evaporation

80% of Average

## 7. Channel Water Loss

from Jenelata & Dam 3%



## 2. Maximum Net Feild Requirement (2/3)

### Dry Paddy

Month	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001		
Jan	1	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
	2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	4	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	6	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
Feb	1	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
	2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	4	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	6	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mar	1	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
	2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	4	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	6	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Apr	1	0.317	0.000	0.010	0.176	0.202	0.000	0.239	0.083	0.124	0.269	0.078	0.092	0.166	0.037	0.106	0.006	0.074	0.192	0.134	0.081	0.000	0.163	0.000	0.167	0.153	0.000	0.125	0.037	0.150		
	2	0.317	0.000	0.010	0.176	0.202	0.000	0.239	0.083	0.124	0.269	0.078	0.092	0.166	0.037	0.106	0.006	0.074	0.192	0.134	0.081	0.000	0.163	0.000	0.167	0.153	0.000	0.125	0.037	0.150		
	3	0.317	0.000	0.010	0.176	0.202	0.000	0.239	0.083	0.124	0.269	0.078	0.092	0.166	0.037	0.106	0.006	0.074	0.192	0.134	0.081	0.000	0.163	0.000	0.167	0.153	0.000	0.125	0.037	0.150		
	4	0.381	0.000	0.460	0.000	0.631	0.669	0.429	0.438	0.290	0.501	0.403	0.215	0.321	0.417	0.551	0.638	0.592	0.000	0.507	0.154	0.570	0.419	0.366	0.540	0.476	0.498	0.249	0.185	0.259	0.549	
	5	0.381	0.000	0.460	0.000	0.631	0.669	0.429	0.438	0.290	0.501	0.403	0.215	0.321	0.417	0.551	0.638	0.592	0.000	0.507	0.154	0.570	0.419	0.366	0.540	0.476	0.498	0.249	0.185	0.259	0.549	
	6	0.381	0.000	0.460	0.000	0.631	0.669	0.429	0.438	0.290	0.501	0.403	0.215	0.321	0.417	0.551	0.638	0.592	0.000	0.507	0.154	0.570	0.419	0.366	0.540	0.476	0.498	0.249	0.185	0.259	0.549	
May	1	0.889	0.572	0.836	0.683	0.658	0.798	0.212	0.474	0.867	0.623	0.777	0.564	0.283	0.561	0.812	0.560	0.397	0.635	0.564	0.959	0.931	0.635	0.746	0.567	0.865	0.916	0.378	0.618	0.750	0.906	
	2	0.889	0.572	0.836	0.683	0.658	0.798	0.212	0.474	0.867	0.623	0.777	0.564	0.283	0.561	0.812	0.560	0.397	0.635	0.564	0.959	0.931	0.635	0.746	0.567	0.865	0.916	0.378	0.618	0.750	0.906	
	3	0.889	0.572	0.836	0.683	0.658	0.798	0.212	0.474	0.867	0.623	0.777	0.564	0.283	0.561	0.812	0.560	0.397	0.635	0.564	0.959	0.931	0.635	0.746	0.567	0.865	0.916	0.378	0.618	0.750	0.906	
	4	1.062	0.788	0.803	0.911	1.045	0.939	0.297	0.889	0.996	0.937	1.057	0.981	0.800	0.891	1.068	1.047	0.816	1.027	0.369	1.041	1.067	0.952	1.033	0.962	1.063	1.071	0.738	1.037	0.794	0.992	
	5	1.062	0.788	0.803	0.911	1.045	0.939	0.297	0.889	0.996	0.937	1.057	0.981	0.800	0.891	1.068	1.047	0.816	1.027	0.369	1.041	1.067	0.952	1.033	0.962	1.063	1.071	0.738	1.037	0.794	0.992	
	6	1.062	0.788	0.803	0.911	1.045	0.939	0.297	0.889	0.996	0.937	1.057	0.981	0.800	0.891	1.068	1.047	0.816	1.027	0.369	1.041	1.067	0.952	1.033	0.962	1.063	1.071	0.738	1.037	0.794	0.992	
June	1	1.033	0.920	0.949	0.758	0.878	0.581	0.638	0.262	0.884	0.970	0.878	0.869	0.872	0.788	0.713	1.028	0.884	0.731	0.909	1.042	0.817	0.806	0.967	0.795	0.938	1.033	0.762	0.949	0.501	0.681	
	2	1.033	0.920	0.949	0.758	0.878	0.581	0.638	0.262	0.884	0.970	0.878	0.869	0.872	0.788	0.713	1.028	0.884	0.731	0.909	1.042	0.817	0.806	0.967	0.795	0.938	1.033	0.762	0.949	0.501	0.681	
	3	1.033	0.920	0.949	0.758	0.878	0.581	0.638	0.262	0.884	0.970	0.878	0.869	0.872	0.788	0.713	1.028	0.884	0.731	0.909	1.042	0.817	0.806	0.967	0.795	0.938	1.033	0.762	0.949	0.501	0.681	
	4	1.002	0.956	0.817	0.932	0.843	0.824	0.662	0.793	0.796	0.811	0.907	0.818	0.845	0.911	0.858	1.006	0.871	0.608	0.913	1.008	0.831	0.892	0.874	0.842	0.906	0.998	0.517	0.821	0.677	0.892	
	5	1.002	0.956	0.817	0.932	0.843	0.824	0.662	0.793	0.796	0.811	0.907	0.818	0.845	0.911	0.858																



### 3. Jenelata River Discharge

Month	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Jan	84.74	4.07	31.12	5.52	3.60	17.19	13.73	8.95	13.76	10.98	13.25	10.36	7.90	16.41	2.35	13.03	3.23	60.47	14.75	10.52	5.91	8.26	14.22	8.94	8.19	12.59	5.92	21.23	11.58	7.87
	88.37	2.38	19.44	4.45	13.73	38.11	33.77	60.19	37.53	41.52	53.71	9.14	7.61	15.26	4.80	17.06	16.02	42.09	17.43	43.88	10.66	10.75	8.49	10.50	11.63	8.30	6.01	14.83	14.12	16.37
	46.81	4.39	3.57	17.76	53.17	16.41	15.87	19.05	22.61	13.93	37.99	9.91	19.33	17.48	85.13	24.75	17.25	27.62	10.78	7.80	13.35	10.32	3.56	44.20	9.00	7.01	5.96	10.18	14.53	23.34
	20.21	5.65	1.34	16.89	34.86	4.05	15.69	4.62	55.55	17.61	5.45	18.41	18.90	21.68	15.60	36.65	15.05	21.63	10.09	8.08	4.09	15.33	15.50	16.63	6.40	23.42	3.97	7.01	16.03	16.69
	11.45	9.36	1.25	9.24	6.47	45.35	19.23	9.53	11.82	21.00	13.37	5.28	6.43	9.00	50.66	46.02	11.17	34.92	12.87	32.67	19.93	14.40	21.45	39.78	12.76	16.51	2.27	16.02	13.13	14.06
	7.70	29.60	1.37	17.43	4.66	3.18	4.32	5.52	1.89	44.40	38.21	24.07	35.47	3.68	62.28	59.27	13.64	135.15	7.83	40.95	14.04	24.75	36.95	8.42	21.47	7.35	3.68	24.91	22.85	21.04
Feb	6.87	1.44	1.05	8.38	18.47	3.02	14.06	12.61	12.70	10.43	11.49	27.91	14.90	9.68	4.73	33.68	46.50	65.41	7.26	16.16	32.17	19.82	14.27	11.01	22.97	3.08	4.35	20.02	38.66	37.41
	5.27	3.52	2.23	24.97	10.66	15.47	28.34	3.75	43.56	35.73	20.16	8.91	22.88	9.53	3.63	25.73	27.32	21.05	6.54	41.68	4.64	27.38	18.14	12.26	15.30	15.48	2.40	18.84	20.42	67.82
	11.26	14.73	40.31	18.05	20.25	55.56	8.75	13.97	72.39	17.18	53.51	13.07	24.57	15.01	10.74	19.64	143.33	40.01	7.32	10.20	6.45	25.16	24.90	5.70	47.09	4.37	5.35	15.55	13.17	19.19
	15.63	5.99	28.18	12.07	3.20	81.44	15.86	12.82	26.42	6.86	6.90	16.31	23.43	4.78	11.45	23.44	20.82	33.44	7.34	10.10	11.48	26.47	20.35	7.21	19.34	16.45	3.43	15.59	15.12	24.90
	17.82	6.84	10.16	3.93	24.58	46.85	7.16	5.14	49.39	4.30	4.33	4.53	11.68	1.89	13.89	23.19	28.09	21.63	8.65	26.71	12.47	17.23	12.01	6.44	14.65	19.01	3.53	15.80	15.25	17.45
	9.60	0.70	6.38	12.02	22.74	19.46	6.49	23.78	19.36	14.20	3.37	1.71	8.18	11.10	4.10	9.03	11.36	10.95	4.52	7.13	2.56	6.58	8.08	13.01	22.77	17.38	1.52	7.79	14.63	7.11
Mar	3.73	7.28	83.24	9.08	36.55	12.21	4.09	9.22	21.32	18.78	14.35	1.44	15.03	7.95	7.88	12.39	8.79	14.52	13.80	4.63	8.75	7.05	9.95	34.85	17.27	38.78	2.50	12.07	11.95	18.18
	4.50	10.55	39.03	18.66	12.76	20.33	6.56	60.58	25.75	8.94	25.67	1.85	24.49	6.32	5.36	12.31	3.49	43.88	11.00	3.78	13.90	5.85	19.33	24.39	15.28	20.75	2.45	12.28	10.23	15.45
	1.79	16.41	31.46	19.92	22.47	14.06	5.38	19.37	41.70	2.52	9.08	2.19	29.92	4.15	1.93	3.34	2.39	23.11	11.39	4.75	9.34	4.85	32.87	21.34	8.04	4.54	4.43	12.18	13.68	12.82
	9.40	8.81	62.37	11.70	21.07	13.94	5.21	4.90	50.29	2.40	30.98	1.24	11.74	32.82	2.10	3.42	3.80	4.49	4.71	12.79	19.77	6.01	9.67	12.45	5.43	2.86	10.72	13.84	15.19	13.32
	1.75	6.11	5.17	6.67	12.16	10.31	12.16	9.82	11.85	9.78	10.48	4.76	5.46	9.91	6.71	42.65	9.14	33.77	5.60	11.14	5.63	23.91	7.92	25.53	2.52	8.50	11.70	14.95	10.36	
	4.76	3.07	4.64	3.26	15.61	15.88	6.40	12.89	10.45	15.42	15.58	8.94	6.23	12.52	4.91	6.39	30.39	10.59	7.58	9.57	15.49	16.04	22.88	25.71	10.69	2.82	11.94	15.99	20.14	9.90
Apr	6.73	3.15	1.89	5.49	13.56	8.01	7.27	3.58	20.36	11.95	33.61	3.83	26.77	22.44	8.58	2.90	5.26	9.91	2.96	18.84	19.32	13.45	10.82	11.88	3.27	2.41	12.41	11.87	15.60	8.75
	1.33	4.62	5.78	14.19	5.72	11.39	22.06	10.79	14.45	16.19	21.94	9.86	23.17	5.09	16.37	8.31	2.18	39.89	2.65	7.32	10.37	13.78	8.47	15.68	4.60	3.11	11.31	9.84	11.76	9.16
	1.80	7.07	14.82	4.22	2.06	34.45	2.88	2.18	15.48	9.22	27.51	14.27	16.47	22.37	10.24	5.25	2.03	42.65	3.74	3.54	5.92	14.24	13.90	11.33	5.57	2.77	21.64	8.73	10.84	8.90
	7.43	8.03	12.89	18.79	2.49	6.90	1.57	3.96	28.14	4.76	10.92	28.31	8.25	26.59	6.70	1.73	2.98	43.03	4.50	13.48	7.61	10.16	11.08	9.35	9.22	3.18	15.92	5.48	9.25	9.97
	1.22	2.22	2.03	16.95	3.07	3.57	3.78	2.32	31.13	11.07	14.94	13.79	14.72	3.70	3.23	1.60	1.77	23.36	2.73	30.85	4.92	15.21	14.40	3.62	6.89	2.27	11.98	4.92	8.61	8.31
	1.22	1.26	1.63	7.97	2.99	2.01	2.45	4.00	11.20	8.75	25.56	2.11	9.05	2.10	1.50	3.90	3.31	9.16	2.82	16.66	2.74	5.69	7.43	3.54	3.29	3.65	11.19	4.66	9.24	8.59
May	1.07	3.14	1.50	7.49	7.73	4.23	3.36	8.52	23.42	11.59	19.98	2.10	40.59	6.23	1.38	2.65	2.89	4.09	2.12	10.15	2.05	6.83	9.09	3.25	3.17	2.89	11.21	4.39	6.61	6.51
	1.14	4.83	3.15	7.47	9.44	2.53	1.34	7.34	7.55	6.38	2.42	9.28	11.35	7.61	1.27	1.41	1.63	11.52	7.32	3.00	1.88	13.69	6.06	2.62	2.01	2.56	8.69	4.10	5.16	5.16
	1.90	5.69	2.71	5.21	4.73	1.67	7.15	10.91	2.34	5.23	2.25	10.10	5.20	2.15	1.77	1.50	1.42	18.74	6.81	2.85	1.31	7.39	9.32	9.35	1.36	1.81	5.68	3.82	4.94	4.88
	0.90	7.58	5.76	5.33	1.57	4.18	7.01	2.01	1.27	2.10	2.07	3.05	2.03	2.55	1.13	1.33	11.72	5.90	6.64	2.22	1.09	4.75	3.16	8.00	1.47	1.96	6.89	3.56	4.74	4.66
	0.82	2.42	1.27	3.48	1.44	6.89	1.27	1.46	18.21	3.45	1.91	22.96	1.92	6.44	1.03	1.17	2.98	8.48	7.79	1.76	1.61	4.14	2.45	2.97	1.48	1.50	4.33	3.33	6.07	4.42
	0.89	1.67	10.50	1.87	1.57	1.76	1.44	1.60	13.49	1.79	2.11	10.91	5.83	13.11	1.12	1.28	1.53	11.31	5.84	2.08	2.46	7.26	2.44	3.80	1.67	1.40	4.76	3.73	5.40	5.03
	0.67	1.36	2.67	3.13	1.19	1.33	1.11	3.03	2.00	1.36	4.35	1.57	3.44	7.87	0.85	0.96	1.16	10.99	7.19	1.16	3.56	6.08	1.95	2.48	2.51	0.94	3.82	2.91	6.21	4.00
	0.60	1.08	1.17	1.39	1.09	1.55	6.14	6.45	1.85	1.25	3.94	7.80	3.08	4.01	0.80	0.88	1.06	39.09	3.13	0.96	3.20	6.62	1.88	2.87	2.14	0.86	4.88	2.73	7.10	3.84
	0.54	1.01	1.07	2.11	1.00	25.70	4.34	1.29	1.70	1.14	1.49	4.39	2.73	11.78	0.76	0.79	0.98	8.54	1.99	0.81	1.74	5.09	1.35	10.16	1.55	0.99	3.66	2.56	7.58	3.67
	0.49	0.93	1.26	3.93	0.92	12.83	3.17	1.11	7.86	6.00	1.39	2.60	1.51	1.52	0.71	0.72	0.90	5.93	2.06	0.66	1.64	4.07	1.50	17.25	1.36	1.06	3.56	2.40	7.84	3.47
	0.43	0.86	0.93	2.80	0.83	1.35	1.52	1.02	2.06	7.81	1.28	7.56	3.16	1.39	0.66	0.65	0.82	7.46	1.45	0.74	1.21	3.11	1.34	7.07	1.50	0.89	3.44	2.25	5.20	3.27
	0.39	0.81	3.26	1.92	0.75	1.21	2.65	0.93	1.48	1.92	1.16	7.20	6.85	1.28	0.62	0.58	0.74	10.57	1.22	0.69	0.94	2.42	1.15	4.79	1.27	0.84	3.29	2.12	4.16	3.07
July	0.34	0.75	0.85	1.12	0.68	1.10	4.10	0.85	1.36	3.17	1.06	2.37	1.43	13.77	0.57	0.52	0.68	3.35	1.30	0.99	0.92	2.17	0.95	1.96	1.68	1.16	3.12	2.00	5.70	2.89

#### 4. Bili-Bili Dam In-flow

Month	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	
Jan	160.04	11.34	59.92	12.46	6.65	41.99	37.50	26.89	41.79	25.53	37.59	4.70	59.80	19.05	23.69	19.44	6.69	9.91	19.65	11.66	19.05	12.09	39.62	26.92	16.64	49.83	23.12	88.84	14.46	24.58	
	175.41	18.57	37.18	7.05	39.45	76.12	29.47	138.61	170.59	82.41	69.19	5.45	22.80	15.88	30.92	19.87	12.94	9.04	47.60	32.57	41.36	11.44	19.24	30.60	13.96	21.82	29.37	6.84	27.13	61.58	
	92.70	10.19	10.53	51.38	129.49	36.64	91.66	88.02	53.26	88.78	106.36	3.43	25.59	28.08	94.03	59.75	10.36	9.42	41.74	11.75	20.31	6.24	11.36	122.16	13.37	20.60	9.60	9.57	25.60	51.99	
	33.10	15.70	4.72	28.20	48.39	30.59	30.03	18.67	69.87	44.47	33.20	7.35	28.83	25.87	40.24	73.36	22.25	8.06	35.38	11.12	17.60	29.83	29.97	15.97	42.85	29.87	2.97	4.85	36.62	20.86	
	18.53	44.20	3.27	26.34	16.79	140.61	53.07	15.25	86.08	47.97	16.13	4.82	32.08	22.21	92.41	84.67	23.55	60.54	21.03	222.29	11.20	230.97	43.16	49.30	40.12	72.72	2.86	54.12	27.70	11.86	
	12.42	45.07	2.68	28.41	13.86	11.84	24.10	13.57	13.62	134.10	55.70	9.86	74.78	24.29	153.43	114.43	26.96	229.68	13.79	162.56	31.34	5.58	39.28	25.98	73.42	19.91	3.38	82.28	58.25	26.46	
Feb	9.99	5.06	3.94	13.58	54.45	27.72	40.27	78.48	63.63	32.02	30.78	20.04	54.92	32.99	16.28	72.69	40.85	90.30	16.97	50.80	27.59	15.24	17.38	35.07	93.92	21.96	16.27	44.22	66.35	81.23	
	4.99	12.13	8.21	40.32	21.75	79.85	31.93	12.01	39.53	74.01	110.35	11.94	59.58	24.26	19.09	51.50	39.10	28.99	20.49	189.61	12.30	26.19	24.64	18.09	33.55	35.16	2.95	41.46	22.75	112.30	
	50.95	29.81	91.16	50.34	40.35	150.79	21.40	22.45	152.14	81.23	99.25	12.40	43.30	38.94	29.24	26.43	211.50	13.99	12.11	19.31	12.88	33.35	30.14	12.76	38.00	51.74	12.46	27.43	6.29	6.92	
	86.56	9.65	51.99	36.07	8.17	101.44	22.69	23.60	99.22	22.54	20.67	12.85	68.25	19.76	22.22	32.60	41.47	10.58	21.49	20.29	20.45	15.90	34.52	15.48	22.71	47.87	5.16	34.10	21.50	34.11	
	41.45	7.38	29.30	27.56	52.30	101.72	19.84	13.24	86.29	10.14	10.49	7.09	32.07	10.30	26.02	37.95	25.69	8.42	15.01	40.90	18.75	23.35	20.67	19.87	32.05	88.42	14.08	27.48	26.41	12.51	
	23.55	2.05	21.82	17.69	28.29	48.80	25.68	44.67	52.88	7.74	4.34	2.47	17.70	15.25	12.62	22.92	10.25	5.01	6.08	9.36	17.43	14.35	5.88	27.04	29.68	63.42	1.85	15.70	27.02	3.86	
Mar	8.93	18.86	158.40	17.00	44.93	19.22	15.88	20.62	30.75	15.31	10.19	2.70	32.63	60.06	30.59	26.36	36.55	61.02	43.14	8.93	25.57	47.66	28.84	43.86	26.45	38.27	5.50	15.90	7.31	44.02	
	36.32	23.22	89.33	54.47	16.08	47.81	24.94	68.38	33.25	11.83	16.84	3.89	48.30	112.33	34.30	28.15	13.86	27.65	23.10	7.68	28.77	36.18	30.45	33.92	25.53	48.79	2.98	19.03	11.48	22.00	
	25.20	49.77	77.39	28.41	36.61	24.95	17.52	48.61	58.05	11.26	13.38	2.73	51.54	32.19	26.36	13.15	16.34	47.19	18.59	6.13	19.69	19.95	72.88	20.79	12.98	43.30	14.77	25.69	31.78	13.45	
	47.46	11.11	99.32	25.49	48.71	30.15	9.92	16.03	73.11	6.55	15.56	5.17	24.92	40.62	28.47	21.74	11.41	8.11	6.86	8.35	15.98	24.59	24.33	13.04	6.62	10.32	40.53	23.87	31.77	20.65	
	5.49	13.61	9.63	19.34	26.86	16.85	22.17	16.05	48.79	6.09	15.54	9.69	15.39	19.72	16.59	23.35	85.31	17.52	5.42	10.90	5.13	12.78	66.55	15.92	46.62	10.39	8.31	16.63	19.89	3.73	8.09
	10.39	6.93	13.60	11.13	27.05	28.94	19.91	22.07	20.08	29.26	41.14	15.10	16.91	10.24	17.74	20.15	58.53	7.94	8.22	11.20	6.83	28.75	35.89	30.48	13.08	22.46	26.10	35.02	41.37	13.81	
Apr	8.94	27.90	5.24	10.13	14.74	15.96	13.63	12.77	11.69	21.68	23.99	10.86	27.57	20.54	13.81	10.90	12.34	15.56	11.62	31.99	11.57	29.42	7.27	41.24	6.27	26.55	25.85	20.33	35.81	25.68	
	2.87	31.42	34.40	18.46	7.08	51.36	35.41	16.60	18.50	32.48	20.78	7.75	28.62	11.97	18.76	12.43	7.21	21.82	6.44	8.26	7.44	30.51	18.00	66.95	16.91	31.34	18.69	12.04	15.51	16.94	
	2.19	16.83	37.38	10.35	3.79	57.71	13.79	8.44	19.06	18.34	27.73	11.94	36.81	22.60	30.05	15.18	7.33	21.54	5.58	6.49	4.46	15.82	23.35	20.97	10.17	9.79	38.93	17.03	21.10	12.99	
	26.27	33.19	22.18	65.42	3.99	13.39	7.85	7.17	39.81	12.45	14.60	14.22	27.71	19.09	19.14	10.91	6.54	31.74	5.45	20.34	5.23	22.24	22.41	13.48	38.19	7.06	15.01	5.77	10.76	5.53	
	6.42	38.95	3.88	111.13	3.31	5.61	10.46	14.24	17.39	13.84	16.03	16.39	32.87	9.40	17.89	4.15	5.13	18.09	5.33	30.74	4.10	29.64	13.97	6.10	15.01	6.60	4.63	5.38	11.20	5.61	
	2.42	4.69	2.65	23.96	5.85	8.79	9.65	17.49	23.41	12.58	21.68	10.15	20.81	14.57	11.41	5.20	4.25	11.99	5.20	14.06	3.83	6.61	9.18	5.79	5.74	6.26	4.95	4.96	10.64	18.51	
May	1.63	5.60	2.73	15.79	13.06	7.69	9.89	18.82	16.68	30.85	19.67	6.69	31.92	10.42	6.62	5.67	3.59	9.56	5.37	9.16	3.57	7.02	8.86	6.80	5.40	5.89	12.35	4.58	9.89	8.11	
	3.50	19.67	8.07	18.24	17.44	7.40	6.69	18.43	11.43	18.03	8.06	6.18	23.33	8.45	6.44	8.05	3.28	21.31	5.66	6.24	3.32	7.98	19.18	5.25	5.00	5.49	7.11	4.23	10.51	4.88	
	2.48	7.66	2.70	8.01	4.12	2.57	10.64	16.84	6.66	12.52	5.71	12.23	18.81	7.04	6.96	7.20	3.07	16.19	5.70	5.67	3.06	5.11	5.61	15.94	4.62	5.08	4.08	3.90	5.21	4.60	
	1.17	9.59	9.47	13.00	2.47	5.01	17.84	7.65	4.57	9.58	3.94	9.87	11.69	7.92	5.80	5.62	3.28	9.04	15.77	5.12	2.82	26.37	5.31	7.54	4.29	4.70	9.48	3.60	9.90	4.28	
	0.76	11.37	1.97	4.94	1.67	6.73	7.44	4.93	7.40	10.19	3.33	12.30	6.37	9.24	3.25	4.01	2.98	7.32	12.05	5.16	2.60	5.82	4.96	4.77	4.01	4.34	3.87	3.32	7.80	3.95	
	0.56	4.30	21.24	3.57	1.30	2.37	7.32	4.95	7.14	7.25	4.61	9.95	8.94	15.38	2.92	3.54	3.14	8.03	13.12	6.30	2.89	130.09	5.52	5.50	4.50	4.82	4.35	3.68	5.65	4.41	
June	0.33	3.16	4.16	4.28	0.70	1.30	6.57	4.09	4.02	3.39	3.51	4.47	4.49	13.30	4.89	2.78	2.51	6.13	9.72	4.97	2.28	9.42	4.24	4.94	3.54	3.71	3.44	2.83	15.28	3.47	
	0.30	2.32	1.59	2.02	2.33	2.73	15.55	7.65	2.94	2.25	4.36	5.68	5.47	7.61	3.24	2.47	2.66	6.04	10.13	4.93	2.15	30.44	3.92	20.93	3.29	3.43	6.83	2.61	14.70	10.72	
	0.28	1.82	1.06	3.71	0.99	41.63	12.88	4.32	2.54	1.96	2.58	7.35	4.52	9.70	3.50	2.29	2.98	7.66	5.88	4.93	2.00	8.20	3.62	19.93	3.04	3.17	3.31	2.41	27.08	5.29	
	0.25	1.23	3.07	5.53	0.71	10.62	8.28	3.81	2.63	2.62	2.23	4.61	2.97	4.15	2.87	2.08	2.75	7.56	5.33	4.89	1.84	17.12	3.34	18.98	2.80	2.93	5.81	2.23	17.54	3.38	
	0.23	1.07	0.91	2.43	0.66	2.64	6.56	3.81	2.26	4.53	2.00	4.31	2.49	2.36	3.68	2.01	2.25	7.51	5.04	4.97	1.70	5.35	3.09	8.98	2.59	2.71	3.16	2.06	4.72	3.25	
	0.21	0.94	0.71	2.92	0.91	1.76	10.61	3.81	1.86	2.41	1.31	5.08	3.89	1.54	5.06	1.94	2.08	7.14	4.89	4.93	1.56	5.11	2.85	5.94	2.39	2.51	2.99	1.90	4.96	3.10	
July	0.19	0.89	1.02	1.41	10.																										



### 5. Discharge from Residual Basin Area

Month	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Jan	5.41	0.38	2.03	0.42	0.22	1.42	1.24	0.60	0.74	0.49	0.66	0.79	1.26	0.87	1.37	1.27	0.29	2.14	2.12	0.68	0.49	0.44	1.08	0.71	0.52	1.20	0.56	2.11	0.58	0.64
	5.93	0.63	1.26	0.24	1.33	2.57	2.13	4.58	2.76	2.46	2.82	0.53	0.52	0.79	0.61	1.28	0.96	1.53	1.12	1.72	1.01	0.50	0.57	0.82	0.57	0.61	0.67	0.54	0.86	1.51
	3.13	0.34	0.36	1.74	4.38	1.24	1.27	2.10	1.63	0.92	1.92	0.77	1.02	0.81	6.45	2.66	0.85	1.15	0.93	0.67	0.73	0.40	0.29	3.34	0.48	0.55	0.33	0.45	0.85	1.55
	1.12	0.53	0.16	0.95	1.64	1.03	0.97	0.71	2.98	1.38	0.39	0.91	1.27	1.24	0.97	2.45	0.70	1.44	1.07	1.38	0.42	0.94	0.95	0.75	0.91	1.18	0.16	0.28	1.08	0.83
	0.63	1.50	0.11	0.89	0.57	4.76	1.27	0.72	0.99	1.06	0.76	0.21	0.57	0.54	3.15	2.72	0.86	2.05	0.69	3.33	0.76	4.32	1.35	1.98	1.05	1.70	0.11	1.38	0.85	0.60
	0.42	1.52	0.09	0.96	0.47	0.40	0.49	0.51	0.27	2.41	2.52	1.36	2.60	0.71	4.04	4.52	1.19	7.77	0.69	2.64	0.93	0.81	1.73	0.68	1.86	0.55	0.16	2.11	1.64	1.05
Feb	0.34	0.17	0.13	0.46	1.84	0.94	1.48	2.56	1.01	0.59	0.79	1.36	1.11	0.73	0.36	1.59	2.43	3.05	0.41	0.57	1.39	0.83	0.70	0.91	2.25	0.46	0.40	1.32	2.23	2.45
	0.17	0.41	0.28	1.36	0.74	2.70	1.83	0.33	2.22	2.22	1.84	0.33	1.88	0.85	0.51	1.62	1.32	0.98	1.05	2.03	0.34	1.23	0.94	0.66	1.01	1.04	0.12	1.24	0.97	3.85
	1.72	1.01	3.08	1.70	1.37	5.10	0.68	0.70	3.99	1.15	3.32	0.73	1.34	1.55	0.74	1.21	7.15	1.58	0.57	0.34	0.40	1.29	1.22	0.38	2.00	1.00	0.36	0.91	0.48	0.67
	2.93	0.33	1.76	1.22	0.28	3.43	1.15	0.71	1.40	0.50	0.35	0.69	1.95	0.32	0.70	1.25	1.40	1.81	0.59	0.65	0.68	1.03	1.17	0.47	0.94	1.28	1.19	1.02	0.80	1.29
	1.40	0.25	0.99	0.93	1.77	3.44	0.80	0.81	2.45	0.32	0.41	0.32	0.94	0.16	0.93	1.24	1.25	0.94	0.44	0.60	0.68	0.89	0.69	0.52	0.96	2.04	0.34	0.92	0.88	0.71
	0.80	0.07	0.74	0.60	0.96	1.65	0.45	1.88	0.90	0.96	0.19	0.16	0.42	1.00	0.41	0.44	0.53	0.81	0.35	0.14	0.37	0.43	0.33	0.83	1.16	1.57	0.07	0.49	0.88	0.27
Mar	0.30	0.64	5.36	0.57	1.52	0.65	0.25	0.47	1.02	0.97	1.01	0.12	1.45	0.96	0.71	0.80	0.98	1.91	1.46	0.24	0.68	1.01	0.77	1.74	0.94	1.76	0.16	0.62	0.47	1.27
	1.23	0.79	3.02	1.84	0.54	1.62	0.84	3.23	1.29	0.38	1.25	0.14	2.17	1.84	0.50	1.38	0.24	2.69	0.78	0.23	0.89	0.78	1.07	1.27	0.87	1.42	0.12	0.67	0.49	0.82
	0.85	1.68	2.62	0.96	1.24	0.84	0.58	1.28	2.08	0.15	0.56	0.11	2.20	0.98	0.36	0.20	0.17	1.60	0.63	0.11	0.60	0.48	2.18	0.96	0.45	0.86	0.32	0.78	0.93	0.60
	1.60	0.38	3.36	0.86	1.65	1.02	0.30	0.33	2.33	0.16	1.84	0.06	0.54	1.18	0.41	0.58	0.18	0.27	0.23	0.12	0.84	0.59	0.69	0.58	0.27	0.26	0.99	0.80	0.97	0.73
	0.19	0.46	0.33	0.65	0.91	0.57	1.09	0.80	0.70	0.22	0.39	0.96	0.55	0.22	0.65	0.55	2.45	0.59	0.18	0.42	0.41	0.38	1.81	0.50	1.43	0.21	0.53	0.67	0.86	0.44
	0.35	0.23	0.46	0.38	0.92	0.98	0.41	1.14	0.51	1.30	0.94	0.88	0.30	0.65	0.32	0.76	2.09	0.31	0.28	0.20	0.56	0.95	1.26	1.25	0.53	0.46	0.78	1.05	1.28	0.52
Apr	0.30	0.94	0.18	0.34	0.50	0.54	0.70	0.26	0.93	1.17	1.30	0.28	1.64	1.52	0.39	0.21	0.42	0.70	0.39	1.29	0.75	0.88	0.43	1.04	0.20	0.52	0.79	0.68	1.05	0.69
	0.10	1.06	1.16	0.62	0.24	1.74	1.07	0.83	0.92	0.98	1.04	0.78	1.10	0.17	0.99	0.92	0.36	1.58	0.09	0.13	0.42	0.91	0.55	1.58	0.42	0.62	0.64	0.49	1.60	0.55
	0.07	0.57	1.26	0.35	0.13	1.95	0.16	0.15	0.70	0.44	0.99	0.72	1.21	1.40	0.72	0.18	0.13	2.15	0.37	0.09	0.25	0.68	0.79	0.68	0.33	0.25	1.28	0.54	0.67	0.48
	0.89	1.12	0.75	2.21	0.14	0.45	0.12	0.20	1.46	0.21	0.69	1.67	1.04	1.04	0.31	0.11	0.40	2.38	0.76	1.16	0.31	0.67	0.70	0.50	0.91	0.21	0.71	0.25	0.45	0.38
	0.22	1.32	0.13	3.76	0.11	0.19	0.19	0.36	1.26	0.50	1.21	1.63	0.85	0.21	0.26	0.08	0.09	1.13	0.11	0.90	0.21	0.94	0.65	0.21	0.45	0.18	0.42	0.23	0.44	0.33
	0.08	0.16	0.09	0.81	0.20	0.30	0.41	0.71	0.79	0.33	1.35	0.23	0.64	0.75	0.11	0.60	0.32	0.98	0.18	0.11	0.14	0.28	0.37	0.20	0.19	0.21	0.41	0.22	0.45	0.56
May	0.06	0.19	0.09	0.53	0.44	0.26	0.25	0.75	1.04	0.67	1.40	0.47	1.76	0.35	0.10	0.10	0.14	0.41	0.12	0.08	0.12	0.31	0.41	0.21	0.18	0.18	0.53	0.20	0.36	0.32
	0.12	0.67	0.27	0.62	0.59	0.25	0.09	0.37	0.34	0.24	0.21	0.65	1.38	0.30	0.15	0.07	0.08	0.62	0.12	0.09	0.11	0.53	0.50	0.16	0.14	0.17	0.37	0.19	0.33	0.23
	0.08	0.26	0.09	0.27	0.14	0.09	0.97	0.63	0.15	0.38	0.14	0.65	0.47	0.21	0.19	0.18	0.16	0.76	0.15	0.05	0.09	0.30	0.36	0.54	0.12	0.14	0.23	0.18	0.23	0.22
	0.04	0.32	0.32	0.44	0.08	0.17	0.98	0.13	0.10	0.15	0.10	0.21	0.41	0.23	0.06	0.07	1.21	0.20	0.53	0.04	0.08	0.58	0.18	0.36	0.11	0.14	0.36	0.16	0.30	0.21
	0.03	0.38	0.07	0.17	0.06	0.23	0.12	0.09	0.83	0.16	0.07	0.92	0.16	0.22	0.04	0.05	0.10	0.44	0.41	0.02	0.09	0.22	0.15	0.17	0.11	0.12	0.19	0.15	0.31	0.19
	0.02	0.14	0.72	0.12	0.04	0.08	0.39	0.08	0.47	0.09	0.06	0.46	0.25	0.86	0.03	0.04	0.08	0.35	0.44	0.03	0.12	2.41	0.16	0.20	0.12	0.12	0.21	0.17	0.25	0.22
June	0.01	0.11	0.14	0.14	0.02	0.04	0.14	0.24	0.11	0.05	0.19	0.13	0.20	0.44	0.02	0.02	0.05	0.55	0.09	0.02	0.14	0.33	0.13	0.15	0.13	0.09	0.17	0.13	0.44	0.17
	0.01	0.08	0.05	0.07	0.08	0.09	0.40	0.62	0.08	0.03	0.07	0.41	0.21	0.41	0.19	0.01	0.04	1.14	0.06	0.01	0.13	0.70	0.12	0.44	0.12	0.08	0.26	0.12	0.45	0.29
	0.01	0.06	0.04	0.13	0.03	1.41	0.16	0.10	0.05	0.03	0.05	0.13	0.17	0.49	0.04	0.01	0.03	0.55	0.04	0.01	0.08	0.28	0.10	0.63	0.10	0.08	0.16	0.11	0.68	0.19
	0.01	0.04	0.10	0.19	0.02	0.36	0.24	0.07	0.30	0.53	0.04	0.10	0.08	0.11	0.03	0.01	0.02	0.35	0.04	0.01	0.08	0.41	0.10	0.82	0.09	0.08	0.20	0.11	0.52	0.16
	0.01	0.04	0.03	0.08	0.02	0.09	0.10	0.05	0.06	0.28	0.03	0.39	0.19	0.08	0.02	0.01	0.02	0.67	0.04	0.01	0.06	0.18	0.09	0.36	0.09	0.07	0.15	0.10	0.23	0.15
	0.01	0.03	0.26	0.10	0.03	0.06	0.26	0.03	0.04	0.14	0.02	0.39	0.26	0.05	0.02	0.01	0.01	0.50	0.03	0.01	0.05	0.16	0.08	0.24	0.08	0.07	0.15	0.09	0.20	0.14
July	0.01	0.03	0.04	0.05	0.36	0.04	0.51	0.02	0.03	0.35	0.01	0.15	0.08	0.52	0.01	0.01	0.01	0.15	0.06	0.01	0.05	0.14	0.07	0.13	0.09	0.07	0.14	0.09	0.24	0.13
	0.01	1.33	0.30	0.03	0.04	0.03	1.73	0.01	0.02	0.33	0.01	0.17	0.05	0.08	0.01	0.01	0.01	0.16	0.03	0.01	0.05	0.13	0.06	0.12	0.08	0.07	0.25	0.08	0.20	0.12
	0.01	0.29	0.05	0.02	0.03	0.02	0.28	0.01	0.01	0.57</																				

**Water Balance Analysis**

**Year 1972**

**I. Water Requirement**

Wet Paddy 100 %  
Dry Paddy 100 %  
Palawija 40 %

**II. Water Balance Calculation**

Initial Reservoir Volume 318.81 mcm  
Initial Water Level EL. 99.45 m as of end of 1971

Month	No. of day	1-1		1-2				1-3		1-4		3. at Downstream of Bili-Bili Weir																									
		NFR (Net Field Requirement)		DR (Diversion Water Requirement)				Q - BiliBili (IRB)		Q - Kampili (IRK)		1. at Dam Site						2. Upstream of Bili-Bili Weir						3. at Downstream of Bili-Bili Weir													
		w.paddy	d.paddy	palawija	w.paddy	d.paddy	palawija	total	(mcm)	(mcm)	Inflow	Evaporation	Reservoir Area	Evaporation	Balance	Surplus Water From Dam	WTP at Bili-Bili	Bili-Bili Irrigation	Balance	Bili-Bili Outflow	Jenelata River	Channel Water Loss	Residual Basin	Total	Kampili + Bissua Ir.	WTP at Downstream	Other Use	Total	Balance	Channel Water Loss	Supply Water from Dam	Water Balance at Reservoir	Impound. Volume in Reservoir	Water level of Reservoir	Required Supply Water to Reservoir	Ineffct. Discharge from Dam	
		(l/s/ha)	(l/s/ha)	(l/s/ha)	(l/s/ha)	(l/s/ha)	(l/s/ha)	(mcm)	(mcm)	(mcm)	mcm/day	km2	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	
Jan	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	160.04	4.30	17.41	0.30	159.74	159.74	0.57	0.00	159.17	159.17	84.74	7.32	5.41	242.00	0.00	0.15	0.65	0.79	241.21	0.00	0.00	0.00	318.81	99.50	0.00	159.17		
	2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	175.41	4.30	17.41	0.30	175.11	175.11	0.57	0.00	174.54	174.54	88.37	7.89	5.93	260.95	0.00	0.15	0.65	0.79	260.16	0.00	0.00	0.00	318.81	99.50	0.00	174.54		
	3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	92.70	4.30	17.41	0.30	92.40	92.40	0.57	0.00	91.83	91.83	46.81	4.16	3.13	137.61	0.00	0.15	0.65	0.79	136.82	0.00	0.00	0.00	318.81	99.50	0.00	91.83		
	4	0.81	0.00	0.00	1.18	0.00	0.00	1.18	1.21	33.10	4.30	17.41	0.30	32.80	32.80	0.57	1.21	31.02	31.02	20.21	1.54	1.12	50.82	10.90	0.15	0.65	11.69	39.12	0.00	0.00	-0.00	318.81	99.50	0.00	31.02		
	5	0.81	0.00	0.00	1.18	0.00	0.00	1.18	1.21	18.53	4.30	17.41	0.30	18.23	18.23	0.57	1.21	16.45	16.45	11.45	0.84	0.63	27.70	10.90	0.15	0.65	11.69	16.00	0.00	0.00	-0.00	318.81	99.50	0.00	16.45		
	6	0.81	0.00	0.00	1.18	0.00	0.00	1.18	1.45	12.42	4.30	17.41	0.36	12.06	12.06	0.69	1.45	9.93	9.93	7.70	0.53	0.42	17.52	13.08	0.17	0.78	14.03	3.48	0.00	0.00	0.00	318.81	99.50	0.00	9.93		
Feb	1	0.40	0.00	0.00	0.58	0.00	0.00	0.58	0.59	9.99	4.20	17.41	0.29	9.70	9.70	0.57	0.59	8.53	8.53	6.87	0.46	0.34	15.28	5.37	0.15	0.65	6.17	9.11	0.00	0.00	318.81	99.50	0.00	8.53			
	2	0.40	0.00	0.00	0.58	0.00	0.00	0.58	0.59	4.99	4.20	17.41	0.29	4.70	4.70	0.57	0.59	3.53	3.53	5.27	0.26	0.17	8.71	5.37	0.15	0.65	6.17	2.54	0.00	0.00	318.81	99.50	0.00	4.99			
	3	0.40	0.00	0.00	0.58	0.00	0.00	0.58	0.59	50.95	4.20	17.41	0.29	50.66	50.66	0.57	0.59	49.49	49.49	11.26	1.82	1.72	60.65	5.37	0.15	0.65	6.17	54.48	0.00	0.00	-0.00	318.81	99.50	0.00	49.49		
	4	0.40	0.00	0.00	0.58	0.00	0.00	0.58	0.59	86.56	4.20	17.41	0.29	86.27	86.27	0.57	0.59	85.70	85.70	15.63	3.04	2.93	101.22	0.00	0.15	0.65	0.79	100.42	0.00	0.00	0.00	318.81	99.50	0.00	86.27		
	5	0.40	0.00	0.00	0.58	0.00	0.00	0.58	0.59	41.45	4.20	17.41	0.29	41.16	41.16	0.57	0.59	40.59	40.59	17.75	1.40	1.30	58.05	0.00	0.15	0.65	0.79	57.26	0.00	0.00	0.00	318.81	99.50	0.00	41.16		
	6	0.40	0.00	0.00	0.58	0.00	0.00	0.58	0.59	23.55	4.90	17.41	0.33	23.32	23.32	0.46	0.00	22.86	22.86	9.60	0.97	0.80	32.28	0.00	0.12	0.52	0.63	31.65	0.00	0.00	0.00	318.81	99.50	0.00	23.55		
	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	89.45	4.70	17.41	0.33	89.16	89.16	0.57	0.00	88.60	88.60	8.03	8.03	3.73	0.35	0.30	11.71	0.00	0.15	0.65	0.79	10.92	0.00	0.00	0.00	318.81	99.50	0.00	89.45
	8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	36.32	4.70	17.41	0.33	35.99	35.99	0.57	0.00	35.42	35.42	4.50	1.20	1.23	39.95	0.00	0.15	0.65	0.79	39.16	0.00	0.00	0.00	318.81	99.50	0.00	36.32		
	9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25.20	4.70	17.41	0.33	24.87	24.87	0.57	0.00	24.30	24.30	1.79	0.78	0.85	26.16	0.00	0.15	0.65	0.79	25.37	0.00	0.00	0.00	318.81	99.50	0.00	25.20		
	10	0.13	0.00	0.00	0.19	0.00	0.00	0.19	0.19	47.46	4.70	17.41	0.33	47.13	47.13	0.57	0.19	46.37	46.37	9.40	1.67	1.60	55.70	1.72	0.15	0.65	2.51	53.19	0.00	0.00	0.00	318.81	99.50	0.00	47.46		
	11	0.13	0.00	0.00	0.19	0.00	0.00	0.19	0.19	5.49	4.70	17.41	0.33	5.16	5.16	0.57	0.19	4.40	4.40	1.75	0.18	0.19	6.15	1.72	0.15	0.65	2.51	3.64	0.00	0.00	0.00	318.81	99.50	0.00	5.49		
	12	0.13	0.00	0.00	0.19	0.00	0.00	0.19	0.23	10.39	4.70	17.41	0.39	10.00	10.00	0.69	0.23	9.08	9.08	4.76	0.42	0.35	13.78	2.06	0.17	0.78	3.01	10.77	0.00	0.00	0.00	318.81	99.50	0.00	10.39		
Apr	1	0.44	0.32	0.00	0.64	0.46	0.00	1.10	1.12	8.94	5.10	17.41	0.36	8.58	8.58	0.57	1.12	6.90	6.90	6.73	0.41	0.30	13.52	10.09	0.15	0.65	10.89	2.63	0.00	0.00	318.81	99.50	0.00	8.94			
	2	0.44	0.32	0.00	0.64	0.46	0.00	1.10	1.12	2.87	5.10	17.41	0.36	2.51	2.51	0.57	1.12	0.83	0.83	1.33	0.06	0.10	2.19	10.09	0.15	0.65	10.89	-8.70	0.27	8.97	-8.97	309.84	98.97	-362.68	2.87		
	3	0.44	0.32	0.00	0.64	0.46	0.00	1.10	1.12	2.19	5.10	17.41	0.36	1.84	1.84	0.00	0.57	1.12	-1.69	0.00	1.80	0.05	0.07	1.82	10.09	0.15	0.65	10.89	-9.07	0.28	9.35	-9.20	300.64	98.43	-357.05	2.19	
	4	0.05	0.38	0.00	0.08	0.55	0.00	0.63	0.64	26.27	5.10	16.87	0.34	25.93	25.93	0.76	0.64	6.54	6.54	7.43	0.42	0.89	14.44	5.81	0.15	0.65	6.60	7.84	0.00	0.00	318.81	99.50	0.00	26.27			
	5	0.05	0.38	0.00	0.08	0.55	0.00	0.63	0.64	6.42	5.10	17.41	0.36	6.06	6.06	0.57	0.64	4.85	4.85	1.22	1.18	0.22	6.10	5.81	0.15	0.65	6.60	-0.50	0.02	0.51	-0.51	318.30	99.47	-380.32	6.42		
	6	0.05	0.38	0.00	0.08	0.55	0.00	0.63	0.64	2.42	5.10	17.40	0.35	2.07	2.07	0.57	0.64	3.34	3.34	1.22	0.05	0.08	1.59	5.81	0.15	0.65	6.60	-5.01	0.15	5.16	-4.65	313.65	99.20	-390.72	2.42		
May	1	0.01	0.89	0.00	0.02	1.29	0.00	1.31	1.34	1.63	4.90	17.26	0.34	1.29	1.29	0.00	0.57	1.34	-1.91	0.00	1.07	0.03	0.06	1.09	12.09	0.15	0.65	13.10	-12.01	0.37	12.38	-11.60	300.65	98.43	-387.97	1.63	
	2	0.01	0.89	0.00	0.02	1.29	0.00	1.31	1.34	3.50	4.90	16.87	0.33	3.14	3.14	0.00	0.57	3.34	-1.91	0.00	0.41	0.06	0.12	3.22	12.09	0.15	0.65	13.10	-11.88	0.37	12.24	-10.98	289.67	98.76	-371.67	3.50	
	3	0.01	0.89	0.00	0.02	1.29	0.00	1.31	1.34	2.48	4.90	16.55	0.32	2.16	2.16	0.00	0.57	2.34	-1.91	0.00	1.90	0.00	0.08	1.93	12.09	0.15	0.65	13.10	-11.77	0.35	11.52	-11.27	278.39	97.07	-363.98	2.48	
	4	0.01	1.06	0.00	0.02	1.54	0.00	1.56	1.59	1.17	4.90	16.21	0.32	0.88	0.88	0.00	0.57	1.59	-2.16	0.00	0.90	0.03	0.04	0.91	14.39	0.15	0.65	15.40	-14.48	0.45	14.93	-16.24	262.15	96.05	-352.71	1.17	
	5	0.01	1.06	0.00	0.02	1.54	0.00	1.56	1.59	0.76	4.90	15.73	0.31	0.45	0.45	0.00	0.57	1.59	-2.16	0.00	0.82	0.02	0.03	0.82	14.39	0.15	0.65	15.40	-14.57	0.45	15.03	-16.74	245.41	94.96	-336.47	0.76	
	6	0.01	1.06	0.00	0.02	1.54	0.00	1.56	1.91	6.56	4.90	15.21	0.36	6.20	6.20	0.69	1.91	-2.60	0.00	0.89	0.03	0.02	0.88	17.26	0.17	0.78	10.4	18.47	-17.59	0.54	18.14	-20.53	224.88	93.59	-319.73	6.56	
Jun	1	0																																			

**Water Balance Analysis**

**Year 1973**

**I. Water Requirement**

Wet Paddy 100 %  
 Dry Paddy 100 %  
 Palawija 40 %

**II. Water Balance Calculation**

Initial Reservoir Volume 141.20 mcm  
 Initial Water Level EL. 87.04 m as of end of 1972

Month	No. of day	1. at Dam Site										2. Upstream of Bili-Bili Weir										3. at Downstream of Bili-Bili Weir										Water Balance at Reservoir	Impound. Volume in Reservoir	Water level of Reservoir	Required Supply Water to Reservoir	Ineffct. Discharge from Dam				
		Inflow					Evaporation					Balance	Water Demand					Balance	Inflow					Balance	Channel Water Loss	Supply Water from Dam														
		Jeneberang River		Reservoir Area		Evaporation- km2	mcm	mcm	WTP at Bili-Bili		Bili-Bili Irrigation		Balance	Bili-Bili Outflow		Jenelata River			Residual Basin	Total	Kampili-Bissua Ir.		WTP at Downstream				Other Use	Total												
		w.paddy	d.paddy	palawija	w.paddy				d.paddy	palawija	total	mcm		mcm	mcm	mcm	mcm	mcm			mcm	mcm	mcm	mcm	mcm	mcm			mcm	mcm	mcm						mcm			
Jan	1	0.36	0.00	0.00	0.52	0.00	0.00	0.52	0.53	4.76	Jan	1	5	11.34	4.30	11.17	0.19	11.15	0.00	0.57	0.53	-1.10	0.00	4.07	0.12	0.38	4.33	4.76	0.15	0.65	5.55	-1.22	0.04	1.26	8.79	142.46	87.21	0.00	0.00	
	2	0.36	0.00	0.00	0.52	0.00	0.00	0.52	0.53	4.76		2	5	18.57	4.30	11.23	0.19	18.38	0.00	0.57	0.53	-1.10	0.00	2.38	0.07	0.63	2.94	4.76	0.15	0.65	5.55	-2.61	0.08	2.69	14.59	157.05	88.48	0.00	0.00	
	3	0.36	0.00	0.00	0.52	0.00	0.00	0.52	0.53	4.76		3	5	10.19	4.30	11.92	0.21	9.98	0.00	0.57	0.53	-1.10	0.00	4.39	0.13	0.34	4.60	4.76	0.15	0.65	5.55	-0.95	0.03	0.98	7.90	164.95	89.14	0.00	0.00	
	4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		4	5	15.70	4.30	12.27	0.21	15.49	0.00	0.57	0.00	-0.57	0.00	5.65	0.17	0.53	6.01	0.00	0.15	0.65	0.79	5.22	0.00	0.00	4.92	179.87	90.33	0.00	0.00	
	5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		5	5	44.20	4.30	12.90	0.22	43.98	0.00	0.57	0.00	-0.57	0.00	9.36	0.28	1.50	10.58	0.00	0.15	0.65	0.79	9.79	0.00	0.00	43.41	223.28	93.48	0.00	0.00	
	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		6	6	45.07	4.30	14.49	0.30	44.77	0.00	0.69	0.00	-0.69	0.00	29.60	0.89	1.52	30.23	0.00	0.17	0.78	0.95	29.28	0.00	0.00	44.08	267.36	96.38	0.00	0.00	
Feb	1	0.59	0.00	0.00	0.85	0.00	0.00	0.85	0.87	7.87	Feb	1	5	5.06	4.20	15.88	0.27	4.79	0.00	0.57	0.87	-1.44	0.00	1.44	0.04	0.17	1.57	7.87	0.15	0.65	8.66	-7.10	0.22	7.32	-3.97	263.40	96.13	-3.97	0.00	
	2	0.59	0.00	0.00	0.85	0.00	0.00	0.85	0.87	7.87		2	5	12.13	4.20	15.76	0.26	11.87	0.00	0.57	0.87	-1.44	0.00	3.52	0.11	0.41	3.82	7.87	0.15	0.65	8.66	-4.84	0.15	4.99	5.43	268.83	96.47	0.00	0.00	
	3	0.59	0.00	0.00	0.85	0.00	0.00	0.85	0.87	7.87		3	5	29.81	4.20	15.93	0.27	29.54	0.00	0.57	0.87	-1.44	0.00	14.73	0.44	1.01	15.30	7.87	0.15	0.65	8.66	6.64	0.00	0.00	28.10	296.93	98.20	0.00	0.00	
	4	0.91	0.00	0.00	1.32	0.00	0.00	1.32	1.35	12.16		4	5	9.65	4.20	16.76	0.28	9.37	0.00	0.57	1.35	-1.92	0.00	5.99	0.18	0.33	6.14	12.16	0.15	0.65	12.96	-6.82	0.21	7.03	0.42	297.35	98.23	-7.17	0.00	
	5	0.91	0.00	0.00	1.32	0.00	0.00	1.32	1.35	12.16		5	5	7.38	4.20	16.77	0.28	7.10	0.00	0.57	1.35	-1.92	0.00	6.84	0.21	0.25	6.88	12.16	0.15	0.65	12.96	-6.07	0.19	6.26	-1.08	296.27	98.16	-7.59	0.00	
	6	0.91	0.00	0.00	1.32	0.00	0.00	1.32	0.81	7.30		6	3	2.05	4.90	16.74	0.17	1.88	0.00	0.34	0.81	-1.15	0.00	0.70	0.02	0.07	0.75	7.30	0.09	0.39	7.77	-7.03	0.22	7.24	-6.51	289.76	97.77	-6.51	0.00	
	1	0.03	0.00	0.00	0.04	0.00	0.00	0.04	0.04	0.38	Mar	1	5	18.86	4.70	16.55	0.31	18.55	0.00	0.57	0.04	-0.61	0.00	7.28	0.22	0.64	7.70	0.38	0.15	0.65	1.17	6.53	0.00	0.00	1.93	307.69	98.85	0.00	0.00	
	2	0.03	0.00	0.00	0.04	0.00	0.00	0.04	0.04	0.38		2	5	23.22	4.70	17.08	0.33	22.90	0.00	0.57	0.04	-1.17	0.00	10.55	0.65	0.79	21.85	0.38	0.15	0.65	1.17	20.68	0.00	0.00	11.12	318.81	99.50	0.00	0.00	
	3	0.03	0.00	0.00	0.04	0.00	0.00	0.04	0.04	0.38		3	5	49.77	4.70	17.41	0.33	49.44	0.00	0.57	0.04	-48.83	0.00	48.83	48.83	16.41	1.96	1.68	64.96	0.38	0.15	0.65	1.17	63.79	0.00	0.00	318.81	99.50	0.00	48.83
	4	0.25	0.00	0.00	0.36	0.00	0.00	0.36	0.36	3.29		4	5	11.11	4.70	17.41	0.33	10.78	0.00	0.57	0.36	9.85	9.85	8.81	0.56	0.38	18.48	3.29	0.15	0.65	4.08	14.39	0.00	0.00	-0.00	318.81	99.50	0.00	9.85	
	5	0.25	0.00	0.00	0.36	0.00	0.00	0.36	0.36	3.29		5	5	13.61	4.70	17.41	0.33	13.28	0.00	0.57	0.36	12.35	12.35	6.11	0.55	0.46	18.36	3.29	0.15	0.65	4.08	14.28	0.00	0.00	-0.00	318.81	99.50	0.00	12.35	
	6	0.25	0.00	0.00	0.36	0.00	0.00	0.36	0.44	3.95		6	6	6.93	4.70	17.41	0.39	6.54	0.00	0.57	0.44	5.41	5.41	3.07	0.25	0.23	8.46	3.95	0.17	0.78	4.90	3.56	0.00	0.00	-0.00	318.81	99.50	0.00	5.41	
	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Apr	1	5	27.90	5.10	17.41	0.36	27.54	0.00	0.57	0.00	26.97	26.97	3.15	0.90	0.94	30.16	0.00	0.15	0.65	0.79	29.37	0.00	0.00	-0.00	318.81	99.50	0.00	26.97	
	2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		2	5	31.42	5.10	17.41	0.36	31.06	0.00	0.57	0.00	30.49	30.49	4.62	1.05	1.06	35.12	0.00	0.15	0.65	0.79	34.33	0.00	0.00	0.00	318.81	99.50	0.00	30.49	
	3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		3	5	16.83	5.10	17.41	0.36	16.47	0.00	0.57	0.00	15.90	15.90	7.07	0.69	0.57	22.85	0.00	0.15	0.65	0.79	22.06	0.00	0.00	-0.00	318.81	99.50	0.00	15.90	
	4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		4	5	33.19	5.10	17.41	0.36	32.83	0.00	0.57	0.00	32.26	32.26	8.03	1.21	1.12	40.20	0.00	0.15	0.65	0.79	39.41	0.00	0.00	0.00	318.81	99.50	0.00	32.26	
	5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		5	5	38.95	5.10	17.41	0.36	38.59	0.00	0.57	0.00	38.02	38.02	2.23	1.21	1.32	40.36	0.00	0.15	0.65	0.79	39.56	0.00	0.00	-0.00	318.81	99.50	0.00	38.02	
	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		6	5	4.69	5.10	17.41	0.36	4.33	0.00	0.57	0.00	3.76	3.76	1.26	0.15	0.16	5.03	0.00	0.15	0.65	0.79	4.24	0.00	0.00	0.00	318.81	99.50	0.00	4.24	
	1	0.00	0.57	0.00	0.00	0.83	0.00	0.83	0.85	7.66	May	1	5	5.60	4.90	17.41	0.34	5.26	0.00	0.57	0.85	3.84	3.84	3.14	0.21	0.19	6.96	7.66	0.15	0.65	8.67	-1.71	0.05	1.76	-1.76	317.05	99.40	-1.76	2.08	
	2	0.00	0.57	0.00	0.00	0.83	0.00	0.83	0.85	7.66		2	3	19.67	4.90	16.74	0.34	19.33	0.00	0.57	0.85	16.15	16.15	4.83	0.63	0.67	21.02	7.66	0.15	0.65	8.67	12.65	0.00	0.00	-1.76	318.81	99.50	-2.09	16.15	
	3	0.00	0.57	0.00	0.00	0.83	0.00	0.83	0.85	7.66		3	5	7.66	4.90	17.41	0.34	7.32	0.00	0.57	0.85	5.90	5.90	5.69	0.35	0.26	11.50	7.66	0.15	0.65	8.67	2.83	0.00	0.00	-0.00	318.81	99.50	-5.67	5.90	
	4	0.00	0.79	0.00	0.00	1.14	0.00	1.14	1.17	10.54		4	5	9.59	4.90	17.41	0.34	9.25	0.00	0.57	1.17	7.51	7.51	5.69	0.45	0.32	14.96	10.54	0.15	0.65	11.55	3.41	0.00	0.00	-0.00	318.81	99.50	-6.89	7.51	
	5	0.00	0.79	0.00	0.00	1.14	0.00	1.14	1.17	10.54		5	5	11.37	4.90	17.41	0.34	11.03	0.00	0.57	1.17	9.29	9.29	2.42	0															

**Water Balance Analysis**

**Year 1974**

**I. Water Requirement**

Wet Paddy 100 %  
 Dry Paddy 100 %  
 Palawija 40 %

**II. Water Balance Calculation**

Initial Reservoir Volume 318.81 mcm  
 Initial Water Level EL. 99.45 m as of end of 1973

Month	No. of day	1-1		1-2				1-3		1-4		3. at Downstream of Bili-Bili Weir																								
		NFR (Net Field Requirement)		DR (Diversion Water Requirement)				Q -		Kampili (IRK)		1. at Dam Site						2. Upstream of Bili-Bili Weir						3. at Downstream of Bili-Bili Weir												
		w.paddy	d.paddy	palawija	w.paddy	d.paddy	palawija	total	BiliBili (IRB)	Kampili (IRK)	Inflow	Evaporation	Evaporation	Balance	Surplus Water From Dam	WTP at Bili-Bili	Bili-Bili Irrigation	Balance	Bili-Bili Outflow	Jenelata River	Channel Water Loss	Residual Basin	Total	Kampili-Bissua In.	WTP at Downstream	Other Use	Total	Balance	Channel Water Loss	Supply Water from Dam	Water Balance at Reservoir	Impound. Volume in Reservoir	Water level of Reservoir	Required Supply Water to Reservoir	Ineffct. Discharge from Dam	
		(%ha)	(%ha)	(%ha)	(%ha)	(%ha)	(%ha)	(mcm)	(mcm)	(mcm)	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	
Jan	1	0.03	0.00	0.00	0.04	0.00	0.04	0.04	0.39	59.92	4.30	17.41	0.30	59.62	59.62	0.57	0.04	59.00	59.00	31.12	2.70	2.03	89.45	0.39	0.15	0.65	1.19	88.26	0.00	0.00	0.00	318.81	99.50	0.00	59.00	
	2	0.03	0.00	0.00	0.04	0.00	0.04	0.04	0.39	37.18	4.30	17.41	0.30	36.88	36.88	0.57	0.04	36.26	36.26	19.44	1.67	1.26	55.29	0.39	0.15	0.65	1.19	54.11	0.00	0.00	0.00	318.81	99.50	0.00	36.26	
	3	0.03	0.00	0.00	0.04	0.00	0.04	0.04	0.39	10.53	4.30	17.41	0.30	10.23	10.23	0.57	0.04	9.61	9.61	3.57	0.40	0.36	13.15	0.39	0.15	0.65	1.19	11.96	0.00	0.00	0.00	318.81	99.50	0.00	9.61	
	4	1.00	0.00	0.00	1.45	0.00	1.45	1.48	13.35	4.72	4.30	17.41	0.30	4.42	4.42	0.57	1.48	2.37	2.37	1.34	0.11	0.16	3.76	13.35	0.15	0.65	14.14	-10.38	0.32	10.70	-10.70	308.11	98.87	-32.35	0.00	
	5	1.00	0.00	0.00	1.45	0.00	1.45	1.48	13.35	3.27	4.30	17.09	0.29	2.98	0.00	0.57	1.48	-2.05	0.00	1.25	0.04	0.11	1.32	13.35	0.15	0.65	14.14	-12.82	0.40	13.21	-12.29	295.82	98.14	-28.44	0.00	
	6	1.00	0.00	0.00	1.45	0.00	1.45	1.77	16.02	2.68	4.30	16.73	0.25	2.33	0.00	0.69	1.77	-2.46	0.00	1.37	0.04	0.09	1.42	16.02	0.17	0.78	18.78	-15.55	0.48	16.03	-16.25	279.67	97.15	-16.15	0.00	
Feb	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.94	4.20	16.25	0.27	3.67	0.00	0.57	0.00	-0.57	0.00	1.05	0.03	0.13	1.15	0.00	0.15	0.65	0.79	0.35	0.00	3.09	282.76	97.34	0.00	0.00		
	2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.21	4.20	16.34	0.27	7.94	0.00	0.57	0.00	-0.57	0.00	2.23	0.07	0.28	2.44	0.00	0.15	0.65	0.79	1.65	0.00	0.00	7.36	290.13	97.79	0.00	0.00	
	3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.16	4.20	16.56	0.28	90.88	62.20	0.57	0.00	61.63	61.63	40.31	3.06	3.08	101.96	0.00	0.15	0.65	0.79	101.17	0.00	0.00	28.68	318.81	99.50	0.00	61.63	
	4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	51.99	4.20	17.41	0.29	51.70	51.70	0.57	0.00	51.13	51.13	28.18	2.38	1.76	78.69	0.00	0.15	0.65	0.79	77.89	0.00	0.00	0.00	318.81	99.50	0.00	51.13	
	5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	29.30	4.20	17.41	0.29	29.01	29.01	0.57	0.00	28.44	28.44	10.16	1.16	0.99	38.43	0.00	0.15	0.65	0.79	37.63	0.00	0.00	0.00	318.81	99.50	0.00	28.44	
	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	21.82	4.90	17.41	0.18	21.64	21.64	0.34	0.00	21.30	21.30	6.38	0.83	0.74	27.59	0.00	0.00	0.39	0.48	27.11	0.00	0.00	0.00	318.81	99.50	0.00	21.30	
	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	158.40	4.70	17.41	0.33	158.07	158.07	0.57	0.00	157.50	157.50	83.24	7.22	5.36	238.88	0.00	0.15	0.65	0.79	238.08	0.00	0.00	0.00	318.81	99.50	0.00	157.50	
	8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	89.33	4.70	17.41	0.33	89.00	89.00	0.57	0.00	88.43	88.43	39.03	3.82	3.02	126.66	0.00	0.15	0.65	0.79	125.86	0.00	0.00	0.00	318.81	99.50	0.00	88.43	
	9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	77.39	4.70	17.41	0.33	77.06	77.06	0.57	0.00	76.49	76.49	31.46	3.24	2.62	107.33	0.00	0.15	0.65	0.79	106.54	0.00	0.00	0.00	318.81	99.50	0.00	76.49	
	10	0.01	0.00	0.00	0.01	0.00	0.01	0.01	0.08	99.32	4.70	17.41	0.33	98.99	98.99	0.57	0.01	98.41	98.41	62.37	4.82	3.56	159.32	0.08	0.15	0.65	0.87	158.45	0.00	0.00	0.00	318.81	99.50	0.00	98.41	
	11	0.01	0.00	0.00	0.01	0.00	0.01	0.01	0.08	9.63	4.70	17.41	0.33	9.30	9.30	0.57	0.01	8.72	8.72	5.17	0.42	0.33	13.80	0.08	0.15	0.65	0.87	12.93	0.00	0.00	0.00	318.81	99.50	0.00	8.72	
	12	0.01	0.00	0.00	0.01	0.00	0.01	0.01	0.09	13.60	4.70	17.41	0.39	13.21	13.21	0.69	0.01	12.51	12.51	4.64	0.51	0.46	17.10	0.09	0.17	0.78	1.05	16.05	0.00	0.00	0.00	318.81	99.50	0.00	12.51	
	13	0.01	0.01	0.00	0.01	0.02	0.03	0.03	0.26	5.24	5.10	17.41	0.36	4.88	4.88	0.57	0.03	4.28	4.28	1.89	0.19	0.18	6.17	0.26	0.15	0.65	1.05	5.12	0.00	0.00	0.00	318.81	99.50	0.00	4.28	
	14	0.01	0.01	0.00	0.01	0.02	0.03	0.03	0.26	34.40	5.10	17.41	0.36	34.04	34.04	0.57	0.03	33.44	33.44	5.78	1.18	1.16	39.21	0.26	0.15	0.65	1.05	38.15	0.00	0.00	0.00	318.81	99.50	0.00	33.44	
	15	0.01	0.01	0.00	0.01	0.02	0.03	0.03	0.26	37.38	5.10	17.41	0.36	37.02	37.02	0.57	0.03	36.42	36.42	14.82	1.54	1.26	50.97	0.26	0.15	0.65	1.05	49.91	0.00	0.00	0.00	318.81	99.50	0.00	36.42	
	16	0.09	0.46	0.00	0.13	0.67	0.80	0.80	7.36	22.18	5.10	17.41	0.36	21.82	21.82	0.57	0.81	20.44	20.44	12.89	1.00	0.75	33.08	7.36	0.15	0.65	8.16	24.92	0.00	0.00	0.00	318.81	99.50	0.00	20.44	
	17	0.09	0.46	0.00	0.13	0.67	0.80	0.80	7.36	3.88	5.10	17.41	0.36	3.52	3.52	0.57	0.81	2.14	2.14	2.03	0.13	0.13	4.17	7.36	0.15	0.65	8.16	-3.98	0.12	4.11	-4.11	314.70	99.26	-122.93	0.00	
	18	0.09	0.46	0.00	0.13	0.67	0.80	0.80	7.36	2.65	5.10	17.29	0.35	2.30	0.00	0.57	0.81	-1.39	0.00	1.63	0.05	0.09	1.67	7.36	0.15	0.65	8.16	-6.48	0.20	6.68	-5.77	308.93	98.92	-124.49	0.00	
	19	0.00	0.84	0.00	0.00	1.21	0.00	1.21	11.19	2.73	4.90	17.12	0.34	2.39	0.00	0.57	1.24	-1.81	0.00	1.50	0.05	0.09	1.55	11.19	0.15	0.65	12.20	-10.65	0.33	10.68	-10.40	298.53	98.30	-118.72	0.00	
	20	0.00	0.84	0.00	0.00	1.21	0.00	1.21	11.19	8.07	4.90	16.81	0.33	7.71	0.00	0.57	1.24	-1.81	0.00	6.38	0.09	0.27	8.33	11.19	0.15	0.65	8.16	-12.20	-8.77	9.15	-3.22	295.32	97.81	-102.62	0.00	
	21	0.00	0.84	0.00	0.00	1.21	0.00	1.21	11.19	2.70	4.90	16.71	0.33	2.37	0.00	0.57	1.24	-1.81	0.00	2.71	0.08	0.09	2.72	11.19	0.15	0.65	8.16	12.20	-9.48	0.29	9.77	-9.21	286.11	97.55	-105.10	0.00
	22	0.00	0.80	0.00	0.00	1.17	0.00	1.17	10.75	9.47	4.90	16.44	0.32	9.15	0.00	0.57	1.19	-1.76	0.00	5.76	0.17	0.32	5.91	10.75	0.15	0.65	8.16	11.76	-5.85	0.18	6.03	-1.26	287.46	97.63	-95.89	0.00
	23	0.00	0.80	0.00	0.00	1.17	0.00	1.17	10.75	1.97	4.90	16.48	0.32	1.65	0.00	0.57	1.19	-1.76	0.00	1.27	0.04	0.07	1.30	10.75	0.15	0.65	8.16	11.76	-10.46	0.32	10.78	-10.89	276.57	96.96	-97.25	0.00
	24	0.00	0.80	0.00	0.00	1.17	0.00	1.17	14.3	21.24	4.90	16.16	0.38	20.86	0.00	0.69	1.43	-2.11	0.00	10.50	0.32	0.72	13.91	12.90	0.17	1.04	14.11	-3.20	0.10	3.30	15.44	292.01	97.91	-86.35	0.00	
	25	0.00	0.95	0.00	0.00	1.38	0.0																													

**Water Balance Analysis**

**Year 1975**

**I. Water Requirement**

Wet Paddy 100 %  
Dry Paddy 100 %  
Palawija 40 %

**II. Water Balance Calculation**

Initial Reservoir Volume 318.81 mcm  
Initial Water Level EL. 99.45 m as of end of 1974

Month	No. of day	1-1		1-2				1-3		1-4		3. at Downstream of Bili-Bili Weir																													
		NFR (Net Field Requirement)		DR (Diversion Water Requirement)				Q -	Q -	1. at Dam Site												2. Upstream of Bili-Bili Weir												3. at Downstream of Bili-Bili Weir							
		w.paddy	d.paddy	palawija	w.paddy	d.paddy	palawija	total	BiliBili (IRB)	Kampili (IRK)	Evaporation				Balance	Surplus Water From Dam	Water Demand				Balance	Inflow				Water Demand				Total				Balance	Channel Water Loss	Supply Water from Dam	Water Balance at Reservoir	Impound. Volume in Reservoir	Water level of Reservoir	Required Supply Water to Reservoir	Ineffct. Discharge from Dam
		(%ha)	(%ha)	(%ha)	(%ha)	(%ha)	(%ha)	(mcm)	(mcm)	(mcm)	mm/day	unit evapo.	Reservoir Area	Evapo-ration	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm					
Jan	1	0.12	0.00	0.00	0.17	0.00	0.00	0.17	0.17	1.56	Jan	1	5	12.46	4.30	17.41	0.30	12.16	12.16	0.57	0.17	11.42	11.42	5.52	0.51	0.42	16.85	1.56	0.15	0.65	2.36	14.49	0.00	0.00	-0.00	318.81	99.50	0.00	11.42		
	2	0.12	0.00	0.00	0.17	0.00	0.00	0.17	0.17	1.56		2	5	7.05	4.30	17.41	0.30	6.75	6.75	0.57	0.17	6.01	6.01	4.45	0.31	0.24	10.38	1.56	0.15	0.65	2.36	8.02	0.00	0.00	-0.00	318.81	99.50	0.00	6.01		
	3	0.12	0.00	0.00	0.17	0.00	0.00	0.17	0.17	1.56		3	5	51.38	4.30	17.41	0.30	51.08	51.08	0.57	0.17	50.34	50.34	17.76	2.04	1.74	67.79	1.56	0.15	0.65	2.36	65.43	0.00	0.00	-0.00	318.81	99.50	0.00	50.34		
	4	0.19	0.00	0.00	0.27	0.00	0.00	0.27	0.27	2.48		4	5	28.20	4.30	17.41	0.30	27.90	27.90	0.57	0.27	27.05	27.05	16.89	1.32	0.95	43.58	2.48	0.15	0.65	3.27	40.30	0.00	0.00	-0.00	318.81	99.50	0.00	27.05		
	5	0.19	0.00	0.00	0.27	0.00	0.00	0.27	0.27	2.48		5	5	26.34	4.30	17.41	0.30	26.04	26.04	0.57	0.27	25.19	25.19	9.24	1.03	0.89	34.29	2.48	0.15	0.65	3.27	31.02	0.00	0.00	-0.00	318.81	99.50	0.00	25.19		
	6	0.19	0.00	0.00	0.27	0.00	0.00	0.27	0.27	2.48		6	6	28.41	4.30	17.41	0.30	28.05	28.05	0.69	0.33	27.03	27.03	17.43	1.33	0.96	44.09	2.97	0.17	0.78	3.93	40.16	0.00	0.00	-0.00	318.81	99.50	0.00	27.03		
Feb	1	0.01	0.00	0.00	0.02	0.00	0.00	0.02	0.02	0.17	Feb	1	5	13.58	4.20	17.41	0.29	13.29	13.29	0.57	0.02	12.70	12.70	8.38	0.63	0.46	20.90	0.17	0.15	0.65	0.96	19.95	0.00	0.00	-0.00	318.81	99.50	0.00	12.70		
	2	0.01	0.00	0.00	0.02	0.00	0.00	0.02	0.02	0.17		2	5	40.32	4.20	17.41	0.29	40.03	40.03	0.57	0.02	39.44	39.44	24.97	1.93	1.36	63.83	0.17	0.15	0.65	0.96	62.88	0.00	0.00	-0.00	318.81	99.50	0.00	39.44		
	3	0.01	0.00	0.00	0.02	0.00	0.00	0.02	0.02	0.17		3	5	50.34	4.20	17.41	0.29	50.05	50.05	0.57	0.02	49.46	49.46	18.05	2.03	1.70	67.18	0.17	0.15	0.65	0.96	66.22	0.00	0.00	-0.00	318.81	99.50	0.00	49.46		
	4	0.35	0.00	0.00	0.50	0.00	0.00	0.50	0.51	4.64		4	5	36.07	4.20	17.41	0.29	35.78	35.78	0.57	0.51	34.69	34.69	12.07	1.40	1.22	46.58	0.64	0.15	0.65	5.44	41.14	0.00	0.00	-0.00	318.81	99.50	0.00	34.69		
	5	0.35	0.00	0.00	0.50	0.00	0.00	0.50	0.51	4.64		5	5	27.56	4.20	17.41	0.29	27.27	27.27	0.57	0.51	26.18	26.18	3.93	0.90	0.93	30.14	4.64	0.15	0.65	5.44	24.70	0.00	0.00	-0.00	318.81	99.50	0.00	26.18		
	6	0.35	0.00	0.00	0.50	0.00	0.00	0.50	0.51	4.64		6	3	17.69	4.90	17.41	0.34	17.51	17.51	0.34	0.31	16.86	16.86	12.02	0.87	0.60	28.62	2.79	0.09	0.39	3.26	25.35	0.00	0.00	-0.00	318.81	99.50	0.00	16.86		
Mar	1	0.01	0.00	0.00	0.01	0.00	0.00	0.01	0.01	0.12	Mar	1	5	17.00	4.70	17.41	0.33	16.67	16.67	0.57	0.01	16.09	16.09	9.08	0.76	0.57	24.98	0.12	0.15	0.65	0.91	24.07	0.00	0.00	-0.00	318.81	99.50	0.00	16.09		
	2	0.01	0.00	0.00	0.01	0.00	0.00	0.01	0.01	0.12		2	5	54.47	4.70	17.41	0.33	54.14	54.14	0.57	0.01	53.56	53.56	18.66	2.17	1.84	71.89	0.12	0.15	0.65	0.91	70.98	0.00	0.00	-0.00	318.81	99.50	0.00	53.56		
	3	0.01	0.00	0.00	0.01	0.00	0.00	0.01	0.01	0.12		3	5	28.41	4.70	17.41	0.33	28.08	28.08	0.57	0.01	27.50	27.50	19.92	1.42	0.96	46.95	0.12	0.15	0.65	0.91	46.04	0.00	0.00	-0.00	318.81	99.50	0.00	27.50		
	4	0.22	0.00	0.00	0.32	0.00	0.00	0.32	0.33	2.96		4	5	25.49	4.70	17.41	0.33	25.16	25.16	0.57	0.33	24.26	24.26	11.70	1.08	0.86	35.74	2.96	0.15	0.65	3.75	31.99	0.00	0.00	-0.00	318.81	99.50	0.00	24.26		
	5	0.22	0.00	0.00	0.32	0.00	0.00	0.32	0.33	2.96		5	5	19.34	4.70	17.41	0.33	19.01	19.01	0.57	0.33	18.11	18.11	11.61	0.67	0.74	0.65	24.69	2.96	0.15	0.65	3.75	20.93	0.00	0.00	-0.00	318.81	99.50	0.00	18.11	
	6	0.26	0.00	0.00	0.32	0.00	0.00	0.32	0.39	3.55		6	6	11.13	4.70	17.41	0.39	10.74	10.74	0.69	0.39	9.66	9.66	3.26	0.39	0.38	12.91	3.55	0.17	0.78	4.51	8.40	0.00	0.00	-0.00	318.81	99.50	0.00	9.66		
Apr	1	0.26	0.18	0.00	0.37	0.26	0.00	0.63	0.64	5.78	Apr	1	5	10.13	5.10	17.41	0.36	9.77	9.77	0.57	0.64	8.56	8.56	5.49	0.42	0.34	13.97	5.78	0.15	0.65	6.57	7.40	0.00	0.00	-0.00	318.81	99.50	0.00	8.56		
	2	0.26	0.18	0.00	0.37	0.26	0.00	0.63	0.64	5.78		2	5	18.46	5.10	17.41	0.36	18.10	18.10	0.57	0.64	16.89	16.89	14.19	0.93	0.62	30.77	5.78	0.15	0.65	6.57	24.20	0.00	0.00	-0.00	318.81	99.50	0.00	16.89		
	3	0.26	0.18	0.00	0.37	0.26	0.00	0.63	0.64	5.78		3	5	10.35	5.10	17.41	0.36	9.99	9.99	0.57	0.64	8.78	8.78	4.22	0.39	0.35	12.96	5.78	0.15	0.65	6.57	6.39	0.00	0.00	-0.00	318.81	99.50	0.00	8.78		
	4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		4	5	65.42	5.10	17.41	0.36	65.06	65.06	0.57	0.00	64.49	64.49	18.79	2.50	2.21	82.99	0.00	0.15	0.65	0.79	82.20	0.00	0.00	-0.00	318.81	99.50	0.00	64.49		
	5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		5	5	111.13	5.10	17.41	0.36	110.77	110.77	0.57	0.00	110.20	110.20	16.95	3.81	3.76	127.10	0.00	0.15	0.65	0.79	126.30	0.00	0.00	-0.00	318.81	99.50	0.00	110.20		
	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		6	5	23.96	5.10	17.41	0.36	23.60	23.60	0.57	0.00	23.03	23.03	7.97	0.93	0.81	30.88	0.00	0.15	0.65	0.79	30.09	0.00	0.00	-0.00	318.81	99.50	0.00	23.03		
May	1	0.00	0.68	0.00	0.00	0.00	0.00	0.99	1.01	9.14	May	1	5	15.79	4.90	17.41	0.34	15.45	15.45	0.57	1.01	13.87	13.87	7.99	0.64	0.53	21.24	9.14	0.15	0.65	10.15	11.09	0.00	0.00	-0.00	318.81	99.50	0.00	13.87		
	2	0.00	0.68	0.00	0.00	0.00	0.00	0.99	1.01	9.14		2	3	18.24	4.90	17.41	0.34	17.91	17.91	0.57	0.71	16.32	16.32	7.47	0.71	0.61	23.69	9.14	0.15	0.65	10.15	13.54	0.00	0.00	-0.00	318.81	99.50	0.00	16.32		
	3	0.00	0.68	0.00	0.00	0.00	0.00	0.99	1.01	9.14		3	5	8.01	4.90	17.41	0.34	7.67	7.67	0.57	1.01	6.09	6.09	5.21	0.34	0.27	11.23	9.14	0.15	0.65	10.15	10.07	0.00	0.00	-0.00	318.81	99.50	0.00	10.07		
	4	0.00	0.91	0.00	0.00	0.00	0.00	1.32	1.35	12.20		4	5	13.00	4.90	17.41	0.34	12.66	12.66	0.57	1.35	10.74	10.74	5.33	0.48	0.44	16.02	12.20	0.15	0.65	13.21	2.82	0.00	0.00	-0.00	318.81	99.50	0.00	10.74		
	5	0.00	0.91	0.00	0.00																																				

**Water Balance Analysis**

Year 1976

**I. Water Requirement**

Wet Paddy 100 %  
 Dry Paddy 100 %  
 Palawija 40 %

**II. Water Balance Calculation**

Initial Reservoir Volume 318.81 mcm  
 Initial Water Level EL. 99.45 m as of end of 1975

Month	No. of day	1-1		1-2				1-3		1-4		3. at Downstream of Bili-Bili Weir																																			
		NFR (Net Field Requirement)		DR (Diversion Water Requirement)				Q -	Q -	Water Demand																																					
		w.paddy	d.paddy	palawija	w.paddy	d.paddy	palawija	total	Bilibili (IRB)	Kampili (IRK)	Water Demand																																				
		(l/s/ha)	(l/s/ha)	(l/s/ha)	(l/s/ha)	(l/s/ha)	(l/s/ha)	(l/s/ha)	(mcm)	(mcm)	Water Demand																																				
1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		22		23		24	
1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		22		23		24	
1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		22		23		24	
1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		22		23		24	
1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		22		23		24	
1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		22		23		24	
1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		22		23		24	
1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		22		23		24	
1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		22		23		24	
1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		22		23		24	
1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		22		23		24	
1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		22		23		24	
1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		22		23		24	
1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		22		23		24	
1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		22		23		24	
1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		22		23		24	
1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		22		23		24	
1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		22		23		24	
1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		22		23		24	
1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		22		23		24	
1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		22		23		24	
1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		22		23		24	
1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		22		23		24	
1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		22		23		24	
1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		22		23		24	
1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		22		23		24	
1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		22		23		24	
1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		22		23		24	
1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		22		23		24	
1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		22		23		24	
1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		22		23		24	
1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		22		23		24	
1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		22		23		24	
1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		22		23		24	
1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		22		23		24	
1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		22		23		24	
1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		22		23		24	
1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		22		23		24	
1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		22		23		24	
1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		22		23		24	
1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		22		23		24	
1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		22		23		24	
1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		22		23		24	
1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		22		23		24	
1		2		3		4		5		6		7		8		9		10		11		12</																									

**Water Balance Analysis**

Year 1977

**I. Water Requirement**

Wet Paddy 100 %  
Dry Paddy 100 %  
Palawija 40 %

**II. Water Balance Calculation**

Initial Reservoir Volume 229.38 mcm  
Initial Water Level EL. 93.84 m as of end of 1976

Month	No. of day	1-1		1-2				1-3		1-4		3. at Downstream of Bili-Bili Weir																												
		NFR (Net Field Requirement)		DR (Diversion Water Requirement)				Q -		K -		1. at Dam Site						2. Upstream of Bili-Bili Weir						Water Demand												Water Balance at Reservoir	Impound. Volume in Reservoir	Water level of Reservoir	Required Supply Water to Reservoir	Ineffct. Discharge from Dam
		w.paddy	d.paddy	palawija	w.paddy	d.paddy	palawija	total	BiliBili (IRB)	Kampili (IRK)	Inflow	Evaporation	Reservoir Area	Evapo-ration	Balance	Surplus Water From Dam	WTP at Bili-Bili	Bili-Bili Irrigation	Balance	Bili-Bili Outflow	Jenelata River	Channel Water Loss	Residual Basin	Total	Kampili-Bissua Ir.	WTP at Downstre am	Other Use	Total	Balance	Channel Water Loss	Supply Water from Dam									
		(%ha)	(%ha)	(%ha)	(%ha)	(%ha)	(%ha)	(%ha)	(mcm)	(mcm)	mcm	mm/day	km2	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm					
Jan	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	41.99	4.30	14.70	0.25	41.74	0.00	0.57	0.00	-0.57	0.00	17.19	0.52	1.42	18.09	0.00	0.15	0.65	0.79	17.30	0.00	0.00	-41.17	229.38	93.90	0.00	0.00					
	2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	76.12	4.30	14.70	0.25	75.87	0.00	0.57	0.00	-0.57	0.00	38.11	1.14	2.57	39.54	0.00	0.15	0.65	0.79	38.74	0.00	0.00	-75.30	304.68	98.67	0.00	0.00					
	3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	36.64	4.30	16.99	0.29	36.35	0.00	0.57	0.00	0.00	21.64	21.64	1.41	1.14	1.24	38.15	0.00	0.15	0.65	0.79	37.36	0.00	0.00	-14.13	318.81	99.50	0.00	21.64				
	4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	30.59	4.30	17.41	0.30	30.29	0.00	0.57	0.00	0.00	29.72	29.72	4.05	1.01	1.03	33.79	0.00	0.15	0.65	0.79	32.99	0.00	0.00	-0.00	318.81	99.50	0.00	29.72				
	5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	140.61	4.30	17.41	0.30	140.31	0.00	0.57	0.00	0.00	139.74	139.74	4.35	5.55	4.76	184.30	0.00	0.15	0.65	0.79	183.50	0.00	0.00	-0.00	318.81	99.50	0.00	139.74				
	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.84	4.30	17.41	0.36	11.48	0.00	0.57	0.00	0.00	10.79	10.79	3.18	0.42	0.40	13.95	0.00	0.17	0.78	0.95	13.00	0.00	0.00	-0.00	318.81	99.50	0.00	10.79				
Feb	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	27.72	4.20	17.41	0.29	27.43	0.00	0.57	0.00	0.00	26.86	26.86	3.02	0.90	0.94	29.92	0.00	0.15	0.65	0.79	29.13	0.00	0.00	-0.00	318.81	99.50	0.00	26.86				
	2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	79.85	4.20	17.41	0.29	79.56	0.00	0.57	0.00	0.00	78.99	78.99	15.47	2.83	2.70	94.32	0.00	0.15	0.65	0.79	93.53	0.00	0.00	-0.00	318.81	99.50	0.00	78.99				
	3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	150.79	4.20	17.41	0.29	150.50	0.00	0.57	0.00	0.00	149.93	149.93	55.56	6.16	5.10	204.42	0.00	0.15	0.65	0.79	203.63	0.00	0.00	-0.00	318.81	99.50	0.00	149.93				
	4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	101.44	4.20	17.41	0.29	101.15	0.00	0.57	0.00	0.00	100.58	100.58	81.44	5.46	3.43	179.98	0.00	0.15	0.65	0.79	179.19	0.00	0.00	-0.00	318.81	99.50	0.00	100.58				
	5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	101.72	4.20	17.41	0.29	101.43	0.00	0.57	0.00	0.00	100.86	100.86	46.85	4.43	3.44	146.71	0.00	0.15	0.65	0.79	145.92	0.00	0.00	-0.00	318.81	99.50	0.00	100.86				
	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	48.80	4.20	17.41	0.18	48.62	0.00	0.34	0.00	0.00	48.28	48.28	19.46	2.03	1.65	67.36	0.00	0.09	0.39	0.48	66.88	0.00	0.00	-0.00	318.81	99.50	0.00	48.28				
	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	19.22	4.70	17.41	0.33	18.89	0.00	0.57	0.00	0.00	17.95	17.95	12.21	0.90	0.65	29.90	0.00	0.15	0.65	4.18	25.73	0.00	0.00	-0.00	318.81	99.50	0.00	17.95				
	8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	47.81	4.70	17.41	0.33	47.48	0.00	0.57	0.00	0.00	46.54	46.54	20.33	2.01	1.62	66.48	0.00	0.15	0.65	4.18	62.30	0.00	0.00	-0.00	318.81	99.50	0.00	46.54				
	9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24.95	4.70	17.41	0.33	24.62	0.00	0.57	0.00	0.00	23.68	23.68	14.06	1.13	0.84	37.44	0.00	0.15	0.65	4.18	33.27	0.00	0.00	-0.00	318.81	99.50	0.00	23.68				
	10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	30.15	4.70	17.41	0.33	29.82	0.00	0.57	0.00	0.00	29.17	29.17	13.94	1.29	1.02	42.84	0.00	0.15	0.65	4.19	41.35	0.00	0.00	-0.00	318.81	99.50	0.00	29.17				
	11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.85	4.70	17.41	0.33	16.52	0.00	0.57	0.00	0.00	15.87	15.87	10.31	0.79	0.57	25.97	0.00	0.15	0.65	4.19	24.48	0.00	0.00	-0.00	318.81	99.50	0.00	15.87				
	12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	28.94	4.70	17.41	0.39	28.55	0.00	0.69	0.00	0.00	27.77	27.77	15.88	1.31	0.98	43.32	0.83	0.17	0.78	1.79	41.53	0.00	0.00	-0.00	318.81	99.50	0.00	27.77				
Apr	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15.96	5.10	17.41	0.36	15.60	0.00	0.57	0.00	0.00	15.03	15.03	8.01	0.69	0.54	22.89	0.00	0.15	0.65	0.79	22.10	0.00	0.00	-0.00	318.81	99.50	0.00	15.03				
	2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	51.36	5.10	17.41	0.36	51.00	0.00	0.57	0.00	0.00	50.43	50.43	11.39	1.85	1.74	61.71	0.00	0.15	0.65	0.79	60.91	0.00	0.00	-0.00	318.81	99.50	0.00	50.43				
	3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	57.71	5.10	17.41	0.36	57.35	0.00	0.57	0.00	0.00	56.78	56.78	34.45	2.74	1.95	90.45	0.00	0.15	0.65	0.79	89.65	0.00	0.00	-0.00	318.81	99.50	0.00	56.78				
	4	0.20	0.67	0.00	0.30	0.97	0.00	1.27	1.29	13.39	5.10	17.41	0.36	13.03	0.00	0.57	0.00	0.00	12.29	11.17	11.17	6.90	0.54	0.45	17.98	11.69	0.15	0.65	12.48	5.50	0.00	0.00	-0.00	318.81	99.50	0.00	11.17			
	5	0.20	0.67	0.00	0.30	0.97	0.00	1.27	1.29	5.61	5.10	17.41	0.36	5.25	0.00	0.57	0.00	0.00	4.29	3.39	3.39	3.57	0.21	0.19	6.94	11.69	0.15	0.65	12.48	-5.54	0.17	5.71	-5.71	313.10	99.17	-210.44	0.00			
	6	0.20	0.67	0.00	0.30	0.97	0.00	1.27	1.29	8.79	5.10	17.41	0.35	8.44	0.00	0.57	0.00	0.00	7.86	7.86	2.01	0.09	0.30	3.09	11.69	0.15	0.65	12.48	-9.40	0.29	9.69	-3.97	309.12	98.93	-213.97	0.00				
May	1	0.00	0.80	0.00	0.00	1.16	0.00	1.16	1.18	7.69	4.90	17.24	0.34	7.35	0.00	0.57	0.00	0.00	6.48	6.48	1.18	-1.75	0.00	4.23	0.13	0.26	4.36	10.67	0.15	0.65	11.68	-7.32	0.23	7.55	-1.95	307.18	98.82	-212.99	0.00	
	2	0.00	0.80	0.00	0.00	1.16	0.00	1.16	1.18	7.40	4.90	17.24	0.34	7.07	0.00	0.57	0.00	0.00	6.28	6.28	1.18	-1.75	0.00	4.23	0.13	0.26	4.36	10.67	0.15	0.65	11.68	-8.98	0.26	7.94	-3.94	306.28	98.74	-212.04	0.00	
	3	0.00	0.80	0.00	0.00	1.16	0.00	1.16	1.18	2.57	4.90	16.95	0.33	2.24	0.00	0.57	0.00	0.00	1.88	1.88	1.18	-1.75	0.00	1.67	0.05	0.09	1.71	10.67	0.15	0.65	11.68	-9.97	0.31	10.28	-9.80	293.44	97.99	-207.10	0.00	
	4	0.00	0.94	0.00	0.00	1.36	0.00	1.36	1.39	5.01	4.90	16.66	0.33	4.68	0.00	0.57	0.00	0.00	4.18	4.18	1.13	0.17	0.17	4.22	12.57	0.15	0.65	13.58	-9.35	0.29	9.64	-6.92	286.52	97.57	-197.30	0.00				
	5	0.00	0.94	0.00	0.00	1.36	0.00	1.36	1.39	6.73	4.90	16.45	0.32	6.41	0.00	0.57	0.00	0.00	5.89	5.89	1.21	0.23	0.23	6.91	12.57	0.15	0.65	13.58	-6.66	0.21	6.87	-2.42	284.09	97.42	-190.38	0.00				
	6	0.00	0.94	0.00	0.00	1.																																		









**Water Balance Analysis**

**Year 1981**

**I. Water Requirement**

Wet Paddy	100 %
Dry Paddy	100 %
Palawija	40 %

**II. Water Balance Calculation**

Initial Reservoir Volume 318.81 mcm  
 Initial Water Level EL. 99.45 m as of end of 1980

Month	No. of day	1. at Dam Site										2. Upstream of Bili-Bili Weir										3. at Downstream of Bili-Bili Weir										Water Balance at Reservoir	Impound. Volume in Reservoir	Water level of Reservoir	Required Supply Water to Reservoir	Ineffct. Discharge from Dam	
		Inflow					Balance	Evaporation					Surplus Water From Dam	Water Demand					Inflow					Balance	Channel Water Loss	Supply Water from Dam											
		Jeneberan g River		unit evapo.		Reservoir Area		Evapo-ration		WTP at Bili-Bili		Bili-Bili Irrigation		Bili-Bili Outflow		Jenelata River		Residual Basin		Total		Kampili-Bissua Ir.					WTP at Downstre am		Other Use								
		mcm	mm/day	km2	mcm	mcm		mcm	mcm	mcm	mcm	mcm		mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm				mcm	mcm	mcm	mcm	mcm						mcm
Jan	1	5	25.53	4.30	17.41	0.30	25.23	25.23	0.57	0.00	24.66	24.66	10.98	1.07	0.49	35.06	0.00	0.15	0.65	0.79	34.27	0.00	0.00	-0.00	318.81	99.50	0.00	24.66									
	2	5	82.41	4.30	17.41	0.30	82.11	82.11	0.57	0.00	81.54	81.54	41.52	3.69	2.46	121.83	0.00	0.15	0.65	0.79	121.03	0.00	0.00	-0.00	318.81	99.50	0.00	81.54									
	3	5	88.78	4.30	17.41	0.30	88.48	88.48	0.57	0.00	87.91	87.91	13.93	3.06	0.92	99.70	0.00	0.15	0.65	0.79	98.91	0.00	0.00	-0.00	318.81	99.50	0.00	87.91									
	4	5	44.47	4.30	17.41	0.30	44.17	44.17	0.57	0.00	43.60	43.60	17.61	1.84	1.38	60.75	0.00	0.15	0.65	0.79	59.96	0.00	0.00	-0.00	318.81	99.50	0.00	43.60									
	5	5	47.97	4.30	17.41	0.30	47.67	47.67	0.57	0.00	47.10	47.10	21.00	2.04	1.06	67.12	0.00	0.15	0.65	0.79	66.32	0.00	0.00	-0.00	318.81	99.50	0.00	47.10									
	6	5	134.10	4.30	17.41	0.36	133.74	133.74	0.69	0.00	133.05	133.05	44.40	5.32	2.41	174.54	0.00	0.17	0.78	0.95	173.59	0.00	0.00	-0.00	318.81	99.50	0.00	133.05									
Feb	1	5	32.02	4.20	17.41	0.29	31.73	31.73	0.57	0.00	31.16	31.16	10.43	1.25	0.59	40.93	0.00	0.15	0.65	0.79	40.13	0.00	0.00	-0.00	318.81	99.50	0.00	31.16									
	2	5	74.01	4.20	17.41	0.29	73.72	73.72	0.57	0.00	73.15	73.15	35.73	3.27	2.22	107.83	0.00	0.15	0.65	0.79	107.04	0.00	0.00	-0.00	318.81	99.50	0.00	73.15									
	3	5	81.23	4.20	17.41	0.29	80.94	80.94	0.57	0.00	80.37	80.37	17.18	2.93	1.15	95.77	0.00	0.15	0.65	0.79	94.98	0.00	0.00	-0.00	318.81	99.50	0.00	80.37									
	4	5	22.54	4.20	17.41	0.29	22.25	22.25	0.57	0.28	21.40	21.40	6.86	0.85	0.50	27.91	2.52	0.15	0.65	3.32	24.59	0.00	0.00	-0.00	318.81	99.50	0.00	21.40									
	5	5	10.14	4.20	17.41	0.29	9.85	9.85	0.57	0.28	9.00	9.00	4.30	0.40	0.32	13.22	2.52	0.15	0.65	3.32	9.90	0.00	0.00	-0.00	318.81	99.50	0.00	9.00									
	6	5	7.74	4.20	17.41	0.18	7.56	7.56	0.34	0.17	7.05	7.05	14.20	0.64	0.96	21.58	1.51	0.09	0.39	1.99	19.59	0.00	0.00	-0.00	318.81	99.50	0.00	7.05									
Mar	1	5	15.31	4.70	17.41	0.33	14.98	14.98	0.57	0.92	13.49	13.49	18.78	0.97	0.97	32.27	8.35	0.15	0.65	9.15	23.12	0.00	0.00	-0.00	318.81	99.50	0.00	13.49									
	2	5	11.83	4.70	17.41	0.33	11.50	11.50	0.57	0.92	10.01	10.01	8.94	0.57	0.38	18.76	8.35	0.15	0.65	9.15	9.61	0.00	0.00	-0.00	318.81	99.50	0.00	10.01									
	3	5	11.26	4.70	17.41	0.33	10.93	10.93	0.57	0.92	9.44	9.44	2.52	0.36	0.11	11.75	8.35	0.15	0.65	9.15	2.60	0.00	0.00	-0.00	318.81	99.50	0.00	9.44									
	4	5	6.55	4.70	17.41	0.33	6.22	6.22	0.57	0.19	5.46	5.46	2.40	0.24	0.16	7.78	1.76	0.15	0.65	2.56	5.22	0.00	0.00	-0.00	318.81	99.50	0.00	5.46									
	5	5	6.09	4.70	17.41	0.33	5.76	5.76	0.57	0.19	5.00	5.00	1.85	0.21	0.22	6.86	1.76	0.15	0.65	2.56	4.30	0.00	0.00	-0.00	318.81	99.50	0.00	5.00									
	6	5	29.26	4.70	17.41	0.39	28.87	28.87	0.69	0.23	27.95	27.95	15.42	1.30	1.30	43.37	2.11	0.17	0.78	3.07	40.30	0.00	0.00	-0.00	318.81	99.50	0.00	27.95									
Apr	1	5	21.68	5.10	17.41	0.36	21.32	21.32	0.57	0.44	20.31	20.31	11.95	0.97	1.17	32.47	3.97	0.15	0.65	4.76	27.70	0.00	0.00	-0.00	318.81	99.50	0.00	20.31									
	2	5	32.48	5.10	17.41	0.36	32.12	32.12	0.57	0.44	31.11	31.11	16.19	1.42	0.98	46.86	3.97	0.15	0.65	4.76	42.10	0.00	0.00	-0.00	318.81	99.50	0.00	31.11									
	3	5	18.34	5.10	17.41	0.36	17.98	17.98	0.57	0.44	16.97	16.97	9.22	0.79	0.44	25.85	3.97	0.15	0.65	4.76	21.08	0.00	0.00	-0.00	318.81	99.50	0.00	16.97									
	4	5	12.45	5.10	17.41	0.36	12.09	12.09	0.57	0.89	10.63	10.63	4.76	0.46	0.21	15.14	8.09	0.15	0.65	8.88	6.26	0.00	0.00	-0.00	318.81	99.50	0.00	10.63									
	5	5	13.84	5.10	17.41	0.36	13.48	13.48	0.57	0.89	12.02	12.02	11.07	0.69	0.50	22.90	8.09	0.15	0.65	8.88	14.02	0.00	0.00	-0.00	318.81	99.50	0.00	12.02									
	6	5	12.58	5.10	17.41	0.36	12.22	12.22	0.57	0.89	10.76	10.76	8.75	0.59	0.33	19.25	8.09	0.15	0.65	8.88	10.37	0.00	0.00	-0.00	318.81	99.50	0.00	10.76									
May	1	5	30.85	4.90	17.41	0.34	30.51	30.51	0.57	0.92	29.01	29.01	11.59	1.22	0.67	40.06	8.33	0.15	0.65	9.34	30.72	0.00	0.00	-0.00	318.81	99.50	0.00	29.01									
	2	5	18.03	4.90	17.41	0.34	17.69	17.69	0.57	0.92	16.19	16.19	6.38	0.68	0.46	22.14	8.33	0.15	0.65	9.34	18.80	0.00	0.00	-0.00	318.81	99.50	0.00	16.19									
	3	5	12.52	4.90	17.41	0.34	12.18	12.18	0.57	0.92	10.68	10.68	5.23	0.48	0.38	15.82	8.33	0.15	0.65	9.34	6.48	0.00	0.00	-0.00	318.81	99.50	0.00	10.68									
	4	5	9.58	4.90	17.41	0.34	9.24	9.24	0.57	1.39	7.28	7.28	2.10	0.28	0.15	9.25	12.53	0.15	0.65	8.88	13.54	-4.29	0.13	4.43	-4.43	314.38	99.24	-113.94	2.85								
	5	5	10.19	4.90	17.41	0.34	9.85	9.85	0.57	1.39	7.46	7.46	3.45	0.21	0.16	6.87	12.53	0.15	0.65	8.88	13.54	-6.68	0.21	6.88	-2.45	311.93	99.10	-126.04	0.00								
	6	5	7.25	4.90	17.41	0.34	6.85	6.85	0.69	1.66	-2.35	0.00	1.79	0.05	0.09	1.83	15.04	0.17	0.78	1.62	-14.43	0.45	14.87	-10.31	301.55	98.48	-132.47	0.00									
Jun	1	5	3.39	4.70	16.90	0.32	3.07	3.07	0.00	0.57	1.44	-2.01	0.00	1.36	0.04	0.05	1.37	12.98	0.15	0.65	13.99	-12.62	0.39	13.01	-11.95	289.60	97.76	-122.09	0.00								
	2	5	2.25	4.70	16.55	0.31	1.94	1.94	0.00	0.57	1.44	-2.01	0.00	1.25	0.04	0.03	1.24	12.98	0.15	0.65	13.99	-12.75	0.39	13.14	-11.21	276.39	96.95	-110.15	0.00								
	3	5	1.96	4.70	16.15	0.30	1.66	1.66	0.00	0.57	1.44	-2.01	0.00	1.14	0.03	0.03	1.14	12.98	0.15	0.65	13.99	-12.85	0.40	13.25	-13.60	262.79	96.09	-96.94	0.00								
	4	5	2.62	4.70	15.75	0.30	2.32	2.32	0.00	0.57	1.20	-1.77	0.00	1.00	0.18	0.53	6.35	10.86	0.15	0.65	11.87	-5.52	0.17	5.69	-5.14	257.65	95.76	-83.33	0.00								
	5	5	4.53	4.70	15.59	0.29	4.24	4.24	0.00	0.57	1.20	-1.77	0.00	0.81	0.23	0.28	7.86	10.86	0.15	0.65	11.87	-4.01	0.12	4.13	-1.67	255.98	95.65	-78.20	0.00								
	6	5	2.41	4.70	15.54	0.29	2.12	2.12	0.00	0.57	1.20	-1.77	0.00	1.92	0.06	0.14	2.00	10.86	0.15	0.65	11.87	-9.86	0.31	10.17	-9.82	246.16	95.01	-76.52	0.00								
July	1	5	2.86	5.10	15.23	0.31	2.55	2.55	0.00	0.57	0.30	-0.88	0.00	3.17	0.10	0.35	3.42	2.74	0.15	0.65	3.75	-0.33	0.01	0.34	1.34	247.49	95.10	-66.70	0.00								
	2	5	7.51	5.10	15.28	0.31	7.20	7.20	0.00	0.57	0.30	-0.88	0.00	5.20	0.16	0.33	5.37	2.74	0.15	0.65	3.75	1															



**Water Balance Analysis**

**Year 1983**

**I. Water Requirement**

Wet Paddy	100 %
Dry Paddy	100 %
Palawija	40 %

**II. Water Balance Calculation**

Initial Reservoir Volume 24.93 mcm  
 Initial Water Level EL. 70.22 m as of end of 1982

Month	No. of day	1. at Dam Site										2. Upstream of Bili-Bili Weir										3. at Downstream of Bili-Bili Weir										Water Balance at Reservoir	Impound. Volume in Reservoir	Water level of Reservoir	Required Supply Water to Reservoir	Ineffct. Discharge from Dam
		Inflow					Evaporation					Balance	Water Demand					Balance	Inflow					Water Demand												
		Jeneberan g River		unit evapo.		Reservoir Area	Evapora- tion		WTP at Bili-Bili Irrigation	Bili-Bili Irrigation			Balance	Jenelata River		Channel Water Loss			Residual Basin	Total	Kampili+ Bissua Ir.		WTP at Downstre am		Other Use		Total	Balance	Channel Water Loss	Supply Water from Dam						
		mcm	mm/day	km2	mcm	mcm	mcm	mcm		mcm	mcm			mcm	mcm	mcm	mcm				mcm	mcm	mcm	mcm	mcm	mcm					mcm					
Jan	1	5	4.70	4.30	3.25	0.06	4.64	0.00	0.57	0.16	-0.73	0.00	10.36	0.31	0.79	10.84	1.43	0.15	0.65	2.22	8.62	0.00	0.00	3.91	24.93	70.22	-3.78	0.00								
	2	5	5.45	4.30	3.25	0.06	5.39	0.00	0.57	0.16	-0.73	0.00	9.14	0.27	0.53	9.40	1.43	0.15	0.65	2.22	7.17	0.00	0.00	4.66	29.59	71.62	-7.70	0.00								
	3	5	3.43	4.30	3.67	0.06	3.37	0.00	0.57	0.16	-0.73	0.00	9.91	0.30	0.77	10.38	1.43	0.15	0.65	2.22	8.16	0.00	0.00	2.64	32.23	72.27	-12.36	0.00								
	4	5	7.35	4.30	3.90	0.07	7.28	0.00	0.57	0.94	-1.51	0.00	18.41	0.55	0.91	18.77	8.50	0.15	0.65	9.29	9.48	0.00	0.00	5.77	38.00	73.50	-15.00	0.00								
	5	5	4.82	4.30	4.40	0.08	4.74	0.00	0.57	0.94	-1.51	0.00	5.28	0.16	0.21	5.33	8.50	0.15	0.65	9.29	-3.96	0.12	4.08	-0.85	37.15	73.33	-20.77	0.00								
	6	6	9.86	4.30	4.33	0.09	9.77	0.00	0.69	1.13	-1.81	0.00	24.07	0.72	1.36	24.71	10.20	0.17	0.78	11.15	13.56	0.00	0.00	7.96	45.10	74.74	-19.92	0.00								
Feb	1	5	20.04	4.20	4.99	0.08	19.96	0.00	0.57	0.95	-1.52	0.00	27.91	0.84	1.36	28.43	8.60	0.15	0.65	9.39	19.04	0.00	0.00	18.43	63.54	77.58	-27.87	0.00								
	2	5	11.94	4.20	6.44	0.11	11.83	0.00	0.57	0.95	-1.52	0.00	8.91	0.27	0.33	8.97	8.60	0.15	0.65	9.39	-0.42	0.01	0.43	8.98	73.42	79.45	-46.31	0.00								
	3	5	12.40	4.20	7.15	0.12	12.28	0.00	0.57	0.95	-1.52	0.00	13.07	0.39	0.73	13.41	8.60	0.15	0.65	9.39	4.02	0.00	0.00	10.76	84.17	81.01	-56.19	0.00								
	4	5	12.85	4.20	7.89	0.13	12.72	0.00	0.57	1.14	-1.71	0.00	16.31	0.49	0.69	16.51	10.20	0.15	0.65	11.08	5.44	0.00	0.00	11.01	95.18	82.36	-66.94	0.00								
	5	5	7.09	4.20	8.61	0.14	6.95	0.00	0.57	1.14	-1.71	0.00	4.53	0.14	0.32	4.71	10.28	0.15	0.65	11.08	-6.36	0.20	6.56	-1.32	93.86	82.20	-77.95	0.00								
	6	3	2.47	4.20	8.52	0.08	2.38	0.00	0.34	0.68	-1.03	0.00	1.71	0.05	0.16	1.82	6.17	0.09	0.39	6.65	-4.83	0.15	4.98	-3.62	90.24	81.77	-76.63	0.00								
Mar	1	5	2.70	4.70	8.29	0.16	2.54	0.00	0.57	1.22	-1.80	0.00	1.44	0.04	0.12	1.52	11.06	0.15	0.65	11.85	-10.33	0.32	10.65	-9.90	80.34	80.52	-73.01	0.00								
	2	5	3.89	4.70	7.63	0.14	3.75	0.00	0.57	1.22	-1.80	0.00	1.85	0.06	0.14	1.93	11.06	0.15	0.65	11.85	-9.91	0.31	10.22	-8.27	72.07	79.16	-63.11	0.00								
	3	5	2.73	4.70	7.06	0.13	2.60	0.00	0.57	1.22	-1.80	0.00	2.19	0.07	0.11	2.23	11.06	0.15	0.65	11.85	-9.62	0.30	9.91	-9.11	62.95	77.48	-54.84	0.00								
	4	5	5.17	4.70	6.39	0.12	5.05	0.00	0.57	0.52	-1.09	0.00	1.24	0.04	0.06	1.26	4.72	0.15	0.65	5.52	-4.25	0.13	4.38	-0.43	62.53	77.41	-45.72	0.00								
	5	5	9.69	4.70	6.36	0.12	9.57	0.00	0.57	0.52	-1.09	0.00	10.48	0.31	0.96	11.13	4.72	0.15	0.65	5.52	5.61	0.00	0.00	8.48	71.00	78.94	-45.30	0.00								
	6	6	15.10	4.70	6.98	0.16	14.94	0.00	0.69	0.63	-1.31	0.00	8.94	0.27	0.88	9.55	5.67	0.17	0.78	6.62	2.93	0.00	0.00	13.63	84.63	81.07	-53.77	0.00								
Apr	1	5	10.86	5.10	7.92	0.16	10.70	0.00	0.57	0.22	-0.80	0.00	3.83	0.11	0.28	4.00	2.02	0.15	0.65	2.82	1.18	0.00	0.00	9.00	94.53	82.28	-67.40	0.00								
	2	5	7.75	5.10	8.57	0.17	7.58	0.00	0.57	0.22	-0.80	0.00	9.86	0.30	0.78	10.34	2.02	0.15	0.65	2.82	7.53	0.00	0.00	6.78	101.31	83.07	-77.30	0.00								
	3	5	11.94	5.10	8.99	0.18	11.76	0.00	0.57	0.22	-0.80	0.00	14.27	0.43	0.72	14.56	2.02	0.15	0.65	2.82	11.74	0.00	0.00	10.96	112.27	84.27	-84.08	0.00								
	4	5	14.22	5.10	9.63	0.20	14.02	0.00	0.57	0.32	-0.89	0.00	28.31	0.85	1.67	29.13	2.87	0.15	0.65	3.67	25.47	0.00	0.00	13.13	125.41	85.61	-95.04	0.00								
	5	5	16.39	5.10	10.36	0.21	16.18	0.00	0.57	0.32	-0.89	0.00	13.79	0.41	1.63	15.01	2.87	0.15	0.65	3.67	11.34	0.00	0.00	15.29	140.70	87.05	-108.18	0.00								
	6	5	10.15	5.10	11.15	0.23	9.92	0.00	0.57	0.32	-0.89	0.00	2.11	0.06	0.23	2.28	2.87	0.15	0.65	3.67	-1.39	0.04	1.43	7.60	148.30	87.73	-123.47	0.00								
May	1	5	6.69	4.90	11.52	0.23	6.46	0.00	0.57	0.83	-1.41	0.00	2.10	0.06	0.47	2.51	7.55	0.15	0.65	8.56	-6.05	0.19	6.24	-1.18	147.12	87.63	-131.07	0.00								
	2	5	6.18	4.90	11.46	0.23	5.95	0.00	0.57	0.83	-1.41	0.00	9.28	0.28	0.65	9.65	7.55	0.15	0.65	8.56	-6.10	0.00	0.00	4.55	151.00	88.92	-120.89	0.00								
	3	5	12.23	4.90	11.67	0.23	12.00	0.00	0.57	0.83	-1.41	0.00	15.10	0.45	0.65	15.30	7.55	0.15	0.65	8.56	6.74	0.00	0.00	10.59	162.26	88.92	-134.44	0.00								
	4	5	9.87	4.90	12.15	0.24	9.63	0.00	0.57	1.46	-2.03	0.00	3.05	0.09	0.21	3.17	13.21	0.15	0.65	14.22	-11.05	0.34	11.39	-3.79	158.46	88.60	-145.03	0.00								
	5	5	12.30	4.90	11.98	0.23	12.07	0.00	0.57	1.46	-2.03	0.00	22.96	0.69	0.92	23.19	13.21	0.15	0.65	14.22	8.97	0.00	0.00	10.03	168.50	89.43	-141.23	0.00								
	6	6	9.95	4.90	12.42	0.29	9.66	0.00	0.69	1.75	-2.44	0.00	10.91	0.33	0.46	11.04	15.85	0.17	0.78	10.4	-6.02	0.19	6.21	1.10	169.51	89.51	-151.27	0.00								
Jun	1	5	4.47	4.70	12.47	0.23	4.24	0.00	0.57	1.29	-1.86	0.00	1.57	0.05	0.13	1.65	11.63	0.15	0.65	12.64	-10.99	0.34	11.33	-8.95	160.55	88.78	-152.28	0.00								
	2	5	5.68	4.70	12.08	0.23	5.45	0.00	0.57	1.29	-1.86	0.00	7.80	0.23	0.41	7.98	11.63	0.15	0.65	12.64	-4.67	0.14	4.81	-1.22	159.34	88.68	-143.32	0.00								
	3	5	7.35	4.70	12.02	0.23	7.12	0.00	0.57	1.29	-1.86	0.00	4.39	0.13	0.13	4.39	11.63	0.15	0.65	12.64	-8.25	0.26	8.51	-3.24	156.10	88.40	-142.11	0.00								
	4	5	4.61	4.70	11.88	0.22	4.39	0.00	0.57	1.21	-1.78	0.00	2.60	0.08	0.10	2.62	10.95	0.15	0.65	11.96	-9.34	0.29	9.63	-7.02	149.07	87.80	-138.87	0.00								
	5	5	4.31	4.70	11.55	0.22	4.09	0.00	0.57	1.21	-1.78	0.00	7.56	0.23	0.39	7.72	10.95	0.15	0.65	11.96	-4.24	0.13	4.37	-2.06	147.02	87.62	-131.84	0.00								
	6	5	5.08	4.70	11.45	0.22	4.86	0.00	0.57	1.21	-1.78	0.00	7.20	0.22	0.39	7.37	10.95	0.15	0.65	11.96	-4.58	0.14	4.73	-1.65	145.37	87.47	-129.79	0.00								
July	1	5	3.44	5.10	11.38	0.23	3.21	0.00	0.57	1.18	-1.75	0.00	2.37	0.07	0.15	2.45	10.65	0.15	0.65	11.66	-9.22	0.29	9.50	-8.04	137.33	86.74	-128.14	0.00								
	2	5	2.43	5.10	10.98	0.22	2.21	0.00	0.57	1.18	-1.75	0.00	1.34	0.04	0.17	1.47	10.65	0.15	0.65	11.66	-10.19	0.32	10.51	-10.06	127.27	85.79	-120.10	0.00								
	3	5	1.63	5.10	10.46	0.21	1.42	0.00	0.57	1.18	-1.75	0.00	1.23																							

**Water Balance Analysis**

**Year 1984**

**I. Water Requirement**

Wet Paddy	100 %
Dry Paddy	100 %
Palawija	40 %

**II. Water Balance Calculation**

Initial Reservoir Volume 245.01 mcm  
 Initial Water Level EL. 94.88 m as of end of 1983

Month	No. of day	1. at Dam Site										2. Upstream of Bili-Bili Weir										3. at Downstream of Bili-Bili Weir										Water Balance at Reservoir	Impound. Volume in Reservoir	Water level of Reservoir	Required Supply Water to Reservoir	Ineffct. Discharge from Dam
		Inflow					Evaporation					Balance	Water Demand					Inflow					Water Demand													
		Jeneberang River		unit evapo.		Reservoir Area	Evapo- area	Evapo- mcm	Balance	Surplus Water From Dam	WTP at Bili-Bili		Bili-Bili Irrigation	Balance	Bili-Bili Outflow	Jenelata River	Channel Water Loss	Residual Basin	Total	Kampili-Bissua In.	WTP at Downstream	Other Use	Total	Balance	Channel Water Loss	Supply Water from Dam										
		mcm	mm/day	km2	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm										
Jan	1	5	59.80	4.30	15.20	0.26	59.54	0.00	0.57	0.00	-0.57	0.00	7.90	0.24	1.26	8.92	0.00	0.15	0.65	0.79	8.13	0.00	0.00	58.97	245.01	94.94	0.00	0.00								
	2	5	22.80	4.30	15.20	0.26	22.54	0.00	0.57	0.00	-0.57	0.00	7.61	0.23	0.52	7.90	0.00	0.15	0.65	0.79	7.11	0.00	0.00	21.97	266.98	96.35	0.00	0.00								
	3	5	25.59	4.30	15.87	0.27	25.32	0.00	0.57	0.00	-0.57	0.00	19.33	0.58	1.02	19.77	0.00	0.15	0.65	0.79	18.98	0.00	0.00	24.74	291.72	97.89	0.00	0.00								
	4	5	28.83	4.30	16.61	0.29	28.54	1.45	0.57	0.00	0.88	0.88	18.90	0.59	1.27	20.46	0.00	0.15	0.65	0.79	19.67	0.00	0.00	27.09	318.81	99.50	0.00	0.88								
	5	5	32.08	4.30	17.41	0.30	31.78	31.78	0.57	0.00	31.21	31.21	6.43	1.13	0.57	37.08	0.00	0.15	0.65	0.79	36.29	0.00	0.00	-0.00	318.81	99.50	0.00	31.21								
	6	5	74.78	4.30	17.41	0.36	74.42	74.42	0.69	0.00	73.73	73.73	35.47	3.28	2.60	108.53	0.00	0.17	0.78	0.95	107.58	0.00	0.00	0.00	318.81	99.50	0.00	73.73								
Feb	1	5	54.92	4.20	17.41	0.29	54.63	54.63	0.57	0.00	54.06	54.06	14.90	2.07	1.11	68.00	0.00	0.15	0.65	0.79	67.20	0.00	0.00	0.00	318.81	99.50	0.00	54.06								
	2	5	59.58	4.20	17.41	0.29	59.29	59.29	0.57	0.00	58.72	58.72	22.88	2.45	1.88	81.03	0.00	0.15	0.65	0.79	80.23	0.00	0.00	-0.00	318.81	99.50	0.00	58.72								
	3	5	43.30	4.20	17.41	0.29	43.01	43.01	0.57	0.00	42.44	42.44	24.57	2.01	1.34	66.34	0.00	0.15	0.65	0.79	65.54	0.00	0.00	0.00	318.81	99.50	0.00	42.44								
	4	5	68.25	4.20	17.41	0.29	67.96	67.96	0.57	0.00	67.39	67.39	23.43	2.72	1.96	90.54	0.00	0.15	0.65	0.79	89.25	0.00	0.00	0.00	318.81	99.50	0.00	67.39								
	5	5	32.07	4.20	17.41	0.29	31.78	31.78	0.57	0.00	31.21	31.21	11.68	1.29	0.94	42.54	0.00	0.15	0.65	0.79	41.75	0.00	0.00	0.00	318.81	99.50	0.00	31.21								
	6	4	17.70	4.20	17.41	0.23	17.47	17.47	0.46	0.00	17.01	17.01	8.18	0.76	0.42	24.85	0.00	0.12	0.52	0.63	24.22	0.00	0.00	0.00	318.81	99.50	0.00	17.01								
	7	5	32.63	4.70	17.41	0.33	32.30	32.30	0.57	0.00	31.73	31.73	10.53	1.40	1.45	46.81	0.00	0.15	0.65	0.79	46.01	0.00	0.00	0.00	318.81	99.50	0.00	31.73								
	8	5	48.30	4.70	17.41	0.33	47.97	47.97	0.57	0.00	47.40	47.40	24.49	2.16	2.17	71.90	0.00	0.15	0.65	0.79	71.11	0.00	0.00	-0.00	318.81	99.50	0.00	47.40								
	9	5	51.54	4.70	17.41	0.33	51.21	51.21	0.57	0.00	50.64	50.64	29.92	2.42	2.20	80.34	0.00	0.15	0.65	0.79	79.55	0.00	0.00	0.00	318.81	99.50	0.00	50.64								
	10	5	24.92	4.70	17.41	0.33	24.59	24.59	0.57	0.53	23.49	23.49	11.74	1.06	0.54	34.71	4.80	0.15	0.65	5.59	29.12	0.00	0.00	-0.00	318.81	99.50	0.00	23.49								
	11	5	15.39	4.70	17.41	0.33	15.06	15.06	0.57	0.53	13.96	13.96	4.76	0.56	0.55	18.71	4.80	0.15	0.65	5.59	13.12	0.00	0.00	0.00	318.81	99.50	0.00	13.96								
	12	6	16.91	4.70	17.41	0.39	16.52	16.52	0.69	0.64	15.19	15.19	6.23	0.64	0.30	21.08	5.75	0.17	0.78	6.71	14.37	0.00	0.00	-0.00	318.81	99.50	0.00	15.19								
Apr	1	5	27.57	5.10	17.41	0.36	27.21	27.21	0.57	0.29	26.36	26.36	26.77	1.59	1.64	53.17	2.59	0.15	0.65	3.38	49.79	0.00	0.00	0.00	318.81	99.50	0.00	26.36								
	2	5	28.62	5.10	17.41	0.36	28.26	28.26	0.57	0.29	27.41	27.41	23.17	1.52	1.10	50.16	2.59	0.15	0.65	3.38	46.78	0.00	0.00	0.00	318.81	99.50	0.00	27.41								
	3	5	36.81	5.10	17.41	0.36	36.45	36.45	0.57	0.29	35.60	35.60	16.47	1.56	1.21	51.71	2.59	0.15	0.65	3.38	48.33	0.00	0.00	0.00	318.81	99.50	0.00	35.60								
	4	5	27.71	5.10	17.41	0.36	27.35	27.35	0.57	0.52	26.27	26.27	8.25	1.04	1.04	34.52	4.67	0.15	0.65	5.46	29.06	0.00	0.00	-0.00	318.81	99.50	0.00	26.27								
	5	5	32.87	5.10	17.41	0.36	32.51	32.51	0.57	0.52	31.43	31.43	14.72	1.38	0.85	45.61	4.67	0.15	0.65	5.46	40.15	0.00	0.00	0.00	318.81	99.50	0.00	31.43								
	6	5	20.81	5.10	17.41	0.36	20.45	20.45	0.57	0.52	19.37	19.37	9.05	0.85	0.64	28.20	4.67	0.15	0.65	5.46	22.74	0.00	0.00	0.00	318.81	99.50	0.00	19.37								
May	1	5	31.92	4.90	17.41	0.34	31.58	31.58	0.57	0.42	30.59	30.59	40.59	2.14	1.76	70.80	3.79	0.15	0.65	4.80	66.00	0.00	0.00	-0.00	318.81	99.50	0.00	30.59								
	2	4	23.33	4.90	17.41	0.34	22.99	22.99	0.42	0.42	22.00	22.00	11.35	1.38	0.73	33.73	3.79	0.15	0.65	4.80	28.23	0.00	0.00	0.00	318.81	99.50	0.00	22.00								
	3	5	18.81	4.90	17.41	0.34	18.47	18.47	0.57	0.42	17.48	17.48	5.20	0.68	0.47	22.47	3.79	0.15	0.65	4.80	17.67	0.00	0.00	0.00	318.81	99.50	0.00	17.48								
	4	5	11.69	4.90	17.41	0.34	11.35	11.35	0.57	1.19	9.59	9.59	2.03	0.35	0.41	11.68	10.71	0.15	0.65	11.72	-0.04	0.00	0.04	-0.04	318.81	99.50	0.00	9.59								
	5	5	6.37	4.90	17.41	0.34	6.03	5.99	0.57	1.19	4.23	4.23	1.92	0.18	0.16	6.13	10.71	0.15	0.65	11.72	-5.60	0.17	5.77	-5.73	313.04	99.16	0.00	4.23								
	6	6	8.94	4.90	17.41	0.41	8.53	7.77	0.69	1.42	6.66	6.66	5.83	0.19	0.25	6.54	12.86	0.17	0.78	10.47	-7.52	0.23	7.76	-1.19	311.05	99.05	0.00	6.66								
June	1	5	4.49	4.70	17.18	0.32	4.17	0.00	0.57	1.29	-1.86	0.00	3.44	0.10	0.20	3.54	11.67	0.15	0.65	12.68	-9.14	0.28	9.42	-7.12	303.94	98.62	0.00	4.17								
	2	5	5.47	4.70	16.97	0.32	5.15	0.00	0.57	1.29	-1.86	0.00	3.08	0.09	0.21	3.20	11.67	0.15	0.65	12.68	-9.48	0.29	9.77	-6.48	297.45	98.24	0.00	5.15								
	3	5	4.52	4.70	16.78	0.32	4.20	0.00	0.57	1.29	-1.86	0.00	2.73	0.08	0.17	2.82	11.67	0.15	0.65	12.68	-9.86	0.30	10.16	-7.82	289.63	97.76	0.00	4.20								
	4	5	2.97	4.70	16.55	0.31	2.66	0.00	0.57	1.25	-1.82	0.00	1.51	0.05	0.08	1.54	11.30	0.15	0.65	12.31	-10.77	0.33	11.10	-10.26	279.37	97.13	0.00	2.66								
	5	5	2.49	4.70	16.24	0.31	2.18	0.00	0.57	1.25	-1.82	0.00	3.16	0.09	0.19	3.26	11.30	0.15	0.65	12.31	-9.06	0.28	9.34	-8.89	270.39	96.57	0.00	2.18								
	6	5	3.89	4.70	15.98	0.30	3.59	0.00	0.57	1.25	-1.82	0.00	6.85	0.21	0.26	6.90	11.30	0.15	0.65	12.31	-5.41	0.17	5.57	-3.81	266.58	96.33	0.00	3.59								
	7	5	3.96	5.10	15.86	0.32	3.64	0.00	0.57	1.25	-1.82	0.00	1.43	0.04	0.08	1.47	11.30	0.15	0.65	12.31	-10.84	0.34	11.18	-9.36	257.22	95.73	0.00	3.64								
	8	5	1.72	5.10	15.58	0.32	1.40	0.00	0.57	1.25	-1.82	0.00	1.24	0.04	0.05	1.25	11.30	0.15	0.65	12.31	-11.06	0.34	11.40	-11.82	245.41	94.96	0.00	1.40								
	9	5	0.																																	

**Water Balance Analysis**

**Year 1985**

**I. Water Requirement**

Wet Paddy 100 %  
 Dry Paddy 100 %  
 Palawija 40 %

**II. Water Balance Calculation**

Initial Reservoir Volume 318.81 mcm  
 Initial Water Level EL. 99.45 m as of end of 1984

Month	No. of day	1-1		1-2				1-3		1-4		3. at Downstream of Bili-Bili Weir																																			
		NFR (Net Field Requirement)		DR (Diversion Water Requirement)				Q -	Q -	Water Demand																																					
		w.paddy	d.paddy	palawija	w.paddy	d.paddy	palawija	total	BiliBili (IRB)	Kampili (IRK)	Water Demand																																				
		(l/s/ha)	(l/s/ha)	(l/s/ha)	(l/s/ha)	(l/s/ha)	(l/s/ha)	(l/s/ha)	(mcm)	(mcm)	Water Demand																																				
1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		22		23		24	
1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		22		23		24	
1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		22		23		24	
1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		22		23		24	
1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		22		23		24	
1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		22		23		24	
1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		22		23		24	
1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		22		23		24	
1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		22		23		24	
1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		22		23		24	
1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		22		23		24	
1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		22		23		24	
1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		22		23		24	
1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		22		23		24	
1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		22		23		24	
1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		22		23		24	
1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		22		23		24	
1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		22		23		24	
1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		22		23		24	
1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		22		23		24	
1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		22		23		24	
1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		22		23		24	
1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		22		23		24	
1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		22		23		24	
1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		22		23		24	
1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		22		23		24	
1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		22		23		24	
1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		22		23		24	
1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		22		23		24	
1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		22		23		24	
1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		22		23		24	
1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		22		23		24	
1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		22		23		24	
1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		22		23		24	
1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		22		23		24	
1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		22		23		24	
1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		22		23		24	
1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		22		23		24	
1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		22		23		24	
1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		22		23		24	
1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		22		23		24	
1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		22		23		24	
1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		22		23		24	
1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		22		23		24	
1		2		3		4		5		6		7		8		9		10		11																											





**Water Balance Analysis**

**Year 1987**

**I. Water Requirement**

Wet Paddy 100 %  
Dry Paddy 100 %  
Palawija 40 %

**II. Water Balance Calculation**

Initial Reservoir Volume 227.15 mcm  
Initial Water Level EL. 93.69 m as of end of 1986

		1-1		1-2				1-3	1-4	3. at Downstream of Bili-Bili Weir																									
		NFR (Net Field Requirement)				DR (Diversion Water Requirement)				Q - BiliBili (IRB)	Q - Kampili (IRK)																								
		w.paddy	d.paddy	palawija	w.paddy	d.paddy	palawija	total	(mcm)	(mcm)																									
		(l/s/ha)				(l/s/ha)																													
Month	No. of day	1. at Dam Site						2. Upstream of Bili-Bili Weir						3. at Downstream of Bili-Bili Weir												Water Balance at Reservoir	Impound. Volume in Reservoir	Water level of reservoir	Required Supply Water to Reservoir	Ineffct. Discharge from Dam					
		Inflow		Evaporation		Balance		Surplus Water From Dam		Water Demand		Balance		Inflow		Water Demand		Balance		Channel Water Loss		Supply Water from Dam													
		Jeneberan g River	unit evapo.	Reservoir Area	Evapo-ration	Balance	Surplus Water From Dam	WTP at Bili-Bili	Bili-Bili Irrigation	Balance	Bili-Bili Outflow	Jenelata River	Channel Water Loss	Residual Basin	Total	Kampili-Bissua Ir.	WTP at Downstre am	Other Use	Total	Balance	Channel Water Loss	Supply Water from Dam			Balance	Channel Water Loss	Supply Water from Dam								
		mcm	mm/day	km2	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm		
Jan	1	5	19.44	4.30	14.62	0.25	19.19	0.00	0.57	0.00	-0.57	0.00	13.03	0.39	1.27	13.91	0.00	0.15	0.65	0.79	13.12	0.00	0.00	18.62	227.15	93.74	0.00	0.00							
	2	5	19.87	4.30	14.62	0.25	19.62	0.00	0.57	0.00	-0.57	0.00	17.06	0.51	1.28	17.83	0.00	0.15	0.65	0.79	17.03	0.00	0.00	19.05	246.20	95.02	0.00	0.00							
	3	5	59.75	4.30	15.24	0.26	59.49	0.00	0.57	0.00	-0.57	0.00	24.75	0.74	2.66	26.67	0.00	0.15	0.65	0.79	25.87	0.00	0.00	58.92	305.12	98.69	0.00	0.00							
	4	5	73.36	4.30	17.00	0.29	73.07	59.37	0.57	0.00	58.80	58.80	36.65	2.86	2.45	95.04	0.00	0.15	0.65	0.79	94.24	0.00	0.00	13.69	318.81	99.50	0.00	0.00	58.80						
	5	5	84.67	4.30	17.41	0.30	84.37	84.37	0.57	0.00	83.80	83.80	46.02	3.89	2.72	128.64	0.00	0.15	0.65	0.79	127.85	0.00	0.00	0.00	318.81	99.50	0.00	0.00	83.80						
	6	5	114.43	4.30	17.41	0.36	114.07	114.07	0.69	0.00	113.38	113.38	59.27	5.18	4.52	171.99	0.00	0.17	0.78	0.95	171.04	0.00	0.00	0.00	318.81	99.50	0.00	0.00	113.38						
Feb	1	5	72.69	4.20	17.41	0.29	72.40	72.40	0.57	0.00	71.83	71.83	33.68	3.17	1.59	103.93	0.00	0.15	0.65	0.79	103.14	0.00	0.00	-0.00	318.81	99.50	0.00	0.00	71.83						
	2	5	51.50	4.20	17.41	0.29	51.21	51.21	0.57	0.00	50.64	50.64	25.73	2.29	1.62	75.69	0.00	0.15	0.65	0.79	74.90	0.00	0.00	0.00	318.81	99.50	0.00	0.00	50.64						
	3	5	26.43	4.20	17.41	0.29	26.14	26.14	0.57	0.00	25.57	25.57	19.64	1.36	1.21	45.06	0.00	0.15	0.65	0.79	44.27	0.00	0.00	0.00	318.81	99.50	0.00	0.00	25.57						
	4	5	32.60	4.20	17.41	0.29	32.31	32.31	0.57	0.44	31.30	31.30	23.44	1.64	1.25	54.34	3.98	0.15	0.65	4.77	49.57	0.00	0.00	-0.00	318.81	99.50	0.00	0.00	31.30						
	5	5	37.95	4.20	17.41	0.29	37.66	37.66	0.57	0.44	36.65	36.65	23.19	1.80	1.24	59.28	3.98	0.15	0.65	4.77	54.51	0.00	0.00	-0.00	318.81	99.50	0.00	0.00	36.65						
	6	3	22.92	4.90	17.41	0.34	22.74	22.74	0.34	0.26	22.14	22.14	9.03	0.94	0.44	30.67	2.39	0.09	0.39	2.86	27.81	0.00	0.00	0.00	318.81	99.50	0.00	0.00	22.14						
	7	5	26.36	4.70	17.41	0.33	26.03	26.03	0.57	0.66	24.80	24.80	12.39	1.12	0.80	36.88	5.94	0.15	0.65	6.73	30.15	0.00	0.00	-0.00	318.81	99.50	0.00	0.00	24.80						
	8	5	28.15	4.70	17.41	0.33	27.82	27.82	0.57	0.66	26.59	26.59	12.31	1.17	1.38	39.12	5.94	0.15	0.65	6.73	32.39	0.00	0.00	0.00	318.81	99.50	0.00	0.00	26.59						
	9	5	13.15	4.70	17.41	0.33	12.82	12.82	0.57	0.66	11.59	11.59	3.34	0.45	0.20	14.69	5.94	0.15	0.65	6.73	7.96	0.00	0.00	0.00	318.81	99.50	-25.71	11.59							
	4	5	21.74	4.70	17.41	0.33	21.41	21.41	0.57	0.00	20.84	20.84	3.42	0.73	0.58	24.11	0.00	0.15	0.65	0.79	23.32	0.00	0.00	-0.00	318.81	99.50	-50.13	20.84							
	5	5	23.35	4.70	17.41	0.33	23.02	23.02	0.57	0.00	22.45	22.45	6.71	0.87	0.55	28.84	0.00	0.15	0.65	0.79	28.04	0.00	0.00	0.00	318.81	99.50	-92.38	22.45							
	6	6	20.15	4.70	17.41	0.39	19.76	19.76	0.69	0.00	19.07	19.07	6.39	0.76	0.76	25.46	0.00	0.17	0.78	0.95	24.50	0.00	0.00	0.00	318.81	99.50	-137.86	19.07							
Apr	1	5	10.90	5.10	17.41	0.36	10.54	10.54	0.57	0.36	9.61	9.61	2.90	0.38	0.21	12.34	3.28	0.15	0.65	4.07	8.27	0.00	0.00	-0.00	318.81	99.50	-176.68	9.61							
	2	5	12.43	5.10	17.41	0.36	12.07	12.07	0.57	0.36	11.14	11.14	8.31	0.58	0.92	19.79	3.28	0.15	0.65	4.07	15.72	0.00	0.00	0.00	318.81	99.50	-196.84	11.14							
	3	5	15.18	5.10	17.41	0.36	14.82	14.82	0.57	0.36	13.89	13.89	5.25	0.57	0.18	18.75	3.28	0.15	0.65	4.07	14.68	0.00	0.00	0.00	318.81	99.50	-220.05	13.89							
	4	5	10.91	5.10	17.41	0.36	10.55	10.55	0.57	1.20	8.79	8.79	1.73	0.32	0.11	10.31	10.82	0.15	0.65	11.61	-1.30	0.04	1.34	-1.34	317.47	99.42	-248.77	7.44							
	5	5	4.15	5.10	17.37	0.35	3.80	3.80	0.57	1.20	0.68	0.68	1.60	0.07	0.08	2.30	10.82	0.15	0.65	11.61	-9.32	0.29	9.60	-8.26	309.21	98.94	-266.77	0.00							
	6	5	5.20	5.10	17.13	0.35	4.85	4.85	0.57	1.20	-1.77	0.00	9.30	0.28	0.60	9.62	10.82	0.15	0.65	11.61	-1.99	0.06	2.05	-1.03	310.24	99.00	-261.64	0.00							
	7	5	5.67	4.90	17.16	0.34	5.33	5.33	0.57	0.83	-1.40	0.00	2.65	0.08	0.10	2.67	7.50	0.15	0.65	8.51	-5.84	0.18	0.02	-2.08	308.15	98.87	-262.67	0.00							
	8	5	8.05	4.90	17.09	0.34	7.71	7.71	0.57	0.83	-1.40	0.00	1.41	0.00	0.07	1.44	7.50	0.15	0.65	8.86	-7.07	0.22	7.29	-6.07	307.18	98.82	-260.69	0.00							
	9	5	7.20	4.90	17.06	0.33	6.87	6.87	0.57	0.83	-1.40	0.00	1.50	0.05	0.18	1.64	7.50	0.15	0.65	8.51	-6.87	0.21	7.08	-1.62	305.56	98.72	-259.62	0.00							
	4	5	5.62	4.90	17.02	0.33	5.29	5.29	0.57	1.57	-2.14	0.00	1.33	0.04	0.07	1.36	14.17	0.15	0.65	15.18	-13.82	0.43	14.25	-1.10	294.46	98.05	-258.00	0.00							
	5	5	6.01	4.90	16.69	0.33	3.68	3.68	0.57	1.57	-2.14	0.00	1.17	0.04	0.05	1.18	14.17	0.15	0.65	15.18	-13.99	0.43	14.43	-12.88	281.58	97.27	-246.90	0.00							
	6	6	3.54	4.90	16.31	0.38	3.16	3.16	0.00	0.69	1.88	-2.57	0.00	1.28	0.04	0.04	1.28	17.00	0.17	1.04	18.21	-16.93	0.52	17.46	-16.87	266.71	96.21	-234.02	0.00						
	7	5	2.78	4.70	15.80	0.30	2.48	2.48	0.00	0.57	1.52	-2.09	0.00	0.96	0.03	0.02	0.95	13.76	0.15	0.86	14.77	-13.82	0.43	14.25	-13.86	250.85	95.32	-217.15	0.00						
	8	5	2.47	4.70	15.38	0.29	2.18	2.18	0.00	0.57	1.52	-2.09	0.00	0.88	0.03	0.01	0.86	13.76	0.15	0.86	14.77	-13.91	0.43	14.34	-14.25	236.60	94.38	-209.20	0.00						
	3	5	2.29	4.70	14.93	0.28	2.01	2.01	0.00	0.57	1.52	-2.09	0.00	0.79	0.02	0.01	0.78	13.76	0.15	0.86	14.77	-13.99	0.43	14.43	-14.51	222.09	93.40	-189.04	0.00						
	4	5	2.08	4.70	14.45	0.27	1.81	1.81	0.00	0.57	1.49	-2.06	0.00	0.72	0.02	0.01	0.71	13.47	0.15	0.86	14.48	-13.77	0.43	14.19	-14.45	207.64	92.39	-174.53	0.00						



**Water Balance Analysis**

**Year 1989**

**I. Water Requirement**

Wet Paddy	100 %
Dry Paddy	100 %
Palawija	40 %

**II. Water Balance Calculation**

Initial Reservoir Volume 318.81 mcm  
 Initial Water Level EL. 99.45 m as of end of 1988

Month	No. of day	1-1 NFR (Net Field Requirement)				1-2 DR (Diversion Water Requirement)				1-3 Q - Bilibili (IRB)		1-4 Q - Kampili (IRK)		24
		w.paddy		palawija		w.paddy		palawija		total	total	total	total	
		(l/s/ha)	(l/s/ha)	(l/s/ha)	(l/s/ha)	(mcm)	(mcm)	(mcm)	(mcm)					
		1. at Dam Site				2. Upstream of Bilibili Weir				3. at Downstream of Bilibili Weir				
		Inflow				Evaporation				Water Demand				
		Jeneberang g River				Reservoir Area				Bilibili Irrigation				
		unit evapo.				km2				mcm				
		mm/day				mcm				mcm				
		Balance				Surplus				Channel				
		mcm				mcm				Water Loss				
		mcm				mcm				Residual Basin				
		mcm				mcm				Total				
		mcm				mcm				Kampili-Bissua Ir.				
		mcm				mcm				WTP at Downstre am				
		mcm				mcm				Other Use				
		mcm				mcm				Total				
		mcm				mcm				Balance				
		mcm				mcm				Channel Water Loss				
		mcm				mcm				Supply Water from Dam				
		mcm				mcm				Water Balance at Reservoir				
		mcm				mcm				Impound. Volume in Reservoir				
		mcm				mcm				Water level of Reservoir				
		mcm				mcm				Required Supply Water to Reservoir				
		mcm				mcm				Ineffct. Discharge from Dam				

Note: 7. When the water level at reservoir is not reach to the NWL, the surplus water is used for the recovery of reservoir capacity.

**Water Balance Analysis**

**Year 1990**

**I. Water Requirement**

Wet Paddy	100 %
Dry Paddy	100 %
Palawija	40 %

**II. Water Balance Calculation**

Initial Reservoir Volume 318.81 mcm  
 Initial Water Level EL. 99.45 m as of end of 1989

Month	No. of day	1-1		1-2			Q - Kampili (IRK) (mcm)	Q - K (IRK) (mcm)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24				
		w.paddy	d.paddy	palawija	w.paddy	d.paddy																											palawija			
Jan	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	19.65	4.30	17.41	0.30	19.35	19.35	0.57	0.00	18.78	18.78	14.75	1.01	2.12	34.64	0.00	0.15	0.65	0.79	33.85	0.00	0.00	-0.00	318.81	99.50	0.00	18.78	
		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	47.60	4.30	17.41	0.30	47.30	47.30	0.57	0.00	46.73	46.73	17.43	1.92	1.12	63.35	0.00	0.15	0.65	0.79	62.56	0.00	0.00	-0.00	318.81	99.50	0.00	46.73	
Feb	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.79	4.30	17.41	0.36	13.43	13.43	0.69	0.00	12.74	12.74	7.83	0.62	0.69	20.65	0.00	0.17	0.78	0.95	19.70	0.00	0.00	-0.00	318.81	99.50	0.00	12.74	
		0.09	0.00	0.00	0.14	0.00	0.00	0.14	0.14	16.97	4.20	17.41	0.29	16.68	16.68	0.57	0.14	15.97	15.97	7.26	0.70	0.41	22.94	1.26	0.15	0.65	2.05	20.88	0.00	0.00	-0.00	318.81	99.50	0.00	15.97	
Mar	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20.49	4.20	17.41	0.29	20.20	20.20	0.57	0.14	19.49	19.49	6.54	0.78	1.05	26.30	1.26	0.15	0.65	2.05	24.25	0.00	0.00	-0.00	318.81	99.50	0.00	19.49	
		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.11	4.20	17.41	0.29	11.82	11.82	0.57	0.14	11.11	11.11	7.32	0.55	0.57	18.45	1.26	0.15	0.65	2.05	16.39	0.00	0.00	-0.00	318.81	99.50	0.00	11.11	
Apr	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	21.49	4.20	17.41	0.29	21.20	21.20	0.57	0.77	19.85	19.85	7.34	0.82	0.59	26.97	1.26	0.15	0.65	2.05	19.21	0.00	0.00	-0.00	318.81	99.50	0.00	19.85	
		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15.01	4.20	17.41	0.29	14.72	14.72	0.57	0.77	13.37	13.37	8.65	0.66	0.44	21.81	6.96	0.15	0.65	1.76	14.05	0.00	0.00	-0.00	318.81	99.50	0.00	13.37	
May	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.08	4.90	17.41	0.33	5.90	5.90	0.34	0.46	5.10	5.10	4.52	0.29	0.35	9.69	4.18	0.09	0.39	4.65	5.03	0.00	0.00	-0.00	318.81	99.50	0.00	5.10	
		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	43.14	4.70	17.41	0.33	42.81	42.81	0.57	0.03	42.21	42.21	13.80	1.68	1.46	55.79	0.29	0.15	0.65	1.08	54.71	0.00	0.00	-0.00	318.81	99.50	0.00	42.21	
June	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	23.10	4.70	17.41	0.33	22.77	22.77	0.57	0.03	22.17	22.17	11.00	1.00	0.78	32.95	0.29	0.15	0.65	1.08	31.87	0.00	0.00	-0.00	318.81	99.50	0.00	22.17	
		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	18.59	4.70	17.41	0.33	18.26	18.26	0.57	0.03	17.66	17.66	11.39	0.87	0.63	28.81	0.29	0.15	0.65	1.08	27.73	0.00	0.00	-0.00	318.81	99.50	0.00	17.66	
July	1	0.63	0.05	0.00	0.91	0.07	0.00	0.98	1.00	6.86	4.70	17.41	0.33	6.53	6.53	0.57	1.00	4.96	4.96	4.71	0.29	0.23	9.61	9.06	0.15	0.65	9.85	-0.24	0.01	0.25	-0.25	318.56	99.49	0.00	4.71	
		0.63	0.05	0.00	0.91	0.07	0.00	0.98	1.00	5.42	4.70	17.41	0.33	5.09	5.09	0.57	1.00	3.27	3.27	3.37	0.20	0.18	6.63	9.06	0.15	0.65	9.85	-3.22	0.10	3.32	-3.08	315.49	99.31	0.00	3.37	
Aug	1	0.63	0.05	0.00	0.91	0.07	0.00	0.98	1.20	8.22	4.70	17.31	0.39	7.83	5.61	0.69	1.20	2.62	2.62	2.58	0.31	0.28	10.17	10.87	0.17	0.78	11.82	-1.65	0.05	1.70	1.62	317.11	99.40	0.00	0.92	
		0.27	0.19	0.00	0.40	0.28	0.00	0.68	0.69	5.11	5.10	17.36	0.35	11.27	9.56	0.57	0.69	8.30	8.30	2.96	0.34	0.39	11.31	6.23	0.15	0.65	7.02	4.29	0.00	0.00	-0.00	318.81	99.50	0.00	8.30	
Sept	1	0.27	0.19	0.00	0.40	0.28	0.00	0.68	0.69	6.44	5.10	17.41	0.36	6.08	6.08	0.57	0.69	4.82	4.82	2.65	0.22	0.09	7.34	6.23	0.15	0.65	7.02	0.31	0.00	0.00	-0.00	318.81	99.50	0.00	4.82	
		0.27	0.19	0.00	0.40	0.28	0.00	0.68	0.69	5.58	5.10	17.41	0.36	5.22	5.22	0.57	0.69	3.96	3.96	3.74	0.23	0.37	7.84	6.23	0.15	0.65	7.02	0.82	0.00	0.00	-0.00	318.81	99.50	0.00	3.96	
Oct	1	0.11	0.51	0.00	0.15	0.74	0.00	0.89	0.91	5.45	5.10	17.41	0.36	5.09	5.09	0.57	0.91	3.62	3.62	4.50	0.24	0.76	8.63	8.20	0.15	0.65	8.99	-0.36	0.01	0.37	-0.37	318.44	99.48	0.00	3.25	
		0.11	0.51	0.00	0.15	0.74	0.00	0.89	0.91	5.33	5.10	17.40	0.35	4.98	4.98	0.57	0.91	3.13	3.13	2.73	0.18	0.11	5.80	8.20	0.15	0.65	8.99	-3.19	0.10	3.29	-2.92	315.52	99.31	0.00	0.00	
Nov	1	0.00	0.56	0.00	0.00	0.82	0.00	0.82	0.83	5.20	5.10	17.31	0.35	4.85	4.85	0.57	0.91	0.08	0.08	2.82	0.09	0.18	2.99	8.20	0.15	0.65	8.99	-6.00	0.19	6.19	-2.90	312.62	99.14	-2.22	0.00	
		0.00	0.56	0.00	0.00	0.82	0.00	0.82	0.83	5.16	4.90	17.21	0.34	5.02	5.02	0.57	0.83	-1.41	0.00	2.12	0.06	0.12	2.17	7.55	0.15	0.65	8.55	-6.38	0.20	6.58	-2.95	309.67	98.96	-4.29	0.00	
Dec	1	0.00	0.37	0.00	0.00	0.54	0.00	0.54	0.55	5.70	4.90	17.21	0.34	5.36	5.36	0.00	0.57	0.83	-1.41	0.00	6.81	0.20	0.15	6.75	7.55	0.15	0.65	8.55	-1.80	0.06	1.86	2.10	314.30	99.24	0.00	0.00
		0.00	0.37	0.00	0.00	0.54	0.00	0.54	0.55	5.77	4.90	17.28	0.34	5.43	5.43	0.57	0.55	9.81	9.81	6.64	0.49	0.53	16.48	4.94	0.15	0.65	8.95	10.53	0.00	0.00	-0.00	318.81	99.50	0.00	9.81	
Jan	1	0.00	0.37	0.00	0.00	0.54	0.00	0.54	0.55	5.12	4.90	17.41	0.34	11.71	11.71	0.57	0.55	10.59	10.59	7.79	0.55	0.44	18.24	4.94	0.15	0.65	8.95	12.30	0.00	0.00	-0.00	318.81	99.50	-12.11	10.59	
		0.00	0.37	0.00	0.00	0.54	0.00	0.54	0.66	6.13	4.90	17.41	0.41	12.71	12.71	0.69	0.66	11.37	11.37	5.84	0.52	0.44	17.13	5.92	0.17	1.04	7.14	10.00	0.00	0.00	-0.00	318.81	99.50	-34.41	11.37	
Feb	1	0.00	0.91	0.00	0.00	1.32	0.00	1.32	1.35	9.72	4.70	17.41	0.33	9.39	9.39	0.57	1.35	7.47	7.47	7.19	0.44	0.09	14.31	12.17	0.15	0.65	13.18	1.14	0.00	0.00	-0.00	318.81	99.50	-58.48	7.47	
		0.00	0.91	0.00	0.00	1.32	0.00	1.32	1.35	10.13	4.70	17.41	0.33	9.80	9.80	0.57	1.35	7.88	7.88	3.13	0.33	0.06	10.75	12.17	0.15	0.65	13.18	-2.43	0.08	2.51	-2.51	316.30	99.35	-75.35	5.38	
Mar	1	0.00	0.91	0.00	0.00	1.32	0.00	1.32	1.35	5.88	4.70	17.34	0.33	5.55	3.05	0.57	1.35	1.13	1.13	1.99	0.09	0.04	3.07	12.17	0.15	0.65	13.18	-10.11	0.31	10.42	-7.92	308.39	98.89	-90.53	0.00	
		0.00	0.91	0.00	0.00	1.33	0.00	1.33	1.35	5.33	4.70	17.10	0.32	5.01	0.00	0.57	1.35	-1.92	0.00	2.06	0.06	0.04	2.04	12.22	0.15	0.65	13.23	-11.19	0.35	11.54	-8.48	299.93	98.38	-86.79	0.00	
Apr	1	0.00	0.91	0.00	0.00	1.33	0.00	1.33	1.35	5.04	4.70	16.85	0.32	4.72	0.00	0.57	1.35	-1.92	0.00	1.45	0.04	0.04	1.44	12.22	0.15	0.65	13.23	-11.79	0.36	12.15	-9.35	290.58	97.82	-78.34	0.00	
		0.00	0.91	0.00	0.00	1.33	0.00	1.33	1.35	4.89	4.70	16.57	0.31	4.58	0.00	0.57	1.35	-1.92	0.00	1.22	0.04	0.03	1.21	12.22	0.15	0.65	13.23	-12.02	0.37	12.39	-9.73	280.85	97.22	-68.98	0.00	
May	1	0.00	0.81	0.00	0.00	1.18	0.00	1.18	1.21	5.12	5.10	16.29	0.33	4.79	0.00	0.57	1.21	-1.78	0.00	1.30	0.04	0.06	1.32	10.90	0.15	0.65	11.91	-10.59	0.33	10.91	-7.90	272.94	96.73	-59.25	0.00	
		0.00	0.81	0.00	0.00	1.18	0.00	1.18	1.21	4.93	5.10	16.05	0.33	4.60	0.00	0.57	1.21	-1.78	0.00	0.94	0.03	0.03	0.94	10.90	0.15	0.65	11.91	-10.97	0.34	11.31	-8.48	264.46	96.19	-51.35	0.00	
June	1	0.00	0.69																																	



Water Balance Analysis

Year 1992

I. Water Requirement

Table with 2 columns: Requirement Type (Wet Paddy, Dry Paddy, Palawija) and Percentage (100%, 100%, 40%).

II. Water Balance Calculation

Initial Reservoir Volume 73.97 mcm
Initial Water Level EL. 79.51 m as of end of 1991

Main data table with columns for months (Jan-Dec), days, and various water balance metrics including Inflow, Evaporation, Balance, Water Demand, and Residual Basin. Includes a summary row at the bottom for 1992 totals.

Note: 7. When the water level at reservoir is not reach to the NWL, the surplus water is used for the recovery of reservoir capacity.



**Water Balance Analysis**

Year 1994

**I. Water Requirement**

Wet Paddy	100 %
Dry Paddy	100 %
Palawija	40 %

**II. Water Balance Calculation**

Initial Reservoir Volume 318.81 mcm  
 Initial Water Level EL. 99.45 m as of end of 1993

Month	No. of day	1-1		1-2					1-3		1-4		3. at Downstream of Bili-Bili Weir																							
		NFR (Net Field Requirement)		DR (Diversion Water Requirement)					Q -	Q -	Water Demand																									
		w.paddy	d.paddy	palawija	w.paddy	d.paddy	palawija	total	BiliBili (IRB)	Kampili (IRK)	Water Demand																									
		(l/s/ha)		(l/s/ha)					(mcm)	(mcm)	(mcm)																									
Jan	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	39.32	39.32	0.57	0.00	38.75	38.75	14.22	1.59	1.08	52.45	0.00	0.15	0.65	0.79	51.66	0.00	0.00	0.00	318.81	99.50	0.00	38.75					
Jan	2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	19.24	4.30	17.41	0.30	18.94	18.94	0.57	0.00	18.37	18.37	8.49	0.81	0.57	26.62	0.00	0.15	0.65	0.79	25.83	0.00	0.00	0.00	318.81	99.50	0.00	18.37	
Jan	3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.36	4.30	17.41	0.30	11.06	11.06	0.57	0.00	10.49	10.49	3.56	0.42	0.29	13.92	0.00	0.15	0.65	0.79	13.13	0.00	0.00	0.00	318.81	99.50	0.00	10.49	
Jan	4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	29.97	4.30	17.41	0.30	29.67	29.67	0.57	0.00	29.09	29.09	15.50	1.34	0.95	44.21	0.00	0.15	0.65	0.79	43.42	0.00	0.00	0.00	318.81	99.50	0.00	29.09	
Jan	5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	43.16	4.30	17.41	0.30	42.86	42.86	0.57	0.00	42.29	42.29	21.45	1.91	1.35	63.18	0.00	0.15	0.65	0.79	62.38	0.00	0.00	0.00	318.81	99.50	0.00	42.29	
Jan	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	39.28	4.30	17.41	0.36	38.92	38.92	0.69	0.00	38.23	38.23	36.95	2.26	1.73	74.66	0.00	0.17	0.78	0.95	73.70	0.00	0.00	0.00	318.81	99.50	0.00	38.23	
Feb	1	0.04	0.00	0.00	0.06	0.00	0.00	0.06	0.06	17.38	4.20	17.41	0.29	17.08	17.08	0.57	0.06	16.45	16.45	14.27	0.92	0.70	30.50	0.56	0.15	0.65	1.35	29.14	0.00	0.00	-0.00	318.81	99.50	0.00	16.45	
Feb	2	0.04	0.00	0.00	0.06	0.00	0.00	0.06	0.06	24.64	4.20	17.41	0.29	24.34	24.34	0.57	0.06	23.71	23.71	18.14	1.26	0.94	41.53	0.56	0.15	0.65	1.35	40.17	0.00	0.00	-0.00	318.81	99.50	0.00	23.71	
Feb	3	0.04	0.00	0.00	0.06	0.00	0.00	0.06	0.06	30.14	4.20	17.41	0.29	29.84	29.84	0.57	0.06	29.21	29.21	24.90	1.62	1.22	53.71	0.56	0.15	0.65	1.35	52.36	0.00	0.00	0.00	318.81	99.50	0.00	29.21	
Feb	4	0.20	0.00	0.00	0.29	0.00	0.00	0.29	0.29	34.52	4.20	17.41	0.29	34.23	34.23	0.57	0.30	33.36	33.36	20.35	1.61	1.17	53.26	2.71	0.15	0.65	3.51	49.75	0.00	0.00	0.00	318.81	99.50	0.00	33.36	
Feb	5	0.20	0.00	0.00	0.29	0.00	0.00	0.29	0.29	20.67	4.20	17.41	0.29	20.37	20.37	0.57	0.30	19.50	19.50	12.01	0.95	0.69	31.26	2.71	0.15	0.65	3.51	27.76	0.00	0.00	-0.00	318.81	99.50	0.00	19.50	
Feb	6	0.20	0.00	0.00	0.29	0.00	0.00	0.29	0.29	5.88	4.20	17.41	0.41	5.71	5.71	0.34	0.18	5.18	5.18	8.08	0.40	0.33	13.19	1.63	0.09	0.39	2.10	11.09	0.00	0.00	-0.00	318.81	99.50	0.00	5.18	
Mar	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	28.84	4.70	17.41	0.33	28.52	28.52	0.57	0.00	27.95	27.95	9.95	1.14	0.77	37.54	0.00	0.15	0.65	0.79	36.74	0.00	0.00	0.00	318.81	99.50	0.00	27.95	
Mar	2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	30.45	4.70	17.41	0.33	30.13	30.13	0.57	0.00	29.55	29.55	19.33	1.47	1.07	48.49	0.00	0.15	0.65	0.79	47.69	0.00	0.00	0.00	318.81	99.50	0.00	29.55	
Mar	3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	72.88	4.70	17.41	0.33	72.55	72.55	0.57	0.00	71.98	71.98	32.37	3.15	2.18	103.88	0.00	0.15	0.65	0.79	103.08	0.00	0.00	0.00	318.81	99.50	0.00	71.98	
Mar	4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24.33	4.70	17.41	0.33	24.00	24.00	0.57	0.00	23.43	23.43	9.67	0.99	0.69	32.80	0.00	0.15	0.65	0.79	32.01	0.00	0.00	0.00	318.81	99.50	0.00	23.43	
Mar	5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	66.55	4.70	17.41	0.33	66.23	66.23	0.57	0.00	65.66	65.66	23.91	2.69	1.81	88.69	0.00	0.15	0.65	0.79	87.90	0.00	0.00	0.00	318.81	99.50	0.00	65.66	
Mar	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	35.89	4.70	17.41	0.39	35.50	35.50	0.69	0.00	34.81	34.81	22.88	1.73	1.26	57.22	0.00	0.17	0.78	0.95	56.27	0.00	0.00	0.00	318.81	99.50	0.00	34.81	
Apr	1	0.23	0.16	0.00	0.34	0.24	0.00	0.58	0.59	7.27	5.10	17.41	0.36	6.92	6.92	0.57	0.59	5.76	5.76	10.82	0.50	0.43	16.51	5.31	0.15	0.65	6.11	10.40	0.00	0.00	-0.00	318.81	99.50	-15.24	5.76	
Apr	2	0.23	0.16	0.00	0.34	0.24	0.00	0.58	0.59	18.00	5.10	17.41	0.36	17.64	17.64	0.57	0.59	16.48	16.48	8.47	0.75	0.55	24.76	5.31	0.15	0.65	6.11	18.65	0.00	0.00	-0.00	318.81	99.50	-27.91	16.48	
Apr	3	0.23	0.16	0.00	0.34	0.24	0.00	0.58	0.59	23.35	5.10	17.41	0.36	23.00	23.00	0.57	0.59	21.84	21.84	13.90	1.07	0.79	35.46	5.31	0.15	0.65	6.11	29.35	0.00	0.00	-0.00	318.81	99.50	-62.04	21.84	
Apr	4	0.05	0.37	0.00	0.07	0.53	0.00	0.60	0.62	22.41	5.10	17.41	0.36	22.06	22.06	0.57	0.62	20.87	20.87	11.08	0.96	0.70	31.69	5.56	0.15	0.65	6.35	25.34	0.00	0.00	0.00	318.81	99.50	-106.88	20.87	
Apr	5	0.05	0.37	0.00	0.07	0.53	0.00	0.60	0.62	13.97	5.10	17.41	0.36	13.61	13.61	0.57	0.62	12.43	12.43	14.40	0.80	0.65	26.67	5.56	0.15	0.65	6.35	20.32	0.00	0.00	0.00	318.81	99.50	-149.81	12.43	
Apr	6	0.05	0.37	0.00	0.07	0.53	0.00	0.60	0.62	9.18	5.10	17.41	0.36	8.83	8.83	0.57	0.62	7.64	7.64	7.43	0.45	0.37	14.99	5.56	0.15	0.65	6.35	8.63	0.00	0.00	-0.00	318.81	99.50	-175.85	7.64	
May	1	0.00	0.75	0.00	0.00	1.08	0.00	1.08	1.10	8.86	4.90	17.41	0.34	8.52	8.52	0.57	1.10	7.16	7.16	6.84	9.09	0.48	0.41	15.86	9.98	0.15	0.65	10.99	4.87	0.00	0.00	318.81	99.50	-192.32	6.84	
May	2	0.00	0.75	0.00	0.00	1.08	0.00	1.08	1.10	19.18	4.90	17.41	0.34	18.83	18.83	0.57	1.10	17.16	17.16	6.06	6.06	0.90	23.02	9.98	0.15	0.65	10.99	12.03	0.00	0.00	-0.00	318.81	99.50	-201.83	17.16	
May	3	0.00	0.75	0.00	0.00	1.08	0.00	1.08	1.10	5.61	4.90	17.41	0.34	5.26	5.26	0.57	1.10	3.59	3.59	3.92	0.39	0.36	12.89	9.98	0.15	0.65	10.99	1.89	0.00	0.00	-0.00	318.81	99.50	-243.67	3.59	
May	4	0.01	1.03	0.00	0.02	1.50	0.00	1.52	1.55	5.31	4.90	17.41	0.34	4.97	4.97	0.57	1.55	2.85	2.85	3.16	0.18	0.16	14.00	15.01	0.15	0.65	15.01	-9.00	0.28	9.28	-9.28	309.53	98.76	-252.52	0.00	
May	5	0.01	1.03	0.00	0.02	1.50	0.00	1.52	1.55	4.96	4.90	17.41	0.34	4.63	4.63	0.57	1.55	-2.12	0.00	2.45	0.07	0.15	2.53	14.00	0.15	0.65	15.01	-12.48	0.39	12.86	-13.35	299.18	98.34	-251.07	0.00	
May	6	0.01	1.03	0.00	0.02	1.50	0.00	1.52	1.86	5.52	4.90	16.83	0.40	5.12	5.00	0.69	1.86	-2.55	0.00	2.44	0.07	0.16	2.53	16.80	0.17	0.78	1.04	18.01	-15.48	0.48	15.96	-13.29	285.79	97.53	-240.71	0.00
Jun	1	0.00	0.97	0.00	0.00	1.40	0.00	1.40	1.43	4.24	4.70	16.43	0.31	3.94	3.94	0.00	0.57	-2.00	0.00	1.95	0.06	0.13	2.02	12.94	0.15	0.65	13.95	-11.93	0.37	12.30	-10.37	275.43	96.89	-227.33	0.00	
Jun	2	0.00	0.97	0.00	0.00	1.40	0.00	1.40	1.43	3.92	4																									



Water Balance Analysis

Year 1995

I. Water Requirement

- Wet Paddy 100%
Dry Paddy 100%
Palawija 40%

II. Water Balance Calculation

Initial Reservoir Volume 132.28 mcm
Initial Water Level EL. 86.22 m as of end of 1994

Large data table with columns for month, day, water requirement (w.paddy, d.paddy, palawija), diversion (DR), and various balance metrics (Inflow, Evaporation, Reservoir Area, Balance, Water Demand, etc.) across 24 months.

Note: 7. When the water level at reservoir is not reach to the NWL, the surplus water is used for the recovery of reservoir capacity.

Water Balance Analysis

Year 1996

I. Water Requirement

Wet Paddy 100%
Dry Paddy 100%
Palawija 40%

II. Water Balance Calculation

Initial Reservoir Volume 318.81 mcm
Initial Water Level EL. 99.45 m as of end of 1995

Main data table with columns: Month, No. of day, Inflow, Evaporation, Balance, Water Demand, Residual Basin, etc. Rows include months Jan through Dec.

Note: 7. When the water level at reservoir is not reach to the NWL, the surplus water is used for the recovery of reservoir capacity.

**Water Balance Analysis**

**Year 1997**

**I. Water Requirement**

Wet Paddy 100 %  
Dry Paddy 100 %  
Palawija 40 %

**II. Water Balance Calculation**

Initial Reservoir Volume 318.81 mcm  
Initial Water Level EL. 99.45 m as of end of 1996

Month	No. of day	1-1		1-2			1-3		1-4		24
		NFR (Net Field Requirement)		DR (Diversion Water Requirement)			Q -		Q -		
		w.paddy	d.paddy	palawija	w.paddy	d.paddy	palawija	total	BiiliBili (IRB)	Kampili (IRK)	
		(l/s/ha)		(l/s/ha)			(mcm)		(mcm)		
Jan	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Feb	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Mar	1	0.23	0.00	0.00	0.34	0.00	0.34	0.34	3.09	3.09	
	2	0.23	0.00	0.00	0.34	0.00	0.34	0.34	3.09	3.09	
Apr	1	0.23	0.15	0.00	0.34	0.22	0.56	0.57	5.16	5.16	
	2	0.23	0.15	0.00	0.34	0.22	0.56	0.57	5.16	5.16	
May	1	0.02	0.92	0.00	0.02	1.33	0.00	1.35	13.88	13.88	
	2	0.02	0.92	0.00	0.02	1.33	0.00	1.35	13.88	13.88	
June	1	0.00	1.03	0.00	0.00	1.50	0.00	1.50	15.33	15.33	
	2	0.00	1.03	0.00	0.00	1.50	0.00	1.50	15.33	15.33	
July	1	0.00	0.82	0.00	0.00	1.20	0.00	1.20	12.22	12.22	
	2	0.00	0.82	0.00	0.00	1.20	0.00	1.20	12.22	12.22	
Aug	1	0.00	0.45	0.08	0.00	0.66	0.04	0.70	7.22	7.22	
	2	0.00	0.45	0.08	0.00	0.66	0.04	0.70	7.22	7.22	
Sept	1	0.00	0.05	0.38	0.00	0.07	0.22	0.29	3.00	3.00	
	2	0.00	0.05	0.38	0.00	0.07	0.22	0.29	3.00	3.00	
Oct	1	0.00	0.00	0.57	0.00	0.00	0.33	0.33	3.34	3.34	
	2	0.00	0.00	0.57	0.00	0.00	0.33	0.33	3.34	3.34	
Nov	1	0.00	0.00	0.49	0.00	0.00	0.29	0.29	2.64	2.64	
	2	0.00	0.00	0.49	0.00	0.00	0.29	0.29	2.64	2.64	
Dec	1	0.11	0.00	0.00	0.16	0.00	0.16	0.16	1.46	1.46	
	2	0.11	0.00	0.00	0.16	0.00	0.16	0.16	1.46	1.46	

Note: 7. When the water level at reservoir is not reach to the NWL, the surplus water is used for the recovery of reservoir capacity.

**Water Balance Analysis**

**Year 1998**

**I. Water Requirement**

Wet Paddy 100 %  
Dry Paddy 100 %  
Palawija 40 %

**II. Water Balance Calculation**

Initial Reservoir Volume 92.55 mcm  
Initial Water Level EL. 81.99 m as of end of 1997

Month	No. of day	1. at Dam Site										2. Upstream of Bili-Bili Weir										3. at Downstream of Bili-Bili Weir										Water level of Reservoir	Impound. Volume in Reservoir	Water level of Reservoir	Required Supply Water to Reservoir	Ineffct. Discharge from Dam	
		Inflow					Evaporation					Balance	Surplus Water From Dam		Water Demand		Inflow					Water Demand					Balance	Channel Water Loss	Supply Water from Dam	Water Balance at Reservoir							
		Jeneberan g River		unit evapo.		Reservoir Area		Evaporation		WTP at Bili-Bili Irrigation			Bili-Bili Irrigation		Jelata River		Residual Basin		Total		Kampili-Bissua Ir.		WTP at Downstre am		Other Use						Total						
		mcm	(l/s/ha)	mm/day	km2	mcm	mcm	mcm	mcm	mcm	mcm		mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm	mcm					mcm						mcm
Jan	1-5	0.57	0.00	0.00	0.83	0.00	0.00	0.83	0.84	7.63	0.00	0.57	0.84	-1.42	0.00	5.92	0.18	0.56	6.30	7.63	0.15	0.65	8.43	-2.12	0.07	2.19	19.36	94.74	82.31	0.00	0.00						

Note: 7. When the water level at reservoir is not reach to the NWL, the surplus water is used for the recovery of reservoir capacity.







***Part-II***

***CALCULATION OF NET FIELD WATER  
REQUIREMENT FOR PADDY AND PALAWIJA***



Net Field Requirement for Water Balance Calculation in 1972 (1/7)

[Kampili Rotation A]

Calculation of Net Field Water Requirement for Paddy (A) on 1972

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
<b>Cropping Pattern</b>	Early Cropping Middle Cropping Late Cropping																								
<b>A. Land Preparation Requirement</b>																									
1. Land Preparation Intensity																									
Early Cropping																									
Middle Cropping																									
Late Cropping																									
Total																									
2. Land Preparation Requirement (mm/day/A)		11.90	11.90	12.03	12.03	12.14	12.14	12.31	12.31	12.20	12.20	12.37	12.37	12.47	12.47	13.05	13.05	13.76	13.76	13.42	13.42	12.94	12.94	12.20	12.20
3. Water Layer Replacement Intensity																									
4. Water Layer Replacement Requirement (mm/day/A)																									
5. Total Requirement for Land Preparation																									
I (mm/day)		5.95	3.09	1.11	2.22	1.11	1.11											0.00	0.00	0.00	0.00	0.00	2.16	6.10	8.13
II (mm/day)							2.02	6.15	8.21	6.10	3.14	1.11	2.22	1.11	1.11	0.00	0.00								
<b>B. Crop Water Requirement</b>																									
1. Crop Intensity																									
Early Cropping																									
Middle Cropping																									
Late Cropping																									
Total																									
I		1/2	5/6	1	1	1	5/6	1/2	1/6	1/2	5/6	1	1	1	5/6	1/2	1/6								1/6
II									1/6	1/2	5/6	1	1	1	5/6	1/2	1/6								
2. Crop Coefficient																									
Early Cropping																									
Middle Cropping																									
Late Cropping																									
Weighted average																									
I		1.10	1.05	1.05	0.95	0.00	0.00			1.10	1.05	1.05	0.95	0.00	0.00										1.10
II		1.10	1.08	1.07	1.02	0.67	0.38	0.00	0.00	1.10	1.10	1.08	1.07	1.02	0.67	0.38	0.00	0.00							1.10
3. Potential ETo (mm/day/A)		3.94	3.94	4.13	4.13	4.30	4.30	4.53	4.53	4.38	4.38	4.62	4.62	4.76	4.76	5.57	5.57	6.54	6.54	6.09	6.09	5.42	5.42	4.37	4.37
4. Consumptive Use, ETc (mm/day/A)		4.33	4.25	4.41	4.20	2.87	1.63	0.00	0.00	4.99	4.82	4.73	4.93	4.70	3.18	1.81	0.00	0.00							4.81
5. Percolation Loss (mm/day/A)		2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
6. Crop Water Requirement (mm/day/A)		6.33	6.25	6.41	6.20	4.87	3.63	2.00	2.00	6.99	6.82	6.73	6.93	6.70	5.18	3.81	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	6.81
7. Crop water Requirement (mm/day)		3.17	5.21	6.41	6.20	4.87	3.03	1.00	0.33	1.16	3.41	5.61	6.93	6.70	5.18	3.17	1.00	0.33	0.00	0.00	0.00	0.00	0.00	0.00	1.13
C. Total A(5)+B(7)																									
I (mm/day)		9.11	8.30	7.52	8.42	5.98	4.14	1.00	0.33	9.51	8.75	8.04	8.92	6.29	4.28	1.00	0.33	0.00	0.00	0.00	0.00	0.00	2.16	6.10	9.27
II (mm/day)							2.02	6.15	9.37	6.10	3.14	1.11	2.22	1.11	1.11	0.00	0.00								
D. Effective Rainfall (mm/day)		36.59	1.76	4.96	15.30	10.09	5.62	0.00	2.83	0.62	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.00	0.00	0.00	0.00	1.10	4.95	3.65	5.61
E. Net field Water Requirement, NFR (mm/day)		-27.48	6.54	2.55	-6.88	-4.12	-1.48	1.00	-2.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-1.10	-2.80	2.45	3.66
I (mm/day)		0.00	6.54	2.55	0.00	0.00	0.00	1.00	0.00	8.89	8.75	8.04	8.92	6.29	4.28	1.00	0.16					0.00	2.45	3.66	
II (mm/day)							0.00	6.15	6.54	8.89	8.75	8.04	8.92	6.29	4.28	1.00	0.16								
I (l/sec/ha)		0.000	0.757	0.295	0.000	0.000	0.000	0.116	0.000	1.029	1.013	0.931	1.033	0.727	0.496	0.116	0.018					0.000	0.284	0.424	
II (l/sec/ha)							0.000	0.712	0.757	1.029	1.013	0.931	1.033	0.727	0.496	0.116	0.018								

Net Field Requirement for Water Balance Calculation in 1972 (2/7)

Calculation of Net Field Water Requirement for Palawija(A)

Cropping Pattern	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
Early Cropping		●		●						●		●												
Middle Cropping			●	Paddy	●						●	Paddy	●											
Late Cropping	LP			●		●						●		●										LP

A. Crop Water Requirement

1. Crop Intensity																									
Early Cropping															1/6	1/3	1/3	1/3	1/3	1/3	1/3	1/6			
Middle Cropping																1/6	1/3	1/3	1/3	1/3	1/3	1/3	1/6		
Late Cropping																	1/6	1/3	1/3	1/3	1/3	1/3	1/6	1/6	
Total															1/6	1/2	5/6	1	1	1	5/6	1/2	1/6		
2. Crop Coefficient																									
Early Cropping															0.50	0.70	0.95	1.00	0.85	0.50	0.00				
Middle Cropping																0.50	0.70	0.95	1.00	0.85	0.50	0.00			
Late Cropping																	0.50	0.70	0.95	1.00	0.85	0.50	0.00	0.00	
Weighted average															0.50	0.63	0.76	0.88	0.93	0.78	0.54	0.33	0.00		
3. Potential ETo (mm/day/A)		3.94	3.94	4.13	4.13	4.30	4.30	4.53	4.53	4.38	4.38	4.62	4.62	4.76	4.76	5.57	5.57	6.54	6.54	6.09	6.09	5.42	5.42	4.37	4.37
4. Consumptive Use, ETc (mm/day/A)															2.38	3.53	4.23	5.78	6.11	4.77	3.29	1.81	0.00		
5. Rainfall (mm/day)		52.27	2.52	7.09	21.86	14.42	8.03	0.00	4.04	0.88	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.00	0.00	0.00	0.00	1.57	7.08	5.21	8.01
6. Effective Rainfall (mm/day/A)															0.00	0.00	0.22	0.00	0.00	0.00	0.00	0.99	0.00		
7. Crop water Requirement (mm/day/A)															2.38	3.53	4.01	5.78	6.11	4.77	3.29	0.82	0.00		
B. Net Field Water Requirement (mm/day)															0.40	1.76	3.34	5.78	6.11	4.77	2.74	0.41	0.00		
(I/sec/ha)															0.046	0.204	0.387	0.669	0.707	0.552	0.317	0.047	0.000		

	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec		
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	
Net Field Water Requirement for Paddy	0.000	0.757	0.295	0.000	0.000	0.000	0.116	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.284	0.424
Net Field Water Requirement for Palawija	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.712	0.757	1.029	1.013	0.931	1.033	0.727	0.496	0.116	0.018	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100 I	0.000	0.757	0.295	0.000	0.000	0.000	0.116	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.284	0.424
100 II	0.000	0.000	0.000	0.000	0.000	0.000	0.712	0.757	1.029	1.013	0.931	1.033	0.727	0.496	0.116	0.018	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100 III	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.046	0.204	0.387	0.669	0.707	0.552	0.317	0.047	0.000	0.000	0.000	0.000
<b>Total NWR</b> (I/s/ha)	0.000	0.757	0.295	0.000	0.000	0.000	0.828	0.757	1.029	1.013	0.931	1.033	0.727	0.542	0.320	0.405	0.669	0.707	0.552	0.317	0.047	0.000	0.284	0.424	
<b>DR</b> (E=0.875*0.81)	0.000	1.068	0.417	0.000	0.000	0.000	1.168	1.068	1.452	1.429	1.313	1.457	1.026	0.765	0.451	0.571	0.944	0.997	0.779	0.447	0.067	0.000	0.400	0.598	
0.85      0.81      0.6885	0.000	1.099	0.429	0.000	0.000	0.000	1.203	1.100	1.495	1.471	1.352	1.500	1.057	0.787	0.465	0.588	0.972	1.027	0.802	0.461	0.069	0.000	0.412	0.615	

Net Field Requirement for Water Balance Calculation in 1972 (3/7)

[Kampili Rotation B]

Calculation of Net Field Water Requirement for Paddy(B) on 1972

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec					
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd				
<b>Cropping Pattern</b>																													
		<p>Early Cropping Middle Cropping Late Cropping</p>																											
<b>A. Land Preparation Requirement</b>																													
1. Land Preparation Intensity																													
Early Cropping		1/6						1/6		1/3		1/6												1/6		1/3			
Middle Cropping		1/3		1/6						1/6		1/3		1/6														1/6	
Late Cropping		1/6		1/3		1/6						1/6		1/3		1/6												1/6	
Total		2/3		1/2		1/6				1/6		1/2		2/3		1/6										1/6		1/2	
2. Land Preparation Requirement (mm/day/A)		11.90	11.90	12.03	12.03	12.14	12.14	12.31	12.31	12.20	12.20	12.37	12.37	12.47	12.47	13.05	13.05	13.76	13.76	13.42	13.42	12.94	12.94	12.20	12.20	12.20	12.20		
3. Water Layer Replacement Intensity (mm/day)		7.93	5.95	2.00	0.00	0.00	0.00	2.05	6.15	8.13	6.10	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.03	6.10	2.03	6.10		
4. Water Layer Replacement Requirement (mm/day/A)				3.33	3.33	3.33	3.33	3.33	3.33			3.33	3.33	3.33	3.33	3.33													
5. Total Requirement for Land Preparation (mm/day)				1.11	1.11	2.22	1.11	1.11	1.11			1.11	1.11	2.22	1.11	1.11													
I (mm/day)		7.93	5.95	3.11	1.11	2.22	1.11	1.11									0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.03	6.10	2.03	6.10		
II (mm/day)								2.05		6.15	8.13	6.10	3.17	1.11	2.22	1.11	1.11												
<b>B. Crop Water Requirement</b>																													
1. Crop Intensity																													
Early Cropping		1/6	1/3	1/3	1/3	1/3	1/3	1/6	1/6	1/3	1/3	1/3	1/3	1/3	1/3	1/6													
Middle Cropping		1/6		1/3	1/3	1/3	1/3	1/3	1/6	1/6	1/3	1/3	1/3	1/3	1/3	1/3	1/6												
Late Cropping		1/6		1/6	1/3	1/3	1/3	1/3	1/6	1/6	1/3	1/3	1/3	1/3	1/3	1/3	1/3	1/3	1/6										
Total		1/6	1/2	5/6	1	1	1	5/6	1/2	1/6	1/6	1/2	5/6	1	1	1	5/6	1/2	1/6										
I																													
II										1/6	1/2	5/6	1	1	1	5/6	1/2	1/6											
2. Crop Coefficient																													
Early Cropping		1.10	1.10	1.05	1.05	0.95	0.00	0.00	1.10	1.10	1.05	1.05	0.95	0.00	0.00														
Middle Cropping		1.10		1.10	1.05	1.05	0.95	0.00	0.00	1.10	1.10	1.05	1.05	0.95	0.00	0.00													
Late Cropping		1.10		1.10	1.10	1.05	1.05	0.95	0.00	0.00	1.10	1.10	1.05	1.05	0.95	0.00	0.00												
Weighted average		1.10	1.10	1.08	1.07	1.02	0.67	0.38	0.00	1.10	1.10	1.08	1.07	1.02	0.67	0.38	0.00	0.00											
I																													
II										1.10	1.10	1.08	1.07	1.02	0.67	0.38	0.00	0.00											
3. Potential ETo (mm/day/A)		3.94	3.94	4.13	4.13	4.30	4.30	4.53	4.53	4.38	4.38	4.62	4.62	4.76	4.76	5.57	5.57	6.54	6.54	6.09	6.09	5.42	5.42	4.37	4.37	4.37	4.37		
4. Consumptive Use, Etc (mm/day/A)		4.33	4.33	4.46	4.41	4.37	2.87	1.72	0.00	0.00	4.82	4.82	4.99	4.93	4.84	3.18	2.12	0.00	0.00										
5. Percolation Loss (mm/day/A)		2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00			
6. Crop Water Requirement (mm/day/A)		6.33	6.33	6.46	6.41	6.37	4.87	3.72	2.00	2.00	6.82	6.82	6.99	6.93	6.84	5.18	4.12	2.00	2.00										
7. Crop water Requirement (mm/day)		1.06	3.17	5.38	6.41	6.37	4.87	3.10	1.00	0.33	1.14	3.41	5.83	6.93	6.84	5.18	3.43	1.00	0.33										
I																													
II										0.33	3.41	5.83	6.93	6.84	5.18	3.43	1.00	0.33											
C. Total A(5)+B(7) (mm/day)		8.99	9.11	8.50	7.52	8.59	5.98	4.21	1.00	0.33	4.82	4.99	6.93	6.84	5.18	3.43	1.00	0.33											
I																													
II										0.33	4.82	4.99	6.93	6.84	5.18	3.43	1.00	0.33											
D. Effective Rainfall (mm/day)		36.59	1.76	4.96	15.30	10.09	5.62	0.00	2.83	0.62	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.00	0.00	0.00	0.00	0.00	1.10	4.95	3.65	5.61			
E. Net field Water Requirement, NFR (mm/day)		-27.60	7.35	3.53	-7.79	-1.50	0.36	4.21	-1.83	-0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-1.10	-4.95	-1.62	0.49			
I																													
II										2.05	3.32	8.65	9.51	9.00	8.04	9.06	6.29	4.54	0.82	0.33									
I		0.00	7.35	3.53	0.00	0.00	0.36	4.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.49			
II										2.05	3.32	8.65	9.51	9.00	8.04	9.06	6.29	4.54	0.82	0.33									
I (l/sec/ha)		0.000	0.851	0.409	0.000	0.000	0.041	0.488	0.000	0.000	0.000	1.100	1.042	0.931	1.049	0.727	0.526	0.095	0.039										
II										0.237	0.385	1.002	1.100	1.042	0.931	1.049	0.727	0.526	0.095	0.039									

Net Field Requirement for Water Balance Calculation in 1972 (4/7)

Calculation of Net Field Water Requirement for Palawija(B)

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
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		<table border="1"> <thead> <tr> <th colspan="2"></th> <th colspan="2">Jan</th> <th colspan="2">Feb</th> <th colspan="2">Mar</th> <th colspan="2">Apr</th> <th colspan="2">May</th> <th colspan="2">Jun</th> <th colspan="2">Jul</th> <th colspan="2">Aug</th> <th colspan="2">Sep</th> <th colspan="2">Oct</th> <th colspan="2">Nov</th> <th colspan="2">Dec</th> </tr> <tr> <th colspan="2"></th> <th>1st</th> <th>2nd</th> <th>1st</th> <th>2nd</th> <th>1st</th> <th>2nd</th> <th>1st</th> <th>2nd</th> <th>1st</th> <th>2nd</th> <th>1st</th> <th>2nd</th> <th>1st</th> <th>2nd</th> <th>1st</th> <th>2nd</th> <th>1st</th> <th>2nd</th> <th>1st</th> <th>2nd</th> <th>1st</th> <th>2nd</th> <th>1st</th> <th>2nd</th> </tr> </thead> <tbody> <tr> <td>A.Crop Water Requirement</td> <td></td> <td colspan="24"></td> </tr> <tr> <td>1.Crop Intensity</td> <td></td> <td colspan="24"></td> </tr> <tr> <td>  Early Cropping</td> <td></td> <td colspan="16"></td> <td>1/6</td> <td>1/3</td> <td>1/3</td> <td>1/3</td> <td>1/3</td> <td>1/3</td> <td>1/3</td> <td>1/6</td> <td colspan="6"></td> </tr> <tr> <td>  Middle Cropping</td> <td></td> <td colspan="16"></td> <td></td> <td>1/6</td> <td>1/3</td> <td>1/3</td> <td>1/3</td> <td>1/3</td> <td>1/3</td> <td>1/6</td> <td colspan="6"></td> </tr> <tr> <td>  Late Cropping</td> <td></td> <td colspan="16"></td> <td></td> <td></td> <td>1/6</td> <td>1/3</td> <td>1/3</td> <td>1/3</td> <td>1/3</td> <td>1/3</td> <td>1/3</td> <td>1/6</td> <td colspan="2"></td> </tr> <tr> <td>  Total</td> <td></td> <td colspan="16"></td> <td>1/6</td> <td>1/2</td> <td>5/6</td> <td>1</td> <td>1</td> <td>1</td> <td>5/6</td> <td>1/2</td> <td>1/6</td> <td colspan="6"></td> </tr> <tr> <td>2.Crop Coefficient</td> <td></td> <td colspan="24"></td> </tr> <tr> <td>  Early Cropping</td> <td></td> <td colspan="16"></td> <td>0.50</td> <td>0.70</td> <td>0.95</td> <td>1.00</td> <td>0.85</td> <td>0.50</td> <td>0.00</td> <td colspan="6"></td> </tr> <tr> <td>  Middle Cropping</td> <td></td> <td colspan="16"></td> 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(mm/day/A)</td> <td></td> <td colspan="24"></td> </tr> <tr> <td>5.Rainfall (mm/day)</td> <td></td> <td>52.27</td> <td>2.52</td> <td>7.09</td> <td>21.86</td> <td>14.42</td> <td>8.03</td> <td>0.00</td> <td>4.04</td> <td>0.88</td> <td>0.00</td> <td>0.00</td> <td>0.00</td> <td>0.00</td> <td>0.00</td> <td>0.00</td> <td>0.25</td> <td>0.00</td> <td>0.00</td> <td>0.00</td> <td>0.00</td> <td>0.00</td> <td>1.57</td> <td>7.08</td> <td>5.21</td> <td>8.01</td> </tr> <tr> <td>6.Effective Rainfall (mm/day/A)</td> <td></td> <td colspan="24"></td> </tr> <tr> <td>7.Crop water Requirement (mm/day)</td> <td></td> <td colspan="24"></td> </tr> <tr> <td>B.Net Field Water Requirement (mm/day)</td> <td></td> <td colspan="16"></td> <td>0.46</td> <td>1.66</td> <td>4.14</td> <td>5.78</td> <td>5.68</td> <td>4.77</td> <td>1.55</td> <td>0.00</td> <td>0.00</td> <td colspan="6"></td> </tr> <tr> <td></td> <td>(l/sec/ha)</td> <td colspan="16"></td> <td>0.054</td> <td>0.192</td> <td>0.480</td> <td>0.669</td> <td>0.658</td> <td>0.552</td> <td>0.179</td> <td>0.000</td> <td>0.000</td> <td colspan="6"></td> </tr> <tr> <td></td> <td>III</td> <td colspan="24"></td> </tr> <tr> <td colspan="2"></td> <td colspan="2">Jan</td> <td colspan="2">Feb</td> <td colspan="2">Mar</td> <td colspan="2">Apr</td> <td colspan="2">May</td> <td colspan="2">Jun</td> <td colspan="2">Jul</td> <td colspan="2">Aug</td> <td colspan="2">Sep</td> <td colspan="2">Oct</td> <td colspan="2">Nov</td> <td colspan="2">Dec</td> </tr> <tr> <td colspan="2"></td> <td>1st</td> <td>2nd</td> <td>1st</td> <td>2nd</td> <td>1st</td> <td>2nd</td> <td>1st</td> <td>2nd</td> <td>1st</td> <td>2nd</td> <td>1st</td> <td>2nd</td> <td>1st</td> <td>2nd</td> <td>1st</td> <td>2nd</td> <td>1st</td> <td>2nd</td> <td>1st</td> <td>2nd</td> <td>1st</td> <td>2nd</td> <td>1st</td> <td>2nd</td> </tr> <tr> <td colspan="2">Net Field Water Requirement for Paddy</td> <td>0.000</td> <td>0.851</td> <td>0.409</td> <td>0.000</td> <td>0.000</td> <td>0.041</td> <td>0.488</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.057</td> </tr> <tr> <td colspan="2">Net Field Water Requirement for Palawija</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.237</td> <td>0.385</td> <td>1.002</td> <td>1.100</td> <td>1.042</td> <td>0.931</td> <td>1.049</td> <td>0.727</td> <td>0.526</td> <td>0.095</td> <td>0.039</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> </tr> <tr> <td colspan="2">  100 I</td> <td>0.000</td> <td>0.851</td> <td>0.409</td> <td>0.000</td> <td>0.000</td> <td>0.041</td> <td>0.488</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> 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colspan="2">  <b>Total NWR</b> (l/s/ha)</td> <td>0.000</td> <td>0.851</td> <td>0.409</td> <td>0.000</td> <td>0.000</td> <td>0.041</td> <td>0.725</td> <td>0.385</td> <td>1.002</td> <td>1.100</td> <td>1.042</td> <td>0.931</td> <td>1.049</td> <td>0.727</td> <td>0.579</td> <td>0.287</td> <td>0.518</td> <td>0.669</td> <td>0.658</td> <td>0.552</td> <td>0.179</td> <td>0.000</td> <td>0.000</td> <td>0.057</td> </tr> <tr> <td colspan="2">  <b>DR</b> (E=0.875*0.81)</td> <td>0.000</td> <td>1.200</td> <td>0.577</td> <td>0.000</td> <td>0.000</td> <td>0.058</td> <td>1.023</td> <td>0.543</td> <td>1.413</td> <td>1.553</td> <td>1.470</td> <td>1.313</td> <td>1.480</td> <td>1.026</td> <td>0.817</td> <td>0.405</td> <td>0.731</td> <td>0.944</td> <td>0.928</td> <td>0.779</td> <td>0.253</td> <td>0.000</td> <td>0.000</td> <td>0.080</td> </tr> <tr> <td colspan="2">  0.85 0.81 0.6885</td> <td>0.000</td> <td>1.236</td> <td>0.594</td> <td>0.000</td> <td>0.000</td> <td>0.060</td> <td>1.053</td> <td>0.559</td> <td>1.455</td> <td>1.598</td> <td>1.513</td> <td>1.352</td> <td>1.523</td> <td>1.057</td> <td>0.841</td> <td>0.417</td> <td>0.753</td> <td>0.972</td> <td>0.955</td> <td>0.802</td> <td>0.260</td> <td>0.000</td> <td>0.000</td> <td>0.083</td> </tr> </tbody> </table>																										Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec				1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	A.Crop Water Requirement																										1.Crop Intensity																										Early Cropping																		1/6	1/3	1/3	1/3	1/3	1/3	1/3	1/6							Middle Cropping																			1/6	1/3	1/3	1/3	1/3	1/3	1/6							Late Cropping																				1/6	1/3	1/3	1/3	1/3	1/3	1/3	1/6			Total																		1/6	1/2	5/6	1	1	1	5/6	1/2	1/6							2.Crop Coefficient																										Early Cropping																		0.50	0.70	0.95	1.00	0.85	0.50	0.00							Middle Cropping																			0.50	0.70	0.95	1.00	0.85	0.50	0.00							Late Cropping																				0.50	0.70	0.95	1.00	0.85	0.50	0.00							Weighted average																		0.50	0.63	0.76	0.88	0.93	0.78	0.54	0.33	0.00							3.Potential ETo (mm/day/A)		3.94	3.94	4.13	4.13	4.30	4.30	4.53	4.53	4.38	4.38	4.62	4.62	4.76	4.76	5.57	5.57	6.54	6.54	6.09	6.09	5.42	5.42	4.37	4.37	4.Consumptive Use, ETc (mm/day/A)																										5.Rainfall (mm/day)		52.27	2.52	7.09	21.86	14.42	8.03	0.00	4.04	0.88	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.00	0.00	0.00	0.00	0.00	1.57	7.08	5.21	8.01	6.Effective Rainfall (mm/day/A)																										7.Crop water Requirement (mm/day)																										B.Net Field Water Requirement (mm/day)																		0.46	1.66	4.14	5.78	5.68	4.77	1.55	0.00	0.00								(l/sec/ha)																	0.054	0.192	0.480	0.669	0.658	0.552	0.179	0.000	0.000								III																											Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec				1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	Net Field Water Requirement for Paddy		0.000	0.851	0.409	0.000	0.000	0.041	0.488	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.057	Net Field Water Requirement for Palawija		0.000	0.000	0.000	0.000	0.000	0.000	0.237	0.385	1.002	1.100	1.042	0.931	1.049	0.727	0.526	0.095	0.039	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	100 I		0.000	0.851	0.409	0.000	0.000	0.041	0.488	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.057	100 II		0.000	0.000	0.000	0.000	0.000	0.000	0.237	0.385	1.002	1.100	1.042	0.931	1.049	0.727	0.526	0.095	0.039	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	100 III		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.054	0.192	0.480	0.669	0.658	0.552	0.179	0.000	0.000	0.000	0.000	<b>Total NWR</b> (l/s/ha)		0.000	0.851	0.409	0.000	0.000	0.041	0.725	0.385	1.002	1.100	1.042	0.931	1.049	0.727	0.579	0.287	0.518	0.669	0.658	0.552	0.179	0.000	0.000	0.057	<b>DR</b> (E=0.875*0.81)		0.000	1.200	0.577	0.000	0.000	0.058	1.023	0.543	1.413	1.553	1.470	1.313	1.480	1.026	0.817	0.405	0.731	0.944	0.928	0.779	0.253	0.000	0.000	0.080	0.85 0.81 0.6885		0.000	1.236	0.594	0.000	0.000	0.060	1.053	0.559	1.455	1.598	1.513	1.352	1.523	1.057	0.841	0.417	0.753	0.972	0.955	0.802	0.260	0.000	0.000	0.083
		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
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Weighted average																		0.50	0.63	0.76	0.88	0.93	0.78	0.54	0.33	0.00																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
3.Potential ETo (mm/day/A)		3.94	3.94	4.13	4.13	4.30	4.30	4.53	4.53	4.38	4.38	4.62	4.62	4.76	4.76	5.57	5.57	6.54	6.54	6.09	6.09	5.42	5.42	4.37	4.37																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
4.Consumptive Use, ETc (mm/day/A)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
5.Rainfall (mm/day)		52.27	2.52	7.09	21.86	14.42	8.03	0.00	4.04	0.88	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.00	0.00	0.00	0.00	0.00	1.57	7.08	5.21	8.01																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
6.Effective Rainfall (mm/day/A)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
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B.Net Field Water Requirement (mm/day)																		0.46	1.66	4.14	5.78	5.68	4.77	1.55	0.00	0.00																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
	(l/sec/ha)																	0.054	0.192	0.480	0.669	0.658	0.552	0.179	0.000	0.000																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
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Net Field Water Requirement for Paddy		0.000	0.851	0.409	0.000	0.000	0.041	0.488	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.057																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
Net Field Water Requirement for Palawija		0.000	0.000	0.000	0.000	0.000	0.000	0.237	0.385	1.002	1.100	1.042	0.931	1.049	0.727	0.526	0.095	0.039	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
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<b>Total NWR</b> (l/s/ha)		0.000	0.851	0.409	0.000	0.000	0.041	0.725	0.385	1.002	1.100	1.042	0.931	1.049	0.727	0.579	0.287	0.518	0.669	0.658	0.552	0.179	0.000	0.000	0.057																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
<b>DR</b> (E=0.875*0.81)		0.000	1.200	0.577	0.000	0.000	0.058	1.023	0.543	1.413	1.553	1.470	1.313	1.480	1.026	0.817	0.405	0.731	0.944	0.928	0.779	0.253	0.000	0.000	0.080																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
0.85 0.81 0.6885		0.000	1.236	0.594	0.000	0.000	0.060	1.053	0.559	1.455	1.598	1.513	1.352	1.523	1.057	0.841	0.417	0.753	0.972	0.955	0.802	0.260	0.000	0.000	0.083																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										



Net Field Requirement for Water Balance Calculation in 1972 (6/7)

Calculation of Net Field Water Requirement for Palawija(C)

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
Cropping Pattern	Early Cropping																								
	Middle Cropping																								
	Late Cropping																								
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A.Crop Water Requirement																									
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Late Cropping																									
Weighted average																									
3.Potential ETo (mm/day/A)		3.94	3.94	4.13	4.13	4.30	4.30	4.53	4.53	4.38	4.38	4.62	4.62	4.76	4.76	5.57	5.57	6.54	6.54	6.09	6.09	5.42	5.42	4.37	4.37
4.Consumptive Use, ETc (mm/day/A)		2.79	4.14	4.97	5.38	5.68	4.25	2.93	1.46	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.00	0.00	0.00	0.00	1.57	7.08	5.21	8.01	
5.Rainfall (mm/day)		52.27	2.52	7.09	21.86	14.42	8.03	0.00	4.04	0.88	0.00	0.00	0.00	0.00	0.00	0.25	0.00	0.00	0.00	0.00	1.57	7.08	5.21	8.01	
6.Effective Rainfall (mm/day/A)		0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.00	0.00	0.00	0.00	1.17	2.93	1.46	0.00	
7.Crop water Requirement (mm/day/A)		2.58	4.14	4.97	5.38	5.68	3.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.58	4.14	4.97	5.38	5.68	3.08	0.00	0.00	0.00	
B.Net Field Water Requirement (mm/day)		0.43	2.07	4.14	5.38	5.68	3.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43	2.07	4.14	5.38	5.68	3.08	0.00	0.00	0.00	
(l/sec/ha)		0.050	0.240	0.480	0.622	0.658	0.356	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.050	0.240	0.480	0.622	0.658	0.356	0.000	0.000	0.000	
		III																							
Net Field Water Requirement for Paddy		0.000	0.836	0.500	0.000	0.000	0.344	0.710	0.160	0.045	0.039	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Net Field Water Requirement for Palawija		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.635	1.073	1.126	1.042	0.948	1.049	0.790	0.505	0.116	0.039	0.000	0.000	0.000	0.000	0.000	0.000
100 I		0.000	0.836	0.500	0.000	0.000	0.344	0.710	0.160	0.045	0.039	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
100 II		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.635	1.073	1.126	1.042	0.948	1.049	0.790	0.505	0.116	0.039	0.000	0.000	0.000	0.000	0.000	
100 III		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.050	0.240	0.480	0.622	0.658	0.356	0.000	0.000	0.000	
<b>Total NWR</b> (l/s/ha)		0.000	0.836	0.500	0.000	0.000	0.344	0.710	0.160	0.679	1.111	1.126	1.042	0.948	1.049	0.790	0.555	0.356	0.518	0.622	0.658	0.356	0.000	0.000	
<b>DR</b> (E=0.875*0.81)		0.000	1.179	0.706	0.000	0.000	0.485	1.001	0.226	0.959	1.568	1.589	1.470	1.337	1.480	1.114	0.783	0.502	0.731	0.878	0.928	0.503	0.000	0.000	
0.85 0.81 0.6885		0.000	1.214	0.727	0.000	0.000	0.499	1.031	0.232	0.987	1.614	1.636	1.513	1.377	1.523	1.147	0.806	0.516	0.753	0.904	0.955	0.518	0.000	0.000	

Net Field Requirement for Water Balance Calculation in 1972 (7/7)

(E=0.875*0.81)	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
<b>Golongan A</b>	0.000	1.068	0.417	0.000	0.000	0.000	1.168	1.068	1.452	1.429	1.313	1.457	1.026	0.765	0.451	0.571	0.944	0.997	0.779	0.447	0.067	0.000	0.400	0.598
<b>Golongan B</b>	0.000	1.200	0.577	0.000	0.000	0.058	1.023	0.543	1.413	1.553	1.470	1.313	1.480	1.026	0.817	0.405	0.731	0.944	0.928	0.779	0.253	0.000	0.000	0.080
<b>Golongan C</b>	0.000	1.179	0.706	0.000	0.000	0.485	1.001	0.226	0.959	1.568	1.589	1.470	1.337	1.480	1.114	0.783	0.502	0.731	0.878	0.928	0.503	0.000	0.000	0.000
average	0.000	1.149	0.567	0.000	0.000	0.181	1.064	0.612	1.275	1.517	1.457	1.413	1.281	1.090	0.794	0.586	0.726	0.891	0.862	0.718	0.274	0.000	0.133	0.226

(E=0.85*0.81)	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
<b>Golongan A</b>	0.000	1.099	0.429	0.000	0.000	0.000	1.203	1.100	1.495	1.471	1.352	1.500	1.057	0.787	0.465	0.588	0.972	1.027	0.802	0.461	0.069	0.000	0.412	0.615
<b>Golongan B</b>	0.000	1.236	0.594	0.000	0.000	0.060	1.053	0.559	1.455	1.598	1.513	1.352	1.523	1.057	0.841	0.417	0.753	0.972	0.955	0.802	0.260	0.000	0.000	0.083
<b>Golongan C</b>	0.000	1.214	0.727	0.000	0.000	0.499	1.031	0.232	0.987	1.614	1.636	1.513	1.377	1.523	1.147	0.806	0.516	0.753	0.904	0.955	0.518	0.000	0.000	0.000
average	0.000	1.183	0.583	0.000	0.000	0.186	1.096	0.630	1.312	1.561	1.500	1.455	1.319	1.122	0.818	0.604	0.747	0.917	0.887	0.739	0.282	0.000	0.137	0.233

Summary Calculation of NFR (l/s/ha)

	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
<b>Golongan A</b>	0.00	0.76	0.30	0.00	0.00	0.00	0.83	0.76	1.03	1.01	0.93	1.03	0.73	0.54	0.32	0.41	0.67	0.71	0.55	0.32	0.05	0.00	0.28	0.42
<b>Golongan B</b>	0.00	0.85	0.41	0.00	0.00	0.04	0.73	0.38	1.00	1.10	1.04	0.93	1.05	0.73	0.58	0.29	0.52	0.67	0.66	0.55	0.18	0.00	0.00	0.06
<b>Golongan C</b>	0.00	0.84	0.50	0.00	0.00	0.34	0.71	0.16	0.68	1.11	1.13	1.04	0.95	1.05	0.79	0.55	0.36	0.52	0.62	0.66	0.36	0.00	0.00	0.00

1972

	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
I : W.Pad	0.00	0.76	0.30	0.00	0.00	0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.42
B	0.00	0.85	0.41	0.00	0.00	0.04	0.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06
C	0.00	0.84	0.50	0.00	0.00	0.34	0.71	0.16	0.04	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
av	0.00	0.81	0.40	0.00	0.00	0.13	0.44	0.05	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.16
II : D.Pad	0.00	0.00	0.00	0.00	0.00	0.00	0.71	0.76	1.03	1.01	0.93	1.03	0.73	0.50	0.12	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B	0.00	0.00	0.00	0.00	0.00	0.00	0.24	0.38	1.00	1.10	1.04	0.93	1.05	0.73	0.53	0.10	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.63	1.07	1.13	1.04	0.95	1.05	0.79	0.50	0.12	0.04	0.00	0.00	0.00	0.00	0.00	0.00
av	0.00	0.00	0.00	0.00	0.00	0.00	0.32	0.38	0.89	1.06	1.03	1.00	0.91	0.76	0.48	0.21	0.05	0.01	0.00	0.00	0.00	0.00	0.00	0.00
III : D.Pal	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.20	0.39	0.67	0.71	0.55	0.32	0.05	0.00	0.00	0.00
B	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.19	0.48	0.67	0.66	0.55	0.18	0.00	0.00	0.00
C	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.24	0.48	0.62	0.66	0.36	0.00	0.00	0.00	0.00
av	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.09	0.21	0.46	0.62	0.61	0.51	0.19	0.00	0.00	0.00
I : W.Pad	0.00	0.81	0.40	0.00	0.00	0.13	0.44	0.05	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.16
II : D.Pad	0.00	0.00	0.00	0.00	0.00	0.00	0.32	0.38	0.89	1.06	1.03	1.00	0.91	0.76	0.48	0.21	0.05	0.01	0.00	0.00	0.00	0.00	0.00	0.00
III : D.Pal	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.09	0.21	0.46	0.62	0.61	0.51	0.19	0.00	0.00	0.00

1972

I : W.Pad	100	0.000	0.814	0.402	0.000	0.000	0.128	0.438	0.053	0.015	0.013	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.095	0.160
II : D.Pad	100	0.000	0.000	0.000	0.000	0.000	0.317	0.381	0.889	1.062	1.033	1.002	0.908	0.757	0.477	0.206	0.051	0.013	0.000	0.000	0.000	0.000	0.000	0.000	0.000
III : D.Pal	100	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.015	0.086	0.210	0.463	0.618	0.611	0.509	0.194	0.000	0.000	0.000	0.000
total		0.000	0.814	0.402	0.000	0.000	0.128	0.754	0.434	0.903	1.075	1.033	1.002	0.908	0.773	0.563	0.416	0.514	0.631	0.611	0.509	0.194	0.000	0.095	0.160
		0.40725		0.20079		0.06415		0.59411		0.98918		1.01733		0.84039		0.48932		0.57277		0.55974		0.09715		0.12737	

Year : 1972

N.F.R. (l/s/ha)

	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
	0.000	0.814	0.402	0.000	0.000	0.128	0.754	0.434	0.903	1.075	1.033	1.002	0.908	0.773	0.563	0.416	0.514	0.631	0.611	0.509	0.194	0.000	0.095	0.160





Net Field Requirement for Water Balance Calculation in 1973 (2/7)

Calculation of Net Field Water Requirement for Palawija(A)

Cropping Pattern	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
Early Cropping		○		○						○		○												
Middle Cropping			○	Paddy	○						○	Paddy	○											
Late Cropping	LP			○		○						○		○										LP

A. Crop Water Requirement

1. Crop Intensity																									
Early Cropping															1/6	1/3	1/3	1/3	1/3	1/3	1/3	1/6			
Middle Cropping																1/6	1/3	1/3	1/3	1/3	1/3	1/3	1/6		
Late Cropping																	1/6	1/3	1/3	1/3	1/3	1/3	1/3	1/6	
Total															1/6	1/2	5/6	1	1	1	5/6	1/2	1/6		
2. Crop Coefficient																									
Early Cropping															0.50	0.70	0.95	1.00	0.85	0.50	0.00				
Middle Cropping																0.50	0.70	0.95	1.00	0.85	0.50	0.00			
Late Cropping																	0.50	0.70	0.95	1.00	0.85	0.50	0.00	0.00	
Weighted average															0.50	0.63	0.76	0.88	0.93	0.78	0.54	0.33	0.00		
3. Potential ETo (mm/day/A)		4.19	4.19	4.31	4.31	4.36	4.36	4.66	4.66	4.38	4.38	4.38	4.38	4.55	4.55	4.89	4.89	5.27	5.27	5.23	5.23	4.78	4.78	4.28	4.28
4. Consumptive Use, ETc (mm/day/A)															2.28	3.10	3.72	4.66	4.92	4.10	2.83	1.59	0.00		
5. Rainfall (mm/day)		7.29	14.11	5.04	0.68	11.31	5.93	15.17	14.45	4.79	3.39	1.06	0.21	7.12	0.00	0.64	0.47	3.98	11.74	3.22	2.12	7.37	25.34	4.53	26.52
6. Effective Rainfall (mm/day/A)															0.00	0.47	0.37	2.82	4.92	2.24	1.40	1.59	0.00		
7. Crop water Requirement (mm/day/A)															2.28	2.62	3.35	1.84	0.00	1.86	1.42	0.00	0.00		
B. Net Field Water Requirement (mm/day)															0.38	1.31	2.79	1.84	0.00	1.86	1.19	0.00	0.00		
(l/sec/ha)															0.044	0.152	0.323	0.213	0.000	0.215	0.137	0.000	0.000		

	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec		
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	
Net Field Water Requirement for Paddy	0.490	0.000	0.483	0.940	0.000	0.001	0.000	0.000	0.000	0.713	0.739	0.815	0.987	0.135	0.488	0.064	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Net Field Water Requirement for Palawija	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.044	0.152	0.323	0.213	0.000	0.215	0.137	0.000	0.000	0.000	
100 I	0.490	0.000	0.483	0.940	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.335	
100 II	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.713	0.739	0.815	0.987	0.135	0.488	0.064	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
100 III	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.044	0.152	0.323	0.213	0.000	0.215	0.137	0.000	0.000	0.000	
<b>Total NWR</b> (l/s/ha)	0.490	0.000	0.483	0.940	0.000	0.001	0.000	0.000	0.000	0.713	0.739	0.815	0.987	0.135	0.532	0.216	0.324	0.213	0.000	0.215	0.137	0.000	0.000	0.335	
<b>DR</b> (E=0.875*0.81)	0.692	0.000	0.682	1.327	0.000	0.001	0.000	0.000	1.006	1.042	1.151	1.393	0.190	0.751	0.305	0.456	0.301	0.000	0.304	0.194	0.000	0.000	0.472	0.000	
0.85      0.81      0.6885	0.712	0.000	0.702	1.366	0.000	0.001	0.000	0.000	1.035	1.073	1.184	1.434	0.195	0.773	0.314	0.470	0.310	0.000	0.313	0.199	0.000	0.000	0.486	0.000	

Net Field Requirement for Water Balance Calculation in 1973 (3/7)

[Kampili Rotation B]

Calculation of Net Field Water Requirement for Paddy(B) on 1973

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec					
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd				
<b>Cropping Pattern</b>																													
<b>A. Land Preparation Requirement</b>																													
1. Land Preparation Intensity																													
Early Cropping		1/6						1/6		1/3		1/6												1/6		1/3			
Middle Cropping		1/3		1/6						1/6		1/3		1/6														1/6	
Late Cropping		1/6		1/3		1/6						1/6		1/3		1/6												1/6	
Total		2/3		1/2		1/6				1/6		1/2		2/3		1/6										1/6		1/2	
2. Land Preparation Requirement (mm/day/A)		12.07	12.07	12.15	12.15	12.19	12.19	12.40	12.40	12.20	12.20	12.21	12.21	12.32	12.32	12.56	12.56	12.83	12.83	12.80	12.80	12.48	12.48	12.13	12.13	12.13	12.13	12.13	12.13
3. Water Layer Replacement Intensity (mm/day)		8.05	6.03	2.03	0.00	0.00	0.00	2.07	6.20	8.14	6.10	2.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.02	6.06	
4. Water Layer Replacement Requirement (mm/day/A)				3.33	3.33	3.33	3.33	3.33	3.33			3.33	3.33	3.33	3.33	3.33													
5. Total Requirement for Land Preparation																													
I (mm/day)		8.05	6.03	3.14	1.11	2.22	1.11	1.11			1.11	1.11	2.22	1.11	1.11			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.02	6.06		
II (mm/day)								2.07		6.20	8.14	6.10	3.14	1.11	2.22	1.11	1.11												
<b>B. Crop Water Requirement</b>																													
1. Crop Intensity																													
Early Cropping		1/6	1/3	1/3	1/3	1/3	1/3	1/6	1/6	1/3	1/3	1/3	1/3	1/3	1/3	1/6													
Middle Cropping		1/6		1/3	1/3	1/3	1/3	1/3	1/6	1/6	1/3	1/3	1/3	1/3	1/3	1/3	1/6												
Late Cropping		1/6		1/6	1/3	1/3	1/3	1/3	1/6	1/6	1/3	1/3	1/3	1/3	1/3	1/3	1/3	1/3	1/6										
Total		1/6		1/2	5/6	1	1	1	5/6	1/2	1/6			1	1	1	5/6	1/2	1/6										
2. Crop Coefficient																													
Early Cropping		1.10	1.10	1.05	1.05	0.95	0.00	0.00	0.00	1.10	1.10	1.05	1.05	0.95	0.00	0.00													
Middle Cropping		1.10		1.10	1.05	1.05	0.95	0.00	0.00	1.10	1.10	1.05	1.05	0.95	0.00	0.00													
Late Cropping		1.10		1.10	1.10	1.05	1.05	0.95	0.00	0.00	1.10	1.10	1.05	1.05	0.95	0.00	0.00												
Weighted average		1.10		1.10	1.08	1.07	1.02	0.67	0.38	0.00	1.10	1.10	1.08	1.07	1.02	0.67	0.38	0.00	0.00										
3. Potential ETo (mm/day/A)		4.19	4.19	4.31	4.31	4.36	4.36	4.66	4.66	4.38	4.38	4.38	4.38	4.55	4.55	4.89	4.89	5.27	5.27	5.23	5.23	4.78	4.78	4.28	4.28	4.28	4.28		
4. Consumptive Use, ETc (mm/day/A)		4.61	4.61	4.65	4.59	4.43	2.91	1.77	0.00	0.00	4.82	4.82	4.74	4.68	4.63	3.03	1.86	0.00	0.00										
5. Percolation Loss (mm/day/A)		2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00		
6. Crop Water Requirement (mm/day/A)		6.61	6.61	6.65	6.59	6.43	4.91	3.77	2.00	2.00	6.82	6.82	6.74	6.68	6.63	5.03	3.86	2.00	2.00										
7. Crop water Requirement (mm/day)		1.10	3.30	5.54	6.59	6.43	4.91	3.14	1.00	0.33	1.14	3.41	5.61	6.68	6.63	5.03	3.22	1.00	0.33										
C. Total A(5)+B(7)																													
I (mm/day)		9.15	9.34	8.68	7.70	8.65	6.02	4.25	1.00	0.33	3.41	5.61	6.68	6.63	5.03	3.22	1.00	0.33											
II (mm/day)								2.07		6.20	9.27	9.51	8.76	7.79	8.85	6.14	4.33	1.00	0.33										
D. Effective Rainfall (mm/day)		5.10	9.88	3.53	0.47	7.92	4.15	10.62	10.11	3.35	2.37	0.74	0.15	4.98	0.00	0.44	0.33	2.79			8.22	2.25	1.48	5.16	17.74	3.17	18.57		
E. Net field Water Requirement, NFR (mm/day)		4.04	-0.54	5.15	7.23	0.74	1.87	-6.37	-9.11	-3.02	7.14	8.02	7.64	3.87	6.14	3.88	0.67	-2.45			-8.22	-2.25	-1.48	-5.16	-17.74	-1.15	-12.50		
II (mm/day)								-8.55		-3.91	5.92	7.14	8.02	7.64	3.87	6.14	3.88	0.67	-2.45										
I (mm/day)		4.04	0.00	5.15	7.23	0.74	1.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00												
II (mm/day)								0.00		0.00	5.92	7.14	8.02	7.64	3.87	6.14	3.88	0.67	0.00										
I (l/sec/ha)		0.468	0.000	0.596	0.837	0.085	0.216	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000												
II (l/sec/ha)								0.000		0.000	0.685	0.826	0.928	0.884	0.447	0.711	0.449	0.078	0.000										

Net Field Requirement for Water Balance Calculation in 1973 (4/7)

Calculation of Net Field Water Requirement for Palawija(B)

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec			
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd		
Cropping Pattern	Early Cropping			●		●						●		●													
	Middle Cropping				●		●					●		●													
	Late Cropping	●																							●		
		LP				Paddy				LP				Paddy				Palawija				No Cropping		LP			
		Jan 1st	Jan 2nd	Feb 1st	Feb 2nd	Mar 1st	Mar 2nd	Apr 1st	Apr 2nd	May 1st	May 2nd	Jun 1st	Jun 2nd	Jul 1st	Jul 2nd	Aug 1st	Aug 2nd	Sep 1st	Sep 2nd	Oct 1st	Oct 2nd	Nov 1st	Nov 2nd	Dec 1st	Dec 2nd		
A.Crop Water Requirement																											
1.Crop Intensity																											
Early Cropping																											
Middle Cropping																											
Late Cropping																											
Total																											
2.Crop Coefficient																											
Early Cropping																											
Middle Cropping																											
Late Cropping																											
Weighted average																											
3.Potential ETo (mm/day/A)		4.19	4.19	4.31	4.31	4.36	4.36	4.66	4.66	4.38	4.38	4.38	4.38	4.55	4.55	4.89	4.89	5.27	5.27	5.23	5.23	4.78	4.78	4.28	4.28		
4.Consumptive Use, ETc (mm/day/A)																											
5.Rainfall (mm/day)		7.29	14.11	5.04	0.68	11.31	5.93	15.17	14.45	4.79	3.39	1.06	0.21	7.12	0.00	0.64	0.47	3.98	11.74	3.22	2.12	7.37	25.34	4.53	26.52		
6.Effective Rainfall (mm/day/A)																											
7.Crop water Requirement (mm/day)																											
B.Net Field Water Requirement (mm/day)																											
(I/sec/ha)																											
III																											
		Jan 1st	Jan 2nd	Feb 1st	Feb 2nd	Mar 1st	Mar 2nd	Apr 1st	Apr 2nd	May 1st	May 2nd	Jun 1st	Jun 2nd	Jul 1st	Jul 2nd	Aug 1st	Aug 2nd	Sep 1st	Sep 2nd	Oct 1st	Oct 2nd	Nov 1st	Nov 2nd	Dec 1st	Dec 2nd		
Net Field Water Requirement for Paddy		0.468	0.000	0.596	0.837	0.085	0.216	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
Net Field Water Requirement for Palawija																											
100 I		0.468	0.000	0.596	0.837	0.085	0.216	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
100 II		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.685	0.826	0.928	0.884	0.447	0.711	0.449	0.078	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
100 III		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.038	0.159	0.126	0.000	0.293	0.298	0.000	0.000	0.000	0.000		
<b>Total NWR</b> (I/s/ha)		0.468	0.000	0.596	0.837	0.085	0.216	0.000	0.000	0.685	0.826	0.928	0.884	0.447	0.711	0.488	0.237	0.126	0.000	0.293	0.298	0.000	0.000	0.000	0.000		
<b>DR</b> (E=0.875*0.81)		0.661	0.000	0.841	1.181	0.120	0.305	0.000	0.000	0.967	1.166	1.309	1.247	0.631	1.003	0.688	0.334	0.178	0.000	0.414	0.420	0.000	0.000	0.000	0.000		
0.85      0.81      0.6885		0.680	0.000	0.866	1.215	0.124	0.314	0.000	0.000	0.995	1.200	1.347	1.284	0.650	1.033	0.708	0.344	0.183	0.000	0.426	0.433	0.000	0.000	0.000	0.000		



Net Field Requirement for Water Balance Calculation in 1973 (6/7)

Calculation of Net Field Water Requirement for Palawija(C)

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
Cropping Pattern	Early Cropping																								
	Middle Cropping																								
	Late Cropping																								
A.Crop Water Requirement																									
1.Crop Intensity																									
Early Cropping																									
Middle Cropping																									
Late Cropping																									
Total																									
2.Crop Coefficient																									
Early Cropping																									
Middle Cropping																									
Late Cropping																									
Weighted average																									
3.Potential ETo (mm/day/A)		4.19	4.19	4.31	4.31	4.36	4.36	4.66	4.66	4.38	4.38	4.38	4.38	4.55	4.55	4.89	4.89	5.27	5.27	5.23	5.23	4.78	4.78	4.28	4.28
4.Consumptive Use, ETc (mm/day/A)										0.318	0.799	1.015	0.996	0.345	1.024	0.686	0.463	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5.Rainfall (mm/day)		7.29	14.11	5.04	0.68	11.31	5.93	15.17	14.45	4.79	3.39	1.06	0.21	7.12	0.00	0.64	0.47	3.98	11.74	3.22	2.12	7.37	25.34	4.53	26.52
6.Effective Rainfall (mm/day/A)																	0.34	2.59	4.01	2.31	1.60	3.75	2.58	1.43	0.00
7.Crop water Requirement (mm/day/A)																	2.10	0.75	0.00	2.31	3.28	0.00	0.00	0.00	0.00
B.Net Field Water Requirement (mm/day)																									
(I/sec/ha)																									
III																									
		0.041	0.044	0.000	0.267	0.380	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.041	0.044	0.000	0.267	0.380	0.000	0.000	0.000	0.000
Net Field Water Requirement for Paddy		0.108	0.000	0.685	0.950	0.000	0.521	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Net Field Water Requirement for Palawija		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.318	0.799	1.015	0.996	0.345	1.024	0.686	0.463	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100 I		0.108	0.000	0.685	0.950	0.000	0.521	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100 II		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.318	0.799	1.015	0.996	0.345	1.024	0.686	0.463	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100 III		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.041	0.044	0.000	0.267	0.380	0.000	0.000	0.000	0.000
<b>Total NWR</b> (I/s/ha)		0.108	0.000	0.685	0.950	0.000	0.521	0.000	0.000	0.318	0.799	1.015	0.996	0.345	1.024	0.686	0.504	0.044	0.000	0.267	0.380	0.000	0.000	0.000	0.000
<b>DR</b> (E=0.875*0.81)		0.152	0.000	0.966	1.340	0.000	0.735	0.000	0.000	0.449	1.127	1.433	1.406	0.487	1.445	0.968	0.710	0.061	0.000	0.377	0.536	0.000	0.000	0.000	0.000
0.85      0.81      0.6885		0.157	0.000	0.994	1.379	0.000	0.757	0.000	0.000	0.462	1.160	1.475	1.447	0.502	1.487	0.996	0.731	0.063	0.000	0.388	0.552	0.000	0.000	0.000	0.000

Net Field Requirement for Water Balance Calculation in 1973 (7/7)

(E=0.875*0.81)	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
<b>Golongan A</b>	0.692	0.000	0.682	1.327	0.000	0.001	0.000	0.000	1.006	1.042	1.151	1.393	0.190	0.751	0.305	0.456	0.301	0.000	0.304	0.194	0.000	0.000	0.472	0.000
<b>Golongan B</b>	0.661	0.000	0.841	1.181	0.120	0.305	0.000	0.000	0.967	1.166	1.309	1.247	0.631	1.003	0.688	0.334	0.178	0.000	0.414	0.420	0.000	0.000	0.000	0.000
<b>Golongan C</b>	0.152	0.000	0.966	1.340	0.000	0.735	0.000	0.000	0.449	1.127	1.433	1.406	0.487	1.445	0.968	0.710	0.061	0.000	0.377	0.536	0.000	0.000	0.000	0.000
average	0.502	0.000	0.830	1.282	0.040	0.347	0.000	0.000	0.807	1.111	1.297	1.349	0.436	1.066	0.654	0.500	0.180	0.000	0.365	0.383	0.000	0.000	0.157	0.000

(E=0.85*0.81)	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
<b>Golongan A</b>	0.712	0.000	0.702	1.366	0.000	0.001	0.000	0.000	1.035	1.073	1.184	1.434	0.195	0.773	0.314	0.470	0.310	0.000	0.313	0.199	0.000	0.000	0.486	0.000
<b>Golongan B</b>	0.680	0.000	0.866	1.215	0.124	0.314	0.000	0.000	0.995	1.200	1.347	1.284	0.650	1.033	0.708	0.344	0.183	0.000	0.426	0.433	0.000	0.000	0.000	0.000
<b>Golongan C</b>	0.157	0.000	0.994	1.379	0.000	0.757	0.000	0.000	0.462	1.160	1.447	1.406	0.502	1.487	0.996	0.731	0.063	0.000	0.388	0.552	0.000	0.000	0.000	0.000
average	0.516	0.000	0.854	1.320	0.041	0.357	0.000	0.000	0.831	1.144	1.336	1.388	0.449	1.098	0.673	0.515	0.185	0.000	0.376	0.395	0.000	0.000	0.162	0.000

Summary Calculation of NFR (l/s/ha)

	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
<b>Golongan A</b>	0.49	0.00	0.48	0.94	0.00	0.00	0.00	0.00	0.71	0.74	0.82	0.99	0.13	0.53	0.22	0.32	0.21	0.00	0.22	0.14	0.00	0.00	0.33	0.00
<b>Golongan B</b>	0.47	0.00	0.60	0.84	0.09	0.22	0.00	0.00	0.69	0.83	0.93	0.88	0.45	0.71	0.49	0.24	0.13	0.00	0.29	0.30	0.00	0.00	0.00	0.00
<b>Golongan C</b>	0.11	0.00	0.68	0.95	0.00	0.52	0.00	0.00	0.32	0.80	1.02	1.00	0.35	1.02	0.69	0.50	0.04	0.00	0.27	0.38	0.00	0.00	0.00	0.00

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		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
I : W.Pad	A	0.49	0.00	0.48	0.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33	0.00
	B	0.47	0.00	0.60	0.84	0.09	0.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	C	0.11	0.00	0.68	0.95	0.00	0.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	av	0.36	0.00	0.59	0.91	0.03	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00
II : D.Pad	A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.71	0.74	0.82	0.99	0.13	0.49	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	B	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.69	0.83	0.93	0.88	0.45	0.71	0.45	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	C	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32	0.80	1.02	1.00	0.35	1.02	0.69	0.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	av	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57	0.79	0.92	0.96	0.31	0.74	0.40	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
III : D.Pad	A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.15	0.32	0.21	0.00	0.22	0.14	0.00	0.00	0.00	0.00
	B	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.16	0.13	0.00	0.29	0.30	0.00	0.00	0.00	0.00	
	C	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.04	0.00	0.27	0.38	0.00	0.00	0.00	0.00	
	av	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.06	0.17	0.13	0.00	0.26	0.27	0.00	0.00	0.00	0.00
I : W.Pad		0.36	0.00	0.59	0.91	0.03	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00
II : D.Pad		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57	0.79	0.92	0.96	0.31	0.74	0.40	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
III : D.Pad		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.06	0.17	0.13	0.00	0.26	0.27	0.00	0.00	0.00	0.00	0.00

1973

I : W.Pad	<b>100</b>	0.355	0.000	0.588	0.909	0.028	0.246	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.112	0.000
II : D.Pad	<b>100</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.572	0.788	0.920	0.956	0.309	0.741	0.400	0.181	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
III : D.Pad	<b>100</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.015	0.063	0.174	0.128	0.000	0.259	0.272	0.000	0.000	0.000	0.000	0.000	
total		0.355	0.000	0.588	0.909	0.028	0.246	0.000	0.000	0.572	0.788	0.920	0.956	0.309	0.756	0.463	0.355	0.128	0.000	0.259	0.272	0.000	0.000	0.112	0.000	
		0.17773		0.74848		0.1371		0	0.67995		0.93772		0.53245		0.40891		0.06379		0.26511		0		0.05578			

Year : 1973

N.F.R. (l/s/ha)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
	0.355	0.000	0.588	0.909	0.028	0.246	0.000	0.000	0.572	0.788	0.920	0.956

Net Field Requirement for Water Balance Calculation in 1974 (1/7)

[Kampili Rotation A]

1 1 1  
Calculation of Net Field Water Requirement for Paddy (A) on

1974

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
<b>Cropping Pattern</b>																									
		<p>Early Cropping Middle Cropping Late Cropping</p>																							
<b>A. Land Preparation Requirement</b>																									
1. Land Preparation Intensity																									
Early Cropping																									
Middle Cropping																									
Late Cropping																									
Total																									
2. Land Preparation Requirement (mm/day/A)																									
3. Water Layer Replacement Intensity																									
4. Water Layer Replacement Requirement (mm/day/A)																									
5. Total Requirement for Land Preparation																									
I (mm/day)																									
II (mm/day)																									
<b>B. Crop Water Requirement</b>																									
1. Crop Intensity																									
Early Cropping																									
Middle Cropping																									
Late Cropping																									
Total																									
I																									
II																									
2. Crop Coefficient																									
Early Cropping																									
Middle Cropping																									
Late Cropping																									
Weighted average																									
I																									
II																									
3. Potential ETo (mm/day/A)																									
4. Consumptive Use, ETc (mm/day/A)																									
5. Percolation Loss (mm/day/A)																									
6. Crop Water Requirement (mm/day/A)																									
7. Crop water Requirement (mm/day)																									
C. Total A(5)+B(7)																									
I (mm/day)																									
II (mm/day)																									
D. Effective Rainfall (mm/day)																									
E. Net field Water Requirement, NFR (mm/day)																									
I																									
II																									
I (l/sec/ha)																									
II																									

Net Field Requirement for Water Balance Calculation in 1974 (2/7)

Calculation of Net Field Water Requirement for Palawija(A)

Cropping Pattern	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
Early Cropping		●		●						●		●												
Middle Cropping			●	Paddy	●						●	Paddy	●											
Late Cropping	LP			●		●						●		●										LP

A. Crop Water Requirement

1. Crop Intensity																									
Early Cropping															1/6	1/3	1/3	1/3	1/3	1/3	1/3	1/6			
Middle Cropping																1/6	1/3	1/3	1/3	1/3	1/3	1/3	1/6		
Late Cropping																	1/6	1/3	1/3	1/3	1/3	1/3	1/3	1/6	
Total															1/6	1/2	5/6	1	1	1	1	5/6	1/2	1/6	
2. Crop Coefficient																									
Early Cropping															0.50	0.70	0.95	1.00	0.85	0.50	0.00				
Middle Cropping																0.50	0.70	0.95	1.00	0.85	0.50	0.00			
Late Cropping																	0.50	0.70	0.95	1.00	0.85	0.50	0.00		
Weighted average															0.50	0.63	0.76	0.88	0.93	0.78	0.54	0.33	0.00		
3. Potential ETo (mm/day/A)		4.31	4.31	4.14	4.14	4.37	4.37	4.49	4.49	4.33	4.33	4.25	4.25	4.36	4.36	4.98	4.98	4.95	4.95	4.94	4.94	4.53	4.53	4.00	4.00
4. Consumptive Use, ETC (mm/day/A)															2.18	3.15	3.78	4.37	4.62	3.87	2.67	1.51	0.00		
5. Rainfall (mm/day)		12.80	0.72	14.62	13.09	26.78	12.16	8.39	2.67	1.48	3.14	0.51	1.74	1.78	5.30	0.00	0.30	5.22	0.29	9.14	2.75	4.75	14.42	12.19	14.30
6. Effective Rainfall (mm/day/A)															2.18	0.00	0.25	3.54	0.26	3.87	1.76	1.51	0.00		
7. Crop water Requirement (mm/day/A)															0.00	3.15	3.53	0.83	4.36	0.00	0.90	0.00	0.00		
B. Net Field Water Requirement (mm/day)															0.00	1.58	2.95	0.83	4.36	0.00	0.75	0.00	0.00		
(I/sec/ha)															0.000	0.182	0.341	0.096	0.504	0.000	0.087	0.000	0.000		

	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec		
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	
Net Field Water Requirement for Paddy	0.057	0.947	0.000	0.000	0.000	0.000	0.000	0.000	0.031	0.865	0.975	0.753	0.844	0.848	0.552	0.052	0.116	0.015	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Net Field Water Requirement for Palawija	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.182	0.341	0.096	0.504	0.000	0.087	0.000	0.000	0.000	0.000
100 I	0.057	0.947	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100 II	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.031	0.865	0.975	0.753	0.844	0.848	0.552	0.052	0.116	0.015	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100 III	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.182	0.341	0.096	0.504	0.000	0.087	0.000	0.000	0.000	0.000
<b>Total NWR</b> (l/s/ha)	0.057	0.947	0.000	0.000	0.000	0.000	0.031	0.865	0.975	0.753	0.844	0.848	0.552	0.052	0.298	0.355	0.096	0.504	0.000	0.087	0.000	0.000	0.000	0.000	0.000
<b>DR</b> (E=0.875*0.81)	0.081	1.336	0.000	0.000	0.000	0.000	0.044	1.221	1.376	1.062	1.191	1.197	0.779	0.074	0.421	0.502	0.135	0.712	0.000	0.123	0.000	0.000	0.000	0.000	0.000
0.85      0.81	0.6885	0.083	1.375	0.000	0.000	0.000	0.045	1.257	1.416	1.093	1.226	1.232	0.802	0.076	0.433	0.516	0.139	0.733	0.000	0.127	0.000	0.000	0.000	0.000	0.000



Net Field Requirement for Water Balance Calculation in 1974 (3/7)

[Kampili Rotation B]

Calculation of Net Field Water Requirement for Paddy(B) on

1974

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec					
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd				
<b>Cropping Pattern</b>																													
<b>A. Land Preparation Requirement</b>																													
1. Land Preparation Intensity																													
Early Cropping		1/6						1/6		1/3		1/6												1/6		1/3			
Middle Cropping		1/3		1/6								1/6		1/3		1/6												1/6	
Late Cropping		1/6		1/3		1/6								1/6		1/3		1/6											
Total		2/3		1/2		1/6				1/6		1/2		2/3		1/6										1/6		1/2	
2. Land Preparation Requirement (mm/day/A)		12.16	12.16	12.04	12.04	12.20	12.20	12.28	12.28	12.17	12.17	12.11	12.11	12.19	12.19	12.62	12.62	12.60	12.60	12.60	12.60	12.60	12.31	12.31	11.94	11.94			
3. Water Layer Replacement Intensity (mm/day)		8.10	6.08	2.01	0.00	0.00	0.00	2.05	6.14	8.11	6.08	2.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.99	5.97			
4. Water Layer Replacement Requirement (mm/day/A)				3.33	3.33	3.33	3.33	3.33	3.33			3.33	3.33	3.33	3.33	3.33													
5. Total Requirement for Land Preparation (mm/day)				1.11	1.11	2.22	1.11	1.11			1.11	1.11	2.22	1.11	1.11														
I (mm/day)		8.10	6.08	3.12	1.11	2.22	1.11	1.11									0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.99	5.97			
II (mm/day)								2.05		6.14	8.11	6.08	3.13	1.11	2.22	1.11	1.11												
<b>B. Crop Water Requirement</b>																													
1. Crop Intensity																													
Early Cropping		1/6		1/3		1/3		1/3		1/6		1/3		1/3		1/6													
Middle Cropping				1/6		1/3		1/3		1/6		1/6		1/3		1/3		1/6											
Late Cropping				1/6		1/3		1/3		1/6		1/6		1/3		1/3		1/6		1/6									
Total		1/6		1/2		5/6		1		5/6		1/2		1/6															
I																													
II										1/6		1/2		5/6		1		1		1		5/6		1/2		1/6			
2. Crop Coefficient																													
Early Cropping		1.10		1.10		1.05		0.95		0.00		0.00		1.10		1.10		1.05		1.05		0.95		0.00		0.00			
Middle Cropping				1.10		1.10		1.05		0.95		0.00		0.00		1.10		1.10		1.05		1.05		0.95		0.00		0.00	
Late Cropping				1.10		1.10		1.05		0.95		0.00		0.00		1.10		1.10		1.05		1.05		0.95		0.00		0.00	
Weighted average		1.10		1.10		1.08		1.07		1.02		0.67		0.38		0.00		0.00		1.10		1.10		1.08		1.07		1.02	
I																													
II												1.10		1.10		1.08		1.07		1.02		0.67		0.38		0.00		0.00	
3. Potential ETo (mm/day/A)		4.31	4.31	4.14	4.14	4.37	4.37	4.49	4.49	4.33	4.33	4.25	4.25	4.36	4.36	4.98	4.98	4.95	4.95	4.94	4.94	4.53	4.53	4.00	4.00				
4. Consumptive Use, ETc (mm/day/A)		4.74	4.74	4.47	4.42	4.44	2.91	1.71	0.00	0.00	4.76	4.76	4.59	4.54	4.43	2.91	1.89	0.00	0.00										
5. Percolation Loss (mm/day/A)		2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00				
6. Crop Water Requirement (mm/day/A)		6.74	6.74	6.47	6.42	6.44	4.91	3.71	2.00	2.00	6.76	6.76	6.59	6.54	6.43	4.91	3.89	2.00	2.00										
7. Crop water Requirement (mm/day)		1.12	3.37	5.39	6.42	6.44	4.91	3.09	1.00	0.33	1.13	3.38	5.50	6.54	6.43	4.91	3.24	1.00	0.33										
I (mm/day)		9.23	9.45	8.51	7.53	8.66	6.02	4.20	1.00	0.33																			
II (mm/day)								2.05		6.14	9.24	9.46	8.62	7.65	8.65	6.02	4.35	1.00	0.33										
D. Effective Rainfall (mm/day)		8.96	0.50	10.23	9.16	18.74	8.51	5.87	1.87	1.04	2.19	0.36	1.22	1.25	3.71	0.00	0.21	3.65	0.21	6.40	1.93	3.32	10.09	8.53	10.01				
E. Net field Water Requirement, NFR (mm/day)		0.27	8.95	-1.72	-1.64	-10.08	-2.49	-1.67	-0.87	-0.70	4.76	4.76	4.59	4.54	4.43	2.91	1.89	0.00	0.00	-0.21	-6.40	-1.93	-3.32	-10.09	-6.54	-4.04			
I																													
II												7.27		8.27	6.43	7.41	2.31	4.35	0.79	-3.32									
I (l/sec/ha)		0.031	1.035	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000										
II												0.841		0.957	0.744	0.857	0.267	0.504	0.092	0.000									

Net Field Requirement for Water Balance Calculation in 1974 (4/7)

Calculation of Net Field Water Requirement for Palawija(B)

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
Cropping Pattern																									
Early Cropping																									
Middle Cropping																									
Late Cropping																									
A.Crop Water Requirement																									
1.Crop Intensity																									
Early Cropping																									
Middle Cropping																									
Late Cropping																									
Total																									
2.Crop Coefficient																									
Early Cropping																									
Middle Cropping																									
Late Cropping																									
Weighted average																									
3.Potential ETo (mm/day/A)		4.31	4.31	4.14	4.14	4.37	4.37	4.49	4.49	4.33	4.33	4.25	4.25	4.36	4.36	4.98	4.98	4.95	4.95	4.94	4.94	4.53	4.53	4.00	4.00
4.Consumptive Use, ETc (mm/day/A)																2.49	3.15	3.76	4.37	4.61	3.87	2.45	1.51	0.00	0.00
5.Rainfall (mm/day)		12.80	0.72	14.62	13.09	26.78	12.16	8.39	2.67	1.48	3.14	0.51	1.74	1.78	5.30	0.00	0.30	5.22	0.29	9.14	2.75	4.75	14.42	12.19	14.30
6.Effective Rainfall (mm/day/A)																0.00	0.24	3.40	0.25	4.61	1.91	2.45	1.51	0.00	0.00
7.Crop water Requirement (mm/day)																2.49	2.91	0.35	4.11	0.00	1.96	0.00	0.00	0.00	0.00
B.Net Field Water Requirement (mm/day)																0.41	1.46	0.30	4.11	0.00	1.96	0.00	0.00	0.00	0.00
(l/sec/ha)																0.048	0.169	0.034	0.476	0.000	0.227	0.000	0.000	0.000	0.000
III																									
		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
Net Field Water Requirement for Paddy		0.031	1.035	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Net Field Water Requirement for Palawija		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.048	0.169	0.034	0.476	0.000	0.000	0.000	0.000	0.000	0.000
100 I		0.031	1.035	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100 II		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.494	0.949	0.841	0.957	0.744	0.857	0.267	0.504	0.092	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100 III		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.048	0.169	0.034	0.476	0.000	0.227	0.000	0.000	0.000	0.000
<b>Total NWR</b> (l/s/ha)		0.031	1.035	0.000	0.000	0.000	0.000	0.000	0.494	0.949	0.841	0.957	0.744	0.857	0.267	0.552	0.260	0.034	0.476	0.000	0.227	0.000	0.000	0.000	0.000
<b>DR</b> (E=0.875*0.81)		0.044	1.461	0.000	0.000	0.000	0.000	0.000	0.698	1.339	1.187	1.350	1.050	1.210	0.377	0.779	0.367	0.048	0.672	0.000	0.320	0.000	0.000	0.000	0.000
0.85 0.81 0.6885		0.046	1.504	0.000	0.000	0.000	0.000	0.000	0.718	1.378	1.222	1.390	1.081	1.245	0.388	0.801	0.378	0.050	0.692	0.000	0.329	0.000	0.000	0.000	0.000

Net Field Requirement for Water Balance Calculation in 1974 (5/7)

[Kampili Rotation C ]

Calculation of Net Field Water Requirement for Paddy (C) on

1974

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec		
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	
Cropping Pattern																										
A.Land Preparation Requirement																										
1.Land Preparation Intensity																										
Early Cropping		1/3	1/6							1/6	1/3	1/6														1/6
Middle Cropping		1/6	1/3	1/6						1/6	1/3	1/6														
Late Cropping			1/6	1/3	1/6							1/6	1/3	1/6												
Total		1/2	2/3	1/2	1/6					1/6	1/2	2/3	1/2	1/6												1/6
2.Land Preparation Requirement (mm/day/A)	(mm/day)	12.16	12.16	12.04	12.04	12.20	12.20	12.28	12.28	12.17	12.17	12.11	12.11	12.19	12.19	12.62	12.62	12.60	12.60	12.60	12.60	12.31	12.31	11.94	11.94	
		6.08	8.10	6.02	2.01	0.00	0.00	0.00	2.05	6.08	8.11	6.06		2.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
3.Water Layer Replacement Intensity					1/3	1/3	2/3	1/3	1/3					1/3	1/3	2/3	1/3	1/3								
4.Water Layer Replacement Requirement	(mm/day/A)				3.33	3.33	3.33	3.33	3.33					3.33	3.33	3.33	3.33	3.33								
	(mm/day)				1.11	1.11	2.22	1.11	1.11					1.11	1.11	2.22	1.11	1.11								
5.Total Requirement for Land Preparation	(mm/day)	6.08	8.10	6.02	3.12	1.11	2.22	1.11	1.11	2.05	6.08	8.11	6.06	3.13	1.11	2.22	1.11	1.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
I																										
II																									1.99	
B. Crop Water Requirement																										
1.Crop Intensity		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec													
Early Cropping			1/6	1/3	1/3	1/3	1/3	1/6	1/6	1/3	1/3	1/3	1/6													
Middle Cropping			1/6	1/3	1/3	1/3	1/3	1/6	1/6	1/3	1/3	1/3	1/6													
Late Cropping				1/6	1/3	1/3	1/3	1/3	1/6	1/6	1/3	1/3	1/3	1/6							1/6					
Total	I		1/6	1/2	5/6	1	1	1	5/6	1/2	1/6	1/6	1/6													
	II										1/6	1/2	5/6	1	1	1	5/6	1/2	1/6							
2.Crop Coefficient																										
Early Cropping			1.10	1.10	1.05	1.05	0.95	0.00	0.00	1.10	1.10	1.05	1.05	0.95	0.00	0.00										
Middle Cropping			1.10	1.10	1.05	1.05	0.95	0.00	0.00	1.10	1.10	1.05	1.05	0.95	0.00	0.00										
Late Cropping				1.10	1.10	1.05	1.05	0.95	0.00	0.00			1.10	1.10	1.05	1.05	0.95	0.00	0.00							
Weighted average	I		1.10	1.10	1.08	1.07	1.02	0.67	0.38	0.00																
	II										1.10	1.10	1.08	1.07	1.02	0.67	0.38	0.00	0.00							
3.Potential ETo	(mm/day/A)	4.31	4.31	4.14	4.14	4.37	4.37	4.49	4.49	4.33	4.33	4.25	4.25	4.36	4.36	4.98	4.98	4.95	4.95	4.94	4.94	4.53	4.53	4.00	4.00	
4.Consumptive Use, ETc	(mm/day/A)	0.00	4.74	4.55	4.47	4.66	4.44	3.00	1.71	0.00	0.00	4.76	4.68	4.59	4.65	4.43	3.32	1.89	0.00							
	II										4.76	4.68	4.59	4.65	4.43	3.32	1.89	0.00								
5.Percolation Loss	(mm/day/A)	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00							
6.Crop Water Requirement	(mm/day/A)	2.00	6.74	6.55	6.47	6.66	6.44	5.00	3.71	2.00	2.00	6.76	6.68	6.59	6.65	6.43	5.32	3.89	2.00	2.00	0.00	0.00	0.00	0.00	0.00	
	II										6.76	6.68	6.59	6.65	6.43	5.32	3.89	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	
7.Crop water Requirement	(mm/day)	0.00	1.12	3.28	5.39	6.66	6.44	5.00	3.09	1.00	0.33	1.13	3.34	5.50	6.65	6.43	5.32	3.24	1.00	0.33	0.00	0.00	0.00	0.00	0.00	
	II										1.13	3.34	5.50	6.65	6.43	5.32	3.24	1.00	0.33	0.00	0.00	0.00	0.00	0.00	0.00	
C.Total A(5)+B(7)	(mm/day)	6.08	9.23	9.29	8.51	7.77	8.66	6.11	4.20	1.00	0.33	1.13	3.34	5.50	6.65	6.43	5.32	3.24	1.00	0.33	0.00	0.00	0.00	0.00	1.99	
	I										2.05	6.08	9.24	9.40	8.62	7.76	8.65	6.43	4.35	1.00	0.33					
	II										2.05	6.08	9.24	9.40	8.62	7.76	8.65	6.43	4.35	1.00	0.33					
D.Effective Rainfall	(mm/day)	8.96	0.50	10.23	9.16	18.74	8.51	5.87	1.87	1.04	2.19	0.36	1.22	1.25	3.71	0.00	0.21	3.65	0.21	6.40	1.93	3.32	10.09	8.53	10.01	
E.Net field Water Requirement, NFR (mm/day)		-2.88	8.72	-0.94	-0.66	-10.97	0.15	0.23	2.33	-0.04	-1.86	0.18	5.04	7.04	9.04	7.41	6.52	4.95	6.43	4.14	-2.65	0.13				
	I										0.18	5.04	7.04	9.04	7.41	6.52	4.95	6.43	4.14	-2.65	0.13				0.00	
	II										0.18	5.04	7.04	9.04	7.41	6.52	4.95	6.43	4.14	0.00	0.13					
	(l/sec/ha)	0.000	1.010	0.000	0.000	0.000	0.018	0.027	0.270	0.000	0.000	0.021	0.584	0.815	1.046	0.858	0.754	0.572	0.744	0.480	0.000	0.015			0.000	
	II										0.021	0.584	0.815	1.046	0.858	0.754	0.572	0.744	0.480	0.000	0.015					

Net Field Requirement for Water Balance Calculation in 1974 (6/7)

Calculation of Net Field Water Requirement for Palawija(C)

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
Cropping Pattern	Early Cropping																								
	Middle Cropping																								
	Late Cropping																								
	No Cropping																								
A.Crop Water Requirement																									
1.Crop Intensity																									
Early Cropping																									
Middle Cropping																									
Late Cropping																									
Total																									
2.Crop Coefficient																									
Early Cropping																									
Middle Cropping																									
Late Cropping																									
Weighted average																									
3.Potential ETo (mm/day/A)		4.31	4.31	4.14	4.14	4.37	4.37	4.49	4.49	4.33	4.33	4.25	4.25	4.36	4.36	4.98	4.98	4.95	4.95	4.94	4.94	4.53	4.53	4.00	4.00
4.Consumptive Use, ETc (mm/day/A)		2.49	3.13	3.76	4.36	4.61	3.55	2.45	1.33	0.00															
5.Rainfall (mm/day)		12.80	0.72	14.62	13.09	26.78	12.16	8.39	2.67	1.48	3.14	0.51	1.74	1.78	5.30	0.00	0.30	5.22	0.29	9.14	2.75	4.75	14.42	12.19	14.30
6.Effective Rainfall (mm/day/A)																									
7.Crop water Requirement (mm/day/A)																									
B.Net Field Water Requirement (mm/day)																									
(l/sec/ha)																									
III																									
		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
Net Field Water Requirement for Paddy		0.000	1.010	0.000	0.000	0.000	0.018	0.027	0.270	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Net Field Water Requirement for Palawija		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.021	0.584	0.815	1.046	0.858	0.754	0.572	0.744	0.480	0.000	0.015	0.000	0.000	0.000	0.000	0.000	0.000
100 I		0.000	1.010	0.000	0.000	0.000	0.018	0.027	0.270	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100 II		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.021	0.584	0.815	1.046	0.858	0.754	0.572	0.744	0.480	0.000	0.015	0.000	0.000	0.000	0.000	0.000	0.000
100 III		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.044	0.000	0.339	0.000	0.302	0.054	0.000	0.000	0.000
<b>Total NWR</b> (l/s/ha)		0.000	1.010	0.000	0.000	0.000	0.018	0.027	0.290	0.584	0.815	1.046	0.858	0.754	0.572	0.744	0.523	0.000	0.354	0.000	0.302	0.054	0.000	0.000	0.000
<b>DR</b> (E=0.875*0.81)		0.000	1.425	0.000	0.000	0.000	0.025	0.038	0.410	0.824	1.150	1.477	1.210	1.064	0.808	1.050	0.738	0.000	0.499	0.000	0.426	0.077	0.000	0.000	0.000
0.85 0.81 0.6885		0.000	1.466	0.000	0.000	0.000	0.026	0.039	0.422	0.848	1.184	1.520	1.245	1.095	0.831	1.081	0.760	0.000	0.514	0.000	0.438	0.079	0.000	0.000	0.000

Net Field Requirement for Water Balance Calculation in 1974 (7/7)

(E=0.875*0.81)	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec		
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	
<b>Golongan A</b>	0.081	1.336	0.000	0.000	0.000	0.000	0.044	1.221	1.376	1.062	1.191	1.197	0.779	0.074	0.421	0.502	0.135	0.712	0.000	0.123	0.000	0.000	0.000	0.000	0.000
<b>Golongan B</b>	0.044	1.461	0.000	0.000	0.000	0.000	0.000	0.698	1.339	1.187	1.350	1.050	1.210	0.377	0.779	0.367	0.048	0.672	0.000	0.320	0.000	0.000	0.000	0.000	0.000
<b>Golongan C</b>	0.000	1.425	0.000	0.000	0.000	0.000	0.025	0.038	0.410	0.824	1.150	1.477	1.210	1.064	0.808	1.050	0.738	0.000	0.499	0.000	0.426	0.077	0.000	0.000	0.000
average	0.042	1.407	0.000	0.000	0.000	0.008	0.027	0.776	1.180	1.133	1.339	1.152	1.018	0.419	0.750	0.536	0.061	0.628	0.000	0.289	0.026	0.000	0.000	0.000	0.000

(E=0.85*0.81)	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec		
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	
<b>Golongan A</b>	0.083	1.375	0.000	0.000	0.000	0.000	0.045	1.257	1.416	1.093	1.226	1.232	0.802	0.076	0.433	0.516	0.139	0.733	0.000	0.127	0.000	0.000	0.000	0.000	0.000
<b>Golongan B</b>	0.046	1.504	0.000	0.000	0.000	0.000	0.000	0.718	1.378	1.222	1.390	1.081	1.245	0.388	0.801	0.378	0.050	0.692	0.000	0.329	0.000	0.000	0.000	0.000	0.000
<b>Golongan C</b>	0.000	1.466	0.000	0.000	0.000	0.000	0.026	0.039	0.422	0.848	1.184	1.520	1.245	1.095	0.831	1.081	0.760	0.000	0.514	0.000	0.438	0.079	0.000	0.000	0.000
average	0.043	1.448	0.000	0.000	0.000	0.009	0.028	0.799	1.214	1.166	1.379	1.186	1.048	0.432	0.772	0.552	0.063	0.646	0.000	0.298	0.026	0.000	0.000	0.000	0.000

Summary Calculation of NFR (l/s/ha)

	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec		
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	
<b>Golongan A</b>	0.06	0.95	0.00	0.00	0.00	0.00	0.03	0.87	0.98	0.75	0.84	0.85	0.55	0.05	0.30	0.36	0.10	0.50	0.00	0.09	0.00	0.00	0.00	0.00	0.00
<b>Golongan B</b>	0.03	1.04	0.00	0.00	0.00	0.00	0.00	0.49	0.95	0.84	0.96	0.74	0.86	0.27	0.55	0.26	0.03	0.48	0.00	0.23	0.00	0.00	0.00	0.00	0.00
<b>Golongan C</b>	0.00	1.01	0.00	0.00	0.00	0.02	0.03	0.29	0.58	0.82	1.05	0.86	0.75	0.57	0.74	0.52	0.00	0.35	0.00	0.30	0.05	0.00	0.00	0.00	0.00

1974

	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec		
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	
I : W.Pad	A	0.06	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	B	0.03	1.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	C	0.00	1.01	0.00	0.00	0.00	0.02	0.03	0.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	av	0.03	1.00	0.00	0.00	0.00	0.01	0.01	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
II : D.Pad	A	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.87	0.98	0.75	0.84	0.85	0.55	0.05	0.12	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	B	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.49	0.95	0.84	0.96	0.74	0.86	0.27	0.50	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	C	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.58	0.82	1.05	0.86	0.75	0.57	0.74	0.48	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00
	av	0.00	0.00	0.00	0.00	0.00	0.01	0.46	0.84	0.80	0.95	0.82	0.72	0.30	0.45	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
III : D.Pal	A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.34	0.10	0.50	0.00	0.09	0.00	0.00	0.00	0.00	0.00
	B	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.17	0.03	0.48	0.00	0.23	0.00	0.00	0.00	0.00	0.00
	C	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.34	0.00	0.30	0.05	0.00	0.00	0.00	0.00
	av	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.18	0.04	0.44	0.00	0.21	0.02	0.00	0.00	0.00	0.00
I : W.Pad		0.03	1.00	0.00	0.00	0.00	0.01	0.01	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
II : D.Pad		0.00	0.00	0.00	0.00	0.00	0.01	0.46	0.84	0.80	0.95	0.82	0.72	0.30	0.45	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
III : D.Pal		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.18	0.04	0.44	0.00	0.21	0.02	0.00	0.00	0.00	0.00

1974

I : W.Pad	<b>100</b>	0.029	0.997	0.000	0.000	0.000	0.006	0.009	0.090	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
II : D.Pad	<b>100</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.010	0.460	0.836	0.803	0.949	0.817	0.721	0.297	0.454	0.195	0.000	0.005	0.000	0.000	0.000	0.000	0.000	0.000
III : D.Pal	<b>100</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.077	0.184	0.043	0.440	0.000	0.205	0.018	0.000	0.000	0.000	0.000
total		0.029	0.997	0.000	0.000	0.000	0.006	0.019	0.550	0.836	0.803	0.949	0.817	0.721	0.297	0.531	0.380	0.043	0.445	0.000	0.205	0.018	0.000	0.000	0.000
		0.51335		0		0.00295		0.2847		0.81955		0.88297		0.50925		0.45552		0.24411		0.10257		0.00907		0	

Year : 1974

N.F.R. (l/s/ha)

	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec		
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	
	0.029	0.997	0.000	0.000	0.000	0.006	0.019	0.550	0.836	0.803	0.949	0.817	0.721	0.297	0.531	0.380	0.043	0.445	0.000	0.205	0.018	0.000	0.000	0.000	0.000

Net Field Requirement for Water Balance Calculation in 1975 (1/7)

[Kampili Rotation A]

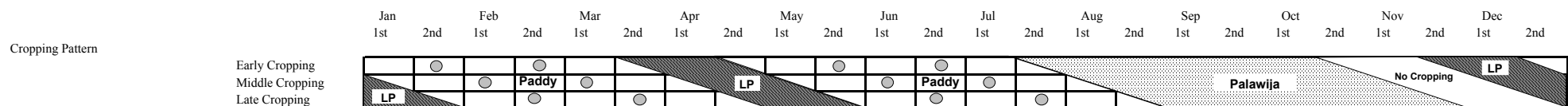
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Calculation of Net Field Water Requirement for Paddy (A) on

1975

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
<b>Cropping Pattern</b>																									
		<p>Early Cropping Middle Cropping Late Cropping</p>																							
<b>A. Land Preparation Requirement</b>																									
1. Land Preparation Intensity																									
Early Cropping																									
Middle Cropping																									
Late Cropping																									
Total																									
2. Land Preparation Requirement (mm/day/A)																									
3. Water Layer Replacement Intensity																									
4. Water Layer Replacement Requirement (mm/day/A)																									
5. Total Requirement for Land Preparation																									
I (mm/day)																									
II (mm/day)																									
<b>B. Crop Water Requirement</b>																									
1. Crop Intensity																									
Early Cropping																									
Middle Cropping																									
Late Cropping																									
Total																									
I																									
II																									
2. Crop Coefficient																									
Early Cropping																									
Middle Cropping																									
Late Cropping																									
Weighted average																									
I																									
II																									
3. Potential ETo (mm/day/A)																									
4. Consumptive Use, ETc (mm/day/A)																									
I																									
II																									
5. Percolation Loss (mm/day/A)																									
6. Crop Water Requirement (mm/day/A)																									
I																									
II																									
7. Crop water Requirement (mm/day)																									
I																									
II																									
C. Total A(5)+B(7) (mm/day)																									
I																									
II																									
D. Effective Rainfall (mm/day)																									
E. Net field Water Requirement, NFR (mm/day)																									
I																									
II																									
I (l/sec/ha)																									
II																									

Net Field Requirement for Water Balance Calculation in 1975 (2/7)

Calculation of Net Field Water Requirement for Palawija(A)



A. Crop Water Requirement

	Jan 1st	Jan 2nd	Feb 1st	Feb 2nd	Mar 1st	Mar 2nd	Apr 1st	Apr 2nd	May 1st	May 2nd	Jun 1st	Jun 2nd	Jul 1st	Jul 2nd	Aug 1st	Aug 2nd	Sep 1st	Sep 2nd	Oct 1st	Oct 2nd	Nov 1st	Nov 2nd	Dec 1st	Dec 2nd	
1. Crop Intensity																									
Early Cropping															1/6	1/3	1/3	1/3	1/3	1/3	1/3	1/6			
Middle Cropping																1/6	1/3	1/3	1/3	1/3	1/3	1/3	1/6		
Late Cropping																	1/6	1/3	1/3	1/3	1/3	1/3	1/3	1/6	
Total															1/6	1/2	5/6	1	1	1	5/6	1/2	1/6		
2. Crop Coefficient																									
Early Cropping															0.50	0.70	0.95	1.00	0.85	0.50	0.00				
Middle Cropping																0.50	0.70	0.95	1.00	0.85	0.50	0.00			
Late Cropping																	0.50	0.70	0.95	1.00	0.85	0.50	0.00		
Weighted average															0.50	0.63	0.76	0.88	0.93	0.78	0.54	0.33	0.00		
3. Potential ETo (mm/day/A)		4.01	4.01	4.15	4.15	4.27	4.27	4.37	4.37	4.14	4.14	4.16	4.16	4.29	4.29	4.79	4.79	4.94	4.94	4.91	4.91	4.54	4.54	4.02	4.02
4. Consumptive Use, ETc (mm/day/A)															2.15	3.03	3.64	4.36	4.61	3.84	2.65	1.51	0.00		
5. Rainfall (mm/day)		10.84	10.37	12.83	7.38	11.90	6.27	2.54	19.00	3.20	1.57	2.73	0.17	0.29	3.52	1.06	0.14	4.10	2.72	4.28	9.78	6.23	16.60	28.03	14.31
6. Effective Rainfall (mm/day/A)															2.13	0.75	0.13	2.84	1.98	2.86	2.65	1.51	0.00		
7. Crop water Requirement (mm/day/A)															0.02	2.28	3.51	1.52	2.63	0.99	0.00	0.00	0.00		
B. Net Field Water Requirement (mm/day)															0.00	1.14	2.93	1.52	2.63	0.99	0.00	0.00	0.00		
(l/sec/ha)															0.000	0.132	0.339	0.176	0.304	0.114	0.000	0.000	0.000		

	Jan 1st	Jan 2nd	Feb 1st	Feb 2nd	Mar 1st	Mar 2nd	Apr 1st	Apr 2nd	May 1st	May 2nd	Jun 1st	Jun 2nd	Jul 1st	Jul 2nd	Aug 1st	Aug 2nd	Sep 1st	Sep 2nd	Oct 1st	Oct 2nd	Nov 1st	Nov 2nd	Dec 1st	Dec 2nd
Net Field Water Requirement for Paddy	0.184	0.129	0.000	0.379	0.000	0.000	0.000	0.000	0.816	0.858	0.652	0.964	0.668	0.193	0.030	0.027	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Net Field Water Requirement for Palawija	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.132	0.339	0.176	0.304	0.114	0.000	0.000	0.000	0.000	0.000
100 I	0.184	0.129	0.000	0.379	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100 II	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.816	0.858	0.652	0.964	0.668	0.193	0.030	0.027	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100 III	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.132	0.339	0.176	0.304	0.114	0.000	0.000	0.000	0.000	0.000
<b>Total NWR</b> (l/s/ha)	0.184	0.129	0.000	0.379	0.000	0.000	0.500	0.000	0.816	0.858	0.652	0.964	0.668	0.194	0.162	0.366	0.176	0.304	0.114	0.000	0.000	0.000	0.000	0.000
<b>DR</b> (E=0.875*0.81)	0.259	0.182	0.000	0.534	0.000	0.000	0.705	0.000	1.152	1.210	0.919	1.360	0.942	0.273	0.229	0.516	0.249	0.429	0.161	0.000	0.000	0.000	0.000	0.000
0.85    0.81    0.6885	0.267	0.187	0.000	0.550	0.000	0.000	0.726	0.000	1.186	1.246	0.946	1.400	0.970	0.281	0.236	0.531	0.256	0.442	0.166	0.000	0.000	0.000	0.000	0.000

Net Field Requirement for Water Balance Calculation in 1975 (3/7)

[Kampili Rotation B]

Calculation of Net Field Water Requirement for Paddy(B) on

1975

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec						
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd					
<b>Cropping Pattern</b>																														
		<p>Early Cropping Middle Cropping Late Cropping</p>																												
<b>A. Land Preparation Requirement</b>																														
1. Land Preparation Intensity																														
Early Cropping		1/6						1/6		1/3		1/6												1/6		1/3				
Middle Cropping		1/3		1/6						1/6		1/3		1/6														1/6		
Late Cropping		1/6		1/3		1/6						1/6		1/3		1/6												1/6		
Total		2/3		1/2		1/6				1/6		1/2		2/3		1/6										1/6		1/2		
2. Land Preparation Requirement (mm/day/A)		11.94	11.94	12.04	12.04	12.12	12.12	12.19	12.19	12.03	12.03	12.05	12.05	12.14	12.14	12.49	12.49	12.60	12.60	12.57	12.57	12.32	12.32	11.95	11.95					
3. Water Layer Replacement Intensity (mm/day)		7.96	5.97	2.01	0.00	0.00	0.00	2.03	6.10	8.02	6.02	2.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.99	5.98			
4. Water Layer Replacement Requirement (mm/day/A)				3.33	3.33	3.33	3.33	3.33	3.33			3.33	3.33	3.33	3.33	3.33														
5. Total Requirement for Land Preparation (mm/day)				1.11	1.11	2.22	1.11	1.11			1.11	1.11	2.22	1.11	1.11															
I		7.96	5.97	3.12	1.11	2.22	1.11	1.11									0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.99	5.98				
II								2.03		6.10	8.02	6.02	3.12	1.11	2.22	1.11	1.11													
<b>B. Crop Water Requirement</b>																														
1. Crop Intensity																														
Early Cropping		1/6	1/3	1/3	1/3	1/3	1/3	1/6	1/6	1/3	1/3	1/3	1/3	1/3	1/3	1/6														
Middle Cropping		1/6		1/3	1/3	1/3	1/3	1/3	1/6	1/6	1/3	1/3	1/3	1/3	1/3	1/3	1/6													
Late Cropping		1/6		1/6	1/3	1/3	1/3	1/3	1/6	1/6	1/3	1/3	1/3	1/3	1/3	1/3	1/3	1/3	1/6											
Total		1/6	1/2	5/6	1	1	1	5/6	1/2	1/6	1/6	1/2	5/6	1	1	1	5/6	1/2	1/6											
I																														
II										1/6	1/2	5/6	1	1	1	5/6	1/2	1/6												
2. Crop Coefficient																														
Early Cropping		1.10	1.10	1.05	1.05	0.95	0.00	0.00	1.10	1.10	1.05	1.05	0.95	0.00	0.00															
Middle Cropping		1.10		1.10	1.05	1.05	0.95	0.00	0.00	1.10	1.10	1.05	1.05	0.95	0.00	0.00														
Late Cropping		1.10		1.10	1.10	1.05	1.05	0.95	0.00	0.00	1.10	1.10	1.05	1.05	0.95	0.00	0.00													
Weighted average		1.10	1.10	1.08	1.07	1.02	0.67	0.38	0.00	0.00	1.10	1.10	1.08	1.07	1.02	0.67	0.38	0.00	0.00											
I																														
II										1.10	1.10	1.08	1.07	1.02	0.67	0.38	0.00	0.00												
3. Potential ETo (mm/day/A)		4.01	4.01	4.15	4.15	4.27	4.27	4.37	4.37	4.14	4.14	4.16	4.16	4.29	4.29	4.79	4.79	4.94	4.94	4.91	4.91	4.54	4.54	4.02	4.02					
4. Consumptive Use, ETc (mm/day/A)		4.41	4.41	4.48	4.43	4.34	2.84	1.66	0.00	0.00	4.55	4.55	4.49	4.43	4.36	2.86	1.82	0.00	0.00											
I																														
II										4.55	4.55	4.49	4.43	4.36	2.86	1.82	0.00	0.00												
5. Percolation Loss (mm/day/A)		2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	
6. Crop Water Requirement (mm/day/A)		6.41	6.41	6.48	6.43	6.34	4.84	3.66	2.00	2.00	6.55	6.55	6.49	6.43	6.36	4.86	3.82	2.00	2.00											
I																														
II										6.55	6.55	6.49	6.43	6.36	4.86	3.82	2.00	2.00												
7. Crop water Requirement (mm/day)		1.07	3.20	5.40	6.43	6.34	4.84	3.05	1.00	0.33	1.09	3.28	5.41	6.43	6.36	4.86	3.18	1.00	0.33											
I																														
II										0.33	1.09	3.28	5.41	6.43	6.36	4.86	3.18	1.00	0.33											
C. Total A(5)+B(7) (mm/day)		9.03	9.18	8.52	7.54	8.56	5.95	4.16	1.00	0.33	3.28	5.41	6.43	6.36	4.86	3.18	1.00	0.33												
I																														
II										2.03	6.10	9.11	9.29	8.52	7.54	8.58	5.97	4.29	1.00	0.33										
D. Effective Rainfall (mm/day)		7.59	7.26	8.98	5.17	8.33	4.39	1.78	13.30	2.24	1.10	1.91	0.12	0.20	2.47	0.74	0.10	2.87	1.91	2.99	6.84	4.36	11.62	19.62	10.02					
E. Net field Water Requirement, NFR (mm/day)		1.44	1.92	-0.46	2.37	0.23	1.57	2.38	-12.30	-1.91	0.25	-7.20	6.87	8.20	6.61	7.43	8.38	3.51	3.55	0.90	-2.54	-1.91	-2.99	-6.84	-4.36	-11.62	-17.63	-4.04		
I																														
II										0.25	-7.20	6.87	8.20	6.61	7.43	8.38	3.51	3.55	0.90	-2.54										
I		1.44	1.92	0.00	2.37	0.23	1.57	2.38	0.00	0.00	0.00	8.20	6.61	7.43	8.38	3.51	3.55	0.90	0.00											
II										0.25	0.00	6.87	8.20	6.61	7.43	8.38	3.51	3.55	0.90	0.00										
I		0.167	0.222	0.000	0.274	0.027	0.181	0.275	0.000	0.000	0.000	0.949	0.765	0.860	0.970	0.406	0.411	0.104	0.000											
II										0.029	0.000	0.796	0.949	0.765	0.860	0.970	0.406	0.411	0.104	0.000										



Net Field Requirement for Water Balance Calculation in 1975 (4/7)

Calculation of Net Field Water Requirement for Palawija(B)

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
Cropping Pattern	Early Cropping			●		●						●		●																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
	Middle Cropping				●		●					●		●																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
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II		0.000	0.000	0.000	0.000	0.000	0.000	0.029	0.000	0.796	0.949	0.765	0.860	0.970	0.406	0.411	0.104	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	100 III		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.032	0.168	0.099	0.279	0.184	0.000	0.000	0.000	0.000	0.000	<b>Total NWR</b> (l/s/ha)		0.167	0.222	0.000	0.274	0.027	0.181	0.304	0.000	0.796	0.949	0.765	0.860	0.970	0.406	0.444	0.273	0.099	0.279	0.184	0.000	0.000	0.000	0.000	0.000	<b>DR</b> (E=0.875*0.81)		0.236	0.313	0.000	0.387	0.038	0.256	0.430	0.000	1.123	1.339	1.080	1.213	1.369	0.572	0.626	0.385	0.139	0.394	0.259	0.000	0.000	0.000	0.000	0.000	0.85 0.81 0.6885		0.242	0.322	0.000	0.398	0.039	0.263	0.442	0.000	1.156	1.378	1.111	1.248	1.409	0.589	0.644	0.396	0.143	0.406	0.267	0.000	0.000	0.000	0.000	0.000																																																																																																																																																																																																																																										
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Net Field Requirement for Water Balance Calculation in 1975 (6/7)

Calculation of Net Field Water Requirement for Palawija(C)

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
Cropping Pattern	Early Cropping																								
	Middle Cropping																								
	Late Cropping																								
	No Cropping																								
A.Crop Water Requirement																									
1.Crop Intensity																									
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Middle Cropping																									
Late Cropping																									
Weighted average																									
3.Potential ETo (mm/day/A)		4.01	4.01	4.15	4.15	4.27	4.27	4.37	4.37	4.14	4.14	4.16	4.16	4.29	4.29	4.79	4.79	4.94	4.94	4.91	4.91	4.54	4.54	4.02	4.02
4.Consumptive Use, ETc (mm/day/A)										0.437	0.928	0.856	0.973	0.866	0.708	0.644	0.485	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5.Rainfall (mm/day)		10.84	10.37	12.83	7.38	11.90	6.27	2.54	19.00	3.20	1.57	2.73	0.17	0.29	3.52	1.06	0.14	4.10	2.72	4.28	9.78	6.23	16.60	28.03	14.31
6.Effective Rainfall (mm/day/A)																	0.12	2.62	1.88	2.95	4.58	3.56	2.45	1.34	0.00
7.Crop water Requirement (mm/day/A)																	2.28	0.51	1.88	1.39	0.00	0.00	0.00	0.00	0.00
B.Net Field Water Requirement (mm/day)																									
(I/sec/ha)																									
III																									
		0.044	0.030	0.181	0.161	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.044	0.030	0.181	0.161	0.000	0.000	0.000	0.000	0.000
Net Field Water Requirement for Paddy		0.000	0.205	0.037	0.388	0.000	0.483	0.491	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Net Field Water Requirement for Palawija		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.437	0.928	0.856	0.973	0.866	0.708	0.644	0.485	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100 I		0.000	0.205	0.037	0.388	0.000	0.483	0.491	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
100 II		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.437	0.928	0.856	0.973	0.866	0.708	0.644	0.485	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
100 III		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.044	0.030	0.181	0.161	0.000	0.000	0.000	0.000	
<b>Total NWR</b> (I/s/ha)		0.000	0.205	0.037	0.388	0.000	0.483	0.491	0.000	0.437	0.928	0.856	0.973	0.866	0.708	0.644	0.529	0.030	0.181	0.161	0.000	0.000	0.000	0.000	
<b>DR</b> (E=0.875*0.81)		0.000	0.289	0.052	0.547	0.000	0.681	0.693	0.000	0.617	1.309	1.208	1.373	1.222	0.999	0.909	0.747	0.042	0.256	0.227	0.000	0.000	0.000	0.000	
0.85 0.81 0.6885		0.000	0.298	0.054	0.563	0.000	0.701	0.713	0.000	0.635	1.348	1.243	1.413	1.258	1.028	0.935	0.769	0.043	0.263	0.233	0.000	0.000	0.000	0.000	

Net Field Requirement for Water Balance Calculation in 1975 (7/7)

(E=0.875*0.81)	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
<b>Golongan A</b>	0.259	0.182	0.000	0.534	0.000	0.000	0.705	0.000	1.152	1.210	0.919	1.360	0.942	0.273	0.229	0.516	0.249	0.429	0.161	0.000	0.000	0.000	0.000	0.000
<b>Golongan B</b>	0.236	0.313	0.000	0.387	0.038	0.256	0.430	0.000	1.123	1.339	1.080	1.213	1.369	0.572	0.626	0.385	0.139	0.394	0.259	0.000	0.000	0.000	0.000	0.000
<b>Golongan C</b>	0.000	0.289	0.052	0.547	0.000	0.681	0.693	0.000	0.617	1.309	1.208	1.373	1.222	0.999	0.909	0.747	0.042	0.256	0.227	0.000	0.000	0.000	0.000	0.000
average	0.165	0.261	0.017	0.490	0.013	0.312	0.609	0.000	0.964	1.286	1.069	1.315	1.178	0.615	0.588	0.549	0.143	0.360	0.216	0.000	0.000	0.000	0.000	0.000

(E=0.85*0.81)	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
<b>Golongan A</b>	0.267	0.187	0.000	0.550	0.000	0.000	0.726	0.000	1.186	1.246	0.946	1.400	0.970	0.281	0.236	0.531	0.256	0.442	0.166	0.000	0.000	0.000	0.000	0.000
<b>Golongan B</b>	0.242	0.322	0.000	0.398	0.039	0.263	0.442	0.000	1.156	1.378	1.111	1.248	1.409	0.589	0.644	0.396	0.143	0.406	0.267	0.000	0.000	0.000	0.000	0.000
<b>Golongan C</b>	0.000	0.298	0.054	0.563	0.000	0.701	0.713	0.000	0.635	1.348	1.243	1.413	1.258	1.028	0.935	0.769	0.043	0.263	0.233	0.000	0.000	0.000	0.000	0.000
average	0.170	0.269	0.018	0.504	0.013	0.321	0.627	0.000	0.992	1.324	1.100	1.354	1.212	0.633	0.605	0.565	0.148	0.370	0.222	0.000	0.000	0.000	0.000	0.000

Summary Calculation of NFR (l/s/ha)

	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
<b>Golongan A</b>	0.18	0.13	0.00	0.38	0.00	0.00	0.50	0.00	0.82	0.86	0.65	0.96	0.67	0.19	0.16	0.37	0.18	0.30	0.11	0.00	0.00	0.00	0.00	0.00
<b>Golongan B</b>	0.17	0.22	0.00	0.27	0.03	0.18	0.30	0.00	0.80	0.95	0.77	0.86	0.97	0.41	0.44	0.27	0.10	0.28	0.18	0.00	0.00	0.00	0.00	0.00
<b>Golongan C</b>	0.00	0.20	0.04	0.39	0.00	0.48	0.49	0.00	0.44	0.93	0.86	0.97	0.87	0.71	0.64	0.53	0.03	0.18	0.16	0.00	0.00	0.00	0.00	0.00

1975

	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
I : W.Pad	0.18	0.13	0.00	0.38	0.00	0.00	0.50	0.00	0.82	0.86	0.65	0.96	0.67	0.19	0.16	0.37	0.18	0.30	0.11	0.00	0.00	0.00	0.00	0.00
A	0.18	0.13	0.00	0.38	0.00	0.00	0.50	0.00	0.82	0.86	0.65	0.96	0.67	0.19	0.16	0.37	0.18	0.30	0.11	0.00	0.00	0.00	0.00	0.00
B	0.17	0.22	0.00	0.27	0.03	0.18	0.28	0.00	0.80	0.95	0.77	0.86	0.97	0.41	0.44	0.27	0.10	0.28	0.18	0.00	0.00	0.00	0.00	0.00
C	0.00	0.20	0.04	0.39	0.00	0.48	0.49	0.00	0.44	0.93	0.86	0.97	0.87	0.71	0.64	0.53	0.03	0.18	0.16	0.00	0.00	0.00	0.00	0.00
av	0.12	0.19	0.01	0.35	0.01	0.22	0.26	0.00	0.68	0.91	0.76	0.93	0.83	0.44	0.36	0.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
II : D.Pad	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
av	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
III : D.Pal	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
av	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
I : W.Pad	0.12	0.19	0.01	0.35	0.01	0.22	0.26	0.00	0.68	0.91	0.76	0.93	0.83	0.44	0.36	0.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
II : D.Pad	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.00	0.68	0.91	0.76	0.93	0.83	0.44	0.36	0.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
III : D.Pal	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.18	0.10	0.25	0.15	0.00	0.00	0.00	0.00	0.00

	1975		1975		1975		1975		1975		1975		1975		1975		1975		1975		1975		1975	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
I : W.Pad	0.117	0.185	0.012	0.347	0.009	0.221	0.255	0.000	0.683	0.911	0.758	0.932	0.835	0.436	0.362	0.205	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
II : D.Pad	0.000	0.000	0.000	0.000	0.000	0.000	0.176	0.000	0.683	0.911	0.758	0.932	0.835	0.436	0.362	0.205	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
III : D.Pal	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.055	0.184	0.102	0.255	0.153	0.000	0.000	0.000	0.000	0.000
total	0.117	0.185	0.012	0.347	0.009	0.221	0.432	0.000	0.683	0.911	0.758	0.932	0.835	0.436	0.417	0.389	0.102	0.255	0.153	0.000	0.000	0.000	0.000	0.000
	0.15107		0.17967		0.1151		0.21583		0.79727		0.84492		0.63522		0.40289		0.17823		0.07651		0		0	

Year : 1975

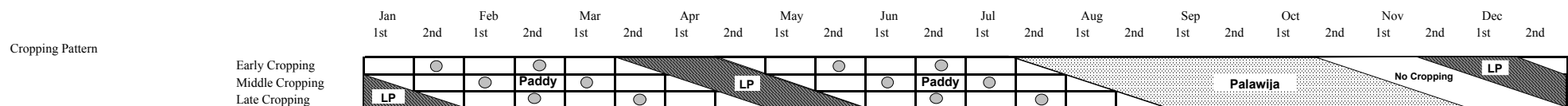
N.F.R. (l/s/ha)

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec												
1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd												
0.117	0.185	0.012	0.347	0.009	0.221	0.432	0.000	0.683	0.911	0.758	0.932	0.835	0.436	0.417	0.389	0.102	0.255	0.153	0.000	0.000	0.000	0.000	0.000



Net Field Requirement for Water Balance Calculation in 1976 (2/7)

Calculation of Net Field Water Requirement for Palawija(A)



A. Crop Water Requirement

	Jan 1st	Jan 2nd	Feb 1st	Feb 2nd	Mar 1st	Mar 2nd	Apr 1st	Apr 2nd	May 1st	May 2nd	Jun 1st	Jun 2nd	Jul 1st	Jul 2nd	Aug 1st	Aug 2nd	Sep 1st	Sep 2nd	Oct 1st	Oct 2nd	Nov 1st	Nov 2nd	Dec 1st	Dec 2nd
1. Crop Intensity																								
Early Cropping															1/6	1/3	1/3	1/3	1/3	1/3	1/3	1/6		
Middle Cropping																1/6	1/3	1/3	1/3	1/3	1/3	1/3	1/6	
Late Cropping																	1/6	1/3	1/3	1/3	1/3	1/3	1/3	1/6
Total															1/6	1/2	5/6	1	1	1	5/6	1/2	1/6	
2. Crop Coefficient																								
Early Cropping															0.50	0.70	0.95	1.00	0.85	0.50	0.15			
Middle Cropping																0.50	0.70	0.95	1.00	0.85	0.50	0.15		
Late Cropping																	0.50	0.70	0.95	1.00	0.85	0.50	0.15	
Weighted average															0.50	0.63	0.76	0.88	0.93	0.78	0.57	0.38	0.15	
3. Potential ETo (mm/day/A)	4.15	4.15	4.14	4.14	4.01	4.01	4.66	4.66	4.33	4.33	4.07	4.07	4.46	4.46	5.18	5.18	5.70	5.70	5.08	5.08	4.51	4.51	3.90	3.90
4. Consumptive Use, ETc (mm/day/A)															2.23	3.28	3.94	5.03	5.32	3.98	2.89	1.73	0.68	
5. Rainfall (mm/day)	39.43	6.72	15.04	12.81	13.43	16.66	2.17	0.65	3.68	0.16	1.13	1.14	0.54	0.00	0.00	0.00	0.00	0.00	0.33	3.11	7.00	10.26	18.44	9.79
6. Effective Rainfall (mm/day/A)															0.00	0.00	0.00	0.00	0.00	0.27	2.00	1.73	0.68	
7. Crop water Requirement (mm/day/A)															2.23	3.28	3.94	5.03	5.32	3.70	0.89	0.00	0.00	
B. Net Field Water Requirement (mm/day)															0.37	1.64	3.28	5.03	5.32	3.70	0.74	0.00	0.00	
(I/sec/ha)															0.043	0.190	0.380	0.582	0.615	0.429	0.086	0.000	0.000	

	Jan 1st	Jan 2nd	Feb 1st	Feb 2nd	Mar 1st	Mar 2nd	Apr 1st	Apr 2nd	May 1st	May 2nd	Jun 1st	Jun 2nd	Jul 1st	Jul 2nd	Aug 1st	Aug 2nd	Sep 1st	Sep 2nd	Oct 1st	Oct 2nd	Nov 1st	Nov 2nd	Dec 1st	Dec 2nd
Net Field Water Requirement for Paddy	0.000	0.442	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.244
Net Field Water Requirement for Palawija	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.043	0.190	0.380	0.582	0.615	0.429	0.086	0.000	0.000	0.000
100 I	0.000	0.442	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.244
100 II	0.000	0.000	0.000	0.000	0.000	0.000	0.542	1.041	0.797	0.995	0.771	0.875	0.661	0.485	0.116	0.039	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100 III	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.043	0.190	0.380	0.582	0.615	0.429	0.086	0.000	0.000	0.000
<b>Total NWR</b> (I/s/ha)	0.000	0.442	0.000	0.000	0.000	0.000	0.542	1.041	0.797	0.995	0.771	0.875	0.661	0.528	0.306	0.418	0.582	0.615	0.429	0.086	0.000	0.000	0.000	0.244
<b>DR</b> (E=0.875*0.81)	0.000	0.623	0.000	0.000	0.000	0.000	0.764	1.469	1.125	1.403	1.088	1.235	0.932	0.745	0.431	0.590	0.822	0.868	0.605	0.121	0.000	0.000	0.000	0.344
0.85    0.81    0.6885	0.000	0.642	0.000	0.000	0.000	0.000	0.787	1.512	1.158	1.445	1.120	1.271	0.959	0.767	0.444	0.608	0.846	0.894	0.623	0.125	0.000	0.000	0.000	0.354

Net Field Requirement for Water Balance Calculation in 1976 (3/7)

[Kampili Rotation B]

Calculation of Net Field Water Requirement for Paddy(B) on

1976

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec				
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd			
<b>Cropping Pattern</b>	Early Cropping																											
	Middle Cropping																											
	Late Cropping																											
<b>A. Land Preparation Requirement</b>																												
1. Land Preparation Intensity																												
	Early Cropping	1/6						1/6	1/3	1/6															1/6	1/3		
	Middle Cropping	1/3	1/6						1/6	1/3	1/6															1/6	1/6	
	Late Cropping	1/6	1/3	1/6							1/6	1/3	1/6														1/6	1/2
	Total	2/3	1/2	1/6				1/6	1/2	2/3	1/2	1/6														1/6	1/2	
	2. Land Preparation Requirement (mm/day/A)	12.04	12.04	12.04	12.04	11.95	11.95	12.40	12.40	12.17	12.17	11.99	11.99	12.26	12.26	12.77	12.77	13.14	13.14	12.69	12.69	12.29	12.29	11.87	11.87			
	3. Water Layer Replacement Intensity (mm/day)	8.03	6.02	2.01	0.00	0.00	0.00	2.07	6.20	8.11	6.08	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.98	5.93		
	4. Water Layer Replacement Requirement (mm/day/A)			3.33	3.33	3.33	3.33	3.33				3.33	3.33	3.33	3.33	3.33												
	5. Total Requirement for Land Preparation (mm/day)			1.11	1.11	2.22	1.11	1.11				1.11	1.11	2.22	1.11	1.11												
	I (mm/day)	8.03	6.02	3.12	1.11	2.22	1.11	1.11										0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.98	5.93		
	II (mm/day)							2.07	6.20	8.11	6.08	3.11	1.11	2.22	1.11	1.11												
<b>B. Crop Water Requirement</b>																												
1. Crop Intensity																												
	Early Cropping	1/6	1/3	1/3	1/3	1/3	1/3	1/6	1/6	1/3	1/3	1/3	1/3	1/3	1/3	1/6												
	Middle Cropping		1/6	1/3	1/3	1/3	1/3	1/3	1/6	1/6	1/3	1/3	1/3	1/3	1/3	1/3	1/3	1/6										
	Late Cropping			1/6	1/3	1/3	1/3	1/3	1/3	1/6	1/3	1/3	1/3	1/3	1/3	1/3	1/3	1/3	1/6									
	Total	1/6	1/2	5/6	1	1	1	5/6	1/2	1/6	1/6	1/2	5/6	1	1	1	5/6	1/2	1/6									
	I																											
	II									1/6	1/2	5/6	1	1	1	5/6	1/2	1/6										
	2. Crop Coefficient																											
	Early Cropping	1.10	1.10	1.05	1.05	0.95	0.00	0.00		1.10	1.10	1.05	1.05	0.95	0.00	0.00												
	Middle Cropping		1.10	1.10	1.05	1.05	0.95	0.00	0.00		1.10	1.10	1.05	1.05	0.95	0.00	0.00											
	Late Cropping			1.10	1.10	1.05	1.05	0.95	0.00	0.00		1.10	1.10	1.05	1.05	0.95	0.00	0.00										
	Weighted average	1.10	1.10	1.08	1.07	1.02	0.67	0.38	0.00	0.00		1.10	1.10	1.08	1.07	1.02	0.67	0.38	0.00	0.00								
	I																											
	II									1.10	1.10	1.08	1.07	1.02	0.67	0.38	0.00	0.00										
	3. Potential ETo (mm/day/A)	4.15	4.15	4.14	4.14	4.01	4.01	4.66	4.66	4.33	4.33	4.07	4.07	4.46	4.46	5.18	5.18	5.70	5.70	5.08	5.08	4.51	4.51	3.90	3.90			
	4. Consumptive Use, ETc (mm/day/A)	4.57	4.57	4.47	4.42	4.08	2.67	1.77	0.00	0.00		4.76	4.76	4.40	4.34	4.54	2.98	1.97	0.00	0.00								
	5. Percolation Loss (mm/day/A)	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00			
	6. Crop Water Requirement (mm/day/A)	6.57	6.57	6.47	6.42	6.08	4.67	3.77	2.00	2.00		6.76	6.76	6.40	6.34	6.54	4.98	3.97	2.00	2.00								
	7. Crop water Requirement (mm/day)	1.09	3.28	5.40	6.42	6.08	4.67	3.14	1.00	0.33		1.13	3.38	5.33	6.34	6.54	4.98	3.31	1.00	0.33								
	I (mm/day)	9.12	9.31	8.51	7.53	8.30	5.78	4.25	1.00	0.33																		
	II (mm/day)							2.07	6.20	9.24	9.47	8.44	7.45	8.76	6.09	4.42	1.00	0.33										
	D. Effective Rainfall (mm/day)	27.60	4.71	10.53	8.97	9.40	11.66	1.52	0.46	2.58	0.11	0.79	0.80	0.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
	E. Net field Water Requirement, NFR (mm/day)	-18.48	4.60	-2.02	-1.44	-1.11	-5.88	2.73	0.54	-2.24		9.36	7.65	6.66	8.38	6.09	4.42	1.00	0.33									
	I		0.00	4.60	0.00	0.00	0.00	2.73	0.54	0.00															0.00	0.00		
	II							0.55	5.74	6.66	9.36	7.65	6.66	8.38	6.09	4.42	1.00	0.33										
	I (l/sec/ha)	0.000	0.533	0.000	0.000	0.000	0.000	0.316	0.063	0.000		1.083	0.885	0.770	0.970	0.704	0.511	0.116	0.039						0.000	0.000		
	II							0.063	0.665	0.771	1.083	0.885	0.770	0.970	0.704	0.511	0.116	0.039										







Net Field Requirement for Water Balance Calculation in 1976 (6/7)

Calculation of Net Field Water Requirement for Palawija(C)

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec		
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	
Cropping Pattern	Early Cropping				●		●					●		●												
	Middle Cropping					●	Paddy	●					●	Paddy	●											
	Late Cropping						●		●					●											●	
		No Cropping																							No Cropping	
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	
A.Crop Water Requirement		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	
1.Crop Intensity																										
Early Cropping																		1/6	1/3	1/3	1/3	1/3	1/3	1/6		
Middle Cropping																		1/6	1/3	1/3	1/3	1/3	1/3	1/3	1/6	
Late Cropping																				1/6	1/3	1/3	1/3	1/3	1/6	
Total																		1/6	1/2	5/6	1	1	1	5/6	1/6	
2.Crop Coefficient																										
Early Cropping																		0.50	0.70	0.95	1.00	0.85	0.50	0.15		
Middle Cropping																		0.50	0.70	0.95	1.00	0.85	0.50	0.15		
Late Cropping																		0.50	0.70	0.95	1.00	0.85	0.50	0.15		
Weighted average																		0.50	0.63	0.76	0.88	0.93	0.78	0.38	0.15	
3.Potential ETo (mm/day/A)		4.15	4.15	4.14	4.14	4.01	4.01	4.66	4.66	4.33	4.33	4.07	4.07	4.46	4.46	5.18	5.18	5.70	5.70	5.08	5.08	4.51	4.51	3.90	3.90	
4.Consumptive Use, ETc (mm/day/A)																		2.59	3.61	4.33	4.48	4.74	3.53	2.57	1.49	0.58
5.Rainfall (mm/day)		39.43	6.72	15.04	12.81	13.43	16.66	2.17	0.65	3.68	0.16	1.13	1.14	0.54	0.00	0.00	0.00	0.00	0.00	0.33	3.11	7.00	10.26	18.44	9.79	
6.Effective Rainfall (mm/day/A)																		0.00	0.00	0.00	0.28	2.26	3.53	2.57	1.49	0.58
7.Crop water Requirement (mm/day/A)																		2.59	3.61	4.33	4.20	2.48	0.00	0.00	0.00	0.00
B.Net Field Water Requirement (mm/day)																		0.43	1.80	3.61	4.20	2.48	0.00	0.00	0.00	0.00
(l/sec/ha)																		0.050	0.209	0.418	0.486	0.287	0.000	0.000	0.000	0.000
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	
Net Field Water Requirement for Paddy		0.000	0.511	0.000	0.000	0.000	0.000	0.544	0.439	0.000	0.026	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
Net Field Water Requirement for Palawija		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.186	0.406	1.057	0.977	0.884	0.867	1.014	0.760	0.511	0.116	0.039	0.000	0.000	0.000	0.000	0.000	0.000	
100 I		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.186	0.406	1.057	0.977	0.884	0.867	1.014	0.760	0.511	0.116	0.039	0.000	0.000	0.000	0.000	0.000	0.000	
100 II		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.186	0.406	1.057	0.977	0.884	0.867	1.014	0.760	0.511	0.116	0.039	0.000	0.000	0.000	0.000	0.000	0.000	
100 III		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.050	0.209	0.418	0.486	0.287	0.000	0.000	0.000	0.000	
<b>Total NWR</b> (l/s/ha)		0.000	0.511	0.000	0.000	0.000	0.000	0.544	0.626	0.406	1.083	0.977	0.884	0.867	1.014	0.760	0.561	0.325	0.456	0.486	0.287	0.000	0.000	0.000	0.000	
<b>DR</b> (E=0.875*0.81)		0.000	0.722	0.000	0.000	0.000	0.000	0.767	0.883	0.573	1.528	1.378	1.248	1.224	1.430	1.072	0.792	0.458	0.644	0.686	0.405	0.000	0.000	0.000	0.000	
0.85 0.81 0.6885		0.000	0.743	0.000	0.000	0.000	0.000	0.789	0.909	0.590	1.573	1.419	1.285	1.260	1.472	1.104	0.815	0.471	0.663	0.706	0.417	0.000	0.000	0.000	0.000	

Net Field Requirement for Water Balance Calculation in 1976 (7/7)

(E=0.875*0.81)	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
<b>Golongan A</b>	0.000	0.623	0.000	0.000	0.000	0.000	0.764	1.469	1.125	1.403	1.088	1.235	0.932	0.745	0.431	0.590	0.822	0.868	0.605	0.121	0.000	0.000	0.000	0.344
<b>Golongan B</b>	0.000	0.751	0.000	0.000	0.000	0.000	0.536	1.026	1.088	1.528	1.249	1.087	1.368	0.994	0.792	0.431	0.644	0.822	0.727	0.298	0.000	0.000	0.000	0.000
<b>Golongan C</b>	0.000	0.722	0.000	0.000	0.000	0.000	0.767	0.883	0.573	1.528	1.378	1.248	1.224	1.430	1.072	0.792	0.458	0.644	0.686	0.405	0.000	0.000	0.000	0.000
average	0.000	0.699	0.000	0.000	0.000	0.000	0.689	1.126	0.929	1.486	1.238	1.190	1.175	1.056	0.765	0.605	0.641	0.778	0.673	0.275	0.000	0.000	0.000	0.115

(E=0.85*0.81)	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
<b>Golongan A</b>	0.000	0.642	0.000	0.000	0.000	0.000	0.787	1.512	1.158	1.445	1.120	1.271	0.959	0.767	0.444	0.608	0.846	0.894	0.623	0.125	0.000	0.000	0.000	0.354
<b>Golongan B</b>	0.000	0.774	0.000	0.000	0.000	0.000	0.551	1.057	1.120	1.573	1.285	1.119	1.409	1.023	0.815	0.444	0.663	0.846	0.748	0.307	0.000	0.000	0.000	0.000
<b>Golongan C</b>	0.000	0.743	0.000	0.000	0.000	0.000	0.789	0.909	0.590	1.573	1.419	1.285	1.260	1.472	1.104	0.815	0.471	0.663	0.706	0.417	0.000	0.000	0.000	0.000
average	0.000	0.719	0.000	0.000	0.000	0.000	0.709	1.159	0.956	1.530	1.275	1.225	1.209	1.087	0.788	0.622	0.660	0.801	0.692	0.283	0.000	0.000	0.000	0.118

Summary Calculation of NFR (l/s/ha)

	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
<b>Golongan A</b>	0.00	0.44	0.00	0.00	0.00	0.00	0.54	1.04	0.80	0.99	0.77	0.88	0.66	0.53	0.31	0.42	0.58	0.62	0.43	0.09	0.00	0.00	0.00	0.24
<b>Golongan B</b>	0.00	0.53	0.00	0.00	0.00	0.00	0.38	0.73	0.77	1.08	0.89	0.77	0.97	0.70	0.56	0.31	0.46	0.58	0.52	0.21	0.00	0.00	0.00	0.00
<b>Golongan C</b>	0.00	0.51	0.00	0.00	0.00	0.00	0.54	0.63	0.41	1.08	0.98	0.88	0.87	1.01	0.76	0.56	0.32	0.46	0.49	0.29	0.00	0.00	0.00	0.00

1976

	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
I : W.Pad	0.00	0.44	0.00	0.00	0.00	0.00	0.54	1.04	0.80	0.99	0.77	0.88	0.66	0.53	0.31	0.42	0.58	0.62	0.43	0.09	0.00	0.00	0.00	0.24
B	0.00	0.53	0.00	0.00	0.00	0.00	0.32	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C	0.00	0.51	0.00	0.00	0.00	0.00	0.54	0.44	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
av	0.00	0.50	0.00	0.00	0.00	0.00	0.29	0.17	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
II : D.Pad	0.00	0.00	0.00	0.00	0.00	0.00	0.54	1.04	0.80	0.99	0.77	0.88	0.66	0.48	0.12	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.66	0.77	1.08	0.89	0.77	0.97	0.70	0.51	0.12	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.41	1.06	0.98	0.88	0.87	1.01	0.76	0.51	0.12	0.04	0.00	0.00	0.00	0.00	0.00	0.00
av	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.63	0.66	1.04	0.88	0.84	0.83	0.73	0.46	0.22	0.05	0.01	0.00	0.00	0.00	0.00	0.00	0.00
III : D.Pal	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.19	0.38	0.58	0.62	0.43	0.09	0.00	0.00	0.00	0.00
B	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.19	0.42	0.58	0.52	0.21	0.00	0.00	0.00	0.00
C	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.21	0.42	0.49	0.29	0.00	0.00	0.00	0.00	0.00
av	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.08	0.21	0.40	0.54	0.48	0.19	0.00	0.00	0.00	0.00
I : W.Pad	0.00	0.50	0.00	0.00	0.00	0.00	0.29	0.17	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
II : D.Pad	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.63	0.66	1.04	0.88	0.84	0.83	0.73	0.46	0.22	0.05	0.01	0.00	0.00	0.00	0.00	0.00	0.00
III : D.Pal	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.08	0.21	0.40	0.54	0.48	0.19	0.00	0.00	0.00	0.00

	1976		1976		1976		1976		1976		1976		1976		1976		1976		1976		1976		1976	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
I : W.Pad	100	0.000	0.495	0.000	0.000	0.000	0.287	0.167	0.000	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.081
II : D.Pad	100	0.000	0.000	0.000	0.000	0.000	0.202	0.631	0.658	1.045	0.878	0.843	0.833	0.734	0.462	0.222	0.051	0.013	0.000	0.000	0.000	0.000	0.000	0.000
III : D.Pal	100	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.014	0.080	0.207	0.403	0.539	0.477	0.195	0.000	0.000	0.000	0.000
total		0.000	0.495	0.000	0.000	0.000	0.488	0.798	0.658	1.053	0.878	0.843	0.833	0.749	0.542	0.428	0.454	0.551	0.477	0.195	0.000	0.000	0.000	0.081
		0.24764		0		0	0.64315		0.85578		0.86046		0.79067		0.48536		0.50291		0.33572		0		0.04061	

Year : 1976

N.F.R. (l/s/ha)	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
	0.000	0.495	0.000	0.000	0.000	0.000	0.488	0.798	0.658	1.053	0.878	0.843	0.833	0.749	0.542	0.428	0.454	0.551	0.477	0.195	0.000	0.000	0.000	0.081

Net Field Requirement for Water Balance Calculation in 1977 (1/7)

[Kampili Rotation A]

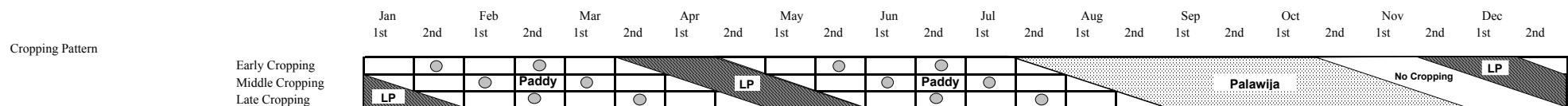
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Calculation of Net Field Water Requirement for Paddy (A) on

1977

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
<b>Cropping Pattern</b>																									
Early Cropping																									
Middle Cropping																									
Late Cropping																									
<b>A. Land Preparation Requirement</b>																									
1. Land Preparation Intensity																									
Early Cropping																									
Middle Cropping																									
Late Cropping																									
Total																									
2. Land Preparation Requirement (mm/day/A)																									
3. Water Layer Replacement Intensity																									
4. Water Layer Replacement Requirement (mm/day/A)																									
5. Total Requirement for Land Preparation																									
I (mm/day)																									
II (mm/day)																									
<b>B. Crop Water Requirement</b>																									
1. Crop Intensity																									
Early Cropping																									
Middle Cropping																									
Late Cropping																									
Total																									
I																									
II																									
2. Crop Coefficient																									
Early Cropping																									
Middle Cropping																									
Late Cropping																									
Weighted average																									
I																									
II																									
3. Potential ETo (mm/day/A)																									
4. Consumptive Use, ETc (mm/day/A)																									
II																									
5. Percolation Loss (mm/day/A)																									
6. Crop Water Requirement (mm/day/A)																									
II																									
7. Crop water Requirement (mm/day)																									
II																									
C. Total A(5)+B(7)																									
I (mm/day)																									
II (mm/day)																									
D. Effective Rainfall (mm/day)																									
E. Net field Water Requirement, NFR (mm/day)																									
II																									
I																									
II																									
I (l/sec/ha)																									
II																									

Net Field Requirement for Water Balance Calculation in 1977 (2/7)

Calculation of Net Field Water Requirement for Palawija(A)



A. Crop Water Requirement

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
1. Crop Intensity												
Early Cropping								1/6	1/3	1/3	1/3	1/6
Middle Cropping								1/6	1/3	1/3	1/3	1/6
Late Cropping								1/6	1/3	1/3	1/3	1/6
Total								1/6	1/2	5/6	1	1/6
2. Crop Coefficient												
Early Cropping								0.50	0.70	0.95	1.00	0.85
Middle Cropping								0.50	0.70	0.95	1.00	0.85
Late Cropping								0.50	0.70	0.95	1.00	0.85
Weighted average								0.50	0.63	0.76	0.88	0.93
3. Potential ETo (mm/day/A)	3.84	3.84	3.91	3.91	4.30	4.30	4.54	4.54	3.95	3.95	3.66	3.66
4. Consumptive Use, ETc (mm/day/A)	2.08	2.92	3.50	4.72	4.99	4.77	3.47	1.89	0.74			
5. Rainfall (mm/day)	24.37	41.21	31.66	38.48	7.49	10.36	8.86	0.12	1.61	0.99	4.21	0.78
6. Effective Rainfall (mm/day/A)	0.00	0.55	0.00	0.00	0.16	0.02	0.00	0.16	0.02	0.00	0.22	6.45
7. Crop water Requirement (mm/day/A)	2.08	2.37	3.50	4.72	4.83	4.75	3.47	1.73	0.00			
B. Net Field Water Requirement (mm/day)	0.35	1.18	2.92	4.72	4.83	4.75	2.89	0.86	0.00			
(I/sec/ha)	0.040	0.137	0.338	0.547	0.559	0.550	0.335	0.100	0.000			

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
Net Field Water Requirement for Paddy	0.000	0.000	0.000	0.000	0.085	0.000	0.000	1.076	0.925	0.882	0.470	0.856
Net Field Water Requirement for Palawija	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.040	0.137	0.338	0.547
100 I	0.000	0.000	0.000	0.000	0.085	0.000	0.000	0.029	0.000	0.000	0.000	0.000
100 II	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.076	0.925	0.882	0.470	0.856
100 III	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.040	0.137	0.338
Total NWR (l/s/ha)	0.000	0.000	0.000	0.000	0.085	0.000	0.000	1.104	0.925	0.882	0.470	0.856
DR (E=0.875*0.81)	0.000	0.000	0.000	0.000	0.120	0.000	0.000	1.558	1.305	1.244	0.664	1.208
0.85 0.81 0.6885	0.000	0.000	0.000	0.000	0.124	0.000	0.000	1.604	1.343	1.280	0.683	1.244

Net Field Requirement for Water Balance Calculation in 1977 (3/7)

[Kampili Rotation B]

Calculation of Net Field Water Requirement for Paddy(B) on

1977

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec					
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd				
<b>Cropping Pattern</b>																													
<b>A. Land Preparation Requirement</b>																													
1. Land Preparation Intensity																													
Early Cropping		1/6						1/6		1/3		1/6												1/6		1/3			
Middle Cropping		1/3		1/6						1/6		1/3		1/6														1/6	
Late Cropping		1/6		1/3		1/6						1/6		1/3		1/6												1/6	
Total		2/3		1/2		1/6				1/6		1/2		2/3		1/6										1/6		1/2	
2. Land Preparation Requirement (mm/day/A)		11.83	11.83	11.88	11.88	12.15	12.15	12.31	12.31	11.90	11.90	11.71	11.71	12.05	12.05	12.36	12.36	12.89	12.89	13.43	13.43	12.59	12.59	11.69	11.69	11.69	11.69	11.69	11.69
3. Water Layer Replacement Intensity																													
4. Water Layer Replacement Requirement (mm/day/A)																													
5. Total Requirement for Land Preparation																													
I (mm/day)		7.89	5.91	3.09	1.11	2.22	1.11	1.11										0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.95	5.85	
II (mm/day)																													
<b>B. Crop Water Requirement</b>																													
1. Crop Intensity																													
Early Cropping		1/6		1/3		1/3		1/3		1/6		1/3		1/3		1/6													
Middle Cropping				1/6		1/3		1/3		1/6		1/3		1/3		1/3		1/6											
Late Cropping				1/6		1/3		1/3		1/6		1/3		1/3		1/3		1/6											
Total		1/6		1/2		5/6		1		5/6		1/2		1/6		5/6		1/2		1/6									
2. Crop Coefficient																													
Early Cropping		1.10		1.10		1.05		0.95		0.00		0.00		1.10		1.10		1.05		1.05		0.95		0.00		0.00		0.00	
Middle Cropping				1.10		1.10		1.05		0.95		0.00		1.10		1.10		1.05		1.05		0.95		0.00		0.00		0.00	
Late Cropping				1.10		1.10		1.05		0.95		0.00		1.10		1.10		1.05		1.05		0.95		0.00		0.00		0.00	
Weighted average		1.10		1.10		1.08		1.07		1.02		0.67		0.38		0.00		0.00		0.00		0.00		0.00		0.00		0.00	
3. Potential ETo (mm/day/A)		3.84	3.84	3.91	3.91	4.30	4.30	4.54	4.54	3.95	3.95	3.66	3.66	4.16	4.16	4.61	4.61	5.35	5.35	6.09	6.09	4.94	4.94	3.64	3.64	3.64	3.64		
4. Consumptive Use, ETc (mm/day/A)		4.22	4.22	4.23	4.18	4.38	2.87	1.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
5. Percolation Loss (mm/day/A)		2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	
6. Crop Water Requirement (mm/day/A)		6.22	6.22	6.23	6.18	6.38	4.87	3.73	2.00	2.00	2.00	6.34	6.34	5.95	5.90	6.23	4.78	3.75	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	
7. Crop water Requirement (mm/day)		1.04	3.11	5.19	6.18	6.38	4.87	3.10	1.00	0.33	1.06	3.17	4.96	5.90	6.23	4.78	3.13	1.00	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
C. Total A(5)+B(7)																													
I (mm/day)		8.92	9.03	8.28	7.29	8.60	5.98	4.21	1.00	0.33	1.06	3.17	4.96	5.90	6.23	4.78	3.13	1.00	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.95	5.85	
II (mm/day)																													
D. Effective Rainfall (mm/day)		17.06	28.85	22.16	26.94	5.24	7.25	6.20	0.08	1.13	0.69	2.95	0.54	0.00	0.00	0.53	0.00	0.00	0.00	0.12	0.02	0.00	0.15	4.52	7.31	7.30	7.30		
E. Net field Water Requirement, NFR (mm/day)		-8.14	-19.82	-13.88	-19.65	3.35	-1.27	-1.99	0.92	-0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.12	-0.02	0.00	-0.15	-4.52	-5.36	-1.45	-1.45		
II (mm/day)																													
I (mm/day)		0.00	0.00	0.00	0.00	3.35	0.00	0.00	0.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
II (mm/day)																													
I (l/sec/ha)		0.000	0.000	0.000	0.000	0.388	0.000	0.000	0.106	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
II (l/sec/ha)																													







Net Field Requirement for Water Balance Calculation in 1977 (6/7)

Calculation of Net Field Water Requirement for Palawija(C)

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec		
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	
Cropping Pattern	Early Cropping																									
	Middle Cropping																									
	Late Cropping																									
	No Cropping																									
A.Crop Water Requirement																										
1.Crop Intensity																										
Early Cropping																										
Middle Cropping																										
Late Cropping																										
Total																										
2.Crop Coefficient																										
Early Cropping																										
Middle Cropping																										
Late Cropping																										
Weighted average																										
3.Potential ETo (mm/day/A)		3.84	3.84	3.91	3.91	4.30	4.30	4.54	4.54	3.95	3.95	3.66	3.66	4.16	4.16	4.61	4.61	5.35	5.35	6.09	6.09	4.94	4.94	3.64	3.64	
4.Consumptive Use, ETc (mm/day/A)																		2.31	3.39	4.06	5.38	5.69	3.87	2.81	1.40	0.55
5.Rainfall (mm/day)		24.37	41.21	31.66	38.48	7.49	10.36	8.86	0.12	1.61	0.99	4.21	0.78	0.00	0.00	0.76	0.00	0.00	0.17	0.02	0.00	0.22	6.45	10.45	10.42	
6.Effective Rainfall (mm/day/A)																		0.00	0.00	0.15	0.03	0.00	0.19	2.81	1.40	0.55
7.Crop water Requirement (mm/day/A)																		2.31	3.39	3.91	5.36	5.69	3.68	0.00	0.00	0.00
B.Net Field Water Requirement (mm/day)																		0.38	1.69	3.26	5.36	5.69	3.68	0.00	0.00	0.00
(l/sec/ha)																		0.044	0.196	0.378	0.620	0.658	0.426	0.000	0.000	0.000
		III																								
Net Field Water Requirement for Paddy		0.000	0.000	0.000	0.000	0.285	0.156	0.000	0.478	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Net Field Water Requirement for Palawija		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.044	0.196	0.378	0.620	0.658	0.426	0.000	0.000	0.000
100 I		0.000	0.000	0.000	0.000	0.285	0.156	0.000	0.478	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100 II		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.228	0.558	0.960	0.685	0.866	0.874	0.978	0.654	0.490	0.116	0.025	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100 III		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.044	0.196	0.378	0.620	0.658	0.426	0.000	0.000	0.000	0.000
<b>Total NWR</b> (l/s/ha)		0.000	0.000	0.000	0.000	0.285	0.156	0.000	0.706	0.558	0.960	0.685	0.866	0.874	0.978	0.654	0.535	0.312	0.403	0.620	0.658	0.426	0.000	0.000	0.000	0.000
<b>DR</b> (E=0.875*0.81)		0.000	0.000	0.000	0.000	0.402	0.220	0.000	0.996	0.787	1.355	0.966	1.221	1.233	1.380	0.923	0.755	0.440	0.568	0.875	0.929	0.601	0.000	0.000	0.000	0.000
0.85 0.81 0.6885		0.000	0.000	0.000	0.000	0.413	0.227	0.000	1.026	0.810	1.395	0.995	1.257	1.269	1.421	0.950	0.777	0.453	0.585	0.901	0.956	0.618	0.000	0.000	0.000	0.000

Net Field Requirement for Water Balance Calculation in 1977 (7/7)

(E=0.875*0.81)	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
<b>Golongan A</b>	0.000	0.000	0.000	0.000	0.120	0.000	0.000	1.558	1.305	1.244	0.664	1.208	0.961	0.725	0.270	0.531	0.771	0.789	0.776	0.473	0.141	0.000	0.000	0.245
<b>Golongan B</b>	0.000	0.000	0.000	0.000	0.548	0.000	0.000	1.142	1.284	1.376	0.828	1.057	1.380	0.961	0.654	0.402	0.607	0.746	0.925	0.780	0.359	0.000	0.000	0.000
<b>Golongan C</b>	0.000	0.000	0.000	0.000	0.402	0.220	0.000	0.996	0.787	1.355	0.966	1.221	1.233	1.380	0.923	0.755	0.440	0.568	0.875	0.929	0.601	0.000	0.000	0.000
average	0.000	0.000	0.000	0.000	0.357	0.073	0.000	1.232	1.125	1.325	0.819	1.162	1.192	1.022	0.616	0.563	0.606	0.701	0.858	0.727	0.367	0.000	0.000	0.082

(E=0.85*0.81)	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
<b>Golongan A</b>	0.000	0.000	0.000	0.000	0.124	0.000	0.000	1.604	1.343	1.280	0.683	1.244	0.989	0.747	0.278	0.547	0.794	0.812	0.798	0.487	0.145	0.000	0.000	0.252
<b>Golongan B</b>	0.000	0.000	0.000	0.000	0.564	0.000	0.000	1.175	1.321	1.416	0.853	1.088	1.421	0.989	0.673	0.414	0.625	0.768	0.952	0.803	0.370	0.000	0.000	0.000
<b>Golongan C</b>	0.000	0.000	0.000	0.000	0.413	0.227	0.000	1.026	0.810	1.395	0.995	1.257	1.269	1.421	0.950	0.777	0.453	0.585	0.901	0.956	0.618	0.000	0.000	0.000
average	0.000	0.000	0.000	0.000	0.367	0.076	0.000	1.268	1.158	1.364	0.843	1.196	1.227	1.052	0.634	0.579	0.624	0.722	0.884	0.748	0.378	0.000	0.000	0.084

Summary Calculation of NFR (l/s/ha)

	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
<b>Golongan A</b>	0.00	0.00	0.00	0.00	0.09	0.00	0.00	1.10	0.92	0.88	0.47	0.86	0.68	0.51	0.19	0.38	0.55	0.56	0.55	0.34	0.10	0.00	0.00	0.17
<b>Golongan B</b>	0.00	0.00	0.00	0.00	0.39	0.00	0.00	0.81	0.91	0.98	0.59	0.75	0.98	0.68	0.46	0.28	0.43	0.53	0.66	0.55	0.25	0.00	0.00	0.00
<b>Golongan C</b>	0.00	0.00	0.00	0.00	0.28	0.16	0.00	0.71	0.56	0.96	0.68	0.87	0.87	0.98	0.65	0.53	0.31	0.40	0.62	0.66	0.43	0.00	0.00	0.00

1977

	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec		
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	
I : W.Pad	A	0.00	0.00	0.00	0.00	0.09	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	B	0.00	0.00	0.00	0.00	0.39	0.00	0.00	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	C	0.00	0.00	0.00	0.00	0.28	0.16	0.00	0.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	av	0.00	0.00	0.00	0.00	0.25	0.05	0.00	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	
II : D.Pad	A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.08	0.92	0.88	0.47	0.86	0.68	0.47	0.05	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	B	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.70	0.91	0.98	0.59	0.75	0.98	0.68	0.43	0.12	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	C	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.56	0.96	0.68	0.87	0.98	0.65	0.49	0.12	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	av	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.67	0.80	0.94	0.58	0.82	0.84	0.71	0.38	0.21	0.05	0.01	0.00	0.00	0.00	0.00	0.00	0.00
III : D.Pal	A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.14	0.34	0.55	0.56	0.55	0.34	0.10	0.00	0.00	0.00
	B	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.17	0.39	0.53	0.66	0.55	0.25	0.00	0.00	0.00
	C	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.20	0.38	0.62	0.66	0.43	0.00	0.00	0.00	0.00
	av	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.06	0.18	0.38	0.49	0.61	0.52	0.26	0.00	0.00	0.00	0.00
I : W.Pad		0.00	0.00	0.00	0.00	0.25	0.05	0.00	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06
II : D.Pad		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.67	0.80	0.94	0.58	0.82	0.84	0.71	0.38	0.21	0.05	0.01	0.00	0.00	0.00	0.00	0.00	0.00
III : D.Pal		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.06	0.18	0.38	0.49	0.61	0.52	0.26	0.00	0.00	0.00

1977

I : W.Pad	100	0.000	0.000	0.000	0.000	0.253	0.052	0.000	0.204	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.058
II : D.Pad	100	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.669	0.798	0.939	0.581	0.824	0.845	0.711	0.379	0.215	0.051	0.008	0.000	0.000	0.000	0.000	0.000	0.000
III : D.Pal	100	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.013	0.057	0.184	0.378	0.489	0.608	0.515	0.260	0.000	0.000	0.000	0.000
total		0.000	0.000	0.000	0.000	0.253	0.052	0.000	0.873	0.798	0.939	0.581	0.824	0.845	0.725	0.436	0.399	0.430	0.497	0.608	0.515	0.260	0.000	0.000	0.058
		0	0	0	0	0.15237	0.043663	0	0.43663	0.86827	0.70214	0.78456	0.41758	0.46327	0.56187	0.13006	0.02894								

Year : 1977

N.F.R. (l/s/ha)

	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
	0.000	0.000	0.000	0.000	0.253	0.052	0.000	0.873	0.798	0.939	0.581	0.824	0.845	0.725	0.436	0.399	0.430	0.497	0.608	0.515	0.260	0.000	0.000	0.058

Net Field Requirement for Water Balance Calculation in 1978 (1/7)

[Kampili Rotation A]

1 1 1  
Calculation of Net Field Water Requirement for Paddy (A) on

1978

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec			
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd		
<b>Cropping Pattern</b>																											
		<p>Early Cropping</p> <p>Middle Cropping</p> <p>Late Cropping</p>																									
<b>A. Land Preparation Requirement</b>																											
1. Land Preparation Intensity																											
Early Cropping																											
Middle Cropping																											
Late Cropping																											
Total																											
2. Land Preparation Requirement (mm/day/A)																											
3. Water Layer Replacement Intensity																											
4. Water Layer Replacement Requirement (mm/day/A)																											
5. Total Requirement for Land Preparation																											
I (mm/day)																											
II (mm/day)																											
<b>B. Crop Water Requirement</b>																											
1. Crop Intensity																											
Early Cropping																											
Middle Cropping																											
Late Cropping																											
Total																											
I																											
II																											
2. Crop Coefficient																											
Early Cropping																											
Middle Cropping																											
Late Cropping																											
Weighted average																											
I																											
II																											
3. Potential ETo (mm/day/A)																											
4. Consumptive Use, ETc (mm/day/A)																											
5. Percolation Loss (mm/day/A)																											
6. Crop Water Requirement (mm/day/A)																											
7. Crop water Requirement (mm/day)																											
I																											
II																											
C. Total A(5)+B(7) (mm/day)																											
I																											
II																											
D. Effective Rainfall (mm/day)																											
E. Net field Water Requirement, NFR (mm/day)																											
I																											
II																											
I (l/sec/ha)																											
II																											

Net Field Requirement for Water Balance Calculation in 1978 (2/7)

Calculation of Net Field Water Requirement for Palawija(A)

Cropping Pattern	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
Early Cropping		○		○						○		○												
Middle Cropping			○	Paddy	○						○	Paddy	○											
Late Cropping	LP			○		○						○		○										LP

A. Crop Water Requirement

1. Crop Intensity																									
Early Cropping															1/6	1/3	1/3	1/3	1/3	1/3	1/3	1/6			
Middle Cropping																1/6	1/3	1/3	1/3	1/3	1/3	1/6			
Late Cropping																	1/6	1/3	1/3	1/3	1/3	1/6	1/6		
Total															1/6	1/2	5/6	1	1	1	5/6	1/2	1/6		
2. Crop Coefficient																									
Early Cropping															0.50	0.70	0.95	1.00	0.85	0.50	0.15				
Middle Cropping																0.50	0.70	0.95	1.00	0.85	0.50	0.15			
Late Cropping																	0.50	0.70	0.95	1.00	0.85	0.50	0.15		
Weighted average															0.50	0.63	0.76	0.88	0.93	0.78	0.57	0.38	0.15		
3. Potential ETo (mm/day/A)		3.85	3.85	3.76	3.76	4.00	4.00	4.12	4.12	3.76	3.76	3.47	3.47	3.36	3.36	4.14	4.14	4.45	4.45	5.14	5.14	4.82	4.82	3.78	3.78
4. Consumptive Use, ETc (mm/day/A)															1.68	2.62	3.14	3.93	4.16	4.03	2.93	1.85	0.72		
5. Rainfall (mm/day)		18.23	13.23	19.24	12.96	6.35	11.63	9.04	2.86	8.81	8.69	3.23	2.49	5.77	0.59	0.48	0.91	2.85	0.66	2.15	0.51	4.83	7.03	10.60	31.82
6. Effective Rainfall (mm/day/A)															0.40	0.36	0.66	1.98	0.53	1.54	0.39	1.85	0.72		
7. Crop water Requirement (mm/day/A)															1.28	2.26	2.49	1.96	3.63	2.49	2.54	0.00	0.00		
B. Net Field Water Requirement (mm/day)															0.21	1.13	2.07	1.96	3.63	2.49	2.12	0.00	0.00		
(l/sec/ha)															0.025	0.131	0.240	0.226	0.420	0.288	0.245	0.000	0.000		

	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
Net Field Water Requirement for Paddy	0.000	0.000	0.000	0.000	0.154	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Net Field Water Requirement for Palawija	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.025	0.131	0.240	0.226	0.420	0.288	0.245	0.000	0.000	0.000
100 I	0.000	0.000	0.000	0.000	0.154	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100 II	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.822	0.323	0.236	0.526	0.695	0.152	0.397	0.077	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100 III	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.025	0.131	0.240	0.226	0.420	0.288	0.245	0.000	0.000	0.000
<b>Total NWR</b> (l/s/ha)	0.000	0.000	0.000	0.000	0.154	0.000	0.000	0.822	0.323	0.236	0.526	0.695	0.152	0.421	0.208	0.240	0.226	0.420	0.288	0.245	0.000	0.000	0.000	0.000
<b>DR</b> (E=0.875*0.81)	0.000	0.000	0.000	0.000	0.217	0.000	0.000	1.159	0.455	0.332	0.743	0.980	0.214	0.595	0.293	0.338	0.319	0.593	0.407	0.346	0.000	0.000	0.000	0.000
0.85      0.81      0.6885	0.000	0.000	0.000	0.000	0.223	0.000	0.000	1.194	0.469	0.342	0.765	1.009	0.220	0.612	0.302	0.348	0.329	0.610	0.418	0.356	0.000	0.000	0.000	0.000







Net Field Requirement for Water Balance Calculation in 1978 (6/7)

Calculation of Net Field Water Requirement for Palawija(C)

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
Cropping Pattern	Early Cropping																								
	Middle Cropping																								
	Late Cropping																								
	No Cropping																								
A.Crop Water Requirement																									
1.Crop Intensity																									
Early Cropping																									
Middle Cropping																									
Late Cropping																									
Total																									
2.Crop Coefficient																									
Early Cropping																									
Middle Cropping																									
Late Cropping																									
Weighted average																									
3.Potential ETo (mm/day/A)		3.85	3.85	3.76	3.76	4.00	4.00	4.12	4.12	3.76	3.76	3.47	3.47	3.36	3.36	4.14	4.14	4.45	4.45	5.14	5.14	4.82	4.82	3.78	3.78
4.Consumptive Use, ETc (mm/day/A)																									
5.Rainfall (mm/day)		18.23	13.23	19.24	12.96	6.35	11.63	9.04	2.86	8.81	8.69	3.23	2.49	5.77	0.59	0.48	0.91	2.85	0.66	2.15	0.51	4.83	7.03	10.60	31.82
6.Effective Rainfall (mm/day/A)																									
7.Crop water Requirement (mm/day/A)																									
B.Net Field Water Requirement (mm/day)																									
(l/sec/ha)																									
III																									
		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
Net Field Water Requirement for Paddy		0.000	0.000	0.000	0.000	0.339	0.017	0.000	0.241	0.000	0.000	0.000	0.322	0.745	0.704	0.307	0.836	0.640	0.400	0.000	0.000	0.000	0.000	0.000	0.000
Net Field Water Requirement for Palawija		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.028	0.057	0.278	0.342	0.505	0.069	0.000	0.000
100 I		0.000	0.000	0.000	0.000	0.339	0.017	0.000	0.241	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100 II		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.322	0.745	0.704	0.307	0.836	0.640	0.400	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100 III		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.028	0.057	0.278	0.342	0.505	0.069	0.000	0.000
<b>Total NWR</b> (l/s/ha)		0.000	0.000	0.000	0.000	0.339	0.017	0.000	0.241	0.000	0.322	0.745	0.704	0.307	0.836	0.640	0.428	0.057	0.278	0.342	0.505	0.069	0.000	0.000	0.000
<b>DR</b> (E=0.875*0.81)		0.000	0.000	0.000	0.000	0.478	0.023	0.000	0.339	0.000	0.455	1.051	0.994	0.433	1.179	0.903	0.603	0.080	0.393	0.482	0.712	0.098	0.000	0.000	0.000
0.85 0.81 0.6885		0.000	0.000	0.000	0.000	0.492	0.024	0.000	0.349	0.000	0.468	1.082	1.023	0.446	1.214	0.930	0.621	0.083	0.404	0.496	0.733	0.101	0.000	0.000	0.000



Net Field Requirement for Water Balance Calculation in 1978 (7/7)

(E=0.875*0.81)	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
<b>Golongan A</b>	0.000	0.000	0.000	0.000	0.217	0.000	0.000	1.159	0.455	0.332	0.743	0.980	0.214	0.595	0.293	0.338	0.319	0.593	0.407	0.346	0.000	0.000	0.000	0.000
<b>Golongan B</b>	0.000	0.000	0.000	0.000	0.626	0.000	0.000	0.654	0.442	0.468	0.909	0.827	0.587	0.806	0.659	0.222	0.201	0.558	0.520	0.590	0.000	0.000	0.000	0.000
<b>Golongan C</b>	0.000	0.000	0.000	0.000	0.478	0.023	0.000	0.339	0.000	0.455	1.051	0.994	0.433	1.179	0.903	0.603	0.080	0.393	0.482	0.712	0.098	0.000	0.000	0.000
average	0.000	0.000	0.000	0.000	0.440	0.008	0.000	0.718	0.299	0.418	0.901	0.934	0.411	0.860	0.619	0.388	0.200	0.514	0.470	0.549	0.033	0.000	0.000	0.000

(E=0.85*0.81)	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
<b>Golongan A</b>	0.000	0.000	0.000	0.000	0.223	0.000	0.000	1.194	0.469	0.342	0.765	1.009	0.220	0.612	0.302	0.348	0.329	0.610	0.418	0.356	0.000	0.000	0.000	0.000
<b>Golongan B</b>	0.000	0.000	0.000	0.000	0.645	0.000	0.000	0.674	0.455	0.482	0.936	0.852	0.604	0.830	0.679	0.228	0.207	0.574	0.535	0.607	0.000	0.000	0.000	0.000
<b>Golongan C</b>	0.000	0.000	0.000	0.000	0.492	0.024	0.000	0.349	0.000	0.468	1.082	1.023	0.446	1.214	0.930	0.621	0.083	0.404	0.496	0.733	0.101	0.000	0.000	0.000
average	0.000	0.000	0.000	0.000	0.453	0.008	0.000	0.739	0.308	0.431	0.927	0.961	0.423	0.885	0.637	0.399	0.206	0.530	0.483	0.566	0.034	0.000	0.000	0.000

Summary Calculation of NFR (l/s/ha)

	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
<b>Golongan A</b>	0.00	0.00	0.00	0.00	0.15	0.00	0.00	0.82	0.32	0.24	0.53	0.69	0.15	0.42	0.21	0.24	0.23	0.42	0.29	0.25	0.00	0.00	0.00	0.00
<b>Golongan B</b>	0.00	0.00	0.00	0.00	0.44	0.00	0.00	0.46	0.31	0.33	0.64	0.59	0.42	0.57	0.47	0.16	0.14	0.40	0.37	0.42	0.00	0.00	0.00	0.00
<b>Golongan C</b>	0.00	0.00	0.00	0.00	0.34	0.02	0.00	0.24	0.00	0.32	0.74	0.70	0.31	0.84	0.64	0.43	0.06	0.28	0.34	0.50	0.07	0.00	0.00	0.00

1978

	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
I : W.Pad	0.00	0.00	0.00	0.00	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
A	0.00	0.00	0.00	0.00	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B	0.00	0.00	0.00	0.00	0.34	0.02	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C	0.00	0.00	0.00	0.00	0.31	0.01	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
av	0.00	0.00	0.00	0.00	0.31	0.01	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
II : D.Pad	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.82	0.32	0.24	0.53	0.69	0.15	0.40	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46	0.31	0.33	0.64	0.59	0.42	0.57	0.43	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32	0.74	0.70	0.31	0.84	0.64	0.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43	0.21	0.30	0.64	0.66	0.29	0.60	0.38	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
av	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43	0.21	0.30	0.64	0.66	0.29	0.60	0.38	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
III : D.Pal	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.13	0.24	0.23	0.42	0.29	0.25	0.00	0.00	0.00
A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.11	0.14	0.40	0.37	0.42	0.00	0.00	0.00	0.00
B	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.11	0.14	0.40	0.37	0.42	0.00	0.00	0.00	0.00
C	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.06	0.28	0.34	0.50	0.07	0.00	0.00	0.00	0.00
av	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.05	0.13	0.14	0.36	0.33	0.39	0.02	0.00	0.00	0.00
I : W.Pad	0.00	0.00	0.00	0.00	0.31	0.01	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
II : D.Pad	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43	0.21	0.30	0.64	0.66	0.29	0.60	0.38	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
III : D.Pal	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.05	0.13	0.14	0.36	0.33	0.39	0.02	0.00	0.00	0.00

1978

I : W.Pad	100	0.000	0.000	0.000	0.312	0.006	0.000	0.080	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
II : D.Pad	100	0.000	0.000	0.000	0.000	0.000	0.000	0.429	0.212	0.297	0.638	0.662	0.292	0.601	0.384	0.147	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
III : D.Pal	100	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.008	0.055	0.128	0.142	0.365	0.333	0.389	0.023	0.000	0.000	0.000
total		0.000	0.000	0.000	0.000	0.312	0.006	0.000	0.509	0.212	0.297	0.638	0.662	0.292	0.610	0.438	0.275	0.142	0.365	0.333	0.389	0.023	0.000	0.000
		0	0	0	0.1588	0.025436	0.000	0.25425	0.000	0.000	0.65012	0.45052	0.000	0.35664	0.25322	0.36109	0.01156	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Year : 1978

N.F.R. (l/s/ha)

	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
	0.000	0.000	0.000	0.000	0.312	0.006	0.000	0.509	0.212	0.297	0.638	0.662	0.292	0.610	0.438	0.275	0.142	0.365	0.333	0.389	0.023	0.000	0.000	0.000



Net Field Requirement for Water Balance Calculation in 1979 (2/7)

Calculation of Net Field Water Requirement for Palawija(A)

Cropping Pattern	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
Early Cropping		○		○						○		○												
Middle Cropping			○	Paddy	○						○	Paddy	○											
Late Cropping	LP			○		○						○		○										LP

A. Crop Water Requirement

1. Crop Intensity																									
Early Cropping															1/6	1/3	1/3	1/3	1/3	1/3	1/3	1/6			
Middle Cropping																1/6	1/3	1/3	1/3	1/3	1/3	1/6			
Late Cropping																	1/6	1/3	1/3	1/3	1/3	1/3	1/6		
Total															1/6	1/2	5/6	1	1	1	5/6	1/2	1/6		
2. Crop Coefficient																									
Early Cropping															0.50	0.70	0.95	1.00	0.85	0.50	0.15				
Middle Cropping																0.50	0.70	0.95	1.00	0.85	0.50	0.15			
Late Cropping																	0.50	0.70	0.95	1.00	0.85	0.50	0.15		
Weighted average															0.50	0.63	0.76	0.88	0.93	0.78	0.57	0.38	0.15		
3. Potential ETo (mm/day/A)		3.84	3.84	3.85	3.85	3.81	3.81	4.44	4.44	4.17	4.17	3.02	3.02	4.14	4.14	4.79	4.79	5.18	5.18	5.33	5.33	5.20	5.20	4.06	4.06
4. Consumptive Use, ETc (mm/day/A)															2.07	3.03	3.64	4.57	4.83	4.18	3.04	1.99	0.78		
5. Rainfall (mm/day)		43.39	11.99	15.83	17.38	19.19	3.75	1.41	2.92	5.81	1.88	7.25	0.21	0.07	0.00	0.31	0.00	0.14	0.16	0.09	0.49	2.20	4.09	27.36	8.61
6. Effective Rainfall (mm/day/A)															0.00	0.25	0.00	0.13	0.15	0.08	0.38	1.37	0.78		
7. Crop water Requirement (mm/day/A)															2.07	2.79	3.64	4.44	4.68	4.09	2.66	0.63	0.00		
B. Net Field Water Requirement (mm/day)															0.34	1.39	3.03	4.44	4.68	4.09	2.22	0.31	0.00		
(l/sec/ha)															0.040	0.161	0.351	0.514	0.542	0.474	0.257	0.036	0.000		

	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
Net Field Water Requirement for Paddy	0.000	0.000	0.000	0.000	0.000	0.157	0.002	0.000	0.000	0.000	0.000	0.145	0.827	0.674	0.473	0.091	0.039	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Net Field Water Requirement for Palawija	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.040	0.161	0.351	0.514	0.542	0.474	0.257	0.036	0.000	0.000
100 I	0.000	0.000	0.000	0.000	0.000	0.157	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.352
100 II	0.000	0.000	0.000	0.000	0.000	0.000	0.595	0.841	0.608	0.836	0.145	0.827	0.674	0.473	0.091	0.039	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100 III	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.040	0.161	0.351	0.514	0.542	0.474	0.257	0.036	0.000	0.000
<b>Total NWR</b> (l/s/ha)	0.000	0.000	0.000	0.000	0.000	0.157	0.596	0.841	0.608	0.836	0.145	0.827	0.674	0.513	0.252	0.390	0.514	0.542	0.474	0.257	0.036	0.000	0.000	0.352
<b>DR</b> (E=0.875*0.81)	0.000	0.000	0.000	0.000	0.000	0.221	0.841	1.187	0.858	1.179	0.205	1.167	0.951	0.724	0.355	0.550	0.725	0.764	0.668	0.362	0.051	0.000	0.000	0.497
0.85      0.81      0.6885	0.000	0.000	0.000	0.000	0.000	0.228	0.866	1.222	0.884	1.214	0.211	1.201	0.979	0.745	0.366	0.566	0.746	0.787	0.688	0.373	0.053	0.000	0.000	0.511

Net Field Requirement for Water Balance Calculation in 1979 (3/7)

[Kampili Rotation B]

Calculation of Net Field Water Requirement for Paddy(B) on

1979

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec							
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd						
<b>Cropping Pattern</b>																															
		<p>Early Cropping Middle Cropping Late Cropping</p>																													
<b>A. Land Preparation Requirement</b>																															
1. Land Preparation Intensity																															
Early Cropping		1/6						1/6		1/3		1/6												1/6		1/3					
Middle Cropping		1/3		1/6						1/6		1/3		1/6												1/6		1/6			
Late Cropping		1/6		1/3		1/6						1/6		1/3		1/6												1/6		1/2	
Total		2/3		1/2		1/6				1/6		1/2		2/3		1/6										1/6		1/2			
2. Land Preparation Requirement (mm/day/A)		11.83	11.83	11.83	11.83	11.81	11.81	12.25	12.25	12.05	12.05	11.28	11.28	12.03	12.03	12.49	12.49	12.76	12.76	12.87	12.87	12.78	12.78	11.98	11.98						
3. Water Layer Replacement Intensity																															
4. Water Layer Replacement Requirement (mm/day/A)																															
5. Total Requirement for Land Preparation																															
I (mm/day)		7.89	5.92	3.08	1.11	2.22	1.11	1.11										0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	5.99				
II (mm/day)								2.04	6.12	8.04	6.03	2.99	1.11	2.22	1.11	1.11															
<b>B. Crop Water Requirement</b>																															
1. Crop Intensity																															
Early Cropping		1/6		1/3		1/3		1/3		1/6		1/3		1/3		1/6															
Middle Cropping				1/6		1/3		1/3		1/6		1/6		1/3		1/3		1/6													
Late Cropping				1/6		1/3		1/3		1/6		1/6		1/3		1/3		1/6		1/6											
Total		1/6		1/2		5/6		1		5/6		1/2		1/6		1/6		1/6		1/6		1/6		1/6		1/6		1/6			
II																															
2. Crop Coefficient																															
Early Cropping		1.10		1.10		1.05		0.95		0.00		1.10		1.10		1.05		0.95		0.00		0.00		0.00		0.00		0.00			
Middle Cropping				1.10		1.10		1.05		0.95		0.00		1.10		1.10		1.05		0.95		0.00		0.00		0.00		0.00			
Late Cropping				1.10		1.10		1.05		0.95		0.00		1.10		1.10		1.05		0.95		0.00		0.00		0.00		0.00			
Weighted average		1.10		1.10		1.08		1.07		1.02		0.67		0.38		0.00		0.00		0.00		0.00		0.00		0.00		0.00			
II																															
3. Potential ETo (mm/day/A)		3.84	3.84	3.85	3.85	3.81	3.81	4.44	4.44	4.17	4.17	3.02	3.02	4.14	4.14	4.79	4.79	5.18	5.18	5.33	5.33	5.20	5.20	4.06	4.06						
4. Consumptive Use, ETc (mm/day/A)		4.23	4.23	4.16	4.10	3.87	2.54	1.69	0.00	0.00	0.00	4.58	4.58	3.26	3.22	4.21	2.76	1.82	0.00	0.00											
5. Percolation Loss (mm/day/A)		2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00			
6. Crop Water Requirement (mm/day/A)		6.23	6.23	6.16	6.10	5.87	4.54	3.69	2.00	2.00	2.00	6.58	6.58	5.26	5.22	6.21	4.76	3.82	2.00	2.00											
7. Crop water Requirement (mm/day)		1.04	3.11	5.13	6.10	5.87	4.54	3.07	1.00	0.33	1.10	3.29	4.39	5.22	6.21	4.76	3.18	1.00	0.33												
II																															
C. Total A(5)+B(7) (mm/day)		8.93	9.03	8.21	7.21	8.09	5.65	4.18	1.00	0.33	1.10	3.29	4.39	5.22	6.21	4.76	3.18	1.00	0.33												
II																															
D. Effective Rainfall (mm/day)		30.37	8.39	11.08	12.17	13.43	2.63	0.99	2.04	4.06	9.32	7.38	6.33	8.43	5.87	4.29	1.00	0.33													
E. Net field Water Requirement, NFR (mm/day)		-21.44	0.64	-2.87	-4.95	-5.34	3.02	3.20	-1.04	-3.73	1.05	4.08	5.07	8.01	2.30	6.19	8.38	5.87	4.08	1.00	0.23										
II																															
I		0.00	0.64	0.00	0.00	0.00	3.02	3.20	0.00	0.00	1.05	4.08	5.07	8.01	2.30	6.19	8.38	5.87	4.08	1.00	0.23					0.00	0.00				
II																															
I (l/sec/ha)		0.000	0.074	0.000	0.000	0.000	0.350	0.370	0.000	0.000	0.122	0.472	0.587	0.927	0.266	0.716	0.970	0.679	0.472	0.116	0.027					0.000	0.000				
II																															

Net Field Requirement for Water Balance Calculation in 1979 (4/7)

Calculation of Net Field Water Requirement for Palawija(B)

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
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<td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>2.40</td><td>3.03</td><td>3.93</td><td>4.57</td><td>4.98</td><td>4.18</td><td>2.96</td><td>1.99</td><td>0.61</td><td></td> </tr> <tr> <td>5.Rainfall (mm/day)</td> <td></td> <td>43.39</td><td>11.99</td><td>15.83</td><td>17.38</td><td>19.19</td><td>3.75</td><td>1.41</td><td>2.92</td><td>5.81</td><td>1.88</td><td>7.25</td><td>0.21</td><td>0.07</td><td>0.00</td><td>0.31</td><td>0.00</td><td>0.14</td><td>0.16</td><td>0.09</td><td>0.49</td><td>2.20</td><td>4.09</td><td>27.36</td><td>8.61</td> </tr> <tr> <td>6.Effective Rainfall (mm/day/A)</td> <td></td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>0.24</td><td>0.00</td><td>0.13</td><td>0.15</td><td>0.09</td><td>0.41</td><td>1.46</td><td>1.99</td><td>0.61</td><td></td> </tr> <tr> <td>7.Crop water Requirement (mm/day)</td> <td></td> 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<td>0.000</td><td>0.074</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.350</td><td>0.370</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td> </tr> <tr> <td colspan="2">Net Field Water Requirement for Palawija</td> <td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.122</td><td>0.472</td><td>0.587</td><td>0.927</td><td>0.266</td><td>0.716</td><td>0.970</td><td>0.679</td><td>0.472</td><td>0.116</td><td>0.027</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td> </tr> <tr> <td>100</td> <td>I</td> <td>0.000</td><td>0.074</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.350</td><td>0.370</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td> </tr> <tr> <td>100</td> <td>II</td> <td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.122</td><td>0.472</td><td>0.587</td><td>0.927</td><td>0.266</td><td>0.716</td><td>0.970</td><td>0.679</td><td>0.472</td><td>0.116</td><td>0.027</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td> </tr> <tr> <td>100</td> <td>III</td> 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<td>0.000</td><td>0.104</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.494</td><td>0.694</td><td>0.666</td><td>0.828</td><td>1.307</td><td>0.375</td><td>1.010</td><td>1.368</td><td>0.958</td><td>0.724</td><td>0.411</td><td>0.556</td><td>0.722</td><td>0.798</td><td>0.616</td><td>0.204</td><td>0.000</td><td>0.000</td><td>0.000</td> </tr> <tr> <td>0.85</td> <td>0.81</td> <td>0.6885</td><td>0.000</td><td>0.107</td><td>0.000</td><td>0.000</td><td>0.508</td><td>0.715</td><td>0.686</td><td>0.852</td><td>1.346</td><td>0.386</td><td>1.040</td><td>1.408</td><td>0.986</td><td>0.746</td><td>0.423</td><td>0.573</td><td>0.743</td><td>0.822</td><td>0.634</td><td>0.210</td><td>0.000</td><td>0.000</td><td>0.000</td> </tr> </tbody> </table>																										Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec				1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	A.Crop Water Requirement																										1.Crop 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(mm/day)																0.36	1.52	3.17	4.42	4.89	3.77	1.25	0.00	0.00			(l/sec/ha)															0.042	0.176	0.367	0.512	0.566	0.436	0.145	0.000	0.000			III																																																					Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec				1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	Net Field Water Requirement for Paddy		0.000	0.074	0.000	0.000	0.000	0.350	0.370	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Net Field Water Requirement for Palawija		0.000	0.000	0.000	0.000	0.000	0.000	0.122	0.472	0.587	0.927	0.266	0.716	0.970	0.679	0.472	0.116	0.027	0.000	0.000	0.000	0.000	0.000	0.000	0.000	100	I	0.000	0.074	0.000	0.000	0.000	0.350	0.370	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	100	II	0.000	0.000	0.000	0.000	0.000	0.000	0.122	0.472	0.587	0.927	0.266	0.716	0.970	0.679	0.472	0.116	0.027	0.000	0.000	0.000	0.000	0.000	0.000	0.000	100	III	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.042	0.176	0.367	0.512	0.566	0.436	0.145	0.000	0.000	0.000	0.000	<b>Total NWR</b> (l/s/ha)		0.000	0.074	0.000	0.000	0.000	0.350	0.492	0.472	0.587	0.927	0.266	0.716	0.970	0.679	0.513	0.291	0.394	0.512	0.566	0.436	0.145	0.000	0.000	0.000	<b>DR</b> (E=0.875*0.81)		0.000	0.104	0.000	0.000	0.000	0.494	0.694	0.666	0.828	1.307	0.375	1.010	1.368	0.958	0.724	0.411	0.556	0.722	0.798	0.616	0.204	0.000	0.000	0.000	0.85	0.81	0.6885	0.000	0.107	0.000	0.000	0.508	0.715	0.686	0.852	1.346	0.386	1.040	1.408	0.986	0.746	0.423	0.573	0.743	0.822	0.634	0.210	0.000	0.000	0.000
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3.Potential ETo (mm/day/A)		3.84	3.84	3.85	3.85	3.81	3.81	4.44	4.44	4.17	4.17	3.02	3.02	4.14	4.14	4.79	4.79	5.18	5.18	5.33	5.33	5.20	5.20	4.06	4.06																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
4.Consumptive Use, ETc (mm/day/A)																2.40	3.03	3.93	4.57	4.98	4.18	2.96	1.99	0.61																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
5.Rainfall (mm/day)		43.39	11.99	15.83	17.38	19.19	3.75	1.41	2.92	5.81	1.88	7.25	0.21	0.07	0.00	0.31	0.00	0.14	0.16	0.09	0.49	2.20	4.09	27.36	8.61																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
6.Effective Rainfall (mm/day/A)																0.24	0.00	0.13	0.15	0.09	0.41	1.46	1.99	0.61																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
7.Crop water Requirement (mm/day)																2.16	3.03	3.81	4.42	4.89	3.77	1.50	0.00	0.00																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
B.Net Field Water Requirement (mm/day)																0.36	1.52	3.17	4.42	4.89	3.77	1.25	0.00	0.00																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
	(l/sec/ha)															0.042	0.176	0.367	0.512	0.566	0.436	0.145	0.000	0.000																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
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		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
Net Field Water Requirement for Paddy		0.000	0.074	0.000	0.000	0.000	0.350	0.370	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
Net Field Water Requirement for Palawija		0.000	0.000	0.000	0.000	0.000	0.000	0.122	0.472	0.587	0.927	0.266	0.716	0.970	0.679	0.472	0.116	0.027	0.000	0.000	0.000	0.000	0.000	0.000	0.000																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
100	I	0.000	0.074	0.000	0.000	0.000	0.350	0.370	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
100	II	0.000	0.000	0.000	0.000	0.000	0.000	0.122	0.472	0.587	0.927	0.266	0.716	0.970	0.679	0.472	0.116	0.027	0.000	0.000	0.000	0.000	0.000	0.000	0.000																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
100	III	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.042	0.176	0.367	0.512	0.566	0.436	0.145	0.000	0.000	0.000	0.000																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
<b>Total NWR</b> (l/s/ha)		0.000	0.074	0.000	0.000	0.000	0.350	0.492	0.472	0.587	0.927	0.266	0.716	0.970	0.679	0.513	0.291	0.394	0.512	0.566	0.436	0.145	0.000	0.000	0.000																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
<b>DR</b> (E=0.875*0.81)		0.000	0.104	0.000	0.000	0.000	0.494	0.694	0.666	0.828	1.307	0.375	1.010	1.368	0.958	0.724	0.411	0.556	0.722	0.798	0.616	0.204	0.000	0.000	0.000																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
0.85	0.81	0.6885	0.000	0.107	0.000	0.000	0.508	0.715	0.686	0.852	1.346	0.386	1.040	1.408	0.986	0.746	0.423	0.573	0.743	0.822	0.634	0.210	0.000	0.000	0.000																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																

Net Field Requirement for Water Balance Calculation in 1979 (5/7)

[Kampili Rotation C ]

Calculation of Net Field Water Requirement for Paddy (C) on

1979

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
Cropping Pattern																									
	Early Cropping																								
	Middle Cropping																								
	Late Cropping																								
A.Land Preparation Requirement																									
1.Land Preparation Intensity																									
Early Cropping		1/3	1/6							1/6	1/3	1/6													1/6
Middle Cropping		1/6	1/3	1/6						1/6	1/3	1/6													
Late Cropping			1/6	1/3	1/6						1/6	1/3	1/6												
Total		1/2	2/3	1/2	1/6					1/6	1/2	2/3	1/2	1/6											1/6
2.Land Preparation Requirement (mm/day/A)		11.83	11.83	11.83	11.83	11.81	11.81	12.25	12.25	12.05	12.05	11.28	11.28	12.03	12.03	12.49	12.49	12.76	12.76	12.87	12.87	12.78	12.78	11.98	11.98
	(mm/day)	5.92	7.89	5.92	1.97	0.00	0.00	0.00	2.04	6.03	8.04	5.64	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00
3.Water Layer Replacement Intensity					1/3	1/3	2/3	1/3	1/3					1/3	1/3	2/3	1/3	1/3							
4.Water Layer Replacement Requirement																									
	(mm/day/A)				3.33	3.33	3.33	3.33	3.33					3.33	3.33	3.33	3.33	3.33							
	(mm/day)				1.11	1.11	2.22	1.11	1.11					1.11	1.11	2.22	1.11	1.11							
5.Total Requirement for Land Preparation																									
	I	5.92	7.89	5.92	3.08	1.11	2.22	1.11	1.11										0.00	0.00	0.00	0.00	0.00	0.00	2.00
	II								2.04	6.03	8.04	5.64	2.99	1.11	2.22	1.11	1.11								
B. Crop Water Requirement																									
1.Crop Intensity		Jan	Feb		Mar		Apr		May	Jun	Jul		Aug		Sep	Oct	Nov	Dec							
Early Cropping			1/6	1/3	1/3	1/3	1/3	1/3	1/6	1/6	1/3	1/3	1/3	1/3	1/6										
Middle Cropping				1/6	1/3	1/3	1/3	1/3	1/6		1/6	1/3	1/3	1/3	1/3	1/6									
Late Cropping					1/6	1/3	1/3	1/3	1/6	1/6	1/3	1/3	1/3	1/3	1/3	1/6									
Total			1/6	1/2	5/6	1	1	1	5/6	1/2	1/6	1/2	5/6	1	1	1	5/6	1/2	1/6						
2.Crop Coefficient																									
Early Cropping			1.10	1.10	1.05	1.05	0.95	0.00	0.00	1.10	1.10	1.05	1.05	0.95	0.00	0.00									
Middle Cropping				1.10	1.10	1.05	1.05	0.95	0.00	0.00	1.10	1.10	1.05	1.05	0.95	0.00	0.00								
Late Cropping					1.10	1.10	1.05	1.05	0.95	0.00	0.00	1.10	1.10	1.05	1.05	0.95	0.00	0.00							
Weighted average			1.10	1.10	1.08	1.07	1.02	0.67	0.38	0.00	0.00	1.10	1.10	1.08	1.07	1.02	0.67	0.38	0.00	0.00					
3.Potential ETo	(mm/day/A)	3.84	3.84	3.85	3.85	3.81	3.81	4.44	4.44	4.17	4.17	3.02	3.02	4.14	4.14	4.79	4.79	5.18	5.18	5.33	5.33	5.20	5.20	4.06	4.06
4.Consumptive Use, ETc	(mm/day/A)	0.00	4.23	4.23	4.16	4.06	3.87	2.96	1.69	0.00	0.00														
	II																								
5.Percolation Loss	(mm/day/A)	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00						
6.Crop Water Requirement	(mm/day/A)	2.00	6.23	6.23	6.16	6.06	5.87	4.96	3.69	2.00	2.00									0.00	0.00	0.00	0.00	0.00	0.00
	II																								
7.Crop water Requirement	(mm/day)	0.00	1.04	3.12	5.13	6.06	5.87	4.96	3.07	1.00	0.33									0.00	0.00	0.00	0.00	0.00	0.00
	II																								
C.Total A(5)+B(7)	(mm/day)	5.92	8.93	9.03	8.21	7.17	8.09	6.07	4.18	1.00	0.33									0.00	0.00	0.00	0.00	0.00	2.00
	II								2.04	6.03	9.13	8.30	7.38	7.52	8.43	6.30	4.29	1.00	0.33						
D.Effective Rainfall	(mm/day)	30.37	8.39	11.08	12.17	13.43	2.63	0.99	2.04	4.06	1.31	5.08	0.15	0.05	0.00	0.22	0.00	0.10	0.11	0.06	0.35	1.54	2.86	19.15	6.02
E.Net field Water Requirement, NFR (mm/day)		-24.45	0.53	-2.05	-3.95	-6.26	5.47	5.09	2.14	-3.06	-0.98									-0.06	-0.35	-1.54	-2.86	-19.15	-4.03
	II								0.00	1.96	7.82	3.22	7.23	7.48	8.43	6.09	4.29	0.90	0.22						
	I	0.00	0.53	0.00	0.00	0.00	5.47	5.09	2.14	0.00	0.00														0.00
	II								0.00	1.96	7.82	3.22	7.23	7.48	8.43	6.09	4.29	0.90	0.22						
	(l/sec/ha)	0.000	0.062	0.000	0.000	0.000	0.633	0.589	0.248	0.000	0.000														0.000
	II								0.000	0.227	0.905	0.373	0.837	0.865	0.975	0.704	0.497	0.104	0.026						

Net Field Requirement for Water Balance Calculation in 1979 (6/7)

Calculation of Net Field Water Requirement for Palawija(C)

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
Cropping Pattern	Early Cropping																								
	Middle Cropping																								
	Late Cropping																								
	No Cropping																								
A.Crop Water Requirement																									
1.Crop Intensity																									
Early Cropping																									
Middle Cropping																									
Late Cropping																									
Total																									
2.Crop Coefficient																									
Early Cropping																									
Middle Cropping																									
Late Cropping																									
Weighted average																									
3.Potential ETo (mm/day/A)		3.84	3.84	3.85	3.85	3.81	3.81	4.44	4.44	4.17	4.17	3.02	3.02	4.14	4.14	4.79	4.79	5.18	5.18	5.33	5.33	5.20	5.20	4.06	4.06
4.Consumptive Use, ETc (mm/day/A)		2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40
5.Rainfall (mm/day)		43.39	11.99	15.83	17.38	19.19	3.75	1.41	2.92	5.81	1.88	7.25	0.21	0.07	0.00	0.31	0.00	0.14	0.16	0.09	0.49	2.20	4.09	27.36	8.61
6.Effective Rainfall (mm/day/A)		0.00	0.12	0.14	0.09	0.43	1.57	2.58	1.56	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.14	0.09	0.43	1.57	2.58	1.56	0.61
7.Crop water Requirement (mm/day/A)		2.40	3.16	3.79	4.62	4.55	2.50	0.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.16	3.79	4.62	4.55	2.50	0.38	0.00	0.00
B.Net Field Water Requirement (mm/day)		0.40	1.58	3.16	4.62	4.55	2.50	0.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.58	3.16	4.62	4.55	2.50	0.31	0.00	0.00
(l/sec/ha)		III																							
		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
Net Field Water Requirement for Paddy		0.000	0.062	0.000	0.000	0.000	0.633	0.589	0.248	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Net Field Water Requirement for Palawija		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.227	0.905	0.373	0.837	0.865	0.975	0.704	0.497	0.104	0.026	0.000	0.000	0.000	0.000	0.000	0.000
100 I		0.000	0.062	0.000	0.000	0.000	0.633	0.589	0.248	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100 II		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.227	0.905	0.373	0.837	0.865	0.975	0.704	0.497	0.104	0.026	0.000	0.000	0.000	0.000	0.000	0.000
100 III		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.046	0.183	0.366	0.535	0.527	0.289	0.036	0.000	0.000
<b>Total NWR</b> (l/s/ha)		0.000	0.062	0.000	0.000	0.000	0.633	0.589	0.248	0.227	0.905	0.373	0.837	0.865	0.975	0.704	0.543	0.287	0.391	0.535	0.527	0.289	0.036	0.000	0.000
<b>DR</b> (E=0.875*0.81)		0.000	0.087	0.000	0.000	0.000	0.893	0.831	0.350	0.321	1.277	0.526	1.180	1.221	1.376	0.994	0.766	0.405	0.552	0.755	0.743	0.408	0.051	0.000	0.000
0.85      0.81      0.6885		0.000	0.090	0.000	0.000	0.000	0.919	0.855	0.360	0.330	1.315	0.542	1.215	1.257	1.416	1.023	0.789	0.417	0.568	0.777	0.765	0.420	0.053	0.000	0.000

Net Field Requirement for Water Balance Calculation in 1979 (7/7)

(E=0.875*0.81)	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
<b>Golongan A</b>	0.000	0.000	0.000	0.000	0.000	0.221	0.841	1.187	0.858	1.179	0.205	1.167	0.951	0.724	0.355	0.550	0.725	0.764	0.668	0.362	0.051	0.000	0.000	0.497
<b>Golongan B</b>	0.000	0.104	0.000	0.000	0.000	0.494	0.694	0.666	0.828	1.307	0.375	1.010	1.368	0.958	0.724	0.411	0.556	0.722	0.798	0.616	0.204	0.000	0.000	0.000
<b>Golongan C</b>	0.000	0.087	0.000	0.000	0.000	0.893	0.831	0.350	0.321	1.277	0.526	1.180	1.221	1.376	0.994	0.766	0.405	0.552	0.755	0.743	0.408	0.051	0.000	0.000
average	0.000	0.064	0.000	0.000	0.000	0.536	0.789	0.734	0.669	1.255	0.369	1.119	1.180	1.019	0.691	0.576	0.562	0.679	0.740	0.574	0.221	0.017	0.000	0.166

(E=0.85*0.81)	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
<b>Golongan A</b>	0.000	0.000	0.000	0.000	0.000	0.228	0.866	1.222	0.884	1.214	0.211	1.201	0.979	0.745	0.366	0.566	0.746	0.787	0.688	0.373	0.053	0.000	0.000	0.511
<b>Golongan B</b>	0.000	0.107	0.000	0.000	0.000	0.508	0.715	0.686	0.852	1.346	0.386	1.040	1.408	0.986	0.746	0.423	0.573	0.743	0.822	0.634	0.210	0.000	0.000	0.000
<b>Golongan C</b>	0.000	0.090	0.000	0.000	0.000	0.919	0.855	0.360	0.330	1.315	0.542	1.215	1.257	1.416	1.023	0.789	0.417	0.568	0.777	0.765	0.420	0.053	0.000	0.000
average	0.000	0.066	0.000	0.000	0.000	0.552	0.812	0.756	0.689	1.291	0.380	1.152	1.215	1.049	0.712	0.593	0.579	0.699	0.762	0.591	0.227	0.018	0.000	0.170

Summary Calculation of NFR (l/s/ha)

	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
<b>Golongan A</b>	0.00	0.00	0.00	0.00	0.00	0.16	0.60	0.84	0.61	0.84	0.15	0.83	0.67	0.51	0.25	0.39	0.51	0.54	0.47	0.26	0.04	0.00	0.00	0.35
<b>Golongan B</b>	0.00	0.07	0.00	0.00	0.00	0.35	0.49	0.47	0.59	0.93	0.27	0.72	0.97	0.68	0.51	0.29	0.39	0.51	0.57	0.44	0.14	0.00	0.00	0.00
<b>Golongan C</b>	0.00	0.06	0.00	0.00	0.00	0.63	0.59	0.25	0.23	0.91	0.37	0.84	0.87	0.98	0.70	0.54	0.29	0.39	0.53	0.53	0.29	0.04	0.00	0.00

1979

	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec		
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	
I : W.Pad	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35
B	0.00	0.07	0.00	0.00	0.00	0.35	0.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C	0.00	0.06	0.00	0.00	0.00	0.63	0.59	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
av	0.00	0.05	0.00	0.00	0.00	0.38	0.32	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
II : D.Pad	0.00	0.00	0.00	0.00	0.00	0.00	0.59	0.84	0.61	0.84	0.15	0.83	0.67	0.47	0.09	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.47	0.59	0.93	0.27	0.72	0.97	0.68	0.47	0.12	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.91	0.37	0.84	0.87	0.98	0.70	0.50	0.10	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00
av	0.00	0.00	0.00	0.00	0.00	0.24	0.44	0.47	0.89	0.26	0.79	0.84	0.71	0.42	0.22	0.04	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
III : D.Pal	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.16	0.35	0.51	0.54	0.47	0.26	0.04	0.00	0.00	0.00	0.00
B	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.18	0.37	0.51	0.57	0.44	0.14	0.00	0.00	0.00	0.00
C	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.18	0.37	0.53	0.53	0.29	0.04	0.00	0.00	0.00
av	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.07	0.19	0.35	0.47	0.52	0.41	0.16	0.01	0.00	0.00	0.00
I : W.Pad	0.00	0.05	0.00	0.00	0.00	0.38	0.32	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
II : D.Pad	0.00	0.00	0.00	0.00	0.00	0.00	0.24	0.44	0.47	0.89	0.26	0.79	0.84	0.71	0.42	0.22	0.04	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
III : D.Pal	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.07	0.19	0.35	0.47	0.52	0.41	0.16	0.01	0.00	0.00	0.00

1979

I : W.Pad	100	0.000	0.045	0.000	0.000	0.000	0.380	0.320	0.083	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.117
II : D.Pad	100	0.000	0.000	0.000	0.000	0.000	0.000	0.239	0.438	0.474	0.889	0.262	0.793	0.836	0.709	0.422	0.217	0.044	0.009	0.000	0.000	0.000	0.000	0.000	0.000
III : D.Pal	100	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.013	0.068	0.191	0.355	0.473	0.525	0.407	0.157	0.012	0.000	0.000	0.000
total		0.000	0.045	0.000	0.000	0.000	0.380	0.559	0.521	0.474	0.889	0.262	0.793	0.836	0.722	0.490	0.408	0.398	0.482	0.525	0.407	0.157	0.012	0.000	0.117
		0.02262		0		0.18989		0.53975		0.68167		0.52736		0.77929		0.44898		0.43997		0.46565		0.08437		0.05867	

Year : 1979

N.F.R. (l/s/ha)

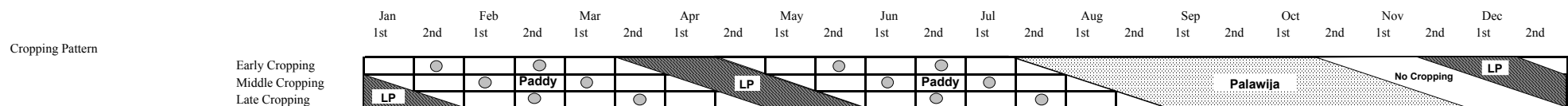
	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
	0.000	0.045	0.000	0.000	0.000	0.380	0.559	0.521	0.474	0.889	0.262	0.793	0.836	0.722	0.490	0.408	0.398	0.482	0.525	0.407	0.157	0.012	0.000	0.117





Net Field Requirement for Water Balance Calculation in 1980 (2/7)

Calculation of Net Field Water Requirement for Palawija(A)



A. Crop Water Requirement

	Jan 1st	Jan 2nd	Feb 1st	Feb 2nd	Mar 1st	Mar 2nd	Apr 1st	Apr 2nd	May 1st	May 2nd	Jun 1st	Jun 2nd	Jul 1st	Jul 2nd	Aug 1st	Aug 2nd	Sep 1st	Sep 2nd	Oct 1st	Oct 2nd	Nov 1st	Nov 2nd	Dec 1st	Dec 2nd	
1. Crop Intensity																									
Early Cropping															1/6	1/3	1/3	1/3	1/3	1/3	1/3	1/6			
Middle Cropping																1/6	1/3	1/3	1/3	1/3	1/3	1/3	1/6		
Late Cropping																	1/6	1/3	1/3	1/3	1/3	1/3	1/6		
Total															1/6	1/2	5/6	1	1	1	5/6	1/2	1/6		
2. Crop Coefficient																									
Early Cropping															0.50	0.70	0.95	1.00	0.85	0.50	0.15				
Middle Cropping																0.50	0.70	0.95	1.00	0.85	0.50	0.15			
Late Cropping																	0.50	0.70	0.95	1.00	0.85	0.50	0.15		
Weighted average															0.50	0.63	0.76	0.88	0.93	0.78	0.57	0.38	0.15		
3. Potential ETo (mm/day/A)		4.06	4.06	4.04	4.04	3.89	3.89	4.54	4.54	4.29	4.29	3.33	3.33	4.54	4.54	5.20	5.20	5.36	5.36	5.50	5.50	4.69	4.69	3.65	3.65
4. Consumptive Use, ETc (mm/day/A)															2.27	3.29	3.95	4.73	5.00	4.31	3.13	1.80	0.70		
5. Rainfall (mm/day)	24.32	20.37	19.58	12.77	13.18	7.81	5.72	5.73	1.07	0.71	0.00	0.63	0.07	0.00	0.16	0.00	0.00	0.33	0.29	0.76	2.67	2.94	23.86	20.42	
6. Effective Rainfall (mm/day/A)															0.00	0.13	0.00	0.00	0.30	0.25	0.56	1.61	0.70		
7. Crop water Requirement (mm/day/A)															2.27	3.16	3.95	4.73	4.70	4.06	2.58	0.19	0.00		
B. Net Field Water Requirement (mm/day)															0.38	1.58	3.29	4.73	4.70	4.06	2.15	0.09	0.00		
(l/sec/ha)															0.044	0.183	0.381	0.548	0.544	0.470	0.249	0.011	0.000		

	Jan 1st	Jan 2nd	Feb 1st	Feb 2nd	Mar 1st	Mar 2nd	Apr 1st	Apr 2nd	May 1st	May 2nd	Jun 1st	Jun 2nd	Jul 1st	Jul 2nd	Aug 1st	Aug 2nd	Sep 1st	Sep 2nd	Oct 1st	Oct 2nd	Nov 1st	Nov 2nd	Dec 1st	Dec 2nd
Net Field Water Requirement for Paddy	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Net Field Water Requirement for Palawija																								
100 I	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100 II	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.621	1.005	0.945	0.771	0.829	0.705	0.488	0.103	0.039	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100 III	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.044	0.183	0.381	0.548	0.544	0.470	0.249	0.011	0.000	0.000	0.000
<b>Total NWR</b> (l/s/ha)	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.621	1.005	0.945	0.771	0.829	0.705	0.532	0.286	0.419	0.548	0.544	0.470	0.249	0.011	0.001	0.000	0.000
<b>DR</b> (E=0.875*0.81)	0.000	0.000	0.000	0.000	0.000	0.000	0.352	0.876	1.417	1.333	1.087	1.170	0.995	0.750	0.403	0.592	0.773	0.768	0.663	0.351	0.015	0.001	0.000	0.000
0.85    0.81    0.6885	0.000	0.000	0.000	0.000	0.000	0.000	0.362	0.902	1.459	1.373	1.119	1.204	1.024	0.772	0.415	0.609	0.796	0.791	0.682	0.361	0.016	0.001	0.000	0.000



Net Field Requirement for Water Balance Calculation in 1980 (4/7)

Calculation of Net Field Water Requirement for Palawija(B)

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
Cropping Pattern	Early Cropping			●		●						●		●											
	Middle Cropping				●		●					●		●											
	Late Cropping							●						●											
		LP				Paddy				LP				Paddy							Palawija			No Cropping	LP
A.Crop Water Requirement		Jan 1st	2nd	Feb 1st	2nd	Mar 1st	2nd	Apr 1st	2nd	May 1st	2nd	Jun 1st	2nd	Jul 1st	2nd	Aug 1st	2nd	Sep 1st	2nd	Oct 1st	2nd	Nov 1st	2nd	Dec 1st	2nd
1.Crop Intensity																									
Early Cropping																	1/6	1/3	1/3	1/3	1/3	1/3	1/3	1/6	
Middle Cropping																		1/6	1/3	1/3	1/3	1/3	1/3	1/6	
Late Cropping																			1/6	1/3	1/3	1/3	1/3	1/3	1/6
Total																	1/6	1/2	5/6	1	1	1	5/6	1/2	1/6
2.Crop Coefficient																									
Early Cropping																	0.50	0.70	0.95	1.00	0.85	0.50	0.15		
Middle Cropping																		0.50	0.70	0.95	1.00	0.85	0.50	0.15	
Late Cropping																			0.50	0.70	0.95	1.00	0.85	0.50	0.15
Weighted average																	0.50	0.63	0.76	0.88	0.93	0.78	0.57	0.38	0.15
3.Potential ETo (mm/day/A)		4.06	4.06	4.04	4.04	3.89	3.89	4.54	4.54	4.29	4.29	3.33	3.33	4.54	4.54	5.20	5.20	5.36	5.36	5.50	5.50	4.69	4.69	3.65	3.65
4.Consumptive Use, ETc (mm/day/A)																2.60	3.29	4.07	4.73	5.13	4.31	2.67	1.80	0.55	
5.Rainfall (mm/day)		24.32	20.37	19.58	12.77	13.18	7.81	5.72	5.73	1.07	0.71	0.00	0.63	0.07	0.00	0.16	0.00	0.00	0.33	0.29	0.76	2.67	2.94	23.86	20.42
6.Effective Rainfall (mm/day/A)																0.13	0.00	0.00	0.29	0.26	0.60	1.71	1.76	0.55	
7.Crop water Requirement (mm/day)																2.47	3.29	4.07	4.44	4.87	3.71	0.96	0.04	0.00	
B.Net Field Water Requirement (mm/day)																0.41	1.65	3.39	4.44	4.87	3.71	0.80	0.02	0.00	
(l/sec/ha)	III															0.048	0.190	0.393	0.514	0.564	0.429	0.092	0.002	0.000	
		Jan 1st	2nd	Feb 1st	2nd	Mar 1st	2nd	Apr 1st	2nd	May 1st	2nd	Jun 1st	2nd	Jul 1st	2nd	Aug 1st	2nd	Sep 1st	2nd	Oct 1st	2nd	Nov 1st	2nd	Dec 1st	2nd
Net Field Water Requirement for Paddy		0.000	0.000	0.000	0.000	0.000	0.027	0.025	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Net Field Water Requirement for Palawija		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.048	0.190	0.393	0.514	0.564	0.429	0.092	0.002	0.000	0.000
100 I		0.000	0.000	0.000	0.000	0.000	0.027	0.025	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100 II		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.248	0.980	1.034	0.889	0.720	1.017	0.710	0.499	0.116	0.039	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100 III		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.048	0.190	0.393	0.514	0.564	0.429	0.092	0.002	0.000	0.000
<b>Total NWR</b> (l/s/ha)		0.000	0.000	0.000	0.000	0.000	0.027	0.025	0.248	0.980	1.034	0.889	0.720	1.017	0.710	0.547	0.306	0.431	0.514	0.564	0.429	0.092	0.002	0.000	0.000
<b>DR</b> (E=0.875*0.81)		0.000	0.000	0.000	0.000	0.000	0.039	0.035	0.350	1.382	1.459	1.255	1.015	1.436	1.002	0.772	0.432	0.609	0.725	0.795	0.605	0.130	0.003	0.000	0.000
0.85      0.81		0.6885	0.000	0.000	0.000	0.000	0.040	0.036	0.361	1.423	1.502	1.292	1.045	1.478	1.032	0.794	0.445	0.626	0.746	0.819	0.623	0.134	0.003	0.000	0.000

Net Field Requirement for Water Balance Calculation in 1980 (5/7)

[Kampili Rotation C ]

Calculation of Net Field Water Requirement for Paddy (C) on

1980

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec		
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	
Cropping Pattern																										
Early Cropping																										
Middle Cropping																										
Late Cropping																										
A.Land Preparation Requirement																										
1.Land Preparation Intensity																										
Early Cropping		1/3	1/6							1/6	1/3	1/6														1/6
Middle Cropping		1/6	1/3	1/6						1/6	1/3	1/6														
Late Cropping			1/6	1/3	1/6							1/6	1/3	1/6												
Total		1/2	2/3	1/2	1/6					1/6	1/2	2/3	1/2	1/6												1/6
2.Land Preparation Requirement (mm/day/A)																										
	(mm/day)	11.98	11.98	11.97	11.97	11.86	11.86	12.32	12.32	12.14	12.14	11.48	11.48	12.31	12.31	12.78	12.78	12.89	12.89	13.00	13.00	12.42	12.42	11.70	11.70	
		5.99	7.99	5.98	1.99	0.00	0.00	0.00	2.05	6.07	8.09	5.74	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
3.Water Layer Replacement Intensity																										
				1/3	1/3	2/3	1/3	1/3					1/3	1/3	2/3	1/3	1/3									
4.Water Layer Replacement Requirement																										
	(mm/day/A)				3.33	3.33	3.33	3.33	3.33				3.33	3.33	3.33	3.33	3.33									
	(mm/day)				1.11	1.11	2.22	1.11	1.11				1.11	1.11	2.22	1.11	1.11									
5.Total Requirement for Land Preparation																										
I	(mm/day)	5.99	7.99	5.98	3.10	1.11	2.22	1.11	1.11									0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.95
II									2.05	6.07	8.09	5.74	3.02	1.11	2.22	1.11	1.11									
B. Crop Water Requirement																										
1.Crop Intensity																										
Early Cropping			1/6	1/3	1/3	1/3	1/3	1/3	1/6	1/6	1/3	1/3	1/3	1/3	1/3	1/3	1/6									
Middle Cropping				1/6	1/3	1/3	1/3	1/3	1/6		1/6	1/3	1/3	1/3	1/3	1/3	1/6									
Late Cropping					1/6	1/3	1/3	1/3	1/3	1/3	1/6	1/6	1/3	1/3	1/3	1/3	1/3	1/6								
Total	I		1/6	1/2	5/6	1	1	1	5/6	1/2	1/6	1/6	1/2	5/6	1	1	1	5/6	1/2	1/6						
	II										1/6	1/2	5/6	1	1	1	5/6	1/2	1/6							
2.Crop Coefficient																										
Early Cropping			1.10	1.10	1.05	1.05	0.95	0.00	0.00		1.10	1.10	1.05	1.05	0.95	0.00	0.00									
Middle Cropping				1.10	1.10	1.05	1.05	0.95	0.00	0.00		1.10	1.10	1.05	1.05	0.95	0.00	0.00								
Late Cropping					1.10	1.10	1.05	1.05	0.95	0.00	0.00		1.10	1.10	1.05	1.05	0.95	0.00	0.00							
Weighted average	I		1.10	1.10	1.08	1.07	1.02	0.67	0.38	0.00	0.00		1.10	1.10	1.08	1.07	1.02	0.67	0.38	0.00	0.00					
	II										1.10	1.10	1.08	1.07	1.02	0.67	0.38	0.00	0.00							
3.Potential ETo (mm/day/A)																										
		4.06	4.06	4.04	4.04	3.89	3.89	4.54	4.54	4.29	4.29	3.33	3.33	4.54	4.54	5.20	5.20	5.36	5.36	5.50	5.50	4.69	4.69	3.65	3.65	
4.Consumptive Use, ETc (mm/day/A)																										
		0.00	4.47	4.44	4.36	4.15	3.95	3.03	1.73	0.00	0.00			4.72	3.66	3.59	4.84	4.62	3.46	1.97	0.00					
5.Percolation Loss (mm/day/A)																										
		2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	0.00	0.00	0.00	0.00	0.00	
6.Crop Water Requirement (mm/day/A)																										
		2.00	6.47	6.44	6.36	6.15	5.95	5.03	3.73	2.00	2.00			6.72	5.66	5.59	6.84	6.62	5.46	3.97	2.00	2.00	0.00	0.00	0.00	
7.Crop water Requirement (mm/day)																										
		0.00	1.08	3.22	5.30	6.15	5.95	5.03	3.11	1.00	0.33			1.12	2.83	4.66	6.84	6.62	5.46	3.31	1.00	0.33	0.00	0.00	0.00	
C.Total A(5)+B(7) (mm/day)																										
I		5.99	9.07	9.20	8.41	7.26	8.17	6.14	4.22	1.00	0.33			0.33	1.12	4.66	6.84	6.62	5.46	3.31	1.00	0.33	0.00	0.00	0.00	
II									2.05	6.07	9.21	8.57	7.68	7.95	8.84	6.57	4.42	1.00	0.33							
D.Effective Rainfall (mm/day)																										
		17.02	14.26	13.70	8.94	9.22	5.47	4.00	4.01	0.75	0.50	0.00	0.44	0.05	0.00	0.11	0.00	0.00	0.23	0.20	0.53	1.87	2.06	16.70	14.29	
E.Net field Water Requirement, NFR (mm/day)																										
		-11.03	-5.19	-4.50	-0.54	-1.97	2.71	2.14	0.20	0.25	-0.16										-0.20	-0.53	-1.87	-2.06	-16.70	
	II								-1.96	5.32	8.72	8.57	7.24	7.91	8.84	6.46	4.42	1.00	0.10							
	I	0.00	0.00	0.00	0.00	0.00	2.71	2.14	0.20	0.25	0.00														0.00	
	II								0.00	5.32	8.72	8.57	7.24	7.91	8.84	6.46	4.42	1.00	0.10							
	(l/sec/ha)	0.000	0.000	0.000	0.000	0.000	0.313	0.247	0.023	0.029	0.000														0.000	
	II								0.000	0.616	1.009	0.992	0.838	0.915	1.023	0.748	0.512	0.116	0.012							

Net Field Requirement for Water Balance Calculation in 1980 (6/7)

Calculation of Net Field Water Requirement for Palawija(C)

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec		
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	
Cropping Pattern	Early Cropping																									
	Middle Cropping																									
	Late Cropping																									
	No Cropping																									
A.Crop Water Requirement																										
1.Crop Intensity																										
Early Cropping																										
Middle Cropping																										
Late Cropping																										
Total																										
2.Crop Coefficient																										
Early Cropping																										
Middle Cropping																										
Late Cropping																										
Weighted average																										
3.Potential ETo (mm/day/A)		4.06	4.06	4.04	4.04	3.89	3.89	4.54	4.54	4.29	4.29	3.33	3.33	4.54	4.54	5.20	5.20	5.36	5.36	5.50	5.50	4.69	4.69	3.65	3.65	
4.Consumptive Use, ETc (mm/day/A)																		2.60	3.39	4.07	4.86	5.13	3.67	2.67	1.40	0.55
5.Rainfall (mm/day)		24.32	20.37	19.58	12.77	13.18	7.81	5.72	5.73	1.07	0.71	0.00	0.63	0.07	0.00	0.16	0.00	0.00	0.33	0.29	0.76	2.67	2.94	23.86	20.42	
6.Effective Rainfall (mm/day/A)																		0.00	0.00	0.28	0.26	0.63	1.83	1.87	1.40	0.55
7.Crop water Requirement (mm/day/A)																		2.60	3.39	3.79	4.60	4.50	1.84	0.80	0.00	0.00
B.Net Field Water Requirement (mm/day)																		0.43	1.70	3.16	4.60	4.50	1.84	0.66	0.00	0.00
(l/sec/ha)																		0.050	0.196	0.366	0.532	0.521	0.213	0.077	0.000	0.000
		III																								
Net Field Water Requirement for Paddy		0.000	0.000	0.000	0.000	0.000	0.313	0.247	0.023	0.029	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Net Field Water Requirement for Palawija		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.050	0.196	0.366	0.532	0.521	0.213	0.077	0.000	0.000
100 I		0.000	0.000	0.000	0.000	0.000	0.313	0.247	0.023	0.029	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100 II		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.616	1.009	0.992	0.838	0.915	1.023	0.748	0.512	0.116	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100 III		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.050	0.196	0.366	0.532	0.521	0.213	0.077	0.000	0.000	
<b>Total NWR</b> (l/s/ha)		0.000	0.000	0.000	0.000	0.000	0.313	0.247	0.023	0.645	1.009	0.992	0.838	0.915	1.023	0.748	0.562	0.312	0.377	0.532	0.521	0.213	0.077	0.000	0.000	
<b>DR</b> (E=0.875*0.81)		0.000	0.000	0.000	0.000	0.000	0.442	0.349	0.033	0.909	1.424	1.400	1.183	1.291	1.443	1.056	0.793	0.440	0.532	0.751	0.735	0.300	0.108	0.000	0.000	
0.85 0.81 0.6885		0.000	0.000	0.000	0.000	0.000	0.455	0.359	0.034	0.936	1.465	1.441	1.218	1.329	1.486	1.087	0.816	0.453	0.548	0.773	0.756	0.309	0.112	0.000	0.000	

Net Field Requirement for Water Balance Calculation in 1980 (7/7)

(E=0.875*0.81)	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec		
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	
<b>Golongan A</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.352	0.876	1.417	1.333	1.087	1.170	0.995	0.750	0.403	0.592	0.773	0.768	0.663	0.351	0.015	0.001	0.000	0.000	
<b>Golongan B</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.039	0.035	0.350	1.382	1.459	1.255	1.015	1.436	1.002	0.772	0.432	0.609	0.725	0.795	0.605	0.130	0.003	0.000	0.000
<b>Golongan C</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.442	0.349	0.033	0.909	1.424	1.400	1.183	1.291	1.443	1.056	0.793	0.440	0.532	0.751	0.735	0.300	0.108	0.000	0.000
average	0.000	0.000	0.000	0.000	0.000	0.160	0.245	0.420	1.236	1.405	1.247	1.123	1.240	1.065	0.744	0.605	0.607	0.675	0.736	0.563	0.149	0.038	0.000	0.000	

(E=0.85*0.81)	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
<b>Golongan A</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.362	0.902	1.459	1.373	1.119	1.204	1.024	0.772	0.415	0.609	0.796	0.791	0.682	0.361	0.016	0.001	0.000	0.000
<b>Golongan B</b>	0.000	0.000	0.000	0.000	0.000	0.040	0.036	0.361	1.423	1.502	1.292	1.045	1.478	1.032	0.794	0.445	0.626	0.746	0.819	0.623	0.134	0.003	0.000	0.000
<b>Golongan C</b>	0.000	0.000	0.000	0.000	0.000	0.455	0.359	0.034	0.936	1.465	1.441	1.218	1.329	1.486	1.087	0.816	0.453	0.548	0.773	0.756	0.309	0.112	0.000	0.000
average	0.000	0.000	0.000	0.000	0.000	0.165	0.253	0.432	1.273	1.447	1.284	1.156	1.277	1.096	0.765	0.623	0.625	0.695	0.758	0.580	0.153	0.039	0.000	0.000

Summary Calculation of NFR (l/s/ha)

	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
<b>Golongan A</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.62	1.00	0.95	0.77	0.83	0.70	0.53	0.29	0.42	0.55	0.54	0.47	0.25	0.01	0.00	0.00	0.00
<b>Golongan B</b>	0.00	0.00	0.00	0.00	0.00	0.03	0.02	0.25	0.98	1.03	0.89	0.72	1.02	0.71	0.55	0.31	0.43	0.51	0.56	0.43	0.09	0.00	0.00	0.00
<b>Golongan C</b>	0.00	0.00	0.00	0.00	0.00	0.31	0.25	0.02	0.64	1.01	0.99	0.84	0.92	1.02	0.75	0.56	0.31	0.38	0.53	0.52	0.21	0.08	0.00	0.00

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	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
I : W.Pad	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
A	0.00	0.00	0.00	0.00	0.00	0.03	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B	0.00	0.00	0.00	0.00	0.00	0.00	0.31	0.25	0.02	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C	0.00	0.00	0.00	0.00	0.00	0.11	0.09	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
av	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
II : D.Pad	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.62	1.00	0.95	0.77	0.83	0.70	0.49	0.10	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.98	1.03	0.89	0.72	1.02	0.71	0.50	0.12	0.04	0.00	0.00	0.00	0.00	0.00	0.00
B	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.62	1.01	0.99	0.84	0.92	1.02	0.75	0.51	0.12	0.01	0.00	0.00	0.00	0.00	0.00
C	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.62	1.01	0.99	0.84	0.92	1.02	0.75	0.51	0.12	0.01	0.00	0.00	0.00	0.00
av	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.29	0.87	1.00	0.88	0.80	0.88	0.74	0.45	0.22	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00
III : D.Pal	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.18	0.38	0.55	0.54	0.47	0.25	0.01	0.00	0.00
A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.18	0.38	0.55	0.54	0.47	0.25	0.01	0.00	0.00
B	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.19	0.39	0.51	0.56	0.43	0.09	0.00	0.00	0.00
C	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.20	0.37	0.53	0.52	0.21	0.08	0.00	0.00	0.00
av	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.08	0.21	0.38	0.47	0.52	0.40	0.11	0.03	0.00	0.00
I : W.Pad	0.00	0.00	0.00	0.00	0.00	0.11	0.09	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
II : D.Pad	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.29	0.87	1.00	0.88	0.80	0.88	0.74	0.45	0.22	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00
III : D.Pal	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.08	0.21	0.38	0.47	0.52	0.40	0.11	0.03	0.00	0.00

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I : W.Pad	100	0.000	0.000	0.000	0.000	0.000	0.114	0.091	0.008	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
II : D.Pad	100	0.000	0.000	0.000	0.000	0.000	0.000	0.083	0.290	0.867	0.996	0.884	0.796	0.879	0.740	0.450	0.222	0.051	0.004	0.000	0.000	0.000	0.000	0.000	
III : D.Pal	100	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.015	0.077	0.207	0.379	0.475	0.522	0.399	0.105	0.026	0.000	0.000
total		0.000	0.000	0.000	0.000	0.000	0.114	0.174	0.297	0.876	0.996	0.884	0.796	0.879	0.755	0.527	0.429	0.430	0.479	0.522	0.399	0.105	0.027	0.000	0.000
		0	0	0	0	0.05681	0.23568	0.93613	0.83985	0.81707	0.47806	0.45448	0.4606	0.06603	0										

Year : 1980

N.F.R. (l/s/ha)

	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
	0.000	0.000	0.000	0.000	0.000	0.114	0.174	0.297	0.876	0.996	0.884	0.796	0.879	0.755	0.527	0.429	0.430	0.479	0.522	0.399	0.105	0.027	0.000	0.000

Net Field Requirement for Water Balance Calculation in 1981 (1/7)

[Kampili Rotation A]

1 1 1  
Calculation of Net Field Water Requirement for Paddy (A) on

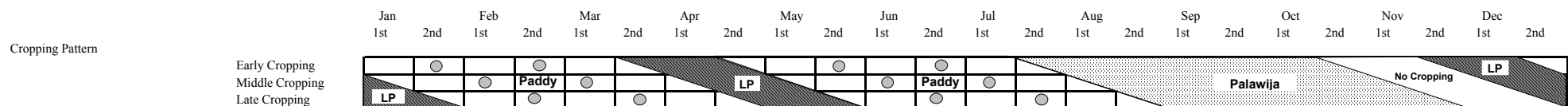
1981

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec			
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd		
<b>Cropping Pattern</b>																											
		<p>Early Cropping Middle Cropping Late Cropping</p>																									
<b>A. Land Preparation Requirement</b>																											
1. Land Preparation Intensity																											
Early Cropping																											
Middle Cropping																											
Late Cropping																											
Total																											
2. Land Preparation Requirement (mm/day/A)																											
3. Water Layer Replacement Intensity																											
4. Water Layer Replacement Requirement (mm/day/A)																											
5. Total Requirement for Land Preparation																											
I (mm/day)																											
II (mm/day)																											
<b>B. Crop Water Requirement</b>																											
1. Crop Intensity																											
Early Cropping																											
Middle Cropping																											
Late Cropping																											
Total																											
I																											
II																											
2. Crop Coefficient																											
Early Cropping																											
Middle Cropping																											
Late Cropping																											
Weighted average																											
I																											
II																											
3. Potential ETo (mm/day/A)																											
4. Consumptive Use, ETc (mm/day/A)																											
II																											
5. Percolation Loss (mm/day/A)																											
6. Crop Water Requirement (mm/day/A)																											
II																											
7. Crop water Requirement (mm/day)																											
II																											
C. Total A(5)+B(7)																											
I (mm/day)																											
II (mm/day)																											
D. Effective Rainfall (mm/day)																											
E. Net field Water Requirement, NFR (mm/day)																											
II																											
I																											
II																											
I (l/sec/ha)																											
II																											



Net Field Requirement for Water Balance Calculation in 1981 (2/7)

Calculation of Net Field Water Requirement for Palawija(A)



A. Crop Water Requirement

	Jan	Jan	Feb	Feb	Mar	Mar	Apr	Apr	May	May	Jun	Jun	Jul	Jul	Aug	Aug	Sep	Sep	Oct	Oct	Nov	Nov	Dec	Dec
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
1.Crop Intensity																								
Early Cropping															1/6	1/3	1/3	1/3	1/3	1/3	1/3	1/6		
Middle Cropping																1/6	1/3	1/3	1/3	1/3	1/3	1/3	1/6	
Late Cropping																	1/6	1/3	1/3	1/3	1/3	1/3	1/3	1/6
Total															1/6	1/2	5/6	1	1	1	1	5/6	1/2	1/6
2.Crop Coefficient																								
Early Cropping															0.50	0.70	0.95	1.00	0.85	0.50	0.15			
Middle Cropping																0.50	0.70	0.95	1.00	0.85	0.50	0.15		
Late Cropping																	0.50	0.70	0.95	1.00	0.85	0.50	0.15	
Weighted average															0.50	0.63	0.76	0.88	0.93	0.78	0.57	0.38	0.15	
3.Potential ETo (mm/day/A)	3.65	3.65	3.67	3.67	4.48	4.48	4.61	4.61	4.15	4.15	4.18	4.18	3.90	3.90	4.56	4.56	4.83	4.83	5.51	5.51	3.95	3.95	3.52	3.52
4.Consumptive Use, ETc (mm/day/A)															1.95	2.89	3.47	4.27	4.51	4.32	3.14	1.51	0.59	
5.Rainfall (mm/day)	19.81	19.84	13.82	8.63	3.14	8.19	4.25	2.23	3.96	1.27	0.14	1.69	7.55	0.90	0.03	0.26	0.85	0.08	0.99	0.69	5.15	21.09	26.20	18.76
6.Effective Rainfall (mm/day/A)															0.60	0.03	0.21	0.67	0.08	0.77	0.51	1.51	0.59	
7.Crop water Requirement (mm/day/A)															1.35	2.86	3.26	3.60	4.43	3.55	2.63	0.00	0.00	
B.Net Field Water Requirement (mm/day)															0.22	1.43	2.71	3.60	4.43	3.55	2.19	0.00	0.00	
(l/sec/ha)															0.026	0.165	0.314	0.417	0.513	0.411	0.254	0.000	0.000	

	Jan	Jan	Feb	Feb	Mar	Mar	Apr	Apr	May	May	Jun	Jun	Jul	Jul	Aug	Aug	Sep	Sep	Oct	Oct	Nov	Nov	Dec	Dec
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
Net Field Water Requirement for Paddy	0.000	0.000	0.000	0.221	0.452	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Net Field Water Requirement for Palawija	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.026	0.165	0.314	0.417	0.513	0.411	0.254	0.000	0.000	0.000
100 I	0.000	0.000	0.000	0.221	0.452	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100 II	0.000	0.000	0.000	0.000	0.000	0.000	0.372	0.910	0.756	0.883	0.864	0.843	0.049	0.391	0.113	0.018	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100 III	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.026	0.165	0.314	0.417	0.513	0.411	0.254	0.000	0.000	0.000
<b>Total NWR</b> (l/s/ha)	0.000	0.000	0.000	0.221	0.452	0.000	0.372	0.910	0.756	0.883	0.864	0.843	0.049	0.417	0.278	0.332	0.417	0.513	0.411	0.254	0.000	0.000	0.000	0.000
<b>DR</b> (E=0.875*0.81)	0.000	0.000	0.000	0.312	0.637	0.000	0.524	1.284	1.067	1.246	1.219	1.189	0.070	0.589	0.393	0.468	0.588	0.724	0.579	0.358	0.000	0.000	0.000	0.000
0.85      0.81      0.6885	0.000	0.000	0.000	0.321	0.656	0.000	0.540	1.322	1.098	1.282	1.255	1.224	0.072	0.606	0.404	0.482	0.605	0.745	0.596	0.369	0.000	0.000	0.000	0.000



Net Field Requirement for Water Balance Calculation in 1981 (4/7)

Calculation of Net Field Water Requirement for Palawija(B)

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
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	Middle Cropping				●	Paddy	●					●		Paddy	●																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
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colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2">1/6</td> <td colspan="2">1/3</td> <td colspan="2">1/3</td> <td colspan="2">1/3</td> <td colspan="2">1/6</td> </tr> <tr> <td colspan="2">  Middle Cropping</td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2">1/6</td> <td colspan="2">1/3</td> <td colspan="2">1/3</td> <td colspan="2">1/6</td> </tr> <tr> <td colspan="2">  Late Cropping</td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2">1/6</td> <td colspan="2">1/3</td> <td colspan="2">1/3</td> <td colspan="2">1/3</td> </tr> <tr> <td colspan="2">  Total</td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2">1/6</td> <td colspan="2">1/2</td> <td colspan="2">5/6</td> <td colspan="2">1</td> <td colspan="2">1/6</td> </tr> <tr> <td colspan="2">2.Crop Coefficient</td> <td colspan="24"></td> </tr> <tr> <td colspan="2">  Early Cropping</td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2">0.50</td> <td colspan="2">0.70</td> <td colspan="2">0.95</td> <td colspan="2">1.00</td> <td colspan="2">0.15</td> </tr> <tr> <td colspan="2">  Middle Cropping</td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2">0.50</td> <td colspan="2">0.70</td> <td colspan="2">1.00</td> <td colspan="2">0.15</td> </tr> <tr> <td colspan="2">  Late Cropping</td> <td colspan="2"></td> <td 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colspan="2">4.Consumptive Use, ETc (mm/day/A)</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>2.28</td><td>2.89</td><td>3.67</td><td>4.27</td><td>5.15</td><td>4.32</td><td>2.25</td><td>1.51</td><td>0.53</td> </tr> <tr> <td colspan="2">5.Rainfall (mm/day)</td> <td>19.81</td><td>19.84</td><td>13.82</td><td>8.63</td><td>3.14</td><td>8.19</td><td>4.25</td><td>2.23</td><td>3.96</td><td>1.27</td><td>0.14</td><td>1.69</td><td>7.55</td><td>0.90</td><td>0.03</td><td>0.26</td><td>0.85</td><td>0.08</td><td>0.99</td><td>0.69</td><td>5.15</td><td>21.09</td><td>26.20</td><td>18.76</td> </tr> <tr> <td colspan="2">6.Effective Rainfall (mm/day/A)</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>0.03</td><td>0.20</td><td>0.65</td><td>0.08</td><td>0.81</td><td>0.55</td><td>2.25</td><td>1.51</td><td>0.53</td> </tr> <tr> <td colspan="2">7.Crop water Requirement (mm/day)</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>2.25</td><td>2.69</td><td>3.03</td><td>4.19</td><td>4.34</td><td>3.77</td><td>0.00</td><td>0.00</td><td>0.00</td> </tr> <tr> <td colspan="2">B.Net Field Water Requirement (mm/day)</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>0.38</td><td>1.34</td><td>2.52</td><td>4.19</td><td>4.34</td><td>3.77</td><td>0.00</td><td>0.00</td><td>0.00</td> </tr> <tr> <td colspan="2">(l/sec/ha)</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>0.043</td><td>0.155</td><td>0.292</td><td>0.485</td><td>0.502</td><td>0.436</td><td>0.000</td><td>0.000</td><td>0.000</td> </tr> <tr> <td colspan="2"></td> <td colspan="24">III</td> </tr> <tr> <td colspan="2"></td> <td colspan="2">Jan</td> <td colspan="2">Feb</td> <td colspan="2">Mar</td> <td colspan="2">Apr</td> <td colspan="2">May</td> <td colspan="2">Jun</td> <td colspan="2">Jul</td> <td colspan="2">Aug</td> <td colspan="2">Sep</td> <td colspan="2">Oct</td> <td colspan="2">Nov</td> <td colspan="2">Dec</td> </tr> <tr> <td colspan="2"></td> <td>1st</td> <td>2nd</td> <td>1st</td> <td>2nd</td> <td>1st</td> <td>2nd</td> <td>1st</td> <td>2nd</td> <td>1st</td> <td>2nd</td> <td>1st</td> <td>2nd</td> <td>1st</td> <td>2nd</td> <td>1st</td> <td>2nd</td> <td>1st</td> <td>2nd</td> <td>1st</td> <td>2nd</td> <td>1st</td> <td>2nd</td> <td>1st</td> <td>2nd</td> </tr> <tr> <td colspan="2">Net Field Water Requirement for Paddy</td> <td>0.000</td><td>0.000</td><td>0.000</td><td>0.114</td><td>0.762</td><td>0.042</td><td>0.146</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td> </tr> <tr> <td colspan="2">Net Field Water Requirement for Palawija</td> <td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.043</td><td>0.155</td><td>0.292</td><td>0.485</td><td>0.502</td><td>0.436</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td> </tr> <tr> <td colspan="2">  100 I</td> 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<td>0.000</td><td>0.000</td><td>0.000</td><td>0.161</td><td>1.075</td><td>0.060</td><td>0.207</td><td>0.755</td><td>1.037</td><td>1.374</td><td>1.379</td><td>1.042</td><td>0.474</td><td>0.830</td><td>0.747</td><td>0.353</td><td>0.412</td><td>0.684</td><td>0.708</td><td>0.615</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td> </tr> <tr> <td colspan="2">  0.85 0.81</td> <td>0.6885</td><td>0.000</td><td>0.000</td><td>0.166</td><td>1.106</td><td>0.062</td><td>0.213</td><td>0.777</td><td>1.068</td><td>1.414</td><td>1.420</td><td>1.073</td><td>0.488</td><td>0.854</td><td>0.769</td><td>0.364</td><td>0.424</td><td>0.704</td><td>0.729</td><td>0.633</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td> </tr> </tbody> </table>																										Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec				1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	A.Crop Water Requirement																										1.Crop Intensity																										Early Cropping																1/6		1/3		1/3		1/3		1/6		Middle Cropping																		1/6		1/3		1/3		1/6		Late Cropping																		1/6		1/3		1/3		1/3		Total																1/6		1/2		5/6		1		1/6		2.Crop Coefficient																										Early Cropping																0.50		0.70		0.95		1.00		0.15		Middle Cropping																		0.50		0.70		1.00		0.15		Late Cropping																		0.50		0.70		0.95		0.15		Weighted average																0.50		0.63		0.76		0.88		0.15		3.Potential ETo (mm/day/A)		3.65	3.65	3.67	3.67	4.48	4.48	4.61	4.61	4.15	4.15	4.18	4.18	3.90	3.90	4.56	4.56	4.83	4.83	5.51	5.51	3.95	3.95	3.52	3.52	4.Consumptive Use, ETc (mm/day/A)																2.28	2.89	3.67	4.27	5.15	4.32	2.25	1.51	0.53	5.Rainfall (mm/day)		19.81	19.84	13.82	8.63	3.14	8.19	4.25	2.23	3.96	1.27	0.14	1.69	7.55	0.90	0.03	0.26	0.85	0.08	0.99	0.69	5.15	21.09	26.20	18.76	6.Effective Rainfall (mm/day/A)																0.03	0.20	0.65	0.08	0.81	0.55	2.25	1.51	0.53	7.Crop water Requirement (mm/day)																2.25	2.69	3.03	4.19	4.34	3.77	0.00	0.00	0.00	B.Net Field Water Requirement (mm/day)																0.38	1.34	2.52	4.19	4.34	3.77	0.00	0.00	0.00	(l/sec/ha)																0.043	0.155	0.292	0.485	0.502	0.436	0.000	0.000	0.000			III																										Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec				1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	Net Field Water Requirement for Paddy		0.000	0.000	0.000	0.114	0.762	0.042	0.146	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Net Field Water Requirement for Palawija		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.043	0.155	0.292	0.485	0.502	0.436	0.000	0.000	0.000	0.000	100 I		0.000	0.000	0.000	0.114	0.762	0.042	0.146	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	100 II		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.535	0.735	0.974	0.978	0.739	0.336	0.588	0.486	0.095	0.000	0.000	0.000	0.000	0.000	0.000	0.000	100 III		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.043	0.155	0.292	0.485	0.502	0.436	0.000	0.000	0.000	0.000	<b>Total NWR</b> (l/s/ha)		0.000	0.000	0.000	0.114	0.762	0.042	0.146	0.535	0.735	0.974	0.978	0.739	0.336	0.588	0.529	0.250	0.292	0.485	0.502	0.436	0.000	0.000	0.000	0.000	<b>DR</b> (E=0.875*0.81)		0.000	0.000	0.000	0.161	1.075	0.060	0.207	0.755	1.037	1.374	1.379	1.042	0.474	0.830	0.747	0.353	0.412	0.684	0.708	0.615	0.000	0.000	0.000	0.000	0.85 0.81		0.6885	0.000	0.000	0.166	1.106	0.062	0.213	0.777	1.068	1.414	1.420	1.073	0.488	0.854	0.769	0.364	0.424	0.704	0.729	0.633	0.000	0.000	0.000	0.000
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3.Potential ETo (mm/day/A)		3.65	3.65	3.67	3.67	4.48	4.48	4.61	4.61	4.15	4.15	4.18	4.18	3.90	3.90	4.56	4.56	4.83	4.83	5.51	5.51	3.95	3.95	3.52	3.52																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
4.Consumptive Use, ETc (mm/day/A)																2.28	2.89	3.67	4.27	5.15	4.32	2.25	1.51	0.53																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
5.Rainfall (mm/day)		19.81	19.84	13.82	8.63	3.14	8.19	4.25	2.23	3.96	1.27	0.14	1.69	7.55	0.90	0.03	0.26	0.85	0.08	0.99	0.69	5.15	21.09	26.20	18.76																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
6.Effective Rainfall (mm/day/A)																0.03	0.20	0.65	0.08	0.81	0.55	2.25	1.51	0.53																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
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B.Net Field Water Requirement (mm/day)																0.38	1.34	2.52	4.19	4.34	3.77	0.00	0.00	0.00																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
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100 I		0.000	0.000	0.000	0.114	0.762	0.042	0.146	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
100 II		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.535	0.735	0.974	0.978	0.739	0.336	0.588	0.486	0.095	0.000	0.000	0.000	0.000	0.000	0.000	0.000																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
100 III		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.043	0.155	0.292	0.485	0.502	0.436	0.000	0.000	0.000	0.000																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
<b>Total NWR</b> (l/s/ha)		0.000	0.000	0.000	0.114	0.762	0.042	0.146	0.535	0.735	0.974	0.978	0.739	0.336	0.588	0.529	0.250	0.292	0.485	0.502	0.436	0.000	0.000	0.000	0.000																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
<b>DR</b> (E=0.875*0.81)		0.000	0.000	0.000	0.161	1.075	0.060	0.207	0.755	1.037	1.374	1.379	1.042	0.474	0.830	0.747	0.353	0.412	0.684	0.708	0.615	0.000	0.000	0.000	0.000																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
0.85 0.81		0.6885	0.000	0.000	0.166	1.106	0.062	0.213	0.777	1.068	1.414	1.420	1.073	0.488	0.854	0.769	0.364	0.424	0.704	0.729	0.633	0.000	0.000	0.000	0.000																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	



Net Field Requirement for Water Balance Calculation in 1981 (6/7)

Calculation of Net Field Water Requirement for Palawija(C)

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec		
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	
Cropping Pattern	Early Cropping																									
	Middle Cropping																									
	Late Cropping																									
	No Cropping																									
A.Crop Water Requirement																										
1.Crop Intensity																										
Early Cropping																										
Middle Cropping																										
Late Cropping																										
Total																										
2.Crop Coefficient																										
Early Cropping																										
Middle Cropping																										
Late Cropping																										
Weighted average																										
3.Potential ETo (mm/day/A)		3.65	3.65	3.67	3.67	4.48	4.48	4.61	4.61	4.15	4.15	4.18	4.18	3.90	3.90	4.56	4.56	4.83	4.83	5.51	5.51	3.95	3.95	3.52	3.52	
4.Consumptive Use, ETc (mm/day/A)																		2.28	3.06	3.67	4.87	5.15	3.09	2.25	1.35	0.53
5.Rainfall (mm/day)		19.81	19.84	13.82	8.63	3.14	8.19	4.25	2.23	3.96	1.27	0.14	1.69	7.55	0.90	0.03	0.26	0.85	0.08	0.99	0.69	5.15	21.09	26.20	18.76	
6.Effective Rainfall (mm/day/A)																		0.19	0.62	0.08	0.80	0.58	3.09	2.25	1.35	0.53
7.Crop water Requirement (mm/day/A)																		2.09	2.44	3.60	4.07	4.57	0.00	0.00	0.00	0.00
B.Net Field Water Requirement (mm/day)																		0.35	1.22	3.00	4.07	4.57	0.00	0.00	0.00	0.00
(l/sec/ha)																		0.040	0.141	0.347	0.471	0.529	0.000	0.000	0.000	0.000
		III																								
Net Field Water Requirement for Paddy		0.000	0.000	0.000	0.231	0.659	0.352	0.372	0.310	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Net Field Water Requirement for Palawija		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.040	0.141	0.347	0.471	0.529	0.000	0.000	0.000	0.000	0.000
100 I		0.000	0.000	0.000	0.231	0.659	0.352	0.372	0.310	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100 II		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.058	0.376	0.953	1.068	0.852	0.230	0.874	0.709	0.468	0.047	0.032	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100 III		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.040	0.141	0.347	0.471	0.529	0.000	0.000	0.000	0.000	0.000	0.000
<b>Total NWR</b> (l/s/ha)		0.000	0.000	0.000	0.231	0.659	0.352	0.372	0.368	0.376	0.953	1.068	0.852	0.230	0.874	0.709	0.508	0.188	0.379	0.471	0.529	0.000	0.000	0.000	0.000	0.000
<b>DR</b> (E=0.875*0.81)		0.000	0.000	0.000	0.325	0.930	0.497	0.525	0.519	0.531	1.344	1.507	1.202	0.324	1.234	1.001	0.717	0.265	0.534	0.665	0.746	0.000	0.000	0.000	0.000	0.000
0.85 0.81 0.6885		0.000	0.000	0.000	0.335	0.958	0.512	0.540	0.534	0.546	1.384	1.551	1.238	0.334	1.270	1.030	0.738	0.273	0.550	0.685	0.768	0.000	0.000	0.000	0.000	0.000

Net Field Requirement for Water Balance Calculation in 1981 (7/7)

(E=0.875*0.81)	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
<b>Golongan A</b>	0.000	0.000	0.000	0.312	0.637	0.000	0.524	1.284	1.067	1.246	1.219	1.189	0.070	0.589	0.393	0.468	0.588	0.724	0.579	0.358	0.000	0.000	0.000	0.000
<b>Golongan B</b>	0.000	0.000	0.000	0.161	1.075	0.060	0.207	0.755	1.037	1.374	1.379	1.042	0.474	0.830	0.747	0.353	0.412	0.684	0.708	0.615	0.000	0.000	0.000	0.000
<b>Golongan C</b>	0.000	0.000	0.000	0.325	0.930	0.497	0.525	0.519	0.531	1.344	1.507	1.202	0.324	1.234	1.001	0.717	0.265	0.534	0.665	0.746	0.000	0.000	0.000	0.000
average	0.000	0.000	0.000	0.266	0.881	0.186	0.418	0.852	0.878	1.321	1.368	1.145	0.289	0.884	0.714	0.513	0.422	0.647	0.651	0.573	0.000	0.000	0.000	0.000

(E=0.85*0.81)	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
<b>Golongan A</b>	0.000	0.000	0.000	0.321	0.656	0.000	0.540	1.322	1.098	1.282	1.255	1.224	0.072	0.606	0.404	0.482	0.605	0.745	0.596	0.369	0.000	0.000	0.000	0.000
<b>Golongan B</b>	0.000	0.000	0.000	0.166	1.106	0.062	0.213	0.777	1.068	1.414	1.420	1.073	0.488	0.854	0.769	0.364	0.424	0.704	0.729	0.633	0.000	0.000	0.000	0.000
<b>Golongan C</b>	0.000	0.000	0.000	0.335	0.958	0.512	0.540	0.534	0.546	1.384	1.551	1.238	0.334	1.270	1.030	0.738	0.273	0.550	0.685	0.768	0.000	0.000	0.000	0.000
average	0.000	0.000	0.000	0.274	0.907	0.191	0.431	0.878	0.904	1.360	1.409	1.178	0.298	0.910	0.734	0.528	0.434	0.666	0.670	0.590	0.000	0.000	0.000	0.000

Summary Calculation of NFR (l/s/ha)

	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
<b>Golongan A</b>	0.00	0.00	0.00	0.22	0.45	0.00	0.37	0.91	0.76	0.88	0.86	0.84	0.05	0.42	0.28	0.33	0.42	0.51	0.41	0.25	0.00	0.00	0.00	0.00
<b>Golongan B</b>	0.00	0.00	0.00	0.11	0.76	0.04	0.15	0.53	0.74	0.97	0.98	0.74	0.34	0.59	0.53	0.25	0.29	0.48	0.50	0.44	0.00	0.00	0.00	0.00
<b>Golongan C</b>	0.00	0.00	0.00	0.23	0.66	0.35	0.37	0.37	0.38	0.95	1.07	0.85	0.23	0.87	0.71	0.51	0.19	0.38	0.47	0.53	0.00	0.00	0.00	0.00

1981

	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
I : W.Pad A	0.00	0.00	0.00	0.22	0.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B	0.00	0.00	0.00	0.11	0.76	0.04	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C	0.00	0.00	0.00	0.23	0.66	0.35	0.37	0.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
av	0.00	0.00	0.00	0.19	0.62	0.13	0.17	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
II : D.Pad A	0.00	0.00	0.00	0.00	0.00	0.00	0.37	0.91	0.76	0.88	0.86	0.84	0.05	0.39	0.11	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.53	0.74	0.97	0.98	0.74	0.34	0.59	0.49	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.38	0.95	1.07	0.85	0.23	0.87	0.71	0.47	0.05	0.03	0.00	0.00	0.00	0.00	0.00	0.00
av	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.50	0.62	0.94	0.97	0.81	0.20	0.62	0.44	0.19	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00
III : D.Pal A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.17	0.31	0.42	0.51	0.41	0.25	0.00	0.00	0.00	0.00
B	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.16	0.29	0.48	0.50	0.44	0.00	0.00	0.00	0.00
C	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.14	0.35	0.47	0.53	0.00	0.00	0.00	0.00	
av	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.07	0.17	0.28	0.45	0.46	0.41	0.00	0.00	0.00	0.00
I : W.Pad	0.00	0.00	0.00	0.19	0.62	0.13	0.17	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
II : D.Pad	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.50	0.62	0.94	0.97	0.81	0.20	0.62	0.44	0.19	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00
III : D.Pal	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.07	0.17	0.28	0.45	0.46	0.41	0.00	0.00	0.00	0.00

1981

I : W.Pad	<b>100</b>	0.000	0.000	0.000	0.189	0.624	0.132	0.173	0.103	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
II : D.Pad	<b>100</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.124	0.501	0.623	0.937	0.970	0.811	0.205	0.618	0.436	0.194	0.016	0.011	0.000	0.000	0.000	0.000	0.000
III : D.Pal	<b>100</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.009	0.070	0.170	0.283	0.448	0.461	0.406	0.000	0.000	0.000	0.000
total		0.000	0.000	0.000	0.189	0.624	0.132	0.297	0.604	0.623	0.937	0.970	0.811	0.205	0.627	0.506	0.364	0.299	0.459	0.461	0.406	0.000	0.000	0.000
		0		0.09432		0.37795		0.45038		0.77953		0.89054		0.41577		0.43461		0.37889		0.43372		0		0

Year : 1981

N.F.R. (l/s/ha)	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
	0.000	0.000	0.000	0.189	0.624	0.132	0.297	0.604	0.623	0.937	0.970	0.811	0.205	0.627	0.506	0.364	0.299	0.459	0.461	0.406	0.000	0.000	0.000	0.000

Net Field Requirement for Water Balance Calculation in 1982 (1/7)

[Kampili Rotation A]

1 1 1  
Calculation of Net Field Water Requirement for Paddy (A) on

1982

Cropping Pattern	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
Early Cropping		○																						
Middle Cropping				○									○											
Late Cropping					○									○										
	LP			Paddy				LP				Paddy								Palawija			No Cropping	LP

A. Land Preparation Requirement

1. Land Preparation Intensity																									
Early Cropping							1/6	1/3	1/6													1/6	1/3	1/6	
Middle Cropping		1/6							1/6	1/3	1/6												1/6	1/3	
Late Cropping		1/3	1/6							1/6	1/3	1/6												1/6	
Total		1/2	1/6				1/6	1/2	2/3	1/2	1/6											1/6	1/2	2/3	
2. Land Preparation Requirement	(mm/day/A)	11.85	11.85	11.80	11.80	11.73	11.73	12.16	12.16	12.19	12.19	11.82	11.82	12.26	12.26	12.54	12.54	12.91	12.91	13.04	13.04	13.06	13.06	12.50	12.50
	(mm/day)	5.93	1.98	0.00	0.00	0.00	1.95	6.08	8.10	6.10	2.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.18	6.25	8.34
3. Water Layer Replacement Intensity			1/3	1/3	2/3	1/3	1/3				1/3	1/3	2/3	1/3	1/3										
4. Water Layer Replacement Requirement	(mm/day/A)		3.33	3.33	3.33	3.33	3.33				3.33	3.33	3.33	3.33	3.33										
	(mm/day)		1.11	1.11	2.22	1.11	1.11				1.11	1.11	2.22	1.11	1.11										
5. Total Requirement for Land Preparation																									
I	(mm/day)	5.93	3.09	1.11	2.22	1.11	1.11											0.00	0.00	0.00	0.00	0.00	2.18	6.25	8.34
II	(mm/day)						1.95	6.08	8.10	6.10	3.14	1.11	2.22	1.11	1.11	0.00	0.00								

B. Crop Water Requirement

1. Crop Intensity																									
Early Cropping		1/3	1/3	1/3	1/3	1/3	1/6	1/3	1/6	1/3	1/3	1/3	1/3	1/3	1/6									1/6	
Middle Cropping		1/6	1/3	1/3	1/3	1/3	1/3	1/6	1/6	1/3	1/3	1/3	1/3	1/3	1/3	1/3	1/6								
Late Cropping			1/6	1/3	1/3	1/3	1/3	1/3	1/6	1/6	1/3	1/3	1/3	1/3	1/3	1/3	1/6								
Total		1/2	5/6	1	1	1	5/6	1/2	1/6	1/2	5/6	1	1	1	5/6	1/2	1/6							1/6	
I																									
II																									
2. Crop Coefficient																									
Early Cropping		1.10	1.05	1.05	0.95	0.00	0.00		1.10	1.10	1.05	1.05	0.95	0.00	0.00									1.10	
Middle Cropping		1.10	1.10	1.05	1.05	0.95	0.00	0.00		1.10	1.10	1.05	1.05	0.95	0.00	0.00									
Late Cropping			1.10	1.10	1.05	1.05	0.95	0.00	0.00		1.10	1.10	1.05	1.05	0.95	0.00	0.00								
Weighted average		1.10	1.08	1.07	1.02	0.67	0.38	0.00		1.10	1.10	1.08	1.07	1.02	0.67	0.38	0.00	0.00						1.10	
3. Potential ET <sub>o</sub>	(mm/day/A)	3.87	3.87	3.79	3.79	3.69	3.69	4.32	4.32	4.37	4.37	3.83	3.83	4.46	4.46	4.86	4.86	5.38	5.38	5.56	5.56	5.58	5.58	4.81	4.81
4. Consumptive Use, ET <sub>c</sub>	(mm/day/A)	4.26	4.18	4.05	3.86	2.46	1.40	0.00	0.00		4.75	4.80	4.72	4.09	3.89	2.98	1.70	0.00	0.00						5.29
5. Percolation Loss	(mm/day/A)	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
6. Crop Water Requirement	(mm/day/A)	6.26	6.18	6.05	5.86	4.46	3.40	2.00	2.00		6.75	6.80	6.72	6.09	5.89	4.98	3.70	2.00	2.00						7.29
7. Crop water Requirement	(mm/day)	3.13	5.15	6.05	5.86	4.46	2.84	1.00	0.33		1.12	3.40	5.60	6.09	5.89	4.98	3.08	1.00	0.33						1.22
C. Total A(5)+B(7)																									
I	(mm/day)	9.06	8.24	7.16	8.08	5.57	3.95	1.00	0.33									0.00	0.00	0.00	0.00	0.00	2.18	6.25	9.55
II	(mm/day)						1.95	6.08	9.23	9.50	8.74	7.20	8.11	6.09	4.19	1.00	0.33								
D. Effective Rainfall	(mm/day)	13.38	14.60	19.23	2.49	9.57	6.40	0.57	2.43	1.57	0.03	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.16	0.66	8.62	
E. Net field Water Requirement, NFR	(mm/day)	-4.33	-6.36	-12.07	5.59	-3.99	-2.46	0.43	-2.09									0.00	0.00	0.00	0.00	-0.04	2.01	5.59	0.93
I							-4.45	5.51	6.80	7.93	8.71	6.65	8.11	6.09	4.19	1.00	0.33								
II							0.00	0.43	0.00																
I	(l/sec/ha)	0.000	0.000	0.000	0.647	0.000	0.000	0.050	0.000														0.233	0.647	0.108
II							0.000	0.638	0.787	0.918	1.008	0.769	0.939	0.704	0.485	0.116	0.039								

Net Field Requirement for Water Balance Calculation in 1982 (2/7)

Calculation of Net Field Water Requirement for Palawija(A)

Cropping Pattern	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
Early Cropping		●		●						●		●												
Middle Cropping			●	Paddy	●						●	Paddy	●											
Late Cropping	LP			●		●						●		●										LP

A. Crop Water Requirement

1. Crop Intensity																										
Early Cropping															1/6	1/3	1/3	1/3	1/3	1/3	1/3	1/6				
Middle Cropping																1/6	1/3	1/3	1/3	1/3	1/3	1/3	1/6			
Late Cropping																	1/6	1/3	1/3	1/3	1/3	1/3	1/3	1/6		
Total															1/6	1/2	5/6	1	1	1	1	5/6	1/2	1/6		
2. Crop Coefficient																										
Early Cropping															0.50	0.70	0.95	1.00	0.85	0.50	0.15					
Middle Cropping																0.50	0.70	0.95	1.00	0.85	0.50	0.15				
Late Cropping																	0.50	0.70	0.95	1.00	0.85	0.50	0.15			
Weighted average															0.50	0.63	0.76	0.88	0.93	0.78	0.57	0.38	0.15			
3. Potential ETo (mm/day/A)		3.87	3.87	3.79	3.79	3.69	3.69	4.32	4.32	4.37	4.37	3.83	3.83	4.46	4.46	4.86	4.86	5.38	5.38	5.56	5.56	5.58	5.58	4.81	4.81	
4. Consumptive Use, ETc (mm/day/A)															2.23	3.08	3.69	4.75	5.02	4.36	3.17	2.14	0.84			
5. Rainfall (mm/day)		19.12	20.86	27.46	3.55	13.66	9.15	0.81	3.47	2.24	0.05	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.23	0.94	12.31
6. Effective Rainfall (mm/day/A)															0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.16			
7. Crop water Requirement (mm/day/A)															2.23	3.08	3.69	4.75	5.02	4.36	3.17	2.09	0.68			
B. Net Field Water Requirement (mm/day)															0.37	1.54	3.08	4.75	5.02	4.36	2.64	1.05	0.11			
(l/sec/ha)															0.043	0.178	0.356	0.550	0.581	0.504	0.306	0.121	0.013			

	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec		
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	
Net Field Water Requirement for Paddy	0.000	0.000	0.000	0.647	0.000	0.000	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.233	0.647	0.108	
Net Field Water Requirement for Palawija	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.043	0.178	0.356	0.550	0.581	0.504	0.306	0.121	0.013	0.000	0.000
100 I	0.000	0.000	0.000	0.647	0.000	0.000	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.233	0.647	0.108	
100 II	0.000	0.000	0.000	0.000	0.000	0.000	0.638	0.787	0.918	1.008	0.769	0.939	0.704	0.485	0.116	0.039	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100 III	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.043	0.178	0.356	0.550	0.581	0.504	0.306	0.121	0.013	0.000	0.000	
<b>Total NWR</b> (l/s/ha)	0.000	0.000	0.000	0.647	0.000	0.000	0.687	0.787	0.918	1.008	0.769	0.939	0.704	0.528	0.294	0.395	0.550	0.581	0.504	0.306	0.121	0.246	0.647	0.108	
<b>DR</b> (E=0.875*0.81)	0.000	0.000	0.000	0.913	0.000	0.000	0.970	1.111	1.295	1.422	1.085	1.325	0.994	0.745	0.415	0.557	0.775	0.819	0.712	0.431	0.171	0.347	0.913	0.152	
0.85      0.81      0.6885	0.000	0.000	0.000	0.940	0.000	0.000	0.998	1.143	1.333	1.464	1.117	1.364	1.023	0.767	0.427	0.573	0.798	0.843	0.732	0.444	0.176	0.357	0.940	0.157	





Net Field Requirement for Water Balance Calculation in 1982 (4/7)

Calculation of Net Field Water Requirement for Palawija(B)

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec		
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	
Cropping Pattern	Early Cropping			●		●						●		●												
	Middle Cropping				●		●						●		●											
	Late Cropping	LP								LP															LP	
		Jan	2nd	Feb	2nd	Mar	2nd	Apr	2nd	May	2nd	Jun	2nd	Jul	2nd	Aug	2nd	Sep	2nd	Oct	2nd	Nov	2nd	Dec	2nd	
A.Crop Water Requirement																										
1.Crop Intensity																										
Early Cropping																										
Middle Cropping																										
Late Cropping																										
Total																										
2.Crop Coefficient																										
Early Cropping																										
Middle Cropping																										
Late Cropping																										
Weighted average																										
3.Potential ETo (mm/day/A)		3.87	3.87	3.79	3.79	3.69	3.69	4.32	4.32	4.37	4.37	3.83	3.83	4.46	4.46	4.86	4.86	5.38	5.38	5.56	5.56	5.58	5.58	4.81	4.81	
4.Consumptive Use, ETc (mm/day/A)																										
5.Rainfall (mm/day)		19.12	20.86	27.46	3.55	13.66	9.15	0.81	3.47	2.24	0.05	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.23	0.94	12.31
6.Effective Rainfall (mm/day/A)																										
7.Crop water Requirement (mm/day)																										
B.Net Field Water Requirement (mm/day)																										
(l/sec/ha)																										
III																										
		Jan	2nd	Feb	2nd	Mar	2nd	Apr	2nd	May	2nd	Jun	2nd	Jul	2nd	Aug	2nd	Sep	2nd	Oct	2nd	Nov	2nd	Dec	2nd	
Net Field Water Requirement for Paddy		0.000	0.000	0.000	0.541	0.000	0.000	0.414	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.165	0.000	
Net Field Water Requirement for Palawija		0.000	0.000	0.000	0.000	0.000	0.000	0.168	0.423	0.890	1.096	0.885	0.833	1.014	0.704	0.499	0.116	0.039	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
100 I		0.000	0.000	0.000	0.541	0.000	0.000	0.414	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.165	0.000	
100 II		0.000	0.000	0.000	0.000	0.000	0.000	0.168	0.423	0.890	1.096	0.885	0.833	1.014	0.704	0.499	0.116	0.039	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
100 III		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.047	0.178	0.394	0.550	0.601	0.504	0.302	0.114	0.003	0.000	
<b>Total NWR</b> (l/s/ha)		0.000	0.000	0.000	0.541	0.000	0.000	0.582	0.423	0.890	1.096	0.885	0.833	1.014	0.704	0.546	0.294	0.433	0.550	0.601	0.504	0.302	0.114	0.168	0.000	
<b>DR</b> (E=0.875*0.81)		0.000	0.000	0.000	0.763	0.000	0.000	0.821	0.596	1.256	1.546	1.248	1.175	1.430	0.994	0.771	0.415	0.610	0.775	0.848	0.712	0.426	0.160	0.237	0.000	
0.85 0.81 0.6885		0.000	0.000	0.000	0.785	0.000	0.000	0.845	0.614	1.293	1.591	1.285	1.210	1.472	1.023	0.794	0.427	0.628	0.798	0.873	0.732	0.439	0.165	0.244	0.000	

Net Field Requirement for Water Balance Calculation in 1982 (5/7)

[Kampili Rotation C ]

Calculation of Net Field Water Requirement for Paddy (C) on

1982

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec			
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd		
Cropping Pattern																											
A.Land Preparation Requirement																											
1.Land Preparation Intensity																											
Early Cropping		1/3	1/6							1/6	1/3	1/6														1/6	
Middle Cropping		1/6	1/3	1/6						1/6	1/3	1/6															
Late Cropping			1/6	1/3	1/6								1/6														
Total		1/2	2/3	1/2	1/6					1/6	1/2	2/3	1/2	1/6												1/6	
2.Land Preparation Requirement (mm/day/A)	(mm/day)	11.85	11.85	11.80	11.80	11.73	11.73	12.16	12.16	12.19	12.19	11.82	11.82	12.26	12.26	12.54	12.54	12.91	12.91	13.04	13.04	13.06	13.06	12.50	12.50		
		5.93	7.90	5.90	1.97	0.00	0.00	0.00	2.03	6.10	8.13	5.91	1.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.08		
3.Water Layer Replacement Intensity					1/3	1/3	2/3	1/3	1/3				1/3	1/3	2/3	1/3	1/3										
4.Water Layer Replacement Requirement	(mm/day/A)				3.33	3.33	3.33	3.33	3.33				3.33	3.33	3.33	3.33	3.33										
	(mm/day)				1.11	1.11	2.22	1.11	1.11				1.11	1.11	2.22	1.11	1.11										
5.Total Requirement for Land Preparation																											
I	(mm/day)	5.93	7.90	5.90	3.08	1.11	2.22	1.11	1.11				3.08	1.11	2.22	1.11	1.11			0.00	0.00	0.00	0.00	0.00	0.00	2.08	
II									2.03	6.10	8.13	5.91	3.08	1.11	2.22	1.11	1.11										
B. Crop Water Requirement																											
1.Crop Intensity		Jan	Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec				
Early Cropping			1/6	1/3	1/3	1/3	1/3	1/3	1/6		1/6	1/3	1/3	1/3	1/3	1/3	1/6										
Middle Cropping				1/6	1/3	1/3	1/3	1/3	1/6		1/6	1/3	1/3	1/3	1/3	1/3	1/6										
Late Cropping					1/6	1/3	1/3	1/3	1/6		1/6	1/3	1/3	1/3	1/3	1/3	1/6			1/6							
Total	I		1/6	1/2	5/6	1	1	1	5/6	1/2	1/6	1/2	5/6	1	1	1	5/6	1/2	1/6								
	II										1/6	1/2	5/6	1	1	1	5/6	1/2	1/6								
2.Crop Coefficient																											
Early Cropping			1.10	1.10	1.05	1.05	0.95	0.00	0.00		1.10	1.10	1.05	1.05	0.95	0.00	0.00										
Middle Cropping				1.10	1.10	1.05	1.05	0.95	0.00	0.00		1.10	1.10	1.05	1.05	0.95	0.00	0.00									
Late Cropping					1.10	1.10	1.05	1.05	0.95	0.00	0.00		1.10	1.10	1.05	1.05	0.95	0.00	0.00								
Weighted average	I		1.10	1.10	1.08	1.07	1.02	0.67	0.38	0.00	0.00		1.10	1.10	1.08	1.07	1.02	0.67	0.38	0.00	0.00						
	II										1.10	1.10	1.08	1.07	1.02	0.67	0.38	0.00	0.00								
3.Potential ETo	(mm/day/A)	3.87	3.87	3.79	3.79	3.69	3.69	4.32	4.32	4.37	4.37	3.83	3.83	4.46	4.46	4.86	4.86	5.38	5.38	5.56	5.56	5.58	5.58	4.81	4.81		
4.Consumptive Use, ETc	(mm/day/A)	0.00	4.26	4.17	4.10	3.94	3.75	2.88	1.64	0.00	0.00			4.80	4.21	4.14	4.76	4.54	3.24	1.85	0.00						
	II										4.80	4.21	4.14	4.76	4.54	3.24	1.85	0.00									
5.Percolation Loss	(mm/day/A)	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00								
6.Crop Water Requirement	(mm/day/A)	2.00	6.26	6.17	6.10	5.94	5.75	4.88	3.64	2.00	2.00			6.80	6.21	6.14	6.76	6.54	5.24	3.85	2.00	2.00		0.00	0.00	0.00	
	II										6.80	6.21	6.14	6.76	6.54	5.24	3.85	2.00	2.00								
7.Crop water Requirement	(mm/day)	0.00	1.04	3.09	5.08	5.94	5.75	4.88	3.03	1.00	0.33			1.13	3.11	5.11	6.76	6.54	5.24	3.21	1.00	0.33		0.00	0.00	0.00	
	II										1.13	3.11	5.11	6.76	6.54	5.24	3.21	1.00	0.33								
C.Total A(5)+B(7)	I	(mm/day)	5.93	8.95	8.99	8.16	7.05	7.97	5.99	4.14	1.00	0.33			0.33	3.11	5.11	6.76	6.54	5.24	3.21	1.00	0.33		0.00	0.00	
	II									2.03	6.10	8.13	5.91	3.08	1.11	2.22	1.11	1.11								2.08	
D.Effective Rainfall	(mm/day)	13.38	14.60	19.23	2.49	9.57	6.40	0.57	2.43	1.57	0.03	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.62	
E.Net field Water Requirement, NFR (mm/day)		-7.46	-5.65	-10.24	5.67	-2.52	1.57	5.42	1.72	-0.57	0.30			-0.40	4.53	9.23	8.47	8.19	7.87	8.76	6.35	4.32	1.00	0.33		0.00	
	I				5.67	0.00	1.57	5.42	1.72	0.00	0.30			0.00	0.30	0.30	8.47	8.19	7.87	8.76	6.35	4.32	1.00	0.33		0.00	
	II										0.00	4.53	9.23	8.47	8.19	7.87	8.76	6.35	4.32	1.00	0.33						
(l/sec/ha)	I	0.000	0.000	0.000	0.657	0.000	0.182	0.627	0.199	0.000	0.035			0.000	0.524	1.068	0.980	0.948	0.911	1.014	0.735	0.499	0.116	0.039		0.000	
	II								0.000	0.524	1.068	0.980	0.948	0.911	1.014	0.735	0.499	0.116	0.039								

Net Field Requirement for Water Balance Calculation in 1982 (6/7)

Calculation of Net Field Water Requirement for Palawija(C)

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec		
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	
Cropping Pattern	Early Cropping																									
	Middle Cropping																									
	Late Cropping																									
	No Cropping																									
A.Crop Water Requirement																										
1.Crop Intensity																										
Early Cropping																										
Middle Cropping																										
Late Cropping																										
Total																										
2.Crop Coefficient																										
Early Cropping																										
Middle Cropping																										
Late Cropping																										
Weighted average																										
3.Potential ETo (mm/day/A)		3.87	3.87	3.79	3.79	3.69	3.69	4.32	4.32	4.37	4.37	3.83	3.83	4.46	4.46	4.86	4.86	5.38	5.38	5.56	5.56	5.58	5.58	4.81	4.81	
4.Consumptive Use, ETc (mm/day/A)																		2.43	3.40	4.09	4.91	5.19	4.37	3.18	1.84	0.72
5.Rainfall (mm/day)		19.12	20.86	27.46	3.55	13.66	9.15	0.81	3.47	2.24	0.05	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.23	0.94	12.31	
6.Effective Rainfall (mm/day/A)																		0.00	0.00	0.00	0.00	0.00	0.06	0.19	0.62	0.72
7.Crop water Requirement (mm/day/A)																		2.43	3.40	4.09	4.91	5.19	4.32	2.99	1.22	0.00
B.Net Field Water Requirement (mm/day)																										
(I/sec/ha)																										
III																										
		0.047	0.197	0.394	0.569	0.601	0.500	0.289	0.071	0.000																
Net Field Water Requirement for Paddy		0.000	0.000	0.000	0.657	0.000	0.182	0.627	0.199	0.000	0.035	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Net Field Water Requirement for Palawija		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.524	1.068	0.980	0.948	0.911	1.014	0.735	0.499	0.116	0.039	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100 I		0.000	0.000	0.000	0.657	0.000	0.182	0.627	0.199	0.000	0.035	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100 II		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.524	1.068	0.980	0.948	0.911	1.014	0.735	0.499	0.116	0.039	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100 III		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.047	0.197	0.394	0.569	0.601	0.500	0.289	0.071	0.000	
<b>Total NWR</b> (l/s/ha)		0.000	0.000	0.000	0.657	0.000	0.182	0.627	0.199	0.524	1.103	0.980	0.948	0.911	1.014	0.735	0.546	0.313	0.433	0.569	0.601	0.500	0.289	0.071	0.000	
<b>DR</b> (E=0.875*0.81)		0.000	0.000	0.000	0.926	0.000	0.256	0.885	0.280	0.739	1.556	1.383	1.338	1.285	1.430	1.037	0.771	0.441	0.610	0.802	0.848	0.705	0.407	0.100	0.000	
0.85 0.81 0.6885		0.000	0.000	0.000	0.954	0.000	0.264	0.911	0.288	0.761	1.602	1.424	1.378	1.323	1.472	1.067	0.794	0.454	0.628	0.826	0.873	0.726	0.419	0.103	0.000	

Net Field Requirement for Water Balance Calculation in 1982 (7/7)

(E=0.875*0.81)	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
<b>Golongan A</b>	0.000	0.000	0.000	0.913	0.000	0.000	0.970	1.111	1.295	1.422	1.085	1.325	0.994	0.745	0.415	0.557	0.775	0.819	0.712	0.431	0.171	0.347	0.913	0.152
<b>Golongan B</b>	0.000	0.000	0.000	0.763	0.000	0.000	0.821	0.596	1.256	1.546	1.248	1.175	1.430	0.994	0.771	0.415	0.610	0.775	0.848	0.712	0.426	0.160	0.237	0.000
<b>Golongan C</b>	0.000	0.000	0.000	0.926	0.000	0.256	0.885	0.280	0.739	1.556	1.383	1.338	1.285	1.430	1.037	0.771	0.441	0.610	0.802	0.848	0.705	0.407	0.100	0.000
average	0.000	0.000	0.000	0.868	0.000	0.085	0.892	0.662	1.097	1.508	1.239	1.279	1.236	1.056	0.741	0.581	0.609	0.735	0.787	0.664	0.434	0.305	0.416	0.051

(E=0.85*0.81)	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
<b>Golongan A</b>	0.000	0.000	0.000	0.940	0.000	0.000	0.998	1.143	1.333	1.464	1.117	1.364	1.023	0.767	0.427	0.573	0.798	0.843	0.732	0.444	0.176	0.357	0.940	0.157
<b>Golongan B</b>	0.000	0.000	0.000	0.785	0.000	0.000	0.845	0.614	1.293	1.591	1.285	1.210	1.472	1.023	0.794	0.427	0.628	0.798	0.873	0.732	0.439	0.165	0.244	0.000
<b>Golongan C</b>	0.000	0.000	0.000	0.954	0.000	0.264	0.911	0.288	0.761	1.602	1.424	1.378	1.323	1.472	1.067	0.794	0.454	0.628	0.826	0.873	0.726	0.419	0.103	0.000
average	0.000	0.000	0.000	0.893	0.000	0.088	0.918	0.682	1.129	1.552	1.275	1.317	1.273	1.087	0.763	0.598	0.627	0.757	0.810	0.683	0.447	0.314	0.429	0.052

Summary Calculation of NFR (l/s/ha)

	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
<b>Golongan A</b>	0.00	0.00	0.00	0.65	0.00	0.00	0.69	0.79	0.92	1.01	0.77	0.94	0.70	0.53	0.29	0.39	0.55	0.58	0.50	0.31	0.12	0.25	0.65	0.11
<b>Golongan B</b>	0.00	0.00	0.00	0.54	0.00	0.00	0.58	0.42	0.89	1.10	0.88	0.83	1.01	0.70	0.55	0.29	0.43	0.55	0.60	0.50	0.30	0.11	0.17	0.00
<b>Golongan C</b>	0.00	0.00	0.00	0.66	0.00	0.18	0.63	0.20	0.52	1.10	0.98	0.95	0.91	1.01	0.73	0.55	0.31	0.43	0.57	0.60	0.50	0.29	0.07	0.00

1982

	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
I : W.Pad	0.00	0.00	0.00	0.65	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.65	0.11
B	0.00	0.00	0.00	0.54	0.00	0.00	0.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00
C	0.00	0.00	0.00	0.66	0.00	0.18	0.63	0.20	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
av	0.00	0.00	0.00	0.61	0.00	0.06	0.36	0.07	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.27	0.04
II : D.Pad	0.00	0.00	0.00	0.00	0.00	0.00	0.64	0.79	0.92	1.01	0.77	0.94	0.70	0.48	0.12	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.42	0.89	1.10	0.88	0.83	1.01	0.70	0.50	0.12	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.52	1.07	0.98	0.95	0.91	1.01	0.73	0.50	0.12	0.04	0.00	0.00	0.00	0.00	0.00	0.00
av	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.40	0.78	1.06	0.88	0.91	0.88	0.73	0.45	0.22	0.05	0.01	0.00	0.00	0.00	0.00	0.00	0.00
III : D.Pal	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.18	0.36	0.55	0.58	0.50	0.31	0.12	0.01	0.00	0.00
B	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.18	0.39	0.55	0.60	0.50	0.30	0.11	0.00
C	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.20	0.39	0.57	0.60	0.50	0.29	0.07	0.00
av	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.07	0.19	0.38	0.51	0.56	0.47	0.31	0.14	0.02	0.00
I : W.Pad	0.00	0.00	0.00	0.61	0.00	0.06	0.36	0.07	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.27	0.04
II : D.Pad	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.40	0.78	1.06	0.88	0.91	0.88	0.73	0.45	0.22	0.05	0.01	0.00	0.00	0.00	0.00	0.00	0.00
III : D.Pal	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.07	0.19	0.38	0.51	0.56	0.47	0.31	0.14	0.02	0.00

1982

I : W.Pad	100	0.000	0.000	0.615	0.000	0.061	0.363	0.066	0.000	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.078	0.271	0.036
II : D.Pad	100	0.000	0.000	0.000	0.000	0.000	0.269	0.403	0.777	1.057	0.878	0.907	0.876	0.734	0.450	0.218	0.051	0.013	0.000	0.000	0.000	0.000	0.000	0.000
III : D.Pal	100	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.014	0.075	0.194	0.380	0.508	0.558	0.470	0.308	0.138	0.025	0.000
total		0.000	0.000	0.000	0.615	0.000	0.061	0.632	0.469	0.777	1.069	0.878	0.907	0.876	0.749	0.525	0.412	0.432	0.521	0.558	0.470	0.308	0.216	0.295
		0		0.30746			0.03026		0.55073		0.9231		0.89242		0.81251		0.46834		0.47631		0.51413		0.26185	

Year : 1982

N.F.R. (l/s/ha)	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
	0.000	0.000	0.000	0.615	0.000	0.061	0.632	0.469	0.777	1.069	0.878	0.907	0.876	0.749	0.525	0.412	0.432	0.521	0.558	0.470	0.308	0.216	0.295	0.036





Net Field Requirement for Water Balance Calculation in 1983 (3/7)

[Kampili Rotation B]

Calculation of Net Field Water Requirement for Paddy(B) on 1983

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec																													
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd																												
<b>Cropping Pattern</b>																																																					
		<p>Early Cropping</p> <p>Middle Cropping</p> <p>Late Cropping</p>																																																			
<b>A. Land Preparation Requirement</b>																																																					
1. Land Preparation Intensity																																																					
Early Cropping		1/6						1/6		1/3		1/6												1/6		1/3																											
Middle Cropping		1/3		1/6						1/6		1/3		1/6														1/6																									
Late Cropping		1/6		1/3		1/6						1/6		1/3		1/6												1/6																									
Total		2/3		1/2		1/6				1/6		1/2		2/3		1/6										1/6		1/2																									
2. Land Preparation Requirement		(mm/day/A)		11.93		11.93		12.13		12.13		12.21		11.95		11.95		11.77		11.77		11.71		11.71		12.07		12.07		12.47		12.47		12.82		12.82		12.68		12.68		12.23		12.23		11.90		11.90					
		(mm/day)		7.95		5.97		2.02		0.00		0.00		0.00		1.99		5.98		7.85		5.89		1.95		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		1.98		5.95							
3. Water Layer Replacement Intensity						1/3		1/3		2/3		1/3		1/3																																							
4. Water Layer Replacement Requirement								3.33		3.33		3.33		3.33		3.33		3.33		3.33		3.33		3.33		3.33		3.33		3.33		3.33		3.33		3.33		3.33		3.33		3.33		3.33									
5. Total Requirement for Land Preparation																																																					
I		(mm/day)		7.95		5.97		3.13		1.11		2.22		1.11		1.11												0.00		0.00		0.00		0.00		0.00		0.00		1.98		5.95											
II		(mm/day)								1.99		5.98		7.85		5.89		3.06		1.11		2.22		1.11		1.11																											
<b>B. Crop Water Requirement</b>																																																					
1. Crop Intensity																																																					
Early Cropping		Jan		1/6		1/3		1/3		1/3		1/3		1/3		1/6		1/6		1/3		1/3		1/3		1/3		1/3		1/6																							
Middle Cropping				1/6		1/3		1/3		1/3		1/3		1/6		1/6		1/3		1/3		1/3		1/3		1/3		1/3		1/6																							
Late Cropping				1/6		1/3		1/3		1/3		1/3		1/6		1/6		1/3		1/3		1/3		1/3		1/3		1/3		1/6																							
Total		I		1/6		1/2		5/6		1		1		1		5/6		1/2		1/6		1/6		1/6		1/6		1/6		1/6		1/6		1/6		1/6		1/6		1/6													
II														1/6		1/2		5/6		1		1		1		5/6		1/2		1/6																							
2. Crop Coefficient																																																					
Early Cropping		1.10		1.10		1.05		1.05		0.95		0.00		0.00		1.10		1.10		1.05		1.05		0.95		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00													
Middle Cropping				1.10		1.10		1.05		1.05		0.95		0.00		0.00		1.10		1.10		1.05		1.05		0.95		0.00		0.00		0.00		0.00		0.00		0.00		0.00													
Late Cropping				1.10		1.10		1.05		1.05		0.95		0.00		0.00		1.10		1.10		1.05		1.05		0.95		0.00		0.00		0.00		0.00		0.00		0.00		0.00													
Weighted average		I		1.10		1.10		1.08		1.07		1.02		0.67		0.38		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00													
II														1.10		1.10		1.08		1.07		1.02		0.67		0.38		0.00		0.00		0.00		0.00		0.00		0.00		0.00													
3. Potential ETo		(mm/day/A)		3.99		3.99		4.28		4.28		4.39		4.39		4.02		4.02		3.75		3.75		3.66		3.66		4.19		4.19		4.77		4.77		5.26		5.26		5.05		5.05		4.42		4.42		3.95		3.95			
4. Consumptive Use, ETc		(mm/day/A)		4.39		4.39		4.62		4.57		4.46		2.93		1.53		0.00		0.00		0.00		4.13		4.13		3.96		3.91		4.26		2.79		1.81		0.00		0.00		0.00		0.00									
5. Percolation Loss		(mm/day/A)		2.00		2.00		2.00		2.00		2.00		2.00		2.00		2.00		2.00		2.00		2.00		2.00		2.00		2.00		2.00		2.00		2.00		2.00		2.00		2.00		2.00									
6. Crop Water Requirement		(mm/day/A)		6.39		6.39		6.62		6.57		6.46		4.93		3.53		2.00		2.00		2.00		6.13		6.13		5.96		5.91		6.26		4.79		3.81		2.00		2.00		0.00		0.00									
7. Crop water Requirement		(mm/day)		1.06		3.19		5.52		6.57		6.46		4.93		2.94		1.00		0.33		0.33		1.02		3.06		4.96		5.91		6.26		4.79		3.18		1.00		0.33		0.00		0.00									
C. Total A(5)+B(7)		I		9.02		9.16		8.65		7.68		8.68		6.04		4.05		1.00		0.33		0.33		3.06		4.96		5.91		6.26		4.79		3.18		1.00		0.33		0.00		0.00											
II														1.99		5.98		8.87		8.95		8.03		7.02		8.48		5.90		4.29		1.00		0.33		0.00		0.00		0.00		0.00											
D. Effective Rainfall		(mm/day)		7.71		3.36		3.03		1.66		0.37		3.25		3.97		4.73		3.03		0.17		0.46		0.59		0.44		0.37		0.00		0.00		0.00		0.02		0.87		2.50		2.61		16.86		6.94		16.28			
E. Net field Water Requirement, NFR		(mm/day)		1.31		5.80		5.62		6.01		8.32		2.79		0.08		-3.73		-2.70		0.00		8.78		7.56		6.42		8.04		5.53		4.29		1.00		0.33		-0.02		-0.87		-2.50		-2.61		-16.86		-4.95		-10.33	
II														-1.97		1.25		5.84		8.78		7.56		6.42		8.04		5.53		4.29		1.00		0.33		0.00		0.00		0.00		0.00											
I				1.31		5.80		5.62		6.01		8.32		2.79		0.08		0.00		0.00		0.00		8.78		7.56		6.42		8.04		5.53		4.29		1.00		0.33						0.00		0.00							
II																0.00		1.25		5.84		8.78		7.56		6.42		8.04		5.53		4.29		1.00		0.33																	
I		(l/sec/ha)		0.152		0.671		0.650		0.696		0.963		0.323		0.010		0.000		0.000		0.000		0.000		1.016		0.875		0.743		0.930		0.640		0.496		0.116		0.039													
II																0.000		0.145		0.676		1.016		0.875		0.743		0.930		0.640		0.496		0.116		0.039																	



Net Field Requirement for Water Balance Calculation in 1983 (4/7)

Calculation of Net Field Water Requirement for Palawija(B)

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
Cropping Pattern	Early Cropping																								
	Middle Cropping																								
	Late Cropping																								
		LP				Paddy				LP				Paddy							Palawija			No Cropping	LP
A.Crop Water Requirement																									
1.Crop Intensity																									
Early Cropping																									
Middle Cropping																									
Late Cropping																									
Total																									
2.Crop Coefficient																									
Early Cropping																									
Middle Cropping																									
Late Cropping																									
Weighted average																									
3.Potential ETo (mm/day/A)		3.99	3.99	4.28	4.28	4.39	4.39	4.02	4.02	3.75	3.75	3.66	3.66	4.19	4.19	4.77	4.77	5.26	5.26	5.05	5.05	4.42	4.42	3.95	3.95
4.Consumptive Use, ETc (mm/day/A)																2.38	3.02	4.00	4.64	4.72	3.96	2.52	1.69	0.59	
5.Rainfall (mm/day)		11.01	4.80	4.34	2.38	0.53	4.64	5.66	6.75	4.33	0.24	0.66	0.85	0.63	0.53	0.00	0.00	0.00	0.03	1.24	3.57	3.74	24.09	9.91	23.26
6.Effective Rainfall (mm/day/A)																0.00	0.00	0.00	0.04	0.97	2.44	2.31	1.69	0.59	
7.Crop water Requirement (mm/day)																2.38	3.02	4.00	4.61	3.74	1.52	0.21	0.00	0.00	
B.Net Field Water Requirement (mm/day)																									
(I/sec/ha)																									
III																									
Net Field Water Requirement for Paddy		0.152	0.671	0.650	0.696	0.963	0.323	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Net Field Water Requirement for Palawija		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.145	0.676	1.016	0.875	0.743	0.930	0.640	0.496	0.116	0.039	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100 I		0.152	0.671	0.650	0.696	0.963	0.323	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
100 II		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.145	0.676	1.016	0.875	0.743	0.930	0.640	0.496	0.116	0.039	0.000	0.000	0.000	0.000	0.000	0.000	
100 III		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.046	0.175	0.385	0.533	0.433	0.176	0.020	0.000	0.000	
<b>Total NWR</b> (l/s/ha)		0.152	0.671	0.650	0.696	0.963	0.323	0.010	0.145	0.676	1.016	0.875	0.743	0.930	0.640	0.542	0.291	0.424	0.533	0.433	0.176	0.020	0.000	0.000	
<b>DR</b> (E=0.875*0.81)		0.214	0.947	0.917	0.982	1.358	0.455	0.014	0.204	0.954	1.434	1.235	1.049	1.313	0.903	0.765	0.410	0.598	0.753	0.611	0.249	0.029	0.000	0.000	
0.85 0.81 0.6885		0.221	0.975	0.944	1.011	1.398	0.469	0.014	0.210	0.982	1.476	1.271	1.080	1.351	0.930	0.787	0.422	0.616	0.775	0.629	0.256	0.030	0.000	0.000	

Net Field Requirement for Water Balance Calculation in 1983 (5/7)

[Kampili Rotation C ]

Calculation of Net Field Water Requirement for Paddy (C) on

1983

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
Cropping Pattern																									
	Early Cropping																								
	Middle Cropping																								
	Late Cropping																								
A.Land Preparation Requirement																									
1.Land Preparation Intensity																									
Early Cropping		1/3	1/6							1/6	1/3	1/6													1/6
Middle Cropping		1/6	1/3	1/6						1/6	1/3	1/6													
Late Cropping			1/6	1/3	1/6						1/6	1/3	1/6												
Total		1/2	2/3	1/2	1/6					1/6	1/2	2/3	1/2	1/6											1/6
2.Land Preparation Requirement (mm/day/A)	(mm/day)	11.93	11.93	12.13	12.13	12.21	12.21	11.95	11.95	11.77	11.77	11.71	11.71	12.07	12.07	12.47	12.47	12.82	12.82	12.68	12.68	12.23	12.23	11.90	11.90
		5.97	7.95	6.07	2.02	0.00	0.00	0.00	1.99	5.89	7.85	5.85	1.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.98
3.Water Layer Replacement Intensity					1/3	1/3	2/3	1/3	1/3					1/3	1/3	2/3	1/3	1/3							
4.Water Layer Replacement Requirement	(mm/day/A)				3.33	3.33	3.33	3.33	3.33					3.33	3.33	3.33	3.33	3.33							
	(mm/day)				1.11	1.11	2.22	1.11	1.11					1.11	1.11	2.22	1.11	1.11							
5.Total Requirement for Land Preparation																									
	I	5.97	7.95	6.07	3.13	1.11	2.22	1.11	1.11										0.00	0.00	0.00	0.00	0.00	0.00	1.98
	II								1.99	5.89	7.85	5.85	3.06	1.11	2.22	1.11	1.11								
B. Crop Water Requirement																									
1.Crop Intensity		Jan	Feb		Mar		Apr		May	Jun	Jul		Aug		Sep	Oct	Nov	Dec							
Early Cropping			1/6	1/3	1/3	1/3	1/3	1/3	1/6	1/6	1/3	1/3	1/3	1/3	1/6										
Middle Cropping				1/6	1/3	1/3	1/3	1/3	1/6	1/6	1/3	1/3	1/3	1/3	1/6										
Late Cropping					1/6	1/3	1/3	1/3	1/6	1/6	1/3	1/3	1/3	1/3	1/6				1/6						
Total	I		1/6	1/2	5/6	1	1	1	5/6	1/2	1/6	1/6	1/6	1/6	1/6				1/6						
	II										1/6	1/2	5/6	1	1	1	5/6	1/2	1/6						
2.Crop Coefficient																									
Early Cropping			1.10	1.10	1.05	1.05	0.95	0.00	0.00	1.10	1.10	1.05	1.05	0.95	0.00	0.00									
Middle Cropping				1.10	1.10	1.05	1.05	0.95	0.00	0.00	1.10	1.10	1.05	1.05	0.95	0.00	0.00								
Late Cropping					1.10	1.10	1.05	0.95	0.00	0.00	1.10	1.10	1.05	1.05	0.95	0.00	0.00								
Weighted average	I		1.10	1.10	1.08	1.07	1.02	0.67	0.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00									
	II									1.10	1.10	1.08	1.07	1.02	0.67	0.38	0.00	0.00							
3.Potential ETo	(mm/day/A)	3.99	3.99	4.28	4.28	4.39	4.39	4.02	4.02	3.75	3.75	3.66	3.66	4.19	4.19	4.77	4.77	5.26	5.26	5.05	5.05	4.42	4.42	3.95	3.95
4.Consumptive Use, ETc	(mm/day/A)	0.00	4.39	4.71	4.62	4.68	4.46	2.68	1.53	0.00	0.00	4.13	4.03	3.96	4.47	4.26	3.18	1.81	0.00						
	II																								
5.Percolation Loss	(mm/day/A)	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00						
6.Crop Water Requirement	(mm/day/A)	2.00	6.39	6.71	6.62	6.68	6.46	4.68	3.53	2.00	2.00	6.13	6.03	5.96	6.47	6.26	5.18	3.81	2.00	2.00	0.00	0.00	0.00	0.00	0.00
	II																								
7.Crop water Requirement	(mm/day)	0.00	1.06	3.35	5.52	6.68	6.46	4.68	2.94	1.00	0.33	1.02	3.01	4.96	6.47	6.26	5.18	3.18	1.00	0.33	0.00	0.00	0.00	0.00	0.00
	II																								
C.Total A(5)+B(7)	I	5.97	9.02	9.42	8.65	7.79	8.68	5.79	4.05	1.00	0.33	1.99	5.89	8.87	8.87	8.03	7.58	8.48	6.29	4.29	1.00	0.33	0.00	0.00	1.98
	II																								
D.Effective Rainfall	(mm/day)	7.71	3.36	3.03	1.66	0.37	3.25	3.97	4.73	3.03	0.17	0.46	0.59	0.44	0.37	0.00	0.00	0.00	0.00	0.87	2.50	2.61	16.86	6.94	16.28
E.Net field Water Requirement, NFR (mm/day)		-1.74	5.66	6.39	6.99	7.43	5.44	1.82	-0.68	-2.03	0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.87	-2.50	-2.61	-16.86	-6.94	-14.30
	II																								
	I	0.00	5.66	6.39	6.99	7.43	5.44	1.82	0.00	0.00	0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	II								0.00	2.86	8.70	8.41	7.43	7.14	8.11	6.29	4.29	1.00	0.31						
(l/sec/ha)	I	0.000	0.655	0.739	0.809	0.860	0.629	0.211	0.000	0.000	0.019	0.000	0.000	0.019	0.973	0.860	0.826	0.938	0.728	0.496	0.116	0.036			0.000
	II								0.000	0.331	1.007	0.973	0.860	0.826	0.938	0.728	0.496	0.116	0.036						

Net Field Requirement for Water Balance Calculation in 1983 (6/7)

Calculation of Net Field Water Requirement for Palawija(C)

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec		
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	
Cropping Pattern	Early Cropping																									
	Middle Cropping																									
	Late Cropping																									
	No Cropping																									
A.Crop Water Requirement																										
1.Crop Intensity																										
Early Cropping																										
Middle Cropping																										
Late Cropping																										
Total																										
2.Crop Coefficient																										
Early Cropping																										
Middle Cropping																										
Late Cropping																										
Weighted average																										
3.Potential ETo (mm/day/A)		3.99	3.99	4.28	4.28	4.39	4.39	4.02	4.02	3.75	3.75	3.66	3.66	4.19	4.19	4.77	4.77	5.26	5.26	5.05	5.05	4.42	4.42	3.95	3.95	
4.Consumptive Use, ETc (mm/day/A)																		2.38	3.33	4.00	4.46	4.72	3.46	2.52	1.51	0.59
5.Rainfall (mm/day)		11.01	4.80	4.34	2.38	0.53	4.64	5.66	6.75	4.33	0.24	0.66	0.85	0.63	0.53	0.00	0.00	0.00	0.03	1.24	3.57	3.74	24.09	9.91	23.26	
6.Effective Rainfall (mm/day/A)																		0.00	0.00	0.03	0.96	2.55	2.46	2.52	1.51	0.59
7.Crop water Requirement (mm/day/A)																		2.38	3.33	3.96	3.50	2.16	1.00	0.00	0.00	0.00
B.Net Field Water Requirement (mm/day)																		0.40	1.66	3.30	3.50	2.16	1.00	0.00	0.00	0.00
(l/sec/ha)																		0.046	0.193	0.382	0.406	0.250	0.116	0.000	0.000	0.000
III																										
		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec		
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	
Net Field Water Requirement for Paddy		0.000	0.655	0.739	0.809	0.860	0.629	0.211	0.000	0.000	0.019	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Net Field Water Requirement for Palawija		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.331	1.007	0.973	0.860	0.826	0.938	0.728	0.496	0.116	0.036	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100 I		0.000	0.655	0.739	0.809	0.860	0.629	0.211	0.000	0.000	0.019	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100 II		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.331	1.007	0.973	0.860	0.826	0.938	0.728	0.496	0.116	0.036	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100 III		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.046	0.193	0.382	0.406	0.250	0.116	0.000	0.000	0.000	
<b>Total NWR</b> (l/s/ha)		0.000	0.655	0.739	0.809	0.860	0.629	0.211	0.000	0.331	1.025	0.973	0.860	0.826	0.938	0.728	0.542	0.308	0.418	0.406	0.250	0.116	0.000	0.000	0.000	
<b>DR</b> (E=0.875*0.81)		0.000	0.924	1.043	1.141	1.213	0.888	0.298	0.000	0.466	1.447	1.373	1.214	1.166	1.324	1.027	0.765	0.435	0.590	0.572	0.353	0.163	0.000	0.000	0.000	
0.85 0.81 0.6885		0.000	0.952	1.074	1.175	1.248	0.914	0.307	0.000	0.480	1.489	1.413	1.249	1.200	1.363	1.057	0.787	0.448	0.607	0.589	0.363	0.168	0.000	0.000	0.000	

Net Field Requirement for Water Balance Calculation in 1983 (7/7)

(E=0.875*0.81)	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
<b>Golongan A</b>	0.237	0.816	0.758	1.128	0.926	0.150	0.328	0.704	0.967	1.298	1.071	1.200	0.892	0.656	0.410	0.548	0.758	0.795	0.495	0.083	0.000	0.000	0.000	0.000
<b>Golongan B</b>	0.214	0.947	0.917	0.982	1.358	0.455	0.014	0.204	0.954	1.434	1.235	1.049	1.313	0.903	0.765	0.410	0.598	0.753	0.611	0.249	0.029	0.000	0.000	0.000
<b>Golongan C</b>	0.000	0.924	1.043	1.141	1.213	0.888	0.298	0.000	0.466	1.447	1.373	1.214	1.166	1.324	1.027	0.765	0.435	0.590	0.572	0.353	0.163	0.000	0.000	0.000
average	0.151	0.896	0.906	1.084	1.166	0.498	0.213	0.303	0.796	1.393	1.226	1.154	1.123	0.961	0.734	0.574	0.597	0.713	0.559	0.228	0.064	0.000	0.000	0.000

(E=0.85*0.81)	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
<b>Golongan A</b>	0.244	0.840	0.780	1.162	0.953	0.154	0.338	0.725	0.995	1.336	1.102	1.236	0.918	0.675	0.422	0.564	0.781	0.819	0.509	0.086	0.000	0.000	0.000	0.000
<b>Golongan B</b>	0.221	0.975	0.944	1.011	1.398	0.469	0.014	0.210	0.982	1.476	1.271	1.080	1.351	0.930	0.787	0.422	0.616	0.775	0.629	0.256	0.030	0.000	0.000	0.000
<b>Golongan C</b>	0.000	0.952	1.074	1.175	1.248	0.914	0.307	0.000	0.480	1.489	1.413	1.249	1.200	1.363	1.057	0.787	0.448	0.607	0.589	0.363	0.168	0.000	0.000	0.000
average	0.155	0.922	0.933	1.116	1.200	0.512	0.220	0.312	0.819	1.434	1.262	1.188	1.156	0.989	0.756	0.591	0.615	0.733	0.576	0.235	0.066	0.000	0.000	0.000

Summary Calculation of NFR (l/s/ha)

	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
<b>Golongan A</b>	0.17	0.58	0.54	0.80	0.66	0.11	0.23	0.50	0.69	0.92	0.76	0.85	0.63	0.46	0.29	0.39	0.54	0.56	0.35	0.06	0.00	0.00	0.00	0.00
<b>Golongan B</b>	0.15	0.67	0.65	0.70	0.96	0.32	0.01	0.14	0.68	1.02	0.88	0.74	0.93	0.64	0.54	0.29	0.42	0.53	0.43	0.18	0.02	0.00	0.00	0.00
<b>Golongan C</b>	0.00	0.66	0.74	0.81	0.86	0.63	0.21	0.00	0.33	1.03	0.97	0.86	0.83	0.94	0.73	0.54	0.31	0.42	0.41	0.25	0.12	0.00	0.00	0.00

1983

	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
I : W.Pad	A	0.17	0.58	0.54	0.80	0.66	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	B	0.15	0.67	0.65	0.70	0.96	0.32	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	C	0.00	0.66	0.74	0.81	0.86	0.63	0.21	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	av	0.11	0.63	0.64	0.77	0.83	0.35	0.07	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
II : D.Pad	A	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.50	0.69	0.92	0.76	0.85	0.63	0.43	0.12	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	B	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.68	1.02	0.88	0.74	0.93	0.64	0.50	0.12	0.04	0.00	0.00	0.00	0.00	0.00	0.00
	C	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33	1.01	0.97	0.86	0.83	0.94	0.73	0.50	0.12	0.04	0.00	0.00	0.00	0.00	0.00
	av	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.21	0.56	0.98	0.87	0.82	0.80	0.67	0.45	0.22	0.05	0.01	0.00	0.00	0.00	0.00	0.00
III : D.Pal	A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.17	0.35	0.54	0.56	0.35	0.06	0.00	0.00	0.00
	B	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.17	0.39	0.53	0.43	0.18	0.02	0.00	0.00
	C	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.19	0.38	0.41	0.25	0.12	0.00	0.00	0.00
	av	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.07	0.19	0.37	0.49	0.40	0.16	0.05	0.00	0.00	0.00
I : W.Pad		0.11	0.63	0.64	0.77	0.83	0.35	0.07	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
II : D.Pad		0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.21	0.56	0.98	0.87	0.82	0.80	0.67	0.45	0.22	0.05	0.01	0.00	0.00	0.00	0.00	0.00
III : D.Pal		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.07	0.19	0.37	0.49	0.40	0.16	0.05	0.00	0.00	0.00

1983

I : W.Pad	100	0.107	0.635	0.642	0.768	0.826	0.353	0.074	0.000	0.000	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
II : D.Pad	100	0.000	0.000	0.000	0.000	0.000	0.000	0.078	0.215	0.564	0.981	0.869	0.818	0.796	0.670	0.447	0.217	0.051	0.012	0.000	0.000	0.000	0.000	0.000
III : D.Pal	100	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.011	0.074	0.190	0.372	0.493	0.396	0.162	0.045	0.000	0.000	0.000
total		0.107	0.635	0.642	0.768	0.826	0.353	0.151	0.215	0.564	0.987	0.869	0.818	0.796	0.681	0.520	0.407	0.423	0.505	0.396	0.162	0.045	0.000	0.000
		0.37084		0.70527		0.58944		0.18288		0.77546		0.84362		0.73865		0.46358		0.46413		0.27911		0.02272		0

Year : 1983

N.F.R. (l/s/ha)	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
	0.107	0.635	0.642	0.768	0.826	0.353	0.151	0.215	0.564	0.987	0.869	0.818	0.796	0.681	0.520	0.407	0.423	0.505	0.396	0.162	0.045	0.000	0.000	0.000



Net Field Requirement for Water Balance Calculation in 1984 (2/7)

Calculation of Net Field Water Requirement for Palawija(A)

Cropping Pattern	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
Early Cropping		○		○						○		○												
Middle Cropping			○	Paddy	○						○	Paddy	○											
Late Cropping	LP			○		○						○		○										LP

A. Crop Water Requirement

1. Crop Intensity																									
Early Cropping															1/6	1/3	1/3	1/3	1/3	1/3	1/3	1/6			
Middle Cropping																1/6	1/3	1/3	1/3	1/3	1/3	1/6			
Late Cropping																	1/6	1/3	1/3	1/3	1/3	1/3	1/6		
Total															1/6	1/2	5/6	1	1	1	5/6	1/2	1/6		
2. Crop Coefficient																									
Early Cropping															0.50	0.70	0.95	1.00	0.85	0.50	0.15				
Middle Cropping																0.50	0.70	0.95	1.00	0.85	0.50	0.15			
Late Cropping																	0.50	0.70	0.95	1.00	0.85	0.50	0.15		
Weighted average															0.50	0.63	0.76	0.88	0.93	0.78	0.57	0.38	0.15		
3. Potential ETo (mm/day/A)		3.45	3.45	3.21	3.21	3.50	3.50	3.85	3.85	3.55	3.55	3.57	3.57	4.18	4.18	4.80	4.80	4.20	4.20	5.15	5.15	4.47	4.47	3.45	3.45
4. Consumptive Use, ETc (mm/day/A)															2.09	3.04	3.65	3.71	3.92	4.03	2.93	1.71	0.67		
5. Rainfall (mm/day)		13.42	25.91	22.61	11.93	12.60	3.72	5.03	4.67	7.61	2.22	0.49	0.38	0.02	0.84	0.00	0.06	3.70	0.54	2.01	2.01	2.65	8.82	12.39	25.40
6. Effective Rainfall (mm/day/A)															0.57	0.00	0.06	2.48	0.43	1.45	1.35	1.59	0.67		
7. Crop water Requirement (mm/day/A)															1.52	3.04	3.59	1.23	3.49	2.58	1.59	0.13	0.00		
B. Net Field Water Requirement (mm/day)															0.25	1.52	2.99	1.23	3.49	2.58	1.32	0.06	0.00		
(l/sec/ha)															0.029	0.176	0.346	0.143	0.404	0.299	0.153	0.007	0.000		

	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
Net Field Water Requirement for Paddy	0.000	0.000	0.000	0.000	0.000	0.148	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Net Field Water Requirement for Palawija	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.029	0.176	0.346	0.143	0.404	0.299	0.153	0.007	0.000	0.000
100 I	0.000	0.000	0.000	0.000	0.000	0.148	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100 II	0.000	0.000	0.000	0.000	0.000	0.000	0.277	0.655	0.398	0.735	0.760	0.877	0.681	0.406	0.116	0.033	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100 III	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.029	0.176	0.346	0.143	0.404	0.299	0.153	0.007	0.000	0.000
<b>Total NWR</b> (l/s/ha)	0.000	0.000	0.000	0.000	0.000	0.148	0.277	0.655	0.398	0.735	0.760	0.877	0.681	0.435	0.292	0.379	0.143	0.404	0.299	0.153	0.007	0.000	0.000	0.000
<b>DR</b> (E=0.875*0.81)	0.000	0.000	0.000	0.000	0.000	0.209	0.391	0.924	0.562	1.038	1.073	1.238	0.960	0.614	0.411	0.555	0.202	0.570	0.422	0.216	0.010	0.000	0.000	0.000
0.85      0.81      0.6885	0.000	0.000	0.000	0.000	0.000	0.215	0.402	0.952	0.578	1.068	1.105	1.274	0.988	0.632	0.424	0.551	0.207	0.586	0.434	0.222	0.011	0.000	0.000	0.000



Net Field Requirement for Water Balance Calculation in 1984 (4/7)

Calculation of Net Field Water Requirement for Palawija(B)

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
Cropping Pattern																									
A.Crop Water Requirement																									
1.Crop Intensity																									
Early Cropping																									
Middle Cropping																									
Late Cropping																									
Total																									
2.Crop Coefficient																									
Early Cropping																									
Middle Cropping																									
Late Cropping																									
Weighted average																									
3.Potential ETo (mm/day/A)		3.45	3.45	3.21	3.21	3.50	3.50	3.85	3.85	3.55	3.55	3.57	3.57	4.18	4.18	4.80	4.80	4.20	4.20	5.15	5.15	4.47	4.47	3.45	3.45
4.Consumptive Use, ETc (mm/day/A)																2.40	3.04	3.19	3.71	4.80	4.03	2.55	1.71	0.52	
5.Rainfall (mm/day)		13.42	25.91	22.61	11.93	12.60	3.72	5.03	4.67	7.61	2.22	0.49	0.38	0.02	0.84	0.00	0.06	3.70	0.54	2.01	2.01	2.65	8.82	12.39	25.40
6.Effective Rainfall (mm/day/A)																									
7.Crop water Requirement (mm/day)																									
B.Net Field Water Requirement (mm/day)																									
(l/sec/ha)																									
III																									
		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
Net Field Water Requirement for Paddy		0.000	0.000	0.000	0.000	0.000	0.328	0.055	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Net Field Water Requirement for Palawija		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.046	0.173	0.077	0.380	0.380	0.299	0.083	0.000	0.000	0.000
100 I		0.000	0.000	0.000	0.000	0.000	0.328	0.055	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100 II		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.307	0.395	0.835	0.878	0.770	0.978	0.614	0.497	0.111	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100 III		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.046	0.173	0.077	0.380	0.380	0.299	0.083	0.000	0.000	0.000	0.000
<b>Total NWR</b> (l/s/ha)		0.000	0.000	0.000	0.000	0.000	0.328	0.055	0.307	0.395	0.835	0.878	0.770	0.978	0.614	0.544	0.283	0.077	0.380	0.380	0.299	0.083	0.000	0.000	0.000
<b>DR</b> (E=0.875*0.81)		0.000	0.000	0.000	0.000	0.000	0.463	0.077	0.433	0.557	1.178	1.238	1.086	1.380	0.866	0.767	0.400	0.109	0.536	0.536	0.422	0.117	0.000	0.000	0.000
0.85	0.81	0.6885	0.000	0.000	0.000	0.000	0.477	0.079	0.445	0.573	1.212	1.275	1.118	1.421	0.892	0.789	0.411	0.112	0.552	0.552	0.434	0.121	0.000	0.000	0.000



Net Field Requirement for Water Balance Calculation in 1984 (5/7)

[Kampili Rotation C ]

Calculation of Net Field Water Requirement for Paddy (C) on

1984

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec		
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	
Cropping Pattern																										
Early Cropping																										
Middle Cropping																										
Late Cropping																										
A. Land Preparation Requirement																										
1. Land Preparation Intensity																										
Early Cropping		1/3	1/6							1/6	1/3	1/6														1/6
Middle Cropping		1/6	1/3	1/6						1/6	1/3	1/6														
Late Cropping			1/6	1/3	1/6							1/6	1/3	1/6												
Total		1/2	2/3	1/2	1/6					1/6	1/2	2/3	1/2	1/6												1/6
2. Land Preparation Requirement (mm/day/A)																										
	(mm/day)	11.57	11.57	11.40	11.40	11.60	11.60	11.83	11.83	11.63	11.63	11.64	11.64	12.06	12.06	12.50	12.50	12.08	12.08	12.74	12.74	12.27	12.27	11.57	11.57	
3. Water Layer Replacement Intensity																										
4. Water Layer Replacement Requirement																										
	(mm/day/A)				3.33	3.33	3.33	3.33	3.33			3.33	3.33	3.33	3.33	3.33										
	(mm/day)				1.11	1.11	2.22	1.11	1.11			1.11	1.11	2.22	1.11	1.11										
5. Total Requirement for Land Preparation																										
I	(mm/day)	5.78	7.71	5.70	3.01	1.11	2.22	1.11	1.11			1.11	1.11					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.93
II									1.97	5.82	7.75	5.82	3.05	1.11	2.22	1.11	1.11									
B. Crop Water Requirement																										
1. Crop Intensity																										
Early Cropping			1/6	1/3	1/3	1/3	1/3	1/3	1/6		1/6	1/3	1/3	1/3	1/3	1/3	1/6									
Middle Cropping				1/6	1/3	1/3	1/3	1/3	1/3	1/6		1/6	1/3	1/3	1/3	1/3	1/3	1/6								
Late Cropping					1/6	1/3	1/3	1/3	1/3	1/3	1/6	1/6	1/3	1/3	1/3	1/3	1/3	1/6								
Total	I		1/6	1/2	5/6	1	1	1	5/6	1/2	1/6	1/6	1/2	5/6	1	1	1	5/6	1/2	1/6						
	II										1/6	1/2	5/6	1	1	1	5/6	1/2	1/6							
2. Crop Coefficient																										
Early Cropping			1.10	1.10	1.05	1.05	0.95	0.00	0.00		1.10	1.10	1.05	1.05	0.95	0.00	0.00									
Middle Cropping				1.10	1.10	1.05	1.05	0.95	0.00	0.00		1.10	1.10	1.05	1.05	0.95	0.00	0.00								
Late Cropping					1.10	1.10	1.05	0.95	0.00	0.00			1.10	1.10	1.05	1.05	0.95	0.00	0.00							
Weighted average	I		1.10	1.10	1.08	1.07	1.02	0.67	0.38	0.00																
	II										1.10	1.10	1.08	1.07	1.02	0.67	0.38	0.00	0.00							
3. Potential ETo (mm/day/A)																										
		3.45	3.45	3.21	3.21	3.50	3.50	3.85	3.85	3.55	3.55	3.57	3.57	4.18	4.18	4.80	4.80	4.20	4.20	5.15	5.15	4.47	4.47	3.45	3.45	
4. Consumptive Use, ETc (mm/day/A)																										
		0.00	3.80	3.53	3.47	3.73	3.56	2.56	1.46	0.00	0.00															
5. Percolation Loss (mm/day/A)																										
		2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00							
6. Crop Water Requirement (mm/day/A)																										
		2.00	5.80	5.53	5.47	5.73	5.56	4.56	3.46	2.00	2.00									0.00	0.00	0.00	0.00	0.00	0.00	
7. Crop water Requirement (mm/day)																										
		0.00	0.97	2.77	4.56	5.73	5.56	4.56	2.88	1.00	0.33									0.00	0.00	0.00	0.00	0.00	0.00	
	II										0.98	2.96	4.88	6.46	6.25	5.20	3.19	1.00	0.33							
C. Total A(5)+B(7) (mm/day)																										
I		5.78	8.68	8.47	7.57	6.84	7.78	5.67	3.99	1.00	0.33									0.00	0.00	0.00	0.00	0.00	1.93	
II									1.97	5.82	7.75	5.82	3.05	1.11	2.22	1.11	1.11									
D. Effective Rainfall (mm/day)																										
		9.40	18.14	15.83	8.35	8.82	2.61	3.52	3.27	5.33	1.56	0.34	0.26	0.02	0.59	0.00	0.04	2.59	0.38	1.41	1.41	1.85	6.17	8.67	17.78	
E. Net field Water Requirement, NFR (mm/day)																										
		-3.61	-9.46	-7.36	-0.79	-1.98	5.17	2.15	0.73	-4.33	-1.22									-1.41	-1.41	-1.85	-6.17	-8.67	-15.85	
	II								-1.29	0.49	7.18	8.44	7.66	7.55	7.88	6.31	4.25	-1.59	-0.05							
	I	0.00	0.00	0.00	0.00	0.00	5.17	2.15	0.73	0.00	0.00														0.00	
	II								0.00	0.49	7.18	8.44	7.66	7.55	7.88	6.31	4.25	0.00	0.00							
	(l/sec/ha)	0.000	0.000	0.000	0.000	0.000	0.599	0.249	0.084	0.000	0.000									0.000	0.000				0.000	
	II								0.000	0.056	0.831	0.977	0.887	0.874	0.912	0.730	0.492	0.000	0.000							

Net Field Requirement for Water Balance Calculation in 1984 (6/7)

Calculation of Net Field Water Requirement for Palawija(C)

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
Cropping Pattern	Early Cropping																								
	Middle Cropping																								
	Late Cropping																								
A.Crop Water Requirement																									
1.Crop Intensity																									
Early Cropping																									
Middle Cropping																									
Late Cropping																									
Total																									
2.Crop Coefficient																									
Early Cropping																									
Middle Cropping																									
Late Cropping																									
Weighted average																									
3.Potential ETo (mm/day/A)		3.45	3.45	3.21	3.21	3.50	3.50	3.85	3.85	3.55	3.55	3.57	3.57	4.18	4.18	4.80	4.80	4.20	4.20	5.15	5.15	4.47	4.47	3.45	3.45
4.Consumptive Use, ETc (mm/day/A)																2.40	2.66	3.19	4.55	4.80	3.50	2.55	1.32	0.52	
5.Rainfall (mm/day)		13.42	25.91	22.61	11.93	12.60	3.72	5.03	4.67	7.61	2.22	0.49	0.38	0.02	0.84	0.00	0.06	3.70	0.54	2.01	2.01	2.65	8.82	12.39	25.40
6.Effective Rainfall (mm/day/A)																0.05	2.31	0.41	1.50	1.52	1.80	2.55	1.32	0.52	
7.Crop water Requirement (mm/day/A)																2.34	0.35	2.78	3.05	3.28	1.70	0.00	0.00	0.00	
B.Net Field Water Requirement (mm/day)																0.39	0.18	2.32	3.05	3.28	1.70	0.00	0.00	0.00	
(l/sec/ha)																0.045	0.020	0.268	0.353	0.380	0.197	0.000	0.000	0.000	
		III																							
		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
Net Field Water Requirement for Paddy		0.000	0.000	0.000	0.000	0.000	0.599	0.249	0.084	0.000	0.000	0.000	0.000	0.831	0.977	0.887	0.874	0.912	0.730	0.492	0.000	0.000	0.000	0.000	0.000
Net Field Water Requirement for Palawija		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.045	0.020	0.268	0.353	0.380	0.197	0.000	0.000	0.000
100 I		0.000	0.000	0.000	0.000	0.000	0.599	0.249	0.084	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100 II		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.056	0.831	0.977	0.887	0.874	0.912	0.730	0.492	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100 III		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.045	0.020	0.268	0.353	0.380	0.197	0.000	0.000	0.000
<b>Total NWR</b> (l/s/ha)		0.000	0.000	0.000	0.000	0.000	0.599	0.249	0.084	0.056	0.831	0.977	0.887	0.874	0.912	0.730	0.537	0.020	0.268	0.353	0.380	0.197	0.000	0.000	0.000
<b>DR</b> (E=0.875*0.81)		0.000	0.000	0.000	0.000	0.000	0.845	0.351	0.119	0.080	1.173	1.378	1.251	1.233	1.286	1.030	0.758	0.029	0.378	0.498	0.536	0.278	0.000	0.000	0.000
0.85      0.81      0.6885		0.000	0.000	0.000	0.000	0.000	0.869	0.362	0.122	0.082	1.207	1.419	1.288	1.269	1.324	1.061	0.781	0.030	0.390	0.512	0.552	0.286	0.000	0.000	0.000

Net Field Requirement for Water Balance Calculation in 1984 (7/7)

(E=0.875*0.81)	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
<b>Golongan A</b>	0.000	0.000	0.000	0.000	0.000	0.209	0.391	0.924	0.562	1.038	1.073	1.238	0.960	0.614	0.411	0.535	0.202	0.570	0.422	0.216	0.010	0.000	0.000	0.000
<b>Golongan B</b>	0.000	0.000	0.000	0.000	0.000	0.463	0.077	0.433	0.557	1.178	1.238	1.086	1.380	0.866	0.767	0.400	0.109	0.536	0.536	0.422	0.117	0.000	0.000	0.000
<b>Golongan C</b>	0.000	0.000	0.000	0.000	0.000	0.845	0.351	0.119	0.080	1.173	1.378	1.251	1.233	1.286	1.030	0.758	0.029	0.378	0.498	0.536	0.278	0.000	0.000	0.000
average	0.000	0.000	0.000	0.000	0.000	0.506	0.273	0.492	0.399	1.129	1.230	1.192	1.191	0.922	0.736	0.564	0.113	0.495	0.485	0.391	0.135	0.000	0.000	0.000

(E=0.85*0.81)	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
<b>Golongan A</b>	0.000	0.000	0.000	0.000	0.000	0.215	0.402	0.952	0.578	1.068	1.105	1.274	0.988	0.632	0.424	0.551	0.207	0.586	0.434	0.222	0.011	0.000	0.000	0.000
<b>Golongan B</b>	0.000	0.000	0.000	0.000	0.000	0.477	0.079	0.445	0.573	1.212	1.275	1.118	1.421	0.892	0.789	0.411	0.112	0.552	0.552	0.434	0.121	0.000	0.000	0.000
<b>Golongan C</b>	0.000	0.000	0.000	0.000	0.000	0.869	0.362	0.122	0.082	1.207	1.419	1.288	1.269	1.324	1.061	0.781	0.030	0.390	0.512	0.552	0.286	0.000	0.000	0.000
average	0.000	0.000	0.000	0.000	0.000	0.520	0.281	0.507	0.411	1.163	1.266	1.227	1.226	0.949	0.758	0.581	0.116	0.509	0.499	0.403	0.139	0.000	0.000	0.000

Summary Calculation of NFR (l/s/ha)

	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
<b>Golongan A</b>	0.00	0.00	0.00	0.00	0.00	0.15	0.28	0.66	0.40	0.74	0.76	0.88	0.68	0.44	0.29	0.38	0.14	0.40	0.30	0.15	0.01	0.00	0.00	0.00
<b>Golongan B</b>	0.00	0.00	0.00	0.00	0.00	0.33	0.05	0.31	0.39	0.83	0.88	0.77	0.98	0.61	0.54	0.28	0.08	0.38	0.38	0.30	0.08	0.00	0.00	0.00
<b>Golongan C</b>	0.00	0.00	0.00	0.00	0.00	0.60	0.25	0.08	0.06	0.83	0.98	0.89	0.87	0.91	0.73	0.54	0.02	0.27	0.35	0.38	0.20	0.00	0.00	0.00

1984

	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
I : W.Pad	0.00	0.00	0.00	0.00	0.00	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
A	0.00	0.00	0.00	0.00	0.00	0.33	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B	0.00	0.00	0.00	0.00	0.00	0.60	0.25	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C	0.00	0.00	0.00	0.00	0.00	0.36	0.10	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
av	0.00	0.00	0.00	0.00	0.00	0.36	0.10	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
II : D.Pad	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.66	0.40	0.74	0.76	0.88	0.68	0.41	0.12	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.31	0.39	0.83	0.88	0.77	0.98	0.61	0.50	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.06	0.83	0.98	0.89	0.87	0.91	0.73	0.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.32	0.28	0.80	0.87	0.84	0.84	0.64	0.45	0.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
av	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.32	0.28	0.80	0.87	0.84	0.84	0.64	0.45	0.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
III : D.Pal	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.18	0.35	0.14	0.40	0.30	0.15	0.01	0.00	0.00	0.00
A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.17	0.08	0.38	0.38	0.30	0.08	0.00	0.00	0.00
B	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.17	0.08	0.38	0.38	0.30	0.08	0.00	0.00	0.00
C	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.02	0.27	0.35	0.38	0.20	0.00	0.00	0.00	0.00
av	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.07	0.19	0.08	0.35	0.34	0.28	0.10	0.00	0.00	0.00
I : W.Pad	0.00	0.00	0.00	0.00	0.00	0.36	0.10	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
II : D.Pad	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.32	0.28	0.80	0.87	0.84	0.84	0.64	0.45	0.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
III : D.Pal	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.07	0.19	0.08	0.35	0.34	0.28	0.10	0.00	0.00	0.00

1984

I : W.Pad	100	0.000	0.000	0.000	0.000	0.358	0.101	0.028	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
II : D.Pad	100	0.000	0.000	0.000	0.000	0.000	0.092	0.321	0.283	0.800	0.872	0.845	0.844	0.644	0.448	0.212	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
III : D.Pal	100	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.010	0.074	0.188	0.080	0.351	0.344	0.277	0.096	0.000	0.000	0.000
total		0.000	0.000	0.000	0.000	0.000	0.358	0.194	0.349	0.283	0.800	0.872	0.845	0.844	0.654	0.522	0.400	0.080	0.351	0.344	0.277	0.096	0.000	0.000
		0	0	0	0	0.17916	0.27112	0.54176	0.8581	0.74892	0.46091	0.21544	0.31052	0.04796	0									

Year : 1984

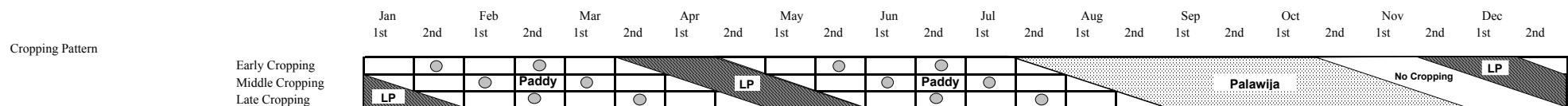
N.F.R. (l/s/ha)

	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
	0.000	0.000	0.000	0.000	0.000	0.358	0.194	0.349	0.283	0.800	0.872	0.845	0.844	0.654	0.522	0.400	0.080	0.351	0.344	0.277	0.096	0.000	0.000	0.000



Net Field Requirement for Water Balance Calculation in 1985 (2/7)

Calculation of Net Field Water Requirement for Palawija(A)



A. Crop Water Requirement

	Jan 1st	Jan 2nd	Feb 1st	Feb 2nd	Mar 1st	Mar 2nd	Apr 1st	Apr 2nd	May 1st	May 2nd	Jun 1st	Jun 2nd	Jul 1st	Jul 2nd	Aug 1st	Aug 2nd	Sep 1st	Sep 2nd	Oct 1st	Oct 2nd	Nov 1st	Nov 2nd	Dec 1st	Dec 2nd	
1. Crop Intensity																									
Early Cropping															1/6	1/3	1/3	1/3	1/3	1/3	1/3	1/6			
Middle Cropping																1/6	1/3	1/3	1/3	1/3	1/3	1/6			
Late Cropping																	1/6	1/3	1/3	1/3	1/3	1/3	1/6		
Total															1/6	1/2	5/6	1	1	1	5/6	1/2	1/6		
2. Crop Coefficient																									
Early Cropping															0.50	0.70	0.95	1.00	0.85	0.50	0.15				
Middle Cropping																0.50	0.70	0.95	1.00	0.85	0.50	0.15			
Late Cropping																	0.50	0.70	0.95	1.00	0.85	0.50	0.15		
Weighted average															0.50	0.63	0.76	0.88	0.93	0.78	0.57	0.38	0.15		
3. Potential ETo (mm/day/A)		3.89	3.89	3.76	3.76	4.34	4.34	4.14	4.14	4.12	4.12	3.88	3.88	4.05	4.05	4.51	4.51	5.27	5.27	5.05	5.05	4.52	4.52	3.95	3.95
4. Consumptive Use, ETc (mm/day/A)															2.03	2.86	3.43	4.65	4.92	3.95	2.88	1.73	0.68		
5. Rainfall (mm/day)		10.79	18.37	10.92	12.18	29.00	0.64	7.99	3.10	4.70	1.80	1.96	0.01	0.79	1.22	0.00	0.32	0.00	2.36	0.11	1.58	3.60	7.47	5.34	6.50
6. Effective Rainfall (mm/day/A)															0.80	0.00	0.26	0.00	1.77	0.10	1.08	1.73	0.68		
7. Crop water Requirement (mm/day/A)															1.23	2.86	3.17	4.65	3.14	3.85	1.80	0.00	0.00		
B. Net Field Water Requirement (mm/day)															0.20	1.43	2.64	4.65	3.14	3.85	1.50	0.00	0.00		
(l/sec/ha)															0.024	0.165	0.306	0.539	0.364	0.446	0.174	0.000	0.000		

	Jan 1st	Jan 2nd	Feb 1st	Feb 2nd	Mar 1st	Mar 2nd	Apr 1st	Apr 2nd	May 1st	May 2nd	Jun 1st	Jun 2nd	Jul 1st	Jul 2nd	Aug 1st	Aug 2nd	Sep 1st	Sep 2nd	Oct 1st	Oct 2nd	Nov 1st	Nov 2nd	Dec 1st	Dec 2nd
Net Field Water Requirement for Paddy	0.175	0.000	0.000	0.000	0.000	0.428	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.256	0.514
Net Field Water Requirement for Palawija	0.000	0.000	0.000	0.000	0.000	0.183	0.049	0.804	0.694	0.837	0.680	0.944	0.609	0.371	0.116	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100 I	0.175	0.000	0.000	0.000	0.000	0.428	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.256	0.514
100 II	0.000	0.000	0.000	0.000	0.000	0.183	0.049	0.804	0.694	0.837	0.680	0.944	0.609	0.371	0.116	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100 III	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.024	0.165	0.306	0.539	0.364	0.446	0.174	0.000	0.000	0.000	0.000
<b>Total NWR</b> (l/s/ha)	0.175	0.000	0.000	0.000	0.000	0.611	0.049	0.804	0.694	0.837	0.680	0.944	0.609	0.394	0.281	0.318	0.539	0.364	0.446	0.174	0.000	0.000	0.256	0.514
<b>DR</b> (E=0.875*0.81)	0.248	0.000	0.000	0.000	0.000	0.862	0.069	1.135	0.979	1.181	0.959	1.331	0.860	0.557	0.397	0.449	0.760	0.513	0.629	0.245	0.000	0.000	0.361	0.725
0.85    0.81    0.6885	0.255	0.000	0.000	0.000	0.000	0.887	0.071	1.168	1.007	1.216	0.987	1.370	0.885	0.573	0.408	0.462	0.782	0.529	0.647	0.252	0.000	0.000	0.371	0.746

Net Field Requirement for Water Balance Calculation in 1985 (3/7)

[Kampili Rotation B]

Calculation of Net Field Water Requirement for Paddy(B) on

1985

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec					
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd				
<b>Cropping Pattern</b>																													
<b>A. Land Preparation Requirement</b>																													
1. Land Preparation Intensity																													
Early Cropping		1/6						1/6		1/3		1/6												1/6		1/3			
Middle Cropping		1/3		1/6								1/6		1/3		1/6													
Late Cropping		1/6		1/3		1/6								1/6		1/3		1/6											
Total		2/3		1/2		1/6						1/6		1/2		1/6										1/6		1/2	
2. Land Preparation Requirement (mm/day/A)		11.86	11.86	11.77	11.77	12.17	12.17	12.04	12.04	12.02	12.02	11.85	11.85	11.98	11.98	12.30	12.30	12.83	12.83	12.67	12.67	12.30	12.30	11.90	11.90	11.90	11.90		
3. Water Layer Replacement Intensity (mm/day)		7.91	5.93	1.96	0.00	0.00	0.00	2.01	6.02	8.02	6.01	1.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.98	5.95		
4. Water Layer Replacement Requirement (mm/day/A)				3.33		3.33		3.33		3.33				3.33		3.33		3.33		3.33									
5. Total Requirement for Land Preparation (mm/day)				1.11		2.22		1.11		1.11				1.11		1.11		1.11		1.11									
I		7.91	5.93	3.07	1.11	2.22	1.11	1.11										0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.98	5.95			
II								2.01	6.02	8.02	6.01	3.09	1.11	2.22	1.11	1.11													
<b>B. Crop Water Requirement</b>																													
1. Crop Intensity																													
Early Cropping		1/6	1/3	1/3	1/3	1/3	1/3	1/6	1/6	1/3	1/3	1/3	1/3	1/3	1/3	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/6		
Middle Cropping			1/6	1/3	1/3	1/3	1/3	1/3	1/6	1/6	1/3	1/3	1/3	1/3	1/3	1/3	1/3	1/3	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/6		
Late Cropping				1/6	1/3	1/3	1/3	1/3	1/6	1/6	1/3	1/3	1/3	1/3	1/3	1/3	1/3	1/3	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/6		
Total		1/6	1/2	5/6	1	1	1	5/6	1/2	1/6	1/6	1/2	5/6	1	1	1	5/6	1/2	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/6			
I																													
II									1/6	1/2	5/6	1	1	1	5/6	1/2	1/6												
2. Crop Coefficient																													
Early Cropping		1.10	1.10	1.05	1.05	0.95	0.00	0.00	1.10	1.10	1.05	1.05	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Middle Cropping			1.10	1.10	1.05	1.05	0.95	0.00	0.00	1.10	1.10	1.05	1.05	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
Late Cropping				1.10	1.10	1.05	1.05	0.95	0.00	0.00	1.10	1.10	1.05	1.05	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
Weighted average		1.10	1.10	1.08	1.07	1.02	0.67	0.38	0.00	0.00	1.10	1.10	1.08	1.07	1.02	0.67	0.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
I																													
II									1.10	1.10	1.08	1.07	1.02	0.67	0.38	0.00	0.00												
3. Potential ETo (mm/day/A)		3.89	3.89	3.76	3.76	4.34	4.34	4.14	4.14	4.12	4.12	3.88	3.88	4.05	4.05	4.51	4.51	5.27	5.27	5.05	5.05	4.52	4.52	3.95	3.95				
4. Consumptive Use, ETc (mm/day/A)		4.27	4.27	4.06	4.01	4.41	2.89	1.57	0.00	0.00	4.54	4.54	4.19	4.13	4.12	2.70	1.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				
I																													
II									4.54	4.54	4.19	4.13	4.12	2.70	1.72	0.00	0.00												
5. Percolation Loss (mm/day/A)		2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00				
6. Crop Water Requirement (mm/day/A)		6.27	6.27	6.06	6.01	6.41	4.89	3.57	2.00	2.00	6.54	6.54	6.19	6.13	6.12	4.70	3.72	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00				
I																													
II									6.54	6.54	6.19	6.13	6.12	4.70	3.72	2.00	2.00												
7. Crop water Requirement (mm/day)		1.05	3.14	5.05	6.01	6.41	4.89	2.98	1.00	0.33	3.27	5.15	6.13	6.12	4.70	3.10	1.00	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00				
I																													
II									1.09	3.27	5.15	6.13	6.12	4.70	3.10	1.00	0.33												
C. Total A(5)+B(7) (mm/day)		8.95	9.07	8.12	7.12	8.63	6.00	4.09	1.00	0.33	3.27	5.15	6.13	6.12	4.70	3.10	1.00	0.33	0.00	0.00	0.00	0.00	0.00	1.98	5.95				
I																													
II								2.01	6.02	9.11	9.28	8.24	7.24	8.34	5.81	4.21	1.00	0.33											
D. Effective Rainfall (mm/day)		7.55	12.86	7.65	8.53	20.30	0.45	5.59	2.17	3.29	1.26	1.37	0.01	0.55	0.86	0.00	0.23	0.00	1.65	0.08	1.11	2.52	5.23	3.74	4.55				
E. Net field Water Requirement, NFR (mm/day)		1.40	-3.79	0.48	-1.41	-11.67	5.55	-1.51	-1.17	-2.95	8.02	6.87	7.24	7.79	4.96	4.21	0.77	0.33	-1.65	-0.08	-1.11	-2.52	-5.23	-1.76	1.40				
I																													
II								-3.59	3.85	5.82	8.02	6.87	7.24	7.79	4.96	4.21	0.77	0.33											
I		1.40	0.00	0.48	0.00	0.00	5.55	0.00	0.00	0.00	8.02	6.87	7.24	7.79	4.96	4.21	0.77	0.33						0.00	1.40				
II								0.00	3.85	5.82	8.02	6.87	7.24	7.79	4.96	4.21	0.77	0.33											
I		0.162	0.000	0.055	0.000	0.000	0.643	0.000	0.000	0.000	0.928	0.795	0.837	0.902	0.574	0.487	0.090	0.039						0.000	0.162				
II								0.000	0.445	0.673	0.928	0.795	0.837	0.902	0.574	0.487	0.090	0.039											

Net Field Requirement for Water Balance Calculation in 1985 (4/7)

Calculation of Net Field Water Requirement for Palawija(B)

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
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colspan="24"></td> </tr> <tr> <td colspan="2">  Late Cropping</td> <td colspan="24"></td> </tr> <tr> <td colspan="2">  Total</td> <td colspan="24"></td> </tr> <tr> <td colspan="2">2.Crop Coefficient</td> <td colspan="24"></td> </tr> <tr> <td colspan="2">  Early Cropping</td> <td colspan="24"></td> </tr> <tr> <td colspan="2">  Middle Cropping</td> <td colspan="24"></td> </tr> <tr> <td colspan="2">  Late Cropping</td> <td colspan="24"></td> </tr> <tr> <td colspan="2">  Weighted average</td> <td colspan="24"></td> </tr> <tr> <td colspan="2">3.Potential ETo (mm/day/A)</td> <td>3.89</td><td>3.89</td><td>3.76</td><td>3.76</td><td>4.34</td><td>4.34</td><td>4.14</td><td>4.14</td><td>4.12</td><td>4.12</td><td>3.88</td><td>3.88</td><td>4.05</td><td>4.05</td><td>4.51</td><td>4.51</td><td>5.27</td><td>5.27</td><td>5.05</td><td>5.05</td><td>4.52</td><td>4.52</td><td>3.95</td><td>3.95</td> </tr> <tr> <td colspan="2">4.Consumptive Use, ETc (mm/day/A)</td> <td>2.26</td><td>2.86</td><td>4.00</td><td>4.65</td><td>4.71</td><td>3.95</td><td>2.57</td><td>1.73</td><td>0.59</td> <td colspan="14"></td> </tr> <tr> <td colspan="2">5.Rainfall (mm/day)</td> <td>10.79</td><td>18.37</td><td>10.92</td><td>12.18</td><td>29.00</td><td>0.64</td><td>7.99</td><td>3.10</td><td>4.70</td><td>1.80</td><td>1.96</td><td>0.01</td><td>0.79</td><td>1.22</td><td>0.00</td><td>0.32</td><td>0.00</td><td>2.36</td><td>0.11</td><td>1.58</td><td>3.60</td><td>7.47</td><td>5.34</td><td>6.50</td> </tr> <tr> <td colspan="2">6.Effective Rainfall (mm/day/A)</td> <td colspan="24">0.00</td> </tr> <tr> <td colspan="2">7.Crop water Requirement (mm/day)</td> <td colspan="24">2.26</td> </tr> <tr> <td colspan="2">B.Net Field Water Requirement (mm/day)</td> <td colspan="24">0.38</td> </tr> <tr> <td colspan="2">(l/sec/ha)</td> <td colspan="24">0.044</td> </tr> <tr> <td colspan="2">III</td> <td colspan="24"></td> </tr> <tr> <td colspan="2"></td> <td colspan="24"> <table border="1"> <thead> 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<td>0.162</td><td>0.000</td><td>0.055</td><td>0.000</td><td>0.000</td><td>0.643</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.162</td> </tr> <tr> <td colspan="2">Net Field Water Requirement for Palawija</td> <td colspan="24">0.000</td> </tr> <tr> <td colspan="2">  100 I</td> <td>0.162</td><td>0.000</td><td>0.055</td><td>0.000</td><td>0.000</td><td>0.643</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.162</td> </tr> <tr> <td colspan="2">  100 II</td> 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average																										3.Potential ETo (mm/day/A)		3.89	3.89	3.76	3.76	4.34	4.34	4.14	4.14	4.12	4.12	3.88	3.88	4.05	4.05	4.51	4.51	5.27	5.27	5.05	5.05	4.52	4.52	3.95	3.95	4.Consumptive Use, ETc (mm/day/A)		2.26	2.86	4.00	4.65	4.71	3.95	2.57	1.73	0.59															5.Rainfall (mm/day)		10.79	18.37	10.92	12.18	29.00	0.64	7.99	3.10	4.70	1.80	1.96	0.01	0.79	1.22	0.00	0.32	0.00	2.36	0.11	1.58	3.60	7.47	5.34	6.50	6.Effective Rainfall (mm/day/A)		0.00																								7.Crop water Requirement (mm/day)		2.26																								B.Net Field Water Requirement (mm/day)		0.38																								(l/sec/ha)		0.044																								III																												<table border="1"> <thead> <tr> <th colspan="2"></th> <th colspan="2">Jan</th> <th colspan="2">Feb</th> <th colspan="2">Mar</th> <th colspan="2">Apr</th> <th colspan="2">May</th> <th colspan="2">Jun</th> <th colspan="2">Jul</th> <th colspan="2">Aug</th> <th colspan="2">Sep</th> <th colspan="2">Oct</th> <th 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Paddy		0.162	0.000	0.055	0.000	0.000	0.643	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.162	Net Field Water Requirement for Palawija		0.000																								100 I		0.162	0.000	0.055	0.000	0.000	0.643	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.162	100 II		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.445	0.673	0.928	0.795	0.837	0.902	0.574	0.487	0.090	0.039	0.000	0.000	0.000	0.000	0.000	0.000	0.000	100 III		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.044	0.151	0.386	0.337	0.533	0.324	0.032	0.000	0.000	<b>Total NWR</b> (l/s/ha)		0.162	0.000	0.055	0.000	0.000	0.643	0.000	0.445	0.673	0.928	0.795	0.837	0.902	0.574	0.530	0.241	0.425	0.337	0.533	0.324	0.032	0.000	0.162	<b>DR</b> (E=0.875*0.81)		0.229	0.000	0.078	0.000	0.000	0.907	0.000	0.629	0.950	1.310	1.122	1.182	1.273	0.809	0.748	0.339	0.599	0.475	0.751	0.457	0.046	0.000	0.228	0.85 0.81 0.6885		0.236	0.000	0.080	0.000	0.000	0.933	0.000	0.647	0.978	1.348	1.155	1.216	1.310	0.833	0.770	0.349	0.617	0.489	0.774	0.470	0.047	0.000	0.235
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<td>0.236</td><td>0.000</td><td>0.080</td><td>0.000</td><td>0.000</td><td>0.933</td><td>0.000</td><td>0.647</td><td>0.978</td><td>1.348</td><td>1.155</td><td>1.216</td><td>1.310</td><td>0.833</td><td>0.770</td><td>0.349</td><td>0.617</td><td>0.489</td><td>0.774</td><td>0.470</td><td>0.047</td><td>0.000</td><td>0.235</td> </tr> </tbody> </table>																										Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec				1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	Net Field Water Requirement for Paddy		0.162	0.000	0.055	0.000	0.000	0.643	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.162	Net Field Water Requirement for Palawija		0.000																								100 I		0.162	0.000	0.055	0.000	0.000	0.643	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.162	100 II		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.445	0.673	0.928	0.795	0.837	0.902	0.574	0.487	0.090	0.039	0.000	0.000	0.000	0.000	0.000	0.000	0.000	100 III		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.044	0.151	0.386	0.337	0.533	0.324	0.032	0.000	0.000	<b>Total NWR</b> (l/s/ha)		0.162	0.000	0.055	0.000	0.000	0.643	0.000	0.445	0.673	0.928	0.795	0.837	0.902	0.574	0.530	0.241	0.425	0.337	0.533	0.324	0.032	0.000	0.162	<b>DR</b> (E=0.875*0.81)		0.229	0.000	0.078	0.000	0.000	0.907	0.000	0.629	0.950	1.310	1.122	1.182	1.273	0.809	0.748	0.339	0.599	0.475	0.751	0.457	0.046	0.000	0.228	0.85 0.81 0.6885		0.236	0.000	0.080	0.000	0.000	0.933	0.000	0.647	0.978	1.348	1.155	1.216	1.310	0.833	0.770	0.349	0.617	0.489	0.774	0.470	0.047	0.000	0.235																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
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Net Field Requirement for Water Balance Calculation in 1985 (6/7)

Calculation of Net Field Water Requirement for Palawija(C)

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec		
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	
Cropping Pattern	Early Cropping																									
	Middle Cropping																									
	Late Cropping																									
	No Cropping																									
A.Crop Water Requirement																										
1.Crop Intensity																										
Early Cropping																										
Middle Cropping																										
Late Cropping																										
Total																										
2.Crop Coefficient																										
Early Cropping																										
Middle Cropping																										
Late Cropping																										
Weighted average																										
3.Potential ETo (mm/day/A)		3.89	3.89	3.76	3.76	4.34	4.34	4.14	4.14	4.12	4.12	3.88	3.88	4.05	4.05	4.51	4.51	5.27	5.27	5.05	5.05	4.52	4.52	3.95	3.95	
4.Consumptive Use, ETc (mm/day/A)																		2.26	3.34	4.00	4.46	4.71	3.54	2.57	1.51	0.59
5.Rainfall (mm/day)		10.79	18.37	10.92	12.18	29.00	0.64	7.99	3.10	4.70	1.80	1.96	0.01	0.79	1.22	0.00	0.32	0.00	2.36	0.11	1.58	3.60	7.47	5.34	6.50	
6.Effective Rainfall (mm/day/A)																		0.24	0.00	1.67	0.11	1.21	2.39	2.57	1.51	0.59
7.Crop water Requirement (mm/day/A)																		2.02	3.34	2.33	4.35	3.50	1.15	0.00	0.00	0.00
B.Net Field Water Requirement (mm/day)																		0.34	1.67	1.94	4.35	3.50	1.15	0.00	0.00	0.00
(l/sec/ha)																		0.039	0.193	0.225	0.504	0.405	0.133	0.000	0.000	0.000
		III																								
Net Field Water Requirement for Paddy		0.000	0.000	0.151	0.000	0.000	0.947	0.032	0.222	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Net Field Water Requirement for Palawija		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.039	0.193	0.225	0.504	0.405	0.133	0.000	0.000	0.000	0.000
100 I		0.000	0.000	0.151	0.000	0.000	0.947	0.032	0.222	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100 II		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100 III		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.039	0.193	0.225	0.504	0.405	0.133	0.000	0.000	0.000	0.000
<b>Total NWR</b> (l/s/ha)		0.000	0.000	0.151	0.000	0.000	0.947	0.032	0.222	0.315	0.908	0.890	0.953	0.797	0.866	0.708	0.500	0.309	0.225	0.504	0.405	0.133	0.000	0.000	0.000	0.000
<b>DR</b> (E=0.875*0.81)		0.000	0.000	0.214	0.000	0.000	1.336	0.045	0.313	0.445	1.281	1.255	1.344	1.124	1.222	0.999	0.705	0.436	0.317	0.711	0.571	0.187	0.000	0.000	0.000	0.000
0.85 0.81 0.6885		0.000	0.000	0.220	0.000	0.000	1.375	0.047	0.323	0.458	1.319	1.292	1.384	1.157	1.258	1.029	0.726	0.449	0.326	0.731	0.588	0.193	0.000	0.000	0.000	0.000

Net Field Requirement for Water Balance Calculation in 1985 (7/7)

(E=0.875*0.81)	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
<b>Golongan A</b>	0.248	0.000	0.000	0.000	0.000	0.862	0.069	1.135	0.979	1.181	0.959	1.331	0.860	0.557	0.397	0.449	0.760	0.513	0.629	0.245	0.000	0.000	0.361	0.725
<b>Golongan B</b>	0.229	0.000	0.078	0.000	0.000	0.907	0.000	0.629	0.950	1.310	1.122	1.182	1.273	0.809	0.748	0.339	0.599	0.475	0.751	0.457	0.046	0.000	0.000	0.228
<b>Golongan C</b>	0.000	0.000	0.214	0.000	0.000	1.336	0.045	0.313	0.445	1.281	1.255	1.344	1.124	1.222	0.999	0.705	0.436	0.317	0.711	0.571	0.187	0.000	0.000	0.000
average	0.159	0.000	0.097	0.000	0.000	1.035	0.038	0.692	0.791	1.257	1.112	1.286	1.086	0.863	0.715	0.498	0.598	0.435	0.697	0.424	0.078	0.000	0.120	0.318

(E=0.85*0.81)	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
<b>Golongan A</b>	0.255	0.000	0.000	0.000	0.000	0.887	0.071	1.168	1.007	1.216	0.987	1.370	0.885	0.573	0.408	0.462	0.782	0.529	0.647	0.252	0.000	0.000	0.371	0.746
<b>Golongan B</b>	0.236	0.000	0.080	0.000	0.000	0.933	0.000	0.647	0.978	1.348	1.155	1.216	1.310	0.833	0.770	0.349	0.617	0.489	0.774	0.470	0.047	0.000	0.000	0.235
<b>Golongan C</b>	0.000	0.000	0.220	0.000	0.000	1.375	0.047	0.323	0.458	1.319	1.292	1.384	1.157	1.258	1.029	0.726	0.449	0.326	0.731	0.588	0.193	0.000	0.000	0.000
average	0.164	0.000	0.100	0.000	0.000	1.065	0.039	0.713	0.814	1.294	1.145	1.324	1.117	0.888	0.736	0.512	0.616	0.448	0.717	0.437	0.080	0.000	0.124	0.327

Summary Calculation of NFR (l/s/ha)

	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
<b>Golongan A</b>	0.18	0.00	0.00	0.00	0.00	0.61	0.05	0.80	0.69	0.84	0.68	0.94	0.61	0.39	0.28	0.32	0.54	0.36	0.45	0.17	0.00	0.00	0.26	0.51
<b>Golongan B</b>	0.16	0.00	0.06	0.00	0.00	0.64	0.00	0.45	0.67	0.93	0.79	0.84	0.90	0.57	0.53	0.24	0.42	0.34	0.53	0.32	0.03	0.00	0.00	0.16
<b>Golongan C</b>	0.00	0.00	0.15	0.00	0.00	0.95	0.03	0.22	0.32	0.91	0.89	0.95	0.80	0.87	0.71	0.50	0.31	0.22	0.50	0.40	0.13	0.00	0.00	0.00

1985

	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec		
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	
I : W.Pad	A	0.18	0.00	0.00	0.00	0.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.51
	B	0.16	0.00	0.06	0.00	0.00	0.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
	C	0.00	0.00	0.15	0.00	0.00	0.95	0.03	0.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	av	0.11	0.00	0.07	0.00	0.00	0.67	0.01	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.23
II : D.Pad	A	0.00	0.00	0.00	0.00	0.00	0.18	0.05	0.80	0.69	0.84	0.68	0.94	0.61	0.37	0.12	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	B	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.45	0.67	0.93	0.79	0.84	0.90	0.57	0.49	0.09	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	C	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32	0.91	0.89	0.95	0.80	0.87	0.71	0.46	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	av	0.00	0.00	0.00	0.00	0.00	0.06	0.02	0.42	0.56	0.89	0.79	0.91	0.77	0.60	0.44	0.19	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00
III : D.Pal	A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.17	0.31	0.54	0.36	0.45	0.17	0.00	0.00	0.00	0.00
	B	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.15	0.39	0.34	0.53	0.32	0.03	0.00	0.00	0.00
	C	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.19	0.22	0.50	0.40	0.13	0.00	0.00	0.00	0.00
	av	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.07	0.17	0.37	0.31	0.49	0.30	0.06	0.00	0.00	0.00
I : W.Pad		0.11	0.00	0.07	0.00	0.00	0.67	0.01	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.23
II : D.Pad		0.00	0.00	0.00	0.00	0.00	0.06	0.02	0.42	0.56	0.89	0.79	0.91	0.77	0.60	0.44	0.19	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00
III : D.Pal		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.07	0.17	0.37	0.31	0.49	0.30	0.06	0.00	0.00	0.00

1985

I : W.Pad	100	0.113	0.000	0.069	0.000	0.000	0.673	0.011	0.074	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.085	0.225
II : D.Pad	100	0.000	0.000	0.000	0.000	0.000	0.061	0.016	0.417	0.561	0.891	0.788	0.911	0.769	0.604	0.437	0.188	0.051	0.000	0.000	0.000	0.000	0.000	0.000	0.000
III : D.Pal	100	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.008	0.070	0.165	0.373	0.308	0.494	0.301	0.055	0.000	0.000	0.000	0.000
total		0.113	0.000	0.069	0.000	0.000	0.733	0.027	0.491	0.561	0.891	0.788	0.911	0.769	0.611	0.507	0.353	0.424	0.308	0.494	0.301	0.055	0.000	0.085	0.225
		0.05629		0.0344		0.36669		0.25886		0.72593		0.84966		0.69042		0.42965		0.36622		0.39735		0.02753		0.15521	

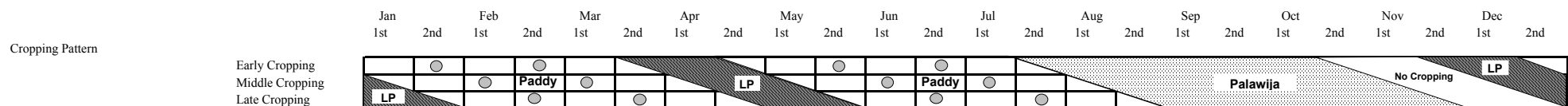
Year : 1985

N.F.R. (l/s/ha)	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
	0.113	0.000	0.069	0.000	0.000	0.733	0.027	0.491	0.561	0.891	0.788	0.911	0.769	0.611	0.507	0.353	0.424	0.308	0.494	0.301	0.055	0.000	0.085	0.225



Net Field Requirement for Water Balance Calculation in 1986 (2/7)

Calculation of Net Field Water Requirement for Palawija(A)



A. Crop Water Requirement

	Jan 1st	Jan 2nd	Feb 1st	Feb 2nd	Mar 1st	Mar 2nd	Apr 1st	Apr 2nd	May 1st	May 2nd	Jun 1st	Jun 2nd	Jul 1st	Jul 2nd	Aug 1st	Aug 2nd	Sep 1st	Sep 2nd	Oct 1st	Oct 2nd	Nov 1st	Nov 2nd	Dec 1st	Dec 2nd
1. Crop Intensity																								
Early Cropping																	1/6	1/3	1/3	1/3	1/3	1/3	1/6	
Middle Cropping																		1/6	1/3	1/3	1/3	1/3	1/6	
Late Cropping																			1/6	1/3	1/3	1/3	1/6	
Total																	1/6	1/2	5/6	1	1	1	5/6	1/2
2. Crop Coefficient																								
Early Cropping																	0.50	0.70	0.95	1.00	0.85	0.50	0.15	
Middle Cropping																		0.50	0.70	0.95	1.00	0.85	0.50	0.15
Late Cropping																			0.50	0.70	0.95	1.00	0.85	0.50
Weighted average																	0.50	0.63	0.76	0.88	0.93	0.78	0.57	0.38
3. Potential ETo (mm/day/A)		3.71	3.71	3.89	3.89	3.89	3.89	4.23	4.23	4.48	4.48	3.82	3.82	3.96	3.96	5.01	5.01	5.44	5.44	4.93	4.93	4.53	4.53	4.55
4. Consumptive Use, ETc (mm/day/A)															1.98	3.17	3.81	4.80	5.07	3.87	2.81	1.74	0.68	
5. Rainfall (mm/day)	35.63	20.54	12.39	10.31	11.35	9.62	7.28	1.41	1.92	0.04	2.81	0.59	0.53	0.94	0.03	0.00	0.00	0.44	3.44	2.59	4.80	7.66	6.76	
6. Effective Rainfall (mm/day/A)															0.63	0.03	0.00	0.00	0.38	2.35	1.69	1.74	0.68	
7. Crop water Requirement (mm/day/A)															1.36	3.15	3.81	4.80	4.69	1.52	1.13	0.00	0.00	
B. Net Field Water Requirement (mm/day)															0.23	1.57	3.17	4.80	4.69	1.52	0.94	0.00	0.00	
(I/sec/ha)															0.026	0.182	0.367	0.556	0.543	0.176	0.109	0.000	0.000	

	Jan 1st	Jan 2nd	Feb 1st	Feb 2nd	Mar 1st	Mar 2nd	Apr 1st	Apr 2nd	May 1st	May 2nd	Jun 1st	Jun 2nd	Jul 1st	Jul 2nd	Aug 1st	Aug 2nd	Sep 1st	Sep 2nd	Oct 1st	Oct 2nd	Nov 1st	Nov 2nd	Dec 1st	Dec 2nd
Net Field Water Requirement for Paddy	0.000	0.000	0.000	0.111	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.165
Net Field Water Requirement for Palawija																								
100 I	0.000	0.000	0.000	0.111	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.165
100 II	0.000	0.000	0.000	0.000	0.000	0.000	0.111	0.948	0.956	1.021	0.604	0.890	0.623	0.391	0.113	0.039	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100 III	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.026	0.182	0.367	0.556	0.543	0.176	0.109	0.000	0.000	0.000	0.000
<b>Total NWR</b> (l/s/ha)	0.000	0.000	0.000	0.111	0.000	0.000	0.111	0.948	0.956	1.021	0.604	0.890	0.623	0.417	0.296	0.406	0.556	0.543	0.176	0.109	0.000	0.000	0.165	0.435
<b>DR</b> (E=0.875*0.81)	0.000	0.000	0.000	0.156	0.000	0.000	0.156	1.338	1.348	1.441	0.852	1.256	0.879	0.588	0.417	0.573	0.784	0.766	0.248	0.153	0.000	0.000	0.233	0.613
0.85    0.81    0.6885	0.000	0.000	0.000	0.161	0.000	0.000	0.161	1.377	1.388	1.483	0.877	1.293	0.905	0.605	0.429	0.589	0.807	0.789	0.256	0.158	0.000	0.000	0.240	0.632

Net Field Requirement for Water Balance Calculation in 1986 (3/7)

[Kampili Rotation B]

Calculation of Net Field Water Requirement for Paddy(B) on 1986

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec					
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd				
<b>Cropping Pattern</b>																													
		<p>Early Cropping</p> <p>Middle Cropping</p> <p>Late Cropping</p>																											
<b>A. Land Preparation Requirement</b>																													
1. Land Preparation Intensity																													
Early Cropping		1/6						1/6		1/3		1/6												1/6		1/3			
Middle Cropping		1/3		1/6						1/6		1/3		1/6														1/6	
Late Cropping		1/6		1/3		1/6						1/6		1/3		1/6												1/6	
Total		2/3		1/2		1/6				1/6		1/2		2/3		1/6										1/6		1/2	
2. Land Preparation Requirement (mm/day/A)		11.74	11.74	11.86	11.86	11.86	11.86	12.10	12.10	12.27	12.27	11.82	11.82	11.91	11.91	12.64	12.64	12.95	12.95	12.59	12.59	12.30	12.30	12.32	12.32	12.32	12.32		
3. Water Layer Replacement Intensity (mm/day)		7.83	5.87	1.98	0.00	0.00	0.00	2.02	6.05	8.18	6.14	1.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.05	6.16		
4. Water Layer Replacement Requirement (mm/day/A)				3.33	3.33	3.33	3.33	3.33	3.33			3.33	3.33	3.33	3.33	3.33													
5. Total Requirement for Land Preparation (mm/day)				1.11	1.11	2.22	1.11	1.11	1.11			1.11	1.11	2.22	1.11	1.11													
I (mm/day)		7.83	5.87	3.09	1.11	2.22	1.11	1.11									0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.05	6.16			
II (mm/day)								2.02	6.05	8.18	6.14	3.08	1.11	2.22	1.11	1.11													
<b>B. Crop Water Requirement</b>																													
1. Crop Intensity																													
Early Cropping		1/6	1/3	1/3	1/3	1/3	1/3	1/6	1/6	1/3	1/3	1/3	1/3	1/3	1/3	1/6													
Middle Cropping		1/6		1/3	1/3	1/3	1/3	1/3	1/6	1/6	1/3	1/3	1/3	1/3	1/3	1/3	1/6												
Late Cropping		1/6		1/6	1/3	1/3	1/3	1/3	1/6	1/6	1/3	1/3	1/3	1/3	1/3	1/3	1/3	1/3	1/6										
Total		1/6	1/2	5/6	1	1	1	5/6	1/2	1/6	1/2	5/6	1	1	1	5/6	1/2	1/6											
I																													
II										1/6	1/2	5/6	1	1	1	5/6	1/2	1/6											
2. Crop Coefficient																													
Early Cropping		1.10	1.10	1.05	1.05	0.95	0.00	0.00	1.10	1.10	1.05	1.05	0.95	0.00	0.00														
Middle Cropping		1.10		1.10	1.05	1.05	0.95	0.00	0.00			1.10	1.10	1.05	1.05	0.95	0.00	0.00											
Late Cropping		1.10		1.10	1.10	1.05	1.05	0.95	0.00	0.00			1.10	1.10	1.05	1.05	0.95	0.00	0.00										
Weighted average		1.10	1.10	1.08	1.07	1.02	0.67	0.38	0.00	0.00	1.10	1.10	1.08	1.07	1.02	0.67	0.38	0.00	0.00										
I																													
II										1.10	1.10	1.08	1.07	1.02	0.67	0.38	0.00	0.00											
3. Potential ETo (mm/day/A)		3.71	3.71	3.89	3.89	3.89	3.89	4.23	4.23	4.48	4.48	3.82	3.82	3.96	3.96	5.01	5.01	5.44	5.44	4.93	4.93	4.53	4.53	4.55	4.55				
4. Consumptive Use, ETc (mm/day/A)		4.08	4.08	4.20	4.15	3.95	2.59	1.61	0.00	0.00	4.93	4.93	4.13	4.08	4.03	2.64	1.90	0.00	0.00										
5. Percolation Loss (mm/day/A)		2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00				
6. Crop Water Requirement (mm/day/A)		6.08	6.08	6.20	6.15	5.95	4.59	3.61	2.00	2.00	6.93	6.93	6.13	6.08	6.03	4.64	3.90	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00				
7. Crop water Requirement (mm/day)		1.01	3.04	5.17	6.15	5.95	4.59	3.01	1.00	0.33	1.15	3.46	5.11	6.08	6.03	4.64	3.25	1.00	0.33	0.00	0.00	0.00	0.00	0.00	0.00				
I																													
II										0.33	1.15	3.46	5.11	6.08	6.03	4.64	3.25	1.00	0.33	0.00	0.00	0.00	0.00	0.00	0.00				
C. Total A(5)+B(7) (mm/day)		8.84	8.91	8.26	7.26	8.17	5.70	4.12	1.00	0.33	4.93	4.93	4.13	4.08	4.03	2.64	1.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.05	6.16			
D. Effective Rainfall (mm/day)		24.94	14.37	8.67	7.22	7.95	6.74	5.09	0.99	1.34	0.03	1.97	0.41	0.37	0.66	0.02	0.00	0.00	0.00	0.31	2.41	1.81	3.36	5.36	4.73	5.62			
E. Net field Water Requirement, NFR (mm/day)		-16.10	-5.46	-0.42	0.04	0.23	-1.03	-0.98	0.01	-1.01	9.57	6.22	6.77	7.88	5.10	4.34	1.00	0.33	-0.31	-2.41	-1.81	-3.36	-5.36	-2.68	0.54				
I																													
II										-3.08	5.07	7.99	9.57	6.22	6.77	7.88	5.10	4.34	1.00	0.33									
I		0.00	0.00	0.00	0.04	0.23	0.00	0.00	0.01	0.00	9.57	6.22	6.77	7.88	5.10	4.34	1.00	0.33							0.00	0.54			
II										0.00	5.07	7.99	9.57	6.22	6.77	7.88	5.10	4.34	1.00	0.33									
I (l/sec/ha)		0.000	0.000	0.000	0.005	0.026	0.000	0.000	0.002	0.000	0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.062			
II										0.000	0.586	0.925	1.107	0.720	0.784	0.912	0.590	0.503	0.116	0.039									





Net Field Requirement for Water Balance Calculation in 1986 (6/7)

Calculation of Net Field Water Requirement for Palawija(C)

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec		
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	
Cropping Pattern	Early Cropping																									
	Middle Cropping																									
	Late Cropping																									
A.Crop Water Requirement																										
1.Crop Intensity																										
Early Cropping																										
Middle Cropping																										
Late Cropping																										
Total																										
2.Crop Coefficient																										
Early Cropping																										
Middle Cropping																										
Late Cropping																										
Weighted average																										
3.Potential ETo (mm/day/A)		3.71	3.71	3.89	3.89	3.89	3.89	4.23	4.23	4.48	4.48	3.82	3.82	3.96	3.96	5.01	5.01	5.44	5.44	4.93	4.93	4.53	4.53	4.55	4.55	
4.Consumptive Use, ETc (mm/day/A)																		2.50	3.44	4.13	4.36	4.61	3.55	2.58	1.74	0.68
5.Rainfall (mm/day)		35.63	20.54	12.39	10.31	11.35	9.62	7.28	1.41	1.92	0.04	2.81	0.59	0.53	0.94	0.03	0.00	0.00	0.44	3.44	2.59	4.80	7.66	6.76	8.03	
6.Effective Rainfall (mm/day/A)																	0.00	0.00	0.36	2.42	1.90	3.11	2.58	1.74	0.68	
7.Crop water Requirement (mm/day/A)																	2.50	3.44	3.77	1.94	2.71	0.43	0.00	0.00	0.00	
B.Net Field Water Requirement (mm/day)																										
(l/sec/ha)																										
III																										
Net Field Water Requirement for Paddy		0.000	0.000	0.046	0.120	0.000	0.166	0.097	0.363	0.000	0.035	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Net Field Water Requirement for Palawija		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.048	0.199	0.364	0.224	0.314	0.050	0.000	0.000	0.000	
100 I		0.000	0.000	0.046	0.120	0.000	0.166	0.097	0.363	0.000	0.035	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
100 II		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.119	0.555	1.077	0.815	0.900	0.806	0.879	0.744	0.505	0.116	0.003	0.000	0.000	0.000	0.000	0.000	0.000	
100 III		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.048	0.199	0.364	0.224	0.314	0.050	0.000	0.000	0.000	0.000	
<b>Total NWR</b> (l/s/ha)		0.000	0.000	0.046	0.120	0.000	0.166	0.097	0.482	0.555	1.112	0.815	0.900	0.806	0.879	0.744	0.553	0.315	0.367	0.224	0.314	0.050	0.000	0.000	0.000	
<b>DR</b> (E=0.875*0.81)		0.000	0.000	0.065	0.170	0.000	0.234	0.137	0.680	0.783	1.569	1.150	1.269	1.138	1.240	1.050	0.781	0.444	0.518	0.317	0.443	0.071	0.000	0.000	0.000	
0.85 0.81 0.6885		0.000	0.000	0.067	0.175	0.000	0.241	0.141	0.700	0.806	1.615	1.184	1.307	1.171	1.276	1.081	0.804	0.457	0.533	0.326	0.456	0.073	0.000	0.000	0.000	



Net Field Requirement for Water Balance Calculation in 1986 (7/7)

(E=0.875*0.81)	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
<b>Golongan A</b>	0.000	0.000	0.000	0.156	0.000	0.000	0.156	1.338	1.348	1.441	0.852	1.256	0.879	0.588	0.417	0.573	0.784	0.766	0.248	0.153	0.000	0.000	0.233	0.613
<b>Golongan B</b>	0.000	0.000	0.000	0.007	0.037	0.000	0.000	0.830	1.305	1.562	1.015	1.106	1.286	0.832	0.777	0.422	0.617	0.723	0.351	0.336	0.000	0.000	0.000	0.088
<b>Golongan C</b>	0.000	0.000	0.065	0.170	0.000	0.234	0.137	0.680	0.783	1.569	1.150	1.269	1.138	1.240	1.050	0.781	0.444	0.518	0.317	0.443	0.071	0.000	0.000	0.000
average	0.000	0.000	0.022	0.111	0.012	0.078	0.098	0.949	1.145	1.524	1.006	1.211	1.101	0.887	0.748	0.592	0.615	0.669	0.305	0.311	0.024	0.000	0.078	0.234

(E=0.85*0.81)	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
<b>Golongan A</b>	0.000	0.000	0.000	0.161	0.000	0.000	0.161	1.377	1.388	1.483	0.877	1.293	0.905	0.605	0.429	0.589	0.807	0.789	0.256	0.158	0.000	0.000	0.240	0.632
<b>Golongan B</b>	0.000	0.000	0.000	0.007	0.038	0.000	0.000	0.854	1.343	1.608	1.045	1.139	1.324	0.857	0.800	0.435	0.635	0.744	0.361	0.346	0.000	0.000	0.000	0.090
<b>Golongan C</b>	0.000	0.000	0.067	0.175	0.000	0.241	0.141	0.700	0.806	1.615	1.184	1.307	1.171	1.276	1.081	0.804	0.457	0.533	0.326	0.456	0.073	0.000	0.000	0.000
average	0.000	0.000	0.022	0.114	0.013	0.080	0.101	0.977	1.179	1.569	1.036	1.246	1.133	0.913	0.770	0.609	0.633	0.688	0.314	0.320	0.024	0.000	0.080	0.241

Summary Calculation of NFR (l/s/ha)

	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
<b>Golongan A</b>	0.00	0.00	0.00	0.11	0.00	0.00	0.11	0.95	0.96	1.02	0.60	0.89	0.62	0.42	0.30	0.41	0.56	0.54	0.18	0.11	0.00	0.00	0.17	0.43
<b>Golongan B</b>	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.59	0.92	1.11	0.72	0.78	0.91	0.59	0.55	0.30	0.44	0.51	0.25	0.24	0.00	0.00	0.00	0.06
<b>Golongan C</b>	0.00	0.00	0.05	0.12	0.00	0.17	0.10	0.48	0.55	1.11	0.82	0.90	0.81	0.88	0.74	0.55	0.31	0.37	0.22	0.31	0.05	0.00	0.00	0.00

1986

	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
I : W.Pad	0.00	0.00	0.00	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.43
B	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06
C	0.00	0.00	0.05	0.12	0.00	0.17	0.10	0.36	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
av	0.00	0.00	0.02	0.08	0.01	0.06	0.03	0.12	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.17
II : D.Pad	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.95	0.96	1.02	0.60	0.89	0.62	0.39	0.11	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.59	0.92	1.11	0.72	0.78	0.91	0.59	0.50	0.12	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.55	1.08	0.82	0.90	0.81	0.88	0.74	0.50	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00
av	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.55	0.81	1.07	0.71	0.86	0.78	0.62	0.45	0.22	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00
III : D.Pal	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.18	0.37	0.56	0.54	0.18	0.11	0.00	0.00	0.00
B	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.18	0.40	0.51	0.25	0.24	0.00	0.00	0.00
C	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.20	0.36	0.22	0.31	0.05	0.00	0.00	0.00
av	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.08	0.20	0.38	0.47	0.22	0.22	0.02	0.00	0.00	0.00
I : W.Pad	0.00	0.00	0.02	0.08	0.01	0.06	0.03	0.12	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.17
II : D.Pad	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.55	0.81	1.07	0.71	0.86	0.78	0.62	0.45	0.22	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00
III : D.Pal	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.08	0.20	0.38	0.47	0.22	0.22	0.02	0.00	0.00	0.00

1986

I : W.Pad	100	0.000	0.000	0.015	0.079	0.009	0.055	0.032	0.121	0.000	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.055	0.166
II : D.Pad	100	0.000	0.000	0.000	0.000	0.000	0.000	0.037	0.551	0.812	1.068	0.713	0.858	0.780	0.620	0.453	0.220	0.051	0.001	0.000	0.000	0.000	0.000	0.000	0.000
III : D.Pal	100	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.009	0.077	0.200	0.384	0.473	0.216	0.220	0.017	0.000	0.000	0.000	0.000
total		0.000	0.000	0.015	0.079	0.009	0.055	0.069	0.673	0.812	1.080	0.713	0.858	0.780	0.628	0.530	0.419	0.436	0.474	0.216	0.220	0.017	0.000	0.055	0.166
		0	0.04705	0.03209	0.37092	0.94588	0.78554	0.70438	0.47477	0.45496	0.21823	0.00837	0.11037												

Year : 1986

N.F.R. (l/s/ha)

	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
	0.000	0.000	0.015	0.079	0.009	0.055	0.069	0.673	0.812	1.080	0.713	0.858	0.780	0.628	0.530	0.419	0.436	0.474	0.216	0.220	0.017	0.000	0.055	0.166

Net Field Requirement for Water Balance Calculation in 1987 (1/7)

[Kampili Rotation A]

1 1 1  
Calculation of Net Field Water Requirement for Paddy (A) on

1987

Cropping Pattern	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
Early Cropping		○																						
Middle Cropping			○																					
Late Cropping				○																				
	LP			Paddy				LP				Paddy								Palawija			No Cropping	LP

A. Land Preparation Requirement

1. Land Preparation Intensity																									
Early Cropping							1/6	1/3	1/6													1/6	1/3	1/6	
Middle Cropping		1/6							1/6	1/3	1/6												1/6	1/3	
Late Cropping		1/3	1/6							1/6	1/3	1/6												1/6	
Total		1/2	1/6				1/6	1/2	2/3	1/2	1/6											1/6	1/2	2/3	
2. Land Preparation Requirement	(mm/day/A)	11.42	11.42	12.09	12.09	12.33	12.33	12.46	12.46	12.11	12.11	12.40	12.40	12.52	12.52	12.79	12.79	13.22	13.22	13.60	13.60	12.51	12.51	11.96	11.96
	(mm/day)	5.71	1.90	0.00	0.00	0.00	2.05	6.23	8.31	6.06	2.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.09	5.98	7.97	
3. Water Layer Replacement Intensity			1/3	1/3	2/3	1/3	1/3				1/3	1/3	2/3	1/3	1/3										
4. Water Layer Replacement Requirement	(mm/day/A)		3.33	3.33	3.33	3.33	3.33				3.33	3.33	3.33	3.33	3.33										
	(mm/day)		1.11	1.11	2.22	1.11	1.11				1.11	1.11	2.22	1.11	1.11										
5. Total Requirement for Land Preparation																									
	I (mm/day)	5.71	3.01	1.11	2.22	1.11	1.11											0.00	0.00	0.00	0.00	0.00	2.09	5.98	7.97
	II (mm/day)						2.05	6.23	8.31	6.06	3.13	1.11	2.22	1.11	1.11	0.00	0.00								

B. Crop Water Requirement

		Jan	Feb		Mar		Apr		May		Jun		Jul		Aug		Sep	Oct		Nov		Dec			
1. Crop Intensity																									
Early Cropping		1/3	1/3	1/3	1/3	1/3	1/6	1/3	1/6	1/3	1/3	1/3	1/3	1/3	1/6								1/6		
Middle Cropping		1/6	1/3	1/3	1/3	1/3	1/3	1/6	1/6	1/3	1/3	1/3	1/3	1/3	1/3	1/6									
Late Cropping			1/6	1/3	1/3	1/3	1/3	1/3	1/6	1/6	1/3	1/3	1/3	1/3	1/3	1/3	1/6								
Total	I	1/2	5/6	1	1	1	5/6	1/2	1/6	1/2	5/6	1	1	1	5/6	1/2	1/6						1/6		
	II								1/6	1/2	5/6	1	1	1	5/6	1/2	1/6								
2. Crop Coefficient																									
Early Cropping		1.10	1.05	1.05	0.95	0.00	0.00		1.10	1.10	1.05	1.05	0.95	0.00	0.00								1.10		
Middle Cropping		1.10	1.10	1.05	1.05	0.95	0.00	0.00		1.10	1.10	1.05	1.05	0.95	0.00	0.00									
Late Cropping			1.10	1.10	1.05	1.05	0.95	0.00	0.00		1.10	1.10	1.05	1.05	0.95	0.00	0.00								
Weighted average	I	1.10	1.08	1.07	1.02	0.67	0.38	0.00															1.10		
	II								1.10	1.10	1.08	1.07	1.02	0.67	0.38	0.00	0.00								
3. Potential ET <sub>o</sub>	(mm/day/A)	3.24	3.24	4.21	4.21	4.56	4.56	4.75	4.75	4.25	4.25	4.66	4.66	4.83	4.83	5.22	5.22	5.81	5.81	6.33	6.33	4.82	4.82	4.02	4.02
4. Consumptive Use, ET <sub>c</sub>	(mm/day/A)	3.57	3.50	4.49	4.28	3.04	1.73	0.00	0.00																4.43
	II								5.23	4.68	4.59	4.97	4.74	3.22	1.84	0.00	0.00								
5. Percolation Loss	(mm/day/A)	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	
6. Crop Water Requirement	(mm/day/A)	5.57	5.50	6.49	6.28	5.04	3.73	2.00	2.00									2.00	2.00	2.00	2.00	2.00	2.00	2.00	6.43
	II								7.23	6.68	6.59	6.97	6.74	5.22	3.84	2.00	2.00								
7. Crop water Requirement	(mm/day)	2.78	4.59	6.49	6.28	5.04	3.11	1.00	0.33									0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.07
	II								1.20	3.34	5.49	6.97	6.74	5.22	3.20	1.00	0.33								
C. Total A(5)+B(7)	I (mm/day)	8.50	7.60	7.60	8.50	6.15	4.22	1.00	0.33									0.00	0.00	0.00	0.00	0.00	2.09	5.98	9.04
	II						2.05	6.23	9.51	9.39	8.62	8.08	8.96	6.33	4.31	1.00	0.33								
D. Effective Rainfall	(mm/day)	17.53	26.42	9.68	5.66	3.82	11.68	3.48	0.43	3.37	0.02	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.23	1.72	1.56	13.52	-42.61
E. Net field Water Requirement, NFR	(mm/day)	-9.03	-18.82	-2.08	2.84	2.32	-7.46	-2.48	-0.10									0.00	-0.05	0.00	-0.23	-1.72	0.53	-7.55	-33.57
	II						-9.62	2.75	9.08	6.02	8.60	8.00	8.96	6.33	4.31	1.00	0.33								
	I		0.00	0.00	0.00	2.84	2.32	0.00	0.00														0.53	0.00	0.00
	II						0.00	2.75	9.08	6.02	8.60	8.00	8.96	6.33	4.31	1.00	0.33								
	I (l/sec/ha)	0.000	0.000	0.000	0.329	0.269	0.000	0.000	0.000														0.061	0.000	0.000
	II						0.000	0.318	1.051	0.697	0.995	0.926	1.037	0.733	0.498	0.116	0.039								

Net Field Requirement for Water Balance Calculation in 1987 (2/7)

Calculation of Net Field Water Requirement for Palawija(A)

Cropping Pattern	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
Early Cropping		○		○						○		○												
Middle Cropping			○	Paddy	○						○	Paddy	○											
Late Cropping	LP			○		○						○		○										LP

A. Crop Water Requirement

1. Crop Intensity																									
Early Cropping															1/6	1/3	1/3	1/3	1/3	1/3	1/3	1/6			
Middle Cropping																1/6	1/3	1/3	1/3	1/3	1/3	1/3	1/6		
Late Cropping																	1/6	1/3	1/3	1/3	1/3	1/3	1/3	1/6	
Total															1/6	1/2	5/6	1	1	1	1	5/6	1/2	1/6	
2. Crop Coefficient																									
Early Cropping															0.50	0.70	0.95	1.00	0.85	0.50	0.15				
Middle Cropping																0.50	0.70	0.95	1.00	0.85	0.50	0.15			
Late Cropping																	0.50	0.70	0.95	1.00	0.85	0.50	0.15		
Weighted average															0.50	0.63	0.76	0.88	0.93	0.78	0.57	0.38	0.15		
3. Potential ETo (mm/day/A)		3.24	3.24	4.21	4.21	4.56	4.56	4.75	4.75	4.25	4.25	4.66	4.66	4.83	4.83	5.22	5.22	5.81	5.81	6.33	6.33	4.82	4.82	4.02	4.02
4. Consumptive Use, ETc (mm/day/A)															2.42	3.30	3.97	5.13	5.42	4.95	3.61	1.85	0.72		
5. Rainfall (mm/day)		25.04	37.75	13.83	8.09	5.46	16.68	4.97	0.61	4.82	0.03	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.33	2.46	2.23	19.32	60.87
6. Effective Rainfall (mm/day/A)															0.00	0.00	0.00	0.00	0.07	0.00	0.27	1.50	0.72		
7. Crop water Requirement (mm/day/A)															2.42	3.30	3.97	5.13	5.35	4.95	3.34	0.35	0.00		
B. Net Field Water Requirement (mm/day)															0.40	1.65	3.30	5.13	5.35	4.95	2.78	0.18	0.00		
(l/sec/ha)															0.047	0.191	0.383	0.594	0.619	0.573	0.322	0.020	0.000		

	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec		
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	
Net Field Water Requirement for Paddy	0.000	0.000	0.000	0.329	0.269	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.061	0.000	0.000
Net Field Water Requirement for Palawija	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.047	0.191	0.383	0.594	0.619	0.573	0.322	0.020	0.000	0.000	0.000
100 I	0.000	0.000	0.000	0.329	0.269	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.061	0.000	0.000
100 II	0.000	0.000	0.000	0.000	0.000	0.000	0.318	1.051	0.697	0.995	0.926	1.037	0.733	0.498	0.116	0.039	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100 III	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.047	0.191	0.383	0.594	0.619	0.573	0.322	0.020	0.000	0.000	0.000
<b>Total NWR</b> (l/s/ha)	0.000	0.000	0.000	0.329	0.269	0.000	0.318	1.051	0.697	0.995	0.926	1.037	0.733	0.545	0.307	0.421	0.594	0.619	0.573	0.322	0.020	0.061	0.000	0.000	0.000
<b>DR</b> (E=0.875*0.81)	0.000	0.000	0.000	0.464	0.379	0.000	0.449	1.483	0.983	1.404	1.307	1.463	1.034	0.769	0.433	0.594	0.837	0.873	0.809	0.454	0.029	0.086	0.000	0.000	0.000
0.85      0.81      0.6885	0.000	0.000	0.000	0.478	0.391	0.000	0.462	1.527	1.012	1.445	1.346	1.506	1.064	0.792	0.446	0.612	0.862	0.899	0.833	0.468	0.030	0.089	0.000	0.000	0.000



Net Field Requirement for Water Balance Calculation in 1987 (4/7)

Calculation of Net Field Water Requirement for Palawija(B)

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
Cropping Pattern																									
A.Crop Water Requirement																									
1.Crop Intensity																									
Early Cropping																									
Middle Cropping																									
Late Cropping																									
Total																									
2.Crop Coefficient																									
Early Cropping																									
Middle Cropping																									
Late Cropping																									
Weighted average																									
3.Potential ETo (mm/day/A)		3.24	3.24	4.21	4.21	4.56	4.56	4.75	4.75	4.25	4.25	4.66	4.66	4.83	4.83	5.22	5.22	5.81	5.81	6.33	6.33	4.82	4.82	4.02	4.02
4.Consumptive Use, ETc (mm/day/A)																2.61	3.30	4.41	5.13	5.90	4.95	2.75	1.85	0.60	
5.Rainfall (mm/day)		25.04	37.75	13.83	8.09	5.46	16.68	4.97	0.61	4.82	0.03	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.33	2.46	2.23	19.32	60.87
6.Effective Rainfall (mm/day/A)																0.00	0.00	0.00	0.07	0.00	0.29	1.60	1.37	0.60	
7.Crop water Requirement (mm/day)																2.61	3.30	4.41	5.06	5.90	4.66	1.15	0.48	0.00	
B.Net Field Water Requirement (mm/day)																									
(I/sec/ha)																									
III																									
		0.050	0.191	0.426	0.586	0.683	0.540	0.111	0.028	0.000															
Net Field Water Requirement for Paddy		0.000	0.000	0.000	0.225	0.582	0.000	0.093	0.066	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Net Field Water Requirement for Palawija		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.050	0.191	0.426	0.586	0.683	0.540	0.111	0.028	0.000	0.000
100 I		0.000	0.000	0.000	0.225	0.582	0.000	0.093	0.066	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100 II		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.671	0.673	1.085	1.037	0.935	1.057	0.733	0.513	0.116	0.039	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100 III		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.050	0.191	0.426	0.586	0.683	0.540	0.111	0.028	0.000	0.000
<b>Total NWR</b> (l/s/ha)		0.000	0.000	0.000	0.225	0.582	0.000	0.093	0.737	0.673	1.085	1.037	0.935	1.057	0.733	0.563	0.307	0.464	0.586	0.683	0.540	0.111	0.028	0.000	0.000
<b>DR</b> (E=0.875*0.81)		0.000	0.000	0.000	0.317	0.821	0.000	0.131	1.040	0.949	1.530	1.463	1.320	1.491	1.034	0.794	0.433	0.655	0.826	0.964	0.762	0.157	0.039	0.000	0.000
0.85 0.81 0.6885		0.000	0.000	0.000	0.327	0.845	0.000	0.134	1.071	0.977	1.575	1.506	1.359	1.535	1.064	0.818	0.446	0.674	0.851	0.992	0.784	0.161	0.040	0.000	0.000

Net Field Requirement for Water Balance Calculation in 1987 (5/7)

[Kampili Rotation C ]

Calculation of Net Field Water Requirement for Paddy (C) on

1987

Cropping Pattern	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec		
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	
Early Cropping																									
Middle Cropping																									
Late Cropping																									
	No Cropping	LP				Paddy			LP				Paddy								Palawija		No Cropping	LP	
A. Land Preparation Requirement																									
1. Land Preparation Intensity																									
Early Cropping		1/3	1/6						1/6	1/3	1/6														1/6
Middle Cropping		1/6	1/3	1/6					1/6	1/3	1/6														
Late Cropping			1/6	1/3	1/6						1/6	1/3	1/6												
Total		1/2	2/3	1/2	1/6				1/6	1/2	2/3	1/2	1/6												1/6
2. Land Preparation Requirement (mm/day/A)																									
	(mm/day)	11.42	11.42	12.09	12.09	12.33	12.33	12.46	12.46	12.11	12.11	12.40	12.40	12.52	12.52	12.79	12.79	13.22	13.22	13.60	13.60	12.51	12.51	11.96	11.96
3. Water Layer Replacement Intensity																									
4. Water Layer Replacement Requirement																									
	(mm/day/A)				3.33	3.33	3.33	3.33	3.33				3.33	3.33	3.33	3.33	3.33								
	(mm/day)				1.11	1.11	2.22	1.11	1.11				1.11	1.11	2.22	1.11	1.11								
5. Total Requirement for Land Preparation																									
I	(mm/day)	5.71	7.62	6.04	3.12	1.11	2.22	1.11	1.11									0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.99
II								2.08	6.06	8.07	6.20	3.18	1.11	2.22	1.11	1.11									
B. Crop Water Requirement																									
1. Crop Intensity																									
Early Cropping	Jan		1/6	1/3	1/3	1/3	1/3	1/3	1/6	1/6	1/3	1/3	1/3	1/3	1/3	1/6									
Middle Cropping			1/6	1/3	1/3	1/3	1/3	1/3	1/6	1/6	1/3	1/3	1/3	1/3	1/3	1/6									
Late Cropping				1/6	1/3	1/3	1/3	1/3	1/6	1/6	1/3	1/3	1/3	1/3	1/3	1/6			1/6						
Total	I		1/6	1/2	5/6	1	1	1	5/6	1/2	1/6	1/2	5/6	1	1	1	5/6	1/2	1/6						
	II																								
2. Crop Coefficient																									
Early Cropping		1.10	1.10	1.05	1.05	0.95	0.00	0.00		1.10	1.10	1.05	1.05	0.95	0.00	0.00									
Middle Cropping			1.10	1.10	1.05	1.05	0.95	0.00	0.00		1.10	1.10	1.05	1.05	0.95	0.00	0.00								
Late Cropping				1.10	1.10	1.05	1.05	0.95	0.00	0.00		1.10	1.10	1.05	1.05	0.95	0.00	0.00							
Weighted average	I		1.10	1.10	1.08	1.07	1.02	0.67	0.38	0.00		1.10	1.10	1.08	1.07	1.02	0.67	0.38	0.00	0.00					
	II										1.10	1.10	1.08	1.07	1.02	0.67	0.38	0.00	0.00						
3. Potential ETo (mm/day/A)																									
		3.24	3.24	4.21	4.21	4.56	4.56	4.75	4.75	4.25	4.25	4.66	4.66	4.83	4.83	5.22	5.22	5.81	5.81	6.33	6.33	4.82	4.82	4.02	4.02
4. Consumptive Use, ETc (mm/day/A)																									
		0.00	3.57	4.63	4.55	4.86	4.63	3.17	1.81	0.00	0.00	4.68	5.13	5.03	5.15	4.91	3.48	1.98	0.00						
5. Percolation Loss (mm/day/A)																									
		2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00						
6. Crop Water Requirement (mm/day/A)																									
		2.00	5.57	6.63	6.55	6.86	6.63	5.17	3.81	2.00	2.00	6.68	7.13	7.03	7.15	6.91	5.48	3.98	2.00	2.00	0.00	0.00	0.00	0.00	
7. Crop water Requirement (mm/day)																									
		0.00	0.93	3.32	5.46	6.86	6.63	5.17	3.17	1.00	0.33	1.11	3.56	5.86	7.15	6.91	5.48	3.32	1.00	0.33	0.00	0.00	0.00	0.00	
C. Total A(5)+B(7) (mm/day)																									
I		5.71	8.54	9.36	8.58	7.97	8.85	6.28	4.28	1.00	0.33	1.11	3.56	5.86	7.15	6.91	5.48	3.32	1.00	0.33	0.00	0.00	0.00	1.99	
II									2.08	6.06	9.19	9.76	9.04	8.26	9.13	6.59	4.43	1.00	0.33						
D. Effective Rainfall (mm/day)																									
		17.53	26.42	9.68	5.66	3.82	11.68	3.48	0.43	3.37	0.02	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.23	1.72	1.56	13.52	42.61
E. Net field Water Requirement, NFR (mm/day)																									
		-11.81	-17.88	-0.32	2.92	4.15	-2.82	2.80	3.85	-2.37	0.31	1.65	2.68	9.16	9.69	9.04	8.26	9.13	6.59	4.43	1.00	0.29			
	I	0.00	0.00	0.00	2.92	4.15	0.00	2.80	3.85	0.00	0.31	1.65	2.68	9.16	9.69	9.04	8.26	9.13	6.59	4.43	1.00	0.29		0.00	
	II								1.65	2.68	9.16	9.69	9.04	8.26	9.13	6.59	4.43	1.00	0.29						
	(l/sec/ha)	0.000	0.000	0.000	0.338	0.480	0.000	0.324	0.446	0.000	0.036	0.191	0.311	1.061	1.121	1.046	0.956	1.057	0.763	0.513	0.116	0.033		0.000	
	II								0.191	0.311	1.061	1.121	1.046	0.956	1.057	0.763	0.513	0.116	0.033						

Net Field Requirement for Water Balance Calculation in 1987 (6/7)

Calculation of Net Field Water Requirement for Palawija(C)

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec		
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	
Cropping Pattern	Early Cropping																									
	Middle Cropping																									
	Late Cropping																									
	No Cropping																									
A.Crop Water Requirement																										
1.Crop Intensity																										
Early Cropping																										
Middle Cropping																										
Late Cropping																										
Total																										
2.Crop Coefficient																										
Early Cropping																										
Middle Cropping																										
Late Cropping																										
Weighted average																										
3.Potential ETo (mm/day/A)		3.24	3.24	4.21	4.21	4.56	4.56	4.75	4.75	4.25	4.25	4.66	4.66	4.83	4.83	5.22	5.22	5.81	5.81	6.33	6.33	4.82	4.82	4.02	4.02	
4.Consumptive Use, ETc (mm/day/A)																										
5.Rainfall (mm/day)		25.04	37.75	13.83	8.09	5.46	16.68	4.97	0.61	4.82	0.03	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.33	2.46	2.23	19.32	60.87
6.Effective Rainfall (mm/day/A)																										
7.Crop water Requirement (mm/day/A)																										
B.Net Field Water Requirement (mm/day)																										
(l/sec/ha)																										
III																										
		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec		
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	
Net Field Water Requirement for Paddy		0.000	0.000	0.000	0.338	0.480	0.000	0.324	0.446	0.000	0.036	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
Net Field Water Requirement for Palawija		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.050	0.213	0.419	0.647	0.648	0.239	0.124	0.000	0.000
100 I		0.000	0.000	0.000	0.338	0.480	0.000	0.324	0.446	0.000	0.036	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
100 II		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.191	0.311	1.061	1.121	1.046	0.956	1.057	0.763	0.513	0.116	0.033	0.000	0.000	0.000	0.000	0.000	0.000	
100 III		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.050	0.213	0.419	0.647	0.648	0.239	0.124	0.000	0.000	
<b>Total NWR</b> (l/s/ha)		0.000	0.000	0.000	0.338	0.480	0.000	0.324	0.636	0.311	1.097	1.121	1.046	0.956	1.057	0.763	0.563	0.329	0.452	0.647	0.648	0.239	0.124	0.000	0.000	
<b>DR</b> (E=0.875*0.81)		0.000	0.000	0.000	0.477	0.677	0.000	0.457	0.898	0.438	1.547	1.582	1.476	1.349	1.491	1.076	0.794	0.464	0.638	0.912	0.914	0.337	0.175	0.000	0.000	
0.85 0.81 0.6885		0.000	0.000	0.000	0.491	0.697	0.000	0.470	0.924	0.451	1.593	1.628	1.519	1.389	1.535	1.108	0.818	0.477	0.657	0.939	0.941	0.347	0.181	0.000	0.000	

Net Field Requirement for Water Balance Calculation in 1987 (7/7)

(E=0.875*0.81)	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
<b>Golongan A</b>	0.000	0.000	0.000	0.464	0.379	0.000	0.449	1.483	0.983	1.404	1.307	1.463	1.034	0.769	0.433	0.594	0.837	0.873	0.809	0.454	0.029	0.086	0.000	0.000
<b>Golongan B</b>	0.000	0.000	0.000	0.317	0.821	0.000	0.131	1.040	0.949	1.530	1.463	1.320	1.491	1.034	0.794	0.433	0.655	0.826	0.964	0.762	0.157	0.039	0.000	0.000
<b>Golongan C</b>	0.000	0.000	0.000	0.477	0.677	0.000	0.457	0.898	0.438	1.547	1.582	1.476	1.349	1.491	1.076	0.794	0.464	0.638	0.912	0.914	0.337	0.175	0.000	0.000
average	0.000	0.000	0.000	0.419	0.626	0.000	0.345	1.141	0.790	1.494	1.451	1.420	1.291	1.098	0.768	0.607	0.652	0.779	0.895	0.710	0.174	0.100	0.000	0.000

(E=0.85*0.81)	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
<b>Golongan A</b>	0.000	0.000	0.000	0.478	0.391	0.000	0.462	1.527	1.012	1.445	1.346	1.506	1.064	0.792	0.446	0.612	0.862	0.899	0.833	0.468	0.030	0.089	0.000	0.000
<b>Golongan B</b>	0.000	0.000	0.000	0.327	0.845	0.000	0.134	1.071	0.977	1.575	1.506	1.359	1.535	1.064	0.818	0.446	0.674	0.851	0.992	0.784	0.161	0.040	0.000	0.000
<b>Golongan C</b>	0.000	0.000	0.000	0.491	0.697	0.000	0.470	0.924	0.451	1.593	1.628	1.519	1.389	1.535	1.108	0.818	0.477	0.657	0.939	0.941	0.347	0.181	0.000	0.000
average	0.000	0.000	0.000	0.432	0.644	0.000	0.356	1.174	0.814	1.538	1.493	1.461	1.329	1.130	0.790	0.625	0.671	0.802	0.922	0.731	0.179	0.103	0.000	0.000

Summary Calculation of NFR (l/s/ha)

	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
<b>Golongan A</b>	0.00	0.00	0.00	0.33	0.27	0.00	0.32	1.05	0.70	1.00	0.93	1.04	0.73	0.55	0.31	0.42	0.59	0.62	0.57	0.32	0.02	0.06	0.00	0.00
<b>Golongan B</b>	0.00	0.00	0.00	0.22	0.58	0.00	0.09	0.74	0.67	1.08	1.04	0.94	1.06	0.73	0.56	0.31	0.46	0.59	0.68	0.54	0.11	0.03	0.00	0.00
<b>Golongan C</b>	0.00	0.00	0.00	0.34	0.48	0.00	0.32	0.64	0.31	1.10	1.12	1.05	0.96	1.06	0.76	0.56	0.33	0.45	0.65	0.65	0.24	0.12	0.00	0.00

1987

	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec		
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	
I : W.Pad	A	0.00	0.00	0.00	0.33	0.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	B	0.00	0.00	0.00	0.22	0.58	0.00	0.09	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	C	0.00	0.00	0.00	0.34	0.48	0.00	0.32	0.45	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	av	0.00	0.00	0.00	0.30	0.44	0.00	0.14	0.17	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00
II : D.Pad	A	0.00	0.00	0.00	0.00	0.00	0.00	0.32	1.05	0.70	1.00	0.93	1.04	0.73	0.50	0.12	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	B	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.67	0.67	1.08	1.04	0.94	1.06	0.73	0.51	0.12	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	C	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.31	1.06	1.12	1.05	0.96	1.06	0.76	0.51	0.12	0.03	0.00	0.00	0.00	0.00	0.00	0.00
	av	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.64	0.56	1.05	1.03	1.01	0.92	0.76	0.46	0.22	0.05	0.01	0.00	0.00	0.00	0.00	0.00	0.00
III : D.Pal	A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.19	0.38	0.59	0.62	0.57	0.32	0.02	0.00	0.00	0.00
	B	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.19	0.43	0.59	0.68	0.54	0.11	0.03	0.00	0.00
	C	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.21	0.42	0.65	0.65	0.24	0.12	0.00	0.00	0.00
	av	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.08	0.21	0.41	0.54	0.63	0.50	0.12	0.05	0.00	0.00
I : W.Pad		0.00	0.00	0.00	0.30	0.44	0.00	0.14	0.17	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00
II : D.Pad		0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.64	0.56	1.05	1.03	1.01	0.92	0.76	0.46	0.22	0.05	0.01	0.00	0.00	0.00	0.00	0.00	0.00
III : D.Pal		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.08	0.21	0.41	0.54	0.63	0.50	0.12	0.05	0.00	0.00

1987

I : W.Pad	<b>100</b>	0.000	0.000	0.000	0.297	0.444	0.000	0.139	0.171	0.000	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.020	0.000
II : D.Pad	<b>100</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.106	0.638	0.560	1.047	1.028	1.006	0.915	0.763	0.464	0.222	0.051	0.011	0.000	0.000	0.000	0.000	0.000	0.000
III : D.Pal	<b>100</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.016	0.081	0.208	0.411	0.541	0.634	0.503	0.123	0.051	0.000	0.000	0.000
total		0.000	0.000	0.000	0.297	0.444	0.000	0.245	0.808	0.560	1.059	1.028	1.006	0.915	0.778	0.544	0.430	0.462	0.552	0.634	0.503	0.123	0.071	0.000	0.000
		0		0.14866		0.22178		0.52659		0.8094		1.01716		0.84679		0.48727		0.5072		0.56886		0.09722		0	

Year : 1987

N.F.R. (l/s/ha)

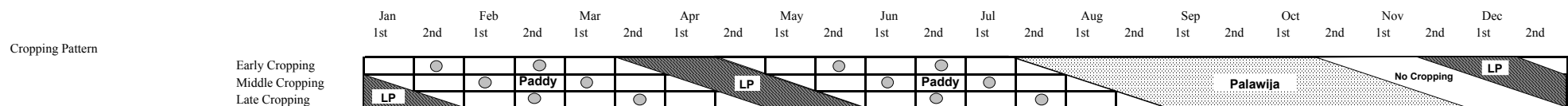
	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
<b>N.F.R. (l/s/ha)</b>	0.000	0.000	0.000	0.297	0.444	0.000	0.245	0.808	0.560	1.059	1.028	1.006	0.915	0.778	0.544	0.430	0.462	0.552	0.634	0.503	0.123	0.071	0.000	0.000





Net Field Requirement for Water Balance Calculation in 1988 (2/7)

Calculation of Net Field Water Requirement for Palawija(A)



A. Crop Water Requirement

	Jan 1st	Jan 2nd	Feb 1st	Feb 2nd	Mar 1st	Mar 2nd	Apr 1st	Apr 2nd	May 1st	May 2nd	Jun 1st	Jun 2nd	Jul 1st	Jul 2nd	Aug 1st	Aug 2nd	Sep 1st	Sep 2nd	Oct 1st	Oct 2nd	Nov 1st	Nov 2nd	Dec 1st	Dec 2nd
1. Crop Intensity																								
Early Cropping															1/6	1/3	1/3	1/3	1/3	1/3	1/3	1/6		
Middle Cropping																1/6	1/3	1/3	1/3	1/3	1/3	1/3	1/6	
Late Cropping																	1/6	1/3	1/3	1/3	1/3	1/3	1/3	1/6
Total															1/6	1/2	5/6	1	1	1	5/6	1/2	1/6	
2. Crop Coefficient																								
Early Cropping															0.50	0.70	0.95	1.00	0.85	0.50	0.15			
Middle Cropping																0.50	0.70	0.95	1.00	0.85	0.50	0.15		
Late Cropping																	0.50	0.70	0.95	1.00	0.85	0.50	0.15	
Weighted average															0.50	0.63	0.76	0.88	0.93	0.78	0.57	0.38	0.15	
3. Potential ETo (mm/day/A)	3.90	3.90	4.76	4.76	4.23	4.23	4.48	4.48	4.30	4.30	3.79	3.79	3.90	3.90	4.27	4.27	4.85	4.85	4.66	4.66	4.36	4.36	3.45	3.45
4. Consumptive Use, ETc (mm/day/A)															1.95	2.70	3.24	4.29	4.53	3.65	2.66	1.67	0.65	
5. Rainfall (mm/day)	8.11	15.71	45.45	9.76	4.94	18.29	8.54	1.04	6.88	2.94	0.66	0.39	0.15	0.17	0.76	0.66	3.21	2.33	3.94	4.71	10.03	13.41	25.93	13.62
6. Effective Rainfall (mm/day/A)														0.13	0.54	0.50	2.26	1.71	2.62	2.66	1.67	0.65		
7. Crop water Requirement (mm/day/A)														1.82	2.16	2.74	2.02	2.82	1.03	0.00	0.00	0.00		
B. Net Field Water Requirement (mm/day)														0.30	1.08	2.29	2.02	2.82	1.03	0.00	0.00	0.00		
(I/sec/ha)														0.035	0.125	0.265	0.234	0.326	0.119	0.000	0.000	0.000		

	Jan 1st	Jan 2nd	Feb 1st	Feb 2nd	Mar 1st	Mar 2nd	Apr 1st	Apr 2nd	May 1st	May 2nd	Jun 1st	Jun 2nd	Jul 1st	Jul 2nd	Aug 1st	Aug 2nd	Sep 1st	Sep 2nd	Oct 1st	Oct 2nd	Nov 1st	Nov 2nd	Dec 1st	Dec 2nd
Net Field Water Requirement for Paddy	0.393	0.000	0.000	0.258	0.286	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Net Field Water Requirement for Palawija	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.035	0.125	0.265	0.234	0.326	0.119	0.000	0.000	0.000	0.000
100 I	0.393	0.000	0.000	0.258	0.286	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100 II	0.000	0.000	0.000	0.000	0.000	0.000	0.018	0.996	0.535	0.765	0.775	0.903	0.649	0.450	0.054	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100 III	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.035	0.125	0.265	0.234	0.326	0.119	0.000	0.000	0.000	0.000
<b>Total NWR</b> (I/s/ha)	0.393	0.000	0.000	0.258	0.286	0.000	0.018	0.996	0.535	0.765	0.775	0.903	0.649	0.485	0.179	0.265	0.234	0.326	0.119	0.000	0.000	0.000	0.000	0.000
<b>DR</b> (E=0.875*0.81)	0.555	0.000	0.000	0.364	0.404	0.000	0.025	1.406	0.754	1.079	1.093	1.274	0.916	0.685	0.253	0.373	0.331	0.460	0.168	0.000	0.000	0.000	0.000	0.000
0.85      0.81      0.6885	0.571	0.000	0.000	0.374	0.416	0.000	0.026	1.447	0.777	1.111	1.125	1.312	0.943	0.705	0.260	0.384	0.340	0.474	0.173	0.000	0.000	0.000	0.000	0.000

Net Field Requirement for Water Balance Calculation in 1988 (3/7)

[Kampili Rotation B]

Calculation of Net Field Water Requirement for Paddy(B) on 1988

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
Cropping Pattern		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
Early Cropping		[Pattern: LP, Paddy, LP, Paddy, Palawia, No Cropping, LP]																							
Middle Cropping		[Pattern: LP, Paddy, LP, Paddy, Palawia, No Cropping, LP]																							
Late Cropping		[Pattern: LP, Paddy, LP, Paddy, Palawia, No Cropping, LP]																							
<b>A. Land Preparation Requirement</b>																									
1. Land Preparation Intensity																									
Early Cropping		1/6						1/6	1/3	1/6														1/6	1/3
Middle Cropping		1/3	1/6							1/6	1/3	1/6													1/6
Late Cropping		1/6	1/3	1/6						1/6	1/3	1/6													1/6
Total		2/3	1/2	1/6				1/6	1/2	2/3	1/2	1/6												1/6	1/2
2. Land Preparation Requirement	(mm/day/A)	11.87	11.87	12.47	12.47	12.10	12.10	12.27	12.27	12.14	12.14	11.80	11.80	11.87	11.87	12.12	12.12	12.53	12.53	12.40	12.40	12.19	12.19	11.56	11.56
	(mm/day)	7.91	5.93	2.08	0.00	0.00	0.00	2.05	6.14	8.10	6.07	1.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.93	5.78
3. Water Layer Replacement Intensity				1/3	1/3	2/3	1/3	1/3				1/3	1/3	2/3	1/3	1/3									
4. Water Layer Replacement Requirement	(mm/day/A)			3.33	3.33	3.33	3.33	3.33				3.33	3.33	3.33	3.33	3.33									
	(mm/day)			1.11	1.11	2.22	1.11	1.11				1.11	1.11	2.22	1.11	1.11									
5. Total Requirement for Land Preparation																									
I	(mm/day)	7.91	5.93	3.19	1.11	2.22	1.11	1.11										0.00	0.00	0.00	0.00	0.00	0.00	1.93	5.78
II	(mm/day)							2.05	6.14	8.10	6.07	3.08	1.11	2.22	1.11	1.11									
<b>B. Crop Water Requirement</b>																									
1. Crop Intensity																									
Early Cropping		1/6	1/3	1/3	1/3	1/3	1/3	1/6	1/6	1/3	1/3	1/3	1/3	1/3	1/3	1/6									
Middle Cropping			1/6	1/3	1/3	1/3	1/3	1/3	1/6	1/6	1/3	1/3	1/3	1/3	1/3	1/3	1/3	1/6							
Late Cropping				1/6	1/3	1/3	1/3	1/3	1/6	1/6	1/3	1/3	1/3	1/3	1/3	1/3	1/3	1/3	1/6						
Total		1/6	1/2	5/6	1	1	1	5/6	1/2	1/6															
I																									
II									1/6	1/2	5/6	1	1	1	5/6	1/2	1/6								
2. Crop Coefficient																									
Early Cropping		1.10	1.10	1.05	1.05	0.95	0.00	0.00	1.10	1.10	1.05	1.05	0.95	0.00	0.00										
Middle Cropping			1.10	1.10	1.05	1.05	0.95	0.00	0.00		1.10	1.10	1.05	1.05	0.95	0.00	0.00								
Late Cropping				1.10	1.10	1.05	1.05	0.95	0.00	0.00		1.10	1.10	1.05	1.05	0.95	0.00	0.00							
Weighted average		1.10	1.10	1.08	1.07	1.02	0.67	0.38	0.00	0.00		1.10	1.10	1.08	1.07	1.02	0.67	0.38	0.00	0.00					
I																									
II									1.10	1.10	1.08	1.07	1.02	0.67	0.38	0.00	0.00								
3. Potential ETo	(mm/day/A)	3.90	3.90	4.76	4.76	4.23	4.23	4.48	4.48	4.30	4.30	3.79	3.79	3.90	3.90	4.27	4.27	4.85	4.85	4.66	4.66	4.36	4.36	3.45	3.45
4. Consumptive Use, ETc	(mm/day/A)	4.29	4.29	5.14	5.08	4.30	2.82	1.70	0.00	0.00		4.72	4.72	4.09	4.04	3.97	2.60	1.62	0.00	0.00					
5. Percolation Loss	(mm/day/A)	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
6. Crop Water Requirement	(mm/day/A)	6.29	6.29	7.14	7.08	6.30	4.82	3.70	2.00	2.00		6.72	6.72	6.09	6.04	5.97	4.60	3.62	2.00	2.00					
7. Crop water Requirement	(mm/day)	1.05	3.14	5.95	7.08	6.30	4.82	3.09	1.00	0.33		1.12	3.36	5.08	6.04	5.97	4.60	3.02	1.00	0.33					
I																									
II									1.12	3.36	5.08	6.04	5.97	4.60	3.02	1.00	0.33								
C. Total A(5)+B(7)	(mm/day)	8.96	9.08	9.14	8.19	8.52	5.93	4.20	1.00	0.33		4.72	4.72	4.09	4.04	3.97	2.60	1.62	0.00	0.00					
I								2.05	6.14	9.22	9.43	8.15	7.15	8.19	5.71	4.13	1.00	0.33							
II																									
D. Effective Rainfall	(mm/day)	5.68	11.00	31.82	6.83	3.46	12.80	5.98	0.73	4.81	2.06	0.46	0.27	0.10	0.12	0.53	0.46	2.25	1.63	2.76	3.30	7.02	9.39	18.15	9.54
E. Net field Water Requirement, NFR	(mm/day)	3.28	-1.92	-22.68	1.35	5.07	-6.87	-1.78	0.27	-4.48															
I								-3.94	5.41	4.40	7.38	7.70	6.88	8.08	5.59	3.60	0.54	-1.92							
II																									
I	(l/sec/ha)	0.380	0.000	0.000	0.157	0.586	0.000	0.000	0.031	0.000															
II								0.000	0.626	0.509	0.854	0.891	0.797	0.936	0.647	0.416	0.062	0.000							

Net Field Requirement for Water Balance Calculation in 1988 (4/7)

Calculation of Net Field Water Requirement for Palawija(B)

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
Cropping Pattern	Early Cropping			●		●						●		●											
	Middle Cropping				●		●					●			●										
	Late Cropping	LP									LP													LP	
		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
A.Crop Water Requirement																									
1.Crop Intensity																									
Early Cropping																									
Middle Cropping																									
Late Cropping																									
Total																									
2.Crop Coefficient																									
Early Cropping																									
Middle Cropping																									
Late Cropping																									
Weighted average																									
3.Potential ETo (mm/day/A)		3.90	3.90	4.76	4.76	4.23	4.23	4.48	4.48	4.30	4.30	3.79	3.79	3.90	3.90	4.27	4.27	4.85	4.85	4.66	4.66	4.36	4.36	3.45	3.45
4.Consumptive Use, ETc (mm/day/A)																									
5.Rainfall (mm/day)		8.11	15.71	45.45	9.76	4.94	18.29	8.54	1.04	6.88	2.94	0.66	0.39	0.15	0.17	0.76	0.66	3.21	2.33	3.94	4.71	10.03	13.41	25.93	13.62
6.Effective Rainfall (mm/day/A)																									
7.Crop water Requirement (mm/day)																									
B.Net Field Water Requirement (mm/day)																									
(I/sec/ha)																									
		III																							
		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
Net Field Water Requirement for Paddy		0.380	0.000	0.000	0.157	0.586	0.000	0.000	0.031	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Net Field Water Requirement for Palawija		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.626	0.509	0.854	0.891	0.797	0.936	0.647	0.416	0.062	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100 I		0.380	0.000	0.000	0.157	0.586	0.000	0.000	0.031	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100 II		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.626	0.509	0.854	0.891	0.797	0.936	0.647	0.416	0.062	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100 III		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.031	0.129	0.146	0.301	0.186	0.066	0.000	0.000	0.000
<b>Total NWR</b> (l/s/ha)		0.380	0.000	0.000	0.157	0.586	0.000	0.000	0.657	0.509	0.854	0.891	0.797	0.936	0.647	0.447	0.191	0.146	0.301	0.186	0.066	0.000	0.000	0.000	0.000
<b>DR</b> (E=0.875*0.81)		0.536	0.000	0.000	0.221	0.827	0.000	0.000	0.928	0.719	1.205	1.257	1.124	1.320	0.913	0.631	0.269	0.206	0.425	0.263	0.093	0.000	0.000	0.000	0.000
0.85 0.81 0.6885		0.552	0.000	0.000	0.228	0.851	0.000	0.000	0.955	0.740	1.240	1.294	1.157	1.359	0.940	0.650	0.277	0.212	0.437	0.271	0.096	0.000	0.000	0.000	0.000



Net Field Requirement for Water Balance Calculation in 1988 (6/7)

Calculation of Net Field Water Requirement for Palawija(C)

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec		
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	
Cropping Pattern	Early Cropping																									
	Middle Cropping																									
	Late Cropping																									
	No Cropping																									
A.Crop Water Requirement																										
1.Crop Intensity																										
Early Cropping																										
Middle Cropping																										
Late Cropping																										
Total																										
2.Crop Coefficient																										
Early Cropping																										
Middle Cropping																										
Late Cropping																										
Weighted average																										
3.Potential ETo (mm/day/A)		3.90	3.90	4.76	4.76	4.23	4.23	4.48	4.48	4.30	4.30	3.79	3.79	3.90	3.90	4.27	4.27	4.85	4.85	4.66	4.66	4.36	4.36	3.45	3.45	
4.Consumptive Use, ETc (mm/day/A)																		2.13	3.07	3.69	4.12	4.35	3.41	2.48	1.32	0.52
5.Rainfall (mm/day)		8.11	15.71	45.45	9.76	4.94	18.29	8.54	1.04	6.88	2.94	0.66	0.39	0.15	0.17	0.76	0.66	3.21	2.33	3.94	4.71	10.03	13.41	25.93	13.62	
6.Effective Rainfall (mm/day/A)																	0.46	2.09	1.62	2.70	3.22	3.41	2.48	1.32	0.52	
7.Crop water Requirement (mm/day/A)																	1.67	0.98	2.07	1.42	1.13	0.00	0.00	0.00	0.00	
B.Net Field Water Requirement (mm/day)																	0.28	0.49	1.72	1.42	1.13	0.00	0.00	0.00	0.00	
(l/sec/ha)																	0.032	0.057	0.199	0.164	0.130	0.000	0.000	0.000	0.000	
		III																								
		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec		
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	
Net Field Water Requirement for Paddy		0.030	0.000	0.000	0.267	0.482	0.000	0.014	0.401	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
Net Field Water Requirement for Palawija		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.032	0.057	0.199	0.164	0.130	0.000	0.000	0.000	0.000	
100 I		0.030	0.000	0.000	0.267	0.482	0.000	0.014	0.401	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
100 II		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.152	0.145	0.829	0.987	0.912	0.830	0.933	0.628	0.424	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
100 III		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.032	0.057	0.199	0.164	0.130	0.000	0.000	0.000	0.000	
<b>Total NWR</b> (l/s/ha)		0.030	0.000	0.000	0.267	0.482	0.000	0.014	0.554	0.145	0.829	0.987	0.912	0.830	0.933	0.628	0.456	0.057	0.199	0.164	0.130	0.000	0.000	0.000	0.000	
<b>DR</b> (E=0.875*0.81)		0.042	0.000	0.000	0.377	0.680	0.000	0.019	0.781	0.205	1.169	1.392	1.287	1.171	1.317	0.886	0.644	0.080	0.281	0.231	0.184	0.000	0.000	0.000	0.000	
0.85      0.81      0.6885		0.043	0.000	0.000	0.388	0.700	0.000	0.020	0.804	0.211	1.204	1.433	1.325	1.205	1.356	0.912	0.663	0.083	0.290	0.238	0.189	0.000	0.000	0.000	0.000	

Net Field Requirement for Water Balance Calculation in 1988 (7/7)

(E=0.875*0.81)	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec		
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	
<b>Golongan A</b>	0.555	0.000	0.000	0.364	0.404	0.000	0.025	1.406	0.754	1.079	1.093	1.274	0.916	0.685	0.253	0.373	0.331	0.460	0.168	0.000	0.000	0.000	0.000	0.000	0.000
<b>Golongan B</b>	0.536	0.000	0.000	0.221	0.827	0.000	0.000	0.928	0.719	1.205	1.257	1.124	1.320	0.913	0.631	0.269	0.206	0.425	0.263	0.093	0.000	0.000	0.000	0.000	0.000
<b>Golongan C</b>	0.042	0.000	0.000	0.377	0.680	0.000	0.019	0.781	0.205	1.169	1.392	1.287	1.171	1.317	0.886	0.644	0.080	0.281	0.231	0.184	0.000	0.000	0.000	0.000	0.000
average	0.378	0.000	0.000	0.320	0.637	0.000	0.015	1.038	0.559	1.151	1.247	1.228	1.135	0.972	0.590	0.429	0.206	0.389	0.221	0.092	0.000	0.000	0.000	0.000	0.000

(E=0.85*0.81)	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec		
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	
<b>Golongan A</b>	0.571	0.000	0.000	0.374	0.416	0.000	0.026	1.447	0.777	1.111	1.125	1.312	0.943	0.705	0.260	0.384	0.340	0.474	0.173	0.000	0.000	0.000	0.000	0.000	0.000
<b>Golongan B</b>	0.552	0.000	0.000	0.228	0.851	0.000	0.000	0.955	0.740	1.240	1.294	1.157	1.359	0.940	0.650	0.277	0.212	0.437	0.271	0.096	0.000	0.000	0.000	0.000	0.000
<b>Golongan C</b>	0.043	0.000	0.000	0.388	0.700	0.000	0.020	0.804	0.211	1.204	1.433	1.205	1.356	0.912	0.663	0.083	0.290	0.238	0.189	0.000	0.000	0.000	0.000	0.000	0.000
average	0.389	0.000	0.000	0.330	0.656	0.000	0.015	1.069	0.576	1.185	1.284	1.265	1.169	1.000	0.607	0.441	0.212	0.400	0.227	0.095	0.000	0.000	0.000	0.000	0.000

Summary Calculation of NFR (l/s/ha)

	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec		
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	
<b>Golongan A</b>	0.39	0.00	0.00	0.26	0.29	0.00	0.02	1.00	0.53	0.77	0.77	0.90	0.65	0.49	0.18	0.26	0.23	0.33	0.12	0.00	0.00	0.00	0.00	0.00	0.00
<b>Golongan B</b>	0.38	0.00	0.00	0.16	0.59	0.00	0.00	0.66	0.51	0.85	0.89	0.80	0.94	0.65	0.45	0.19	0.15	0.30	0.19	0.07	0.00	0.00	0.00	0.00	0.00
<b>Golongan C</b>	0.03	0.00	0.00	0.27	0.48	0.00	0.01	0.55	0.15	0.83	0.99	0.91	0.83	0.93	0.63	0.46	0.06	0.20	0.16	0.13	0.00	0.00	0.00	0.00	0.00

1988

	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec		
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	
I : W.Pad	A	0.39	0.00	0.00	0.26	0.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	B	0.38	0.00	0.00	0.16	0.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	C	0.03	0.00	0.00	0.27	0.48	0.00	0.01	0.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	av	0.27	0.00	0.00	0.23	0.45	0.00	0.00	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
II : D.Pad	A	0.00	0.00	0.00	0.00	0.00	0.00	0.02	1.00	0.53	0.77	0.77	0.90	0.65	0.45	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	B	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.63	0.51	0.85	0.89	0.80	0.94	0.65	0.42	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	C	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.15	0.83	0.99	0.91	0.83	0.93	0.63	0.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	av	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.59	0.40	0.82	0.88	0.80	0.68	0.37	0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
III : D.Pad	A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.12	0.26	0.23	0.33	0.12	0.00	0.00	0.00	0.00	0.00
	B	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.13	0.15	0.30	0.19	0.07	0.00	0.00	0.00	0.00
	C	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.06	0.20	0.16	0.13	0.00	0.00	0.00	0.00	0.00
	av	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.05	0.14	0.15	0.28	0.16	0.07	0.00	0.00	0.00	0.00
I : W.Pad		0.27	0.00	0.00	0.23	0.45	0.00	0.00	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
II : D.Pad		0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.59	0.40	0.82	0.88	0.87	0.80	0.68	0.37	0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
III : D.Pad		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.05	0.14	0.15	0.28	0.16	0.07	0.00	0.00	0.00	0.00

1988

I : W.Pad	100	0.268	0.000	0.000	0.227	0.452	0.000	0.005	0.144	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
II : D.Pad	100	0.000	0.000	0.000	0.000	0.000	0.000	0.006	0.592	0.397	0.816	0.884	0.871	0.805	0.677	0.366	0.162	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
III : D.Pad	100	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.012	0.052	0.142	0.146	0.276	0.157	0.065	0.000	0.000	0.000	0.000	0.000
total		0.268	0.000	0.000	0.227	0.452	0.000	0.011	0.736	0.397	0.816	0.884	0.871	0.805	0.689	0.418	0.304	0.146	0.276	0.157	0.065	0.000	0.000	0.000	0.000
		0.1338		0.11354		0.2258		0.37324		0.60622		0.87735		0.74665		0.36092		0.2106		0.11104		0		0	

Year : 1988

N.F.R. (l/s/ha)

	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
	0.268	0.000	0.000	0.227	0.452	0.000	0.011	0.736	0.397	0.816	0.884	0.871	0.805	0.689	0.418	0.304	0.146	0.276	0.157	0.065	0.000	0.000	0.000	0.000

Net Field Requirement for Water Balance Calculation in 1989 (1/7)

[Kampili Rotation A]

1 1 1  
Calculation of Net Field Water Requirement for Paddy (A) on

1989

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
<b>Cropping Pattern</b>																									
		<p>Early Cropping Middle Cropping Late Cropping</p>																							
<b>A. Land Preparation Requirement</b>																									
1. Land Preparation Intensity																									
Early Cropping																									
Middle Cropping																									
Late Cropping																									
Total																									
2. Land Preparation Requirement (mm/day/A)																									
3. Water Layer Replacement Intensity																									
4. Water Layer Replacement Requirement (mm/day/A)																									
5. Total Requirement for Land Preparation																									
I (mm/day)																									
II (mm/day)																									
<b>B. Crop Water Requirement</b>																									
1. Crop Intensity																									
Early Cropping																									
Middle Cropping																									
Late Cropping																									
Total																									
I																									
II																									
2. Crop Coefficient																									
Early Cropping																									
Middle Cropping																									
Late Cropping																									
Weighted average																									
I																									
II																									
3. Potential ETo (mm/day/A)																									
4. Consumptive Use, ETc (mm/day/A)																									
5. Percolation Loss (mm/day/A)																									
6. Crop Water Requirement (mm/day/A)																									
7. Crop water Requirement (mm/day)																									
I																									
II																									
C. Total A(5)+B(7) (mm/day)																									
I																									
II																									
D. Effective Rainfall (mm/day)																									
E. Net field Water Requirement, NFR (mm/day)																									
I																									
II																									
I (l/sec/ha)																									
II																									



Net Field Requirement for Water Balance Calculation in 1989 (2/7)

Calculation of Net Field Water Requirement for Palawija(A)

Cropping Pattern	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
Early Cropping		○		○						○		○												
Middle Cropping			○	Paddy	○						○	Paddy	○											
Late Cropping	LP			○		○						○		○										LP

A. Crop Water Requirement

1. Crop Intensity																									
Early Cropping															1/6	1/3	1/3	1/3	1/3	1/3	1/3	1/6			
Middle Cropping																1/6	1/3	1/3	1/3	1/3	1/3	1/6			
Late Cropping																	1/6	1/3	1/3	1/3	1/3	1/3	1/6		
Total															1/6	1/2	5/6	1	1	1	5/6	1/2	1/6		
2. Crop Coefficient																									
Early Cropping															0.50	0.70	0.95	1.00	0.85	0.50	0.15				
Middle Cropping																0.50	0.70	0.95	1.00	0.85	0.50	0.15			
Late Cropping																	0.50	0.70	0.95	1.00	0.85	0.50	0.15		
Weighted average															0.50	0.63	0.76	0.88	0.93	0.78	0.57	0.38	0.15		
3. Potential ETo (mm/day/A)		3.83	3.83	3.70	3.70	3.50	3.50	3.62	3.62	4.27	4.27	3.44	3.44	3.57	3.57	4.39	4.39	4.72	4.72	4.63	4.63	4.78	4.78	4.32	4.32
4. Consumptive Use, ETc (mm/day/A)															1.78	2.78	3.34	4.17	4.40	3.62	2.64	1.83	0.72		
5. Rainfall (mm/day)		3.77	41.83	18.81	18.53	19.83	1.51	5.61	14.73	3.91	0.30	2.05	3.11	1.00	2.13	0.00	0.61	0.17	1.56	2.76	5.54	6.86	6.27	13.24	3.93
6. Effective Rainfall (mm/day/A)															1.31	0.00	0.47	0.16	1.17	1.88	2.64	1.83	0.72		
7. Crop water Requirement (mm/day/A)															0.48	2.78	2.87	4.01	3.23	1.74	0.00	0.00	0.00		
B. Net Field Water Requirement (mm/day)															0.08	1.39	2.39	4.01	3.23	1.74	0.00	0.00	0.00		
(l/sec/ha)															0.009	0.161	0.277	0.464	0.374	0.201	0.000	0.000	0.000		

	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec		
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	
Net Field Water Requirement for Paddy	0.738	0.000	0.000	0.000	0.000	0.327	0.000	0.000	0.000	0.773	0.976	0.619	0.642	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.750
Net Field Water Requirement for Palawija	0.000	0.000	0.000	0.000	0.000	0.101	0.222	0.000	0.773	0.976	0.619	0.642	0.554	0.280	0.116	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100 I	0.738	0.000	0.000	0.000	0.000	0.327	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.750
100 II	0.000	0.000	0.000	0.000	0.000	0.101	0.222	0.000	0.773	0.976	0.619	0.642	0.554	0.280	0.116	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100 III	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.009	0.161	0.277	0.464	0.374	0.201	0.000	0.000	0.000	0.000	0.000
<b>Total NWR</b> (l/s/ha)	0.738	0.000	0.000	0.000	0.000	0.429	0.222	0.000	0.773	0.976	0.619	0.642	0.554	0.289	0.277	0.277	0.464	0.374	0.201	0.000	0.000	0.000	0.000	0.000	0.750
<b>DR</b> (E=0.875*0.81)	1.042	0.000	0.000	0.000	0.000	0.605	0.313	0.000	1.090	1.377	0.874	0.905	0.782	0.408	0.390	0.390	0.655	0.527	0.284	0.000	0.000	0.000	0.000	1.058	
0.85      0.81      0.6885	1.073	0.000	0.000	0.000	0.000	0.623	0.322	0.000	1.122	1.418	0.899	0.932	0.805	0.420	0.402	0.402	0.674	0.543	0.293	0.000	0.000	0.000	0.000	1.090	

Net Field Requirement for Water Balance Calculation in 1989 (3/7)

[Kampili Rotation B]

Calculation of Net Field Water Requirement for Paddy(B) on 1989

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec									
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd								
<b>Cropping Pattern</b>																																	
<b>A. Land Preparation Requirement</b>																																	
1. Land Preparation Intensity																																	
Early Cropping		1/6						1/6		1/3		1/6												1/6		1/3							
Middle Cropping		1/3		1/6						1/6		1/3		1/6														1/6					
Late Cropping		1/6		1/3		1/6						1/6		1/3		1/6												1/6					
Total		2/3		1/2		1/6				1/6		1/2		2/3		1/6										1/6		1/2					
2. Land Preparation Requirement (mm/day/A)		11.82	11.82	11.73	11.73	11.60	11.60	11.68	11.68	12.13	12.13	11.56	11.56	11.65	11.65	12.21	12.21	12.44	12.44	12.37	12.37	12.48	12.48	12.16	12.16	12.16	12.16	12.16	12.16				
3. Water Layer Replacement Intensity																																	
4. Water Layer Replacement Requirement (mm/day)		7.88		5.91		1.96		0.00		0.00		1.95		5.84		8.08		6.06		1.93		0.00		0.00		0.00		0.00		2.03		6.08	
5. Total Requirement for Land Preparation																																	
I (mm/day)		7.88	5.91	3.07	1.11	2.22	1.11	1.11	1.11	1.11	1.11	3.04	1.11	2.22	1.11	1.11	1.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.03	6.08	6.08	6.08	6.08			
II (mm/day)																																	
<b>B. Crop Water Requirement</b>																																	
1. Crop Intensity																																	
Early Cropping		1/6		1/3		1/3		1/3		1/6		1/3		1/3		1/6																	
Middle Cropping				1/6		1/3		1/3		1/6		1/6		1/3		1/3		1/6															
Late Cropping				1/6		1/3		1/3		1/6		1/6		1/3		1/3		1/6		1/6													
Total		1/6		1/2		5/6		1		5/6		1/2		1/6		5/6		1/2		1/6													
II																																	
2. Crop Coefficient																																	
Early Cropping		1.10		1.10		1.05		0.95		0.00		1.10		1.10		1.05		0.95		0.00		0.00		0.00		0.00		0.00					
Middle Cropping				1.10		1.10		1.05		0.95		0.00		1.10		1.10		1.05		0.95		0.00		0.00		0.00		0.00					
Late Cropping				1.10		1.10		1.05		0.95		0.00		1.10		1.10		1.05		0.95		0.00		0.00		0.00		0.00					
Weighted average		1.10		1.10		1.08		1.07		1.02		0.67		0.38		0.00		0.00		0.00		0.00		0.00		0.00		0.00					
II																																	
3. Potential ETo (mm/day/A)		3.83	3.83	3.70	3.70	3.50	3.50	3.62	3.62	4.27	4.27	3.44	3.44	3.57	3.57	4.39	4.39	4.72	4.72	4.63	4.63	4.78	4.78	4.32	4.32	4.32	4.32	4.32	4.32				
4. Consumptive Use, ETc (mm/day/A)		4.21	4.21	3.99	3.94	3.56	2.34	1.38	0.00	0.00	0.00	4.70	4.70	3.72	3.67	3.63	2.38	1.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				
II																																	
5. Percolation Loss (mm/day/A)		2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00				
6. Crop Water Requirement (mm/day/A)		6.21	6.21	5.99	5.94	5.56	4.34	3.38	2.00	2.00	2.00	6.70	6.70	5.72	5.67	5.63	4.38	3.67	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00				
II																																	
7. Crop water Requirement (mm/day)		1.04	3.11	4.99	5.94	5.56	4.34	2.81	1.00	0.33	1.12	3.35	4.77	5.67	5.63	4.38	3.06	1.00	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				
II																																	
C. Total A(5)+B(7) (mm/day)		8.92	9.02	8.06	7.05	7.78	5.45	3.92	1.00	0.33	0.33	3.35	4.77	5.67	5.63	4.38	3.06	1.00	0.33	0.00	0.00	0.00	0.00	0.00	2.03	6.08	6.08	6.08	6.08				
II																																	
D. Effective Rainfall (mm/day)		2.64	29.28	13.17	12.97	13.88	1.06	3.93	10.31	2.74	0.21	1.43	2.18	0.70	1.49	0.00	0.43	0.12	1.09	1.93	3.88	4.80	4.39	9.27	2.75	2.75	2.75	2.75	2.75				
E. Net field Water Requirement, NFR (mm/day)		6.28	-20.26	-5.11	-5.92	-6.10	4.39	0.00	-9.31	-2.40	-2.40	9.20	6.37	4.60	7.15	4.00	4.17	0.57	0.21	-1.09	-1.93	-3.88	-4.80	-4.39	-7.24	3.33	3.33	3.33	3.33				
II																																	
I		6.28	0.00	0.00	0.00	0.00	4.39	0.00	0.00	0.00	0.00	9.20	6.37	4.60	7.15	4.00	4.17	0.57	0.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.33				
II																																	
I (l/sec/ha)		0.727	0.000	0.000	0.000	0.000	0.508	0.000	0.000	0.000	0.000	1.065	0.737	0.533	0.827	0.463	0.482	0.066	0.024	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.385				
II																																	

Net Field Requirement for Water Balance Calculation in 1989 (4/7)

Calculation of Net Field Water Requirement for Palawija(B)

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
Cropping Pattern																									
A.Crop Water Requirement																									
1.Crop Intensity																									
Early Cropping																									
Middle Cropping																									
Late Cropping																									
Total																									
2.Crop Coefficient																									
Early Cropping																									
Middle Cropping																									
Late Cropping																									
Weighted average																									
3.Potential ETo (mm/day/A)		3.83	3.83	3.70	3.70	3.50	3.50	3.62	3.62	4.27	4.27	3.44	3.44	3.57	3.57	4.39	4.39	4.72	4.72	4.63	4.63	4.78	4.78	4.32	4.32
4.Consumptive Use, ETc (mm/day/A)																									
5.Rainfall (mm/day)		3.77	41.83	18.81	18.53	19.83	1.51	5.61	14.73	3.91	0.30	2.05	3.11	1.00	2.13	0.00	0.61	0.17	1.56	2.76	5.54	6.86	6.27	13.24	3.93
6.Effective Rainfall (mm/day/A)																									
7.Crop water Requirement (mm/day)																									
B.Net Field Water Requirement (mm/day)																									
(I/sec/ha)																									
III																									
		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
Net Field Water Requirement for Paddy		0.727	0.000	0.000	0.000	0.000	0.508	0.000	0.000	0.000	0.000	0.748	1.065	0.737	0.533	0.827	0.463	0.482	0.066	0.024	0.000	0.000	0.000	0.000	0.000
Net Field Water Requirement for Palawija		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.042	0.135	0.331	0.348	0.272	0.007	0.000	0.000	0.000
100 I		0.727	0.000	0.000	0.000	0.000	0.508	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.385
100 II		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.748	1.065	0.737	0.533	0.827	0.463	0.482	0.066	0.024	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100 III		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.042	0.135	0.331	0.348	0.272	0.007	0.000	0.000	0.000	0.000
<b>Total NWR</b> (I/s/ha)		0.727	0.000	0.000	0.000	0.000	0.508	0.000	0.000	0.748	1.065	0.737	0.533	0.827	0.463	0.525	0.201	0.356	0.348	0.272	0.007	0.000	0.000	0.000	0.385
<b>DR</b> (E=0.875*0.81)		1.026	0.000	0.000	0.000	0.000	0.717	0.000	0.000	1.056	1.503	1.040	0.752	1.167	0.653	0.740	0.283	0.502	0.492	0.384	0.010	0.000	0.000	0.000	0.544
0.85    0.81    0.6885		1.056	0.000	0.000	0.000	0.000	0.738	0.000	0.000	1.087	1.547	1.071	0.774	1.201	0.672	0.762	0.292	0.517	0.506	0.395	0.010	0.000	0.000	0.000	0.560

Net Field Requirement for Water Balance Calculation in 1989 (5/7)

[Kampili Rotation C ]

Calculation of Net Field Water Requirement for Paddy (C) on

1989

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec		
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	
Cropping Pattern																										
A.Land Preparation Requirement																										
1.Land Preparation Intensity																										
Early Cropping		1/3	1/6							1/6	1/3	1/6														1/6
Middle Cropping		1/6	1/3	1/6						1/6	1/3	1/6														
Late Cropping			1/6	1/3	1/6							1/6	1/3	1/6												
Total		1/2	2/3	1/2	1/6					1/6	1/2	2/3	1/2	1/6												1/6
2.Land Preparation Requirement (mm/day/A)	(mm/day)	11.82	11.82	11.73	11.73	11.60	11.60	11.68	11.68	12.13	12.13	11.56	11.56	11.65	11.65	12.21	12.21	12.44	12.44	12.37	12.37	12.48	12.48	12.16	12.16	
		5.91	7.88	5.87	1.96	0.00	0.00	0.00	1.95	6.06	8.08	5.78	1.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.03	
3.Water Layer Replacement Intensity					1/3	1/3	2/3	1/3	1/3				1/3	1/3	2/3	1/3	1/3									
4.Water Layer Replacement Requirement	(mm/day/A)				3.33	3.33	3.33	3.33	3.33				3.33	3.33	3.33	3.33	3.33									
	(mm/day)				1.11	1.11	2.22	1.11	1.11				1.11	1.11	2.22	1.11	1.11									
5.Total Requirement for Land Preparation	(mm/day)	5.91	7.88	5.87	3.07	1.11	2.22	1.11	1.11	1.95	6.06	8.08	5.78	3.04	1.11	2.22	1.11	1.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.03
B. Crop Water Requirement																										
1.Crop Intensity		Jan	Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec			
Early Cropping			1/6	1/3	1/3	1/3	1/3	1/3	1/6	1/6	1/3	1/3	1/3	1/3	1/3	1/3	1/6									
Middle Cropping				1/6	1/3	1/3	1/3	1/3	1/6		1/6	1/3	1/3	1/3	1/3	1/3	1/6									
Late Cropping					1/6	1/3	1/3	1/3	1/3	1/6	1/6	1/3	1/3	1/3	1/3	1/3	1/3	1/6								
Total	I		1/6	1/2	5/6	1	1	1	5/6	1/2	1/6	1/2	5/6	1	1	1	5/6	1/2	1/6							
	II										1/6	1/2	5/6	1	1	1	5/6	1/2	1/6							
2.Crop Coefficient																										
Early Cropping			1.10	1.10	1.05	1.05	0.95	0.00	0.00	1.10	1.10	1.05	1.05	0.95	0.00	0.00										
Middle Cropping				1.10	1.10	1.05	1.05	0.95	0.00	0.00	1.10	1.10	1.05	1.05	0.95	0.00	0.00									
Late Cropping					1.10	1.10	1.05	1.05	0.95	0.00	0.00		1.10	1.10	1.05	1.05	0.95	0.00	0.00							
Weighted average	I		1.10	1.10	1.08	1.07	1.02	0.67	0.38	0.00	0.00		1.10	1.10	1.08	1.07	1.02	0.67	0.38	0.00	0.00					
	II										1.10	1.10	1.08	1.07	1.02	0.67	0.38	0.00	0.00							
3.Potential ETo	(mm/day/A)	3.83	3.83	3.70	3.70	3.50	3.50	3.62	3.62	4.27	4.27	3.44	3.44	3.57	3.57	4.39	4.39	4.72	4.72	4.63	4.63	4.78	4.78	4.32	4.32	
4.Consumptive Use, ETc	(mm/day/A)	0.00	4.21	4.06	3.99	3.74	3.56	2.42	1.38	0.00	0.00	4.70	3.79	3.72	3.81	3.63	2.93	1.67	0.00							
	II										4.70	3.79	3.72	3.81	3.63	2.93	1.67	0.00								
5.Percolation Loss	(mm/day/A)	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00							
6.Crop Water Requirement	(mm/day/A)	2.00	6.21	6.06	5.99	5.74	5.56	4.42	3.38	2.00	2.00	6.70	5.79	5.72	5.81	5.63	4.93	3.67	2.00	2.00	0.00	0.00	0.00	0.00	0.00	
	II										6.70	5.79	5.72	5.81	5.63	4.93	3.67	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	
7.Crop water Requirement	(mm/day)	0.00	1.04	3.03	4.99	5.74	5.56	4.42	2.81	1.00	0.33	1.12	2.89	4.77	5.81	5.63	4.93	3.06	1.00	0.33	0.00	0.00	0.00	0.00	0.00	
	II										1.12	2.89	4.77	5.81	5.63	4.93	3.06	1.00	0.33	0.00	0.00	0.00	0.00	0.00	0.00	
C.Total A(5)+B(7)	(mm/day)	5.91	8.92	8.90	8.06	6.85	7.78	5.53	3.92	1.00	0.33	1.95	6.06	9.20	8.67	7.80	6.92	7.85	6.04	4.17	1.00	0.33	0.00	0.00	2.03	
	II								1.95	6.06	9.20	8.67	7.80	6.92	7.85	6.04	4.17	1.00	0.33	0.00	0.33	0.00	0.00	0.00	2.03	
D.Effective Rainfall	(mm/day)	2.64	29.28	13.17	12.97	13.88	1.06	3.93	10.31	2.74	0.21	1.43	2.18	0.70	1.49	0.00	0.43	0.12	1.09	1.93	3.88	4.80	4.39	9.27	2.75	
E.Net field Water Requirement, NFR (mm/day)		3.27	-20.36	-4.27	-4.92	-7.03	6.72	1.60	-6.39	-1.74	0.13	1.12	2.89	4.77	5.81	5.63	4.93	3.06	1.00	0.33	-1.93	-3.88	-4.80	-4.39	-9.27	
	II								-8.37	3.33	8.99	7.24	5.62	6.22	6.36	6.04	3.74	0.88	-0.76						0.00	
	I	3.27	0.00	0.00	0.00	0.00	6.72	1.60	0.00	0.00	0.13	7.24	5.62	6.22	6.36	6.04	3.74	0.88	-0.76						0.00	
	II								0.00	3.33	8.99	7.24	5.62	6.22	6.36	6.04	3.74	0.88	0.00						0.00	
	(l/sec/ha)	0.379	0.000	0.000	0.000	0.000	0.778	0.185	0.000	0.000	0.015	0.838	0.651	0.719	0.736	0.699	0.432	0.102	0.000						0.000	
	II								0.000	0.385	1.041	0.838	0.651	0.719	0.736	0.699	0.432	0.102	0.000						0.000	

Net Field Requirement for Water Balance Calculation in 1989 (6/7)

Calculation of Net Field Water Requirement for Palawija(C)

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec		
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	
Cropping Pattern	Early Cropping																									
	Middle Cropping																									
	Late Cropping																									
A.Crop Water Requirement																										
1.Crop Intensity																										
Early Cropping																										
Middle Cropping																										
Late Cropping																										
Total																										
2.Crop Coefficient																										
Early Cropping																										
Middle Cropping																										
Late Cropping																										
Weighted average																										
3.Potential ETo (mm/day/A)		3.83	3.83	3.70	3.70	3.50	3.50	3.62	3.62	4.27	4.27	3.44	3.44	3.57	3.57	4.39	4.39	4.72	4.72	4.63	4.63	4.78	4.78	4.32	4.32	
4.Consumptive Use, ETc (mm/day/A)																		2.19	2.99	3.58	4.09	4.32	3.74	2.72	1.65	0.65
5.Rainfall (mm/day)		3.77	41.83	18.81	18.53	19.83	1.51	5.61	14.73	3.91	0.30	2.05	3.11	1.00	2.13	0.00	0.61	0.17	1.56	2.76	5.54	6.86	6.27	13.24	3.93	
6.Effective Rainfall (mm/day/A)																	0.43	0.14	1.11	1.94	3.73	3.74	2.72	1.65	0.65	
7.Crop water Requirement (mm/day/A)																	1.76	2.84	2.47	2.15	0.59	0.00	0.00	0.00	0.00	
B.Net Field Water Requirement (mm/day)																										
(l/sec/ha)																										
III																										
Net Field Water Requirement for Paddy		0.379	0.000	0.000	0.000	0.000	0.778	0.185	0.000	0.000	0.015	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
Net Field Water Requirement for Palawija		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.385	1.041	0.838	0.651	0.719	0.736	0.699	0.432	0.102	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
100 I		0.379	0.000	0.000	0.000	0.000	0.778	0.185	0.000	0.000	0.015	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
100 II		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.385	1.041	0.838	0.651	0.719	0.736	0.699	0.432	0.102	0.000	0.000	0.000	0.000	0.000	0.000		
100 III		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.034	0.164	0.238	0.248	0.068	0.000	0.000	0.000		
<b>Total NWR</b> (l/s/ha)		0.379	0.000	0.000	0.000	0.000	0.778	0.185	0.000	0.385	1.055	0.838	0.651	0.719	0.736	0.699	0.466	0.266	0.238	0.248	0.068	0.000	0.000	0.000		
<b>DR</b> (E=0.875*0.81)		0.535	0.000	0.000	0.000	0.000	1.098	0.261	0.000	0.543	1.489	1.182	0.918	1.015	1.038	0.986	0.658	0.375	0.336	0.350	0.096	0.000	0.000	0.000		
0.85	0.81	0.6885	0.550	0.000	0.000	0.000	1.131	0.269	0.000	0.559	1.533	1.217	0.945	1.045	1.069	1.015	0.678	0.387	0.346	0.361	0.099	0.000	0.000	0.000		

Net Field Requirement for Water Balance Calculation in 1989 (7/7)

(E=0.875*0.81)	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
<b>Golongan A</b>	1.042	0.000	0.000	0.000	0.000	0.605	0.313	0.000	1.090	1.377	0.874	0.905	0.782	0.408	0.390	0.390	0.655	0.527	0.284	0.000	0.000	0.000	0.000	1.058
<b>Golongan B</b>	1.026	0.000	0.000	0.000	0.000	0.717	0.000	0.000	1.056	1.503	1.040	0.752	1.167	0.653	0.740	0.283	0.502	0.492	0.384	0.010	0.000	0.000	0.000	0.544
<b>Golongan C</b>	0.535	0.000	0.000	0.000	0.000	1.098	0.261	0.000	0.543	1.489	1.182	0.918	1.015	1.038	0.986	0.658	0.375	0.336	0.350	0.096	0.000	0.000	0.000	0.000
average	0.867	0.000	0.000	0.000	0.000	0.807	0.191	0.000	0.896	1.456	1.032	0.859	0.988	0.700	0.705	0.444	0.511	0.452	0.339	0.035	0.000	0.000	0.000	0.534

(E=0.85*0.81)	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
<b>Golongan A</b>	1.073	0.000	0.000	0.000	0.000	0.623	0.322	0.000	1.122	1.418	0.899	0.932	0.805	0.420	0.402	0.402	0.674	0.543	0.293	0.000	0.000	0.000	0.000	1.090
<b>Golongan B</b>	1.056	0.000	0.000	0.000	0.000	0.738	0.000	0.000	1.087	1.547	1.071	0.774	1.201	0.672	0.762	0.292	0.517	0.506	0.395	0.010	0.000	0.000	0.000	0.560
<b>Golongan C</b>	0.550	0.000	0.000	0.000	0.000	1.131	0.269	0.000	0.559	1.533	1.217	0.945	1.045	1.069	1.015	0.678	0.387	0.346	0.361	0.099	0.000	0.000	0.000	0.000
average	0.893	0.000	0.000	0.000	0.000	0.830	0.197	0.000	0.923	1.499	1.062	0.884	1.017	0.720	0.726	0.457	0.526	0.465	0.349	0.036	0.000	0.000	0.000	0.550

Summary Calculation of NFR (l/s/ha)

	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
<b>Golongan A</b>	0.74	0.00	0.00	0.00	0.00	0.43	0.22	0.00	0.77	0.98	0.62	0.64	0.55	0.29	0.28	0.28	0.46	0.37	0.20	0.00	0.00	0.00	0.00	0.75
<b>Golongan B</b>	0.73	0.00	0.00	0.00	0.00	0.51	0.00	0.00	0.75	1.07	0.74	0.53	0.83	0.46	0.52	0.20	0.36	0.35	0.27	0.01	0.00	0.00	0.00	0.39
<b>Golongan C</b>	0.38	0.00	0.00	0.00	0.00	0.78	0.19	0.00	0.39	1.06	0.84	0.65	0.72	0.74	0.70	0.47	0.27	0.24	0.25	0.07	0.00	0.00	0.00	0.00

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	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec		
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	
I : W.Pad	A	0.74	0.00	0.00	0.00	0.00	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.75
	B	0.73	0.00	0.00	0.00	0.00	0.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39
	C	0.38	0.00	0.00	0.00	0.00	0.78	0.19	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	av	0.61	0.00	0.00	0.00	0.00	0.54	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.38
II : D.Pad	A	0.00	0.00	0.00	0.00	0.00	0.10	0.22	0.00	0.77	0.98	0.62	0.64	0.55	0.28	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	B	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.75	1.07	0.74	0.53	0.83	0.46	0.48	0.07	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	C	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39	1.04	0.84	0.65	0.72	0.74	0.70	0.43	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	av	0.00	0.00	0.00	0.00	0.00	0.03	0.07	0.00	0.64	1.03	0.73	0.61	0.70	0.49	0.43	0.17	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00
III : D.Pal	A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.16	0.28	0.46	0.37	0.20	0.00	0.00	0.00	0.00	0.00
	B	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.13	0.33	0.35	0.27	0.01	0.00	0.00	0.00	0.00	0.00
	C	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.16	0.24	0.25	0.07	0.00	0.00	0.00	0.00	0.00
	av	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.15	0.32	0.32	0.24	0.03	0.00	0.00	0.00	0.00	0.00
I : W.Pad		0.61	0.00	0.00	0.00	0.00	0.54	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.38
II : D.Pad		0.00	0.00	0.00	0.00	0.00	0.03	0.07	0.00	0.64	1.03	0.73	0.61	0.70	0.49	0.43	0.17	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00
III : D.Pal		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.15	0.32	0.32	0.24	0.03	0.00	0.00	0.00	0.00	0.00

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I : W.Pad	100	0.615	0.000	0.000	0.000	0.000	0.538	0.062	0.000	0.000	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.379
II : D.Pad	100	0.000	0.000	0.000	0.000	0.000	0.034	0.074	0.000	0.635	1.027	0.731	0.608	0.700	0.493	0.432	0.166	0.042	0.000	0.000	0.000	0.000	0.000	0.000	0.000
III : D.Pal	100	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.068	0.148	0.320	0.320	0.241	0.025	0.000	0.000	0.000	0.000
total		0.615	0.000	0.000	0.000	0.000	0.572	0.136	0.000	0.635	1.032	0.731	0.608	0.700	0.496	0.500	0.315	0.362	0.320	0.241	0.025	0.000	0.000	0.000	0.379
		0.30737		0		0.28584		0.06781		0.83376		0.66993		0.59805		0.4073		0.34105		0.1328		0		0.18927	

Year : 1989

N.F.R. (l/s/ha)

	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
	0.615	0.000	0.000	0.000	0.000	0.572	0.136	0.000	0.635	1.032	0.731	0.608	0.700	0.496	0.500	0.315	0.362	0.320	0.241	0.025	0.000	0.000	0.000	0.379



Net Field Requirement for Water Balance Calculation in 1990 (2/7)

Calculation of Net Field Water Requirement for Palawija(A)

Cropping Pattern	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
Early Cropping		●		●						●		●												
Middle Cropping			●	Paddy	●						●	Paddy	●											
Late Cropping	LP			●		●						●		●										LP

A. Crop Water Requirement

1. Crop Intensity																									
Early Cropping															1/6	1/3	1/3	1/3	1/3	1/3	1/3	1/6			
Middle Cropping																1/6	1/3	1/3	1/3	1/3	1/3	1/6			
Late Cropping																	1/6	1/3	1/3	1/3	1/3	1/3	1/6		
Total															1/6	1/2	5/6	1	1	1	5/6	1/2	1/6		
2. Crop Coefficient																									
Early Cropping															0.50	0.70	0.95	1.00	0.85	0.50	0.15				
Middle Cropping																0.50	0.70	0.95	1.00	0.85	0.50	0.15			
Late Cropping																	0.50	0.70	0.95	1.00	0.85	0.50	0.15		
Weighted average															0.50	0.63	0.76	0.88	0.93	0.78	0.57	0.38	0.15		
3. Potential ETo (mm/day/A)		3.56	3.56	4.70	4.70	4.29	4.29	4.50	4.50	3.56	3.56	3.88	3.88	4.09	4.09	4.87	4.87	5.58	5.58	5.40	5.40	5.20	5.20	3.88	3.88
4. Consumptive Use, ETc (mm/day/A)															2.04	3.09	3.70	4.93	5.21	4.23	3.08	1.99	0.78		
5. Rainfall (mm/day)		24.85	19.91	11.74	6.05	11.47	1.13	2.30	2.10	4.16	7.57	0.47	0.00	0.28	0.21	0.00	0.07	0.00	0.16	0.00	3.34	4.32	3.72	5.33	20.98
6. Effective Rainfall (mm/day/A)															0.16	0.00	0.07	0.00	0.16	0.00	2.17	1.99	0.78		
7. Crop water Requirement (mm/day/A)															1.89	3.09	3.63	4.93	5.05	4.23	0.91	0.00	0.00		
B. Net Field Water Requirement (mm/day)															0.31	1.54	3.03	4.93	5.05	4.23	0.76	0.00	0.00		
(l/sec/ha)															0.036	0.179	0.350	0.571	0.585	0.489	0.088	0.000	0.000		

	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec		
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	
Net Field Water Requirement for Paddy	0.000	0.000	0.000	0.551	0.000	0.387	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
Net Field Water Requirement for Palawija	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.036	0.179	0.350	0.571	0.585	0.489	0.088	0.000	0.000	0.000	0.000
100 I	0.000	0.000	0.000	0.551	0.000	0.387	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.254	
100 II	0.000	0.000	0.000	0.000	0.000	0.142	0.525	0.912	0.679	0.304	0.801	0.945	0.653	0.454	0.116	0.033	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
100 III	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.036	0.179	0.350	0.571	0.585	0.489	0.088	0.000	0.000	0.000	
<b>Total NWR</b> (l/s/ha)	0.000	0.000	0.000	0.551	0.000	0.529	0.525	0.912	0.679	0.304	0.801	0.945	0.653	0.491	0.294	0.383	0.571	0.585	0.489	0.088	0.000	0.000	0.254	0.000	
<b>DR</b> (E=0.875*0.81)	0.000	0.000	0.000	0.777	0.000	0.747	0.740	1.287	0.958	0.429	1.130	1.334	0.921	0.692	0.415	0.540	0.805	0.825	0.691	0.124	0.000	0.000	0.358	0.000	
0.85      0.81      0.6885	0.000	0.000	0.000	0.800	0.000	0.769	0.762	1.325	0.987	0.442	1.163	1.373	0.948	0.713	0.427	0.556	0.829	0.850	0.711	0.128	0.000	0.000	0.369	0.000	



Net Field Requirement for Water Balance Calculation in 1990 (3/7)

[Kampili Rotation B]

Calculation of Net Field Water Requirement for Paddy(B) on 1990

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec					
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd				
<b>Cropping Pattern</b>	Early Cropping	[Diagram showing crop rotation: LP, Paddy, LP, Paddy, Palawia, No Cropping, LP]																											
	Middle Cropping	[Diagram showing crop rotation: LP, Paddy, LP, Paddy, Palawia, No Cropping, LP]																											
	Late Cropping	[Diagram showing crop rotation: LP, Paddy, LP, Paddy, Palawia, No Cropping, LP]																											
<b>A. Land Preparation Requirement</b>																													
1. Land Preparation Intensity																													
	Early Cropping	1/6						1/6		1/3		1/6												1/6		1/3			
	Middle Cropping	1/3		1/6						1/6		1/3		1/6												1/6		1/6	
	Late Cropping	1/6		1/3		1/6						1/6		1/3		1/6													
	Total	2/3		1/2		1/6				1/6		1/2		2/3		1/6										1/6		1/2	
	2. Land Preparation Requirement (mm/day/A)	11.64	11.64	12.42	12.42	12.14	12.14	12.29	12.29	11.64	11.64	11.86	11.86	12.00	12.00	12.55	12.55	13.06	13.06	12.92	12.92	12.78	12.78	11.85	11.85				
	(mm/day)	7.76	5.82	2.07	0.00	0.00	0.00	2.05	6.14	7.76	5.82	1.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.98	5.93		
	3. Water Layer Replacement Intensity			1/3		1/3		2/3		1/3				1/3		1/3													
	4. Water Layer Replacement Requirement (mm/day/A)			3.33		3.33		3.33		3.33				3.33		3.33													
	(mm/day)			1.11		1.11		2.22		1.11				1.11		1.11													
	5. Total Requirement for Land Preparation																												
	I (mm/day)	7.76	5.82	3.18	1.11	2.22	1.11	1.11										0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.98	5.93		
	II (mm/day)							2.05	6.14	7.76	5.82	3.09	1.11	2.22	1.11	1.11													
<b>B. Crop Water Requirement</b>																													
1. Crop Intensity																													
	Early Cropping	1/6		1/3		1/3		1/3		1/6		1/3		1/3		1/6													
	Middle Cropping			1/6		1/3		1/3		1/6		1/3		1/3		1/3		1/6											
	Late Cropping			1/6		1/3		1/3		1/6		1/3		1/3		1/3		1/6											
	Total	1/6		1/2		5/6		1		5/6		1/2		1/6		5/6		1/2		1/6									
	II									1/6		1/2		5/6		1		1		1		5/6		1/2		1/6			
	2. Crop Coefficient																												
	Early Cropping	1.10		1.10		1.05		1.05		0.95		0.00		1.10		1.10		1.05		1.05		0.95		0.00		0.00		0.00	
	Middle Cropping			1.10		1.10		1.05		0.95		0.00		1.10		1.10		1.05		1.05		0.95		0.00		0.00		0.00	
	Late Cropping			1.10		1.10		1.05		0.95		0.00		1.10		1.10		1.05		1.05		0.95		0.00		0.00		0.00	
	Weighted average	1.10		1.10		1.08		1.07		1.02		0.67		0.38		0.00		0.00		0.00		0.00		0.00		0.00		0.00	
	II									1.10		1.10		1.08		1.07		1.02		0.67		0.38		0.00		0.00		0.00	
	3. Potential ETo (mm/day/A)	3.56	3.56	4.70	4.70	4.29	4.29	4.50	4.50	3.56	3.56	3.88	3.88	4.09	4.09	4.87	4.87	5.58	5.58	5.40	5.40	5.20	5.20	3.88	3.88				
	4. Consumptive Use, ETc (mm/day/A)	3.92	3.92	5.07	5.01	4.36	2.86	1.71	0.00	0.00																			
	II									3.92		3.92		4.19		4.14		4.16		2.73		1.85		0.00		0.00		0.00	
	5. Percolation Loss (mm/day/A)	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
	6. Crop Water Requirement (mm/day/A)	5.92	5.92	7.07	7.01	6.36	4.86	3.71	2.00	2.00																			
	II									5.92		5.92		6.19		6.14		6.16		4.73		3.85		2.00		2.00		2.00	
	7. Crop water Requirement (mm/day)	0.99	2.96	5.89	7.01	6.36	4.86	3.09	1.00	0.33																			
	II									0.99		2.96		5.16		6.14		6.16		4.73		3.21		1.00		0.33		0.00	
	C. Total A(5)+B(7) (mm/day)	8.75	8.78	9.07	8.12	8.58	5.97	4.20	1.00	0.33																			
	II							2.05		6.14		8.75		8.78		8.25		7.25		8.38		5.84		4.32		1.00		0.33	
	D. Effective Rainfall (mm/day)	17.39	13.94	8.22	4.23	8.03	0.79	1.61	1.47	2.91	5.30	0.33	0.00	0.19	0.15	0.00	0.05	0.00	0.11	0.00	2.34	3.03	2.60	3.73	14.69				
	E. Net field Water Requirement, NFR (mm/day)	-8.65	-5.16	0.86	3.89	0.55	5.18	2.59	-0.47	-2.58																			
	II							0.44		4.68		5.84		3.48		7.92		7.25		8.18		5.69		4.32		0.95		0.33	
	I	0.00	0.00	0.86	3.89	0.55	5.18	2.59	0.00	0.00																			
	II							0.44		4.68		5.84		3.48		7.92		7.25		8.18		5.69		4.32		0.95		0.33	
	I (l/sec/ha)	0.000	0.000	0.099	0.450	0.064	0.599	0.300	0.000	0.000																			
	II							0.051		0.541		0.675		0.403		0.916		0.839		0.947		0.659		0.500		0.110		0.039	

Net Field Requirement for Water Balance Calculation in 1990 (4/7)

Calculation of Net Field Water Requirement for Palawija(B)

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
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<td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>2.44</td><td>3.09</td><td>4.24</td><td>4.93</td><td>5.04</td><td>4.23</td><td>2.96</td><td>1.99</td><td>0.58</td><td></td> </tr> <tr> <td colspan="2">5.Rainfall (mm/day)</td> <td>24.85</td><td>19.91</td><td>11.74</td><td>6.05</td><td>11.47</td><td>1.13</td><td>2.30</td><td>2.10</td><td>4.16</td><td>7.57</td><td>0.47</td><td>0.00</td><td>0.28</td><td>0.21</td><td>0.00</td><td>0.07</td><td>0.00</td><td>0.16</td><td>0.00</td><td>3.34</td><td>4.32</td><td>3.72</td><td>5.33</td><td>20.98</td> </tr> <tr> <td colspan="2">6.Effective Rainfall (mm/day/A)</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>0.00</td><td>0.07</td><td>0.00</td><td>0.15</td><td>0.00</td><td>2.34</td><td>2.72</td><td>1.99</td><td>0.58</td><td></td> </tr> <tr> <td colspan="2">7.Crop water Requirement (mm/day)</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>2.44</td><td>3.02</td><td>4.24</td><td>4.78</td><td>5.04</td><td>1.89</td><td>0.24</td><td>0.00</td><td>0.00</td><td></td> </tr> <tr> <td colspan="2">B.Net Field Water Requirement (mm/day)</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>0.41</td><td>1.51</td><td>3.54</td><td>4.78</td><td>5.04</td><td>1.89</td><td>0.20</td><td>0.00</td><td>0.00</td><td></td> </tr> <tr> <td colspan="2">(l/sec/ha)</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>0.047</td><td>0.175</td><td>0.409</td><td>0.553</td><td>0.583</td><td>0.219</td><td>0.024</td><td>0.000</td><td>0.000</td><td></td> </tr> <tr> <td colspan="2"></td> <td colspan="24">III</td> </tr> <tr> <td colspan="2"></td> <td 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Requirement																										1.Crop Intensity																										Early Cropping																										Middle Cropping																										Late Cropping																										Total																										2.Crop Coefficient																										Early Cropping																										Middle Cropping																										Late Cropping																										Weighted average																										3.Potential ETo (mm/day/A)		3.56	3.56	4.70	4.70	4.29	4.29	4.50	4.50	3.56	3.56	3.88	3.88	4.09	4.09	4.87	4.87	5.58	5.58	5.40	5.40	5.20	5.20	3.88	3.88	4.Consumptive Use, ETc (mm/day/A)																2.44	3.09	4.24	4.93	5.04	4.23	2.96	1.99	0.58		5.Rainfall (mm/day)		24.85	19.91	11.74	6.05	11.47	1.13	2.30	2.10	4.16	7.57	0.47	0.00	0.28	0.21	0.00	0.07	0.00	0.16	0.00	3.34	4.32	3.72	5.33	20.98	6.Effective Rainfall (mm/day/A)																0.00	0.07	0.00	0.15	0.00	2.34	2.72	1.99	0.58		7.Crop water Requirement (mm/day)																2.44	3.02	4.24	4.78	5.04	1.89	0.24	0.00	0.00		B.Net Field Water Requirement (mm/day)																0.41	1.51	3.54	4.78	5.04	1.89	0.20	0.00	0.00		(l/sec/ha)																0.047	0.175	0.409	0.553	0.583	0.219	0.024	0.000	0.000				III																										<table border="1"> <thead> <tr> <th colspan="2"></th> <th colspan="2">Jan</th> <th colspan="2">Feb</th> <th colspan="2">Mar</th> <th colspan="2">Apr</th> <th colspan="2">May</th> <th colspan="2">Jun</th> <th colspan="2">Jul</th> <th colspan="2">Aug</th> <th colspan="2">Sep</th> <th colspan="2">Oct</th> <th colspan="2">Nov</th> <th colspan="2">Dec</th> </tr> <tr> <th colspan="2"></th> <th>1st</th> <th>2nd</th> <th>1st</th> <th>2nd</th> <th>1st</th> <th>2nd</th> <th>1st</th> <th>2nd</th> <th>1st</th> <th>2nd</th> <th>1st</th> <th>2nd</th> <th>1st</th> <th>2nd</th> <th>1st</th> <th>2nd</th> <th>1st</th> <th>2nd</th> <th>1st</th> <th>2nd</th> <th>1st</th> <th>2nd</th> <th>1st</th> <th>2nd</th> </tr> </thead> 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Paddy		0.000	0.000	0.099	0.450	0.064	0.599	0.300	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Net Field Water Requirement for Palawija		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.047	0.175	0.409	0.553	0.583	0.219	0.024	0.000	0.000	0.000	100 I		0.000	0.000	0.099	0.450	0.064	0.599	0.300	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	100 II		0.000	0.000	0.000	0.000	0.000	0.000	0.051	0.541	0.675	0.403	0.916	0.839	0.947	0.659	0.500	0.110	0.039	0.000	0.000	0.000	0.000	0.000	0.000	0.000	100 III		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.047	0.175	0.409	0.553	0.583	0.219	0.024	0.000	0.000	0.000	<b>Total NWR</b> (l/s/ha)		0.000	0.000	0.099	0.450	0.064	0.599	0.351	0.541	0.675	0.403	0.916	0.839	0.947	0.659	0.547	0.284	0.448	0.553	0.583	0.219	0.024	0.000	0.000	0.000	<b>DR</b> (E=0.875*0.81)		0.000	0.000	0.140	0.634	0.091	0.846	0.495	0.764	0.953	0.569	1.293	1.184	1.336	0.929	0.772	0.401	0.632	0.780	0.823	0.309	0.033	0.000	0.000	0.000	0.85 0.81 0.6885		0.000	0.000	0.144	0.653	0.093	0.871	0.509	0.786	0.981	0.586	1.331	1.219	1.376	0.957	0.794	0.413	0.650	0.803	0.847	0.318	0.034	0.000	0.000	0.000
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3.Potential ETo (mm/day/A)		3.56	3.56	4.70	4.70	4.29	4.29	4.50	4.50	3.56	3.56	3.88	3.88	4.09	4.09	4.87	4.87	5.58	5.58	5.40	5.40	5.20	5.20	3.88	3.88																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
4.Consumptive Use, ETc (mm/day/A)																2.44	3.09	4.24	4.93	5.04	4.23	2.96	1.99	0.58																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
5.Rainfall (mm/day)		24.85	19.91	11.74	6.05	11.47	1.13	2.30	2.10	4.16	7.57	0.47	0.00	0.28	0.21	0.00	0.07	0.00	0.16	0.00	3.34	4.32	3.72	5.33	20.98																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
6.Effective Rainfall (mm/day/A)																0.00	0.07	0.00	0.15	0.00	2.34	2.72	1.99	0.58																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
7.Crop water Requirement (mm/day)																2.44	3.02	4.24	4.78	5.04	1.89	0.24	0.00	0.00																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
B.Net Field Water Requirement (mm/day)																0.41	1.51	3.54	4.78	5.04	1.89	0.20	0.00	0.00																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
(l/sec/ha)																0.047	0.175	0.409	0.553	0.583	0.219	0.024	0.000	0.000																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
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		<table border="1"> <thead> <tr> <th colspan="2"></th> <th colspan="2">Jan</th> <th colspan="2">Feb</th> <th colspan="2">Mar</th> <th colspan="2">Apr</th> <th colspan="2">May</th> <th colspan="2">Jun</th> <th colspan="2">Jul</th> <th colspan="2">Aug</th> <th colspan="2">Sep</th> <th colspan="2">Oct</th> <th colspan="2">Nov</th> <th colspan="2">Dec</th> </tr> <tr> <th colspan="2"></th> <th>1st</th> <th>2nd</th> <th>1st</th> <th>2nd</th> <th>1st</th> <th>2nd</th> <th>1st</th> <th>2nd</th> <th>1st</th> <th>2nd</th> <th>1st</th> <th>2nd</th> <th>1st</th> <th>2nd</th> <th>1st</th> <th>2nd</th> <th>1st</th> <th>2nd</th> <th>1st</th> <th>2nd</th> <th>1st</th> <th>2nd</th> <th>1st</th> <th>2nd</th> </tr> </thead> <tbody> <tr> <td colspan="2">Net Field Water Requirement for Paddy</td> <td>0.000</td><td>0.000</td><td>0.099</td><td>0.450</td><td>0.064</td><td>0.599</td><td>0.300</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td> </tr> <tr> <td colspan="2">Net Field Water Requirement for Palawija</td> <td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.047</td><td>0.175</td><td>0.409</td><td>0.553</td><td>0.583</td><td>0.219</td><td>0.024</td><td>0.000</td><td>0.000</td><td>0.000</td> </tr> <tr> <td colspan="2">  100 I</td> 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<td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.047</td><td>0.175</td><td>0.409</td><td>0.553</td><td>0.583</td><td>0.219</td><td>0.024</td><td>0.000</td><td>0.000</td><td>0.000</td> </tr> <tr> <td colspan="2">  <b>Total NWR</b> (l/s/ha)</td> <td>0.000</td><td>0.000</td><td>0.099</td><td>0.450</td><td>0.064</td><td>0.599</td><td>0.351</td><td>0.541</td><td>0.675</td><td>0.403</td><td>0.916</td><td>0.839</td><td>0.947</td><td>0.659</td><td>0.547</td><td>0.284</td><td>0.448</td><td>0.553</td><td>0.583</td><td>0.219</td><td>0.024</td><td>0.000</td><td>0.000</td><td>0.000</td> </tr> <tr> <td colspan="2">  <b>DR</b> (E=0.875*0.81)</td> <td>0.000</td><td>0.000</td><td>0.140</td><td>0.634</td><td>0.091</td><td>0.846</td><td>0.495</td><td>0.764</td><td>0.953</td><td>0.569</td><td>1.293</td><td>1.184</td><td>1.336</td><td>0.929</td><td>0.772</td><td>0.401</td><td>0.632</td><td>0.780</td><td>0.823</td><td>0.309</td><td>0.033</td><td>0.000</td><td>0.000</td><td>0.000</td> </tr> <tr> <td colspan="2">  0.85 0.81 0.6885</td> <td>0.000</td><td>0.000</td><td>0.144</td><td>0.653</td><td>0.093</td><td>0.871</td><td>0.509</td><td>0.786</td><td>0.981</td><td>0.586</td><td>1.331</td><td>1.219</td><td>1.376</td><td>0.957</td><td>0.794</td><td>0.413</td><td>0.650</td><td>0.803</td><td>0.847</td><td>0.318</td><td>0.034</td><td>0.000</td><td>0.000</td><td>0.000</td> </tr> </tbody> </table>																										Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec				1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	Net Field Water Requirement for Paddy		0.000	0.000	0.099	0.450	0.064	0.599	0.300	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Net Field Water Requirement for Palawija		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.047	0.175	0.409	0.553	0.583	0.219	0.024	0.000	0.000	0.000	100 I		0.000	0.000	0.099	0.450	0.064	0.599	0.300	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	100 II		0.000	0.000	0.000	0.000	0.000	0.000	0.051	0.541	0.675	0.403	0.916	0.839	0.947	0.659	0.500	0.110	0.039	0.000	0.000	0.000	0.000	0.000	0.000	0.000	100 III		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.047	0.175	0.409	0.553	0.583	0.219	0.024	0.000	0.000	0.000	<b>Total NWR</b> (l/s/ha)		0.000	0.000	0.099	0.450	0.064	0.599	0.351	0.541	0.675	0.403	0.916	0.839	0.947	0.659	0.547	0.284	0.448	0.553	0.583	0.219	0.024	0.000	0.000	0.000	<b>DR</b> (E=0.875*0.81)		0.000	0.000	0.140	0.634	0.091	0.846	0.495	0.764	0.953	0.569	1.293	1.184	1.336	0.929	0.772	0.401	0.632	0.780	0.823	0.309	0.033	0.000	0.000	0.000	0.85 0.81 0.6885		0.000	0.000	0.144	0.653	0.093	0.871	0.509	0.786	0.981	0.586	1.331	1.219	1.376	0.957	0.794	0.413	0.650	0.803	0.847	0.318	0.034	0.000	0.000	0.000																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
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		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
Net Field Water Requirement for Paddy		0.000	0.000	0.099	0.450	0.064	0.599	0.300	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
Net Field Water Requirement for Palawija		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.047	0.175	0.409	0.553	0.583	0.219	0.024	0.000	0.000	0.000																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
100 I		0.000	0.000	0.099	0.450	0.064	0.599	0.300	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
100 II		0.000	0.000	0.000	0.000	0.000	0.000	0.051	0.541	0.675	0.403	0.916	0.839	0.947	0.659	0.500	0.110	0.039	0.000	0.000	0.000	0.000	0.000	0.000	0.000																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
100 III		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.047	0.175	0.409	0.553	0.583	0.219	0.024	0.000	0.000	0.000																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
<b>Total NWR</b> (l/s/ha)		0.000	0.000	0.099	0.450	0.064	0.599	0.351	0.541	0.675	0.403	0.916	0.839	0.947	0.659	0.547	0.284	0.448	0.553	0.583	0.219	0.024	0.000	0.000	0.000																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
<b>DR</b> (E=0.875*0.81)		0.000	0.000	0.140	0.634	0.091	0.846	0.495	0.764	0.953	0.569	1.293	1.184	1.336	0.929	0.772	0.401	0.632	0.780	0.823	0.309	0.033	0.000	0.000	0.000																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
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Net Field Requirement for Water Balance Calculation in 1990 (5/7)

[Kampili Rotation C ]

Calculation of Net Field Water Requirement for Paddy (C) on

1990

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec		
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	
Cropping Pattern																										
Early Cropping																										
Middle Cropping																										
Late Cropping																										
A.Land Preparation Requirement																										
1.Land Preparation Intensity																										
Early Cropping		1/3	1/6							1/6	1/3	1/6														1/6
Middle Cropping		1/6	1/3	1/6						1/6	1/3	1/6														
Late Cropping			1/6	1/3	1/6							1/6	1/3	1/6												
Total		1/2	2/3	1/2	1/6					1/6	1/2	2/3	1/2	1/6												1/6
2.Land Preparation Requirement (mm/day/A)																										
	(mm/day)	11.64	11.64	12.42	12.42	12.14	12.14	12.29	12.29	11.64	11.64	11.86	11.86	12.00	12.00	12.55	12.55	13.06	13.06	12.92	12.92	12.78	12.78	11.85	11.85	
		5.82	7.76	6.21	2.07	0.00	0.00	0.00	2.05	5.82	7.76	5.93	1.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.98
3.Water Layer Replacement Intensity																										
					1/3	1/3	2/3	1/3	1/3				1/3	1/3	2/3	1/3	1/3									
4.Water Layer Replacement Requirement																										
	(mm/day/A)				3.33	3.33	3.33	3.33	3.33				3.33	3.33	3.33	3.33	3.33									
	(mm/day)				1.11	1.11	2.22	1.11	1.11				1.11	1.11	2.22	1.11	1.11									
5.Total Requirement for Land Preparation																										
	I	5.82	7.76	6.21	3.18	1.11	2.22	1.11	1.11									0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.98
	II								2.05	5.82	7.76	5.93	3.09	1.11	2.22	1.11	1.11									
B. Crop Water Requirement																										
1.Crop Intensity																										
Early Cropping			1/6	1/3	1/3	1/3	1/3	1/3	1/6	1/6	1/3	1/3	1/3	1/3	1/3	1/3	1/6									
Middle Cropping				1/6	1/3	1/3	1/3	1/3	1/3	1/6	1/6	1/3	1/3	1/3	1/3	1/3	1/3	1/6								
Late Cropping					1/6	1/3	1/3	1/3	1/3	1/3	1/6	1/6	1/3	1/3	1/3	1/3	1/3	1/3	1/6							
Total	I		1/6	1/2	5/6	1	1	1	5/6	1/2	1/6	1/6	1/2	5/6	1	1	1	5/6	1/2	1/6						
	II										1/6	1/2	5/6	1	1	1	5/6	1/2	1/6							
2.Crop Coefficient																										
Early Cropping			1.10	1.10	1.05	1.05	0.95	0.00	0.00		1.10	1.10	1.05	1.05	0.95	0.00	0.00									
Middle Cropping				1.10	1.10	1.05	1.05	0.95	0.00	0.00		1.10	1.10	1.05	1.05	0.95	0.00	0.00								
Late Cropping					1.10	1.10	1.05	0.95	0.00	0.00			1.10	1.10	1.05	1.05	0.95	0.00	0.00							
Weighted average	I		1.10	1.10	1.08	1.07	1.02	0.67	0.38	0.00																
	II										1.10	1.10	1.08	1.07	1.02	0.67	0.38	0.00	0.00							
3.Potential ETo (mm/day/A)																										
		3.56	3.56	4.70	4.70	4.29	4.29	4.50	4.50	3.56	3.56	3.88	3.88	4.09	4.09	4.87	4.87	5.58	5.58	5.40	5.40	5.20	5.20	3.88	3.88	
4.Consumptive Use, ETc (mm/day/A)																										
		0.00	3.92	5.17	5.07	4.58	4.36	3.00	1.71	0.00	0.00															
5.Percolation Loss (mm/day/A)																										
		2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00							
6.Crop Water Requirement (mm/day/A)																										
		2.00	5.92	7.17	7.07	6.58	6.36	5.00	3.71	2.00											0.00	0.00	0.00	0.00	0.00	0.00
7.Crop water Requirement (mm/day)																										
		0.00	0.99	3.58	5.89	6.58	6.36	5.00	3.09	1.00											0.00	0.00	0.00	0.00	0.00	0.00
C.Total A(5)+B(7) (mm/day)																										
	I	5.82	8.75	9.79	9.07	7.69	8.58	6.11	4.20	1.00	0.33										0.00	0.00	0.00	0.00	0.00	1.98
	II								2.05	5.82	8.75	9.06	8.25	7.47	8.38	6.36	4.32	1.00	0.33							
D.Effective Rainfall (mm/day)																										
		17.39	13.94	8.22	4.23	8.03	0.79	1.61	1.47	2.91	5.30	0.33	0.00	0.19	0.15	0.00	0.05	0.00	0.11	0.00	2.34	3.03	2.60	3.73	14.69	
E.Net field Water Requirement, NFR (mm/day)																										
		-11.57	-5.19	1.58	4.84	-0.34	7.79	4.50	2.73	-1.91	-4.96										0.00	-2.34	-3.03	-2.60	-3.73	-12.71
	II								0.58	2.91	3.45	8.73	8.25	7.28	8.23	6.36	4.27	1.00	0.22							0.00
	I	0.00	0.00	1.58	4.84	0.00	7.79	4.50	2.73	0.00	0.00															0.00
	II								0.58	2.91	3.45	8.73	8.25	7.28	8.23	6.36	4.27	1.00	0.22							0.00
	(l/sec/ha)	0.000	0.000	0.183	0.560	0.000	0.902	0.521	0.317	0.000	0.000															0.000
	II								0.067	0.337	0.399	1.011	0.955	0.842	0.953	0.736	0.494	0.116	0.025							

Net Field Requirement for Water Balance Calculation in 1990 (6/7)

Calculation of Net Field Water Requirement for Palawija(C)

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec		
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	
Cropping Pattern	Early Cropping																									
	Middle Cropping																									
	Late Cropping																									
A.Crop Water Requirement																										
1.Crop Intensity																										
Early Cropping																										
Middle Cropping																										
Late Cropping																										
Total																										
2.Crop Coefficient																										
Early Cropping																										
Middle Cropping																										
Late Cropping																										
Weighted average																										
3.Potential ETo (mm/day/A)		3.56	3.56	4.70	4.70	4.29	4.29	4.50	4.50	3.56	3.56	3.88	3.88	4.09	4.09	4.87	4.87	5.58	5.58	5.40	5.40	5.20	5.20	3.88	3.88	
4.Consumptive Use, ETc (mm/day/A)																		2.44	3.54	4.24	4.77	5.04	4.07	2.96	1.49	0.58
5.Rainfall (mm/day)		24.85	19.91	11.74	6.05	11.47	1.13	2.30	2.10	4.16	7.57	0.47	0.00	0.28	0.21	0.00	0.07	0.00	0.16	0.00	3.34	4.32	3.72	5.33	20.98	
6.Effective Rainfall (mm/day/A)																	0.06	0.00	0.15	0.00	2.46	2.93	2.37	1.49	0.58	
7.Crop water Requirement (mm/day/A)																	2.37	3.54	4.10	4.77	2.58	1.15	0.59	0.00	0.00	
B.Net Field Water Requirement (mm/day)																	0.40	1.77	3.41	4.77	2.58	1.15	0.50	0.00	0.00	
(l/sec/ha)																	0.046	0.205	0.395	0.552	0.299	0.133	0.057	0.000	0.000	
		III																								
Net Field Water Requirement for Paddy		0.000	0.000	0.183	0.560	0.000	0.902	0.521	0.317	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
Net Field Water Requirement for Palawija		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.046	0.205	0.395	0.552	0.299	0.133	0.057	0.000	0.000	
100 I		0.000	0.000	0.183	0.560	0.000	0.902	0.521	0.317	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
100 II		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.067	0.337	0.399	1.011	0.955	0.842	0.953	0.736	0.494	0.116	0.025	0.000	0.000	0.000	0.000	0.000	0.000	
100 III		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.046	0.205	0.395	0.552	0.299	0.133	0.057	0.000	0.000	
<b>Total NWR</b> (l/s/ha)		0.000	0.000	0.183	0.560	0.000	0.902	0.521	0.384	0.337	0.399	1.011	0.955	0.842	0.953	0.736	0.540	0.320	0.420	0.552	0.299	0.133	0.057	0.000	0.000	
<b>DR</b> (E=0.875*0.81)		0.000	0.000	0.258	0.790	0.000	1.272	0.735	0.541	0.475	0.563	1.426	1.347	1.188	1.344	1.038	0.761	0.452	0.593	0.779	0.422	0.187	0.081	0.000	0.000	
0.85      0.81      0.6885		0.000	0.000	0.265	0.814	0.000	1.310	0.757	0.557	0.489	0.580	1.468	1.386	1.223	1.384	1.069	0.784	0.465	0.611	0.802	0.434	0.193	0.083	0.000	0.000	

Net Field Requirement for Water Balance Calculation in 1990 (7/7)

	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
(E=0.875*0.81)																								
<b>Golongan A</b>	0.000	0.000	0.000	0.777	0.000	0.747	0.740	1.287	0.958	0.429	1.130	1.334	0.921	0.692	0.415	0.540	0.805	0.825	0.691	0.124	0.000	0.000	0.358	0.000
<b>Golongan B</b>	0.000	0.000	0.140	0.634	0.091	0.846	0.495	0.764	0.953	0.569	1.293	1.184	1.336	0.929	0.772	0.401	0.632	0.780	0.823	0.309	0.033	0.000	0.000	0.000
<b>Golongan C</b>	0.000	0.000	0.258	0.790	0.000	1.272	0.735	0.541	0.475	0.563	1.426	1.347	1.188	1.344	1.038	0.761	0.452	0.593	0.779	0.422	0.187	0.081	0.000	0.000
average	0.000	0.000	0.133	0.734	0.030	0.955	0.657	0.864	0.795	0.520	1.283	1.288	1.149	0.989	0.742	0.568	0.630	0.733	0.764	0.285	0.074	0.027	0.119	0.000

	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
(E=0.85*0.81)																								
<b>Golongan A</b>	0.000	0.000	0.000	0.800	0.000	0.769	0.762	1.325	0.987	0.442	1.163	1.373	0.948	0.713	0.427	0.556	0.829	0.850	0.711	0.128	0.000	0.000	0.369	0.000
<b>Golongan B</b>	0.000	0.000	0.144	0.653	0.093	0.871	0.509	0.786	0.981	0.586	1.331	1.219	1.376	0.957	0.794	0.413	0.650	0.803	0.847	0.318	0.034	0.000	0.000	0.000
<b>Golongan C</b>	0.000	0.000	0.265	0.814	0.000	1.310	0.757	0.557	0.489	0.580	1.468	1.386	1.223	1.384	1.069	0.784	0.465	0.611	0.802	0.434	0.193	0.083	0.000	0.000
average	0.000	0.000	0.137	0.756	0.031	0.983	0.676	0.889	0.819	0.536	1.321	1.326	1.182	1.018	0.764	0.584	0.648	0.755	0.786	0.293	0.076	0.028	0.123	0.000

Summary Calculation of NFR (l/s/ha)

	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
<b>Golongan A</b>	0.00	0.00	0.00	0.55	0.00	0.53	0.52	0.91	0.68	0.30	0.80	0.95	0.65	0.49	0.29	0.38	0.57	0.59	0.49	0.09	0.00	0.00	0.25	0.00
<b>Golongan B</b>	0.00	0.00	0.10	0.45	0.06	0.60	0.35	0.54	0.68	0.40	0.92	0.84	0.95	0.66	0.55	0.28	0.45	0.55	0.58	0.22	0.02	0.00	0.00	0.00
<b>Golongan C</b>	0.00	0.00	0.18	0.56	0.00	0.90	0.52	0.38	0.34	0.40	1.01	0.95	0.84	0.95	0.74	0.54	0.32	0.42	0.55	0.30	0.13	0.06	0.00	0.00

1990

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
I : W.Pad	A	0.00	0.00	0.00	0.55	0.00	0.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.00
	B	0.00	0.00	0.10	0.45	0.06	0.60	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	C	0.00	0.00	0.18	0.56	0.00	0.90	0.52	0.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
II : D.Pad	av	0.00	0.00	0.09	0.52	0.02	0.63	0.27	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.00
	A	0.00	0.00	0.00	0.00	0.00	0.14	0.52	0.91	0.68	0.30	0.80	0.95	0.65	0.45	0.12	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	B	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.54	0.68	0.40	0.92	0.84	0.95	0.66	0.50	0.11	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00
III : D.Pal	C	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.34	0.40	1.01	0.95	0.84	0.95	0.74	0.49	0.12	0.03	0.00	0.00	0.00	0.00	0.00	0.00
	av	0.00	0.00	0.00	0.00	0.00	0.05	0.19	0.51	0.56	0.37	0.91	0.91	0.81	0.69	0.45	0.21	0.05	0.01	0.00	0.00	0.00	0.00	0.00	0.00
	A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.18	0.35	0.57	0.59	0.49	0.09	0.00	0.00	0.00	0.00
I : W.Pad	B	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.17	0.41	0.55	0.58	0.22	0.02	0.00	0.00	0.00
	C	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.20	0.40	0.55	0.30	0.13	0.06	0.00	0.00	0.00
	av	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.08	0.19	0.39	0.51	0.54	0.20	0.05	0.02	0.00	0.00	0.00
I : W.Pad		0.00	0.00	0.09	0.52	0.02	0.63	0.27	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.00
II : D.Pad		0.00	0.00	0.00	0.00	0.00	0.05	0.19	0.51	0.56	0.37	0.91	0.91	0.81	0.69	0.45	0.21	0.05	0.01	0.00	0.00	0.00	0.00	0.00	0.00
III : D.Pal		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.08	0.19	0.39	0.51	0.54	0.20	0.05	0.02	0.00	0.00

1990

I : W.Pad	100	0.000	0.000	0.094	0.520	0.021	0.629	0.274	0.106	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.085	0.000
II : D.Pad	100	0.000	0.000	0.000	0.000	0.000	0.047	0.192	0.507	0.564	0.369	0.909	0.913	0.814	0.689	0.451	0.212	0.051	0.008	0.000	0.000	0.000	0.000	0.000	0.000
III : D.Pal	100	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.012	0.075	0.190	0.395	0.511	0.541	0.202	0.052	0.019	0.000	0.000	0.000
total		0.000	0.000	0.094	0.520	0.021	0.677	0.465	0.612	0.564	0.369	0.909	0.913	0.814	0.701	0.526	0.402	0.446	0.519	0.541	0.202	0.052	0.019	0.085	0.000
			0	0.30713		0.3491		0.53893		0.46632		0.91115		0.7574		0.46403		0.48291		0.37169		0.0356		0.04231	

Year : 1990

N.F.R. (l/s/ha)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec												
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd												
N.F.R. (l/s/ha)	0.000	0.000	0.094	0.520	0.021	0.677	0.465	0.612	0.564	0.369	0.909	0.913	0.814	0.701	0.526	0.402	0.446	0.519	0.541	0.202	0.052	0.019	0.085	0.000



Net Field Requirement for Water Balance Calculation in 1991 (2/7)

Calculation of Net Field Water Requirement for Palawija(A)

Cropping Pattern	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
Early Cropping		○		○						○		○												
Middle Cropping			○	Paddy	○						○	Paddy	○											
Late Cropping	LP			○		○						○		○										LP

A. Crop Water Requirement

1. Crop Intensity																										
Early Cropping															1/6	1/3	1/3	1/3	1/3	1/3	1/3	1/6				
Middle Cropping																1/6	1/3	1/3	1/3	1/3	1/3	1/6				
Late Cropping																	1/6	1/3	1/3	1/3	1/3	1/3	1/6			
Total															1/6	1/2	5/6	1	1	1	5/6	1/2	1/6			
2. Crop Coefficient																										
Early Cropping															0.50	0.70	0.95	1.00	0.85	0.50	0.15					
Middle Cropping																0.50	0.70	0.95	1.00	0.85	0.50	0.15				
Late Cropping																	0.50	0.70	0.95	1.00	0.85	0.50	0.15			
Weighted average															0.50	0.63	0.76	0.88	0.93	0.78	0.57	0.38	0.15			
3. Potential ETo (mm/day/A)		3.58	3.58	3.56	3.56	4.95	4.95	4.31	4.31	4.40	4.40	4.70	4.70	4.47	4.47	4.84	4.84	5.33	5.33	5.68	5.68	5.01	5.01	4.31	4.31	
4. Consumptive Use, ETc (mm/day/A)															2.24	3.06	3.68	4.71	4.97	4.45	3.24	1.92	0.75			
5. Rainfall (mm/day)		13.64	35.63	16.24	8.49	1.98	5.06	3.73	8.09	0.03	0.29	0.00	0.03	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	1.69	3.29	15.75	3.21
6. Effective Rainfall (mm/day/A)															0.00	0.00	0.00	0.00	0.00	0.00	0.08	1.07	0.75			
7. Crop water Requirement (mm/day/A)															2.24	3.06	3.68	4.71	4.97	4.45	3.16	0.85	0.00			
B. Net Field Water Requirement (mm/day)															0.37	1.53	3.06	4.71	4.97	4.45	2.63	0.43	0.00			
(l/sec/ha)															0.043	0.177	0.355	0.545	0.575	0.515	0.305	0.049	0.000			

	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec		
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	
Net Field Water Requirement for Paddy	0.000	0.000	0.000	0.219	0.582	0.093	0.000	0.401	0.413	1.100	0.992	0.940	1.039	0.701	0.485	0.116	0.039	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Net Field Water Requirement for Palawija	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.043	0.177	0.355	0.545	0.575	0.515	0.305	0.049	0.000	0.000	0.000
100 I	0.000	0.000	0.000	0.219	0.582	0.093	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.808
100 II	0.000	0.000	0.000	0.000	0.000	0.000	0.401	0.413	1.100	0.992	0.940	1.039	0.701	0.485	0.116	0.039	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100 III	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.043	0.177	0.355	0.545	0.575	0.515	0.305	0.049	0.000	0.000	0.000	0.000
<b>Total NWR</b> (l/s/ha)	0.000	0.000	0.000	0.219	0.582	0.093	0.401	0.413	1.100	0.992	0.940	1.039	0.701	0.529	0.293	0.393	0.545	0.575	0.515	0.305	0.049	0.000	0.000	0.808	
<b>DR</b> (E=0.875*0.81)	0.000	0.000	0.000	0.309	0.821	0.131	0.566	0.582	1.552	1.399	1.327	1.466	0.989	0.746	0.413	0.555	0.768	0.812	0.726	0.430	0.070	0.000	0.000	1.140	
0.85    0.81    0.6885	0.000	0.000	0.000	0.318	0.845	0.135	0.582	0.600	1.598	1.440	1.366	1.509	1.018	0.768	0.426	0.571	0.791	0.836	0.748	0.442	0.072	0.000	0.000	1.174	

Net Field Requirement for Water Balance Calculation in 1991 (3/7)

[Kampili Rotation B]

Calculation of Net Field Water Requirement for Paddy(B) on 1991

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec			
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd		
<b>Cropping Pattern</b>	Early Cropping	[Pattern: LP, Paddy, LP, Paddy, Palawia, No Cropping, LP]																									
	Middle Cropping	[Pattern: LP, Paddy, LP, Paddy, Palawia, No Cropping, LP]																									
	Late Cropping	[Pattern: LP, Paddy, LP, Paddy, Palawia, No Cropping, LP]																									
<b>A. Land Preparation Requirement</b>																											
1. Land Preparation Intensity																											
	Early Cropping	1/6						1/6	1/3	1/6														1/6	1/3		
	Middle Cropping	1/3	1/6							1/6	1/3	1/6														1/6	
	Late Cropping	1/6	1/3	1/6						1/6	1/3	1/6														1/6	
	Total	2/3	1/2	1/6				1/6	1/2	2/3	1/2	1/6														1/2	
	2. Land Preparation Requirement (mm/day/A)	11.65	11.65	11.64	11.64	12.60	12.60	12.16	12.16	12.21	12.21	12.43	12.43	12.27	12.27	12.52	12.52	12.87	12.87	13.13	13.13	12.65	12.65	12.15	12.15		
	3. Water Layer Replacement Intensity (mm/day)	7.77	5.83	1.94	0.00	0.00	0.00	2.03	6.08	8.14	6.11	2.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.03	6.08		
	4. Water Layer Replacement Requirement (mm/day/A)			3.33	3.33	3.33	3.33	3.33				3.33	3.33	3.33	3.33	3.33											
	5. Total Requirement for Land Preparation (mm/day)			1.11	1.11	2.22	1.11	1.11				1.11	1.11	2.22	1.11	1.11											
	I	7.77	5.83	3.05	1.11	2.22	1.11	1.11										0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.03	6.08	
	II							2.03	6.08	8.14	6.11	3.18	1.11	2.22	1.11	1.11											
<b>B. Crop Water Requirement</b>																											
1. Crop Intensity																											
	Early Cropping	1/6	1/3	1/3	1/3	1/3	1/3	1/6	1/6	1/3	1/3	1/3	1/3	1/3	1/3	1/6											
	Middle Cropping		1/6	1/3	1/3	1/3	1/3	1/3	1/6	1/6	1/3	1/3	1/3	1/3	1/3	1/3	1/6										
	Late Cropping			1/6	1/3	1/3	1/3	1/3	1/6	1/6	1/3	1/3	1/3	1/3	1/3	1/3	1/3	1/6									
	Total	1/6	1/2	5/6	1	1	1	5/6	1/2	1/6	1/6	1/2	5/6	1	1	1	5/6	1/2	1/6								
	II								1/6	1/2	5/6	1	1	1	5/6	1/2	1/6										
	2. Crop Coefficient																										
	Early Cropping	1.10	1.10	1.05	1.05	0.95	0.00	0.00	1.10	1.10	1.05	1.05	0.95	0.00	0.00												
	Middle Cropping		1.10	1.10	1.05	1.05	0.95	0.00	0.00		1.10	1.10	1.05	1.05	0.95	0.00	0.00										
	Late Cropping			1.10	1.10	1.05	1.05	0.95	0.00	0.00		1.10	1.10	1.05	1.05	0.95	0.00	0.00									
	Weighted average	1.10	1.10	1.08	1.07	1.02	0.67	0.38	0.00	0.00	1.10	1.10	1.08	1.07	1.02	0.67	0.38	0.00	0.00								
	II								1.10	1.10	1.08	1.07	1.02	0.67	0.38	0.00	0.00										
	3. Potential ETo (mm/day/A)	3.58	3.58	3.56	3.56	4.95	4.95	4.31	4.31	4.40	4.40	4.70	4.70	4.47	4.47	4.84	4.84	5.33	5.33	5.68	5.68	5.01	5.01	4.31	4.31		
	4. Consumptive Use, ETc (mm/day/A)	3.94	3.94	3.84	3.79	5.04	3.30	1.64	0.00	0.00	4.84	4.84	5.08	5.02	4.55	2.98	1.84	0.00	0.00								
	5. Percolation Loss (mm/day/A)	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00		
	6. Crop Water Requirement (mm/day/A)	5.94	5.94	5.84	5.79	7.04	5.30	3.64	2.00	2.00	6.84	6.84	7.08	7.02	6.55	4.98	3.84	2.00	2.00								
	7. Crop water Requirement (mm/day)	0.99	2.97	4.87	5.79	7.04	5.30	3.03	1.00	0.33	1.14	3.42	5.90	7.02	6.55	4.98	3.20	1.00	0.33								
	II								0.33	3.42	5.90	7.02	6.55	4.98	3.20	1.00	0.33										
	C. Total A(5)+B(7) (mm/day)	8.76	8.79	7.92	6.90	9.26	6.41	4.14	1.00	0.33	3.42	5.90	7.02	6.55	4.98	3.20	1.00	0.33									
	II							2.03	6.08	9.28	9.53	9.08	8.13	8.77	6.09	4.31	1.00	0.33									
	D. Effective Rainfall (mm/day)	9.55	24.94	11.37	5.94	1.39	3.54	2.61	5.66	0.02	0.20	0.00	0.02	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.06	1.18	2.30	11.03	2.24		
	E. Net field Water Requirement, NFR (mm/day)	-0.79	-16.15	-3.45	0.96	7.87	2.87	1.53	-4.66	0.31	9.32	9.08	8.10	8.73	6.09	4.31	1.00	0.33			0.00	0.00	-0.06	-1.18	-2.30	-9.00	3.83
	II							-0.59	0.42	9.26	9.32	9.08	8.10	8.73	6.09	4.31	1.00	0.33									
	I	0.00	0.00	0.00	0.96	7.87	2.87	0.00	0.42	9.26	9.32	9.08	8.10	8.73	6.09	4.31	1.00	0.33							0.00	3.83	
	II							0.00	0.42	9.26	9.32	9.08	8.10	8.73	6.09	4.31	1.00	0.33									
	I	0.000	0.000	0.000	0.111	0.911	0.332	0.177	0.000	0.036	1.079	1.051	0.938	1.010	0.705	0.499	0.116	0.039							0.000	0.444	
	II							0.000	0.048	1.072	1.079	1.051	0.938	1.010	0.705	0.499	0.116	0.039									



Net Field Requirement for Water Balance Calculation in 1991 (4/7)

Calculation of Net Field Water Requirement for Palawija(B)

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
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colspan="24"></td> </tr> <tr> <td colspan="2">  Late Cropping</td> <td colspan="24"></td> </tr> <tr> <td colspan="2">  Total</td> <td colspan="24"></td> </tr> <tr> <td colspan="2">2.Crop Coefficient</td> <td colspan="24"></td> </tr> <tr> <td colspan="2">  Early Cropping</td> <td colspan="24"></td> </tr> <tr> <td colspan="2">  Middle Cropping</td> <td colspan="24"></td> </tr> <tr> <td colspan="2">  Late Cropping</td> <td colspan="24"></td> </tr> <tr> <td colspan="2">  Weighted average</td> <td colspan="24"></td> </tr> <tr> <td colspan="2">3.Potential ETo (mm/day/A)</td> <td>3.58</td><td>3.58</td><td>3.56</td><td>3.56</td><td>4.95</td><td>4.95</td><td>4.31</td><td>4.31</td><td>4.40</td><td>4.40</td><td>4.70</td><td>4.70</td><td>4.47</td><td>4.47</td><td>4.84</td><td>4.84</td><td>5.33</td><td>5.33</td><td>5.68</td><td>5.68</td><td>5.01</td><td>5.01</td><td>4.31</td><td>4.31</td> </tr> <tr> <td colspan="2">4.Consumptive Use, ETc (mm/day/A)</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>2.42</td><td>3.06</td><td>4.05</td><td>4.71</td><td>5.30</td><td>4.45</td><td>2.86</td><td>1.92</td><td>0.65</td><td></td> </tr> <tr> <td colspan="2">5.Rainfall (mm/day)</td> <td>13.64</td><td>35.63</td><td>16.24</td><td>8.49</td><td>1.98</td><td>5.06</td><td>3.73</td><td>8.09</td><td>0.03</td><td>0.29</td><td>0.00</td><td>0.03</td><td>0.06</td><td>0.00</td><td>0.00</td><td>0.00</td><td>0.00</td><td>0.00</td><td>0.00</td><td>0.09</td><td>1.69</td><td>3.29</td><td>15.75</td><td>3.21</td> </tr> <tr> <td colspan="2">6.Effective Rainfall (mm/day/A)</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>0.00</td><td>0.00</td><td>0.00</td><td>0.00</td><td>0.00</td><td>0.09</td><td>1.14</td><td>1.92</td><td>0.65</td><td></td> </tr> <tr> <td colspan="2">7.Crop water Requirement (mm/day)</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>2.42</td><td>3.06</td><td>4.05</td><td>4.71</td><td>5.30</td><td>4.36</td><td>1.71</td><td>0.00</td><td>0.00</td><td></td> </tr> <tr> <td colspan="2">B.Net Field Water Requirement (mm/day)</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>0.40</td><td>1.53</td><td>3.37</td><td>4.71</td><td>5.30</td><td>4.36</td><td>1.43</td><td>0.00</td><td>0.00</td><td></td> </tr> <tr> <td colspan="2">(l/sec/ha)</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>0.047</td><td>0.177</td><td>0.390</td><td>0.545</td><td>0.613</td><td>0.505</td><td>0.165</td><td>0.000</td><td>0.000</td><td></td> </tr> <tr> <td colspan="2"></td> <td colspan="24" style="text-align: center;">III</td> </tr> <tr> <td colspan="2"></td> <td colspan="24"></td> </tr> <tr> <td colspan="2"></td> <td colspan="24"></td> </tr> <tr> <td colspan="2">Net Field Water Requirement for Paddy</td> <td>0.000</td><td>0.000</td><td>0.000</td><td>0.111</td><td>0.911</td><td>0.332</td><td>0.177</td><td>0.000</td><td>0.036</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.444</td> </tr> <tr> <td colspan="2">Net Field Water Requirement for Palawija</td> <td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.047</td><td>0.177</td><td>0.390</td><td>0.545</td><td>0.613</td><td>0.505</td><td>0.165</td><td>0.000</td><td>0.000</td><td>0.000</td> </tr> <tr> <td colspan="2">  100 I</td> 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<td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.047</td><td>0.177</td><td>0.390</td><td>0.545</td><td>0.613</td><td>0.505</td><td>0.165</td><td>0.000</td><td>0.000</td><td>0.000</td> </tr> <tr> <td colspan="2">  <b>Total NWR</b> (l/s/ha)</td> <td>0.000</td><td>0.000</td><td>0.000</td><td>0.111</td><td>0.911</td><td>0.332</td><td>0.177</td><td>0.048</td><td>1.108</td><td>1.079</td><td>1.051</td><td>0.938</td><td>1.010</td><td>0.705</td><td>0.545</td><td>0.293</td><td>0.429</td><td>0.545</td><td>0.613</td><td>0.505</td><td>0.165</td><td>0.000</td><td>0.000</td><td>0.444</td> </tr> <tr> <td colspan="2">  <b>DR</b> (E=0.875*0.81)</td> <td>0.000</td><td>0.000</td><td>0.000</td><td>0.157</td><td>1.285</td><td>0.468</td><td>0.250</td><td>0.068</td><td>1.564</td><td>1.523</td><td>1.483</td><td>1.323</td><td>1.426</td><td>0.995</td><td>0.769</td><td>0.413</td><td>0.605</td><td>0.768</td><td>0.865</td><td>0.712</td><td>0.233</td><td>0.000</td><td>0.000</td><td>0.626</td> </tr> <tr> <td colspan="2">  0.85    0.81    0.6885</td> <td>0.000</td><td>0.000</td><td>0.000</td><td>0.162</td><td>1.323</td><td>0.482</td><td>0.257</td><td>0.070</td><td>1.610</td><td>1.567</td><td>1.526</td><td>1.362</td><td>1.468</td><td>1.024</td><td>0.792</td><td>0.426</td><td>0.623</td><td>0.791</td><td>0.891</td><td>0.733</td><td>0.240</td><td>0.000</td><td>0.000</td><td>0.644</td> </tr> </tbody> </table>																										Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec				1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	A.Crop Water Requirement																										1.Crop Intensity																										Early Cropping																										Middle Cropping																										Late Cropping																										Total																										2.Crop Coefficient																										Early Cropping																										Middle Cropping																										Late Cropping																										Weighted average																										3.Potential ETo (mm/day/A)		3.58	3.58	3.56	3.56	4.95	4.95	4.31	4.31	4.40	4.40	4.70	4.70	4.47	4.47	4.84	4.84	5.33	5.33	5.68	5.68	5.01	5.01	4.31	4.31	4.Consumptive Use, ETc (mm/day/A)																2.42	3.06	4.05	4.71	5.30	4.45	2.86	1.92	0.65		5.Rainfall (mm/day)		13.64	35.63	16.24	8.49	1.98	5.06	3.73	8.09	0.03	0.29	0.00	0.03	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.09	1.69	3.29	15.75	3.21	6.Effective Rainfall (mm/day/A)																0.00	0.00	0.00	0.00	0.00	0.09	1.14	1.92	0.65		7.Crop water Requirement (mm/day)																2.42	3.06	4.05	4.71	5.30	4.36	1.71	0.00	0.00		B.Net Field Water Requirement (mm/day)																0.40	1.53	3.37	4.71	5.30	4.36	1.43	0.00	0.00		(l/sec/ha)																0.047	0.177	0.390	0.545	0.613	0.505	0.165	0.000	0.000				III																																																																												Net Field Water Requirement for Paddy		0.000	0.000	0.000	0.111	0.911	0.332	0.177	0.000	0.036	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.444	Net Field Water Requirement for Palawija		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.047	0.177	0.390	0.545	0.613	0.505	0.165	0.000	0.000	0.000	100 I		0.000	0.000	0.000	0.111	0.911	0.332	0.177	0.000	0.036	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.444	100 II		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.048	1.072	1.079	1.051	0.938	1.010	0.705	0.499	0.116	0.039	0.000	0.000	0.000	0.000	0.000	0.000	0.000	100 III		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.047	0.177	0.390	0.545	0.613	0.505	0.165	0.000	0.000	0.000	<b>Total NWR</b> (l/s/ha)		0.000	0.000	0.000	0.111	0.911	0.332	0.177	0.048	1.108	1.079	1.051	0.938	1.010	0.705	0.545	0.293	0.429	0.545	0.613	0.505	0.165	0.000	0.000	0.444	<b>DR</b> (E=0.875*0.81)		0.000	0.000	0.000	0.157	1.285	0.468	0.250	0.068	1.564	1.523	1.483	1.323	1.426	0.995	0.769	0.413	0.605	0.768	0.865	0.712	0.233	0.000	0.000	0.626	0.85    0.81    0.6885		0.000	0.000	0.000	0.162	1.323	0.482	0.257	0.070	1.610	1.567	1.526	1.362	1.468	1.024	0.792	0.426	0.623	0.791	0.891	0.733	0.240	0.000	0.000	0.644
		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
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3.Potential ETo (mm/day/A)		3.58	3.58	3.56	3.56	4.95	4.95	4.31	4.31	4.40	4.40	4.70	4.70	4.47	4.47	4.84	4.84	5.33	5.33	5.68	5.68	5.01	5.01	4.31	4.31																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
4.Consumptive Use, ETc (mm/day/A)																2.42	3.06	4.05	4.71	5.30	4.45	2.86	1.92	0.65																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
5.Rainfall (mm/day)		13.64	35.63	16.24	8.49	1.98	5.06	3.73	8.09	0.03	0.29	0.00	0.03	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.09	1.69	3.29	15.75	3.21																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
6.Effective Rainfall (mm/day/A)																0.00	0.00	0.00	0.00	0.00	0.09	1.14	1.92	0.65																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
7.Crop water Requirement (mm/day)																2.42	3.06	4.05	4.71	5.30	4.36	1.71	0.00	0.00																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
B.Net Field Water Requirement (mm/day)																0.40	1.53	3.37	4.71	5.30	4.36	1.43	0.00	0.00																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
(l/sec/ha)																0.047	0.177	0.390	0.545	0.613	0.505	0.165	0.000	0.000																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
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Net Field Water Requirement for Paddy		0.000	0.000	0.000	0.111	0.911	0.332	0.177	0.000	0.036	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.444																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
Net Field Water Requirement for Palawija		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.047	0.177	0.390	0.545	0.613	0.505	0.165	0.000	0.000	0.000																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
100 I		0.000	0.000	0.000	0.111	0.911	0.332	0.177	0.000	0.036	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.444																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
100 II		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.048	1.072	1.079	1.051	0.938	1.010	0.705	0.499	0.116	0.039	0.000	0.000	0.000	0.000	0.000	0.000	0.000																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
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<b>Total NWR</b> (l/s/ha)		0.000	0.000	0.000	0.111	0.911	0.332	0.177	0.048	1.108	1.079	1.051	0.938	1.010	0.705	0.545	0.293	0.429	0.545	0.613	0.505	0.165	0.000	0.000	0.444																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
<b>DR</b> (E=0.875*0.81)		0.000	0.000	0.000	0.157	1.285	0.468	0.250	0.068	1.564	1.523	1.483	1.323	1.426	0.995	0.769	0.413	0.605	0.768	0.865	0.712	0.233	0.000	0.000	0.626																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
0.85    0.81    0.6885		0.000	0.000	0.000	0.162	1.323	0.482	0.257	0.070	1.610	1.567	1.526	1.362	1.468	1.024	0.792	0.426	0.623	0.791	0.891	0.733	0.240	0.000	0.000	0.644																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						

Net Field Requirement for Water Balance Calculation in 1991 (5/7)

[Kampili Rotation C ]

Calculation of Net Field Water Requirement for Paddy (C) on

1991

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec		
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	
Cropping Pattern																										
Early Cropping																										
Middle Cropping																										
Late Cropping																										
A.Land Preparation Requirement																										
1.Land Preparation Intensity																										
Early Cropping		1/3	1/6							1/6	1/3	1/6														1/6
Middle Cropping		1/6	1/3	1/6						1/6	1/3	1/6														
Late Cropping			1/6	1/3	1/6							1/6	1/3	1/6												
Total		1/2	2/3	1/2	1/6					1/6	1/2	2/3	1/2	1/6												1/6
2.Land Preparation Requirement (mm/day/A)																										
	(mm/day)	11.65	11.65	11.64	11.64	12.60	12.60	12.16	12.16	12.21	12.21	12.43	12.43	12.27	12.27	12.52	12.52	12.87	12.87	13.13	13.13	12.65	12.65	12.15	12.15	
3.Water Layer Replacement Intensity																										
4.Water Layer Replacement Requirement																										
	(mm/day/A)				3.33	3.33	3.33	3.33	3.33			3.33	3.33	3.33	3.33	3.33	3.33									
	(mm/day)				1.11	1.11	2.22	1.11	1.11			1.11	1.11	2.22	1.11	1.11										
5.Total Requirement for Land Preparation																										
I	(mm/day)	5.83	7.77	5.82	3.05	1.11	2.22	1.11	1.11									0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.03
II									2.03	6.11	8.14	6.21	3.18	1.11	2.22	1.11	1.11									
B. Crop Water Requirement																										
1.Crop Intensity																										
Early Cropping			1/6	1/3	1/3	1/3	1/3	1/3	1/6	1/6	1/3	1/3	1/3	1/3	1/3	1/3	1/6									
Middle Cropping				1/6	1/3	1/3	1/3	1/3	1/6		1/6	1/3	1/3	1/3	1/3	1/3	1/6									
Late Cropping					1/6	1/3	1/3	1/3	1/3	1/6	1/6	1/3	1/3	1/3	1/3	1/3	1/6									
Total	I		1/6	1/2	5/6	1	1	1	5/6	1/2	1/6	1/2	5/6	1	1	1	5/6	1/2	1/6							
	II										1/6	1/2	5/6	1	1	1	5/6	1/2	1/6							
2.Crop Coefficient																										
Early Cropping			1.10	1.10	1.05	1.05	0.95	0.00	0.00	1.10	1.10	1.05	1.05	0.95	0.00	0.00										
Middle Cropping				1.10	1.10	1.05	1.05	0.95	0.00	0.00		1.10	1.10	1.05	1.05	0.95	0.00	0.00								
Late Cropping					1.10	1.10	1.05	1.05	0.95	0.00	0.00		1.10	1.10	1.05	1.05	0.95	0.00	0.00							
Weighted average	I		1.10	1.10	1.08	1.07	1.02	0.67	0.38	0.00		1.10	1.10	1.08	1.07	1.02	0.67	0.38	0.00	0.00						
	II										1.10	1.10	1.08	1.07	1.02	0.67	0.38	0.00	0.00							
3.Potential ETo (mm/day/A)																										
		3.58	3.58	3.56	3.56	4.95	4.95	4.31	4.31	4.40	4.40	4.70	4.70	4.47	4.47	4.84	4.84	5.33	5.33	5.68	5.68	5.01	5.01	4.31	4.31	
4.Consumptive Use, ETc (mm/day/A)																										
		0.00	3.94	3.91	3.84	5.28	5.04	2.88	1.64	0.00	0.00			4.84	5.17	5.08	4.77	4.55	3.22	1.84	0.00					
5.Percolation Loss (mm/day/A)																										
		2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00						
6.Crop Water Requirement (mm/day/A)																										
		2.00	5.94	5.91	5.84	7.28	7.04	4.88	3.64	2.00	2.00			6.84	7.17	7.08	6.77	6.55	5.22	3.84	2.00	2.00		0.00	0.00	0.00
7.Crop water Requirement (mm/day)																										
		0.00	0.99	2.96	4.87	7.28	7.04	4.88	3.03	1.00	0.33			1.14	3.59	5.90	6.77	6.55	5.22	3.20	1.00	0.33		0.00	0.00	0.00
C.Total A(5)+B(7) (mm/day)																										
I		5.83	8.76	8.77	7.92	8.39	9.26	5.99	4.14	1.00	0.33															2.03
II									2.03	6.11	9.28	9.80	9.08	7.88	8.77	6.33	4.31	1.00	0.33							
D.Effective Rainfall (mm/day)																										
		9.55	24.94	11.37	5.94	1.39	3.54	2.61	5.66	0.02	0.20	0.00	0.02	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E.Net field Water Requirement, NFR (mm/day)																										
		-3.73	-16.18	-2.59	1.97	7.01	5.71	3.37	-1.52	0.98	0.13															
	II								-3.64	6.09	9.08	9.80	9.06	7.84	8.77	6.33	4.31	1.00	0.33							
	I	0.00	0.00	0.00	1.97	7.01	5.71	3.37	0.00	0.98	0.13															0.00
	II								0.00	6.09	9.08	9.80	9.06	7.84	8.77	6.33	4.31	1.00	0.33							
	(l/sec/ha)	0.000	0.000	0.000	0.228	0.811	0.661	0.390	0.000	0.113	0.015															0.000
	II								0.000	0.704	1.051	1.134	1.048	0.908	1.015	0.733	0.499	0.116	0.039							

Net Field Requirement for Water Balance Calculation in 1991 (6/7)

Calculation of Net Field Water Requirement for Palawija(C)

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec		
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	
Cropping Pattern	Early Cropping																									
	Middle Cropping																									
	Late Cropping																									
	No Cropping																									
A.Crop Water Requirement																										
1.Crop Intensity																										
Early Cropping																										
Middle Cropping																										
Late Cropping																										
Total																										
2.Crop Coefficient																										
Early Cropping																										
Middle Cropping																										
Late Cropping																										
Weighted average																										
3.Potential ETo (mm/day/A)		3.58	3.58	3.56	3.56	4.95	4.95	4.31	4.31	4.40	4.40	4.70	4.70	4.47	4.47	4.84	4.84	5.33	5.33	5.68	5.68	5.01	5.01	4.31	4.31	
4.Consumptive Use, ETc (mm/day/A)																		2.42	3.37	4.05	5.02	5.30	3.93	2.86	1.65	0.65
5.Rainfall (mm/day)		13.64	35.63	16.24	8.49	1.98	5.06	3.73	8.09	0.03	0.29	0.00	0.03	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.09	1.69	3.29	15.75	3.21	
6.Effective Rainfall (mm/day/A)																		0.00	0.00	0.00	0.00	0.09	1.23	2.10	1.65	0.65
7.Crop water Requirement (mm/day/A)																		2.42	3.37	4.05	5.02	5.21	2.70	0.75	0.00	0.00
B.Net Field Water Requirement (mm/day)																		0.40	1.69	3.37	5.02	5.21	2.70	0.63	0.00	0.00
(l/sec/ha)																		0.047	0.195	0.390	0.581	0.603	0.312	0.073	0.000	0.000
		III																								
Net Field Water Requirement for Paddy		0.000	0.000	0.000	0.228	0.811	0.661	0.390	0.000	0.113	0.015	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Net Field Water Requirement for Palawija		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.047	0.195	0.390	0.581	0.603	0.312	0.073	0.000	0.000	0.000
100 I		0.000	0.000	0.000	0.228	0.811	0.661	0.390	0.000	0.113	0.015	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100 II		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.047	0.195	0.390	0.581	0.603	0.312	0.073	0.000	0.000	0.000
100 III		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.047	0.195	0.390	0.581	0.603	0.312	0.073	0.000	0.000	0.000
<b>Total NWR</b> (l/s/ha)		0.000	0.000	0.000	0.228	0.811	0.661	0.390	0.000	0.818	1.066	1.134	1.048	0.908	1.015	0.733	0.545	0.311	0.429	0.581	0.603	0.312	0.073	0.000	0.000	0.000
<b>DR</b> (E=0.875*0.81)		0.000	0.000	0.000	0.322	1.144	0.933	0.551	0.000	1.154	1.504	1.600	1.479	1.281	1.432	1.034	0.769	0.439	0.605	0.819	0.851	0.441	0.102	0.000	0.000	0.000
0.85 0.81 0.6885		0.000	0.000	0.000	0.332	1.178	0.960	0.567	0.000	1.188	1.548	1.647	1.522	1.319	1.474	1.065	0.792	0.452	0.623	0.843	0.876	0.454	0.105	0.000	0.000	0.000

Net Field Requirement for Water Balance Calculation in 1991 (7/7)

(E=0.875*0.81)	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
<b>Golongan A</b>	0.000	0.000	0.000	0.309	0.821	0.131	0.566	0.582	1.552	1.399	1.327	1.466	0.989	0.746	0.413	0.555	0.768	0.812	0.726	0.430	0.070	0.000	0.000	1.140
<b>Golongan B</b>	0.000	0.000	0.000	0.157	1.285	0.468	0.250	0.068	1.564	1.523	1.483	1.323	1.426	0.995	0.769	0.413	0.605	0.768	0.865	0.712	0.233	0.000	0.000	0.626
<b>Golongan C</b>	0.000	0.000	0.000	0.322	1.144	0.933	0.551	0.000	1.154	1.504	1.600	1.479	1.281	1.432	1.034	0.769	0.439	0.605	0.819	0.851	0.441	0.102	0.000	0.000
average	0.000	0.000	0.000	0.263	1.083	0.511	0.455	0.217	1.423	1.475	1.470	1.423	1.232	1.058	0.739	0.579	0.604	0.729	0.804	0.664	0.248	0.034	0.000	0.589

(E=0.85*0.81)	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
<b>Golongan A</b>	0.000	0.000	0.000	0.318	0.845	0.135	0.582	0.600	1.598	1.440	1.366	1.509	1.018	0.768	0.426	0.571	0.791	0.836	0.748	0.442	0.072	0.000	0.000	1.174
<b>Golongan B</b>	0.000	0.000	0.000	0.162	1.323	0.482	0.257	0.070	1.610	1.567	1.526	1.362	1.468	1.024	0.792	0.426	0.623	0.791	0.891	0.733	0.240	0.000	0.000	0.644
<b>Golongan C</b>	0.000	0.000	0.000	0.332	1.178	0.960	0.567	0.000	1.188	1.548	1.647	1.522	1.319	1.474	1.065	0.792	0.452	0.623	0.843	0.876	0.454	0.105	0.000	0.000
average	0.000	0.000	0.000	0.271	1.115	0.526	0.469	0.223	1.465	1.519	1.513	1.464	1.268	1.089	0.761	0.596	0.622	0.750	0.827	0.684	0.255	0.035	0.000	0.606

Summary Calculation of NFR (l/s/ha)

	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
<b>Golongan A</b>	0.00	0.00	0.00	0.22	0.58	0.09	0.40	0.41	1.10	0.99	0.94	1.04	0.70	0.53	0.29	0.39	0.54	0.58	0.51	0.30	0.05	0.00	0.00	0.81
<b>Golongan B</b>	0.00	0.00	0.00	0.11	0.91	0.33	0.18	0.05	1.11	1.08	1.05	0.94	1.01	0.71	0.55	0.29	0.43	0.54	0.61	0.50	0.17	0.00	0.00	0.44
<b>Golongan C</b>	0.00	0.00	0.00	0.23	0.81	0.66	0.39	0.00	0.82	1.07	1.13	1.05	0.91	1.01	0.73	0.55	0.31	0.43	0.58	0.60	0.31	0.07	0.00	0.00

1991

	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
I : W.Pad	0.00	0.00	0.00	0.22	0.58	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.81
B	0.00	0.00	0.00	0.11	0.91	0.33	0.18	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44
C	0.00	0.00	0.00	0.23	0.81	0.66	0.39	0.00	0.11	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
av	0.00	0.00	0.00	0.19	0.77	0.36	0.19	0.00	0.05	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42
II : D.Pad	0.00	0.00	0.00	0.00	0.00	0.00	0.40	0.41	1.10	0.99	0.94	1.04	0.70	0.49	0.12	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	1.07	1.08	1.05	0.94	1.01	0.71	0.50	0.12	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.70	1.05	1.13	1.05	0.91	1.01	0.73	0.50	0.12	0.04	0.00	0.00	0.00	0.00	0.00	0.00
av	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.15	0.96	1.04	1.04	1.01	0.87	0.74	0.45	0.22	0.05	0.01	0.00	0.00	0.00	0.00	0.00	0.00
III : D.Pal	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.18	0.35	0.54	0.58	0.51	0.30	0.05	0.00	0.00	0.00
B	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.18	0.39	0.54	0.61	0.50	0.17	0.00	0.00	0.00
C	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.20	0.39	0.58	0.60	0.31	0.07	0.00	0.00	0.00
av	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.07	0.19	0.38	0.50	0.57	0.47	0.18	0.02	0.00	0.00
I : W.Pad	0.00	0.00	0.00	0.19	0.77	0.36	0.19	0.00	0.05	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42
II : D.Pad	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.15	0.96	1.04	1.04	1.01	0.87	0.74	0.45	0.22	0.05	0.01	0.00	0.00	0.00	0.00	0.00	0.00
III : D.Pal	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.07	0.19	0.38	0.50	0.57	0.47	0.18	0.02	0.00	0.00

1991

I : W.Pad	100	0.000	0.000	0.186	0.768	0.362	0.189	0.000	0.050	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.417	
II : D.Pad	100	0.000	0.000	0.000	0.000	0.000	0.134	0.154	0.959	1.041	1.042	1.008	0.873	0.735	0.449	0.218	0.051	0.013	0.000	0.000	0.000	0.000	0.000	0.000	
III : D.Pal	100	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.014	0.075	0.193	0.377	0.504	0.570	0.471	0.176	0.024	0.000	0.000	
total		0.000	0.000	0.000	0.186	0.768	0.362	0.323	0.154	1.009	1.046	1.042	1.008	0.873	0.750	0.524	0.410	0.428	0.516	0.570	0.471	0.176	0.024	0.000	0.417
		0		0.09313		0.56481		0.23823		1.02717		1.02505		0.81128		0.46713		0.47231		0.52016		0.09994		0.20865	

Year : 1991

N.F.R. (l/s/ha)	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
	0.000	0.000	0.000	0.186	0.768	0.362	0.323	0.154	1.009	1.046	1.042	1.008	0.873	0.750	0.524	0.410	0.428	0.516	0.570	0.471	0.176	0.024	0.000	0.417

Net Field Requirement for Water Balance Calculation in 1992 (1/7)

[Kampili Rotation A]

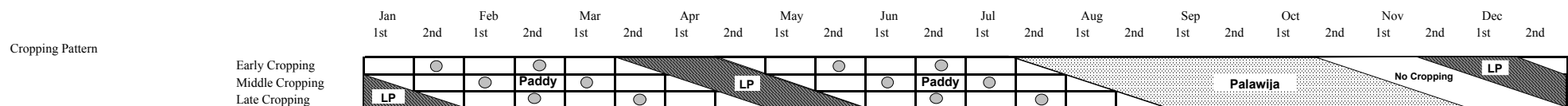
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Calculation of Net Field Water Requirement for Paddy (A) on

1992

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
<b>Cropping Pattern</b>																									
<b>A. Land Preparation Requirement</b>																									
1. Land Preparation Intensity																									
Early Cropping																									
Middle Cropping																									
Late Cropping																									
Total																									
2. Land Preparation Requirement (mm/day/A)																									
3. Water Layer Replacement Intensity																									
4. Water Layer Replacement Requirement (mm/day/A)																									
5. Total Requirement for Land Preparation																									
I (mm/day)																									
II (mm/day)																									
<b>B. Crop Water Requirement</b>																									
1. Crop Intensity																									
Early Cropping																									
Middle Cropping																									
Late Cropping																									
Total																									
I																									
II																									
2. Crop Coefficient																									
Early Cropping																									
Middle Cropping																									
Late Cropping																									
Weighted average																									
I																									
II																									
3. Potential ETo (mm/day/A)																									
4. Consumptive Use, ETc (mm/day/A)																									
I																									
II																									
5. Percolation Loss (mm/day/A)																									
6. Crop Water Requirement (mm/day/A)																									
I																									
II																									
7. Crop water Requirement (mm/day)																									
I																									
II																									
C. Total A(5)+B(7) (mm/day)																									
I																									
II																									
D. Effective Rainfall (mm/day)																									
E. Net field Water Requirement, NFR (mm/day)																									
I																									
II																									
I (l/sec/ha)																									
II																									

Net Field Requirement for Water Balance Calculation in 1992 (2/7)

Calculation of Net Field Water Requirement for Palawija(A)



A. Crop Water Requirement

	Jan 1st	Jan 2nd	Feb 1st	Feb 2nd	Mar 1st	Mar 2nd	Apr 1st	Apr 2nd	May 1st	May 2nd	Jun 1st	Jun 2nd	Jul 1st	Jul 2nd	Aug 1st	Aug 2nd	Sep 1st	Sep 2nd	Oct 1st	Oct 2nd	Nov 1st	Nov 2nd	Dec 1st	Dec 2nd
1. Crop Intensity																								
Early Cropping																	1/6	1/3	1/3	1/3	1/3	1/3	1/6	
Middle Cropping																		1/6	1/3	1/3	1/3	1/3	1/6	
Late Cropping																			1/6	1/3	1/3	1/3	1/6	
Total																	1/6	1/2	5/6	1	1	1	5/6	1/2
2. Crop Coefficient																								
Early Cropping																	0.50	0.70	0.95	1.00	0.85	0.50	0.15	
Middle Cropping																		0.50	0.70	0.95	1.00	0.85	0.50	0.15
Late Cropping																			0.50	0.70	0.95	1.00	0.85	0.50
Weighted average																	0.50	0.63	0.76	0.88	0.93	0.78	0.57	0.38
3. Potential ETo (mm/day/A)	4.35	4.35	4.13	4.13	4.26	4.26	4.44	4.44	4.57	4.57	3.96	3.96	4.36	4.36	4.94	4.94	4.64	4.64	5.02	5.02	4.53	4.53	3.83	3.83
4. Consumptive Use, ETc (mm/day/A)																								
5. Rainfall (mm/day)	17.19	5.28	5.86	6.24	17.69	12.50	5.73	1.28	0.53	0.18	1.73	1.13	1.71	0.02	0.69	0.08	3.46	2.59	0.57	1.11	2.28	7.40	10.28	
6. Effective Rainfall (mm/day/A)																								
7. Crop water Requirement (mm/day/A)																								
B. Net Field Water Requirement (mm/day)																								
(l/sec/ha)																								
III																								

	Jan 1st	Jan 2nd	Feb 1st	Feb 2nd	Mar 1st	Mar 2nd	Apr 1st	Apr 2nd	May 1st	May 2nd	Jun 1st	Jun 2nd	Jul 1st	Jul 2nd	Aug 1st	Aug 2nd	Sep 1st	Sep 2nd	Oct 1st	Oct 2nd	Nov 1st	Nov 2nd	Dec 1st	Dec 2nd
Net Field Water Requirement for Paddy	0.000	0.582	0.395	0.468	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.103
Net Field Water Requirement for Palawija	0.000	0.000	0.000	0.000	0.000	0.000	0.244	0.974	1.077	1.021	0.709	0.863	0.558	0.479	0.060	0.032	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100 I	0.000	0.582	0.395	0.468	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.103
100 II	0.000	0.000	0.000	0.000	0.000	0.000	0.244	0.974	1.077	1.021	0.709	0.863	0.558	0.479	0.060	0.032	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100 III	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.042	0.151	0.355	0.198	0.286	0.402	0.201	0.020	0.000	0.000	0.000
<b>Total NWR</b> (l/s/ha)	0.000	0.582	0.395	0.468	0.000	0.000	0.244	0.974	1.077	1.021	0.709	0.863	0.558	0.521	0.211	0.387	0.198	0.286	0.402	0.201	0.020	0.000	0.000	0.103
<b>DR</b> (E=0.875*0.81)	0.000	0.821	0.558	0.661	0.000	0.000	0.345	1.374	1.520	1.441	1.000	1.218	0.787	0.735	0.298	0.546	0.279	0.404	0.567	0.284	0.029	0.000	0.000	0.146
0.85 0.81 0.6885	0.000	0.845	0.574	0.680	0.000	0.000	0.355	1.414	1.565	1.483	1.030	1.254	0.810	0.757	0.307	0.562	0.287	0.416	0.584	0.292	0.030	0.000	0.000	0.150

Net Field Requirement for Water Balance Calculation in 1992 (3/7)

[Kampili Rotation B]

Calculation of Net Field Water Requirement for Paddy(B) on 1992

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec					
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd				
<b>Cropping Pattern</b>	Early Cropping					○						○																	
	Middle Cropping			○								○																	
	Late Cropping				○								○																
<b>A.Land Preparation Requirement</b>																													
1.Land Preparation Intensity																													
Early Cropping		1/6						1/6		1/3		1/6												1/6		1/3			
Middle Cropping		1/3		1/6						1/6		1/3		1/6														1/6	
Late Cropping		1/6		1/3		1/6						1/6		1/3		1/6												1/6	
Total		2/3		1/2		1/6				1/6		1/2		1/6												1/6		1/2	
2.Land Preparation Requirement		(mm/day/A)																											
		(mm/day)																											
3.Water Layer Replacement Intensity																													
4.Water Layer Replacement Requirement																													
		(mm/day/A)																											
		(mm/day)																											
5.Total Requirement for Land Preparation																													
I		(mm/day)																											
II		(mm/day)																											
<b>B. Crop Water Requirement</b>																													
1.Crop Intensity																													
Early Cropping		1/6		1/3		1/3		1/3		1/6		1/3		1/3		1/6													
Middle Cropping				1/6		1/3		1/3		1/3		1/6		1/3		1/3		1/6										1/6	
Late Cropping				1/6		1/3		1/3		1/3		1/6		1/3		1/3		1/6		1/3		1/6							
Total		1/6		1/2		5/6		1		5/6		1/2		1/6															
I																													
II																													
2.Crop Coefficient																													
Early Cropping		1.10		1.10		1.05		1.05		0.95		0.00		0.00		1.10		1.10		1.05		1.05		0.95		0.00		0.00	
Middle Cropping				1.10		1.10		1.05		0.95		0.00		0.00		1.10		1.10		1.05		1.05		0.95		0.00		0.00	
Late Cropping				1.10		1.10		1.05		0.95		0.00		0.00		1.10		1.10		1.05		1.05		0.95		0.00		0.00	
Weighted average		1.10		1.10		1.08		1.07		1.02		0.67		0.38		0.00		0.00		0.00		0.00		0.00		0.00		0.00	
I																													
II																													
3.Potential ETo		(mm/day/A)																											
4.Consumptive Use, ETc		(mm/day/A)																											
5.Percolation Loss		(mm/day/A)																											
6.Crop Water Requirement		(mm/day/A)																											
7.Crop water Requirement		(mm/day)																											
I																													
II																													
C.Total A(5)+B(7)		(mm/day)																											
I																													
II																													
D.Effective Rainfall		(mm/day)																											
E.Net field Water Requirement, NFR		(mm/day)																											
I																													
II																													
I		(l/sec/ha)																											
II																													

Net Field Requirement for Water Balance Calculation in 1992 (4/7)

Calculation of Net Field Water Requirement for Palawija(B)

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec			
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd		
Cropping Pattern	Early Cropping			●		●						●		●													
	Middle Cropping				●		●						●		●												
	Late Cropping	LP								LP															LP		
						Paddy								Paddy											No Cropping		
A.Crop Water Requirement																											
1.Crop Intensity																											
Early Cropping																											
Middle Cropping																											
Late Cropping																											
Total																											
2.Crop Coefficient																											
Early Cropping																											
Middle Cropping																											
Late Cropping																											
Weighted average																											
3.Potential ETo (mm/day/A)		4.35	4.35	4.13	4.13	4.26	4.26	4.44	4.44	4.57	4.57	3.96	3.96	4.36	4.36	4.94	4.94	4.64	4.64	5.02	5.02	4.53	4.53	3.83	3.83		
4.Consumptive Use, ETc (mm/day/A)																2.47	3.13	3.53	4.10	4.68	3.93	2.58	1.74	0.57			
5.Rainfall (mm/day)		17.19	5.28	5.86	6.24	17.69	12.50	5.73	1.28	0.53	0.18	1.73	1.13	1.71	0.02	0.69	0.08	3.46	2.59	0.57	1.11	2.28	7.40	10.28	11.46		
6.Effective Rainfall (mm/day/A)																0.49	0.07	2.31	1.83	0.48	0.83	1.47	1.74	0.57			
7.Crop water Requirement (mm/day)																1.98	3.06	1.22	2.27	4.21	3.10	1.11	0.00	0.00			
B.Net Field Water Requirement (mm/day)																											
(I/sec/ha)																											
III																											
Net Field Water Requirement for Paddy		0.000	0.670	0.509	0.364	0.000	0.000	0.020	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
Net Field Water Requirement for Palawija		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.038	0.177	0.118	0.262	0.487	0.358	0.107	0.000	0.000	0.000		
100 I		0.000	0.670	0.509	0.364	0.000	0.000	0.020	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000			
100 II		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.605	1.044	1.106	0.824	0.758	0.863	0.695	0.447	0.109	0.000	0.000	0.000	0.000	0.000	0.000	0.000			
100 III		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.038	0.177	0.118	0.262	0.487	0.358	0.107	0.000	0.000			
<b>Total NWR</b> (l/s/ha)		0.000	0.670	0.509	0.364	0.000	0.000	0.020	0.617	1.044	1.106	0.824	0.758	0.863	0.695	0.485	0.286	0.118	0.262	0.487	0.358	0.107	0.000	0.000			
<b>DR</b> (E=0.875*0.81)		0.000	0.946	0.718	0.513	0.000	0.000	0.028	0.870	1.473	1.561	1.162	1.069	1.218	0.980	0.684	0.403	0.166	0.370	0.687	0.506	0.151	0.000	0.000			
0.85      0.81      0.6885		0.000	0.973	0.740	0.529	0.000	0.000	0.029	0.896	1.517	1.607	1.197	1.100	1.253	1.009	0.704	0.415	0.171	0.381	0.707	0.521	0.155	0.000	0.000			





Net Field Requirement for Water Balance Calculation in 1992 (6/7)

Calculation of Net Field Water Requirement for Palawija(C)

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec		
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	
Cropping Pattern	Early Cropping																									
	Middle Cropping																									
	Late Cropping																									
	No Cropping																									
A.Crop Water Requirement																										
1.Crop Intensity																										
Early Cropping																										
Middle Cropping																										
Late Cropping																										
Total																										
2.Crop Coefficient																										
Early Cropping																										
Middle Cropping																										
Late Cropping																										
Weighted average																										
3.Potential ETo (mm/day/A)		4.35	4.35	4.13	4.13	4.26	4.26	4.44	4.44	4.57	4.57	3.96	3.96	4.36	4.36	4.94	4.94	4.64	4.64	5.02	5.02	4.53	4.53	3.83	3.83	
4.Consumptive Use, ETc (mm/day/A)																		2.47	2.94	3.53	4.43	4.68	3.55	2.58	1.47	0.57
5.Rainfall (mm/day)		17.19	5.28	5.86	6.24	17.69	12.50	5.73	1.28	0.53	0.18	1.73	1.13	1.71	0.02	0.69	0.08	3.46	2.59	0.57	1.11	2.28	7.40	10.28	11.46	
6.Effective Rainfall (mm/day/A)																		0.07	2.22	1.77	0.47	0.87	1.57	2.58	1.47	0.57
7.Crop water Requirement (mm/day/A)																		2.40	0.72	1.76	3.96	3.81	1.97	0.00	0.00	0.00
B.Net Field Water Requirement (mm/day)																										
(I/sec/ha)																										
III																										
		0.046	0.042	0.170	0.459	0.441	0.228	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.046	0.042	0.170	0.459	0.441	0.228	0.000	0.000	0.000
Net Field Water Requirement for Paddy		0.000	0.643	0.600	0.478	0.000	0.000	0.238	0.380	0.073	0.024	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Net Field Water Requirement for Palawija		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.132	0.671	1.073	0.917	0.872	0.760	1.000	0.685	0.496	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100 I		0.000	0.643	0.600	0.478	0.000	0.000	0.238	0.380	0.073	0.024	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100 II		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.132	0.671	1.073	0.917	0.872	0.760	1.000	0.685	0.496	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100 III		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.046	0.042	0.170	0.459	0.441	0.228	0.000	0.000	0.000	
<b>Total NWR</b> (l/s/ha)		0.000	0.643	0.600	0.478	0.000	0.000	0.238	0.513	0.743	1.097	0.917	0.872	0.760	1.000	0.685	0.542	0.042	0.170	0.459	0.441	0.228	0.000	0.000	0.000	
<b>DR</b> (E=0.875*0.81)		0.000	0.908	0.847	0.674	0.000	0.000	0.336	0.723	1.049	1.548	1.294	1.231	1.072	1.411	0.967	0.765	0.059	0.240	0.647	0.622	0.322	0.000	0.000	0.000	
0.85 0.81 0.6885		0.000	0.934	0.872	0.694	0.000	0.000	0.346	0.745	1.079	1.594	1.332	1.267	1.103	1.453	0.995	0.787	0.061	0.247	0.666	0.640	0.332	0.000	0.000	0.000	

Net Field Requirement for Water Balance Calculation in 1992 (7/7)

(E=0.875*0.81)	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
<b>Golongan A</b>	0.000	0.821	0.558	0.661	0.000	0.000	0.345	1.374	1.520	1.441	1.000	1.218	0.787	0.735	0.298	0.546	0.279	0.404	0.567	0.284	0.029	0.000	0.000	0.146
<b>Golongan B</b>	0.000	0.946	0.718	0.513	0.000	0.000	0.028	0.870	1.473	1.561	1.162	1.069	1.218	0.980	0.684	0.403	0.166	0.370	0.687	0.506	0.151	0.000	0.000	0.000
<b>Golongan C</b>	0.000	0.908	0.847	0.674	0.000	0.000	0.336	0.723	1.049	1.548	1.294	1.231	1.072	1.411	0.967	0.765	0.059	0.240	0.647	0.622	0.322	0.000	0.000	0.000
average	0.000	0.891	0.708	0.616	0.000	0.000	0.237	0.989	1.347	1.517	1.152	1.173	1.025	1.042	0.650	0.571	0.168	0.338	0.634	0.470	0.167	0.000	0.000	0.049

(E=0.85*0.81)	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
<b>Golongan A</b>	0.000	0.845	0.574	0.680	0.000	0.000	0.355	1.414	1.565	1.483	1.030	1.254	0.810	0.757	0.307	0.562	0.287	0.416	0.584	0.292	0.030	0.000	0.000	0.150
<b>Golongan B</b>	0.000	0.973	0.740	0.529	0.000	0.000	0.029	0.896	1.517	1.607	1.197	1.100	1.253	1.009	0.704	0.415	0.171	0.381	0.707	0.521	0.155	0.000	0.000	0.000
<b>Golongan C</b>	0.000	0.934	0.872	0.694	0.000	0.000	0.346	0.745	1.079	1.594	1.332	1.267	1.103	1.453	0.995	0.787	0.061	0.247	0.666	0.640	0.332	0.000	0.000	0.000
average	0.000	0.918	0.729	0.634	0.000	0.000	0.243	1.018	1.387	1.561	1.186	1.207	1.056	1.073	0.669	0.588	0.173	0.348	0.652	0.484	0.172	0.000	0.000	0.050

Summary Calculation of NFR (l/s/ha)

	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
<b>Golongan A</b>	0.00	0.58	0.40	0.47	0.00	0.00	0.24	0.97	1.08	1.02	0.71	0.86	0.56	0.52	0.21	0.39	0.20	0.29	0.40	0.20	0.02	0.00	0.00	0.10
<b>Golongan B</b>	0.00	0.67	0.51	0.36	0.00	0.00	0.02	0.62	1.04	1.11	0.82	0.76	0.86	0.69	0.48	0.29	0.12	0.26	0.49	0.36	0.11	0.00	0.00	0.00
<b>Golongan C</b>	0.00	0.64	0.60	0.48	0.00	0.00	0.24	0.51	0.74	1.10	0.92	0.87	0.76	1.00	0.69	0.54	0.04	0.17	0.46	0.44	0.23	0.00	0.00	0.00

1992

	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec		
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	
I : W.Pad	A	0.00	0.58	0.40	0.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
	B	0.00	0.67	0.51	0.36	0.00	0.00	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	C	0.00	0.64	0.60	0.48	0.00	0.00	0.24	0.38	0.07	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	av	0.00	0.63	0.50	0.44	0.00	0.00	0.09	0.13	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
II : D.Pad	A	0.00	0.00	0.00	0.00	0.00	0.00	0.24	0.97	1.08	1.02	0.71	0.86	0.56	0.48	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	B	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.60	1.04	1.11	0.82	0.76	0.86	0.69	0.45	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	C	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.67	1.07	0.92	0.87	0.76	1.00	0.69	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	av	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.57	0.93	1.07	0.82	0.83	0.73	0.72	0.40	0.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
III : D.Pal	A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.15	0.35	0.20	0.29	0.40	0.20	0.02	0.00	0.00	0.00
	B	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.18	0.12	0.26	0.49	0.36	0.11	0.00	0.00	0.00
	C	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.04	0.17	0.46	0.44	0.23	0.00	0.00	0.00	
	av	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.06	0.19	0.12	0.24	0.45	0.33	0.12	0.00	0.00	0.00	0.00
I : W.Pad		0.00	0.63	0.50	0.44	0.00	0.00	0.09	0.13	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
II : D.Pad		0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.57	0.93	1.07	0.82	0.83	0.73	0.72	0.40	0.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
III : D.Pal		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.06	0.19	0.12	0.24	0.45	0.33	0.12	0.00	0.00	0.00	0.00

1992

I : W.Pad	100	0.000	0.632	0.502	0.437	0.000	0.000	0.086	0.131	0.024	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.034
II : D.Pad	100	0.000	0.000	0.000	0.000	0.000	0.000	0.081	0.570	0.931	1.067	0.817	0.831	0.727	0.725	0.397	0.212	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
III : D.Pal	100	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.014	0.063	0.193	0.119	0.240	0.449	0.333	0.119	0.000	0.000	0.000	0.000
total		0.000	0.632	0.502	0.437	0.000	0.000	0.168	0.701	0.955	1.075	0.817	0.831	0.727	0.739	0.460	0.405	0.119	0.240	0.449	0.333	0.119	0.000	0.000	0.034
		0.31591		0.46917		0		0.43437		1.0149		0.82393		0.73273		0.43271		0.17937		0.3913		0.05929		0.01722	

Year : 1992

N.F.R. (l/s/ha)

	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
	0.000	0.632	0.502	0.437	0.000	0.000	0.168	0.701	0.955	1.075	0.817	0.831	0.727	0.739	0.460	0.405	0.119	0.240	0.449	0.333	0.119	0.000	0.000	0.034

Net Field Requirement for Water Balance Calculation in 1993 (1/7)

[Kampili Rotation A]

1 1 1  
Calculation of Net Field Water Requirement for Paddy (A) on

1993

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec			
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd		
<b>Cropping Pattern</b>																											
<b>A. Land Preparation Requirement</b>																											
1. Land Preparation Intensity																											
Early Cropping																											
Middle Cropping																											
Late Cropping																											
Total																											
2. Land Preparation Requirement (mm/day/A)																											
3. Water Layer Replacement Intensity																											
4. Water Layer Replacement Requirement (mm/day/A)																											
5. Total Requirement for Land Preparation																											
I (mm/day)																											
II (mm/day)																											
<b>B. Crop Water Requirement</b>																											
1. Crop Intensity																											
Early Cropping																											
Middle Cropping																											
Late Cropping																											
Total																											
I																											
II																											
2. Crop Coefficient																											
Early Cropping																											
Middle Cropping																											
Late Cropping																											
Weighted average																											
I																											
II																											
3. Potential ETo (mm/day/A)																											
4. Consumptive Use, ETc (mm/day/A)																											
5. Percolation Loss (mm/day/A)																											
6. Crop Water Requirement (mm/day/A)																											
7. Crop water Requirement (mm/day)																											
I																											
II																											
C. Total A(5)+B(7) (mm/day)																											
I																											
II																											
D. Effective Rainfall (mm/day)																											
E. Net field Water Requirement, NFR (mm/day)																											
I																											
II																											
I (l/sec/ha)																											
II																											

Net Field Requirement for Water Balance Calculation in 1993 (2/7)

Calculation of Net Field Water Requirement for Palawija(A)

Cropping Pattern	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
Early Cropping		○		○						○		○												
Middle Cropping			○	Paddy	○						○	Paddy	○											
Late Cropping	LP			○		○						○		○										LP

A. Crop Water Requirement

1. Crop Intensity																									
Early Cropping															1/6	1/3	1/3	1/3	1/3	1/3	1/3	1/6			
Middle Cropping																1/6	1/3	1/3	1/3	1/3	1/3	1/3	1/6		
Late Cropping																	1/6	1/3	1/3	1/3	1/3	1/3	1/3	1/6	
Total															1/6	1/2	5/6	1	1	1	1	5/6	1/2	1/6	
2. Crop Coefficient																									
Early Cropping															0.50	0.70	0.95	1.00	0.85	0.50	0.15				
Middle Cropping																0.50	0.70	0.95	1.00	0.85	0.50	0.15			
Late Cropping																	0.50	0.70	0.95	1.00	0.85	0.50	0.15		
Weighted average															0.50	0.63	0.76	0.88	0.93	0.78	0.57	0.38	0.15		
3. Potential ETo (mm/day/A)		4.02	4.02	3.83	3.83	3.47	3.47	3.72	3.72	4.32	4.32	3.98	3.98	4.40	4.40	5.33	5.33	5.71	5.71	5.68	5.68	4.74	4.74	3.95	3.95
4. Consumptive Use, ETc (mm/day/A)															2.20	3.37	4.05	5.04	5.33	4.45	3.24	1.82	0.71		
5. Rainfall (mm/day)		4.97	23.10	11.89	11.52	5.72	6.02	9.08	2.77	3.95	1.29	1.89	0.41	0.00	0.00	0.00	0.00	0.00	0.00	1.16	0.32	1.36	3.84	9.79	33.40
6. Effective Rainfall (mm/day/A)															0.00	0.00	0.00	0.00	0.00	0.90	0.26	0.87	0.71		
7. Crop water Requirement (mm/day/A)															2.20	3.37	4.05	5.04	5.33	3.55	2.98	0.95	0.00		
B. Net Field Water Requirement (mm/day)															0.37	1.69	3.37	5.04	5.33	3.55	2.48	0.47	0.00		
(l/sec/ha)															0.042	0.195	0.391	0.584	0.617	0.411	0.288	0.055	0.000		

	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec		
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	
Net Field Water Requirement for Paddy	0.661	0.000	0.000	0.005	0.164	0.000	0.000	0.000	0.000	0.774	0.902	0.699	0.924	0.700	0.483	0.116	0.039	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Net Field Water Requirement for Palawija	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.042	0.195	0.391	0.584	0.617	0.411	0.288	0.055	0.000	0.000	0.000
100 I	0.661	0.000	0.000	0.005	0.164	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100 II	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.800	0.774	0.902	0.699	0.924	0.700	0.483	0.116	0.039	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100 III	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.042	0.195	0.391	0.584	0.617	0.411	0.288	0.055	0.000	0.000	0.000
<b>Total NWR</b> (l/s/ha)	0.661	0.000	0.000	0.005	0.164	0.000	0.000	0.800	0.774	0.902	0.699	0.924	0.700	0.525	0.311	0.429	0.584	0.617	0.411	0.288	0.055	0.000	0.000	0.000	0.000
<b>DR</b> (E=0.875*0.81)	0.932	0.000	0.000	0.007	0.232	0.000	0.000	1.129	1.092	1.272	0.986	1.304	0.987	0.741	0.439	0.606	0.824	0.870	0.580	0.406	0.078	0.000	0.000	0.000	0.000
0.85      0.81      0.6885	0.960	0.000	0.000	0.008	0.239	0.000	0.000	1.162	1.124	1.310	1.015	1.342	1.016	0.763	0.452	0.623	0.848	0.896	0.597	0.418	0.080	0.000	0.000	0.000	0.000

Net Field Requirement for Water Balance Calculation in 1993 (3/7)

[Kampili Rotation B]

Calculation of Net Field Water Requirement for Paddy(B) on 1993

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec																											
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd																										
<b>Cropping Pattern</b>																																																			
<b>A. Land Preparation Requirement</b>																																																			
1. Land Preparation Intensity																																																			
Early Cropping		1/6						1/6		1/3		1/6												1/6		1/3																									
Middle Cropping		1/3		1/6						1/6		1/3		1/6												1/6		1/6																							
Late Cropping		1/6		1/3		1/6						1/6		1/3		1/6																																			
Total		2/3		1/2		1/6				1/6		1/2		2/3		1/6										1/6		1/2																							
2. Land Preparation Requirement (mm/day/A)		11.95		11.95		11.82		11.58		11.58		11.75		11.75		12.16		12.16		11.93		11.93		12.22		12.22		12.87		12.87		13.15		13.15		13.13		13.13		12.45		12.45		11.91		11.91					
3. Water Layer Replacement Intensity		7.97		5.98		1.97		0.00		0.00		1.96		5.88		8.11		6.08		1.99		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		1.98		5.95							
4. Water Layer Replacement Requirement (mm/day/A)						3.33		3.33		3.33		3.33				3.33		3.33		3.33		3.33		3.33																											
5. Total Requirement for Land Preparation																																																			
I (mm/day)		7.97		5.98		3.08		1.11		2.22		1.11		1.11																																					
II (mm/day)										1.96		5.88		8.11		6.08		3.10		1.11		2.22		1.11		1.11																									
<b>B. Crop Water Requirement</b>																																																			
1. Crop Intensity																																																			
Early Cropping		1/6		1/3		1/3		1/3		1/3		1/6		1/6		1/3		1/3		1/3		1/3		1/6																											
Middle Cropping				1/6		1/3		1/3		1/3		1/6		1/6		1/3		1/3		1/3		1/3		1/6																											
Late Cropping				1/6		1/3		1/3		1/3		1/6		1/6		1/3		1/3		1/3		1/3		1/6																											
Total		1/6		1/2		5/6		1		1		5/6		1/2		1/6		1/6		1/2		5/6		1/2		1/6																									
2. Crop Coefficient																																																			
Early Cropping		1.10		1.10		1.05		1.05		0.95		0.00		0.00		1.10		1.10		1.05		1.05		0.95		0.00		0.00																							
Middle Cropping				1.10		1.10		1.05		1.05		0.95		0.00		0.00		1.10		1.10		1.05		1.05		0.95		0.00		0.00																					
Late Cropping						1.10		1.10		1.05		1.05		0.95		0.00		0.00		1.10		1.10		1.05		1.05		0.95		0.00		0.00																			
Weighted average		1.10		1.10		1.08		1.07		1.02		0.67		0.38		0.00		0.00		1.10		1.10		1.08		1.07		1.02		0.67		0.38		0.00		0.00															
3. Potential ETo (mm/day/A)		4.02		4.02		3.83		3.83		3.47		3.47		3.72		3.72		4.32		4.32		3.98		3.98		4.40		4.40		5.33		5.33		5.71		5.71		5.68		5.68		4.74		4.74		3.95		3.95			
4. Consumptive Use, ETc (mm/day/A)		4.42		4.42		4.13		4.08		3.52		2.31		1.42		0.00		0.00		4.75		4.75		4.30		4.25		4.48		2.94		2.02		0.00		0.00															
5. Percolation Loss (mm/day/A)		2.00		2.00		2.00		2.00		2.00		2.00		2.00		2.00		2.00		2.00		2.00		2.00		2.00		2.00		2.00		2.00		2.00		2.00		2.00		2.00		2.00									
6. Crop Water Requirement (mm/day/A)		6.42		6.42		6.13		6.08		5.52		4.31		3.42		2.00		2.00		6.75		6.75		6.30		6.25		6.48		4.94		4.02		2.00		2.00															
7. Crop water Requirement (mm/day)		1.07		3.21		5.11		6.08		5.52		4.31		2.85		1.00		0.33		1.13		3.38		5.25		6.25		6.48		4.94		3.35		1.00		0.33															
C. Total A(5)+B(7)		9.04		9.19		8.19		7.19		7.74		5.42		3.96		1.00		0.33		1.13		3.38		5.25		6.25		6.48		4.94		3.35		1.00		0.33															
D. Effective Rainfall (mm/day)		3.48		16.17		8.32		8.06		4.00		4.22		6.36		1.94		2.77		0.90		1.32		0.29		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.81		0.23		0.95		2.69		6.85		23.38	
E. Net field Water Requirement, NFR (mm/day)		5.56		-6.98		-0.13		-0.87		3.74		1.20		-2.40		-0.94		-2.43		8.56		7.03		7.07		8.70		6.05		4.46		1.00		0.33																	
II																				8.56		7.03		7.07		8.70		6.05		4.46		1.00		0.33																	
I		5.56		0.00		0.00		0.00		3.74		1.20		0.00		0.00		0.00		8.56		7.03		7.07		8.70		6.05		4.46		1.00		0.33																	
II																				8.56		7.03		7.07		8.70		6.05		4.46		1.00		0.33																	
I (l/sec/ha)		0.644		0.000		0.000		0.000		0.433		0.139		0.000		0.000		0.000		0.990		0.814		0.819		1.007		0.700		0.517		0.116		0.039																	
II																				0.990		0.814		0.819		1.007		0.700		0.517		0.116		0.039																	

Net Field Requirement for Water Balance Calculation in 1993 (4/7)

Calculation of Net Field Water Requirement for Palawija(B)

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
Cropping Pattern	Early Cropping			●		●						●		●																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
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<td>0.38</td> <td>0.15</td> </tr> <tr> <td>3.Potential ETo</td> <td>(mm/day/A)</td> <td>4.02</td> <td>4.02</td> <td>3.83</td> <td>3.83</td> <td>3.47</td> <td>3.47</td> <td>3.72</td> <td>3.72</td> <td>4.32</td> <td>4.32</td> <td>3.98</td> <td>3.98</td> <td>4.40</td> <td>4.40</td> <td>5.33</td> <td>5.33</td> <td>5.71</td> <td>5.71</td> <td>5.68</td> <td>5.68</td> <td>4.74</td> <td>4.74</td> <td>3.95</td> <td>3.95</td> </tr> <tr> <td>4.Consumptive Use, ETc</td> <td>(mm/day/A)</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> <td>2.66</td> <td>3.37</td> <td>4.34</td> <td>5.04</td> <td>5.30</td> <td>4.45</td> <td>2.70</td> <td>1.82</td> <td>0.59</td> </tr> <tr> <td>5.Rainfall</td> <td>(mm/day)</td> <td>4.97</td> <td>23.10</td> <td>11.89</td> <td>11.52</td> <td>5.72</td> <td>6.02</td> <td>9.08</td> <td>2.77</td> <td>3.95</td> <td>1.29</td> <td>1.89</td> <td>0.41</td> <td>0.00</td> <td>0.00</td> 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<td>0.44</td> <td>1.69</td> <td>3.62</td> <td>5.04</td> <td>4.36</td> <td>4.17</td> <td>1.48</td> <td>0.00</td> <td>0.00</td> </tr> <tr> <td></td> <td>(l/sec/ha)</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> <td>0.051</td> <td>0.195</td> <td>0.419</td> <td>0.584</td> <td>0.504</td> <td>0.483</td> <td>0.171</td> <td>0.000</td> <td>0.000</td> </tr> <tr> <td></td> <td>III</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td colspan="2"></td> <td colspan="24" style="text-align: center;"> <table border="1"> <thead> <tr> <th colspan="2"></th> <th colspan="2">Jan</th> <th colspan="2">Feb</th> <th colspan="2">Mar</th> <th colspan="2">Apr</th> <th colspan="2">May</th> <th colspan="2">Jun</th> <th colspan="2">Jul</th> <th 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<td>0.700</td> <td>0.517</td> <td>0.116</td> <td>0.039</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> </tr> <tr> <td></td> <td>100 III</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.051</td> <td>0.195</td> <td>0.419</td> <td>0.584</td> <td>0.504</td> <td>0.483</td> <td>0.171</td> <td>0.000</td> <td>0.000</td> </tr> <tr> <td></td> <td><b>Total NWR</b> (l/s/ha)</td> <td>0.644</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.433</td> <td>0.139</td> <td>0.000</td> <td>0.456</td> <td>0.748</td> <td>0.990</td> <td>0.814</td> <td>0.819</td> <td>1.007</td> <td>0.700</td> <td>0.568</td> <td>0.311</td> <td>0.457</td> <td>0.584</td> <td>0.504</td> <td>0.483</td> <td>0.171</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> </tr> <tr> <td></td> <td><b>DR</b> (E=0.875*0.81)</td> <td>0.908</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.611</td> <td>0.197</td> <td>0.000</td> <td>0.643</td> <td>1.056</td> <td>1.397</td> <td>1.148</td> <td>1.155</td> <td>1.420</td> <td>0.987</td> <td>0.802</td> <td>0.439</td> <td>0.645</td> <td>0.824</td> <td>0.712</td> <td>0.681</td> <td>0.242</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> </tr> <tr> <td></td> <td>0.85 0.81</td> <td>0.6885</td> <td>0.935</td> <td>0.000</td> <td>0.000</td> <td>0.629</td> <td>0.202</td> <td>0.000</td> <td>0.662</td> <td>1.087</td> <td>1.438</td> <td>1.182</td> <td>1.189</td> <td>1.462</td> <td>1.016</td> <td>0.825</td> <td>0.452</td> <td>0.664</td> <td>0.848</td> <td>0.732</td> <td>0.701</td> <td>0.249</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> </tr> </tbody> </table> </td> </tr> </tbody> 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ETo	(mm/day/A)	4.02	4.02	3.83	3.83	3.47	3.47	3.72	3.72	4.32	4.32	3.98	3.98	4.40	4.40	5.33	5.33	5.71	5.71	5.68	5.68	4.74	4.74	3.95	3.95	4.Consumptive Use, ETc	(mm/day/A)																2.66	3.37	4.34	5.04	5.30	4.45	2.70	1.82	0.59	5.Rainfall	(mm/day)	4.97	23.10	11.89	11.52	5.72	6.02	9.08	2.77	3.95	1.29	1.89	0.41	0.00	0.00	0.00	0.00	0.00	0.00	1.16	0.32	1.36	3.84	9.79	33.40	6.Effective Rainfall	(mm/day/A)																0.00	0.00	0.00	0.00	0.95	0.28	0.92	1.82	0.59	7.Crop water Requirement	(mm/day)																2.66	3.37	4.34	5.04	4.36	4.17	1.78	0.00	0.00	B.Net Field Water Requirement	(mm/day)																0.44	1.69	3.62	5.04	4.36	4.17	1.48	0.00	0.00		(l/sec/ha)																0.051	0.195	0.419	0.584	0.504	0.483	0.171	0.000	0.000		III																											<table border="1"> <thead> <tr> <th colspan="2"></th> <th colspan="2">Jan</th> <th colspan="2">Feb</th> <th colspan="2">Mar</th> <th colspan="2">Apr</th> <th colspan="2">May</th> <th colspan="2">Jun</th> <th colspan="2">Jul</th> 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<td>0.700</td> <td>0.517</td> <td>0.116</td> <td>0.039</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> </tr> <tr> <td></td> <td>100 III</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.051</td> <td>0.195</td> <td>0.419</td> <td>0.584</td> <td>0.504</td> <td>0.483</td> <td>0.171</td> <td>0.000</td> <td>0.000</td> </tr> <tr> <td></td> <td><b>Total NWR</b> (l/s/ha)</td> <td>0.644</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.433</td> <td>0.139</td> <td>0.000</td> <td>0.456</td> <td>0.748</td> <td>0.990</td> <td>0.814</td> <td>0.819</td> <td>1.007</td> <td>0.700</td> <td>0.568</td> <td>0.311</td> <td>0.457</td> <td>0.584</td> <td>0.504</td> <td>0.483</td> <td>0.171</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> </tr> <tr> <td></td> <td><b>DR</b> (E=0.875*0.81)</td> <td>0.908</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.611</td> <td>0.197</td> <td>0.000</td> <td>0.643</td> <td>1.056</td> <td>1.397</td> <td>1.148</td> <td>1.155</td> <td>1.420</td> <td>0.987</td> <td>0.802</td> <td>0.439</td> <td>0.645</td> <td>0.824</td> <td>0.712</td> <td>0.681</td> <td>0.242</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> </tr> <tr> <td></td> <td>0.85 0.81</td> <td>0.6885</td> <td>0.935</td> <td>0.000</td> <td>0.000</td> <td>0.629</td> <td>0.202</td> <td>0.000</td> <td>0.662</td> <td>1.087</td> <td>1.438</td> <td>1.182</td> <td>1.189</td> <td>1.462</td> <td>1.016</td> <td>0.825</td> <td>0.452</td> <td>0.664</td> <td>0.848</td> <td>0.732</td> <td>0.701</td> <td>0.249</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> </tr> </tbody> </table>																										Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec				1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	Net Field Water Requirement for Paddy		0.644	0.000	0.000	0.000	0.433	0.139	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Net Field Water Requirement for Palawija		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.051	0.195	0.419	0.584	0.504	0.483	0.171	0.000	0.000		100 I	0.644	0.000	0.000	0.000	0.433	0.139	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		100 II	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.456	0.748	0.990	0.814	0.819	1.007	0.700	0.517	0.116	0.039	0.000	0.000	0.000	0.000	0.000	0.000		100 III	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.051	0.195	0.419	0.584	0.504	0.483	0.171	0.000	0.000		<b>Total NWR</b> (l/s/ha)	0.644	0.000	0.000	0.000	0.433	0.139	0.000	0.456	0.748	0.990	0.814	0.819	1.007	0.700	0.568	0.311	0.457	0.584	0.504	0.483	0.171	0.000	0.000	0.000		<b>DR</b> (E=0.875*0.81)	0.908	0.000	0.000	0.000	0.611	0.197	0.000	0.643	1.056	1.397	1.148	1.155	1.420	0.987	0.802	0.439	0.645	0.824	0.712	0.681	0.242	0.000	0.000	0.000		0.85 0.81	0.6885	0.935	0.000	0.000	0.629	0.202	0.000	0.662	1.087	1.438	1.182	1.189	1.462	1.016	0.825	0.452	0.664	0.848	0.732	0.701	0.249	0.000	0.000	0.000
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3.Potential ETo	(mm/day/A)	4.02	4.02	3.83	3.83	3.47	3.47	3.72	3.72	4.32	4.32	3.98	3.98	4.40	4.40	5.33	5.33	5.71	5.71	5.68	5.68	4.74	4.74	3.95	3.95																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
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5.Rainfall	(mm/day)	4.97	23.10	11.89	11.52	5.72	6.02	9.08	2.77	3.95	1.29	1.89	0.41	0.00	0.00	0.00	0.00	0.00	0.00	1.16	0.32	1.36	3.84	9.79	33.40																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
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<td>0.819</td> <td>1.007</td> <td>0.700</td> <td>0.568</td> <td>0.311</td> <td>0.457</td> <td>0.584</td> <td>0.504</td> <td>0.483</td> <td>0.171</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> </tr> <tr> <td></td> <td><b>DR</b> (E=0.875*0.81)</td> <td>0.908</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.611</td> <td>0.197</td> <td>0.000</td> <td>0.643</td> <td>1.056</td> <td>1.397</td> <td>1.148</td> <td>1.155</td> <td>1.420</td> <td>0.987</td> <td>0.802</td> <td>0.439</td> <td>0.645</td> <td>0.824</td> <td>0.712</td> <td>0.681</td> <td>0.242</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> </tr> <tr> <td></td> <td>0.85 0.81</td> <td>0.6885</td> <td>0.935</td> <td>0.000</td> <td>0.000</td> <td>0.629</td> <td>0.202</td> <td>0.000</td> <td>0.662</td> <td>1.087</td> <td>1.438</td> <td>1.182</td> <td>1.189</td> <td>1.462</td> <td>1.016</td> <td>0.825</td> <td>0.452</td> <td>0.664</td> <td>0.848</td> <td>0.732</td> <td>0.701</td> <td>0.249</td> <td>0.000</td> <td>0.000</td> 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III	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.051	0.195	0.419	0.584	0.504	0.483	0.171	0.000	0.000		<b>Total NWR</b> (l/s/ha)	0.644	0.000	0.000	0.000	0.433	0.139	0.000	0.456	0.748	0.990	0.814	0.819	1.007	0.700	0.568	0.311	0.457	0.584	0.504	0.483	0.171	0.000	0.000	0.000		<b>DR</b> (E=0.875*0.81)	0.908	0.000	0.000	0.000	0.611	0.197	0.000	0.643	1.056	1.397	1.148	1.155	1.420	0.987	0.802	0.439	0.645	0.824	0.712	0.681	0.242	0.000	0.000	0.000		0.85 0.81	0.6885	0.935	0.000	0.000	0.629	0.202	0.000	0.662	1.087	1.438	1.182	1.189	1.462	1.016	0.825	0.452	0.664	0.848	0.732	0.701	0.249	0.000	0.000	0.000																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
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Net Field Water Requirement for Palawija		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.051	0.195	0.419	0.584	0.504	0.483	0.171	0.000	0.000																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
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Net Field Requirement for Water Balance Calculation in 1993 (6/7)

Calculation of Net Field Water Requirement for Palawija(C)

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
Cropping Pattern	Early Cropping																								
	Middle Cropping																								
	Late Cropping																								
A.Crop Water Requirement																									
1.Crop Intensity																									
Early Cropping																									
Middle Cropping																									
Late Cropping																									
Total																									
2.Crop Coefficient																									
Early Cropping																									
Middle Cropping																									
Late Cropping																									
Weighted average																									
3.Potential ETo (mm/day/A)		4.02	4.02	3.83	3.83	3.47	3.47	3.72	3.72	4.32	4.32	3.98	3.98	4.40	4.40	5.33	5.33	5.71	5.71	5.68	5.68	4.74	4.74	3.95	3.95
4.Consumptive Use, ETc (mm/day/A)																									
5.Rainfall (mm/day)		4.97	23.10	11.89	11.52	5.72	6.02	9.08	2.77	3.95	1.29	1.89	0.41	0.00	0.00	0.00	0.00	0.00	0.00	1.16	0.32	1.36	3.84	9.79	33.40
6.Effective Rainfall (mm/day/A)																									
7.Crop water Requirement (mm/day/A)																									
B.Net Field Water Requirement (mm/day)																									
(I/sec/ha)																									
III																									
Net Field Water Requirement for Paddy		0.289	0.000	0.080	0.015	0.325	0.408	0.000	0.233	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Net Field Water Requirement for Palawija																									
100 I		0.289	0.000	0.080	0.015	0.325	0.408	0.000	0.233	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100 II		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.383	0.964	0.907	0.933	0.904	1.007	0.771	0.517	0.116	0.039	0.000	0.000	0.000	0.000	0.000	0.000
100 III		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.051	0.209	0.419	0.473	0.580	0.315	0.029	0.000	0.000	
<b>Total NWR</b> (I/s/ha)		0.289	0.000	0.080	0.015	0.325	0.408	0.000	0.236	0.383	0.964	0.907	0.933	0.904	1.007	0.771	0.568	0.325	0.457	0.473	0.580	0.315	0.029	0.000	
<b>DR</b> (E=0.875*0.81)		0.408	0.000	0.113	0.021	0.458	0.576	0.000	0.332	0.541	1.361	1.279	1.317	1.275	1.420	1.088	0.802	0.459	0.645	0.668	0.818	0.444	0.041	0.000	
0.85 0.81 0.6885		0.420	0.000	0.117	0.021	0.472	0.593	0.000	0.342	0.557	1.401	1.317	1.356	1.313	1.462	1.120	0.825	0.472	0.664	0.687	0.842	0.458	0.042	0.000	

Net Field Requirement for Water Balance Calculation in 1993 (7/7)

(E=0.875*0.81)	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec		
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	
<b>Golongan A</b>	0.932	0.000	0.000	0.007	0.232	0.000	0.000	1.129	1.092	1.272	0.986	1.304	0.987	0.741	0.439	0.606	0.824	0.870	0.580	0.406	0.078	0.000	0.000	0.000	0.000
<b>Golongan B</b>	0.908	0.000	0.000	0.000	0.611	0.197	0.000	0.643	1.056	1.397	1.148	1.155	1.420	0.987	0.802	0.439	0.645	0.824	0.712	0.681	0.242	0.000	0.000	0.000	0.000
<b>Golongan C</b>	0.408	0.000	0.113	0.021	0.458	0.576	0.000	0.332	0.541	1.361	1.279	1.317	1.275	1.420	1.088	0.802	0.459	0.645	0.668	0.818	0.444	0.041	0.000	0.000	0.000
average	0.749	0.000	0.038	0.009	0.434	0.258	0.000	0.701	0.896	1.343	1.138	1.259	1.228	1.050	0.776	0.615	0.642	0.780	0.653	0.635	0.255	0.014	0.000	0.000	0.000

(E=0.85*0.81)	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec		
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	
<b>Golongan A</b>	0.960	0.000	0.000	0.008	0.239	0.000	0.000	1.162	1.124	1.310	1.015	1.342	1.016	0.763	0.452	0.623	0.848	0.896	0.597	0.418	0.080	0.000	0.000	0.000	0.000
<b>Golongan B</b>	0.935	0.000	0.000	0.000	0.629	0.202	0.000	0.662	1.087	1.438	1.182	1.189	1.462	1.016	0.825	0.452	0.664	0.848	0.732	0.701	0.249	0.000	0.000	0.000	0.000
<b>Golongan C</b>	0.420	0.000	0.117	0.021	0.472	0.593	0.000	0.342	0.557	1.401	1.317	1.356	1.313	1.462	1.120	0.825	0.472	0.664	0.687	0.842	0.458	0.042	0.000	0.000	0.000
average	0.771	0.000	0.039	0.010	0.446	0.265	0.000	0.722	0.923	1.383	1.171	1.296	1.264	1.081	0.799	0.633	0.661	0.803	0.672	0.654	0.262	0.014	0.000	0.000	0.000

Summary Calculation of NFR (l/s/ha)

	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec		
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	
<b>Golongan A</b>	0.66	0.00	0.00	0.01	0.16	0.00	0.00	0.80	0.77	0.90	0.70	0.92	0.70	0.53	0.31	0.43	0.58	0.62	0.41	0.29	0.05	0.00	0.00	0.00	0.00
<b>Golongan B</b>	0.64	0.00	0.00	0.00	0.43	0.14	0.00	0.46	0.75	0.99	0.81	0.82	1.01	0.70	0.57	0.31	0.46	0.58	0.50	0.48	0.17	0.00	0.00	0.00	0.00
<b>Golongan C</b>	0.29	0.00	0.08	0.01	0.32	0.41	0.00	0.24	0.38	0.96	0.91	0.93	0.90	1.01	0.77	0.57	0.33	0.46	0.47	0.58	0.32	0.03	0.00	0.00	0.00

1993

	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec		
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	
I : W.Pad	A	0.66	0.00	0.00	0.01	0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	B	0.64	0.00	0.00	0.00	0.43	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	C	0.29	0.00	0.08	0.01	0.32	0.41	0.00	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	av	0.53	0.00	0.03	0.01	0.31	0.18	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
II : D.Pad	A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.80	0.77	0.90	0.70	0.92	0.70	0.48	0.12	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	B	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46	0.75	0.99	0.81	0.82	1.01	0.70	0.52	0.12	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	C	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.38	0.96	0.91	0.93	0.90	1.01	0.77	0.52	0.12	0.04	0.00	0.00	0.00	0.00	0.00	0.00
	av	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42	0.64	0.95	0.81	0.89	0.87	0.73	0.47	0.22	0.05	0.01	0.00	0.00	0.00	0.00	0.00	0.00
III : D.Pal	A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.20	0.39	0.58	0.62	0.41	0.29	0.05	0.00	0.00	0.00
	B	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.20	0.42	0.58	0.50	0.48	0.17	0.00	0.00	0.00
	C	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.21	0.42	0.47	0.58	0.32	0.03	0.00	0.00	0.00
	av	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.08	0.21	0.40	0.54	0.46	0.45	0.18	0.01	0.00	0.00
I : W.Pad		0.53	0.00	0.03	0.01	0.31	0.18	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
II : D.Pad		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42	0.64	0.95	0.81	0.89	0.87	0.73	0.47	0.22	0.05	0.01	0.00	0.00	0.00	0.00	0.00	0.00
III : D.Pal		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.08	0.21	0.40	0.54	0.46	0.45	0.18	0.01	0.00	0.00

1993

I : W.Pad	100	0.531	0.000	0.027	0.007	0.307	0.183	0.000	0.078	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
II : D.Pad	100	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.419	0.635	0.952	0.806	0.892	0.870	0.730	0.468	0.224	0.051	0.013	0.000	0.000	0.000	0.000	0.000	0.000	0.000
III : D.Pal	100	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.014	0.082	0.212	0.404	0.540	0.463	0.450	0.180	0.010	0.000	0.000	0.000	0.000
total		0.531	0.000	0.027	0.007	0.307	0.183	0.000	0.497	0.635	0.952	0.806	0.892	0.870	0.744	0.550	0.436	0.455	0.553	0.463	0.450	0.180	0.010	0.000	0.000	0.000
		0.26558		0.01668		0.24496		0.24851		0.79369		0.84919		0.80702		0.49308		0.50393		0.45654		0.09508				0

Year : 1993

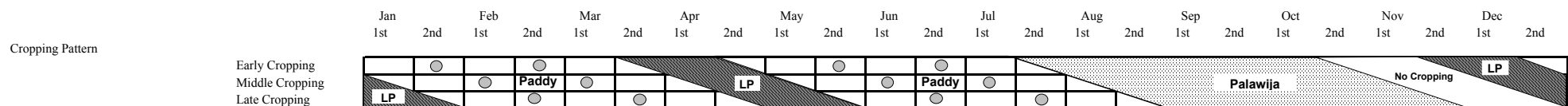
N.F.R. (l/s/ha)

	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec		
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	
	0.531	0.000	0.027	0.007	0.307	0.183	0.000	0.497	0.635	0.952	0.806	0.892	0.870	0.744	0.550	0.436	0.455	0.553	0.463	0.450	0.180	0.010	0.000	0.000	0.000



Net Field Requirement for Water Balance Calculation in 1994 (2/7)

Calculation of Net Field Water Requirement for Palawija(A)



A. Crop Water Requirement

	Jan 1st	Jan 2nd	Feb 1st	Feb 2nd	Mar 1st	Mar 2nd	Apr 1st	Apr 2nd	May 1st	May 2nd	Jun 1st	Jun 2nd	Jul 1st	Jul 2nd	Aug 1st	Aug 2nd	Sep 1st	Sep 2nd	Oct 1st	Oct 2nd	Nov 1st	Nov 2nd	Dec 1st	Dec 2nd
1. Crop Intensity																								
Early Cropping															1/6	1/3	1/3	1/3	1/3	1/3	1/3	1/6		
Middle Cropping																1/6	1/3	1/3	1/3	1/3	1/3	1/3	1/6	
Late Cropping																	1/6	1/3	1/3	1/3	1/3	1/3	1/3	1/6
Total															1/6	1/2	5/6	1	1	1	5/6	1/2	1/6	
2. Crop Coefficient																								
Early Cropping															0.50	0.70	0.95	1.00	0.85	0.50	0.15			
Middle Cropping																0.50	0.70	0.95	1.00	0.85	0.50	0.15		
Late Cropping																	0.50	0.70	0.95	1.00	0.85	0.50	0.15	
Weighted average															0.50	0.63	0.76	0.88	0.93	0.78	0.57	0.38	0.15	
3. Potential ETo (mm/day/A)	3.49	3.49	3.91	3.91	3.84	3.84	3.96	3.96	4.09	4.09	4.06	4.06	4.25	4.25	5.05	5.05	5.37	5.37	5.77	5.77	5.13	5.13	4.57	4.57
4. Consumptive Use, ETc (mm/day/A)															2.12	3.20	3.84	4.74	5.01	4.52	3.29	1.97	0.77	
5. Rainfall (mm/day)	13.70	33.10	11.63	8.81	19.19	14.03	2.65	3.91	2.38	0.00	0.02	0.74	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.64	2.73	6.63	8.26	8.46
6. Effective Rainfall (mm/day/A)															0.00	0.00	0.00	0.00	0.00	0.21	0.48	1.66	0.77	
7. Crop water Requirement (mm/day/A)															2.12	3.20	3.84	4.74	5.01	4.31	2.80	0.30	0.00	
B. Net Field Water Requirement (mm/day)															0.35	1.60	3.20	4.74	5.01	4.31	2.34	0.15	0.00	
(l/sec/ha)															0.041	0.185	0.370	0.549	0.580	0.499	0.271	0.017	0.000	

	Jan 1st	Jan 2nd	Feb 1st	Feb 2nd	Mar 1st	Mar 2nd	Apr 1st	Apr 2nd	May 1st	May 2nd	Jun 1st	Jun 2nd	Jul 1st	Jul 2nd	Aug 1st	Aug 2nd	Sep 1st	Sep 2nd	Oct 1st	Oct 2nd	Nov 1st	Nov 2nd	Dec 1st	Dec 2nd
Net Field Water Requirement for Paddy	0.000	0.000	0.000	0.235	0.000	0.000	0.000	0.000	0.474	0.725	0.878	0.978	0.860	0.906	0.688	0.477	0.116	0.039	0.000	0.000	0.000	0.000	0.000	0.000
Net Field Water Requirement for Palawija	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.041	0.185	0.370	0.549	0.580	0.499	0.271	0.017	0.000	0.000
100 I	0.000	0.000	0.000	0.235	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100 II	0.000	0.000	0.000	0.000	0.000	0.000	0.474	0.725	0.878	0.978	0.860	0.906	0.688	0.477	0.116	0.039	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100 III	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.041	0.185	0.370	0.549	0.580	0.499	0.271	0.017	0.000	0.000
<b>Total NWR</b> (l/s/ha)	0.000	0.000	0.000	0.235	0.000	0.000	0.474	0.725	0.878	0.978	0.860	0.906	0.688	0.518	0.301	0.409	0.549	0.580	0.499	0.271	0.017	0.000	0.044	0.402
<b>DR</b> (E=0.875*0.81)	0.000	0.000	0.000	0.331	0.000	0.000	0.669	1.022	1.238	1.381	1.213	1.279	0.970	0.731	0.424	0.577	0.775	0.818	0.704	0.382	0.025	0.000	0.062	0.567
0.85    0.81    0.6885	0.000	0.000	0.000	0.341	0.000	0.000	0.689	1.052	1.275	1.421	1.249	1.316	0.999	0.752	0.437	0.593	0.797	0.842	0.725	0.393	0.025	0.000	0.064	0.584



Net Field Requirement for Water Balance Calculation in 1994 (4/7)

Calculation of Net Field Water Requirement for Palawija(B)

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
Cropping Pattern	Early Cropping			●		●						●		●											
	Middle Cropping				●		●						●		●										
	Late Cropping	●						●																	●
		LP				Paddy				LP				Paddy							Palawija			No Cropping	LP
A.Crop Water Requirement																									
1.Crop Intensity																									
Early Cropping																									
Middle Cropping																									
Late Cropping																									
Total																									
2.Crop Coefficient																									
Early Cropping																									
Middle Cropping																									
Late Cropping																									
Weighted average																									
3.Potential ETo (mm/day/A)		3.49	3.49	3.91	3.91	3.84	3.84	3.96	3.96	4.09	4.09	4.06	4.06	4.25	4.25	5.05	5.05	5.37	5.37	5.77	5.77	5.13	5.13	4.57	4.57
4.Consumptive Use, ETc (mm/day/A)																2.52	3.20	4.08	4.74	5.39	4.52	2.92	1.97	0.68	
5.Rainfall (mm/day)		13.70	33.10	11.63	8.81	19.19	14.03	2.65	3.91	2.38	0.00	0.02	0.74	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.64	2.73	6.63	8.26	8.46
6.Effective Rainfall (mm/day/A)																0.00	0.00	0.00	0.00	0.22	0.52	1.78	1.97	0.68	
7.Crop water Requirement (mm/day)																2.52	3.20	4.08	4.74	5.17	4.00	1.14	0.00	0.00	
B.Net Field Water Requirement (mm/day)																									
(l/sec/ha)																									
III																									
		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
Net Field Water Requirement for Paddy		0.000	0.000	0.016	0.129	0.000	0.000	0.252	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.029
Net Field Water Requirement for Palawija		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.049	0.185	0.394	0.549	0.598	0.462	0.110	0.000	0.000	0.000
100 I		0.000	0.000	0.016	0.129	0.000	0.000	0.252	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.029
100 II		0.000	0.000	0.000	0.000	0.000	0.000	0.015	0.372	0.858	1.070	0.974	0.801	0.988	0.688	0.506	0.116	0.039	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100 III		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.049	0.185	0.394	0.549	0.598	0.462	0.110	0.000	0.000	0.000
<b>Total NWR</b> (l/s/ha)		0.000	0.000	0.016	0.129	0.000	0.000	0.266	0.372	0.858	1.070	0.974	0.801	0.988	0.688	0.555	0.301	0.432	0.549	0.598	0.462	0.110	0.000	0.000	0.029
<b>DR</b> (E=0.875*0.81)		0.000	0.000	0.022	0.182	0.000	0.000	0.376	0.525	1.211	1.510	1.374	1.130	1.394	0.970	0.783	0.424	0.610	0.775	0.844	0.652	0.155	0.000	0.000	0.040
0.85 0.81 0.6885		0.000	0.000	0.023	0.187	0.000	0.000	0.387	0.541	1.247	1.554	1.415	1.164	1.435	0.999	0.806	0.437	0.628	0.797	0.869	0.672	0.160	0.000	0.000	0.041



Net Field Requirement for Water Balance Calculation in 1994 (6/7)

Calculation of Net Field Water Requirement for Palawija(C)

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec		
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	
Cropping Pattern	Early Cropping																									
	Middle Cropping																									
	Late Cropping																									
A.Crop Water Requirement																										
1.Crop Intensity																										
Early Cropping																										
Middle Cropping																										
Late Cropping																										
Total																										
2.Crop Coefficient																										
Early Cropping																										
Middle Cropping																										
Late Cropping																										
Weighted average																										
3.Potential ETo (mm/day/A)		3.49	3.49	3.91	3.91	3.84	3.84	3.96	3.96	4.09	4.09	4.06	4.06	4.25	4.25	5.05	5.05	5.37	5.37	5.77	5.77	5.13	5.13	4.57	4.57	
4.Consumptive Use, ETc (mm/day/A)																		2.52	3.40	4.08	5.10	5.39	4.02	2.92	1.75	0.68
5.Rainfall (mm/day)		13.70	33.10	11.63	8.81	19.19	14.03	2.65	3.91	2.38	0.00	0.02	0.74	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.64	2.73	6.63	8.26	8.46	
6.Effective Rainfall (mm/day/A)																		0.00	0.00	0.00	0.22	0.55	1.92	2.92	1.75	0.68
7.Crop water Requirement (mm/day/A)																		2.52	3.40	4.08	4.88	4.83	2.10	0.00	0.00	0.00
B.Net Field Water Requirement (mm/day)																		0.42	1.70	3.40	4.88	4.83	2.10	0.00	0.00	0.00
(l/sec/ha)																		0.049	0.197	0.394	0.565	0.559	0.243	0.000	0.000	0.000
		III																								
Net Field Water Requirement for Paddy		0.000	0.000	0.110	0.244	0.000	0.000	0.451	0.149	0.000	0.039	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Net Field Water Requirement for Palawija		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.049	0.197	0.394	0.565	0.559	0.243	0.000	0.000	0.000	0.000
100 I		0.000	0.000	0.110	0.244	0.000	0.000	0.451	0.149	0.000	0.039	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100 II		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.502	1.051	1.066	0.915	0.884	0.988	0.749	0.506	0.116	0.039	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100 III		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.049	0.197	0.394	0.565	0.559	0.243	0.000	0.000	0.000	0.000
<b>Total NWR</b> (l/s/ha)		0.000	0.000	0.110	0.244	0.000	0.000	0.451	0.149	0.502	1.090	1.066	0.915	0.884	0.988	0.749	0.555	0.313	0.432	0.565	0.559	0.243	0.000	0.000	0.000	0.000
<b>DR</b> (E=0.875*0.81)		0.000	0.000	0.155	0.345	0.000	0.000	0.636	0.211	0.708	1.537	1.504	1.292	1.248	1.394	1.057	0.783	0.441	0.610	0.797	0.789	0.343	0.000	0.000	0.000	0.000
0.85 0.81 0.6885		0.000	0.000	0.160	0.355	0.000	0.000	0.654	0.217	0.729	1.583	1.548	1.330	1.284	1.435	1.089	0.806	0.454	0.628	0.821	0.812	0.353	0.000	0.000	0.000	0.000



Net Field Requirement for Water Balance Calculation in 1994 (7/7)

(E=0.875*0.81)	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
<b>Golongan A</b>	0.000	0.000	0.000	0.331	0.000	0.000	0.669	1.022	1.238	1.381	1.213	1.279	0.970	0.731	0.424	0.577	0.775	0.818	0.704	0.382	0.025	0.000	0.062	0.567
<b>Golongan B</b>	0.000	0.000	0.022	0.182	0.000	0.000	0.376	0.525	1.211	1.510	1.374	1.130	1.394	0.970	0.783	0.424	0.610	0.775	0.844	0.652	0.155	0.000	0.000	0.040
<b>Golongan C</b>	0.000	0.000	0.155	0.345	0.000	0.000	0.636	0.211	0.708	1.537	1.504	1.292	1.248	1.394	1.057	0.783	0.441	0.610	0.797	0.789	0.343	0.000	0.000	0.000
average	0.000	0.000	0.059	0.286	0.000	0.000	0.560	0.586	1.052	1.476	1.364	1.234	1.204	1.032	0.755	0.595	0.608	0.734	0.782	0.608	0.174	0.000	0.021	0.202

(E=0.85*0.81)	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
<b>Golongan A</b>	0.000	0.000	0.000	0.341	0.000	0.000	0.689	1.052	1.275	1.421	1.249	1.316	0.999	0.752	0.437	0.593	0.797	0.842	0.725	0.393	0.025	0.000	0.064	0.584
<b>Golongan B</b>	0.000	0.000	0.023	0.187	0.000	0.000	0.387	0.541	1.247	1.554	1.415	1.164	1.435	0.999	0.806	0.437	0.628	0.797	0.869	0.672	0.160	0.000	0.000	0.041
<b>Golongan C</b>	0.000	0.000	0.160	0.355	0.000	0.000	0.654	0.217	0.729	1.583	1.548	1.330	1.284	1.435	1.089	0.806	0.454	0.628	0.821	0.812	0.353	0.000	0.000	0.000
average	0.000	0.000	0.061	0.294	0.000	0.000	0.577	0.603	1.083	1.519	1.404	1.270	1.239	1.062	0.777	0.612	0.626	0.756	0.805	0.626	0.180	0.000	0.021	0.208

Summary Calculation of NFR (l/s/ha)

	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
<b>Golongan A</b>	0.00	0.00	0.00	0.23	0.00	0.00	0.47	0.72	0.88	0.98	0.86	0.91	0.69	0.52	0.30	0.41	0.55	0.58	0.50	0.27	0.02	0.00	0.04	0.40
<b>Golongan B</b>	0.00	0.00	0.02	0.13	0.00	0.00	0.27	0.37	0.86	1.07	0.97	0.80	0.99	0.69	0.56	0.30	0.43	0.55	0.60	0.46	0.11	0.00	0.00	0.03
<b>Golongan C</b>	0.00	0.00	0.11	0.24	0.00	0.00	0.45	0.15	0.50	1.09	1.07	0.92	0.88	0.99	0.75	0.56	0.31	0.43	0.57	0.56	0.24	0.00	0.00	0.00

1994

	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
I : W.Pad	0.00	0.00	0.00	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
A	0.00	0.00	0.00	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B	0.00	0.00	0.02	0.13	0.00	0.00	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
C	0.00	0.00	0.11	0.24	0.00	0.00	0.45	0.15	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
av	0.00	0.00	0.04	0.20	0.00	0.00	0.23	0.05	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.14
II : D.Pad	0.00	0.00	0.00	0.00	0.00	0.00	0.47	0.72	0.88	0.98	0.86	0.91	0.69	0.48	0.12	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
A	0.00	0.00	0.00	0.00	0.00	0.00	0.47	0.72	0.88	0.98	0.86	0.91	0.69	0.48	0.12	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.37	0.86	1.07	0.97	0.80	0.99	0.69	0.51	0.12	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50	1.05	1.07	0.92	0.88	0.99	0.75	0.51	0.12	0.04	0.00	0.00	0.00	0.00	0.00	0.00
av	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.37	0.75	1.03	0.97	0.87	0.85	0.72	0.46	0.22	0.05	0.01	0.00	0.00	0.00	0.00	0.00	0.00
III : D.Pal	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.19	0.37	0.55	0.58	0.50	0.27	0.02	0.00	0.00	0.00
A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.19	0.37	0.55	0.58	0.50	0.27	0.02	0.00	0.00	0.00
B	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.19	0.39	0.55	0.60	0.46	0.11	0.00	0.00	0.00
C	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.20	0.39	0.57	0.56	0.24	0.00	0.00	0.00	0.00
av	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.08	0.20	0.38	0.51	0.55	0.43	0.12	0.00	0.00	0.00
I : W.Pad	0.00	0.00	0.04	0.20	0.00	0.00	0.23	0.05	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
II : D.Pad	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.37	0.75	1.03	0.97	0.87	0.85	0.72	0.46	0.22	0.05	0.01	0.00	0.00	0.00	0.00	0.00	0.00
III : D.Pal	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.08	0.20	0.38	0.51	0.55	0.43	0.12	0.00	0.00	0.00

1994

I : W.Pad	100	0.000	0.000	0.042	0.203	0.000	0.000	0.234	0.050	0.000	0.013	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.015	0.143
II : D.Pad	100	0.000	0.000	0.000	0.000	0.000	0.000	0.163	0.366	0.746	1.033	0.967	0.874	0.853	0.718	0.457	0.220	0.051	0.013	0.000	0.000	0.000	0.000	0.000	0.000
III : D.Pal	100	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.014	0.078	0.201	0.380	0.508	0.554	0.431	0.124	0.000	0.000	0.000	0.000
total		0.000	0.000	0.042	0.203	0.000	0.000	0.397	0.415	0.746	1.046	0.967	0.874	0.853	0.731	0.535	0.421	0.431	0.520	0.554	0.431	0.124	0.000	0.015	0.143
		0		0.12232		0		0.40623		0.89601		0.9204		0.79232		0.47828		0.47581		0.49239		0.06182		0.0791	

Year : 1994

N.F.R. (l/s/ha)

	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
	0.000	0.000	0.042	0.203	0.000	0.000	0.397	0.415	0.746	1.046	0.967	0.874	0.853	0.731	0.535	0.421	0.431	0.520	0.554	0.431	0.124	0.000	0.015	0.143

Net Field Requirement for Water Balance Calculation in 1995 (1/7)

[Kampili Rotation A]

1 1 1  
Calculation of Net Field Water Requirement for Paddy (A) on

1995

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
<b>Cropping Pattern</b>																									
Early Cropping																									
Middle Cropping																									
Late Cropping																									
<b>A. Land Preparation Requirement</b>																									
1. Land Preparation Intensity																									
Early Cropping																									
Middle Cropping																									
Late Cropping																									
Total																									
2. Land Preparation Requirement (mm/day/A)																									
3. Water Layer Replacement Intensity																									
4. Water Layer Replacement Requirement (mm/day/A)																									
5. Total Requirement for Land Preparation																									
I (mm/day)																									
II (mm/day)																									
<b>B. Crop Water Requirement</b>																									
1. Crop Intensity																									
Early Cropping																									
Middle Cropping																									
Late Cropping																									
Total																									
I																									
II																									
2. Crop Coefficient																									
Early Cropping																									
Middle Cropping																									
Late Cropping																									
Weighted average																									
I																									
II																									
3. Potential ETo (mm/day/A)																									
4. Consumptive Use, ETc (mm/day/A)																									
I																									
II																									
5. Percolation Loss (mm/day/A)																									
6. Crop Water Requirement (mm/day/A)																									
I																									
II																									
7. Crop water Requirement (mm/day)																									
I																									
II																									
C. Total A(5)+B(7) (mm/day)																									
I																									
II																									
D. Effective Rainfall (mm/day)																									
E. Net field Water Requirement, NFR (mm/day)																									
I																									
II																									
I (l/sec/ha)																									
II																									

Net Field Requirement for Water Balance Calculation in 1995 (2/7)

Calculation of Net Field Water Requirement for Palawija(A)

Cropping Pattern	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
Early Cropping		○		○						○		○												
Middle Cropping			○	Paddy	○						○	Paddy	○											
Late Cropping	LP			○		○						○		○										LP

A. Crop Water Requirement

1. Crop Intensity																									
Early Cropping															1/6	1/3	1/3	1/3	1/3	1/3	1/3	1/6			
Middle Cropping																1/6	1/3	1/3	1/3	1/3	1/3	1/3	1/6		
Late Cropping																	1/6	1/3	1/3	1/3	1/3	1/3	1/3	1/6	
Total															1/6	1/2	5/6	1	1	1	1	5/6	1/2	1/6	
2. Crop Coefficient																									
Early Cropping															0.50	0.70	0.95	1.00	0.85	0.50	0.15				
Middle Cropping																0.50	0.70	0.95	1.00	0.85	0.50	0.15			
Late Cropping																	0.50	0.70	0.95	1.00	0.85	0.50	0.15		
Weighted average															0.50	0.63	0.76	0.88	0.93	0.78	0.57	0.38	0.15		
3. Potential ETo (mm/day/A)		3.65	3.65	3.75	3.75	3.69	3.69	4.19	4.19	4.02	4.02	4.04	4.04	3.98	3.98	4.65	4.65	5.10	5.10	5.41	5.41	4.49	4.49	3.61	3.61
4. Consumptive Use, ETc (mm/day/A)															1.99	2.94	3.53	4.50	4.76	4.24	3.09	1.72	0.67		
5. Rainfall (mm/day)		20.33	19.25	14.42	12.66	17.76	7.09	19.02	1.52	4.52	0.79	2.11	1.11	0.56	0.00	0.00	0.00	0.13	0.54	0.36	1.29	4.38	11.81	28.84	8.11
6. Effective Rainfall (mm/day/A)															0.00	0.00	0.00	0.12	0.46	0.30	0.91	1.72	0.67		
7. Crop water Requirement (mm/day/A)															1.99	2.94	3.53	4.38	4.30	3.94	2.18	0.00	0.00		
B. Net Field Water Requirement (mm/day)															0.33	1.47	2.94	4.38	4.30	3.94	1.81	0.00	0.00		
(l/sec/ha)															0.038	0.170	0.341	0.507	0.498	0.456	0.210	0.000	0.000		

	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
Net Field Water Requirement for Paddy	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.936	0.697	0.906	0.688	0.874	0.622	0.467	0.116	0.039	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Net Field Water Requirement for Palawija	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.038	0.170	0.341	0.507	0.498	0.456	0.210	0.000	0.000	0.000
100 I	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.359
100 II	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.936	0.697	0.906	0.688	0.874	0.622	0.467	0.116	0.039	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100 III	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.038	0.170	0.341	0.507	0.498	0.456	0.210	0.000	0.000	0.000
<b>Total NWR</b> (l/s/ha)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.936	0.697	0.906	0.688	0.874	0.622	0.506	0.286	0.379	0.507	0.498	0.456	0.210	0.000	0.000	0.000	0.359
<b>DR</b> (E=0.875*0.81)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.320	0.983	1.279	0.970	1.233	0.878	0.714	0.404	0.535	0.715	0.702	0.643	0.296	0.000	0.000	0.000	0.507
0.85      0.81      0.6885	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.359	1.012	1.316	0.999	1.269	0.903	0.735	0.416	0.551	0.736	0.723	0.662	0.305	0.000	0.000	0.000	0.522



Net Field Requirement for Water Balance Calculation in 1995 (4/7)

Calculation of Net Field Water Requirement for Palawija(B)

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
Cropping Pattern																									
A.Crop Water Requirement																									
1.Crop Intensity																									
Early Cropping																									
Middle Cropping																									
Late Cropping																									
Total																									
2.Crop Coefficient																									
Early Cropping																									
Middle Cropping																									
Late Cropping																									
Weighted average																									
3.Potential ETo (mm/day/A)		3.65	3.65	3.75	3.75	3.69	3.69	4.19	4.19	4.02	4.02	4.04	4.04	3.98	3.98	4.65	4.65	5.10	5.10	5.41	5.41	4.49	4.49	3.61	3.61
4.Consumptive Use, ETc (mm/day/A)																									
5.Rainfall (mm/day)		20.33	19.25	14.42	12.66	17.76	7.09	19.02	1.52	4.52	0.79	2.11	1.11	0.56	0.00	0.00	0.00	0.13	0.54	0.36	1.29	4.38	11.81	28.84	8.11
6.Effective Rainfall (mm/day/A)																									
7.Crop water Requirement (mm/day)																									
B.Net Field Water Requirement (mm/day)																									
(I/sec/ha)																									
		III																							
Net Field Water Requirement for Paddy		0.000	0.000	0.000	0.000	0.000	0.070	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.019
Net Field Water Requirement for Palawija																									
100 I		0.000	0.000	0.000	0.000	0.000	0.070	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.019
100 II		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.575	0.680	0.999	0.802	0.769	0.912	0.667	0.492	0.116	0.028	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100 III		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.045	0.170	0.362	0.469	0.548	0.377	0.000	0.000	0.000	0.000
<b>Total NWR</b> (I/s/ha)		0.000	0.000	0.000	0.000	0.000	0.070	0.000	0.575	0.680	0.999	0.802	0.769	0.912	0.667	0.537	0.286	0.390	0.469	0.548	0.377	0.000	0.000	0.000	0.019
<b>DR</b> (E=0.875*0.81)		0.000	0.000	0.000	0.000	0.000	0.099	0.000	0.812	0.959	1.410	1.131	1.085	1.287	0.942	0.757	0.404	0.550	0.662	0.773	0.532	0.000	0.000	0.000	0.027
0.85 0.81 0.6885		0.000	0.000	0.000	0.000	0.000	0.102	0.000	0.835	0.987	1.451	1.165	1.116	1.324	0.969	0.779	0.416	0.566	0.681	0.796	0.548	0.000	0.000	0.000	0.027



Net Field Requirement for Water Balance Calculation in 1995 (6/7)

Calculation of Net Field Water Requirement for Palawija(C)

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
Cropping Pattern	Early Cropping																								
	Middle Cropping																								
	Late Cropping																								
	No Cropping																								
A.Crop Water Requirement																									
1.Crop Intensity																									
Early Cropping																									
Middle Cropping																									
Late Cropping																									
Total																									
2.Crop Coefficient																									
Early Cropping																									
Middle Cropping																									
Late Cropping																									
Weighted average																									
3.Potential ETo (mm/day/A)		3.65	3.65	3.75	3.75	3.69	3.69	4.19	4.19	4.02	4.02	4.04	4.04	3.98	3.98	4.65	4.65	5.10	5.10	5.41	5.41	4.49	4.49	3.61	3.61
4.Consumptive Use, ETc (mm/day/A)		2.32	2.32	3.87	3.87	4.78	4.78	5.05	5.05	3.52	3.52	2.56	2.56	1.39	1.39	0.54	0.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5.Rainfall (mm/day)		20.33	19.25	14.42	12.66	17.76	7.09	19.02	1.52	4.52	0.79	2.11	1.11	0.56	0.00	0.00	0.00	0.13	0.54	0.36	1.29	4.38	11.81	28.84	8.11
6.Effective Rainfall (mm/day/A)		0.00	0.11	0.43	0.31	1.03	2.86	2.56	1.39	0.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.43	0.31	1.03	2.86	2.56	1.39	0.54
7.Crop water Requirement (mm/day/A)		2.32	3.11	3.44	4.47	4.02	0.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.32	3.11	3.44	4.47	4.02	0.66	0.00	0.00
B.Net Field Water Requirement (mm/day)		0.39	1.56	2.87	4.47	4.02	0.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39	1.56	2.87	4.47	4.02	0.66	0.00	0.00
(l/sec/ha)		0.045	0.180	0.332	0.517	0.465	0.076	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.045	0.180	0.332	0.517	0.465	0.076	0.000	0.000
		III																							
Net Field Water Requirement for Paddy		0.000	0.000	0.000	0.000	0.000	0.348	0.000	0.352	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Net Field Water Requirement for Palawija		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.045	0.180	0.332	0.517	0.465	0.076	0.000	0.000
100 I		0.000	0.000	0.000	0.000	0.000	0.348	0.000	0.352	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100 II		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.110	0.325	0.982	0.894	0.883	0.806	0.957	0.719	0.492	0.105	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100 III		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.045	0.180	0.332	0.517	0.465	0.076	0.000	0.000	0.000
<b>Total NWR</b> (l/s/ha)		0.000	0.000	0.000	0.000	0.000	0.348	0.000	0.461	0.325	0.982	0.894	0.883	0.806	0.957	0.719	0.537	0.285	0.332	0.517	0.465	0.076	0.000	0.000	0.000
<b>DR</b> (E=0.875*0.81)		0.000	0.000	0.000	0.000	0.000	0.492	0.000	0.651	0.459	1.385	1.262	1.246	1.138	1.350	1.014	0.757	0.402	0.468	0.730	0.657	0.108	0.000	0.000	0.000
0.85      0.81      0.6885		0.000	0.000	0.000	0.000	0.000	0.506	0.000	0.670	0.472	1.426	1.299	1.283	1.171	1.390	1.044	0.779	0.414	0.482	0.751	0.676	0.111	0.000	0.000	0.000

Net Field Requirement for Water Balance Calculation in 1995 (7/7)

(E=0.875*0.81)	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
<b>Golongan A</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.320	0.983	1.279	0.970	1.233	0.878	0.714	0.404	0.535	0.715	0.702	0.643	0.296	0.000	0.000	0.000	0.507
<b>Golongan B</b>	0.000	0.000	0.000	0.000	0.000	0.099	0.000	0.812	0.959	1.410	1.131	1.085	1.287	0.942	0.757	0.404	0.550	0.662	0.773	0.532	0.000	0.000	0.000	0.027
<b>Golongan C</b>	0.000	0.000	0.000	0.000	0.000	0.492	0.000	0.651	0.459	1.385	1.262	1.246	1.138	1.350	1.014	0.757	0.402	0.468	0.730	0.657	0.108	0.000	0.000	0.000
average	0.000	0.000	0.000	0.000	0.000	0.197	0.000	0.927	0.800	1.358	1.121	1.188	1.101	1.002	0.725	0.565	0.556	0.611	0.716	0.495	0.036	0.000	0.000	0.178

(E=0.85*0.81)	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
<b>Golongan A</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.359	1.012	1.316	0.999	1.269	0.903	0.735	0.416	0.551	0.736	0.723	0.662	0.305	0.000	0.000	0.000	0.522
<b>Golongan B</b>	0.000	0.000	0.000	0.000	0.000	0.102	0.000	0.835	0.987	1.451	1.165	1.116	1.324	0.969	0.779	0.416	0.566	0.681	0.796	0.548	0.000	0.000	0.000	0.027
<b>Golongan C</b>	0.000	0.000	0.000	0.000	0.000	0.506	0.000	0.670	0.472	1.426	1.299	1.283	1.171	1.390	1.044	0.779	0.414	0.482	0.751	0.676	0.111	0.000	0.000	0.000
average	0.000	0.000	0.000	0.000	0.000	0.203	0.000	0.955	0.824	1.398	1.154	1.223	1.133	1.031	0.746	0.582	0.572	0.629	0.737	0.510	0.037	0.000	0.000	0.183

Summary Calculation of NFR (l/s/ha)

	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
<b>Golongan A</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.94	0.70	0.91	0.69	0.87	0.62	0.51	0.29	0.38	0.51	0.50	0.46	0.21	0.00	0.00	0.00	0.36
<b>Golongan B</b>	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.58	0.68	1.00	0.80	0.77	0.91	0.67	0.54	0.29	0.39	0.47	0.55	0.38	0.00	0.00	0.00	0.02
<b>Golongan C</b>	0.00	0.00	0.00	0.00	0.00	0.35	0.00	0.46	0.33	0.98	0.89	0.88	0.81	0.96	0.72	0.54	0.29	0.33	0.52	0.47	0.08	0.00	0.00	0.00

1995

	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
I : W.Pad	A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	B	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
	C	0.00	0.00	0.00	0.00	0.00	0.35	0.00	0.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	av	0.00	0.00	0.00	0.00	0.00	0.14	0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13
II : D.Pad	A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.94	0.70	0.91	0.69	0.87	0.62	0.47	0.12	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	B	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58	0.68	1.00	0.80	0.77	0.91	0.67	0.49	0.12	0.03	0.00	0.00	0.00	0.00	0.00	0.00
	C	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.33	0.98	0.89	0.88	0.81	0.96	0.72	0.49	0.10	0.00	0.00	0.00	0.00	0.00	0.00
	av	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.54	0.57	0.96	0.79	0.84	0.78	0.70	0.44	0.22	0.04	0.00	0.00	0.00	0.00	0.00	0.00
III : D.Pal	A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.17	0.34	0.51	0.50	0.46	0.21	0.00	0.00	0.00
	B	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.17	0.36	0.47	0.55	0.38	0.00	0.00	0.00	0.00
	C	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.18	0.33	0.52	0.47	0.08	0.00	0.00	0.00	0.00
	av	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.07	0.19	0.35	0.43	0.51	0.35	0.03	0.00	0.00	0.00
I : W.Pad		0.00	0.00	0.00	0.00	0.00	0.14	0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13
II : D.Pad		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.54	0.57	0.96	0.79	0.84	0.78	0.70	0.44	0.22	0.04	0.00	0.00	0.00	0.00	0.00	0.00
III : D.Pal		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.07	0.19	0.35	0.43	0.51	0.35	0.03	0.00	0.00

1995

I : W.Pad	100	0.000	0.000	0.000	0.000	0.000	0.140	0.000	0.117	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.126
II : D.Pad	100	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.540	0.567	0.962	0.795	0.842	0.780	0.697	0.442	0.215	0.044	0.000	0.000	0.000	0.000	0.000	0.000
III : D.Pal	100	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.013	0.072	0.185	0.350	0.433	0.507	0.351	0.025	0.000	0.000	0.000
total		0.000	0.000	0.000	0.000	0.000	0.140	0.000	0.657	0.567	0.962	0.795	0.842	0.780	0.710	0.514	0.401	0.394	0.433	0.507	0.351	0.025	0.000	0.126
		0	0	0	0	0.06978	0.32867	0.76482	0.8182	0.74508	0.45724	0.41336	0.42902	0.01273	0.06305									

Year : 1995

N.F.R. (l/s/ha)

	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
N.F.R. (l/s/ha)	0.000	0.000	0.000	0.000	0.000	0.140	0.000	0.657	0.567	0.962	0.795	0.842	0.780	0.710	0.514	0.401	0.394	0.433	0.507	0.351	0.025	0.000	0.000	0.126



Net Field Requirement for Water Balance Calculation in 1996 (1/7)

[Kampili Rotation A]

1 1 1  
Calculation of Net Field Water Requirement for Paddy (A) on

1996

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec			
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd		
<b>Cropping Pattern</b>																											
		<p>Early Cropping Middle Cropping Late Cropping</p>																									
<b>A. Land Preparation Requirement</b>																											
1. Land Preparation Intensity																											
Early Cropping																											
Middle Cropping																											
Late Cropping																											
Total																											
2. Land Preparation Requirement (mm/day/A)																											
3. Water Layer Replacement Intensity																											
4. Water Layer Replacement Requirement (mm/day/A)																											
5. Total Requirement for Land Preparation																											
I (mm/day)																											
II (mm/day)																											
<b>B. Crop Water Requirement</b>																											
1. Crop Intensity																											
Early Cropping																											
Middle Cropping																											
Late Cropping																											
Total																											
I																											
II																											
2. Crop Coefficient																											
Early Cropping																											
Middle Cropping																											
Late Cropping																											
Weighted average																											
I																											
II																											
3. Potential ETo (mm/day/A)																											
4. Consumptive Use, ETc (mm/day/A)																											
5. Percolation Loss (mm/day/A)																											
6. Crop Water Requirement (mm/day/A)																											
7. Crop water Requirement (mm/day)																											
I																											
II																											
C. Total A(5)+B(7) (mm/day)																											
I																											
II																											
D. Effective Rainfall (mm/day)																											
E. Net field Water Requirement, NFR (mm/day)																											
I																											
II																											
I (l/sec/ha)																											
II																											

Net Field Requirement for Water Balance Calculation in 1996 (2/7)

Calculation of Net Field Water Requirement for Palawija(A)

Cropping Pattern	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
Early Cropping		○		○						○		○												
Middle Cropping			○	Paddy	○						○	Paddy	○											
Late Cropping	LP			○		○						○		○										LP

A. Crop Water Requirement

1. Crop Intensity																									
Early Cropping															1/6	1/3	1/3	1/3	1/3	1/3	1/3	1/6			
Middle Cropping																1/6	1/3	1/3	1/3	1/3	1/3	1/3	1/6		
Late Cropping																	1/6	1/3	1/3	1/3	1/3	1/3	1/3	1/6	
Total															1/6	1/2	5/6	1	1	1	1	5/6	1/2	1/6	
2. Crop Coefficient																									
Early Cropping															0.50	0.70	0.95	1.00	0.85	0.50	0.15				
Middle Cropping																0.50	0.70	0.95	1.00	0.85	0.50	0.15			
Late Cropping																	0.50	0.70	0.95	1.00	0.85	0.50	0.15		
Weighted average															0.50	0.63	0.76	0.88	0.93	0.78	0.57	0.38	0.15		
3. Potential ETo (mm/day/A)		3.57	3.57	3.85	3.85	4.39	4.39	4.58	4.58	4.56	4.56	4.15	4.15	4.03	4.03	4.66	4.66	5.07	5.07	5.17	5.17	4.68	4.68	3.49	3.49
4. Consumptive Use, ETc (mm/day/A)															2.02	2.95	3.54	4.48	4.73	4.05	2.95	1.79	0.70		
5. Rainfall (mm/day)		11.49	28.77	42.71	14.03	6.94	12.09	2.78	2.51	1.33	0.21	0.50	0.48	0.16	0.13	0.28	0.02	0.24	0.10	3.40	1.62	8.34	4.96	31.31	31.73
6. Effective Rainfall (mm/day/A)															0.11	0.22	0.02	0.21	0.10	2.34	1.11	1.79	0.70		
7. Crop water Requirement (mm/day/A)															1.91	2.73	3.52	4.27	4.63	1.71	1.84	0.00	0.00		
B. Net Field Water Requirement (mm/day)															0.32	1.37	2.93	4.27	4.63	1.71	1.53	0.00	0.00		
(I/sec/ha)															0.037	0.158	0.339	0.494	0.536	0.198	0.178	0.000	0.000		

	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
Net Field Water Requirement for Paddy	0.087	0.000	0.000	0.000	0.136	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Net Field Water Requirement for Palawija	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.037	0.158	0.339	0.494	0.536	0.198	0.178	0.000	0.000	0.000
100 I	0.087	0.000	0.000	0.000	0.136	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100 II	0.000	0.000	0.000	0.000	0.000	0.000	0.489	0.884	1.011	1.017	0.832	0.938	0.658	0.458	0.093	0.037	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100 III	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.037	0.158	0.339	0.494	0.536	0.198	0.178	0.000	0.000	0.000
<b>Total NWR</b> (I/s/ha)	0.087	0.000	0.000	0.000	0.136	0.000	0.489	0.884	1.011	1.017	0.832	0.938	0.658	0.495	0.251	0.376	0.494	0.536	0.198	0.178	0.000	0.000	0.000	0.000
<b>DR</b> (E=0.875*0.81)	0.122	0.000	0.000	0.000	0.192	0.000	0.690	1.247	1.427	1.435	1.174	1.323	0.929	0.699	0.355	0.531	0.697	0.757	0.279	0.250	0.000	0.000	0.000	0.000
0.85      0.81      0.6885	0.126	0.000	0.000	0.000	0.198	0.000	0.710	1.284	1.469	1.477	1.208	1.362	0.956	0.719	0.365	0.546	0.717	0.779	0.287	0.258	0.000	0.000	0.000	0.000



Net Field Requirement for Water Balance Calculation in 1996 (4/7)

Calculation of Net Field Water Requirement for Palawija(B)

		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec												
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd										
Cropping Pattern	Early Cropping																								
	Middle Cropping																								
	Late Cropping																								
		LP		Paddy		LP		Paddy		Palawija		No Cropping		LP											
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec												
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd										
A.Crop Water Requirement																									
1.Crop Intensity																									
Early Cropping																									
Middle Cropping																									
Late Cropping																									
Total																									
2.Crop Coefficient																									
Early Cropping																									
Middle Cropping																									
Late Cropping																									
Weighted average																									
3.Potential ETo (mm/day/A)		3.57	3.57	3.85	3.85	4.39	4.39	4.58	4.58	4.56	4.56	4.15	4.15	4.03	4.03	4.66	4.66	5.07	5.07	5.17	5.17	4.68	4.68	3.49	3.49
4.Consumptive Use, ETc (mm/day/A)																									
5.Rainfall (mm/day)		11.49	28.77	42.71	14.03	6.94	12.09	2.78	2.51	1.33	0.21	0.50	0.48	0.16	0.13	0.28	0.02	0.24	0.10	3.40	1.62	8.34	4.96	31.31	31.73
6.Effective Rainfall (mm/day/A)																									
7.Crop water Requirement (mm/day)																									
B.Net Field Water Requirement (mm/day)																									
(l/sec/ha)																									
III																									
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec												
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd										
Net Field Water Requirement for Paddy		0.082	0.000	0.000	0.000	0.442	0.000	0.264	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Net Field Water Requirement for Palawija																									
100 I		0.082	0.000	0.000	0.000	0.442	0.000	0.264	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100 II		0.000	0.000	0.000	0.000	0.000	0.000	0.013	0.510	0.979	1.102	0.945	0.834	0.950	0.660	0.470	0.114	0.019	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100 III		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.041	0.170	0.352	0.507	0.274	0.331	0.000	0.000	0.000	0.000
<b>Total NWR</b> (l/s/ha)		0.082	0.000	0.000	0.000	0.442	0.000	0.276	0.510	0.979	1.102	0.945	0.834	0.950	0.660	0.511	0.284	0.371	0.507	0.274	0.331	0.000	0.000	0.000	0.000
<b>DR</b> (E=0.875*0.81)		0.116	0.000	0.000	0.000	0.624	0.000	0.390	0.720	1.381	1.555	1.334	1.176	1.341	0.931	0.720	0.400	0.524	0.716	0.386	0.467	0.000	0.000	0.000	0.000
0.85 0.81 0.6885		0.120	0.000	0.000	0.000	0.642	0.000	0.402	0.741	1.421	1.601	1.373	1.211	1.380	0.959	0.742	0.412	0.539	0.737	0.398	0.481	0.000	0.000	0.000	0.000



Net Field Requirement for Water Balance Calculation in 1996 (6/7)

Calculation of Net Field Water Requirement for Palawija(C)

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec		
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	
Cropping Pattern	Early Cropping																									
	Middle Cropping																									
	Late Cropping																									
	No Cropping																									
A.Crop Water Requirement																										
1.Crop Intensity																										
Early Cropping																										
Middle Cropping																										
Late Cropping																										
Total																										
2.Crop Coefficient																										
Early Cropping																										
Middle Cropping																										
Late Cropping																										
Weighted average																										
3.Potential ETo (mm/day/A)		3.57	3.57	3.85	3.85	4.39	4.39	4.58	4.58	4.56	4.56	4.15	4.15	4.03	4.03	4.66	4.66	5.07	5.07	5.17	5.17	4.68	4.68	3.49	3.49	
4.Consumptive Use, ETc (mm/day/A)																		2.33	3.21	3.86	4.57	4.83	3.66	2.67	1.34	0.52
5.Rainfall (mm/day)		11.49	28.77	42.71	14.03	6.94	12.09	2.78	2.51	1.33	0.21	0.50	0.48	0.16	0.13	0.28	0.02	0.24	0.10	3.40	1.62	8.34	4.96	31.31	31.73	
6.Effective Rainfall (mm/day/A)																		0.02	0.20	0.10	2.42	1.25	3.66	2.67	1.34	0.52
7.Crop water Requirement (mm/day/A)																		2.31	3.02	3.76	2.15	3.58	0.00	0.00	0.00	0.00
B.Net Field Water Requirement (mm/day)																										
(I/sec/ha)																										
III																										
		0.045	0.175	0.363	0.248	0.414	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.175	0.363	0.248	0.414	0.000	0.000	0.000	0.000	
Net Field Water Requirement for Paddy		0.000	0.000	0.000	0.000	0.339	0.025	0.488	0.285	0.008	0.021	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
Net Field Water Requirement for Palawija		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.045	0.175	0.363	0.248	0.414	0.000	0.000	0.000	
100 I		0.000	0.000	0.000	0.000	0.339	0.025	0.488	0.285	0.008	0.021	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
100 II		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.034	1.069	1.036	0.947	0.845	0.952	0.697	0.490	0.096	0.030	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
100 III		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.045	0.175	0.363	0.248	0.414	0.000	0.000	0.000	0.000	
<b>Total NWR</b> (l/s/ha)		0.000	0.000	0.000	0.000	0.339	0.025	0.488	0.320	0.614	1.091	1.036	0.947	0.845	0.952	0.697	0.535	0.271	0.393	0.248	0.414	0.000	0.000	0.000	0.000	
<b>DR</b> (E=0.875*0.81)		0.000	0.000	0.000	0.000	0.478	0.035	0.688	0.451	0.866	1.539	1.462	1.336	1.192	1.343	0.984	0.755	0.382	0.554	0.351	0.584	0.000	0.000	0.000	0.000	
0.85 0.81 0.6885		0.000	0.000	0.000	0.000	0.492	0.036	0.709	0.464	0.891	1.584	1.505	1.376	1.227	1.383	1.012	0.777	0.393	0.571	0.361	0.601	0.000	0.000	0.000	0.000	

Net Field Requirement for Water Balance Calculation in 1996 (7/7)

(E=0.875*0.81)	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
<b>Golongan A</b>	0.122	0.000	0.000	0.000	0.192	0.000	0.690	1.247	1.427	1.435	1.174	1.323	0.929	0.699	0.355	0.531	0.697	0.757	0.279	0.250	0.000	0.000	0.000	0.000
<b>Golongan B</b>	0.116	0.000	0.000	0.000	0.624	0.000	0.390	0.720	1.381	1.555	1.334	1.176	1.341	0.931	0.720	0.400	0.524	0.716	0.386	0.467	0.000	0.000	0.000	0.000
<b>Golongan C</b>	0.000	0.000	0.000	0.000	0.478	0.035	0.688	0.451	0.866	1.539	1.462	1.336	1.192	1.343	0.984	0.755	0.382	0.554	0.351	0.584	0.000	0.000	0.000	0.000
average	0.079	0.000	0.000	0.000	0.431	0.012	0.589	0.806	1.225	1.510	1.323	1.279	1.154	0.991	0.686	0.562	0.534	0.676	0.339	0.434	0.000	0.000	0.000	0.000

(E=0.85*0.81)	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
<b>Golongan A</b>	0.126	0.000	0.000	0.000	0.198	0.000	0.710	1.284	1.469	1.477	1.208	1.362	0.956	0.719	0.365	0.546	0.717	0.779	0.287	0.258	0.000	0.000	0.000	0.000
<b>Golongan B</b>	0.120	0.000	0.000	0.000	0.642	0.000	0.402	0.741	1.421	1.601	1.373	1.211	1.380	0.959	0.742	0.412	0.539	0.737	0.398	0.481	0.000	0.000	0.000	0.000
<b>Golongan C</b>	0.000	0.000	0.000	0.000	0.492	0.036	0.709	0.464	0.891	1.584	1.505	1.376	1.227	1.383	1.012	0.777	0.393	0.571	0.361	0.601	0.000	0.000	0.000	0.000
average	0.082	0.000	0.000	0.000	0.444	0.012	0.607	0.830	1.261	1.554	1.362	1.316	1.188	1.020	0.706	0.578	0.550	0.695	0.349	0.447	0.000	0.000	0.000	0.000

Summary Calculation of NFR (l/s/ha)

	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
<b>Golongan A</b>	0.09	0.00	0.00	0.00	0.14	0.00	0.49	0.88	1.01	1.02	0.83	0.94	0.66	0.50	0.25	0.38	0.49	0.54	0.20	0.18	0.00	0.00	0.00	0.00
<b>Golongan B</b>	0.08	0.00	0.00	0.00	0.44	0.00	0.28	0.51	0.98	1.10	0.95	0.83	0.95	0.66	0.51	0.28	0.37	0.51	0.27	0.33	0.00	0.00	0.00	0.00
<b>Golongan C</b>	0.00	0.00	0.00	0.00	0.34	0.02	0.49	0.32	0.61	1.09	1.04	0.95	0.84	0.95	0.70	0.53	0.27	0.39	0.25	0.41	0.00	0.00	0.00	0.00

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		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
I : W.Pad	A	0.09	0.00	0.00	0.00	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	B	0.08	0.00	0.00	0.00	0.44	0.00	0.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	C	0.00	0.00	0.00	0.00	0.34	0.02	0.49	0.29	0.01	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
II : D.Pad	av	0.06	0.00	0.00	0.00	0.31	0.01	0.25	0.10	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	A	0.00	0.00	0.00	0.00	0.00	0.00	0.49	0.88	1.01	1.02	0.83	0.94	0.66	0.46	0.09	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	B	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.51	0.98	1.10	0.95	0.83	0.95	0.66	0.47	0.11	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00
III : D.Pal	C	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.61	1.07	1.04	0.95	0.84	0.95	0.70	0.49	0.10	0.03	0.00	0.00	0.00	0.00	0.00	0.00
	av	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.48	0.87	1.06	0.94	0.91	0.82	0.69	0.42	0.21	0.04	0.01	0.00	0.00	0.00	0.00	0.00	0.00
	A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.16	0.34	0.49	0.54	0.20	0.18	0.00	0.00	0.00	0.00
I : W.Pad	B	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.17	0.35	0.51	0.27	0.33	0.00	0.00	0.00	0.00	0.00
	C	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.17	0.36	0.25	0.41	0.00	0.00	0.00	0.00	0.00	0.00
	av	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.07	0.18	0.34	0.47	0.24	0.31	0.00	0.00	0.00	0.00	0.00
I : W.Pad		0.06	0.00	0.00	0.00	0.31	0.01	0.25	0.10	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
II : D.Pad		0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.48	0.87	1.06	0.94	0.91	0.82	0.69	0.42	0.21	0.04	0.01	0.00	0.00	0.00	0.00	0.00	0.00
III : D.Pal		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.07	0.18	0.34	0.47	0.24	0.31	0.00	0.00	0.00	0.00	0.00

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I : W.Pad	<b>100</b>	0.056	0.000	0.000	0.000	0.306	0.008	0.251	0.095	0.003	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
II : D.Pad	<b>100</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.167	0.476	0.865	1.063	0.938	0.906	0.818	0.690	0.420	0.214	0.038	0.010	0.000	0.000	0.000	0.000	0.000	0.000
III : D.Pal	<b>100</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.012	0.066	0.185	0.340	0.469	0.240	0.307	0.000	0.000	0.000	0.000	0.000
total		0.056	0.000	0.000	0.000	0.306	0.008	0.418	0.571	0.868	1.070	0.938	0.906	0.818	0.702	0.486	0.398	0.379	0.479	0.240	0.307	0.000	0.000	0.000	0.000
		0.02816		0		0.15698		0.49455		0.96891		0.92204		0.76009		0.44229		0.42869		0.2737		0		0	

Year : 1996

**N.F.R. (l/s/ha)**

Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec		
1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	
0.056	0.000	0.000	0.000	0.306	0.008	0.418	0.571	0.868	1.070	0.938	0.906	0.818	0.702	0.486	0.398	0.379	0.479	0.240	0.307	0.000	0.000	0.000	0.000	0.000





Net Field Requirement for Water Balance Calculation in 1997 (2/7)

Calculation of Net Field Water Requirement for Palawija(A)

Cropping Pattern	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
Early Cropping		○		○						○		○												
Middle Cropping			○	Paddy	○						○	Paddy	○											
Late Cropping	LP			○		○						○		○										LP

A. Crop Water Requirement

1. Crop Intensity																									
Early Cropping															1/6	1/3	1/3	1/3	1/3	1/3	1/3	1/6			
Middle Cropping																1/6	1/3	1/3	1/3	1/3	1/3	1/3	1/6		
Late Cropping																	1/6	1/3	1/3	1/3	1/3	1/3	1/3	1/6	
Total															1/6	1/2	5/6	1	1	1	1	5/6	1/2	1/6	
2. Crop Coefficient																									
Early Cropping															0.50	0.70	0.95	1.00	0.85	0.50	0.15				
Middle Cropping																0.50	0.70	0.95	1.00	0.85	0.50	0.15			
Late Cropping																	0.50	0.70	0.95	1.00	0.85	0.50	0.15		
Weighted average															0.50	0.63	0.76	0.88	0.93	0.78	0.57	0.38	0.15		
3. Potential ETo (mm/day/A)		3.71	3.71	3.88	3.88	5.01	5.01	4.75	4.75	4.67	4.67	4.63	4.63	4.22	4.22	4.97	4.97	5.31	5.31	5.84	5.84	5.50	5.50	4.62	4.62
4. Consumptive Use, ETc (mm/day/A)															2.11	3.15	3.78	4.69	4.96	4.57	3.33	2.11	0.82		
5. Rainfall (mm/day)		19.32	12.17	13.95	27.49	8.67	0.36	3.23	2.33	0.81	0.25	0.00	0.06	0.32	0.00	0.00	0.00	0.00	0.12	0.10	0.00	0.00	1.78	4.78	11.49
6. Effective Rainfall (mm/day/A)															0.00	0.00	0.00	0.00	0.12	0.10	0.00	0.00	0.82		
7. Crop water Requirement (mm/day/A)															2.11	3.15	3.78	4.69	4.84	4.48	3.33	2.11	0.00		
B. Net Field Water Requirement (mm/day)															0.35	1.57	3.15	4.69	4.84	4.48	2.77	1.05	0.00		
(l/sec/ha)															0.041	0.182	0.364	0.543	0.560	0.518	0.321	0.122	0.000		

	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec				
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	2nd	1st	2nd	1st	
Net Field Water Requirement for Paddy	0.000	0.000	0.000	0.000	0.044	0.476	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.107	0.328	0.160		
Net Field Water Requirement for Palawija	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.041	0.182	0.364	0.543	0.560	0.518	0.321	0.122	0.000	0.000	0.000	0.000	0.000
100 I	0.000	0.000	0.000	0.000	0.044	0.476	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.107	0.328	0.160		
100 II	0.000	0.000	0.000	0.000	0.000	0.215	0.459	0.912	1.065	1.027	0.931	1.029	0.659	0.476	0.116	0.039	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100 III	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.041	0.182	0.364	0.543	0.560	0.518	0.321	0.122	0.000	0.000	0.000	0.000	0.000
<b>Total NWR</b> (l/s/ha)	0.000	0.000	0.000	0.000	0.044	0.690	0.459	0.912	1.065	1.027	0.931	1.029	0.659	0.517	0.298	0.403	0.543	0.560	0.518	0.321	0.122	0.107	0.328	0.160			
<b>DR</b> (E=0.875*0.81)	0.000	0.000	0.000	0.000	0.061	0.974	0.648	1.286	1.503	1.449	1.314	1.451	0.930	0.729	0.420	0.568	0.766	0.790	0.731	0.453	0.172	0.150	0.463	0.225			
0.85      0.81      0.6885	0.000	0.000	0.000	0.000	0.063	1.003	0.667	1.324	1.547	1.491	1.353	1.494	0.958	0.751	0.433	0.585	0.789	0.814	0.753	0.466	0.177	0.155	0.477	0.232			



Net Field Requirement for Water Balance Calculation in 1997 (4/7)

Calculation of Net Field Water Requirement for Palawija(B)

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
Cropping Pattern																									
A.Crop Water Requirement																									
1.Crop Intensity																									
Early Cropping																									
Middle Cropping																									
Late Cropping																									
Total																									
2.Crop Coefficient																									
Early Cropping																									
Middle Cropping																									
Late Cropping																									
Weighted average																									
3.Potential ETo (mm/day/A)		3.71	3.71	3.88	3.88	5.01	5.01	4.75	4.75	4.67	4.67	4.63	4.63	4.22	4.22	4.97	4.97	5.31	5.31	5.84	5.84	5.50	5.50	4.62	4.62
4.Consumptive Use, ETc (mm/day/A)																									
5.Rainfall (mm/day)		19.32	12.17	13.95	27.49	8.67	0.36	3.23	2.33	0.81	0.25	0.00	0.06	0.32	0.00	0.00	0.00	0.00	0.12	0.10	0.00	0.00	1.78	4.78	11.49
6.Effective Rainfall (mm/day/A)																									
7.Crop water Requirement (mm/day)																									
B.Net Field Water Requirement (mm/day)																									
(l/sec/ha)																									
III																									
		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
Net Field Water Requirement for Paddy		0.000	0.045	0.000	0.000	0.375	0.717	0.234	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Net Field Water Requirement for Palawija		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.532	1.029	1.111	1.042	0.927	0.959	0.686	0.503	0.116	0.039	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100 I		0.000	0.045	0.000	0.000	0.375	0.717	0.234	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100 II		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.532	1.029	1.111	1.042	0.927	0.959	0.686	0.503	0.116	0.039	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100 III		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.048	0.182	0.389	0.530	0.619	0.529	0.302	0.056	0.000	0.000
<b>Total NWR</b> (l/s/ha)		0.000	0.045	0.000	0.000	0.375	0.717	0.234	0.532	1.029	1.111	1.042	0.927	0.959	0.686	0.551	0.298	0.428	0.530	0.619	0.529	0.302	0.056	0.000	0.000
<b>DR</b> (E=0.875*0.81)		0.000	0.064	0.000	0.000	0.529	1.012	0.330	0.751	1.452	1.567	1.471	1.308	1.353	0.967	0.778	0.420	0.604	0.747	0.874	0.747	0.426	0.079	0.000	0.000
0.85 0.81 0.6885		0.000	0.066	0.000	0.000	0.544	1.042	0.339	0.773	1.495	1.613	1.514	1.346	1.393	0.996	0.801	0.433	0.622	0.769	0.899	0.769	0.439	0.082	0.000	0.000

Net Field Requirement for Water Balance Calculation in 1997 (5/7)

[Kampili Rotation C ]

Calculation of Net Field Water Requirement for Paddy (C) on

1997

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec		
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	
Cropping Pattern																										
A.Land Preparation Requirement																										
1.Land Preparation Intensity																										
Early Cropping		1/3	1/6							1/6	1/3	1/6														1/6
Middle Cropping		1/6	1/3	1/6						1/6	1/3	1/6														
Late Cropping			1/6	1/3	1/6							1/6	1/3	1/6												
Total		1/2	2/3	1/2	1/6					1/6	1/2	2/3	1/2	1/6												1/6
2.Land Preparation Requirement (mm/day/A)	(mm/day)	11.74	11.74	11.86	11.86	12.64	12.64	12.46	12.46	12.40	12.40	12.38	12.38	12.09	12.09	12.62	12.62	12.86	12.86	13.24	13.24	12.99	12.99	12.37	12.37	
3.Water Layer Replacement Intensity					1/3	1/3	2/3	1/3	1/3					1/3	1/3	2/3	1/3	1/3								
4.Water Layer Replacement Requirement	(mm/day/A)				3.33	3.33	3.33	3.33	3.33					3.33	3.33	3.33	3.33	3.33								
	(mm/day)				1.11	1.11	2.22	1.11	1.11					1.11	1.11	2.22	1.11	1.11								
5.Total Requirement for Land Preparation																										
I	(mm/day)	5.87	7.83	5.93	3.09	1.11	2.22	1.11	1.11									0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.06
II									2.08	6.20	8.27	6.19	3.17	1.11	2.22	1.11	1.11									
B. Crop Water Requirement																										
1.Crop Intensity		Jan	Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec			
Early Cropping			1/6	1/3	1/3	1/3	1/3	1/3	1/6	1/6	1/3	1/3	1/3	1/3	1/3	1/3	1/6									
Middle Cropping				1/6	1/3	1/3	1/3	1/3	1/6		1/6	1/3	1/3	1/3	1/3	1/3	1/6									
Late Cropping					1/6	1/3	1/3	1/3	1/6	1/6	1/3	1/3	1/3	1/3	1/3	1/3	1/6									
Total	I		1/6	1/2	5/6	1	1	1	5/6	1/2	1/6	1/2	5/6	1	1	1	5/6	1/2	1/6							
	II										1/6	1/2	5/6	1	1	1	5/6	1/2	1/6							
2.Crop Coefficient																										
Early Cropping			1.10	1.10	1.05	1.05	0.95	0.00	0.00	1.10	1.10	1.05	1.05	0.95	0.00	0.00										
Middle Cropping				1.10	1.10	1.05	1.05	0.95	0.00	0.00								0.00								
Late Cropping					1.10	1.10	1.05	0.95	0.00	0.00								0.00	0.00							
Weighted average	I		1.10	1.10	1.08	1.07	1.02	0.67	0.38	0.00								0.00	0.00							
	II									1.10	1.10	1.08	1.07	1.02	0.67	0.38	0.00	0.00								
3.Potential ETo	(mm/day/A)	3.71	3.71	3.88	3.88	5.01	5.01	4.75	4.75	4.67	4.67	4.63	4.63	4.22	4.22	4.97	4.97	5.31	5.31	5.84	5.84	5.50	5.50	4.62	4.62	
4.Consumptive Use, ETc	(mm/day/A)	0.00	4.08	4.27	4.19	5.34	5.09	3.17	1.80	0.00																
	II									5.13	5.09	5.00	4.50	4.29	3.31	1.89	0.00									
5.Percolation Loss	(mm/day/A)	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00							
6.Crop Water Requirement	(mm/day/A)	2.00	6.08	6.27	6.19	7.34	7.09	5.17	3.80	2.00										0.00	0.00	0.00	0.00	0.00	0.00	0.00
	II									7.13	7.09	7.00	6.50	6.29	5.31	3.89	2.00	2.00								
7.Crop water Requirement	(mm/day)	0.00	1.01	3.14	5.16	7.34	7.09	5.17	3.17	1.00	0.33	1.19	3.55	5.83	6.50	6.29	5.31	3.24	1.00	0.33						
	II									0.33	1.19	3.55	5.83	6.50	6.29	5.31	3.24	1.00	0.33							
C.Total A(5)+B(7)	I	(mm/day)	5.87	8.84	9.06	8.25	8.45	9.31	6.28	4.28	1.00	0.33	1.19	3.55	5.83	6.50	6.29	5.31	3.24	1.00	0.33					2.06
	II									2.08	6.20	9.46	9.73	9.01	7.61	8.51	6.42	4.35	1.00	0.33						
D.Effective Rainfall	(mm/day)	13.53	8.52	9.76	19.25	6.07	0.25	2.26	1.63	0.57	0.17	0.00	0.04	0.23	0.00	0.00	0.00	0.00	0.00	0.09	0.07	0.00	0.00	1.24	3.35	8.04
E.Net field Water Requirement, NFR (mm/day)		-7.66	0.32	-0.70	-11.00	2.38	9.06	4.01	2.65	0.43	0.16	0.44	5.64	9.28	9.73	8.97	7.39	8.51	6.42	4.35	1.00	0.25				
	I		0.00	0.32	0.00	0.00	2.38	9.06	4.01	2.65	0.43	0.16	0.44	5.64	9.28	9.73	8.97	7.39	8.51	6.42	4.35	1.00	0.25			0.00
	II									0.44	5.64	9.28	9.73	8.97	7.39	8.51	6.42	4.35	1.00	0.25						
(l/sec/ha)	I	0.000	0.037	0.000	0.000	0.275	1.048	0.465	0.306	0.050	0.018	0.051	0.652	1.075	1.127	1.038	0.855	0.985	0.743	0.503	0.116	0.029				0.000
	II									0.051	0.652	1.075	1.127	1.038	0.855	0.985	0.743	0.503	0.116	0.029						

Net Field Requirement for Water Balance Calculation in 1997 (6/7)

Calculation of Net Field Water Requirement for Palawija(C)

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec		
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	
Cropping Pattern	Early Cropping																									
	Middle Cropping																									
	Late Cropping																									
	No Cropping																									
A.Crop Water Requirement																										
1.Crop Intensity																										
Early Cropping																										
Middle Cropping																										
Late Cropping																										
Total																										
2.Crop Coefficient																										
Early Cropping																										
Middle Cropping																										
Late Cropping																										
Weighted average																										
3.Potential ETo (mm/day/A)		3.71	3.71	3.88	3.88	5.01	5.01	4.75	4.75	4.67	4.67	4.63	4.63	4.22	4.22	4.97	4.97	5.31	5.31	5.84	5.84	5.50	5.50	4.62	4.62	
4.Consumptive Use, ETc (mm/day/A)																		2.48	3.36	4.04	5.16	5.45	4.31	3.13	1.77	0.69
5.Rainfall (mm/day)		19.32	12.17	13.95	27.49	8.67	0.36	3.23	2.33	0.81	0.25	0.00	0.06	0.32	0.00	0.00	0.00	0.00	0.12	0.10	0.00	0.00	1.78	4.78	11.49	
6.Effective Rainfall (mm/day/A)																		0.00	0.00	0.11	0.10	0.00	0.00	1.22	1.77	0.69
7.Crop water Requirement (mm/day/A)																		2.48	3.36	3.93	5.06	5.45	4.31	1.91	0.00	0.00
B.Net Field Water Requirement (mm/day)																										
(I/sec/ha)																										
III																										
		0.048	0.195	0.379	0.586	0.631	0.498	0.185	0.000	0.000																
Net Field Water Requirement for Paddy		0.000	0.037	0.000	0.000	0.275	1.048	0.465	0.306	0.050	0.018	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
Net Field Water Requirement for Palawija		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.048	0.195	0.379	0.586	0.631	0.498	0.185	0.000	0.000	
100 I		0.000	0.037	0.000	0.000	0.275	1.048	0.465	0.306	0.050	0.018	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
100 II		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.051	0.652	1.075	1.127	1.038	0.855	0.985	0.743	0.503	0.116	0.029	0.000	0.000	0.000	0.000	0.000	0.000	
100 III		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.048	0.195	0.379	0.586	0.631	0.498	0.185	0.000	0.000	0.000	
<b>Total NWR</b> (I/s/ha)		0.000	0.037	0.000	0.000	0.275	1.048	0.465	0.358	0.703	1.093	1.127	1.038	0.855	0.985	0.743	0.551	0.310	0.407	0.586	0.631	0.498	0.185	0.000	0.000	
<b>DR</b> (E=0.875*0.81)		0.000	0.052	0.000	0.000	0.388	1.479	0.656	0.505	0.991	1.542	1.590	1.464	1.206	1.390	1.049	0.778	0.438	0.575	0.826	0.890	0.703	0.260	0.000	0.000	
0.85 0.81 0.6885		0.000	0.054	0.000	0.000	0.400	1.523	0.675	0.519	1.021	1.588	1.636	1.507	1.242	1.431	1.080	0.801	0.451	0.592	0.850	0.916	0.724	0.268	0.000	0.000	

Net Field Requirement for Water Balance Calculation in 1997 (7/7)

(E=0.875*0.81)	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
<b>Golongan A</b>	0.000	0.000	0.000	0.000	0.061	0.974	0.648	1.286	1.503	1.449	1.314	1.451	0.930	0.729	0.420	0.568	0.766	0.790	0.731	0.453	0.172	0.150	0.463	0.225
<b>Golongan B</b>	0.000	0.064	0.000	0.000	0.529	1.012	0.330	0.751	1.452	1.567	1.471	1.308	1.353	0.967	0.778	0.420	0.604	0.747	0.874	0.747	0.426	0.079	0.000	0.000
<b>Golongan C</b>	0.000	0.052	0.000	0.000	0.388	1.479	0.656	0.505	0.991	1.542	1.590	1.464	1.206	1.390	1.049	0.778	0.438	0.575	0.826	0.890	0.703	0.260	0.000	0.000
average	0.000	0.039	0.000	0.000	0.326	1.155	0.544	0.847	1.316	1.519	1.458	1.408	1.163	1.029	0.749	0.589	0.603	0.704	0.810	0.697	0.434	0.163	0.154	0.075

(E=0.85*0.81)	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
<b>Golongan A</b>	0.000	0.000	0.000	0.000	0.063	1.003	0.667	1.324	1.547	1.491	1.353	1.494	0.958	0.751	0.433	0.585	0.789	0.814	0.753	0.466	0.177	0.155	0.477	0.232
<b>Golongan B</b>	0.000	0.066	0.000	0.000	0.544	1.042	0.339	0.773	1.495	1.613	1.514	1.346	1.393	0.996	0.801	0.433	0.622	0.769	0.899	0.769	0.439	0.082	0.000	0.000
<b>Golongan C</b>	0.000	0.054	0.000	0.000	0.400	1.523	0.675	0.519	1.021	1.588	1.636	1.507	1.242	1.431	1.080	0.801	0.451	0.592	0.850	0.916	0.724	0.268	0.000	0.000
average	0.000	0.040	0.000	0.000	0.336	1.189	0.561	0.872	1.354	1.564	1.501	1.449	1.197	1.059	0.771	0.606	0.620	0.725	0.834	0.717	0.447	0.168	0.159	0.077

Summary Calculation of NFR (l/s/ha)

	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
<b>Golongan A</b>	0.00	0.00	0.00	0.00	0.04	0.69	0.46	0.91	1.07	1.03	0.93	1.03	0.66	0.52	0.30	0.40	0.54	0.56	0.52	0.32	0.12	0.11	0.33	0.16
<b>Golongan B</b>	0.00	0.05	0.00	0.00	0.37	0.72	0.23	0.53	1.03	1.11	1.04	0.93	0.96	0.69	0.55	0.30	0.43	0.53	0.62	0.53	0.30	0.06	0.00	0.00
<b>Golongan C</b>	0.00	0.04	0.00	0.00	0.28	1.05	0.46	0.36	0.70	1.09	1.13	1.04	0.85	0.99	0.74	0.55	0.31	0.41	0.59	0.63	0.50	0.18	0.00	0.00

1997

	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec		
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	
I : W.Pad	A	0.00	0.00	0.00	0.00	0.04	0.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	B	0.00	0.05	0.00	0.00	0.37	0.72	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	C	0.00	0.04	0.00	0.00	0.28	1.05	0.46	0.31	0.05	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
II : D.Pad	av	0.00	0.03	0.00	0.00	0.23	0.75	0.23	0.10	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.11	0.05	
	A	0.00	0.00	0.00	0.00	0.00	0.21	0.46	0.91	1.07	1.03	0.93	1.03	0.66	0.48	0.12	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	B	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.53	1.03	1.11	1.04	0.93	0.96	0.69	0.50	0.12	0.04	0.00	0.00	0.00	0.00	0.00	0.00	
III : D.Pal	C	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.65	1.07	1.13	1.04	0.85	0.99	0.74	0.50	0.12	0.03	0.00	0.00	0.00	0.00	0.00	
	av	0.00	0.00	0.00	0.00	0.00	0.07	0.15	0.50	0.92	1.07	1.03	1.00	0.82	0.72	0.45	0.22	0.05	0.01	0.00	0.00	0.00	0.00	0.00	
	A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.18	0.36	0.54	0.56	0.52	0.32	0.12	0.00	0.00	
I : W.Pad	B	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.18	0.39	0.53	0.62	0.53	0.06	0.00	
	C	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.19	0.38	0.59	0.63	0.50	0.18	0.00	
	av	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.08	0.20	0.38	0.49	0.57	0.49	0.31	0.08	0.00	
II : D.Pad	0.00	0.00	0.00	0.00	0.00	0.07	0.15	0.50	0.92	1.07	1.03	1.00	0.82	0.72	0.45	0.22	0.05	0.01	0.00	0.00	0.00	0.00	0.00	0.00	
III : D.Pal	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.08	0.20	0.38	0.49	0.57	0.49	0.31	0.08	0.00	0.00	

1997

I : W.Pad	100	0.000	0.027	0.000	0.000	0.231	0.747	0.233	0.102	0.017	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.036	0.109	0.053
II : D.Pad	100	0.000	0.000	0.000	0.000	0.000	0.072	0.153	0.498	0.916	1.071	1.033	0.998	0.824	0.716	0.454	0.219	0.051	0.010	0.000	0.000	0.000	0.000	0.000	0.000
III : D.Pal	100	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.014	0.077	0.198	0.376	0.490	0.574	0.494	0.308	0.080	0.000	0.000	0.000
total		0.000	0.027	0.000	0.000	0.231	0.819	0.386	0.600	0.932	1.077	1.033	0.998	0.824	0.729	0.531	0.417	0.427	0.499	0.574	0.494	0.308	0.116	0.109	0.053
		0.01371		0		0.52495		0.49317		1.00458		1.01562		0.77679		0.47404		0.46314		0.53408		0.21167		0.08136	

Year : 1997

N.F.R. (l/s/ha)

	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
	0.000	0.027	0.000	0.000	0.231	0.819	0.386	0.600	0.932	1.077	1.033	0.998	0.824	0.729	0.531	0.417	0.427	0.499	0.574	0.494	0.308	0.116	0.109	0.053

Net Field Requirement for Water Balance Calculation in 1998 (1/7)

[Kampili Rotation A]

1 1 1  
Calculation of Net Field Water Requirement for Paddy (A) on

1998

Cropping Pattern	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
Early Cropping		○																						
Middle Cropping			○																					
Late Cropping				○																				
	LP			Paddy				LP				Paddy								Palawija			No Cropping	LP

A. Land Preparation Requirement

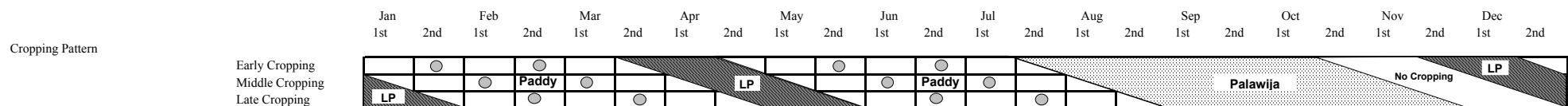
1. Land Preparation Intensity																									
Early Cropping							1/6	1/3	1/6													1/6	1/3	1/6	
Middle Cropping		1/6							1/6	1/3	1/6												1/6	1/3	
Late Cropping		1/3	1/6							1/6	1/3	1/6												1/6	
Total		1/2	1/6				1/6	1/2	2/3	1/2	1/6											1/6	1/2	2/3	
2. Land Preparation Requirement	(mm/day/A)	11.82	11.82	11.92	11.92	12.04	12.04	12.17	12.17	12.08	12.08	11.92	11.92	12.08	12.08	12.52	12.52	12.80	12.80	12.89	12.89	12.48	12.48	11.94	11.94
	(mm/day)	5.91	1.97	0.00	0.00	0.00	2.01	6.09	8.12	6.04	2.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.08	5.97	7.96	
3. Water Layer Replacement Intensity			1/3	1/3	2/3	1/3	1/3					1/3	1/3	2/3	1/3	1/3									
4. Water Layer Replacement Requirement	(mm/day/A)		3.33	3.33	3.33	3.33	3.33					3.33	3.33	3.33	3.33	3.33									
	(mm/day)		1.11	1.11	2.22	1.11	1.11					1.11	1.11	2.22	1.11	1.11									
5. Total Requirement for Land Preparation																									
I	(mm/day)	5.91	3.08	1.11	2.22	1.11	1.11											0.00	0.00	0.00	0.00	0.00	2.08	5.97	7.96
II	(mm/day)						2.01	6.09	8.12	6.04	3.12	1.11	2.22	1.11	1.11	0.00	0.00								

B. Crop Water Requirement

		Jan	Feb		Mar		Apr		May		Jun		Jul		Aug		Sep	Oct		Nov		Dec			
1. Crop Intensity																									
Early Cropping		1/3	1/3	1/3	1/3	1/3	1/6	1/3	1/6	1/3	1/3	1/3	1/3	1/3	1/6								1/6		
Middle Cropping		1/6	1/3	1/3	1/3	1/3	1/3	1/6	1/6	1/3	1/3	1/3	1/3	1/3	1/3	1/6									
Late Cropping			1/6	1/3	1/3	1/3	1/3	1/3	1/6	1/6	1/3	1/3	1/3	1/3	1/3	1/3	1/6								
Total	I	1/2	5/6	1	1	1	5/6	1/2	1/6	1/2	5/6	1	1	1	5/6	1/2	1/6						1/6		
	II								1/6	1/2	5/6	1	1	1	5/6	1/2	1/6								
2. Crop Coefficient																									
Early Cropping		1.10	1.05	1.05	0.95	0.00	0.00		1.10	1.10	1.05	1.05	0.95	0.00	0.00								1.10		
Middle Cropping		1.10	1.10	1.05	1.05	0.95	0.00	0.00		1.10	1.10	1.05	1.05	0.95	0.00	0.00									
Late Cropping			1.10	1.10	1.05	1.05	0.95	0.00	0.00		1.10	1.10	1.05	1.05	0.95	0.00	0.00								
Weighted average	I	1.10	1.08	1.07	1.02	0.67	0.38	0.00															1.10		
	II								1.10	1.10	1.08	1.07	1.02	0.67	0.38	0.00	0.00								
3. Potential ETo	(mm/day/A)	3.83	3.83	3.97	3.97	4.15	4.15	4.34	4.34	4.20	4.20	3.97	3.97	4.21	4.21	4.84	4.84	5.22	5.22	5.35	5.35	4.77	4.77	4.00	4.00
4. Consumptive Use, ETc	(mm/day/A)	4.21	4.14	4.23	4.04	2.77	1.58	0.00	0.00			4.77	4.62	4.54	4.23	4.04	2.81	1.60	0.00	0.00				4.40	
5. Percolation Loss	(mm/day/A)	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	
6. Crop Water Requirement	(mm/day/A)	6.21	6.14	6.23	6.04	4.77	3.58	2.00	2.00			6.77	6.62	6.54	6.23	6.04	4.81	3.60	2.00	2.00				6.40	
7. Crop water Requirement	(mm/day)	3.11	5.11	6.23	6.04	4.77	2.98	1.00	0.33			1.13	3.31	5.45	6.23	6.04	4.81	3.00	1.00	0.33				1.07	
C. Total A(5)+B(7)	I	9.02	8.19	7.34	8.26	5.88	4.09	1.00	0.33									0.00	0.00	0.00	0.00	0.00	2.08	5.97	9.03
	II						2.01	6.09	9.25	9.35	8.57	7.34	8.26	5.92	4.11	1.00	0.33								
D. Effective Rainfall	(mm/day)	3.02	0.89	2.59	0.50	0.23	9.85	10.56	4.44	4.91	2.65	1.69	3.51	1.50	5.53	1.22	1.39	0.07	2.65	2.08	5.77	12.29	9.51	11.25	20.08
E. Net field Water Requirement, NFR	(mm/day)	6.00	7.30	4.75	7.76	5.65	-5.76	-9.56	-4.10			4.44	5.92	5.66	4.74	4.41	-1.42	-0.22	-1.06						
	II						-7.85	-4.47	4.81	4.44	5.92	5.66	4.74	4.41	-1.42	-0.22	-1.06								
	I		6.00	7.30	4.75	7.76	5.65	0.00	0.00	0.00													0.00	0.00	0.00
	II						0.00	0.00	4.81	4.44	5.92	5.66	4.74	4.41	0.00	0.00	0.00								
	I	(l/sec/ha)	0.694	0.845	0.550	0.898	0.654	0.000	0.000	0.000													0.000	0.000	0.000
	II						0.000	0.000	0.557	0.513	0.686	0.655	0.549	0.511	0.000	0.000	0.000								

Net Field Requirement for Water Balance Calculation in 1998 (2/7)

Calculation of Net Field Water Requirement for Palawija(A)



A. Crop Water Requirement

	Jan	Jan	Feb	Feb	Mar	Mar	Apr	Apr	May	May	Jun	Jun	Jul	Jul	Aug	Aug	Sep	Sep	Oct	Oct	Nov	Nov	Dec	Dec
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
1. Crop Intensity																								
Early Cropping															1/6	1/3	1/3	1/3	1/3	1/3	1/6			
Middle Cropping																1/6	1/3	1/3	1/3	1/3	1/3	1/6		
Late Cropping																	1/6	1/3	1/3	1/3	1/3	1/3	1/6	
Total															1/6	1/2	5/6	1	1	1	5/6	1/2	1/6	
2. Crop Coefficient																								
Early Cropping															0.50	0.70	0.95	1.00	0.85	0.50	0.15			
Middle Cropping																0.50	0.70	0.95	1.00	0.85	0.50	0.15		
Late Cropping																	0.50	0.70	0.95	1.00	0.85	0.50	0.15	
Weighted average															0.50	0.63	0.76	0.88	0.93	0.78	0.57	0.38	0.15	
3. Potential ETo (mm/day/A)	3.83	3.83	3.97	3.97	4.15	4.15	4.34	4.34	4.20	4.20	3.97	3.97	4.21	4.21	4.84	4.84	5.22	5.22	5.35	5.35	4.77	4.77	4.00	4.00
4. Consumptive Use, ETc (mm/day/A)															2.11	3.07	3.68	4.61	4.87	4.19	3.05	1.83	0.72	
5. Rainfall (mm/day)	4.32	1.27	3.70	0.71	0.32	14.08	15.09	6.34	7.02	3.78	2.41	5.02	2.15	7.90	1.74	1.99	0.10	3.78	2.97	8.24	17.56	13.58	16.07	28.69
6. Effective Rainfall (mm/day/A)														2.11	1.19	1.40	0.10	2.72	2.09	3.05	1.83	0.72		
7. Crop water Requirement (mm/day/A)														0.00	1.87	2.28	4.51	2.15	2.10	0.00	0.00	0.00		
B. Net Field Water Requirement (mm/day)														0.00	0.94	1.90	4.51	2.15	2.10	0.00	0.00	0.00		
(I/sec/ha)														0.000	0.108	0.219	0.522	0.249	0.243	0.000	0.000	0.000		

	Jan	Jan	Feb	Feb	Mar	Mar	Apr	Apr	May	May	Jun	Jun	Jul	Jul	Aug	Aug	Sep	Sep	Oct	Oct	Nov	Nov	Dec	Dec
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
Net Field Water Requirement for Paddy	0.694	0.845	0.550	0.898	0.654	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Net Field Water Requirement for Palawija	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.557	0.513	0.686	0.655	0.549	0.511	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100 I	0.694	0.845	0.550	0.898	0.654	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100 II	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.557	0.513	0.686	0.655	0.549	0.511	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100 III	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.108	0.219	0.522	0.249	0.243	0.000	0.000	0.000	0.000	0.000
<b>Total NWR</b> (l/s/ha)	0.694	0.845	0.550	0.898	0.654	0.000	0.000	0.557	0.513	0.686	0.655	0.549	0.511	0.000	0.108	0.219	0.522	0.249	0.243	0.000	0.000	0.000	0.000	0.000
<b>DR</b> (E=0.875*0.81)	0.979	1.193	0.776	1.267	0.923	0.000	0.000	0.785	0.724	0.967	0.924	0.775	0.721	0.000	0.153	0.310	0.737	0.351	0.343	0.000	0.000	0.000	0.000	0.000
0.85     0.81     0.6885	1.008	1.228	0.799	1.304	0.950	0.000	0.000	0.808	0.746	0.996	0.951	0.797	0.742	0.000	0.157	0.319	0.758	0.362	0.353	0.000	0.000	0.000	0.000	0.000



Net Field Requirement for Water Balance Calculation in 1998 (3/7)

[Kampili Rotation B]

Calculation of Net Field Water Requirement for Paddy(B) on 1998

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec																											
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd																										
<b>Cropping Pattern</b>																																																			
<b>A. Land Preparation Requirement</b>																																																			
1. Land Preparation Intensity																																																			
Early Cropping		1/6						1/6		1/3		1/6												1/6		1/3																									
Middle Cropping		1/3		1/6						1/6		1/3		1/6														1/6																							
Late Cropping		1/6		1/3		1/6						1/6		1/3		1/6												1/6																							
Total		2/3		1/2		1/6				1/6		1/2		2/3		1/6										1/6		1/2																							
2. Land Preparation Requirement		(mm/day/A)		11.82		11.82		11.92		11.92		12.04		12.04		12.17		12.17		12.08		12.08		11.92		11.92		12.08		12.08		12.52		12.80		12.80		12.89		12.89		12.48		12.48		11.94		11.94			
3. Water Layer Replacement Intensity		(mm/day)		7.88		5.91		1.99		0.00		0.00		0.00		2.03		6.09		8.05		6.04		1.99		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		1.99		5.97					
4. Water Layer Replacement Requirement		(mm/day/A)																																																	
5. Total Requirement for Land Preparation		(mm/day)		7.88		5.91		3.10		1.11		2.22		1.11		1.11																																			
<b>B. Crop Water Requirement</b>																																																			
1. Crop Intensity																																																			
Early Cropping		1/6		1/3		1/3		1/3		1/3		1/3		1/6		1/6		1/3		1/3		1/3		1/3		1/3		1/6																							
Middle Cropping				1/6		1/3		1/3		1/3		1/3		1/6		1/6		1/3		1/3		1/3		1/3		1/3		1/3		1/6																					
Late Cropping				1/6		1/3		1/3		1/3		1/3		1/6		1/6		1/3		1/3		1/3		1/3		1/3		1/3		1/6																					
Total		1/6		1/2		5/6		1		1		1		5/6		1/2		1/6		1/6		1/6		1/6		1/6		1/6		1/6		1/6		1/6		1/6		1/6		1/6		1/6		1/6							
2. Crop Coefficient																																																			
Early Cropping		1.10		1.10		1.05		1.05		0.95		0.00		0.00		1.10		1.10		1.05		1.05		0.95		0.00		0.00																							
Middle Cropping				1.10		1.10		1.05		0.95		0.00		0.00		1.10		1.10		1.05		1.05		0.95		0.00		0.00																							
Late Cropping						1.10		1.10		1.05		0.95		0.00		0.00		1.10		1.10		1.05		0.95		0.00		0.00																							
Weighted average		1.10		1.10		1.08		1.07		1.02		0.67		0.38		0.00		0.00		1.10		1.10		1.08		1.07		1.02		0.67		0.38		0.00		0.00		0.00		0.00		0.00		0.00		0.00					
3. Potential ETo		(mm/day/A)		3.83		3.83		3.97		3.97		4.15		4.15		4.34		4.34		4.20		4.20		3.97		3.97		4.21		4.21		4.84		4.84		5.22		5.22		5.35		5.35		4.77		4.77		4.00		4.00	
4. Consumptive Use, ETc		(mm/day/A)		4.21		4.21		4.29		4.23		4.22		2.77		1.65		0.00		0.00		0.00		4.62		4.62		4.29		4.23		4.28		2.81		1.84		0.00		0.00		0.00		0.00		0.00		0.00			
5. Percolation Loss		(mm/day/A)		2.00		2.00		2.00		2.00		2.00		2.00		2.00		2.00		2.00		2.00		2.00		2.00		2.00		2.00		2.00		2.00		2.00		2.00		2.00		2.00		2.00		2.00		2.00			
6. Crop Water Requirement		(mm/day/A)		6.21		6.21		6.29		6.23		6.22		4.77		3.65		2.00		2.00		2.00		6.62		6.62		6.29		6.23		6.28		4.81		3.84		2.00		2.00		0.00		0.00		0.00		0.00			
7. Crop water Requirement		(mm/day)		1.04		3.11		5.24		6.23		6.22		4.77		3.04		1.00		0.33		1.10		3.31		5.24		6.23		6.28		4.81		3.20		1.00		0.33		0.00		0.00		0.00		0.00		0.00			
C. Total A(5)+B(7)		(mm/day)		8.92		9.02		8.34		7.34		8.44		5.88		4.15		1.00		0.33		0.33		3.31		5.24		6.23		6.28		4.81		3.20		1.00		0.33		0.00		0.00		0.00		1.99		5.97			
D. Effective Rainfall		(mm/day)		3.02		0.89		2.59		0.50		0.23		9.85		10.56		4.44		4.91		2.65		1.69		3.51		1.50		5.53		1.22		1.39		0.07		2.65		2.08		5.77		12.29		9.51		11.25		20.08	
E. Net field Water Requirement, NFR		(mm/day)		5.90		8.13		5.75		6.85		8.21		-3.98		-6.41		-3.44		-4.58		-8.53		1.65		4.24		6.70		6.65		3.83		7.00		0.39		3.09		-0.39		0.26		0.00		0.00		0.00			
		(l/sec/ha)		0.682		0.941		0.665		0.792		0.951		0.000		0.000		0.000		0.000		0.000		0.191		0.491		0.776		0.770		0.443		0.810		0.045		0.358		0.000		0.030		0.000		0.000					

Net Field Requirement for Water Balance Calculation in 1998 (4/7)

Calculation of Net Field Water Requirement for Palawija(B)

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
Cropping Pattern																									
A.Crop Water Requirement																									
1.Crop Intensity																									
Early Cropping																									
Middle Cropping																									
Late Cropping																									
Total																									
2.Crop Coefficient																									
Early Cropping																									
Middle Cropping																									
Late Cropping																									
Weighted average																									
3.Potential ETo (mm/day/A)		3.83	3.83	3.97	3.97	4.15	4.15	4.34	4.34	4.20	4.20	3.97	3.97	4.21	4.21	4.84	4.84	5.22	5.22	5.35	5.35	4.77	4.77	4.00	4.00
4.Consumptive Use, ETc (mm/day/A)															2.42	3.07	3.97	4.61	4.99	4.19	2.72	1.83	0.60		
5.Rainfall (mm/day)		4.32	1.27	3.70	0.71	0.32	14.08	15.09	6.34	7.02	3.78	2.41	5.02	2.15	7.90	1.74	1.99	0.10	3.78	2.97	8.24	17.56	13.58	16.07	28.69
6.Effective Rainfall (mm/day/A)															1.14	1.35	0.10	2.68	2.20	4.19	2.72	1.83	0.60		
7.Crop water Requirement (mm/day)															1.28	1.72	3.87	1.93	2.79	0.00	0.00	0.00	0.00		
B.Net Field Water Requirement (mm/day)																									
(I/sec/ha)																									
III																									
Net Field Water Requirement for Paddy		0.682	0.941	0.665	0.792	0.951	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Net Field Water Requirement for Palawija		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.025	0.099	0.373	0.224	0.323	0.000	0.000	0.000	0.000	0.000
100 I		0.682	0.941	0.665	0.792	0.951	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100 II		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.191	0.491	0.776	0.770	0.443	0.810	0.045	0.358	0.000	0.030	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100 III		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.025	0.099	0.373	0.224	0.323	0.000	0.000	0.000	0.000	0.000
<b>Total NWR</b> (l/s/ha)		0.682	0.941	0.665	0.792	0.951	0.000	0.000	0.191	0.491	0.776	0.770	0.443	0.810	0.045	0.382	0.099	0.403	0.224	0.323	0.000	0.000	0.000	0.000	0.000
<b>DR</b> (E=0.875*0.81)		0.963	1.327	0.938	1.118	1.341	0.000	0.000	0.270	0.693	1.094	1.086	0.626	1.143	0.064	0.539	0.140	0.569	0.316	0.456	0.000	0.000	0.000	0.000	0.000
0.85 0.81 0.6885		0.991	1.366	0.966	1.151	1.381	0.000	0.000	0.277	0.713	1.127	1.118	0.644	1.176	0.066	0.555	0.144	0.586	0.325	0.470	0.000	0.000	0.000	0.000	0.000



Net Field Requirement for Water Balance Calculation in 1998 (6/7)

Calculation of Net Field Water Requirement for Palawija(C)

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec		
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	
Cropping Pattern	Early Cropping																									
	Middle Cropping																									
	Late Cropping																									
	No Cropping																									
A.Crop Water Requirement																										
1.Crop Intensity																										
Early Cropping																										
Middle Cropping																										
Late Cropping																										
Total																										
2.Crop Coefficient																										
Early Cropping																										
Middle Cropping																										
Late Cropping																										
Weighted average																										
3.Potential ETo (mm/day/A)		3.83	3.83	3.97	3.97	4.15	4.15	4.34	4.34	4.20	4.20	3.97	3.97	4.21	4.21	4.84	4.84	5.22	5.22	5.35	5.35	4.77	4.77	4.00	4.00	
4.Consumptive Use, ETc (mm/day/A)		2.42	3.31	3.97	4.73	4.99	3.74	2.72	1.53	0.60																
5.Rainfall (mm/day)		4.32	1.27	3.70	0.71	0.32	14.08	15.09	6.34	7.02	3.78	2.41	5.02	2.15	7.90	1.74	1.99	0.10	3.78	2.97	8.24	17.56	13.58	16.07	28.69	
6.Effective Rainfall (mm/day/A)																										
7.Crop water Requirement (mm/day/A)																										
B.Net Field Water Requirement (mm/day)																										
(l/sec/ha)																										
III																										
		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec		
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	
Net Field Water Requirement for Paddy		0.334	0.929	0.758	0.907	0.846	0.000	0.000	0.000	0.000	0.000	0.130	0.753	0.863	0.558	0.706	0.344	0.592	0.338	0.107	0.000	0.000	0.000	0.000	0.000	
Net Field Water Requirement for Palawija		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.022	0.186	0.135	0.297	0.000	0.000	0.000	0.000	
100 I		0.334	0.929	0.758	0.907	0.846	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
100 II		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.130	0.753	0.863	0.558	0.706	0.344	0.592	0.338	0.107	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
100 III		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.022	0.186	0.135	0.297	0.000	0.000	0.000	0.000	0.000	
<b>Total NWR</b> (l/s/ha)		0.334	0.929	0.758	0.907	0.846	0.000	0.000	0.000	0.130	0.753	0.863	0.558	0.706	0.344	0.592	0.359	0.293	0.135	0.297	0.000	0.000	0.000	0.000	0.000	
<b>DR</b> (E=0.875*0.81)		0.472	1.311	1.070	1.280	1.194	0.000	0.000	0.000	0.184	1.063	1.218	0.788	0.996	0.486	0.836	0.507	0.414	0.190	0.419	0.000	0.000	0.000	0.000	0.000	
0.85 0.81 0.6885		0.486	1.349	1.102	1.318	1.229	0.000	0.000	0.000	0.189	1.094	1.253	0.811	1.025	0.500	0.860	0.522	0.426	0.196	0.431	0.000	0.000	0.000	0.000	0.000	

Net Field Requirement for Water Balance Calculation in 1998 (7/7)

(E=0.875*0.81)	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
<b>Golongan A</b>	0.979	1.193	0.776	1.267	0.923	0.000	0.000	0.785	0.724	0.967	0.924	0.775	0.721	0.000	0.153	0.310	0.737	0.351	0.343	0.000	0.000	0.000	0.000	0.000
<b>Golongan B</b>	0.963	1.327	0.938	1.118	1.341	0.000	0.000	0.270	0.693	1.094	1.086	0.626	1.143	0.064	0.539	0.140	0.569	0.316	0.456	0.000	0.000	0.000	0.000	0.000
<b>Golongan C</b>	0.472	1.311	1.070	1.280	1.194	0.000	0.000	0.000	0.184	1.063	1.218	0.788	0.996	0.486	0.836	0.507	0.414	0.190	0.419	0.000	0.000	0.000	0.000	0.000
average	0.805	1.277	0.928	1.222	1.153	0.000	0.000	0.352	0.534	1.041	1.076	0.729	0.953	0.183	0.509	0.319	0.573	0.286	0.406	0.000	0.000	0.000	0.000	0.000

(E=0.85*0.81)	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
<b>Golongan A</b>	1.008	1.228	0.799	1.304	0.950	0.000	0.000	0.808	0.746	0.996	0.951	0.797	0.742	0.000	0.157	0.319	0.758	0.362	0.353	0.000	0.000	0.000	0.000	0.000
<b>Golongan B</b>	0.991	1.366	0.966	1.151	1.381	0.000	0.000	0.277	0.713	1.127	1.118	0.644	1.176	0.066	0.555	0.144	0.586	0.325	0.470	0.000	0.000	0.000	0.000	0.000
<b>Golongan C</b>	0.486	1.349	1.102	1.318	1.229	0.000	0.000	0.000	0.189	1.094	1.253	0.811	1.025	0.500	0.860	0.522	0.426	0.196	0.431	0.000	0.000	0.000	0.000	0.000
average	0.828	1.314	0.956	1.258	1.186	0.000	0.000	0.362	0.549	1.072	1.107	0.751	0.981	0.188	0.524	0.328	0.590	0.294	0.418	0.000	0.000	0.000	0.000	0.000

Summary Calculation of NFR (l/s/ha)

	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
<b>Golongan A</b>	0.69	0.85	0.55	0.90	0.65	0.00	0.00	0.56	0.51	0.69	0.65	0.55	0.51	0.00	0.11	0.22	0.52	0.25	0.24	0.00	0.00	0.00	0.00	0.00
<b>Golongan B</b>	0.68	0.94	0.67	0.79	0.95	0.00	0.00	0.19	0.49	0.78	0.77	0.44	0.81	0.05	0.38	0.10	0.40	0.22	0.32	0.00	0.00	0.00	0.00	0.00
<b>Golongan C</b>	0.33	0.93	0.76	0.91	0.85	0.00	0.00	0.00	0.13	0.75	0.86	0.56	0.71	0.34	0.59	0.36	0.29	0.13	0.30	0.00	0.00	0.00	0.00	0.00

1998

	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
I : W.Pad	A	0.69	0.85	0.55	0.90	0.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	B	0.68	0.94	0.67	0.79	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	C	0.33	0.93	0.76	0.91	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	av	0.57	0.90	0.66	0.87	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
II : D.Pad	A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56	0.51	0.69	0.65	0.55	0.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	B	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.49	0.78	0.77	0.44	0.81	0.05	0.36	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00
	C	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.75	0.86	0.56	0.71	0.34	0.59	0.34	0.11	0.00	0.00	0.00	0.00	0.00	0.00
	av	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.38	0.74	0.76	0.52	0.68	0.13	0.32	0.11	0.05	0.00	0.00	0.00	0.00	0.00	0.00
III : D.Pal	A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.22	0.52	0.25	0.24	0.00	0.00	0.00	0.00	0.00
	B	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.10	0.37	0.22	0.32	0.00	0.00	0.00	0.00	0.00
	C	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.19	0.13	0.30	0.00	0.00	0.00	0.00	0.00
	av	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.11	0.36	0.20	0.29	0.00	0.00	0.00	0.00	0.00
I : W.Pad		0.57	0.90	0.66	0.87	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
II : D.Pad		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.38	0.74	0.76	0.52	0.68	0.13	0.32	0.11	0.05	0.00	0.00	0.00	0.00	0.00	0.00
III : D.Pal		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.11	0.36	0.20	0.29	0.00	0.00	0.00	0.00	0.00

1998

I : W.Pad	100	0.570	0.905	0.658	0.866	0.817	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
II : D.Pad	100	0.000	0.000	0.000	0.000	0.000	0.000	0.249	0.378	0.738	0.762	0.517	0.675	0.130	0.317	0.113	0.046	0.000	0.000	0.000	0.000	0.000	0.000	0.000
III : D.Pal	100	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.044	0.114	0.360	0.202	0.288	0.000	0.000	0.000	0.000	0.000
total		0.570	0.905	0.658	0.866	0.817	0.000	0.249	0.378	0.738	0.762	0.517	0.675	0.130	0.361	0.226	0.406	0.202	0.288	0.000	0.000	0.000	0.000	0.000
		0.73761		0.7619		0.40842		0.12459		0.55815		0.63967		0.4026		0.29353		0.30435		0.14383		0		0

Year : 1998

N.F.R. (l/s/ha)

	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
	0.570	0.905	0.658	0.866	0.817	0.000	0.000	0.249	0.378	0.738	0.762	0.517	0.675	0.130	0.361	0.226	0.406	0.202	0.288	0.000	0.000	0.000	0.000	0.000

Net Field Requirement for Water Balance Calculation in 1999 (1/7)

[Kampili Rotation A]

1 1 1  
Calculation of Net Field Water Requirement for Paddy (A) on

1999

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec			
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd		
<b>Cropping Pattern</b>																											
		<p>Early Cropping Middle Cropping Late Cropping</p>																									
<b>A. Land Preparation Requirement</b>																											
1. Land Preparation Intensity																											
Early Cropping																											
Middle Cropping																											
Late Cropping																											
Total																											
2. Land Preparation Requirement (mm/day/A)																											
3. Water Layer Replacement Intensity																											
4. Water Layer Replacement Requirement (mm/day/A)																											
5. Total Requirement for Land Preparation																											
I (mm/day)																											
II (mm/day)																											
<b>B. Crop Water Requirement</b>																											
1. Crop Intensity																											
Early Cropping																											
Middle Cropping																											
Late Cropping																											
Total																											
I																											
II																											
2. Crop Coefficient																											
Early Cropping																											
Middle Cropping																											
Late Cropping																											
Weighted average																											
I																											
II																											
3. Potential ETo (mm/day/A)																											
4. Consumptive Use, ETc (mm/day/A)																											
5. Percolation Loss (mm/day/A)																											
6. Crop Water Requirement (mm/day/A)																											
7. Crop water Requirement (mm/day)																											
I																											
II																											
C. Total A(5)+B(7) (mm/day)																											
I																											
II																											
D. Effective Rainfall (mm/day)																											
E. Net field Water Requirement, NFR (mm/day)																											
I																											
II																											
I (l/sec/ha)																											
II																											







Net Field Requirement for Water Balance Calculation in 1999 (4/7)

Calculation of Net Field Water Requirement for Palawija(B)

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
Cropping Pattern	Early Cropping			●		●						●		●																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
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		<table border="1"> <thead> <tr> <th colspan="2"></th> <th colspan="2">Jan</th> <th colspan="2">Feb</th> <th colspan="2">Mar</th> <th colspan="2">Apr</th> <th colspan="2">May</th> <th colspan="2">Jun</th> <th colspan="2">Jul</th> <th colspan="2">Aug</th> <th colspan="2">Sep</th> <th colspan="2">Oct</th> <th colspan="2">Nov</th> <th colspan="2">Dec</th> </tr> <tr> <th colspan="2"></th> <th>1st</th> <th>2nd</th> <th>1st</th> <th>2nd</th> <th>1st</th> <th>2nd</th> <th>1st</th> <th>2nd</th> <th>1st</th> <th>2nd</th> <th>1st</th> <th>2nd</th> <th>1st</th> <th>2nd</th> <th>1st</th> <th>2nd</th> <th>1st</th> <th>2nd</th> <th>1st</th> <th>2nd</th> <th>1st</th> <th>2nd</th> <th>1st</th> <th>2nd</th> </tr> </thead> <tbody> <tr> <td>A.Crop Water Requirement</td> <td></td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>1.Crop Intensity</td> <td></td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>  Early Cropping</td> <td></td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>1/6</td> <td>1/3</td> <td>1/3</td> <td>1/3</td> <td>1/3</td> <td>1/3</td> <td>1/3</td> <td>1/6</td> <td></td><td></td> </tr> <tr> <td>  Middle Cropping</td> <td></td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> <td>1/6</td> <td>1/3</td> <td>1/3</td> <td>1/3</td> <td>1/3</td> <td>1/3</td> <td>1/6</td> <td></td><td></td><td></td> </tr> <tr> <td>  Late Cropping</td> <td></td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> <td>1/6</td> <td>1/3</td> <td>1/3</td> <td>1/3</td> <td>1/3</td> <td>1/3</td> <td>1/3</td> <td>1/6</td><td></td> </tr> <tr> <td>  Total</td> <td></td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> <td>1/6</td> <td>1/2</td> <td>5/6</td> <td>1</td> <td>1</td> <td>1</td> <td>5/6</td> <td>1/2</td> <td>1/6</td><td></td> </tr> <tr> <td>2.Crop Coefficient</td> <td></td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>  Early Cropping</td> <td></td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>0.50</td> <td>0.70</td> <td>0.95</td> <td>1.00</td> <td>0.85</td> <td>0.50</td> <td>0.15</td> <td></td><td></td><td></td> </tr> <tr> <td>  Middle Cropping</td> <td></td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> <td>0.50</td> <td>0.70</td> <td>0.95</td> <td>1.00</td> <td>0.85</td> <td>0.50</td> <td>0.15</td> <td></td><td></td><td></td> </tr> <tr> <td>  Late Cropping</td> <td></td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> <td>0.50</td> <td>0.70</td> <td>0.95</td> <td>1.00</td> <td>0.85</td> <td>0.50</td> <td>0.15</td> <td></td><td></td><td>0.15</td> </tr> <tr> <td>  Weighted average</td> <td></td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> <td>0.50</td> <td>0.63</td> <td>0.76</td> <td>0.88</td> <td>0.93</td> <td>0.78</td> <td>0.57</td> <td>0.38</td> <td>0.15</td><td></td> </tr> <tr> <td>3.Potential ETo (mm/day/A)</td> <td></td> <td>3.83</td> <td>3.83</td> <td>3.97</td> <td>3.97</td> <td>4.15</td> <td>4.15</td> <td>4.34</td> <td>4.34</td> <td>4.20</td> <td>4.20</td> <td>3.97</td> <td>3.97</td> <td>4.21</td> <td>4.21</td> <td>4.84</td> <td>4.84</td> <td>5.22</td> <td>5.22</td> <td>5.35</td> <td>5.35</td> <td>4.77</td> <td>4.77</td> <td>4.00</td> <td>4.00</td> </tr> <tr> <td>4.Consumptive Use, ETc (mm/day/A)</td> <td></td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>2.42</td> <td>3.07</td> <td>3.97</td> <td>4.61</td> <td>4.99</td> <td>4.19</td> <td>2.72</td> <td>1.83</td> <td>0.60</td> <td>0.60</td> </tr> <tr> <td>5.Rainfall (mm/day)</td> <td></td> <td>47.70</td> <td>38.89</td> <td>18.02</td> <td>17.97</td> <td>12.19</td> <td>7.26</td> <td>4.06</td> <td>7.52</td> <td>4.06</td> <td>0.10</td> <td>0.10</td> <td>1.27</td> <td>1.01</td> <td>0.00</td> <td>0.00</td> <td>0.00</td> <td>0.00</td> <td>0.00</td> <td>8.80</td> <td>6.32</td> <td>11.87</td> <td>5.91</td> <td>19.31</td> <td>15.55</td> </tr> <tr> <td>6.Effective Rainfall (mm/day/A)</td> <td></td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>0.00</td> <td>0.00</td> <td>0.00</td> <td>0.00</td> <td>4.99</td> <td>4.18</td> <td>2.72</td> <td>1.83</td> <td>0.60</td> <td>0.60</td> </tr> <tr> <td>7.Crop water Requirement (mm/day)</td> <td></td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>2.42</td> <td>3.07</td> <td>3.97</td> <td>4.61</td> <td>0.00</td> <td>0.02</td> <td>0.00</td> <td>0.00</td> <td>0.00</td> <td>0.00</td> </tr> <tr> <td>B.Net Field Water Requirement (mm/day)</td> <td></td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>0.40</td> <td>1.53</td> <td>3.31</td> <td>4.61</td> <td>0.00</td> <td>0.02</td> <td>0.00</td> <td>0.00</td> <td>0.00</td> <td>0.00</td> </tr> <tr> <td></td> <td>(l/sec/ha)</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>0.047</td> <td>0.177</td> <td>0.383</td> <td>0.534</td> <td>0.000</td> <td>0.002</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> </tr> <tr> <td></td> <td>III</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td colspan="2"></td> 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(mm/day/A)		3.83	3.83	3.97	3.97	4.15	4.15	4.34	4.34	4.20	4.20	3.97	3.97	4.21	4.21	4.84	4.84	5.22	5.22	5.35	5.35	4.77	4.77	4.00	4.00	4.Consumptive Use, ETc (mm/day/A)																2.42	3.07	3.97	4.61	4.99	4.19	2.72	1.83	0.60	0.60	5.Rainfall (mm/day)		47.70	38.89	18.02	17.97	12.19	7.26	4.06	7.52	4.06	0.10	0.10	1.27	1.01	0.00	0.00	0.00	0.00	0.00	8.80	6.32	11.87	5.91	19.31	15.55	6.Effective Rainfall (mm/day/A)																0.00	0.00	0.00	0.00	4.99	4.18	2.72	1.83	0.60	0.60	7.Crop water Requirement (mm/day)																2.42	3.07	3.97	4.61	0.00	0.02	0.00	0.00	0.00	0.00	B.Net Field Water Requirement (mm/day)																0.40	1.53	3.31	4.61	0.00	0.02	0.00	0.00	0.00	0.00		(l/sec/ha)															0.047	0.177	0.383	0.534	0.000	0.002	0.000	0.000	0.000	0.000		III																												<table border="1"> <thead> <tr> <th colspan="2"></th> <th colspan="2">Jan</th> <th colspan="2">Feb</th> <th colspan="2">Mar</th> <th colspan="2">Apr</th> <th colspan="2">May</th> <th 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<td>0.747</td> <td>0.902</td> <td>0.685</td> <td>0.499</td> <td>0.116</td> <td>0.039</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> </tr> <tr> <td></td> <td>100 III</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.047</td> <td>0.177</td> <td>0.383</td> <td>0.534</td> <td>0.000</td> <td>0.002</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> </tr> <tr> <td></td> <td><b>Total NWR</b> (l/s/ha)</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.092</td> <td>0.152</td> <td>0.095</td> <td>0.731</td> <td>1.074</td> <td>0.956</td> <td>0.747</td> <td>0.902</td> <td>0.685</td> <td>0.545</td> <td>0.293</td> <td>0.421</td> <td>0.534</td> <td>0.000</td> <td>0.002</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> 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III	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.047	0.177	0.383	0.534	0.000	0.002	0.000	0.000	0.000	0.000		<b>Total NWR</b> (l/s/ha)	0.000	0.000	0.000	0.000	0.000	0.092	0.152	0.095	0.731	1.074	0.956	0.747	0.902	0.685	0.545	0.293	0.421	0.534	0.000	0.002	0.000	0.000	0.000	0.000		<b>DR</b> (E=0.875*0.81)	0.000	0.000	0.000	0.000	0.000	0.130	0.214	0.134	1.031	1.516	1.349	1.055	1.273	0.966	0.770	0.414	0.594	0.753	0.000	0.003	0.000	0.000	0.000	0.000		0.85 0.81 0.6885	0.000	0.000	0.000	0.000	0.000	0.134	0.220	0.138	1.062	1.560	1.389	1.086	1.310	0.995	0.792	0.426	0.612	0.775	0.000	0.003	0.000	0.000	0.000	0.000
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Weighted average																	0.50	0.63	0.76	0.88	0.93	0.78	0.57	0.38	0.15																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
3.Potential ETo (mm/day/A)		3.83	3.83	3.97	3.97	4.15	4.15	4.34	4.34	4.20	4.20	3.97	3.97	4.21	4.21	4.84	4.84	5.22	5.22	5.35	5.35	4.77	4.77	4.00	4.00																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
4.Consumptive Use, ETc (mm/day/A)																2.42	3.07	3.97	4.61	4.99	4.19	2.72	1.83	0.60	0.60																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
5.Rainfall (mm/day)		47.70	38.89	18.02	17.97	12.19	7.26	4.06	7.52	4.06	0.10	0.10	1.27	1.01	0.00	0.00	0.00	0.00	0.00	8.80	6.32	11.87	5.91	19.31	15.55																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
6.Effective Rainfall (mm/day/A)																0.00	0.00	0.00	0.00	4.99	4.18	2.72	1.83	0.60	0.60																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
7.Crop water Requirement (mm/day)																2.42	3.07	3.97	4.61	0.00	0.02	0.00	0.00	0.00	0.00																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
B.Net Field Water Requirement (mm/day)																0.40	1.53	3.31	4.61	0.00	0.02	0.00	0.00	0.00	0.00																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
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		<table border="1"> <thead> <tr> <th colspan="2"></th> <th colspan="2">Jan</th> <th colspan="2">Feb</th> <th colspan="2">Mar</th> <th colspan="2">Apr</th> <th colspan="2">May</th> <th colspan="2">Jun</th> <th colspan="2">Jul</th> <th colspan="2">Aug</th> <th colspan="2">Sep</th> <th colspan="2">Oct</th> <th colspan="2">Nov</th> <th colspan="2">Dec</th> </tr> <tr> <th colspan="2"></th> <th>1st</th> <th>2nd</th> <th>1st</th> <th>2nd</th> <th>1st</th> <th>2nd</th> <th>1st</th> <th>2nd</th> <th>1st</th> <th>2nd</th> <th>1st</th> <th>2nd</th> <th>1st</th> <th>2nd</th> <th>1st</th> <th>2nd</th> <th>1st</th> <th>2nd</th> <th>1st</th> <th>2nd</th> <th>1st</th> <th>2nd</th> <th>1st</th> <th>2nd</th> </tr> </thead> <tbody> <tr> <td>Net Field Water Requirement for Paddy</td> <td></td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.092</td> <td>0.152</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> 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<td>0.747</td> <td>0.902</td> <td>0.685</td> <td>0.545</td> <td>0.293</td> <td>0.421</td> <td>0.534</td> <td>0.000</td> <td>0.002</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> </tr> <tr> <td></td> <td><b>DR</b> (E=0.875*0.81)</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.130</td> <td>0.214</td> <td>0.134</td> <td>1.031</td> <td>1.516</td> <td>1.349</td> <td>1.055</td> <td>1.273</td> <td>0.966</td> <td>0.770</td> <td>0.414</td> <td>0.594</td> <td>0.753</td> <td>0.000</td> <td>0.003</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> </tr> <tr> <td></td> <td>0.85 0.81 0.6885</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.134</td> <td>0.220</td> <td>0.138</td> <td>1.062</td> <td>1.560</td> <td>1.389</td> <td>1.086</td> <td>1.310</td> <td>0.995</td> <td>0.792</td> <td>0.426</td> <td>0.612</td> <td>0.775</td> <td>0.000</td> <td>0.003</td> <td>0.000</td> <td>0.000</td> 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III	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.047	0.177	0.383	0.534	0.000	0.002	0.000	0.000	0.000	0.000		<b>Total NWR</b> (l/s/ha)	0.000	0.000	0.000	0.000	0.000	0.092	0.152	0.095	0.731	1.074	0.956	0.747	0.902	0.685	0.545	0.293	0.421	0.534	0.000	0.002	0.000	0.000	0.000	0.000		<b>DR</b> (E=0.875*0.81)	0.000	0.000	0.000	0.000	0.000	0.130	0.214	0.134	1.031	1.516	1.349	1.055	1.273	0.966	0.770	0.414	0.594	0.753	0.000	0.003	0.000	0.000	0.000	0.000		0.85 0.81 0.6885	0.000	0.000	0.000	0.000	0.000	0.134	0.220	0.138	1.062	1.560	1.389	1.086	1.310	0.995	0.792	0.426	0.612	0.775	0.000	0.003	0.000	0.000	0.000	0.000																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
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Net Field Water Requirement for Palawija		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.047	0.177	0.383	0.534	0.000	0.002	0.000	0.000	0.000																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
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	<b>Total NWR</b> (l/s/ha)	0.000	0.000	0.000	0.000	0.000	0.092	0.152	0.095	0.731	1.074	0.956	0.747	0.902	0.685	0.545	0.293	0.421	0.534	0.000	0.002	0.000	0.000	0.000	0.000																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
	<b>DR</b> (E=0.875*0.81)	0.000	0.000	0.000	0.000	0.000	0.130	0.214	0.134	1.031	1.516	1.349	1.055	1.273	0.966	0.770	0.414	0.594	0.753	0.000	0.003	0.000	0.000	0.000	0.000																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
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Net Field Requirement for Water Balance Calculation in 1999 (5/7)

[Kampili Rotation C ]

Calculation of Net Field Water Requirement for Paddy (C) on

1999

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec				
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd			
Cropping Pattern																												
A.Land Preparation Requirement																												
1.Land Preparation Intensity																												
Early Cropping		1/3	1/6							1/6	1/3	1/6														1/6		
Middle Cropping		1/6	1/3	1/6						1/6	1/3	1/6																
Late Cropping			1/6	1/3	1/6							1/6	1/3	1/6														
Total		1/2	2/3	1/2	1/6					1/6	1/2	2/3	1/2	1/6												1/6		
2.Land Preparation Requirement (mm/day/A)	(mm/day)	11.82	11.82	11.92	11.92	12.04	12.04	12.17	12.17	12.08	12.08	11.92	11.92	12.08	12.08	12.52	12.52	12.80	12.80	12.89	12.89	12.48	12.48	11.94	11.94			
3.Water Layer Replacement Intensity					1/3	1/3	2/3	1/3	1/3					1/3	1/3	2/3	1/3	1/3										
4.Water Layer Replacement Requirement	(mm/day/A)				3.33	3.33	3.33	3.33	3.33					3.33	3.33	3.33	3.33	3.33										
	(mm/day)				1.11	1.11	2.22	1.11	1.11					1.11	1.11	2.22	1.11	1.11										
5.Total Requirement for Land Preparation																												
	I	5.91	7.88	5.96	3.10	1.11	2.22	1.11	1.11									0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.99		
	II								2.03	6.04	8.05	5.96	3.10	1.11	2.22	1.11	1.11											
B. Crop Water Requirement																												
1.Crop Intensity		Jan	Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec					
Early Cropping			1/6	1/3	1/3	1/3	1/3	1/3	1/6	1/6	1/3	1/3	1/3	1/3	1/3	1/3	1/6											
Middle Cropping				1/6	1/3	1/3	1/3	1/3	1/6		1/6	1/3	1/3	1/3	1/3	1/3	1/6											
Late Cropping					1/6	1/3	1/3	1/3	1/3	1/6	1/6	1/3	1/3	1/3	1/3	1/3	1/3	1/6										
Total	I		1/6	1/2	5/6	1	1	1	5/6	1/2	1/6	1/2	5/6	1	1	1	5/6	1/2	1/6									
	II										1/6	1/2	5/6	1	1	1	5/6	1/2	1/6									
2.Crop Coefficient																												
Early Cropping			1.10	1.10	1.05	1.05	0.95	0.00	0.00		1.10	1.10	1.05	1.05	0.95	0.00	0.00											
Middle Cropping				1.10	1.10	1.05	1.05	0.95	0.00	0.00		1.10	1.10	1.05	1.05	0.95	0.00	0.00										
Late Cropping					1.10	1.10	1.05	1.05	0.95	0.00	0.00		1.10	1.10	1.05	1.05	0.95	0.00	0.00									
Weighted average	I		1.10	1.10	1.08	1.07	1.02	0.67	0.38	0.00	0.00		1.10	1.10	1.08	1.07	1.02	0.67	0.38	0.00	0.00							
	II										1.10	1.10	1.08	1.07	1.02	0.67	0.38	0.00	0.00									
3.Potential ETo	(mm/day/A)	3.83	3.83	3.97	3.97	4.15	4.15	4.34	4.34	4.20	4.20	3.97	3.97	4.21	4.21	4.84	4.84	5.22	5.22	5.35	5.35	4.77	4.77	4.00	4.00			
4.Consumptive Use, ETc	(mm/day/A)	0.00	4.21	4.37	4.29	4.43	4.22	2.89	1.65	0.00	0.00		4.62	4.37	4.29	4.49	4.28	3.23	1.84	0.00								
	II										4.62	4.37	4.29	4.49	4.28	3.23	1.84	0.00										
5.Percolation Loss	(mm/day/A)	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00									
6.Crop Water Requirement	(mm/day/A)	2.00	6.21	6.37	6.29	6.43	6.22	4.89	3.65	2.00	2.00		6.62	6.37	6.29	6.49	6.28	5.23	3.84	2.00	2.00		0.00	0.00	0.00	0.00		
	II										6.62	6.37	6.29	6.49	6.28	5.23	3.84	2.00	2.00		0.00	0.00	0.00	0.00	0.00	0.00		
7.Crop water Requirement	(mm/day)	0.00	1.04	3.18	5.24	6.43	6.22	4.89	3.04	1.00	0.33		1.10	3.18	5.24	6.49	6.28	5.23	3.20	1.00	0.33		0.00	0.00	0.00	0.00		
	II										1.10	3.18	5.24	6.49	6.28	5.23	3.20	1.00	0.33		0.00	0.00	0.00	0.00	0.00	0.00		
C.Total A(5)+B(7)	I	5.91	8.92	9.14	8.34	7.54	8.44	6.00	4.15	1.00	0.33		1.10	3.18	5.24	6.49	6.28	5.23	3.20	1.00	0.33		0.00	0.00	0.00	0.00		
	II								2.03	6.04	9.15	9.14	8.34	7.60	8.50	6.34	4.31	1.00	0.33		0.00	0.00	0.00	0.00	0.00	0.00		
D.Effective Rainfall	(mm/day)	33.39	27.22	12.62	12.58	8.53	5.08	2.84	5.27	2.84	0.07	0.07	0.89	0.71	0.00	0.00	0.00	0.00	0.00			6.16	4.43	8.31	4.14	13.52	10.89	
E.Net field Water Requirement, NFR (mm/day)		-27.48	-18.31	-3.47	-4.24	-1.00	3.36	3.16	-1.12	-1.84	0.27		6.62	6.37	6.29	6.49	6.28	5.23	3.84	2.00	2.00		-6.16	-4.43	-8.31	-4.14	-13.52	-8.90
	II								-3.24	3.20	9.09	9.07	7.45	6.89	8.50	6.34	4.31	1.00	0.33		0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	I	0.00	0.00	0.00	0.00	0.00	3.36	3.16	0.00	0.00	0.27		6.62	6.37	6.29	6.49	6.28	5.23	3.84	2.00	2.00		-6.16	-4.43	-8.31	-4.14	-13.52	-8.90
	II								0.00	3.20	9.09	9.07	7.45	6.89	8.50	6.34	4.31	1.00	0.33		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	I	0.000	0.000	0.000	0.000	0.000	0.389	0.366	0.000	0.000	0.031		0.000	0.000	0.031	0.031	0.031	0.031	0.031		0.031	0.031						0.000
	II								0.000	0.370	1.052	1.050	0.862	0.798	0.984	0.733	0.499	0.116	0.039		0.039							

Net Field Requirement for Water Balance Calculation in 1999 (6/7)

Calculation of Net Field Water Requirement for Palawija(C)

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
Cropping Pattern	Early Cropping																								
	Middle Cropping																								
	Late Cropping																								
A.Crop Water Requirement																									
1.Crop Intensity																									
Early Cropping																									
Middle Cropping																									
Late Cropping																									
Total																									
2.Crop Coefficient																									
Early Cropping																									
Middle Cropping																									
Late Cropping																									
Weighted average																									
3.Potential ETo (mm/day/A)																									
4.Consumptive Use, ETc (mm/day/A)																									
5.Rainfall (mm/day)																									
6.Effective Rainfall (mm/day/A)																									
7.Crop water Requirement (mm/day/A)																									
B.Net Field Water Requirement (mm/day)																									
(l/sec/ha)																									
III																									
		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
Net Field Water Requirement for Paddy		0.000	0.000	0.000	0.000	0.000	0.389	0.366	0.000	0.000	0.031	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Net Field Water Requirement for Palawija		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.047	0.191	0.383	0.000	0.070	0.000	0.000	0.000
100 I		0.000	0.000	0.000	0.000	0.000	0.389	0.366	0.000	0.000	0.031	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100 II		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.370	1.052	1.050	0.862	0.798	0.984	0.733	0.499	0.116	0.039	0.000	0.000	0.000	0.000	0.000	0.000
100 III		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.047	0.191	0.383	0.000	0.070	0.000	0.000	0.000	0.000
<b>Total NWR</b> (l/s/ha)		0.000	0.000	0.000	0.000	0.000	0.389	0.366	0.000	0.370	1.083	1.050	0.862	0.798	0.984	0.733	0.545	0.307	0.421	0.000	0.070	0.000	0.000	0.000	0.000
<b>DR</b> (E=0.875*0.81)		0.000	0.000	0.000	0.000	0.000	0.549	0.517	0.000	0.522	1.528	1.481	1.217	1.126	1.388	1.035	0.770	0.433	0.594	0.000	0.099	0.000	0.000	0.000	0.000
0.85 0.81 0.6885		0.000	0.000	0.000	0.000	0.000	0.565	0.532	0.000	0.538	1.573	1.525	1.252	1.159	1.429	1.065	0.792	0.446	0.612	0.000	0.102	0.000	0.000	0.000	0.000

Net Field Requirement for Water Balance Calculation in 1999 (7/7)

(E=0.875*0.81)	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
<b>Golongan A</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.530	0.650	1.063	1.389	1.187	1.203	0.851	0.728	0.414	0.555	0.753	0.796	0.000	0.000	0.000	0.000	0.000	0.000
<b>Golongan B</b>	0.000	0.000	0.000	0.000	0.000	0.130	0.214	0.134	1.031	1.516	1.349	1.055	1.273	0.966	0.770	0.414	0.594	0.753	0.000	0.003	0.000	0.000	0.000	0.000
<b>Golongan C</b>	0.000	0.000	0.000	0.000	0.000	0.549	0.517	0.000	0.522	1.528	1.481	1.217	1.126	1.388	1.035	0.770	0.433	0.594	0.000	0.099	0.000	0.000	0.000	0.000
average	0.000	0.000	0.000	0.000	0.000	0.226	0.420	0.261	0.872	1.477	1.339	1.158	1.083	1.028	0.739	0.579	0.594	0.714	0.000	0.034	0.000	0.000	0.000	0.000

(E=0.85*0.81)	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
<b>Golongan A</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.546	0.669	1.094	1.429	1.222	1.239	0.876	0.750	0.426	0.571	0.775	0.819	0.000	0.000	0.000	0.000	0.000	0.000
<b>Golongan B</b>	0.000	0.000	0.000	0.000	0.000	0.134	0.220	0.138	1.062	1.560	1.389	1.086	1.310	0.995	0.792	0.426	0.612	0.775	0.000	0.003	0.000	0.000	0.000	0.000
<b>Golongan C</b>	0.000	0.000	0.000	0.000	0.000	0.565	0.532	0.000	0.538	1.573	1.525	1.252	1.159	1.429	1.065	0.792	0.446	0.612	0.000	0.102	0.000	0.000	0.000	0.000
average	0.000	0.000	0.000	0.000	0.000	0.233	0.433	0.269	0.898	1.521	1.379	1.192	1.115	1.058	0.761	0.596	0.611	0.735	0.000	0.035	0.000	0.000	0.000	0.000

Summary Calculation of NFR (l/s/ha)

	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
<b>Golongan A</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.38	0.46	0.75	0.98	0.84	0.85	0.60	0.52	0.29	0.39	0.53	0.56	0.00	0.00	0.00	0.00	0.00	0.00
<b>Golongan B</b>	0.00	0.00	0.00	0.00	0.00	0.09	0.15	0.09	0.73	1.07	0.96	0.75	0.90	0.68	0.55	0.29	0.42	0.53	0.00	0.00	0.00	0.00	0.00	0.00
<b>Golongan C</b>	0.00	0.00	0.00	0.00	0.00	0.39	0.37	0.00	0.37	1.08	1.05	0.86	0.80	0.98	0.73	0.55	0.31	0.42	0.00	0.07	0.00	0.00	0.00	0.00

1999

	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
I : W.Pad	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
A	0.00	0.00	0.00	0.00	0.00	0.09	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B	0.00	0.00	0.00	0.00	0.00	0.00	0.39	0.37	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C	0.00	0.00	0.00	0.00	0.00	0.16	0.17	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
av	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.17	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
II : D.Pad	0.00	0.00	0.00	0.00	0.00	0.00	0.38	0.46	0.75	0.98	0.84	0.85	0.60	0.48	0.12	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.73	1.07	0.96	0.75	0.90	0.68	0.50	0.12	0.04	0.00	0.00	0.00	0.00	0.00	0.00
B	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.37	1.05	1.05	0.86	0.80	0.98	0.73	0.50	0.12	0.04	0.00	0.00	0.00	0.00	0.00
C	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.37	1.05	1.05	0.86	0.80	0.98	0.73	0.50	0.12	0.04	0.00	0.00	0.00	0.00	0.00
av	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.19	0.62	1.04	0.95	0.82	0.77	0.71	0.45	0.22	0.05	0.01	0.00	0.00	0.00	0.00	0.00	0.00
III : D.Pal	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.18	0.35	0.53	0.56	0.00	0.00	0.00	0.00	0.00
A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.18	0.35	0.53	0.56	0.00	0.00	0.00	0.00	0.00
B	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.18	0.38	0.53	0.00	0.00	0.00	0.00	0.00
C	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.19	0.38	0.00	0.07	0.00	0.00	0.00	0.00
av	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.07	0.19	0.37	0.49	0.00	0.02	0.00	0.00	0.00	0.00
I : W.Pad	0.00	0.00	0.00	0.00	0.00	0.16	0.17	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
II : D.Pad	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.19	0.62	1.04	0.95	0.82	0.77	0.71	0.45	0.22	0.05	0.01	0.00	0.00	0.00	0.00	0.00	0.00
III : D.Pal	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.07	0.19	0.37	0.49	0.00	0.02	0.00	0.00	0.00	0.00

1999

I : W.Pad	100	0.000	0.000	0.000	0.000	0.000	0.160	0.173	0.000	0.000	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
II : D.Pad	100	0.000	0.000	0.000	0.000	0.000	0.000	0.125	0.185	0.618	1.037	0.949	0.821	0.768	0.715	0.449	0.218	0.051	0.013	0.000	0.000	0.000	0.000	0.000
III : D.Pal	100	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.014	0.075	0.193	0.369	0.493	0.000	0.024	0.000	0.000	0.000	0.000
total		0.000	0.000	0.000	0.000	0.000	0.160	0.298	0.185	0.618	1.047	0.949	0.821	0.768	0.728	0.524	0.411	0.421	0.506	0.000	0.024	0.000	0.000	0.000
		0	0	0	0	0.08017	0.24152	0.83258	0.88504	0.74797	0.46732	0.46346	0.01197	0	0									

Year : 1999

N.F.R. (l/s/ha)

	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
	0.000	0.000	0.000	0.000	0.000	0.160	0.298	0.185	0.618	1.047	0.949	0.821	0.768	0.728	0.524	0.411	0.421	0.506	0.000	0.024	0.000	0.000	0.000	0.000

Net Field Requirement for Water Balance Calculation in 2000 (1/7)

[Kampili Rotation A]

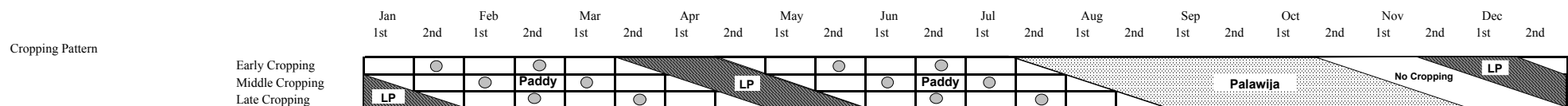
1 1 1  
Calculation of Net Field Water Requirement for Paddy (A) on

2000

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec			
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd		
<b>Cropping Pattern</b>																											
		<p>Early Cropping</p> <p>Middle Cropping</p> <p>Late Cropping</p>																									
<b>A. Land Preparation Requirement</b>																											
1. Land Preparation Intensity																											
Early Cropping																											
Middle Cropping																											
Late Cropping																											
Total																											
2. Land Preparation Requirement (mm/day/A)																											
3. Water Layer Replacement Intensity																											
4. Water Layer Replacement Requirement (mm/day/A)																											
5. Total Requirement for Land Preparation																											
I (mm/day)																											
II (mm/day)																											
<b>B. Crop Water Requirement</b>																											
1. Crop Intensity																											
Early Cropping																											
Middle Cropping																											
Late Cropping																											
Total																											
I																											
II																											
2. Crop Coefficient																											
Early Cropping																											
Middle Cropping																											
Late Cropping																											
Weighted average																											
I																											
II																											
3. Potential ETo (mm/day/A)																											
4. Consumptive Use, ETc (mm/day/A)																											
5. Percolation Loss (mm/day/A)																											
6. Crop Water Requirement (mm/day/A)																											
7. Crop water Requirement (mm/day)																											
C. Total A(5)+B(7)																											
I (mm/day)																											
II (mm/day)																											
D. Effective Rainfall (mm/day)																											
E. Net field Water Requirement, NFR (mm/day)																											
I																											
II																											
I (l/sec/ha)																											
II																											

Net Field Requirement for Water Balance Calculation in 2000 (2/7)

Calculation of Net Field Water Requirement for Palawija(A)



A. Crop Water Requirement

	Jan 1st	Jan 2nd	Feb 1st	Feb 2nd	Mar 1st	Mar 2nd	Apr 1st	Apr 2nd	May 1st	May 2nd	Jun 1st	Jun 2nd	Jul 1st	Jul 2nd	Aug 1st	Aug 2nd	Sep 1st	Sep 2nd	Oct 1st	Oct 2nd	Nov 1st	Nov 2nd	Dec 1st	Dec 2nd
1. Crop Intensity																								
Early Cropping															1/6	1/3	1/3	1/3	1/3	1/3	1/3	1/6		
Middle Cropping																1/6	1/3	1/3	1/3	1/3	1/3	1/3	1/6	
Late Cropping																	1/6	1/3	1/3	1/3	1/3	1/3	1/3	1/6
Total															1/6	1/2	5/6	1	1	1	5/6	1/2	1/6	
2. Crop Coefficient																								
Early Cropping															0.50	0.70	0.95	1.00	0.85	0.50	0.15			
Middle Cropping																0.50	0.70	0.95	1.00	0.85	0.50	0.15		
Late Cropping																	0.50	0.70	0.95	1.00	0.85	0.50	0.15	
Weighted average															0.50	0.63	0.76	0.88	0.93	0.78	0.57	0.38	0.15	
3. Potential ETo (mm/day/A)	3.83	3.83	3.97	3.97	4.15	4.15	4.34	4.34	4.20	4.20	3.97	3.97	4.21	4.21	4.84	4.84	5.22	5.22	5.35	5.35	4.77	4.77	4.00	4.00
4. Consumptive Use, ETc (mm/day/A)															2.11	3.07	3.68	4.61	4.87	4.19	3.05	1.83	0.72	
5. Rainfall (mm/day)	15.52	29.38	30.17	12.51	9.37	15.40	7.32	6.15	2.43	3.10	5.64	3.05	0.80	0.31	0.04	0.00	0.00	0.00	0.55	4.01	0.79	12.65	17.18	8.05
6. Effective Rainfall (mm/day/A)															0.23	0.04	0.00	0.00	0.00	0.45	2.55	0.53	0.72	
7. Crop water Requirement (mm/day/A)															1.87	3.03	3.68	4.61	4.87	3.74	0.50	1.30	0.00	
B. Net Field Water Requirement (mm/day)															0.31	1.51	3.07	4.61	4.87	3.74	0.41	0.65	0.00	
(I/sec/ha)															0.036	0.175	0.355	0.534	0.564	0.433	0.048	0.075	0.000	

	Jan 1st	Jan 2nd	Feb 1st	Feb 2nd	Mar 1st	Mar 2nd	Apr 1st	Apr 2nd	May 1st	May 2nd	Jun 1st	Jun 2nd	Jul 1st	Jul 2nd	Aug 1st	Aug 2nd	Sep 1st	Sep 2nd	Oct 1st	Oct 2nd	Nov 1st	Nov 2nd	Dec 1st	Dec 2nd
Net Field Water Requirement for Paddy	0.000	0.000	0.000	0.000	0.000	0.000	0.111	0.572	0.885	0.741	0.393	0.709	0.620	0.450	0.113	0.039	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.392
Net Field Water Requirement for Palawija	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.036	0.175	0.355	0.534	0.564	0.433	0.048	0.075	0.000	0.000
100 I	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.392
100 II	0.000	0.000	0.000	0.000	0.000	0.000	0.111	0.572	0.885	0.741	0.393	0.709	0.620	0.450	0.113	0.039	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100 III	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.036	0.175	0.355	0.534	0.564	0.433	0.048	0.075	0.000	0.000
<b>Total NWR</b> (I/s/ha)	0.000	0.000	0.000	0.000	0.000	0.000	0.111	0.572	0.885	0.741	0.393	0.709	0.620	0.486	0.288	0.393	0.534	0.564	0.433	0.048	0.075	0.000	0.000	0.392
<b>DR</b> (E=0.875*0.81)	0.000	0.000	0.000	0.000	0.000	0.000	0.157	0.806	1.249	1.046	0.555	1.000	0.875	0.686	0.406	0.555	0.753	0.796	0.611	0.068	0.106	0.000	0.000	0.553
0.85    0.81    0.6885	0.000	0.000	0.000	0.000	0.000	0.000	0.161	0.830	1.286	1.076	0.571	1.029	0.900	0.706	0.418	0.571	0.775	0.819	0.629	0.070	0.109	0.000	0.000	0.570

Net Field Requirement for Water Balance Calculation in 2000 (3/7)

[Kampili Rotation B]

Calculation of Net Field Water Requirement for Paddy(B) on 2000

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec			
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd		
<b>Cropping Pattern</b>	Early Cropping	[Diagram: Shaded area with circles representing crop periods]																									
	Middle Cropping	[Diagram: Shaded area with circles representing crop periods]																									
	Late Cropping	[Diagram: Shaded area with circles representing crop periods]																									
<b>A.Land Preparation Requirement</b>																											
1.Land Preparation Intensity																											
	Early Cropping	1/6						1/6	1/3	1/6														1/6	1/3		
	Middle Cropping	1/3	1/6							1/6	1/3	1/6														1/6	
	Late Cropping	1/6	1/3	1/6						1/6	1/3	1/6														1/6	
	Total	2/3	1/2	1/6				1/6	1/2	2/3	1/2	1/6														1/6	
	2.Land Preparation Requirement	(mm/day/A)	11.82	11.82	11.92	11.92	12.04	12.04	12.17	12.17	12.08	12.08	11.92	11.92	12.08	12.08	12.52	12.52	12.80	12.80	12.89	12.89	12.48	12.48	11.94	11.94	
		(mm/day)	7.88	5.91	1.99	0.00	0.00	2.03	6.09	8.05	6.04	1.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.99	5.97	
	3.Water Layer Replacement Intensity				1/3	1/3	2/3	1/3	1/3				1/3	1/3	2/3	1/3	1/3										
	4.Water Layer Replacement Requirement																										
		(mm/day/A)			3.33	3.33	3.33	3.33	3.33				3.33	3.33	3.33	3.33	3.33										
		(mm/day)			1.11	1.11	2.22	1.11	1.11				1.11	1.11	2.22	1.11	1.11										
	5.Total Requirement for Land Preparation																										
	I	(mm/day)	7.88	5.91	3.10	1.11	2.22	1.11	1.11									0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.99	5.97	
	II	(mm/day)						2.03	6.09	8.05	6.04	3.10	1.11	2.22	1.11	1.11											
<b>B. Crop Water Requirement</b>																											
1.Crop Intensity																											
	Early Cropping	1/6	1/3	1/3	1/3	1/3	1/3	1/6	1/6	1/3	1/3	1/3	1/3	1/3	1/3	1/6											
	Middle Cropping		1/6	1/3	1/3	1/3	1/3	1/3	1/6	1/6	1/3	1/3	1/3	1/3	1/3	1/3	1/6										
	Late Cropping			1/6	1/3	1/3	1/3	1/3	1/3	1/6	1/6	1/3	1/3	1/3	1/3	1/3	1/3	1/6									
	Total	I	1/6	1/2	5/6	1	1	1	5/6	1/2	1/6																
		II							1/6	1/2	5/6	1	1	1	5/6	1/2	1/6										
	2.Crop Coefficient																										
	Early Cropping	1.10	1.10	1.05	1.05	0.95	0.00	0.00	1.10	1.10	1.05	1.05	0.95	0.00	0.00												
	Middle Cropping		1.10	1.10	1.05	1.05	0.95	0.00	0.00		1.10	1.10	1.05	1.05	0.95	0.00	0.00										
	Late Cropping			1.10	1.10	1.05	1.05	0.95	0.00	0.00		1.10	1.10	1.05	1.05	0.95	0.00	0.00									
	Weighted average	I	1.10	1.10	1.08	1.07	1.02	0.67	0.38	0.00	0.00																
		II							1.10	1.10	1.08	1.07	1.02	0.67	0.38	0.00	0.00										
	3.Potential ETo	(mm/day/A)	3.83	3.83	3.97	3.97	4.15	4.15	4.34	4.34	4.20	4.20	3.97	3.97	4.21	4.21	4.84	4.84	5.22	5.22	5.35	5.35	4.77	4.77	4.00	4.00	
	4.Consumptive Use, ETc	(mm/day/A)	4.21	4.21	4.29	4.23	4.22	2.77	1.65	0.00	0.00	4.62	4.62	4.29	4.23	4.28	2.81	1.84	0.00	0.00							
	5.Percolation Loss	(mm/day/A)	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	
	6.Crop Water Requirement	(mm/day/A)	6.21	6.21	6.29	6.23	6.22	4.77	3.65	2.00	2.00	6.62	6.62	6.29	6.23	6.28	4.81	3.84	2.00	2.00							
	7.Crop water Requirement	(mm/day)	1.04	3.11	5.24	6.23	6.22	4.77	3.04	1.00	0.33	1.10	3.31	5.24	6.23	6.28	4.81	3.20	1.00	0.33							
		II									0.33	3.31	5.24	6.23	6.28	4.81	3.20	1.00	0.33								
	C.Total A(5)+B(7)	I	8.92	9.02	8.34	7.34	8.44	5.88	4.15	1.00	0.33	3.31	5.24	6.23	6.28	4.81	3.20	1.00	0.33								
		II							2.03	6.09	9.15	9.35	8.34	7.34	8.50	5.92	4.31	1.00	0.33								
	D.Effective Rainfall	(mm/day)	10.87	20.56	21.12	8.75	6.56	10.78	5.13	4.31	1.70	2.17	3.95	2.13	0.56	0.22	0.03	0.00	0.00	0.00	0.39	2.81	0.55	8.85	12.02	5.64	
	E.Net field Water Requirement, NFR	(mm/day)	-1.95	-11.55	-12.79	-1.41	1.88	-4.90	-0.98	-3.31	-1.37	-1.37	-1.37	-1.37	-1.37	-1.37	-1.37	-1.37	-1.37	-1.37	0.00	-0.39	-2.81	-0.55	-8.85	-10.03	
		II							-3.10	1.78	7.45	7.18	4.39	5.21	7.94	5.70	4.28	1.00	0.33								
		I	0.00	0.00	0.00	0.00	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00	0.33
		II							0.00	1.78	7.45	7.18	4.39	5.21	7.94	5.70	4.28	1.00	0.33								
		I	0.000	0.000	0.000	0.000	0.218	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000						0.000	0.039
		II							0.000	0.206	0.863	0.831	0.508	0.603	0.919	0.659	0.496	0.116	0.039								

Net Field Requirement for Water Balance Calculation in 2000 (4/7)

Calculation of Net Field Water Requirement for Palawija(B)

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
Cropping Pattern																									
Early Cropping																									
Middle Cropping																									
Late Cropping																									
A.Crop Water Requirement																									
1.Crop Intensity																									
Early Cropping																									
Middle Cropping																									
Late Cropping																									
Total																									
2.Crop Coefficient																									
Early Cropping																									
Middle Cropping																									
Late Cropping																									
Weighted average																									
3.Potential ETo (mm/day/A)		3.83	3.83	3.97	3.97	4.15	4.15	4.34	4.34	4.20	4.20	3.97	3.97	4.21	4.21	4.84	4.84	5.22	5.22	5.35	5.35	4.77	4.77	4.00	4.00
4.Consumptive Use, ETc (mm/day/A)																2.42	3.07	3.97	4.61	4.99	4.19	2.72	1.83	0.60	0.60
5.Rainfall (mm/day)		15.52	29.38	30.17	12.51	9.37	15.40	7.32	6.15	2.43	3.10	5.64	3.05	0.80	0.31	0.04	0.00	0.00	0.00	0.55	4.01	0.79	12.65	17.18	8.05
6.Effective Rainfall (mm/day/A)																0.03	0.00	0.00	0.00	0.47	2.75	0.56	1.83	0.60	0.60
7.Crop water Requirement (mm/day)																2.39	3.07	3.97	4.61	4.52	1.44	2.15	0.00	0.00	0.00
B.Net Field Water Requirement (mm/day)																0.40	1.53	3.31	4.61	4.52	1.44	1.80	0.00	0.00	0.00
(l/sec/ha)																0.046	0.177	0.383	0.534	0.523	0.167	0.208	0.000	0.000	0.000
III																									
		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
Net Field Water Requirement for Paddy		0.000	0.000	0.000	0.000	0.218	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.039
Net Field Water Requirement for Palawija		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.046	0.177	0.383	0.534	0.523	0.167	0.208	0.000	0.000	0.000
100 I		0.000	0.000	0.000	0.000	0.218	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.039
100 II		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.206	0.863	0.831	0.508	0.603	0.919	0.659	0.496	0.116	0.039	0.000	0.000	0.000	0.000	0.000	0.000
100 III		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.046	0.177	0.383	0.534	0.523	0.167	0.208	0.000	0.000	0.000
<b>Total NWR</b> (l/s/ha)		0.000	0.000	0.000	0.000	0.218	0.000	0.000	0.206	0.863	0.831	0.508	0.603	0.919	0.659	0.542	0.293	0.421	0.534	0.523	0.167	0.208	0.000	0.000	0.039
<b>DR</b> (E=0.875*0.81)		0.000	0.000	0.000	0.000	0.307	0.000	0.000	0.291	1.217	1.173	0.717	0.851	1.297	0.930	0.764	0.414	0.594	0.753	0.738	0.235	0.293	0.000	0.000	0.054
0.85 0.81 0.6885		0.000	0.000	0.000	0.000	0.316	0.000	0.000	0.299	1.253	1.207	0.738	0.876	1.335	0.958	0.787	0.426	0.612	0.775	0.760	0.242	0.302	0.000	0.000	0.056



Net Field Requirement for Water Balance Calculation in 2000 (5/7)

[Kampili Rotation C ]

Calculation of Net Field Water Requirement for Paddy (C) on

2000

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec		
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	
Cropping Pattern																										
	Early Cropping																									
	Middle Cropping																									
	Late Cropping																									
A.Land Preparation Requirement																										
1.Land Preparation Intensity																										
Early Cropping		1/3	1/6							1/6	1/3	1/6													1/6	
Middle Cropping		1/6	1/3	1/6						1/6	1/3	1/6														
Late Cropping			1/6	1/3	1/6						1/6	1/3	1/6													
Total		1/2	2/3	1/2	1/6					1/6	1/2	2/3	1/2	1/6											1/6	
2.Land Preparation Requirement (mm/day/A)	(mm/day)	11.82	11.82	11.92	11.92	12.04	12.04	12.17	12.17	12.08	12.08	11.92	11.92	12.08	12.08	12.52	12.52	12.80	12.80	12.89	12.89	12.48	12.48	11.94	11.94	
		5.91	7.88	5.96	1.99	0.00	0.00	0.00	2.03	6.04	8.05	5.96			1.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.99	
3.Water Layer Replacement Intensity					1/3	1/3	2/3	1/3	1/3					1/3	1/3	2/3	1/3	1/3								
4.Water Layer Replacement Requirement	(mm/day/A)				3.33	3.33	3.33	3.33	3.33					3.33	3.33	3.33	3.33	3.33								
	(mm/day)				1.11	1.11	2.22	1.11	1.11					1.11	1.11	2.22	1.11	1.11								
5.Total Requirement for Land Preparation																										
I	(mm/day)	5.91	7.88	5.96	3.10	1.11	2.22	1.11	1.11					1.11	1.11	2.22	1.11	1.11	0.00	0.00	0.00	0.00	0.00	0.00	1.99	
II									2.03	6.04	8.05	5.96	3.10	1.11	2.22	1.11	1.11									
B. Crop Water Requirement																										
1.Crop Intensity																										
Early Cropping			1/6	1/3	1/3	1/3	1/3	1/3	1/6		1/6	1/3	1/3	1/3	1/3	1/3	1/6									
Middle Cropping				1/6	1/3	1/3	1/3	1/3	1/3	1/6		1/6	1/3	1/3	1/3	1/3	1/3	1/6								
Late Cropping					1/6	1/3	1/3	1/3	1/3	1/6		1/6	1/3	1/3	1/3	1/3	1/3	1/6								
Total	I		1/6	1/2	5/6	1	1	1	5/6	1/2	1/6	1/6	1/2	5/6	1	1	1	5/6	1/2	1/6						
	II																									
2.Crop Coefficient																										
Early Cropping			1.10	1.10	1.05	1.05	0.95	0.00	0.00		1.10	1.10	1.05	1.05	0.95	0.00	0.00									
Middle Cropping				1.10	1.10	1.05	1.05	0.95	0.00	0.00		1.10	1.10	1.05	1.05	0.95	0.00	0.00								
Late Cropping					1.10	1.10	1.05	1.05	0.95	0.00	0.00		1.10	1.10	1.05	1.05	0.95	0.00	0.00							
Weighted average	I		1.10	1.10	1.08	1.07	1.02	0.67	0.38	0.00	0.00		1.10	1.10	1.08	1.07	1.02	0.67	0.38	0.00	0.00					
	II																									
3.Potential ETo	(mm/day/A)	3.83	3.83	3.97	3.97	4.15	4.15	4.34	4.34	4.20	4.20	3.97	3.97	4.21	4.21	4.84	4.84	5.22	5.22	5.35	5.35	4.77	4.77	4.00	4.00	
4.Consumptive Use, ETc	(mm/day/A)	0.00	4.21	4.37	4.29	4.43	4.22	2.89	1.65	0.00	0.00		4.62	4.37	4.29	4.49	4.28	3.23	1.84	0.00						
	II																									
5.Percolation Loss	(mm/day/A)	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00						
6.Crop Water Requirement	(mm/day/A)	2.00	6.21	6.37	6.29	6.43	6.22	4.89	3.65	2.00	2.00		6.62	6.37	6.29	6.49	6.28	5.23	3.84	2.00	2.00	0.00	0.00	0.00	0.00	
	II																									
7.Crop water Requirement	(mm/day)	0.00	1.04	3.18	5.24	6.43	6.22	4.89	3.04	1.00	0.33		1.10	3.18	5.24	6.49	6.28	5.23	3.20	1.00	0.33	0.00	0.00	0.00	0.00	
	II																									
C.Total A(5)+B(7)	I	5.91	8.92	9.14	8.34	7.54	8.44	6.00	4.15	1.00	0.33		1.10	3.18	5.24	6.49	6.28	5.23	3.20	1.00	0.33	0.00	0.00	0.00	1.99	
	II								2.03	6.04	9.15	9.14	8.34	7.60	8.50	6.34	4.31	1.00	0.33							
D.Effective Rainfall	(mm/day)	10.87	20.56	21.12	8.75	6.56	10.78	5.13	4.31	1.70	2.17	3.95	2.13	0.56	0.22	0.03	0.00	0.00	0.00	0.00	0.39	2.81	0.55	8.85	12.02	5.64
E.Net field Water Requirement, NFR (mm/day)		-4.95	-11.65	-11.98	-0.42	0.98	-2.34	0.88	-0.16	-0.70	-1.83		6.62	6.37	6.29	6.49	6.28	5.23	3.84	2.00	2.00	0.00	0.00	0.00	0.00	
	II								-2.28	4.34	6.99	5.20	6.20	7.04	8.28	6.31	4.31	1.00	0.33							
	I	0.00	0.00	0.00	0.00	0.98	0.00	0.88	0.00	0.00	0.00														0.00	
	II								0.00	4.34	6.99	5.20	6.20	7.04	8.28	6.31	4.31	1.00	0.33							
	(l/sec/ha)	0.000	0.000	0.000	0.000	0.113	0.000	0.101	0.000	0.000	0.000														0.000	
	II								0.000	0.502	0.809	0.601	0.718	0.815	0.958	0.730	0.499	0.116	0.039							

Net Field Requirement for Water Balance Calculation in 2000 (6/7)

Calculation of Net Field Water Requirement for Palawija(C)

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
Cropping Pattern	Early Cropping																								
	Middle Cropping																								
	Late Cropping																								
	No Cropping																								
A.Crop Water Requirement																									
1.Crop Intensity																									
Early Cropping																									
Middle Cropping																									
Late Cropping																									
Total																									
2.Crop Coefficient																									
Early Cropping																									
Middle Cropping																									
Late Cropping																									
Weighted average																									
3.Potential ETo (mm/day/A)		3.83	3.83	3.97	3.97	4.15	4.15	4.34	4.34	4.20	4.20	3.97	3.97	4.21	4.21	4.84	4.84	5.22	5.22	5.35	5.35	4.77	4.77	4.00	4.00
4.Consumptive Use, ETc (mm/day/A)		2.42	2.42	2.42	2.42	2.42	2.42	2.42	2.42	2.42	2.42	2.42	2.42	2.42	2.42	2.42	2.42	2.42	2.42	2.42	2.42	2.42	2.42	2.42	2.42
5.Rainfall (mm/day)		15.52	29.38	30.17	12.51	9.37	15.40	7.32	6.15	2.43	3.10	5.64	3.05	0.80	0.31	0.04	0.00	0.00	0.00	0.55	4.01	0.79	12.65	17.18	8.05
6.Effective Rainfall (mm/day/A)		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46	2.89	0.60	2.72	1.53	0.60
7.Crop water Requirement (mm/day/A)		2.42	3.31	3.97	4.26	2.10	3.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.42	3.31	3.97	4.26	2.10	3.13	0.00	0.00	0.00
B.Net Field Water Requirement (mm/day)		0.40	1.65	3.31	4.26	2.10	3.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40	1.65	3.31	4.26	2.10	3.13	0.00	0.00	0.00
(l/sec/ha)		0.047	0.191	0.383	0.493	0.243	0.362	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.047	0.191	0.383	0.493	0.243	0.362	0.000	0.000	0.000
		III																							
Net Field Water Requirement for Paddy		0.000	0.000	0.000	0.000	0.113	0.000	0.101	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Net Field Water Requirement for Palawija		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.047	0.191	0.383	0.493	0.243	0.362	0.000	0.000	0.000
100 I		0.000	0.000	0.000	0.000	0.113	0.000	0.101	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100 II		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.047	0.191	0.383	0.493	0.243	0.362	0.000	0.000	0.000
100 III		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.047	0.191	0.383	0.493	0.243	0.362	0.000	0.000	0.000
<b>Total NWR</b> (l/s/ha)		0.000	0.000	0.000	0.000	0.113	0.000	0.101	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.545	0.307	0.421	0.493	0.243	0.362	0.000	0.000	0.000
<b>DR</b> (E=0.875*0.81)		0.000	0.000	0.000	0.000	0.160	0.000	0.143	0.000	0.708	1.141	0.849	1.013	1.150	1.352	1.030	0.770	0.433	0.594	0.696	0.343	0.511	0.000	0.000	0.000
0.85 0.81 0.6885		0.000	0.000	0.000	0.000	0.165	0.000	0.147	0.000	0.729	1.175	0.873	1.043	1.184	1.392	1.061	0.792	0.446	0.612	0.716	0.353	0.526	0.000	0.000	0.000

Net Field Requirement for Water Balance Calculation in 2000 (7/7)

(E=0.875*0.81)	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
<b>Golongan A</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.157	0.806	1.249	1.046	0.555	1.000	0.875	0.686	0.406	0.555	0.753	0.796	0.611	0.068	0.106	0.000	0.000	0.553
<b>Golongan B</b>	0.000	0.000	0.000	0.000	0.307	0.000	0.000	0.291	1.217	1.173	0.717	0.851	1.297	0.930	0.764	0.414	0.594	0.753	0.738	0.235	0.293	0.000	0.000	0.054
<b>Golongan C</b>	0.000	0.000	0.000	0.000	0.160	0.000	0.143	0.000	0.708	1.141	0.849	1.013	1.150	1.352	1.030	0.770	0.433	0.594	0.696	0.343	0.511	0.000	0.000	0.000
average	0.000	0.000	0.000	0.000	0.156	0.000	0.100	0.366	1.058	1.120	0.707	0.955	1.107	0.990	0.734	0.579	0.594	0.714	0.682	0.215	0.304	0.000	0.000	0.203

(E=0.85*0.81)	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
<b>Golongan A</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.161	0.830	1.286	1.076	0.571	1.029	0.900	0.706	0.418	0.571	0.775	0.819	0.629	0.070	0.109	0.000	0.000	0.570
<b>Golongan B</b>	0.000	0.000	0.000	0.000	0.316	0.000	0.000	0.299	1.253	1.207	0.738	0.876	1.335	0.958	0.787	0.426	0.612	0.775	0.760	0.242	0.302	0.000	0.000	0.056
<b>Golongan C</b>	0.000	0.000	0.000	0.000	0.165	0.000	0.147	0.000	0.729	1.175	0.873	1.043	1.184	1.392	1.061	0.792	0.446	0.612	0.716	0.353	0.526	0.000	0.000	0.000
average	0.000	0.000	0.000	0.000	0.160	0.000	0.103	0.376	1.089	1.153	0.728	0.983	1.140	1.019	0.755	0.596	0.611	0.735	0.702	0.222	0.312	0.000	0.000	0.209

Summary Calculation of NFR (l/s/ha)

	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
<b>Golongan A</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.57	0.89	0.74	0.39	0.71	0.62	0.49	0.29	0.39	0.53	0.56	0.43	0.05	0.08	0.00	0.00	0.39
<b>Golongan B</b>	0.00	0.00	0.00	0.00	0.22	0.00	0.00	0.21	0.86	0.83	0.51	0.60	0.92	0.66	0.54	0.29	0.42	0.53	0.52	0.17	0.21	0.00	0.00	0.04
<b>Golongan C</b>	0.00	0.00	0.00	0.00	0.11	0.00	0.10	0.00	0.50	0.81	0.60	0.72	0.81	0.96	0.73	0.55	0.31	0.42	0.49	0.24	0.36	0.00	0.00	0.00

2000

	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
I : W.Pad	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
A	0.00	0.00	0.00	0.00	0.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
B	0.00	0.00	0.00	0.00	0.11	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C	0.00	0.00	0.00	0.00	0.11	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
av	0.00	0.00	0.00	0.00	0.11	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
II : D.Pad	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.57	0.89	0.74	0.39	0.71	0.62	0.45	0.11	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.86	0.83	0.51	0.60	0.92	0.66	0.50	0.12	0.04	0.00	0.00	0.00	0.00	0.00	0.00
B	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.86	0.83	0.51	0.60	0.92	0.66	0.50	0.12	0.04	0.00	0.00	0.00	0.00	0.00	0.00
C	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50	0.81	0.60	0.72	0.81	0.96	0.73	0.50	0.12	0.04	0.00	0.00	0.00	0.00	0.00	0.00
av	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.26	0.75	0.79	0.50	0.68	0.78	0.69	0.45	0.22	0.05	0.01	0.00	0.00	0.00	0.00	0.00	0.00
III : D.Pal	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.18	0.35	0.53	0.56	0.43	0.05	0.08	0.00	0.00	0.00
A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.18	0.35	0.53	0.56	0.43	0.05	0.08	0.00	0.00	0.00
B	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.18	0.38	0.53	0.52	0.17	0.21	0.00	0.00	0.00
C	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.19	0.38	0.49	0.24	0.36	0.00	0.00	0.00	0.00
av	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.07	0.19	0.37	0.49	0.48	0.15	0.22	0.00	0.00	0.00
I : W.Pad	0.00	0.00	0.00	0.00	0.11	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
II : D.Pad	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.26	0.75	0.79	0.50	0.68	0.78	0.69	0.45	0.22	0.05	0.01	0.00	0.00	0.00	0.00	0.00	0.00
III : D.Pal	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.07	0.19	0.37	0.49	0.48	0.15	0.22	0.00	0.00	0.00

2000

I : W.Pad	100	0.000	0.000	0.000	0.110	0.000	0.034	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.144	
II : D.Pad	100	0.000	0.000	0.000	0.000	0.000	0.037	0.259	0.750	0.794	0.501	0.677	0.785	0.689	0.446	0.218	0.051	0.013	0.000	0.000	0.000	0.000	0.000	0.000	
III : D.Pal	100	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.012	0.074	0.193	0.369	0.493	0.483	0.153	0.215	0.000	0.000	0.000	
total		0.000	0.000	0.000	0.000	0.110	0.000	0.071	0.259	0.750	0.794	0.501	0.677	0.785	0.701	0.520	0.411	0.421	0.506	0.483	0.153	0.215	0.000	0.000	0.144
		0	0	0	0.05522	0.16505	0.77188	0.58874	0.74298	0.46532	0.46346	0.3179	0.10757	0.0718											

Year : 2000

N.F.R. (l/s/ha)

	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
	0.000	0.000	0.000	0.000	0.110	0.000	0.071	0.259	0.750	0.794	0.501	0.677	0.785	0.701	0.520	0.411	0.421	0.506	0.483	0.153	0.215	0.000	0.000	0.144

Net Field Requirement for Water Balance Calculation in 2001 (1/7)

[Kampili Rotation A]

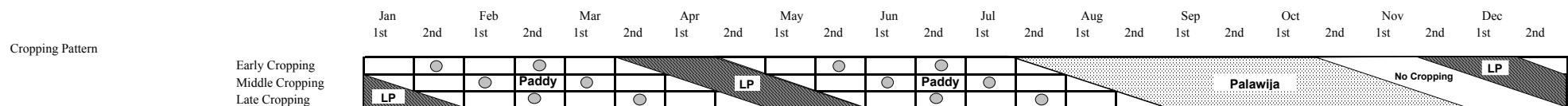
1 1 1  
Calculation of Net Field Water Requirement for Paddy (A) on

2001

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec			
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd		
<b>Cropping Pattern</b>																											
		<p>Early Cropping Middle Cropping Late Cropping</p>																									
<b>A. Land Preparation Requirement</b>																											
1. Land Preparation Intensity																											
Early Cropping																											
Middle Cropping																											
Late Cropping																											
Total																											
2. Land Preparation Requirement (mm/day/A)																											
3. Water Layer Replacement Intensity																											
4. Water Layer Replacement Requirement (mm/day/A)																											
5. Total Requirement for Land Preparation																											
I (mm/day)																											
II (mm/day)																											
<b>B. Crop Water Requirement</b>																											
1. Crop Intensity																											
Early Cropping																											
Middle Cropping																											
Late Cropping																											
Total																											
I																											
II																											
2. Crop Coefficient																											
Early Cropping																											
Middle Cropping																											
Late Cropping																											
Weighted average																											
I																											
II																											
3. Potential ETo (mm/day/A)																											
4. Consumptive Use, ETc (mm/day/A)																											
5. Percolation Loss (mm/day/A)																											
6. Crop Water Requirement (mm/day/A)																											
7. Crop water Requirement (mm/day)																											
C. Total A(5)+B(7)																											
I (mm/day)																											
II (mm/day)																											
D. Effective Rainfall (mm/day)																											
E. Net field Water Requirement, NFR (mm/day)																											
I																											
II																											
I (l/sec/ha)																											
II																											

Net Field Requirement for Water Balance Calculation in 2001 (2/7)

Calculation of Net Field Water Requirement for Palawija(A)



A. Crop Water Requirement

1.Crop Intensity																									
Early Cropping															1/6	1/3	1/3	1/3	1/3	1/3	1/3	1/6			
Middle Cropping																1/6	1/3	1/3	1/3	1/3	1/3	1/6			
Late Cropping																	1/6	1/3	1/3	1/3	1/3	1/3	1/6		
Total															1/6	1/2	5/6	1	1	1	5/6	1/2	1/6		
2.Crop Coefficient																									
Early Cropping															0.50	0.70	0.95	1.00	0.85	0.50	0.15				
Middle Cropping																0.50	0.70	0.95	1.00	0.85	0.50	0.15			
Late Cropping																	0.50	0.70	0.95	1.00	0.85	0.50	0.15		
Weighted average															0.50	0.63	0.76	0.88	0.93	0.78	0.57	0.38	0.15		
3.Potential ETo (mm/day/A)		3.83	3.83	3.97	3.97	4.15	4.15	4.34	4.34	4.20	4.20	3.97	3.97	4.21	4.21	4.84	4.84	5.22	5.22	5.35	5.35	4.77	4.77	4.00	4.00
4.Consumptive Use, ETc (mm/day/A)															2.11	3.07	3.68	4.61	4.87	4.19	3.05	1.83	0.72		
5.Rainfall (mm/day)		33.22	9.90	47.69	6.71	18.88	8.10	3.13	1.50	0.50	0.65	3.42	0.39	0.00	0.00	0.00	0.00	0.05	0.06	0.22	1.32	5.04	7.46	31.09	12.86
6.Effective Rainfall (mm/day/A)															0.00	0.00	0.00	0.05	0.06	0.19	0.93	1.83	0.72		
7.Crop water Requirement (mm/day/A)															2.11	3.07	3.68	4.56	4.81	4.00	2.12	0.00	0.00		
B.Net Field Water Requirement (mm/day)															0.35	1.53	3.07	4.56	4.81	4.00	1.77	0.00	0.00		
(l/sec/ha)															0.041	0.177	0.355	0.528	0.557	0.463	0.205	0.000	0.000		

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
Net Field Water Requirement for Paddy		0.000	0.147	0.000	0.412	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Net Field Water Requirement for Palawija		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.041	0.177	0.355	0.528	0.557	0.463	0.205	0.000	0.000	0.000
	100 I	0.000	0.147	0.000	0.412	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003
	100 II	0.000	0.000	0.000	0.000	0.000	0.000	0.451	0.949	1.041	0.939	0.573	0.924	0.685	0.476	0.116	0.039	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	100 III	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.041	0.177	0.355	0.528	0.557	0.463	0.205	0.000	0.000	0.000	0.000
<b>Total NWR</b> (l/s/ha)		0.000	0.147	0.000	0.412	0.000	0.000	0.451	0.949	1.041	0.939	0.573	0.924	0.685	0.516	0.293	0.393	0.528	0.557	0.463	0.205	0.000	0.000	0.000	0.003
<b>DR</b> (E=0.875*0.81)		0.000	0.207	0.000	0.581	0.000	0.000	0.636	1.339	1.469	1.325	0.809	1.304	0.966	0.728	0.414	0.555	0.745	0.786	0.653	0.289	0.000	0.000	0.000	0.004
	0.85 0.81	0.6885	0.000	0.213	0.000	0.598	0.000	0.655	1.378	1.512	1.364	0.832	1.342	0.995	0.750	0.426	0.571	0.767	0.809	0.672	0.297	0.000	0.000	0.000	0.004



Net Field Requirement for Water Balance Calculation in 2001 (4/7)

Calculation of Net Field Water Requirement for Palawija(B)

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
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<td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>2.42</td><td>3.07</td><td>3.97</td><td>4.61</td><td>4.99</td><td>4.19</td><td>2.72</td><td>1.83</td><td>0.60</td><td>0.60</td> </tr> <tr> <td colspan="2">5.Rainfall (mm/day)</td> <td>33.22</td><td>9.90</td><td>47.69</td><td>6.71</td><td>18.88</td><td>8.10</td><td>3.13</td><td>1.50</td><td>0.50</td><td>0.65</td><td>3.42</td><td>0.39</td><td>0.00</td><td>0.00</td><td>0.00</td><td>0.00</td><td>0.05</td><td>0.06</td><td>0.22</td><td>1.32</td><td>5.04</td><td>7.46</td><td>31.09</td><td>12.86</td> </tr> <tr> <td colspan="2">6.Effective Rainfall (mm/day/A)</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>0.00</td><td>0.00</td><td>0.05</td><td>0.06</td><td>0.20</td><td>1.00</td><td>2.72</td><td>1.83</td><td>0.60</td><td>0.60</td> </tr> <tr> <td colspan="2">7.Crop water Requirement (mm/day)</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>2.42</td><td>3.07</td><td>3.92</td><td>4.55</td><td>4.79</td><td>3.19</td><td>0.00</td><td>0.00</td><td>0.00</td><td>0.00</td> </tr> <tr> <td colspan="2">B.Net Field Water Requirement (mm/day)</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>0.40</td><td>1.53</td><td>3.27</td><td>4.55</td><td>4.79</td><td>3.19</td><td>0.00</td><td>0.00</td><td>0.00</td><td>0.00</td> </tr> <tr> <td colspan="2">(l/sec/ha)</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>0.047</td><td>0.177</td><td>0.378</td><td>0.527</td><td>0.555</td><td>0.369</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td> </tr> <tr> <td colspan="2"></td> <td colspan="24">III</td> </tr> <tr> <td colspan="2"></td> 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<td>0.000</td><td>0.242</td><td>0.000</td><td>0.306</td><td>0.000</td><td>0.024</td><td>0.227</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td> </tr> <tr> <td colspan="2">Net Field Water Requirement for Palawija</td> <td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.583</td><td>1.019</td><td>1.030</td><td>0.688</td><td>0.818</td><td>0.984</td><td>0.685</td><td>0.499</td><td>0.116</td><td>0.035</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td> </tr> <tr> <td colspan="2">  100 I</td> <td>0.000</td><td>0.242</td><td>0.000</td><td>0.306</td><td>0.000</td><td>0.024</td><td>0.227</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td> </tr> <tr> <td colspan="2">  100 II</td> <td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.583</td><td>1.019</td><td>1.030</td><td>0.688</td><td>0.818</td><td>0.984</td><td>0.685</td><td>0.499</td><td>0.116</td><td>0.035</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td> </tr> <tr> <td colspan="2">  100 III</td> 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Requirement																										1.Crop Intensity																										Early Cropping																										Middle Cropping																										Late Cropping																										Total																										2.Crop Coefficient																										Early Cropping																										Middle Cropping																										Late Cropping																										Weighted average																										3.Potential ETo (mm/day/A)		3.83	3.83	3.97	3.97	4.15	4.15	4.34	4.34	4.20	4.20	3.97	3.97	4.21	4.21	4.84	4.84	5.22	5.22	5.35	5.35	4.77	4.77	4.00	4.00	4.Consumptive Use, ETc (mm/day/A)																2.42	3.07	3.97	4.61	4.99	4.19	2.72	1.83	0.60	0.60	5.Rainfall (mm/day)		33.22	9.90	47.69	6.71	18.88	8.10	3.13	1.50	0.50	0.65	3.42	0.39	0.00	0.00	0.00	0.00	0.05	0.06	0.22	1.32	5.04	7.46	31.09	12.86	6.Effective Rainfall (mm/day/A)																0.00	0.00	0.05	0.06	0.20	1.00	2.72	1.83	0.60	0.60	7.Crop water Requirement (mm/day)																2.42	3.07	3.92	4.55	4.79	3.19	0.00	0.00	0.00	0.00	B.Net Field Water Requirement (mm/day)																0.40	1.53	3.27	4.55	4.79	3.19	0.00	0.00	0.00	0.00	(l/sec/ha)																0.047	0.177	0.378	0.527	0.555	0.369	0.000	0.000	0.000	0.000			III																										<table border="1"> <thead> <tr> <th colspan="2"></th> <th colspan="2">Jan</th> <th colspan="2">Feb</th> <th colspan="2">Mar</th> <th colspan="2">Apr</th> <th colspan="2">May</th> <th colspan="2">Jun</th> <th colspan="2">Jul</th> <th colspan="2">Aug</th> <th colspan="2">Sep</th> <th colspan="2">Oct</th> <th colspan="2">Nov</th> <th colspan="2">Dec</th> </tr> <tr> <th colspan="2"></th> <th>1st</th><th>2nd</th><th>1st</th><th>2nd</th><th>1st</th><th>2nd</th><th>1st</th><th>2nd</th><th>1st</th><th>2nd</th><th>1st</th><th>2nd</th><th>1st</th><th>2nd</th><th>1st</th><th>2nd</th><th>1st</th><th>2nd</th><th>1st</th><th>2nd</th><th>1st</th><th>2nd</th><th>1st</th><th>2nd</th> </tr> </thead> <tbody> <tr> 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Paddy		0.000	0.242	0.000	0.306	0.000	0.024	0.227	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Net Field Water Requirement for Palawija		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.583	1.019	1.030	0.688	0.818	0.984	0.685	0.499	0.116	0.035	0.000	0.000	0.000	0.000	0.000	0.000	0.000	100 I		0.000	0.242	0.000	0.306	0.000	0.024	0.227	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	100 II		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.583	1.019	1.030	0.688	0.818	0.984	0.685	0.499	0.116	0.035	0.000	0.000	0.000	0.000	0.000	0.000	0.000	100 III		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.047	0.177	0.378	0.527	0.555	0.369	0.000	0.000	0.000	0.000	<b>Total NWR</b> (l/s/ha)		0.000	0.242	0.000	0.306	0.000	0.024	0.227	0.583	1.019	1.030	0.688	0.818	0.984	0.685	0.545	0.293	0.413	0.527	0.555	0.369	0.000	0.000	0.000	0.000	<b>DR</b> (E=0.875*0.81)		0.000	0.341	0.000	0.432	0.000	0.034	0.320	0.823	1.437	1.453	0.970	1.155	1.388	0.966	0.770	0.414	0.582	0.744	0.782	0.521	0.000	0.000	0.000	0.000	0.85      0.81      0.6885		0.000	0.352	0.000	0.445	0.000	0.035	0.329	0.847	1.480	1.495	0.999	1.189	1.429	0.995	0.792	0.426	0.600	0.765	0.805	0.537	0.000	0.000	0.000	0.000
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3.Potential ETo (mm/day/A)		3.83	3.83	3.97	3.97	4.15	4.15	4.34	4.34	4.20	4.20	3.97	3.97	4.21	4.21	4.84	4.84	5.22	5.22	5.35	5.35	4.77	4.77	4.00	4.00																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
4.Consumptive Use, ETc (mm/day/A)																2.42	3.07	3.97	4.61	4.99	4.19	2.72	1.83	0.60	0.60																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
5.Rainfall (mm/day)		33.22	9.90	47.69	6.71	18.88	8.10	3.13	1.50	0.50	0.65	3.42	0.39	0.00	0.00	0.00	0.00	0.05	0.06	0.22	1.32	5.04	7.46	31.09	12.86																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
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<td>0.000</td><td>0.242</td><td>0.000</td><td>0.306</td><td>0.000</td><td>0.024</td><td>0.227</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td> </tr> <tr> <td colspan="2">Net Field Water Requirement for Palawija</td> <td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.583</td><td>1.019</td><td>1.030</td><td>0.688</td><td>0.818</td><td>0.984</td><td>0.685</td><td>0.499</td><td>0.116</td><td>0.035</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td> </tr> <tr> <td colspan="2">  100 I</td> 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<td>0.000</td><td>0.341</td><td>0.000</td><td>0.432</td><td>0.000</td><td>0.034</td><td>0.320</td><td>0.823</td><td>1.437</td><td>1.453</td><td>0.970</td><td>1.155</td><td>1.388</td><td>0.966</td><td>0.770</td><td>0.414</td><td>0.582</td><td>0.744</td><td>0.782</td><td>0.521</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td> </tr> <tr> <td colspan="2">  0.85      0.81      0.6885</td> <td>0.000</td><td>0.352</td><td>0.000</td><td>0.445</td><td>0.000</td><td>0.035</td><td>0.329</td><td>0.847</td><td>1.480</td><td>1.495</td><td>0.999</td><td>1.189</td><td>1.429</td><td>0.995</td><td>0.792</td><td>0.426</td><td>0.600</td><td>0.765</td><td>0.805</td><td>0.537</td><td>0.000</td><td>0.000</td><td>0.000</td><td>0.000</td> </tr> </tbody> </table>																										Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec				1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	Net Field Water Requirement for Paddy		0.000	0.242	0.000	0.306	0.000	0.024	0.227	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Net Field Water Requirement for Palawija		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.583	1.019	1.030	0.688	0.818	0.984	0.685	0.499	0.116	0.035	0.000	0.000	0.000	0.000	0.000	0.000	0.000	100 I		0.000	0.242	0.000	0.306	0.000	0.024	0.227	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	100 II		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.583	1.019	1.030	0.688	0.818	0.984	0.685	0.499	0.116	0.035	0.000	0.000	0.000	0.000	0.000	0.000	0.000	100 III		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.047	0.177	0.378	0.527	0.555	0.369	0.000	0.000	0.000	0.000	<b>Total NWR</b> (l/s/ha)		0.000	0.242	0.000	0.306	0.000	0.024	0.227	0.583	1.019	1.030	0.688	0.818	0.984	0.685	0.545	0.293	0.413	0.527	0.555	0.369	0.000	0.000	0.000	0.000	<b>DR</b> (E=0.875*0.81)		0.000	0.341	0.000	0.432	0.000	0.034	0.320	0.823	1.437	1.453	0.970	1.155	1.388	0.966	0.770	0.414	0.582	0.744	0.782	0.521	0.000	0.000	0.000	0.000	0.85      0.81      0.6885		0.000	0.352	0.000	0.445	0.000	0.035	0.329	0.847	1.480	1.495	0.999	1.189	1.429	0.995	0.792	0.426	0.600	0.765	0.805	0.537	0.000	0.000	0.000	0.000																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
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Net Field Water Requirement for Paddy		0.000	0.242	0.000	0.306	0.000	0.024	0.227	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
Net Field Water Requirement for Palawija		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.583	1.019	1.030	0.688	0.818	0.984	0.685	0.499	0.116	0.035	0.000	0.000	0.000	0.000	0.000	0.000	0.000																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
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<b>Total NWR</b> (l/s/ha)		0.000	0.242	0.000	0.306	0.000	0.024	0.227	0.583	1.019	1.030	0.688	0.818	0.984	0.685	0.545	0.293	0.413	0.527	0.555	0.369	0.000	0.000	0.000	0.000																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
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Net Field Requirement for Water Balance Calculation in 2001 (5/7)

[Kampili Rotation C ]

Calculation of Net Field Water Requirement for Paddy (C) on

2001

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec			
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd		
Cropping Pattern																											
Early Cropping																											
Middle Cropping																											
Late Cropping																											
A.Land Preparation Requirement																											
1.Land Preparation Intensity																											
Early Cropping		1/3	1/6							1/6	1/3	1/6														1/6	
Middle Cropping		1/6	1/3	1/6						1/6	1/3	1/6															
Late Cropping			1/6	1/3	1/6						1/6	1/3	1/6														
Total		1/2	2/3	1/2	1/6					1/6	1/2	2/3	1/2	1/6												1/6	
2.Land Preparation Requirement (mm/day/A)	(mm/day)	11.82	11.82	11.92	11.92	12.04	12.04	12.17	12.17	12.08	12.08	11.92	11.92	12.08	12.08	12.52	12.52	12.80	12.80	12.89	12.89	12.48	12.48	11.94	11.94		
3.Water Layer Replacement Intensity				1/3	1/3	2/3	1/3	1/3					1/3	1/3	2/3	1/3	1/3										
4.Water Layer Replacement Requirement	(mm/day/A)			3.33	3.33	3.33	3.33	3.33				3.33	3.33	3.33	3.33	3.33											
	(mm/day)			1.11	1.11	2.22	1.11	1.11				1.11	1.11	2.22	1.11	1.11											
5.Total Requirement for Land Preparation	(mm/day)	5.91	7.88	5.96	3.10	1.11	2.22	1.11	1.11	2.03	6.04	8.05	5.96	3.10	1.11	2.22	1.11	1.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.99	
B. Crop Water Requirement																											
1.Crop Intensity		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec														
Early Cropping			1/6	1/3	1/3	1/3	1/3	1/6	1/6	1/3	1/3	1/3	1/6														
Middle Cropping			1/6	1/3	1/3	1/3	1/3	1/6	1/6	1/3	1/3	1/3	1/6														
Late Cropping				1/6	1/3	1/3	1/3	1/3	1/6	1/6	1/3	1/3	1/3	1/3	1/3	1/3	1/3	1/6									
Total	I		1/6	1/2	5/6	1	1	1	5/6	1/2	1/6	1/6	1/6	1/2	5/6	1	1	1	5/6	1/2	1/6						
	II																										
2.Crop Coefficient																											
Early Cropping			1.10	1.10	1.05	1.05	0.95	0.00	0.00	1.10	1.10	1.05	1.05	0.95	0.00	0.00											
Middle Cropping			1.10	1.10	1.05	1.05	0.95	0.00	0.00	1.10	1.10	1.05	1.05	0.95	0.00	0.00											
Late Cropping				1.10	1.10	1.05	1.05	0.95	0.00	0.00	1.10	1.10	1.05	1.05	0.95	0.00	0.00										
Weighted average	I		1.10	1.10	1.08	1.07	1.02	0.67	0.38	0.00	0.00	1.10	1.10	1.08	1.07	1.02	0.67	0.38	0.00	0.00							
	II																										
3.Potential ETo (mm/day/A)		3.83	3.83	3.97	3.97	4.15	4.15	4.34	4.34	4.20	4.20	3.97	3.97	4.21	4.21	4.84	4.84	5.22	5.22	5.35	5.35	4.77	4.77	4.00	4.00		
4.Consumptive Use, ETc (mm/day/A)		0.00	4.21	4.37	4.29	4.43	4.22	2.89	1.65	0.00	0.00	4.62	4.37	4.29	4.49	4.28	3.23	1.84	0.00								
	II																										
5.Percolation Loss (mm/day/A)		2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00								
6.Crop Water Requirement (mm/day/A)		2.00	6.21	6.37	6.29	6.43	6.22	4.89	3.65	2.00	2.00	6.62	6.37	6.29	6.49	6.28	5.23	3.84	2.00	2.00	0.00	0.00	0.00	0.00	0.00		
	II																										
7.Crop water Requirement (mm/day)		0.00	1.04	3.18	5.24	6.43	6.22	4.89	3.04	1.00	0.33	1.10	3.18	5.24	6.49	6.28	5.23	3.20	1.00	0.33	0.00	0.00	0.00	0.00	0.00		
	II																										
C.Total A(5)+B(7)	I (mm/day)	5.91	8.92	9.14	8.34	7.54	8.44	6.00	4.15	1.00	0.33	1.10	3.18	5.24	6.49	6.28	5.23	3.20	1.00	0.33	0.00	0.00	0.00	0.00	0.00	1.99	
	II																										
D.Effective Rainfall (mm/day)		23.25	6.93	33.38	4.70	13.21	5.67	2.19	1.05	0.35	0.45	2.39	0.27	0.00	0.00	0.00	0.00	0.03	0.04	0.15	0.93	3.53	5.22	21.76	9.00		
E.Net field Water Requirement, NFR (mm/day)		-17.34	1.99	-24.24	3.64	-5.68	2.77	3.81	3.10	0.65	-0.12	0.98	5.69	8.70	6.75	8.06	7.60	8.50	6.34	4.31	0.97	0.29					
	I	0.00	1.99	0.00	3.64	0.00	2.77	3.81	3.10	0.65	0.00	0.98	5.69	8.70	6.75	8.06	7.60	8.50	6.34	4.31	0.97	0.29				0.00	
	II																										
	I (l/sec/ha)	0.000	0.230	0.000	0.421	0.000	0.321	0.441	0.359	0.075	0.000	0.114	0.658	1.007	0.781	0.933	0.880	0.984	0.733	0.499	0.112	0.034				0.000	
	II																										



Net Field Requirement for Water Balance Calculation in 2001 (6/7)

Calculation of Net Field Water Requirement for Palawija(C)

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
Cropping Pattern	Early Cropping																								
	Middle Cropping																								
	Late Cropping																								
	No Cropping																								
A.Crop Water Requirement																									
1.Crop Intensity																									
Early Cropping																									
Middle Cropping																									
Late Cropping																									
Total																									
2.Crop Coefficient																									
Early Cropping																									
Middle Cropping																									
Late Cropping																									
Weighted average																									
3.Potential ETo (mm/day/A)																									
4.Consumptive Use, ETc (mm/day/A)																									
5.Rainfall (mm/day)																									
6.Effective Rainfall (mm/day/A)																									
7.Crop water Requirement (mm/day/A)																									
B.Net Field Water Requirement (mm/day)																									
(l/sec/ha)																									
III																									
		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
Net Field Water Requirement for Paddy		0.000	0.230	0.000	0.421	0.000	0.321	0.441	0.359	0.075	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Net Field Water Requirement for Palawija		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.047	0.189	0.377	0.524	0.456	0.051	0.000	0.000
100 I		0.000	0.230	0.000	0.421	0.000	0.321	0.441	0.359	0.075	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100 II		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.114	0.658	1.007	0.781	0.933	0.880	0.984	0.733	0.499	0.112	0.034	0.000	0.000	0.000	0.000	0.000	0.000
100 III		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.047	0.189	0.377	0.524	0.456	0.051	0.000	0.000	0.000
<b>Total NWR</b> (l/s/ha)		0.000	0.230	0.000	0.421	0.000	0.321	0.441	0.473	0.733	1.007	0.781	0.933	0.880	0.984	0.733	0.545	0.301	0.411	0.524	0.456	0.051	0.000	0.000	0.000
<b>DR</b> (E=0.875*0.81)		0.000	0.325	0.000	0.594	0.000	0.453	0.622	0.667	1.034	1.421	1.102	1.317	1.241	1.388	1.035	0.770	0.424	0.580	0.739	0.644	0.072	0.000	0.000	0.000
0.85 0.81 0.6885		0.000	0.335	0.000	0.611	0.000	0.466	0.640	0.687	1.064	1.463	1.135	1.355	1.278	1.429	1.065	0.792	0.437	0.597	0.761	0.663	0.074	0.000	0.000	0.000

Net Field Requirement for Water Balance Calculation in 2001 (7/7)

(E=0.875*0.81)	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
<b>Golongan A</b>	0.000	0.207	0.000	0.581	0.000	0.000	0.636	1.339	1.469	1.325	0.809	1.304	0.966	0.728	0.414	0.555	0.745	0.786	0.653	0.289	0.000	0.000	0.000	0.004
<b>Golongan B</b>	0.000	0.341	0.000	0.432	0.000	0.034	0.320	0.823	1.437	1.453	0.970	1.155	1.388	0.966	0.770	0.414	0.582	0.744	0.782	0.521	0.000	0.000	0.000	0.000
<b>Golongan C</b>	0.000	0.325	0.000	0.594	0.000	0.453	0.622	0.667	1.034	1.421	1.102	1.317	1.241	1.388	1.035	0.770	0.424	0.580	0.739	0.644	0.072	0.000	0.000	0.000
average	0.000	0.291	0.000	0.535	0.000	0.162	0.526	0.943	1.313	1.400	0.960	1.258	1.199	1.028	0.739	0.579	0.584	0.703	0.725	0.485	0.024	0.000	0.000	0.001

(E=0.85*0.81)	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
<b>Golongan A</b>	0.000	0.213	0.000	0.598	0.000	0.000	0.655	1.378	1.512	1.364	0.832	1.342	0.995	0.750	0.426	0.571	0.767	0.809	0.672	0.297	0.000	0.000	0.000	0.004
<b>Golongan B</b>	0.000	0.352	0.000	0.445	0.000	0.035	0.329	0.847	1.480	1.495	0.999	1.189	1.429	0.995	0.792	0.426	0.600	0.765	0.805	0.537	0.000	0.000	0.000	0.000
<b>Golongan C</b>	0.000	0.335	0.000	0.611	0.000	0.466	0.640	0.687	1.064	1.463	1.135	1.355	1.278	1.429	1.065	0.792	0.437	0.597	0.761	0.663	0.074	0.000	0.000	0.000
average	0.000	0.300	0.000	0.551	0.000	0.167	0.541	0.971	1.352	1.441	0.989	1.295	1.234	1.058	0.761	0.596	0.601	0.724	0.746	0.499	0.025	0.000	0.000	0.001

Summary Calculation of NFR (l/s/ha)

	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
<b>Golongan A</b>	0.00	0.15	0.00	0.41	0.00	0.00	0.45	0.95	1.04	0.94	0.57	0.92	0.68	0.52	0.29	0.39	0.53	0.56	0.46	0.20	0.00	0.00	0.00	0.00
<b>Golongan B</b>	0.00	0.24	0.00	0.31	0.00	0.02	0.23	0.58	1.02	1.03	0.69	0.82	0.98	0.68	0.55	0.29	0.41	0.53	0.55	0.37	0.00	0.00	0.00	0.00
<b>Golongan C</b>	0.00	0.23	0.00	0.42	0.00	0.32	0.44	0.47	0.73	1.01	0.78	0.93	0.88	0.98	0.73	0.55	0.30	0.41	0.52	0.46	0.05	0.00	0.00	0.00

2001

	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec		
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	
I : W.Pad	A	0.00	0.15	0.00	0.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	B	0.00	0.24	0.00	0.31	0.00	0.02	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	C	0.00	0.23	0.00	0.42	0.00	0.32	0.44	0.36	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	av	0.00	0.21	0.00	0.38	0.00	0.12	0.22	0.12	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
II : D.Pad	A	0.00	0.00	0.00	0.00	0.00	0.00	0.45	0.95	1.04	0.94	0.57	0.92	0.68	0.48	0.12	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	B	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58	1.02	1.03	0.69	0.82	0.98	0.68	0.50	0.12	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	C	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.66	1.01	0.78	0.93	0.88	0.98	0.73	0.50	0.11	0.03	0.00	0.00	0.00	0.00	0.00	0.00
	av	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.55	0.91	0.99	0.68	0.89	0.85	0.71	0.45	0.22	0.05	0.01	0.00	0.00	0.00	0.00	0.00	0.00
III : D.Pal	A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.18	0.35	0.53	0.56	0.46	0.20	0.00	0.00	0.00	0.00
	B	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.18	0.38	0.53	0.55	0.37	0.00	0.00	0.00	0.00
	C	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.19	0.38	0.52	0.46	0.05	0.00	0.00	0.00	0.00
	av	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.07	0.19	0.36	0.49	0.51	0.34	0.02	0.00	0.00	0.00	0.00
I : W.Pad		0.00	0.21	0.00	0.38	0.00	0.12	0.22	0.12	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
II : D.Pad		0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.55	0.91	0.99	0.68	0.89	0.85	0.71	0.45	0.22	0.05	0.01	0.00	0.00	0.00	0.00	0.00	0.00
III : D.Pal		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.07	0.19	0.36	0.49	0.51	0.34	0.02	0.00	0.00	0.00	0.00

2001

I : W.Pad	<b>100</b>	0.000	0.206	0.000	0.380	0.000	0.115	0.223	0.120	0.025	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
II : D.Pad	<b>100</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.150	0.549	0.906	0.992	0.681	0.892	0.849	0.715	0.449	0.218	0.049	0.011	0.000	0.000	0.000	0.000	0.000	0.000
III : D.Pal	<b>100</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.014	0.075	0.193	0.365	0.487	0.514	0.344	0.017	0.000	0.000	0.000
total		0.000	0.206	0.000	0.380	0.000	0.115	0.373	0.668	0.931	0.992	0.681	0.892	0.849	0.728	0.524	0.411	0.414	0.498	0.514	0.344	0.017	0.000	0.000	0.001
		0.10318		0.18975		0.05753		0.52058		0.96144		0.78627		0.78887		0.46732		0.45613		0.42867		0.00854		0.0005	

Year : 2001

N.F.R. (l/s/ha)

	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
	0.000	0.206	0.000	0.380	0.000	0.115	0.373	0.668	0.931	0.992	0.681	0.892	0.849	0.728	0.524	0.411	0.414	0.498	0.514	0.344	0.017	0.000	0.000	0.001

***Part-III***

***TABLES OF DAILY RAINFALL RECORD***

**Table Daily Rainfall**

Station : **Jonggoa (Telemetric)**  
 Year : **1999**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	129	1	17	15	0	0	0	0	0	0	14	20
2	171	0	0	12	0	0	0	0	0	6	15	67
3	48	0	10	5	0	0	0	0	0	0	8	6
4	0	0	0	10	0	0	0	0	0	0	33	21
5	24	0	6	4	0	0	0	0	0	0	21	7
6	11	0	11	9	0	0	0	0	0	2	0	6
7	17	0	10	0	0	0	0	0	5	0	15	11
8	1	0	13	0	0	0	0	0	0	9	4	38
9	5	0	13	0	0	0	0	0	0	0	0	78
10	0	0	13	47	0	0	0	0	0	58	5	46
11	18	0	1	11	0	0	0	0	0	10	6	65
12	0	3	0	0	0	0	0	0	0	44	8	50
13	0	36	13	0	0	0	0	0	0	0	4	34
14	2	29	86	1	0	0	0	0	0	2	0	1
15	0	24	0	24	0	0	0	0	0	0	3	6
16	0	7	82	0	0	0	0	0	0	0	12	3
17	0	14	0	0	0	0	0	0	0	0	20	15
18	0	25	0	0	0	0	0	0	0	0	39	14
19	0	51	4	0	0	0	0	0	0	0	1	8
20	20	33	20	0	0	0	0	0	0	6	73	23
21	44	22	25	0	0	0	0	0	0	31	39	10
22	24	23	19	0	0	0	0	2	0	3	0	59
23	54	0	0	0	0	0	0	1	0	15	1	0
24	44	20	0	0	0	0	0	0	0	0	3	64
25	88	30	11	0	0	0	0	0	0	0	17	61
26	130	0	2	0	0	0	0	0	0	3	14	3
27	51	8	11	0	0	0	0	0	0	1	3	3
28	26	30	13	0	0	0	0	0	0	0	0	4
29	23		91	0	0	0	0	0	0	12	2	22
30	46		36	0	0	0	0	0	0	14	0	23
31	43		14		0		0	0		8		0

<b>Monthly</b>	1019	356	521	138	0	0	0	3	5	224	360	768
<b>Rainy Days</b>	22	16	23	10	0	0	0	2	1	16	24	29
<b>Max.</b>	171	51	91	47	0	0	0	2	5	58	73	78
<b>Average</b>	33	13	17	5	0	0	0	0	0	7	12	25

<b>Annual</b> :	3394	<b>No.</b> :	143	<b>Max.</b> :	171	<b>Ave.</b> :	9
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	372	1	33	46	0	0	0	0	0	6	91	121
2	34	0	60	56	0	0	0	0	5	69	24	179
3	20	92	100	36	0	0	0	0	0	56	21	156
4	20	130	106	0	0	0	0	0	0	6	145	63
5	254	95	55	0	0	0	0	3	0	49	60	194
6	319	38	167	0	0	0	0	0	0	38	19	55

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	426	93	193	138	0	0	0	0	5	131	136	456
<b>2nd</b>	593	263	328	0	0	0	0	3	0	93	224	312

**Table Daily Rainfall**

Station : **Jonggoa (Telemetric)**  
 Year : **2000**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	26	2	0	2	13	71	0	0	0	0	0	21
2	22	10	0	9	0	20	0	0	1	0	31	2
3	7	4	0	15	0	16	0	0	0	0	0	60
4	14	11	0	83	0	0	3	0	0	0	0	73
5	3	2	1	14	3	0	4	0	0	0	39	45
6	11	11	1	0	0	0	0	0	0	0	25	36
7	2	7	0	15	0	0	2	2	0	0	0	20
8	119	16	13	1	0	5	0	0	0	0	17	7
9	0	25	0	1	23	0	0	0	0	0	26	0
10	8	0	20	1	0	39	0	0	0	0	0	0
11	81	9	0	36	0	2	5	0	0	0	4	0
12	1	0	2	3	0	0	8	4	0	62	2	15
13	8	0	54	5	4	0	1	0	0	0	37	6
14	7	0	23	0	0	18	0	0	0	11	2	4
15	0	1	40	0	18	42	0	8	0	49	16	12
16	0	0	27	3	2	42	0	0	0	4	9	36
17	1	6	1	11	13	0	0	26	0	5	4	0
18	188	33	11	0	24	0	0	0	0	13	5	6
19	16	51	5	15	0	0	0	0	0	0	43	0
20	41	33	43	1	0	21	0	0	0	33	11	12
21	0	12	19	1	0	2	0	0	0	3	9	39
22	0	3	15	0	2	0	0	0	0	53	2	4
23	5	0	54	31	19	1	0	0	0	18	44	0
24	13	10	2	3	0	0	0	0	0	10	52	17
25	30	52	2	7	9	0	0	0	0	29	1	5
26	20	100	3	1	4	6	0	0	0	41	74	0
27	3	0	33	1	4	0	0	0	0	0	2	30
28	1	0	40	6	0	4	0	0	2	1	8	2
29	40	0	35	10	0	6	0	0	0	0	13	33
30	73		39	6	1	0	0	0	0	0	61	11
31	65		1		0		4	0		19		0

<b>Monthly</b>	805	398	484	281	139	295	27	40	3	351	537	496
<b>Rainy Days</b>	26	20	24	25	14	15	7	4	2	15	25	23
<b>Max.</b>	188	100	54	83	24	71	8	26	2	62	74	73
<b>Average</b>	26	14	16	9	4	10	1	1	0	11	18	16

<b>Annual</b> :	3856	<b>No.</b> :	200	<b>Max.</b> :	188	<b>Ave.</b> :	11
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	72	29	1	123	16	107	7	0	1	0	70	201
2	140	59	34	18	23	44	2	2	0	0	68	63
3	97	10	119	44	22	62	14	12	0	122	61	37
4	246	123	87	30	39	63	0	26	0	55	72	54
5	48	77	92	42	30	3	0	0	0	113	108	65
6	202	100	151	24	9	16	4	0	2	61	158	76

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	309	98	154	185	61	213	23	14	1	122	199	301
<b>2nd</b>	496	300	330	96	78	82	4	26	2	229	338	195

**Table Daily Rainfall**

Station : **Jonggoa (Telemetric)**  
 Year : **2001**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	24	0	20	24	0	0	0	0	2	0	29
2	37	51	7	16	0	0	0	0	0	0	0	81
3	59	47	35	21	0	9	0	0	0	7	19	26
4	1	80	171	5	0	12	0	0	0	0	3	35
5	34	66	8	85	0	1	0	0	0	0	0	19
6	12	68	28	2	0	1	0	0	0	0	26	33
7	5	76	31	25	0	2	0	0	0	0	13	12
8	36	88	0	1	0	13	0	0	0	0	24	36
9	48	120	0	2	0	4	0	0	0	0	15	7
10	117	21	0	26	0	50	0	0	0	0	28	15
11	70	2	6	53	0	0	0	0	0	0	0	21
12	59	0	19	11	0	12	0	0	0	0	50	6
13	11	10	18	5	0	0	0	4	0	54	1	0
14	31	32	0	10	0	2	0	0	0	23	1	0
15	13	0	15	0	0	0	0	0	0	0	0	0
16	14	42	1	1	0	0	29	0	0	0	16	1
17	1	64	37	2	0	0	3	0	0	48	0	5
18	2	31	25	1	0	0	0	0	0	5	0	21
19	15	22	2	6	0	0	0	0	0	1	0	0
20	2	27	3	0	0	21	0	0	0	0	0	4
21	11	16	0	0	0	2	0	0	0	19	0	17
22	0	0	0	8	0	0	0	0	0	2	0	20
23	9	0	0	2	2	0	1	0	3	43	0	1
24	3	0	7	33	0	0	0	0	0	0	0	7
25	0	15	0	1	0	0	0	0	0	0	0	3
26	18	0	1	1	0	0	0	0	0	0	3	12
27	2	0	1	0	0	0	0	0	0	0	0	16
28	25	0	1	52	0	1	0	0	0	0	0	25
29	10		24	31	2	1	0	0	0	0	13	24
30	33		0	44	3	0	0	0	0	0	1	4
31	24		0		3		0	0		0		8

<b>Monthly</b>	702	902	440	464	34	131	33	4	3	204	213	488
<b>Rainy Days</b>	28	20	20	26	5	14	3	1	1	10	14	27
<b>Max.</b>	117	120	171	85	24	50	29	4	3	54	50	81
<b>Average</b>	23	32	14	15	1	4	1	0	0	7	7	16

<b>Annual</b> :	3618	<b>No.</b> :	169	<b>Max.</b> :	171	<b>Ave.</b> :	10
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	131	268	221	147	24	22	0	0	0	9	22	190
2	218	373	59	56	0	70	0	0	0	0	106	103
3	184	44	58	79	0	14	0	4	0	77	52	27
4	34	186	68	10	0	21	32	0	0	54	16	31
5	23	31	7	44	2	2	1	0	3	64	0	48
6	112	0	27	128	8	2	0	0	0	0	17	89

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	533	685	338	282	24	106	0	4	0	86	180	320
<b>2nd</b>	169	217	102	182	10	25	33	0	3	118	33	168

**Table Daily Rainfall**

Station : **Jonggoa (Telemetric)**  
 Year : **2002**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	108	12	0	0	0	0	0	0	0	0	0	14
2	58	12	0	0	0	0	0	0	0	0	0	0
3	28	4	0	0	0	0	0	0	0	0	0	1
4	12	2	0	0	0	0	1	0	0	0	0	16
5	10	17	0	0	0	9	0	0	0	0	0	11
6	2	1	0	0	0	0	0	0	0	0	0	2
7	6	11	0	0	0	0	0	0	0	0	0	0
8	69	7	0	0	0	1	0	0	0	0	0	1
9	6	0	0	0	0	0	0	0	0	0	0	9
10	1	7	0	0	0	0	0	0	0	0	0	4
11	0	0	0	0	0	0	0	0	0	0	1	50
12	1	20	0	0	0	4	0	0	0	0	11	11
13	10	29	0	0	0	3	0	0	0	0	0	10
14	5	0	0	0	0	0	0	0	0	0	0	48
15	8	0	0	0	0	0	0	0	0	0	0	1
16	3	0	0	0	0	0	0	0	0	0	13	25
17	23	0	0	0	0	1	0	0	0	0	0	0
18	9	0	0	0	0	0	0	0	0	0	0	0
19	1	0	0	0	0	0	0	0	0	0	0	0
20	18	0	0	0	0	0	0	0	0	0	62	34
21	34	0	0	0	0	26	0	0	0	0	0	43
22	6	0	0	0	0	0	0	0	0	1	3	19
23	4	0	0	0	0	14	0	0	0	0	4	11
24	2	0	0	0	0	0	0	0	0	0	3	15
25	2	0	0	0	0	24	0	0	0	0	13	33
26	0	0	0	0	0	0	0	0	0	0	72	26
27	4	0	0	0	0	0	0	0	0	0	100	38
28	0	0	0	0	0	0	0	0	0	0	0	44
29	27		0	0	0	0	0	0	0	0	77	16
30	2		0	0	0	0	0	0	0	0	29	17
31	5		0		0		0	0		0		7

<b>Monthly</b>	464	122	0	0	0	82	1	0	0	1	388	506
<b>Rainy Days</b>	28	11	0	0	0	8	1	0	0	1	12	26
<b>Max.</b>	108	29	0	0	0	26	1	0	0	1	100	50
<b>Average</b>	15	4	0	0	0	3	0	0	0	0	13	16

<b>Annual</b> :	1564	<b>No.</b> :	87	<b>Max.</b> :	108	<b>Ave.</b> :	4
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	216	47	0	0	0	9	1	0	0	0	0	42
2	84	26	0	0	0	1	0	0	0	0	0	16
3	24	49	0	0	0	7	0	0	0	0	12	120
4	54	0	0	0	0	1	0	0	0	0	75	59
5	48	0	0	0	0	64	0	0	0	1	23	121
6	38	0	0	0	0	0	0	0	0	0	278	148

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	324	122	0	0	0	17	1	0	0	0	12	178
<b>2nd</b>	140	0	0	0	0	65	0	0	0	1	376	328

**Table Daily Rainfall**

Station : **Jonggoa (Telemetric)**  
 Year : **2003**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	23	9	0	2	2	0	0	0	0	20	0	0
2	84	18	0	0	0	0	0	0	0	0	0	17
3	34	8	0	0	4	0	0	0	0	0	0	6
4	43	1	0	0	42	0	0	0	0	0	0	18
5	3	12	47	0	6	0	0	0	0	0	0	6
6	19	7	0	13	3	0	0	0	0	0	3	10
7	2	10	18	0	0	0	6	0	0	29	0	25
8	1	63	0	0	2	0	0	0	0	2	0	0
9	17	2	9	29	0	0	1	0	0	0	7	23
10	70	31	28	2	0	3	4	0	0	9	0	7
11	53	50	8	1	17	0	0	0	0	0	9	1
12	93	0	2	20	0	0	0	52	0	0	0	14
13	115	24	1	0	0	0	0	2	0	0	0	52
14	46	6	3	0	0	0	0	0	0	9	0	11
15	64	11	11	2	0	0	0	0	9	0	1	26
16	16	53	0	5	0	0	0	0	5	0	0	7
17	3	57	17	0	0	1	0	0	0	0	0	10
18	3	91	31	1	0	5	0	0	0	0	28	32
19	34	145	1	4	0	0	0	0	0	0	2	123
20	0	13	0	0	0	1	0	0	2	0	4	58
21	37	0	0	4	0	4	0	0	0	0	10	133
22	1	1	0	1	0	0	0	0	0	0	40	72
23	18	8	0	5	0	9	0	0	0	0	10	118
24	0	1	15	0	0	0	0	0	0	0	39	100
25	0	0	22	15	0	0	1	0	0	0	0	80
26	0	0	12	0	0	0	0	11	0	0	54	87
27	52	0	25	0	0	0	0	0	0	1	15	21
28	56	19	233	0	0	0	0	0	0	0	2	8
29	10		0	0	0	0	0	0	0	0	3	7
30	15		1	0	0	0	0	0	0	0	0	14
31	66		0		0		0	0		8		29

<b>Monthly</b>	978	640	484	104	76	23	12	65	16	78	233	1128
<b>Rainy Days</b>	27	23	18	14	7	6	4	3	3	7	16	29
<b>Max.</b>	115	145	233	29	42	9	6	52	9	29	54	133
<b>Average</b>	32	23	16	3	2	1	0	2	1	3	8	36

<b>Annual</b> :	3837	<b>No.</b> :	157	<b>Max.</b> :	233	<b>Ave.</b> :	11
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	187	48	47	2	54	0	0	0	0	20	6	60
2	109	113	55	44	5	3	11	0	0	40	10	65
3	371	91	25	23	17	0	0	54	9	9	10	104
4	56	359	49	10	0	7	0	0	7	0	34	230
5	56	10	37	25	0	13	1	0	0	0	99	503
6	199	19	271	0	0	0	0	11	0	9	74	166

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	667	252	127	69	76	3	11	54	9	69	26	229
<b>2nd</b>	311	388	357	35	0	20	1	11	7	9	207	899



**Table Daily Rainfall**

Station : **Jonggoa (Telemetric)**  
 Year : **2004**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	20	0	0	0	0	0						
2	55	6	0	32	1	0						
3	1	72	1	0	0	0						
4	0	55	46	36	0	0						
5	15	26	2	3	0	0						
6	21	4	15	22	0	20						
7	1	65	0	0	9	2						
8	7	63	33	0	8	4						
9	5	51	103	0	12							
10	13	40	25	23	0							
11	0	37	9	0	13							
12	9	56	44	0	0							
13	6	33	39	0	0							
14	20	2	33	0	0							
15	0	37	19	3	0							
16	0	15	12	16	0							
17	19	0	18	3	0							
18	20	0	39	0	0							
19	0	0	3	21	0							
20	14	0	1	5	0							
21	0	2	11	1	0							
22	7	16	1	23	0							
23	92	1	22	2	0							
24	5	17	53	0	1							
25	51	13	0	0	31							
26	1	25	0	1	0							
27	17	4	0	0	3							
28	0	0	0	0	0							
29	3	0	0	0	7							
30	48		7	15	16							
31	1		0		2							

<b>Monthly</b>	451	640	536	206	103	26	0	0	0	0	0	0
<b>Rainy Days</b>	24	22	22	15	11	3	0	0	0	0	0	0
<b>Max.</b>	92	72	103	36	31	20	0	0	0	0	0	0
<b>Average</b>	15	22	17	7	3	3	0	0	0	0	0	0

<b>Annual</b> :	1962	<b>No.</b> :	97	<b>Max.</b> :	103	<b>Ave.</b> :	6
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	91	159	49	71	1	0	0	0	0	0	0	0
2	47	223	176	45	29	26	0	0	0	0	0	0
3	35	165	144	3	13	0	0	0	0	0	0	0
4	53	15	73	45	0	0	0	0	0	0	0	0
5	155	49	87	26	32	0	0	0	0	0	0	0
6	70	29	7	16	28	0	0	0	0	0	0	0

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	173	547	369	119	43	26	0	0	0	0	0	0
<b>2nd</b>	278	93	167	87	60	0	0	0	0	0	0	0

**Table Daily Rainfall**

Station : **Limbunga (Telemetric)**  
 Year : **1999**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	10	2	8	2	0	0	0	0	0	0	25	43
2	93	3	34	23	0	0	0	0	0	5	10	47
3	33	39	20	34	0	0	0	0	0	0	3	4
4	0	20	0	2	0	0	0	0	0	0	42	19
5	18	23	7	7	0	0	0	0	0	0	12	3
6	7	22	14	7	0	0	0	0	0	0	0	4
7	4	19	13	0	0	0	0	0	46	0	8	19
8	1	21	7	0	0	0	0	0	0	0	10	40
9	10	22	2	0	0	0	0	0	0	0	0	77
10	0	3	43	56	0	0	0	0	0	11	4	28
11	5	0	0	15	0	0	0	0	0	61	3	30
12	0	0	9	0	0	0	0	0	0	4	4	34
13	0	26	16	0	0	0	0	0	0	2	0	42
14	14	9	50	1	0	0	0	0	0	37	0	2
15	0	13	0	29	0	0	0	0	0	0	10	11
16	0	8	74	0	0	0	0	0	0	0	7	6
17	0	12	0	0	0	0	0	0	0	0	29	19
18	0	20	0	0	0	0	0	0	0	7	25	11
19	0	19	13	0	0	0	0	0	2	27	3	5
20	22	19	18	0	0	0	0	0	0	4	4	62
21	30	33	17	0	0	0	0	0	0	0	1	0
22	19	17	12	0	0	0	0	0	0	12	2	17
23	47	3	0	0	0	0	0	3	0	20	2	0
24	21	8	0	0	0	0	0	0	0	15	5	67
25	95	27	16	0	0	0	0	0	1	25	18	43
26	69	0	0	0	0	0	0	0	0	5	2	7
27	35	3	20	0	0	0	0	0	0	0	10	1
28	33	21	29	0	0	0	0	0	0	0	1	1
29	16		45	0	0	0	0	0	0	4	1	10
30	50		9	0	0	0	0	0	0	1	1	30
31	16		16		0		0	0		51		0

<b>Monthly</b>	648	412	492	176	0	0	0	3	49	291	242	682
<b>Rainy Days</b>	22	25	23	10	0	0	0	1	3	17	26	28
<b>Max.</b>	95	39	74	56	0	0	0	3	46	61	42	77
<b>Average</b>	21	15	16	6	0	0	0	0	2	9	8	22

<b>Annual</b> :	2995	<b>No.</b> :	155	<b>Max.</b> :	95	<b>Ave.</b> :	8
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	154	87	69	68	0	0	0	0	0	5	92	116
2	22	87	79	63	0	0	0	0	46	11	22	168
3	19	48	75	45	0	0	0	0	0	104	17	119
4	22	78	105	0	0	0	0	0	2	38	68	103
5	212	88	45	0	0	0	0	3	1	72	28	127
6	219	24	119	0	0	0	0	0	0	61	15	49

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	195	222	223	176	0	0	0	0	46	120	131	403
<b>2nd</b>	453	190	269	0	0	0	0	3	3	171	111	279

**Table Daily Rainfall**

Station : **Limbunga (Telemetric)**  
 Year : **2000**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	43	11	0	0	2	45	8	0	0	0	0	57
2	11	18	0	7	8	16	0	0	1	0	0	4
3	3	18	0	1	0	0	1	0	0	0	0	73
4	8	234	3	67	0	0	61	0	0	0	0	86
5	2	25	0	23	2	0	1	0	0	0	0	55
6	9	8	4	0	0	0	0	0	0	0	4	17
7	12	2	0	20	0	2	19	0	0	0	0	80
8	92	26	4	0	0	9	0	2	0	0	0	31
9	0	35	0	4	0	39	1	0	0	0	0	5
10	42	0	36	8	0	2	0	0	2	0	1	0
11	68	0	0	26	0	2	17	0	0	11	0	0
12	4	0	0	31	4	0	8	0	0	136	0	7
13	4	0	54	6	0	2	1	0	0	1	8	16
14	9	0	24	0	5	9	0	0	0	20	0	2
15	0	1	51	0	4	47	0	28	0	11	0	2
16	0	0	16	2	2	21	0	0	0	1	2	32
17	0	1	4	24	21	0	15	0	0	1	2	0
18	76	38	22	0	8	1	1	0	0	1	0	0
19	22	78	3	9	0	2	0	0	0	0	0	0
20	21	20	65	0	0	20	0	0	0	7	6	5
21	3	9	14	1	0	2	0	0	3	1	0	39
22	4	1	48	1	55	0	0	0	0	0	0	8
23	13	0	40	21	11	0	0	0	0	1	0	0
24	10	4	1	1	0	1	0	0	0	1	0	1
25	9	46	9	24	0	1	0	0	0	0	3	1
26	3	115	35	13	5	0	0	0	0	0	52	0
27	18	0	25	20	3	0	1	0	0	0	1	3
28	16	0	11	16	0	10	0	0	0	0	3	0
29	36	0	77	16	0	1	0	0	0	0	16	8
30	30		43	8	1	0	0	0	0	2	10	15
31	105		1		2		3	0		2		1

<b>Monthly</b>	673	690	590	349	133	232	137	30	6	196	108	548
<b>Rainy Days</b>	27	19	23	23	15	19	13	2	3	14	12	23
<b>Max.</b>	105	234	77	67	55	47	61	28	3	136	52	86
<b>Average</b>	22	24	19	12	4	8	4	1	0	6	4	18

<b>Annual</b> :	3692	<b>No.</b> :	193	<b>Max.</b> :	234	<b>Ave.</b> :	10
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	67	306	3	98	12	61	71	0	1	0	0	275
2	155	71	44	32	0	52	20	2	2	0	5	133
3	85	1	129	63	13	60	26	28	0	179	8	27
4	119	137	110	35	31	44	16	0	0	10	10	37
5	39	60	112	48	66	4	0	0	3	3	3	49
6	208	115	192	73	11	11	4	0	0	4	82	27

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	307	378	176	193	25	173	117	30	3	179	13	435
<b>2nd</b>	366	312	414	156	108	59	20	0	3	17	95	113

**Table Daily Rainfall**

Station : **Limbunga (Telemetric)**  
 Year : **2001**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	32	10	20	8	0	0	0	0	0	3	45
2	0	56	7	1	0	0	0	0	0	4	0	141
3	72	46	44	2	0	25	0	0	0	9	33	44
4	1	76	100	1	0	19	0	0	0	2	3	71
5	11	65	11	11	0	2	0	0	0	0	6	19
6	12	56	29	34	0	4	0	0	0	1	41	51
7	14	104	17	21	33	2	0	0	0	0	14	33
8	33	84	0	0	0	13	0	0	0	0	0	60
9	43	114	0	3	2	2	0	0	0	0	9	20
10	83	18	0	3	0	17	0	0	0	0	57	35
11	99	1	10	2	0	0	0	0	2	0	0	23
12	28	0	16	8	0	5	0	0	0	0	26	15
13	25	32	6	20	0	0	0	0	0	45	0	0
14	43	23	0	25	0	5	0	0	0	4	2	0
15	18	2	1	1	0	0	2	0	0	0	29	4
16	16	20	0	0	1	0	45	0	0	0	24	2
17	2	51	16	20	1	0	1	0	0	11	42	16
18	2	59	27	13	0	0	29	0	0	27	2	18
19	22	47	16	48	0	0	0	0	0	0	1	0
20	3	47	9	0	0	0	0	0	0	0	3	24
21	6	12	1	0	0	1	0	0	0	2	0	40
22	12	0	0	3	0	0	0	0	0	3	15	19
23	10	0	0	29	0	0	0	0	0	42	0	1
24	2	0	21	18	0	0	0	0	0	3	4	25
25	3	6	1	1	2	6	0	0	0	2	39	1
26	49	5	1	4	0	0	0	0	0	0	3	13
27	41	0	3	3	0	2	0	0	0	18	4	18
28	9	0	1	30	0	5	0	0	1	21	6	36
29	7		19	33	3	1	0	0	5	0	1	54
30	42		0	11	17	0	0	4	0	6	0	10
31	21		0		6		0	0		17		3

<b>Monthly</b>	729	956	366	365	73	109	77	4	8	217	367	841
<b>Rainy Days</b>	29	22	22	26	9	15	4	1	3	17	23	28
<b>Max.</b>	99	114	100	48	33	25	45	4	5	45	57	141
<b>Average</b>	24	34	12	12	2	4	2	0	0	7	12	27

<b>Annual</b> :	4112	<b>No.</b> :	199	<b>Max.</b> :	141	<b>Ave.</b> :	11
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	84	275	172	35	8	46	0	0	0	15	45	320
2	185	376	46	61	35	38	0	0	0	1	121	199
3	213	58	33	56	0	10	2	0	2	49	57	42
4	45	224	68	81	2	0	75	0	0	38	72	60
5	33	18	23	51	2	7	0	0	0	52	58	86
6	169	5	24	81	26	8	0	4	6	62	14	134

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	482	709	251	152	43	94	2	0	2	65	223	561
<b>2nd</b>	247	247	115	213	30	15	75	4	6	152	144	280

**Table Daily Rainfall**

Station : **Limbunga (Telemetric)**  
 Year : **2002**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	216	37	0	9	26	0	0	0	0	0	14	10
2	113	19	0	0	10	0	0	0	0	0	0	0
3	40	1	0	7	7	0	0	0	0	0	5	17
4	12	6	0	21	0	0	5	0	0	0	0	20
5	7	34	0	1	0	17	0	0	0	0	0	56
6	8	3	24	0	4	0	0	0	0	0	0	5
7	16	13	12	12	2	0	0	0	0	0	0	6
8	1	13	0	8	14	1	0	0	0	0	0	2
9	30	0	7	9	9	2	0	0	0	0	0	0
10	1	3	1	0	31	2	0	0	0	0	0	28
11	0	0	19	0	0	0	0	0	0	0	8	24
12	0	6	26	0	0	7	0	0	0	0	6	25
13	3	63	42	1	0	0	0	0	0	0	14	22
14	20	36	29	2	0	1	0	0	0	0	0	8
15	18	47	0	31	0	10	0	0	0	0	0	3
16	17	21	1	4	0	3	0	0	0	0	22	42
17	41	31	3	25	0	1	0	0	0	0	0	1
18	60	31	3	0	0	0	6	0	0	0	1	0
19	9	8	28	2	0	0	0	0	0	0	0	10
20	2	14	0	1	0	5	0	0	0	0	6	0
21	30	32	0	11	0	8	0	0	0	0	7	14
22	2	56	12	58	0	0	0	0	0	0	0	24
23	5	16	5	2	0	9	0	0	0	0	19	64
24	6	15	2	65	0	0	0	0	0	0	6	50
25	0	0	27	0	0	13	0	0	0	0	11	37
26	1	0	70	2	0	0	0	0	0	0	4	5
27	1	7	17	0	0	0	0	0	0	0	9	15
28	5	0	0	0	0	0	0	0	0	0	0	13
29	25		1	0	0	0	0	0	0	0	37	7
30	12		13	4	0	0	0	0	0	0	11	21
31	3		5		0		0	0		0		5

<b>Monthly</b>	704	512	347	275	103	79	11	0	0	0	180	534
<b>Rainy Days</b>	28	23	21	20	8	13	2	0	0	0	16	27
<b>Max.</b>	216	63	70	65	31	17	6	0	0	0	37	64
<b>Average</b>	23	18	11	9	3	3	0	0	0	0	6	17

<b>Annual</b> :	2745	<b>No.</b> :	158	<b>Max.</b> :	216	<b>Ave.</b> :	8
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	388	97	0	38	43	17	5	0	0	0	19	103
2	56	32	44	29	60	5	0	0	0	0	0	41
3	41	152	116	34	0	18	0	0	0	0	28	82
4	129	105	35	32	0	9	6	0	0	0	29	53
5	43	119	46	136	0	30	0	0	0	0	43	189
6	47	7	106	6	0	0	0	0	0	0	61	66

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	485	281	160	101	103	40	5	0	0	0	47	226
<b>2nd</b>	219	231	187	174	0	39	6	0	0	0	133	308

**Table Daily Rainfall**

Station : **Limbunga (Telemetric)**  
 Year : **2003**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	4	22	0	0	2	0	0	0	0	22	6	1
2	70	10	0	6	0	0	0	0	0	0	10	14
3	32	6	0	0	3	0	0	0	0	0	5	7
4	40	18	0	0	41	0	0	0	0	0	0	5
5	3	14	65	25	37	0	0	0	0	0	0	1
6	25	10	0	31	1	0	0	5	0	0	10	21
7	2	14	4	10	0	0	2	0	0	57	0	3
8	5	8	0	0	20	0	0	0	0	0	4	14
9	4	2	4	23	0	0	0	0	0	0	4	50
10	60	2	6	0	0	0	9	0	0	18	24	0
11	37	39	2	1	83	0	0	0	5	0	5	1
12	145	0	1	1	0	0	0	0	0	0	0	0
13	93	12	2	0	0	0	0	1	0	0	0	19
14	35	19	11	0	0	0	0	0	0	0	0	6
15	51	10	3	23	0	0	0	0	35	0	7	20
16	18	44	0	3	0	0	0	0	0	3	4	5
17	1	40	3	0	0	0	0	0	0	0	0	7
18	10	37	2	0	0	3	0	0	0	0	23	46
19	32	101	2	0	0	0	0	0	0	0	7	75
20	0	3	9	0	0	0	0	0	3	0	7	45
21	28	0	0	6	0	12	0	0	0	0	27	111
22	7	9	13	7	0	1	0	0	0	0	31	61
23	18	3	30	2	0	3	0	0	0	0	24	162
24	0	2	0	16	0	2	1	0	0	0	3	77
25	0	1	30	5	0	0	1	0	0	0	0	73
26	0	0	25	0	0	0	0	0	0	0	1	71
27	30	0	1	35	0	0	0	0	0	4	0	51
28	29	13	20	1	0	0	0	0	0	0	4	6
29	19		2	0	0	0	0	0	0	1	4	3
30	25		5	0	0	0	0	0	0	0	6	22
31	55		4		0		0	0		9		61

<b>Monthly</b>	878	439	244	195	187	21	13	6	43	114	216	1038
<b>Rainy Days</b>	27	24	22	16	7	5	4	2	3	7	21	29
<b>Max.</b>	145	101	65	35	83	12	9	5	35	57	31	162
<b>Average</b>	28	16	8	7	6	1	0	0	1	4	7	33

<b>Annual</b> :	3394	<b>No.</b> :	167	<b>Max.</b> :	162	<b>Ave.</b> :	9
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	149	70	65	31	83	0	0	0	0	22	21	28
2	96	36	14	64	21	0	11	5	0	75	42	88
3	361	80	19	25	83	0	0	1	40	0	12	46
4	61	225	16	3	0	3	0	0	3	3	41	178
5	53	15	73	36	0	18	2	0	0	0	85	484
6	158	13	57	36	0	0	0	0	0	14	15	214

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	606	186	98	120	187	0	11	6	40	97	75	162
<b>2nd</b>	272	253	146	75	0	21	2	0	3	17	141	876

**Table Daily Rainfall**

Station : **Limbunga (Telemetric)**  
 Year : **2004**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	44	0	15	5	12	0						
2	46	13	0	3	6	0						
3	8	72	5	2	0	0						
4	0	55	69	1	0	0						
5	9	21	0	11	0	0						
6	25	9	6	26	1	31						
7	1	70	0	24	8	4						
8	34	75	23	0	17	3						
9	3	35	96	1	7							
10	0	41	14	0	0							
11	0	70	43	0	2							
12	0	45	63	5	0							
13	1	53	29	0	0							
14	13	3	23	0	0							
15	0	36	18	0	0							
16	0	32	5	2	0							
17	5	4	5	1	0							
18	0	13	57	2	0							
19	43	0	16	18	0							
20	2	7	0	0	0							
21	0	12	3	8	0							
22	0	11	7	34	0							
23	47	0	17	0	1							
24	15	4	30	0	0							
25	17	3	0	0	19							
26	32	12	0	3	0							
27	4	2	20	25	1							
28	12	0	0	1	0							
29	10	0	12	39	1							
30	23		13	10	11							
31	1		8		3							

<b>Monthly</b>	395	698	597	221	89	38	0	0	0	0	0	0
<b>Rainy Days</b>	22	24	24	20	13	3	0	0	0	0	0	0
<b>Max.</b>	47	75	96	39	19	31	0	0	0	0	0	0
<b>Average</b>	13	24	19	7	3	5	0	0	0	0	0	0

<b>Annual</b> :	2038	<b>No.</b> :	106	<b>Max.</b> :	96	<b>Ave.</b> :	6
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	107	161	89	22	18	0	0	0	0	0	0	0
2	63	230	139	51	33	38	0	0	0	0	0	0
3	14	207	176	5	2	0	0	0	0	0	0	0
4	50	56	83	23	0	0	0	0	0	0	0	0
5	79	30	57	42	20	0	0	0	0	0	0	0
6	82	14	53	78	16	0	0	0	0	0	0	0

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	184	598	404	78	53	38	0	0	0	0	0	0
<b>2nd</b>	211	100	193	143	36	0	0	0	0	0	0	0

**Table Daily Rainfall**

Station : Maccini Sombala (Telemetric)  
 Year : 1999

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	47	0	61	0	0	0	0	0	0	1	2	0
2	177	1	5	7	0	0	0	0	0	0	0	0
3	178	7	38	0	0	0	0	0	1	0	5	0
4	21	23	12	22	0	0	0	0	0	0	46	0
5	46	0	1	27	0	0	0	0	0	0	18	17
6	24	45	0	7	0	0	0	0	0	0	1	83
7	20	11	4	0	0	0	0	0	0	0	3	16
8	27	6	0	0	0	0	0	0	5	0	12	19
9	33	24	0	0	0	0	0	0	0	0	12	85
10	0	13	37	0	0	0	0	0	0	27	1	9
11	18	0	0	0	0	0	0	0	0	24	0	38
12	0	0	0	0	0	0	0	0	0	1	20	12
13	0	53	4	0	0	0	0	0	0	0	0	33
14	0	9	12	3	0	0	0	0	0	0	0	0
15	0	4	0	7	0	0	0	0	0	0	11	1
16	0	11	24	0	0	0	0	0	0	0	3	0
17	0	8	0	0	0	0	0	0	0	2	7	19
18	0	26	0	0	0	0	0	0	0	0	38	20
19	0	36	0	0	0	0	0	0	1	2	0	8
20	3	22	6	0	0	0	0	0	0	2	0	2
21	62	23	12	0	0	0	0	0	0	3	5	0
22	32	18	3	0	0	0	0	0	0	2	1	0
23	42	10	0	0	0	0	0	0	0	0	0	0
24	10	21	8	0	0	0	0	0	0	4	0	15
25	86	32	15	0	0	0	0	0	0	30	0	75
26	138	0	10	0	0	0	0	0	0	3	0	41
27	139	1	3	0	0	0	0	0	0	0	0	0
28	15	28	36	0	0	0	0	0	0	0	0	1
29	25		2	0	0	0	0	0	0	1	0	19
30	25		11	0	0	0	0	0	0	5	0	7
31	10		14		0		0	0		5		1

<b>Monthly</b>	1178	432	318	73	0	0	0	0	7	112	185	521
<b>Rainy Days</b>	22	23	21	6	0	0	0	0	3	15	16	21
<b>Max.</b>	178	53	61	27	0	0	0	0	5	30	46	85
<b>Average</b>	38	15	10	2	0	0	0	0	0	4	6	17

<b>Annual</b> :	2826	<b>No.</b> :	127	<b>Max.</b> :	178	<b>Ave.</b> :	8
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	469	31	117	56	0	0	0	0	1	1	71	17
2	104	99	41	7	0	0	0	0	5	27	29	212
3	18	66	16	10	0	0	0	0	0	25	31	84
4	3	103	30	0	0	0	0	0	1	6	48	49
5	232	104	38	0	0	0	0	0	0	39	6	90
6	352	29	76	0	0	0	0	0	0	14	0	69

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	591	196	174	73	0	0	0	0	6	53	131	313
<b>2nd</b>	587	236	144	0	0	0	0	0	1	59	54	208



**Table Daily Rainfall**

Station : **Maccini Sombala (Telemetric)**  
 Year : **2000**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	5	37	0	0	5	0	0	0	0	0	0	51
2	24	3	0	0	5	4	0	0	0	0	0	4
3	0	45	0	0	4	0	0	0	0	0	0	77
4	3	302	3	23	0	0	4	0	0	1	26	32
5	9	44	0	35	0	0	3	0	0	0	0	34
6	21	0	1	0	0	0	2	0	0	0	0	1
7	8	42	0	0	0	0	0	0	0	1	0	8
8	24	59	44	4	0	2	0	0	0	0	0	14
9	0	13	0	1	0	3	0	2	0	0	0	4
10	8	0	12	2	0	4	0	0	0	0	4	0
11	65	0	0	0	0	0	0	0	0	0	0	0
12	4	0	0	3	0	0	0	0	0	13	0	14
13	11	0	14	86	0	0	0	0	0	0	0	5
14	29	0	11	0	0	0	0	0	0	0	1	83
15	4	1	21	0	0	3	0	0	0	0	11	17
16	0	0	7	3	0	19	0	0	0	1	1	0
17	7	8	18	0	0	0	0	0	0	0	0	1
18	89	11	11	0	1	0	0	0	0	0	0	1
19	11	2	41	8	0	5	0	0	0	1	1	0
20	13	2	2	2	0	5	0	0	0	0	0	8
21	0	2	23	0	0	0	0	0	0	1	0	23
22	5	4	10	0	0	0	0	0	0	46	2	8
23	53	0	14	1	7	1	0	0	0	0	72	1
24	18	14	0	7	6	0	0	0	0	0	2	0
25	27	41	1	0	10	0	0	0	0	4	1	16
26	0	101	1	0	0	15	0	0	0	0	51	0
27	5	0	0	8	0	0	0	0	0	0	24	1
28	1	4	3	1	0	0	0	0	21	0	5	0
29	29	0	3	31	0	0	0	0	0	0	71	0
30	8		1	11	0	0	3	0	0	0	21	0
31	29		1		0		0	0		7		0

<b>Monthly</b>	510	735	242	226	38	61	12	2	21	75	293	403
<b>Rainy Days</b>	26	19	21	16	7	10	4	1	1	9	15	21
<b>Max.</b>	89	302	44	86	10	19	4	2	21	46	72	83
<b>Average</b>	16	25	8	8	1	2	0	0	1	2	10	13

<b>Annual</b> :	2618	<b>No.</b> :	150	<b>Max.</b> :	302	<b>Ave.</b> :	7
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	41	431	3	58	14	4	7	0	0	1	26	198
2	61	114	57	7	0	9	2	2	0	1	4	27
3	113	1	46	89	0	3	0	0	0	13	12	119
4	120	23	79	13	1	29	0	0	0	2	2	10
5	103	61	48	8	23	1	0	0	0	51	77	48
6	72	105	9	51	0	15	3	0	21	7	172	1

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	215	546	106	154	14	16	9	2	0	15	42	344
<b>2nd</b>	295	189	136	72	24	45	3	0	21	60	251	59

**Table Daily Rainfall**

Station : Maccini Sombala (Telemetric)  
 Year : 2001

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	44	13	2	2	0	0	0	0	1	12	30
2	0	170	9	1	0	0	0	0	0	0	3	106
3	3	62	22	0	0	2	0	0	0	0	10	55
4	2	55	148	0	0	8	0	0	0	0	2	43
5	51	87	41	1	0	0	0	0	2	0	0	40
6	18	25	27	1	11	0	0	0	0	0	1	75
7	11	51	10	0	0	0	0	0	0	0	0	64
8	43	44	0	43	0	12	0	0	0	0	0	105
9	117	71	0	19	0	12	0	0	0	0	0	27
10	78	0	0	17	0	33	0	0	0	0	3	15
11	98	10	17	8	0	0	0	0	0	0	0	36
12	41	0	2	8	0	0	0	0	0	0	7	29
13	41	11	20	0	0	20	0	0	0	0	0	0
14	15	5	0	0	0	0	0	0	0	0	0	0
15	41	0	4	0	0	0	0	0	0	0	0	0
16	18	6	0	0	0	0	0	0	0	0	7	0
17	2	13	45	1	0	0	0	0	0	0	5	11
18	6	28	27	0	0	0	0	0	0	0	29	27
19	1	21	6	0	0	0	0	0	0	0	1	0
20	27	10	27	0	0	0	0	0	0	0	4	0
21	41	5	0	0	6	0	0	0	0	0	1	0
22	16	0	0	3	0	0	0	0	0	0	12	3
23	0	0	0	0	0	0	0	0	0	17	0	0
24	9	0	9	1	0	0	0	0	0	0	7	0
25	0	11	1	11	0	0	0	0	0	0	55	24
26	0	0	0	0	0	0	0	0	0	6	27	0
27	61	0	0	5	0	0	0	0	0	0	20	149
28	2	0	0	1	0	0	0	0	0	0	28	2
29	43		2	0	2	0	0	0	25	0	2	35
30	1		0	0	29	0	0	0	0	0	8	22
31	15		0		0		0	0		18		0

<b>Monthly</b>	801	729	430	122	50	87	0	0	27	42	244	898
<b>Rainy Days</b>	26	19	18	15	5	6	0	0	2	4	21	20
<b>Max.</b>	117	170	148	43	29	33	0	0	25	18	55	149
<b>Average</b>	26	26	14	4	2	3	0	0	1	1	8	29

<b>Annual</b> :	3430	<b>No.</b> :	136	<b>Max.</b> :	170	<b>Ave.</b> :	9
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	56	418	233	4	2	10	0	0	2	1	27	274
2	267	191	37	80	11	57	0	0	0	0	4	286
3	236	26	43	16	0	20	0	0	0	0	7	65
4	54	78	105	1	0	0	0	0	0	0	46	38
5	66	16	10	15	6	0	0	0	0	17	75	27
6	122	0	2	6	31	0	0	0	25	24	85	208

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	559	635	313	100	13	87	0	0	2	1	38	625
<b>2nd</b>	242	94	117	22	37	0	0	0	25	41	206	273

**Table Daily Rainfall**

Station : **Maccini Sombala (Telemetric)**  
 Year : **2002**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	62	63	0	13	5	0	0	0	0	0	0	31
2	220	36	0	0	0	0	0	0	0	0	35	31
3	57	0	0	29	9	0	0	0	0	0	0	1
4	19	0	0	3	0	0	4	0	0	0	0	1
5	15	10	0	0	0	0	0	0	0	0	0	2
6	15	3	24	0	0	0	0	0	0	0	0	0
7	12	0	67	0	1	0	0	0	0	0	0	0
8	0	5	36	3	20	0	0	0	0	0	0	5
9	6	0	63	0	12	0	0	0	0	0	0	0
10	23	0	0	24	2	0	0	0	0	0	0	0
11	1	4	59	19	0	10	0	0	0	0	0	2
12	1	1	3	0	0	0	0	0	0	0	0	48
13	1	35	0	0	0	0	0	0	0	0	1	3
14	2	60	1	0	0	0	0	0	0	0	0	40
15	2	21	0	8	0	0	0	0	0	0	0	0
16	3	26	1	0	0	0	0	0	0	0	4	2
17	0	25	0	0	0	0	0	0	0	0	2	0
18	10	9	0	23	0	1	0	0	0	0	0	0
19	16	0	12	0	0	0	0	0	0	0	0	18
20	4	2	3	0	0	0	0	0	0	0	0	19
21	47	29	0	0	0	0	0	0	0	0	0	31
22	48	46	0	0	0	0	0	0	0	0	20	0
23	21	23	1	3	0	0	0	0	0	0	9	25
24	18	41	0	0	0	46	0	0	0	0	0	0
25	13	0	0	0	0	0	0	0	0	0	0	5
26	13	0	53	0	0	0	0	0	0	0	9	6
27	0	34	54	0	0	0	0	0	0	0	27	0
28	3	0	4	0	0	0	0	0	0	0	0	59
29	42		0	0	0	0	0	0	0	0	3	42
30	74		0	0	0	0	0	0	0	0	2	22
31	0		15		0		0	0		0		16

<b>Monthly</b>	748	473	396	125	49	57	4	0	0	0	112	409
<b>Rainy Days</b>	27	19	15	9	6	3	1	0	0	0	10	21
<b>Max.</b>	220	63	67	29	20	46	4	0	0	0	35	59
<b>Average</b>	24	17	13	4	2	2	0	0	0	0	4	13

<b>Annual</b> :	2373	<b>No.</b> :	111	<b>Max.</b> :	220	<b>Ave.</b> :	7
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	373	109	0	45	14	0	4	0	0	0	35	66
2	56	8	190	27	35	0	0	0	0	0	0	5
3	7	121	63	27	0	10	0	0	0	0	1	93
4	33	62	16	23	0	1	0	0	0	0	6	39
5	147	139	1	3	0	46	0	0	0	0	29	61
6	132	34	126	0	0	0	0	0	0	0	41	145

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	436	238	253	99	49	10	4	0	0	0	36	164
<b>2nd</b>	312	235	143	26	0	47	0	0	0	0	76	245

**Table Daily Rainfall**

Station : Maccini Sombala (Telemetric)  
 Year : 2003

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	38	7	0	1	0	0	0	0	0	5	1	0
2	117	57	0	1	0	0	0	0	0	0	0	38
3	40	4	0	0	0	0	0	0	0	0	0	7
4	9	19	0	21	16	0	0	0	0	0	0	4
5	23	65	6	0	4	0	0	0	0	0	0	39
6	33	49	0	4	0	0	0	0	0	0	0	2
7	0	9	5	0	9	0	0	0	0	29	0	0
8	3	1	0	0	2	0	0	0	0	1	0	0
9	4	5	13	0	0	0	1	0	0	0	0	11
10	130	30	0	22	13	0	1	0	0	1	2	12
11	42	22	19	2	0	0	0	0	0	0	0	7
12	38	1	0	1	0	0	0	0	0	0	0	0
13	37	0	0	0	0	0	0	0	0	0	0	23
14	47	10	1	0	0	0	0	0	0	7	0	11
15	85	0	7	1	0	0	0	0	0	0	0	33
16	21	1	1	1	0	0	0	0	1	0	0	12
17	2	22	0	8	0	0	0	0	1	0	6	51
18	43	36	26	0	0	0	0	0	0	0	0	9
19	1	86	0	0	0	0	0	0	0	0	0	18
20	5	0	0	0	0	6	0	0	7	0	10	17
21	7	0	0	2	0	1	0	0	0	0	21	58
22	0	8	0	0	28	0	0	0	0	0	1	47
23	8	0	2	0	0	1	0	0	0	0	5	64
24	5	0	9	0	0	5	0	0	0	0	0	24
25	0	0	0	27	0	0	2	0	0	0	0	14
26	0	0	0	0	0	0	0	0	0	0	9	63
27	0	0	0	0	0	0	0	0	0	0	7	12
28	1	4	0	13	0	0	0	0	0	0	7	26
29	0		0	8	0	0	0	0	0	0	4	1
30	6		0	0	0	0	0	0	0	0	11	63
31	4		0		0		0	0		0		37

<b>Monthly</b>	749	436	89	112	72	13	4	0	9	43	84	703
<b>Rainy Days</b>	25	19	10	14	6	4	3	0	3	5	12	27
<b>Max.</b>	130	86	26	27	28	6	2	0	7	29	21	64
<b>Average</b>	24	16	3	4	2	0	0	0	0	1	3	23

<b>Annual</b> :	2314	<b>No.</b> :	128	<b>Max.</b> :	130	<b>Ave.</b> :	6
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	227	152	6	23	20	0	0	0	0	5	1	88
2	170	94	18	26	24	0	2	0	0	31	2	25
3	249	33	27	4	0	0	0	0	0	7	0	74
4	72	145	27	9	0	6	0	0	9	0	16	107
5	20	8	11	29	28	7	2	0	0	0	27	207
6	11	4	0	21	0	0	0	0	0	0	38	202

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	646	279	51	53	44	0	2	0	0	43	3	187
<b>2nd</b>	103	157	38	59	28	13	2	0	9	0	81	516

**Table Daily Rainfall**

Station : **Maccini Sombala (Telemetric)**  
 Year : **2004**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	14	0	0	24	2	15						
2	36	23	0	12	0	0						
3	2	34	5	0	0	0						
4	0	102	40	0	4	0						
5	25	15	2	3	0	0						
6	43	5	38	0	0	3						
7	1	32	0	0	22	1						
8	2	33	14	0	1	4						
9	7	3	92	0	31							
10	4	4	26	0	0							
11	0	7	10	0	0							
12	18	51	14	0	0							
13	30	30	79	0	0							
14	22	2	82	0	0							
15	0	14	29	0	0							
16	0	24	24	0	0							
17	22	0	34	0	0							
18	8	0	23	0	0							
19	1	0	1	0	0							
20	106	6	0	0	0							
21	0	7	0	0	0							
22	1	27	0	0	0							
23	0	0	11	0	0							
24	2	8	2	0	0							
25	12	1	0	16	0							
26	1	31	0	0	0							
27	7	7	0	0	0							
28	1	0	0	8	1							
29	1	0	0	0	18							
30	42		1	2	17							
31	1		0		5							

<b>Monthly</b>	409	466	527	65	101	23	0	0	0	0	0	0
<b>Rainy Days</b>	25	22	19	6	9	4	0	0	0	0	0	0
<b>Max.</b>	106	102	92	24	31	15	0	0	0	0	0	0
<b>Average</b>	13	16	17	2	3	3	0	0	0	0	0	0

<b>Annual</b> :	1591	<b>No.</b> :	85	<b>Max.</b> :	106	<b>Ave.</b> :	5
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	77	174	47	39	6	15	0	0	0	0	0	0
2	57	77	170	0	54	8	0	0	0	0	0	0
3	70	104	214	0	0	0	0	0	0	0	0	0
4	137	30	82	0	0	0	0	0	0	0	0	0
5	15	43	13	16	0	0	0	0	0	0	0	0
6	53	38	1	10	41	0	0	0	0	0	0	0

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	204	355	431	39	60	23	0	0	0	0	0	0
<b>2nd</b>	205	111	96	26	41	0	0	0	0	0	0	0

**Table Daily Rainfall**

Station : Mangempang (Telemetric)  
 Year : 1999

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	143	3	15	2	0	0	0	0	0	0	14	37
2	134	6	10	28	0	0	0	0	0	12	37	39
3	53	44	34	8	0	0	0	0	0	0	12	6
4	0	36	0	9	0	0	0	0	0	0	47	30
5	25	44	8	8	0	0	0	0	0	0	20	5
6	8	51	1	9	0	0	0	0	0	0	1	14
7	9	20	15	0	0	0	0	0	20	0	9	24
8	1	27	6	1	0	0	0	0	0	0	5	42
9	16	28	1	0	0	0	0	0	0	0	3	99
10	0	8	77	9	0	0	0	0	0	34	3	45
11	24	0	0	2	0	0	0	0	0	14	0	36
12	0	0	4	0	0	0	0	0	0	16	3	46
13	0	49	33	0	0	0	0	0	0	1	0	49
14	0	12	50	10	0	0	0	0	0	46	0	2
15	0	26	1	31	0	0	0	0	7	0	8	15
16	0	17	92	0	0	0	0	0	0	0	26	0
17	0	27	0	0	0	0	0	0	0	0	18	24
18	0	23	0	0	0	0	0	0	0	0	20	20
19	0	33	12	0	0	0	0	0	2	28	1	8
20	8	25	15	0	0	0	0	0	0	4	32	7
21	31	30	15	0	0	0	0	2	0	25	166	0
22	23	31	17	0	0	0	0	1	0	0	6	18
23	53	2	0	0	0	0	0	2	0	0	0	1
24	24	16	0	0	0	0	0	0	0	1	19	5
25	89	33	19	0	0	0	0	0	0	4	42	56
26	125	0	2	0	0	0	0	0	0	19	25	8
27	27	7	9	0	0	0	0	0	0	4	60	0
28	34	34	35	0	0	0	0	0	0	0	0	5
29	23		70	0	0	0	0	0	0	39	11	17
30	54		23	0	0	0	0	0	0	12	0	4
31	15		13		0		0	0		16		0

<b>Monthly</b>	919	632	577	117	0	0	0	5	29	275	588	662
<b>Rainy Days</b>	21	25	25	11	0	0	0	3	3	16	24	27
<b>Max.</b>	143	51	92	31	0	0	0	2	20	46	166	99
<b>Average</b>	30	23	19	4	0	0	0	0	1	9	20	21

<b>Annual</b> :	3804	<b>No.</b> :	155	<b>Max.</b> :	166	<b>Ave.</b> :	10
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	355	133	67	55	0	0	0	0	0	12	130	117
2	34	134	100	19	0	0	0	0	20	34	21	224
3	24	87	88	43	0	0	0	0	7	77	11	148
4	8	125	119	0	0	0	0	0	2	32	97	59
5	220	112	51	0	0	0	0	5	0	30	233	80
6	278	41	152	0	0	0	0	0	0	90	96	34

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	413	354	255	117	0	0	0	0	27	123	162	489
<b>2nd</b>	506	278	322	0	0	0	0	5	2	152	426	173

**Table Daily Rainfall**

Station : Mangempang (Telemetric)  
 Year : 2000

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	74	21	0	0	1	50	20	0	0	0	0	31
2	13	10	0	12	4	38	0	0	9	0	35	6
3	7	28	0	3	2	0	0	0	0	24	0	81
4	1	232	5	43	0	0	58	0	0	0	9	93
5	32	33	0	23	7	0	0	0	0	0	16	61
6	7	3	8	0	0	0	16	0	0	0	21	18
7	17	5	0	18	0	2	0	0	0	0	9	14
8	25	26	5	0	2	18	2	2	0	2	19	35
9	0	50	0	1	0	13	0	0	0	0	0	4
10	18	0	42	13	0	28	24	0	0	0	1	0
11	92	0	0	14	0	19	8	0	0	0	1	1
12	4	0	0	19	0	0	11	0	0	8	0	6
13	9	0	71	10	0	1	0	0	0	0	12	18
14	17	0	22	0	0	4	0	0	0	4	33	12
15	0	0	35	0	0	39	0	2	0	4	82	4
16	0	0	19	2	1	21	0	0	0	11	25	8
17	1	3	13	37	11	0	0	0	0	6	30	0
18	99	52	28	1	27	0	0	0	0	1	18	1
19	30	47	10	19	0	33	0	0	0	1	2	10
20	15	20	43	0	0	32	0	0	0	12	48	1
21	9	22	5	1	0	2	0	0	0	7	26	20
22	3	1	8	0	72	0	0	0	0	48	12	19
23	26	0	19	19	35	0	0	0	0	25	11	0
24	12	9	1	16	0	9	0	0	0	15	54	2
25	24	91	7	2	1	1	0	0	0	22	6	3
26	6	130	22	1	4	2	0	0	0	22	99	0
27	13	1	2	6	13	1	13	0	0	0	2	14
28	11	0	24	13	0	6	0	0	5	0	13	0
29	46	0	49	23	0	0	0	0	0	0	14	12
30	39		14	17	0	0	0	0	0	14	49	0
31	122		0		0		4	0		1		14

<b>Monthly</b>	772	784	452	313	180	319	156	4	14	227	647	488
<b>Rainy Days</b>	28	19	22	23	13	19	9	2	2	18	26	25
<b>Max.</b>	122	232	71	43	72	50	58	2	9	48	99	93
<b>Average</b>	25	27	15	10	6	11	5	0	0	7	22	16

<b>Annual</b> :	4356	<b>No.</b> :	206	<b>Max.</b> :	232	<b>Ave.</b> :	12
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	127	324	5	81	14	88	78	0	9	24	60	272
2	67	84	55	32	2	61	42	2	0	2	50	71
3	122	0	128	43	0	63	19	2	0	16	128	41
4	145	122	113	59	39	86	0	0	0	31	123	20
5	74	123	40	38	108	12	0	0	0	117	109	44
6	237	131	111	60	17	9	17	0	5	37	177	40

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	316	408	188	156	16	212	139	4	9	42	238	384
<b>2nd</b>	456	376	264	157	164	107	17	0	5	185	409	104

**Table Daily Rainfall**

Station : Mangempang (Telemetric)  
 Year : 2001

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	57	2	54	14	0	0	0	0	32	0	113
2	0	90	11	0	4	0	0	0	0	37	0	270
3	38	57	31	0	1	9	0	0	0	2	22	97
4	2	104	124	4	0	12	0	0	0	0	21	111
5	36	84	14	50	0	0	0	0	0	0	31	38
6	18	60	43	50	0	0	0	0	0	0	10	106
7	15	127	32	15	0	0	0	0	0	0	4	60
8	44	106	0	1	1	0	0	0	0	4	3	119
9	58	151	5	0	1	0	0	0	0	0	20	5
10	99	10	0	1	0	0	0	0	0	0	106	51
11	143	2	32	2	0	0	0	0	0	0	0	39
12	27	0	21	16	0	0	0	0	0	1	71	21
13	67	33	9	5	0	0	0	0	0	45	18	0
14	21	12	0	22	0	0	0	0	0	5	3	0
15	20	4	1	0	0	0	0	0	0	0	3	4
16	15	42	5	3	27	0	0	0	0	0	10	29
17	8	58	38	5	0	0	0	0	0	5	81	28
18	5	41	47	33	0	0	0	0	0	27	33	36
19	6	40	7	51	0	0	0	0	0	2	39	0
20	1	48	13	0	1	0	0	0	0	0	0	21
21	3	9	1	0	1	0	0	0	0	0	0	26
22	29	0	0	3	0	0	0	0	0	16	9	3
23	2	0	0	3	0	0	0	0	0	8	2	34
24	29	0	26	12	0	0	0	0	0	33	4	14
25	50	11	3	2	2	0	0	0	17	1	62	4
26	44	1	0	15	0	0	0	0	0	6	9	32
27	26	0	22	0	0	0	0	0	0	3	61	42
28	35	0	0	16	0	0	0	0	0	9	15	49
29	14		16	5	1	0	0	0	2	0	1	99
30	68		0	1	12	0	0	3	0	0	5	27
31	42		0		13		0	0		2		5

<b>Monthly</b>	965	1147	503	369	78	21	0	3	19	238	643	1483
<b>Rainy Days</b>	29	22	22	23	12	2	0	1	2	18	25	28
<b>Max.</b>	143	151	124	54	27	12	0	3	17	45	106	270
<b>Average</b>	31	41	16	12	3	1	0	0	1	8	21	48

<b>Annual</b> :	5469	<b>No.</b> :	184	<b>Max.</b> :	270	<b>Ave.</b> :	15
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	76	392	182	108	19	21	0	0	0	71	74	629
2	234	454	80	67	2	0	0	0	0	4	143	341
3	278	51	63	45	0	0	0	0	0	51	95	64
4	35	229	110	92	28	0	0	0	0	34	163	114
5	113	20	30	20	3	0	0	0	17	58	77	81
6	229	1	38	37	26	0	0	3	2	20	91	254

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	588	897	325	220	21	21	0	0	0	126	312	1034
<b>2nd</b>	377	250	178	149	57	0	0	3	19	112	331	449



**Table Daily Rainfall**

Station : Mangempang (Telemetric)  
 Year : 2002

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	340	54	0	26	75	0	0	0	0	0	0	15
2	320	35	0	0	17	0	0	0	0	0	21	3
3	90	3	0	16	10	0	0	0	0	0	0	47
4	18	7	0	78	0	0	2	0	0	0	0	24
5	16	54	0	17	3	17	0	0	0	0	0	25
6	17	12	30	0	42	0	0	0	0	0	0	6
7	1	18	27	0	6	0	0	0	0	0	0	11
8	33	11	3	33	47	4	0	0	0	0	0	0
9	3	0	16	22	66	0	0	0	0	0	2	2
10	0	1	8	0	73	2	0	0	0	0	0	48
11	0	8	40	6	2	0	0	0	0	0	10	84
12	0	19	63	0	1	12	0	0	0	0	11	15
13	3	108	11	0	0	0	0	0	0	0	6	68
14	1	63	49	0	0	0	0	0	0	0	0	36
15	36	93	5	47	0	0	0	0	0	0	0	91
16	27	45	3	17	0	22	0	0	0	0	81	27
17	63	51	34	72	0	15	0	0	0	0	0	9
18	5	69	8	0	0	0	7	0	0	0	18	0
19	12	17	28	15	0	17	5	0	0	0	3	3
20	9	7	0	0	0	0	0	0	0	0	5	2
21	30	65	0	0	0	6	0	0	0	0	1	55
22	5	78	47	42	0	0	0	0	0	0	0	161
23	18	27	1	68	0	3	0	0	0	0	18	112
24	31	31	3	87	0	1	0	0	0	0	3	33
25	6	2	20	0	0	38	0	0	0	0	6	54
26	6	0	58	1	0	0	0	0	0	1	33	20
27	3	9	17	0	0	0	0	0	0	5	5	31
28	14	0	1	0	0	0	0	0	0	0	3	35
29	70		0	0	0	0	0	0	0	0	99	17
30	26		0	6	0	0	0	0	0	1	49	67
31	7		27		0		0	0		0		0

<b>Monthly</b>	1210	887	499	553	342	137	14	0	0	7	374	1101
<b>Rainy Days</b>	28	25	22	16	11	11	3	0	0	3	18	28
<b>Max.</b>	340	108	63	87	75	38	7	0	0	5	99	161
<b>Average</b>	39	32	16	18	11	5	0	0	0	0	12	36

<b>Annual</b> :	5124	<b>No.</b> :	165	<b>Max.</b> :	340	<b>Ave.</b> :	14
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	784	153	0	137	105	17	2	0	0	0	21	114
2	54	42	84	55	234	6	0	0	0	0	2	67
3	40	291	168	53	3	12	0	0	0	0	27	294
4	116	189	73	104	0	54	12	0	0	0	107	41
5	90	203	71	197	0	48	0	0	0	0	28	415
6	126	9	103	7	0	0	0	0	0	7	189	170

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	878	486	252	245	342	35	2	0	0	0	50	475
<b>2nd</b>	332	401	247	308	0	102	12	0	0	7	324	626

**Table Daily Rainfall**

Station : Mangempang (Telemetric)  
 Year : 2003

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	9	18	0	1	3	0	0	0	0	13	15	1
2	154	32	0	5	0	0	0	0	0	0	10	24
3	69	9	0	0	0	0	0	0	0	0	11	9
4	59	69	0	0	78	0	0	0	0	0	0	14
5	7	30	94	0	10	0	0	0	0	0	0	1
6	24	31	0	33	1	0	0	6	0	0	37	50
7	0	8	0	7	0	0	1	0	0	28	0	1
8	0	25	0	0	22	0	0	0	0	0	3	0
9	5	0	14	56	0	0	0	0	0	26	9	74
10	114	5	16	0	1	0	12	0	0	19	3	0
11	60	57	6	1	69	0	0	0	6	0	0	5
12	155	0	18	24	3	0	0	0	0	0	0	1
13	148	12	0	0	0	0	0	1	0	0	0	117
14	79	27	3	0	0	0	0	0	0	21	0	5
15	101	19	8	0	0	0	4	0	44	0	0	48
16	27	54	0	12	0	0	0	0	0	0	0	39
17	5	84	5	0	0	0	0	0	3	6	0	14
18	13	84	6	12	0	6	0	0	13	0	138	63
19	48	181	0	19	0	0	0	0	0	0	0	139
20	0	6	40	0	0	0	0	0	32	0	24	133
21	6	0	0	9	0	17	0	0	0	0	13	162
22	6	23	14	40	0	0	0	0	0	0	53	116
23	31	5	24	6	0	5	0	0	0	0	27	207
24	0	7	0	2	0	0	2	0	0	15	48	180
25	0	3	3	3	0	6	2	0	0	0	0	53
26	0	3	43	0	0	0	0	0	0	0	24	108
27	27	0	21	51	0	0	0	0	0	0	2	61
28	111	27	108	0	0	0	0	0	0	0	34	14
29	13		26	15	0	0	0	0	0	68	23	8
30	38		63	0	0	0	0	0	0	39	3	46
31	112		13		0		0	0		4		56

<b>Monthly</b>	1421	819	525	296	187	34	21	7	98	239	477	1749
<b>Rainy Days</b>	25	24	19	17	8	4	5	2	5	10	18	29
<b>Max.</b>	155	181	108	56	78	17	12	6	44	68	138	207
<b>Average</b>	46	29	17	10	6	1	1	0	3	8	16	56

<b>Annual</b> :	5873	<b>No.</b> :	166	<b>Max.</b> :	207	<b>Ave.</b> :	16
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	298	158	94	6	91	0	0	0	0	13	36	49
2	143	69	30	96	24	0	13	6	0	73	52	125
3	543	115	35	25	72	0	4	1	50	21	0	176
4	93	409	51	43	0	6	0	0	48	6	162	388
5	43	38	41	60	0	28	4	0	0	15	141	718
6	301	30	274	66	0	0	0	0	0	111	86	293

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	984	342	159	127	187	0	17	7	50	107	88	350
<b>2nd</b>	437	477	366	169	0	34	4	0	48	132	389	1399

**Table Daily Rainfall**

Station : Mangempang (Telemetric)  
 Year : 2004

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	41	6	23	4	72	0						
2	84	36	0	0	39	0						
3	14	119	9	0	0	0						
4	0	114	155	15	1	0						
5	31	38	0	61	0	0						
6	28	12	9	22	0	33						
7	1	95	0	36	1	0						
8	14	112	93	0	41	1						
9	3	33	123	0	12							
10	2	29	29	0	0							
11	0	94	25	0	1							
12	1	74	118	6	0							
13	11	70	65	0	0							
14	13	7	58	0	0							
15	0	52	43	0	0							
16	0	47	23	69	0							
17	30	0	15	1	0							
18	5	0	103	0	0							
19	19	0	17	6	0							
20	5	4	0	0	0							
21	0	12	9	0	0							
22	8	34	4	56	0							
23	48	0	49	0	6							
24	44	3	51	12	0							
25	83	20	0	25	21							
26	18	24	0	3	19							
27	10	1	21	54	0							
28	30	0	0	4	0							
29	17	0	19	33	5							
30	56		9	18	19							
31	1		5		3							

<b>Monthly</b>	617	1036	1075	425	240	34	0	0	0	0	0	0
<b>Rainy Days</b>	26	23	24	17	13	2	0	0	0	0	0	0
<b>Max.</b>	84	119	155	69	72	33	0	0	0	0	0	0
<b>Average</b>	20	36	35	14	8	4	0	0	0	0	0	0

<b>Annual</b> :	3427	<b>No.</b> :	105	<b>Max.</b> :	155	<b>Ave.</b> :	10
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	170	313	187	80	112	0	0	0	0	0	0	0
2	48	281	254	58	54	34	0	0	0	0	0	0
3	25	297	309	6	1	0	0	0	0	0	0	0
4	59	51	158	76	0	0	0	0	0	0	0	0
5	183	69	113	93	27	0	0	0	0	0	0	0
6	132	25	54	112	46	0	0	0	0	0	0	0

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	243	891	750	144	167	34	0	0	0	0	0	0
<b>2nd</b>	374	145	325	281	73	0	0	0	0	0	0	0

**Table Daily Rainfall**

Station : **Malino Biasa**  
 Year : **1993**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	23	0	14	3	2	4	0	0	0	0	0	6
2	21	0	3	27	2	0	5	0	0	0	0	3
3	0	43	25	21	1	5	0	0	0	0	0	5
4	0	24	20	9	14	18	0	0	0	0	0	4
5	28	5	10	33	0	0	0	0	0	0	0	0
6	35	55	6	0	0	4	0	0	0	0	0	23
7	26	36	0	34	16	5	0	0	0	0	0	16
8	49	13	2	36	25	1	0	0	0	0	0	3
9	37	1	17	3	19	0	0	0	0	0	0	40
10	0	0	20	1	7	6	0	0	0	0	5	41
11	21	39	13	9	0	0	0	0	0	3	0	35
12	53	2	4	0	10	0	4	0	0	0	2	0
13	0	4	0	0	27	0	4	0	0	0	5	21
14	57	64	0	4	11	32	0	0	0	0	25	32
15	69	41	11	10	7	0	0	0	0	0	0	44
16	72	44	0	16	0	0	0	0	0	0	0	52
17	12	6	0	0	0	0	0	0	0	0	14	34
18	5	18	0	1	0	10	0	0	0	0	20	2
19	0	19	0	0	9	0	0	0	0	0	10	0
20	9	20	4	7	4	0	0	0	0	0	10	41
21	12	80	6	19	3	3	0	0	0	1	2	16
22	19	78	4	22	0	11	0	0	0	0	27	100
23	12	1	4	22	2	0	0	0	0	0	0	51
24	22	22	0	3	0	0	0	0	0	0	0	60
25	41	0	0	40	16	0	0	0	0	0	45	50
26	2	0	3	2	2	0	0	0	0	0	28	165
27	48	18	7	0	0	0	0	0	0	0	27	41
28	0	1	12	0	0	3	0	0	0	0	32	7
29	0		21	0	28	0	0	0	0	0	3	0
30	17		0	0	3	5	23	0	0	0	38	0
31	5		4		60		0	0		0		6

<b>Monthly</b>	695	634	210	322	268	107	36	0	0	4	293	898
<b>Rainy Days</b>	24	23	21	21	21	13	4	0	0	2	16	26
<b>Max.</b>	72	80	25	40	60	32	23	0	0	3	45	165
<b>Average</b>	22	23	7	11	9	4	1	0	0	0	10	29

<b>Annual</b> :	3467	<b>No.</b> :	171	<b>Max.</b> :	165	<b>Ave.</b> :	10
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	72	72	72	93	19	27	5	0	0	0	0	18
2	147	105	45	74	67	16	0	0	0	0	5	123
3	200	150	28	23	55	32	8	0	0	3	32	132
4	98	107	4	24	13	10	0	0	0	0	54	129
5	106	181	14	106	21	14	0	0	0	1	74	277
6	72	19	47	2	93	8	23	0	0	0	128	219

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	419	327	145	190	141	75	13	0	0	3	37	273
<b>2nd</b>	276	307	65	132	127	32	23	0	0	1	256	625

**Table Daily Rainfall**

Station : **Malino Biasa**  
 Year : **1994**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	49	0	0	9	2	0	0	0	0	0	0	0
2	22	0	16	0	0	0	0	0	0	0	0	0
3	30	4	11	0	0	0	0	0	0	0	0	0
4	2	0	12	7	4	0	0	0	0	0	0	8
5	29	30	3	0	5	0	0	0	0	0	0	13
6	28	4	0	0	7	0	0	0	0	0	0	21
7	3	8	10	4	2	0	0	0	0	0	0	29
8	0	1	50	0	9	0	0	0	0	0	0	25
9	23	8	16	0	8	0	0	0	0	0	0	16
10	70	24	32	10	0	0	0	0	0	0	0	32
11	7	31	35	11	8	0	0	0	0	0	0	0
12	4	1	175	0	0	0	0	0	0	0	2	0
13	0	4	52	32	0	0	0	0	0	0	0	0
14	5	25	17	0	0	0	0	0	3	0	0	35
15	19	0	25	0	0	0	0	0	2	0	5	10
16	22	0	6	52	0	0	0	0	0	0	31	0
17	24	25	12	0	0	0	0	0	0	0	16	0
18	17	24	2	27	0	0	0	0	0	0	0	52
19	51	36	0	39	0	0	0	0	0	0	0	44
20	4	38	1	0	0	0	0	0	0	0	0	23
21	3	14	19	0	6	0	0	0	0	0	2	9
22	41	17	41	47	0	0	0	0	0	0	0	0
23	7	12	14	21	0	0	0	0	0	0	7	0
24	4	0	92	6	0	0	0	0	0	0	5	0
25	30	0	13	6	0	0	0	0	0	0	52	0
26	27	39	40	0	0	0	0	0	0	0	0	0
27	7	14	7	0	0	0	0	0	0	0	0	0
28	29	0	20	11	0	0	0	0	0	0	24	0
29	45		7	2	9	0	0	0	0	29	0	0
30	10		50	9	7	0	0	0	0	0	0	0
31	21		11				0	0		0		22

<b>Monthly</b>	633	359	789	293	67	0	0	0	5	29	144	339
<b>Rainy Days</b>	29	20	28	16	11	0	0	0	2	1	9	14
<b>Max.</b>	70	39	175	52	9	0	0	0	3	29	52	52
<b>Average</b>	20	13	25	10	2	0	0	0	0	1	5	11

<b>Annual</b> :	2658	<b>No.</b> :	130	<b>Max.</b> :	175	<b>Ave.</b> :	7
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	132	34	42	16	11	0	0	0	0	0	0	21
2	124	45	108	14	26	0	0	0	0	0	0	123
3	35	61	304	43	8	0	0	0	5	0	7	45
4	118	123	21	118	0	0	0	0	0	0	47	119
5	85	43	179	80	6	0	0	0	0	0	66	9
6	139	53	135	22	16	0	0	0	0	29	24	22

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	291	140	454	73	45	0	0	0	5	0	7	189
<b>2nd</b>	342	219	335	220	22	0	0	0	0	29	137	150

**Table Daily Rainfall**

Station : **Malino Biasa**  
 Year : **1996**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	26	28	0	0	9	15	0	0	13	0	2
2	27	24	24	0	0	21	3	0	0	0	6	25
3	12	42	23	0	61	3	0	0	0	0	0	55
4	29	85	29	27	4	0	0	0	0	0	0	5
5	47	7	125	19	0	0	4	0	0	7	5	6
6	15	50	115	9	0	0	16	0	7	0	29	6
7	20	19	92	0	0	5	0	1	0	18	0	28
8	8	21	0	0	0	0	2	0	5	0	45	25
9	60	39	5	0	0	0	4	0	18	0	34	25
10	0	52	0	0	0	0	4	0	8	25	0	12
11	20	50	33	0	21	0	15	0	0	5	0	25
12	2	59	0	0	24	0	3	3	17	0	0	10
13	29	20	0	0	26	0	5	0	0	39	0	42
14	1	0	25	3	0	0	0	0	0	0	0	85
15	0	10	31	1	0	0	0	4	0	2	16	25
16	33	1	6	0	0	0	0	0	0	0	22	30
17	37	12	0	6	0	2	0	0	0	0	7	4
18	23	0	0	0	0	0	0	0	0	0	14	45
19	4	0	6	7	0	0	0	0	2	0	0	65
20	45	9	15	2	0	1	0	0	0	36	20	80
21	7	15	22	1	0	0	0	0	0	0	47	85
22	0	57	36	0	0	0	0	0	8	0	39	70
23	0	30	40	0	0	0	4	0	0	7	40	70
24	45	8	50	0	0	18	7	0	0	0	8	95
25	55	80	45	4	0	0	0	5	0	0	50	125
26	30	101	36	0	0	0	1	0	0	14	0	125
27	24	59	0	2	0	4	21	0	0	2	0	100
28	71	50	7	0	0	3	43	0	0	1	0	135
29	90	23	5	0	23	0	0	0	0	38	5	115
30	18		19	0	4	0	0	0	2	10	0	125
31	9		0		7		0	0		16		10

<b>Monthly</b>	761	949	817	81	170	66	147	13	67	233	387	1655
<b>Rainy Days</b>	26	26	23	11	8	9	15	4	8	15	16	31
<b>Max.</b>	90	101	125	27	61	21	43	5	18	39	50	135
<b>Average</b>	25	33	26	3	5	2	5	0	2	8	13	53

<b>Annual</b> :	5346	<b>No.</b> :	192	<b>Max.</b> :	135	<b>Ave.</b> :	15
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	115	184	229	46	65	33	22	0	0	20	11	93
2	103	181	212	9	0	5	26	1	38	43	108	96
3	52	139	89	4	71	0	23	7	17	46	16	187
4	142	22	27	15	0	3	0	0	2	36	63	224
5	107	190	193	5	0	18	11	5	8	7	184	445
6	242	233	67	2	34	7	65	0	2	81	5	610

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	270	504	530	59	136	38	71	8	55	109	135	376
<b>2nd</b>	491	445	287	22	34	28	76	5	12	124	252	1279

**Table Daily Rainfall**

Station : **Malino (Telemetric)**  
 Year : **1999**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	82	0	12	30	0	0	0	0	0	0	10	7
2	44	9	14	5	0	0	0	0	0	8	14	18
3	66	25	12	18	0	0	0	0	0	0	15	47
4	1	70	1	20	0	0	0	0	0	0	36	32
5	24	156	11	7	0	0	0	0	0	0	29	20
6	5	127	2	4	0	0	0	0	0	0	12	1
7	8	19	20	0	0	0	0	0	1	0	12	27
8	13	35	33	0	0	0	0	0	0	0	2	35
9	4	24	1	5	0	0	0	0	0	0	3	82
10	0	27	22	21	0	0	0	0	0	40	29	10
11	38	2	10	47	0	0	0	0	0	15	1	78
12	0	17	15	1	0	0	0	0	0	9	0	66
13	10	36	21	19	0	0	0	0	0	0	0	48
14	14	8	55	1	0	0	0	0	0	0	16	2
15	0	16	0	24	0	0	0	0	0	0	84	14
16	0	15	37	0	0	0	0	0	0	0	2	6
17	0	4	0	0	0	0	0	0	0	0	3	10
18	0	25	0	0	0	0	0	0	0	0	19	15
19	0	44	6	0	0	0	0	0	0	0	25	34
20	19	30	18	0	0	0	0	0	0	16	2	51
21	46	13	21	0	0	0	0	0	0	31	63	10
22	16	24	24	0	0	0	0	7	0	5	3	43
23	51	3	0	0	0	0	0	0	0	1	2	5
24	32	8	0	0	0	0	0	0	0	0	1	96
25	77	23	29	0	0	0	0	0	0	0	21	52
26	96	0	2	0	0	0	0	0	0	1	10	10
27	43	15	3	0	0	0	0	0	0	0	17	0
28	25	54	18	0	0	0	0	0	0	0	13	5
29	18		51	0	0	0	0	0	0	4	1	9
30	29		14	0	0	0	0	0	0	8	3	38
31	25		31		0		0	0		31		2

<b>Monthly</b>	786	829	483	202	0	0	0	7	1	169	448	873
<b>Rainy Days</b>	24	26	26	13	0	0	0	1	1	12	28	30
<b>Max.</b>	96	156	55	47	0	0	0	7	1	40	84	96
<b>Average</b>	25	30	16	7	0	0	0	0	0	5	15	28

<b>Annual</b> :	3798	<b>No.</b> :	161	<b>Max.</b> :	156	<b>Ave.</b> :	11
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	217	260	50	80	0	0	0	0	0	8	104	124
2	30	232	78	30	0	0	0	0	1	40	58	155
3	62	79	101	92	0	0	0	0	0	24	101	208
4	19	118	61	0	0	0	0	0	0	16	51	116
5	222	71	74	0	0	0	0	7	0	37	90	206
6	236	69	119	0	0	0	0	0	0	44	44	64

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	309	571	229	202	0	0	0	0	1	72	263	487
<b>2nd</b>	477	258	254	0	0	0	0	7	0	97	185	386

**Table Daily Rainfall**

Station : **Malino (Telemetric)**  
 Year : **2000**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	8	24	0	0	17	58	5	1	0	0	0	58
2	17	13	2	74	7	7	0	0	0	0	2	5
3	3	2	0	8	5	0	0	0	0	0	0	67
4	1	237	0	52	0	0	7	0	0	0	0	106
5	0	17	5	13	31	0	1	0	0	0	37	74
6	0	19	12	1	3	2	2	0	0	0	2	63
7	2	10	10	12	2	5	0	3	0	0	0	82
8	65	20	19	1	42	25	0	0	0	0	32	49
9	0	27	2	1	0	6	0	0	0	0	17	4
10	14	1	16	39	0	21	18	0	0	0	19	19
11	62	0	1	32	0	0	0	0	0	0	21	8
12	1	0	9	70	1	31	25	0	0	23	27	5
13	2	0	61	5	0	26	1	0	0	11	3	5
14	8	0	24	0	17	10	0	0	0	47	4	2
15	5	1	47	0	1	93	0	4	0	17	9	4
16	0	0	23	0	7	31	0	2	0	16	4	39
17	0	28	14	9	4	0	0	3	0	35	25	0
18	16	41	18	0	46	2	0	0	2	10	11	10
19	21	1	46	19	0	0	13	0	0	0	9	0
20	43	10	23	5	0	24	0	0	0	55	17	25
21	0	28	15	6	2	3	0	0	0	1	14	35
22	7	4	5	1	5	1	0	0	0	0	13	25
23	23	0	25	6	3	0	0	0	0	0	9	9
24	55	8	4	23	0	0	0	20	0	0	3	74
25	40	52	19	2	14	1	0	0	0	0	2	2
26	5	64	44	4	3	12	0	2	0	0	27	0
27	4	28	14	2	11	0	1	0	0	0	24	25
28	12	0	33	19	0	24	0	0	1	0	6	11
29	31	1	28	9	0	8	0	0	0	0	17	8
30	57		26	11	3	0	0	0	0	0	25	1
31	114		22		0		7	0		0		1

<b>Monthly</b>	616	636	567	424	224	390	80	35	3	215	379	816
<b>Rainy Days</b>	25	22	28	25	20	20	10	7	2	9	26	28
<b>Max.</b>	114	237	61	74	46	93	25	20	2	55	37	106
<b>Average</b>	20	22	18	14	7	13	3	1	0	7	13	26

<b>Annual</b> :	4385	<b>No.</b> :	222	<b>Max.</b> :	237	<b>Ave.</b> :	12
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	29	293	7	147	60	65	13	1	0	0	39	310
2	81	77	59	54	47	59	20	3	0	0	70	217
3	78	1	142	107	19	160	26	4	0	98	64	24
4	80	80	124	33	57	57	13	5	2	116	66	74
5	125	92	68	38	24	5	0	20	0	1	41	145
6	223	93	167	45	17	44	8	2	1	0	99	46

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	188	371	208	308	126	284	59	8	0	98	173	551
<b>2nd</b>	428	265	359	116	98	106	21	27	3	117	206	265



**Table Daily Rainfall**

Station : **Malino (Telemetric)**  
 Year : **2001**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	6	1	20	6	0	0	0	0	0	0	23
2	38	35	0	8	6	0	0	0	0	0	0	130
3	33	59	33	20	3	17	0	0	0	11	0	47
4	9	70	113	17	2	15	0	0	0	5	20	72
5	9	56	9	30	3	6	0	0	0	0	8	58
6	26	52	15	20	1	0	0	0	0	0	1	65
7	18	70	25	21	1	6	0	0	0	0	13	31
8	42	62	2	2	2	39	0	0	0	2	16	84
9	38	82	3	4	2	38	0	0	0	0	19	16
10	99	23	4	7	2	4	0	0	0	0	40	22
11	99	5	2	1	1	1	0	0	0	0	0	35
12	17	1	3	5	1	5	0	0	0	0	20	9
13	6	3	14	8	0	6	0	2	0	11	2	0
14	33	30	2	2	0	4	0	0	0	36	1	6
15	33	2	2	5	20	20	0	0	0	0	7	59
16	28	26	6	3	0	11	0	0	0	0	1	16
17	0	30	17	4	0	0	0	0	0	38	13	43
18	5	20	26	2	0	0	0	0	0	34	23	30
19	26	22	20	4	0	0	0	0	0	50	1	0
20	3	15	12	2	1	5	0	0	0	0	5	61
21	8	7	3	3	0	1	0	0	0	34	57	55
22	9	1	1	6	0	0	1	0	0	1	32	6
23	3	0	0	6	4	0	7	0	0	41	0	12
24	5	0	6	1	0	0	0	0	0	0	11	23
25	8	7	9	1	0	21	0	0	0	0	41	16
26	1	17	15	5	0	16	0	0	0	0	14	16
27	14	0	1	3	0	0	0	0	0	0	10	40
28	33	1	15	33	0	1	0	0	0	0	2	62
29	21		35	19	8	3	0	0	0	0	2	48
30	3		16	5	5	0	0	0	0	5	2	10
31	10		0		21		0	0		0		34

<b>Monthly</b>	677	702	410	267	89	219	8	2	0	268	361	1129
<b>Rainy Days</b>	29	25	28	30	18	19	2	1	0	12	25	29
<b>Max.</b>	99	82	113	33	21	39	7	2	0	50	57	130
<b>Average</b>	22	25	13	9	3	7	0	0	0	9	12	36

<b>Annual</b> :	4132	<b>No.</b> :	218	<b>Max.</b> :	130	<b>Ave.</b> :	11
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	89	226	156	95	20	38	0	0	0	16	28	330
2	223	289	49	54	8	87	0	0	0	2	89	218
3	188	41	23	21	22	36	0	2	0	47	30	109
4	62	113	81	15	1	16	0	0	0	122	43	150
5	33	15	19	17	4	22	8	0	0	76	141	112
6	82	18	82	65	34	20	0	0	0	5	30	210

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	500	556	228	170	50	161	0	2	0	65	147	657
<b>2nd</b>	177	146	182	97	39	58	8	0	0	203	214	472

**Table Daily Rainfall**

Station : **Malino (Telemetric)**  
 Year : **2002**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	134	11	0	28	8	0	0	0	0	0	0	9
2	108	24	0	7	24	0	0	0	0	0	0	40
3	78	5	0	26	21	0	0	0	0	0	0	12
4	29	18	0	10	0	0	5	0	0	0	0	10
5	14	32	0	2	2	2	2	0	0	0	0	7
6	6	3	35	0	15	0	0	0	0	0	0	1
7	25	28	46	0	11	0	0	0	0	0	0	0
8	13	22	8	26	24	9	0	0	0	0	0	5
9	16	0	52	15	54	0	0	0	0	0	0	2
10	5	2	3	1	13	1	0	0	0	0	0	20
11	15	0	67	0	0	1	0	0	0	0	0	4
12	10	34	59	0	0	17	0	0	0	0	3	33
13	2	43	1	2	0	0	0	0	0	0	4	37
14	3	31	6	3	0	0	0	0	0	0	0	9
15	0	43	2	24	0	0	0	0	0	0	0	7
16	30	21	23	21	0	1	0	0	0	0	10	1
17	10	22	1	20	1	3	0	0	0	0	0	0
18	2	34	1	6	0	0	0	0	0	0	0	0
19	6	35	14	1	0	1	0	0	0	0	0	0
20	11	5	0	0	0	0	0	0	0	0	3	17
21	70	24	0	1	0	1	0	0	0	0	0	35
22	4	70	23	9	0	2	0	0	0	2	6	36
23	35	22	35	12	0	10	0	0	0	0	9	4
24	5	26	59	6	0	0	0	0	0	0	23	1
25	6	0	13	1	0	42	0	0	0	0	12	2
26	1	0	16	3	0	0	0	0	0	0	14	11
27	7	5	16	0	0	0	0	0	0	0	5	12
28	0	23	5	0	0	0	0	0	0	0	2	9
29	23		1	0	0	0	0	0	0	0	16	10
30	18		2	41	0	0	0	0	0	0	18	10
31	19		10		0		0	0		0		18

<b>Monthly</b>	705	583	498	265	173	90	7	0	0	2	125	362
<b>Rainy Days</b>	29	24	24	22	10	12	2	0	0	1	13	27
<b>Max.</b>	134	70	67	41	54	42	5	0	0	2	23	40
<b>Average</b>	23	21	16	9	6	3	0	0	0	0	4	12

<b>Annual</b> :	2810	<b>No.</b> :	164	<b>Max.</b> :	134	<b>Ave.</b> :	8
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	363	90	0	73	55	2	7	0	0	0	0	78
2	65	55	144	42	117	10	0	0	0	0	0	28
3	30	151	135	29	0	18	0	0	0	0	7	90
4	59	117	39	48	1	5	0	0	0	0	13	18
5	120	142	130	29	0	55	0	0	0	2	50	78
6	68	28	50	44	0	0	0	0	0	0	55	70

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	458	296	279	144	172	30	7	0	0	0	7	196
<b>2nd</b>	247	287	219	121	1	60	0	0	0	2	118	166

**Table Daily Rainfall**

Station : **Malino (Telemetric)**  
 Year : **2003**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	23	6	0	1	2	0	0	0	0	10	1	
2	108	14	0	6	0	0	0	0	0	0	0	
3	49	15	0	0	0	0	0	0	0	0	0	3
4	33	8	0	0	44	0	0	0	0	0	0	
5	2	52	81	0	11	0	0	0	0	0	0	
6	20	4	0	34	3	0	0	0	0	0	0	4
7	6	7	8	6	0	0	12	0	0	10	0	
8	2	8	0	0	5	0	0	0	0	0	1	0
9	12	19	2	0	1	0	2	0	0	13	9	
10	54	14	20	4	2	1	5	0	0	3	7	
11	75	39	3	1	11	0	0	0	0	22	36	
12	97	1	11	7	0	0	0	41	0	0	23	3
13	161	47	4	0	0	0	0	0	0	0	0	15
14	33	37	32	0	0	0	0	0	0	1	13	4
15	68	4	14	2	0	0	0	0	10	0	0	26
16	14	101	0	10	0	0	0	0	0	0	0	17
17	8	24	59	0	0	0	0	0	0	0	0	12
18	7	94	23	3	0	7	0	0	0	0	0	26
19	17	153	20	15	0	0	0	0	0	0	0	55
20	12	22	5	0	0	3	0	0	7	0	0	27
21	24	0	0	8	0	10	0	0	0	0	0	73
22	8	12	0	4	0	1	0	0	0	0		61
23	13	6	0	5	0	13	0	0	0	0		84
24	0	0	12	7	0	5	4	0	0	0		61
25	0	2	37	12	0	0	0	0	0	0		35
26	0	0	9	0	0	0	0	0	0	0		80
27	15	0	30	4	0	0	0	0	0	13		16
28	35	38	39	3	0	0	0	0	0	0		8
29	79		0	0	0	0	0	0	0	2		3
30	12		0	0	0	0	0	0	0	5		5
31	18		11		0		0	0		0		22

<b>Monthly</b>	1005	727	420	132	79	40	23	41	17	80	96	633
<b>Rainy Days</b>	28	24	19	18	8	7	4	1	2	10	8	20
<b>Max.</b>	161	153	81	34	44	13	12	41	10	22	36	84
<b>Average</b>	32	26	14	4	3	1	1	1	1	3	5	32

<b>Annual</b> :	3293	<b>No.</b> :	149	<b>Max.</b> :	161	<b>Ave.</b> :	10
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	215	95	81	7	57	0	0	0	0	10	4	0
2	94	52	30	44	11	1	19	0	0	27	20	0
3	434	128	64	10	11	0	0	41	10	23	72	48
4	58	394	107	28	0	10	0	0	7	0	0	137
5	45	20	49	36	0	29	4	0	0	0	0	314
6	159	38	89	7	0	0	0	0	0	20	0	134

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	743	275	175	61	79	1	19	41	10	60	96	48
<b>2nd</b>	262	452	245	71	0	39	4	0	7	20	0	585

**Table Daily Rainfall**

Station : **Malino (Telemetric)**  
 Year : **2004**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	29	0	0	0	0	0						
2	26	10	0	0	21	0						
3	3	47	0	0	3	0						
4	0	26	0	0	1	0						
5	4	29	0	0	0	0						
6	18	9	0	0	0	38						
7	3	41	0	0	13	21						
8	1	33	0	0	32	10						
9	1	27	0	0	22	0						
10	7	50	0	0	0	0						
11	0	25	0	0	1	0						
12	1	28	0	0	0	0						
13	1	25	0	0	0	0						
14	10	3	0	0	0	0						
15	0	30	0	0	0	0						
16	0	22	0	0	0	0						
17	6	1	0	0	0	0						
18	18	2	0	10	0	0						
19	5	0	0	6	1	0						
20	10	2	0	12	0	0						
21	0	1	0	1	0	0						
22	6	15	0	29	0	0						
23	21	24	34	7	7							
24	1	1	0	12	0							
25	2	23	0	0	9							
26	3	1	0	0	0							
27	7	0	0	27	0							
28	2	0	0	1	0							
29	2	0	1	5	42							
30	12		1	20	28							
31	3		0		7							

<b>Monthly</b>	202	475	36	130	187	69	0	0	0	0	0	0
<b>Rainy Days</b>	26	24	3	11	13	3	0	0	0	0	0	0
<b>Max.</b>	29	50	34	29	42	38	0	0	0	0	0	0
<b>Average</b>	7	16	1	4	6	3	0	0	0	0	0	0

<b>Annual</b> :	1099	<b>No.</b> :	80	<b>Max.</b> :	50	<b>Ave.</b> :	3
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	62	112	0	0	25	0	0	0	0	0	0	0
2	30	160	0	0	67	69	0	0	0	0	0	0
3	12	111	0	0	1	0	0	0	0	0	0	0
4	39	27	0	28	1	0	0	0	0	0	0	0
5	30	64	34	49	16	0	0	0	0	0	0	0
6	29	1	2	53	77	0	0	0	0	0	0	0

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	104	383	0	0	93	69	0	0	0	0	0	0
<b>2nd</b>	98	92	36	130	94	0	0	0	0	0	0	0

**Table Daily Rainfall**

Station : Malino (Non Telemetric)  
 Year : 1977

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1				12	0	2	3	0	0	0	0	58
2				3	0	0	2	0	0	0	6	21
3				14	46	0	0	2	0	0	0	8
4				12	9	1	0	0	0	0	0	15
5				2	0	0	1	0	0	0	0	0
6				63	2	5	8	0	0	0	4	0
7				2	1	0	0	0	0	0	0	11
8				24	0	23	0	0	0	0	0	13
9				101	0	0	0	0	0	0	0	38
10				141	0	0	0	10	0	0	0	88
11				6	3	0	0	10	0	0	0	5
12				24	0	83	0	0	0	0	0	14
13				2	2	58	0	0	0	0	0	26
14				13	4	18	0	0	0	0	0	6
15				2	2	0	0	0	0	0	0	50
16				15	28	1	0	0	0	0	0	19
17				4	21	63	0	0	0	0	0	21
18				16	38	5	0	0	0	0	0	66
19				2	11	1	0	0	0	0	67	15
20				23	21	1	0	0	0	0	1	5
21				3	2	0	0	0	0	0	12	57
22				2	2	0	0	0	0	0	28	53
23				19	0	0	0	19	0	0	37	17
24				1	0	0	0	0	0	0	0	18
25				0	0	0	0	0	0	0	4	20
26				0	22	0	0	0	0	0	5	64
27			27	0	0	0	0	0	0	0	1	30
28			49	6	0	0	0	0	0	0	22	35
29			23	7	0	0	0	0	0	0	57	18
30			13	2	0	0	0	0	0	0	31	11
31			28		0		0	0		0		26

<b>Monthly</b>	0	0	140	521	214	261	14	41	0	0	275	828
<b>Rainy Days</b>	0	0	5	27	16	12	4	4	0	0	13	29
<b>Max.</b>	0	0	49	141	46	83	8	19	0	0	67	88
<b>Average</b>	0	0	28	17	7	9	0	1	0	0	9	27

<b>Annual</b> :	2294	<b>No.</b> :	110	<b>Max.</b> :	141	<b>Ave.</b> :	8
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0	0	43	55	3	6	2	0	0	6	102
2	0	0	0	331	3	28	8	10	0	0	4	150
3	0	0	0	47	11	159	0	10	0	0	0	101
4	0	0	0	60	119	71	0	0	0	0	68	126
5	0	0	0	25	4	0	0	19	0	0	81	165
6	0	0	140	15	22	0	0	0	0	0	116	184

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	0	0	0	421	69	190	14	22	0	0	10	353
<b>2nd</b>	0	0	140	100	145	71	0	19	0	0	265	475

**Table Daily Rainfall**

Station : **Malino**  
 Year : **1978**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	8	10	1	0	4	3	4	7	0	6	0	28
2	51	86	15	3	31	5	30	2	3	1	0	41
3	7	22	1	22	0	0	4	0	7	45	0	35
4	38	18	3	45	0	4	9	0	0	4	0	11
5	24	16	24	24	0	3	12	0	0	4	4	10
6	26	14	12	9	0	8	63	0	3	4	2	8
7	8	11	13	99	1	21	1	0	1	0	2	0
8	12	49	11	0	6	0	3	0	8	0	12	0
9	16	112	11	41	0	57	6	0	6	0	1	2
10	168	7	19	8	0	0	14	0	7	1	10	14
11	54	3	17	1	18	13	5	2	1	0	99	16
12	35	25	0	0	20	3	7	10	1	0	0	92
13	0	2	15	0	4	4	7	2	0	0	0	62
14	10	32	0	0	17	15	1	6	0	0	0	6
15	1	0	18	0	70	0	1	0	3	6	1	14
16	79	28	3	0	17	0	0	5	0	7	0	102
17	1	54	7	19	2	19	2	26	0	2	0	0
18	23	13	5	0	0	5	0	0	27	0	1	9
19	8	37	40	0	0	18	0	19	61	3	25	1
20	43	11	0	17	0	0	2	0	9	1	6	11
21	64	13	1	21	0	0	0	0	0	0	50	44
22	14	9	23	3	0	0	5	0	0	6	53	68
23	8	2	44	0	9	3	26	0	0	0	69	91
24	30	15	48	23	1	19	1	0	0	0	58	94
25	45	6	4	3	0	4	1	0	0	0	24	22
26	0	38	4	0	2	6	0	3	1	0	24	29
27	1	21	14	0	0	20	6	0	16	0	0	94
28	1	1	8	27	0	4	9	1	0	0	1	25
29	0		6	0	19	3	50	28	0	66	0	18
30	0		0	6	3	0	8	0	0	0	4	24
31	0		11		12		5	0		0		16

<b>Monthly</b>	775	655	378	371	236	237	282	111	154	156	446	987
<b>Rainy Days</b>	26	27	27	17	17	21	26	12	15	14	19	28
<b>Max.</b>	168	112	48	99	70	57	63	28	61	66	99	102
<b>Average</b>	25	23	12	12	8	8	9	4	5	5	15	32

<b>Annual</b> :	4788	<b>No.</b> :	249	<b>Max.</b> :	168	<b>Ave.</b> :	13
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	128	152	44	94	35	15	59	9	10	60	4	125
2	230	193	66	157	7	86	87	0	25	5	27	24
3	100	62	50	1	129	35	21	20	5	6	100	190
4	154	143	55	36	19	42	4	50	97	13	32	123
5	161	45	120	50	10	26	33	0	0	6	254	319
6	2	60	43	33	36	33	78	32	17	66	29	206

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	458	407	160	252	171	136	167	29	40	71	131	339
<b>2nd</b>	317	248	218	119	65	101	115	82	114	85	315	648

**Table Daily Rainfall**

Station : **Malino**  
 Year : **1979**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	21	74	21	2	26	1	0	0	0	1	0	0
2	19	15	19	0	0	1	0	0	0	0	7	24
3	6	4	6	34	53	4	0	0	0	0	16	11
4	11	18	11	0	1	0	0	0	1	0	0	0
5	12	2	12	1	2	55	0	0	0	0	0	0
6	83	13	83	21	31	10	0	0	2	12	0	30
7	75	2	75	12	5	0	4	0	0	0	0	73
8	79	10	79	70	23	21	2	0	0	8	0	60
9	95	3	95	1	0	20	1	0	0	0	7	17
10	80	1	80	2	6	0	3	0	0	0	0	35
11	67	5	67	0	18	0	3	0	0	0	1	21
12	16	52	16	0	41	0	3	0	0	0	17	17
13	3	51	3	0	16	0	0	0	0	0	0	1
14	6	17	6	0	27	5	0	0	0	0	15	1
15	28	21	28	0	0	0	0	0	0	0	6	0
16	18	46	18	15	0	0	0	0	0	0	0	12
17	0	8	0	39	0	0	3	0	0	0	0	14
18	2	0	2	0	0	0	3	0	0	0	1	9
19	0	13	0	1	0	9	4	0	0	0	0	58
20	2	32	2	4	0	5	0	0	0	32	0	28
21	43	5	43	11	0	0	0	0	1	16	1	9
22	29	0	29	8	0	0	0	0	0	0	44	1
23	11	0	11	3	0	2	0	0	0	0	6	1
24	11	12	11	5	0	1	0	0	0	0	0	7
25	3	22	3	10	1	0	0	0	0	0	4	39
26	35	28	85	21	1	0	0	0	0	1	2	69
27	2	131	2	1	12	0	0	0	0	0	6	1
28	1	4	1	4	1	0	0	0	0	0	24	17
29	0		0	21	3	0	0	0	0	0	3	53
30	0		0	1	10	0	0	0	0	0	10	54
31	13		13		1		0	0		0		9

<b>Monthly</b>	771	589	821	287	278	134	26	0	4	70	170	671
<b>Rainy Days</b>	27	25	27	22	19	12	9	0	3	6	17	27
<b>Max.</b>	95	131	95	70	53	55	4	0	2	32	44	73
<b>Average</b>	25	21	26	10	9	4	1	0	0	2	6	22

<b>Annual</b> :	3821	<b>No.</b> :	194	<b>Max.</b> :	131	<b>Ave.</b> :	10
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	69	113	69	37	82	61	0	0	1	1	23	35
2	412	29	412	106	65	51	10	0	2	20	7	215
3	120	146	120	0	102	5	6	0	0	0	39	40
4	22	99	22	59	0	14	10	0	0	32	1	121
5	97	39	97	37	1	3	0	0	1	16	55	57
6	51	163	101	48	28	0	0	0	0	1	45	203

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	601	288	601	143	249	117	16	0	3	21	69	290
<b>2nd</b>	170	301	220	144	29	17	10	0	1	49	101	381

**Table Daily Rainfall**

Station : **Malino**  
 Year : **1980**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	19	0	2	1	30	0	0	1	0	0	0	2
2	5	27	4	10	30	0	0	0	0	0	0	10
3	33	51	24	21	92	0	0	0	0	0	0	9
4	11	0	120	26	20	0	0	0	0	0	0	55
5	67	81	6	116	5	0	0	4	0	0	0	67
6	28	136	0	11	35	1	0	2	0	0	0	30
7	37	73	13	4	2	0	0	0	0	0	0	1
8	64	6	56	5	0	0	1	0	0	0	0	72
9	86	34	102	58	2	0	0	0	0	0	115	51
10	45	9	0	40	0	0	1	0	0	0	54	15
11	10	81	1	15	2	0	0	0	0	11	1	46
12	27	136	23	4	0	4	0	0	0	0	0	25
13	6	96	137	5	0	3	3	0	0	6	0	103
14	5	83	100	61	0	1	16	0	0	0	0	18
15	114	67	5	39	1	8	0	0	0	0	0	16
16	3	79	28	42	1	42	11	0	0	0	0	5
17	0	27	110	89	0	0	0	0	0	0	21	35
18	138	16	28	0	0	13	0	0	0	0	68	7
19	113	31	67	30	15	44	0	0	0	0	12	133
20	93	17	101	0	0	0	0	0	0	25	0	24
21	12	92	12	0	0	0	0	0	0	10	0	18
22	51	51	3	135	7	0	0	0	0	77	10	28
23	0	130	0	64	108	0	0	1	0	16	4	88
24	1	22	45	0	49	7	0	0	0	0	4	84
25	0	14	20	9	0	1	0	0	0	0	25	4
26	0	98	0	18	3	0	0	0	0	36	2	10
27	1	4	1	46	13	4	0	0	0	21	46	31
28	0	1	22	10	73	1	0	0	0	50	23	2
29	0	18	45	6	0	0	0	0	0	0	92	38
30	0		0	3	0	0	0	0	0	0	133	54
31	0		0		0		0	4		0		43

<b>Monthly</b>	969	1480	1075	868	488	129	32	12	0	252	610	1124
<b>Rainy Days</b>	23	27	25	26	18	12	5	5	0	9	15	31
<b>Max.</b>	138	136	137	135	108	44	16	4	0	77	133	133
<b>Average</b>	31	51	35	29	16	4	1	0	0	8	20	36

<b>Annual</b> :	7039	<b>No.</b> :	196	<b>Max.</b> :	138	<b>Ave.</b> :	19
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	135	159	156	174	177	0	0	5	0	0	0	143
2	260	258	171	118	39	1	2	2	0	0	169	169
3	162	463	266	124	3	16	19	0	0	17	1	208
4	347	170	334	161	16	99	11	0	0	25	101	204
5	64	309	80	208	164	8	0	1	0	103	43	222
6	1	121	68	83	89	5	0	4	0	107	296	178

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	557	880	593	416	219	17	21	7	0	17	170	520
<b>2nd</b>	412	600	482	452	269	112	11	5	0	235	440	604



**Table Daily Rainfall**

Station : **Malino**  
 Year : **1981**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	18	0	96	2	4	1	2	0	0	0	19	21
2	9	0	0	50	8	1	2	1	0	3	3	15
3	17	67	0	7	59	0	9	0	0	0	13	18
4	7	22	0	3	16	0	3	0	5	1	20	85
5	9	6	0	0	46	0	53	0	16	0	30	127
6	103	39	17	1	1	1	17	0	3	8	48	75
7	40	77	38	101	0	5	11	0	0	2	20	60
8	13	49	14	5	1	0	0	0	13	16	9	48
9	20	27	13	19	0	1	0	0	0	0	0	43
10	127	71	10	14	31	8	0	0	0	0	6	135
11	59	23	1	18	0	0	6	0	3	1	14	12
12	2	47	0	16	11	0	66	0	0	0	52	36
13	1	5	3	24	5	0	6	0	0	0	54	13
14	6	9	0	0	17	0	18	0	0	0	40	0
15	6	32	0	19	18	2	15	0	0	0	38	24
16	43	15	25	9	0	1	21	0	0	0	24	36
17	64	7	0	2	0	0	1	0	0	0	133	5
18	20	6	2	24	0	44	0	0	5	0	5	42
19	13	1	0	2	10	12	0	0	0	0	21	20
20	14	0	2	0	1	45	16	0	0	0	33	6
21	16	0	1	43	34	16	7	0	0	0	3	55
22	98	8	0	35	0	1	0	0	25	7	4	15
23	5	11	2	19	0	16	0	0	4	0	10	27
24	7	13	2	4	0	15	0	0	0	0	11	29
25	28	26	4	3	0	2	0	0	84	0	23	15
26	120	37	12	24	5	11	0	1	3	0	19	1
27	51	68	6	40	0	0	0	1	38	8	30	91
28	45	12	25	3	0	0	0	0	31	0	9	92
29	65		67	5	0	0	0	0	1	0	15	13
30	0		27	6	0	2	0	0	0	0	38	67
31	0		50		0		0	0		0		5

<b>Monthly</b>	1026	678	417	498	267	184	253	3	231	46	744	1231
<b>Rainy Days</b>	29	24	21	27	16	18	16	3	13	8	29	30
<b>Max.</b>	127	77	96	101	59	45	66	1	84	16	133	135
<b>Average</b>	33	24	13	17	9	6	8	0	8	1	25	40

<b>Annual</b> :	5578	<b>No.</b> :	234	<b>Max.</b> :	135	<b>Ave.</b> :	15
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	60	95	96	62	133	2	69	1	21	4	85	266
2	303	263	92	140	33	15	28	0	16	26	83	361
3	74	116	4	77	51	2	111	0	3	1	198	85
4	154	29	29	37	11	102	38	0	5	0	216	109
5	154	58	9	104	34	50	7	0	113	7	51	141
6	281	117	187	78	5	13	0	2	73	8	111	269

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	437	474	192	279	217	19	208	1	40	31	366	712
<b>2nd</b>	589	204	225	219	50	165	45	2	191	15	378	519

**Table Daily Rainfall**

Station : **Malino**  
 Year : **1982**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	32	10	10	118	89	3	0	0	0	0	0	28
2	33	5	60	19	41	0	0	0	0	0	0	0
3	5	9	2	0	4	2	0	0	0	0	0	0
4	18	51	17	25	0	29	0	0	0	0	0	0
5	12	27	64	75	1	39	0	0	0	0	0	43
6	17	32	0	23	0	1	0	0	0	0	0	35
7	34	63	31	10	0	10	0	0	0	0	0	8
8	79	10	103	42	1	1	0	0	0	0	0	13
9	97	21	2	13	2	2	0	0	0	0	0	25
10	131	4	15	74	0	0	1	0	0	0	38	0
11	82	64	16	52	0	0	0	0	0	1	43	12
12	53	71	0	60	0	0	0	0	0	0	28	7
13	14	135	25	16	6	0	0	0	0	0	0	4
14	2	53	3	38	0	0	0	0	0	0	0	2
15	105	44	39	14	0	23	0	0	0	0	0	0
16	0	2	41	-	0	0	0	0	0	0	0	0
17	2	3	48	29	0	0	0	0	0	0	0	15
18	0	2	60	39	0	0	0	0	0	1	0	6
19	0	0	40	0	0	0	0	0	0	0	0	19
20	0	9	48	0	0	0	0	0	0	0	0	2
21	28	9	0	6	0	0	0	0	0	0	0	14
22	11	12	3	45	5	0	0	0	0	0	0	42
23	20	10	3	50	2	1	0	0	0	0	1	1
24	26	2	26	23	13	0	0	0	0	0	0	37
25	72	8	29	18	2	0	0	0	1	0	0	7
26	49	0	20	78	3	0	0	0	0	0	0	21
27	71	33	10	46	0	0	0	0	0	0	0	21
28	66	1	22	38	0	0	0	0	0	0	0	0
29	20		30	0	7	0	0	0	0	0	3	1
30	20		18	3	9	0	0	0	0	0	0	38
31	15		33		5		0	0	1			18

<b>Monthly</b>	1114	690	818	954	190	111	1	0	2	2	113	419
<b>Rainy Days</b>	27	26	28	25	15	10	1	0	2	2	5	24
<b>Max.</b>	131	135	103	118	89	39	1	0	1	1	43	43
<b>Average</b>	36	25	26	33	6	4	0	0	0	0	4	14

<b>Annual</b> :	4414	<b>No.</b> :	165	<b>Max.</b> :	135	<b>Ave.</b> :	12
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	100	102	153	237	135	73	0	0	0	0	0	71
2	358	130	151	162	3	14	1	0	0	0	38	81
3	256	367	83	180	6	23	0	0	0	1	71	25
4	2	16	237	68	0	0	0	0	0	1	0	42
5	157	41	61	142	22	1	0	0	1	0	1	101
6	241	34	133	165	24	0	0	0	1	0	3	99

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	714	599	387	579	144	110	1	0	0	1	109	177
<b>2nd</b>	400	91	431	375	46	1	0	0	2	1	4	242

**Table Daily Rainfall**

Station : **Malino**  
 Year : **1983**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	19	42	0	20	5	5	0	0	0	0	21	0
2	32	88	0	3	0	0	0	0	0	0	40	0
3	18	47	0	8	14	5	0	0	0	0	1	0
4	12	0	0	23	20	3	0	0	0	0	14	0
5	13	0	1	1	0	1	4	0	0	0	21	0
6	68	25	7	27	3	20	0	0	1	0	0	0
7	2	12	5	2	20	11	0	0	0	2	0	0
8	0	4	28	9	4	25	0	0	0	1	0	0
9	0	38	0	66	40	34	0	0	0	2	3	0
10	0	5	1	10	60	9	0	0	0	15	1	8
11	6	9	0	32	37	6	0	0	0	16	0	0
12	30	36	28	55	31	5	0	2	0	0	0	4
13	27	50	0	0	16	4	0	0	0	0	0	60
14	25	13	0	0	0	7	0	8	0	0	0	0
15	49	5	0	23	1	13	0	0	0	0	0	0
16	11	78	0	31	0	0	41	3	0	0	0	0
17	18	32	0	60	3	1	9	0	0	0	6	0
18	16	0	0	59	0	5	0	0	0	3	11	0
19	78	1	13	36	15	18	4	0	0	0	23	14
20	16	1	3	49	25	9	0	0	0	0	8	30
21	10	14	2	18	0	31	0	0	0	0	62	1
22	11	16	69	9	36	5	0	0	0	0	54	42
23	0	3	14	46	101	24	0	0	0	0	10	10
24	0	0	0	11	27	0	0	0	0	0	130	24
25	0	19	56	2	21	15	2	0	0	0	47	4
26	27	0	11	1	30	10	0	0	0	0	27	5
27	87	14	31	2	28	2	0	0	0	10	5	0
28	47	0	0	2	0	37	0	0	0	0	21	4
29	10		1	0	2	0	0	5	0	0	55	1
30	26		4	1	0	27	0	0	0	0	53	0
31	26		0		3		0	0		0		0

<b>Monthly</b>	684	552	274	606	542	332	60	18	1	49	613	207
<b>Rainy Days</b>	25	22	16	27	23	26	5	4	1	7	21	13
<b>Max.</b>	87	88	69	66	101	37	41	8	1	16	130	60
<b>Average</b>	22	20	9	20	17	11	2	1	0	2	20	7

<b>Annual</b> :	3938	<b>No.</b> :	190	<b>Max.</b> :	130	<b>Ave.</b> :	11
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	94	177	1	55	39	14	4	0	0	0	97	0
2	70	84	41	114	127	99	0	0	1	20	4	8
3	137	113	28	110	85	35	0	10	0	16	0	64
4	139	112	16	235	43	33	54	3	0	3	48	44
5	21	52	141	86	185	75	2	0	0	0	303	81
6	223	14	47	6	63	76	0	5	0	10	161	10

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	301	374	70	279	251	148	4	10	1	36	101	72
<b>2nd</b>	383	178	204	327	291	184	56	8	0	13	512	135

**Table Daily Rainfall**

Station : **Malino**  
 Year : **1984**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	25	11	5	20	9	0	0	0	5	69	0	4
2	11	4	61	5	190	0	0	17	88	18	0	82
3	25	64	48	54	18	0	0	0	3	12	0	6
4	24	12	0	108	8	0	0	0	0	2	0	1
5	44	8	5	42	22	50	0	0	29	0	0	77
6	0	1	2	26	18	1	0	0	33	0	0	26
7	0	37	7	46	20	4	0	0	1	0	0	21
8	8	68	11	31	27	4	1	0	1	1	60	8
9	48	61	125	48	4	2	0	0	0	0	4	9
10	0	2	53	6	20	1	0	0	0	0	0	113
11	31	11	62	40	2	11	0	0	4	8	0	10
12	63	37	30	27	1	0	0	0	6	0	0	9
13	10	0	25	6	26	25	0	0	1	0	0	122
14	59	39	31	41	3	0	0	0	3	0	0	73
15	4	102	63	21	0	0	2	0	0	35	0	42
16	33	64	0	9	1	2	0	0	0	0	0	87
17	80	33	28	8	3	0	1	0	0	0	0	0
18	5	20	30	2	3	3	0	0	0	0	0	56
19	6	8	2	0	1	0	5	0	0	55	14	41
20	1	44	1	53	10	0	9	0	0	2	30	5
21	15	2	3	34	5	0	2	0	0	0	1	4
22	40	6	3	1	2	0	0	0	0	3	42	24
23	0	45	21	47	0	3	2	0	0	0	70	28
24	0	20	4	26	13	45	1	19	13	0	79	1
25	10	1	23	1	0	3	0	0	0	0	4	2
26	13	26	0	15	10	11	0	0	0	0	5	35
27	35	14	0	1	40	25	0	0	0	0	0	3
28	114	18	22	11	0	20	24	0	0	0	4	62
29	16	12	24	26	0	4	0	0	0	0	1	111
30	75		5	39	15	6	21	12	45	13	0	0
31	35				3		0	0		0	0	0

<b>Monthly</b>	830	770	694	794	474	220	68	48	232	218	314	1062
<b>Rainy Days</b>	26	28	26	29	26	18	10	3	13	11	12	28
<b>Max.</b>	114	102	125	108	190	50	24	19	88	69	79	122
<b>Average</b>	27	27	23	26	15	7	2	2	8	7	10	34

<b>Annual</b> :	5724	<b>No.</b> :	230	<b>Max.</b> :	190	<b>Ave.</b> :	16
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	129	99	119	229	247	50	0	17	125	101	0	170
2	56	169	198	157	89	12	1	0	35	1	64	177
3	167	189	211	135	32	36	2	0	14	43	0	256
4	125	169	61	72	18	5	15	0	0	57	44	189
5	65	74	54	109	20	51	5	19	13	3	196	59
6	288	70	51	92	68	66	45	12	45	13	10	211

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	352	457	528	521	368	98	3	17	174	145	64	603
<b>2nd</b>	478	313	166	273	106	122	65	31	58	73	250	459

**Table Daily Rainfall**

Station : **Malino**  
 Year : **1985**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	20	0	53	0	13	11	0	0	0	0	23
2	70	17	5	37	1	5	0	0	0	2	0	14
3	10	6	25	0	39	0	105	0	0	0	2	0
4	66	52	0	61	35	0	6	0	0	0	6	6
5	0	16	0	0	0	15	1	0	0	0	0	11
6	23	9	26	0	0	3	0	0	0	0	0	0
7	69	0	0	16	34	3	5	0	0	0	16	0
8	2	30	0	9	27	5	1	0	0	0	46	9
9	3	29	35	1	0	30	0	0	0	0	4	28
10	15	1	15	1	0	5	25	0	0	0	4	20
11	73	5	1	95	0	6	0	0	0	0	49	6
12	24	25	1	9	0	83	0	0	5	0	36	4
13	26	42	6	41	0	3	3	0	0	0	27	1
14	16	55	79	47	4	0	16	0	0	2	52	3
15	1	6	89	11	24	0	4	0	0	0	75	21
16	16	4	54	0	5	1	6	0	0	0	58	26
17	20	10	15	143	13	0	28	0	3	0	2	34
18	100	0	33	3	1	0	7	0	0	0	11	1
19	29	0	91	0	1	0	3	0	0	1	0	8
20	0	0	40	11	7	0	0	0	0	0	0	3
21	5	0	0	7	36	0	0	0	0	95	31	41
22	2	0	1	0	4	1	47	0	1	0	6	4
23	4	15	0	16	12	1	2	0	0	5	16	28
24	67	0	0	9	9	0	0	0	0	0	76	53
25	4	16	0	4	10	0	1	0	50	0	10	4
26	0	30	8	5	2	0	0	0	0	0	6	20
27	0	42	1	9	31	0	0	0	0	0	0	19
28	0	56	0	3	2	0	3	0	0	0	16	20
29	6	0	9	4	3	3	0	0	0	0	12	20
30	16		22	0	63	22	3	0	0	0	5	26
31	0		104		48		0	0		0		7

<b>Monthly</b>	667	486	660	595	411	199	277	0	59	105	566	460
<b>Rainy Days</b>	24	21	21	23	23	16	19	0	4	5	23	28
<b>Max.</b>	100	56	104	143	63	83	105	0	50	95	76	53
<b>Average</b>	22	17	21	20	13	7	9	0	2	3	19	15

<b>Annual</b> :	4485	<b>No.</b> :	207	<b>Max.</b> :	143	<b>Ave.</b> :	12
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	146	111	30	151	75	33	123	0	0	2	8	54
2	112	69	76	27	61	46	31	0	0	0	70	57
3	140	133	176	203	28	92	23	0	5	2	239	35
4	165	14	233	157	27	1	44	0	3	1	71	72
5	82	31	1	36	71	2	50	0	51	100	139	130
6	22	128	144	21	149	25	6	0	0	0	39	112

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	398	313	282	381	164	171	177	0	5	4	317	146
<b>2nd</b>	269	173	378	214	247	28	100	0	54	101	249	314

**Table Daily Rainfall**

Station : **Malino**  
 Year : **1986**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0	1	0	0	4	0	3	0	0	3	12
2	6	0	0	43	7	2	0	0	0	0	8	0
3	3	9	26	13	1	16	8	0	0	5	0	8
4	4	27	47	39	0	7	10	0	0	0	2	0
5	11	1	3	10	0	0	0	0	0	0	12	5
6	17	7	7	24	2	1	0	0	0	1	7	6
7	16	7	4	39	5	5	0	0	0	0	0	3
8	15	1	8	47	2	2	1	0	0	0	0	22
9	4	15	13	11	0	12	0	0	0	0	14	4
10	3	7	12	25	17	4	0	0	0	3	0	2
11	98	13	0	5	19	3	0	6	0	39	4	35
12	82	9	0	0	4	0	3	0	0	17	25	18
13	200	53	0	15	0	2	1	0	0	2	0	21
14	132	19	0	35	0	8	28	0	0	0	3	13
15	48	14	0	43	0	0	9	0	0	7	0	0
16	0	45	0	1	0	2	0	0	0	0	33	0
17	23	16	11	19	0	3	9	0	0	0	33	0
18	36	12	11	0	7	5	0	0	0	0	7	9
19	48	3	5	2	0	0	7	0	0	8	17	2
20	3	0	19	13	0	1	0	33	0	10	7	9
21	6	57	1	22	0	8	6	0	0	5	8	26
22	17	15	0	0	0	7	10	0	1	3	12	0
23	99	6	31	2	0	0	0	0	0	5	10	4
24	96	34	13	6	0	1	0	0	0	16	10	4
25	115	24	14	1	0	10	0	0	0	7	19	0
26	112	0	24	0	0	0	21	0	0	1	27	0
27	118	2	2	1	0	5	2	0	0	0	37	15
28	79	19	3	0	0	0	36	0	0	0	0	33
29	49		5	0	0	5	2	0	0	5	0	109
30	13		2	0	0	0	5	0	0	0	0	23
31	0		0		4		16	0		0		53

<b>Monthly</b>	1453	415	262	416	68	113	174	42	1	134	298	436
<b>Rainy Days</b>	28	24	22	22	10	22	17	3	1	16	21	23
<b>Max.</b>	200	57	47	47	19	16	36	33	1	39	37	109
<b>Average</b>	47	15	8	14	2	4	6	1	0	4	10	14

<b>Annual</b> :	3812	<b>No.</b> :	209	<b>Max.</b> :	200	<b>Ave.</b> :	10
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	24	37	77	105	8	29	18	3	0	5	25	25
2	55	37	44	146	26	24	1	0	0	4	21	37
3	560	108	0	98	23	13	41	6	0	65	32	87
4	110	76	46	35	7	11	16	33	0	18	97	20
5	333	136	59	31	0	26	16	0	1	36	59	34
6	371	21	36	1	4	10	82	0	0	6	64	233

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	639	182	121	349	57	66	60	9	0	74	78	149
<b>2nd</b>	814	233	141	67	11	47	114	33	1	60	220	287

**Table Daily Rainfall**

Station : **Malino**  
 Year : **1987**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	16	46	41	2	16	3	0	0	0	0	0	29
2	20	44	12	12	0	0	0	0	0	0	0	37
3	18	6	25	6	0	7	0	0	0	0	0	6
4	0	109	6	2	0	0	0	0	0	0	0	10
5	53	11	1	16	0	0	0	0	0	0	0	12
6	28	30	2	13	0	0	0	0	0	0	2	28
7	24	73	82	3	9	1	0	0	0	0	20	38
8	42	16	1	0	6	0	0	0	0	0	0	29
9	26	13	13	7	0	0	0	0	0	0	0	4
10	19	67	4	90	0	0	0	0	0	0	0	39
11	12	13	3	0	5	0	0	0	0	0	0	40
12	20	40	11	0	19	0	0	0	0	0	0	20
13	2	28	0	0	0	0	0	0	0	0	39	30
14	93	10	0	0	9	0	0	0	0	0	0	10
15	65	59	0	1	9	0	0	0	0	0	29	99
16	67	43	10	1	5	0	0	0	0	0	9	10
17	75	22	8	1	0	0	0	0	0	0	2	79
18	49	20	25	0	5	0	0	0	0	0	129	10
19	35	59	0	2	1	0	0	0	0	0	0	10
20	22	15	0	1	0	0	0	0	0	0	0	70
21	74	22	1	0	0	0	0	0	0	0	0	115
22	67	31	12	0	0	0	0	0	0	0	0	133
23	19	63	32	0	0	0	0	0	0	0	59	127
24	72	37	26	0	4	0	0	0	0	0	49	85
25	76	19	5	0	1	0	0	0	0	0	0	27
26	61	26	16	3	0	0	0	0	0	0	29	67
27	17	16	2	79	8	0	0	0	0	6	15	78
28	49	14	12	25	3	0	0	0	0	0	16	50
29	40		0	0	0	0	0	0	0	0	19	25
30	110		22	0	0	0	0	0	0	0	19	10
31	105		1		0		0	0		0		0

<b>Monthly</b>	1376	952	373	264	100	11	0	0	0	6	436	1327
<b>Rainy Days</b>	30	28	25	17	14	3	0	0	0	1	14	30
<b>Max.</b>	110	109	82	90	19	7	0	0	0	6	129	133
<b>Average</b>	44	34	12	9	3	0	0	0	0	0	15	43

<b>Annual</b> :	4845	<b>No.</b> :	162	<b>Max.</b> :	133	<b>Ave.</b> :	13
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	107	216	85	38	16	10	0	0	0	0	0	94
2	139	199	102	113	15	1	0	0	0	0	22	138
3	192	150	14	1	42	0	0	0	0	0	68	199
4	248	159	43	5	11	0	0	0	0	0	140	179
5	308	172	76	0	5	0	0	0	0	0	108	487
6	382	56	53	107	11	0	0	0	0	6	98	230

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	438	565	201	152	73	11	0	0	0	0	90	431
<b>2nd</b>	938	387	172	112	27	0	0	0	0	6	346	896

**Table Daily Rainfall**

Station : **Malino**  
 Year : **1988**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	12	78	4	4	6	0	0	44	0	10	30	79
2	0	66	16	44	28	0	0	4	8	2	14	23
3	0	45	11	0	1	10	12	0	24	10	0	15
4	0	45	24	0	2	0	15	2	3	3	28	38
5	19	66	9	3	12	0	1	0	0	0	17	16
6	19	32	2	4	3	0	3	0	10	0	72	74
7	13	31	8	0	2	1	3	0	16	2	15	29
8	56	45	0	1	9	0	0	0	0	10	30	38
9	45	47	2	2	1	1	0	5	2	0	67	22
10	39	44	0	6	1	2	0	0	7	0	14	25
11	33	174	2	6	0	0	1	0	0	5	20	80
12	11	275	0	0	0	9	1	2	0	3	50	75
13	0	154	0	0	0	1	0	0	5	0	20	27
14	67	108	3	1	0	12	0	0	0	0	20	27
15	19	106	22	0	0	1	4	0	0	0	13	90
16	42	56	8	40	18	0	3	0	0	0	12	129
17	0	13	0	1	1	0	0	0	0	0	10	90
18	31	38	2	0	104	0	7	0	0	0	0	34
19	0	11	33	0	0	3	0	0	0	0	0	168
20	51	16	0	0	2	0	0	0	0	0	64	51
21	32	64	28	0	0	0	0	0	0	4	0	43
22	13	76	75	0	0	0	4	0	0	0	0	85
23	15	22	104	3	24	1	0	0	0	10	39	68
24	1	12	48	1	0	0	0	0	0	0	23	93
25	3	16	62	6	0	1	0	0	0	0	9	96
26	36	12	43	44	0	0	0	1	0	0	56	85
27	6	43	106	1	0	2	0	0	0	0	27	46
28	4	20	10	0	4	5	0	0	0	20	41	58
29	18	11	0	0	0	0	0	6	0	11	20	85
30	29		0	0	0	3	0	0	0	0	7	128
31	63		0		0		2	0		13		88

<b>Monthly</b>	677	1726	622	167	218	52	56	64	75	103	718	2005
<b>Rainy Days</b>	25	29	22	16	16	14	12	7	8	13	25	31
<b>Max.</b>	67	275	106	44	104	12	15	44	24	20	72	168
<b>Average</b>	22	60	20	6	7	2	2	2	3	3	24	65

<b>Annual</b> :	6483	<b>No.</b> :	218	<b>Max.</b> :	275	<b>Ave.</b> :	18
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	31	300	64	51	49	10	28	50	35	25	89	171
2	172	199	12	13	16	4	6	5	35	12	198	188
3	130	817	27	7	0	23	6	2	5	8	123	299
4	124	134	43	41	125	3	10	0	0	0	86	472
5	64	190	317	10	24	2	4	0	0	14	71	385
6	156	86	159	45	4	10	2	7	0	44	151	490

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	333	1316	103	71	65	37	40	57	75	45	410	658
<b>2nd</b>	344	410	519	96	153	15	16	7	0	58	308	1347



**Table Daily Rainfall**

Station : **Malino**  
 Year : **1989**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	86	85	29	7	0	0	5	0	2	0	2	48
2	96	55	16	13	0	0	10	17	2	0	0	6
3	68	85	35	17	12	0	12	0	0	0	13	20
4	39	138	0	29	5	86	2	0	0	0	11	21
5	88	48	5	18	10	37	8	20	0	0	12	0
6	38	85	10	95	0	40	16	0	0	0	0	11
7	5	0	221	13	42	95	7	7	0	0	0	18
8	85	0	15	18	0	81	0	0	0	0	0	25
9	61	5	14	125	68	0	4	4	0	0	0	0
10	86	0	12	18	0	0	2	0	0	0	13	13
11	24	15	12	68	2	2	10	11	0	0	4	10
12	20	109	16	99	0	18	2	0	0	0	0	6
13	17	85	27	0	20	47	6	0	15	0	7	35
14	100	30	105	90	70	0	10	4	20	0	0	53
15	27	58	0	25	61	0	2	0	0	0	6	110
16	20	15	0	38	0	0	4	0	0	0	0	10
17	55	58	0	53	0	30	0	0	0	0	0	12
18	36	49	8	68	0	5	12	0	0	0	10	4
19	27	15	2	91	0	15	10	0	5	0	3	0
20	16	82	0	39	0	0	2	2	0	0	0	11
21	37	68	0	30	0	16	4	0	0	0	0	20
22	74	5	0	68	0	0	0	0	0	0	0	1
23	7	15	21	32	28	0	12	0	0	0	26	2
24	92	19	0	0	42	18	0	0	0	2	10	5
25	38	16	95	0	40	68	0	6	2	5	10	7
26	120	41	4	0	19	17	0	2	0	2	11	0
27	208	24	4	10	0	29	0	4	0	40	6	24
28	85	29	0	39	0	0	0	2	0	5	18	4
29	97		15	29	30	0	0	21	0	15	20	12
30	68		6	1	10	0	0	2	0	20	15	11
31	195		30		7		0	3		0		0

<b>Monthly</b>	2015	1234	702	1133	466	604	140	105	46	89	197	499
<b>Rainy Days</b>	31	25	22	26	16	16	20	14	6	7	18	26
<b>Max.</b>	208	138	221	125	70	95	16	21	20	40	26	110
<b>Average</b>	65	44	23	38	15	20	5	3	2	3	7	16

<b>Annual</b> :	7230	<b>No.</b> :	227	<b>Max.</b> :	221	<b>Ave.</b> :	20
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	377	411	85	84	27	123	37	37	4	0	38	95
2	275	90	272	269	110	216	29	11	0	0	13	67
3	188	297	160	282	153	67	30	15	35	0	17	214
4	154	219	10	289	0	50	28	2	5	0	13	37
5	248	123	116	130	110	102	16	6	2	7	46	35
6	773	94	59	79	66	46	0	34	0	82	70	51

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	840	798	517	635	290	406	96	63	39	0	68	376
<b>2nd</b>	1175	436	185	498	176	198	44	42	7	89	129	123

**Table Daily Rainfall**

Station : **Malino**  
 Year : **1990**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	19	4	86	0	0	0	0	0	0	0	0	14
2	6	0	6	0	0	0	0	0	0	0	0	1
3	25	4	0	0	0	0	33	0	0	0	0	34
4	44	56	2	6	0	11	0	0	0	0	0	36
5	0	15	1	4	0	0	0	0	0	0	0	3
6	13	55	17	4	0	3	10	0	0	0	0	2
7	12	51	17	0	0	1	0	0	0	0	0	28
8	21	25	40	0	0	6	0	2	0	0	48	18
9	32	1	31	0	20	0	0	0	0	0	0	11
10	33	0	0	18	14	0	0	0	0	0	0	14
11	33	0	18	0	10	0	0	0	0	0	0	1
12	40	3	11	0	0	10	0	0	0	0	0	19
13	26	45	27	0	0	0	0	0	0	0	0	76
14	36	32	16	6	0	4	0	0	0	0	0	11
15	12	0	0	25	0	10	0	0	0	0	0	0
16	10	11	3	12	0	4	16	0	0	0	0	19
17	18	13	15	15	0	14	0	0	0	0	0	0
18	0	2	11	12	0	0	0	0	0	0	0	0
19	17	3	27	0	0	8	0	0	0	0	0	42
20	39	0	0	0	0	10	0	0	0	0	23	60
21	17	4	19	10	0	11	0	0	0	0	16	64
22	31	5	10	10	10	0	3	0	0	0	13	20
23	25	0	11	14	0	0	4	0	0	0	19	5
24	0	1	1	12	3	0	0	0	0	0	4	50
25	0	22	0	0	19	0	0	0	0	0	44	2
26	33	8	20	0	13	0	0	0	0	0	1	19
27	11	1	7	12	23	0	0	0	0	0	0	0
28	24	2	8	0	20	0	0	0	0	0	0	0
29	30		0	0	8	0	0	0	0	0	0	0
30	29		0	49	0	0	14	0	0	0	0	0
31	12		0		0		40	0		0		0

<b>Monthly</b>	648	363	404	209	140	92	120	2	0	0	168	549
<b>Rainy Days</b>	27	22	23	15	10	12	7	1	0	0	8	23
<b>Max.</b>	44	56	86	49	23	14	40	2	0	0	48	76
<b>Average</b>	21	13	13	7	5	3	4	0	0	0	6	18

<b>Annual</b> :	2695	<b>No.</b> :	148	<b>Max.</b> :	86	<b>Ave.</b> :	7
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	94	79	95	10	0	11	33	0	0	0	0	88
2	111	132	105	22	34	10	10	2	0	0	48	73
3	147	80	72	31	10	24	0	0	0	0	0	107
4	84	29	56	39	0	36	16	0	0	0	23	121
5	73	32	41	46	32	11	7	0	0	0	96	141
6	139	11	35	61	64	0	54	0	0	0	1	19

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	352	291	272	63	44	45	43	2	0	0	48	268
<b>2nd</b>	296	72	132	146	96	47	77	0	0	0	120	281

**Table Daily Rainfall**

Station : **Malino**  
 Year : **1991**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	19	7	11	43	0	0	0	0	0	0	0	37
2	9	21	5	29	0	0	0	1	0	0	0	10
3	20	12	0	10	16	0	0	0	0	0	0	21
4	8	10	0	42	2	3	0	0	0	0	13	48
5	69	38	34	27	0	0	0	0	0	0	17	0
6	74	58	5	4	0	0	0	0	0	0	0	9
7	24	70	9	0	0	0	0	0	0	0	0	23
8	19	20	1	0	1	0	0	0	0	0	22	41
9	18	22	3	5	22	0	0	0	0	0	20	2
10	23	27	0	0	16	0	2	0	0	0	3	6
11	22	11	11	12	0	0	0	0	0	0	10	58
12	12	3	0	0	0	0	7	0	0	0	3	4
13	24	11	0	0	0	0	0	0	0	0	26	11
14	48	7	0	9	0	0	0	0	0	0	19	10
15	27	7	2	0	0	0	3	0	0	0	7	0
16	37	10	7	0	4	0	0	0	0	0	0	0
17	7	6	3	23	2	0	0	0	0	0	0	21
18	27	37	0	48	2	0	0	0	0	0	0	0
19	93	54	1	48	4	18	0	0	0	0	16	8
20	66	20	0	0	1	0	0	0	0	0	47	0
21	3	12	4	56	1	0	0	0	0	0	1	0
22	34	14	0	2	0	0	0	0	0	5	14	0
23	160	19	0	10	0	0	0	0	0	0	37	8
24	33	68	0	1	0	6	0	0	0	1	14	71
25	130	0	0	29	4	0	0	0	0	0	0	27
26	50	13	0	70	2	0	0	0	0	0	2	6
27	83	5	0	10	9	0	0	0	0	0	0	9
28	9	2	10	24	0	0	0	0	0	0	31	0
29	14		0	16	0	0	0	2	0	0	4	0
30	12		10	7	0	0	0	0	0	0	37	17
31	33		19		0		0	0		0		3

<b>Monthly</b>	1207	584	135	525	86	27	12	3	0	6	343	450
<b>Rainy Days</b>	31	27	16	22	14	3	3	2	0	2	20	22
<b>Max.</b>	160	70	34	70	22	18	7	2	0	5	47	71
<b>Average</b>	39	21	4	18	3	1	0	0	0	0	11	15

<b>Annual</b> :	3378	<b>No.</b> :	162	<b>Max.</b> :	160	<b>Ave.</b> :	9
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	125	88	50	151	18	3	0	1	0	0	30	116
2	158	197	18	9	39	0	2	0	0	0	45	81
3	133	39	13	21	0	0	10	0	0	0	65	83
4	230	127	11	119	13	18	0	0	0	0	63	29
5	360	113	4	98	5	6	0	0	0	6	66	106
6	201	20	39	127	11	0	0	2	0	0	74	35

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	416	324	81	181	57	3	12	1	0	0	140	280
<b>2nd</b>	791	260	54	344	29	24	0	2	0	6	203	170

**Table Daily Rainfall**

Station : **Malino**  
 Year : **1992**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	24	26	3	17	0	3	0	4	0	0	0	4
2	9	3	8	23	0	2	0	0	18	0	0	34
3	4	8	0	22	0	37	0	0	2	0	0	8
4	14	0	8	1	0	0	13	0	13	0	0	4
5	1	1	0	31	16	0	1	0	11	5	0	2
6	2	0	43	10	6	3	0	0	0	2	0	22
7	52	12	99	0	6	10	0	0	0	2	1	10
8	27	3	4	1	3	2	0	0	0	0	11	16
9	30	0	2	44	2	1	1	0	0	5	0	0
10	83	37	6	0	7	13	0	0	0	0	0	0
11	0	1	17	0	0	5	45	0	0	0	0	6
12	0	23	6	0	0	7	0	0	0	0	2	1
13	69	17	17	2	0	3	1	0	0	0	3	28
14	0	6	4	0	0	0	26	0	0	0	12	1
15	0	0	7	0	0	3	0	0	0	0	5	0
16	0	0	36	13	0	2	0	0	0	0	1	16
17	21	0	7	17	0	6	0	0	0	0	1	0
18	14	13	2	10	0	2	0	0	0	0	0	1
19	8	56	6	6	5	0	0	0	0	9	1	0
20	57	68	0	43	0	0	0	0	0	7	0	0
21	14	14	0	0	1	0	0	0	0	0	2	1
22	5	0	0	10	2	0	2	0	0	33	3	8
23	6	3	1	0	17	0	0	0	0	13	5	1
24	1	0	0	0	1	0	0	0	0	0	0	11
25	31	0	17	0	0	0	0	7	0	0	0	0
26	16	1	7	0	14	1	0	0	0	0	3	0
27	50	64	4	0	11	0	0	0	0	0	13	45
28	6	0	17	0	0	0	0	0	0	0	0	26
29	9	18	4	1	3	0	3	0	2	31	0	1
30	26		1	1	0	3	2	0	0	1	23	21
31	0		2		0		0	0		0		2

<b>Monthly</b>	579	374	328	252	94	103	94	11	46	108	86	269
<b>Rainy Days</b>	25	19	25	17	14	17	9	2	5	10	15	23
<b>Max.</b>	83	68	99	44	17	37	45	7	18	33	23	45
<b>Average</b>	19	13	11	8	3	3	3	0	2	3	3	9

<b>Annual</b> :	2344	<b>No.</b> :	181	<b>Max.</b> :	99	<b>Ave.</b> :	6
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	52	38	19	94	16	42	14	4	44	5	0	52
2	194	52	154	55	24	29	1	0	0	9	12	48
3	69	47	51	2	0	18	72	0	0	0	22	36
4	100	137	51	89	5	10	0	0	0	16	3	17
5	57	17	18	10	21	0	2	7	0	46	10	21
6	107	83	35	2	28	4	5	0	2	32	39	95

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	315	137	224	151	40	89	87	4	44	14	34	136
<b>2nd</b>	264	237	104	101	54	14	7	7	2	94	52	133

**Table Daily Rainfall**

Station : Malino  
Year : 1993

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	44	0	41	47	1	0	0	0	0	0	0	13
2	6	11	43	24	0	10	1	0	0	0	0	3
3	2	55	32	17	8	20	0	0	0	0	0	3
4	11	110	2	47	0	11	0	0	0	0	0	2
5	2	34	0	1	18	10	0	0	0	0	0	5
6	1	27	0	18	4	4	0	0	0	0	0	20
7	22	21	8	78	25	5	7	0	0	0	0	4
8	33	0	59	24	42	0	0	0	0	0	0	36
9	22	1	51	2	11	1	0	0	0	0	0	19
10	25	30	5	27	2	0	0	0	0	0	0	19
11	21	0	6	53	2	0	6	3	0	0	0	0
12	0	7	0	0	6	0	4	0	0	0	0	19
13	0	73	0	18	0	30	1	0	0	1	0	9
14	0	29	0	7	6	0	1	0	0	0	0	0
15	13	30	2	25	0	0	0	0	0	0	0	19
16	25	60	6	0	0	0	0	0	0	0	0	9
17	71	0	27	33	0	13	0	0	0	2	0	4
18	11	0	1	10	9	4	0	0	0	1	0	0
19	28	0	14	50	3	0	0	0	0	0	0	19
20	9	77	18	6	1	2	0	0	0	2	3	0
21	19	70	1	46	2	0	0	0	0	0	70	4
22	42	10	16	11	0	1	0	0	0	0	0	15
23	246	25	6	35	0	0	0	0	0	0	0	9
24	0	1	1	56	9	0	1	0	0	0	24	9
25	27	0	6	2	5	1	0	0	0	0	66	18
26	4	41	16	0	1	1	0	0	0	0	19	0
27	14	0	45	0	0	3	0	0	0	0	19	9
28	4	20	26	0	23	1	0	0	0	0	3	2
29	0		8	1	7	1	0	0	13	0	19	0
30	0		0	1	62	2	0	0	0	0	3	19
31	0		5		1		0	0		0		0

<b>Monthly</b>	702	732	445	639	248	120	21	3	13	6	226	288
<b>Rainy Days</b>	24	20	25	25	22	18	7	1	1	4	9	24
<b>Max.</b>	246	110	59	78	62	30	7	3	13	2	70	36
<b>Average</b>	23	26	14	21	8	4	1	0	0	0	8	9

<b>Annual</b> :	3443	<b>No.</b> :	180	<b>Max.</b> :	246	<b>Ave.</b> :	10
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	65	210	118	136	27	51	1	0	0	0	0	26
2	103	79	123	149	84	10	7	0	0	0	0	98
3	34	139	8	103	14	30	12	3	0	1	0	47
4	144	137	66	99	13	19	0	0	0	5	3	32
5	334	106	30	150	16	2	1	0	0	0	160	55
6	22	61	100	2	94	8	0	0	13	0	63	30

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	202	428	249	388	125	91	20	3	0	1	0	171
<b>2nd</b>	500	304	196	251	123	29	1	0	13	5	226	117

**Table Daily Rainfall**

Station : **Malino**  
 Year : **1994**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	16	17	10	3	0	0	0	0	0	0		4
2	4	43	10	1	0	1	0	0	0	0		2
3	0	20	0	0	12	13	0	0	0	0		17
4	3	13	2	0	28	0	0	0	0	0		10
5	10	0	1	4	0	0	0	0	0	0		7
6	23	7	6	3	1	0	0	0	0	0		0
7	0	15	23	10	4	0	0	0	0	0		27
8	0	10	22	1	1	0	0	0	0	0		6
9	20	10	12	0	0	0	0	0	0	0		26
10	6	1	2	30	10	0	0	0	0	0		24
11	3	5	50	11	10	0	0	0	0	0		0
12	1	6	10	0	0	0	0	0	0	0		6
13	0	14	10	2	0	0	0	0	0	0		24
14	19	30	11	2	0	0	0	0	0	0		27
15	38	13	6	20	0	0	0	0	0	0		32
16	4	14	18	30	0	0	0	0	0	0		36
17	0	6	0	10	0	0	0	0	0	0		33
18	0	20	1	0	0	0	0	0	0	0		31
19	0	40	9	60	0	0	0	0	0	0		71
20	2	14	60	2	0	0	0	0	0	0		6
21	48	8	20	0	0	0	0	0	0	0		6
22	3	30	21	58	10	0	0	0	0	0		0
23	10	0	10	40	0	0	0	0	0	0		0
24	10	0	2	2	0	0	0	0	0	0		0
25	28	36	0	5	0	0	0	0	0	0		0
26	8	10	0	6	0	0	0	0	0	0		0
27	1	0	20	30	0	0	0	0	0	0		0
28	10	1	20	1	0	0	0	0	0	0		0
29	11		30	0	5	0	0	0	0	2		0
30	18		20	12	0	0	0	0	0	0		0
31	0				18		0	0		15		7

<b>Monthly</b>	296	383	406	343	99	14	0	0	0	17	0	402
<b>Rainy Days</b>	23	24	26	23	10	2	0	0	0	2	0	20
<b>Max.</b>	48	43	60	60	28	13	0	0	0	15	0	71
<b>Average</b>	10	14	14	11	3	0	0	0	0	1	0	13

<b>Annual</b> :	1960	<b>No.</b> :	130	<b>Max.</b> :	71	<b>Ave.</b> :	5
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	33	93	23	8	40	14	0	0	0	0	0	40
2	49	43	65	44	16	0	0	0	0	0	0	83
3	61	68	87	35	10	0	0	0	0	0	0	89
4	6	94	88	102	0	0	0	0	0	0	0	177
5	99	74	53	105	10	0	0	0	0	0	0	6
6	48	11	90	49	23	0	0	0	0	17	0	7

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	143	204	175	87	66	14	0	0	0	0	0	212
<b>2nd</b>	153	179	231	256	33	0	0	0	0	17	0	190

**Table Daily Rainfall**

Station : **Malino**  
 Year : **1995**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	12	37	27	0	0	9	1	0	0	0	0	13
2	16	12	3	40	0	0	1	0	0	0	0	46
3	21	58	45	33	0	1	20	0	0	0	0	65
4	29	46	81	60	0	5	11	0	3	4	0	21
5	37	14	0	37	1	0	2	0	0	0	0	48
6	32	6	3	177	1	48	1	0	0	0	38	113
7	29	14	43	77	0	38	0	0	0	23	47	106
8	45	0	2	0	0	20	4	0	0	0	43	75
9	36	0	56	0	1	25	2	0	0	0	14	90
10	27	0	49	23	0	31	1	0	0	0	0	32
11	47	0	20	5	4	57	0	0	0	0	20	25
12	56	0	0	39	5	1	1	0	0	0	11	75
13	136	0	4	26	15	6	1	0	0	0	28	75
14	67	9	31	0	0	2	3	0	0	0	0	7
15	22	24	15	26	45	28	0	0	0	0	94	3
16	35	36	39	0	0	31	0	0	1	26	38	8
17	13	0	1	0	0	1	0	0	0	0	13	12
18	16	38	0	0	0	7	8	0	0	0	90	4
19	55	0	0	50	50	14	0	0	0	0	50	20
20	21	25	1	0	0	0	5	0	0	0	34	70
21	12	28	20	0	5	0	0	0	0	41	54	126
22	18	0	1	0	1	8	0	0	22	0	42	49
23	24	10	14	0	0	47	1	0	0	0	53	27
24	34	1	15	1	0	0	0	0	15	13	68	0
25	13	16	0	4	0	0	0	0	0	2	108	0
26	0	18	5	32	1	0	0	0	0	11	24	0
27	42	83	19	5	0	0	0	0	0	0	47	0
28	26	0	31	6	0	12	0	0	0	0	13	0
29	0		0	2	1	0	0	0	0	0	50	0
30	0		46	0	34	38	0	0	0	0	7	0
31	27		48		5		0	7		0		0

<b>Monthly</b>	948	475	619	643	169	429	62	7	41	120	986	1110
<b>Rainy Days</b>	28	18	25	18	14	21	15	1	4	7	23	23
<b>Max.</b>	136	83	81	177	50	57	20	7	22	41	108	126
<b>Average</b>	31	17	20	21	5	14	2	0	1	4	33	36

<b>Annual</b> :	5609	<b>No.</b> :	197	<b>Max.</b> :	177	<b>Ave.</b> :	15
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	115	167	156	170	1	15	35	0	3	4	0	193
2	169	20	153	277	2	162	8	0	0	23	142	416
3	328	33	70	96	69	94	5	0	0	0	153	185
4	140	99	41	50	50	53	13	0	1	26	225	114
5	101	55	50	5	6	55	1	0	37	56	325	202
6	95	101	149	45	41	50	0	7	0	11	141	0

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	612	220	379	543	72	271	48	0	3	27	295	794
<b>2nd</b>	336	255	240	100	97	158	14	7	38	93	691	316

**Table Daily Rainfall**

Station : **Malino**  
 Year : **1996**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	6	45	26	0	6	10	23					
2	2	57	12	0	5	25	0					
3	12	102	15	19	8	5	0					
4	20	15	23	0	0	0	0					
5	8	45	34	2	0	0	0					
6	5	23	45	31	0	0	0					
7	46	12	27	36	0	0	6					
8	2	25	25	24	0	0	0					
9	7	8	0	2	0	0	4					
10	12	17	0	0	0	0	23					
11	32	21	0	7	0	0	0					
12	4	35	0	5	0	0	12					
13	3	11	18	26	0	0	0					
14	21	4	2	14	0	0	0					
15	18	27	13	3	0	0	0					
16	11	57	0	2	2	0	3					
17	9	13	0	15	3	0	0					
18	22	19	0	5	0	0	0					
19	105	7	0	108	0	0	0					
20	60	0	0	43	32	0	0					
21	42	29	7	3	2	0	0					
22	64	32	68	6	18	0	0					
23	13	9	73	0	4	0	0					
24	27	15	47	0	0	10	6					
25	41	27	26	0	4	2	0					
26	58	35	9	0	0	0	5					
27	31	41	0	0	1	0	0					
28	52	13	0	0	7	0	45					
29	15	23	8	0	9	7	0					
30	63		0	0	8	0	0					
31	60		3		10		0					

<b>Monthly</b>	871	767	481	351	119	59	127	0	0	0	0	0
<b>Rainy Days</b>	31	28	19	18	15	6	9	0	0	0	0	0
<b>Max.</b>	105	102	73	108	32	25	45	0	0	0	0	0
<b>Average</b>	28	26	16	12	4	2	4	0	0	0	0	0

<b>Annual</b> :	2775	<b>No.</b> :	126	<b>Max.</b> :	108	<b>Ave.</b> :	8
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	48	264	110	21	19	40	23	0	0	0	0	0
2	72	85	97	93	0	0	33	0	0	0	0	0
3	78	98	33	55	0	0	12	0	0	0	0	0
4	207	96	0	173	37	0	3	0	0	0	0	0
5	187	112	221	9	28	12	6	0	0	0	0	0
6	279	112	20	0	35	7	50	0	0	0	0	0

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	198	447	240	169	19	40	68	0	0	0	0	0
<b>2nd</b>	673	320	241	182	100	19	59	0	0	0	0	0



**Table Daily Rainfall**

Station : **Malino**  
 Year : **1997**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	56	25	15	10	3	5	0	0	0	0	0	32
2	100	57	75	25	0	0	35	0	0	0	0	63
3	71	10	43	38	0	1	33	0	0	0	0	41
4	39	33	24	47	0	0	0	0	0	0	0	22
5	36	23	39	59	0	14	0	0	0	0	0	1
6	18	7	10	46	0	0	0	0	0	0	0	0
7	30	15	45	13	0	0	0	0	0	0	0	0
8	7	32	60	26	0	0	0	0	0	0	0	0
9	11	17	91	61	0	0	0	0	0	0	0	33
10	3	6	98	73	0	0	0	0	0	0	0	32
11	12	52	51	27	0	0	0	0	0	0	0	9
12	17	71	32	0	0	0	0	0	0	0	0	1
13	25	93	17	0	0	0	0	0	0	0	0	16
14	5	17	160	0	12	0	0	0	0	0	0	0
15	20	49	0	0	6	0	0	0	0	0	0	0
16	36	41	0	0	0	0	0	0	0	0	0	0
17	33	12	0	0	2	0	0	0	0	0	0	0
18	27	16	0	0	0	0	0	0	0	0	0	0
19	6	72	0	0	0	0	0	0	0	0	0	0
20	14	104	0	0	0	0	0	0	0	0	0	3
21	10	96	0	0	0	0	0	0	0	0	0	0
22	93	71	2	0	0	0	0	0	0	0	0	0
23	90	29	0	6	0	0	0	0	0	0	0	22
24	140	16	7	3	0	0	0	0	0	0	0	10
25	23	46	25	1	0	0	0	0	0	0	0	2
26	9	84	63	20	0	0	0	0	0	0	0	25
27	15	100	11	7	0	0	0	0	0	0	0	37
28	17	50	9	9	0	0	0	0	0	0	0	17
29	20		0	2	0	0	0	0	0	0	0	67
30	31		27	0	0	0	0	0	0	0	0	0
31	14		33		0		0	0		0		0

<b>Monthly</b>	1028	1244	937	473	23	20	68	0	0	0	0	433
<b>Rainy Days</b>	31	28	22	18	4	3	2	0	0	0	0	18
<b>Max.</b>	140	104	160	73	12	14	35	0	0	0	0	67
<b>Average</b>	33	44	30	16	1	1	2	0	0	0	0	14

<b>Annual</b> :	4226	<b>No.</b> :	126	<b>Max.</b> :	160	<b>Ave.</b> :	12
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	302	148	196	179	3	20	68	0	0	0	0	159
2	69	77	304	219	0	0	0	0	0	0	0	65
3	79	282	260	27	18	0	0	0	0	0	0	26
4	116	245	0	0	2	0	0	0	0	0	0	3
5	356	258	34	10	0	0	0	0	0	0	0	34
6	106	234	143	38	0	0	0	0	0	0	0	146

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	450	507	760	425	21	20	68	0	0	0	0	250
<b>2nd</b>	578	737	177	48	2	0	0	0	0	0	0	183

**Table Daily Rainfall**

Station : **Malino**  
 Year : **1998**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	5	47	0	45	1	22	0	17	0	0	1	42
2	4	2	25		3	1	0	0	0	0	42	17
3	2	4	15	41	0	0	0	0	0	0	20	19
4	73	12	2	5	41		19	3		52	27	19
5	40	32	4	0	0		3	5		5	0	0
6	0	8	0	10	0	10	5	0	0	38	20	0
7	13	0	4	28	21		65	0	0	0	6	2
8	70	0	4	5	3	25	12	0	1	0	3	30
9	22	3	3	11	0	13	5	0	0	12	17	0
10	50	0	0	10	2	0	15	0	0	0	49	0
11	0	1	4	28	0	6	30	0	0	19	63	8
12	0	34		6	0	1		0	0	0	26	0
13	12	6	49	18	0	0	3	0	0	1	86	0
14	0	8	5	1	1	7	1	6	0	0	10	0
15	0	3	48	43	5	0	0	0	0	0	1	0
16	3	8	26	11	15	0	7	0	0	12	8	3
17	3	0	33	8	29	0	0	0	0	0	26	7
18	6	14	0	10	7	1	0	0	10	0	3	9
19	1	1	44	3	0	5		0		13	2	40
20	0	5	57	1	4	40	5	0	2	14	3	11
21	0	21	0	0	3	5	0	0	1	27	0	19
22	0	0	0	0	3	0	0	0	31	0	0	15
23	7	64	30	0	0	0	19	0	10	0	0	0
24	0	0	0	0	0	0	12	10	22	1	0	34
25	0	0	18	0	0	3	0	8	47	0	0	55
26	27	0	20	0	0	0	0	5	0	0	0	35
27	0	3	10	0	0	0	24	0	0	14	0	49
28	0	0	24	0	0	3	0	0	0	2	0	45
29	0		0	0	0	0	13	0	0	0	0	89
30	0		3	0	0	0	11	0	0	0	0	101
31	0		46		0		0	0		0		28

<b>Monthly</b>	338	276	474	284	138	142	249	54	124	210	413	677
<b>Rainy Days</b>	16	19	22	18	14	14	17	7	8	13	19	22
<b>Max.</b>	73	64	57	45	41	40	65	17	47	52	86	101
<b>Average</b>	11	10	16	10	4	5	9	2	5	7	14	22

<b>Annual</b> :	3379	<b>No.</b> :	189	<b>Max.</b> :	101	<b>Ave.</b> :	9
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	124	97	46	91	45	23	22	25	0	57	90	97
2	155	11	11	64	26	48	102	0	1	50	95	32
3	12	52	106	96	6	14	34	6	0	20	186	8
4	13	28	160	33	55	46	12	0	12	39	42	70
5	7	85	48	0	6	8	31	18	111	28	0	123
6	27	3	103	0	0	3	48	5	0	16	0	347

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	291	160	163	251	77	85	158	31	1	127	371	137
<b>2nd</b>	47	116	311	33	61	57	91	23	123	83	42	540

**Table Daily Rainfall**

Station : **Malino**  
 Year : **1999**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	185	10	15	10	28	1	45	0	0	8	6	8
2	75	2	13	17	0	2	28	0	0	3	17	29
3	25	38	14	14	44	0	30	0	0	0	11	54
4	5	26	9	12	3	20	38	17	0	0	42	35
5	28	115	1	9	1	0	15	0	0	0	40	19
6	1	90	0	2	3	0	4	0	0	0	4	13
7	15	21	0	4	2	0	0	0	0	0	15	51
8	7	39	22	0	8	0	0	0	0	0	0	41
9	4	0	0	0	3	0	0	26	0	2	3	61
10	0	5	22	3	2	19	0	0	0	41	28	105
11	41	0	8	8	3	3	0	0	0	16	0	42
12	0	0	12	12	1	0	0	0	0	13	3	118
13	11	37	21	35	3	0	0	0	0	0	15	12
14	16	16	39	5	0	0	0	0	0	0	2	2
15	18	24	0	20	0	0	0	0	1	0	13	20
16	51	0	9	0	0	0	3	0	0	0	3	13
17	24	21	0	23	0	0	4	0	0	0	4	17
18	33	45	0	25	3	0	0	0	0	0	9	0
19	13	41	0	0	3	0	0	0	0	0	10	40
20	30	15	36	2	1	0	0	1	0	19	5	50
21	48	22	29	0	0	0	0	9	0	44	78	15
22	23	4	33	0	3	0	0	0	0	3	2	53
23	39	4	2	0	1	0	0	0	0	1	8	7
24	68	21	0	0	0	0	0	0	0	0	1	110
25	106	2	41	0	8	5	0	0	0	0	21	63
26	59	0	0	0	0	2	0	0	0	1	11	2
27	79	0	2	0	6	0	0	0	0	0	28	1
28	13	0	18	0	0	0	0	0	0	3	22	8
29	19		55	0	0	0	0	0	0	4	0	13
30	59		24	0	0	0	0	0	0	8	3	56
31	0		29		0		0	0		26		3

<b>Monthly</b>	1095	598	454	201	126	52	167	53	1	192	404	1061
<b>Rainy Days</b>	28	21	22	16	19	7	8	4	1	15	27	30
<b>Max.</b>	185	115	55	35	44	20	45	26	1	44	78	118
<b>Average</b>	35	21	15	7	4	2	5	2	0	6	13	34

<b>Annual</b> :	4404	<b>No.</b> :	198	<b>Max.</b> :	185	<b>Ave.</b> :	12
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	318	191	52	62	76	23	156	17	0	11	116	145
2	27	155	44	9	18	19	4	26	0	43	50	271
3	86	77	80	80	7	3	0	0	1	29	33	194
4	151	122	45	50	7	0	7	1	0	19	31	120
5	284	53	105	0	12	5	0	9	0	48	110	248
6	229	0	128	0	6	2	0	0	0	42	64	83

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	431	423	176	151	101	45	160	43	1	83	199	610
<b>2nd</b>	664	175	278	50	25	7	7	10	0	109	205	451

**Table Daily Rainfall**

Station : **Malino**  
 Year : **2000**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	8	29	0	1	18	0	4	0	0	0	0	0
2	19	20	0	76	9	0	0	0	0	0	0	0
3	3	49	0	38	4	0	2	0	0	0	0	0
4	1	118	3	67	0	0	7	0	0	0	0	0
5	0	25	1	1	27	0	3	0	0	0	0	0
6	0	21	1	2	5	0	2	0	0	0	0	0
7	17	26	3	15	15	0	0	0	0	0	0	0
8	70	25	0	0	17	0	0	0	0	0	0	0
9		3	0	1	0	0	24	0	0	0	0	0
10	16	0	3	33	0	0	0	0	0	0	0	0
11	62	0	0	38	0	0	19	0	0	0	0	0
12	5	0	8	58	0	0	3	0	0	0	0	0
13	0	0	4	0	0	0	0	0	0	0	0	0
14	9	1	52	0	23	0	0	0	0	0	0	0
15	5	0	45	0	4	0	0	0	0	0	0	0
16	0	0	24	12	11	0	0	0	0	0	0	0
17	0	1	25	23	5	0	0	0	0	0	0	0
18	117	49	9	0	63	0	0	0	0	0	0	0
19	13	1	53	0	0	0	15	0	0	0	0	0
20	38	11	16	5	0	0	0	0	0	0	0	0
21	3	35	20	6	1	0	0	0	0	0	0	0
22	7	0	11	13	7	0	0	0	0	0	0	0
23	18	0	16	19	1	0	0	0	0	0	0	0
24	106	2	10	28	2	0	0	0	0	0	0	0
25	0	4	22	0	6	0	0	0	0	0	0	0
26	20	0	36	7	9	0	0	0	0	0	0	0
27	6	0	12	3	8	0	0	0	0	0	0	0
28	22	0	36	20	0	0	0	0	0	0	0	0
29	30		8	13	0	0	0	0	0	0	0	0
30	113		22	11	7	0	7	0	0	0	0	0
31	75		26		1		3	0		0		0

<b>Monthly</b>	783	420	466	490	243	0	89	0	0	0	0	0
<b>Rainy Days</b>	24	17	25	23	21	0	11	0	0	0	0	0
<b>Max.</b>	117	118	53	76	63	0	24	0	0	0	0	0
<b>Average</b>	26	15	15	16	8	0	3	0	0	0	0	0

<b>Annual</b> :	2491	<b>No.</b> :	121	<b>Max.</b> :	118	<b>Ave.</b> :	7
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	31	241	4	183	58	0	16	0	0	0	0	0
2	103	75	7	51	37	0	26	0	0	0	0	0
3	81	1	109	96	27	0	22	0	0	0	0	0
4	168	62	127	40	79	0	15	0	0	0	0	0
5	134	41	79	66	17	0	0	0	0	0	0	0
6	266	0	140	54	25	0	10	0	0	0	0	0

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	215	317	120	330	122	0	64	0	0	0	0	0
<b>2nd</b>	568	103	346	160	121	0	25	0	0	0	0	0

**Table Daily Rainfall**

Station : **Malino**  
 Year : **2001**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0		0	0	12	0	0	0	0	0	12	100
2	0	32	0	0	0	10	0	0	0	0	21	110
3	19	22	0	0	0	20	0	0	0	0	0	26
4	0	11	0	0	0	0	0	0	0	0	40	87
5	11	57	0	0	5	0	0	0	0	0	0	85
6	18	17	0	0	0	0	0	0	0	0	23	80
7	0	10	0	0	13	0	0	0	0	20	0	91
8	24	14	0	0	0	9	0	0	0	0	40	63
9	24	17	0	0	0	0	0	0	0	0	0	86
10	0	8	0	8	0	30	0	0	0	0	0	44
11	11	0	0	11	0	14	0	0	0	0	0	47
12	36	0	0	7	0	36	0	0	0	0	0	0
13	0	0	0	8	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0
15	21	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	12	0	0	0	0	0	4	0
18	0	6	0	0	7	0	0	0	0	0	0	32
19	30	0	0	0	0	0	0	0	0	0	23	0
20	20	8	0	13	6	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0
22	16	0	0	0	0	0	0	0	0	0	0	0
23	21	0	0	0	7	0	0	0	0	15	0	0
24	22	6	0	9	0	0	0	0	0	8	0	0
25	27	4	0	8	17	0	0	0	0	0	0	0
26	0	24	0	14	10	0	0	0	0	0	52	11
27	0	0	0	7	0	0	0	0	0	7	39	49
28	0	0	0	5	0	0	0	0	0	0	0	34
29	2		0	0	8	0	0	0	0	0	20	22
30	14		0	6	0	0	0	0	0	0	0	7
31	27		0		0		0	0		0		0

<b>Monthly</b>	343	236	0	96	97	119	0	0	0	50	274	974
<b>Rainy Days</b>	17	14	0	11	10	6	0	0	0	4	10	17
<b>Max.</b>	36	57	0	14	17	36	0	0	0	20	52	110
<b>Average</b>	11	9	0	3	3	4	0	0	0	2	9	31

<b>Annual</b> :	2189	<b>No.</b> :	89	<b>Max.</b> :	110	<b>Ave.</b> :	6
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	30	122	0	0	17	30	0	0	0	0	73	408
2	66	66	0	8	13	39	0	0	0	20	63	364
3	68	0	0	26	0	50	0	0	0	0	0	47
4	50	14	0	13	25	0	0	0	0	0	27	32
5	86	10	0	17	24	0	0	0	0	23	0	0
6	43	24	0	32	18	0	0	0	0	7	111	123

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	164	188	0	34	30	119	0	0	0	20	136	819
<b>2nd</b>	179	48	0	62	67	0	0	0	0	30	138	155

**Table Daily Rainfall**

Station : **Malino**  
 Year : **2002**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	42	37	0	33	11	0	0	0	0	0	0	6
2	4	2	0	23	56	0	0	0	0	0	0	41
3	27	25	0	15	0	0	1	0	0	0	0	14
4	11	2	0	17	0	0	3	0	0	0	0	7
5	0	42	1	6	13	0	0	0	0	0	0	9
6	6	0	4	0	6	0	0	0	0	0	0	2
7	8	24	5	0	37	15	0	0	0	0	0	0
8	1	21	1	17	64	1	0	0	0	0	0	5
9	15	0	6	25	5	8	0	0	0	0	0	9
10	0	3	0	0	9		0	0	0	0	0	15
11	0	0	8	0	0	22	0	0	0	0	0	4
12	56	41	7	0	0	2	0	0	0	0	2	41
13	75	63	0	2	0	1	0	0	0	0	2	36
14	125	51	1	8	0	0	0	0	0	0	0	9
15	11	19	0	25	0	0	0	0	0	0	9	8
16	7	45	16	30	0	0	0	0	0	0	0	1
17	0	3	0	27	2	3	0	0	0	0	0	0
18	0	35	0	12	0	0	0	0	0	0	0	0
19	31	43	1	1	0	45	0	0	0	0	0	0
20	25	12	0	0	0	0	0	0	0	0	2	21
21	50	24	0	3	0	0	0	0	0	0	0	35
22	4	99	2	10	0	12	0	0	0	0	3	32
23	8	13	4	13	0	0	0	0	0	0	12	11
24	0	24	6	6	0	50	0	0	0	0	37	2
25	0	1	3	1	0	0	0	0	0	0	11	2
26	0	0	1	0	0	0	0	0	0	0	15	4
27	9	11	2	0	0	0	0	0	0	0	8	11
28	32	26	0	0	0	0	0	0	0	0	13	15
29	6		0	0	0	0	0	0	0	0	14	2
30	28		0	50	0	0	0	0	0	0	10	7
31	2		1		0		0	0		0		11

<b>Monthly</b>	583	666	69	324	203	159	4	0	0	0	138	360
<b>Rainy Days</b>	23	24	17	20	9	10	2	0	0	0	13	27
<b>Max.</b>	125	99	16	50	64	50	3	0	0	0	37	41
<b>Average</b>	19	24	2	11	7	5	0	0	0	0	5	12

<b>Annual</b> :	2506	<b>No.</b> :	145	<b>Max.</b> :	125	<b>Ave.</b> :	7
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	84	108	1	94	80	0	4	0	0	0	0	77
2	30	48	16	42	121	24	0	0	0	0	0	31
3	267	174	16	35	0	25	0	0	0	0	13	98
4	63	138	17	70	2	48	0	0	0	0	2	22
5	62	161	15	33	0	62	0	0	0	0	63	82
6	77	37	4	50	0	0	0	0	0	0	60	50

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	381	330	33	171	201	49	4	0	0	0	13	206
<b>2nd</b>	202	336	36	153	2	110	0	0	0	0	125	154

**Table Daily Rainfall**

Station : **Malino**  
 Year : **2003**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	43	5	0	1	2	0	0	0	0	0	0	0
2	90	10	0	7	0	0	0	0	0	0		5
3	50	33	0	0	0	0	0	0	0	0	44	11
4	33	27	0	0	55	0	0	0	0	0	0	19
5	3	70	77	0	13	0	0	0	0	0	0	45
6	24	3	0	34	2	0	0	0	0	0	8	22
7	3	2	0	6	1	0	13	0	0	13	0	3
8	2	6	0	0	5	0		0	0	0	0	2
9	10	21	12	0	2	0	2	0	0	7	16	37
10	69	10	29	3	0	2	7	0	0	3	8	6
11	80	32	3	0	14	0	0	0	0	20	39	15
12	69	8	10	14	0	0	0	8	0		42	5
13	128	52	5	0	0	0	0	0	0	3	51	19
14	41	39	34	1	0	0	0	0	0	2	0	15
15	73	5	9	2	0	0	0	0	12	0	42	65
16	2	107	5	11	0	0	0	0	0	0	1	36
17	8	21	71	1	0	1	0	0	0	0	3	25
18	25	111	9	5	0	8	0	0	0	0	18	56
19	13	140	39	5	0	1	0	0	0	0	20	134
20	15	13	8	0	0	4	0	0	7	0	18	83
21	26	0	0	9	3	8	0	0	0	0	21	163
22	8	12	0	12	1	2	5	0	0	0	11	108
23	14	7	0	2	0	32	0	0	0	0	15	163
24	0	0	7	13	0		5	0	0	0	43	135
25	1	2	35	5	0	2	0	0	0	0	8	93
26	0	0	1		0	0	0	0	0	0	27	117
27	10		39	10	0	0	0	0	0	23	15	38
28	54	45	37	5	0	0	0	0	0	0	0	16
29	77		0	1	0	0	0	0	0	0	0	8
30	15		0	0	0	0	0	0	0	7	0	19
31	19		2		0		0	0		0		55

<b>Monthly</b>	1005	781	432	147	98	60	32	8	19	78	450	1518
<b>Rainy Days</b>	29	24	19	20	10	9	5	1	2	8	20	30
<b>Max.</b>	128	140	77	34	55	32	13	8	12	23	51	163
<b>Average</b>	32	29	14	5	3	2	1	0	1	3	16	49

<b>Annual</b> :	4628	<b>No.</b> :	177	<b>Max.</b> :	163	<b>Ave.</b> :	13
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	219	145	77	8	70	0	0	0	0	0	44	80
2	108	42	41	43	10	2	22	0	0	23	32	70
3	391	136	61	17	14	0	0	8	12	25	174	119
4	63	392	132	22	0	14	0	0	7	0	60	334
5	49	21	42	41	4	44	10	0	0	0	98	662
6	175	45	79	16	0	0	0	0	0	30	42	253

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	718	323	179	68	94	2	22	8	12	48	250	269
<b>2nd</b>	287	458	253	79	4	58	10	0	7	30	200	1249





**Table Daily Rainfall**

Station : **Malino**  
 Year : **1978**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	8	10	1	0	4	3	4	7	0	6	0	28
2	51	86	15	3	31	5	30	2	3	1	0	41
3	7	22	1	22	0	0	4	0	7	45	0	35
4	38	18	3	45	0	4	9	0	0	4	0	11
5	24	16	24	24	0	3	12	0	0	4	4	10
6	26	14	12	9	0	8	63	0	3	4	2	8
7	8	11	13	99	1	21	1	0	1	0	2	0
8	12	49	11	0	6	0	3	0	8	0	12	0
9	16	112	11	41	0	57	6	0	6	0	1	2
10	168	7	19	8	0	0	14	0	7	1	10	14
11	54	3	17	1	18	13	5	2	1	0	99	16
12	35	25	0	0	20	3	7	10	1	0	0	92
13	0	2	15	0	4	4	7	2	0	0	0	62
14	10	32	0	0	17	15	1	6	0	0	0	6
15	1	0	18	0	70	0	1	0	3	6	1	14
16	79	28	3	0	17	0	0	5	0	7	0	102
17	1	54	7	19	2	19	2	26	0	2	0	0
18	23	13	5	0	0	5	0	0	27	0	1	9
19	8	37	40	0	0	18	0	19	61	3	25	1
20	43	11	0	17	0	0	2	0	9	1	6	11
21	64	13	1	21	0	0	0	0	0	0	50	44
22	14	9	23	3	0	0	5	0	0	6	53	68
23	8	2	44	0	9	3	26	0	0	0	69	91
24	30	15	48	23	1	19	1	0	0	0	58	94
25	35	6	4	3	0	4	1	0	0	0	24	22
26	0	38	4	0	2	6	0	3	1	0	24	29
27	1	21	14	0	0	20	6	0	16	0	0	94
28	1	1	8	27	0	4	9	1	0	0	1	25
29	0		6	0	19	3	50	28	0	66	0	18
30	0		0	6	3	0	8	0	0	0	4	24
31	0		11		12		5	0		0		16

<b>Monthly</b>	765	655	378	371	236	237	282	111	154	156	446	987
<b>Rainy Days</b>	26	27	27	17	17	21	26	12	15	14	19	28
<b>Max.</b>	168	112	48	99	70	57	63	28	61	66	99	102
<b>Average</b>	25	23	12	12	8	8	9	4	5	5	15	32

<b>Annual</b> :	4778	<b>No.</b> :	249	<b>Max.</b> :	168	<b>Ave.</b> :	13
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	128	152	44	94	35	15	59	9	10	60	4	125
2	230	193	66	157	7	86	87	0	25	5	27	24
3	100	62	50	1	129	35	21	20	5	6	100	190
4	154	143	55	36	19	42	4	50	97	13	32	123
5	151	45	120	50	10	26	33	0	0	6	254	319
6	2	60	43	33	36	33	78	32	17	66	29	206

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	458	407	160	252	171	136	167	29	40	71	131	339
<b>2nd</b>	307	248	218	119	65	101	115	82	114	85	315	648

**Table Daily Rainfall**

Station : **Malino**  
 Year : **1979**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	21	74	21	2	26	1	0	0	0	1	0	0
2	19	15	19	0	0	1	0	0	0	0	7	24
3	6	4	6	34	53	4	0	0	0	0	16	11
4	11	18	11	0	1	0	0	0	1	0	0	0
5	12	2	12	1	2	55	0	0	0	0	0	0
6	83	13	83	21	31	10	0	0	2	12	0	30
7	75	2	75	12	5	0	4	0	0	0	0	73
8	79	10	79	70	23	21	2	0	0	8	0	60
9	95	3	95	1	0	20	1	0	0	0	7	17
10	80	1	80	2	6	0	3	0	0	0	0	35
11	67	5	67	0	18	0	3	0	0	0	1	21
12	16	52	16	0	41	0	3	0	0	0	17	17
13	3	51	3	0	16	0	0	0	0	0	0	1
14	6	17	6	0	27	5	0	0	0	0	15	1
15	28	21	28	0	0	0	0	0	0	0	6	0
16	18	46	18	15	0	0	0	0	0	0	0	12
17	0	8	0	39	0	0	3	0	0	0	0	14
18	2	0	2	0	0	0	3	0	0	0	1	9
19	0	13	0	1	0	9	4	0	0	0	0	58
20	2	32	2	4	0	5	0	0	0	32	0	28
21	43	5	43	11	0	0	0	0	1	16	1	9
22	29	0	29	8	0	0	0	0	0	0	44	1
23	11	0	11	3	0	2	0	0	0	0	6	1
24	11	12	11	5	0	1	0	0	0	0	0	7
25	3	22	3	10	1	0	0	0	0	0	4	39
26	35	28	85	21	1	0	0	0	0	1	2	69
27	2	131	2	1	12	0	0	0	0	0	6	1
28	1	4	1	4	1	0	0	0	0	0	24	17
29	0		0	21	3	0	0	0	0	0	3	53
30	0		0	1	10	0	0	0	0	0	10	54
31	13		13		1		0	0		0		9

<b>Monthly</b>	771	589	821	287	278	134	26	0	4	70	170	671
<b>Rainy Days</b>	27	25	27	22	19	12	9	0	3	6	17	27
<b>Max.</b>	95	131	95	70	53	55	4	0	2	32	44	73
<b>Average</b>	25	21	26	10	9	4	1	0	0	2	6	22

<b>Annual</b> :	3821	<b>No.</b> :	194	<b>Max.</b> :	131	<b>Ave.</b> :	10
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	69	113	69	37	82	61	0	0	1	1	23	35
2	412	29	412	106	65	51	10	0	2	20	7	215
3	120	146	120	0	102	5	6	0	0	0	39	40
4	22	99	22	59	0	14	10	0	0	32	1	121
5	97	39	97	37	1	3	0	0	1	16	55	57
6	51	163	101	48	28	0	0	0	0	1	45	203

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	601	288	601	143	249	117	16	0	3	21	69	290
<b>2nd</b>	170	301	220	144	29	17	10	0	1	49	101	381

**Table Daily Rainfall**

Station : **Malino**  
 Year : **1980**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	19	0	2	1	30	0	0	1	0	0	0	2
2	5	27	4	10	30	0	0	0	0	0	0	10
3	33	51	24	21	92	0	0	0	0	0	0	9
4	11	0	120	26	20	0	0	0	0	0	0	55
5	67	81	6	116	5	0	0	4	0	0	0	67
6	28	136	0	11	35	1	0	2	0	0	0	30
7	37	73	13	4	2	0	0	0	0	0	0	1
8	64	6	56	5	0	0	1	0	0	0	0	72
9	86	34	102	58	2	0	0	0	0	0	115	51
10	45	9	0	40	0	0	1	0	0	0	54	15
11	10	81	1	15	2	0	0	0	0	11	1	46
12	27	136	23	4	0	4	0	0	0	0	0	25
13	6	96	137	5	0	3	3	0	0	6	0	103
14	5	83	100	61	0	1	16	0	0	0	0	18
15	114	67	5	39	1	8	0	0	0	0	0	16
16	3	79	28	42	1	42	11	0	0	0	0	5
17	0	27	110	89	0	0	0	0	0	0	21	35
18	138	16	28	0	0	13	0	0	0	0	68	7
19	113	31	67	30	15	44	0	0	0	0	12	133
20	93	17	101	0	0	0	0	0	0	25	0	24
21	12	92	12	0	0	0	0	0	0	10	0	18
22	51	51	3	135	7	0	0	0	0	77	10	28
23	0	130	0	64	108	0	0	1	0	16	4	88
24	1	22	45	0	49	7	0	0	0	0	4	84
25	0	14	20	9	0	1	0	0	0	0	25	4
26	0	98	0	18	3	0	0	0	0	36	2	10
27	1	4	1	46	13	4	0	0	0	21	46	31
28	0	1	22	10	73	1	0	0	0	50	23	2
29	0	18	45	6	0	0	0	0	0	0	92	38
30	0		0	3	0	0	0	0	0	0	133	54
31	0		0		0		0	4		0		43

<b>Monthly</b>	969	1480	1075	868	488	129	32	12	0	252	610	1124
<b>Rainy Days</b>	23	27	25	26	18	12	5	5	0	9	15	31
<b>Max.</b>	138	136	137	135	108	44	16	4	0	77	133	133
<b>Average</b>	31	51	35	29	16	4	1	0	0	8	20	36

<b>Annual</b> :	7039	<b>No.</b> :	196	<b>Max.</b> :	138	<b>Ave.</b> :	19
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	135	159	156	174	177	0	0	5	0	0	0	143
2	260	258	171	118	39	1	2	2	0	0	169	169
3	162	463	266	124	3	16	19	0	0	17	1	208
4	347	170	334	161	16	99	11	0	0	25	101	204
5	64	309	80	208	164	8	0	1	0	103	43	222
6	1	121	68	83	89	5	0	4	0	107	296	178

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	557	880	593	416	219	17	21	7	0	17	170	520
<b>2nd</b>	412	600	482	452	269	112	11	5	0	235	440	604

**Table Daily Rainfall**

Station : **Malino**  
 Year : **1981**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	18	0	96	2	4	1	2	0	0	0	19	21
2	9	0	0	50	8	1	2	1	0	3	3	15
3	17	67	0	7	59	0	9	0	0	0	13	18
4	7	22	0	3	16	0	3	0	5	1	20	85
5	9	6	0	0	46	0	53	0	16	0	30	127
6	103	39	17	1	1	1	17	0	3	8	48	75
7	40	77	38	101	0	5	11	0	0	2	20	60
8	13	49	14	5	1	0	0	0	13	16	9	48
9	20	27	13	19	0	1	0	0	0	0	0	43
10	127	71	10	14	31	8	0	0	0	0	6	135
11	59	23	1	18	0	0	6	0	3	1	14	12
12	2	47	0	16	11	0	66	0	0	0	52	36
13	1	5	3	24	5	0	6	0	0	0	54	13
14	6	9	0	0	17	0	18	0	0	0	40	0
15	6	32	0	19	18	2	15	0	0	0	38	24
16	43	15	25	9	0	1	21	0	0	0	24	36
17	64	7	0	2	0	0	1	0	0	0	133	5
18	20	6	2	24	0	44	0	0	5	0	5	42
19	13	1	0	2	10	12	0	0	0	0	21	20
20	14	0	2	0	1	45	16	0	0	0	33	6
21	16	0	1	43	34	16	7	0	0	0	3	55
22	98	8	0	35	0	1	0	0	25	7	4	15
23	5	11	2	19	0	16	0	0	4	0	10	27
24	7	13	2	4	0	15	0	0	0	0	11	29
25	28	26	4	3	0	2	0	0	84	0	23	15
26	120	37	12	24	5	11	0	1	3	0	19	1
27	51	68	6	40	0	0	0	1	38	8	30	91
28	45	12	25	3	0	0	0	0	31	0	9	92
29	65		67	5	0	0	0	0	1	0	15	13
30	0		27	6	0	2	0	0	0	0	38	67
31	0		50		0		0	0		0		5

<b>Monthly</b>	1026	678	417	498	267	184	253	3	231	46	744	1231
<b>Rainy Days</b>	29	24	21	27	16	18	16	3	13	8	29	30
<b>Max.</b>	127	77	96	101	59	45	66	1	84	16	133	135
<b>Average</b>	33	24	13	17	9	6	8	0	8	1	25	40

<b>Annual</b> :	5578	<b>No.</b> :	234	<b>Max.</b> :	135	<b>Ave.</b> :	15
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	60	95	96	62	133	2	69	1	21	4	85	266
2	303	263	92	140	33	15	28	0	16	26	83	361
3	74	116	4	77	51	2	111	0	3	1	198	85
4	154	29	29	37	11	102	38	0	5	0	216	109
5	154	58	9	104	34	50	7	0	113	7	51	141
6	281	117	187	78	5	13	0	2	73	8	111	269

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	437	474	192	279	217	19	208	1	40	31	366	712
<b>2nd</b>	589	204	225	219	50	165	45	2	191	15	378	519

**Table Daily Rainfall**

Station : **Malino**  
 Year : **1982**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	32	10	10	118	89	3	0	0	0	0	0	28
2	33	5	60	19	41	0	0	0	0	0	0	0
3	5	9	2	0	4	2	0	0	0	0	0	0
4	18	51	17	25	0	29	0	0	0	0	0	0
5	12	27	64	75	1	39	0	0	0	0	0	43
6	17	32	0	23	0	1	0	0	0	0	0	35
7	34	63	31	10	0	10	0	0	0	0	0	8
8	79	10	103	42	1	1	0	0	0	0	0	13
9	97	21	2	13	2	2	0	0	0	0	0	25
10	131	4	15	74	0	0	1	0	0	0	38	0
11	82	64	16	52	0	0	0	0	0	1	43	12
12	53	71	0	60	0	0	0	0	0	0	28	7
13	14	135	25	16	6	0	0	0	0	0	0	4
14	2	53	3	38	0	0	0	0	0	0	0	2
15	105	44	39	14	0	23	0	0	0	0	0	0
16	0	2	41	-	0	0	0	0	0	0	0	0
17	2	3	48	29	0	0	0	0	0	0	0	15
18	0	2	60	39	0	0	0	0	0	1	0	6
19	0	0	40	0	0	0	0	0	0	0	0	19
20	0	9	48	0	0	0	0	0	0	0	0	2
21	28	9	0	6	0	0	0	0	0	0	0	14
22	11	12	3	45	5	0	0	0	0	0	0	42
23	20	10	3	50	2	1	0	0	0	0	1	1
24	26	2	26	23	13	0	0	0	0	0	0	37
25	72	8	29	18	2	0	0	0	1	0	0	7
26	49	0	20	78	3	0	0	0	0	0	0	21
27	71	33	10	46	0	0	0	0	0	0	0	21
28	66	1	22	38	0	0	0	0	0	0	0	0
29	20		30	0	7	0	0	0	0	0	3	1
30	20		18	3	9	0	0	0	0	0	0	38
31	15		33		5		0	0	1			18

<b>Monthly</b>	1114	690	818	954	190	111	1	0	2	2	113	419
<b>Rainy Days</b>	27	26	28	25	15	10	1	0	2	2	5	24
<b>Max.</b>	131	135	103	118	89	39	1	0	1	1	43	43
<b>Average</b>	36	25	26	33	6	4	0	0	0	0	4	14

<b>Annual</b> :	4414	<b>No.</b> :	165	<b>Max.</b> :	135	<b>Ave.</b> :	12
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	100	102	153	237	135	73	0	0	0	0	0	71
2	358	130	151	162	3	14	1	0	0	0	38	81
3	256	367	83	180	6	23	0	0	0	1	71	25
4	2	16	237	68	0	0	0	0	0	1	0	42
5	157	41	61	142	22	1	0	0	1	0	1	101
6	241	34	133	165	24	0	0	0	1	0	3	99

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	714	599	387	579	144	110	1	0	0	1	109	177
<b>2nd</b>	400	91	431	375	46	1	0	0	2	1	4	242

**Table Daily Rainfall**

Station : **Malino**  
 Year : **1983**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	19	42	0	20	5	5	0	0	0	0	21	0
2	32	88	0	3	0	0	0	0	0	0	40	0
3	18	47	0	8	14	5	0	0	0	0	1	0
4	12	0	0	23	20	3	0	0	0	0	14	0
5	13	0	1	1	0	1	4	0	0	0	21	0
6	68	25	7	27	3	20	0	0	1	0	0	0
7	2	12	5	2	20	11	0	0	0	2	0	0
8	0	4	28	9	4	25	0	0	0	1	0	0
9	0	38	0	66	40	34	0	0	0	2	3	0
10	0	5	1	10	60	9	0	0	0	15	1	8
11	6	9	0	32	37	6	0	0	0	16	0	0
12	30	36	28	55	31	5	0	2	0	0	0	4
13	27	50	0	0	16	4	0	0	0	0	0	60
14	25	13	0	0	0	7	0	8	0	0	0	0
15	49	5	0	23	1	13	0	0	0	0	0	0
16	11	78	0	31	0	0	41	3	0	0	0	0
17	18	32	0	60	3	1	9	0	0	0	6	0
18	16	0	0	59	0	5	0	0	0	3	11	0
19	78	1	13	36	15	18	4	0	0	0	23	14
20	16	1	3	49	25	9	0	0	0	0	8	30
21	10	14	2	18	0	31	0	0	0	0	62	1
22	11	16	69	9	36	5	0	0	0	0	54	42
23	0	3	14	46	101	24	0	0	0	0	10	10
24	0	0	0	11	27	0	0	0	0	0	130	24
25	0	19	56	2	21	15	2	0	0	0	47	4
26	27	0	11	1	30	10	0	0	0	0	27	5
27	87	14	31	2	28	2	0	0	0	10	5	0
28	47	0	0	2	0	37	0	0	0	0	21	4
29	10		1	0	2	0	0	5	0	0	55	1
30	26		4	1	0	27	0	0	0	0	53	0
31	26		0		3		0	0		0		0

<b>Monthly</b>	684	552	274	606	542	332	60	18	1	49	613	207
<b>Rainy Days</b>	25	22	16	27	23	26	5	4	1	7	21	13
<b>Max.</b>	87	88	69	66	101	37	41	8	1	16	130	60
<b>Average</b>	22	20	9	20	17	11	2	1	0	2	20	7

<b>Annual</b> :	3938	<b>No.</b> :	190	<b>Max.</b> :	130	<b>Ave.</b> :	11
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	94	177	1	55	39	14	4	0	0	0	97	0
2	70	84	41	114	127	99	0	0	1	20	4	8
3	137	113	28	110	85	35	0	10	0	16	0	64
4	139	112	16	235	43	33	54	3	0	3	48	44
5	21	52	141	86	185	75	2	0	0	0	303	81
6	223	14	47	6	63	76	0	5	0	10	161	10

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	301	374	70	279	251	148	4	10	1	36	101	72
<b>2nd</b>	383	178	204	327	291	184	56	8	0	13	512	135

**Table Daily Rainfall**

Station : **Malino**  
 Year : **1984**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	25	11	5	20	9	0	0	0	5	69	0	4
2	11	4	61	5	190	0	0	17	88	18	0	82
3	25	64	48	54	18	0	0	0	3	12	0	6
4	24	12	0	108	8	0	0	0	0	2	0	1
5	44	8	5	42	22	50	0	0	29	0	0	77
6	0	1	2	26	18	1	0	0	33	0	0	26
7	0	37	7	46	20	4	0	0	1	0	0	21
8	8	68	11	31	27	4	1	0	1	1	60	8
9	48	61	125	48	4	2	0	0	0	0	4	9
10	0	2	53	6	20	1	0	0	0	0	0	113
11	31	11	62	40	2	11	0	0	4	8	0	10
12	63	37	30	27	1	0	0	0	6	0	0	9
13	10	0	25	6	26	25	0	0	1	0	0	122
14	59	39	31	41	3	0	0	0	3	0	0	73
15	4	102	63	21	0	0	2	0	0	35	0	42
16	33	64	0	9	1	2	0	0	0	0	0	87
17	80	33	28	8	3	0	1	0	0	0	0	0
18	5	20	30	2	3	3	0	0	0	0	0	56
19	6	8	2	0	1	0	5	0	0	55	14	41
20	1	44	1	53	10	0	9	0	0	2	30	5
21	15	2	3	34	5	0	2	0	0	0	1	4
22	40	6	3	1	2	0	0	0	0	3	42	24
23	0	45	21	47	0	3	2	0	0	0	70	28
24	0	20	4	26	13	45	1	19	13	0	79	1
25	10	1	23	1	0	3	0	0	0	0	4	2
26	13	26	0	15	10	11	0	0	0	0	5	35
27	35	14	0	1	40	25	0	0	0	0	0	3
28	114	18	22	11	0	20	24	0	0	0	4	62
29	16	12	24	26	0	4	0	0	0	0	1	111
30	75		5	39	15	6	21	12	45	13	0	0
31	35				3		0	0		0	0	0

<b>Monthly</b>	830	770	694	794	474	220	68	48	232	218	314	1062
<b>Rainy Days</b>	26	28	26	29	26	18	10	3	13	11	12	28
<b>Max.</b>	114	102	125	108	190	50	24	19	88	69	79	122
<b>Average</b>	27	27	23	26	15	7	2	2	8	7	10	34

<b>Annual</b> :	5724	<b>No.</b> :	230	<b>Max.</b> :	190	<b>Ave.</b> :	16
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	129	99	119	229	247	50	0	17	125	101	0	170
2	56	169	198	157	89	12	1	0	35	1	64	177
3	167	189	211	135	32	36	2	0	14	43	0	256
4	125	169	61	72	18	5	15	0	0	57	44	189
5	65	74	54	109	20	51	5	19	13	3	196	59
6	288	70	51	92	68	66	45	12	45	13	10	211

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	352	457	528	521	368	98	3	17	174	145	64	603
<b>2nd</b>	478	313	166	273	106	122	65	31	58	73	250	459

**Table Daily Rainfall**

Station : **Malino**  
 Year : **1985**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	20	0	53	0	13	11	0	0	0	0	23
2	70	17	5	37	1	5	0	0	0	2	0	14
3	10	6	25	0	39	0	105	0	0	0	2	0
4	66	52	0	61	35	0	6	0	0	0	6	6
5	0	16	0	0	0	15	1	0	0	0	0	11
6	23	9	26	0	0	3	0	0	0	0	0	0
7	69	0	0	16	34	3	5	0	0	0	16	0
8	2	30	0	9	27	5	1	0	0	0	46	9
9	3	29	35	1	0	30	0	0	0	0	4	28
10	15	1	15	1	0	5	25	0	0	0	4	20
11	73	5	1	95	0	6	0	0	0	0	49	6
12	24	25	1	9	0	83	0	0	5	0	36	4
13	26	42	6	41	0	3	3	0	0	0	27	1
14	16	55	79	47	4	0	16	0	0	2	52	3
15	1	6	89	11	24	0	4	0	0	0	75	21
16	16	4	54	0	5	1	6	0	0	0	58	26
17	20	10	15	143	13	0	28	0	3	0	2	34
18	100	0	33	3	1	0	7	0	0	0	11	1
19	29	0	91	0	1	0	3	0	0	1	0	8
20	0	0	40	11	7	0	0	0	0	0	0	3
21	5	0	0	7	36	0	0	0	0	95	31	41
22	2	0	1	0	4	1	47	0	1	0	6	4
23	4	15	0	16	12	1	2	0	0	5	16	28
24	67	0	0	9	9	0	0	0	0	0	76	53
25	4	16	0	4	10	0	1	0	50	0	10	4
26	0	30	8	5	2	0	0	0	0	0	6	20
27	0	42	1	9	31	0	0	0	0	0	0	19
28	0	56	0	3	2	0	3	0	0	0	16	20
29	6	0	9	4	3	3	0	0	0	0	12	20
30	16		22	0	63	22	3	0	0	0	5	26
31	0		104		48		0	0		0		7

<b>Monthly</b>	667	486	660	595	411	199	277	0	59	105	566	460
<b>Rainy Days</b>	24	21	21	23	23	16	19	0	4	5	23	28
<b>Max.</b>	100	56	104	143	63	83	105	0	50	95	76	53
<b>Average</b>	22	17	21	20	13	7	9	0	2	3	19	15

<b>Annual</b> :	4485	<b>No.</b> :	207	<b>Max.</b> :	143	<b>Ave.</b> :	12
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	146	111	30	151	75	33	123	0	0	2	8	54
2	112	69	76	27	61	46	31	0	0	0	70	57
3	140	133	176	203	28	92	23	0	5	2	239	35
4	165	14	233	157	27	1	44	0	3	1	71	72
5	82	31	1	36	71	2	50	0	51	100	139	130
6	22	128	144	21	149	25	6	0	0	0	39	112

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	398	313	282	381	164	171	177	0	5	4	317	146
<b>2nd</b>	269	173	378	214	247	28	100	0	54	101	249	314



**Table Daily Rainfall**

Station : **Malino**  
 Year : **1986**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0	1	0	0	4	0	3	0	0	3	12
2	6	0	0	43	7	2	0	0	0	0	8	0
3	3	9	26	13	1	16	8	0	0	5	0	8
4	4	27	47	39	0	7	10	0	0	0	2	0
5	11	1	3	10	0	0	0	0	0	0	12	5
6	17	7	7	24	2	1	0	0	0	1	7	6
7	16	7	4	39	5	5	0	0	0	0	0	3
8	15	1	8	47	2	2	1	0	0	0	0	22
9	4	15	13	11	0	12	0	0	0	0	14	4
10	3	7	12	25	17	4	0	0	0	3	0	2
11	98	13	0	5	19	3	0	6	0	39	4	35
12	82	9	0	0	4	0	3	0	0	17	25	18
13	200	53	0	15	0	2	1	0	0	2	0	21
14	132	19	0	35	0	8	28	0	0	0	3	13
15	48	14	0	43	0	0	9	0	0	7	0	0
16	0	45	0	1	0	2	0	0	0	0	33	0
17	23	16	11	19	0	3	9	0	0	0	33	0
18	36	12	11	0	7	5	0	0	0	0	7	9
19	48	3	5	2	0	0	7	0	0	8	17	2
20	3	0	19	13	0	1	0	33	0	10	7	9
21	6	57	1	22	0	8	6	0	0	5	8	26
22	17	15	0	0	0	7	10	0	1	3	12	0
23	99	6	31	2	0	0	0	0	0	5	10	4
24	96	34	13	6	0	1	0	0	0	16	10	4
25	115	24	14	1	0	10	0	0	0	7	19	0
26	112	0	24	0	0	0	21	0	0	1	27	0
27	118	2	2	1	0	5	2	0	0	0	37	15
28	79	19	3	0	0	0	36	0	0	0	0	33
29	49		5	0	0	5	2	0	0	5	0	109
30	13		2	0	0	0	5	0	0	0	0	23
31	0		0		4		16	0		0		53

<b>Monthly</b>	1453	415	262	416	68	113	174	42	1	134	298	436
<b>Rainy Days</b>	28	24	22	22	10	22	17	3	1	16	21	23
<b>Max.</b>	200	57	47	47	19	16	36	33	1	39	37	109
<b>Average</b>	47	15	8	14	2	4	6	1	0	4	10	14

<b>Annual</b> :	3812	<b>No.</b> :	209	<b>Max.</b> :	200	<b>Ave.</b> :	10
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	24	37	77	105	8	29	18	3	0	5	25	25
2	55	37	44	146	26	24	1	0	0	4	21	37
3	560	108	0	98	23	13	41	6	0	65	32	87
4	110	76	46	35	7	11	16	33	0	18	97	20
5	333	136	59	31	0	26	16	0	1	36	59	34
6	371	21	36	1	4	10	82	0	0	6	64	233

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	639	182	121	349	57	66	60	9	0	74	78	149
<b>2nd</b>	814	233	141	67	11	47	114	33	1	60	220	287

**Table Daily Rainfall**

Station : **Malino**  
 Year : **1987**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	16	46	41	2	16	3	0	0	0	0	0	29
2	20	44	12	12	0	0	0	0	0	0	0	37
3	18	6	25	6	0	7	0	0	0	0	0	6
4	0	109	6	2	0	0	0	0	0	0	0	10
5	53	11	1	16	0	0	0	0	0	0	0	12
6	28	30	2	13	0	0	0	0	0	0	2	28
7	24	73	82	3	9	1	0	0	0	0	20	38
8	42	16	1	0	6	0	0	0	0	0	0	29
9	26	13	13	7	0	0	0	0	0	0	0	4
10	19	67	4	90	0	0	0	0	0	0	0	39
11	12	13	3	0	5	0	0	0	0	0	0	40
12	20	40	11	0	19	0	0	0	0	0	0	20
13	2	28	0	0	0	0	0	0	0	0	39	30
14	93	10	0	0	9	0	0	0	0	0	0	10
15	65	59	0	1	9	0	0	0	0	0	29	99
16	67	43	10	1	5	0	0	0	0	0	9	10
17	75	22	8	1	0	0	0	0	0	0	2	79
18	49	20	25	0	5	0	0	0	0	0	129	10
19	35	59	0	2	1	0	0	0	0	0	0	10
20	22	15	0	1	0	0	0	0	0	0	0	70
21	74	22	1	0	0	0	0	0	0	0	0	115
22	67	31	12	0	0	0	0	0	0	0	0	133
23	19	63	32	0	0	0	0	0	0	0	59	127
24	72	37	26	0	4	0	0	0	0	0	49	85
25	76	19	5	0	1	0	0	0	0	0	0	27
26	61	26	16	3	0	0	0	0	0	0	29	67
27	17	16	2	79	8	0	0	0	0	6	15	78
28	49	14	12	25	3	0	0	0	0	0	16	50
29	40		0	0	0	0	0	0	0	0	19	25
30	110		22	0	0	0	0	0	0	0	19	10
31	105		1		0		0	0		0		0

<b>Monthly</b>	1376	952	373	264	100	11	0	0	0	6	436	1327
<b>Rainy Days</b>	30	28	25	17	14	3	0	0	0	1	14	30
<b>Max.</b>	110	109	82	90	19	7	0	0	0	6	129	133
<b>Average</b>	44	34	12	9	3	0	0	0	0	0	15	43

<b>Annual</b> :	4845	<b>No.</b> :	162	<b>Max.</b> :	133	<b>Ave.</b> :	13
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	107	216	85	38	16	10	0	0	0	0	0	94
2	139	199	102	113	15	1	0	0	0	0	22	138
3	192	150	14	1	42	0	0	0	0	0	68	199
4	248	159	43	5	11	0	0	0	0	0	140	179
5	308	172	76	0	5	0	0	0	0	0	108	487
6	382	56	53	107	11	0	0	0	0	6	98	230

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	438	565	201	152	73	11	0	0	0	0	90	431
<b>2nd</b>	938	387	172	112	27	0	0	0	0	6	346	896

**Table Daily Rainfall**

Station : **Malino**  
 Year : **1988**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	12	78	4	4	6	0	0	44	0	10	30	79
2	0	66	16	44	28	0	0	4	8	2	14	23
3	0	45	11	0	1	10	12	0	24	10	0	15
4	0	45	24	0	2	0	15	2	3	3	28	38
5	19	66	9	3	12	0	1	0	0	0	17	16
6	19	32	2	4	3	0	3	0	10	0	72	74
7	13	31	8	0	2	1	3	0	16	2	15	29
8	56	45	0	1	9	0	0	0	0	10	30	38
9	45	47	2	2	1	1	0	5	2	0	67	22
10	39	44	0	6	1	2	0	0	7	0	14	25
11	33	174	2	6	0	0	1	0	0	5	20	80
12	11	275	0	0	0	9	1	2	0	3	50	75
13	0	154	0	0	0	1	0	0	5	0	20	27
14	67	108	3	1	0	12	0	0	0	0	20	27
15	19	106	22	0	0	1	4	0	0	0	13	90
16	42	56	8	40	18	0	3	0	0	0	12	129
17	0	13	0	1	1	0	0	0	0	0	10	90
18	31	38	2	0	104	0	7	0	0	0	0	34
19	0	11	33	0	0	3	0	0	0	0	0	168
20	51	16	0	0	2	0	0	0	0	0	64	51
21	32	64	28	0	0	0	0	0	0	4	0	43
22	13	76	75	0	0	0	4	0	0	0	0	85
23	15	22	104	3	24	1	0	0	0	10	39	68
24	1	12	48	1	0	0	0	0	0	0	23	93
25	3	16	62	6	0	1	0	0	0	0	9	96
26	36	12	43	44	0	0	0	1	0	0	56	85
27	6	43	106	1	0	2	0	0	0	0	27	46
28	4	20	10	0	4	5	0	0	0	20	41	58
29	18	11	0	0	0	0	0	6	0	11	20	85
30	29		0	0	0	3	0	0	0	0	7	128
31	63		0		0		2	0		13		88

<b>Monthly</b>	677	1726	622	167	218	52	56	64	75	103	718	2005
<b>Rainy Days</b>	25	29	22	16	16	14	12	7	8	13	25	31
<b>Max.</b>	67	275	106	44	104	12	15	44	24	20	72	168
<b>Average</b>	22	60	20	6	7	2	2	2	3	3	24	65

<b>Annual</b> :	6483	<b>No.</b> :	218	<b>Max.</b> :	275	<b>Ave.</b> :	18
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	31	300	64	51	49	10	28	50	35	25	89	171
2	172	199	12	13	16	4	6	5	35	12	198	188
3	130	817	27	7	0	23	6	2	5	8	123	299
4	124	134	43	41	125	3	10	0	0	0	86	472
5	64	190	317	10	24	2	4	0	0	14	71	385
6	156	86	159	45	4	10	2	7	0	44	151	490

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	333	1316	103	71	65	37	40	57	75	45	410	658
<b>2nd</b>	344	410	519	96	153	15	16	7	0	58	308	1347

**Table Daily Rainfall**

Station : **Malino**  
 Year : **1989**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	86	85	29	7	0	0	5	0	2	0	2	48
2	96	55	16	13	0	0	10	17	2	0	0	6
3	68	85	35	17	12	0	12	0	0	0	13	20
4	39	138	0	29	5	86	2	0	0	0	11	21
5	88	48	5	18	10	37	8	20	0	0	12	0
6	38	85	10	95	0	40	16	0	0	0	0	11
7	5	0	221	13	42	95	7	7	0	0	0	18
8	85	0	15	18	0	81	0	0	0	0	0	25
9	61	5	14	125	68	0	4	4	0	0	0	0
10	86	0	12	18	0	0	2	0	0	0	13	13
11	24	15	12	68	2	2	10	11	0	0	4	10
12	20	109	16	99	0	18	2	0	0	0	0	6
13	17	85	27	0	20	47	6	0	15	0	7	35
14	100	30	105	90	70	0	10	4	20	0	0	53
15	27	58	0	25	61	0	2	0	0	0	6	110
16	20	15	0	38	0	0	4	0	0	0	0	10
17	55	58	0	53	0	30	0	0	0	0	0	12
18	36	49	8	68	0	5	12	0	0	0	10	4
19	27	15	2	91	0	15	10	0	5	0	3	0
20	16	82	0	39	0	0	2	2	0	0	0	11
21	37	68	0	30	0	16	4	0	0	0	0	20
22	74	5	0	68	0	0	0	0	0	0	0	1
23	7	15	21	32	28	0	12	0	0	0	26	2
24	92	19	0	0	42	18	0	0	0	2	10	5
25	38	16	95	0	40	68	0	6	2	5	10	7
26	120	41	4	0	19	17	0	2	0	2	11	0
27	208	24	4	10	0	29	0	4	0	40	6	24
28	85	29	0	39	0	0	0	2	0	5	18	4
29	97		15	29	30	0	0	21	0	15	20	12
30	68		6	1	10	0	0	2	0	20	15	11
31	195		30		7		0	3		0		0

<b>Monthly</b>	2015	1234	702	1133	466	604	140	105	46	89	197	499
<b>Rainy Days</b>	31	25	22	26	16	16	20	14	6	7	18	26
<b>Max.</b>	208	138	221	125	70	95	16	21	20	40	26	110
<b>Average</b>	65	44	23	38	15	20	5	3	2	3	7	16

<b>Annual</b> :	7230	<b>No.</b> :	227	<b>Max.</b> :	221	<b>Ave.</b> :	20
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	377	411	85	84	27	123	37	37	4	0	38	95
2	275	90	272	269	110	216	29	11	0	0	13	67
3	188	297	160	282	153	67	30	15	35	0	17	214
4	154	219	10	289	0	50	28	2	5	0	13	37
5	248	123	116	130	110	102	16	6	2	7	46	35
6	773	94	59	79	66	46	0	34	0	82	70	51

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	840	798	517	635	290	406	96	63	39	0	68	376
<b>2nd</b>	1175	436	185	498	176	198	44	42	7	89	129	123

**Table Daily Rainfall**

Station : **Malino**  
 Year : **1990**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	19	4	86	0	0	0	0	0	0	0	0	14
2	6	0	6	0	0	0	0	0	0	0	0	1
3	25	4	0	0	0	0	33	0	0	0	0	34
4	44	56	2	6	0	11	0	0	0	0	0	36
5	0	15	1	4	0	0	0	0	0	0	0	3
6	13	55	17	4	0	3	10	0	0	0	0	2
7	12	51	17	0	0	1	0	0	0	0	0	28
8	21	25	40	0	0	6	0	2	0	0	48	18
9	32	1	31	0	20	0	0	0	0	0	0	11
10	33	0	0	18	14	0	0	0	0	0	0	14
11	33	0	18	0	10	0	0	0	0	0	0	1
12	40	3	11	0	0	10	0	0	0	0	0	19
13	26	45	27	0	0	0	0	0	0	0	0	76
14	36	32	16	6	0	4	0	0	0	0	0	11
15	12	0	0	25	0	10	0	0	0	0	0	0
16	10	11	3	12	0	4	16	0	0	0	0	19
17	18	13	15	15	0	14	0	0	0	0	0	0
18	0	2	11	12	0	0	0	0	0	0	0	0
19	17	3	27	0	0	8	0	0	0	0	0	42
20	39	0	0	0	0	10	0	0	0	0	23	60
21	17	4	19	10	0	11	0	0	0	0	16	64
22	31	5	10	10	10	0	3	0	0	0	13	20
23	25	0	11	14	0	0	4	0	0	0	19	5
24	0	1	1	12	3	0	0	0	0	0	4	50
25	0	22	0	0	19	0	0	0	0	0	44	2
26	33	8	20	0	13	0	0	0	0	0	1	19
27	11	1	7	12	23	0	0	0	0	0	0	0
28	24	2	8	0	20	0	0	0	0	0	0	0
29	30		0	0	8	0	0	0	0	0	0	0
30	29		0	49	0	0	14	0	0	0	0	0
31	12		0		0		40	0		0		0

<b>Monthly</b>	648	363	404	209	140	92	120	2	0	0	168	549
<b>Rainy Days</b>	27	22	23	15	10	12	7	1	0	0	8	23
<b>Max.</b>	44	56	86	49	23	14	40	2	0	0	48	76
<b>Average</b>	21	13	13	7	5	3	4	0	0	0	6	18

<b>Annual</b> :	2695	<b>No.</b> :	148	<b>Max.</b> :	86	<b>Ave.</b> :	7
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	94	79	95	10	0	11	33	0	0	0	0	88
2	111	132	105	22	34	10	10	2	0	0	48	73
3	147	80	72	31	10	24	0	0	0	0	0	107
4	84	29	56	39	0	36	16	0	0	0	23	121
5	73	32	41	46	32	11	7	0	0	0	96	141
6	139	11	35	61	64	0	54	0	0	0	1	19

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	352	291	272	63	44	45	43	2	0	0	48	268
<b>2nd</b>	296	72	132	146	96	47	77	0	0	0	120	281

**Table Daily Rainfall**

Station : **Malino**  
 Year : **1991**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	19	7	11	43	0	0	0	0	0	0	0	37
2	9	21	5	29	0	0	0	1	0	0	0	10
3	20	12	0	10	16	0	0	0	0	0	0	21
4	8	10	0	42	2	3	0	0	0	0	13	48
5	69	38	34	27	0	0	0	0	0	0	17	0
6	74	58	5	4	0	0	0	0	0	0	0	9
7	24	70	9	0	0	0	0	0	0	0	0	23
8	19	20	1	0	1	0	0	0	0	0	22	41
9	18	22	3	5	22	0	0	0	0	0	20	2
10	23	27	0	0	16	0	2	0	0	0	3	6
11	22	11	11	12	0	0	0	0	0	0	10	58
12	12	3	0	0	0	0	7	0	0	0	3	4
13	24	11	0	0	0	0	0	0	0	0	26	11
14	48	7	0	9	0	0	0	0	0	0	19	10
15	27	7	2	0	0	0	3	0	0	0	7	0
16	37	10	7	0	4	0	0	0	0	0	0	0
17	7	6	3	23	2	0	0	0	0	0	0	21
18	27	37	0	48	2	0	0	0	0	0	0	0
19	93	54	1	48	4	18	0	0	0	0	16	8
20	66	20	0	0	1	0	0	0	0	0	47	0
21	3	12	4	56	1	0	0	0	0	0	1	0
22	34	14	0	2	0	0	0	0	0	5	14	0
23	160	19	0	10	0	0	0	0	0	0	37	8
24	33	68	0	1	0	6	0	0	0	1	14	71
25	130	0	0	29	4	0	0	0	0	0	0	27
26	50	13	0	70	2	0	0	0	0	0	2	6
27	83	5	0	10	9	0	0	0	0	0	0	9
28	9	2	10	24	0	0	0	0	0	0	31	0
29	14		0	16	0	0	0	2	0	0	4	0
30	12		10	7	0	0	0	0	0	0	37	17
31	33		19		0		0	0		0		3

<b>Monthly</b>	1207	584	135	525	86	27	12	3	0	6	343	450
<b>Rainy Days</b>	31	27	16	22	14	3	3	2	0	2	20	22
<b>Max.</b>	160	70	34	70	22	18	7	2	0	5	47	71
<b>Average</b>	39	21	4	18	3	1	0	0	0	0	11	15

<b>Annual</b> :	3378	<b>No.</b> :	162	<b>Max.</b> :	160	<b>Ave.</b> :	9
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	125	88	50	151	18	3	0	1	0	0	30	116
2	158	197	18	9	39	0	2	0	0	0	45	81
3	133	39	13	21	0	0	10	0	0	0	65	83
4	230	127	11	119	13	18	0	0	0	0	63	29
5	360	113	4	98	5	6	0	0	0	6	66	106
6	201	20	39	127	11	0	0	2	0	0	74	35

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	416	324	81	181	57	3	12	1	0	0	140	280
<b>2nd</b>	791	260	54	344	29	24	0	2	0	6	203	170

**Table Daily Rainfall**

Station : **Malino**  
 Year : **1992**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	24	26	3	17	0	3	0	4	0	0	0	4
2	9	3	8	23	0	2	0	0	18	0	0	34
3	4	8	0	22	0	37	0	0	2	0	0	8
4	14	0	8	1	0	0	13	0	13	0	0	4
5	1	1	0	31	16	0	1	0	11	5	0	2
6	2	0	43	10	6	3	0	0	0	2	0	22
7	52	12	99	0	6	10	0	0	0	2	1	10
8	27	3	4	1	3	2	0	0	0	0	11	16
9	30	0	2	44	2	1	1	0	0	5	0	0
10	83	37	6	0	7	13	0	0	0	0	0	0
11	0	1	17	0	0	5	45	0	0	0	0	6
12	0	23	6	0	0	7	0	0	0	0	2	1
13	69	17	17	2	0	3	1	0	0	0	3	28
14	0	6	4	0	0	0	26	0	0	0	12	1
15	0	0	7	0	0	3	0	0	0	0	5	0
16	0	0	36	13	0	2	0	0	0	0	1	16
17	21	0	7	17	0	6	0	0	0	0	1	0
18	14	13	2	10	0	2	0	0	0	0	0	1
19	8	56	6	6	5	0	0	0	0	9	1	0
20	57	68	0	43	0	0	0	0	0	7	0	0
21	14	14	0	0	1	0	0	0	0	0	2	1
22	5	0	0	10	2	0	2	0	0	33	3	8
23	6	3	1	0	17	0	0	0	0	13	5	1
24	1	0	0	0	1	0	0	0	0	0	0	11
25	31	0	17	0	0	0	0	7	0	0	0	0
26	16	1	7	0	14	1	0	0	0	0	3	0
27	50	64	4	0	11	0	0	0	0	0	13	45
28	6	0	17	0	0	0	0	0	0	0	0	26
29	9	18	4	1	3	0	3	0	2	31	0	1
30	26		1	1	0	3	2	0	0	1	23	21
31	0		2		0		0	0		0		2

<b>Monthly</b>	579	374	328	252	94	103	94	11	46	108	86	269
<b>Rainy Days</b>	25	19	25	17	14	17	9	2	5	10	15	23
<b>Max.</b>	83	68	99	44	17	37	45	7	18	33	23	45
<b>Average</b>	19	13	11	8	3	3	3	0	2	3	3	9

<b>Annual</b> :	2344	<b>No.</b> :	181	<b>Max.</b> :	99	<b>Ave.</b> :	6
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	52	38	19	94	16	42	14	4	44	5	0	52
2	194	52	154	55	24	29	1	0	0	9	12	48
3	69	47	51	2	0	18	72	0	0	0	22	36
4	100	137	51	89	5	10	0	0	0	16	3	17
5	57	17	18	10	21	0	2	7	0	46	10	21
6	107	83	35	2	28	4	5	0	2	32	39	95

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	315	137	224	151	40	89	87	4	44	14	34	136
<b>2nd</b>	264	237	104	101	54	14	7	7	2	94	52	133

**Table Daily Rainfall**

Station : **Malino**  
 Year : **1993**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	44	0	41	47	1	0	0	0	0	0	0	13
2	6	11	43	24	0	10	1	0	0	0	0	3
3	2	55	32	17	8	20	0	0	0	0	0	3
4	11	110	2	47	0	11	0	0	0	0	0	2
5	2	34	0	1	18	10	0	0	0	0	0	5
6	1	27	0	18	4	4	0	0	0	0	0	20
7	22	21	8	78	25	5	7	0	0	0	0	4
8	33	0	59	24	42	0	0	0	0	0	0	36
9	22	1	51	2	11	1	0	0	0	0	0	19
10	25	30	5	27	2	0	0	0	0	0	0	19
11	21	0	6	53	2	0	6	3	0	0	0	0
12	0	7	0	0	6	0	4	0	0	0	0	19
13	0	73	0	18	0	30	1	0	0	1	0	9
14	0	29	0	7	6	0	1	0	0	0	0	0
15	13	30	2	25	0	0	0	0	0	0	0	19
16	25	60	6	0	0	0	0	0	0	0	0	9
17	71	0	27	33	0	13	0	0	0	2	0	4
18	11	0	1	10	9	4	0	0	0	1	0	0
19	28	0	14	50	3	0	0	0	0	0	0	19
20	9	77	18	6	1	2	0	0	0	2	3	0
21	19	70	1	46	2	0	0	0	0	0	70	4
22	42	10	16	11	0	1	0	0	0	0	0	15
23	246	25	6	35	0	0	0	0	0	0	0	9
24	0	1	1	56	9	0	1	0	0	0	24	9
25	27	0	6	2	5	1	0	0	0	0	66	18
26	4	41	16	0	1	1	0	0	0	0	19	0
27	14	0	45	0	0	3	0	0	0	0	19	9
28	4	20	26	0	23	1	0	0	0	0	3	2
29	0		8	1	7	1	0	0	13	0	19	0
30	0		0	1	62	2	0	0	0	0	3	19
31	0		5		1		0	0		0		0

<b>Monthly</b>	702	732	445	639	248	120	21	3	13	6	226	288
<b>Rainy Days</b>	24	20	25	25	22	18	7	1	1	4	9	24
<b>Max.</b>	246	110	59	78	62	30	7	3	13	2	70	36
<b>Average</b>	23	26	14	21	8	4	1	0	0	0	8	9

<b>Annual</b> :	3443	<b>No.</b> :	180	<b>Max.</b> :	246	<b>Ave.</b> :	10
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	65	210	118	136	27	51	1	0	0	0	0	26
2	103	79	123	149	84	10	7	0	0	0	0	98
3	34	139	8	103	14	30	12	3	0	1	0	47
4	144	137	66	99	13	19	0	0	0	5	3	32
5	334	106	30	150	16	2	1	0	0	0	160	55
6	22	61	100	2	94	8	0	0	13	0	63	30

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	202	428	249	388	125	91	20	3	0	1	0	171
<b>2nd</b>	500	304	196	251	123	29	1	0	13	5	226	117



**Table Daily Rainfall**

Station : **Malino**  
 Year : **1994**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	16	17	10	3	0	0	0	0	0	0		4
2	4	43	10	1	0	1	0	0	0	0		2
3	0	20	0	0	12	13	0	0	0	0		17
4	3	13	2	0	28	0	0	0	0	0		10
5	10	0	1	4	0	0	0	0	0	0		7
6	23	7	6	3	1	0	0	0	0	0		0
7	0	15	23	10	4	0	0	0	0	0		27
8	0	10	22	1	1	0	0	0	0	0		6
9	20	10	12	0	0	0	0	0	0	0		26
10	6	1	2	30	10	0	0	0	0	0		24
11	3	5	50	11	10	0	0	0	0	0		0
12	1	6	10	0	0	0	0	0	0	0		6
13	0	14	10	2	0	0	0	0	0	0		24
14	19	30	11	2	0	0	0	0	0	0		27
15	38	13	6	20	0	0	0	0	0	0		32
16	4	14	18	30	0	0	0	0	0	0		36
17	0	6	0	10	0	0	0	0	0	0		33
18	0	20	1	0	0	0	0	0	0	0		31
19	0	40	9	60	0	0	0	0	0	0		71
20	2	14	60	2	0	0	0	0	0	0		6
21	48	8	20	0	0	0	0	0	0	0		6
22	3	30	21	58	10	0	0	0	0	0		0
23	10	0	10	40	0	0	0	0	0	0		0
24	10	0	2	2	0	0	0	0	0	0		0
25	28	36	0	5	0	0	0	0	0	0		0
26	8	10	0	6	0	0	0	0	0	0		0
27	1	0	20	30	0	0	0	0	0	0		0
28	10	1	20	1	0	0	0	0	0	0		0
29	11		30	0	5	0	0	0	0	2		0
30	18		20	12	0	0	0	0	0	0		0
31	0				18		0	0		15		7

<b>Monthly</b>	296	383	406	343	99	14	0	0	0	17	0	402
<b>Rainy Days</b>	23	24	26	23	10	2	0	0	0	2	0	20
<b>Max.</b>	48	43	60	60	28	13	0	0	0	15	0	71
<b>Average</b>	10	14	14	11	3	0	0	0	0	1	0	13

<b>Annual</b> :	1960	<b>No.</b> :	130	<b>Max.</b> :	71	<b>Ave.</b> :	5
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	33	93	23	8	40	14	0	0	0	0	0	40
2	49	43	65	44	16	0	0	0	0	0	0	83
3	61	68	87	35	10	0	0	0	0	0	0	89
4	6	94	88	102	0	0	0	0	0	0	0	177
5	99	74	53	105	10	0	0	0	0	0	0	6
6	48	11	90	49	23	0	0	0	0	17	0	7

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	143	204	175	87	66	14	0	0	0	0	0	212
<b>2nd</b>	153	179	231	256	33	0	0	0	0	17	0	190

**Table Daily Rainfall**

Station : **Malino**  
 Year : **1995**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	12	37	27	0	0	9	1	0	0	0	0	13
2	16	12	3	40	0	0	1	0	0	0	0	46
3	21	58	45	33	0	1	20	0	0	0	0	65
4	29	46	81	60	0	5	11	0	3	4	0	21
5	37	14	0	37	1	0	2	0	0	0	0	48
6	32	6	3	177	1	48	1	0	0	0	38	113
7	29	14	43	77	0	38	0	0	0	23	47	106
8	45	0	2	0	0	20	4	0	0	0	43	75
9	36	0	56	0	1	25	2	0	0	0	14	90
10	27	0	49	23	0	31	1	0	0	0	0	32
11	47	0	20	5	4	57	0	0	0	0	20	25
12	56	0	0	39	5	1	1	0	0	0	11	75
13	136	0	4	26	15	6	1	0	0	0	28	75
14	67	9	31	0	0	2	3	0	0	0	0	7
15	22	24	15	26	45	28	0	0	0	0	94	3
16	35	36	39	0	0	31	0	0	1	26	38	8
17	13	0	1	0	0	1	0	0	0	0	13	12
18	16	38	0	0	0	7	8	0	0	0	90	4
19	55	0	0	50	50	14	0	0	0	0	50	20
20	21	25	1	0	0	0	5	0	0	0	34	70
21	12	28	20	0	5	0	0	0	0	41	54	126
22	18	0	1	0	1	8	0	0	22	0	42	49
23	24	10	14	0	0	47	1	0	0	0	53	27
24	34	1	15	1	0	0	0	0	15	13	68	0
25	13	16	0	4	0	0	0	0	0	2	108	0
26	0	18	5	32	1	0	0	0	0	11	24	0
27	42	83	19	5	0	0	0	0	0	0	47	0
28	26	0	31	6	0	12	0	0	0	0	13	0
29	0		0	2	1	0	0	0	0	0	50	0
30	0		46	0	34	38	0	0	0	0	7	0
31	27		48		5		0	7		0		0

<b>Monthly</b>	948	475	619	643	169	429	62	7	41	120	986	1110
<b>Rainy Days</b>	28	18	25	18	14	21	15	1	4	7	23	23
<b>Max.</b>	136	83	81	177	50	57	20	7	22	41	108	126
<b>Average</b>	31	17	20	21	5	14	2	0	1	4	33	36

<b>Annual</b> :	5609	<b>No.</b> :	197	<b>Max.</b> :	177	<b>Ave.</b> :	15
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	115	167	156	170	1	15	35	0	3	4	0	193
2	169	20	153	277	2	162	8	0	0	23	142	416
3	328	33	70	96	69	94	5	0	0	0	153	185
4	140	99	41	50	50	53	13	0	1	26	225	114
5	101	55	50	5	6	55	1	0	37	56	325	202
6	95	101	149	45	41	50	0	7	0	11	141	0

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	612	220	379	543	72	271	48	0	3	27	295	794
<b>2nd</b>	336	255	240	100	97	158	14	7	38	93	691	316

**Table Daily Rainfall**

Station : **Malino**  
 Year : **1996**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	6	45	26	0	6	10	23					
2	2	57	12	0	5	25	0					
3	12	102	15	19	8	5	0					
4	20	15	23	0	0	0	0					
5	8	45	34	2	0	0	0					
6	5	23	45	31	0	0	0					
7	46	12	27	36	0	0	6					
8	2	25	25	24	0	0	0					
9	7	8	0	2	0	0	4					
10	12	17	0	0	0	0	23					
11	32	21	0	7	0	0	0					
12	4	35	0	5	0	0	12					
13	3	11	18	26	0	0	0					
14	21	4	2	14	0	0	0					
15	18	27	13	3	0	0	0					
16	11	57	0	2	2	0	3					
17	9	13	0	15	3	0	0					
18	22	19	0	5	0	0	0					
19	105	7	0	108	0	0	0					
20	60	0	0	43	32	0	0					
21	42	29	7	3	2	0	0					
22	64	32	68	6	18	0	0					
23	13	9	73	0	4	0	0					
24	27	15	47	0	0	10	6					
25	41	27	26	0	4	2	0					
26	58	35	9	0	0	0	5					
27	31	41	0	0	1	0	0					
28	52	13	0	0	7	0	45					
29	15	23	8	0	9	7	0					
30	63		0	0	8	0	0					
31	60		3		10		0					

<b>Monthly</b>	871	767	481	351	119	59	127	0	0	0	0	0
<b>Rainy Days</b>	31	28	19	18	15	6	9	0	0	0	0	0
<b>Max.</b>	105	102	73	108	32	25	45	0	0	0	0	0
<b>Average</b>	28	26	16	12	4	2	4	0	0	0	0	0

<b>Annual</b> :	2775	<b>No.</b> :	126	<b>Max.</b> :	108	<b>Ave.</b> :	8
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	48	264	110	21	19	40	23	0	0	0	0	0
2	72	85	97	93	0	0	33	0	0	0	0	0
3	78	98	33	55	0	0	12	0	0	0	0	0
4	207	96	0	173	37	0	3	0	0	0	0	0
5	187	112	221	9	28	12	6	0	0	0	0	0
6	279	112	20	0	35	7	50	0	0	0	0	0

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	198	447	240	169	19	40	68	0	0	0	0	0
<b>2nd</b>	673	320	241	182	100	19	59	0	0	0	0	0

**Table Daily Rainfall**

Station : **Malino**  
 Year : **1997**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	56	25	15	10	3	5	0	0	0	0	0	32
2	100	57	75	25	0	0	35	0	0	0	0	63
3	71	10	43	38	0	1	33	0	0	0	0	41
4	39	33	24	47	0	0	0	0	0	0	0	22
5	36	23	39	59	0	14	0	0	0	0	0	1
6	18	7	10	46	0	0	0	0	0	0	0	0
7	30	15	45	13	0	0	0	0	0	0	0	0
8	7	32	60	26	0	0	0	0	0	0	0	0
9	11	17	91	61	0	0	0	0	0	0	0	33
10	3	6	98	73	0	0	0	0	0	0	0	32
11	12	52	51	27	0	0	0	0	0	0	0	9
12	17	71	32	0	0	0	0	0	0	0	0	1
13	25	93	17	0	0	0	0	0	0	0	0	16
14	5	17	160	0	12	0	0	0	0	0	0	0
15	20	49	0	0	6	0	0	0	0	0	0	0
16	36	41	0	0	0	0	0	0	0	0	0	0
17	33	12	0	0	2	0	0	0	0	0	0	0
18	27	16	0	0	0	0	0	0	0	0	0	0
19	6	72	0	0	0	0	0	0	0	0	0	0
20	14	104	0	0	0	0	0	0	0	0	0	3
21	10	96	0	0	0	0	0	0	0	0	0	0
22	93	71	2	0	0	0	0	0	0	0	0	0
23	90	29	0	6	0	0	0	0	0	0	0	22
24	140	16	7	3	0	0	0	0	0	0	0	10
25	23	46	25	1	0	0	0	0	0	0	0	2
26	9	84	63	20	0	0	0	0	0	0	0	25
27	15	100	11	7	0	0	0	0	0	0	0	37
28	17	50	9	9	0	0	0	0	0	0	0	17
29	20		0	2	0	0	0	0	0	0	0	67
30	31		27	0	0	0	0	0	0	0	0	0
31	14		33		0		0	0		0		0

<b>Monthly</b>	1028	1244	937	473	23	20	68	0	0	0	0	433
<b>Rainy Days</b>	31	28	22	18	4	3	2	0	0	0	0	18
<b>Max.</b>	140	104	160	73	12	14	35	0	0	0	0	67
<b>Average</b>	33	44	30	16	1	1	2	0	0	0	0	14

<b>Annual</b> :	4226	<b>No.</b> :	126	<b>Max.</b> :	160	<b>Ave.</b> :	12
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	302	148	196	179	3	20	68	0	0	0	0	159
2	69	77	304	219	0	0	0	0	0	0	0	65
3	79	282	260	27	18	0	0	0	0	0	0	26
4	116	245	0	0	2	0	0	0	0	0	0	3
5	356	258	34	10	0	0	0	0	0	0	0	34
6	106	234	143	38	0	0	0	0	0	0	0	146

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	450	507	760	425	21	20	68	0	0	0	0	250
<b>2nd</b>	578	737	177	48	2	0	0	0	0	0	0	183

**Table Daily Rainfall**

Station : **Malino**  
 Year : **1998**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	5	47	0	45	1	22	0	17	0	0	1	42
2	4	2	25		3	1	0	0	0	0	42	17
3	2	4	15	41	0	0	0	0	0	0	20	19
4	73	12	2	5	41		19	3		52	27	19
5	40	32	4	0	0		3	5		5	0	0
6	0	8	0	10	0	10	5	0	0	38	20	0
7	13	0	4	28	21		65	0	0	0	6	2
8	70	0	4	5	3	25	12	0	1	0	3	30
9	22	3	3	11	0	13	5	0	0	12	17	0
10	50	0	0	10	2	0	15	0	0	0	49	0
11	0	1	4	28	0	6	30	0	0	19	63	8
12	0	34		6	0	1		0	0	0	26	0
13	12	6	49	18	0	0	3	0	0	1	86	0
14	0	8	5	1	1	7	1	6	0	0	10	0
15	0	3	48	43	5	0	0	0	0	0	1	0
16	3	8	26	11	15	0	7	0	0	12	8	3
17	3	0	33	8	29	0	0	0	0	0	26	7
18	6	14	0	10	7	1	0	0	10	0	3	9
19	1	1	44	3	0	5		0		13	2	40
20	0	5	57	1	4	40	5	0	2	14	3	11
21	0	21	0	0	3	5	0	0	1	27	0	19
22	0	0	0	0	3	0	0	0	31	0	0	15
23	7	64	30	0	0	0	19	0	10	0	0	0
24	0	0	0	0	0	0	12	10	22	1	0	34
25	0	0	18	0	0	3	0	8	47	0	0	55
26	27	0	20	0	0	0	0	5	0	0	0	35
27	0	3	10	0	0	0	24	0	0	14	0	49
28	0	0	24	0	0	3	0	0	0	2	0	45
29	0		0	0	0	0	13	0	0	0	0	89
30	0		3	0	0	0	11	0	0	0	0	101
31	0		46		0		0	0		0		28

<b>Monthly</b>	338	276	474	284	138	142	249	54	124	210	413	677
<b>Rainy Days</b>	16	19	22	18	14	14	17	7	8	13	19	22
<b>Max.</b>	73	64	57	45	41	40	65	17	47	52	86	101
<b>Average</b>	11	10	16	10	4	5	9	2	5	7	14	22

<b>Annual</b> :	3379	<b>No.</b> :	189	<b>Max.</b> :	101	<b>Ave.</b> :	9
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	124	97	46	91	45	23	22	25	0	57	90	97
2	155	11	11	64	26	48	102	0	1	50	95	32
3	12	52	106	96	6	14	34	6	0	20	186	8
4	13	28	160	33	55	46	12	0	12	39	42	70
5	7	85	48	0	6	8	31	18	111	28	0	123
6	27	3	103	0	0	3	48	5	0	16	0	347

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	291	160	163	251	77	85	158	31	1	127	371	137
<b>2nd</b>	47	116	311	33	61	57	91	23	123	83	42	540

**Table Daily Rainfall**

Station : **Malino**  
 Year : **1999**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	185	10	15	10	28	1	45	0	0	8	6	8
2	75	2	13	17	0	2	28	0	0	3	17	29
3	25	38	14	14	44	0	30	0	0	0	11	54
4	5	26	9	12	3	20	38	17	0	0	42	35
5	28	115	1	9	1	0	15	0	0	0	40	19
6	1	90	0	2	3	0	4	0	0	0	4	13
7	15	21	0	4	2	0	0	0	0	0	15	51
8	7	39	22	0	8	0	0	0	0	0	0	41
9	4	0	0	0	3	0	0	26	0	2	3	61
10	0	5	22	3	2	19	0	0	0	41	28	105
11	41	0	8	8	3	3	0	0	0	16	0	42
12	0	0	12	12	1	0	0	0	0	13	3	118
13	11	37	21	35	3	0	0	0	0	0	15	12
14	16	16	39	5	0	0	0	0	0	0	2	2
15	18	24	0	20	0	0	0	0	1	0	13	20
16	51	0	9	0	0	0	3	0	0	0	3	13
17	24	21	0	23	0	0	4	0	0	0	4	17
18	33	45	0	25	3	0	0	0	0	0	9	0
19	13	41	0	0	3	0	0	0	0	0	10	40
20	30	15	36	2	1	0	0	1	0	19	5	50
21	48	22	29	0	0	0	0	9	0	44	78	15
22	23	4	33	0	3	0	0	0	0	3	2	53
23	39	4	2	0	1	0	0	0	0	1	8	7
24	68	21	0	0	0	0	0	0	0	0	1	110
25	106	2	41	0	8	5	0	0	0	0	21	63
26	59	0	0	0	0	2	0	0	0	1	11	2
27	79	0	2	0	6	0	0	0	0	0	28	1
28	13	0	18	0	0	0	0	0	0	3	22	8
29	19		55	0	0	0	0	0	0	4	0	13
30	59		24	0	0	0	0	0	0	8	3	56
31	0		29		0		0	0		26		3

<b>Monthly</b>	1095	598	454	201	126	52	167	53	1	192	404	1061
<b>Rainy Days</b>	28	21	22	16	19	7	8	4	1	15	27	30
<b>Max.</b>	185	115	55	35	44	20	45	26	1	44	78	118
<b>Average</b>	35	21	15	7	4	2	5	2	0	6	13	34

<b>Annual</b> :	4404	<b>No.</b> :	198	<b>Max.</b> :	185	<b>Ave.</b> :	12
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	318	191	52	62	76	23	156	17	0	11	116	145
2	27	155	44	9	18	19	4	26	0	43	50	271
3	86	77	80	80	7	3	0	0	1	29	33	194
4	151	122	45	50	7	0	7	1	0	19	31	120
5	284	53	105	0	12	5	0	9	0	48	110	248
6	229	0	128	0	6	2	0	0	0	42	64	83

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	431	423	176	151	101	45	160	43	1	83	199	610
<b>2nd</b>	664	175	278	50	25	7	7	10	0	109	205	451

**Table Daily Rainfall**

Station : **Malino**  
 Year : **2000**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	8	29	0	1	18	0	4	0	0	0	0	0
2	19	20	0	76	9	0	0	0	0	0	0	0
3	3	49	0	38	4	0	2	0	0	0	0	0
4	1	118	3	67	0	0	7	0	0	0	0	0
5	0	25	1	1	27	0	3	0	0	0	0	0
6	0	21	1	2	5	0	2	0	0	0	0	0
7	17	26	3	15	15	0	0	0	0	0	0	0
8	70	25	0	0	17	0	0	0	0	0	0	0
9		3	0	1	0	0	24	0	0	0	0	0
10	16	0	3	33	0	0	0	0	0	0	0	0
11	62	0	0	38	0	0	19	0	0	0	0	0
12	5	0	8	58	0	0	3	0	0	0	0	0
13	0	0	4	0	0	0	0	0	0	0	0	0
14	9	1	52	0	23	0	0	0	0	0	0	0
15	5	0	45	0	4	0	0	0	0	0	0	0
16	0	0	24	12	11	0	0	0	0	0	0	0
17	0	1	25	23	5	0	0	0	0	0	0	0
18	117	49	9	0	63	0	0	0	0	0	0	0
19	13	1	53	0	0	0	15	0	0	0	0	0
20	38	11	16	5	0	0	0	0	0	0	0	0
21	3	35	20	6	1	0	0	0	0	0	0	0
22	7	0	11	13	7	0	0	0	0	0	0	0
23	18	0	16	19	1	0	0	0	0	0	0	0
24	106	2	10	28	2	0	0	0	0	0	0	0
25	0	4	22	0	6	0	0	0	0	0	0	0
26	20	0	36	7	9	0	0	0	0	0	0	0
27	6	0	12	3	8	0	0	0	0	0	0	0
28	22	0	36	20	0	0	0	0	0	0	0	0
29	30		8	13	0	0	0	0	0	0	0	0
30	113		22	11	7	0	7	0	0	0	0	0
31	75		26		1		3	0		0		0

<b>Monthly</b>	783	420	466	490	243	0	89	0	0	0	0	0
<b>Rainy Days</b>	24	17	25	23	21	0	11	0	0	0	0	0
<b>Max.</b>	117	118	53	76	63	0	24	0	0	0	0	0
<b>Average</b>	26	15	15	16	8	0	3	0	0	0	0	0

<b>Annual</b> :	2491	<b>No.</b> :	121	<b>Max.</b> :	118	<b>Ave.</b> :	7
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	31	241	4	183	58	0	16	0	0	0	0	0
2	103	75	7	51	37	0	26	0	0	0	0	0
3	81	1	109	96	27	0	22	0	0	0	0	0
4	168	62	127	40	79	0	15	0	0	0	0	0
5	134	41	79	66	17	0	0	0	0	0	0	0
6	266	0	140	54	25	0	10	0	0	0	0	0

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	215	317	120	330	122	0	64	0	0	0	0	0
<b>2nd</b>	568	103	346	160	121	0	25	0	0	0	0	0

**Table Daily Rainfall**

Station : **Malino**  
 Year : **2001**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0		0	0	12	0	0	0	0	0	12	100
2	0	32	0	0	0	10	0	0	0	0	21	110
3	19	22	0	0	0	20	0	0	0	0	0	26
4	0	11	0	0	0	0	0	0	0	0	40	87
5	11	57	0	0	5	0	0	0	0	0	0	85
6	18	17	0	0	0	0	0	0	0	0	23	80
7	0	10	0	0	13	0	0	0	0	20	0	91
8	24	14	0	0	0	9	0	0	0	0	40	63
9	24	17	0	0	0	0	0	0	0	0	0	86
10	0	8	0	8	0	30	0	0	0	0	0	44
11	11	0	0	11	0	14	0	0	0	0	0	47
12	36	0	0	7	0	36	0	0	0	0	0	0
13	0	0	0	8	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0
15	21	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	12	0	0	0	0	0	4	0
18	0	6	0	0	7	0	0	0	0	0	0	32
19	30	0	0	0	0	0	0	0	0	0	23	0
20	20	8	0	13	6	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0
22	16	0	0	0	0	0	0	0	0	0	0	0
23	21	0	0	0	7	0	0	0	0	15	0	0
24	22	6	0	9	0	0	0	0	0	8	0	0
25	27	4	0	8	17	0	0	0	0	0	0	0
26	0	24	0	14	10	0	0	0	0	0	52	11
27	0	0	0	7	0	0	0	0	0	7	39	49
28	0	0	0	5	0	0	0	0	0	0	0	34
29	2		0	0	8	0	0	0	0	0	20	22
30	14		0	6	0	0	0	0	0	0	0	7
31	27		0		0		0	0		0		0

<b>Monthly</b>	343	236	0	96	97	119	0	0	0	50	274	974
<b>Rainy Days</b>	17	14	0	11	10	6	0	0	0	4	10	17
<b>Max.</b>	36	57	0	14	17	36	0	0	0	20	52	110
<b>Average</b>	11	9	0	3	3	4	0	0	0	2	9	31

<b>Annual</b> :	2189	<b>No.</b> :	89	<b>Max.</b> :	110	<b>Ave.</b> :	6
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	30	122	0	0	17	30	0	0	0	0	73	408
2	66	66	0	8	13	39	0	0	0	20	63	364
3	68	0	0	26	0	50	0	0	0	0	0	47
4	50	14	0	13	25	0	0	0	0	0	27	32
5	86	10	0	17	24	0	0	0	0	23	0	0
6	43	24	0	32	18	0	0	0	0	7	111	123

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	164	188	0	34	30	119	0	0	0	20	136	819
<b>2nd</b>	179	48	0	62	67	0	0	0	0	30	138	155



**Table Daily Rainfall**

Station : **Malino**  
 Year : **2002**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	42	37	0	33	11	0	0	0	0	0	0	6
2	4	2	0	23	56	0	0	0	0	0	0	41
3	27	25	0	15	0	0	1	0	0	0	0	14
4	11	2	0	17	0	0	3	0	0	0	0	7
5	0	42	1	6	13	0	0	0	0	0	0	9
6	6	0	4	0	6	0	0	0	0	0	0	2
7	8	24	5	0	37	15	0	0	0	0	0	0
8	1	21	1	17	64	1	0	0	0	0	0	5
9	15	0	6	25	5	8	0	0	0	0	0	9
10	0	3	0	0	9		0	0	0	0	0	15
11	0	0	8	0	0	22	0	0	0	0	0	4
12	56	41	7	0	0	2	0	0	0	0	2	41
13	75	63	0	2	0	1	0	0	0	0	2	36
14	125	51	1	8	0	0	0	0	0	0	0	9
15	11	19	0	25	0	0	0	0	0	0	9	8
16	7	45	16	30	0	0	0	0	0	0	0	1
17	0	3	0	27	2	3	0	0	0	0	0	0
18	0	35	0	12	0	0	0	0	0	0	0	0
19	31	43	1	1	0	45	0	0	0	0	0	0
20	25	12	0	0	0	0	0	0	0	0	2	21
21	50	24	0	3	0	0	0	0	0	0	0	35
22	4	99	2	10	0	12	0	0	0	0	3	32
23	8	13	4	13	0	0	0	0	0	0	12	11
24	0	24	6	6	0	50	0	0	0	0	37	2
25	0	1	3	1	0	0	0	0	0	0	11	2
26	0	0	1	0	0	0	0	0	0	0	15	4
27	9	11	2	0	0	0	0	0	0	0	8	11
28	32	26	0	0	0	0	0	0	0	0	13	15
29	6		0	0	0	0	0	0	0	0	14	2
30	28		0	50	0	0	0	0	0	0	10	7
31	2		1		0		0	0		0		11

<b>Monthly</b>	583	666	69	324	203	159	4	0	0	0	138	360
<b>Rainy Days</b>	23	24	17	20	9	10	2	0	0	0	13	27
<b>Max.</b>	125	99	16	50	64	50	3	0	0	0	37	41
<b>Average</b>	19	24	2	11	7	5	0	0	0	0	5	12

<b>Annual</b> :	2506	<b>No.</b> :	145	<b>Max.</b> :	125	<b>Ave.</b> :	7
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	84	108	1	94	80	0	4	0	0	0	0	77
2	30	48	16	42	121	24	0	0	0	0	0	31
3	267	174	16	35	0	25	0	0	0	0	13	98
4	63	138	17	70	2	48	0	0	0	0	2	22
5	62	161	15	33	0	62	0	0	0	0	63	82
6	77	37	4	50	0	0	0	0	0	0	60	50

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	381	330	33	171	201	49	4	0	0	0	13	206
<b>2nd</b>	202	336	36	153	2	110	0	0	0	0	125	154

**Table Daily Rainfall**

Station : **Malino**  
 Year : **2003**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	43	5	0	1	2	0	0	0	0	0	0	0
2	90	10	0	7	0	0	0	0	0	0		5
3	50	33	0	0	0	0	0	0	0	0	44	11
4	33	27	0	0	55	0	0	0	0	0	0	19
5	3	70	77	0	13	0	0	0	0	0	0	45
6	24	3	0	34	2	0	0	0	0	0	8	22
7	3	2	0	6	1	0	13	0	0	13	0	3
8	2	6	0	0	5	0		0	0	0	0	2
9	10	21	12	0	2	0	2	0	0	7	16	37
10	69	10	29	3	0	2	7	0	0	3	8	6
11	80	32	3	0	14	0	0	0	0	20	39	15
12	69	8	10	14	0	0	0	8	0		42	5
13	128	52	5	0	0	0	0	0	0	3	51	19
14	41	39	34	1	0	0	0	0	0	2	0	15
15	73	5	9	2	0	0	0	0	12	0	42	65
16	2	107	5	11	0	0	0	0	0	0	1	36
17	8	21	71	1	0	1	0	0	0	0	3	25
18	25	111	9	5	0	8	0	0	0	0	18	56
19	13	140	39	5	0	1	0	0	0	0	20	134
20	15	13	8	0	0	4	0	0	7	0	18	83
21	26	0	0	9	3	8	0	0	0	0	21	163
22	8	12	0	12	1	2	5	0	0	0	11	108
23	14	7	0	2	0	32	0	0	0	0	15	163
24	0	0	7	13	0		5	0	0	0	43	135
25	1	2	35	5	0	2	0	0	0	0	8	93
26	0	0	1		0	0	0	0	0	0	27	117
27	10		39	10	0	0	0	0	0	23	15	38
28	54	45	37	5	0	0	0	0	0	0	0	16
29	77		0	1	0	0	0	0	0	0	0	8
30	15		0	0	0	0	0	0	0	7	0	19
31	19		2		0		0	0		0		55

<b>Monthly</b>	1005	781	432	147	98	60	32	8	19	78	450	1518
<b>Rainy Days</b>	29	24	19	20	10	9	5	1	2	8	20	30
<b>Max.</b>	128	140	77	34	55	32	13	8	12	23	51	163
<b>Average</b>	32	29	14	5	3	2	1	0	1	3	16	49

<b>Annual</b> :	4628	<b>No.</b> :	177	<b>Max.</b> :	163	<b>Ave.</b> :	13
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	219	145	77	8	70	0	0	0	0	0	44	80
2	108	42	41	43	10	2	22	0	0	23	32	70
3	391	136	61	17	14	0	0	8	12	25	174	119
4	63	392	132	22	0	14	0	0	7	0	60	334
5	49	21	42	41	4	44	10	0	0	0	98	662
6	175	45	79	16	0	0	0	0	0	30	42	253

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	718	323	179	68	94	2	22	8	12	48	250	269
<b>2nd</b>	287	458	253	79	4	58	10	0	7	30	200	1249



**Table Daily Rainfall**

Station : **Bili-Bili (Telemetric)**  
 Year : **1999**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	2	7	42	0	0	0	0	0	0	0	46	12
2	64	1	0	6	0	0	0	0	0	6	32	0
3	85	14	16	2	0	0	0	0	0	0	33	14
4	4	15	0	25	0	0	0	0	0	0	35	1
5	26	200	2	19	0	0	0	0	1	0	7	0
6	22	72	0	0	0	0	0	0	2	0	1	14
7	5	16	32	0	0	0	0	0	0	0	6	20
8	14	16	1	0	0	0	0	0	0	0	19	61
9	0	10	0	0	0	0	0	0	0	0	0	68
10	16	12	4	21	0	0	0	0	0	13	0	10
11	0	0	0	0	0	0	0	0	0	36	0	38
12	0	0	0	0	0	0	0	0	0	0	0	14
13	0	40	19	0	0	0	0	0	0	0	3	37
14	0	4	33	26	0	0	0	0	0	14	0	1
15	0	10	0	20	0	0	0	0	0	0	17	5
16	0	7	73	0	0	0	0	0	0	0	12	0
17	0	7	0	0	0	0	0	0	0	0	5	13
18	0	15	0	0	0	0	0	0	0	0	0	31
19	0	51	0	0	0	0	0	0	0	3	8	12
20	0	33	15	0	0	0	0	0	0	24	1	5
21	55	35	5	0	0	0	0	0	0	2	82	10
22	20	31	51	0	0	0	0	0	0	0	9	3
23	39	17	0	0	0	0	0	2	2	0	0	31
24	19	27	0	0	0	0	0	0	0	33	15	49
25	34	25	16	0	0	0	0	0	0	0	6	49
26	9	0	8	0	0	0	0	0	0	3	27	6
27	26	3	0	0	0	0	0	0	0	15	0	0
28	20	18	24	0	0	0	0	0	0	0	0	10
29	23		18	0	0	0	0	0	0	16	0	35
30	38		1	0	0	0	0	0	0	76	3	28
31	22		17		0		0	0		14		0

<b>Monthly</b>	543	686	377	119	0	0	0	2	5	255	367	577
<b>Rainy Days</b>	20	25	18	7	0	0	0	1	3	13	20	26
<b>Max.</b>	85	200	73	26	0	0	0	2	2	76	82	68
<b>Average</b>	18	25	12	4	0	0	0	0	0	8	12	19

<b>Annual</b> :	2931	<b>No.</b> :	133	<b>Max.</b> :	200	<b>Ave.</b> :	8
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	181	237	60	52	0	0	0	0	1	6	153	27
2	57	126	37	21	0	0	0	0	2	13	26	173
3	0	54	52	46	0	0	0	0	0	50	20	95
4	0	113	88	0	0	0	0	0	0	27	26	61
5	167	135	72	0	0	0	0	2	2	35	112	142
6	138	21	68	0	0	0	0	0	0	124	30	79

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	238	417	149	119	0	0	0	0	3	69	199	295
<b>2nd</b>	305	269	228	0	0	0	0	2	2	186	168	282

**Table Daily Rainfall**

Station : **Bili-Bili (Telemetric)**  
 Year : **2000**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	9	22	0	0	7	30	0	0	0	0	0	18
2	30	6	0	4	0	0	0	0	5	11	14	4
3	2	31	0	27	1	0	0	0	0	13	0	87
4	7	183	0	6	0	0	34	0	0	0	19	65
5	0	61	0	15	0	0	9	0	0	0	0	37
6	7	1	0	1	97	0	0	0	0	0	0	14
7	110	7	0	3	0	11	1	0	0	0	1	11
8	49	18	7	0	1	73	0	0	0	0	2	19
9	0	15	0	20	0	4	0	0	0	0	0	2
10	7	0	5	0	0	1	0	0	0	0	1	0
11	88	0	0	66	0	17	1	0	0	0	0	4
12	0	0	0	11	5	0	1	0	0	4	0	44
13	10	0	74	1	0	4	10	0	0	0	0	5
14	15	0	18	0	0	0	0	0	0	16	5	3
15	10	0	7	0	0	17	0	0	0	1	19	14
16	0	0	18	1	1	15	0	0	0	16	5	4
17	0	2	30	5	0	0	0	0	0	3	29	0
18	67	11	6	0	10	0	0	0	0	1	49	13
19	12	6	29	5	0	0	0	0	0	6	7	0
20	7	2	42	0	0	21	0	0	0	0	18	0
21	7	39	54	1	0	14	0	0	0	0	3	14
22	3	3	18	0	2	1	0	0	0	51	1	8
23	32	0	79	3	0	0	0	0	0	0	1	0
24	5	15	5	29	0	0	0	0	0	31	1	0
25	14	106	1	39	36	0	0	0	0	99	3	35
26	0	100	41	0	2	7	0	0	0	12	54	0
27	11	0	5	9	4	0	11	0	0	0	11	2
28	3	0	11	9	0	1	0	0	0	0	7	0
29	55	1	28	13	0	4	0	0	0	0	24	0
30	68		27	31	1	0	3	0	0	4	39	37
31	159		0		0		2	0		6		0

<b>Monthly</b>	787	629	505	299	167	220	72	0	5	274	313	440
<b>Rainy Days</b>	25	19	20	21	12	15	9	0	1	15	22	21
<b>Max.</b>	159	183	79	66	97	73	34	0	5	99	54	87
<b>Average</b>	25	22	16	10	5	7	2	0	0	9	10	14

<b>Annual</b> :	3711	<b>No.</b> :	180	<b>Max.</b> :	183	<b>Ave.</b> :	10
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	48	303	0	52	8	30	43	0	5	24	33	211
2	173	41	12	24	98	89	1	0	0	0	4	46
3	123	0	99	78	5	38	12	0	0	21	24	70
4	86	21	125	11	11	36	0	0	0	26	108	17
5	61	163	157	72	38	15	0	0	0	181	9	57
6	296	101	112	62	7	12	16	0	0	22	135	39

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	344	344	111	154	111	157	56	0	5	45	61	327
<b>2nd</b>	443	285	394	145	56	63	16	0	0	229	252	113

**Table Daily Rainfall**

Station : **Bili-Bili (Telemetric)**  
 Year : **2001**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	11	3	1	55	0	0	0	0	22	13	39
2	7	86	25	2	0	0	0	0	0	0	0	122
3	19	65	11	0	2	7	0	0	0	0	6	49
4	0	94	167	0	0	7	0	0	0	0	5	52
5	37	57	15	8	0	0	0	0	1	0	38	19
6	19	55	31	25	1	0	0	0	0	0	17	90
7	1	82	35	1	0	21	0	0	0	0	0	41
8	45	72	0	1	0	12	0	0	0	0	8	78
9	58	4	10	1	0	2	0	0	0	0	17	11
10	102	4	5	20	0	53	0	0	0	0	4	19
11	93	0	3	5	0	0	0	0	0	0	0	40
12	23	0	38	18	0	7	0	0	0	0	6	16
13	19	7	6	39	0	0	0	0	0	9	0	0
14	47	6	0	2	0	1	0	0	0	5	0	0
15	28	0	9	0	0	5	0	0	0	0	15	2
16	10	20	0	0	0	0	1	0	0	0	1	1
17	3	51	33	13	0	0	0	0	0	4	20	16
18	1	34	31	1	0	0	0	0	0	98	9	22
19	0	35	4	0	0	0	0	0	0	4	6	0
20	0	36	18	0	0	1	0	0	0	0	1	1
21	1	23	1	0	0	0	0	0	0	7	0	7
22	16	0	0	5	0	0	0	0	0	4	15	21
23	0	0	0	6	0	0	0	0	0	1	0	33
24	19	0	53	2	0	0	0	0	0	18	0	4
25	12	16	0	0	0	1	0	0	0	0	48	0
26	17	0	0	0	0	0	0	0	0	0	13	0
27	48	0	5	0	0	1	0	0	0	0	2	9
28	0	0	0	7	0	0	0	0	0	0	19	2
29	28		6	4	1	0	0	0	0	0	0	73
30	8		0	19	7	0	0	0	9	0	7	2
31	30		0		12		0	0		7		1

<b>Monthly</b>	691	758	509	180	78	118	1	0	10	179	270	770
<b>Rainy Days</b>	25	19	21	20	6	12	1	0	2	11	21	26
<b>Max.</b>	102	94	167	39	55	53	1	0	9	98	48	122
<b>Average</b>	22	27	16	6	3	4	0	0	0	6	9	25

<b>Annual</b> :	3564	<b>No.</b> :	164	<b>Max.</b> :	167	<b>Ave.</b> :	10
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	63	313	221	11	57	14	0	0	1	22	62	281
2	225	217	81	48	1	88	0	0	0	0	46	239
3	210	13	56	64	0	13	0	0	0	14	21	58
4	14	176	86	14	0	1	1	0	0	106	37	40
5	48	39	54	13	0	1	0	0	0	30	63	65
6	131	0	11	30	20	1	0	0	9	7	41	87

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	498	543	358	123	58	115	0	0	1	36	129	578
<b>2nd</b>	193	215	151	57	20	3	1	0	9	143	141	192

**Table Daily Rainfall**

Station : **Bili-Bili (Telemetric)**  
 Year : **2002**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	127	51	0	11	14	0	0	0	0	0	4	3
2	213	24	0	0	0	0	0	0	0	0	0	1
3	7	1	0	25	4	0	0	0	0	0	0	1
4	5	0	0	96	0	0	0	0	0	0	0	1
5	6	19	0	17	0	5	0	0	0	0	0	46
6	1	3	38	0	9	0	0	0	0	0	0	0
7	0	2	12	0	18	0	0	0	0	0	0	8
8	0	1	14	35	16	2	0	0	0	0	2	77
9	0	0	18	91	79	0	0	0	0	0	0	4
10	0	0	1	0	46	0	0	0	0	0	0	10
11	0	1	25	0	0	0	0	0	0	0	1	61
12	0	3	54	0	0	5	0	0	0	0	0	14
13	3	95	0	3	0	0	0	0	0	0	0	18
14	0	27	9	2	0	0	0	0	0	0	0	42
15	12	40	7	1	0	0	0	0	0	0	0	15
16	18	23	6	1	0	1	0	0	0	0	3	15
17	17	33	0	29	0	1	0	0	0	0	0	0
18	25	12	3	2	0	0	0	0	0	0	0	0
19	24	11	48	0	0	7	0	0	0	0	0	0
20	13	5	18	0	0	0	0	0	0	0	0	2
21	16	21	0	0	0	0	0	0	0	0	0	0
22	7	30	0	0	0	0	0	0	0	0	21	13
23	7	26	2	2	0	0	0	0	0	0	10	2
24	17	20	16	0	0	0	0	0	0	0	0	17
25	0	0	0	0	0	10	0	0	0	0	1	22
26	4	0	62	7	0	0	0	0	0	0	43	17
27	0	0	7	0	0	0	0	0	0	0	36	8
28	0	0	0	0	0	0	0	0	0	0	0	50
29	8		0	0	0	0	0	0	0	0	6	4
30	25		0	1	0	0	0	0	0	9	24	37
31	6		60		0		0	0		0		9

<b>Monthly</b>	561	448	400	323	186	31	0	0	0	9	151	497
<b>Rainy Days</b>	21	21	18	15	7	7	0	0	0	1	11	26
<b>Max.</b>	213	95	62	96	79	10	0	0	0	9	43	77
<b>Average</b>	18	16	13	11	6	1	0	0	0	0	5	16

<b>Annual</b> :	2606	<b>No.</b> :	127	<b>Max.</b> :	213	<b>Ave.</b> :	7
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	358	95	0	149	18	5	0	0	0	0	4	52
2	1	6	83	126	168	2	0	0	0	0	2	99
3	15	166	95	6	0	5	0	0	0	0	1	150
4	97	84	75	32	0	9	0	0	0	0	3	17
5	47	97	18	2	0	10	0	0	0	0	32	54
6	43	0	129	8	0	0	0	0	0	9	109	125

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	374	267	178	281	186	12	0	0	0	0	7	301
<b>2nd</b>	187	181	222	42	0	19	0	0	0	9	144	196

**Table Daily Rainfall**

Station : **Bili-Bili (Telemetric)**  
 Year : **2003**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	6	2	0	0	0	0	0	0	0	1	5	0
2	96	30	0	3	0	0	0	0	0	0	5	39
3	52	2	0	0	0	0	0	0	0	0	0	2
4	16	2	0	0	21	0	0	0	0	0	0	49
5	5	34	17	0	3	0	0	0	0	0	0	0
6	23	9	0	61	0	0	0	0	0	0	1	34
7	0	0	0	3	1	0	1	0	0	44	0	0
8	2	1	3	0	0	0	0	0	0	0	0	0
9	0	0	38	22	0	0	0	0	0	0	7	50
10	77	7	5	22	0	0	2	0	0	2	0	6
11	53	29	6	3	0	0	0	0	0	2	0	0
12	54	0	14	0	0	0	0	0	0	0	0	2
13	67	4	7	0	0	0	0	0	0	0	0	7
14	29	33	34	0	0	0	0	0	0	5	0	9
15	62	0	3	2	0	0	0	0	2	0	2	37
16	17	15	0	2	0	0	0	0	0	0	36	68
17	3	6	24	0	0	0	0	0	0	1	4	11
18	47	35	14	1	0	1	0	0	0	0	0	19
19	0	111	0	1	0	0	0	0	0	0	30	78
20	1	1	0	0	0	0	0	0	2	0	24	30
21	3	0	0	9	0	15	0	0	0	0	0	87
22	2	10	1	9	5	0	0	0	0	0	9	29
23	18	3	6	1	0	2	0	0	0	0	34	116
24	0	0	12	0	0	0	0	0	0	0	0	57
25	0	0	3	4	0	0	0	0	0	0	0	39
26	0	0	13	0	0	0	0	0	0	0	14	51
27	0	0	4	1	0	0	0	0	0	0	4	28
28	0	7	9	0	0	0	0	0	0	0	2	1
29	2		0	10	0	0	0	0	0	5	1	8
30	18		5	0	0	0	0	0	0	1	0	4
31	72		0		0		0	0		0		59

<b>Monthly</b>	725	341	218	154	30	18	3	0	4	61	178	920
<b>Rainy Days</b>	23	19	19	16	4	3	2	0	2	8	15	26
<b>Max.</b>	96	111	38	61	21	15	2	0	2	44	36	116
<b>Average</b>	23	12	7	5	1	1	0	0	0	2	6	30

<b>Annual</b> :	2652	<b>No.</b> :	137	<b>Max.</b> :	116	<b>Ave.</b> :	7
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	175	70	17	3	24	0	0	0	0	1	10	90
2	102	17	46	108	1	0	3	0	0	46	8	90
3	265	66	64	5	0	0	0	0	2	7	2	55
4	68	168	38	4	0	1	0	0	2	1	94	206
5	23	13	22	23	5	17	0	0	0	0	43	328
6	92	7	31	11	0	0	0	0	0	6	21	151

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	542	153	127	116	25	0	3	0	2	54	20	235
<b>2nd</b>	183	188	91	38	5	18	0	0	2	7	158	685



**Table Daily Rainfall**

Station : **Bili-Bili (Telemetric)**  
 Year : **2004**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	33	0	8	0	2	0						
2	55	29	0	15	3	0						
3	1	35	2	0	0	0						
4	0	40	25	1	1	0						
5	4	18	0	1	0	0						
6	10	10	2	2	0	4						
7	0	38	0	15	0	0						
8	0	21	1	0	7	1						
9	0	1	79	0	37							
10	0	2	1	0	0							
11	0	31	3	0	1							
12	0	40	35	0	0							
13	3	19	26	0	0							
14	5	1	16	0	0							
15	0	37	22	0	0							
16	0		19	26	0							
17	7	0	7	0	0							
18	18	6	34	0	0							
19	2	0	0	0	0							
20	42	0	0	0	0							
21	0	33	0	37	0							
22	3	17	0	2	0							
23	0	0	5	0	1							
24	0	31	17	2	0							
25	26	22	0	0	0							
26	22	1	0	0	0							
27	14	3	6	0	0							
28	15	0	0	0	0							
29	0	0	54	0	13							
30	15		1	2	12							
31	0		0		0							

<b>Monthly</b>	275	435	363	103	77	5	0	0	0	0	0	0
<b>Rainy Days</b>	17	21	20	10	9	2	0	0	0	0	0	0
<b>Max.</b>	55	40	79	37	37	4	0	0	0	0	0	0
<b>Average</b>	9	16	12	3	2	1	0	0	0	0	0	0

<b>Annual</b> :	1258	<b>No.</b> :	79	<b>Max.</b> :	79	<b>Ave.</b> :	4
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	93	122	35	17	6	0	0	0	0	0	0	0
2	10	72	83	17	44	5	0	0	0	0	0	0
3	8	128	102	0	1	0	0	0	0	0	0	0
4	69	6	60	26	0	0	0	0	0	0	0	0
5	29	103	22	41	1	0	0	0	0	0	0	0
6	66	4	61	2	25	0	0	0	0	0	0	0

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	111	322	220	34	51	5	0	0	0	0	0	0
<b>2nd</b>	164	113	143	69	26	0	0	0	0	0	0	0

**Table Daily Rainfall**

Station : **Bili-Bili**  
 Year : **1972**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	178	0	0	0	0	0	0	0	0	0	0	17
2	44	0	0	0	0	0	0	0	0	0	22	12
3	98	0	31	0	0	0	0	0	0	0	3	0
4	0	0	0	0	0	0	0	0	0	0	0	6
5	92	0	0	0	0	0	0	0	0	0	0	0
6	137	0	40	0	0	0	0	0	0	0	0	0
7	49	0	45	0	8	0	0	0	0	0	0	5
8	38	0	23	0	0	0	0	0	0	0	0	0
9	70	0	70	0	15	0	0	0	0	0	9	0
10	196	0	11	0	0	0	0	0	0	0	0	19
11	25	0	0	0	0	0	0	0	0	0	3	8
12	0	34	81	0	0	0	0	0	0	0	0	0
13	147	0	54	0	0	0	0	0	0	0	0	33
14	10	0	5	0	0	0	0	0	0	0	0	23
15	39	164	22	0	0	0	0	0	0	0	0	0
16	32	249	93	0	0	0	0	0	0	0	0	0
17	0	23	17	0	0	0	0	0	0	0	0	0
18	0	120	82	88	0	0	0	6	0	0	0	0
19	0	38	0	0	0	0	0	0	0	0	55	0
20	0	0	0	9	0	0	0	0	0	0	25	0
21	0	34	0	0	0	0	0	0	0	0	19	0
22	0	0	0	55	0	0	0	0	0	0	0	0
23	0	69	0	0	0	0	0	0	0	0	0	0
24	18	0	0	0	0	0	0	0	0	0	0	36
25	0	0	0	0	0	0	0	0	0	0	0	74
26	0	7	0	0	0	0	0	0	0	0	7	62
27	0	0	0	0	0	0	0	0	0	0	6	0
28	0	69	0	0	0	0	0	0	0	0	4	0
29	2	0	0	0	0	0	0	0	0	0	44	8
30	0	0	20	0	0	0	0	0	0	0	7	0
31	0	0	0	0	0	0	0	0	0	0	0	9

<b>Monthly</b>	1175	807	594	152	23	0	0	6	0	0	204	312
<b>Rainy Days</b>	16	10	14	3	2	0	0	1	0	0	12	13
<b>Max.</b>	196	249	93	88	15	0	0	6	0	0	55	74
<b>Average</b>	38	28	19	5	1	0	0	0	0	0	7	10

<b>Annual</b> :	3273	<b>No.</b> :	71	<b>Max.</b> :	249	<b>Ave.</b> :	9
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<b>5-day rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	412	0	31	0	0	0	0	0	0	0	25	35
2	490	0	189	0	23	0	0	0	0	0	9	24
3	221	198	162	0	0	0	0	0	0	0	3	64
4	32	430	192	97	0	0	0	6	0	0	80	0
5	18	103	0	55	0	0	0	0	0	0	19	110
6	2	76	20	0	0	0	0	0	0	0	68	79

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	1123	198	382	0	23	0	0	0	0	0	37	123
<b>2nd</b>	52	609	212	152	0	0	0	6	0	0	167	189

**Table Daily Rainfall**

Station : **Bili-Bili**  
 Year : **1973**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	12	0	43	0	15	0	18	0	0	76	0	23
2	5	0	29	4	0	0	0	0	0	0	38	0
3	0	0	0	121	0	0	0	0	0	0	20	0
4	0	0	0	0	0	0	10	0	0	0	37	0
5	34	0	0	11	5	8	0	0	0	0	53	16
6	0	0	31	51	3	0	57	0	0	0	0	0
7	0	0	0	33	62	11	73	0	0	0	0	0
8	4	41	29	13	20	0	0	0	0	0	0	0
9	92	0	8	11	3	3	0	0	10	0	0	23
10	0	5	0	77	0	0	10	15	13	0	15	25
11	0	54	0	33	0	3	0	0	61	0	0	0
12	0	3	0	0	0	0	0	0	10	0	4	0
13	0	0	0	0	0	0	0	0	0	0	0	20
14	0	0	22	4	5	0	0	0	0	0	7	0
15	25	16	105	0	0	0	0	0	0	0	0	0
16	18	16	34	13	0	0	0	0	17	0	0	0
17	22	0	20	0	0	0	0	0	82	0	0	0
18	12	0	23	0	0	0	0	0	0	9	0	6
19	0	0	0	9	3	0	0	0	144	0	0	5
20	4	0	0	123	0	0	0	0	8	0	0	0
21	0	0	0	0	0	0	0	11	0	7	150	42
22	12	0	0	84	0	5	0	0	0	0	88	37
23	91	0	0	112	39	0	0	0	7	0	136	8
24	68	0	23	0	24	0	0	0	16	0	0	14
25	43	0	23	0	0	0	0	0	3	0	16	42
26	0	0	0	0	0	0	0	0	0	0	20	271
27	12	0	0	0	9	0	0	0	0	0	45	8
28	39	0	0	0	0	0	0	0	0	9	0	16
29	12		0	0	0	0	0	0	0	7	22	39
30	0		17	0	5	0	0	0	0	0	121	22
31	0		0		0		0	0		18		116

<b>Monthly</b>	505	135	407	699	193	30	168	26	371	126	772	733
<b>Rainy Days</b>	17	6	13	15	12	5	5	2	11	6	15	18
<b>Max.</b>	92	54	105	123	62	11	73	15	144	76	150	271
<b>Average</b>	16	5	13	23	6	1	5	1	12	4	26	24

<b>Annual</b> :	4165	<b>No.</b> :	125	<b>Max.</b> :	271	<b>Ave.</b> :	11
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<b>5-day rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	51	0	72	136	20	8	28	0	0	76	148	39
2	96	46	68	185	88	14	140	15	0	0	15	48
3	25	73	127	37	5	3	0	0	94	0	11	20
4	56	16	77	145	3	0	0	0	99	9	0	11
5	214	0	46	196	63	5	0	11	178	7	390	143
6	63	0	17	0	14	0	0	0	0	34	208	472

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	172	119	267	358	113	25	168	15	94	76	174	107
<b>2nd</b>	333	16	140	341	80	5	0	11	277	50	598	626

**Table Daily Rainfall**

Station : **Bili-Bili**  
 Year : **1974**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	16	0	54	4	0	12	0	0	0	0	6	8
2	47	0	194	0	0	0	0	0	0	0	0	0
3	0	0	54	0	0	0	0	0	0	0	0	0
4	86	21	8	0	9	0	0	0	0	7	0	0
5	43	0	23	13	0	0	0	0	0	0	0	0
6	68	8	0	0	0	0	0	0	0	29	0	0
7	12	0	29	0	0	0	0	0	0	97	0	0
8	0	0	116	0	0	0	0	0	17	99	0	0
9	0	25	0	7	0	0	42	0	29	0	0	14
10	6	8	0	77	23	0	0	0	46	27	51	0
11	18	23	8	0	0	0	0	0	0	0	0	6
12	6	0	5	11	3	0	0	0	25	0	26	70
13	0	123	9	0	0	0	0	0	0	7	15	147
14	0	93	39	9	0	0	0	0	0	5	20	39
15	0	44	93	77	0	0	0	0	0	0	0	39
16	0	23	109	0	23	2	0	0	0	81	0	8
17	5	71	47	4	0	0	0	0	0	4	0	6
18	0	56	29	59	0	13	83	0	0	0	93	16
19	0	5	8	0	5	0	0	0	0	0	15	0
20	0	0	65	0	0	0	0	0	0	0	22	116
21	5	66	0	0	0	0	0	0	7	0	0	0
22	0	0	0	0	0	0	8	0	0	0	0	31
23	0	0	0	0	0	0	0	0	0	0	117	0
24	0	0	0	0	0	2	0	0	0	0	37	8
25	7	7	0	0	0	0	13	5	0	0	37	82
26	0	15	20	0	38	24	0	0	0	0	7	31
27	0	25	9	0	0	0	0	0	0	0	7	5
28	0	41	0	0	8	0	0	2	0	0	15	23
29	0		0	0	0	0	21	0	0	0	7	16
30	0		0	0	0	0	0	0	0	0	3	14
31	0		0		0		0	0		0		23

<b>Monthly</b>	319	654	919	261	109	53	167	7	124	356	478	702
<b>Rainy Days</b>	12	17	19	9	7	5	5	2	5	9	16	20
<b>Max.</b>	86	123	194	77	38	24	83	5	46	99	117	147
<b>Average</b>	10	23	30	9	4	2	5	0	4	11	16	23

<b>Annual</b> :	4149	<b>No.</b> :	126	<b>Max.</b> :	194	<b>Ave.</b> :	11
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<b>5-day rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	192	21	333	17	9	12	0	0	0	7	6	8
2	86	41	145	84	23	0	42	0	92	252	51	14
3	24	283	154	97	3	0	0	0	25	12	61	301
4	5	155	258	63	28	15	83	0	0	85	130	146
5	12	73	0	0	0	2	21	5	7	0	191	121
6	0	81	29	0	46	24	21	2	0	0	39	112

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	302	345	632	198	35	12	42	0	117	271	118	323
<b>2nd</b>	17	309	287	63	74	41	125	7	7	85	360	379

**Table Daily Rainfall**

Station : Intake Bili-Bili  
 Year : 1975

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	30	0	0	0	0	0	0	0	0	0	11	0
2	0	0	12	0	0	0	0	0	20	0	24	15
3	0	0	0	0	11	2	0	0	0	0	0	0
4	0	21	0	0	0	0	0	0	0	0	0	3
5	0	0	43	4	18	0	0	0	26	0	0	68
6	0	28	110	7	29	0	0	0	0	0	3	71
7	0	0	45	7	0	5	0	0	0	0	6	0
8	0	0	17	0	0	0	0	5	0	0	18	0
9	0	25	9	0	32	0	0	0	0	0	0	17
10	0	41	0	0	0	0	0	0	0	0	0	0
11	73	52	0	2	0	0	5	5	0	0	29	113
12	0	82	0	22	0	0	0	6	0	0	39	39
13	48	39	3	26	6	0	0	0	0	0	0	0
14	37	5	6	0	8	15	0	0	0	0	25	36
15	30	0	40	20	0	0	0	0	0	0	50	46
16	39	66	28	11	0	0	0	0	7	0	0	22
17	0	26	0	20	0	3	8	0	0	0	74	22
18	0	41	34	134	0	0	21	0	0	0	23	12
19	0	0	0	4	9	0	0	0	0	0	56	6
20	16	0	6	0	29	0	0	0	0	0	0	0
21	0	0	37	264	0	0	0	0	0	0	15	0
22	0	0	0	0	0	0	65	0	0	0	0	0
23	0	0	37	0	0	0	0	0	17	0	45	20
24	15	5	9	129	0	0	0	0	0	0	63	12
25	95	92	0	0	0	0	78	0	0	0	49	0
26	0	26	8	0	0	0	0	0	3	0	0	0
27	12	16	3	0	0	0	26	0	18	4	0	0
28	21	0	0	66	0	0	0	0	0	0	0	38
29	0	0	11	21	0	0	0	0	0	48	36	24
30	0	0	0	0	9	0	10	0	0	0	50	9
31	0	0	23	0	0	0	0	0	0	0	0	20

<b>Monthly</b>	416	565	481	737	151	25	213	16	91	52	616	593
<b>Rainy Days</b>	11	15	19	15	9	4	7	3	6	2	18	19
<b>Max.</b>	95	92	110	264	32	15	78	6	26	48	74	113
<b>Average</b>	13	20	16	25	5	1	7	1	3	2	21	19

<b>Annual</b> :	3956	<b>No.</b> :	128	<b>Max.</b> :	264	<b>Ave.</b> :	11
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	30	21	55	4	29	2	0	0	46	0	35	86
2	0	94	181	14	61	5	0	5	0	0	27	88
3	188	178	49	70	14	15	5	11	0	0	143	234
4	55	133	68	169	38	3	29	0	7	0	153	62
5	110	97	83	393	0	0	143	0	17	0	172	32
6	33	42	45	87	9	0	36	0	21	52	86	91

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	218	293	285	88	104	22	5	16	46	0	205	408
<b>2nd</b>	198	272	196	649	47	3	208	0	45	52	411	185

**Table Daily Rainfall**

Station : Intake Bili-Bili  
 Year : 1976

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0	0	5	0	0	80	55	0	0	0	18
2	0	13	22	0	10	0	0	0	0	0	0	0
3	0	98	4	0	3	0	0	0	0	0	0	0
4	0	6	17	0	0	0	0	0	0	10	0	0
5	12	5	0	0	25	0	0	0	0	0	6	47
6	0	22	0	0	21	0	0	0	0	0	17	10
7	50	25	0	0	0	31	0	0	0	0	0	28
8	36	0	0	0	0	0	0	0	0	0	28	3
9	37	32	0	0	0	0	0	0	0	0	16	14
10	22	0	0	0	14	0	0	0	0	0	0	8
11	74	41	0	0	0	0	0	0	0	0	20	0
12	160	17	55	0	0	0	0	0	0	0	3	4
13	70	12	0	0	0	0	0	0	0	0	0	0
14	59	32	3	13	0	0	0	0	0	0	0	80
15	56	0	11	0	0	0	0	0	0	0	7	48
16	54	0	36	0	0	0	0	0	0	0	5	28
17	18	0	27	0	0	0	0	0	0	0	18	0
18	19	13	13	0	0	3	0	0	0	5	3	0
19	0	10	41	0	0	12	0	0	0	0	17	29
20	0	0	31	0	0	0	0	0	0	0	8	0
21	0	39	49	0	0	0	0	0	0	0	0	0
22	14	22	0	0	0	0	0	0	0	19	0	48
23	0	14	47	0	0	0	0	0	0	20	26	0
24	31	46	0	0	0	0	0	0	0	0	9	0
25	5	25	0	0	0	0	0	0	0	0	5	0
26	7	24	0	6	0	0	0	0	0	21	0	0
27	22	0	0	0	0	0	0	0	0	10	0	0
28	0	0	12	25	0	0	0	0	0	48	53	22
29	0	0	5	0	0	23	0	0	0	25	0	4
30	0	0	0	0	0	9	0	0	0	7	23	0
31	0	0	17	0	0	0	0	0	0	23	0	10

<b>Monthly</b>	746	496	390	49	73	78	80	55	0	188	264	401
<b>Rainy Days</b>	18	19	16	4	5	5	1	1	0	10	17	16
<b>Max.</b>	160	98	55	25	25	31	80	55	0	48	53	80
<b>Average</b>	24	17	13	2	2	3	3	2	0	6	9	13

<b>Annual</b> :	2820	<b>No.</b> :	112	<b>Max.</b> :	160	<b>Ave.</b> :	8
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	12	122	43	5	38	0	80	55	0	10	6	65
2	145	79	0	0	35	31	0	0	0	0	61	63
3	419	102	69	13	0	0	0	0	0	0	30	132
4	91	23	148	0	0	15	0	0	0	5	51	57
5	50	146	96	0	0	0	0	0	0	39	40	48
6	29	24	34	31	0	32	0	0	0	134	76	36

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	576	303	112	18	73	31	80	55	0	10	97	260
<b>2nd</b>	170	193	278	31	0	47	0	0	0	178	167	141

**Table Daily Rainfall**

Station : Intake Bili-Bili  
 Year : 1977

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	38	6	7	0	0	0	0	0	0	0	53
2	35	18	6	4	0	0	0	0	0	0	0	61
3	5	0	0	38	0	0	0	0	0	0	0	0
4	64	0	0	0	0	0	0	0	0	0	0	0
5	16	73	11	0	0	0	0	4	0	0	0	62
6	20	35	0	3	36	0	0	0	0	0	0	0
7	74	25	99	15	0	0	0	0	0	0	0	0
8	31	11	20	0	0	0	0	0	0	0	0	0
9	71	34	14	111	0	10	0	0	0	0	0	43
10	25	174	0	50	0	0	0	0	0	0	0	50
11	49	38	0	112	0	0	0	0	0	0	0	0
12	31	28	0	3	0	0	0	0	0	0	0	0
13	10	94	0	8	0	14	0	20	0	0	0	3
14	0	11	26	0	0	44	0	0	0	0	0	16
15	34	213	12	0	0	0	0	0	0	0	0	24
16	0	70	13	0	0	0	0	0	0	0	8	14
17	0	97	0	33	0	0	0	0	0	0	0	14
18	36	94	38	0	0	13	0	0	0	0	0	0
19	97	20	0	0	0	0	0	0	0	0	0	84
20	24	27	47	0	0	0	0	0	0	0	14	0
21	23	7	3	0	0	0	0	0	0	0	4	0
22	75	21	0	0	0	0	0	0	0	0	54	22
23	46	123	11	0	0	0	0	0	0	0	31	25
24	235	54	0	0	0	0	0	0	0	0	74	16
25	169	69	0	0	0	0	0	0	0	0	0	10
26	7	72	9	0	0	0	0	0	0	0	0	0
27	0	31	0	0	0	0	0	0	0	0	0	0
28	0	50	0	0	0	0	0	0	0	0	7	25
29	0		55	58	0	0	0	0	0	0	62	0
30	0		4	0	0	0	0	0	0	0	4	8
31	0		0		0		0	0		0		10

<b>Monthly</b>	1177	1527	374	442	36	81	0	24	0	0	258	540
<b>Rainy Days</b>	22	26	16	12	1	4	0	2	0	0	9	18
<b>Max.</b>	235	213	99	112	36	44	0	20	0	0	74	84
<b>Average</b>	38	55	12	15	1	3	0	1	0	0	9	17

<b>Annual</b> :	4459	<b>No.</b> :	110	<b>Max.</b> :	235	<b>Ave.</b> :	12
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	120	129	23	49	0	0	0	4	0	0	0	176
2	221	279	133	179	36	10	0	0	0	0	0	93
3	124	384	38	123	0	58	0	20	0	0	0	43
4	157	308	98	33	0	13	0	0	0	0	22	112
5	548	274	14	0	0	0	0	0	0	0	163	73
6	7	153	68	58	0	0	0	0	0	0	73	43

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	465	792	194	351	36	68	0	24	0	0	0	312
<b>2nd</b>	712	735	180	91	0	13	0	0	0	0	258	228

**Table Daily Rainfall**

Station : Intake Bili-Bili  
 Year : 1978

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	43	0	7	11	0	3	0	6	8	0	0	30
2	44	10	0	0	0	0	0	3	0	24	0	3
3	25	106	0	0	17	0	58	0	53	0	31	15
4	7	15	0	0	0	0	0	0	0	4	0	10
5	0	20	0	62	0	0	16	0	0	14	0	17
6	9	79	0	9	5	0	148	0	0	0	0	22
7	13	8	40	9	0	0	0	0	28	0	0	4
8	0	59	14	30	0	0	0	0	0	0	0	0
9	12	0	33	0	0	0	0	0	0	0	0	0
10	49	0	34	0	0	29	13	0	0	0	0	18
11	107	7	36	0	0	0	0	13	0	0	42	0
12	69	28	25	0	42	0	0	0	0	0	33	10
13	31	30	0	0	0	0	20	5	18	0	0	3
14	0	0	0	0	10	0	23	0	0	0	0	10
15	2	3	0	0	42	0	0	9	0	0	0	87
16	0	0	6	0	92	0	0	0	0	0	22	0
17	0	0	0	0	80	0	0	0	0	0	9	7
18	0	23	0	0	0	0	0	16	21	25	0	7
19	42	32	0	0	0	0	0	0	19	0	18	41
20	8	39	7	0	0	36	0	0	3	44	29	0
21	4	39	0	0	0	0	0	0	61	0	12	9
22	48	32	0	0	0	0	0	0	0	0	31	79
23	24	17	20	0	0	0	0	0	0	0	14	7
24	8	0	62	13	3	0	0	0	0	4	22	36
25	15	11	18	0	0	0	0	0	0	8	3	114
26	50	0	0	0	0	6	0	0	0	0	49	9
27	0	23	13	0	24	16	0	0	0	0	0	10
28	0	3	0	0	0	11	0	0	0	0	0	60
29	0		35	75	0	0	0	0	0	0	0	32
30	0		0	0	11	0	25	0	0	0	7	21
31	0		0		53		0	0		11		3

<b>Monthly</b>	610	584	350	209	379	101	303	52	211	134	322	664
<b>Rainy Days</b>	20	20	14	7	11	6	7	6	8	8	14	26
<b>Max.</b>	107	106	62	75	92	36	148	16	61	44	49	114
<b>Average</b>	20	21	11	7	12	3	10	2	7	4	11	21

<b>Annual</b> :	3919	<b>No.</b> :	147	<b>Max.</b> :	148	<b>Ave.</b> :	11
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	119	151	7	73	17	3	74	9	61	42	31	75
2	83	146	121	48	5	29	161	0	28	0	0	44
3	209	68	61	0	94	0	43	27	18	0	75	110
4	50	94	13	0	172	36	0	16	43	69	78	55
5	99	99	100	13	3	0	0	0	61	12	82	245
6	50	26	48	75	88	33	25	0	0	11	56	135

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	411	365	189	121	116	32	278	36	107	42	106	229
<b>2nd</b>	199	219	161	88	263	69	25	16	104	92	216	435



**Table Daily Rainfall**

Station : Intake Bili-Bili  
 Year : 1979

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	32	0	0	0	8	0	0	0	0	0	72
2	25	211	0	0	0	0	0	0	0	0	0	0
3	9	5	0	0	0	0	0	0	0	0	0	129
4	0	0	16	0	80	0	0	0	0	0	0	7
5	4	47	0	0	0	16	0	0	0	0	0	3
6	28	14	7	25	0	78	0	0	0	0	0	14
7	85	0	43	21	0	0	0	0	0	0	0	19
8	105	0	55	25	13	0	0	0	0	0	0	63
9	111	0	85	0	0	0	0	0	0	0	0	73
10	85	0	0	0	0	0	0	0	0	0	0	12
11	113	0	5	0	6	0	0	0	0	0	0	0
12	107	0	56	0	6	0	0	0	0	0	0	0
13	15	8	47	0	24	0	0	0	0	0	60	0
14	0	0	0	0	0	0	0	0	0	0	7	0
15	25	0	14	0	0	0	0	0	0	0	0	0
16	56	0	0	0	0	0	0	0	0	0	0	0
17	18	0	0	0	0	0	0	0	0	0	0	0
18	0	18	0	0	0	0	0	0	0	0	7	38
19	0	0	0	0	0	0	0	0	0	0	0	0
20	0	39	0	0	0	0	0	0	0	0	0	33
21	4	57	19	0	0	6	0	0	7	0	0	60
22	25	0	55	0	0	14	0	0	0	0	9	19
23	18	0	0	67	0	0	0	0	0	0	0	64
24	0	44	0	0	0	0	0	0	0	0	4	56
25	0	18	0	0	0	0	0	0	0	0	15	0
26	25	57	7	78	0	0	0	0	0	0	4	0
27	10	41	40	20	0	0	0	0	0	0	34	44
28	0	85	4	0	5	0	0	0	0	0	53	0
29	9		0	0	0	0	0	0	0	0	0	9
30	0		74	13	0	0	0	0	0	0	46	18
31	0		11		0		0	0		0		12

<b>Monthly</b>	877	676	538	249	134	122	0	0	7	0	239	745
<b>Rainy Days</b>	20	14	16	7	6	5	0	0	1	0	10	19
<b>Max.</b>	113	211	85	78	80	78	0	0	7	0	60	129
<b>Average</b>	28	24	17	8	4	4	0	0	0	0	8	24

<b>Annual</b> :	3587	<b>No.</b> :	98	<b>Max.</b> :	211	<b>Ave.</b> :	10
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	38	295	16	0	80	24	0	0	0	0	0	211
2	414	14	190	71	13	78	0	0	0	0	0	181
3	260	8	122	0	36	0	0	0	0	0	67	0
4	74	57	0	0	0	0	0	0	0	0	7	71
5	47	119	74	67	0	20	0	0	7	0	28	199
6	44	183	136	111	5	0	0	0	0	0	137	83

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	712	317	328	71	129	102	0	0	0	0	67	392
<b>2nd</b>	165	359	210	178	5	20	0	0	7	0	172	353

**Table Daily Rainfall**

Station : Intake Bili-Bili  
 Year : 1980

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0	7	0	0	0	0	0	0	0	0	0
2	16	0	0	0	0	0	0	0	0	0	0	16
3	6	29	0	0	0	0	0	0	0	0	0	10
4	18	42	0	0	11	0	0	0	0	0	0	0
5	3	0	0	0	18	0	0	0	0	0	35	80
6	49	15	0	0	0	0	0	0	0	0	3	16
7	44	90	0	49	0	0	0	15	0	0	19	23
8	50	25	53	24	0	0	0	0	0	0	3	19
9	67	0	3	0	0	0	0	0	0	0	16	0
10	66	9	22	14	0	0	0	0	0	0	13	0
11	58	15	0	12	0	0	0	0	0	0	17	11
12	0	10	0	0	0	0	0	0	0	0	40	61
13	31	108	6	0	0	0	0	0	0	0	0	58
14	0	64	46	0	0	0	0	0	0	0	0	87
15	22	53	78	4	0	0	0	0	0	0	0	36
16	29	20	7	38	0	0	0	0	0	0	0	0
17	19	41	0	0	0	0	0	0	0	0	5	0
18	14	21	33	65	0	0	0	0	0	0	0	10
19	42	13	15	0	0	0	0	0	0	0	0	8
20	75	0	16	18	0	0	0	0	0	0	67	3
21	99	4	42	0	0	0	0	0	0	7	0	23
22	8	0	0	0	0	0	0	0	0	0	0	32
23	30	61	0	15	0	0	0	0	0	0	35	8
24	0	17	0	0	16	0	0	0	0	0	15	61
25	0	22	21	14	15	0	0	0	0	0	44	78
26	0	0	0	19	0	0	0	0	0	0	7	0
27	0	0	0	17	0	0	0	0	0	0	25	0
28	0	0	0	22	0	0	0	0	0	6	0	21
29	8	44	0	4	4	0	0	0	0	0	0	0
30	0		0	10	6	0	0	0	0	0	40	49
31	0		20		0		0	0		0		80

<b>Monthly</b>	754	703	369	325	70	0	0	15	0	13	384	790
<b>Rainy Days</b>	21	20	14	15	6	0	0	1	0	2	16	22
<b>Max.</b>	99	108	78	65	18	0	0	15	0	7	67	87
<b>Average</b>	24	24	12	11	2	0	0	0	0	0	13	25

<b>Annual</b> :	3423	<b>No.</b> :	117	<b>Max.</b> :	108	<b>Ave.</b> :	9
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	43	71	7	0	29	0	0	0	0	0	35	106
2	276	139	78	87	0	0	0	15	0	0	54	58
3	111	250	130	16	0	0	0	0	0	0	57	253
4	179	95	71	121	0	0	0	0	0	0	72	21
5	137	104	63	29	31	0	0	0	0	7	94	202
6	8	44	20	72	10	0	0	0	0	6	72	150

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	430	460	215	103	29	0	0	15	0	0	146	417
<b>2nd</b>	324	243	154	222	41	0	0	0	0	13	238	373

**Table Daily Rainfall**

Station : Intake Bili-Bili  
 Year : 1981

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	5	0	17	109	0	0	17	0	0	9	0	18
2	8	8	55	0	14	0	13	0	0	0	0	6
3	8	7	0	0	0	0	0	0	0	0	0	0
4	15	0	0	50	9	0	0	0	0	0	4	0
5	0	0	0	0	0	0	24	0	0	0	7	68
6	0	0	3	0	0	0	11	0	35	0	85	55
7	80	36	0	0	0	0	5	0	0	7	17	25
8	45	58	0	12	19	0	15	0	0	43	0	19
9	7	33	0	0	0	0	0	0	43	0	8	56
10	5	28	0	63	0	0	0	0	0	0	0	74
11	68	57	0	0	13	8	0	0	0	0	0	68
12	32	3	0	0	0	0	4	0	0	0	8	0
13	0	42	7	0	4	0	28	0	0	0	5	25
14	0	0	0	0	0	0	0	0	0	0	0	6
15	0	0	0	4	28	0	0	0	0	0	8	0
16	0	29	0	0	6	0	15	0	0	0	0	23
17	46	11	19	0	0	0	0	0	0	0	19	19
18	50	0	0	0	0	0	0	0	0	0	27	0
19	15	0	0	0	0	50	0	0	0	0	28	35
20	4	0	9	0	0	0	0	0	0	0	0	11
21	8	0	9	0	0	0	0	0	0	0	0	0
22	0	0	8	0	0	0	12	0	0	0	0	39
23	25	14	6	16	0	0	0	0	0	62	0	0
24	0	0	0	0	0	0	0	0	0	0	41	118
25	19	0	42	0	0	23	0	0	0	0	22	0
26	8	0	16	0	0	7	0	0	0	0	4	35
27	0	50	25	0	7	0	0	0	0	0	9	37
28	100	14	16	0	4	0	0	0	0	0	50	23
29	25		18	0	0	0	0	0	0	0	18	43
30	14		18	8	0	0	0	0	84	0	0	13
31	0		8		0		0	0		0		8

<b>Monthly</b>	587	390	276	262	104	88	144	0	162	121	360	824
<b>Rainy Days</b>	21	14	16	7	9	4	10	0	3	4	17	23
<b>Max.</b>	100	58	55	109	28	50	28	0	84	62	85	118
<b>Average</b>	19	14	9	9	3	3	5	0	5	4	12	27

<b>Annual</b> :	3318	<b>No.</b> :	128	<b>Max.</b> :	118	<b>Ave.</b> :	9
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	36	15	72	159	23	0	54	0	0	9	11	92
2	137	155	3	75	19	0	31	0	78	50	110	229
3	100	102	7	4	45	8	32	0	0	0	21	99
4	115	40	28	0	6	50	15	0	0	0	74	88
5	52	14	65	16	0	23	12	0	0	62	63	157
6	147	64	101	8	11	7	0	0	84	0	81	159

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	273	272	82	238	87	8	117	0	78	59	142	420
<b>2nd</b>	314	118	194	24	17	80	27	0	84	62	218	404

**Table Daily Rainfall**

Station : Intake Bili-Bili  
 Year : 1982

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	11	4	0	0	23	0	0	0	0	0	14	0
2	0	3	7	0	0	0	0	0	0	0	0	0
3	0	9	44	22	94	0	0	0	0	0	0	0
4	7	0	11	0	0	0	0	0	0	0	0	0
5	0	28	9	0	0	0	0	0	0	0	0	0
6	0	11	15	0	0	0	0	0	0	0	0	0
7	9	111	0	0	0	0	0	0	0	0	0	0
8	0	63	0	0	0	0	0	0	0	0	4	12
9	0	0	62	0	0	0	0	0	0	0	0	0
10	82	3	10	32	0	0	0	0	0	0	0	0
11	56	37	0	0	0	0	0	0	0	0	0	0
12	42	43	12	0	0	0	0	0	0	0	0	0
13	38	56	0	0	0	0	0	0	0	0	0	38
14	13	79	12	17	0	0	0	0	0	0	0	25
15	12	36	6	0	0	0	0	0	0	0	0	0
16	40	6	5	0	0	0	0	0	0	0	0	58
17	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	48	0	0	0	0	0	0	0	17
19	0	0	31	13	0	0	0	0	0	0	0	0
20	0	0	66	0	0	0	0	0	0	0	0	18
21	0	32	0	0	0	0	0	0	0	0	0	0
22	5	4	12	59	0	0	0	0	0	0	0	15
23	19	0	0	0	0	0	0	0	0	0	0	4
24	0	5	10	28	0	0	0	0	0	0	0	0
25	0	0	0	25	0	0	0	5	0	0	0	28
26	33	0	19	0	0	0	0	7	0	0	0	29
27	49	0	0	16	0	0	0	0	0	0	0	88
28	58	0	0	53	0	0	0	0	0	0	0	13
29	45		0	15	0	0	0	0	0	0	16	17
30	4		38	0	0	0	0	0	0	0	0	147
31	43		5		0		0	0		0		115

<b>Monthly</b>	566	530	374	328	117	0	0	12	0	0	34	624
<b>Rainy Days</b>	18	17	18	11	2	0	0	2	0	0	3	15
<b>Max.</b>	82	111	66	59	94	0	0	7	0	0	16	147
<b>Average</b>	18	19	12	11	4	0	0	0	0	0	1	20

<b>Annual</b> :	2585	<b>No.</b> :	86	<b>Max.</b> :	147	<b>Ave.</b> :	7
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	18	44	71	22	117	0	0	0	0	0	14	0
2	91	188	87	32	0	0	0	0	0	0	4	12
3	161	251	30	17	0	0	0	0	0	0	0	63
4	40	6	102	61	0	0	0	0	0	0	0	93
5	24	41	22	112	0	0	0	5	0	0	0	47
6	232	0	62	84	0	0	0	7	0	0	16	409

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	270	483	188	71	117	0	0	0	0	0	18	75
<b>2nd</b>	296	47	186	257	0	0	0	12	0	0	16	549

**Table Daily Rainfall**

Station : Intake Bili-Bili  
 Year : 1983

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	4	0	0	0	8	0	14	0	0	0	0	28
2	0	0	0	9	28	0	0	0	0	0	0	54
3	0	60	0	0	35	0	0	0	0	0	0	0
4	43	0	0	0	0	3	0	0	0	4	0	82
5	10	0	0	0	0	0	0	0	0	10	0	0
6	0	0	0	0	0	0	44	0	0	0	0	0
7	13	0	0	55	0	0	0	0	0	0	19	0
8	0	0	4	11	13	0	0	0	0	0	0	0
9	0	0	10	0	0	8	0	0	0	0	0	0
10	0	0	0	0	18	9	0	0	0	0	16	0
11	0	16	0	0	8	0	0	0	0	0	0	0
12	25	0	0	8	0	0	0	0	0	0	0	36
13	7	0	0	38	15	0	0	0	0	28	19	45
14	11	18	0	0	6	0	0	0	0	0	0	0
15	8	6	0	0	7	0	0	0	0	0	0	25
16	15	8	0	20	0	0	0	0	0	0	0	0
17	30	0	14	0	0	0	6	0	0	22	16	0
18	0	7	0	15	5	0	0	0	0	0	0	0
19	0	0	0	8	0	0	0	0	0	21	5	0
20	0	0	0	55	0	0	0	0	0	0	0	0
21	0	0	14	23	0	14	0	0	0	0	6	25
22	0	0	38	34	0	9	0	0	0	0	7	13
23	0	30	36	3	5	0	0	0	0	0	14	0
24	0	0	0	130	0	0	0	0	0	0	0	0
25	0	0	8	4	0	0	0	0	0	0	163	68
26	29	15	0	0	0	7	0	0	28	0	49	33
27	12	0	23	28	0	9	0	0	0	0	19	41
28	0	0	53	0	14	0	23	0	0	20	0	0
29	0		0	0	0	7	0	0	0	9	43	0
30	38		54	0	18	0	0	0	0	0	69	206
31	0		11		4		0	0		0		37

<b>Monthly</b>	245	160	265	441	184	66	87	0	28	114	445	693
<b>Rainy Days</b>	13	8	11	15	14	8	4	0	1	7	13	13
<b>Max.</b>	43	60	54	130	35	14	44	0	28	28	163	206
<b>Average</b>	8	6	9	15	6	2	3	0	1	4	15	22

<b>Annual</b>	: 2728	<b>No.</b>	: 107	<b>Max.</b>	: 206	<b>Ave.</b>	: 7
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	57	60	0	9	71	3	14	0	0	14	0	164
2	13	0	14	66	31	17	44	0	0	0	35	0
3	51	40	0	46	36	0	0	0	0	28	19	106
4	45	15	14	98	5	0	6	0	0	43	21	0
5	0	30	96	194	5	23	0	0	0	0	190	106
6	79	15	141	28	36	23	23	0	28	29	180	317

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	121	100	14	121	138	20	58	0	0	42	54	270
<b>2nd</b>	124	60	251	320	46	46	29	0	28	72	391	423

**Table Daily Rainfall**

Station : Intake Bili-Bili  
 Year : 1984

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	68	11	89	0	0	0	0	0	0	32	0	37
2	36	12	3	39	14	0	0	0	0	0	0	9
3	0	0	0	28	0	0	0	0	7	18	0	0
4	37	44	72	5	0	0	0	0	7	30	0	0
5	17	43	0	50	0	0	0	0	0	3	0	0
6	0	0	0	29	35	9	0	0	38	0	0	0
7	0	0	0	18	0	0	0	0	36	0	0	0
8	0	60	0	3	75	0	0	0	0	0	0	4
9	37	83	129	0	3	0	0	0	28	0	25	0
10	0	14	18	0	75	38	0	0	0	0	44	5
11	0	0	123	0	8	0	0	0	7	0	3	13
12	18	8	3	50	11	0	0	0	0	0	0	38
13	9	36	78	0	0	0	0	0	21	0	0	0
14	12	0	18	35	23	0	0	0	0	0	5	54
15	5	11	0	32	6	0	0	0	0	0	0	23
16	0	64	0	33	0	0	0	0	0	30	0	70
17	12	92	0	18	42	13	0	0	0	0	0	71
18	64	14	0	79	20	0	0	0	0	0	0	0
19	43	31	6	0	0	13	0	0	0	0	0	31
20	7	0	20	0	0	0	0	0	0	0	0	56
21	0	38	16	9	0	0	0	0	0	17	0	0
22	0	0	4	0	0	0	0	0	0	0	50	0
23	48	0	33	0	0	0	0	0	0	0	15	21
24	0	27	0	21	0	8	0	0	0	0	16	0
25	0	32	0	25	0	0	0	0	0	0	0	0
26	18	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	20	6
28	23	0	0	0	0	0	0	0	0	0	47	24
29	123	0	0	25	0	5	0	0	0	0	15	0
30	28	0	0	18	0	5	0	0	0	0	14	95
31	28	0	0	0	0	0	0	0	0	18	0	0

<b>Monthly</b>	633	620	612	517	312	91	0	0	144	148	254	557
<b>Rainy Days</b>	19	17	14	18	11	7	0	0	7	7	11	16
<b>Max.</b>	123	92	129	79	75	38	0	0	38	32	50	95
<b>Average</b>	20	21	20	17	10	3	0	0	5	5	8	18

<b>Annual</b> :	3888	<b>No.</b> :	127	<b>Max.</b> :	129	<b>Ave.</b> :	11
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	158	110	164	122	14	0	0	0	14	83	0	46
2	37	157	147	50	188	47	0	0	102	0	69	9
3	44	55	222	117	48	0	0	0	28	0	8	128
4	126	201	26	130	62	26	0	0	0	30	0	228
5	48	97	53	55	0	8	0	0	0	17	81	21
6	220	0	0	43	0	10	0	0	0	18	96	125

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	239	322	533	289	250	47	0	0	144	83	77	183
<b>2nd</b>	394	298	79	228	62	44	0	0	0	65	177	374

**Table Daily Rainfall**

Station : Intake Bili-Bili  
 Year : 1985

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0	66	0	0	43	0	0	0	0	0	19
2	0	14	0	36	0	0	0	0	0	0	0	0
3	0	0	3	81	0	0	0	0	0	0	0	0
4	15	30	77	0	0	0	0	0	0	0	0	0
5	10	0	45	22	0	10	0	0	0	0	0	43
6	39	0	111	0	0	0	0	0	0	0	0	0
7	0	0	61	0	0	33	0	0	0	0	0	0
8	0	62	46	0	0	0	0	0	0	0	38	0
9	0	39	23	0	0	0	0	0	0	0	20	22
10	0	0	35	0	0	20	0	0	0	0	15	27
11	16	0	0	0	0	0	25	0	0	0	0	0
12	0	28	0	0	0	0	0	0	0	0	0	57
13	0	43	10	90	0	0	25	0	0	0	25	0
14	0	15	0	0	0	0	0	0	0	0	0	0
15	0	86	0	0	27	0	0	0	0	0	0	0
16	0	19	0	8	0	0	0	0	0	0	0	0
17	28	0	0	0	24	0	0	0	0	0	20	50
18	7	6	0	0	0	0	12	0	0	0	15	0
19	25	0	0	0	0	0	0	0	0	0	0	0
20	30	0	0	0	0	0	0	0	0	0	10	0
21	0	0	0	0	0	0	0	0	0	0	70	17
22	23	0	0	0	0	0	0	0	0	0	0	15
23	0	0	0	0	0	0	8	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	3
25	0	0	0	25	0	0	0	0	0	13	131	8
26	90	0	0	0	38	0	0	0	0	18	18	9
27	0	0	0	71	16	0	0	0	0	0	0	11
28	0	62	0	28	0	0	0	0	0	5	0	0
29	0	0	0	44	0	0	0	0	0	23	45	15
30	20	0	0	0	0	0	0	0	0	10	0	57
31	12	0	0	0	0	0	0	0	0	33	0	0

<b>Monthly</b>	315	404	477	405	105	106	70	0	0	102	407	353
<b>Rainy Days</b>	12	11	10	9	4	4	4	0	0	6	11	14
<b>Max.</b>	90	86	111	90	38	43	25	0	0	33	131	57
<b>Average</b>	10	14	15	14	3	4	2	0	0	3	14	11

<b>Annual</b>	: 2744	<b>No.</b>	: 85	<b>Max.</b>	: 131	<b>Ave.</b>	: 8
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	25	44	191	139	0	53	0	0	0	0	0	62
2	39	101	276	0	0	53	0	0	0	0	73	49
3	16	172	10	90	27	0	50	0	0	0	25	57
4	90	25	0	8	24	0	12	0	0	0	45	50
5	23	0	0	25	0	0	8	0	0	13	201	43
6	122	62	0	143	54	0	0	0	0	89	63	92

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	80	317	477	229	27	106	50	0	0	0	98	168
<b>2nd</b>	235	87	0	176	78	0	20	0	0	102	309	185

**Table Daily Rainfall**

Station : Intake Bili-Bili  
 Year : 1986

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0	0	0	0	0	0	0	0	0	0	22
2	0	0	0	1	0	0	0	0	0	0	0	0
3	181	0	22	0	0	0	0	0	0	0	0	0
4	24	0	37	0	0	0	0	0	0	23	15	0
5	0	0	0	0	30	0	0	0	0	0	28	0
6	58	0	0	14	0	0	0	0	0	47	0	18
7	0	15	25	48	8	0	0	0	0	0	0	0
8	10	19	0	6	19	51	0	0	0	0	34	20
9	14	0	0	0	0	0	0	0	0	0	61	32
10	4	33	45	2	0	0	0	0	0	0	0	0
11	103	9	22	30	0	0	0	0	0	0	21	18
12	116	21	13	0	17	0	0	0	0	18	0	0
13	161	0	0	14	0	0	0	0	0	0	0	0
14	91	0	0	7	0	0	0	0	0	10	0	63
15	96	0	34	14	0	0	0	0	0	0	0	25
16	0	0	0	0	0	0	0	0	0	0	0	62
17	16	34	0	21	0	0	0	0	0	35	0	0
18	20	0	0	0	0	0	215	0	0	0	0	0
19	31	21	48	0	0	0	0	0	0	0	25	0
20	8	0	0	0	0	0	0	0	0	0	0	22
21	0	0	0	11	0	0	0	0	0	0	0	18
22	17	0	0	13	0	0	0	0	0	0	28	3
23	135	0	50	0	0	3	135	0	0	0	50	0
24	10	58	30	3	0	4	0	0	0	0	0	33
25	33	0	0	5	0	0	0	0	0	37	15	0
26	100	9	0	0	0	0	0	0	0	0	16	0
27	112	22	0	0	0	0	0	0	0	0	0	45
28	50	34	24	0	0	0	0	0	0	0	0	55
29	68		0	0	0	0	0	0	0	0	0	43
30	30		0	0	0	0	0	0	0	0	0	0
31	0		0		0		0	0		0		0

<b>Monthly</b>	1488	275	350	189	74	58	350	0	0	170	293	479
<b>Rainy Days</b>	24	11	11	14	4	3	2	0	0	6	10	15
<b>Max.</b>	181	58	50	48	30	51	215	0	0	47	61	63
<b>Average</b>	48	10	11	6	2	2	11	0	0	5	10	15

<b>Annual</b> :	3726	<b>No.</b> :	100	<b>Max.</b> :	215	<b>Ave.</b> :	10
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	205	0	59	1	30	0	0	0	0	23	43	22
2	86	67	70	70	27	51	0	0	0	47	95	70
3	567	30	69	65	17	0	0	0	0	28	21	106
4	75	55	48	21	0	0	215	0	0	35	25	84
5	195	58	80	32	0	7	135	0	0	37	93	54
6	360	65	24	0	0	0	0	0	0	0	16	143

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	858	97	198	136	74	51	0	0	0	98	159	198
<b>2nd</b>	630	178	152	53	0	7	350	0	0	72	134	281



**Table Daily Rainfall**

Station : Intake Bili-Bili  
 Year : 1987

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	19	53	0	0	0	0	0	0	0	0	0
2	50	43	0	13	2	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	29
4	40	18	0	0	0	0	0	0	0	0	0	0
5	53	0	0	0	3	0	0	0	0	0	0	0
6	19	0	0	0	16	0	0	0	0	0	0	97
7	32	35	89	57	0	0	0	0	0	0	0	0
8	38	0	0	43	0	0	0	0	0	0	0	30
9	31	0	25	0	0	0	0	0	0	0	0	14
10	3	49	17	0	14	0	0	0	0	0	0	30
11	0	0	0	0	0	0	0	0	0	0	0	0
12	63	33	0	0	8	0	0	0	0	0	0	0
13	49	48	0	0	14	0	0	0	0	0	0	0
14	75	0	0	0	0	0	0	0	0	0	0	0
15	105	0	0	0	0	0	0	0	0	0	0	80
16	74	0	40	0	0	0	0	0	0	0	0	142
17	67	14	25	0	0	0	0	0	0	0	0	296
18	42	0	25	0	0	0	0	0	0	0	0	45
19	0	15	0	0	0	0	0	0	0	0	0	30
20	38	43	0	0	0	0	0	0	0	0	0	20
21	62	12	0	0	0	0	0	0	0	0	0	105
22	54	0	8	0	0	0	0	0	0	0	0	132
23	45	17	6	0	0	0	0	0	0	0	0	94
24	28	20	0	0	0	0	0	0	0	0	0	22
25	0	0	44	0	0	0	0	0	0	0	80	24
26	71	18	13	0	0	0	0	0	0	0	0	45
27	75	0	16	0	0	0	0	0	0	0	0	37
28	28	0	0	44	0	0	0	0	0	0	29	0
29	65		32	0	0	0	0	0	0	0	0	0
30	43		41	0	0	0	0	0	0	0	0	0
31	89		0		0		0	0		0		0

<b>Monthly</b>	1339	384	434	157	57	0	0	0	0	0	109	1272
<b>Rainy Days</b>	26	14	14	4	6	0	0	0	0	0	2	18
<b>Max.</b>	105	49	89	57	16	0	0	0	0	0	80	296
<b>Average</b>	43	14	14	5	2	0	0	0	0	0	4	41

<b>Annual</b> :	3752	<b>No.</b> :	84	<b>Max.</b> :	296	<b>Ave.</b> :	10
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	143	80	53	13	5	0	0	0	0	0	0	29
2	123	84	131	100	30	0	0	0	0	0	0	171
3	292	81	0	0	22	0	0	0	0	0	0	80
4	221	72	90	0	0	0	0	0	0	0	0	533
5	189	49	58	0	0	0	0	0	0	0	80	377
6	371	18	102	44	0	0	0	0	0	0	29	82

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	558	245	184	113	57	0	0	0	0	0	0	280
<b>2nd</b>	781	139	250	44	0	0	0	0	0	0	109	992

**Table Daily Rainfall**

Station : Intake Bili-Bili  
 Year : 1988

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	69	66	0	0	0	0	0	0	0	0	41
2	0	75	38	37	0	0	0	0	0	0	0	31
3	0	0	6	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0
5	0	12	9	0	0	11	0	0	22	0	0	0
6	15	13	0	0	0	0	0	0	0	0	35	0
7	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	4	58	0	15	0	0	0	0	0	0
9	0	0	4	17	0	0	0	0	14	19	0	11
10	20	37	0	0	0	0	0	0	0	0	0	8
11	22	57	0	0	0	0	0	0	0	32	62	7
12	0	155	0	0	0	0	0	0	0	0	22	132
13	0	103	0	0	48	0	0	0	0	21	0	0
14	0	88	0	0	0	0	0	0	0	0	23	0
15	9	36	0	0	0	0	0	0	0	10	0	83
16	9	13	0	23	12	0	0	0	0	0	0	64
17	3	55	0	32	42	0	0	0	0	0	0	0
18	0	22	0	0	38	0	0	0	0	0	0	0
19	8	0	0	0	19	14	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	16	0	0	0
21	0	15	25	0	0	0	0	0	30	28	0	0
22	0	7	73	0	0	0	0	0	25	0	0	0
23	0	0	53	0	0	0	0	0	0	0	0	35
24	0	0	0	0	0	0	0	0	0	0	49	0
25	105	0	24	0	0	0	0	16	28	19	0	30
26	62	0	27	0	0	0	0	22	20	0	96	0
27	0	0	89	3	0	0	0	4	0	0	64	0
28	19	0	0	48	0	0	0	0	0	0	40	0
29	0	0	0	0	0	0	0	0	18	0	0	0
30	0	0	0	0	0	0	0	0	9	0	13	0
31	6	0	0	0	0	0	0	0	0	0	0	0

<b>Monthly</b>	278	757	418	218	159	40	0	42	182	129	404	442
<b>Rainy Days</b>	11	15	12	7	5	3	0	3	9	6	9	10
<b>Max.</b>	105	155	89	58	48	15	0	22	30	32	96	132
<b>Average</b>	9	26	13	7	5	1	0	1	6	4	13	14

<b>Annual</b> :	3069	<b>No.</b> :	90	<b>Max.</b> :	155	<b>Ave.</b> :	8
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	156	119	37	0	11	0	0	22	0	0	72
2	35	50	8	75	0	15	0	0	14	19	35	19
3	31	439	0	0	48	0	0	0	0	63	107	222
4	20	90	0	55	111	14	0	0	16	0	0	64
5	105	22	175	0	0	0	0	16	83	47	49	65
6	87	0	116	51	0	0	0	26	47	0	213	0

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	66	645	127	112	48	26	0	0	36	82	142	313
<b>2nd</b>	212	112	291	106	111	14	0	42	146	47	262	129

**Table Daily Rainfall**

Station : Intake Bili-Bili  
 Year : 1989

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	36	38	0	0	0	0	0	0	0	6	0
2	7	47	99	0	23	4	0	0	0	0	0	0
3	4	86	42	0	0	0	0	0	0	0	0	28
4	0	38	83	4	14	0	5	0	0	0	34	79
5	0	25	0	73	8	0	0	0	0	0	0	5
6	0	16	28	0	12	0	0	0	0	0	0	6
7	0	0	41	0	0	0	0	0	0	0	19	0
8	0	0	105	0	0	0	0	0	0	0	23	8
9	0	0	22	0	0	0	0	0	0	0	0	4
10	0	0	0	36	0	0	0	0	0	20	5	18
11	0	7	0	35	0	0	13	0	0	0	3	0
12	0	0	43	59	0	23	0	0	0	0	14	28
13	0	0	84	0	0	21	8	0	0	0	0	26
14	9	0	0	0	12	0	3	0	0	0	0	10
15	0	8	0	0	0	0	24	0	0	0	30	4
16	4	13	0	0	0	0	0	0	0	34	14	0
17	83	0	0	0	0	0	17	0	0	7	12	0
18	15	25	0	0	0	0	0	0	0	80	0	0
19	0	12	0	0	0	31	28	0	0	0	0	0
20	0	35	0	118	0	0	5	0	0	0	0	0
21	0	30	0	84	0	52	0	0	0	0	0	0
22	0	20	0	13	0	0	0	0	0	0	21	3
23	0	0	0	5	0	0	0	0	22	0	10	0
24	47	0	0	0	0	0	23	0	0	0	17	0
25	87	0	11	0	0	0	14	0	0	0	0	0
26	94	43	0	0	0	21	8	0	0	0	0	0
27	90	15	0	84	9	0	0	0	0	0	0	0
28	112	4	0	9	0	0	0	53	0	0	0	54
29	30		0	0	0	22	0	0	16	33	0	0
30	65		0	25	0	0	0	0	0	0	0	0
31	88		0		0		0	0		0		0

<b>Monthly</b>	735	460	596	545	78	174	148	53	38	174	208	273
<b>Rainy Days</b>	14	17	11	12	6	7	11	1	2	5	13	13
<b>Max.</b>	112	86	105	118	23	52	28	53	22	80	34	79
<b>Average</b>	24	16	19	18	3	6	5	2	1	6	7	9

<b>Annual</b> :	3482	<b>No.</b> :	112	<b>Max.</b> :	118	<b>Ave.</b> :	10
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	11	232	262	77	45	4	5	0	0	0	40	112
2	0	16	196	36	12	0	0	0	0	20	47	36
3	9	15	127	94	12	44	48	0	0	0	47	68
4	102	85	0	118	0	31	50	0	0	121	26	0
5	134	50	11	102	0	52	37	0	22	0	48	3
6	479	62	0	118	9	43	8	53	16	33	0	54

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	20	263	585	207	69	48	53	0	0	20	134	216
<b>2nd</b>	715	197	11	338	9	126	95	53	38	154	74	57

**Table Daily Rainfall**

Station : Intake Bili-Bili  
 Year : 1990

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0	88	0	14	0	0	0	0	0	0	16
2	0	0	0	0	0	0	0	0	0	0	0	4
3	169	0	0	19	0	0	0	0	0	0	0	8
4	18	0	0	75	0	0	0	0	0	0	0	19
5	124	8	3	0	22	0	0	0	0	0	0	28
6	0	3	0	0	0	0	0	0	0	0	0	20
7	0	5	14	0	14	0	0	0	0	0	18	8
8	7	4	23	0	0	0	0	0	0	0	0	30
9	58	67	43	0	0	0	0	0	0	0	14	38
10	62	0	0	0	0	0	0	0	0	0	0	6
11	33	0	9	0	16	0	0	0	0	0	0	0
12	7	0	46	0	0	0	0	0	0	0	0	12
13	0	0	0	0	0	0	0	0	0	0	3	0
14	0	0	0	0	0	0	0	0	0	0	0	11
15	0	42	0	74	22	0	0	0	0	0	0	16
16	17	21	0	84	0	0	0	0	0	0	35	19
17	0	0	0	15	26	0	0	0	0	0	0	22
18	13	14	0	0	94	0	0	0	0	0	0	14
19	53	39	0	0	0	0	0	0	0	0	8	20
20	52	14	0	0	0	0	0	0	0	5	0	27
21	19	34	0	0	73	0	0	0	0	8	0	0
22	0	25	0	0	0	0	0	0	0	0	0	51
23	0	0	0	0	0	0	0	0	0	5	0	66
24	0	0	0	0	0	0	0	0	0	0	0	93
25	47	0	0	0	0	0	0	0	0	0	0	85
26	0	0	0	0	0	0	0	0	0	0	18	35
27	0	0	31	0	0	0	0	0	0	0	16	0
28	0	76	0	0	5	0	0	0	0	26	7	0
29	0		0	0	33	0	0	0	0	0	0	0
30	0		0	0	0	0	0	0	0	0	0	0
31	0		0		0		0	0		0		0

<b>Monthly</b>	679	352	257	267	319	0	0	0	0	44	119	648
<b>Rainy Days</b>	14	13	8	5	10	0	0	0	0	4	8	23
<b>Max.</b>	169	76	88	84	94	0	0	0	0	26	35	93
<b>Average</b>	22	13	8	9	10	0	0	0	0	1	4	21

<b>Annual</b> :	2685	<b>No.</b> :	85	<b>Max.</b> :	169	<b>Ave.</b> :	7
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	311	8	91	94	36	0	0	0	0	0	0	75
2	127	79	80	0	14	0	0	0	0	0	32	102
3	40	42	55	74	38	0	0	0	0	0	3	39
4	135	88	0	99	120	0	0	0	0	5	43	102
5	66	59	0	0	73	0	0	0	0	13	0	295
6	0	76	31	0	38	0	0	0	0	26	41	35

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	478	129	226	168	88	0	0	0	0	0	35	216
<b>2nd</b>	201	223	31	99	231	0	0	0	0	44	84	432

**Table Daily Rainfall**

Station : Intake Bili-Bili  
 Year : 1991

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	38	0	0	44	0	0	0	0	0	0	0	17
2	0	0	0	57	0	0	0	0	0	0	0	30
3	10	0	0	20	0	0	0	0	0	0	0	85
4	0	0	15	7	0	0	0	0	0	0	0	123
5	0	18	0	0	0	0	0	0	0	0	0	30
6	18	88	0	0	0	0	0	0	0	0	0	0
7	95	65	23	0	0	0	0	0	0	0	0	15
8	15	13	0	0	5	0	0	0	0	0	0	68
9	25	0	0	0	0	0	0	0	0	0	0	33
10	18	0	0	0	0	0	0	0	0	0	90	80
11	0	7	0	0	0	0	0	0	0	0	100	50
12	0	4	0	0	0	0	0	0	0	0	28	32
13	0	0	0	0	0	0	0	0	0	0	0	35
14	0	0	14	0	0	0	0	0	0	0	0	7
15	0	0	0	0	0	0	0	0	0	0	25	4
16	0	0	0	0	0	0	0	0	0	0	32	0
17	9	0	24	0	0	0	0	0	0	0	0	0
18	0	0	7	108	0	0	0	0	0	0	38	0
19	33	4	0	18	0	0	0	0	0	0	0	0
20	0	4	0	0	0	0	0	0	0	0	0	0
21	40	3	91	0	0	0	0	0	0	0	35	0
22	15	0	0	0	0	0	0	0	0	0	0	0
23	20	0	0	0	0	0	0	0	0	0	100	58
24	170	0	5	0	0	0	0	0	0	0	125	8
25	3	0	0	150	19	0	0	0	0	0	83	5
26	25	0	0	0	0	0	0	0	0	0	12	9
27	95	0	0	0	0	0	0	0	0	0	60	0
28	20	0	0	6	0	0	0	0	0	0	0	0
29	17	0	0	0	0	0	0	0	0	0	100	5
30	23	0	23	5	0	0	0	0	0	0	0	59
31	71	0	6	0	0	0	0	0	0	0	0	50

<b>Monthly</b>	760	206	208	415	24	0	0	0	0	0	828	803
<b>Rainy Days</b>	20	9	9	9	2	0	0	0	0	0	13	21
<b>Max.</b>	170	88	91	150	19	0	0	0	0	0	125	123
<b>Average</b>	25	7	7	14	1	0	0	0	0	0	28	26

<b>Annual</b> :	3244	<b>No.</b> :	83	<b>Max.</b> :	170	<b>Ave.</b> :	9
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	48	18	15	128	0	0	0	0	0	0	0	285
2	171	166	23	0	5	0	0	0	0	0	90	196
3	0	11	14	0	0	0	0	0	0	0	153	128
4	42	8	31	126	0	0	0	0	0	0	70	0
5	248	3	96	150	19	0	0	0	0	0	343	71
6	251	0	29	11	0	0	0	0	0	0	172	123

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	219	195	52	128	5	0	0	0	0	0	243	609
<b>2nd</b>	541	11	156	287	19	0	0	0	0	0	585	194

**Table Daily Rainfall**

Station : Intake Bili-Bili  
 Year : 1992

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	44	13	59	0	0	3	0	0	0	0	0	43
2	0	9	29	0	0	4	0	0	0	9	0	31
3	42	49	11	8	0	0	0	0	0	0	0	11
4	0	86	27	2	4	0	0	0	5	0	0	0
5	11	6	48	1	9	0	0	0	80	0	0	0
6	0	5	31	0	0	0	0	0	15	0	0	0
7	0	0	0	0	0	0	0	0	7	0	0	78
8	0	10	0	0	0	0	0	0	0	8	0	8
9	52	0	22	5	0	0	0	0	0	7	0	0
10	89	0	6	0	0	0	0	0	0	0	0	0
11	11	5	19	0	0	0	0	0	24	0	0	0
12	6	0	59	0	0	0	0	0	19	0	0	45
13	0	5	0	0	0	0	0	0	5	0	0	48
14	0	35	0	0	15	0	0	0	21	0	0	0
15	28	7	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	30	80	0
18	15	3	14	0	0	0	0	0	7	0	45	0
19	0	11	43	0	0	0	0	0	0	0	0	0
20	12	12	5	0	0	0	0	0	0	23	20	0
21	16	56	0	0	0	0	0	0	27	11	0	0
22	4	36	0	0	0	0	0	0	4	0	0	0
23	0	0	0	0	0	0	0	0	0	0	143	0
24	0	8	0	0	0	0	0	0	0	0	0	38
25	0	18	0	0	0	0	0	0	0	26	0	0
26	28	21	0	0	0	0	0	0	0	0	83	0
27	0	15	0	1	0	0	0	0	0	0	23	0
28	16	5	0	0	8	0	0	0	0	0	46	0
29	17	7	37	0	5	0	0	0	0	0	50	0
30	72		0	0	0	0	0	0	0	0	0	0
31	19		0		0		0	0		0		16

<b>Monthly</b>	482	422	410	17	41	7	0	0	214	114	490	318
<b>Rainy Days</b>	17	22	14	5	5	2	0	0	11	7	8	9
<b>Max.</b>	89	86	59	8	15	4	0	0	80	30	143	78
<b>Average</b>	16	15	13	1	1	0	0	0	7	4	16	10

<b>Annual</b> :	2515	<b>No.</b> :	100	<b>Max.</b> :	143	<b>Ave.</b> :	7
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	97	163	174	11	13	7	0	0	85	9	0	85
2	141	15	59	5	0	0	0	0	22	15	0	86
3	45	52	78	0	15	0	0	0	69	0	0	93
4	27	26	62	0	0	0	0	0	7	53	145	0
5	20	118	0	0	0	0	0	0	31	37	143	38
6	152	48	37	1	13	0	0	0	0	0	202	16

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	283	230	311	16	28	7	0	0	176	24	0	264
<b>2nd</b>	199	192	99	1	13	0	0	0	38	90	490	54

**Table Daily Rainfall**

Station : Intake Bili-Bili  
 Year : 1993

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	5	0	0	0	0	5	0	0	0	0	0	50
2	20	0	18	132	0	0	0	0	0	0	0	0
3	0	15	70	11	0	0	0	0	0	0	0	0
4	8	29	7	0	0	8	0	0	0	0	0	0
5	69	6	30	17	0	0	0	0	0	0	0	0
6	0	30	0	0	43	0	0	0	0	0	0	0
7	0	27	0	7	30	5	0	0	0	0	0	0
8	14	0	30	0	70	0	0	0	0	0	0	0
9	0	0	0	5	0	0	0	0	0	0	0	5
10	0	0	4	32	0	7	31	0	0	0	0	18
11	4	16	0	0	0	14	0	0	0	0	0	0
12	0	0	4	0	0	0	0	0	0	0	0	0
13	0	20	0	0	3	0	0	0	0	0	0	0
14	17	27	0	0	0	0	0	0	0	0	0	8
15	32	39	0	0	0	0	0	0	0	0	0	50
16	3	27	8	0	0	0	0	0	0	0	0	23
17	47	5	0	0	0	0	0	0	0	0	0	53
18	19	0	0	15	0	35	0	0	0	0	0	0
19	57	0	0	0	14	0	0	0	0	0	25	0
20	5	30	9	0	7	0	0	0	0	0	30	0
21	24	82	0	30	12	0	0	0	0	0	0	0
22	116	0	0	72	0	0	0	0	0	0	0	78
23	175	0	0	21	0	0	0	0	0	0	0	33
24	20	0	0	20	0	0	0	0	0	0	0	80
25	0	0	20	0	2	0	0	0	0	0	103	130
26	16	0	37	0	0	0	0	0	0	0	0	73
27	0	73	50	0	0	0	0	0	0	0	75	198
28	14	0	47	0	0	0	0	0	0	0	0	0
29	4		30	0	7	0	0	0	0	0	0	0
30	0		0	3	10	9	0	0	0	0	23	0
31	0		0		57		0	0		0		0

<b>Monthly</b>	669	426	364	365	255	83	31	0	0	0	256	799
<b>Rainy Days</b>	20	14	14	12	11	7	1	0	0	0	5	13
<b>Max.</b>	175	82	70	132	70	35	31	0	0	0	103	198
<b>Average</b>	22	15	12	12	8	3	1	0	0	0	9	26

<b>Annual</b> :	3248	<b>No.</b> :	97	<b>Max.</b> :	198	<b>Ave.</b> :	9
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	102	50	125	160	0	13	0	0	0	0	0	50
2	14	57	34	44	143	12	31	0	0	0	0	23
3	53	102	4	0	3	14	0	0	0	0	0	58
4	131	62	17	15	21	35	0	0	0	0	55	76
5	335	82	20	143	14	0	0	0	0	0	103	321
6	34	73	164	3	74	9	0	0	0	0	98	271

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	169	209	163	204	146	39	31	0	0	0	0	131
<b>2nd</b>	500	217	201	161	109	44	0	0	0	0	256	668

**Table Daily Rainfall**

Station : Intake Bili-Bili  
 Year : 1994

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	41	0	10	0	0	4	0	0	0	0	0	5
2	79	12	0	0	0	0	0	0	0	0	0	9
3	11	36	106	0	0	2	0	0	0	0	0	45
4	14	0	85	0	0	0	0	0	0	0	3	5
5	45	0	10	0	0	0	0	0	0	0	0	41
6	0	22	6	0	0	1	0	0	0	0	0	18
7	0	35	14	0	2	4	0	0	0	0	0	1
8	0	0	5	0	3	0	0	3	0	0	0	11
9	36	50	101	0	0	0	0	0	0	0	0	31
10	7	29	29	107	0	0	0	0	0	0	0	0
11	0	0	13	5	6	0	0	0	0	0	0	0
12	0	0	101	12	0	0	0	0	0	0	0	0
13	18	18	193	56	0	0	0	0	0	13	0	18
14	0	125	0	11	0	0	0	0	0	0	0	0
15	29	0	8	30	0	0	0	0	0	0	0	15
16	0	18	2	3	0	0	0	0	0	0	0	22
17	50	48	0	3	0	0	0	0	0	0	0	63
18	99	0	0	5	0	0	0	0	0	0	0	28
19	9	62	0	0	0	0	0	0	0	0	0	9
20	0	18	97	0	12	0	0	0	0	0	0	18
21	15	0	11	28	0	0	0	0	0	0	0	1
22	78	0	68	0	0	2	0	0	0	0	3	0
23	0	23	50	0	0	0	0	0	0	0	0	0
24	75	0	65	0	0	0	0	0	0	0	0	0
25	30	0	115	0	0	0	0	0	0	0	0	0
26	10	27	0	0	0	0	0	0	0	0	0	0
27	65	0	0	0	0	0	0	0	0	0	0	0
28	22	0	0	0	0	2	0	0	0	0	0	0
29	0		13	0	4	0	0	0	0	0	0	0
30	0		47	0	0	0	0	0	0	10	0	28
31	0		56		0		0	0		2		12

<b>Monthly</b>	733	523	1205	260	27	15	0	3	0	25	6	380
<b>Rainy Days</b>	19	14	23	10	5	6	0	1	0	3	2	19
<b>Max.</b>	99	125	193	107	12	4	0	3	0	13	3	63
<b>Average</b>	24	19	39	9	1	1	0	0	0	1	0	12

<b>Annual</b> :	3177	<b>No.</b> :	102	<b>Max.</b> :	193	<b>Ave.</b> :	9
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	190	48	211	0	0	6	0	0	0	0	3	105
2	43	136	155	107	5	5	0	3	0	0	0	61
3	47	143	315	114	6	0	0	0	0	13	0	33
4	158	146	99	11	12	0	0	0	0	0	0	140
5	198	23	309	28	0	2	0	0	0	0	3	1
6	97	27	116	0	4	2	0	0	0	12	0	40

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	280	327	681	221	11	11	0	3	0	13	3	199
<b>2nd</b>	453	196	524	39	16	4	0	0	0	12	3	181



**Table Daily Rainfall**

Station : Intake Bili-Bili  
 Year : 1995

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	3	2	0	1	12	21	2	0	0	0	10	0
2	4	32	47	0	0	8	0	0	0	0	0	1
3	125	5	102	27	0	0	0	0	0	0	0	11
4	0	32	1	59	17	7	5	0	0	0	0	24
5	7	35	0	61	42	5	0	0	0	0	8	16
6	47	38	13	60	1	9	1	0	29	0	7	67
7	0	24	2	83	0	6	0	0	0	19	4	109
8	19	10	50	16	8	1	0	0	0	4	69	31
9	6	0	2	0	0	9	0	0	0	0	0	41
10	0	11	1	0	0	0	0	0	0	0	0	10
11	6	0	0	2	0	12	35	0	0	0	10	62
12	106	0	3	0	11	0	0	0	0	0	0	87
13	109	0	4	0	87	2	0	0	0	0	9	0
14	57	47	43	27	0	0	0	0	0	4	1	8
15	39	7	5	1	0	42	0	0	0	33	0	0
16	10	0	0	0	0	73	0	0	0	0	32	9
17	4	21	0	34	0	15	0	0	0	0	0	56
18	20	0	0	0	0	0	0	0	0	0	1	24
19	33	0	0	0	0	0	0	0	0	1	0	27
20	33	0	41	0	0	2	0	0	0	13	33	8
21	84	13	0	0	0	0	0	0	0	1	104	18
22	140	11	6	0	0	0	0	0	1	0	0	3
23	59	1	0	0	0	1	0	0	0	0	0	0
24	16	26	45	0	0	3	0	0	0	0	42	25
25	9	47	20	0	0		0	0	0	0	6	0
26	15	14	48	0	0	0	0	0	2	5	26	0
27	0	52	8	0	0	0	0	0	0	3	39	5
28	2	49	12	0	0	0	0	0	0	0	0	0
29	2		0	0	8	0	0	0	0	0	4	0
30	3		17	10	34	1	0	0	0	0	0	0
31	17		3		0		0	0		3		0

<b>Monthly</b>	975	477	473	381	220	217	43	0	32	86	405	642
<b>Rainy Days</b>	27	20	21	12	9	17	4	0	3	10	17	21
<b>Max.</b>	140	52	102	83	87	73	35	0	29	33	104	109
<b>Average</b>	31	17	15	13	7	7	1	0	1	3	14	21

<b>Annual</b> :	3951	<b>No.</b> :	161	<b>Max.</b> :	140	<b>Ave.</b> :	11
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	139	106	150	148	71	41	7	0	0	0	18	52
2	72	83	68	159	9	25	1	0	29	23	80	258
3	317	54	55	30	98	56	35	0	0	37	20	157
4	100	21	41	34	0	90	0	0	0	14	66	124
5	308	98	71	0	0	4	0	0	1	1	152	46
6	39	115	88	10	42	1	0	0	2	11	69	5

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	528	243	273	337	178	122	43	0	29	60	118	467
<b>2nd</b>	447	234	200	44	42	95	0	0	3	26	287	175

**Table Daily Rainfall**

Station : Intake Bili-Bili  
 Year : 1996

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	32	34	14	0	0	1	0	0	0	0	16	52
2	8	27	12	0	0	0	0	0	3	0	50	75
3	7	178	1	0	1	1	0	0	1	8	23	43
4	40	20	9	0	2	1	7	0	0	32	2	4
5	6	2	14	0	0	0	0	0	0	2	114	12
6	23	1	15	38	0	0	0	0	0	1	0	8
7	5	31	1	20	0	2	0	0	0	0	5	78
8	0	84	3	6	0	2	4	0	0	0	16	21
9	0	68	0	0	0	0	0	0	0	17	1	30
10	0	21	55	0	0	0	0	0	0	0	0	8
11	0	66	0	0	0	0	1	0	0	0	0	24
12	6	63	0	0	0	0	3	0	0	0	26	63
13	9	1	2	1	0	0	0	0	0	0	0	71
14	0	6	0	3	0	0	3	30	0	0	7	40
15	7	29	31	7	0	0	0	0	0	0	1	24
16	0	2	0	46	0	0	0	0	0	5	8	6
17	3	0	0	34	0	0	0	0	0	0	18	31
18	1	0	0	23	0	0	0	0	0	2	8	18
19	25	26	1	0	0	0	0	0	0	0	33	116
20	117	0	11	42	0	8	0	0	0	0	5	48
21	0	0	6	59	0	0	0	0	60	0	83	59
22	0	3	7	1	0	0	0	0	0	0	45	25
23	28	0	72	1	16	0	16	0	0	6	39	67
24	47	53	59	0	0	0	0	0	0	3	1	26
25	14	63	10	0	0	5	0	29	0	2	0	46
26	52	62	0	0	0	0	0	0	0	5	0	22
27	54	14	3	0	0	0	0	0	0	1	0	5
28	38	18	0	0	0	0	0	0	0	17	8	50
29	14		2	0	0	0	0	0	1	0	8	67
30	7		0	0	3	6	0	0	1	16	9	20
31	53		0		2		0	0		16		7

<b>Monthly</b>	596	872	328	281	24	26	34	59	66	133	526	1166
<b>Rainy Days</b>	23	23	20	13	5	8	6	2	5	15	23	31
<b>Max.</b>	117	178	72	59	16	8	16	30	60	32	114	116
<b>Average</b>	19	31	11	9	1	1	1	2	2	4	18	38

<b>Annual</b> :	4111	<b>No.</b> :	174	<b>Max.</b> :	178	<b>Ave.</b> :	11
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	93	261	50	0	3	3	7	0	4	42	205	186
2	28	205	74	64	0	4	4	0	0	18	22	145
3	22	165	33	11	0	0	7	30	0	0	34	222
4	146	28	12	145	0	8	0	0	0	7	72	219
5	89	119	154	61	16	5	16	29	60	11	168	223
6	218	94	5	0	5	6	0	0	2	55	25	171

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	143	631	157	75	3	7	18	30	4	60	261	553
<b>2nd</b>	453	241	171	206	21	19	16	29	62	73	265	613

**Table Daily Rainfall**

Station : Intake Bili-Bili  
 Year : 1997

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	1	0	28	0	11	0	0	0	0	0	0	0
2	2	0	40	1	1	0	8	0	0	38	0	55
3	109	0	14	10	0	0	10	0	0	0	0	0
4	19	0	44	1	0	1	0	0	0	0	0	2
5	1	7	19	0	0	0	0	0	0	0	0	58
6	5	121	2	0	0	0	1	0	0	0	0	4
7	0	44	29	0	0	0	0	0	0	0	0	0
8	3	12	3	0	2	0	0	0	0	0	0	12
9	6	5	0	0	0	0	0	0	0	0	0	1
10	14	0	0	0	0	0	0	0	0	0	0	31
11	1	0	0	0	0	0	0	0	0	0	0	1
12	10	0	0	0	0	0	0	0	0	0	0	0
13	16	23	12	0	0	0	0	0	0	0	0	1
14	21	58	0	0	0	0	0	0	0	0	0	0
15	9	14	0	0	0	0	0	0	0	0	8	1
16	51	49	0	3	0	0	4	0	0	0	8	3
17	47	0	0	1	8	0	1	0	0	0	0	1
18	1	10	0	0	0	0	0	0	0	0	0	0
19	3	0	0	0	0	0	0	0	0	0	3	0
20	0	9	0	0	0	0	0	0	0	0	0	50
21	7	36	0	0	0	0	0	0	0	0	7	19
22	69	114	1	0	0	0	0	0	0	0	12	6
23	11	15	1	0	0	0	0	0	0	0	18	0
24	23	43	0	0	0	0	0	0	0	0	9	65
25	4	25	0	9	0	0	0	0	0	0	0	37
26	1	52	1	1	0	0	0	0	0	1	42	5
27	1	24	0	1		0	0	0	0	0	0	8
28	0	62	19	39	0	0	0	0	0	0	9	33
29	0		6	3	0	0	0	0	0	0	6	0
30	0		4	2	0	0	0	0	0	0	92	0
31	0		0		0		0	0		0		0

<b>Monthly</b>	435	723	223	71	22	1	24	0	0	39	214	393
<b>Rainy Days</b>	25	19	15	11	4	1	5	0	0	2	11	20
<b>Max.</b>	109	121	44	39	11	1	10	0	0	38	92	65
<b>Average</b>	14	26	7	2	1	0	1	0	0	1	7	13

<b>Annual</b> :	2145	<b>No.</b> :	113	<b>Max.</b> :	121	<b>Ave.</b> :	6
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	132	7	145	12	12	1	18	0	0	38	0	115
2	28	182	34	0	2	0	1	0	0	0	0	48
3	57	95	12	0	0	0	0	0	0	0	8	3
4	102	68	0	4	8	0	5	0	0	0	11	54
5	114	233	2	9	0	0	0	0	0	0	46	127
6	2	138	30	46	0	0	0	0	0	1	149	46

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	217	284	191	12	14	1	19	0	0	38	8	166
<b>2nd</b>	218	439	32	59	8	0	5	0	0	1	206	227

**Table Daily Rainfall**

Station : Intake Bili-Bili  
 Year : 1998

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	6	5	0	14	69	1	0	0	0	0	13	52
2	0	20	11	46	14	21	0	0	0	0	16	48
3	0	3	6	15	1	9	0	0	0	0	0	27
4	1	5	4	57	5	0	0	0	0	0	0	22
5	5	0	0	7	9	0	0	0	0	0	0	50
6	0	0	0	7	0	0	0	0	0	0	27	9
7	0	0	0	21	34	0	0	0	0	0	0	8
8	0	0	8	27	0	0	0	0	0	0	3	0
9	0	0	0	15	0	84	4	31	0	0	38	0
10	1	0	0	9	4	5	0	21	0	0	0	0
11	0	0	0	138	1	0	0	0	0	0	45	0
12	0	5	0	123	0	0	0	0	0	20	23	0
13	45	1	3	67	4	0	3	0	0	0	51	0
14	0	93	0	8	0	4	0	0	0	0	31	0
15	32	2	1	29	5	0	0	0	0	0	42	0
16	21	0	75	7	8	0	0	0	0	0	22	0
17	0	0	92	0	0	0	0	0	4	0	28	72
18	0	1	14	0	15	0	5	0	0	0	74	38
19	0	0	0	5	8	7	0	0	0	0	46	2
20	0	4	32	46	38	16	2	0	0	0	20	15
21	2	9	0	34	0	1	0	0	0	0	31	0
22	0	0	0	14	3	1	3	0	5	0	92	0
23	0	0	0	0	0	0	3	0	0	0	0	0
24	0	0	0	1	0	0	5	14	0	5	25	11
25	0	0	42	16	2	0	4	0	0	5	19	6
26	0	0	2	36	0	0	3	0	0	0	0	26
27	2	0	0	8	0	8	2	24	0	0	28	28
28	1	0	1	44	1	1	0	0	7	70	21	57
29	0		26	14	0	0	7	0	5	2	22	0
30	0		1	9	0	0	0	6	2	3		0
31	72		88		0		0	0		0		0

<b>Monthly</b>	188	148	406	817	221	158	41	96	23	108	714	471
<b>Rainy Days</b>	11	11	16	27	17	12	11	5	5	7	21	16
<b>Max.</b>	72	93	92	138	69	84	7	31	7	70	92	72
<b>Average</b>	6	5	13	27	7	5	1	3	1	3	25	15

<b>Annual</b> :	3391	<b>No.</b> :	159	<b>Max.</b> :	138	<b>Ave.</b> :	9
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	12	33	21	139	98	31	0	0	0	0	29	199
2	1	0	8	79	38	89	4	52	0	3	65	17
3	77	101	4	365	10	4	3	0	0	20	192	0
4	21	5	213	58	69	23	7	0	4	0	190	127
5	2	9	42	65	5	2	15	14	5	10	167	17
6	75	0	118	111	1	9	12	30	14	75	71	111

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	90	134	33	583	146	124	7	52	0	23	286	216
<b>2nd</b>	98	14	373	234	75	34	34	44	23	85	428	255



**Table Daily Rainfall**

Station : **Kampili (Telemetric)**  
 Year : **1999**

Unit: mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0	41	0	0	0	0	0	0	3	15	0
2	0	0	0	12	0	0	0	0	0	2	2	0
3	0	0	32	2	0	0	0	0	0	0	36	0
4	0	0	0	37	0	0	0	0	0	0	62	3
5	0	0	1	29	0	0	0	0	0	1	6	7
6	0	0	0	4	0	0	0	0	0	0	0	38
7	0	0	7	0	0	0	0	0	0	0	5	16
8	0	0	1	0	0	0	0	0	0	0	25	64
9	0	0	0	0	0	0	0	0	0	0	0	70
10	0	0	1	0	0	0	0	0	0	1	0	14
11	0	0	0	0	0	0	0	0	0	27	0	29
12	0	0	0	0	0	0	0	0	0	0	1	12
13	0	0	17	0	0	0	0	0	0	0	0	31
14	0	0	28	19	0	0	0	0	0	10	0	0
15	0	0	0	24	0	0	0	0	0	0	19	5
16	0	0	20	0	0	0	0	0	0	0	20	1
17	0	0	0	0	0	0	0	0	0	0	0	20
18	0	0	0	0	0	0	0	0	0	1	55	30
19	0	0	0	0	0	0	0	0	0	1	0	18
20	0	0	1	0	0	0	0	0	0	0	0	1
21	0	28	45	0	0	0	0	0	0	1	17	2
22	0	21	5	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	6	0	0
24	0	11	0	0	0	0	0	0	0	0	0	49
25	0	34	17	0	0	0	0	0	0	0	7	62
26	0	0	18	0	0	0	0	0	0	10	1	13
27	0	7	0	0	0	0	0	0	0	9	0	0
28	0	31	28	0	0	0	0	0	0	0	0	8
29	0		1	0	0	0	0	0	0	3	0	7
30	0		0	0	0	0	0	0	0	25	0	1
31	0		23		0		0	0		22		0

<b>Monthly</b>	0	132	286	127	0	0	0	0	0	122	271	501
<b>Rainy Days</b>	0	6	17	7	0	0	0	0	0	15	14	23
<b>Max.</b>	0	34	45	37	0	0	0	0	0	27	62	70
<b>Average</b>	0	5	9	4	0	0	0	0	0	4	9	16

<b>Annual</b> :	1439	<b>No.</b> :	82	<b>Max.</b> :	70	<b>Ave.</b> :	4
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0	74	80	0	0	0	0	0	6	121	10
2	0	0	9	4	0	0	0	0	0	1	30	202
3	0	0	45	43	0	0	0	0	0	37	20	77
4	0	0	21	0	0	0	0	0	0	2	75	70
5	0	94	67	0	0	0	0	0	0	7	24	113
6	0	38	70	0	0	0	0	0	0	69	1	29

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	0	0	128	127	0	0	0	0	0	44	171	289
<b>2nd</b>	0	132	158	0	0	0	0	0	0	78	100	212

**Table Daily Rainfall**

Station : **Kampili (Telemetric)**  
 Year : **2000**

Unit: mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	6	15	0	1	5	9	0	0	0	0	0	25
2	9	5	1	6	4	1	0	0	0	0	0	6
3	2	83	0	3	0	0	0	0	0	0	0	76
4	1	213	0	6	0	0	15	0	0	0	0	61
5	0	82	0	16	0	0	1	0	0	0	0	19
6	8	7	0	0	0	0	0	0	0	0	0	8
7	30	12	0	0	25	8	3	0	0	0	0	42
8	30	18	18	0	0	9	0	0	0	0	0	21
9	0	17	0	14	0	21	0	4	0	0	0	3
10	5	0	3	8	0	7	0	0	0	0	0	0
11	78	0	0	62	0	1	0	0	0	0	0	0
12	1	0	0	14	0	0	0	0	0	0	0	7
13	12	0	46	13	0	0	1	0	0	0	0	1
14	20	0	12	0	0	0	0	0	0	0	0	48
15	23	0	26	0	0	11	0	0	0	0	18	16
16	0	0	12	0	0	13	0	0	0	0	0	6
17	2	8	28	0	0	0	0	0	0	0	0	0
18	80	7	7	0	7	0	0	0	0	0	0	2
19	22	2	1	1	0	2	0	0	0	0	0	0
20	13	2	38	0	0	8	0	0	0	0	0	1
21	3	10	61	0	0	1	0	0	0	0	0	26
22	3	3	27	0	0	0	0	0	0	0	12	19
23	26	0	9	2	0	0	0	0	0	0	24	0
24	11	6	0	15	0	0	0	0	0	0	6	0
25	10	75	0	1	18	0	0	0	0	0	0	19
26	0	84	12	0	8	4	0	0	0	0	53	0
27	5	0	1	2	13	0	0	0	0	0	12	4
28	1	1	44	18	0	0	31	0	0	0	1	0
29	21	1	2	0	0	0	0	0	0	0	33	0
30	19		0	1	1	0	2	0	0	0	33	0
31	130		7		0		0	0		0		0

<b>Monthly</b>	571	651	355	183	81	95	53	4	0	0	192	410
<b>Rainy Days</b>	27	20	19	17	8	13	6	1	0	0	9	20
<b>Max.</b>	130	213	61	62	25	21	31	4	0	0	53	76
<b>Average</b>	18	22	11	6	3	3	2	0	0	0	6	13

<b>Annual</b> :	2595	<b>No.</b> :	140	<b>Max.</b> :	213	<b>Ave.</b> :	7
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	18	398	1	32	9	10	16	0	0	0	0	187
2	73	54	21	22	25	45	3	4	0	0	0	74
3	134	0	84	89	0	12	1	0	0	0	18	72
4	117	19	86	1	7	23	0	0	0	0	0	9
5	53	94	97	18	18	1	0	0	0	0	42	64
6	176	86	66	21	22	4	33	0	0	0	132	4

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	225	452	106	143	34	67	20	4	0	0	18	333
<b>2nd</b>	346	199	249	40	47	28	33	0	0	0	174	77

**Table Daily Rainfall**

Station : **Kampili (Telemetric)**  
 Year : **2001**

Unit: mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	72	3	2	26	0	0	0	0	3	14	58
2	0	122	20	0	0	0	0	0	0	0	0	127
3	4	58	11	25	1	6	0	0	0	0	3	51
4	0	80	125	0	0	8	0	0	0	0	0	51
5	58	91	21	1	0	2	0	0	0	0	8	26
6	8	51	34	1	0	0	0	0	0	1	19	81
7	5	67	7	4	0	8	0	0	0	0	15	5
8	41	70	0	2	1	10	0	0	0	0	0	68
9	69	97	0	1	0	5	0	0	0	0	24	18
10	85	2	11	0	0	25	0	0	0	0	1	15
11	87	1	3	29	0	0	0	0	0	0	0	40
12	33	0	62	4	0	2	0	0	0	0	6	20
13	15	16	23	2	0	8	0	0	0	18	0	0
14	27	3	0	0	0	1	0	0	0	1	0	0
15	26	1	6	0	0	0	0	0	0	0	6	0
16	16	14	0	0	0	0	0	0	0	0	5	1
17	13	37	33	13	0	0	0	0	0	12	15	24
18	1	38	44	0	0	0	0	0	0	21	6	5
19	1	24	11	0	0	0	0	0	0	0	1	0
20	2	44	25	0	0	1	0	0	0	0	27	1
21	7	9	1	0	0	0	0	0	0	4	1	0
22	6	0	0	3	0	0	0	0	0	17	30	1
23	0	0	0	14	0	0	0	0	0	3	0	1
24	11	0	17	19	0	0	0	0	0	1	0	28
25	5	3	5	7	0	0	0	0	0	0	42	8
26	10	0	0	0	0	0	0	0	0	14	8	2
27	10	0	1	5	0	0	0	0	0	0	2	85
28	0	0	0	2	0	0	0	0	0	0	44	1
29	35		5	11	1	0	0	0	0	0	1	77
30	1		0	6	3	0	0	0	0	0	6	12
31	42		0		1		0	0		24		11

<b>Monthly</b>	618	900	468	151	33	76	0	0	0	119	284	817
<b>Rainy Days</b>	26	21	21	19	6	11	0	0	0	12	22	26
<b>Max.</b>	87	122	125	29	26	25	0	0	0	24	44	127
<b>Average</b>	20	32	15	5	1	3	0	0	0	4	9	26

<b>Annual</b> :	3466	<b>No.</b> :	164	<b>Max.</b> :	127	<b>Ave.</b> :	10
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	62	423	180	28	27	16	0	0	0	3	25	313
2	208	287	52	8	1	48	0	0	0	1	59	187
3	188	21	94	35	0	11	0	0	0	19	12	60
4	33	157	113	13	0	1	0	0	0	33	54	31
5	29	12	23	43	0	0	0	0	0	25	73	38
6	98	0	6	24	5	0	0	0	0	38	61	188

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	458	731	326	71	28	75	0	0	0	23	96	560
<b>2nd</b>	160	169	142	80	5	1	0	0	0	96	188	257



**Table Daily Rainfall**

Station : **Kampili (Telemetric)**  
 Year : **2002**

Unit: mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	133	55	0	2	25	0	0	0	0	0	0	10
2	257	26	0	0	0	0	0	0	0	0	0	6
3	35	3	0	27	5	0	0	0	0	0	0	4
4	12	1	0	8	0	0	0	0	0	0	0	2
5	6	17	0	28	1	2	1	0	0	0	0	12
6	10	4	6	0	2	0	0	0	0	0	0	0
7	0	1	24	0	8	2	0	0	0	0	0	30
8	0	2	16	37	21	0	0	0	0	0	0	64
9	0	0	33	11	30	0	0	0	0	0	1	1
10	0	0	0	0	9	0	0	0	0	0	0	5
11	0	1	59	0	0	11	0	0	0	0	0	3
12	0	8	88	1	0	0	0	0	0	0	0	0
13	1	86	3	0	1	0	0	0	0	0	2	0
14	1	33	9	0	0	0	0	0	0	0	17	0
15	1	34	30	25	0	0	0	0	0	0	0	0
16	4	17	37	23	0	1	0	0	0	0	3	0
17	1	21	0	3	0	0	0	0	0	0	0	0
18	43	23	2	1	0	21	0	0	0	0	2	0
19	16	2	6	0	0	0	0	0	0	0	0	0
20	5	0	9	0	0	0	0	0	0	0	1	0
21	5	29	0	0	0	0	0	0	0	0	0	0
22	2	25	0	0	0	0	0	0	0	0	17	0
23	11	17	2	2	0	0	0	0	0	0	10	0
24	16	21	1	0	0	5	0	0	0	0	3	0
25	7	0	0	0	0	0	0	0	0	0	0	0
26	13	0	37	0	0	0	0	0	0	0	38	0
27	1	0	54	0	0	0	0	0	0	0	19	0
28	0	15	0	0	0	0	0	0	0	0	0	0
29	26		0	0	0	0	0	0	0	0	3	0
30	11		0	0	0	0	0	0	0	0	12	0
31	0		20		0		0	0		0		2

<b>Monthly</b>	617	441	436	168	102	42	1	0	0	0	128	139
<b>Rainy Days</b>	23	22	18	12	9	6	1	0	0	0	13	11
<b>Max.</b>	257	86	88	37	30	21	1	0	0	0	38	64
<b>Average</b>	20	16	14	6	3	1	0	0	0	0	4	4

<b>Annual</b> :	2074	<b>No.</b> :	115	<b>Max.</b> :	257	<b>Ave.</b> :	6
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	443	102	0	65	31	2	1	0	0	0	0	34
2	10	7	79	48	70	2	0	0	0	0	1	100
3	3	162	189	26	1	11	0	0	0	0	19	3
4	69	63	54	27	0	22	0	0	0	0	6	0
5	41	92	3	2	0	5	0	0	0	0	30	0
6	51	15	111	0	0	0	0	0	0	0	72	2

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	456	271	268	139	102	15	1	0	0	0	20	137
<b>2nd</b>	161	170	168	29	0	27	0	0	0	0	108	2

**Table Daily Rainfall**

Station : **Kampili (Telemetric)**  
 Year : **2003**

Unit: mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	52	2	0	0	0	0	0	0	0	1	1	1
2	206	54	0	10	0	0	0	0	0	0	1	52
3	79	2	0	0	0	0	0	0	0	0	0	3
4	25	8	0	0	22	0	0	0	0	0	0	33
5	3	49	25	0	7	0	0	0	0	0	0	0
6	12	36	0	14	0	0	0	0	0	0	1	5
7	0	3	0	0	8	0	0	0	0	46	0	0
8	2	0	0	0	0	0	0	0	0	1	0	0
9	1	0	16	2	1	0	0	0	0	11	9	14
10	79	9	5	52	4	0	1	0	0	7	0	0
11	74	5	7	0	0	0	0	0	17	0	1	1
12	58	0	2	0	0	0	0	0	0	0	0	1
13	64	10	0	0	0	0	0	0	0	0	0	9
14	44	7	1	0	0	0	0	0	0	9	3	29
15	94	0	0	3	0	0	0	0	0	0	50	19
16	19	25	0	2	0	0	0	0	0	0	14	52
17	1	15	1	0	0	0	0	0	0	0	0	15
18	15	43	10	0	0	0	0	0	0	0	14	13
19	2	100	0	0	0	0	0	0	0	0	0	41
20	3	1	0	0	0	0	0	0	4	0	7	30
21	11	0	0	5	0	13	0	0	0	0	10	68
22	1	20	1	1	19	0	0	0	0	0	2	28
23	13	12	16	0	0	2	0	0	0	0	45	92
24	0	0	36	1	0	8	0	0	0	11	1	59
25	3	0	5	1	0	2	0	0	0	0	17	40
26	0	0	8	0	0	0	0	0	0	0	6	57
27	2	0	1	0	0	0	0	0	0	0	8	46
28	1	5	11	1	0	0	0	0	0	0	33	7
29	0		0	29	0	0	0	0	0	0	1	13
30	7		10	0	0	0	0	0	0	0	4	27
31	30		0		0		0	0		1		47

<b>Monthly</b>	901	406	155	121	61	25	1	0	21	87	228	802
<b>Rainy Days</b>	27	19	16	12	6	4	1	0	2	8	20	27
<b>Max.</b>	206	100	36	52	22	13	1	0	17	46	50	92
<b>Average</b>	29	15	5	4	2	1	0	0	1	3	8	26

<b>Annual</b> :	2808	<b>No.</b> :	142	<b>Max.</b> :	206	<b>Ave.</b> :	8
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	365	115	25	10	29	0	0	0	0	1	2	89
2	94	48	21	68	13	0	1	0	0	65	10	19
3	334	22	10	3	0	0	0	0	17	9	54	59
4	40	184	11	2	0	0	0	0	4	0	35	151
5	28	32	58	8	19	25	0	0	0	11	75	287
6	40	5	30	30	0	0	0	0	0	1	52	197

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	793	185	56	81	42	0	1	0	17	75	66	167
<b>2nd</b>	108	221	99	40	19	25	0	0	4	12	162	635

**Table Daily Rainfall**

Station : **Kampili (Telemetric)**  
 Year : **2004**

Unit: mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	10	3	0	0	21	1						
2	41	10	0	28	26	0						
3	1	62	3	0	0	0						
4	0	64	66	4	2	0						
5	18	16	3	57	0	3						
6	31	5	18	4	0	11						
7	2	58	0	0	0	0						
8	1	48	2	0	15	1						
9	10	3	91	0	40							
10	0	1	19	0	0							
11	0	38	0	3	0							
12	3	49	24	0	0							
13	4	33	54	0	0							
14	10	2	31	0	0							
15	0	28	34	0	0							
16	0	35	58	3	0							
17	0	0	28	0	0							
18	8	0	26	0	0							
19	14	0	1	0	0							
20	51	2	0	0	0							
21	0	12	0	4	0							
22	0	11	0	50	0							
23	1	0	21	0	0							
24	0	26	36	8	0							
25	11	26	3	0	0							
26	14	6	0	0	0							
27	13	2	0	0	1							
28	3	0	0	0	0							
29	0	0	26	0	7							
30	26		6	27	23							
31	9		0		3							

<b>Monthly</b>	281	540	550	188	138	16	0	0	0	0	0	0
<b>Rainy Days</b>	21	23	20	10	9	4	0	0	0	0	0	0
<b>Max.</b>	51	64	91	57	40	11	0	0	0	0	0	0
<b>Average</b>	9	19	18	6	4	2	0	0	0	0	0	0

<b>Annual</b> :	1713	<b>No.</b> :	87	<b>Max.</b> :	91	<b>Ave.</b> :	5
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	70	155	72	89	49	4	0	0	0	0	0	0
2	44	115	130	4	55	12	0	0	0	0	0	0
3	17	150	143	3	0	0	0	0	0	0	0	0
4	73	37	113	3	0	0	0	0	0	0	0	0
5	12	75	60	62	0	0	0	0	0	0	0	0
6	65	8	32	27	34	0	0	0	0	0	0	0

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	131	420	345	96	104	16	0	0	0	0	0	0
<b>2nd</b>	150	120	205	92	34	0	0	0	0	0	0	0

**Table Daily Rainfall**

Station : **Kampili**  
 Year : **1971**

Unit: mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1												
2												
3												5
4				28	0	10						36
5				26								65
6												39
7				0	25	120						4
8				0	0	0	3					
9				6								57
10				18								
11				0	28							
12												
13												
14				15								73
15				0	8							
16												28
17				0	0	0	10					29
18				0	0	0	28					
19												
20				0	6	0	3					
21												
22				41	3	0	13					20
23												
24												
25												
26				0	0	0	11					
27				0	0	11						
28				0	2							
29												
30												
31												29

<b>Monthly</b>	0	0	0	134	72	141	68	0	0	0	0	385
<b>Rainy Days</b>	0	0	0	6	6	3	6	0	0	0	0	11
<b>Max.</b>	0	0	0	41	28	120	28	0	0	0	0	73
<b>Average</b>	0	0	0	8	6	16	11	0	0	0	0	35

<b>Annual</b> :	800	<b>No.</b> :	32	<b>Max.</b> :	120	<b>Ave.</b> :	6
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<b>5-day rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0	0	54	0	10	0	0	0	0	0	106
2	0	0	0	24	25	120	3	0	0	0	0	100
3	0	0	0	15	36	0	0	0	0	0	0	73
4	0	0	0	0	6	0	41	0	0	0	0	57
5	0	0	0	41	3	0	13	0	0	0	0	20
6	0	0	0	0	2	11	11	0	0	0	0	29

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	0	0	0	93	61	130	3	0	0	0	0	279
<b>2nd</b>	0	0	0	41	11	11	65	0	0	0	0	106





**Table Daily Rainfall**

Station : **Kampili**  
 Year : **1974**

Unit: mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1									0	5	4	5
2									0	0	0	0
3									0	0	0	0
4									0	4	0	0
5									0	0	0	0
6									0	16	0	0
7									0	54	0	0
8									13	55	0	0
9									22	0	0	9
10									35	15	35	0
11									0	0	0	4
12									19	0	18	45
13									0	4	10	95
14									0	3	14	25
15									0	0	0	25
16									0	45	0	5
17									0	2	0	4
18									0	0	64	10
19									0	0	10	0
20									0	0	15	75
21									5	0	0	0
22									0	0	0	20
23									0	0	80	0
24									0	0	25	5
25									0	0	25	53
26									0	0	5	20
27									0	0	5	3
28									0	0	10	15
29									0	0	5	10
30									0	0	2	9
31									0	0		15

<b>Monthly</b>	0	0	0	0	0	0	0	0	94	203	327	452
<b>Rainy Days</b>	0	0	0	0	0	0	0	0	5	10	16	20
<b>Max.</b>	0	0	0	0	0	0	0	0	35	55	80	95
<b>Average</b>	0	0	0	0	0	0	0	0	3	7	11	15

<b>Annual</b> :	1076	<b>No.</b> :	51	<b>Max.</b> :	95	<b>Ave.</b> :	3
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<b>5-day rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0	0	0	0	0	0	0	0	9	4	5
2	0	0	0	0	0	0	0	0	70	140	35	9
3	0	0	0	0	0	0	0	0	19	7	42	194
4	0	0	0	0	0	0	0	0	0	47	89	94
5	0	0	0	0	0	0	0	0	5	0	130	78
6	0	0	0	0	0	0	0	0	0	0	27	72

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	0	0	0	0	0	0	0	0	89	156	81	208
<b>2nd</b>	0	0	0	0	0	0	0	0	5	47	246	244

**Table Daily Rainfall**

Station : **Kampili**  
 Year : **1975**

Unit: mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	24	0	8	0	0	0	0	0	0	0	0	3
2	3	0	0	0	0	0	0	0	15	0	0	6
3	0	13	0	0	7	2	0	0	0	20	27	0
4	0	0	28	2	0	0	0	0	0	15	0	0
5	0	17	71	3	12	0	0	0	20	5	0	50
6	0	0	29	3	19	0	0	0	0	10	0	59
7	0	0	11	0	0	5	0	0	0	0	0	2
8	0	15	6	0	0	0	0	4	0	20	0	0
9	6	25	0	0	21	0	0	0	0	5	0	25
10	0	32	0	0	0	0	0	0	0	2	14	0
11	59	50	0	1	0	0	2	4	0	0	8	64
12	0	24	2	10	0	0	0	5	0	0	5	45
13	39	3	4	12	4	0	0	0	0	0	0	11
14	30	0	26	0	5	14	0	0	0	0	30	23
15	24	40	18	9	0	0	0	0	0	0	25	58
16	32	16	0	5	0	0	0	0	5	0	15	15
17	0	25	22	9	0	3	3	0	0	0	0	12
18	2	0	0	61	0	0	8	0	0	0	0	2
19	0	0	4	2	6	0	0	0	0	0	10	0
20	13	0	22	0	19	0	0	0	0	0	0	0
21	5	0	0	120	0	0	0	0	0	0	0	0
22	0	0	24	0	0	0	25	0	0	0	5	0
23	4	0	6	0	0	0	0	0	13	11	15	0
24	12	3	0	59	0	0	0	0	0	48	50	31
25	77	56	5	0	0	0	30	0	0	4	13	0
26	5	16	2	0	0	0	0	0	2	0	20	0
27	10	10	0	0	0	0	10	0	14	0	0	4
28	17	0	7	30	0	0	0	0	0	9	11	20
29	0		0	55	6	0	0	0	0	5	20	29
30	0		15	0	0	0	4	0	0	0	58	39
31	0		0		0		0	0		0		15

<b>Monthly</b>	362	345	310	381	99	24	82	13	69	154	326	513
<b>Rainy Days</b>	17	15	19	15	9	4	7	3	6	12	16	20
<b>Max.</b>	77	56	71	120	21	14	30	5	20	48	58	64
<b>Average</b>	12	12	10	13	3	1	3	0	2	5	11	17

<b>Annual</b> :	2678	<b>No.</b> :	143	<b>Max.</b> :	120	<b>Ave.</b> :	7
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	27	30	107	5	19	2	0	0	35	40	27	59
2	6	72	46	3	40	5	0	4	0	37	14	86
3	152	117	50	32	9	14	2	9	0	0	68	201
4	47	41	48	77	25	3	11	0	5	0	25	29
5	98	59	35	179	0	0	55	0	13	63	83	31
6	32	26	24	85	6	0	14	0	16	14	109	107

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	185	219	203	40	68	21	2	13	35	77	109	346
<b>2nd</b>	177	126	107	341	31	3	80	0	34	77	217	167



**Table Daily Rainfall**

Station : **Kampili**  
 Year : **1976**

Unit: mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	5	0	7	5	0	0	3	0	0	0	0	3
2	0	0	14	0	8	0	0	0	0	0	0	0
3	0	125	17	0	0	0	0	0	0	0	17	0
4	0	0	0	0	0	0	0	0	0	0	5	6
5	18	18	0	0	14	0	0	0	0	0	0	42
6	0	3	0	0	10	0	0	0	0	0	0	9
7	34	2	0	0	0	12	0	0	0	0	0	16
8	35	0	0	0	0	0	0	0	0	0	5	6
9	33	13	22	0	0	0	0	0	0	0	39	13
10	19	3	0	0	5	0	0	0	0	0	0	5
11	66	22	4	0	0	0	0	0	0	0	7	0
12	150	1	54	0	0	0	0	0	0	0	3	0
13	70	18	0	0	0	0	5	0	0	0	1	24
14	62	1	4	0	0	0	0	0	0	0	0	32
15	50	0	5	0	0	0	0	0	0	0	0	34
16	49	0	19	16	0	0	0	0	0	0	0	12
17	16	0	10	0	0	0	0	0	0	0	85	0
18	11	39	19	0	0	0	0	0	0	0	17	2
19	0	1	37	0	0	0	0	0	0	0	50	45
20	0	0	39	0	0	0	0	0	0	0	0	6
21	0	33	36	0	0	0	0	0	0	0	0	33
22	1	11	5	0	0	0	0	0	0	0	0	11
23	19	10	26	0	0	0	0	0	0	0	0	0
24	10	46	0	0	0	0	0	0	0	0	12	0
25	0	22	0	3	0	0	0	0	0	2	8	0
26	10	3	0	0	0	0	0	0	0	3	2	0
27	0	0	2	0	0	2	0	0	0	1	0	0
28	0	8	21	2	0	0	0	0	0	12	0	0
29	0	0	0	0	0	0	0	0	0	40	0	10
30	0	0	0	0	0	0	0	0	0	5	4	0
31	0	0	0	0	0	0	0	0	0	35	0	0

<b>Monthly</b>	658	379	341	26	37	14	8	0	0	98	255	309
<b>Rainy Days</b>	18	19	18	4	4	2	2	0	0	7	14	18
<b>Max.</b>	150	125	54	16	14	12	5	0	0	40	85	45
<b>Average</b>	21	13	11	1	1	0	0	0	0	3	9	10

<b>Annual</b> :	2125	<b>No.</b> :	106	<b>Max.</b> :	150	<b>Ave.</b> :	6
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	23	143	38	5	22	0	3	0	0	0	22	51
2	121	21	22	0	15	12	0	0	0	0	44	49
3	398	42	67	0	0	0	5	0	0	0	11	90
4	76	40	124	16	0	0	0	0	0	0	152	65
5	30	122	67	3	0	0	0	0	0	2	20	44
6	10	11	23	2	0	2	0	0	0	96	6	10

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	542	206	127	5	37	12	8	0	0	0	77	190
<b>2nd</b>	116	173	214	21	0	2	0	0	0	98	178	119

**Table Daily Rainfall**

Station : **Kampili**  
 Year : **1977**

Unit: mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	5	1	5	3	0	0	0	0	0	0	73
2	41	17	0	0	0	0	0	0	0	0	0	22
3	4	0	0	3	0	0	0	0	0	0	0	0
4	46	0	0	3	2	0	0	0	0	0	0	0
5	10	28	0	0	5	0	0	8	0	0	0	7
6	16	6	0	3	2	0	0	0	0	0	0	0
7	40	5	56	4	0	0	0	0	0	0	0	2
8	30	0	3	0	0	0	0	0	0	0	0	0
9	40	21	0	3	0	0	0	0	0	0	0	0
10	25	13	0	50	0	0	0	0	0	0	0	48
11	54	10	0	22	0	0	0	0	0	0	0	6
12	12	10	0	5	0	0	0	8	0	0	0	0
13	14	47	0	3	0	13	0	25	0	0	0	10
14	7	5	3	0	0	15	0	0	0	0	0	9
15	23	101	0	3	0	38	0	0	0	0	0	34
16	1	26	0	0	0	0	0	0	0	0	5	7
17	0	75	14	0	0	0	0	0	0	0	0	11
18	5	60	0	0	0	14	0	0	0	0	0	1
19	125	16	9	0	0	2	0	0	0	0	23	61
20	25	15	3	0	0	0	0	0	0	0	16	0
21	18	0	0	0	0	0	0	0	0	0	0	25
22	50	12	0	3	0	0	0	0	0	0	0	0
23	28	51	0	0	0	0	0	0	0	0	0	10
24	215	15	2	0	0	0	0	0	0	0	15	5
25	80	12	37	0	0	0	0	0	0	0	8	0
26	8	30	0	0	0	0	0	0	0	0	3	0
27	0	24	0	0	0	0	0	0	0	0	0	0
28	0	14	0	0	0	0	0	0	0	0	2	15
29	0		0	0	0	0	0	0	0	0	8	12
30	0		0	0	0	0	0	0	0	0	4	0
31	59		0		0		0	0		0		35

<b>Monthly</b>	976	618	128	107	12	82	0	41	0	0	84	393
<b>Rainy Days</b>	25	24	9	12	4	5	0	3	0	0	9	19
<b>Max.</b>	215	101	56	50	5	38	0	25	0	0	23	73
<b>Average</b>	31	22	4	4	0	3	0	1	0	0	3	13

<b>Annual</b> :	2441	<b>No.</b> :	110	<b>Max.</b> :	215	<b>Ave.</b> :	7
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	101	50	1	11	10	0	0	8	0	0	0	102
2	151	45	59	60	2	0	0	0	0	0	0	50
3	110	173	3	33	0	66	0	33	0	0	0	59
4	156	192	26	0	0	16	0	0	0	0	44	80
5	391	90	39	3	0	0	0	0	0	0	23	40
6	67	68	0	0	0	0	0	0	0	0	17	62

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	362	268	63	104	12	66	0	41	0	0	0	211
<b>2nd</b>	614	350	65	3	0	16	0	0	0	0	84	182

**Table Daily Rainfall**

Station : **Kampili**  
 Year : **1978**

Unit: mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	15	0	6	3	0	20	0	5	0	0	0	0
2	4	8	0	0	0	0	3	0	4	0	0	0
3	46	95	0	0	15	0	15	0	10	0	3	29
4	0	15	0	0	0	0	0	0	12	0	0	11
5	6	14	3	65	0	0	4	0	0	14	0	12
6	0	15	0	5	0	7	72	0	0	0	0	25
7	15	0	7	9	0	9	0	0	0	0	4	0
8	12	20	22	30	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	40	0	0	0
10	40	0	50	0	10	0	0	0	2	0	0	13
11	81	21	12	0	4	3	15	3	0	0	7	0
12	62	4	14	0	15	0	0	0	8	0	87	12
13	20	4	0	0	0	0	0	4	0	0	0	10
14	0	6	0	0	4	0	8	0	3	0	0	8
15	0	7	0	0	17	17	0	2	0	0	0	18
16	0	0	11	0	67	0	0	0	0	0	33	0
17	0	0	0	0	55	0	0	0	0	0	0	10
18	0	32	0	0	0	0	0	11	10	18	0	0
19	35	14	0	0	0	0	0	0	2	0	34	11
20	5	30	3	0	0	87	0	0	0	5	15	0
21	4	34	0	0	0	0	10	0	0	0	65	16
22	40	30	0	0	0	0	0	0	0	0	45	78
23	20	10	0	0	0	0	0	0	0	0	0	0
24	9	6	33	9	0	0	0	0	0	7	10	32
25	33	7	21	0	7	0	0	0	0	0	0	103
26	23	0	0	0	0	0	0	0	0	0	30	10
27	0	15	12	0	5	4	0	0	0	0	0	16
28	0	1	8	0	0	23	0	0	18	0	0	66
29	0		7	91	0	0	0	16	0	0	0	35
30	0		0	0	5	0	3	0	0	0	0	20
31	0		0		28		10	0		0		23

<b>Monthly</b>	470	388	209	212	232	170	140	41	109	44	333	558
<b>Rainy Days</b>	18	21	14	7	12	8	9	6	10	4	11	21
<b>Max.</b>	81	95	50	91	67	87	72	16	40	18	87	103
<b>Average</b>	15	14	7	7	7	6	5	1	4	1	11	18

<b>Annual</b> :	2906	<b>No.</b> :	141	<b>Max.</b> :	103	<b>Ave.</b> :	8
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	71	132	9	68	15	20	22	5	26	14	3	52
2	67	35	79	44	10	16	72	0	42	0	4	38
3	163	42	26	0	40	20	23	9	11	0	94	48
4	40	76	14	0	122	87	0	11	12	23	82	21
5	106	87	54	9	7	0	10	0	0	7	120	229
6	23	16	27	91	38	27	13	16	18	0	30	170

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	301	209	114	112	65	56	117	14	79	14	101	138
<b>2nd</b>	169	179	95	100	167	114	23	27	30	30	232	420

**Table Daily Rainfall**

Station : **Kampili**  
 Year : **1979**

Unit: mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	16	0	0	0	0	0	0	0	0	0	68
2	23	250	0	0	3	0	0	0	0	0	0	0
3	9	0	15	0	0	0	0	0	0	0	0	29
4	0	0	15	0	48	0	0	0	0	0	0	90
5	3	13	0	0	0	45	0	9	0	8	0	0
6	6	9	10	3	3	64	0	0	0	0	0	15
7	65	0	13	12	0	0	0	0	0	0	0	23
8	97	0	55	19	24	0	0	19	0	0	0	95
9	110	0	60	0	0	6	0	0	0	0	0	65
10	58	21	0	0	10	0	0	0	0	0	0	15
11	80	17	0	0	0	0	0	0	0	0	0	0
12	53	0	44	0	11	0	0	0	0	0	0	8
13	10	0	42	0	13	0	0	0	0	0	0	0
14	13	14	6	0	0	0	0	0	0	0	0	5
15	10	0	8	0	0	0	0	0	0	0	0	0
16	28	7	0	0	0	0	0	0	0	0	0	0
17	23	0	0	0	0	0	0	0	0	0	0	0
18	0	12	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	8	0
20	0	15	0	0	0	3	0	0	0	0	0	0
21	0	59	0	0	0	10	0	0	0	0	5	41
22	10	13	37	0	0	0	0	0	0	0	0	0
23	14	0	0	0	0	0	0	0	0	26	11	12
24	0	30	0	0	0	0	0	0	0	0	3	6
25	0	25	0	0	0	0	0	0	0	0	6	0
26	18	33	10	13	0	0	0	0	5	0	0	0
27	13	28	33	19	0	0	0	0	0	0	10	14
28	0	65	0	0	23	0	0	0	0	0	11	0
29	14		0	10	0	0	0	0	0	0	15	3
30	0		30	8	0	0	0	0	8	0	0	5
31	0		7		0		0	0		0		13

<b>Monthly</b>	657	627	385	84	135	128	0	28	13	34	69	507
<b>Rainy Days</b>	20	17	15	7	8	5	0	2	2	2	8	17
<b>Max.</b>	110	250	60	19	48	64	0	19	8	26	15	95
<b>Average</b>	21	22	12	3	4	4	0	1	0	1	2	16

<b>Annual</b> :	2667	<b>No.</b> :	103	<b>Max.</b> :	250	<b>Ave.</b> :	7
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	35	279	30	0	51	45	0	9	0	8	0	187
2	336	30	138	34	37	70	0	19	0	0	0	213
3	166	31	100	0	24	0	0	0	0	0	0	13
4	51	34	0	0	0	3	0	0	0	0	8	0
5	24	127	37	0	0	10	0	0	0	26	25	59
6	45	126	80	50	23	0	0	0	13	0	36	35

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	537	340	268	34	112	115	0	28	0	8	0	413
<b>2nd</b>	120	287	117	50	23	13	0	0	13	26	69	94

**Table Daily Rainfall**

Station : **Kampili**  
 Year : **1980**

Unit: mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0	33	0	0	0	0	0	0	0	0	0
2	8	0	0	0	0	0	0	0	0	0	0	17
3	7	8	0	0	4	0	0	0	0	0	0	0
4	44	24	0	0	9	0	0	0	0	0	0	3
5	3	0	0	0	12	0	0	0	0	0	0	29
6	32	17	0	0	0	0	0	0	0	0	0	0
7	15	51	0	3	7	0	0	11	0	0	13	26
8	31	13	0	24	0	0	0	0	0	0	11	3
9	36	0	0	12	0	0	0	0	0	0	0	3
10	64	3	12	5	0	0	0	0	0	0	7	0
11	50	18	0	0	0	0	0	0	0	0	16	15
12	23	23	0	0	0	0	0	0	0	0	84	80
13	25	57	6	0	0	0	0	0	0	0	0	50
14	3	61	117	3	0	0	0	0	0	0	0	45
15	9	31	70	3	0	0	0	0	0	0	0	70
16	33	23	0	8	0	0	0	0	0	0	0	0
17	5	53	0	0	0	0	0	0	0	0	0	0
18	0	0	20	20	0	0	0	0	0	0	6	9
19	100	0	18	0	0	0	0	0	0	0	0	5
20	47	0	15	0	0	0	0	0	9	0	20	10
21	82	3	23	0	0	0	0	0	5	6	0	16
22	3	0	0	0	0	0	0	0	0	0	0	29
23	30	14	0	0	0	0	0	0	0	14	3	6
24	0	5	0	0	8	0	0	0	0	0	5	30
25	24	13	5	0	0	0	0	0	0	0	10	76
26	0	0	0	3	0	0	0	0	0	0	0	3
27	0	0	0	0	0	0	0	0	0	0	0	3
28	0	0	0	5	0	0	0	0	0	38	0	15
29	0	0	0	0	3	0	0	0	0	0	0	0
30	0	0	0	0	7	0	0	0	0	0	0	37
31	0	0	11	0	0	0	0	0	0	0	0	34

<b>Monthly</b>	674	417	330	86	50	0	0	11	14	58	175	614
<b>Rainy Days</b>	22	17	11	10	7	0	0	1	2	3	10	24
<b>Max.</b>	100	61	117	24	12	0	0	11	9	38	84	80
<b>Average</b>	22	14	11	3	2	0	0	0	0	2	6	20

<b>Annual</b> :	2429	<b>No.</b> :	107	<b>Max.</b> :	117	<b>Ave.</b> :	7
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	62	32	33	0	25	0	0	0	0	0	0	49
2	178	84	12	44	7	0	0	11	0	0	31	32
3	110	190	193	6	0	0	0	0	0	0	100	260
4	185	76	53	28	0	0	0	0	9	0	26	24
5	139	35	28	0	8	0	0	0	5	20	18	157
6	0	0	11	8	10	0	0	0	0	38	0	92

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	350	306	238	50	32	0	0	11	0	0	131	341
<b>2nd</b>	324	111	92	36	18	0	0	0	14	58	44	273

**Table Daily Rainfall**

Station : **Kampili**  
 Year : **1981**

Unit: mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	17	0	0	48	0	0	0	0	0	5	0	3
2	13	0	34	0	35	0	0	0	0	0	0	0
3	13	3	0	30	0	0	45	0	0	0	11	5
4	15	8	0	0	0	0	3	0	0	0	0	0
5	6	0	0	0	10	0	0	0	0	6	11	0
6	0	3	0	0	3	0	0	0	10	0	12	50
7	85	10	3	0	5	0	3	3	0	25	8	12
8	33	28	0	3	5	0	5	0	0	8	0	25
9	5	0	0	0	5	0	3	0	16	0	0	55
10	8	8	0	59	0	0	0	0	0	0	0	50
11	45	33	8	0	5	0	0	0	0	0	0	25
12	24	18	3	0	0	0	3	0	0	0	10	10
13	0	6	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	6	0	3	0	0	0	0	0
16	0	49	0	5	0	0	0	0	0	0	0	0
17	17	9	0	0	0	0	0	0	0	0	13	13
18	25	0	0	3	0	5	0	0	0	0	38	12
19	0	0	0	3	0	25	0	0	0	0	0	13
20	5	0	3	0	0	0	0	0	0	0	0	0
21	3	0	0	0	0	0	0	10	0	0	0	0
22	3	0	0	0	0	0	5	0	0	0	0	5
23	12	0	0	16	0	0	0	0	3	18	0	0
24	0	0	33	0	0	0	0	0	0	0	10	70
25	0	0	17	0	0	0	0	0	0	0	20	5
26	0	0	3	3	11	3	0	0	0	0	18	0
27	50	5	9	23	0	0	0	0	0	0	18	0
28	13	20	35	0	0	0	0	0	0	0	25	0
29	8		8	0	0	0	0	0	0	0	5	13
30	8		0	5	0	0	0	0	3	0	0	0
31	0		1		0		0	0		0		0

<b>Monthly</b>	408	200	157	198	85	33	70	13	32	62	199	366
<b>Rainy Days</b>	21	13	12	11	9	3	8	2	4	5	13	16
<b>Max.</b>	85	49	35	59	35	25	45	10	16	25	38	70
<b>Average</b>	13	7	5	7	3	1	2	0	1	2	7	12

<b>Annual</b> :	1823	<b>No.</b> :	117	<b>Max.</b> :	85	<b>Ave.</b> :	5
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	64	11	34	78	45	0	48	0	0	11	22	8
2	131	49	3	62	18	0	11	3	26	33	20	192
3	69	57	11	0	11	0	6	0	0	0	10	35
4	47	58	3	11	0	30	0	0	0	0	51	38
5	18	0	50	16	0	0	5	10	3	18	30	80
6	79	25	56	31	11	3	0	0	3	0	66	13

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	264	117	48	140	74	0	65	3	26	44	52	235
<b>2nd</b>	144	83	109	58	11	33	5	10	6	18	147	131

**Table Daily Rainfall**

Station : **Kampili**  
 Year : **1982**

Unit: mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0	0	0	25	0	0	0	0	0	5	0
2	0	10	0	0	0	0	0	0	0	0	0	20
3	0	0	10	0	0	0	0	0	0	0	0	0
4	0	13	25	0	0	0	0	0	0	0	0	0
5	0	3	8	0	0	0	0	0	0	0	0	0
6	0	10	3	0	0	0	0	0	0	0	0	7
7	0	55	5	0	0	0	0	0	0	0	0	4
8	0	30	0	0	0	0	0	0	0	0	0	0
9	0	0	8	0	0	3	0	0	0	0	0	0
10	45	0	0	0	0	0	0	0	0	0	0	0
11	40	0	5	0	3	0	0	0	0	0	0	0
12	25	50	0	0	0	0	0	0	0	0	0	6
13	10	25	0	0	0	0	0	0	0	0	0	3
14	0	28	0	0	0	0	0	0	0	0	0	4
15	0	0	0	0	0	0	0	0	0	0	0	5
16	35	0	15	0	0	0	0	0	0	0	0	58
17	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	10	0	0	0	0	0	0	0	0	0
19	0	0	0	15	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	8	13
21	0	0	0	0	0	0	0	0	0	0	5	8
22	0	0	0	25	0	0	0	0	0	0	3	0
23	8	0	0	5	0	0	0	0	0	0	0	0
24	0	17	0	3	0	0	0	0	0	0	0	0
25	5	0	25	0	0	0	0	0	0	0	0	65
26	18	0	13	0	0	0	0	0	0	0	0	45
27	50	0	0	0	0	0	0	0	0	0	0	15
28	33	0	0	0	0	0	0	0	0	0	0	0
29	23		0	8	0	0	0	0	0	0	0	75
30	5		15	0	0	0	0	0	0	0	5	29
31	7		0		0		0	0		0		70

<b>Monthly</b>	304	241	142	56	28	3	0	0	0	0	26	427
<b>Rainy Days</b>	13	10	12	5	2	1	0	0	0	0	5	16
<b>Max.</b>	50	55	25	25	25	3	0	0	0	0	8	75
<b>Average</b>	10	9	5	2	1	0	0	0	0	0	1	14

<b>Annual</b> :	1227	<b>No.</b> :	64	<b>Max.</b> :	75	<b>Ave.</b> :	3
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	26	43	0	25	0	0	0	0	0	5	20
2	45	95	16	0	0	3	0	0	0	0	0	11
3	75	103	5	0	3	0	0	0	0	0	0	18
4	35	0	25	15	0	0	0	0	0	0	8	71
5	13	17	25	33	0	0	0	0	0	0	8	73
6	136	0	28	8	0	0	0	0	0	0	5	234

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	120	224	64	0	28	3	0	0	0	0	5	49
<b>2nd</b>	184	17	78	56	0	0	0	0	0	0	21	378

**Table Daily Rainfall**

Station : **Kampili**  
 Year : **1983**

Unit: mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	10	14	0	68	0	0	0	0	0	0	0	17
2	0	0	0	0	0	23	0	0	0	0	0	33
3	16	0	0	0	0	0	0	0	0	0	0	0
4	24	30	0	0	50	0	0	0	0	0	0	55
5	0	0	0	0	0	0	0	0	0	31	0	0
6	0	0	0	0	0	0	3	0	0	0	0	0
7	0	0	0	15	0	0	18	0	0	0	16	0
8	5	0	25	0	0	0	0	0	0	0	3	0
9	0	0	5	45	3	0	0	0	0	0	0	0
10	0	0	0	0	5	0	0	0	0	0	0	0
11	7	0	0	0	4	0	0	0	0	0	0	15
12	48	25	0	0	0	0	0	0	0	11	3	0
13	20	0	0	75	0	0	0	0	0	6	33	17
14	0	65	0	0	50	0	0	0	0	0	0	0
15	5	0	0	0	0	0	0	0	0	0	21	3
16	7	11	0	8	0	0	0	0	0	0	35	0
17	39	0	30	0	6	0	3	0	0	7	3	30
18	0	0	0	0	0	0	0	0	0	24	0	0
19	40	0	0	25	0	0	0	0	0	5	0	0
20	0	3	0	0	0	0	0	0	0	0	0	0
21	0	3	7	0	0	0	0	0	0	0	10	16
22	0	0	8	10	0	0	0	0	0	0	5	0
23	0	11	5	3	0	0	0	0	0	0	3	0
24	0	60	0	45	0	0	0	0	0	0	20	0
25	0	0	0	0	0	0	0	0	0	0	165	60
26	20	0	0	0	0	0	0	0	3	0	45	40
27	7	0	5	10	3	25	0	0	0	0	0	17
28	24	0	17	0	0	0	25	0	0	0	0	0
29	0		0	0	0	3	0	0	0	28	40	8
30	0		18	0	0	0	0	0	0	0	80	190
31	0		0	0	0		0	0		0		56

<b>Monthly</b>	272	222	120	304	121	51	49	0	3	112	482	557
<b>Rainy Days</b>	14	9	9	10	7	3	4	0	1	7	15	14
<b>Max.</b>	48	65	30	75	50	25	25	0	3	31	165	190
<b>Average</b>	9	8	4	10	4	2	2	0	0	4	16	18

<b>Annual</b> :	2293	<b>No.</b> :	93	<b>Max.</b> :	190	<b>Ave.</b> :	6
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	50	44	0	68	50	23	0	0	0	31	0	105
2	5	0	30	60	8	0	21	0	0	0	19	0
3	80	90	0	75	54	0	0	0	0	17	57	35
4	86	14	30	33	6	0	3	0	0	36	38	30
5	0	74	20	58	0	0	0	0	0	0	203	76
6	51	0	40	10	3	28	25	0	3	28	165	311

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	135	134	30	203	112	23	21	0	0	48	76	140
<b>2nd</b>	137	88	90	101	9	28	28	0	3	64	406	417



**Table Daily Rainfall**

Station : **Kampili**  
 Year : **1984**

Unit: mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	40	3	27	0	0	0	0	0	0	33	0	10
2	31	19	5	0	3	0	0	0	0	0	0	0
3	3	0	0	0	3	8	0	0	0	0	0	0
4	18	47	9	7	0	0	0	0	5	24	0	0
5	21	48	0	19	0	0	0	0	0	0	0	0
6	0	0	0	3	35	3	0	0	50	0	0	0
7	0	0	7	7	0	0	0	0	0	0	0	0
8	0	61	5	7	43	0	0	0	0	0	0	0
9	17	92	145	4	3	0	0	0	3	0	40	0
10	0	28	17	0	66	0	0	0	0	0	42	50
11	0	0	110	0	0	0	0	0	3	0	0	53
12	0	13	4	73	0	0	0	0	0	0	0	0
13	0	27	30	3	0	0	0	0	0	0	0	0
14	19	0	21	17	0	0	0	0	58	0	5	48
15	11	52	0	19	13	3	0	0	0	0	12	45
16	0	24	0	54	0	0	0	0	23	0	0	66
17	0	68	0	23	5	3	0	0	0	0	0	38
18	68	21	0	36	0	0	0	5	0	0	0	0
19	12	36	0	0	0	23	3	0	0	0	0	10
20	10	8	12	0	0	0	3	0	0	0	0	80
21	0	18	0	0	8	0	0	0	0	0	0	0
22	3	0	19	0	0	0	0	0	0	0	9	0
23	35	0	3	0	0	3	0	0	0	0	4	0
24	0	33	9	15	0	0	0	0	0	0	42	0
25	0	15	3	0	0	0	11	0	0	0	45	0
26	9	0	0	0	0	0	0	0	0	0	0	0
27	5	0	0	13	0	0	0	0	0	0	0	65
28	5	0	0	3	0	0	0	0	0	0	43	23
29	146	0	0	0	3	0	0	0	0	0	8	20
30	35	0	0	0	0	0	0	0	0	0	0	70
31	18	0	0	0	0	0	0	0	0	0	0	3

<b>Monthly</b>	506	613	426	303	182	43	17	5	142	57	250	581
<b>Rainy Days</b>	19	18	16	16	10	6	3	1	6	2	10	14
<b>Max.</b>	146	92	145	73	66	23	11	5	58	33	45	80
<b>Average</b>	16	21	14	10	6	1	1	0	5	2	8	19

<b>Annual</b> :	3125	<b>No.</b> :	121	<b>Max.</b> :	146	<b>Ave.</b> :	9
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	113	117	41	26	6	8	0	0	5	57	0	10
2	17	181	174	21	147	3	0	0	53	0	82	50
3	30	92	165	112	13	3	0	0	61	0	17	146
4	90	157	12	113	5	26	6	5	23	0	0	194
5	38	66	34	15	8	3	11	0	0	0	100	0
6	218	0	0	16	3	0	0	0	0	0	51	181

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	160	390	380	159	166	14	0	0	119	57	99	206
<b>2nd</b>	346	223	46	144	16	29	17	5	23	0	151	375

**Table Daily Rainfall**

Station : **Kampili**  
 Year : **1985**

Unit: mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0	62	10	0	20	0	0	0	0	10	5
2	0	0	0	3	0	0	0	0	0	0	0	0
3	0	0	0	13	0	0	0	0	0	0	0	0
4	0	8	73	0	0	0	0	0	0	0	0	0
5	41	0	58	0	0	0	0	0	0	0	0	3
6	29	0	100	0	0	25	0	0	0	0	0	0
7	23	0	60	5	0	13	0	0	0	0	0	0
8	0	5	39	0	0	0	0	0	0	0	5	0
9	0	40	41	0	0	0	0	0	0	0	17	30
10	0	0	55	50	0	15	0	0	0	0	6	37
11	58	0	0	6	0	0	23	0	0	0	8	40
12	0	0	0	3	25	0	7	0	0	0	0	11
13	0	10	0	0	0	0	0	0	0	0	0	0
14	0	43	0	0	45	0	0	0	0	0	0	0
15	0	100	0	3	0	0	0	0	0	5	0	0
16	0	3	0	25	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	53	0
18	30	11	0	0	0	0	10	0	0	0	5	0
19	0	0	0	0	0	0	0	0	3	0	0	48
20	23	0	0	0	0	0	0	0	0	0	13	0
21	0	0	5	0	0	0	0	0	0	0	0	17
22	6	13	0	0	0	0	0	0	8	0	0	20
23	0	0	0	0	0	0	5	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	25	5	0	0	0	0	6	30	3
26	140	0	0	0	3	0	0	0	0	5	31	0
27	15	5	0	20	0	0	0	0	0	3	0	0
28	0	35	0	50	4	0	0	0	0	5	5	33
29	0		0	0	7	0	0	0	0	10	25	68
30	0		0	0	0	0	0	3	0	0	6	0
31	68		0		0		0	0		0		0

<b>Monthly</b>	433	273	493	213	89	73	45	3	11	34	214	315
<b>Rainy Days</b>	10	11	9	12	6	4	4	1	2	6	13	12
<b>Max.</b>	140	100	100	50	45	25	23	3	8	10	53	68
<b>Average</b>	14	10	16	7	3	2	1	0	0	1	7	10

<b>Annual</b> :	2196	<b>No.</b> :	90	<b>Max.</b> :	140	<b>Ave.</b> :	6
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	41	8	193	26	0	20	0	0	0	0	10	8
2	52	45	295	55	0	53	0	0	0	0	28	67
3	58	153	0	12	70	0	30	0	0	5	8	51
4	53	14	0	25	0	0	10	0	3	0	71	48
5	6	13	5	25	5	0	5	0	8	6	30	40
6	223	40	0	70	14	0	0	3	0	23	67	101

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	151	206	488	93	70	73	30	0	0	5	46	126
<b>2nd</b>	282	67	5	120	19	0	15	3	11	29	168	189

**Table Daily Rainfall**

Station : **Kampili**  
 Year : **1986**

Unit: mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0	25	0	0	0	0	0	0	0	0	33
2	0	0	0	0	0	0	5	0	0	0	5	0
3	22	45	45	0	0	38	0	0	0	0	20	0
4	0	0	80	0	3	13	0	0	0	23	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0
6	23	50	0	13	0	0	0	0	0	35	0	0
7	0	35	0	0	5	0	0	0	0	0	11	15
8	0	0	0	48	15	5	0	0	0	8	0	18
9	23	5	5	0	0	0	0	0	0	33	0	8
10	8	30	25	0	0	35	0	0	0	85	0	0
11	100	0	20	0	0	0	0	0	0	0	0	0
12	95	50	60	0	78	0	0	0	0	0	38	0
13	130	0	23	11	0	10	0	0	0	0	0	0
14	78	0	0	20	0	0	3	0	0	30	30	20
15	81	0	13	0	0	0	0	0	0	0	0	30
16	0	0	5	0	0	0	0	0	0	0	0	0
17	25	20	5	25	0	0	0	0	0	15	65	10
18	15	0	25	21	0	0	0	0	0	0	0	3
19	30	0	81	0	0	0	0	0	0	20	0	0
20	13	0	0	0	0	0	0	0	0	8	0	0
21	0	40	0	0	0	0	0	0	0	0	0	10
22	25	0	0	0	0	0	0	0	0	23	0	18
23	40	5	65	0	0	50	0	0	0	15	0	0
24	0	50	0	0	0	0	0	0	0	0	0	18
25	25	0	0	5	0	0	0	0	0	35	33	0
26	70	0	5	0	0	0	0	0	0	18	13	0
27	120	25	0	0	0	0	3	0	0	0	0	60
28	40	0	25	0	0	0	0	0	0	0	0	5
29	55		6	0	0	0	0	0	33	0	0	8
30	0		0	0	0	0	0	0	0	0	0	50
31	0		0		0		0	0		0		5

<b>Monthly</b>	1018	355	513	143	101	151	11	0	33	348	215	311
<b>Rainy Days</b>	20	11	17	7	4	6	3	0	1	13	8	16
<b>Max.</b>	130	50	81	48	78	50	5	0	33	85	65	60
<b>Average</b>	33	13	17	5	3	5	0	0	1	11	7	10

<b>Annual</b> :	3199	<b>No.</b> :	106	<b>Max.</b> :	130	<b>Ave.</b> :	9
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	22	45	150	0	3	51	5	0	0	23	25	33
2	54	120	30	61	20	40	0	0	0	161	11	41
3	484	50	116	31	78	10	3	0	0	30	68	50
4	83	20	116	46	0	0	0	0	0	43	65	13
5	90	95	65	5	0	50	0	0	0	73	33	46
6	285	25	36	0	0	0	3	0	33	18	13	128

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	560	215	296	92	101	101	8	0	0	214	104	124
<b>2nd</b>	458	140	217	51	0	50	3	0	33	134	111	187

**Table Daily Rainfall**

Station : **Kampili**  
 Year : **1987**

Unit: mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	25	15	3	0	0		0	0	0	0	0
2	0	25	0	30	0	0		0	0	0	0	0
3	0	5	0	0	10	0		0	0	0	0	11
4	5	18	0	3	0	0		0	0	0	0	63
5	40	5	0	0	3	10		0	0	0	3	0
6	10	0	0	0	13	0		0	0	0	36	44
7	8	25	80	30	35	0		0	0	0	13	0
8	60	10	0	48	0	0		0	0	0	0	38
9	45	5	10	0	0	0		0	0	0	0	0
10	5	40	15	0	13	0		0	0	0	0	9
11	10	0	0	0	0	0		0	0	0	0	0
12	90	18	0	0	0	0		0	0	0	0	0
13	21	50	0	0	0	0		0	0	0	3	0
14	88	0	0	0	0	0		0	0	0	25	0
15	91	5	10	0	25	0		0	0	0	0	84
16	66	0	13	0	0	0		0	0	0	0	295
17	85	0	18	0	0	0		0	0	0	5	197
18	10	3	23	0	0	0		0	0	0	8	25
19	18	5	0	0	0	0		0	0	0	0	69
20	5	43	0	0	0	0		0	0	0	0	34
21	50	25	0	0	0	0		0	0	0	0	96
22	62	18	10	0	0	0		0	0	0	0	110
23	23	15	13	0	0	0		0	0	0	0	137
24	36	16	0	50	0	0		0	0	0	0	25
25	23	5	100	0	0	0		0	0	0	0	34
26	18	10	10	0	0	0		0	0	0	0	63
27	65	0	23	0	0	0		0	0	0	0	45
28	28	0	0	0	0	0		0	0	0	19	0
29	50		25	3	0	0		0	0	0	0	0
30	30		20	0	0	0		0	0	8	0	0
31	87		0		3			0				0

<b>Monthly</b>	1129	371	385	167	102	10	0	0	0	8	112	1379
<b>Rainy Days</b>	28	21	15	7	7	1	0	0	0	1	8	18
<b>Max.</b>	91	50	100	50	35	10	0	0	0	8	36	295
<b>Average</b>	36	13	12	6	3	0	0	0	0	0	4	44

<b>Annual</b> :	3663	<b>No.</b> :	106	<b>Max.</b> :	295	<b>Ave.</b> :	10
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	45	78	15	36	13	10	0	0	0	0	3	74
2	128	80	105	78	61	0	0	0	0	0	49	91
3	300	73	10	0	25	0	0	0	0	0	28	84
4	184	51	54	0	0	0	0	0	0	0	13	620
5	194	79	123	50	0	0	0	0	0	0	0	402
6	278	10	78	3	3	0	0	0	0	8	19	108

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	473	231	130	114	99	10	0	0	0	0	80	249
<b>2nd</b>	656	140	255	53	3	0	0	0	0	8	32	1130

**Table Daily Rainfall**

Station : **Kampili**  
 Year : **1988**

Unit: mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0	21	0	3	0	0	15	0	5	15	40
2	0	0	75	55	0	0	0	0	0	0	0	75
3	0	140	0	0	0	0	0	0	0	0	0	28
4	0	40	0	0	40	0	0	0	32	0	0	13
5	0	0	25	0	23	0	0	0	34	0	0	0
6	0	50	0	0	0	0	0	0	0	0	32	0
7	0	0	0	0	0	0	0	0	0	0	3	15
8	0	0	0	0	0	0	0	0	0	0	0	0
9	42	17	0	0	0	5	0	0	3	0	0	0
10	3	36	7	0	0	25	0	0	0	0	11	40
11	0	40	0	85	0	0	0	0	0	59	59	30
12	0	150	0	0	0	0	0	0	0	0	25	0
13	0	0	60	0	69	0	0	0	0	3	3	100
14	0	0	0	10	0	0	0	0	11	0	0	15
15	28	0	0	0	3	0	0	0	50	15	25	71
16	0	0	0	0	30	0	0	0	0	0	0	25
17	0	0	0	19	0	0	0	0	0	0	0	19
18	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	30	0	0	0	0	0	11
20	0	0	28	0	0	0	0	0	0	0	0	7
21	0	0	25	0	0	0	0	0	0	28	0	9
22	0	0	35	0	0	0	0	0	0	0	0	25
23	0	0	45	0	0	0	0	0	0	0	0	30
24	0	0	5	0	0	0	0	0	0	0	35	9
25	129	0	0	0	0	0	0	0	5	32	0	13
26	75	0	60	0	0	0	0	0	57	25	85	25
27	0	0	0	3	0	0	0	0	0	0	0	0
28	0	0	0	21	0	0	0	0	0	0	34	0
29	32	0	0	0	0	0	0	0	0	0	15	0
30	0	0	0	0	0	0	0	0	0	7	0	0
31	19	0	19	0	0	0	0	0	0	0	0	0

<b>Monthly</b>	328	473	405	193	168	60	0	15	192	174	342	600
<b>Rainy Days</b>	7	7	12	6	6	3	0	1	7	8	12	20
<b>Max.</b>	129	150	75	85	69	30	0	15	57	59	85	100
<b>Average</b>	11	16	13	6	5	2	0	0	6	6	11	19

<b>Annual</b> :	2950	<b>No.</b> :	89	<b>Max.</b> :	150	<b>Ave.</b> :	8
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	180	121	55	66	0	0	15	66	5	15	156
2	45	103	7	0	0	30	0	0	3	0	46	55
3	28	190	60	95	72	0	0	0	61	77	112	216
4	0	0	28	19	30	30	0	0	0	0	0	62
5	129	0	110	0	0	0	0	0	5	60	35	86
6	126	0	79	24	0	0	0	0	57	32	134	25

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	73	473	188	150	138	30	0	15	130	82	173	427
<b>2nd</b>	255	0	217	43	30	30	0	0	62	92	169	173

**Table Daily Rainfall**

Station : **Kampili**  
 Year : **1989**

Unit: mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0	75	5	0	0	0	0	0	0	13	15
2	0	0	0	0	0	0	0	0	0	0	0	30
3	7	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	38	5	0	15	0	0	0	7	0
5	15	0	9	63	3	25	0	0	0	0	0	25
6	0	0	5	0	0	0	0	0	0	0	0	19
7	0	0	7	13	0	23	0	0	0	0	0	0
8	0	0	25	0	0	0	0	0	0	0	50	17
9	38	0	35	0	63	0	0	0	0	0	0	75
10	0	0	0	63	0	0	0	0	0	0	100	5
11	0	0	0	36	0	0	0	0	0	0	44	28
12	0	0	0	15	0	0	0	0	0	0	0	7
13	0	0	84	0	0	0	3	0	0	0	0	21
14	0	0	0	0	11	0	0	0	0	100	0	0
15	0	13	25	0	0	0	11	0	0	7	0	0
16	3	0	15	7	0	0	0	0	0	0	7	0
17	69	0	0	0	0	0	7	0	0	3	23	21
18	0	9	0	3	0	0	0	0	0	0	50	15
19	0	11	0	0	0	0	30	0	0	5	0	0
20	0	85	0	65	0	0	0	0	0	0	0	0
21	0	15	0	44	0	34	28	0	0	0	0	0
22	0	0	0	7	0	0	0	0	0	0	11	0
23	0	0	0	0	0	0	0	0	19	25	0	0
24	73	3	0	0	0	0	19	0	5	23	0	0
25	55	0	0	15	0	0	0	0	0	0	25	0
26	140	63	0	0	0	11	3	5	0	0	0	0
27	44	0	0	0	0	0	0	0	0	0	0	44
28	69	5	0	80	0	0	0	25	0	0	0	75
29	100		5	0	0	25	0	0	0	0	0	0
30	80		0	5	0	0	0	0	0	0	0	0
31	57		0		0		0	0		0		0

<b>Monthly</b>	750	204	285	459	82	118	116	30	24	163	330	397
<b>Rainy Days</b>	13	8	10	15	4	5	8	2	2	6	10	14
<b>Max.</b>	140	85	84	80	63	34	30	25	19	100	100	75
<b>Average</b>	24	7	9	15	3	4	4	1	1	5	11	13

<b>Annual</b> :	2958	<b>No.</b> :	97	<b>Max.</b> :	140	<b>Ave.</b> :	8
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	22	0	84	106	8	25	15	0	0	0	20	70
2	38	0	72	76	63	23	0	0	0	0	150	116
3	0	13	109	51	11	0	14	0	0	107	44	56
4	72	105	15	75	0	0	37	0	0	8	80	36
5	128	18	0	66	0	34	47	0	24	48	36	0
6	490	68	5	85	0	36	3	30	0	0	0	119

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	60	13	265	233	82	48	29	0	0	107	214	242
<b>2nd</b>	690	191	20	226	0	70	87	30	24	56	116	155

**Table Daily Rainfall**

Station : **Kampili**  
 Year : **1990**

Unit: mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0	37	0	42	0	0	0	0	0	0	1
2	0	0	11	0	0	3	0	0	0	0	0	3
3	100	0	3	0	0	0	0	0	0	0	0	0
4	0	38	0	26	0	0	0	0	0	0	0	2
5	0	7	13	0	0	0	0	0	0	0	0	0
6	0	0	9	0	38	5	25	0	0	0	0	3
7	150	11	36	5	46	0	0	0	0	0	7	0
8	30	36	0	0	0	0	0	0	0	0	0	4
9	55	30	0	0	5	0	0	0	0	0	15	2
10	40	9	0	0	0	0	0	0	0	0	13	5
11	9	13	15	0	0	0	0	0	0	0	0	0
12	0	50	25	0	0	0	0	0	0	0	0	0
13	23	0	38	0	0	0	0	0	0	0	5	0
14	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	30	0	0	0	0	0	0	0	0
16	0	32	0	7	0	0	0	0	0	0	30	2
17	9	21	0	0	15	0	0	0	0	0	0	5
18	28	0	0	44	28	0	0	0	0	0	0	0
19	13	0	0	0	0	0	0	0	0	0	0	4
20	7	0	0	0	30	0	0	0	0	0	0	0
21	100	15	0	0	13	0	0	0	0	5	0	2
22	0	13	0	0	27	0	0	0	0	0	0	2
23	0	0	0	0	0	0	0	0	0	23	0	10
24	0	0	0	0	0	0	0	0	0	0	23	8
25	15	0	0	0	0	0	0	0	0	0	0	100
26	94	0	5	0	0	0	0	0	0	0	30	0
27	0	0	3	0	0	0	0	0	0	3	15	0
28	0	75	0	0	0	0	0	0	0	59	25	0
29	0		0	0	0	0	0	0	0	0	20	0
30	0		0	0	0	0	0	0	0	0	11	0
31	0		0		3		0	0		0		0

<b>Monthly</b>	673	350	195	112	247	8	25	0	0	90	194	153
<b>Rainy Days</b>	14	13	11	5	10	2	1	0	0	4	11	15
<b>Max.</b>	150	75	38	44	46	5	25	0	0	59	30	100
<b>Average</b>	22	13	6	4	8	0	1	0	0	3	6	5

<b>Annual</b> :	2047	<b>No.</b> :	86	<b>Max.</b> :	150	<b>Ave.</b> :	6
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	100	45	64	26	42	3	0	0	0	0	0	6
2	275	86	45	5	89	5	25	0	0	0	35	14
3	32	63	78	30	0	0	0	0	0	0	5	0
4	57	53	0	51	73	0	0	0	0	0	30	11
5	115	28	0	0	40	0	0	0	0	28	23	122
6	94	75	8	0	3	0	0	0	0	62	101	0

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	407	194	187	61	131	8	25	0	0	0	40	20
<b>2nd</b>	266	156	8	51	116	0	0	0	0	90	154	133

**Table Daily Rainfall**

Station : **Kampili**  
 Year : **1991**

Unit: mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	11	0	50	0	0	0	0	0	0	15	0
2	0	7	0	100	0	0	0	0	0	0	0	36
3	0	25	0	0	0	0	0	0	0	0	0	34
4	0	30	0	7	0	0	0	0	0	0	0	48
5	0	40	7	0	0	0	0	0	0	0	5	75
6	30	150	0	0	0	0	0	0	0	0	0	0
7	0	100	0	0	0	0	0	0	0	0	0	11
8	0	0	0	3	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	125
10	0	0	0	0	0	0	0	0	0	0	32	0
11	0	0	0	0	0	0	0	0	0	0	55	38
12	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	5	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	45	0
16	0	0	30	0	0	0	0	0	0	0	0	0
17	0	0	11	15	0	0	0	0	0	0	0	0
18	35	0	0	11	0	0	0	0	0	0	0	0
19	11	0	25	3	0	0	0	0	0	0	0	0
20	25	13	0	0	0	0	0	0	0	0	0	0
21	75	48	0	0	0	0	0	0	0	0	0	0
22	15	30	0	0	0	0	0	0	0	0	50	0
23	46	35	0	7	0	0	0	0	0	0	48	0
24	150	0	0	25	0	0	0	0	0	0	0	0
25	23	0	0	30	0	0	0	0	0	0	0	50
26	50	0	0	0	15	0	0	0	0	0	28	30
27	17	0	0	0	0	0	0	0	0	0	0	0
28	28	0	15	0	0	0	0	0	0	0	0	22
29	34		0	0	0	0	0	0	0	0	11	9
30	15		17	0	0	0	0	0	0	0	0	5
31	55		13		0		0	0		0		0

<b>Monthly</b>	609	489	123	251	15	0	0	0	0	0	289	483
<b>Rainy Days</b>	15	11	8	10	1	0	0	0	0	0	9	12
<b>Max.</b>	150	150	30	100	15	0	0	0	0	0	55	125
<b>Average</b>	20	17	4	8	0	0	0	0	0	0	10	16

<b>Annual</b> :	2259	<b>No.</b> :	66	<b>Max.</b> :	150	<b>Ave.</b> :	6
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	113	7	157	0	0	0	0	0	0	20	193
2	30	250	0	3	0	0	0	0	0	0	32	136
3	0	0	5	0	0	0	0	0	0	0	100	38
4	71	13	66	29	0	0	0	0	0	0	0	0
5	309	113	0	62	0	0	0	0	0	0	98	50
6	199	0	45	0	15	0	0	0	0	0	39	66

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	30	363	12	160	0	0	0	0	0	0	152	367
<b>2nd</b>	579	126	111	91	15	0	0	0	0	0	137	116



**Table Daily Rainfall**

Station : **Kampili**  
 Year : **1992**

Unit: mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0	0	30	0	0	0	0	0	0	0	11
2	0	19	0	0	0	0	0	0	0	0	0	7
3	0	11	18	15	13	30	0	0	0	0	0	50
4	22	125	0	0	0	38	0	0	10	0	0	0
5	14	0	0	0	0	23	0	0	30	0	0	0
6	0	0	11	0	0	0	13	0	0	0	0	36
7	0	0	20	0	0	0	0	0	0	0	0	38
8	0	0	30	0	0	0	0	0	25	0	0	80
9	47	7	0	0	0	0	0	0	19	0	0	0
10	125	3	0	75	0	0	0	0	0	0	5	13
11	92	0	28	28	0	0	0	0	30	0	11	0
12	0	0	25	0	0	0	7	0	13	0	0	0
13	0	13	0	0	0	0	15	0	0	0	0	30
14	0	15	0	0	0	0	30	0	0	0	50	0
15	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	38	0
17	0	0	0	0	0	0	0	0	48	0	75	0
18	0	0	0	0	0	0	0	0	0	0	100	0
19	11	75	0	0	0	0	0	0	0	0	0	0
20	0	0	13	0	0	0	0	0	0	38	38	0
21	0	30	100	0	0	0	0	0	32	0	0	0
22	0	25	28	0	0	0	0	0	0	0	0	32
23	20	0	75	0	0	0	0	0	0	0	0	21
24	23	0	32	0	0	0	0	0	0	0	23	0
25	20	0	19	0	0	0	0	0	0	25	0	0
26	0	0	44	0	0	0	0	0	0	0	0	0
27	25	5	47	0	0	0	0	0	0	0	3	0
28	0	0	13	0	0	0	0	0	0	0	23	0
29	0	0	135	0	0	0	0	0	0	0	21	0
30	50		36	38	0	0	0	0	38	0	7	0
31	7		46		0		0	0		15		0

<b>Monthly</b>	456	328	720	186	13	91	65	0	245	78	394	318
<b>Rainy Days</b>	12	11	18	5	1	3	4	0	9	3	12	10
<b>Max.</b>	125	125	135	75	13	38	30	0	48	38	100	80
<b>Average</b>	15	11	23	6	0	3	2	0	8	3	13	10

<b>Annual</b> :	2894	<b>No.</b> :	88	<b>Max.</b> :	135	<b>Ave.</b> :	8
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	36	155	18	45	13	91	0	0	40	0	0	68
2	172	10	61	75	0	0	13	0	44	0	5	167
3	92	28	53	28	0	0	52	0	43	0	61	30
4	11	75	13	0	0	0	0	0	48	38	251	0
5	63	55	254	0	0	0	0	0	32	25	23	53
6	82	5	321	38	0	0	0	0	38	15	54	0

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	300	193	132	148	13	91	65	0	127	0	66	265
<b>2nd</b>	156	135	588	38	0	0	0	0	118	78	328	53

**Table Daily Rainfall**

Station : **Kampili**  
 Year : **1993**

Unit: mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0	0	125	11	0	0	0	0	0	0	11
2	0	0	0	0	0	0	0	0	0	0	0	23
3	0	34	0	0	0	0	0	0	0	0	0	0
4	0	38	11	0	7	0	0	0	0	0	0	0
5	125	7	0	25	30	0	0	0	0	0	0	0
6	0	50	0	0	0	11	0	0	0	0	0	0
7	0	0	36	0	34	5	0	0	0	0	0	0
8	0	0	25	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	86	0	7	0	0	0	0	0	0
11	0	0	13	0	0	75	0	0	0	0	0	0
12	0	0	7	0	0	0	0	0	0	5	7	0
13	0	0	0	0	0	0	0	0	0	75	6	17
14	23	30	0	0	0	0	0	0	0	0	0	21
15	0	35	0	0	0	0	0	0	0	0	0	67
16	25	28	0	0	0	0	0	0	0	0	0	0
17	0	75	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	8	0
19	53	0	0	100	0	0	0	0	0	0	0	0
20	28	0	0	0	0	0	0	0	0	0	0	0
21	94	12	0	0	0	0	0	0	0	0	0	0
22	150	80	0	0	0	0	0	0	0	0	0	50
23	75	0	0	0	0	0	0	0	0	0	0	75
24	300	25	0	0	0	0	0	0	0	0	7	80
25	0	0	17	34	0	0	0	0	0	0	0	100
26	0	100	50	0	0	0	0	0	0	0	0	175
27	0	0	38	0	0	0	0	0	0	0	0	125
28	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	32
31	0	0	50	0	75	0	0	0	0	0	0	0

<b>Monthly</b>	873	514	247	370	157	98	0	0	0	80	28	776
<b>Rainy Days</b>	9	12	9	5	5	4	0	0	0	2	4	12
<b>Max.</b>	300	100	50	125	75	75	0	0	0	75	8	175
<b>Average</b>	28	18	8	12	5	3	0	0	0	3	1	25

<b>Annual</b> :	3143	<b>No.</b> :	62	<b>Max.</b> :	300	<b>Ave.</b> :	9
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	125	79	11	150	48	0	0	0	0	0	0	34
2	0	50	61	86	34	23	0	0	0	0	0	0
3	23	65	20	0	0	75	0	0	0	80	13	105
4	106	103	0	100	0	0	0	0	0	0	8	0
5	619	117	17	34	0	0	0	0	0	0	7	305
6	0	100	138	0	75	0	0	0	0	0	0	332

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	148	194	92	236	82	98	0	0	0	80	13	139
<b>2nd</b>	725	320	155	134	75	0	0	0	0	0	15	637

**Table Daily Rainfall**

Station : **Kampili**  
 Year : **1994**

Unit: mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	30	0	0	0	5	0	0	0	0	0	0	11
2	11	0	0	0	0	0	0	0	0	0	0	0
3	17	0	50	0	0	0	0	0	0	0	0	55
4	0	0	0	0	0	0	0	0	0	0	30	0
5	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	35
7	0	100	0	0	0	0	0	0	0	0	0	28
8	0	0	0	0	0	0	0	0	0	0	0	0
9	0	20	0	0	0	0	0	0	0	0	0	0
10	0	0	30	0	0	0	0	0	0	0	70	75
11	0	0	0	0	100	0	0	0	0	0	0	0
12	0	0	100	5	0	0	0	0	0	0	0	0
13	0	75	23	0	0	0	0	0	0	0	25	0
14	0	85	63	0	0	0	0	0	0	0	0	0
15	73	42	17	0	0	0	0	0	0	0	0	0
16	0	0	48	36	0	0	0	0	0	0	0	36
17	0	55	0	0	0	0	0	0	0	0	0	80
18	15	36	0	0	0	0	0	0	0	0	35	17
19	0	23	0	0	0	0	0	0	0	0	25	44
20	0	63	19	0	0	0	0	0	0	0	0	19
21	40	0	0	0	0	0	0	0	0	0	0	0
22	75	0	0	0	0	0	0	0	0	0	0	0
23	0	0	59	0	0	11	0	0	0	0	0	0
24	36	0	117	0	0	0	0	0	0	0	50	0
25	125	0	0	48	0	0	0	0	0	0	0	0
26	55	11	0	0	0	0	0	0	0	0	0	0
27	60	7	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	75	0
29	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	34	0
31	0	0	0	0	0	0	0	0	0	5	0	0

<b>Monthly</b>	537	517	526	89	105	11	0	0	0	5	344	400
<b>Rainy Days</b>	11	11	10	3	2	1	0	0	0	1	8	10
<b>Max.</b>	125	100	117	48	100	11	0	0	0	5	75	80
<b>Average</b>	17	18	17	3	3	0	0	0	0	0	11	13

<b>Annual</b> :	2534	<b>No.</b> :	57	<b>Max.</b> :	125	<b>Ave.</b> :	7
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	58	0	50	0	5	0	0	0	0	0	30	66
2	0	120	30	0	0	0	0	0	0	0	70	138
3	73	202	203	5	100	0	0	0	0	0	25	0
4	15	177	67	36	0	0	0	0	0	0	60	196
5	276	0	176	48	0	11	0	0	0	0	50	0
6	115	18	0	0	0	0	0	0	0	5	109	0

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	131	322	283	5	105	0	0	0	0	0	125	204
<b>2nd</b>	406	195	243	84	0	11	0	0	0	5	219	196

**Table Daily Rainfall**

Station : **Kampili**  
 Year : **1995**

Unit: mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	11	0	0		0	0	0	0	0	0	11
2	0	0	0	0		5	0	0	0	0	0	9
3	0	0	95	30		0	0	0	0	0	0	43
4	0	0	2	19		1	0	0	0	0	0	75
5	0	0	0	42		1	0	0	0	0	0	25
6	100	27	1	100		0	0	0	0	0	0	175
7	0	45	16	150		0	0	0	0	0	0	150
8	0	75	93	80		0	0	0	0	0	30	90
9	0	30	15	28		0	0	0	0	0	75	30
10	0	0	0	0		0	0	0	0	0	0	11
11	0	0	0	0		0	30	0	0	0	0	28
12	117	0	10	0		0	0	0	0	0	11	17
13	75	0	1	0		0	0	0	0	0	0	0
14	73	13	0	0		0	0	0	0	0	0	0
15	36	0	0	0		0	0	0	0	0	0	21
16	11	0	4	0		0	0	0	0	17	0	15
17	30	0	0	0		0	0	0	0	35	0	0
18	42	0	0	0		0	0	0	0	0	0	23
19	105	0	0	0		0	0	0	0	0	0	0
20	43	0	0	0		0	0	0	0	0	0	40
21	17	0	0	0		0	0	0	0	0	0	35
22	35	25	0	0		0	0	0	0	0	43	0
23	46	0	0	0		0	0	0	0	0	7	0
24	13	35	0	0		0	0	0	0	0	0	0
25	0	28	0	0		0	0	0	0	0	17	0
26	0	17	3	0		0	0	0	0	0	100	0
27	0	0	0	0		0	0	0	0	0	35	0
28	0	100	1	0		0	0	0	11	0	80	0
29	7		0	0		0	0	0	0	0	25	0
30	0		0	0		0	0	0	0	0	19	0
31	0		0				0	0		0		0

<b>Monthly</b>	750	406	241	449	0	7	30	0	11	52	442	798
<b>Rainy Days</b>	15	11	11	7	0	3	1	0	1	2	11	17
<b>Max.</b>	117	100	95	150	0	5	30	0	11	35	100	175
<b>Average</b>	24	15	8	15	0	0	1	0	0	2	15	26

<b>Annual</b> :	3186	<b>No.</b> :	79	<b>Max.</b> :	175	<b>Ave.</b> :	9
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	11	97	91	0	7	0	0	0	0	0	163
2	100	177	125	358	0	0	0	0	0	0	105	456
3	301	13	11	0	0	0	30	0	0	0	11	66
4	231	0	4	0	0	0	0	0	0	52	0	78
5	111	88	0	0	0	0	0	0	0	0	67	35
6	7	117	4	0	0	0	0	0	11	0	259	0

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	401	201	233	449	0	7	30	0	0	0	116	685
<b>2nd</b>	349	205	8	0	0	0	0	0	11	52	326	113

**Table Daily Rainfall**

Station : **Kampili**  
 Year : **1996**

Unit: mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	11	30	0	0	0	0	0	0	0	0	0	6
2	0	100	35	0	0	0	0	0	0	0	0	76
3	0	25	0	11	0	0	0	0	0	0	0	0
4	17	130	0	0	0	0	0	0	0	0	0	0
5	0	28	0	43	0	0	0	0	0	0	9	18
6	43	0	0	0	0	0	0	0	0	0	12	20
7	0	0	0	0	0	0	0	0	0	0	0	0
8	27	0	15	0	0	0	0	0	0	0	0	0
9	0	35	0	0	0	0	0	0	0	0	0	40
10	0	0	0	0	0	0	0	0	0	0	0	130
11	0	0	0	0	0	0	0	0	0	0	0	81
12	0	0	0	0	0	0	0	0	0	0	19	95
13	0	0	0	0	0	0	0	0	0	0	0	72
14	0	0	0	0	0	0	0	0	0	0	0	9
15	0	0	0	0	0	0	0	25	0	0	0	0
16	0	0	0	50	0	0	0	0	0	0	0	0
17	0	0	0	35	0	0	0	0	0	0	0	13
18	0	0	11	28	0	0	0	0	0	0	0	78
19	0	0	17	17	0	0	0	0	0	17	14	32
20	7	0	0	0	0	0	0	0	0	0	0	1
21	28	0	19	0	0	0	0	0	0	0	0	24
22	19	0	27	0	0	0	0	0	0	0	0	54
23	53	19	30	0	0	0	0	0	0	21	16	33
24	75	125	45	0	0	0	0	0	0	0	0	6
25	35	7	25	0	0	0	0	0	0	0	0	11
26	100	0	0	0	0	0	0	0	0	0	0	8
27	13	11	0	0	0	0	0	0	0	0	0	22
28	23	27	0	0	0	0	0	0	0	0	13	72
29	25	80	13	0	0	0	0	0	0	0	0	63
30	7		0	0	0	0	0	0	0	2	14	10
31	0		0		0		0	0		0		0

<b>Monthly</b>	483	617	237	184	0	0	0	25	0	40	97	974
<b>Rainy Days</b>	15	12	10	6	0	0	0	1	0	3	7	24
<b>Max.</b>	100	130	45	50	0	0	0	25	0	21	19	130
<b>Average</b>	16	21	8	6	0	0	0	1	0	1	3	31

<b>Annual</b> :	2657	<b>No.</b> :	78	<b>Max.</b> :	130	<b>Ave.</b> :	7
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	28	313	35	54	0	0	0	0	0	0	9	100
2	70	35	15	0	0	0	0	0	0	0	12	190
3	0	0	0	0	0	0	0	25	0	0	19	257
4	7	0	28	130	0	0	0	0	0	17	14	124
5	210	151	146	0	0	0	0	0	0	21	16	128
6	168	118	13	0	0	0	0	0	0	2	27	175

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	98	348	50	54	0	0	0	25	0	0	40	547
<b>2nd</b>	385	269	187	130	0	0	0	0	0	40	57	427

**Table Daily Rainfall**

Station : **Kampili**  
 Year : **1997**

Unit: mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0	35	0	0	0	0	0	0	0	0	30
2	0	0	47	0	0	0	0	0	0	0	0	29
3	0	0	28	0	30	0	0	0	0	9	0	0
4	30	0	0	0	0	0	0	0	0	0	0	0
5	50	0	0	0	15	0	0	0	0	0	0	28
6	80	35	17	0	0	0	0	0	0	0	0	0
7	0	28	0	25	0	0	0	0	0	0	0	0
8	0	43	0	0	0	0	0	0	0	0	0	0
9	25	0	0	0	0	0	0	0	0	0	0	45
10	0	0	0	15	0	0	0	0	0	0	0	15
11	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	11	0	0	0	0	0	0	0
13	75	0	0	0	0	0	0	0	0	0	0	0
14	35	17	0	0	0	0	0	0	0	0	0	0
15	0	50	0	0	0	0	0	0	0	0	0	0
16	60	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	30	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0
19	44	0	0	0	0	0	0	0	0	0	0	11
20	0	0	0	0	0	0	0	0	0	0	0	17
21	28	0	0	0	0	0	0	0	0	0	0	0
22	0	75	0	0	0	0	0	0	0	0	0	0
23	0	80	0	0	0	0	0	0	0	0	0	40
24	0	0	0	0	0	0	0	0	0	0	0	25
25	0	0	0	0	0	0	0	0	0	0	3	30
26	0	125	0	0	0	0	0	0	0	0	0	0
27	0	60	0	0	0	0	0	0	0	0	28	0
28	0	125	0	0	0	0	0	0	0	0	44	0
29	0		0	28	0	5	0	0	11	0	0	0
30	0		0	0	0	0	0	0	0	0	0	0
31	0		0		0		0	0		0		0

<b>Monthly</b>	427	638	127	98	56	5	0	0	11	9	75	270
<b>Rainy Days</b>	9	10	4	4	3	1	0	0	1	1	3	10
<b>Max.</b>	80	125	47	30	30	5	0	0	11	9	44	45
<b>Average</b>	14	23	4	3	2	0	0	0	0	0	3	9

<b>Annual</b> :	1716	<b>No.</b> :	46	<b>Max.</b> :	125	<b>Ave.</b> :	5
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	80	0	110	0	45	0	0	0	0	9	0	87
2	105	106	17	40	0	0	0	0	0	0	0	60
3	110	67	0	0	11	0	0	0	0	0	0	0
4	104	0	0	30	0	0	0	0	0	0	0	28
5	28	155	0	0	0	0	0	0	0	0	3	95
6	0	310	0	28	0	5	0	0	11	0	72	0

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	295	173	127	40	56	0	0	0	0	9	0	147
<b>2nd</b>	132	465	0	58	0	5	0	0	11	0	75	123

**Table Daily Rainfall**

Station : **Kampili**  
 Year : **1998**

Unit: mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	28	0	27	40	0	0	0	0	36	11	67
2	0	15	0	32	0	0	0	0	0	27	17	51
3	0	0	0	42	0	0	0	0	0	0	0	25
4	0	0	0	75	0	0	0	0	0	0	0	18
5	0	0	0	46	25	0	0	0	0	0	36	42
6	0	0	0	80	0	0	0	0	0	19	0	12
7	0	0	0	30	0	0	0	0	0	0	0	11
8	0	0	0	60	0	12	17	0	0	32	43	1
9	0	0	0	57	27	0	0	0	0	11	32	0
10	0	0	0	28	0	6	3	19	0	0	0	0
11	0	0	0	100	0	0	0	0	0	0	56	0
12	0	0	0	90	0	0	0	0	0	25	28	0
13	0	0	0	25	0	0	0	0	0	0	60	0
14	25	0	0	11	0		15	32	0	0	28	0
15	35	125	15	30	7	52	0	0	0	0	42	0
16	0	0	75	75	0	0	0	0	0	50	19	0
17	0	0	50	0	0	0	0	0	0	0	35	83
18	0	0	0	17	15	0	0	0	0	17	85	42
19	0	0	0	0	17	0	0	0	0	0	53	10
20	0	0	0	0	30	8	0	0	0	28	25	22
21	0	0	0	0	0	0	0	0	0	0	29	0
22	0	0	0	0	0	0	0	0	36	23	100	0
23	0	0	0	15	0	0	30	0	0	0	0	0
24	0	0	25	48	0	4	24	10	4	60	33	9
25	0	0	30	0	0	0	11	0	0	0	22	7
26	0	0	100	35	0	0	0	0	0	35	0	30
27	0	0	7	60	0	7	0	29	0	15	25	38
28	0	0	0	56	0	0	0	0	9	45	19	46
29	0		35	90	35	0	0	0	0	75	15	0
30	0		43	0	0	11	0	0	1	0	0	0
31	0		0		0		0	0		0		0

<b>Monthly</b>	60	168	380	1129	196	100	100	90	50	498	813	514
<b>Rainy Days</b>	2	3	9	23	8	7	6	4	4	15	22	17
<b>Max.</b>	35	125	100	100	40	52	30	32	36	75	100	83
<b>Average</b>	2	6	12	38	6	3	3	3	2	16	27	17

<b>Annual</b> :	4098	<b>No.</b> :	120	<b>Max.</b> :	125	<b>Ave.</b> :	11
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	43	0	222	65	0	0	0	0	63	64	203
2	0	0	0	255	27	18	20	19	0	62	75	24
3	60	125	15	256	7	52	15	32	0	25	214	0
4	0	0	125	92	62	8	0	0	0	95	217	157
5	0	0	55	63	0	4	65	10	40	83	184	16
6	0	0	185	241	35	18	0	29	10	170	59	114

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	60	168	15	733	99	70	35	51	0	150	353	227
<b>2nd</b>	0	0	365	396	97	30	65	39	50	348	460	287

**Table Daily Rainfall**

Station : **Kampili**  
 Year : **1999**

Unit: mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	30	35	24	0	7	0	0	0	0	28	0
2	0	17	0	0	11	0	0	0	0	0	17	0
3	75	0	0	0	0	0	25	0	0	0	57	0
4	0	0	15	0	30	0	0	0	0	0	75	0
5	35	35	0	0	0	3	0	0	0	0	100	30
6	15	0	47	0	0	0	0	0	0	0	11	25
7	0	65	0	15	75	11	0	0	0	0	0	45
8	23	75	0	0	0	0	0	0	0	0	0	0
9	0	15	0	32	0	0	7	0	0	0	0	0
10	27	0	24	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	75
12	45	80	32	0	0	0	0	0	0	0	0	0
13	0	25	53	7	0	0	3	3	0	0	0	0
14	55	43	0	0	0	0	0	0	0	0	17	100
15	0	0	0	34	0	0	0	0	0	30	0	60
16	0	0	17	0	7	24	0	0	0	0	0	55
17	0	11	25	0	0	0	0	0	0	0	0	42
18	85	0	0	0	0	0	0	0	0	0	0	0
19	0	13	65	0	0	0	0	0	0	0	0	28
20	100	47	0	3	0	15	0	0	0	0	0	11
21	125	53	0	0	0	0	0	7	0	0	0	90
22	32	0	3	0	0	0	0	0	0	0	0	0
23	11	0	0	0	0	0	0	0	0	0	0	0
24	36	24	0	25	0	0	0	11	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	27	0
26	0	100	85	0	25	17	0	30	0	0	0	53
27	47	85	0	0	0	0	0	27	17	27	0	17
28	0	32	0	0	0	35	0	17	0	0	0	85
29	53		32	0	0	0	0	25	5	0	0	0
30	80		0	0	0	0	0	15	0	17	0	0
31	0		0		0		0	0		0	0	0

<b>Monthly</b>	844	750	433	140	148	112	35	135	22	74	332	716
<b>Rainy Days</b>	16	17	12	7	5	7	3	8	2	3	8	14
<b>Max.</b>	125	100	85	34	75	35	25	30	17	30	100	100
<b>Average</b>	27	27	14	5	5	4	1	4	1	2	11	23

<b>Annual</b> :	3741	<b>No.</b> :	102	<b>Max.</b> :	125	<b>Ave.</b> :	10
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	110	82	50	24	41	10	25	0	0	0	277	30
2	65	155	71	47	75	11	7	0	0	0	11	70
3	100	148	85	41	0	0	3	3	0	30	17	235
4	185	71	107	3	7	39	0	0	0	0	0	136
5	204	77	3	25	0	0	0	18	0	0	27	90
6	180	217	117	0	25	52	0	114	22	44	0	155

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	275	385	206	112	116	21	35	3	0	30	305	335
<b>2nd</b>	569	365	227	28	32	91	0	132	22	44	27	381



**Table Daily Rainfall**

Station : **Kampili**  
 Year : **2000**

Unit: mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	11	0	0	11	25	0	0	0	0	0	0
2	55	0	0	0	0	0	0	0	0	0	19	0
3	78	0	28	30	0	35	0	0	0	0	49	23
4	80	0	17	7	0	0	0	0	0	0	44	60
5	0	0	0	0	0	7	0	0	0	0	0	0
6	25	0	0	25	0	0	0	0	0	0	35	33
7	46	28	0	0	28	0	0	0	0	0	0	3
8	70	0	0	43	0	37	0	0	0	0	70	9
9	0	0	0	0	0	0	0	0	0	0	7	0
10	0	0	0	0	0	0	0	0	0	0	125	0
11	0	0	0	0	0	0	0	0	0	0	25	5
12	47	0	25	15	0	0	0	0	0	0	0	0
13	65	0	40	0	0	0	0	0	0	0	0	9
14	125	0	0	11	0	0	0	0	0	17	42	20
15	11	0	0	0	0	0	0	0	0	0	40	25
16	17	17	7	36	17	45	0	0	0	11	0	0
17	0	0	0	13	0	0	0	0	0	0	60	0
18	0	0	0	0	0	0	0	0	0	7	32	0
19	27	0	36	0	0	0	0	0	0	15	13	0
20	135	30	0	0	30	0	0	0	0	19	38	0
21	30	0	0	0	0	19	0	0	0	30	0	31
22	95	0	15	0	0	0	0	0	0	0	0	25
23	0	25	0	0	25	23	0	0	0	75	36	17
24	100	40	32	53	40	0	0	0	0	25	0	3
25	0	0	0	0	0	0	0	0	0	0	11	35
26	42	0	43	17	0	53	0	0	0	0	55	0
27	0	0	70	75	0	0	0	0	0	0	0	0
28	0	0	50	0	0	0	0	0	0	0	75	0
29	85		42	0	0	0	0	0	0	0	300	0
30	135		65	0	0	0	0	0	0	0	100	0
31	150		23		0			0		0		0

<b>Monthly</b>	1418	151	493	325	151	244	0	0	0	199	1176	298
<b>Rainy Days</b>	20	6	14	11	6	8	0	0	0	8	20	14
<b>Max.</b>	150	40	70	75	40	53	0	0	0	75	300	60
<b>Average</b>	46	5	16	11	5	8	0	0	0	6	39	10

<b>Annual</b> :	4455	<b>No.</b> :	107	<b>Max.</b> :	300	<b>Ave.</b> :	12
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	213	11	45	37	11	67	0	0	0	0	112	83
2	141	28	0	68	28	37	0	0	0	0	237	45
3	248	0	65	26	0	0	0	0	0	17	107	59
4	179	47	43	49	47	45	0	0	0	52	143	0
5	225	65	47	53	65	42	0	0	0	130	47	111
6	412	0	293	92	0	53	0	0	0	0	530	0

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	602	39	110	131	39	104	0	0	0	17	456	187
<b>2nd</b>	816	112	383	194	112	140	0	0	0	182	720	111

**Table Daily Rainfall**

Station : **Kampili**  
 Year : **2001**

Unit: mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	70	11	0	0	1	0	0	0	0	75	100
2	190	0	0	0	0	0	0	0	0	0	140	127
3	490	0	35	0	1	1	0	0	0	0	34	41
4	44	44	0	17	0	1	0	0	0	0	30	93
5	0	0	0	19	0	0	0	0	0	0	27	71
6	35	60	38	0	0	0	0	0	0	0	40	65
7	0	11	0	75	0	0	0	0	0	0	0	83
8	70	0	0	0	0	0	0	0	0	0	42	82
9	7	55	0	0	0	2	0	0	0	25	0	111
10	125	85	0	0	0	0	0	0	0	0	0	42
11	25	125	13	11	0	0	0	0	0	0	90	60
12	0	0	0	0	0	0	0	0	0	0	23	59
13	0	75	0	0	0	0	0	0	0	0	36	13
14	42	95	0	0	0	0	0	0	0	0	0	2
15	40	145	44	7	0	2	0	0	0	11	0	0
16	60	175	17	15	0	0	0	0	0	42	65	0
17	32	100	50	38	0	0	0	0	0	0	95	11
18	0	50	32	0	0	0	0	0	0	0	25	20
19	13	25	0	0	0	0	0	0	0	75	150	9
20	38	36	0	0	0	0	0	0	0	38	45	0
21	0	150	0	0	0	0	0	0	0	0	35	0
22	0	0	60	23	0	0	0	0	0	23	130	0
23	36	42	47	0	0	0	0	0	0	0	32	0
24	11	130	0	53	0	0	0	0	0	36	100	0
25	55	140	0	0	0	0	0	0	0	0	110	5
26	0	170	0	0	0	0	0	0	0	80	55	18
27	75	195	0	40	0	0	0	0	0	32	80	82
28	30	28	25	0	0	0	0	0	0	13	170	81
29	100		0	0	0	0	0	0	0	0	0	17
30	80		0	0	0	0	0	0	0	0	0	64
31	65		0		0		0	0		0		13

<b>Monthly</b>	1663	2006	372	298	1	7	0	0	0	375	1629	1269
<b>Rainy Days</b>	22	22	11	10	1	5	0	0	0	10	23	24
<b>Max.</b>	490	195	60	75	1	2	0	0	0	80	170	127
<b>Average</b>	54	72	12	10	0	0	0	0	0	12	54	41

<b>Annual</b> :	7620	<b>No.</b> :	128	<b>Max.</b> :	490	<b>Ave.</b> :	21
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	724	114	46	36	1	3	0	0	0	0	306	432
2	237	211	38	75	0	2	0	0	0	25	82	383
3	107	440	57	18	0	2	0	0	0	11	149	134
4	143	386	99	53	0	0	0	0	0	155	380	40
5	102	462	107	76	0	0	0	0	0	59	407	5
6	350	393	25	40	0	0	0	0	0	125	305	275

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	1068	765	141	129	1	7	0	0	0	36	537	949
<b>2nd</b>	595	1241	231	169	0	0	0	0	0	339	1092	320

**Table Daily Rainfall**

Station : **Kampili**  
 Year : **2002**

Unit: mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	50	24	0	0	0	0	0	0	0	0	30
2	0	30	0	0	0	0	0	0	0	0	24	45
3	75	27	15	26	5	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0
5	35	35	0	0	0	0	0	0	0	0	0	0
6	15	0	0	37	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0
8	23	28	34	0	14	0	0	0	0	0	0	0
9	0	0	0	0	20	0	0	0	0	0	4	75
10	27	0	75	0	7	0	0	0	0	0	0	0
11	0	0	3	45	0	0	0	0	0	0	0	0
12	45	19	43	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	80
14	45	29	0	24	0	0	0	0	0	0	0	0
15	0	0	26	0	0	0	0	0	0	0	0	15
16	0	15	0	0	0	0	0	0	0	0	3	0
17	0	0	95	0	0	0	0	0	0	0	0	0
18	85	23	0	22	0	0	0	0	0	0	16	13
19	0	0	0	0	0	0	0	0	0	0	0	10
20	100	19	0	0	0	0	0	0	0	0	3	6
21	125	53	17	0	0	0	0	0	0	0	0	5
22	32	65	35	0	0	0	0	0	0	0	35	4
23	11	42	0	20	0	0	0	0	0	0	12	9
24	36	0	23	0	0	0	0	0	0	0	0	0
25	0	125	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	31	25
27	47	45	80	0	0	0	0	0	0	0	0	7
28	0	0	1	1	0	0	0	0	0	0	0	11
29	55		8	0	0	0	0	0	0	0	8	0
30	0		11	0	0	0	0	0	0	0	0	0
31	80		0		0	0	0	0	0	0		0

<b>Monthly</b>	836	605	490	175	46	0	0	0	0	0	136	335
<b>Rainy Days</b>	16	15	15	7	4	0	0	0	0	0	9	14
<b>Max.</b>	125	125	95	45	20	0	0	0	0	0	35	80
<b>Average</b>	27	22	16	6	1	0	0	0	0	0	5	11

<b>Annual</b> :	2623	<b>No.</b> :	80	<b>Max.</b> :	125	<b>Ave.</b> :	7
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	110	142	39	26	5	0	0	0	0	0	24	75
2	65	28	109	37	41	0	0	0	0	0	4	75
3	90	48	72	69	0	0	0	0	0	0	0	95
4	185	57	95	22	0	0	0	0	0	0	22	29
5	204	285	75	20	0	0	0	0	0	0	47	18
6	182	45	100	1	0	0	0	0	0	0	39	43

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	265	218	220	132	46	0	0	0	0	0	28	245
<b>2nd</b>	571	387	270	43	0	0	0	0	0	0	108	90

**Table Daily Rainfall**

Station : **Kampili**  
 Year : **2003**

Unit: mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0	0		0	0	0	0	0	0	0	65
2	3	0	30		0	0	0	0	0	0	35	75
3	6	0	0		0	0	0	0	0	0	45	54
4	8	0	75		0	0	0	0	0	0	0	0
5	15	0	0		0	0	0	0	0	0	0	55
6	0	0	13		0	0	0	0	0	0	28	32
7	8	0	25		0	0	0	0	0	0	0	0
8	20	0	0		0	0	0	0	0	0	0	75
9	18	0	28		0	0	0	0	0	0	0	0
10	0	0	0		0	0	0	0	0	0	0	30
11	1	80	0		0	0	0	0	0	0	19	90
12	3	0	19		0	0	0	0	0	0	29	23
13	5	30	0		30	0	0	0	0	0	0	36
14	4	0	29		15	0	0	0	0	0	100	0
15	16	42	0		0	0	0	0	0	0	23	0
16	0	0	42		0	0	0	0	0	30	0	63
17	0	15	0		0	0	0	0	0	0	45	95
18	30	0	15		0	0	0	0	0	11	0	25
19	9	0	0		0	0	0	0	0	0	0	50
20	4	0	0		0	0	0	0	0	0	0	45
21	3	0	0		0	0	0	0	0	0	11	35
22	3	0	0		0	0	0	0	0	0	90	125
23	4	36	0		0	0	0	0	0	47	75	13
24	5	0	36		0	0	0	0	0	0	13	23
25	2	0	0		0	25	0	0	0	0	32	0
26	10	0	0		0	0	0	0	0	19	10	80
27	2	0	0		0	0	0	0	0	43	125	0
28	0	0	0		0	0	0	0	0	0	0	17
29	0		0		0	0	0	0	0	0	0	0
30	0		0		0	0	0	0	0	0	0	0
31	0		0		0		0	0		0		0

<b>Monthly</b>	179	203	312	0	45	25	0	0	0	150	680	1106
<b>Rainy Days</b>	22	5	10	0	2	1	0	0	0	5	15	21
<b>Max.</b>	30	80	75	0	30	25	0	0	0	47	125	125
<b>Average</b>	6	7	10	0	1	1	0	0	0	5	23	36

<b>Annual</b> :	2700	<b>No.</b> :	81	<b>Max.</b> :	125	<b>Ave.</b> :	7
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	32	0	105	0	0	0	0	0	0	0	80	249
2	46	0	66	0	0	0	0	0	0	0	28	137
3	29	152	48	0	45	0	0	0	0	0	171	149
4	43	15	57	0	0	0	0	0	0	41	45	278
5	17	36	36	0	0	25	0	0	0	47	221	196
6	12	0	0	0	0	0	0	0	0	62	135	97

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	107	152	219	0	45	0	0	0	0	0	279	535
<b>2nd</b>	72	51	93	0	0	25	0	0	0	150	401	571

**Table Daily Rainfall**

Station : **Bontosunggu**  
 Year : **1978**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0.5	108	0	0	10.4	0	5	0.7	3.4	0	0	39.2
2	0	15	0	0	0	0	0	0	9.4	0	0	15
3	5	11	4	89	0	0	0.7	0.9	0	0	0	8.3
4	0	4.5	0	3	0	0	52	0	0	0	0	42
5	12.5	1	2.5	6	0	7.5	0	0	0	3.6	14	6
6	19	23	1	12	0	0	0	0	0	0	45	0
7	9	0	0.5	0	0	0	0	0	15	0	0	7
8	33	7.5	3	4	0	6.5	5	0	0	0	3	1.2
9	36	48	17	0	51	0	10	0.9	0.7	0	25	20
10	45	6	20	0	4.3	0	4.3	3.2	2.1	0	4	10
11	45	34	0	0	1	0.5	0	1.4	0	0	0	8.3
12	21	0	0	0	46	0	7	0	0	0	0	0
13	0	15.5	0	0	11	23	0.8	1.4	0	0	2.5	3
14	0	6.5	4	0	123	0	0	0	0.3	0	20	0
15	0	3.5	0	0	65	0	0	0.5	0	0	0	9
16	0	16	0	3.8	0	0	0	6.8	0.4	0	0	0
17	0	33	0	0	1	0	0	0	0.4	0	0	31
18	62	11	7	0	0	14	0	0	0	0.5	0	0
19	4	37	0	0	0	0	0	0	0	0	1	29
20	1	30	0	0	0	0	0	0	0	6	4	35
21	24	3	5	0	0	12	0.7	0	0	0	0	2.5
22	16	28	40	8.5	0	13	0	0	0	0	0	33
23	7	4	40	10	9	0	0	0	0	1.5	8	83
24	54	13	3	0	0	0.5	0	0	0	0	16	12.5
25	5	12	29	0	0	0	0	0	0	0	8	36
26	0	2	24	0	0	0	0	0	0	0	0	56
27	0	9	20	32	0	0	0	0	0	0	0	49
28	0	0	0	0	0.5	0	8	0	0	0	0	19
29	0	0	0	0	31	1	0.3	0	0	0	0	35
30	0	0	0	0	2	0	3.5	0	17.5	0	10	0
31	8.5	0	0	0	1	0	0	3.5	0	0	0	36

<b>Monthly</b>	407.5	481.5	220	168.3	356.2	78	97.3	19.3	49.2	11.6	160.5	626
<b>Rainy Days</b>	19	25	16	9	14	9	12	9	9	4	13	25
<b>Max.</b>	62	108	40	89	123	23	52	6.8	17.5	6	45	83
<b>Average</b>	13	17	7	6	11	3	3	1	2	0	5	20

<b>Annual</b> : 2675.4	<b>No.</b> : 164	<b>Max.</b> : 123	<b>Ave.</b> : 7
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	18	139.5	6.5	98	10.4	7.5	57.7	1.6	12.8	3.6	14	110.5
2	142	84.5	41.5	16	55.3	6.5	19.3	4.1	17.8	0	77	38.2
3	66	59.5	4	0	246	23.5	7.8	3.3	0.3	0	22.5	20.3
4	67	127	7	3.8	1	14	0	6.8	0.8	6.5	5	95
5	106	60	117	18.5	9	25.5	0.7	0	0	1.5	32	167
6	8.5	11	44	32	34.5	1	11.8	3.5	17.5	0	10	195

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	226	283.5	52	114	311.7	37.5	84.8	9	30.9	3.6	113.5	169
<b>2nd</b>	181.5	198	168	54.3	44.5	40.5	12.5	10.3	18.3	8	47	457

**Table Daily Rainfall**

Station : **Bontosunggu**  
 Year : **1979**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	8	6.5	26	0	0	0	0	0	0	0	0	73
2	0	1.5	10	2.5	74	3	0	0	0	0	0	73
3	5	4.3	0	0	0	26	0	0	0	0	0	0
4	16	48	1.5	1.5	0	98	0	0	0	0	33	2
5	54	8.5	72	2.5	0	0	0	0	0	0	0	24
6	101	0	20	9.5	6	0	0	0	0	0	0	92
7	146	5	52	3.5	0	7	0	0	0	0	0	47
8	46	11	0	0	0	0.5	0	0	0	0	1	13
9	91	10	1.5	0	0	0	0	0	0	0	0	0
10	62	4	47	0	1.5	0	0	0	0	0	0	19
11	3	0	26	0	4	0	0	0	0	0	0	0
12	12	3.5	7.5	0	0	0	0	0	0	0	0	18
13	2.5	0.5	14	0	3	0	0	0	0	0	0	3
14	5	4.5	0	0	3	0	0	0	0	0	0	22
15	52	0.5	0	0	0	0	0	0	0	0	0	0
16	0	30	0	0	0	0	0	0	0	0	0	0
17	1.5	0	0	0	0	0	0	0	0	0	2.5	0
18	0	11	0	0	0	0	0	0	0	0	0	0
19	10	34	0	25	0	1	0	0	0	0.5	0	23
20	3.5	11.5	12	0	0	0	0	0	0	0	0	0
21	21	0	0	0	0	0	0	0	0	4	0	1
22	0	54	0	0	0	0	0	0	0	0	1	6
23	0	31	0	0	0	0	0	0	0	0	0	0
24	22	11	5	36	0	0	0	0	0	0	6	2
25	33	37	3.5	2	0	0	0	0	0	0	0	32
26	4	80	0	0	8	0	0	0	0	0	2.5	8
27	30	0	0	3	0	0	0	0	0	0	10.5	11
28	0	0	8	4	0	0	0	0	1.5	0	56	51
29	0		7	0	0	0	0	0	0	0	34	1.5
30	9		0	0	0	0	0	0	0	0	0	1
31	67		0		0		0	0		0		15

<b>Monthly</b>	804.5	407.3	313	89.5	99.5	135.5	0	0	1.5	4.5	146.5	537.5
<b>Rainy Days</b>	24	22	16	10	7	6	0	0	1	2	9	22
<b>Max.</b>	146	80	72	36	74	98	0	0	1.5	4	56	92
<b>Average</b>	26	15	10	3	3	5	0	0	0	0	5	17

<b>Annual</b> : 2539.3	<b>No.</b> : 119	<b>Max.</b> : 146	<b>Ave.</b> : 7
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	83	68.8	109.5	6.5	74	127	0	0	0	0	33	172
2	446	30	120.5	13	7.5	7.5	0	0	0	0	1	171
3	74.5	9	47.5	0	10	0	0	0	0	0	0	43
4	15	86.5	12	25	0	1	0	0	0	0.5	2.5	23
5	76	133	8.5	38	0	0	0	0	0	4	7	41
6	110	80	15	7	8	0	0	0	1.5	0	103	87.5

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	603.5	107.8	277.5	19.5	91.5	134.5	0	0	0	0	34	386
<b>2nd</b>	201	299.5	35.5	70	8	1	0	0	1.5	4.5	112.5	151.5

**Table Daily Rainfall**

Station : **Bontosunggu**  
 Year : **1980**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	2	3	1	0	0	0	0	0	0	0	0	6
2	45	13	0	0	1.5	0	0	0	0	0	0	0
3	5	13	0	0	7	0	0	0	0	0	0	12
4	17	22	0	0	7	0	0	0	0	0	0	37
5	15.5	30	0	0	2	0	0	0	0	0	0	0
6	43	7	0	6	4	0	0	0	0	0	1	10
7	44	0	0	0	0	0	0	0	0	0	6	22
8	38	7	4	0	0	0	0	0	0	0	1	9
9	83	10	28	5	0	0	0	0	0	0	0	0
10	22	8	0	16.5	0	0	0	0	0	0	0.5	27
11	26	54	0	1	0	0	0	0	0	0	41	76
12	9.5	41	7	2	0	0	0	0	0	0	0	35
13	6	15	80	1	0	0	0	0	0	9	0	124
14	35	23	69	9	0	0	0	0	0	0	0	32
15	1	79	0	94	0	0	0	0	0	0	0	0
16	0	37	0.5	12	0	4	0	0	0	0	0	0
17	117	0	38	10	0	0	0	0	0	0	13	1
18	50	0	39	0	0	0	0	0	0	0	0	1.5
19	41	0	18	0	0	0	0	0	0	0	35	1
20	1	5	21	0	0	0	0	0	16	0	2	15
21	30	27	2	2	0	0	0	0	0	0	0	74
22	5	46	1	0	0	0	0	0	0	10	1	5.2
23	5	50	0	0	6	0	0	0	0	0	0	51
24	0	0	7.5	0	0	0	0	0	0	0	5	60.3
25	0	0	0	0	0	0	0	0	0	0	0	0
26	0.5	0	0	0	0	0	0	0	0	0	0	6
27	0.5	9	0	0	0	2	0	0	0	0	4.5	4
28	0	25	0	0	2.5	6	0	0	0	0	0	0
29	0	0	0	0	2	0	0	0	0	0	0.5	62.4
30	0	0	0	0	0	0	0	0	0	0	0	23
31	1	0	0	0	0	0	0	0	0	0	0	42

<b>Monthly</b>	643	524	316	158.5	32	12	0	0	16	19	110.5	736.4
<b>Rainy Days</b>	25	21	14	11	8	3	0	0	1	2	12	24
<b>Max.</b>	117	79	80	94	7	6	0	0	16	10	41	124
<b>Average</b>	21	18	10	5	1	0	0	0	1	1	4	24

<b>Annual</b> : 2567.4	<b>No.</b> : 121	<b>Max.</b> : 124	<b>Ave.</b> : 7
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	84.5	81	1	0	17.5	0	0	0	0	0	0	55
2	230	32	32	27.5	4	0	0	0	0	0	8.5	68
3	77.5	212	156	107	0	0	0	0	0	9	41	267
4	209	42	116.5	22	0	4	0	0	16	0	50	18.5
5	40	123	10.5	2	6	0	0	0	0	10	6	190.5
6	2	34	0	0	4.5	8	0	0	0	0	5	137.4

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	392	325	189	134.5	21.5	0	0	0	0	9	49.5	390
<b>2nd</b>	251	199	127	24	10.5	12	0	0	16	10	61	346.4

**Table Daily Rainfall**

Station : **Bontosunggu**  
 Year : **1981**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	19.6	0	39	0	20	0	0	0	0	0	0	0
2	1.5	0	0	0	0	0	15	0	0	0	0	0
3	54	24	0	8	4	0	6	0	0	0	0	0
4	24.6	2	0	0	0	0	3	0	1	0	37	0
5	1.5	8	0	0	0	0	1	0	5	0	8	0
6	82	16.4	0	0	0	0	3	0	5	0	3	0
7	45	43	2	0	0	0	67	0	0	0	0	0
8	10	24.4	0	0	0	0	0	0	3	0	0	0
9	0	13	0	0	0	0	0	0	0	0	0	0
10	49.9	61.4	0	0	0	0	0	0	0	0	0	0
11	12	15	0	0	0	0	1	0	0	0	2	0
12	0	7.4	0	1.5	0	0	2	0	0	0	5	0
13	1	0	0	0	0	0	0	0	0	0	3	0
14	0	11	0	0	0	0	1.5	0	0	0	2	0
15	6	54	0	0	0	0	6	0	0	0	0	0
16	42	2.9	0	0	0	0	0	0	0	0	9	0
17	41	0	0	0	0	0	0	0	0	0	41	0
18	31	0	0	0	0	35	0	0	0	0	14	0
19	14	1	0	2.5	0	0	0	0	0	0	0	0
20	13.4	0	0	0	0	0	0.5	0	0	0	2	0
21	5	0	0	0	0	0	3	0	0	0	0	0
22	15	5	0	0.8	0	0	0	0	0	6	0	0
23	0	8	0	0	0	0	0	0	0	0	8	0
24	0	4	6	2	0	0	0	0	0	0	103	0
25	0	4	16	21	17	0	0	0	0	0	13	0
26	84	12	0	0	0	0	0	0	0	0	58	0
27	18.4	11.1	26	0	0	0	0	0	0	0	55	0
28	16	1	39	0	0	0	0	0	0	0	23	0
29	14		4	0	0	0	0	0	1.5	0	0	0
30	0		0	0	0	0	0	0	0	0	20	0
31	0		6		0		0	0		0		0

<b>Monthly</b>	600.9	328.6	138	35.8	41	35	109	0	15.5	6	406	0
<b>Rainy Days</b>	23	21	8	6	3	1	12	0	5	1	18	0
<b>Max.</b>	84	61.4	39	21	20	35	67	0	5	6	103	0
<b>Average</b>	19	12	4	1	1	1	4	0	1	0	14	0

<b>Annual</b> : 1715.8	<b>No.</b> : 98	<b>Max.</b> : 103	<b>Ave.</b> : 5
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	101.2	34	39	8	24	0	25	0	6	0	45	0
2	186.9	158.2	2	0	0	0	70	0	8	0	3	0
3	19	87.4	0	1.5	0	0	10.5	0	0	0	12	0
4	141.4	3.9	0	2.5	0	35	0.5	0	0	0	66	0
5	20	21	22	23.8	17	0	3	0	0	6	124	0
6	132.4	24.1	75	0	0	0	0	0	1.5	0	156	0

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	307.1	279.6	41	9.5	24	0	105.5	0	14	0	60	0
<b>2nd</b>	293.8	49	97	26.3	17	35	3.5	0	1.5	6	346	0





**Table Daily Rainfall**

Station : **Bontosunggu**  
 Year : **1983**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	15	3.5	0	0	2	9	0	0	0	0	0	40
2	6	0	0	0	1	0	0	0	0	0	0	1.5
3	34	0	0	0	13	0	0	0	0	0	0	55
4	5	3	0	1.5	0	0	0	0	0	11	4.5	0
5	0.5	0	0	1	0	0	0	0	0	0	0	0
6	0	0	0	2	0	0	0	0	0	0	0	0
7	14	0	1	0	0.5	0	0	0	0	0	0	0
8	0	5	1	0	0	0	0	0	0	0	0	0
9	0	0	0	0	3	0	0	0	0	0	0	0
10	2	1.5	0	0	0	0	0	0	0	0	0	0
11	11	2	0	0	0	0	0	0	0	0	0	0
12	10	0	0	52	0	0	0	0	0	0	18	69
13	0	0	0	0	35	0	0	0	0	0	0	3.5
14	3	10.5	0	0	0	0	0	0	0	0	26	8
15	3	1	0	10	0	0	0	0	0	0	12	15
16	0	0	0	0	0	0	0	0	0	0	0	7
17	0	0	0	0	0	0	0	0	0	20	0.5	0
18	0	0	0	0	0	0	0	0	0	0	22	0
19	0	2	0	2.5	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0
21	16	0	0	11	0	0	0	0	0	0	20	0
22	0	7	0	65	0	0	0	0	0	0	24	0
23	0	8	0	3	0	0	0	0	0	0	18	0
24	0	0	0	0	0	0	0	0	0	0	102	4
25	0	0	0	0	0	0	0	0	0	0	32	67
26	6.5	0	9	0	0	0	0	0	0	0	4	22
27	0	2.5	6	19	0	0	0	0	0	0	6	0
28	0	0	0	1.5	0	9	0	0	0	0	21	3
29	0		5	0	0	0	0	0	0	0	86	173
30	0		2	1	0	0	0	0	0	0	19	32
31	0		1		0		0	0		0		48

<b>Monthly</b>	126	46	25	169.5	54.5	18	0	0	0	31	415	548
<b>Rainy Days</b>	13	11	7	12	6	2	0	0	0	2	16	15
<b>Max.</b>	34	10.5	9	65	35	9	0	0	0	20	102	173
<b>Average</b>	4	2	1	6	2	1	0	0	0	1	14	18

<b>Annual</b> :	1433	<b>No.</b> :	84	<b>Max.</b> :	173	<b>Ave.</b> :	4
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	60.5	6.5	0	2.5	16	9	0	0	0	11	4.5	96.5
2	16	6.5	2	2	3.5	0	0	0	0	0	0	0
3	27	13.5	0	62	35	0	0	0	0	0	56	95.5
4	0	2	0	2.5	0	0	0	0	0	20	22.5	7
5	16	15	0	79	0	0	0	0	0	0	196	71
6	6.5	2.5	23	21.5	0	9	0	0	0	0	136	278

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	103.5	26.5	2	66.5	54.5	9	0	0	0	11	60.5	192
<b>2nd</b>	22.5	19.5	23	103	0	9	0	0	0	20	354.5	356

**Table Daily Rainfall**

Station : **Bontosunggu**  
 Year : **1984**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	17	15	0	1	62	0	0	0	0	0	0	0
2	2	7	2	4	1	0	0	0	2	15	0	0
3	37	47	6	1	0	0	0	0	0	12	0	0
4	34	29	0	4	0	0	0	0	0	0	0	0
5	1.5	0	3	0	2	3	0	0	31	0	0	0
6	0	0	6	4	1	0	0	0	0	0	0	2
7	0	21	3	7	23	0	0	0	0	0	0	2
8	8	94	125	18	2	0	0	0	0	4	16	0
9	1	44	12	0	32	3	0	0	2	0	3	0
10	0	1	106	0	4	0	0	0	0	0	8	24
11	1	7	10	23	1	0	0	0	32	0	0	73
12	0	54	5	1	0	0	0	0	16	0	0	1
13	9	0	5	8	13	0	0	0	18	0	0	15
14	25	27	0	7	6	0	0	0	0	0	0	43
15	0	46	0	38	0	0	0	0	0	0	0	97
16	0	35	4	19	0	0	0	0	0	0	0	57
17	130	23	0	1	0	0	12	0	7	0	0	1
18	13	37	2	5	0	0	0	0	0	0	0	58
19	19	6	8	0	0	0	0	0	0	0	5	42
20	0	25	24	7	0	0	9	0	0	9	37	15
21	3	1	2	3	0	0	0	0	0	12	0	0
22	70	39	6	0	0	0	0	0	0	0	0	8
23	0	33	2	0	0	0	0	0	0	0	3	0
24	0	3	2	10	0	3	0	0	0	0	20	0
25	4	0	13	0	0	0	0	0	0	0	0	0
26	2	0	0	0	0	0	0	0	0	0	0	0
27	9	0	0	18	0	0	0	0	0	0	49	1
28	199	2	0	1	0	0	0	0	0	0	4	8
29	42	3	1	0	0	0	0	0	0	0	0	21
30	5		0	0	3	0	5	0	12	0	0	50
31	6		0	0	0		0	0		0		0

<b>Monthly</b>	637.5	599	347	180	150	9	26	0	120	52	145	518
<b>Rainy Days</b>	22	23	21	20	12	3	3	0	8	5	9	18
<b>Max.</b>	199	94	125	38	62	3	12	0	32	15	49	97
<b>Average</b>	21	21	11	6	5	0	1	0	4	2	5	17

<b>Annual</b> : 2783.5	<b>No.</b> : 144	<b>Max.</b> : 199	<b>Ave.</b> : 8
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	91.5	98	11	10	65	3	0	0	33	27	0	0
2	9	160	252	29	62	3	0	0	2	4	27	28
3	35	134	20	77	20	0	0	0	66	0	0	229
4	162	126	38	32	0	0	21	0	7	9	42	173
5	77	76	25	13	0	3	0	0	0	12	23	8
6	263	5	1	19	3	0	5	0	12	0	53	80

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	135.5	392	283	116	147	6	0	0	101	31	27	257
<b>2nd</b>	502	207	64	64	3	3	26	0	19	21	118	261

**Table Daily Rainfall**

Station : **Bontosunggu**  
 Year : **1985**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	3	0	5	32	0	0	0	0	0	0	9
2	0	0	10	153	0	0	0	0	0	0	0	0
3	72	16	50	1	0	0	0	0	0	0	0	0
4	15	0	58	0	0	0	0	0	0	0	24	5
5	67	0	184	0	0	9	0	0	0	0	0	1
6	3	0	67	0	0	3	0	0	0	0	0	0
7	0	4	23	1.5	0	0	0	0	0	0	2	0
8	0	3	38	0	0	0	0	0	0	0	3	0
9	0	0	17	31	0	14	0	0	0	0	24	0
10	4	0	0	15	15	0	15	0	0	0	12	0
11	0	5	0	0	0	0	1	0	0	0	0	0
12	4	7	4	0	9	0	0	0	0	0	9	0
13	3	50	0	0	0	0	0	0	0	0	16	0
14	6	73	0	0	38	0	0	0	0	0	2	0
15	1.5	19	0	25	0	0	0	0	0	0	0	0
16	11	0	0	0	0	0	0	0	0	0	2	0
17	19	11	0	0	0	0	2.5	0	0	0	0	0
18	4	0	0	0	0	0	0	0	0	0	0	0
19	36	0	0	0	0	0	0	0	0	0	2	0
20	1	0	0	0	0	0	0	0	0	0	0	0
21	1	0	0	0	0	0	0	0	0	0	0	0
22	0	8	0	0	0	0	7	0	0	0	0	0
23	0	0	0	0	0	0	1	0	0	0	0	0
24	2	10	0	11	5	0	0	0	0	0	16	0
25	176	4	0	0	0	0	0	0	106	0	17	0
26	6	2	14	4	0	0	0	0	0	0	4	0
27	0	59	0	2	3	0	0	0	0	0	0	0
28	0	13	0	7	1	0	0	0	0	18	48	0
29	2		0	0	1	0	0	5	0	0	17	0
30	16		0	0	1	1	1	0	0	0	9	0
31	2		5		4		0	0		0		41

<b>Monthly</b>	451.5	287	470	255.5	109	27	27.5	5	106	18	207	56
<b>Rainy Days</b>	21	16	11	11	10	4	6	1	1	1	16	4
<b>Max.</b>	176	73	184	153	38	14	15	5	106	18	48	41
<b>Average</b>	15	10	15	9	4	1	1	0	4	1	7	2

<b>Annual</b> : 2019.5	<b>No.</b> : 102	<b>Max.</b> : 184	<b>Ave.</b> : 6
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	154	19	302	159	32	9	0	0	0	0	24	15
2	7	7	145	47.5	15	17	15	0	0	0	41	0
3	14.5	154	4	25	47	0	1	0	0	0	27	0
4	71	11	0	0	0	0	2.5	0	0	0	4	0
5	179	22	0	11	5	0	8	0	106	0	33	0
6	26	74	19	13	10	1	1	5	0	18	78	41

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	175.5	180	451	231.5	94	26	16	0	0	0	92	15
<b>2nd</b>	276	107	19	24	15	1	11.5	5	106	18	115	41

**Table Daily Rainfall**

Station : **Sandrobone**  
 Year : **1986**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	2	6	0	11	0	5	2.5	0	0	0	0
2	5	48	33	12	0	5	0	0	0	6	0	0
3	12	0	37	0	0	0	1	0	0	0	36	0
4	4	0	11	0	0	0	0	0	0	3	2	0
5	38	0	3	0	0	2	0	0	0	0	8	0
6	39	2	3	0	0	0	0	0	0	0	0	0
7	10	13	0	5	16	2	0	0	0	34	0	0
8	22	12	0	0	0	0	0	0	0	0	0	0
9	26	17	6	0	0	7	0	0	0	0	11	0
10	82	13	1	9	0	11	0	0	0	0	7	10
11	96	36	40	0	0	0	0	0	0	0	14	2
12	79	1	17	15	0	0	0	0	0	0	0	4
13	62	0	8.5	63	0	0	6	0	0	0	10	21
14	60	8	16	45	0	0	0	0	0	0	0	0
15	0	9	6	0	0	0	0	0	0	0	0	0
16	9	11	0	0	0	0	0	0	0	14	0	1
17	4	7	5	0	0	0	0	0	0	0	0	0
18	20	1	85	0	0	0	0	0	0	0	20	0
19	1.5	0	4.5	0	0	0	0	0	0	0	1	0
20	0	0	0	0	0	0	0	0	0	0	4	0
21	39	0	7	3	0	0	0	0	0	0	30	0
22	21	0	53	0	0	0	0	0	0	0	4	0
23	10	0	0	0	0	0	0	0	0	0	0	27
24	10	0	0	12	0	0	0	0	0	0	0	0
25	50	0	0	0	0	0	26	0	0	0	11	0
26	101	0	0	0	0	0	8	0	0	0	0	0
27	30	0	20	0	0	0	0	0	0	0	0	49
28	35	4	2	6	0	0	0	0	0	0	0	25
29	0		0	0	0	0	0	0	3	4	0	6
30	0		0	0	0	0	0	0	0	19	6	3
31	0		0		4		0	0		5		4

<b>Monthly</b>	865.5	184	364	170	31	27	46	2.5	3	85	164	152
<b>Rainy Days</b>	25	15	20	9	3	5	5	1	1	7	14	11
<b>Max.</b>	101	48	85	63	16	11	26	2.5	3	34	36	49
<b>Average</b>	28	7	12	6	1	1	1	0	0	3	5	5

<b>Annual</b> :	2094	<b>No.</b> :	116	<b>Max.</b> :	101	<b>Ave.</b> :	6
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	59	50	90	12	11	7	6	2.5	0	9	46	0
2	179	57	10	14	16	20	0	0	0	34	18	10
3	297	54	87.5	123	0	0	6	0	0	0	24	27
4	34.5	19	94.5	0	0	0	0	0	0	14	25	1
5	130	0	60	15	0	0	26	0	0	0	45	27
6	166	4	22	6	4	0	8	0	3	28	6	87

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	535	161	187.5	149	27	27	12	2.5	0	43	88	37
<b>2nd</b>	330.5	23	176.5	21	4	0	34	0	3	42	76	115

**Table Daily Rainfall**

Station : **Bontosunggu**  
 Year : **1987**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	14	0	16	0	0	0	0	0	0	0	0
2	0	5	0	0	0	0	0	0	0	0	0	0
3	24	17	0	5	0	0	0	0	0	0	0	42
4	41	0	0	13	0	0	0	0	0	0	7	9
5	40	0	0	0	14	0	0	0	0	0	5	20
6	9	22	26	5	4	0	0	0	0	0	7	0
7	64	12	0	19	0	0	0	0	0	0	0	19
8	25	1	0	0	0	0	0	0	0	0	0	1
9	6	59	18	0	35	0	0	0	0	0	0	8
10	9	0	0	0	1	0	0	0	0	0	0	0
11	19	31	0	0	4	0	0	0	0	0	0	0
12	14	41	0	0	0	0	0	0	0	0	0	26
13	39	0	0	0	0	0	0	0	0	0	0	0
14	90	0	5	0	5	0	0	0	0	0	0	52
15	64	0	0	0	0	0	0	0	0	0	1.5	227
16	91	4	0	0	0	0	0	0	0	0	5	150
17	1	2	66	0	0	0	0	0	0	0	31	14
18	16	11	0	0	0	0	0	0	0	0	3	30
19	2	45	0	0	0	0	0	0	0	0	0	37
20	46	42	0	0	0	0	0	0	0	0	0	100
21	62	16	33	0	0	0	0	0	0	0	0	156
22	17	15	34	0	0	0	0	0	0	0	0	110
23	35	13	78	0	0	0	0	0	0	0	0	24
24	34	0	64	0	0	0	0	0	0	0	0	41
25	0	19	26	0	0	0	0	0	0	0	6	63
26	40	0	27	0	0	0	0	0	0	0	0	51
27	20	0	0	0	0	0	0	0	0	0	0	0
28	58	19	28	0	0	0	0	0	6	0	0	1
29	23		2.5	0	0	0	0	0	0	0	0	0
30	70		0	1	0	0	0	0	0	0	0	0
31	16		87		0		0	0		0		0

<b>Monthly</b>	975	388	494.5	59	63	0	0	0	6	0	65.5	1181
<b>Rainy Days</b>	28	19	13	6	6	0	0	0	1	0	8	21
<b>Max.</b>	91	59	87	19	35	0	0	0	6	0	31	227
<b>Average</b>	31	14	16	2	2	0	0	0	0	0	2	38

<b>Annual</b> :	3232	<b>No.</b> :	102	<b>Max.</b> :	227	<b>Ave.</b> :	9
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	105	36	0	34	14	0	0	0	0	0	12	71
2	113	94	44	24	40	0	0	0	0	0	7	28
3	226	72	5	0	9	0	0	0	0	0	1.5	305
4	156	104	66	0	0	0	0	0	0	0	39	331
5	148	63	235	0	0	0	0	0	0	0	6	394
6	227	19	144.5	1	0	0	0	0	6	0	0	52

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	444	202	49	58	63	0	0	0	0	0	20.5	404
<b>2nd</b>	531	186	445.5	1	0	0	0	0	6	0	45	777

**Table Daily Rainfall**

Station : **Bontosunggu**  
 Year : **1988**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	14	4	48	59	0	0	0	0	0	0	66
2	0	116	10	0	0	0	0	0	3	0	0	33
3	0	65	0	0	0	2	0	3	0	0	0	28
4	2	37	0	0	0	9	0	0	13	0	20	12
5	27	16	0	0	0	0	0	0	0	0	26	16
6	0	0	0	0	1	0	0	0	0	0	2	43
7	2	0	0	3	0	4	0	5	0	0	4	18
8	48	16	0	0	44	0	0	0	8	40	0	8
9	10	23	33	16	2	0	0	0	0	0	29	32
10	44	19	5	89	3	0	0	0	0	34	154	76
11	0	169	0	0	0	0	0	0	4	0	2	41
12	0	93	14	0	35	0	0	0	5	8	9	9
13	0	41	0	0	0	0	2	0	1	0	5	25
14	40	20	0	0	0	0	0	0	14	4	6	73
15	14	42	0	20	9	0	0	0	0	1	0	27
16	15	34	0	4	5	0	0	0	0	0	0	9
17	3	38	9	0	57	0	0	0	0	0	0	4
18	11	1	14	0	0	0	0	0	0	0	0	1
19	7	0	0	0	0	0	0	0	0	0	0	11
20	6	0	0	0	7	0	0	0	0	50	0	26
21	0	0	0	0	0	0	0	0	0	0	0	43
22	1	0	16	0	0	0	0	0	0	0	0	45
23	0	0	0	0	0	0	0	2	0	0	19	43
24	56	0	38	0	0	0	0	0	0	7	2	25
25	73	0	28	0	0	0	0	4	46	9	88	25
26	6	16	0	2	0	0	0	0	0	0	32	0
27	22	0	0	2	0	0	0	0	0	0	16	0
28	3	0	0	0	0	0	0	0	0	0	20	2
29	0	9	0	0	0	0	0	0	0	21	0	0
30	0		22	0	0	3	0	0	0	0	94	0
31	90		8		0		13	0		12		0

<b>Monthly</b>	480	769	201	184	222	18	15	14	94	186	528	741
<b>Rainy Days</b>	20	18	12	8	10	4	2	4	8	10	17	26
<b>Max.</b>	90	169	38	89	59	9	13	5	46	50	154	76
<b>Average</b>	15	27	6	6	7	1	0	0	3	6	18	24

<b>Annual</b> :	3452	<b>No.</b> :	139	<b>Max.</b> :	169	<b>Ave.</b> :	9
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	29	248	14	48	59	11	0	3	16	0	46	155
2	104	58	38	108	50	4	0	5	8	74	189	177
3	54	365	14	20	44	0	2	0	24	13	22	175
4	42	73	23	4	69	0	0	0	0	50	0	51
5	130	0	82	0	0	0	0	6	46	16	109	181
6	121	25	30	4	0	3	13	0	0	33	162	2

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	187	671	66	176	153	15	2	8	48	87	257	507
<b>2nd</b>	293	98	135	8	69	3	13	6	46	99	271	234

**Table Daily Rainfall**

Station : **Bontosunggu**  
 Year : **1989**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	40	0	0	0	0	0	0	0	0	0	25
2	12	110	0	0	0	0	0	0	0	0	0	0
3	0	29	0	37	0	0	0	0	0	0	0	0
4	21	11	3	50	67	0	0	0	0	0	0	0
5	0	12	37	0	0	0	0	0	0	0	0	11
6	0	0	21	15	0	0	0	0	0	0	0	21
7	0	5	43	3	0	0	0	0	0	0	9	0
8	6	2	40	0	0	0	0	0	0	2	0	0
9	0	5	0	0	0	0	0	0	0	0	15	0
10	7	99	2	0	0	0	0	0	0	0	60	0
11	2	13	43	0	0	0	0	0	0	2.9	0	38
12	3	53	34	0	0	0	9	0	0	0	0	11
13	5	29	22	0	0	0	0	0	7	0	0	3
14	0	4	9	0	0	0	0	0	0	3	0	3
15	32	3	0	20	0	0	2	0	0	0	5	0
16	23	0	0	3	0	0	0	0	0	9	0	0
17	1	1	0	3	0	0	0	0	0	0	0	0
18	0	15	19	3	0	0	0	0	0	0	0	0
19	0	80	0	53	0	0	0	0	0	4.8	0	0
20	0	32	0	32	0	20	0	0	0	2	0	0
21	0	10	0	8	0	0	0	0	0	0	0	0
22	2	1	0	5	0	0	0	0	0	0	10	0
23	56	6	0	0	0	0	0	0	10	0	9	0
24	125	0	1	0	0	19	0	0	0	0	0	0
25	83	70	10	0	0	14	0	0	0	0	32	0
26	38	12	0	0	0	0	0	0	0	0	0	0
27	43	36	0	42	0	0	0	12	0	0	0	8
28	126	78	0	0	0	4	0	0	0	0	16	10
29	80		1	2.5	20	0	0	0	0	0	0	10
30	80		0	0	0	0	0	0	0	0	25	0
31	15		0		0		0	0		0		0

<b>Monthly</b>	760	756	285	276.5	87	57	11	12	17	23.7	181	140
<b>Rainy Days</b>	20	25	14	14	2	4	2	1	2	6	9	10
<b>Max.</b>	126	110	43	53	67	20	9	12	10	9	60	38
<b>Average</b>	25	27	9	9	3	2	0	0	1	1	6	5

<b>Annual</b> : 2606.2	<b>No.</b> : 109	<b>Max.</b> : 126	<b>Ave.</b> : 7
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	33	202	40	87	67	0	0	0	0	0	0	36
2	13	111	106	18	0	0	0	0	0	2	84	21
3	42	102	108	20	0	0	11	0	7	5.9	5	55
4	24	128	19	94	0	20	0	0	0	15.8	0	0
5	266	87	11	13	0	33	0	0	10	0	51	0
6	382	126	1	44.5	20	4	0	12	0	0	41	28

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	88	415	254	125	67	0	11	0	7	7.9	89	112
<b>2nd</b>	672	341	31	151.5	20	57	0	12	10	15.8	92	28



**Table Daily Rainfall**

Station : **Bontosunggu**  
 Year : **1990**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	3	0	9	0	10	0	0	0	0	0	0	10
2	8	2	0	0	0	0	0	0	0	0	0	0
3	0	70	48	0	0	0	0	0	0	0	0	0
4	0	0	37	0	0	0	0	0	0	0	0	14
5	0	0	0	0	0	0	0	0	0	0	0	18
6	0	0	0	0	19	0	0	0	0	0	0	5
7	4	2	0	15	21	0	0	0	0	0	0	17
8	35	0	8	0	4	0	0	0	0	0	13	0
9	35	0	0	0	50	0	0	0	0	0	11	7
10	3	0	0	0	0	0	0	0	0	0	4	0
11	0	0	2	0	0	0	0	0	0	0	28	9
12	48	0	39	0	0	0	0	0	0	0	0	0
13	30	0	7	0	0	0	0	0	0	0	0	10
14	0	0	0	0	0	0	0	0	0	0	0	0
15	0	4	0	7	10	0	0	0	0	0	0	0
16	2	20	5	0	67	0	0	0	0	0	0	0
17	30	0	0	7	10	0	0	0	0	0	0	0
18	32	7	0	0	0	0	0	0	0	0	0	0
19	36	0	0	0	8	0	0	0	0	0	0	0
20	15	5	0	0	9	0	0	4	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	19
22	0	0	0	0	0	0	0	0	0	0	0	66
23	0	0	0	0	0	0	0	0	0	0	0	17
24	14	0	0	0	0	0	0	0	0	0	0	87
25	53	0	0	0	0	0	0	0	0	0	14	20
26	0	0	0	0	0	0	0	0	0	10	0	36
27	0	19	0	0	0	0	0	0	0	43	2	0
28	0	16	0	0	0	0	0	0	0	0	20	0
29	0		0	0	0	0	0	0	0	0	0	0
30	7		0	0	6	0	2.1	0	0	0	0	0
31	0		0		0		0	0		0		0

<b>Monthly</b>	355	145	155	29	214	0	2.1	4	0	53	92	335
<b>Rainy Days</b>	16	9	8	3	11	0	1	1	0	2	7	14
<b>Max.</b>	53	70	48	15	67	0	2.1	4	0	43	28	87
<b>Average</b>	11	5	5	1	7	0	0	0	0	2	3	11

<b>Annual</b> : 1384.1	<b>No.</b> : 72	<b>Max.</b> : 87	<b>Ave.</b> : 4
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	11	72	94	0	10	0	0	0	0	0	0	42
2	77	2	8	15	94	0	0	0	0	0	28	29
3	78	4	48	7	10	0	0	0	0	0	28	19
4	115	32	5	7	94	0	0	4	0	0	0	0
5	67	0	0	0	0	0	0	0	0	0	14	209
6	7	35	0	0	6	0	2.1	0	0	53	22	36

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	166	78	150	22	114	0	0	0	0	0	56	90
<b>2nd</b>	189	67	5	7	100	0	2.1	4	0	53	36	245

**Table Daily Rainfall**

Station : **Bontosunggu**  
 Year : **1991**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	62	6	2	7	0	0	5	0	0	0	0	8
2	9	10	11	5	0	0	0	0	0	0	0	3
3	0	22	0	0	0	0	0	0	0	0	0	5
4	3	23	0	0	0	0	0	0	0	0	0	8
5	13	33	0	0	0	0	0	0	0	0	0	0
6	0	62	0	0	0	0	0	0	0	0	0	0
7	24	33	0	0	0	0	0	0	0	0	0	1
8	10	34	0	0	0	0	0	0	0	0	0	30
9	52	41	0	0	0	0	0	0	0	0	0	10
10	0	5	0	0	0	0	0	0	0	0	0	18
11	20	9	0	0	0	0	0	0	0	0	0	55
12	0	0	0	0	0	0	0	0	0	0	0	4
13	1	1	0	0	0	0	0	0	0	0	0	0
14	0	2	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	9	0	0	0	0	0	0	0	5
17	0	0	0	40	0	0	0	0	0	0	3	0
18	65	31	0	0	0	0	0	0	0	0	0	0
19	2	12	0	0	0	0	0	0	0	0	0	4
20	63	5	0	0	0	0	0	0	0	0	0	0
21	40	9	0	0	0	0	0	0	0	0	0	0
22	9	12	0	2	0	0	0	0	0	0	27	19.2
23	126	62	0	56	0	0	0	0	0	0	0	0
24	3	0	0	91	0	0	0	0	0	0	0	1
25	21	38	0	0	11	0	0	0	0	0	0	0
26	105	0	0	0	0	0	0	0	0	0	18	0
27	1	7	0	1	0	0	0	0	0	0	10	18
28	4	3	0	0	0	0	0	0	0	0	0	26
29	20		0	0	0	0	0	0	0	0	0	0
30	54		0	0	0	0	0	0	0	0	2	0
31	19		30		0		0	0		8		0

<b>Monthly</b>	726	460	43	211	11	0	5	0	0	8	60	215.2
<b>Rainy Days</b>	23	22	3	8	1	0	1	0	0	1	5	16
<b>Max.</b>	126	62	30	91	11	0	5	0	0	8	27	55
<b>Average</b>	23	16	1	7	0	0	0	0	0	0	2	7

<b>Annual</b> : 1739.2	<b>No.</b> : 80	<b>Max.</b> : 126	<b>Ave.</b> : 5
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	87	94	13	12	0	0	5	0	0	0	0	24
2	86	175	0	0	0	0	0	0	0	0	0	59
3	21	12	0	0	0	0	0	0	0	0	0	59
4	130	48	0	49	0	0	0	0	0	0	3	9
5	199	121	0	149	11	0	0	0	0	0	27	20.2
6	203	10	30	1	0	0	0	0	0	8	30	44

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	194	281	13	12	0	0	5	0	0	0	0	142
<b>2nd</b>	532	179	30	199	11	0	0	0	0	8	60	73.2

**Table Daily Rainfall**

Station : **Bontosunggu**  
 Year : **1992**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0	15	58	0	14	0	15	0	7	0	13.5
2	35	9	154	31	0	0	0	0	0	0	0	14
3	4	66	2	0	0	9	0	0	3	0	0	5
4	7	2	0	0	0	0	0	0	5	0	0	0
5	0	0	0	0	7	0	24	0	4	0	0	9
6	0	0	6.5	0	0	0	0	0	0	0	0	2.5
7	11	2	28	0	0	1	0	0	0	2.5	0	15
8	116	11	0	0	0	2	0	0	0	5	0	0
9	75	0	0	8	0	0	0	0	0	0	0	0
10	42	1	0	17	0	0	0	0	0	0	5	5
11	2	0	105	3	0	0	0	0	0	0	0	0
12	0	3	0	0	0	0	0	0	0	0	0	13
13	0	17	0	0	0	0	0	0	5	0	5	5
14	0	16	0	0	0	0	0	0	0	0	0	2.5
15	0	0	0	0	0	0	0	0	0	0	5	5
16	20	0	0	0	0	45	0	0	0	0	1	49
17	2	0	0	0	0	0	0	0	0	0	10	2.5
18	31	8	0	4	0	0	0	0	0	0	0	0
19	0	15	7	0	0	0	0	0	0	0	0	0
20	0	32	13	0	0	0	0	0	5	0	0	0
21	0	19	0	0	1	0	0	0	0	0	0	1
22	4	0	5	0	0	0	0	0	0	0	2.5	10
23	0	33	0	0	3	0	0	0	0	0	2.5	5
24	0	0	0	0	0	0	0	0	0	5	0	91
25	0	0	0	2	0	0	0	0	0	0	0	0
26	0	3	7	0	0	0	0	0	0	0	15	0
27	26	4	0	0	0	0	0	0	0	0	11	0
28	0	0	35	0	0	0	0	0	0	0	31	0
29	0	0	0	0	2	0	0	0	50	0	25	7.5
30	0	0	0	30	0	0	0	0	0	0	1	21
31	0	0	45	0	0	0	0	0	0	0	0	40

<b>Monthly</b>	375	241	422.5	153	13	71	24	15	72	19.5	114	316.5
<b>Rainy Days</b>	13	16	12	8	4	5	1	1	6	4	12	20
<b>Max.</b>	116	66	154	58	7	45	24	15	50	7	31	91
<b>Average</b>	12	8	14	5	0	2	1	0	2	1	4	10

<b>Annual</b> : 1836.5	<b>No.</b> : 102	<b>Max.</b> : 154	<b>Ave.</b> : 5
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	46	77	171	89	7	23	24	15	12	7	0	41.5
2	244	14	34.5	25	0	3	0	0	0	7.5	5	22.5
3	2	36	105	3	0	0	0	0	5	0	10	25.5
4	53	55	20	4	0	45	0	0	5	0	11	51.5
5	4	52	5	2	4	0	0	0	0	5	5	107
6	26	7	87	30	2	0	0	0	50	0	83	68.5

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	292	127	310.5	117	7	26	24	15	17	14.5	15	89.5
<b>2nd</b>	83	114	112	36	6	45	0	0	55	5	99	227

**Table Daily Rainfall**

Station : **Bontosunggu**  
 Year : **1993**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	25	0	0	97.5	0	0	0			0	0	0
2	0	2.5	66	0	1.56	0	0			0	0	0
3	8	14	4	0	0	0	0			0	0	0
4	22	2.5	27.5	24.5	20	0	0			0	0	0
5	0	20	0	0	1	0	0			0	0	0
6	0	0	0	0	1.5	0	0			0	0	0
7	4	3	7	0	0	0	0			0	0	0
8	13	0	0	0	0	0	0			0	0	0
9	0	2.5	0	0	0	10	0			0	20	6
10	8	11	0	20	0	15	0			0	0	18
11	0	20	8	1	0	0	0			0	0	0
12	19	5	0	0	0	0	0			15	29	11
13	7.5	20	0	0	0	0	0			0	2	9
14	0	24	0	0	0	0	0			0	0	35
15	57.6	34	0	0	6.5	0	0			0	2	40
16	3.5	37	0	0	0	0	0			0	0	32
17	0	8	0	0	0	0	0			19	34	0
18	15	0	0	4	10	0	0			0	0	0
19	0	0	0	0	0	0	0			0	0	0
20	31	0	0	0	0	0	0			0	0	0
21	33	57.5	0	0	0	0	0			0	25	40
22	145	6	0	0	0	0	0			0	0	38
23	19.7	0	0	0	0	0	0			0	0	108
24	14	0	0	19	0	0	0			0	6	148
25	1.9	0	2	0	0	0	0			0	6	90
26	5	85	37.5	0	0	0	0			0	50	135
27	12.5	0	75	0	0	0	0			0	0	40
28	5	5	0	0	0	0	0			0	18	9
29	0		0	0	0	0	0			0	10	0
30	0		0	0	0	0	0			0	0	23
31	0		0		0		0			0		0

<b>Monthly</b>	449.7	357	227	166	40.56	25	0	0	0	34	202	782
<b>Rainy Days</b>	20	18	8	6	6	2	0	0	0	2	11	16
<b>Max.</b>	145	85	75	97.5	20	15	0	0	0	19	50	148
<b>Average</b>	15	13	7	6	1	1	0	0	0	1	7	25

<b>Annual</b> : 2283.3	<b>No.</b> : 89	<b>Max.</b> : 148	<b>Ave.</b> : 6
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	55	39	97.5	122	22.56	0	0	0	0	0	0	0
2	25	16.5	7	20	1.5	25	0	0	0	0	20	24
3	84.1	103	8	1	6.5	0	0	0	0	15	33	95
4	49.5	45	0	4	10	0	0	0	0	19	34	32
5	213.6	63.5	2	19	0	0	0	0	0	0	37	424
6	22.5	90	112.5	0	0	0	0	0	0	0	78	207

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	164.1	158.5	112.5	143	30.56	25	0	0	0	15	53	119
<b>2nd</b>	285.6	198.5	114.5	23	10	0	0	0	0	19	149	663

**Table Daily Rainfall**

Station : **Bontosunggu**  
 Year : **1994**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	45	0	0	8	4	0	0	0	0	2	0	0
2	30	0	31	10	0	0	0	0	0	3	0	0
3	13	6	41	0	7	0	0	0	0	0	0	15
4	3	0	0	0	0	0	0	0	0	0	0	0
5	10	1	0	0	0	0	0	0	0	0	0	50
6	0	47	0	0	0	0	0	0	0	0	0	8.5
7	0	4	15	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	12.5	0
9	18	59	11.5	0	0	0	0	0	0	0	0	15
10	0	0	17	1	5	0	0	0	0	0	0	0
11	5	0	75	2.5	0	0	0	0	0	0	0	0
12	0	38	30	0	0	0	0	0	0	0	2.5	0
13	3	38	27.5	0	0	0	0	0	0	0	0	7.5
14	25	45	9	0	0	0	0	0	0	0	0	0
15	2.5	0	0	21	0	0	0	0	0	0	0	41
16	14	35	0	0	0	0	0	0	0	0	0	10
17	38	2	0	0	0	0	0	0	0	0	3	57
18	110	27	0	0	0	0	0	0	0	0	0	15.5
19	27	37	9	0	0	0	0	0	0	0	0	12.5
20	8	8	0	100	0	0	0	0	0	0	0	0
21	77.5	0	0	0	0	0	0	0	0	0	9	0
22	24	0	15	0	0	10	0	0	0	0	0	0
23	20	0	160	0	0	0	0	0	0	0	47	0
24	104	0	22	0	0	0	0	0	0	0	0	0
25	63	17	0	0	0	0	0	0	0	0	14.5	0
26	47	0	0	0	0	0	0	0	0	0	0	0
27	0	0	6	0	0	0	0	0	0	0	54	0
28	3	0	0	0	0	0	0	0	0	0	16	0
29	0		0	0	0	0	0	0	0	0	0	0
30	12.5		27.5	0	0	0	0	0	0	2.5	58	0
31	1		0		0		0	0		4.5		0

<b>Monthly</b>	703.5	364	496.5	142.5	16	10	0	0	0	12	216.5	232
<b>Rainy Days</b>	24	14	15	6	3	1	0	0	0	4	9	10
<b>Max.</b>	110	59	160	100	7	10	0	0	0	4.5	58	57
<b>Average</b>	23	13	16	5	1	0	0	0	0	0	7	7

<b>Annual</b> :	2193	<b>No.</b> :	86	<b>Max.</b> :	160	<b>Ave.</b> :	6
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	101	7	72	18	11	0	0	0	0	5	0	65
2	18	110	43.5	1	5	0	0	0	0	0	12.5	23.5
3	35.5	121	141.5	23.5	0	0	0	0	0	0	2.5	48.5
4	197	109	9	100	0	0	0	0	0	0	3	95
5	288.5	17	197	0	0	10	0	0	0	0	70.5	0
6	63.5	0	33.5	0	0	0	0	0	0	7	128	0

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	154.5	238	257	42.5	16	0	0	0	0	5	15	137
<b>2nd</b>	549	126	239.5	100	0	10	0	0	0	7	201.5	95

**Table Daily Rainfall**

Station : **Bontosunggu**  
 Year : **1995**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0	27	0	0	0	0	0	0	0	0	3.5
2	0	18	57.5	27.5	0	0	0	0	0	0	0	3.5
3	0	0	59	75	0	0	0	0	0	0	0	4.5
4	0	70	2.5	45	0	11	5	0	0	0	0	35
5	65	45	0.5	57	0	16	0	0	0	0	0	21
6	1	31.5	7	25	0	2.5	0	0	10	0	21	55
7	0	18	32	74	1	0	0	0	0	0	0	83
8	5	0	12	12	1	4	0	0	0	0	21	24
9	0	0	2	0	0	0	0	0	0	0	6	2.5
10	2.5	7	0	5.5	4	14	0	0	0	0	0	43
11	12.5	0	0	0	0	0	0	0	0	0	6	118
12	67.5	0	4	0	0.5	0	6	0	0	0	0	25
13	92.5	18	0	2	37.5	0	0	0	0	0	65	17.5
14	33	62	23	5	0	0	0	0	0	0	0	0
15	16.5	2	6	0	62	5	0	0	0	24	0	0
16	6	0	0	0	0	21	0	0	0	7	56	21
17	0	3	0	5	0	0	0	0	0	0	0	36
18	10	3	9	0	0	0	0	0	0	0	0	1
19	17.5	0	5.5	0	0	0	0	0	0	0	0	11
20	62.5	0	4.5	0	0	0	0	0	0	0	0	8.5
21	131	40	12.5	0	0	0	0	0	0	0	11	39
22	91.5	4.5	0	0	0	0	0	0	0	0	15	15
23	33	0	0	0	0	0	0	0	0	0	0	1
24	11	4	5	0	0	0	0	0	9	0	25	5
25	95	0	0	0	0	0	0	0	0	0	0	0
26	8	7.5	97	0	0	0	0	0	0	0	91	3
27	0	190	0	0	0	0	0	0	0	0	62	0
28	1	22	9	0	0	0	0	0	0	0	34	0
29	10		2.5	0	0	0	0	0	0	0	2.5	0
30	0		22	0	5	0	0	0	0	0	0	0
31	0		8		0		0	0		0		0

<b>Monthly</b>	772	545.5	407.5	333	111	73.5	11	0	19	37	412	583.5
<b>Rainy Days</b>	21	17	22	11	7	7	2	0	2	3	13	23
<b>Max.</b>	131	190	97	75	62	21	6	0	10	24	91	118
<b>Average</b>	25	19	13	11	4	2	0	0	1	1	14	19

<b>Annual</b> :	3305	<b>No.</b> :	128	<b>Max.</b> :	190	<b>Ave.</b> :	9
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	65	133	146.5	204.5	0	27	5	0	0	0	0	67.5
2	8.5	56.5	53	116.5	6	20.5	0	0	10	6	44.5	215
3	222	82	33	7	100	5	6	0	0	24	71	160.5
4	96	6	19	5	0	21	0	0	0	7	56	77.5
5	361.5	48.5	17.5	0	0	0	0	0	9	0	51	60
6	19	219.5	138.5	0	5	0	0	0	0	0	189.5	3

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	295.5	271.5	232.5	328	106	52.5	11	0	10	30	115.5	443
<b>2nd</b>	476.5	274	175	5	5	21	0	0	9	7	296.5	140.5

**Table Daily Rainfall**

Station : **Bontosunggu**  
 Year : **1996**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	33	42.5	14	0	0	0	0	0	0	2.5	27.5	22
2	10	16	4.5	0	0	0	0	0	15	0	16	127.5
3	39	87.5	0	34	0	0	0	0	0	0	32.5	25
4	38	30	0	0	0	0	0	0	0	40	1.5	0
5	11	0.5	7.5	24	0	0	0	0	0	0	58	7
6	135	6	11	0	0	0	0	0	0	0	0	7
7	5	74	0	8	0	0	0	0	0	0	0	4
8	1	108	0	14	0	0	0	0	0	0	2.5	8
9	32	28	0	0	0	0	0	0	0	0	6	7.5
10	0	19	19.5	0	0	0	3	0	0	0	0	30
11	0	141	5.5	0	0	0	0	0	0	0	0	36
12	20	6.5	0	0	0	0	5	0	0	0	32	188
13	45	5.5	0	0	0	0	0	0	0	0	0	34
14	0	7	0	0	0	0	0	0	0	0	5.5	13.5
15	0	23	0	0	0	0	0	0	0	0	0	18.5
16	0	0	0	0	0	0	0	0	0	0	28	7.5
17	0	0	0	5	0	0	0	0	0	0	16	50
18	10.5	0	0	30	0	0	0	0	0	0	0	105
19	5.5	0	10.5	0	0	6	0	0	0	0	0	51
20	38	0	2.5	0	0	0	0	0	0	5	2	106
21	1	3	4	0	0	0	0	0	0	0	5	220
22	14	0	5	0	0	0	0	0	0	0	27.9	46
23	27	8.5	25	0	0	0	0	0	0	0	7	52
24	84	9	38	0	0	0	0	0	0	11	0	105
25	34	57	18	0	0	0	0	0	0	0	0	21
26	86	53	0	0	0	0	0	0	0	0	0	0
27	66	57	71	0	0	0	0	0	0	0	0	0
28	12	0	0	0	0	0	0	0	0	0	38	35
29	18	0	0	0	0	0	0	0	0	0	0	65
30	2	0	0	0	0	5	0	0	0	0	12	0
31	20	0	0	0	0	0	4	0	0	0	0	6

<b>Monthly</b>	787	782	236	115	0	11	12	0	15	58.5	317.4	1397.5
<b>Rainy Days</b>	25	21	14	6	0	2	3	0	1	4	17	27
<b>Max.</b>	135	141	71	34	0	6	5	0	15	40	58	220
<b>Average</b>	25	27	8	4	0	0	0	0	1	2	11	45

<b>Annual</b> : 3731.4	<b>No.</b> : 120	<b>Max.</b> : 220	<b>Ave.</b> : 10
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	131	176.5	26	58	0	0	0	0	15	42.5	135.5	181.5
2	173	235	30.5	22	0	0	3	0	0	0	8.5	56.5
3	65	183	5.5	0	0	0	5	0	0	0	37.5	290
4	54	0	13	35	0	6	0	0	0	5	46	319.5
5	160	77.5	90	0	0	0	0	0	0	11	39.9	444
6	204	110	71	0	0	5	4	0	0	0	50	106

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	369	594.5	62	80	0	0	8	0	15	42.5	181.5	528
<b>2nd</b>	418	187.5	174	35	0	11	4	0	0	16	135.9	869.5

**Table Daily Rainfall**

Station : **Bontosunggu**  
 Year : **1997**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0	23	0	0	0	3.5	0	0	0	0	0
2	17	0	30	31	0	0	8	0	0	0	0	2
3	24	7	30	21.5	0	0	0	0	0	0	0	10
4	9	28.5	27.5	1	0	0	0	0	0	0	0	0
5	1	49	3.5	0	0	0	0	0	0	0	0	21
6	10	70	1.5	0	0	0	0	0	0	0	0	25
7	35	80	72	0	0	0	0	0	0	0	0	0
8	8	75	0	19	0	0	0	0	0	0	0	0
9	23	12	0	25	0	0	0	0	0	0	0	2
10	28	0	0	0	0	0	0	0	0	0	0	20
11	0	0	0	15.5	0	0	0	0	0	0	0	5
12	0	0	25	0	0	0	0	0	0	0	0	0
13	20	22	0	0	0	0	0	0	0	0	0	0
14	30	32	0	13	0	0	0	0	0	0	0	0
15	5	27.5	0	0	0	0	0	0	0	0	0	7
16	62	65	0	0	0	0	0	0	0	0	0	0
17	18	3	0	0	0	0	0	0	0	0	0	0
18	0	31	0	0	0	0	0	0	0	0	0	0
19	9	0	0	0	13	0	0	0	0	0	0	2
20	8	0	0	0	0	0	0	0	0	0	0	0
21	0	124	0	0	0	0	0	0	0	0	0	20
22	80	15	0	0	0	0	0	0	0	0	1	102
23	17	68	0	0	0	0	0	0	0	0	1	24
24	6	16	0	0	0	0	0	0	0	0	2.5	0
25	0	34	0	0	0	0	0	0	0	0	0	34
26	0	32.5	0	0	0	0	0	0	0	0	2	0
27	0	35	0	4	0	0	0	0	0	0	9	0
28	0	21	0	44	0	0	0	0	0	0	0	0
29	0		17	0	0	0	0	0	0	0	3.5	0
30	0		0	40	0	0	0	0	0	0	2	0
31	0		0		0		0	0		0		0

<b>Monthly</b>	410	847.5	229.5	214	13	0	11.5	0	0	0	21	274
<b>Rainy Days</b>	19	21	9	10	1	0	2	0	0	0	7	13
<b>Max.</b>	80	124	72	44	13	0	8	0	0	0	9	102
<b>Average</b>	13	30	7	7	0	0	0	0	0	0	1	9

<b>Annual</b> : 2020.5	<b>No.</b> : 82	<b>Max.</b> : 124	<b>Ave.</b> : 6
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	51	84.5	114	53.5	0	0	11.5	0	0	0	0	33
2	104	237	73.5	44	0	0	0	0	0	0	0	47
3	55	81.5	25	28.5	0	0	0	0	0	0	0	12
4	97	99	0	0	13	0	0	0	0	0	0	2
5	103	257	0	0	0	0	0	0	0	0	4.5	180
6	0	88.5	17	88	0	0	0	0	0	0	16.5	0

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	210	403	212.5	126	0	0	11.5	0	0	0	0	92
<b>2nd</b>	200	444.5	17	88	13	0	0	0	0	0	21	182



**Table Daily Rainfall**

Station : **Bontosunggu**  
 Year : **1998**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0	0	10	11	0	0	40	0	0	0	0
2	11	3	0	0	8	2	0	3	0	0	0	0
3	0	3	0	5	7	8	0	0	0	0	0	0
4	0	5	0	2	0	0	0	0	0	0	0	0
5	18	1	4	0	5	0	29	0	0	0	0	0
6	2	0	0	3	1	0	1.5	0	0	0	0	0
7	0	4	0	14	0	0	0	0	0	0	0	0
8	0	0	0	92	0	0	10	0	0	0	0	0
9	0	0	0	1	0	0	1	0	0	0	0	0
10	2	0	0	4	0	8	6	0	0	0	0	0
11	27.5	0	0	0	0	0	10	0	0	0	0	0
12	0	0	0	15	0	0	0	0	0	0	0	0
13	0	15	0	17	0	0	0	0	0	0	0	0
14	45	0	0	17	10	0	0	0	0	0	0	0
15	0	20	0	5	0	0	1	10	0	0	0	0
16	13	0	5	20	2	19	0	4	0	0	0	0
17	23	0	5	0	6	0	0	0	0	0	0	0
18	0	2	72	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	2.5	0	0	0	0	0	0	0	0
21	1.5	0	62	0	10	0	0	0	0	0	0	0
22	0	0	0	26	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	19	0	0	0	0	0
25	0	0	0	0	0	0	38	0	0	0	0	0
26	0	0	31	0	0	0	0	17	0	0	0	0
27	12	0	0	11	0	0	3	0	0	0	0	0
28	0	0	0	0	0	0	7	0	0	0	0	0
29	0	0	0	0	0	3	12	0	0	0	0	0
30	0	0	0	8	4	5	1	0	0	0	0	0
31	0	0	17	0	0	0	8	0	0	0	0	0

<b>Monthly</b>	155	53	196	252.5	64	45	146.5	74	0	0	0	0
<b>Rainy Days</b>	10	8	7	17	10	6	14	5	0	0	0	0
<b>Max.</b>	45	20	72	92	11	19	38	40	0	0	0	0
<b>Average</b>	5	2	6	8	2	2	5	2	0	0	0	0

<b>Annual</b> :	986	<b>No.</b> :	77	<b>Max.</b> :	92	<b>Ave.</b> :	3
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	29	12	4	17	31	10	29	43	0	0	0	0
2	4	4	0	114	1	8	18.5	0	0	0	0	0
3	72.5	35	0	54	10	0	11	10	0	0	0	0
4	36	2	82	22.5	8	19	0	4	0	0	0	0
5	1.5	0	62	26	10	0	57	0	0	0	0	0
6	12	0	48	19	4	8	31	17	0	0	0	0

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	105.5	51	4	185	42	18	58.5	53	0	0	0	0
<b>2nd</b>	49.5	2	192	67.5	22	27	88	21	0	0	0	0

**Table Daily Rainfall**

Station : **Bontosunggu**  
 Year : **1999**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	372	2	2			8	0			30	50	0
2	281	4	0	0			0			0	80	0
3	68	3	7	3			0			0	40	0
4	105	2	0	3	0	0	0			75	50	0
5	53	3	1	0		0	5			0	0	0
6	47	1	0			0	10			20	20	0
7	76	3	0		2	0	3			100	50	0
8	30	2	14		0	0				70	0	0
9	108	1	0	13	5	0				85	0	
10	19	0	1		8					55		40
11	25	0	0	0	3	3				55	0	100
12	61	0	0		0	0	0			175	0	10
13	26		14		3	0	0			100	70	0
14	123	1	0			0	0			75	50	90
15	165	1	10	3	0	0				0	0	0
16		1	13	1			0			0	50	0
17	53	1		8		0	0			250	6	0
18	71	2		1	0	0	0			0	0	20
19	128	1	0	1	0	13	0			0	0	0
20	83	0	1		8	0	0			0	0	75
21	72	0	4	0		0	0			20	25	50
22	91	0	0		0	0	0			0	50	120
23	103	1	0		0	0	0			75	0	0
24	116	1	15		0	0				5	0	0
25	82	0	5		0	0				0	75	0
26	74	0		0	0	0	0			0	100	0
27	121	1	0		0	0				0	25	75
28	16	1	1	0	0	0				0	0	50
29	42		6	0	0					0	0	0
30	180		0	3						0	0	0
31	0				0					0		0

<b>Monthly</b>	2791	32	94	36	29	24	18	0	0	1190	741	630
<b>Rainy Days</b>	29	19	14	9	6	3	3	0	0	15	15	10
<b>Max.</b>	372	4	15	13	8	13	10	0	0	250	100	120
<b>Average</b>	93	1	3	2	1	1	1	0	0	38	26	21

<b>Annual</b>	: 5585	<b>No.</b>	: 123	<b>Max.</b>	: 372	<b>Ave.</b>	: 16
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	879	14	10	6	0	8	5	0	0	105	220	0
2	280	7	15	13	15	0	13	0	0	330	70	40
3	400	2	24	3	6	3	0	0	0	405	120	200
4	335	5	14	11	8	13	0	0	0	250	56	95
5	464	2	24	0	0	0	0	0	0	100	150	170
6	433	2	7	3	0	0	0	0	0	0	125	125

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	1559	23	49	22	21	11	18	0	0	840	410	240
<b>2nd</b>	1232	9	45	14	8	13	0	0	0	350	331	390

**Table Daily Rainfall**

Station : **Bontosunggu**  
 Year : **2000**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	70	0	0	0	0	30	0	0	0	0	0	35
2	50	5	0	0	0	0	0	0	0	0	0	33
3	15	60	0	0	0	0	0	0	0	0	0	60
4	0	5	0	0	0	0	16	0	0	0	0	108
5	14	13	0	0	0	0	0	0	0	0	16	2
6	0	25	0	0	0	10	0	0	0	0	0	29
7	0	3	0	0	102	0	0	0	0	0	3	7
8	20	5	0	0	0	13	0	0	0	0	0	12
9	120	3	0	0	0	75	0	0	0	25	1	11
10	0	0	0	0	75	0	0	0	0	0	0	0
11	0	5	0	0	0	7	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	5.5
13	0	0	100	0	0	0	0	0	0	3	0	3
14	0	0	25	0	0	0	0	0	0	0	0	9
15	50	0	19	0	0	50	0	0	0	0	3	74
16	0	0	25	0	50	50	0	0	0	0	2	0
17	0	0	25	0	0	0	0	0	0	21	0	5
18	100	25	10	0	0	50	0	0	0	0	0	0
19	15	15	45	0	0	25	0	0	0	56	0	0
20	100	20	10	0	25	0	0	0	0	0	5	0
21	0	0	60	0	50	50	0	0	0	0	0	36
22	14	15	0	0	0	0	0	0	0	57	0	59
23	3	0	12	0	0	0	0	0	0	53	6.5	2.5
24	5	25	26	0	10	0	0	0	0	0	10	0
25	10	20	0	0	0	22	0	0	0	0	2	0
26	5	0	30	0	0	0	0	0	0	4	16.5	30
27	3	0	15	0	0	50	0	0	0	0	48	0
28	20	0	50	0	0	0	0	0	0	0	38	0
29	30	0	25	0	10	0	0	0	0	0	45	0
30	75		40	0	0	0	0	0	0	0	15	0
31	100		25		0		0		0		0	0

<b>Monthly</b>	819	244	542	0	322	432	16	0	0	219	211	521
<b>Rainy Days</b>	20	15	17	0	7	12	1	0	0	7	14	18
<b>Max.</b>	120	60	100	0	102	75	16	0	0	57	48	108
<b>Average</b>	26	8	17	0	10	14	1	0	0	7	7	17

<b>Annual</b> :	3326	<b>No.</b> :	111	<b>Max.</b> :	120	<b>Ave.</b> :	9
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	149	83	0	0	0	30	16	0	0	0	16	238
2	140	36	0	0	177	98	0	0	0	25	4	59
3	50	5	144	0	0	57	0	0	0	3	3	91.5
4	215	60	115	0	75	125	0	0	0	77	7	5
5	32	60	98	0	60	72	0	0	0	110	18.5	97.5
6	233	0	185	0	10	50	0	0	0	4	162.5	30

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	339	124	144	0	177	185	16	0	0	28	23	388.5
<b>2nd</b>	480	120	398	0	145	247	0	0	0	191	188	132.5

**Table Daily Rainfall**

Station : **Bontosunggu**  
 Year : **2001**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0	14	0	0	0	0	0	0	0	0	25
2	0	218	10	0	0	0	0	0	0	0	5	35
3	4	59	11	0	0	0	0	0	0	0	0	50
4	7	82	28	0	0	0	0	0	0	0	11	65
5	19	24	3	0	0	0	0	0	0	0	0	0
6	0	55	7	0	0	6	0	0	0	0	9	0
7	6	75	5	0	0	23	0	0	0	0	0	0
8	24	69	0	0	0	0	0	0	0	0	0	0
9	113	141	0	0	0	0	0	0	0	0	10	15
10	150	4	0	0	0	10	0	0	0	0	0	0
11	12	0	6	0	0	0	0	0	0	0	0	120
12	36	0	23	0	0	0	0	0	0	0	0	31
13	0	6	0	0	0	0	0	0	0	0	0	0
14	9	0	0	0	0	0	0	0	0	0	0	40
15	24	0	17	0	0	0	0	0	0	0	0	18
16	55	0	0	0	0	0	0	0	0	0	9	0
17	3	13	38	0	0	0	0	0	0	0	0	20
18	0	16	0	0	0	0	0	0	0	0	11	51
19	0	30	21	0	0	0	0	0	0	0	4	0
20	0	0	0	0	0	0	0	0	0	0	0	0
21	14	18	0	0	0	0	0	0	0	0	0	30
22	0	0	0	0	0	0	0	0	0	0	0	0
23	9	0	0	0	0	0	0	0	0	0	11	50
24	0	0	12	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	6	42
26	10	0	0	13	0	0	0	0	0	0	0	20
27	12	0	0	0	0	0	0	0	0	0	8	0
28	0	0	0	0	0	0	0	0	0	0	10	0
29	17		7	7	0	0	0	0	0	0	0	0
30	0		0	5	35	0	0	0	3	0	0	70
31	19		0		0		0		0		0	0

<b>Monthly</b>	543	810	202	25	35	39	0	0	3	0	94	682
<b>Rainy Days</b>	19	14	14	3	1	3	0	0	1	0	11	16
<b>Max.</b>	150	218	38	13	35	23	0	0	3	0	11	120
<b>Average</b>	18	29	7	1	1	1	0	0	0	0	3	22

<b>Annual</b> :	2433	<b>No.</b> :	82	<b>Max.</b> :	218	<b>Ave.</b> :	7
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	30	383	66	0	0	0	0	0	0	0	16	175
2	293	344	12	0	0	39	0	0	0	0	19	15
3	81	6	46	0	0	0	0	0	0	0	0	209
4	58	59	59	0	0	0	0	0	0	0	24	71
5	23	18	12	0	0	0	0	0	0	0	17	122
6	58	0	7	25	35	0	0	0	3	0	18	90

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	404	733	124	0	0	39	0	0	0	0	35	399
<b>2nd</b>	139	77	78	25	35	0	0	0	3	0	59	283

**Table Daily Rainfall**

Station : **Bontosunggu**  
 Year : **2002**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	165	21	0	0	11	0	0	0	0	0	3	6
2	99	0	0	0	4	0	0	0	0	0	0	0
3	40	0	0	0	0	0	0	0	0	0	0	0
4	34	0	0	0	0	0	2	0	0	0	0	0
5	0	14	0	0	0	0	3	0	0	0	0	3
6	11	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	4
8	0	0	0	0	34	0	0	0	0	0	0	11
9	0	0	0	0	6	0	0	0	0	0	0	0
10	0	0	0	0	7	0	0	0	0	0	0	0
11	40	0	0	0	0	0	0	0	0	0	0	4
12	0	5	0	0	0	3	0	0	0	0	0	3
13	0	23	0	0	0	0	0	0	0	0	0	11
14	0	16	0	0	0	0	0	0	0	0	0	15
15	0	12	0	0	0	0	0	0	0	0	0	19
16	0	7	0	0	0	0	0	0	0	0	0	0
17	12	0	0	0	0	0	0	0	0	0	0	0
18	9	9	0	0	0	0	0	0	0	0	0	0
19	11	3	0	0	0	11	0	0	0	0	0	7
20	0	0	0	0	0	0	0	0	0	0	6	0
21	6	9	0	0	0	0	0	0	0	0	0	5
22	0	7	0	0	0	0	0	0	0	0	0	0
23	10	6	0	12	0	0	0	0	0	0	11	8
24	12	15	0	0	0	13	0	0	0	0	8	0
25	0	0	0	0	0	0	0	0	3	0	3	4
26	5	0	0	0	0	0	0	0	11	0	6	0
27	0	0	28	0	0	0	0	0	0	0	17	0
28	0	0	5	0	0	0	0	0	0	0	0	71
29	0		0	0	0	0	0	0	0	0	0	8
30	0		0	0	0	0	0	0	0	0	0	20
31	18		0		0		0		0		0	6

<b>Monthly</b>	472	147	33	12	62	27	5	0	14	0	54	205
<b>Rainy Days</b>	14	13	2	1	5	3	2	0	2	0	7	17
<b>Max.</b>	165	23	28	12	34	13	3	0	11	0	17	71
<b>Average</b>	15	5	1	0	2	1	0	0	0	0	2	7

<b>Annual</b>	: 1031	<b>No.</b>	: 66	<b>Max.</b>	: 165	<b>Ave.</b>	: 3
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	338	35	0	0	15	0	5	0	0	0	3	9
2	11	0	0	0	47	0	0	0	0	0	0	15
3	40	56	0	0	0	3	0	0	0	0	0	52
4	32	19	0	0	0	11	0	0	0	0	6	7
5	28	37	0	12	0	13	0	0	3	0	22	17
6	23	0	33	0	0	0	0	0	11	0	23	105

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	389	91	0	0	62	3	5	0	0	0	3	76
<b>2nd</b>	83	56	33	12	0	24	0	0	14	0	51	129

**Table Daily Rainfall**

Station : Mandalle  
Year : 1975

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1				0	0	25	0	0	0	0	0	33
2				0	0	0	0	0	63	0	0	0
3				0	0	0	0	0	0	5	0	0
4				0	0	0	0	0	0	0	0	0
5				0	0	0	0	0	0	0	0	13
6				0	0	0	0	0	0	0	0	40
7				0	0	2	0	0	0	0	0	0
8				0	0	0	0	0	0	0	0	0
9				0	0	0	0	0	0	0	0	55
10				0	0	0	0	0	0	0	0	111
11				0	0	0	12	25	0	0	0	30
12				0	0	24	0	0	0	0	0	75
13				0	0	6	0	0	0	0	51	40
14				0	25	0	0	0	0	0	0	46
15				0	0	3	0	0	0	0	0	23
16				0	0	0	0	0	0	80	0	15
17				0	0	0	0	0	0	0	0	12
18				0	0	0	16	0	0	0	0	0
19				0	0	0	0	0	0	0	0	0
20				0	10	0	0	0	0	0	0	26
21				0	0	0	0	0	0	0	26	0
22				0	0	0	0	0	0	21	0	0
23				0	0	0	3	0	0	0	0	31
24				0	0	0	0	0	0	123	85	0
25				0	5	0	14	0	42	0	40	15
26				0	0	0	0	0	0	0	25	0
27				0	0	0	0	0	0	0	0	10
28				0	0	0	0	0	0	0	0	30
29				0	0	0	0	0	0	0	44	20
30				0	0	0	0	0	0	24	72	22
31					0		0	0		0		16

<b>Monthly</b>	0	0	0	0	40	60	45	25	105	253	343	663
<b>Rainy Days</b>	0	0	0	0	3	5	4	1	2	5	7	20
<b>Max.</b>	0	0	0	0	25	25	16	25	63	123	85	111
<b>Average</b>	0	0	0	0	1	2	1	1	4	8	11	21

<b>Annual</b> :	1534	<b>No.</b> :	47	<b>Max.</b> :	123	<b>Ave.</b> :	4
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0	0	0	0	25	0	0	63	5	0	46
2	0	0	0	0	0	2	0	0	0	0	0	206
3	0	0	0	0	25	33	12	25	0	0	51	214
4	0	0	0	0	10	0	16	0	0	80	0	53
5	0	0	0	0	5	0	17	0	42	144	151	46
6	0	0	0	0	0	0	0	0	0	24	141	98

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	0	0	0	0	25	60	12	25	63	5	51	466
<b>2nd</b>	0	0	0	0	15	0	33	0	42	248	292	197

**Table Daily Rainfall**

Station : Mandalle  
 Year : 1976

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	29	0	7	0	0	0	0	0	0	0	0	0
2	0	15	31	0	0	0	0	0	0	0	0	8
3	0	140	12	0	0	0	0	0	0	0	0	32
4	0	0	0	0	0	0	0	0	0	0	0	60
5	6	16	0	0	16	0	0	0	0	0	0	30
6	10	13	0	1	0	3	0	0	0	0	0	35
7	29	22	0	0	0	2	0	0	0	0	0	45
8	13	0	0	0	4	0	0	0	0	0	0	10
9	44	8	37	0	0	0	0	0	0	0	0	23
10	15	6	0	0	7	0	0	0	0	0	50	0
11	100	26	0	0	0	0	0	0	0	0	54	32
12	150	0	7	0	0	0	0	0	0	0	0	51
13	116	11	51	0	0	0	0	0	0	0	0	37
14	75	0	0	0	4	5	0	0	0	0	0	49
15	58	0	18	0	0	0	0	0	0	0	0	25
16	49	0	0	0	0	0	0	0	0	0	11	110
17	22	0	41	0	0	0	0	0	0	0	94	0
18	9	50	22	0	0	0	0	0	0	0	0	35
19	0	0	5	0	0	0	0	0	0	5	46	70
20	1	0	51	0	0	0	0	0	0	8	0	7
21	0	19	41	0	0	0	0	0	0	0	0	19
22	0	0	0	0	0	0	0	0	0	0	0	6
23	0	16	25	0	0	0	0	0	0	4	0	0
24	14	60	12	0	0	0	0	0	0	0	11	0
25	0	29	0	0	0	0	0	0	0	0	0	0
26	5	25	0	0	0	0	0	0	0	0	26	0
27	0	1	0	0	6	0	0	0	0	2	9	0
28	0	0	0	0	0	6	0	0	0	0	0	3
29	0	0	5	0	0	3	0	0	0	7	0	4
30	0		0	0	0	0	0	0	0	11	0	0
31	0		13		0		0	0		4		9

<b>Monthly</b>	745	457	378	1	37	19	0	0	0	41	301	700
<b>Rainy Days</b>	18	16	16	1	5	5	0	0	0	7	8	22
<b>Max.</b>	150	140	51	1	16	6	0	0	0	11	94	110
<b>Average</b>	24	16	12	0	1	1	0	0	0	1	10	23

<b>Annual</b>	: 2679	<b>No.</b>	: 98	<b>Max.</b>	: 150	<b>Ave.</b>	: 7
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	35	171	50	0	16	0	0	0	0	0	0	130
2	111	49	37	1	11	5	0	0	0	0	50	113
3	499	37	76	0	4	5	0	0	0	0	54	194
4	81	50	119	0	0	0	0	0	0	13	151	222
5	14	124	78	0	0	0	0	0	0	4	11	25
6	5	26	18	0	6	9	0	0	0	24	35	16

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	645	257	163	1	31	10	0	0	0	0	104	437
<b>2nd</b>	100	200	215	0	6	9	0	0	0	41	197	263

**Table Daily Rainfall**

Station : **Mandalle**  
 Year : **1977**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	10	0	0	3	0	0	0	0	0	0	88
2	75	18	0	9	0	0	0	0	0	0	0	5
3	0	0	0	0	0	0	0	0	0	0	0	0
4	37	0	0	0	0	0	0	0	0	0	0	0
5	42	76	3	0	21	0	0	0	0	0	0	0
6	0	33	0	0	3	0	0	0	0	0	0	0
7	24	3	12	0	0	0	0	0	0	0	0	0
8	21	34	0	24	0	0	0	0	0	0	0	0
9	56	61	0	0	0	0	0	0	0	0	0	10
10	19	35	4	56	0	0	0	0	0	0	0	60
11	60	90	0	43	0	0	0	0	0	0	0	15
12	72	14	0	6	0	0	0	0	0	0	0	0
13	4	52	6	21	0	15	0	5	0	0	0	13
14	9	23	9	0	0	34	0	0	0	0	0	0
15	2	121	0	0	0	6	0	0	0	0	0	10
16	6	19	13	0	28	0	0	0	0	0	0	30
17	0	15	24	0	0	0	0	0	0	0	0	39
18	3	32	0	0	0	15	0	0	0	0	0	4
19	90	3	5	0	0	2	0	0	0	0	10	76
20	31	4	74	0	0	0	0	0	0	0	5	0
21	28	46	10	0	0	0	0	0	0	0	19	0
22	63	120	6	0	0	0	0	0	0	0	0	20
23	79	140	0	0	0	0	0	0	0	0	0	8
24	50	91	8	0	0	0	0	0	0	0	0	6
25	26	130	41	0	0	0	0	0	0	0	0	0
26	0	56	23	0	0	0	0	0	0	0	0	0
27	0	48	0	0	0	0	0	0	0	0	0	0
28	0	33	0	0	0	0	0	0	0	0	0	10
29	0		0	0	0	0	0	0	0	0	29	7
30	0		0	0	0	0	0	0	0	0	3	0
31	2		0		0		0	0		0		0

<b>Monthly</b>	799	1307	238	159	55	72	0	5	0	0	66	401
<b>Rainy Days</b>	22	26	14	6	4	5	0	1	0	0	5	16
<b>Max.</b>	90	140	74	56	28	34	0	5	0	0	29	88
<b>Average</b>	26	47	8	5	2	2	0	0	0	0	2	13

<b>Annual</b> :	3102	<b>No.</b> :	99	<b>Max.</b> :	140	<b>Ave.</b> :	9
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	154	104	3	9	24	0	0	0	0	0	0	93
2	120	166	16	80	3	0	0	0	0	0	0	70
3	147	300	15	70	0	55	0	5	0	0	0	38
4	130	73	116	0	28	17	0	0	0	0	15	149
5	246	527	65	0	0	0	0	0	0	0	19	34
6	2	137	23	0	0	0	0	0	0	0	32	17

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	421	570	34	159	27	55	0	5	0	0	0	201
<b>2nd</b>	378	737	204	0	28	17	0	0	0	0	66	200



**Table Daily Rainfall**

Station : Mandalle  
Year : 1978

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	88	0	13	0	0	2	0	3	0	0	0	0
2	38	17	0	0	0	1	0	0	0	10	0	10
3	0	107	0	0	5	0	2	0	0	0	0	18
4	0	18	0	0	0	0	0	3	13	0	0	21
5	21	11	20	119	0	0	0	0	0	0	0	10
6	0	0	0	2	0	0	86	0	0	0	0	17
7	43	8	2	21	0	14	0	0	0	0	24	3
8	23	25	3	13	0	0	0	0	8	0	0	0
9	6	13	0	0	0	0	0	0	0	0	0	14
10	18	6	5	0	0	5	3	0	0	0	0	0
11	50	43	30	0	53	0	18	0	0	0	10	10
12	44	14	33	0	2	0	16	2	0	0	0	88
13	23	32	0	0	2	0	0	0	0	0	0	14
14	0	3	0	0	39	8	5	0	0	0	6	0
15	0	15	0	0	13	50	0	0	0	0	0	0
16	0	17	4	0	155	0	0	0	0	0	15	0
17	0	0	0	0	123	0	0	0	0	0	0	13
18	0	2	0	0	0	0	0	30	0	0	0	0
19	58	51	0	0	0	0	0	0	0	0	0	35
20	5	42	37	0	0	3	0	0	0	0	1	0
21	0	27	0	0	0	0	0	0	0	0	1	23
22	23	43	0	0	0	0	0	0	0	0	0	83
23	21	40	0	0	0	7	0	0	0	0	0	5
24	8	0	39	0	0	8	0	0	0	0	0	60
25	53	38	47	0	8	0	0	0	0	0	21	72
26	20	7	4	0	0	1	0	0	0	0	25	28
27	0	7	27	0	0	0	0	0	0	0	20	54
28	0	2	25	0	0	0	0	0	0	0	0	78
29	0		12	46	0	0	0	0	0	0	0	59
30	0		0	0	1	0	0	0	0	0	0	40
31	0		0		33		5	0		0		13

<b>Monthly</b>	542	588	301	201	434	99	135	38	21	10	123	768
<b>Rainy Days</b>	17	24	15	5	11	10	7	4	2	1	9	23
<b>Max.</b>	88	107	47	119	155	50	86	30	13	10	25	88
<b>Average</b>	17	21	10	7	14	3	4	1	1	0	4	25

<b>Annual</b> :	3260	<b>No.</b> :	128	<b>Max.</b> :	155	<b>Ave.</b> :	9
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	147	153	33	119	5	3	2	6	13	10	0	59
2	90	52	10	36	0	19	89	0	8	0	24	34
3	117	107	63	0	109	58	39	2	0	0	16	112
4	63	112	41	0	278	3	0	30	0	0	16	48
5	105	148	86	0	8	15	0	0	0	0	22	243
6	20	16	68	46	34	1	5	0	0	0	45	272

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	354	312	106	155	114	80	130	8	21	10	40	205
<b>2nd</b>	188	276	195	46	320	19	5	30	0	0	83	563

**Table Daily Rainfall**

Station : Mandalle  
Year : 1979

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	6	3	0	0	0	0	0	0	0	0	21
2	43	80	0	0	0	0	0	0	0	0	0	0
3	40	0	5	0	0	0	0	0	0	0	0	65
4	0	8	10	0	83	1	0	0	0	0	0	68
5	5	39	0	0	0	8	0	0	0	0	0	0
6	19	60	8	0	0	108	0	0	0	0	32	4
7	86	0	20	4	0	0	0	0	0	0	0	78
8	94	0	71	23	28	0	0	0	0	0	0	159
9	184	0	60	0	0	6	0	0	0	0	0	0
10	53	22	0	0	0	0	0	0	0	0	0	0
11	64	0	0	0	0	0	0	0	0	0	0	0
12	64	20	31	0	0	0	0	0	0	0	0	25
13	9	0	32	0	0	0	0	0	0	0	0	0
14	15	0	0	0	0	0	0	0	0	0	0	34
15	3	0	10	0	0	0	0	0	0	0	0	26
16	64	0	0	0	0	0	0	0	0	0	0	0
17	4	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0
19	0	13	0	0	0	0	0	0	0	0	2	0
20	0	12	0	0	12	0	0	0	0	0	0	0
21	7	32	0	0	0	0	0	0	0	0	0	7
22	0	7	15	0	0	0	0	0	0	0	0	0
23	24	0	0	0	0	0	0	0	0	3	0	0
24	0	35	0	0	0	0	0	0	0	0	0	9
25	5	31	0	0	0	0	0	0	0	0	0	0
26	25	16	0	11	0	0	0	0	0	0	0	0
27	23	24	0	0	0	0	0	0	0	0	0	19
28	0	93	0	0	24	0	0	0	0	0	0	3
29	38		0	0	0	0	0	0	0	0	30	10
30	0		9	9	0	0	0	0	0	0	44	91
31	0		4		0		0	0		0		4

<b>Monthly</b>	869	498	278	47	147	123	0	0	0	3	108	623
<b>Rainy Days</b>	21	16	13	4	4	4	0	0	0	1	4	16
<b>Max.</b>	184	93	71	23	83	108	0	0	0	3	44	159
<b>Average</b>	28	18	9	2	5	4	0	0	0	0	4	20

<b>Annual</b> :	2696	<b>No.</b> :	83	<b>Max.</b> :	184	<b>Ave.</b> :	7
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	88	133	18	0	83	9	0	0	0	0	0	154
2	436	82	159	27	28	114	0	0	0	0	32	241
3	155	20	73	0	0	0	0	0	0	0	0	85
4	68	25	0	0	12	0	0	0	0	0	2	0
5	36	105	15	0	0	0	0	0	0	3	0	16
6	86	133	13	20	24	0	0	0	0	0	74	127

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	679	235	250	27	111	123	0	0	0	0	32	480
<b>2nd</b>	190	263	28	20	36	0	0	0	0	3	76	143

**Table Daily Rainfall**

Station : Mandalle  
Year : 1980

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	2	0	0	0	0	0	0	0	0	0	0
2	15	0	0	0	0	0	0	0	0	0	0	0
3	0	4	0	0	0	0	0	0	0	0	0	0
4	99	12	0	0	0	0	0	0	0	0	0	24
5	18	0	0	0	0	0	0	0	0	0	0	33
6	26	17	0	0	0	0	0	0	0	0	0	0
7	45	58	0	6	0	0	0	0	0	0	0	32
8	20	15	0	0	0	0	0	0	0	0	0	16
9	75	8	1	0	0	0	0	0	0	0	0	8
10	60	5	16	13	0	0	0	0	0	0	0	0
11	117	0	0	11	0	0	0	0	0	0	12	70
12	22	13	0	0	0	0	0	0	0	0	3	103
13	27	99	2	0	0	0	0	0	0	0	0	45
14	19	80	69	3	0	0	0	0	0	0	0	203
15	8	9	101	0	0	0	0	0	0	0	0	48
16	23	51	0	99	0	0	0	0	0	0	0	0
17	0	133	4	8	1	0	0	0	0	0	0	0
18	0	31	53	7	0	0	0	0	0	0	0	3
19	156	0	40	0	0	0	0	0	0	0	0	4
20	112	0	35	0	0	0	0	0	0	0	34	0
21	103	0	25	0	0	0	0	0	0	0	0	6
22	0	6	4	0	0	0	0	0	0	0	0	101
23	33	0	1	0	0	23	0	0	0	0	0	4
24	8	81	0	0	0	0	0	0	0	0	0	71
25	4	52	8	0	0	0	0	0	0	0	0	95
26	0	1	0	0	0	0	0	0	0	0	0	0
27	0	5	0	0	0	0	0	0	0	0	0	0
28	2	33	0	4	1	0	0	0	0	0	0	6
29	0	4	0	3	2	0	0	0	0	0	0	9
30	0		0	0	0	0	0	0	0	0	0	105
31	0		0		0		0	0		0		34

<b>Monthly</b>	992	719	359	154	4	23	0	0	0	0	49	1020
<b>Rainy Days</b>	21	22	13	9	3	1	0	0	0	0	3	21
<b>Max.</b>	156	133	101	99	2	23	0	0	0	0	34	203
<b>Average</b>	32	25	12	5	0	1	0	0	0	0	2	33

<b>Annual</b>	: 3320	<b>No.</b>	: 93	<b>Max.</b>	: 203	<b>Ave.</b>	: 9
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	132	18	0	0	0	0	0	0	0	0	0	57
2	226	103	17	19	0	0	0	0	0	0	0	56
3	193	201	172	14	0	0	0	0	0	0	15	469
4	291	215	132	114	1	0	0	0	0	0	34	7
5	148	139	38	0	0	23	0	0	0	0	0	277
6	2	43	0	7	3	0	0	0	0	0	0	154

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	551	322	189	33	0	0	0	0	0	0	15	582
<b>2nd</b>	441	397	170	121	4	23	0	0	0	0	34	438

**Table Daily Rainfall**

Station : **Mandalle**  
 Year : **1981**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	23	0	72	0	25	0	0	0	0	0	0	57
2	34	0	0	0	0	0	0	0	0	0	0	31
3	3	0	0	0	0	0	0	0	0	0	0	0
4	74	23	0	0	0	0	0	0	0	0	0	0
5	35	0	0	0	0	0	0	0	0	0	0	58
6	3	16	0	0	0	0	0	0	0	0	0	51
7	78	24	0	0	0	0	3	0	0	0	0	52
8	63	70	6	0	0	0	75	0	0	0	0	98
9	0	22	7	0	0	0	0	0	0	0	0	158
10	0	18	0	0	0	0	0	0	2	0	0	147
11	79	59	0	0	4	0	0	0	0	0	0	63
12	0	16	0	0	0	0	0	0	0	0	2	5
13	3	9	0	0	0	0	3	0	0	0	25	0
14	9	0	0	0	0	0	2	0	0	0	0	6
15	0	3	0	0	0	0	1	0	0	0	1	3
16	6	99	0	0	0	0	8	0	0	0	1	41
17	72	0	0	0	0	0	0	0	0	0	12	0
18	60	0	0	0	0	0	0	0	0	0	53	4
19	34	0	0	0	0	23	0	0	0	0	18	93
20	26	0	0	0	0	0	0	0	0	0	0	68
21	10	0	0	0	0	0	0	0	0	0	0	90
22	0	0	0	0	0	0	1	0		2	0	2
23	15	27	0	0	0	0	7	0	0	0	0	0
24	0	15	0	0	0	0	0	0	0	0	16	181
25	0	6	2	5	0	0	0	0	0	0	163	23
26	0	20	14	19	20	0	0	0	0	0	14	38
27	166	13	1	0	0	0	0	0	0	0	76	0
28	25	38	17	0	0	0	0	0	0	0	81	63
29	30		63	0	0	2	0	0	0	0	55	3
30	26		15	0	0	0	0	0	0	0	0	6
31	0		0		0		0	0		0		2

<b>Monthly</b>	874	478	197	24	49	25	100	0	2	2	626	1334
<b>Rainy Days</b>	22	17	9	2	3	2	8	0	1	1	15	25
<b>Max.</b>	166	99	72	19	25	23	75	0	2	2	163	181
<b>Average</b>	28	17	6	1	2	1	3	0	0	0	21	43

<b>Annual</b> :	3711	<b>No.</b> :	105	<b>Max.</b> :	181	<b>Ave.</b> :	10
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	169	23	72	0	25	0	0	0	0	0	58	117
2	144	150	13	0	0	0	78	0	2	0	51	526
3	91	87	0	0	4	0	6	0	0	0	28	77
4	198	99	0	0	0	23	8	0	0	0	84	206
5	25	48	2	5	0	0	8	0	0	2	179	296
6	247	71	110	19	20	2	0	0	0	0	226	112

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	404	260	85	0	29	0	84	0	2	0	137	720
<b>2nd</b>	470	218	112	24	20	25	16	0	0	2	489	614



**Table Daily Rainfall**

Station : Mandalle  
Year : 1983

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	19	0	0	0	0	0					0	45
2	30	0	0	0	0	0					0	67
3	11	0	0	0	7	0					0	0
4	30	2	0	0	6	0					0	0
5	0	0	0	0	0	0					0	0
6	0	1	0	0	0	0					14	0
7	0	8	0	0	2	0					5	0
8	2	21	0	0	0	0					12	0
9	0	0	0	0	0	0					0	0
10	0	0	0	0	0	0					0	5
11	8	0	0	0	0	0					7	0
12	5	0	0	0	0	0					9	0
13	0	0	0	0	0	0					0	15
14	0	17	0	0	56	0					0	19
15	4	0	0	0	0	0					0	11
16	24	0	2	30	0	0					0	0
17	0	0	0	0	0	0					4	0
18	0	0	0	0	0	0					0	0
19	0	0	3	0	0	0					0	0
20	0	0	0	0	0	0					24	0
21	0	0	0	0	0	0					35	0
22	13	0	0	0	0	0					46	15
23	0	7	0	58	0	0					110	30
24	0	37	0	3	0	0					17	35
25	0		0	0	0	0					18	12
26	4		0	0	0	0					180	38
27	0	0	7	0	0	0					175	50
28	1	0	0	23	0	2					21	10
29	0		0	21	0	0					50	19
30	0		4		0	0					60	150
31	0		0		0							61

<b>Monthly</b>	151	93	16	135	71	2	0	0	0	0	787	582
<b>Rainy Days</b>	12	7	4	5	4	1	0	0	0	0	17	16
<b>Max.</b>	30	37	7	58	56	2	0	0	0	0	180	150
<b>Average</b>	5	4	1	5	2	0	0	0	0	0	26	19

<b>Annual</b>	: 1837	<b>No.</b>	: 66	<b>Max.</b>	: 180	<b>Ave.</b>	: 5
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	90	2	0	0	13	0	0	0	0	0	0	112
2	2	30	0	0	2	0	0	0	0	0	31	5
3	17	17	0	0	56	0	0	0	0	0	16	45
4	24	0	5	30	0	0	0	0	0	0	28	0
5	13	44	0	61	0	0	0	0	0	0	226	92
6	5	0	11	44	0	2	0	0	0	0	486	328

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	109	49	0	0	71	0	0	0	0	0	47	162
<b>2nd</b>	42	44	16	135	0	2	0	0	0	0	740	420

**Table Daily Rainfall**

Station : Mandalle  
Year : 1984

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	67	9	8	0		0	0	0	0	5	0	0
2	31	6	11	0		0	0	0	0	0	0	0
3	14	0	4	0		0	0	0	0	5	0	0
4	29	11	7	0		0	0	0	0	0	0	0
5	63	7	13	0		0	0	0	0	8	0	0
6	17	15	0	0		0	0	0	30	0	0	0
7	0	25	9	0		0	0	0	0	0	0	0
8	0	31	4	0		2	0	0	0	0	0	0
9	0	67	8	0		0	0	0	0	23	0	0
10	4	40	0	0		0	0	0	0	0	5	0
11	0	15	10	0		0	0	0	0	0	0	23
12	0	10	3	0		0	0	0	43	0	0	90
13	0	17	7	0		0	0	0	0	0	0	5
14	4	18	3	1		0	0	0	10	0	0	3
15	9	6	3	6		4	0	0	0	0	0	58
16	8	18	15	4		0	0	0	0	0	3	83
17	10	10	14	2		0	0	0	0	0	0	70
18	35	13	15	2		0	0	0	0	0	0	0
19	60	27	11	5		0	0	0	0	0	0	58
20	0	20	8	5		0	0	0	0	0	5	65
21	0	43	6	5		0	0	0	0	0	20	8
22	0	15	5	4		0	0	0	0	70	0	3
23	0	22	4	2		0	0	0	0	0	0	0
24	15	14	0	3		0	0	0	0	0	0	0
25	25	0	0	2		0	0	0	0	0	45	0
26	8	0	0	6		0	0	0	0	0	0	0
27	50	8	0	3		0	0	0	0	0	0	0
28	20	4	0	9		0	0	0	0	0	48	23
29	15	2	0	0		0	0	0	0	0	0	30
30	0		0	0		0	0	0	0	0	0	35
31	0		0				0	0		0		3

<b>Monthly</b>	484	473	168	59	0	6	0	0	83	111	126	557
<b>Rainy Days</b>	19	26	21	15	0	2	0	0	3	5	6	15
<b>Max.</b>	67	67	15	9	0	4	0	0	43	70	48	90
<b>Average</b>	16	16	5	2	0	0	0	0	3	4	4	18

<b>Annual</b> :	2067	<b>No.</b> :	112	<b>Max.</b> :	90	<b>Ave.</b> :	6
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	204	33	43	0	0	0	0	0	0	18	0	0
2	21	178	21	0	0	2	0	0	30	23	5	0
3	13	66	26	7	0	4	0	0	53	0	0	179
4	113	88	63	18	0	0	0	0	0	0	8	276
5	40	94	15	16	0	0	0	0	0	70	65	11
6	93	14	0	18	0	0	0	0	0	0	48	91

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	238	277	90	7	0	6	0	0	83	41	5	179
<b>2nd</b>	246	196	78	52	0	0	0	0	0	70	121	378

**Table Daily Rainfall**

Station : Mandalle  
Year : 1985

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0	20		0	0	0	0	0	0	0	5
2	0	5	0		5	0	0	0	0	0	0	10
3	0	0	15		0	0	0	0	0	0	0	0
4	40	35	53		0	0	0	0	0	0	0	0
5	25	0	48		0	0	0	0	0	0	63	3
6	48	0	105		0	0	0	0	0	0	0	0
7	0	0	63		0	0	0	0	0	0	9	0
8	15	0	40		0	0	0	0	0	0	0	0
9	0	0	30		0	0	0	0	0	0	17	0
10	13	0	15		0	8	0	0	0	0	2	0
11	0	0	0		3	0	8	0	0	0	8	118
12	0	13	0		0	0	0	0	0	0	0	34
13	0	5	5		13	0	0	0	0	0	4	0
14	0	28	0		0	0	0	0	0	0	18	28
15	8	75	0		35	0	0	0	0	0	4	0
16	0	43	0		5	0	0	0	0	0	0	0
17	35		3		0	0	0	0	0	0	0	11
18	15	13	0		0	0	3	0	0	0	0	0
19	3	0	0		0	0	0	0	0	0	0	0
20	40	0	0		0	0	0	0	0	0	0	11
21	0	0	0		0	0	0	0	0	0	0	3
22	0	0	0		0	0	0	0	0	0	3	0
23	0	13	0		0	0	5	0	0	0	0	0
24	0	0	0		0	0	0	0	0	0	0	0
25	15	5	0		5	0	0	0	0	0	18	30
26	15	0	0		0	0	0	0	45	0	46	10
27	3	8	0		0	0	0	0	0	0	0	0
28	0	78	0		0	0	0	0	10	4	6	30
29	0		0		0	0	0	0	0	0	65	25
30	0		15		0	0	0	0	0	13	14	0
31	40		0		0		0	0		0		0

<b>Monthly</b>	315	321	412	0	66	8	16	0	55	17	277	318
<b>Rainy Days</b>	14	12	12	0	6	1	3	0	2	2	14	13
<b>Max.</b>	48	78	105	0	35	8	8	0	45	13	65	118
<b>Average</b>	10	12	13	0	2	0	1	0	2	1	9	10

<b>Annual</b> :	1805	<b>No.</b> :	79	<b>Max.</b> :	118	<b>Ave.</b> :	5
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	65	40	136	0	5	0	0	0	0	0	63	18
2	76	0	253	0	0	8	0	0	0	0	28	0
3	8	121	5	0	51	0	8	0	0	0	34	180
4	93	56	3	0	5	0	3	0	0	0	0	22
5	15	18	0	0	5	0	5	0	0	0	21	33
6	58	86	15	0	0	0	0	0	55	17	131	65

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	149	161	394	0	56	8	8	0	0	0	125	198
<b>2nd</b>	166	160	18	0	10	0	8	0	55	17	152	120



**Table Daily Rainfall**

Station : Mandalle  
Year : 1986

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	13	0	3	3	0	0	0	0	0	0	0	0
2	0	0	0	0	8	0	8	0	0	0	2	0
3	5	58	48	20	0	6	0	0	0	0	0	0
4	6	0	33	0	0	0	0	0	0	0	33	0
5	0	0	56	0	0	0	0	0	0	0	0	0
6	55	0	0	0	0	0	0	0	0	0	5	0
7	28	3	0	0	0	0	0	0	0	0	5	0
8	30	18	0	0	14	0	0	0	0	0	0	0
9	29	12	0	0	0	0	0	0	0	0	0	0
10	24	20	5	10	0	10	0	0	0	0	8	0
11	88	29	0	0	0	0	0	0	0	0	0	50
12	73	45	20	5	0	0	0	0	0	0	4	0
13	73	0	8	8	0	0	0	0	0	0	0	0
14	68	0	0	74	0	0	8	0	0	0	18	15
15	53	12	15	34	0	0	0	0	0	0	0	20
16	0	14	0	0	0	0	0	0	0	0	0	0
17	5	23	0	0	0	0	0	0	0	0	0	0
18	8	9	6	0	0	0	0	0	0	0	5	0
19	28	0	40	0	0	0	0	0	0	0	3	0
20	4	0	5	0	0	0	0	0	0	0	0	0
21	0	29	0	0	0	0	0	0	0	0	4	0
22	34	4	8	23	0	0	0	0	0	0	45	0
23	15	23	50	0	0	0	0	0	0	0	0	0
24	7	36	0	0	0	0	0	0	0	0	0	16
25	13	16	0	5	0	0	0	0	0	0	8	0
26	39	0	0	0	0	0	6	0	0	0	20	0
27	95	25	0	0	0	0	10	0	0	0	0	0
28	33	24	13	0	0	0	0	0	0	0	0	25
29	43		0	0	0	0	0	0	0	0	0	10
30	0		0	0	0	0	0	0	0	0	0	3
31	0		0		0		0	0		0		0

<b>Monthly</b>	869	400	310	182	22	16	32	0	0	0	160	139
<b>Rainy Days</b>	25	18	14	9	2	2	4	0	0	0	13	7
<b>Max.</b>	95	58	56	74	14	10	10	0	0	0	45	50
<b>Average</b>	28	14	10	6	1	1	1	0	0	0	5	4

<b>Annual</b>	: 2130	<b>No.</b>	: 94	<b>Max.</b>	: 95	<b>Ave.</b>	: 6
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	24	58	140	23	8	6	8	0	0	0	35	0
2	166	53	5	10	14	10	0	0	0	0	18	0
3	355	86	43	121	0	0	8	0	0	0	22	85
4	45	46	51	0	0	0	0	0	0	0	8	0
5	69	108	58	28	0	0	0	0	0	0	57	16
6	210	49	13	0	0	0	16	0	0	0	20	38

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	545	197	188	154	22	16	16	0	0	0	75	85
<b>2nd</b>	324	203	122	28	0	0	16	0	0	0	85	54

**Table Daily Rainfall**

Station : **Mandalle**  
 Year : **1987**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	3	15	33	53	0	0	0	0	0	0	0	0
2	0	0	0	10	0	0	0	0	0	0	0	0
3	0	20	0	0	0	0	0	0	0	0	0	0
4	30	14	0	0	0	0	0	0	0	0	0	25
5	20	0	0	0	0	0	0	0	0	0	0	0
6	39	0	0	0	3	0	0	0	0	0	0	20
7	4	20	22	5	8	0	0	0	0	0	0	13
8	68	14	0	15	0	0	0	0	0	0	0	0
9	25	0	0	0	0	0	0	0	0	0	0	28
10	5	50	30	0	40	0	0	0	0	0	0	4
11	20	20	0	0	0	0	0	0	0	0	0	0
12	25	18	0	0	15	0	0	0	0	0	0	0
13	18	43	0	0	0	0	0	0	0	0	0	38
14	25	0	0	0	0	0	0	0	0	0	0	0
15	93	0	0	0	0	0	0	0	0	0	0	41
16	68	0	0	0	0	0	0	0	0	0	3	259
17	83	0	0	0	0	0	0	0	0	0	6	134
18	12	3	95	0	0	0	0	0	0	0	20	18
19	18	8	0	0	0	0	0	0	0	0	10	43
20	20	13	0	0	0	0	0	0	0	0	0	53
21	25	30	0	0	0	0	0	0	0	0	0	75
22	65	18	58	0	0	0	0	0	0	0	0	117
23	19	10	55	0	0	0	0	0	0	0	0	148
24	10	0	10	0	0	0	0	0	0	0	0	32
25	65	15	0	0	0	0	0	0	0	0	0	44
26	0	0	5	0	0	0	0	0	0	0	0	48
27	18	0	0	0	0	0	0	0	0	0	0	75
28	21		28	0	0	0	0	0	0	0	0	0
29	62		0	0	0	0	0	0	0	0	0	10
30	18		0	0	0	0	0	0	0	0	0	0
31	70		0		0		0	0		0		0

<b>Monthly</b>	949	311	336	83	66	0	0	0	0	0	39	1225
<b>Rainy Days</b>	28	16	9	4	4	0	0	0	0	0	4	20
<b>Max.</b>	93	50	95	53	40	0	0	0	0	0	20	259
<b>Average</b>	31	12	11	3	2	0	0	0	0	0	1	40

<b>Annual</b> :	3009	<b>No.</b> :	85	<b>Max.</b> :	259	<b>Ave.</b> :	8
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	53	49	33	63	0	0	0	0	0	0	0	25
2	141	84	52	20	51	0	0	0	0	0	0	65
3	181	81	0	0	15	0	0	0	0	0	0	79
4	201	24	95	0	0	0	0	0	0	0	39	507
5	184	73	123	0	0	0	0	0	0	0	0	416
6	189	0	33	0	0	0	0	0	0	0	0	133

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	375	214	85	83	66	0	0	0	0	0	0	169
<b>2nd</b>	574	97	251	0	0	0	0	0	0	0	39	1056

**Table Daily Rainfall**

Station : Mandalle  
Year : 1988

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	70	5	30	0	0	5	13	0	0	5	73
2	0	5	0	45	43	0	5	0	0	0	0	70
3	0	100	0	0	0	0	0	0	0	0	0	18
4	0	80	0	0	0	3	0	3	0	0	0	23
5	5	40	0	0	0	8	0	0	13	0	5	10
6	10	0	0	0	0	0	0	0	0	0	20	15
7	0	0	0	0	0	0	0	0	0	0	0	38
8	0	0	0	0	0	0	0	8	0	0	0	38
9	18	0	0	15	30	0	0	0	8	28	0	3
10	8	0	23	35	0	0	0	0	0	5	23	38
11	50	10	3	35	0	0	0	0	0	13	130	55
12	0	168	0	0	0	0	0	0	5	0	5	30
13	0	80	0	0	38	0	0	0	8	5	13	18
14	0	45	0	0	0	0	3	0	5	0	5	15
15	40	15	0	0	0	0	0	0	10	8	0	88
16	20	63	0	35	30	0	0	0	0	0	0	28
17	0	38	0	3	0	0	0	0	0	0	0	8
18	0	45	0	0	45	0	0	0	0	0	0	0
19	8	0	0	0	0	0	0	0	0	0	0	5
20	18	0	0	0	0	0	0	0	0	0	0	10
21	0	0	5	0	5	0	0	0	0	65	0	30
22	13	0	120	0	0	0	0	0	0	0	0	75
23	0	0	13	0	0	0	0	0	0	0	0	35
24		0	0	0	0	0	0	5	0	0	8	40
25	38	0	48	0	0	0	0	0	0	10	5	15
26	65	0	38	0	0	0	0	0	48	0	108	20
27	3	13	70	0	0	0	0	0	0	0	35	0
28	55	0	0	0	0	0	0	0	0	0	18	0
29	0		0	0	0	0	0	0	0	0	18	3
30	0		0	0	0	0	0	0	0	3	0	0
31	3		28		0		0	0		0		0

<b>Monthly</b>	354	772	353	198	191	11	13	29	97	137	398	801
<b>Rainy Days</b>	15	14	10	7	6	2	3	4	7	8	14	26
<b>Max.</b>	65	168	120	45	45	8	5	13	48	65	130	88
<b>Average</b>	12	28	11	7	6	0	0	1	3	4	13	26

<b>Annual</b>	: 3354	<b>No.</b>	: 116	<b>Max.</b>	: 168	<b>Ave.</b>	: 9
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	5	295	5	75	43	11	10	16	13	0	10	194
2	36	0	23	50	30	0	0	8	8	33	43	132
3	90	318	3	35	38	0	3	0	28	26	153	206
4	46	146	0	38	75	0	0	0	0	0	0	51
5	51	0	186	0	5	0	0	5	0	75	13	195
6	126	13	136	0	0	0	0	0	48	3	179	23

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	131	613	31	160	111	11	13	24	49	59	206	532
<b>2nd</b>	223	159	322	38	80	0	0	5	48	78	192	269

**Table Daily Rainfall**

Station : **Mandalle**  
 Year : **1989**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	10	93	0	0	0	0	0	0	0	0	8
2	0	38	0	0	0	0	0	0	0	0	0	0
3	20	108	0	0	0	0	8	0	0	0	45	0
4	0	30	0	0	10	0	0	0	0	0	0	0
5	18	15	0	45	0	0	0	0	0	0	27	0
6	0	10	43	5	23	0	0	0	0	0	0	8
7	0	0	38	0	0	5	0	0	0	0	0	8
8	0	0	65	0	5	0	0	0	0	0	15	13
9	0	0	33	0	0	3	0	0	0	15	13	90
10	0	5	0	0	0	0	0	0	0	3	13	13
11	35	48	0	0	0	0	0	0	0	0	0	8
12	0	5	18	0	0	5	0	0	0	0	0	68
13	5	55	60	0	8	3	3	0	0	0	0	16
14	3	25	25	0	0	0	0	0	0	15	0	40
15	0	13	23	0	0	0	0	0	0	0	0	20
16	50	3	0	18	0	0	5	0	8	0	0	5
17	48	0	0	0	0	0	0	0	0	0	0	0
18	8	0	0	13	0	0	0	0	0	0	0	0
19	0	10	10	8	0	0	8	0	0	40	0	0
20	0	113	0	43	0	0	0	0	15	0	0	0
21	0	28	0	40	0	33	0	0	0	0	0	0
22	0	10	0	3	0	0	0	0	0	38	0	0
23	5	0	0	5	0	0	0	0	3	5	13	0
24	45	8	0	0	0	0	20	0	12	0	43	0
25	80	0	0	0	0	28	0	0	0	0	20	0
26	90	88	0	0	0	5	0	0	5	0	13	0
27	30	23	0	0	0	0	0	0	0	0	0	39
28	38	33	0	33	0	0	0	10	0	0	0	8
29	120		0	3	0	0	0	0	5	0	0	0
30	80		0	3	0	0	0	0	0	0	0	0
31	78		0		10		0	0		0		0

<b>Monthly</b>	753	678	408	219	56	82	44	10	48	116	202	344
<b>Rainy Days</b>	17	21	10	12	5	7	5	1	6	6	9	14
<b>Max.</b>	120	113	93	45	23	33	20	10	15	40	45	90
<b>Average</b>	24	24	13	7	2	3	1	0	2	4	7	11

<b>Annual</b> :	2960	<b>No.</b> :	113	<b>Max.</b> :	120	<b>Ave.</b> :	8
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	38	201	93	45	10	0	8	0	0	0	72	8
2	0	15	179	5	28	8	0	0	0	18	41	132
3	43	146	126	0	8	8	3	0	0	15	0	152
4	106	126	10	82	0	0	13	0	23	40	0	5
5	130	46	0	48	0	61	20	0	15	43	76	0
6	436	144	0	39	10	5	0	10	10	0	13	47

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	81	362	398	50	46	16	11	0	0	33	113	292
<b>2nd</b>	672	316	10	169	10	66	33	10	48	83	89	52

**Table Daily Rainfall**

Station : Mandalle  
Year : 1990

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	3	23	0	23	0	0	0	0	0	0	0
2	0	0	5	0	0	16	0	0	0	0	0	45
3	80	0	0	0	0	0	0	0	0	0	0	0
4	0	53	25	0	0	0	0	0	0	0	0	5
5	0	48	38	0	0	0	0	0	0	0	0	10
6	0	0	25	0	0	0	0	0	0	0	0	10
7	125	0	3	0	0	0	0	0	0	0	5	4
8	35	8	0	18	0	0	0	0	0	0	0	40
9	65	0	0	0	30	0	0	0	0	0	18	0
10	30	0	0	0	13	0	0	0	0	0	15	5
11	8	0	0	0	0	0	0	0	0	0	0	0
12	8	83	0	0	0	0	0	0	0	0	0	10
13	58	0	38	0	0	0	0	0	0	0	10	0
14	0	0	5	0	0	0	0	0	0	0	0	6
15	4	0	0	0	0	0	0	0	0	0	0	0
16	0	3	0	0	8	0	0	0	0	0	23	0
17	0	38	8	0	45	0	0	0	0	13	0	0
18	15	3	0	73	8	0	0	0	0	0	0	10
19	30	0	0	0	0	0	0	0	0	0	0	61
20	40	0	0	0	0	0	0	0	0	0	0	15
21	45	8	0	0	8	0	0	0	0	10	0	0
22	13	0	0	0	0	0	0	0	8	3	0	60
23	0	0	0	0	0	0	0	0	0	0	0	80
24	0	0	0	0	0	0	0	0	0	0	0	64
25	10	0	0	0	0	0	0	0	0	0	13	62
26	45	0	0	0	0	0	0	0	0	0	0	26
27	0	3	0	0	0	0	0	0	0	0	0	33
28	0	10	0	0	0	0	0	0	0	33	0	0
29	0		0	0	0	0	0	0	0	0	8	1
30	0		0	0	0	0	0	0	0	0	0	0
31	0		0		5		8	0		0		8

<b>Monthly</b>	611	260	170	91	140	16	8	0	8	59	92	555
<b>Rainy Days</b>	16	11	9	2	8	1	1	0	1	4	7	20
<b>Max.</b>	125	83	38	73	45	16	8	0	8	33	23	80
<b>Average</b>	20	9	5	3	5	1	0	0	0	2	3	18

<b>Annual</b> :	2010	<b>No.</b> :	80	<b>Max.</b> :	125	<b>Ave.</b> :	5
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	80	104	91	0	23	16	0	0	0	0	0	60
2	255	8	28	18	43	0	0	0	0	0	38	59
3	78	83	43	0	0	0	0	0	0	0	10	16
4	85	44	8	73	61	0	0	0	0	13	23	86
5	68	8	0	0	8	0	0	0	8	13	13	266
6	45	13	0	0	5	0	8	0	0	33	8	68

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	413	195	162	18	66	16	0	0	0	0	48	135
<b>2nd</b>	198	65	8	73	74	0	8	0	8	59	44	420



**Table Daily Rainfall**

Station : Mandalle  
Year : 1992

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0	0	37	0	0	0	0	0	0	0	5
2	10	0	0	0	0	0	0	25	0	0	0	8
3	15	0	204	0	0	0	0	0	0	0	0	0
4	35	0	0	0	0	0	0	0	2	3	0	10
5	12	0	0	8	0	0	0	0	0	0	0	5
6	0	0	0	0	0	0	17	0	0	3	5	0
7	18	0	5	0	0	0	0	0	0	0	0	0
8	40	0	0	35	0	3	0	0	0	0	0	25
9	40	0	0	0	0	0	0	0	0	0	8	0
10	150	0	0	44	0	0	0	0	0	0	0	3
11	19	0	116	0	0	8	0	0	36	0	0	0
12	3	0	0	0	0	0	0	0	0	0	0	5
13	0	0	0	0	0	0	0	0	0	0	0	25
14	0	0	0	3	0	0	0	0	0	0	25	15
15	5	0	2	0	0	0	0	0	0	0	0	10
16	0	0	0	0	0	0	0	0	0	0	8	0
17	0	0	0	0	0	30	0	0	0	0	0	35
18	3	25	0	0	0	0	0	0	0	0	0	0
19	0	20	34	0	0	0	0	0	0	2	0	0
20	2	30	0	0	0	0	0	0	0	0	3	20
21	0	1	8	0	3	0	0	0	0	0	0	0
22	2	0	0	0	0	0	0	0	0	0	0	0
23	20	0	0	0	0	0	0	0	0	0	5	0
24	0	3	17	0	0	0	0	0	0	0	3	30
25	0	2	0	0	0	0	0	0	0	0	0	35
26	13	2	0	0	0	0	0	0	0	0	25	0
27	25	1	0	0	0	0	0	0	0	1	0	0
28	0	0	0	0	0	0	0	0	0	0	8	22
29	0	0	0	0	0	0	3	0	0	0	0	20
30	0	0	0	0	0	0	0	0	79	0	0	0
31	0	0	1	0	0	0	0	0	0	0	0	0

<b>Monthly</b>	412	84	387	127	3	41	20	25	117	9	90	273
<b>Rainy Days</b>	17	8	8	5	1	3	2	1	3	4	9	16
<b>Max.</b>	150	30	204	44	3	30	17	25	79	3	25	35
<b>Average</b>	13	3	12	4	0	1	1	1	4	0	3	9

<b>Annual</b> :	1588	<b>No.</b> :	77	<b>Max.</b> :	204	<b>Ave.</b> :	4
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	72	0	204	45	0	0	0	25	2	3	0	28
2	248	0	5	79	0	3	17	0	0	3	13	28
3	27	0	118	3	0	8	0	0	36	0	25	55
4	5	75	34	0	0	30	0	0	0	2	11	55
5	22	6	25	0	3	0	0	0	0	0	8	65
6	38	3	1	0	0	0	3	0	79	1	33	42

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	347	0	327	127	0	11	17	25	38	6	38	111
<b>2nd</b>	65	84	60	0	3	30	3	0	79	3	52	162

**Table Daily Rainfall**

Station : Mandalle  
Year : 1993

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	4	0	4	116	0	0	0	0	0	0	0	0
2	1	0	5	3	0	0	0	0	0	0	0	0
3	0	3	70	28	0	0	0	0	0	0	0	0
4	0	4	0	0	0	0	0	0	0	0	0	6
5	0	8	0	0	0	0	0	0	0	0	0	0
6	1	5	0	0	0	0	0	0	0	0	0	0
7	0	5	0	0	0	0	0	0	0	0	0	0
8	2	10	0	0	25	0	0	0	0	0	0	0
9	1	47	0	0	0	7	0	0	0	0	0	0
10	0	0	0	0	20	48	0	0	0	0	0	3
11	0	8	0	63	0	0	0	0	0	0	0	5
12	1	14	0	0	0	0	0	0	0	0	0	1
13	0	23	0	0	7	0	0	0	0	0	19	8
14	3	0	0	0	0	0	0	0	0	0	0	52
15	2	40	0	0	0	0	0	0	0	0	0	51
16	0	25	0	0	0	0	0	0	0	0	0	0
17	3	20	23	0	0	0	0	0	0	0	0	0
18	0	0	26	0	9	0	0	0	0	0	0	0
19	0	0	0	13	0	0	0	0	0	0	0	10
20	3	0	0	23	0	0	0	0	0	0	0	35
21	5	0	0	0	0	0	0	0	0	0	24	0
22	4	16	0	0	0	0	0	0	0	0	3	5
23	2	0	0	0	0	0	0	0	0	0	15	32
24	2	0	0	20	0	0	0	0	0	0	30	92
25	2	0	0	0	4	0	0	0	0	0	0	112
26	4	0	0	0	0	0	0	0	0	0	0	111
27	0	18	0	0	0	0	0	0	0	0	0	135
28	0	0	25	0	0	0	0	0	0	0	0	36
29	0		11	0	4	25	0	0	0	0	7	2
30	0		0	0	0	30	0	0	0	0	0	30
31	0		26		0		0	0		0		0

<b>Monthly</b>	40	246	190	266	69	110	0	0	0	0	98	726
<b>Rainy Days</b>	16	15	8	7	6	4	0	0	0	0	6	18
<b>Max.</b>	5	47	70	116	25	48	0	0	0	0	30	135
<b>Average</b>	1	9	6	9	2	4	0	0	0	0	3	23

<b>Annual</b> :	1745	<b>No.</b> :	80	<b>Max.</b> :	135	<b>Ave.</b> :	5
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	5	15	79	147	0	0	0	0	0	0	0	6
2	4	67	0	0	45	55	0	0	0	0	0	3
3	6	85	0	63	7	0	0	0	0	0	19	117
4	6	45	49	36	9	0	0	0	0	0	0	45
5	15	16	0	20	4	0	0	0	0	0	72	241
6	4	18	62	0	4	55	0	0	0	0	7	314

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	15	167	79	210	52	55	0	0	0	0	19	126
<b>2nd</b>	25	79	111	56	17	55	0	0	0	0	79	600



**Table Daily Rainfall**

Station : Mandalle  
Year : 1994

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	51	0	0	0	0	0	0	0	0	0	25	90
2	57	0	0	0	0	0	0	0	0	0	0	0
3	7	0	0	30	0	0	0	0	0	0	0	0
4	4	0	0	0	0	0	0	0	0	0	0	0
5	41	20	31	0	0	0	0	0	0	0	0	0
6	2	0	30	15	0	0	0	0	0	0	0	0
7	0	25	23	0	0	0	0	0	0	0	0	69
8	0	0	62	10	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	20	45
10	0	45	0	0	0	0	0	0	0	0	0	10
11	0	0	0	0	0	0	0	0	0	0	0	0
12	0	9	8	0	0	0	0	0	0	0	0	0
13	0	18	5	0	0	0	0	0	0	0	0	0
14	0	50	27	0	0	0	0	0	0	0	0	0
15	18	15	0	0	0	0	0	0	0	0	0	0
16	7	35	0	0	0	0	0	0	0	0	0	12
17	3	7	0	0	0	0	0	0	0	0	0	8
18	43	0	0	0	0	0	0	0	0	0	0	0
19	130	28	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0
21	0	29	0	0	0	0	0	0	0	0	0	0
22	121	0	0	70	0	27	0	0	0	0	0	0
23	0	9	135	0	0	0	0	0	0	0	0	0
24	30	0	0	0	0	13	0	0	0	0	0	0
25	156	0	0	0	0	0	0	0	0	0	0	0
26	52	20	0	0	0	0	0	0	0	0	0	0
27	30	0	25	0	0	0	0	0	0	0	28	0
28	0	0	0	0	0	0	0	0	0	0	21	0
29	0	0	0	0	0	0	0	0	0	0	10	0
30	13	0	37	0	0	0	0	0	0	0	0	0
31	0	0	0	0	0	0	0	0	0	0	0	0

<b>Monthly</b>	765	310	383	125	0	40	0	0	0	0	104	234
<b>Rainy Days</b>	17	13	10	4	0	2	0	0	0	0	5	6
<b>Max.</b>	156	50	135	70	0	27	0	0	0	0	28	90
<b>Average</b>	25	11	12	4	0	1	0	0	0	0	3	8

<b>Annual</b> :	1961	<b>No.</b> :	57	<b>Max.</b> :	156	<b>Ave.</b> :	5
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	160	20	31	30	0	0	0	0	0	0	25	90
2	2	70	115	25	0	0	0	0	0	0	20	124
3	18	92	40	0	0	0	0	0	0	0	0	0
4	183	70	0	0	0	0	0	0	0	0	0	20
5	307	38	135	70	0	40	0	0	0	0	0	0
6	95	20	62	0	0	0	0	0	0	0	59	0

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	180	182	186	55	0	0	0	0	0	0	45	214
<b>2nd</b>	585	128	197	70	0	40	0	0	0	0	59	20

**Table Daily Rainfall**

Station : Mandalle  
Year : 1995

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0	0	0	0	0	0	0	0	0	0	0
2	0	23	0	0	0	0	0	0	0	0	0	0
3	0	0	10	10	0	0	0	0	0	0	9	0
4	54	0	75	75	0	0	0	0	0	0	0	0
5	0	95	0	0	0	0	0	0	0	0	0	17
6	0	11	15	0	0	14	0	0	0	0	6	15
7	0	43	0	15	0	0	0	0	0	0	0	45
8	21	30	59	0	0	0	0	0	0	0	0	45
9	0	0	0	55	0	0	0	0	0	0	5	30
10	0	0	16	0	0	0	0	0	0	0	0	30
11	0	9	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	60	0	0	0	0	0	60	45
13	59	0	0	0	0	0	0	0	0	0	0	30
14	70	50	0	15	54	12	0	0	0	0	0	20
15	0	37	15	70	0	0	0	0	3	0	0	45
16	0	0	0	0	61	0	0	0	0	0	0	30
17	0	0	0	0	0	21	0	0	0	0	0	45
18	0	5	0	0	0	0	0	0	0	0	0	45
19	0	0	0	0	0	0	0	0	0	0	0	60
20	40	0	0	0	0	0	0	0	0	0	0	0
21	108	0	0	0	0	0	0	0	0	0	80	65
22	0	0	0	0	0	0	0	0	0	0	0	0
23	0	55	0	0	0	0	0	0	0	0	30	0
24	40	0	31	35	0	0	0	0	0	0	0	0
25	20	0	50	50	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0
27	20	12	53	55	0	0	0	0	0	0	45	0
28	0	250	0	0	0	0	0	0	0	0	35	0
29	0		0	0	0	0	0	0	0	0	15	0
30	0		0	0	0	0	0	0	0	0	0	10
31	15		0		0		0	0		0		7

<b>Monthly</b>	447	620	324	380	175	47	0	0	3	0	285	584
<b>Rainy Days</b>	10	12	9	9	3	3	0	0	1	0	9	17
<b>Max.</b>	108	250	75	75	61	21	0	0	3	0	80	65
<b>Average</b>	14	22	10	13	6	2	0	0	0	0	10	19

<b>Annual</b> :	2865	<b>No.</b> :	73	<b>Max.</b> :	250	<b>Ave.</b> :	8
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	54	118	85	85	0	0	0	0	0	0	9	17
2	21	84	90	70	0	14	0	0	0	0	11	165
3	129	96	15	85	114	12	0	0	3	0	60	140
4	40	5	0	0	61	21	0	0	0	0	0	180
5	168	55	81	85	0	0	0	0	0	0	110	65
6	35	262	53	55	0	0	0	0	0	0	95	17

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	204	298	190	240	114	26	0	0	3	0	80	322
<b>2nd</b>	243	322	134	140	61	21	0	0	0	0	205	262

**Table Daily Rainfall**

Station : Mandalle  
Year : 1996

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	15	30	9	0	76	0	0	0	0	0	0	30
2	20	30	5	0	0	0	0	0	0	0	0	60
3	35	45	0	0	0	0	0	0	0	0	0	75
4	34	60	0	0	0	0	0	0	0	0	46	25
5	90	35	10	0	0	0	0	0	0	0	0	10
6	10	30	11	0	0	0	0	0	0	0	0	5
7	17	90	11	52	0	0	0	0	0	0	65	8
8	0	100	0	24	0	0	0	0	0	0	0	10
9	0	75	0	0	0	0	0	0	0	0	6	9
10	9	25	6	2	0	0	0	0	0	0	0	0
11	0	0	15	0	0	0	0	0	0	0	7	21
12	0	25	10	0	0	0	0	0	0	0	17	20
13	0	30	0	0	0	0	0	0	0	0	0	0
14	0	35	5	0	0	0	0	0	0	0	0	25
15	0	35	0	0	0	0	0	0	0	0	0	85
16	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	26	0	0	0	0	0	0	0	35
18	0	0	0	0	0	0	0	0	0	0	0	25
19	0	0	0	17	0	0	0	0	0	0	90	95
20	30	0	0	0	0	0	0	0	0	0	0	40
21	0	0	90	0	0	0	0	0	0	0	0	100
22	30	0	0	0	0	0	0	0	0	0	0	10
23	60	0	25	0	0	0	0	0	0	0	0	0
24	45	15	27	0	0	0	0	0	0	0	0	24
25	45	20	35	0	0	0	0	0	0	0	0	30
26	50	30	20	0	0	0	0	0	0	0	0	27
27	60	45	0	0	0	0	0	0	0	0	0	20
28	30	30	4	0	0	0	0	0	0	0	23	25
29	45	25	0	0	0	0	0	0	0	7	0	20
30	35		0	0	0	0	0	0	0	27	17	0
31	30		0		0		0	0		0		0

<b>Monthly</b>	690	810	283	121	76	0	0	0	0	34	271	834
<b>Rainy Days</b>	19	20	15	5	1	0	0	0	0	2	8	25
<b>Max.</b>	90	100	90	52	76	0	0	0	0	27	90	100
<b>Average</b>	22	28	9	4	2	0	0	0	0	1	9	27

<b>Annual</b> :	3119	<b>No.</b> :	95	<b>Max.</b> :	100	<b>Ave.</b> :	9
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	194	200	24	0	76	0	0	0	0	0	46	200
2	36	320	28	78	0	0	0	0	0	0	71	32
3	0	125	30	0	0	0	0	0	0	0	24	151
4	30	0	0	43	0	0	0	0	0	0	90	195
5	180	35	177	0	0	0	0	0	0	0	0	164
6	250	130	24	0	0	0	0	0	0	34	40	92

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	230	645	82	78	76	0	0	0	0	0	141	383
<b>2nd</b>	460	165	201	43	0	0	0	0	0	34	130	451



**Table Daily Rainfall**

Station : Mandalle  
Year : 1998

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0	0	0	65	0	0	0	0	0	10	0
2	0	0	0	0	8	0	0	7	0	0	5	29
3	60	16	0	0	0	0	0	0	0	0	5	43
4	0	0	0	0	0	0	0	0	0	0	20	32
5	14	14	0	0	10	0	0	0	0	0	20	30
6	0	0	0	0	0	0	10	0	0	0	30	40
7	0	24	0	25	0	0	0	0	0	0	11	26
8	0	0	0	90	0	0	0	0	0	0	8	0
9	0	0	0	0	0	0	0	0	0	0	10	0
10	0	0	0	6	0	0	10	0	0	0	9	28
11	0	0	0	0	9	0	6	0	0	0	24	0
12	0	0	0	9	0	0	0	0	0	0	0	54
13	0	0	0	17	0	0	0	0	0	0	58	0
14	0	0	0	15	25	0	10	0	0	0	115	0
15	0	11	0	0	0	0	0	0	0	0	0	0
16	0	0	0	10	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	86	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	4	20	0	0	0	0	0
20	0	9	0	0	0	15	0	0	0	0	68	58
21	0	0	0	0	0	0	13	0	0	20	0	43
22	0	0	0	0	0	0	0	0	0	20	0	0
23	0	0	0	0	0	0	0	0	41	5	0	0
24	0	0	0	0	0	0	0	0	30	25	0	32
25	0	0	0	0	0	0	10	0	21	0	0	0
26	0	0	69	0	8	0	0	0	0	0	0	0
27	0	0	0	0	0	0	7	0	0	0	50	0
28	0	0	0	0	0	0	0	4	0	30	30	72
29	0	0	65	9	0	35	20	0	0	6	40	67
30	0	0	44	0	0	20	56	0	0	35	51	46
31	0	0	0	0	0	0	20	0	0	0	0	44

<b>Monthly</b>	74	74	264	181	125	74	182	11	92	141	564	644
<b>Rainy Days</b>	2	5	4	8	6	4	11	2	3	7	18	15
<b>Max.</b>	60	24	86	90	65	35	56	7	41	35	115	72
<b>Average</b>	2	3	9	6	4	2	6	0	3	5	19	21

<b>Annual</b> :	2426	<b>No.</b> :	85	<b>Max.</b> :	115	<b>Ave.</b> :	7
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	74	30	0	0	83	0	0	7	0	0	60	134
2	0	24	0	121	0	0	20	0	0	0	68	94
3	0	11	0	41	34	0	16	0	0	0	197	54
4	0	9	86	10	0	19	20	0	0	0	68	58
5	0	0	0	0	0	0	23	0	92	70	0	75
6	0	0	178	9	8	55	103	4	0	71	171	229

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	74	65	0	162	117	0	36	7	0	0	325	282
<b>2nd</b>	0	9	264	19	8	74	146	4	92	141	239	362

**Table Daily Rainfall**

Station : Mandalle  
Year : 1999

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	111	0	21	0	0	0	0	0	0	0	0	0
2	122	0	0	0	0	0	22	0	0	0	0	0
3	70	0	9	22	32	0	0	0	0	0	0	0
4	0	0	0	22	0	0	0	0	0	0	0	0
5	0	0	0	14	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	10	0	0	0	0	0
7	5	0	0	0	38	0	0	0	0	0	0	160
8	0	30	0	0	0	0	0	0	0	0	0	0
9	0	100	2	0	0	0	0	0	0	0	0	76
10	47	31	0	0	7	0	0	0	0	0	25	0
11	0	0	0	0	0	0	0	0	0	0	0	0
12	60	0	0	0	0	0	0	0	0	0	0	0
13	41	0	17	0	0	0	0	0	0	0	100	20
14	0	0	19	0	0	0	0	0	0	0	0	0
15	35	100	0	0	0	0	0	0	0	0	0	0
16	20	0	0	0	0	0	0	0	0	0	10	0
17	0	25	0	7	0	0	0	0	0	0	0	0
18	0	0	0	41	0	10	0	0	0	0	10	0
19	0	9	0	0	0	0	0	0	0	0	0	0
20	26	0	0	4	0	0	0	0	0	0	0	0
21	0	0	0	0	0	11	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0
23	25	0	0	0	0	0	0	0	0	37	0	61
24	0	0	0	0	0	0	0	0	0	0	0	0
25	30	26	0	0	0	0	0	0	0	0	0	0
26	34	30	32	0	0	0	0	0	0	0	0	70
27	20	0	1	0	0	0	0	0	0	10	0	0
28	101	81	21	0	0	0	0	0	0	0	0	0
29	50		14	0	0	0	0	0	0	0	0	0
30	121		0	21	0	0	0	0	0	0	0	60
31	0		0		0		0	0		0		0

<b>Monthly</b>	918	432	136	131	77	21	32	0	0	47	145	447
<b>Rainy Days</b>	17	9	9	7	3	2	2	0	0	2	4	6
<b>Max.</b>	122	100	32	41	38	11	22	0	0	37	100	160
<b>Average</b>	30	15	4	4	2	1	1	0	0	2	5	14

<b>Annual</b> :	2386	<b>No.</b> :	61	<b>Max.</b> :	160	<b>Ave.</b> :	7
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	303	0	30	58	32	0	22	0	0	0	0	0
2	52	161	2	0	45	0	10	0	0	0	25	236
3	136	100	36	0	0	0	0	0	0	0	100	20
4	46	34	0	52	0	10	0	0	0	0	20	0
5	55	26	0	0	0	11	0	0	0	37	0	61
6	326	111	68	21	0	0	0	0	0	10	0	130

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	491	261	68	58	77	0	32	0	0	0	125	256
<b>2nd</b>	427	171	68	73	0	21	0	0	0	47	20	191

**Table Daily Rainfall**

Station : Mandalle  
Year : 2000

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0	0	0	0	0	0	0	0	0	0	25
2	0	0	0	0	0	0	0	0	0	0	0	35
3	0	0	0	0	0	0	0	0	0	0	0	50
4	0	0	0	0	0	0	0	0	0	0	0	65
5	0	0	0	245	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0
9	60	0	0	0	0	0	0	0	0	0	0	0
10	75	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	68	0	0	0	0	0	20
12	0	0	200	0	0	0	0	0	0	15	0	30
13	0	0	0	60	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	40
15	0	0	0	0	0	0	0	0	0	0	20	15
16	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	20
18	0	0	0	0	0	0	0	0	0	0	0	50
19	170	0	0	0	36	0	0	0	0	66	0	0
20	0	0	0	0	0	0	0	0	0	0	25	0
21	41	0	0	0	0	0	0	0	0	0	0	30
22	0	0	134	0	0	0	0	0	0	34	0	0
23	0	0	0	0	0	0	0	0	0	0	0	50
24	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	28	30	0	0	0	0	0	0	0	40
26	0	0	0	0	0	0	0	0	0	0	0	20
27	35	0	0	0	29	0	0	0	0	0	75	0
28	0	0	25	0	0	0	0	0	0	0	110	0
29	0	0	21	41	0	0	0	0	0	0	0	25
30	245	0	0	20	0	0	0	0	0	0	50	70
31	0	0	0	0	0	0	0	0	0	0	0	0

<b>Monthly</b>	626	0	408	396	65	68	0	0	0	115	280	585
<b>Rainy Days</b>	6	0	5	5	2	1	0	0	0	3	5	16
<b>Max.</b>	245	0	200	245	36	68	0	0	0	66	110	70
<b>Average</b>	20	0	13	13	2	2	0	0	0	4	9	19

<b>Annual</b> :	2543	<b>No.</b> :	43	<b>Max.</b> :	245	<b>Ave.</b> :	7
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0	0	245	0	0	0	0	0	0	0	175
2	135	0	0	0	0	0	0	0	0	0	0	0
3	0	0	200	60	0	68	0	0	0	15	20	105
4	170	0	0	0	36	0	0	0	0	66	25	70
5	41	0	162	30	0	0	0	0	0	34	0	120
6	280	0	46	61	29	0	0	0	0	0	235	115

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	135	0	200	305	0	68	0	0	0	15	20	280
<b>2nd</b>	491	0	208	91	65	0	0	0	0	100	260	305

**Table Daily Rainfall**

Station : Mandalle  
Year : 2001

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0	0	0	0	20	0	0	0	0	27	39
2	0	45	22	0	0	0	0	0	0	0	0	25
3	0	140	26	0	0	0	0	0	0	0	20	82
4	100	80	40	0	0	10	0	0	0	0	30	110
5	70	0	60	0	0	0	0	0	0	0	0	41
6	100	50	30	0	0	0	0	0	0	0	0	37
7	0	65	0	0	0	0	0	0	0	0	60	30
8	150	65	0	90	0	0	0	0	0	0	0	0
9	50	140	0	0	0	0	0	0	0	0	0	38
10	55	45	0	0	0	15	0	0	0	0	25	0
11	0	6	0	20	0	0	0	0	0	0	0	25
12	195	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	20
14	50	0	110	0	0	0	0	0	0	0	0	24
15	30	0	0	0	0	20	0	0	0	0	0	10
16	0	0	10	0	0	0	0	0	0	0	0	0
17	60	46	0	0	0	0	0	0	0	0	30	0
18	0	50	0	0	0	0	0	0	0	0	0	0
19	0	25	0	0	0	0	0	0	0	0	60	0
20	0	0	114	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	25	0
22	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	30	0
24	0	0	12	0	0	0	0	0	0	26	0	0
25	0	0	0	0	0	0	0	0	0	0	25	0
26	0	0	0	0	0	0	0	0	0	0	0	35
27	0	0	0	0	0	0	0	0	0	0	20	10
28	0	0	0	0	0	0	0	0	0	0	0	30
29	40		0	0	0	0	0	0	0	0	25	20
30	45		0	7	0	0	0	0	0	0	0	35
31	0		0		21		0	0		0		0

<b>Monthly</b>	945	757	424	117	21	65	0	0	0	26	377	611
<b>Rainy Days</b>	12	12	9	3	1	4	0	0	0	1	12	17
<b>Max.</b>	195	140	114	90	21	20	0	0	0	26	60	110
<b>Average</b>	30	27	14	4	1	2	0	0	0	1	13	20

<b>Annual</b> :	3343	<b>No.</b> :	71	<b>Max.</b> :	195	<b>Ave.</b> :	9
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	170	265	148	0	0	30	0	0	0	0	77	297
2	355	365	30	90	0	15	0	0	0	0	85	105
3	275	6	110	20	0	20	0	0	0	0	0	79
4	60	121	124	0	0	0	0	0	0	0	90	0
5	0	0	12	0	0	0	0	0	0	26	80	0
6	85	0	0	7	21	0	0	0	0	0	45	130

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	800	636	288	110	0	65	0	0	0	0	162	481
<b>2nd</b>	145	121	136	7	21	0	0	0	0	26	215	130



**Table Daily Rainfall**

Station : Kalabajeng  
Year : 1975

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1				0	0	0	0	0	0	0	2	10
2				0	0	38	0	0	80	0	6	15
3				0	0	0	0	0	0	33	0	0
4				0	0	0	0	0	0	3	0	2
5				0	7	0	0	0	11	10	0	90
6				0	0	0	0	0	0	0	2	44
7				5	0	0	0	0	3	0	1	7
8				0	11	0	0	0	0	9	2	2
9				0	0	13	0	0	3	4	0	40
10				31	0	0	0	0	19	0	10	1
11				2	0	0	4	2	2	0	5	65
12				29	0	0	1	13	0	0	0	58
13				11	22	29	2	0	0	1	0	27
14				11	0	5	1	0	0	0	5	39
15				1	0	0	0	0	17	0	2	66
16				0	0	0	0	0	0	16	3	20
17				5	18	0	0	0	3	0	0	9
18				62	1	0	0	0	1	2	3	12
19				5	0	0	0	0	0	1	0	0
20				14	0	0	0	0	0	0	0	5
21				137	0	0	0	0	0	1	0	0
22				0	0	0	0	0	0	3	0	3
23				0	0	0	0	0	0	7	4	34
24				68	0	0	4	0	0	119	127	1
25				0	0	0	0	5	0	3	41	14
26				0	0	0	0	0	0	0	11	46
27				0	0	0	0	0	31	3	8	0
28				5	0	0	0	0	0	3	4	54
29				63	2	0	0	0	0	26	28	47
30				0	0	0	0	0	0	0	62	38
31					0		0	2		0		19

<b>Monthly</b>	0	0	0	449	61	85	12	22	170	244	326	768
<b>Rainy Days</b>	0	0	0	15	6	4	5	4	10	17	19	27
<b>Max.</b>	0	0	0	137	22	38	4	13	80	119	127	90
<b>Average</b>	0	0	0	15	2	3	0	1	6	8	11	25

<b>Annual</b> :	2137	<b>No.</b> :	107	<b>Max.</b> :	137	<b>Ave.</b> :	6
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0	0	0	7	38	0	0	91	46	8	117
2	0	0	0	36	11	13	0	0	25	13	15	94
3	0	0	0	54	22	34	8	15	19	1	12	255
4	0	0	0	86	19	0	0	0	4	19	6	46
5	0	0	0	205	0	0	4	5	0	133	172	52
6	0	0	0	68	2	0	0	2	31	32	113	204

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	0	0	0	90	40	85	8	15	135	60	35	466
<b>2nd</b>	0	0	0	359	21	0	4	7	35	184	291	302

**Table Daily Rainfall**

Station : Kalabajeng  
Year : 1976

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	35	0	6	0	0	0	10	0	0	0	0	2
2	0	0	28	0	50	0	0	0	0	0	0	1
3	0	106	106	0	28	0	0	0	0	0	5	8
4	0	4	0	0	0	18	0	0	0	7	0	0
5	3	15	1	1	116	0	0	0	0	0	0	53
6	6	12	0	0	25	0	0	0	0	0	0	7
7	29	21	0	14	0	44	0	0	0	0	7	15
8	25	0	0	0	0	0	0	0	0	0	0	13
9	41	6	48	0	0	0	0	0	0	0	53	22
10	32	7	0	0	64	0	0	0	0	0	0	1
11	0	30	0	0	0	0	0	0	0	0	17	7
12	97	3	13	0	0	0	0	0	0	0	4	0
13	131	20	55	2	0	0	0	0	0	0	0	22
14	105	3	0	0	72	10	0	0	0	0	0	38
15	64	0	60	0	0	0	0	0	0	0	3	35
16	59	0	3	0	0	0	0	0	0	0	13	33
17	0	0	41	11	0	0	0	0	0	0	115	0
18	0	48	17	0	0	0	0	0	0	0	2	3
19	0	4	12	0	0	6	0	0	0	0	10	64
20	0	5	26	0	0	0	0	0	0	3	0	4
21	0	22	51	0	0	0	0	0	0	0	0	7
22	0	18	2	0	0	0	0	0	0	1	0	6
23	0	13	7	0	0	0	0	0	0	2	0	0
24	0	72	14	0	0	0	0	0	0	0	10	0
25	0	21	0	14	0	0	0	0	0	0	2	0
26	0	0	0	0	0	0	0	0	0	7	8	0
27	0	2	0	0	0	0	0	0	0	2	0	1
28	0	0	0	0	0	0	0	0	0	2	3	0
29	0	0	52	0	0	50	0	0	0	10	0	5
30	0	0	16	0	0	40	0	0	0	18	0	0
31	0	0	6	0	0	0	0	0	0	2	0	1

<b>Monthly</b>	627	432	564	42	355	168	10	0	0	54	252	348
<b>Rainy Days</b>	12	20	20	5	6	6	1	0	0	10	14	22
<b>Max.</b>	131	106	106	14	116	50	10	0	0	18	115	64
<b>Average</b>	20	15	18	1	11	6	0	0	0	2	8	11

<b>Annual</b> :	2852	<b>No.</b> :	116	<b>Max.</b> :	131	<b>Ave.</b> :	8
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	38	125	141	1	194	18	10	0	0	7	5	64
2	133	46	48	14	89	44	0	0	0	0	60	58
3	397	56	128	2	72	10	0	0	0	0	24	102
4	59	57	99	11	0	6	0	0	0	3	140	104
5	0	146	74	14	0	0	0	0	0	3	12	13
6	0	2	74	0	0	90	0	0	0	41	11	7

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	568	227	317	17	355	72	10	0	0	7	89	224
<b>2nd</b>	59	205	247	25	0	96	0	0	0	47	163	124

**Table Daily Rainfall**

Station : Kalabajeng  
Year : 1977

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	20	2	2	23	0	0	0	0	0	0	53
2	39	18	12	17	0	8	0	0	0	0	0	9
3	6	0	1	0	0	0	0	0	0	0	0	0
4	40	0	0	3	2	0	0	0	0	0	0	0
5	4	62	4	0	11	0	0	0	0	0	0	7
6	2	22	0	5	0	0	0	0	0	0	0	3
7	35	13	87	0	0	0	0	0	0	0	0	0
8	30	35	16	0	0	0	0	0	0	0	0	2
9	52	58	4	4	0	1	0	0	0	0	0	4
10	21	30	1	47	0	0	0	0	0	0	0	39
11	63	57	2	58	0	0	0	0	0	0	0	0
12	24	45	0	4	0	0	0	5	0	0	0	0
13	17	76	0	15	0	13	0	18	0	0	0	6
14	15	29	12	0	0	49	0	0	0	0	0	7
15	12	137	3	8	0	5	0	0	0	0	0	4
16	6	59	18	0	11	0	0	0	0	0	0	31
17	16	69	17	0	0	0	0	0	0	0	0	40
18	14	64	9	0	0	13	0	0	0	0	0	0
19	209	6	16	4	0	4	0	0	0	0	53	53
20	38	15	44	0	0	0	0	0	0	0	8	4
21	50	21	14	0	0	0	0	0	0	0	11	0
22	58	54	3	0	0	0	0	0	0	0	2	14
23	61	120	2	0	0	0	0	0	0	0	0	13
24	307	51	8	0	0	0	0	0	0	0	0	4
25	58	56	17	0	0	0	0	0	0	0	0	0
26	10	67	24	0	0	0	0	0	0	0	0	0
27	0	51	0	0	0	0	0	0	0	0	13	0
28	0	35	0	0	0	0	0	0	0	0	1	2
29	0		1	0	0	0	0	0	0	0	9	0
30	0		0	0	0	0	0	0	0	0	3	5
31	31		0		0		0	0		0		2

<b>Monthly</b>	1218	1270	317	167	47	93	0	23	0	0	100	302
<b>Rainy Days</b>	26	26	23	11	4	7	0	2	0	0	8	20
<b>Max.</b>	307	137	87	58	23	49	0	18	0	0	53	53
<b>Average</b>	39	45	10	6	2	3	0	1	0	0	3	10

<b>Annual</b>	: 3537	<b>No.</b>	: 127	<b>Max.</b>	: 307	<b>Ave.</b>	: 10
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	89	100	19	22	36	8	0	0	0	0	0	69
2	140	158	108	56	0	1	0	0	0	0	0	48
3	131	344	17	85	0	67	0	23	0	0	0	17
4	283	213	104	4	11	17	0	0	0	0	61	128
5	534	302	44	0	0	0	0	0	0	0	13	31
6	41	153	25	0	0	0	0	0	0	0	26	9

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	360	602	144	163	36	76	0	23	0	0	0	134
<b>2nd</b>	858	668	173	4	11	17	0	0	0	0	100	168

**Table Daily Rainfall**

Station : Kalabajeng  
Year : 1978

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	70	0	9	0	0	7	0	5	0	0	0	0
2	1	22	0	0	0	0	0	0	0	28	0	7
3	0	116	0	0	0	0	2	0	3	0	0	24
4	0	19	0	0	13	0	2	0	48	0	0	16
5	5	19	7	97	2	0	0	0	0	0	0	14
6	0	3	0	2	0	0	45	0	0	0	0	28
7	33	0	3	25	0	7	0	0	0	1	0	11
8	28	24	1	13	0	0	0	0	0	0	53	0
9	4	4	0	0	0	0	0	0	13	0	9	6
10	22	2	4	4	5	6	14	0	0	0	3	3
11	64	15	9	0	24	0	0	0	0	0	21	0
12	57	13	31	0	2	0	12	3	3	0	28	34
13	37	41	0	0	0	3	0	2	0	0	0	13
14	0	3	0	0	27	0	7	0	0	0	0	0
15	0	11	0	0	27	11	1	0	0	0	5	0
16	0	10	5	0	89	0	0	0	0	0	17	0
17	6	0	0	0	60	0	0	0	0	0	0	48
18	0	7	0	0	0	0	0	15	2	0	0	0
19	65	34	16	0	0	0	0	0	7	0	0	88
20	5	16	0	0	0	11	0	0	0	0	4	4
21	0	28	0	0	0	0	0	0	0	0	0	25
22	40	46	0	0	0	0	0	0	0	0	0	24
23	27	6	3	0	0	10	0	0	0	0	35	19
24	12	10	39	8	0	3	0	0	0	0	18	34
25	73	22	41	5	6	0	0	0	0	0	9	71
26	18	8	2	0	0	0	0	0	0	0	6	29
27	0	14	23	0	0	0	0	0	0	0	17	32
28	0	2	17	0	0	0	0	0	0	0	0	88
29	0		14	13	0	0	0	0	0	0	0	43
30	0		0	0	0	0	0	0	0	0	0	23
31	0		0		43		9	0		0		29

<b>Monthly</b>	567	495	224	167	298	58	92	25	76	29	225	713
<b>Rainy Days</b>	18	25	16	8	11	8	8	4	6	2	13	24
<b>Max.</b>	73	116	41	97	89	11	45	15	48	28	53	88
<b>Average</b>	18	18	7	6	10	2	3	1	3	1	8	23

<b>Annual</b> :	2969	<b>No.</b> :	143	<b>Max.</b> :	116	<b>Ave.</b> :	8
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	76	176	16	97	15	7	4	5	51	28	0	61
2	87	33	8	44	5	13	59	0	13	1	65	48
3	158	83	40	0	80	14	20	5	3	0	54	47
4	76	67	21	0	149	11	0	15	9	0	21	140
5	152	112	83	13	6	13	0	0	0	0	62	173
6	18	24	56	13	43	0	9	0	0	0	23	244

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	321	292	64	141	100	34	83	10	67	29	119	156
<b>2nd</b>	246	203	160	26	198	24	9	15	9	0	106	557

**Table Daily Rainfall**

Station : Kalabajeng  
Year : 1979

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	15	0	0	0	0	0	0	0	0	0	35
2	23	78	0	0	0	0	0	0	0	0	0	0
3	9	3	20	0	0	0	0	0	0	0	0	109
4	0	0	35	18	53	14	0	0	0	0	0	45
5	8	36	0	0	0	10	0	0	0	0	0	0
6	14	59	8	4	0	74	0	0	0	0	48	5
7	74	0	57	8	5	0	0	0	0	0	0	47
8	89	0	39	5	16	0	0	0	0	0	0	128
9	175	0	66	0	0	0	0	0	0	0	0	71
10	54	30	0	0	0	6	0	0	0	0	0	22
11	72	14	8	0	0	0	0	0	0	0	0	0
12	31	4	49	0	0	0	0	0	0	0	0	10
13	29	0	22	0	11	0	0	0	0	0	0	0
14	24	17	17	0	0	0	0	0	0	0	0	23
15	11	0	17	0	0	0	0	0	0	0	15	0
16	3	4	0	0	0	0	0	0	0	0	0	23
17	63	0	0	0	0	0	0	0	0	0	0	0
18	0	5	0	0	0	0	0	0	0	0	0	0
19	0	4	0	0	0	0	0	0	0	0	12	0
20	0	12	0	0	0	0	0	0	0	0	0	0
21	9	42	0	40	0	0	0	0	0	0	0	16
22	24	18	11	3	0	0	0	0	0	0	0	0
23	3	0	0	0	0	0	0	0	0	8	0	0
24	0	33	0	0	0	0	0	0	0	0	0	6
25	4	25	0	0	0	0	0	0	0	0	0	0
26	18	13	8	6	0	0	0	0	0	0	11	3
27	23	18	8	0	0	0	0	0	0	0	0	31
28	7	85	0	0	60	0	0	0	0	0	0	3
29	43		5	0	0	0	0	0	0	0	13	20
30	0		18	7	0	0	0	0	0	0	6	40
31	0		5		0		0	0		0		0

<b>Monthly</b>	810	515	393	91	145	104	0	0	0	8	105	637
<b>Rainy Days</b>	23	20	17	8	5	4	0	0	0	1	6	18
<b>Max.</b>	175	85	66	40	60	74	0	0	0	8	48	128
<b>Average</b>	26	18	13	3	5	3	0	0	0	0	4	21

<b>Annual</b> :	2808	<b>No.</b> :	102	<b>Max.</b> :	175	<b>Ave.</b> :	8
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	40	132	55	18	53	24	0	0	0	0	0	189
2	406	89	170	17	21	80	0	0	0	0	48	273
3	167	35	113	0	11	0	0	0	0	0	15	33
4	66	25	0	0	0	0	0	0	0	0	12	23
5	40	118	11	43	0	0	0	0	0	8	0	22
6	91	116	44	13	60	0	0	0	0	0	30	97

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	613	256	338	35	85	104	0	0	0	0	63	495
<b>2nd</b>	197	259	55	56	60	0	0	0	0	8	42	142

**Table Daily Rainfall**

Station : Kalabajeng  
Year : 1980

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0	50	0	0	0	0	0	0	0	0	0
2	7	7	0	0	0	0	0	0	0	0	0	0
3	13	3	0	0	0	0	0	0	0	0	0	4
4	55	11	0	0	3	0	0	0	0	0	0	42
5	0	0	0	0	12	0	0	0	0	0	0	35
6	17	11	0	0	8	0	0	0	0	0	0	0
7	24	50	0	44	0	0	0	0	0	0	3	33
8	0	15	0	12	0	0	0	0	0	0	0	4
9	70	0	0	3	0	0	0	0	0	0	0	9
10	49	6	14	5	0	0	0	0	0	0	0	0
11	63	7	0	13	0	0	0	0	0	0	0	80
12	19	40	0	0	0	0	0	0	0	0	6	90
13	14	75	12	5	0	0	0	0	0	0	0	36
14	4	66	89	0	0	0	0	0	0	0	0	114
15	15	17	113	8	0	0	9	0	0	0	0	33
16	24	46	0	108	0	0	0	0	0	0	0	0
17	0	53	3	9	0	0	0	0	0	0	0	0
18	0	17	31	9	0	0	0	0	0	0	28	5
19	115	0	50	0	0	0	0	0	0	0	0	3
20	75	0	8	0	0	0	0	0	0	0	13	0
21	66	0	30	0	0	0	0	0	0	0	0	23
22	3	0	5	0	0	0	0	0	0	0	0	98
23	13	21	0	0	0	0	0	0	0	0	10	20
24	13	67	0	0	0	0	0	0	0	0	0	58
25	13	45	19	0	0	0	0	0	0	0	4	56
26	0	0	0	3	0	0	0	0	0	0	0	7
27	0	0	0	0	0	0	0	0	0	0	0	5
28	0	0	0	0	0	0	0	0	0	0	3	3
29	0	17	9	7	8	9	0	0	0	0	0	0
30	0		0	0	5	0	0	0	0	0	0	50
31	0		0		0		0	0		0		41

<b>Monthly</b>	672	574	433	226	36	9	9	0	0	0	67	849
<b>Rainy Days</b>	20	19	13	12	5	1	1	0	0	0	7	23
<b>Max.</b>	115	75	113	108	12	9	9	0	0	0	28	114
<b>Average</b>	22	20	14	8	1	0	0	0	0	0	2	27

<b>Annual</b> :	2875	<b>No.</b> :	101	<b>Max.</b> :	115	<b>Ave.</b> :	8
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	75	21	50	0	15	0	0	0	0	0	0	81
2	160	82	14	64	8	0	0	0	0	0	3	46
3	115	205	214	26	0	0	9	0	0	0	6	353
4	214	116	92	126	0	0	0	0	0	0	41	8
5	108	133	54	0	0	0	0	0	0	0	14	255
6	0	17	9	10	13	9	0	0	0	0	3	106

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	350	308	278	90	23	0	9	0	0	0	9	480
<b>2nd</b>	322	266	155	136	13	9	0	0	0	0	58	369

**Table Daily Rainfall**

Station : Kalabajeng  
Year : 1981

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	22	0	0	18	0	0	0	0	0	0	0	23
2	18	0	41	0	66	0	0	0	0	0	0	16
3	0	0	0	0	0	0	3	0	0	0	0	3
4	68	13	0	29	6	0	5	0	0	0	0	0
5	21	3	0	0	0	0	4	0	0	0	48	25
6	0	0	0	0	0	0	0	0	6	0	40	66
7	50	8	0	0	0	9	7	0	0	0	5	36
8	43	58	0	0	0	10	8	0	0	0	0	85
9	8	44	11	0	0	0	0	0	0	0	0	118
10	0	11	0	0	0	0	0	0	0	0	0	107
11	56	60	0	0	8	0	0	0	0	0	0	60
12	18	20	0	0	0	0	3	0	7	0	0	3
13	7	9	0	0	0	0	31	0	0	0	8	10
14	3	0	0	0	0	0	6	0	0	0	0	0
15	4	15	0	0	10	0	13	0	0	0	8	0
16	67	72	0	0	0	0	13	0	0	0	0	6
17	0	36	0	0	0	0	0	0	0	0	28	20
18	42	0	0	0	0	3	0	0	0	0	60	7
19	33	0	0	0	0	21	0	0	0	0	0	63
20	23	17	0	0	0	0	0	0	0	0	0	43
21	7	0	0	0	0	0	15	0	0	0	25	18
22	0	0	0	0	0	0	4	0	0	0	3	0
23	9	5	6	0	0	0	0	0	0	9	0	0
24	0	11	0	0	0	0	0	0	0	0	8	132
25	0	5	6	24	0	0	0	0	0	0	75	18
26	0	8	32	0	29	0	0	0	0	0	13	12
27	115	28	0	0	0	0	0	0	0	0	93	0
28	30	16	42	0	0	0	0	0	0	0	67	34
29	25		95	5	0	0	0	0	0	0	0	4
30	17		14	0	0	10	0	0	0	0	0	12
31	0		0	0	0		0	0		0		10

<b>Monthly</b>	686	439	247	76	119	53	112	0	13	9	481	931
<b>Rainy Days</b>	22	19	8	4	5	5	12	0	2	1	14	25
<b>Max.</b>	115	72	95	29	66	21	31	0	7	9	93	132
<b>Average</b>	22	16	8	3	4	2	4	0	0	0	16	30

<b>Annual</b> :	3166	<b>No.</b> :	117	<b>Max.</b> :	132	<b>Ave.</b> :	9
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	129	16	41	47	72	0	12	0	0	0	48	67
2	101	121	11	0	0	19	15	0	6	0	45	412
3	88	104	0	0	18	0	53	0	7	0	16	73
4	165	125	0	0	0	24	13	0	0	0	88	139
5	16	21	12	24	0	0	19	0	0	9	111	168
6	187	52	183	5	29	10	0	0	0	0	173	72

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	318	241	52	47	90	19	80	0	13	0	109	552
<b>2nd</b>	368	198	195	29	29	34	32	0	0	9	372	379

**Table Daily Rainfall**

Station : Kalabajeng  
Year : 1982

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	4	23	0	14	5	0	0	0	0	0		0
2	0	15	0	0	0	0	0	0	0	0		0
3	5	3	45	0	8	0	0	0	0	0		0
4	0	22	3	0	0	0	0	0	0	0		0
5	0	8	9	0	0	0	0	0	0	0		0
6	9	23	58	0	0	0	0	0	0	0		0
7	10	118	11	0	0	0	0	0	0	0		0
8	0	69	0	0	0	0	0	0	0	0		0
9	28	53	80	3	4	0	0	0	0	0		0
10	61	24	12	3	0	0	0	0	0	0		0
11	47	18	20	0	0	0	0	0	0	0		0
12	93	35	6	0	0	0	0	0	0	0		0
13	34	30	5	0	0	0	0	0	0	0		0
14	8	83	15	0	0	0	0	0	0	0		0
15	0	59	19	0	0	0	0	0	0	0		8
16	66	18	10	0	0	0	0	0	0	0		35
17	0	0	0	0	0	0	0	0	0	0		4
18	0	7	30	0	0	0	0	0	0	0		0
19	0	0	7	5	0	0	0	0	0	0		0
20	0	3	0	0	0	0	0	0	0	0		0
21	0	6	0	0	0	0	0	0	0	0		5
22	8	9	0	0	0	0	0	0	0	0		0
23	28	25	0	18	0	0	0	0	0	0		0
24	7	14	38	6	0	0	0	0	0	0		10
25	67	0	11	38	0	0	0	0	0	0		13
26	38	0	41	0	0	0	0	0	0	0		24
27	47	0	0	8	4	0	0	0	0	0		8
28	50	0	0	12	0	0	0	0	0	0		0
29	68		0	0	0	0	0	0	0	0		24
30	0		49	0	0	0	0	0	0	0		5
31	38		0		0		0	0		0		65

<b>Monthly</b>	716	665	469	107	21	0	0	0	0	0	0	201
<b>Rainy Days</b>	20	22	19	9	4	0	0	0	0	0	0	11
<b>Max.</b>	93	118	80	38	8	0	0	0	0	0	0	65
<b>Average</b>	23	24	15	4	1	0	0	0	0	0	0	6

<b>Annual</b>	: 2179	<b>No.</b>	: 85	<b>Max.</b>	: 118	<b>Ave.</b>	: 6
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	9	71	57	14	13	0	0	0	0	0	0	0
2	108	287	161	6	4	0	0	0	0	0	0	0
3	182	225	65	0	0	0	0	0	0	0	0	8
4	66	28	47	5	0	0	0	0	0	0	0	39
5	110	54	49	62	0	0	0	0	0	0	0	28
6	241	0	90	20	4	0	0	0	0	0	0	126

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	299	583	283	20	17	0	0	0	0	0	0	8
<b>2nd</b>	417	82	186	87	4	0	0	0	0	0	0	193



**Table Daily Rainfall**

Station : Kalabajeng  
Year : 1983

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	35	8	0	0	75	0				0	0	0
2	45	0	0	0	5	0				0	0	25
3	14	0	0	0	3	0				0	0	3
4	42	0	0	0	0	0				0	0	25
5	19	0	0	0	0	0				0	3	3
6	0	0	0	0	0	0				0	0	0
7	0	0	0	3	0	0				0	0	0
8	18	0	0	5	0	0				0	0	4
9	0	0	0	0	0	0				0	0	3
10	0	0	0	8	0	0				0	0	0
11	8	0	0	0	0	0				0	0	0
12	20	0	0	0	0	0				8	0	0
13	5	0	0	75	45	0				0	0	3
14	0	18	0	0	50	0				0	0	25
15	5	0	0	0	0	0				10	0	50
16	0	0	0	0	0	0				0	16	35
17	0	0	0	0	0	0				0	0	25
18	0	0	15	0	0	0				150	0	23
19	0	0	0	0	0	0				0	8	3
20	5	0	0	5	0	0				0	0	0
21	25	0	30	0	0	0				0	0	0
22	8	5	0	28	0	0				0	3	0
23	8	5	0	0	0	0				0	5	5
24	0	0	0	78	0	0				0	5	3
25	0	0	0	0	0	0				0	18	15
26	8	0	0	0	0	0				0	8	25
27	4	0	10	45	0	0				0	3	50
28	0	0	10	55	0	0				0	15	25
29	5		0	8	0	0				0	3	25
30	0		25	5	0	0				0	28	50
31	0		0		0					0		52

<b>Monthly</b>	274	36	90	315	178	0	0	0	0	168	115	477
<b>Rainy Days</b>	17	4	5	11	5	0	0	0	0	3	12	22
<b>Max.</b>	45	18	30	78	75	0	0	0	0	150	28	52
<b>Average</b>	9	1	3	11	6	0	0	0	0	5	4	15

<b>Annual</b> :	1653	<b>No.</b> :	79	<b>Max.</b> :	150	<b>Ave.</b> :	4
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	155	8	0	0	83	0	0	0	0	0	3	56
2	18	0	0	16	0	0	0	0	0	0	0	7
3	38	18	0	75	95	0	0	0	0	18	0	78
4	5	0	15	5	0	0	0	0	0	150	24	86
5	41	10	30	106	0	0	0	0	0	0	31	23
6	17	0	45	113	0	0	0	0	0	0	57	227

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	211	26	0	91	178	0	0	0	0	18	3	141
<b>2nd</b>	63	10	90	224	0	0	0	0	0	150	112	336

**Table Daily Rainfall**

Station : Kalabajeng  
Year : 1984

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0	0	0	0	0	0	0	0	13	0	0
2	0	0	0	18	0	0	0	0	0	0	0	0
3	5	3	0	5	6	0	0	0	0	6	0	0
4	8	5	3	0	3	0	0	0	0	26	0	0
5	18	15	0	8	15	0	0	0	0	0	0	0
6	25	0	8	0	7	0	0	0	15	0	0	0
7	3	8	0	3	1	0	0	0	0	0	0	0
8	3	15	0	0	0	1	0	0	0	0	0	0
9	5	155	5	0	0	0	0	0	0	7	24	0
10	0	5	15	5	2	0	0	0	0	0	5	7
11	5	3	3	15	3	0	0	0	0	0	4	34
12	35	18	10	0	8	0	0	0	45	0	0	68
13	25	5	5	18	0	0	0	0	3	0	0	4
14	3	4	0	5	0	0	0	0	20	0	5	16
15	0	8	0	0	0	3	0	0	0	0	0	46
16	5	5	3	3	1	0	0	1	0	3	0	100
17	6	15	0	0	0	0	0	0	0	0	0	43
18	155	35	0	8	28	0	0	0	0	0	4	0
19	5	5	0	0	0	0	0	0	0	0	0	65
20	3	3	0	15	0	0	0	0	0	0	12	39
21	0	3	0	0	0	0	0	0	0	5	22	12
22	0	3	0	8	0	0	0	0	0	80	3	3
23	55	5	15	5	0	0	0	0	0	0	8	8
24	0	3	50	0	0	0	0	0	0	0	7	0
25	0	0	8	3	0	0	0	0	0	0	18	0
26	3	0	3	5	0	0	0	0	0	0	0	0
27	0	0	0	15	0	0	0	0	0	0	0	3
28	0	0	0	25	0	0	0	0	0	0	44	13
29	50	0	0	0	0	0	0	0	0	0	4	35
30	115		0	0	0	0	0	0	0	0	0	43
31	15		0		0		1	0		2		3

<b>Monthly</b>	547	321	128	164	74	4	1	1	83	142	160	542
<b>Rainy Days</b>	21	21	12	17	10	2	1	1	4	8	13	18
<b>Max.</b>	155	155	50	25	28	3	1	1	45	80	44	100
<b>Average</b>	18	11	4	5	2	0	0	0	3	5	5	17

<b>Annual</b> :	2167	<b>No.</b> :	128	<b>Max.</b> :	155	<b>Ave.</b> :	6
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	31	23	3	31	24	0	0	0	0	45	0	0
2	36	183	28	8	10	1	0	0	15	7	29	7
3	68	38	18	38	11	3	0	0	68	0	9	168
4	174	63	3	26	29	0	0	1	0	3	16	247
5	55	14	73	16	0	0	0	0	0	85	58	23
6	183	0	3	45	0	0	1	0	0	2	48	97

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	135	244	49	77	45	4	0	0	83	52	38	175
<b>2nd</b>	412	77	79	87	29	0	1	1	0	90	122	367

**Table Daily Rainfall**

Station : Kalabajeng  
Year : 1985

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	3	0	27		0	0	3	0	0	0	0	15
2	0	6	0		32	0	0	0	0	0	2	10
3	0	0	24		0	0	0	0	0	0	0	0
4	103	8	61		0	0	0	0	0	8	0	0
5	15	0	59		0	0	0	0	0	0	52	5
6	41	0	117		0	5	0	0	0	0	0	5
7	10	0	78		0	4	8	0	0	0	18	0
8	0	8	33		0	0	0	0	0	0	0	0
9	0	5	33		0	0	0	0	0	0	6	0
10	0	0	20		0	8	0	0	0	0	2	0
11	5	5	0		33	0	13	0	0	0	8	31
12	0	3	0		0	0	0	0	0	0	0	39
13	0	10	8		11	0	0	0	0	0	5	0
14	3	18	0		0	0	0	0	0	0	3	8
15	12	74	0		35	0	0	0	0	0	0	0
16	3	52	7		0	0	2	0	0	0	0	0
17	7	0	0		0	0	0	0	0	0	0	6
18	34	14	0		0	0	34	0	0	0	0	3
19	5	0	0		0	0	0	0	0	0	0	0
20	40	0	0		0	0	0	0	0	0	0	16
21	0	0	0		0	0	0	0	0	0	5	6
22	2	0	0		0	0	0	0	0	0	41	0
23	0	9	0		0	0	6	0	0	0	0	0
24	0	0	0		0	0	0	0	0	0	0	8
25	3	6	0		11	0	0	0	0	2	16	23
26	124	0	0		0	0	0	0	57	0	15	7
27	5	3	0		0	0	0	0	0	0	0	6
28	0	94	0		17	0	0	0	2	3	0	22
29	0		0		0	0	0	0	0	0	65	30
30	18		11		0	0	6	0	0	8	12	0
31	58		0		0		0	0		0		0

<b>Monthly</b>	491	315	478	0	139	17	72	0	59	21	250	240
<b>Rainy Days</b>	19	15	12	0	6	3	7	0	2	4	14	17
<b>Max.</b>	124	94	117	0	35	8	34	0	57	8	65	39
<b>Average</b>	16	11	15	0	4	1	2	0	2	1	8	8

<b>Annual</b> :	2082	<b>No.</b> :	99	<b>Max.</b> :	124	<b>Ave.</b> :	6
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	121	14	171	0	32	0	3	0	0	8	54	30
2	51	13	281	0	0	17	8	0	0	0	26	5
3	20	110	8	0	79	0	13	0	0	0	16	78
4	89	66	7	0	0	0	36	0	0	0	0	25
5	5	15	0	0	11	0	6	0	0	2	62	37
6	205	97	11	0	17	0	6	0	59	11	92	65

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	192	137	460	0	111	17	24	0	0	8	96	113
<b>2nd</b>	299	178	18	0	28	0	48	0	59	13	154	127

**Table Daily Rainfall**

Station : Kalabajeng  
 Year : 1986

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	4	0	0	0	0	7	0	0	0	0	0	0
2	0	0	0	0	5	0	6	0	0	0	4	0
3	39	58	52	10	0	20	0	0	0	3	0	0
4	36	0	53	0	0	0	0	0	0	0	29	0
5	0	0	6	0	0	0	0	0	0	0	4	0
6	27	0	0	0	0	0	0	0	0	0	0	0
7	38	0	0	0	29	0	0	0	0	0	0	0
8	40	22	0	0	0	4	0	0	0	25	0	0
9	19	8	0	0	0	0	0	0	0	0	0	0
10	17	14	13	0	0	24	0	0	0	0	15	0
11	82	0	19	9	0	0	0	0	0	0	5	22
12	83	52	19	0	0	0	0	0	0	0	14	0
13	88	0	0	9	0	0	0	0	0	5	0	0
14	81	0	3	40	0	0	4	0	0	0	18	31
15	55	7	0	37	0	0	0	0	0	0	0	47
16	0	12	0	0	0	0	0	0	0	2	0	60
17	14	35	8	0	0	0	0	0	0	0	4	0
18	9	17	53	0	0	0	0	0	0	0	43	0
19	25	0	7	0	0	0	0	0	0	0	0	0
20	12	0	0	0	0	0	0	0	0	0	3	0
21	0	49	0	0	0	0	0	0	0	0	4	0
22	41	0	0	0	0	0	0	0	0	0	30	0
23	15	27	0	0	0	5	0	0	0	0	13	0
24	9	42	0	0	0	0	0	0	0	0	0	0
25	12	10	0	0	0	0	0	0	0	0	0	0
26	49	0	0	0	0	0	23	0	0	0	15	0
27	115	15	0	0	0	0	9	0	0	0	0	7
28	31	13	29	0	0	0	0	0	0	0	0	30
29	3		0	0	0	0	0	0	5	0	0	12
30	0		0	0	0	0	0	0	0	0	0	13
31	0		0		0		0	0		0		4

<b>Monthly</b>	944	381	262	105	34	60	42	0	5	35	201	226
<b>Rainy Days</b>	25	15	11	5	2	5	4	0	1	4	14	9
<b>Max.</b>	115	58	53	40	29	24	23	0	5	25	43	60
<b>Average</b>	30	14	8	4	1	2	1	0	0	1	7	7

<b>Annual</b> :	2295	<b>No.</b> :	95	<b>Max.</b> :	115	<b>Ave.</b> :	6
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	79	58	111	10	5	27	6	0	0	3	37	0
2	141	44	13	0	29	28	0	0	0	25	15	0
3	389	59	41	95	0	0	4	0	0	5	37	100
4	60	64	68	0	0	0	0	0	0	2	50	60
5	77	128	0	0	0	5	0	0	0	0	47	0
6	198	28	29	0	0	0	32	0	5	0	15	66

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	609	161	165	105	34	55	10	0	0	33	89	100
<b>2nd</b>	335	220	97	0	0	5	32	0	5	2	112	126

**Table Daily Rainfall**

Station : Kalabajeng  
Year : 1987

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	5	56	41	0	0	0	0	0	0	0	0
2	0	19	0	22	0	0	0	0	0	0	0	18
3	0	9	0	15	0	0	0	0	0	0	0	63
4	28	12	0	0	0	0	0	0	0	0	11	2
5	12	0	0	0	12	0	0	0	0	0	17	32
6	46	0	0	0	0	0	0	0	0	0	14	5
7	0	31	12	9	7	0	0	0	0	0	0	0
8	62	0	0	0	0	0	0	0	0	0	0	0
9	24	0	3	0	0	0	0	0	0	0	0	22
10	4	68	27	0	42	0	0	0	0	0	0	0
11	17	0	0	0	0	0	0	0	0	0	0	0
12	0	33	0	0	14	0	0	0	0	0	0	13
13	23	41	0	0	0	0	0	0	0	0	0	0
14	43	0	0	0	0	0	0	0	0	0	0	75
15	90	0	2	0	0	0	0	0	0	0	0	305
16	79	3	0	0	0	0	0	0	0	0	9	160
17	88	0	0	0	0	0	0	0	0	0	41	10
18	0	0	72	0	0	0	0	0	0	0	3	31
19	33	7	0	0	0	0	0	0	0	0	0	49
20	8	43	0	0	0	0	0	0	0	0	0	91
21	40	32	3	0	0	0	0	0	0	0	0	148
22	65	0	37	0	0	0	0	0	0	0	0	118
23	15	21	37	0	0	0	0	0	0	0	0	27
24	14	11	29	0	0	0	0	0	0	0	0	38
25	0	0	0	0	0	0	0	0	0	0	9	75
26	0	18	3	0	0	0	0	0	0	0	0	48
27	28	0	0	2	0	0	0	0	0	7	0	0
28	14	4	18	0	0	0	0	0	0	0	4	0
29	89		5	0	0	0	0	0	0	0	0	12
30	28		0	0	0	0	0	0	0	0	0	0
31	80		0		0		0	0		0		0

<b>Monthly</b>	930	357	304	89	75	0	0	0	0	7	108	1342
<b>Rainy Days</b>	23	16	13	5	4	0	0	0	0	1	8	21
<b>Max.</b>	90	68	72	41	42	0	0	0	0	7	41	305
<b>Average</b>	30	13	10	3	2	0	0	0	0	0	4	43

<b>Annual</b>	: 3212	<b>No.</b>	: 91	<b>Max.</b>	: 305	<b>Ave.</b>	: 9
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	40	45	56	78	12	0	0	0	0	0	28	115
2	136	99	42	9	49	0	0	0	0	0	14	27
3	173	74	2	0	14	0	0	0	0	0	0	393
4	208	53	72	0	0	0	0	0	0	0	53	341
5	134	64	106	0	0	0	0	0	0	0	9	406
6	239	22	26	2	0	0	0	0	0	7	4	60

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	349	218	100	87	75	0	0	0	0	0	42	535
<b>2nd</b>	581	139	204	2	0	0	0	0	0	7	66	807

**Table Daily Rainfall**

Station : Kalabajeng  
Year : 1988

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	3	4	17	0	0	0	11	4	0	0	89
2	0	118	0	56	85	0	0	0	0	0	0	70
3	0	67	11	0	0	0	0	3	0	0	0	38
4	17	35	0	0	9	0	0	0	0	0	0	13
5	10	7	0	0	0	8	0	0	9	0	0	0
6	2	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	5	33
8	23	11	0	0	0	0	0	5	0	4	0	0
9	6	8	0	0	0	2	0	0	8	9	0	35
10	57	28	6	0	0	0	0	0	0	0	29	22
11	0	22	0	35	4	0	0	0	0	0	174	36
12	0	134	0	0	0	0	0	0	4	15	0	52
13	3	135	13	0	30	0	0	0	12	9	7	0
14	43	56	0	0	0	0	0	0	0	0	0	0
15	33	36	0	0	0	0	4	0	12	18	11	0
16	20	55	0	4	10	0	0	0	0	0	0	0
17	0	28	0	6	0	0	0	6	0	0	0	0
18	25	38	0	0	128	3	0	0	0	0	20	0
19	18	0	6	0	0	0	4	0	0	0	0	0
20	5	0	0	0	0	0	0	0	0	0	0	0
21	0	0	8	0	4	0	0	0	0	68	0	0
22	0	0	131	0	0	0	0	0	0	0	0	0
23	0	0	12	0	0	0	0	0	0	0	0	0
24	34	0	0	0	0	0	0	17	0	0	13	0
25	72	0	28	0	0	0	0	0	0	22	6	0
26	0	0	46	0	0	0	0	0	39	0	85	0
27	50	22	58	3	0	0	0	0	0	0	36	0
28	0	0	0	0	0	0	0	0	0	0	24	0
29	0	0	0	0	0	0	0	0	0	0	22	0
30	0	0	0	0	0	0	0	0	0	0	3	0
31	92		25		0		0	0		2		0

<b>Monthly</b>	510	803	348	121	270	13	8	42	88	147	435	388
<b>Rainy Days</b>	17	17	12	6	7	3	2	5	7	8	13	9
<b>Max.</b>	92	135	131	56	128	8	4	17	39	68	174	89
<b>Average</b>	16	28	11	4	9	0	0	1	3	5	15	13

<b>Annual</b> :	3173	<b>No.</b> :	106	<b>Max.</b> :	174	<b>Ave.</b> :	9
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	27	230	15	73	94	8	0	14	13	0	0	210
2	88	47	6	0	0	2	0	5	8	13	34	90
3	79	383	13	35	34	0	4	0	28	42	192	88
4	68	121	6	10	138	3	4	6	0	0	20	0
5	106	0	179	0	4	0	0	17	0	90	19	0
6	142	22	129	3	0	0	0	0	39	2	170	0

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	194	660	34	108	128	10	4	19	49	55	226	388
<b>2nd</b>	316	143	314	13	142	3	4	23	39	92	209	0

**Table Daily Rainfall**

Station : Kalabajeng  
Year : 1989

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	18	80	0	0	0	0	0	0	0	0	20
2	0	44	0	0	0	0	0	0	0	0	0	0
3	0	116	0	0	0	0	0	0	0	0	22	0
4	0	33	0	0	29	0	0	0	0	0	15	0
5	0	9	12	73	0	0	0	0	0	0	6	0
6	0	10	34	0	47	48	0	0	0	0	0	25
7	0	0	26	20	0	0	0	0	0	0	0	5
8	0	0	31	21	0	0	0	0	0	0	0	3
9	6	6	42	0	0	3	0	0	0	3	0	69
10	0	0	0	0	0	0	0	0	0	3	0	6
11	30	40	3	2	0	4	14	0	0	0	23	0
12	0	4	16	0	0	0	0	0	0	0	0	56
13	6	50	54	0	5	3	0	0	0	0	0	43
14	9	0	14	0	0	0	0	0	0	31	0	35
15	0	4	0	0	0	0	0	0	13	0	0	13
16	48	5	0	20	0	0	0	0	0	0	0	28
17	14	0	0	2	0	2	0	0	0	0	0	0
18	20	0	0	11	0	0	0	0	0	0	0	0
19	0	10	22	0	0	0	22	0	0	15	0	0
20	0	94	0	44	0	0	0	0	21	0	0	0
21	0	31	0	45	0	13	2	0	0	0	0	0
22	0	10	0	0	0	0	0	1	0	48	0	0
23	0	0	0	22	0	0	0	0	7	38	45	0
24	79	0	0	0	0	0	19	0	6	0	43	0
25	65	0	0	0	0	29	0	0	0	0	0	0
26	128	84	0	0	0	10	0	0	22	0	10	0
27	41	21	4	0	0	0	0	0	0	0	0	10
28	65	34	0	46	0	0	0	9	0	0	0	17
29	112		0	4	0	0	0	0	4	0	0	4
30	50		0	0	0	0	0	0	0	5	17	0
31	67		0		0		0	0		0		3

<b>Monthly</b>	740	623	338	310	81	112	57	10	73	143	181	337
<b>Rainy Days</b>	15	19	12	12	3	8	4	2	6	7	8	15
<b>Max.</b>	128	116	80	73	47	48	22	9	22	48	45	69
<b>Average</b>	24	22	11	10	3	4	2	0	2	5	6	11

<b>Annual</b> :	3005	<b>No.</b> :	111	<b>Max.</b> :	128	<b>Ave.</b> :	8
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	220	92	73	29	0	0	0	0	0	43	20
2	6	16	133	41	47	51	0	0	0	6	0	108
3	45	98	87	2	5	7	14	0	13	31	23	147
4	82	109	22	77	0	2	22	0	21	15	0	28
5	144	41	0	67	0	42	21	1	13	86	88	0
6	463	139	4	50	0	10	0	9	26	5	27	34

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	51	334	312	116	81	58	14	0	13	37	66	275
<b>2nd</b>	689	289	26	194	0	54	43	10	60	106	115	62

**Table Daily Rainfall**

Station : Kalabajeng  
Year : 1990

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0	9	0	0	0	0	0	0	0	0	0
2	0	0	11	0	0	11	0	0	0	0	0	0
3	0	0	0	0	0	4	0	0	0	0	0	0
4	82	103	31	0	0	0	0	0	0	0	0	0
5	0	111	16	0	0	0	0	0	0	0	0	30
6	3	0	12	0	0	0	0	0	0	0	0	0
7	120	0	0	7	13	0	0	0	0	0	30	16
8	36	13	0	4	7	0	0	0	0	0	0	24
9	68	3	0	0	20	0	0	0	0	0	54	0
10	22	0	0	0	54	0	0	0	0	0	38	0
11	7	0	0	0	0	0	0	0	0	0	11	0
12	4	99	12	0	0	0	0	0	0	0	20	7
13	36	0	18	0	0	0	0	0	0	0	0	0
14	0	0	4	0	0	0	0	0	0	0	0	3
15	0	0	0	0	0	0	0	0	0	0	0	0
16	0	15	0	0	44	0	9	0	0	0	6	0
17	4	12	5	0	68	0	0	0	0	5	0	0
18	6	0	0	54	10	0	0	0	0	0	0	7
19	33	13	0	0	0	0	0	0	0	0	0	50
20	150	0	0	0	0	0	0	0	0	0	0	33
21	30	3	0	0	6	0	0	4	0	0	0	0
22	4	0	0	0	0	0	0	0	14	9	0	42
23	0	0	0	14	0	0	0	0	0	8	0	66
24	0	0	0	0	0	0	0	0	0	0	0	79
25	17	0	0	0	0	0	0	0	0	0	0	85
26	14	0	0	0	0	0	0	0	0	0	37	20
27	0	0	0	0	0	0	0	0	0	0	0	35
28	0	8	0	0	0	0	0	0	0	29	3	0
29	0		0	0	0	0	0	0	0	0	28	0
30	0		0	0	0	0	5	0	0	0	0	0
31	0		0		6		0	0		0		0

<b>Monthly</b>	636	380	118	79	228	15	14	4	14	51	227	497
<b>Rainy Days</b>	17	10	9	4	9	2	2	1	1	4	9	14
<b>Max.</b>	150	111	31	54	68	11	9	4	14	29	54	85
<b>Average</b>	21	14	4	3	7	1	0	0	0	2	8	16

<b>Annual</b> :	2263	<b>No.</b> :	82	<b>Max.</b> :	150	<b>Ave.</b> :	6
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	82	214	67	0	0	15	0	0	0	0	0	30
2	249	16	12	11	94	0	0	0	0	0	122	40
3	47	99	34	0	0	0	0	0	0	0	31	10
4	193	40	5	54	122	0	9	0	0	5	6	90
5	51	3	0	14	6	0	0	4	14	17	0	272
6	14	8	0	0	6	0	5	0	0	29	68	55

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	378	329	113	11	94	15	0	0	0	0	153	80
<b>2nd</b>	258	51	5	68	134	0	14	4	14	51	74	417



**Table Daily Rainfall**

Station : Kalabajeng  
Year : 1991

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0	21	20	0	0	0	0	0	0	0	0
2	33	15	0	6	0	0	0	0	0	0	0	18
3	22	21	0	5	4	0	0	0	0	0	0	5
4	0	26	0	0	0	0	0	0	0	0	0	12
5	0	39	0	0	0	0	0	0	0	0	0	8
6	22	49	0	0	0	0	0	0	0	0	0	0
7	80	52	0	0	0	0	0	0	0	0	0	0
8	25	43	0	0	0	0	0	0	0	0	0	0
9	6	15	0	0	0	0	0	0	0	0	0	41
10	47	0	10	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	24
12	57	0	0	0	0	0	0	0	0	0	0	25
13	0	19	0	0	0	0	0	0	0	0	0	20
14	0	29	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	10	0	0	0	0	0	0	0	3
18	5	0	42	12	0	0	0	0	0	0	31	0
19	118	37	0	0	0	0	0	0	0	0	0	0
20	5	13	55	0	0	0	0	0	0	0	0	0
21	36	6	0	0	0	0	0	0	0	0	0	0
22	46	10	0	0	0	0	0	0	0	0	0	0
23	6	25	0	7	0	0	0	0	0	0	11	0
24	120	42	0	46	0	0	0	0	0	0	0	8
25	0	0	0	82	0	3	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	3	0
27	116	19	0	0	0	0	0	0	0	0	0	13
28	0	9	4	0	0	0	0	0	0	0	0	7
29	9		0	0	0	0	0	0	0	0	12	14
30	6		45	0	0	0	0	0	0	0	8	0
31	83		6		0		0	0		0		0

<b>Monthly</b>	842	469	183	188	4	3	0	0	0	0	65	198
<b>Rainy Days</b>	19	18	7	8	1	1	0	0	0	0	5	13
<b>Max.</b>	120	52	55	82	4	3	0	0	0	0	31	41
<b>Average</b>	27	17	6	6	0	0	0	0	0	0	2	6

<b>Annual</b> :	1952	<b>No.</b> :	72	<b>Max.</b> :	120	<b>Ave.</b> :	5
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	55	101	21	31	4	0	0	0	0	0	0	43
2	180	159	10	0	0	0	0	0	0	0	0	41
3	57	48	0	0	0	0	0	0	0	0	0	69
4	128	50	97	22	0	0	0	0	0	0	31	3
5	208	83	0	135	0	3	0	0	0	0	11	8
6	214	28	55	0	0	0	0	0	0	0	23	34

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	292	308	31	31	4	0	0	0	0	0	0	153
<b>2nd</b>	550	161	152	157	0	3	0	0	0	0	65	45

**Table Daily Rainfall**

Station : Kalabajeng  
Year : 1992

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0	0	50	0	0	0	0	0	0	0	20
2	0	0	4	18	0	25	0	13	0	0	0	14
3	40	0	116	34	0	0	0	0	12	0	0	28
4	23	0	0	0	0	17	0	0	8	0	0	0
5	17	0	0	0	0	0	0	0	4	0	0	0
6	0	0	0	0	9	0	54	0	0	0	0	11
7	0	0	5	0	0	0	0	0	0	0	0	14
8	0	0	28	0	0	0	0	0	0	0	0	0
9	61	0	0	0	0	0	0	0	0	7	0	0
10	73	0	0	22	0	0	0	0	0	0	0	0
11	0	0	0	21	0	0	0	0	15	0	0	0
12	0	0	90	9	0	0	0	0	0	0	17	0
13	0	0	55	0	0	0	0	0	0	0	0	20
14	0	0	0	0	0	0	0	0	11	0	25	5
15	0	0	0	0	0	0	0	0	0	0	11	3
16	0	0	0	0	0	0	0	0	0	0	6	0
17	7	0	0	0	0	35	0	0	0	0	0	31
18	0	0	0	0	0	0	0	0	0	0	0	0
19	0	16	0	18	0	0	0	0	0	0	0	0
20	0	20	16	0	0	0	0	0	0	10	0	19
21	0	32	25	0	0	0	0	0	0	4	0	0
22	0	23	0	0	4	0	0	0	0	0	0	0
23	33	0	0	0	0	0	0	0	0	0	21	0
24	45	0	0	0	0	0	0	0	0	0	0	28
25	0	0	4	0	0	0	0	0	0	0	0	40
26	0	0	0	6	0	0	0	0	0	0	0	0
27	0	0	10	0	0	0	0	0	0	0	9	0
28	17	0	0	0	0	0	0	0	0	0	5	21
29	0	0	21	0	0	0	0	0	0	0	0	19
30	0	0	0	28	0	0	0	0	0	0	8	0
31	0	0	18	0	0	0	0	0	0	0	0	0

<b>Monthly</b>	316	91	392	206	13	77	54	13	50	21	102	273
<b>Rainy Days</b>	9	4	12	9	2	3	1	1	5	3	8	14
<b>Max.</b>	73	32	116	50	9	35	54	13	15	10	25	40
<b>Average</b>	10	3	13	7	0	3	2	0	2	1	3	9

<b>Annual</b> :	1608	<b>No.</b> :	71	<b>Max.</b> :	116	<b>Ave.</b> :	4
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	80	0	120	102	0	42	0	13	24	0	0	62
2	134	0	33	22	9	0	54	0	0	7	0	25
3	0	0	145	30	0	0	0	0	26	0	53	28
4	7	36	16	18	0	35	0	0	0	10	6	50
5	78	55	29	0	4	0	0	0	0	4	21	68
6	17	0	49	34	0	0	0	0	0	0	22	40

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	214	0	298	154	9	42	54	13	50	7	53	115
<b>2nd</b>	102	91	94	52	4	35	0	0	0	14	49	158

**Table Daily Rainfall**

Station : Kalabajeng  
Year : 1993

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0	0	22	0	0	0	0	0	0	0	9
2	0	0	0	65	0	0	0	0	0	0	0	0
3	0	17	0	0	0	0	0	0	0	0	0	5
4	21	9	0	0	8	0	0	0	0	0	0	0
5	15	12	0	0	0	0	0	0	0	0	0	0
6	0	20	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0
8	10	8	0	0	0	0	0	0	0	0	0	0
9	12	0	12	0	0	7	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	11	4
11	0	20	0	15	0	0	0	0	0	0	0	3
12	0	13	0	0	0	0	0	0	0	9	0	0
13	0	22	0	0	0	0	0	0	0	0	15	0
14	0	32	0	0	0	0	0	0	0	0	0	16
15	0	60	0	0	0	0	0	0	0	0	0	60
16	75	71	0	0	0	0	0	0	0	0	22	38
17	53	40	0	0	0	0	0	0	0	4	0	29
18	0	0	0	0	0	0	0	0	0	0	0	28
19	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0
21	0	9	0	0	0	0	0	0	0	0	0	3
22	115	82	0	0	0	0	0	0	0	0	14	26
23	148	0	0	0	0	0	0	0	0	0	0	29
24	98	19	0	0	0	0	0	0	0	0	21	99
25	0	0	0	0	0	0	0	0	0	0	0	143
26	0	0	21	12	0	0	0	0	0	0	0	84
27	40	62	10	0	0	0	0	0	0	0	55	172
28	0	0	0	0	0	0	0	0	0	0	0	28
29	0	0	0	0	0	0	0	0	0	0	9	0
30	0	0	0	0	6	0	0	0	0	3	0	0
31	0	0	0	0	18	0	0	0	0	0	0	9

<b>Monthly</b>	587	496	43	114	32	7	0	0	0	16	147	785
<b>Rainy Days</b>	10	16	3	4	3	1	0	0	0	3	7	18
<b>Max.</b>	148	82	21	65	18	7	0	0	0	9	55	172
<b>Average</b>	19	18	1	4	1	0	0	0	0	1	5	25

<b>Annual</b> :	2227	<b>No.</b> :	65	<b>Max.</b> :	172	<b>Ave.</b> :	6
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	36	38	0	87	8	0	0	0	0	0	0	14
2	22	28	12	0	0	7	0	0	0	0	11	4
3	0	147	0	15	0	0	0	0	0	9	15	79
4	128	111	0	0	0	0	0	0	0	4	22	95
5	361	110	0	0	0	0	0	0	0	0	35	300
6	40	62	31	12	24	0	0	0	0	3	64	293

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	58	213	12	102	8	7	0	0	0	9	26	97
<b>2nd</b>	529	283	31	12	24	0	0	0	0	7	121	688

**Table Daily Rainfall**

Station : Kalabajeng  
Year : 1994

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	28	0	0	0		0	0	0	0	0	0	0
2	97	0	0	6		0	0	0	0	23	0	0
3	0	5	45	22		0	0	0	0	0	0	13
4	0	0	24	0		0	0	0	0	0	0	3
5	0	0	0	11		0	0	0	0	0	0	0
6	43	0	0	0		0	0	0	0	0	0	11
7	0	11	0	0		0	0	0	0	0	0	4
8	0	10	0	0		0	0	0	0	0	0	0
9	0	16	0	0		0	0	0	0	0	0	0
10	0	49	30	0		0	0	0	0	0	0	0
11	26	0	37	12		0	0	0	0	0	0	0
12	0	0	124	0		0	0	0	0	0	0	0
13	0	25	57	0		0	0	0	0	0	0	0
14	0	47	40	23		0	0	0	0	1	0	0
15	20	21	0	16		0	0	0	0	0	0	58
16	0	0	0	0		0	0	0	0	0	0	37
17	11	0	0	0		0	0	0	0	0	0	46
18	35	34	0	0		0	0	0	0	0	0	0
19	119	30	0	0		0	0	0	0	0	0	30
20	16	11	0	0		0	0	0	0	0	0	0
21	26	0	0	61		0	0	0	0	0	0	0
22	44	0	80	0		0	0	0	0	0	0	0
23	13	0	57	0		10	0	0	0	0	0	0
24	19	16	113	0		0	0	0	0	0	0	0
25	121	0	24	0		6	0	0	0	0	0	0
26	79	0	0	0		0	0	0	0	0	0	0
27	27	0	0	0		0	0	0	0	0	0	0
28	0	0	0	0		0	0	0	0	0	0	0
29	0		0	0		0	0	0	0	0	0	0
30	0		37	0		0	0	0	0	16	4	0
31	16		0				0	0		0		5

<b>Monthly</b>	740	275	668	151	0	16	0	0	0	40	4	207
<b>Rainy Days</b>	17	12	12	7	0	2	0	0	0	3	1	9
<b>Max.</b>	121	49	124	61	0	10	0	0	0	23	4	58
<b>Average</b>	24	10	22	5	0	1	0	0	0	1	0	7

<b>Annual</b> :	2101	<b>No.</b> :	63	<b>Max.</b> :	124	<b>Ave.</b> :	6
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	125	5	69	39	0	0	0	0	0	23	0	16
2	43	86	30	0	0	0	0	0	0	0	0	15
3	46	93	258	51	0	0	0	0	0	1	0	58
4	181	75	0	0	0	0	0	0	0	0	0	113
5	223	16	274	61	0	16	0	0	0	0	0	0
6	122	0	37	0	0	0	0	0	0	16	4	5

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	214	184	357	90	0	0	0	0	0	24	0	89
<b>2nd</b>	526	91	311	61	0	16	0	0	0	16	4	118

**Table Daily Rainfall**

Station : Kalabajeng  
Year : 1995

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0	0	0	0	12	0	0	0	0	0	4
2	0	0	68	17	0	0	0	0	0	0	0	0
3	0	36	53	23	0	0	0	0	0	0	0	0
4	0	19	0	29	0	0	4	0	0	0	0	9
5	0	0	34	14	0	16	0	0	0	0	0	39
6	19	45	0	25	0	21	0	0	0	0	0	14
7	0	17	22	47	10	0	0	0	0	0	0	71
8	0	0	19	32	13	4	0	0	0	0	0	37
9	0	0	0	17	0	0	0	0	0	0	0	27
10	0	0	0	0	0	0	0	0	0	0	0	68
11	0	0	0	0	0	0	0	0	0	0	0	95
12	75	0	0	0	22	0	0	0	0	0	0	0
13	103	40	30	12	11	0	0	0	0	0	0	11
14	29	19	13	0	0	0	0	0	0	0	6	0
15	16	0	0	0	24	0	0	0	0	3	0	0
16	8	0	0	0	0	11	0	0	0	0	0	16
17	0	0	0	9	0	7	0	0	0	0	0	21
18	0	0	20	0	0	0	0	0	0	0	0	13
19	15	0	23	0	0	0	0	0	0	0	0	0
20	65	0	0	0	0	0	0	0	0	0	0	17
21	123	32	0	0	0	0	0	0	0	0	0	0
22	105	0	20	0	0	0	0	0	0	0	22	0
23	34	0	0	0	0	0	0	0	0	0	0	13
24	13	0	0	0	0	0	0	0	0	0	17	0
25	20	0	15	0	0	0	0	0	3	0	0	0
26	8	34	30	0	0	0	0	0	0	0	47	0
27	0	61	0	6	0	0	0	0	0	0	31	0
28	0	19	0	0	0	0	0	0	0	0	14	0
29	11		11	0	0	0	0	0	0	0	9	0
30	0		17	0	7	9	0	0	0	0	0	0
31	0		9		0		0	0		1		0

<b>Monthly</b>	644	322	384	231	87	80	4	0	3	4	146	455
<b>Rainy Days</b>	15	10	15	11	6	7	1	0	1	2	7	15
<b>Max.</b>	123	61	68	47	24	21	4	0	3	3	47	95
<b>Average</b>	21	12	12	8	3	3	0	0	0	0	5	15

<b>Annual</b> :	2360	<b>No.</b> :	90	<b>Max.</b> :	123	<b>Ave.</b> :	6
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	55	155	83	0	28	4	0	0	0	0	52
2	19	62	41	121	23	25	0	0	0	0	0	217
3	223	59	43	12	57	0	0	0	0	3	6	106
4	88	0	43	9	0	18	0	0	0	0	0	67
5	295	32	35	0	0	0	0	0	3	0	39	13
6	19	114	67	6	7	9	0	0	0	1	101	0

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	242	176	239	216	80	53	4	0	0	3	6	375
<b>2nd</b>	402	146	145	15	7	27	0	0	3	1	140	80

**Table Daily Rainfall**

Station : Kalabajeng  
Year : 1996

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	9	79	29	0	0	0	0	0	0	0	0	0
2	2	42	14	0	0	0	0	0	10	0	0	107
3	0	85	0	0	0	0	0	0	0	0	10	0
4	0	49	0	0	0	0	0	0	0	0	16	39
5	26	0	8	0	0	0	0	0	0	0	11	42
6	0	0	16	0	0	0	0	0	0	0	0	0
7	39	56	7	0	0	0	0	0	0	13	0	26
8	19	90	0	0	0	0	0	0	0	0	8	32
9	0	72	11	0	0	0	0	0	0	20	0	19
10	0	54	16	0	0	0	0	0	0	0	0	24
11	0	0	0	0	0	0	0	0	0	0	0	48
12	0	0	8	0	0	0	0	0	0	0	24	72
13	0	0	0	0	0	0	0	0	0	0	0	32
14	0	0	0	0	0	0	0	0	0	0	0	10
15	0	36	0	0	0	0	0	0	0	0	0	13
16	4	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	29
18	0	0	0	0	0	0	0	0	0	22	11	53
19	3	0	14	0	0	0	0	0	0	0	0	46
20	11	0	27	0	0	0	0	0	11	0	0	31
21	27	0	0	0	0	0	0	0	0	0	0	24
22	22	0	14	0	0	0	0	0	0	0	14	28
23	56	54	23	0	0	0	0	0	0	16	0	42
24	66	10	16	0	0	0	0	0	0	0	0	36
25	21	68	9	0	0	0	0	0	0	0	0	22
26	79	38	0	0	0	0	0	0	0	0	0	0
27	11	14	6	0	0	9	0	0	0	0	0	0
28	14	0	0	0	0	0	0	0	0	0	16	20
29	32	0	0	0	0	0	0	0	0	11	0	33
30	0	0	0	0	0	11	0	0	0	0	12	41
31	0	0	0	0	0	0	0	0	0	0	0	0

<b>Monthly</b>	441	747	218	0	0	20	0	0	21	82	122	869
<b>Rainy Days</b>	17	14	15	0	0	2	0	0	2	5	9	24
<b>Max.</b>	79	90	29	0	0	11	0	0	11	22	24	107
<b>Average</b>	14	26	7	0	0	1	0	0	1	3	4	28

<b>Annual</b> :	2520	<b>No.</b> :	88	<b>Max.</b> :	107	<b>Ave.</b> :	7
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	37	255	51	0	0	0	0	0	10	0	37	188
2	58	272	50	0	0	0	0	0	0	33	8	101
3	0	36	8	0	0	0	0	0	0	0	24	175
4	18	0	41	0	0	0	0	0	11	22	11	159
5	192	132	62	0	0	0	0	0	0	16	14	152
6	136	52	6	0	0	20	0	0	0	11	28	94

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	95	563	109	0	0	0	0	0	10	33	69	464
<b>2nd</b>	346	184	109	0	0	20	0	0	11	49	53	405

**Table Daily Rainfall**

Station : Kalabajeng  
 Year : 1997

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0	42	0	0	0	0	0	0	0	0	0
2	12	0	20	28	0	0	0	0	0	0	0	4
3	25	21	0	13	0	0	0	0	0	0	0	0
4	41	0	11	0	0	0	0	0	0	0	0	0
5	0	89	31	0	0	0	0	0	0	0	0	0
6	11	35	16	0	0	0	0	0	0	0	0	9
7	0	0	78	0	0	0	0	0	0	0	0	0
8	58	0	22	16	0	0	0	0	0	0	0	0
9	13	16	0	0	0	0	0	0	0	0	0	7
10	29	0	0	0	0	0	0	0	0	0	0	21
11	16	0	0	0	0	0	0	0	0	0	0	0
12	22	0	0	0	0	0	0	0	0	0	0	6
13	0	31	0	0	0	0	0	0	0	0	0	0
14	39	17	0	13	0	0	0	0	0	0	0	0
15	11	24	0	0	0	0	0	0	0	0	0	4
16	74	43	0	0	0	0	0	0	0	0	0	0
17	42	19	0	0	0	0	0	0	0	0	0	0
18	8	54	0	0	14	0	0	0	0	0	0	0
19	0	12	0	0	0	0	0	0	0	0	0	0
20	13	0	0	0	0	0	0	0	0	0	0	0
21	13	67	0	0	0	0	0	0	0	0	0	0
22	29	111	0	0	0	0	0	0	0	0	0	34
23	0	29	0	0	0	0	0	0	0	0	9	53
24	16	43	0	0	0	0	0	0	0	0	12	29
25	0	20	0	0	0	0	0	0	0	0	0	0
26	0	38	0	0	0	0	0	0	0	0	0	35
27	0	20	0	0	0	0	0	0	0	0	0	28
28	0	32	0	28	0	0	0	0	0	0	0	0
29	0		3	0	0	0	0	0	0	0	16	0
30	0		0	12	0	0	0	0	0	0	0	0
31	0		0		0		0	0		0		3

<b>Monthly</b>	472	721	223	110	14	0	0	0	0	0	37	233
<b>Rainy Days</b>	18	19	8	6	1	0	0	0	0	0	3	12
<b>Max.</b>	74	111	78	28	14	0	0	0	0	0	16	53
<b>Average</b>	15	26	7	4	0	0	0	0	0	0	1	8

<b>Annual</b> :	1810	<b>No.</b> :	67	<b>Max.</b> :	111	<b>Ave.</b> :	5
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	78	110	104	41	0	0	0	0	0	0	0	4
2	111	51	116	16	0	0	0	0	0	0	0	37
3	88	72	0	13	0	0	0	0	0	0	0	10
4	137	128	0	0	14	0	0	0	0	0	0	0
5	58	270	0	0	0	0	0	0	0	0	21	116
6	0	90	3	40	0	0	0	0	0	0	16	66

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	277	233	220	70	0	0	0	0	0	0	0	51
<b>2nd</b>	195	488	3	40	14	0	0	0	0	0	37	182

**Table Daily Rainfall**

Station : Kalabajeng  
Year : 1998

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	9	5	0	0	0	0	0	0	0	0	29
2	0	0	0	0	0	0	0	0	1	0	0	36
3	0	7	0	0	0	0	0	0	0	0	0	32
4	0	0	0	0	155	0	0	0	0	0	15	19
5	44	0	0	0	0	0	9	0	3	0	24	25
6	0	0	0	31	0	0	0	0	0	0	13	0
7	0	8	0	112	110	0	11	0	1	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	19
9	0	0	0	0	0	65	0	0	0	0	22	34
10	0	0	0	0	0	0	7	0	2	0	11	0
11	0	0	0	13	0	0	0	0	0	44	22	0
12	0	0	0	22	0	0	0	0	3	0	16	0
13	13	0	0	0	40	0	0	0	0	0	53	0
14	0	10	0	11	0	0	0	13	1	0	19	0
15	53	0	6	26	0	80	0	8	0	0	13	0
16	0	0	11	0	0	0	0	0	3	0	25	0
17	0	0	42	0	0	0	0	0	0	0	43	0
18	0	0	0	0	0	0	0	0	0	18	0	31
19	0	0	0	21	0	0	0	0	0	0	21	26
20	0	0	0	0	125	50	0	0	3	0	35	22
21	0	11	29	37	0	95	0	0	6	0	57	0
22	0	0	0	0	0	0	0	0	2	0	36	0
23	0	0	0	0	0	0	12	0	0	16	33	0
24	0	0	0	0	0	0	31	0	5	0	0	21
25	0	0	17	8	0	0	15	4	1	0	0	18
26	5	0	0	0	0	0	0	0	0	0	0	22
27	0	0	0	0	0	0	0	0	0	33	0	29
28	0	0	0	41	70	0	0	0	10	0	0	41
29	0		9	30	0	105	8	0	7	0	0	20
30	0		53	0	0	0	13	0	20	0	0	35
31	0		27		0		0	0		46		38

<b>Monthly</b>	115	45	199	352	500	395	106	25	68	157	458	497
<b>Rainy Days</b>	4	5	9	11	5	5	8	3	15	5	17	18
<b>Max.</b>	53	11	53	112	155	105	31	13	20	46	57	41
<b>Average</b>	4	2	6	12	16	13	3	1	2	5	15	16

<b>Annual</b> :	2917	<b>No.</b> :	105	<b>Max.</b> :	155	<b>Ave.</b> :	8
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	44	16	5	0	155	0	9	0	4	0	39	141
2	0	8	0	143	110	65	18	0	3	0	46	53
3	66	10	6	72	40	80	0	21	4	44	123	0
4	0	0	53	21	125	50	0	0	6	18	124	79
5	0	11	46	45	0	95	58	4	14	16	126	39
6	5	0	89	71	70	105	21	0	37	79	0	185

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	110	34	11	215	305	145	27	21	11	44	208	194
<b>2nd</b>	5	11	188	137	195	250	79	4	57	113	250	303



**Table Daily Rainfall**

Station : Kalabajeng  
Year : 1999

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	37	34	26	0	0	0	0	0	0	0	4	0
2	238	126	0	0	0	0	14	0	0	0	0	0
3	183	42	11	11	28	0	22	0	0	0	13	0
4	0	38	0	25	0	0	0	0	0	0	16	0
5	0	22	0	8	0	0	0	0	0	0	0	43
6	0	0	0	0	0	0	0	0	0	0	0	18
7	44	13	0	0	30	0	13	0	0	0	9	37
8	8	9	0	0	0	0	0	0	0	0	25	62
9	24	10	0	0	0	0	0	0	0	0	0	95
10	0	0	0	0	5	0	0	0	0	11	0	25
11	85	0	0	0	0	0	0	0	0	0	0	14
12	0	0	0	0	0	0	0	0	0	0	0	21
13	35	0	15	0	0	0	0	0	0	0	0	32
14	0	0	21	0	0	0	0	0	0	0	0	10
15	0	0	0	0	0	0	0	0	0	0	10	24
16	0	7	9	8	0	0	0	0	0	0	21	0
17	4	0	0	63	0	0	0	0	0	0	0	13
18	5	13	0	48	0	7	0	0	0	0	0	10
19	28	6	0	0	0	0	0	0	0	0	0	16
20	42	0	0	0	0	0	0	0	0	0	7	11
21	23	0	0	0	0	11	0	0	0	0	14	0
22	51	17	0	0	0	0	0	0	0	9	0	0
23	51	12	0	0	0	0	0	0	0	7	0	0
24	26	0	0	0	0	0	0	0	0	0	0	22
25	86	99	0	0	0	0	0	0	0	0	0	29
26	69	32	24	0	0	0	0	0	0	0	0	15
27	47	0	0	0	0	0	0	0	0	27	0	0
28	157	28	18	0	0	0	0	0	0	0	0	9
29	4		16	0	0	0	0	0	0	12	0	13
30	4		0	16	0	0	0	0	0	14	0	17
31	31		12		0		0	0		9		0

<b>Monthly</b>	1282	508	152	179	63	18	49	0	0	89	119	536
<b>Rainy Days</b>	23	16	9	7	3	2	3	0	0	7	9	21
<b>Max.</b>	238	126	26	63	30	11	22	0	0	27	25	95
<b>Average</b>	41	18	5	6	2	1	2	0	0	3	4	17

<b>Annual</b> :	2995	<b>No.</b> :	100	<b>Max.</b> :	238	<b>Ave.</b> :	8
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	458	262	37	44	28	0	36	0	0	0	33	43
2	76	32	0	0	35	0	13	0	0	11	34	237
3	120	0	36	0	0	0	0	0	0	0	10	101
4	79	26	9	119	0	7	0	0	0	0	28	50
5	237	128	0	0	0	11	0	0	0	16	14	51
6	312	60	70	16	0	0	0	0	0	62	0	54

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	654	294	73	44	63	0	49	0	0	11	77	381
<b>2nd</b>	628	214	79	135	0	18	0	0	0	78	42	155

**Table Daily Rainfall**

Station : Kalabajeng  
Year : 2000

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	24	0	0	18	0	0	0	0	0	0	0
2	8	0	0	0	6	0	0	0	0	0	0	0
3	25	29	0	0	0	0	0	0	0	0	0	30
4	6	286	0	14	0	21	0	0	0	0	0	69
5	0	22	0	0	0	6	0	0	0	0	0	5
6	17	82	0	0	0	0	0	0	0	0	0	27
7	11	16	0	0	0	0	0	0	0	0	0	0
8	14	21	29	0	0	0	0	0	0	11	0	0
9	12	24	0	7	0	0	0	0	0	0	0	0
10	20	0	11	0	0	0	0	0	0	0	0	0
11	74	0	0	0	0	0	0	0	0	0	0	0
12	16	0	0	46	0	0	0	0	0	4	0	17
13	0	0	17	0	0	0	0	0	0	0	0	0
14	0	0	9	0	0	0	0	0	0	0	0	0
15	0	0	4	21	0	0	0	0	0	0	7	22
16	0	0	0	0	0	0	0	0	0	19	11	37
17	0	0	10	0	13	0	0	0	0	0	0	0
18	22	0	0	0	7	0	0	0	0	0	0	0
19	84	0	0	0	0	0	0	0	0	21	0	0
20	19	0	0	0	0	0	0	0	0	0	20	0
21	0	7	53	0	0	0	0	0	0	23	0	21
22	13	22	39	0	0	0	0	0	0	9	0	32
23	16	0	11	0	0	0	0	0	0	0	0	31
24	9	14	0	0	0	0	0	0	0	0	9	0
25	21	30	4	0	0	0	0	0	0	2	0	40
26	14	87	7	0	0	0	0	0	0	0	8	0
27	11	0	0	16	0	0	0	0	0	0	40	0
28	29	0	13	11	0	0	0	0	0	0	37	0
29	0		0	3	0	0	0	0	0	0	36	0
30	22		0	0	5	0	0	0	0	0	10	0
31	114		0		0		0	0		0		0

<b>Monthly</b>	577	664	207	118	49	27	0	0	0	89	178	331
<b>Rainy Days</b>	22	13	12	7	5	2	0	0	0	7	9	11
<b>Max.</b>	114	286	53	46	18	21	0	0	0	23	40	69
<b>Average</b>	19	24	7	4	2	1	0	0	0	3	6	11

<b>Annual</b> :	2240	<b>No.</b> :	88	<b>Max.</b> :	286	<b>Ave.</b> :	6
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	39	361	0	14	24	27	0	0	0	0	0	104
2	74	143	40	7	0	0	0	0	0	11	0	27
3	90	0	30	67	0	0	0	0	0	4	7	39
4	125	0	10	0	20	0	0	0	0	40	31	37
5	59	73	107	0	0	0	0	0	0	34	9	124
6	190	87	20	30	5	0	0	0	0	0	131	0

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	203	504	70	88	24	27	0	0	0	15	7	170
<b>2nd</b>	374	160	137	30	25	0	0	0	0	74	171	161

**Table Daily Rainfall**

Station : Kalabajeng  
Year : 2001

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0	14	0	0	0	0	0	0	0	0	13
2	0	218	10	0	0	0	0	0	0	0	5	25
3	4	59	11	0	0	0	0	0	0	0	0	87
4	7	82	28	0	0	0	0	0	0	0	11	20
5	19	24	3	0	0	0	0	0	0	0	0	0
6	0	55	7	0	0	6	0	0	0	0	9	35
7	6	75	5	0	0	23	0	0	0	0	0	74
8	24	69	0	0	0	0	0	0	0	0	0	91
9	113	141	0	0	0	0	0	0	0	0	10	28
10	150	4	0	0	0	9	0	0	0	0	0	21
11	12	0	6	0	0	0	0	0	0	0	0	94
12	36	0	23	0	0	0	0	0	0	0	0	0
13	0	6	0	0	0	0	0	0	0	0	0	0
14	9	0	0	0	0	0	0	0	0	0	0	0
15	24	0	17	0	0	0	0	0	0	0	0	0
16	55	0	0	0	0	0	0	0	0	0	9	0
17	3	13	38	0	0	0	0	0	0	0	0	6
18	0	16	0	0	0	0	0	0	0	0	11	28
19	0	30	21	0	0	0	0	0	0	0	4	0
20	0	0	0	0	0	0	0	0	0	0	0	0
21	14	18	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	16
23	9	0	0	0	0	0	0	0	0	0	11	0
24	0	0	12	0	0	0	0	0	0	0	0	0
25	0	0	0	13	0	0	0	0	0	0	6	0
26	10	0	0	0	0	0	0	0	0	0	0	0
27	12	0	0	0	0	0	0	0	0	0	8	9
28	0	0	0	7	0	0	0	0	0	0	10	14
29	17		7	5	0	0	0	0	0	0	0	28
30	0		0	0	4	0	0	0	3	0	0	0
31	19		0		0		0	0		0		0

<b>Monthly</b>	543	810	202	25	4	38	0	0	3	0	94	589
<b>Rainy Days</b>	19	14	14	3	1	3	0	0	1	0	11	16
<b>Max.</b>	150	218	38	13	4	23	0	0	3	0	11	94
<b>Average</b>	18	29	7	1	0	1	0	0	0	0	3	19

<b>Annual</b> :	2308	<b>No.</b> :	82	<b>Max.</b> :	218	<b>Ave.</b> :	6
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	30	383	66	0	0	0	0	0	0	0	16	145
2	293	344	12	0	0	38	0	0	0	0	19	249
3	81	6	46	0	0	0	0	0	0	0	0	94
4	58	59	59	0	0	0	0	0	0	0	24	34
5	23	18	12	13	0	0	0	0	0	0	17	16
6	58	0	7	12	4	0	0	0	3	0	18	51

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	404	733	124	0	0	38	0	0	0	0	35	488
<b>2nd</b>	139	77	78	25	4	0	0	0	3	0	59	101

**Table Daily Rainfall**

Station : Bontosallang  
 Year : 1975

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1				0	0	0	0	0	0	0	0	7
2				0	0	8	0	0	0	0	0	0
3				0	0	0	0	0	0	40	31	0
4				0	0	0	0	0	0	0	0	38
5				0	4	0	0	0	0	11	0	110
6				0	2	0	0	0	0	0	0	34
7				0	0	0	0	0	0	0	0	0
8				0	0	0	0	0	0	8	13	0
9				0	0	0	0	0	0	0	0	65
10				3	0	0	0	0	10	0	49	0
11				1	0	0	0	0	0	0	50	89
12				6	0	0	0	16	0	0	0	49
13				7	0	30	0	0	0	0	0	29
14				2	13	0	0	0	56	0	5	39
15				0	0	0	0	0	0	30	0	93
16				0	0	6	0	0	31	0	0	0
17				8	6	0	0	0	0	0	0	23
18				57	0	0	0	0	0	15	0	0
19				5	0	0	13	0	0	0	0	0
20				0	4	0	0	0	0	0	0	0
21				150	0	0	0	0	0	5	0	0
22				4	0	0	4	0	0	0	0	0
23				0	0	0	0	0	0	50	0	73
24				0	2	0	0	0	0	15	0	0
25				70	0	0	23	0	0	103	67	0
26				0	0	0	0	0	0	0	44	0
27				0	0	0	0	0	35	0	12	0
28				4	0	0	0	0	0	8	17	25
29				30	0	0	0	0	0	0	20	50
30				0	0	0	0	0	0	21	25	24
31					0		0	6		0	75	93

<b>Monthly</b>	0	0	0	347	31	44	40	22	132	306	408	841
<b>Rainy Days</b>	0	0	0	13	6	3	3	2	4	11	12	16
<b>Max.</b>	0	0	0	150	13	30	23	16	56	103	75	110
<b>Average</b>	0	0	0	12	1	1	1	1	4	10	13	27

<b>Annual</b> :	2171	<b>No.</b> :	70	<b>Max.</b> :	150	<b>Ave.</b> :	6
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0	0	0	4	8	0	0	0	51	31	155
2	0	0	0	3	2	0	0	0	10	8	62	99
3	0	0	0	16	13	30	0	16	56	30	55	299
4	0	0	0	70	10	6	13	0	31	15	0	23
5	0	0	0	224	2	0	27	0	0	173	67	73
6	0	0	0	34	0	0	0	6	35	29	193	192

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	0	0	0	19	19	38	0	16	66	89	148	553
<b>2nd</b>	0	0	0	328	12	6	40	6	66	217	260	288

**Table Daily Rainfall**

Station : **Bontosallang**  
 Year : **1976**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	78	0	0	0	6	0	0	0	0	0
3	0	139	23	0	0	0	0	0	0	0	4	37
4	0	0	0	0	0	0	0	0	0	4	0	31
5	0	13	0	0	0	0	0	0	0	0	0	41
6	37	0	0	0	0	0	0	0	0	0	35	25
7	28	20	0	0	0	0	0	0	0	0	0	33
8	18	0	0	62	0	0	0	0	0	0	0	15
9	43	5	92	0	0	0	0	0	0	0	49	12
10	33	0	0	0	0	0	0	0	0	0	0	0
11	130	23	62	0	0	0	0	0	0	0	14	0
12	193	27	0	0	0	0	0	0	0	0	5	0
13	120	0	0	0	0	0	0	0	0	0	0	13
14	53	0	0	0	0	5	0	0	0	0	0	0
15	55	25	93	3	0	0	0	0	0	0	24	67
16	62	0	61	0	0	0	0	0	0	0	6	35
17	11	0	72	0	0	0	0	0	0	0	53	10
18	7	0	0	0	0	0	0	0	0	0	0	0
19	0	38	40	0	0	0	0	0	0	0	28	21
20	0	0	0	0	0	0	0	0	0	0	0	93
21	0	31	83	0	0	0	0	0	0	0	25	8
22	0	82	0	0	0	0	0	0	0	0	0	0
23	6	78	23	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	8	0
25	12	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	7	9	0
27	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	52	0	0	8	0	0	0	0	0	0
29	0	0	0	0	0	2	0	0	0	1	5	0
30	0	0	22	0	0	0	0	0	0	0	0	0
31	0	0	42	0	0	0	0	0	0	0	0	0

<b>Monthly</b>	808	481	743	65	0	15	6	0	0	12	265	441
<b>Rainy Days</b>	15	11	13	2	0	3	1	0	0	3	13	14
<b>Max.</b>	193	139	93	62	0	8	6	0	0	7	53	93
<b>Average</b>	26	17	24	2	0	1	0	0	0	0	9	14

<b>Annual</b> :	2836	<b>No.</b> :	75	<b>Max.</b> :	193	<b>Ave.</b> :	8
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	152	101	0	0	0	6	0	0	4	4	109
2	159	25	92	62	0	0	0	0	0	0	84	85
3	551	75	155	3	0	5	0	0	0	0	43	80
4	80	38	173	0	0	0	0	0	0	0	87	159
5	18	191	106	0	0	0	0	0	0	0	33	8
6	0	0	116	0	0	10	0	0	0	8	14	0

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	710	252	348	65	0	5	6	0	0	4	131	274
<b>2nd</b>	98	229	395	0	0	10	0	0	0	8	134	167

**Table Daily Rainfall**

Station : **Bontosallang**  
 Year : **1977**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	28	8	0	0	0	0	0	0	0	0	86
2	0	25	0	2	0	0	0	0	0	0	0	0
3	34	0	0	0	0	0	0	0	0	0	0	0
4	30	0	0	10	0	0	0	0	0	0	0	0
5	0	83	9	0	5	0	0	0	0	0	0	0
6	22	23	0	0	6	0	0	0	0	0	0	0
7	33	11	71	0	0	0	0	0	0	0	0	0
8	34	42	18	0	0	0	0	0	0	0	0	6
9	22	53	0	8	0	0	0	0	0	0	0	15
10	48	0	11	2	0	0	0	0	0	0	0	0
11	78	106	8	81	0	0	0	0	0	0	0	0
12	28	19	0	18	0	0	0	0	0	0	0	0
13	0	88	0	15	0	0	0	0	0	0	0	50
14	30	21	12	0	15	16	0	0	0	0	0	24
15	22	158	0	0	3	65	0	0	0	0	0	16
16	15	15	18	0	0	0	0	0	0	0	0	0
17	0	118	25	0	0	0	0	0	0	0	0	0
18	0	81	18	0	0	14	0	0	0	0	0	0
19	178	0	0	0	0	0	0	0	0	0	40	0
20	34	33	62	0	0	0	0	0	0	0	4	0
21	48	11	8	0	0	0	0	0	0	0	0	0
22	78	28	0	0	0	0	0	0	0	0	0	6
23	0	135	3	0	0	0	0	0	0	0	0	35
24	0	58	3	0	0	0	0	0	0	0	0	0
25	0	38	34	0	0	0	0	0	0	0	0	0
26	85	78	34	0	2	0	0	0	0	0	0	4
27	0	39	0	0	0	0	0	0	0	0	0	0
28	0	36	0	0	0	0	0	0	0	0	0	0
29	0		0	0	0	0	0	0	0	0	30	0
30	0		0	3	0	0	0	0	0	0	45	0
31	73		0		0		0	0		0		61

<b>Monthly</b>	892	1327	342	139	31	95	0	0	0	0	119	303
<b>Rainy Days</b>	18	24	16	8	5	3	0	0	0	0	4	10
<b>Max.</b>	178	158	71	81	15	65	0	0	0	0	45	86
<b>Average</b>	29	47	11	5	1	3	0	0	0	0	4	10

<b>Annual</b> :	3248	<b>No.</b> :	88	<b>Max.</b> :	178	<b>Ave.</b> :	9
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	64	136	17	12	5	0	0	0	0	0	0	86
2	159	129	100	10	6	0	0	0	0	0	0	21
3	158	392	20	114	18	81	0	0	0	0	0	90
4	227	247	123	0	0	14	0	0	0	0	44	0
5	126	270	48	0	0	0	0	0	0	0	0	41
6	158	153	34	3	2	0	0	0	0	0	75	65

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	381	657	137	136	29	81	0	0	0	0	0	197
<b>2nd</b>	511	670	205	3	2	14	0	0	0	0	119	106

**Table Daily Rainfall**

Station : **Bontosallang**  
 Year : **1978**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0	51	0	0	0	0	0	0	0	0	0
2	26	0	0	0	0	0	0	0	0	10	0	8
3	0	156	0	0	5	0	0	0	10	0	0	15
4	0	56	0	0	10	0	0	0	0	0	0	25
5	0	38	0	128	0	0	40	0	0	0	0	20
6	0	13	6	5	0	0	0	0	0	0	2	15
7	0	0	0	20	0	0	0	0	0	0	23	0
8	26	26	0	0	0	0	0	0	0	0	19	27
9	8	5	3	0	0	0	18	0	3	0	0	0
10	25	26	0	0	0	5	0	0	0	0	0	0
11	75	46	24	0	10	0	14	0	0	0	0	24
12	56	11	14	0	8	0	0	3	0	0	0	15
13	6	36	0	0	30	0	8	2	0	0	0	0
14	0	0	0	0	20	0	0	0	3	0	0	0
15	0	31	0	0	0	10	0	0	0	0	13	0
16	0	14	0	0	85	0	0	0	0	0	0	9
17	0	78	0	0	0	0	0	8	0	0	0	10
18	0	0	0	9	0	1	0	0	0	0	0	0
19	53	6	10	0	0	15	0	0	0	0	14	8
20	0	72	0	0	0	0	0	0	0	0	2	48
21	23	8	0	0	0	0	0	0	0	0	0	52
22	10	41	0	0	0	0	0	0	0	0	0	3
23	53	13	0	0	0	0	0	0	0	0	0	50
24	0	0	126	0	0	0	0	0	0	0	0	50
25	71	51	111	0	0	0	0	0	0	2	19	33
26	0	0	0	0	0	0	0	0	0	0	35	43
27	0	0	0	0	0	0	0	0	0	0	0	79
28	0	31	0	0	0	0	0	0	3	0	0	49
29	0		0	5	0	0	0	0	0	0	0	28
30	0		0	0	0	0	0	0	0	0	0	21
31	0		0		0		0	0		0		0

<b>Monthly</b>	432	758	345	167	168	31	80	13	19	12	127	632
<b>Rainy Days</b>	12	20	8	5	7	4	4	3	4	2	8	22
<b>Max.</b>	75	156	126	128	85	15	40	8	10	10	35	79
<b>Average</b>	14	27	11	6	5	1	3	0	1	0	4	20

<b>Annual</b> :	2784	<b>No.</b> :	99	<b>Max.</b> :	156	<b>Ave.</b> :	8
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	26	250	51	128	15	0	40	0	10	10	0	68
2	59	70	9	25	0	5	18	0	3	0	44	42
3	137	124	38	0	68	10	22	5	3	0	13	39
4	53	170	10	9	85	16	0	8	0	0	16	75
5	157	113	237	0	0	0	0	0	0	2	19	188
6	0	31	0	5	0	0	0	0	3	0	35	220

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	222	444	98	153	83	15	80	5	16	10	57	149
<b>2nd</b>	210	314	247	14	85	16	0	8	3	2	70	483

**Table Daily Rainfall**

Station : **Bontosallang**  
 Year : **1979**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	23	52	0	0	0	0	0	0	0	0	0	59
2	4	11	0	0	0	0	0	0	0	0	0	0
3	6	25	0	0	46	0	0	0	0	0	0	104
4	0	75	0	0	0	28	0	0	5	0	0	0
5	28	63	50	0	0	70	0	0	0	0	0	0
6	75	2	15	0	0	0	0	0	0	0	0	50
7	100	0	35	0	17	0	0	0	0	0	0	17
8	130	0	60	0	0	3	0	0	0	0	0	131
9	59	33	50	0	0	8	0	0	0	0	0	18
10	78	9	3	0	0	2	0	0	0	0	0	50
11	88	10	35	0	0	0	0	0	8	0	5	2
12	9	0	65	0	17	0	0	0	0	0	0	8
13	18	3	0	0	0	0	0	0	0	0	12	0
14	25	0	0	0	0	0	0	0	0	0	0	23
15	11	3	0	0	0	0	0	0	0	0	0	8
16	50	0	0	0	0	0	0	0	0	0	0	23
17	0	10	0	0	0	0	0	0	0	0	0	0
18	3	3	0	0	0	0	0	0	0	0	0	0
19	0	10	0	0	0	0	0	0	0	0	4	0
20	3	11	0	18	0	0	0	0	0	0	0	0
21	18	20	0	23	0	0	0	0	0	0	0	3
22	4	0	0	0	0	0	0	0	0	1	0	0
23	0	3	0	0	0	0	0	0	0	3	0	0
24	0	75	0	0	0	0	0	0	0	0	3	28
25	10	45	0	4	0	0	0	0	0	0	3	0
26	33	9	0	0	0	0	0	0	0	0	8	13
27	0	58	0	3	75	0	0	0	0	0	0	8
28	8	0	4	0	0	0	0	0	0	0	0	0
29	0		5	0	0	0	0	0	0	0	11	6
30	0		0	3	0	0	0	0	0	0	19	55
31	0		0		0		0	0		0		5

<b>Monthly</b>	783	530	322	51	155	111	0	0	13	4	65	611
<b>Rainy Days</b>	22	21	10	5	4	5	0	0	2	2	8	19
<b>Max.</b>	130	75	65	23	75	70	0	0	8	3	19	131
<b>Average</b>	25	19	10	2	5	4	0	0	0	0	2	20

<b>Annual</b> :	2645	<b>No.</b> :	98	<b>Max.</b> :	131	<b>Ave.</b> :	7
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	61	226	50	0	46	98	0	0	5	0	0	163
2	442	44	163	0	17	13	0	0	0	0	0	266
3	151	16	100	0	17	0	0	0	8	0	17	41
4	56	34	0	18	0	0	0	0	0	0	4	23
5	32	143	0	27	0	0	0	0	0	4	6	31
6	41	67	9	6	75	0	0	0	0	0	38	87

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	654	286	313	0	80	111	0	0	13	0	17	470
<b>2nd</b>	129	244	9	51	75	0	0	0	0	4	48	141



**Table Daily Rainfall**

Station : **Bontosallang**  
 Year : **1980**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	6	0	6		0	0	0	0	0	0	0	0
2	7	0	10		0	0	0	0	0	0	0	0
3	0	8	10		0	0	0	0	0	0	0	0
4	49	10	0		5	0	0	0	0	0	0	45
5	14	0	0		0	0	0	0	0	0	0	0
6	22	10	0		0	0	0	0	0	0	0	25
7	25	23	0		8	0	0	0	0	0	5	0
8	28	18	0		0	0	0	0	0	0	0	0
9	56	20	0		0	0	0	0	0	0	0	5
10	33	30	20		0	0	0	0	0	0	0	0
11	85	5	0		0	0	0	0	0	0	20	50
12	18	47	0		0	0	0	0	0	0	0	50
13	5	56	14		0	0	0	0	0	0	0	30
14	5	55	61		0	0	0	0	0	15	0	50
15	10	15	105		0	0	0	0	0	0	0	35
16	7	25	8		0	0	0	0	0	0	0	0
17	0	25	13		0	0	0	0	0	0	20	0
18	0	23	80		0	0	0	0	0	0	0	15
19	146	3	73		0	0	0	0	0	0	0	8
20	39	75	10		0	3	0	0	0	0	0	0
21	43	5	18		0	0	0	0	0	0	5	4
22	9	10	0		0	0	0	0	0	0	0	50
23	16	16	0		0	0	0	0	0	0	0	10
24	21	25	0		0	0	0	0	0	0	8	50
25	24	36	10		0	0	0	0	0	0	0	50
26	0	0	0		0	0	0	0	0	0	0	30
27	0	0	0		0	0	0	0	0	0	28	0
28	5	10	0		0	0	0	0	0	0	0	5
29	4	0	1		5	5	0	0	0	0	0	3
30	0	0	0		4	0	0	0	0	0	0	28
31	0	0	0		0	0	0	0	0	0	0	35

<b>Monthly</b>	677	550	439	0	22	8	0	0	0	15	86	578
<b>Rainy Days</b>	24	23	15	0	4	2	0	0	0	1	6	20
<b>Max.</b>	146	75	105	0	8	5	0	0	0	15	28	50
<b>Average</b>	22	19	14	0	1	0	0	0	0	0	3	19

<b>Annual</b> :	2375	<b>No.</b> :	95	<b>Max.</b> :	146	<b>Ave.</b> :	6
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	76	18	26	0	5	0	0	0	0	0	0	45
2	164	101	20	0	8	0	0	0	0	0	5	30
3	123	178	180	0	0	0	0	0	0	15	20	215
4	192	151	184	0	0	3	0	0	0	0	20	23
5	113	92	28	0	0	0	0	0	0	0	13	164
6	9	10	1	0	9	5	0	0	0	0	28	101

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	363	297	226	0	13	0	0	0	0	15	25	290
<b>2nd</b>	314	253	213	0	9	8	0	0	0	0	61	288

**Table Daily Rainfall**

Station : **Bontosallang**  
 Year : **1981**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	5		5	5	0	0	0	0	0	0	0	8
2	25		40	0	67	0	0	0	0	0	0	5
3	5		0	0	0	0	0	0	0	0	0	0
4	34		0	26	0	0	7	0	0	0	0	3
5	10		0	10	0	0	5	0	0	0	22	20
6	0		0	0	0	0	0	0	3	0	2	8
7	63		0	0	0	0	0	0	5	3	8	20
8	34		0	0	0	0	5	0	0	0	0	36
9	3		0	0	0	0	80	0	8	0	0	89
10	0		0	0	0	0	0	0	0	0	0	188
11	55		0	0	8	0	0	0	0	0	0	40
12	18		0	0	0	0	3	0	0	0	3	50
13	3		0	0	3	0	25	0	0	0	20	3
14	10		0	6	0	0	0	0	0	0	0	5
15	0		0	0	6	0	5	0	0	0	0	0
16	6		0	0	0	0	13	0	0	0	0	19
17	19		0	0	0	0	0	0	0	0	25	16
18	34		0	0	0	0	0	0	0	0	75	18
19	10		0	0	0	13	0	0	0	0	50	13
20	0		0	8	0	0	0	0	0	0	50	15
21	0		0	0	0	0	5	0	0	0	8	23
22	5		0	0	0	0	4	0	0	0	0	0
23	8		7	0	0	0	0	0	0	5	0	0
24	6		15	0	0	0	0	0	0	0	0	125
25	0		3	0	0	0	0	0	0	0	15	20
26	10		10	0	0	0	0	0	0	0	11	50
27	100		3	0	0	0	0	0	0	0	60	0
28	10		55	0	0	0	0	0	0	0	95	25
29	28		58	24	0	0	0	0	0	0	25	5
30	21		10	10	0	0	0	0	0	0	0	10
31	0		0	0	0	0	0	0	0	0	0	25

<b>Monthly</b>	522	0	206	89	84	13	152	0	16	8	469	839
<b>Rainy Days</b>	24	0	10	7	4	1	10	0	3	2	15	26
<b>Max.</b>	100	0	58	26	67	13	80	0	8	5	95	188
<b>Average</b>	17	0	7	3	3	0	5	0	1	0	16	27

<b>Annual</b> :	2398	<b>No.</b> :	102	<b>Max.</b> :	188	<b>Ave.</b> :	6
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	79	0	45	41	67	0	12	0	0	0	22	36
2	100	0	0	0	0	0	85	0	16	3	10	341
3	86	0	0	6	17	0	33	0	0	0	23	98
4	69	0	0	8	0	13	13	0	0	0	200	81
5	19	0	25	0	0	0	9	0	0	5	23	168
6	169	0	136	34	0	0	0	0	0	0	191	115

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	265	0	45	47	84	0	130	0	16	3	55	475
<b>2nd</b>	257	0	161	42	0	13	22	0	0	5	414	364



**Table Daily Rainfall**

Station : **Bontosallang**  
 Year : **1983**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	3	4	8	0	3	8		0	0	0	0	5
2	0	3	0	0	0	0		0	0	0	0	3
3	0	4	0	0	0	0		0	0	0	0	10
4	23	0	0	0	3	0		0	0	0	0	0
5	0	8	0	3	3	0		0	0	0	8	0
6	0	0	0	0	8	0		0	0	0	4	0
7	3	0	0	0	4	0		0	0	0	5	0
8	8	0	0	0	0	0		0	0	0	0	0
9	0	0	0	7	0	0		0	0	0	0	0
10	0	0	0	0	0	0		0	0	0	0	0
11	5	0	0	0	0	0		0	0	0	0	0
12	8	0	0	0	3	0		0	0	0	0	0
13	12	0	0	48	0	0		0	0	0	0	0
14	24	0	0	0	0	0		0	0	0	0	0
15	4	18	0	0	0	0		0	0	5	0	0
16	8	4	0	0	3	0		0	0	0	13	0
17	0	0	0	8	0	0		0	0	0	5	13
18	0	0	0	0	0	0		0	0	3	8	0
19	0	0	0	0	0	0		0	0	0	10	8
20	0	0	0	0	0	0		0	0	0	3	5
21	8	3	0	0	0	0		0	0	0	0	0
22	44	0	0	0	0	0		0	0	0	3	0
23	0	0	0	0	0	0		0	0	0	8	0
24	3	43	0	10	0	0		0	0	0	5	33
25	0	0	0	0	0	0		0	0	0	4	75
26	0	3	0	0	0	0		0	0	0	13	10
27	8	0	55	0	0	0		0	0	0	9	13
28	0	0	3	31	0	0		0	0	0	28	50
29	3		0	13	0	0		0	0	0	58	75
30	0		5	0	0	0		0	0	0	78	115
31	0		0		0			0		0		113

<b>Monthly</b>	164	90	71	120	27	8	0	0	0	8	262	528
<b>Rainy Days</b>	15	9	4	7	7	1	0	0	0	2	17	14
<b>Max.</b>	44	43	55	48	8	8	0	0	0	5	78	115
<b>Average</b>	5	3	2	4	1	0	0	0	0	0	9	17

<b>Annual</b> :	1278	<b>No.</b> :	76	<b>Max.</b> :	115	<b>Ave.</b> :	3
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	26	19	8	3	9	8	0	0	0	0	8	18
2	11	0	0	7	12	0	0	0	0	0	9	0
3	53	18	0	48	3	0	0	0	0	5	0	0
4	8	4	0	8	3	0	0	0	0	3	39	26
5	55	46	0	10	0	0	0	0	0	0	20	108
6	11	3	63	44	0	0	0	0	0	0	186	376

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	90	37	8	58	24	8	0	0	0	5	17	18
<b>2nd</b>	74	53	63	62	3	0	0	0	0	3	245	510

**Table Daily Rainfall**

Station : **Bontosallang**  
 Year : **1984**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	15							0	0		0	0
2	63							0	0		0	0
3	0							0	0		0	0
4	0							0	0		0	0
5	0							0	0		0	0
6	3							0	3		0	0
7	0							0	0		0	18
8	0							0	0		0	0
9	0							0	0		0	0
10	0							0	0		13	0
11	0							0	0		3	18
12	0							0	0		0	88
13	0							0	0		0	8
14	0							0	0		0	0
15	3							0	0		0	18
16	15							0	0		0	108
17	13							0	0		0	53
18	83							0	0		10	0
19	18							0	0		0	75
20	8							0	0		13	38
21	0							0	0		13	30
22	0							0	0		3	18
23	90							0	0		18	0
24	0							0	0		4	0
25	0							0	0		50	0
26	35							0	0		0	15
27	25							0	0		0	13
28	73							0	0		15	16
29	123							0	10		3	53
30	30							0	0		10	0
31	15							0				0

<b>Monthly</b>	612	0	0	0	0	0	0	0	13	0	155	569
<b>Rainy Days</b>	16	0	0	0	0	0	0	0	2	0	12	15
<b>Max.</b>	123	0	0	0	0	0	0	0	10	0	50	108
<b>Average</b>	20	0	0	0	0	0	0	0	0	0	5	18

<b>Annual</b> :	1349	<b>No.</b> :	45	<b>Max.</b> :	123	<b>Ave.</b> :	4
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	78	0	0	0	0	0	0	0	0	0	0	0
2	3	0	0	0	0	0	0	0	3	0	13	18
3	3	0	0	0	0	0	0	0	0	0	3	132
4	137	0	0	0	0	0	0	0	0	0	23	274
5	90	0	0	0	0	0	0	0	0	0	88	48
6	301	0	0	0	0	0	0	0	10	0	28	97

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	84	0	0	0	0	0	0	0	3	0	16	150
<b>2nd</b>	528	0	0	0	0	0	0	0	10	0	139	419

**Table Daily Rainfall**

Station : **Bontosallang**  
 Year : **1985**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0	15		10	3	0	0	0	0	0	9
2	0	5	7		0	0	0	0	0	0	0	25
3	0	0	9		0	0	0	0	0	0	0	0
4	143	0	30		0	0	0	0	0	0	0	0
5	13	0	52		0	0	0	0	0	0	0	4
6	40	0	20		0	0	5	0	0	0	0	0
7	0	0	60		0	0	0	0	0	0	6	0
8	0	0	35		0	0	0	0	0	0	0	0
9	0	0	23		0	0	0	0	0	0	25	0
10	0	6	0		0	10	0	0	0	0	3	0
11	0	0	0		53	0	0	0	0	0	0	3
12	0	23	0		0	0	0	0	0	0	0	11
13	5	0	5		3	0	0	0	0	0	0	6
14	4	11	0		0	0	0	0	0	0	3	0
15	8	65	0		17	0	0	0	0	0	3	0
16	0	69	0		0	0	5	0	0	0	0	0
17	20	0	0		0	0	0	0	0	0	0	0
18	53	64	0		10	0	28	0	3	0	0	0
19	10	0	0		0	0	0	0	0	0	0	0
20	45	0	0		0	0	0	0	0	0	0	7
21	0	0	0		0	0	0	0	0	0	0	6
22	3	0	0		0	0	0	0	0	3	15	0
23	0	15	0		0	0	5	0	0	0	3	0
24	0	0	0		0	0	0	0	0	0	0	0
25	10	9	0		14	0	0	0	0	4	10	13
26	175	0	0		0	0	3	0	5	0	14	0
27	7	3	0		0	0	0	0	0	0	3	8
28	0	155	0		19	0	0	0	0	4	5	0
29	0		0		0	0	0	0	0	0	11	18
30	3		0		0	0	0	0	0	0	11	0
31	30		0		0		0	3		0		0

<b>Monthly</b>	569	425	256	0	126	13	46	3	8	11	112	110
<b>Rainy Days</b>	16	11	10	0	7	2	5	1	2	3	13	11
<b>Max.</b>	175	155	60	0	53	10	28	3	5	4	25	25
<b>Average</b>	18	15	8	0	4	0	1	0	0	0	4	4

<b>Annual</b> :	1679	<b>No.</b> :	81	<b>Max.</b> :	175	<b>Ave.</b> :	5
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	156	5	113	0	10	3	0	0	0	0	0	38
2	40	6	138	0	0	10	5	0	0	0	34	0
3	17	99	5	0	73	0	0	0	0	0	6	20
4	128	133	0	0	10	0	33	0	3	0	0	7
5	13	24	0	0	14	0	5	0	0	7	28	19
6	215	158	0	0	19	0	3	3	5	4	44	26

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	213	110	256	0	83	13	5	0	0	0	40	58
<b>2nd</b>	356	315	0	0	43	0	41	3	8	11	72	52

**Table Daily Rainfall**

Station : **Bontosallang**  
 Year : **1986**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0	0	10	0	10	5	0	0	0	5	0
2	0	0	0	0	0	0	0	0	0	0	0	0
3	0	105	53	25	8	0	0	0	0	0	0	0
4	13	0	78	8	0	0	0	0	0	0	28	0
5	0	0	13	0	0	0	0	0	0	0	3	0
6	0	0	0	0	0	0	0	0	0	0	0	0
7	25	0	0	0	3	0	0	0	0	0	5	0
8	10	20	0	0	0	10	0	0	0	10	0	0
9	33	18	0	0	0	0	0	0	0	3	0	0
10	13	30	8	42	0	28	0	0	0	0	3	0
11	58	43	0	8	0	0	0	0	0	0	0	50
12	68	0	5	0	0	0	0	0	0	0	10	5
13	78	43	3	5	0	0	0	0	0	5	0	15
14	68	8	0	40	0	0	0	0	0	0	10	0
15	0	35	0	20	0	0	0	0	0	0	0	35
16	10	23	8	0	0	0	0	0	0	0	0	0
17	5	0	10	0	0	0	0	0	0	0	5	0
18	20	30	3	0	0	0	0	0	0	0	58	0
19	0	0	35	6	0	0	0	0	0	0	5	0
20	8	0	0	0	0	0	0	0	0	0	0	0
21	0	33	0	0	0	0	0	0	0	0	5	0
22	35	0	14	0	0	0	0	0	0	0	35	0
23	0	15	58	0	0	0	0	0	0	0	10	0
24	13	45	0	0	0	0	0	0	0	0	8	53
25	23	10	0	0	0	0	0	0	0	0	10	0
26	63	0	0	0	0	0	15	0	0	0	0	0
27	115	0	0	0	0	0	8	0	0	0	0	15
28	35	60	25	0	0	0	0	0	0	0	0	3
29	23		10	0	0	0	0	0	0	0	0	10
30	0		0	0	0	0	0	0	0	0	0	0
31	0		0		0		0	0		0		3

<b>Monthly</b>	716	518	323	164	11	48	28	0	0	18	200	189
<b>Rainy Days</b>	20	15	14	9	2	3	3	0	0	3	15	9
<b>Max.</b>	115	105	78	42	8	28	15	0	0	10	58	53
<b>Average</b>	23	19	10	5	0	2	1	0	0	1	7	6

<b>Annual</b> :	2215	<b>No.</b> :	93	<b>Max.</b> :	115	<b>Ave.</b> :	6
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	13	105	144	43	8	10	5	0	0	0	36	0
2	81	68	8	42	3	38	0	0	0	13	8	0
3	272	129	8	73	0	0	0	0	0	5	20	105
4	43	53	56	6	0	0	0	0	0	0	68	0
5	71	103	72	0	0	0	0	0	0	0	68	53
6	236	60	35	0	0	0	23	0	0	0	0	31

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	366	302	160	158	11	48	5	0	0	18	64	105
<b>2nd</b>	350	216	163	6	0	0	23	0	0	0	136	84

**Table Daily Rainfall**

Station : **Bontosallang**  
 Year : **1987**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	25	33	23	0	0	0	0	0	0	0	0
2	0	18	0	8	0	0	0	0	0	0	0	0
3	0	13	0	0	10	0	0	0	0	0	0	10
4	23	3	0	0	0	0	0	0	0	0	0	33
5	18	0	0	0	3	0	0	0	0	0	5	10
6	55	0	0	0	0	0	0	0	0	0	25	0
7	10	13	30	5	0	0	0	0	0	0	10	18
8	63	0	0	8	8	0	0	0	0	0	0	0
9	20	0	0	0	0	0	0	0	0	0	0	0
10	10	70	20	0	0	0	0	0	0	0	0	90
11	0	0	0	0	0	0	0	0	0	0	0	0
12	35	38	0	0	25	0	0	0	0	0	0	19
13	23	35	0	0	0	0	0	0	0	0	0	0
14	38	0	0	0	0	0	0	0	0	0	0	40
15	75	0	0	0	0	0	0	0	0	0	0	280
16	0	10	0	0	0	0	0	0	0	0	0	200
17	80	0	0	0	0	0	0	0	0	0	8	70
18	15	0	28	0	0	0	0	0	0	0	10	25
19	30	0	0	0	0	0	0	0	0	0	0	60
20	0	20	0	0	0	0	0	0	0	0	0	50
21	38	18	0	0	0	0	0	0	0	0	0	70
22	90	13	45	0	0	0	0	0	0	0	0	135
23	0	20	46	0	0	0	0	0	0	0	0	130
24	15	0	40	0	0	0	0	0	0	0	0	10
25	10	0	50	0	0	0	0	0	0	0	5	30
26	0	5	0	0	0	0	0	0	0	0	0	50
27	0	0	0	0	0	0	0	0	0	8	3	45
28	13	3	0	0	0	0	0	0	0	5	0	3
29	85		0	0	0	0	0	0	0	0	0	0
30	46		0	0	0	0	0	0	0	0	0	0
31	75		0		0		0	0		0		0

<b>Monthly</b>	867	304	292	44	46	0	0	0	0	13	66	1378
<b>Rainy Days</b>	22	15	8	4	4	0	0	0	0	2	7	21
<b>Max.</b>	90	70	50	23	25	0	0	0	0	8	25	280
<b>Average</b>	28	11	9	1	1	0	0	0	0	0	2	44

<b>Annual</b> :	3010	<b>No.</b> :	83	<b>Max.</b> :	280	<b>Ave.</b> :	8
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	41	59	33	31	13	0	0	0	0	0	5	53
2	158	83	50	13	8	0	0	0	0	0	35	108
3	171	73	0	0	25	0	0	0	0	0	0	339
4	125	30	28	0	0	0	0	0	0	0	18	405
5	153	51	181	0	0	0	0	0	0	0	5	375
6	219	8	0	0	0	0	0	0	0	13	3	98

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	370	215	83	44	46	0	0	0	0	0	40	500
<b>2nd</b>	497	89	209	0	0	0	0	0	0	13	26	878



**Table Daily Rainfall**

Station : **Bontosallang**  
 Year : **1988**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	58	2	8	0	0	0	5	0		0	90
2	0	3	0	63	0	0	0	0	0		0	0
3	0	60	0	3	40	0	0	8	0		0	0
4	0	85	0	0	0	0	0	0	0		0	8
5	5	48	0	0	0	0	0	0	0		0	13
6	13	0	0	0	0	0	0	0	0		25	10
7	0	0	0	0	0	0	0	0	0		0	0
8	35	0	0	0	35	0	0	0	0		0	10
9	58	15	0	0	0	0	0	0	0		0	18
10	18	35	0	0	0	0	0	0	0		65	23
11	0	23	45	13	0	0	0	0	0		3	40
12	0	123	0	20	0	0	0	0	0		0	25
13	0	133	15	0	0	0	0	0	0		10	15
14	8	40	18	0	25	0	0	0	0		0	20
15	18	43	0	0	0	0	0	0	0		0	5
16	0	75	0	5	20	0	0	0	0		0	13
17	0	48	0	0	0	0	0	0	0		0	0
18	0	65	0	0	0	0	0	0	0		0	30
19	123	3	0	0	0	0	0	0	0		20	0
20	5	0	5	0	0	0	0	0	0		0	0
21	0	0	25	0	0	0	0	0	0		0	0
22	0	0	65	0	0	0	0	0	0		0	0
23	8	0	0	0	0	0	0	0	0		0	0
24	3	0	140	0	0	0	0	0	0		10	0
25	13	0	45	0	0	0	0	0	25		8	0
26	178	0	75	8	0	0	0	0	0		20	0
27	0	55	220	0	0	0	0	0	0		73	0
28	58	0	0	0	0	0	0	0	0		33	0
29	0	0	2	0	0	0	0	0	0		25	0
30	0		3	0	0	0	0	0	0		5	0
31	0		25		0		0	0				0

<b>Monthly</b>	543	912	685	120	120	0	0	13	25	0	297	320
<b>Rainy Days</b>	14	17	14	7	4	0	0	2	1	0	12	14
<b>Max.</b>	178	133	220	63	40	0	0	8	25	0	73	90
<b>Average</b>	18	31	22	4	4	0	0	0	1	0	10	10

<b>Annual</b> :	3035	<b>No.</b> :	85	<b>Max.</b> :	220	<b>Ave.</b> :	8
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	5	254	2	74	40	0	0	13	0	0	0	111
2	124	50	0	0	35	0	0	0	0	0	90	61
3	26	362	78	33	25	0	0	0	0	0	13	105
4	128	191	5	5	20	0	0	0	0	0	20	43
5	24	0	275	0	0	0	0	0	25	0	18	0
6	236	55	325	8	0	0	0	0	0	0	156	0

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	155	666	80	107	100	0	0	13	0	0	103	277
<b>2nd</b>	388	246	605	13	20	0	0	0	25	0	194	43

**Table Daily Rainfall**

Station : **Bontosallang**  
 Year : **1989**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	35	5	0	0	0	0	0	0	0	5	0
2	0	0	23	0	0	0	0	0	0	0	0	0
3	0	45	35	0	0	0	0	0	0	0	10	0
4	0	0	0	0	0	0	0	0	0	0	8	0
5	30	38	5	0	0	0	0	0	0	0	0	0
6	28	0	0	0	0	0	0	0	0	0	0	0
7	15	0	0	0	0	0	0	0	0	0	0	0
8	50	18	43	0	0	0	0	0	0	0	0	25
9	0	5	0	0	0	0	0	0	0	0	8	10
10	0	23	5	0	0	0	0	0	0	0	0	13
11	0	0	25	0	0	0	0	0	0	0	0	0
12	0	0	38	0	0	0	0	0	0	0	28	30
13	0	8	30	0	0	0	23	0	0	0	0	100
14	0	30	0	0	0	0	15	0	0	1	0	10
15	0	0	40	0	0	0	5	0	0	0	0	0
16	0	5	0	25	0	0	10	0	0	0	0	0
17	0	0	0	35	0	0	0	0	10	0	0	0
18	0	0	0	45	0	30	23	0	0	8	0	0
19	0	10	0	15	0	0	0	0	20	18	3	0
20	8	8	0	48	0	0	33	0	0	0	0	0
21	0	0	0	25	0	0	0	0	0	0	0	18
22	0	35	0	38	0	0	0	0	0	0	0	0
23	18	15	0	0	0	0	0	0	0	50	73	0
24	48	0	0	0	0	45	0	0	8	3	55	0
25	55	20	0	20	0	0	0	0	13	0	0	0
26	145	5	0	53	0	0	0	0	0	0	0	13
27	50	25	0	10	0	0	0	0	0	0	50	28
28	60	40	0	18	0	0	0	0	0	8	0	0
29	123		0	0	0	0	0	0	0	0	5	0
30	50		0	0	0	0	0	0	0	10	0	0
31	70		0		0		0	0		0		0

<b>Monthly</b>	750	365	249	332	0	75	109	0	51	98	245	247
<b>Rainy Days</b>	14	17	10	11	0	2	6	0	4	7	10	9
<b>Max.</b>	145	45	43	53	0	45	33	0	20	50	73	100
<b>Average</b>	24	13	8	11	0	3	4	0	2	3	8	8

<b>Annual</b> :	2521	<b>No.</b> :	90	<b>Max.</b> :	145	<b>Ave.</b> :	7
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	30	118	68	0	0	0	0	0	0	0	23	0
2	93	46	48	0	0	0	0	0	0	0	8	48
3	0	38	133	0	0	0	43	0	0	1	28	140
4	8	23	0	168	0	30	66	0	30	26	3	0
5	121	70	0	83	0	45	0	0	21	53	128	18
6	498	70	0	81	0	0	0	0	0	18	55	41

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	123	202	249	0	0	0	43	0	0	1	59	188
<b>2nd</b>	627	163	0	332	0	75	66	0	51	97	186	59

**Table Daily Rainfall**

Station : **Bontosallang**  
 Year : **1990**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	53	20	0	0	13	0	0	0	0	0	0
2	130	0	0	0	0	0	0	0	0	0	0	0
3	0	18	0	0	0	0	0	0	0	0	0	0
4	13	68	8	14	8	0	0	0	0	0	0	0
5	0	10	0	0	0	0	0	0	0	0	0	0
6	13	0	0	0	13	8	0	0	0	0	50	0
7	140	0	0	8	0	0	0	0	0	0	0	0
8	100	0	0	0	0	0	0	0	0	0	5	15
9	80	0	25	0	5	0	0	0	0	0	33	5
10	35	0	0	0	0	0	0	0	0	0	68	25
11	0	0	13	0	0	0	0	0	0	0	0	0
12	38	13	68	0	8	0	0	0	0	0	0	0
13	50	0	0	15	0	0	0	0	0	0	0	0
14	10	0	10	0	0	0	0	0	0	0	0	10
15	0	0	0	33	0	0	0	0	0	0	0	0
16	13	0	0	8	15	0	0	0	0	0	8	0
17	0	15	0	0	130	0	0	0	0	0	0	0
18	23	38	0	0	10	0	0	0	0	5	0	0
19	75	0	0	0	0	0	0	0	0	0	0	0
20	88	28	0	0	0	0	0	0	0	10	0	0
21	140	5	0	0	0	0	0	0	0	0	0	0
22	23	0	0	0	10	0	0	0	0	0	0	18
23	0	0	0	0	5	0	0	0	0	0	0	63
24	0	10	0	0	0	0	0	0	0	8	0	17
25	16	0	0	0	18	0	0	0	0	0	0	10
26	78	0	0	0	0	0	0	0	0	0	28	32
27	0	0	0	20	0	0	0	0	0	0	0	55
28	0	48	0	0	0	0	0	0	0	35	15	0
29	0		0	0	0	0	0	0	0	0	0	0
30	0		20	0	0	0	0	0	0	0	0	0
31	0		18		0		3	0		0		8

<b>Monthly</b>	1065	306	182	98	222	21	3	0	0	58	207	258
<b>Rainy Days</b>	18	11	8	6	10	2	1	0	0	4	7	11
<b>Max.</b>	140	68	68	33	130	13	3	0	0	35	68	63
<b>Average</b>	34	11	6	3	7	1	0	0	0	2	7	8

<b>Annual</b> :	2420	<b>No.</b> :	78	<b>Max.</b> :	140	<b>Ave.</b> :	7
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	143	149	28	14	8	13	0	0	0	0	0	0
2	368	0	25	8	18	8	0	0	0	0	156	45
3	98	13	91	48	8	0	0	0	0	0	0	10
4	199	81	0	8	155	0	0	0	0	15	8	0
5	179	15	0	0	33	0	0	0	0	8	0	108
6	78	48	38	20	0	0	3	0	0	35	43	95

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	609	162	144	70	34	21	0	0	0	0	156	55
<b>2nd</b>	456	144	38	28	188	0	3	0	0	58	51	203



**Table Daily Rainfall**

Station : **Bontosallang**  
 Year : **1992**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0	0	50	33	0	0	0	0	28	0	0
2	0	0	0	5	0	0	0	0	0	0	0	0
3	3	0	168	0	0	0	0	25	0	0	0	35
4	0	0	0	0	0	0	3	0	3	0	0	18
5	43	0	0	0	0	0	15	0	3	0	0	15
6	0	0	0	0	0	0	0	0	0	0	0	13
7	0	0	8	0	0	5	0	0	5	7	0	13
8	8	0	75	0	0	0	0	0	70	0	3	0
9	78	0	0	0	0	0	0	0	0	0	0	0
10	58	0	5	0	0	0	0	0	0	0	0	0
11	93	0	0	15	0	0	0	0	0	0	0	5
12	8	0	95	25	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	18
15	0	0	8	0	0	0	0	0	0	0	5	5
16	0	0	0	0	0	0	0	0	0	0	0	8
17	0	0	0	0	0	20	0	5	5	0	18	28
18	10	0	0	0	0	0	0	0	0	0	10	0
19	0	38	0	0	0	0	0	3	3	3	0	0
20	0	15	93	0	5	0	0	0	0	0	0	0
21	0	48	45	0	0	0	0	0	0	0	0	0
22	0	18	0	0	0	0	0	0	0	0	0	0
23	3	0	0	0	0	0	0	0	0	0	0	20
24	15	0	0	0	0	0	0	0	0	0	0	175
25	0	0	15	10	0	0	0	3	3	0	0	75
26	0	0	0	0	3	0	0	0	0	0	0	0
27	18	0	0	0	0	0	0	0	0	5	11	0
28	8	0	0	0	0	0	0	0	0	0	0	0
29	0	0	35	0	0	0	0	0	0	0	0	0
30	0	0	25	0	0	0	0	0	0	0	18	13
31	0	0	10	0	0	0	0	0	0	0	0	55

<b>Monthly</b>	345	119	582	105	41	25	18	36	92	43	65	496
<b>Rainy Days</b>	12	4	12	5	3	2	2	4	7	4	6	15
<b>Max.</b>	93	48	168	50	33	20	15	25	70	28	18	175
<b>Average</b>	11	4	19	4	1	1	1	1	3	1	2	16

<b>Annual</b> :	1967	<b>No.</b> :	76	<b>Max.</b> :	175	<b>Ave.</b> :	5
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	46	0	168	55	33	0	18	25	6	28	0	68
2	144	0	88	0	0	5	0	0	75	7	3	26
3	101	0	103	40	0	0	0	0	0	0	5	28
4	10	53	93	0	5	20	0	8	8	3	28	36
5	18	66	60	10	0	0	0	3	3	0	0	270
6	26	0	70	0	3	0	0	0	0	5	29	68

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	291	0	359	95	33	5	18	25	81	35	8	122
<b>2nd</b>	54	119	223	10	8	20	0	11	11	8	57	374

**Table Daily Rainfall**

Station : **Bontosallang**  
 Year : **1993**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0	8	10	0	0	0	0	0	0	0	8
2	0	0	0	93	5	0	0	0	0	0	0	0
3	0	23	80	0	15	0	0	0	0	0	0	0
4	1	35	8	0	0	0	0	0	0	0	0	0
5	4	10	18	0	30	5	0	0	0	0	0	0
6	0	8	0	28	0	0	0	0	0	0	0	3
7	0	10	0	0	0	0	0	0	0	0	0	0
8	0	3	0	0	0	3	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	8	0
10	3	0	5	0	0	0	0	0	0	5	0	5
11	0	38	0	33	0	0	0	0	0	0	8	0
12	0	18	0	0	0	0	0	0	0	0	23	0
13	0	13	0	0	0	0	0	0	0	0	0	8
14	0	28	0	0	0	0	0	0	0	0	0	3
15	0	15	0	0	15	0	0	0	0	0	0	90
16	0	35	0	0	0	0	0	0	0	0	0	30
17	0	30	0	0	0	0	0	0	0	0	0	0
18	0	13	0	0	0	0	0	0	0	0	0	0
19	6	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	5	0	0	0	0	0	0	0	0
21	2	5	0	0	0	0	0	0	0	0	5	0
22	4	30	0	0	0	0	0	0	0	0	0	30
23	3	8	0	0	5	0	0	0	0	8	18	30
24	15	0	0	0	0	0	0	0	0	0	0	30
25	0	0	0	28	0	0	0	0	0	0	0	140
26	3	0	8	0	0	0	0	0	0	0	45	55
27	0	95	50	0	0	0	0	0	0	0	0	118
28	0	0	5	0	0	0	0	0	0	0	0	38
29	0		0	0	0	0	0	0	0	0	0	0
30	0		0	0	0	0	0	0	0	0	5	0
31	0		0		0		0	0		0		30

<b>Monthly</b>	41	417	182	197	70	8	0	0	0	13	112	618
<b>Rainy Days</b>	9	18	8	6	5	2	0	0	0	2	7	15
<b>Max.</b>	15	95	80	93	30	5	0	0	0	8	45	140
<b>Average</b>	1	15	6	7	2	0	0	0	0	0	4	20

<b>Annual</b> :	1658	<b>No.</b> :	72	<b>Max.</b> :	140	<b>Ave.</b> :	5
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	5	68	114	103	50	5	0	0	0	0	0	8
2	3	21	5	28	0	3	0	0	0	5	8	8
3	0	112	0	33	15	0	0	0	0	0	31	101
4	6	78	0	5	0	0	0	0	0	0	0	30
5	24	43	0	28	5	0	0	0	0	8	23	230
6	3	95	63	0	0	0	0	0	0	0	50	241

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	8	201	119	164	65	8	0	0	0	5	39	117
<b>2nd</b>	33	216	63	33	5	0	0	0	0	8	73	501

**Table Daily Rainfall**

Station : **Bontosallang**  
 Year : **1994**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	30	0	0	0	0	0	0	0	0	0	60	15
2	33	0	0	0	0	0	0	0	0	0	0	0
3	0	2	0	0	50	0	0	0	0	0	0	0
4	20	4	0	0	0	0	0	0	0	0	0	20
5	50	1	0	0	0	0	0	0	0	0	0	0
6	25	1	0	0	0	0	0	0	0	0	0	15
7	0	1	0	0	0	0	0	0	0	0	0	15
8	0	0	0	10	0	0	0	0	0	0	0	5
9	0	0	0	5	0	0	0	0	0	0	0	0
10	5	0	0	5	13	0	0	0	0	0	3	0
11	0	4	0	110	0	0	0	0	0	0	0	0
12	0	2	125	0	0	0	0	0	0	0	0	0
13	0	1	18	0	0	0	0	0	0	0	0	0
14	20	3	20	0	0	0	0	0	0	0	0	0
15	13	2	25	0	0	0	0	0	0	0	0	0
16	0	4	0	0	0	0	0	0	0	0	0	10
17	0	3	0	0	0	0	0	0	0	0	0	8
18	55	1	0	0	0	0	0	0	0	0	23	3
19	90	0	0	0	0	0	0	0	0	0	0	10
20	35	0	0	0	0	0	0	0	0	0	0	5
21	0	1	0	0	0	0	0	0	0	0	0	0
22	33	3	0	0	0	0	0	0	0	0	0	0
23	45	1	0	0	0	0	0	0	0	0	0	0
24	150	0	170	0	0	0	0	0	0	0	20	0
25	108	0	0	0	0	0	0	0	0	0	10	0
26	80	0	0	0	0	0	0	0	0	0	0	0
27	0	10	0	0	0	5	0	0	0	0	8	0
28	0	0	0	0	0	8	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0	0	5	0
30	0	0	0	0	0	0	0	0	0	0	20	0
31	0	0	6	0	0	0	0	0	0	0	0	0

<b>Monthly</b>	792	44	364	130	63	13	0	0	0	0	149	106
<b>Rainy Days</b>	16	17	6	4	2	2	0	0	0	0	8	10
<b>Max.</b>	150	10	170	110	50	8	0	0	0	0	60	20
<b>Average</b>	26	2	12	4	2	0	0	0	0	0	5	3

<b>Annual</b> :	1661	<b>No.</b> :	65	<b>Max.</b> :	170	<b>Ave.</b> :	5
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	133	7	0	0	50	0	0	0	0	0	60	35
2	30	2	0	20	13	0	0	0	0	0	3	35
3	33	12	188	110	0	0	0	0	0	0	0	0
4	180	8	0	0	0	0	0	0	0	0	23	36
5	336	5	170	0	0	0	0	0	0	0	30	0
6	80	10	6	0	0	13	0	0	0	0	33	0

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	196	21	188	130	63	0	0	0	0	0	63	70
<b>2nd</b>	596	23	176	0	0	13	0	0	0	0	86	36

**Table Daily Rainfall**

Station : **Bontosallang**  
 Year : **1995**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0	0	10	5	10	10	0	0	0	0	0
2	0	0	25	0	10	0	0	0	0	0	0	0
3	0	15	75	110	5	0	0	0	0	0	0	0
4	0	0	0	3	0	0	0	0	0	0	0	12
5	0	48	3	0	0	0	0	0	0	0	15	24
6	0	0	8	75	0	0	0	0	0	0	5	11
7	10	45	25	50	0	0	0	0	0	0	3	28
8	5	60	23	18	0	0	0	0	0	0	10	26
9	10	0	10	15	0	0	0	0	0	0	10	51
10	15	0	10	0	0	15	0	0	0	0	3	16
11	0	0	0	5	0	0	0	0	0	0	0	71
12	125	0	0	0	0	0	0	0	0	0	5	93
13	100	0	10	0	5	0	0	0	0	0	30	37
14	50	45	0	0	13	0	0	0	0	0	50	9
15	0	50	43	0	38	0	0	0	0	0	0	2
16	0	10	0	0	0	0	0	0	0	20	0	22
17	0	0	0	0	0	20	0	0	0	0	10	20
18	0	0	0	5	0	50	0	0	0	20	5	0
19	0	5	0	0	0	0	0	0	0	0	0	5
20	0	0	33	0	0	0	0	0	0	0	0	0
21	0	13	0	0	0	0	0	0	0	0	10	9
22	0	0	5	0	0	0	0	0	0	0	10	11
23	0	0	0	0	0	0	0	0	0	0	5	1
24	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	13	0	0	0	0	0	0	0	5	0
26	28	0	10	0	0	0	0	0	0	0	0	0
27	20	0	38	0	0	0	0	0	0	0	20	0
28	0	108	0	0	0	0	0	0	0	0	20	0
29	0		0	0	0	0	0	0	0	0	5	0
30	0		10	5	0	0	0	0	0	0	0	1
31	0		40		0		0	0		30		0

<b>Monthly</b>	363	399	381	296	76	95	10	0	0	70	221	449
<b>Rainy Days</b>	9	10	17	10	6	4	1	0	0	3	18	19
<b>Max.</b>	125	108	75	110	38	50	10	0	0	30	50	93
<b>Average</b>	12	14	12	10	2	3	0	0	0	2	7	14

<b>Annual</b> :	2360	<b>No.</b> :	97	<b>Max.</b> :	125	<b>Ave.</b> :	7
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	63	103	123	20	10	10	0	0	0	15	36
2	40	105	76	158	0	15	0	0	0	0	31	132
3	275	95	53	5	56	0	0	0	0	0	85	212
4	0	15	33	5	0	70	0	0	0	40	15	47
5	0	13	18	0	0	0	0	0	0	0	30	21
6	48	108	98	5	0	0	0	0	0	30	45	1

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	315	263	232	286	76	25	10	0	0	0	131	380
<b>2nd</b>	48	136	149	10	0	70	0	0	0	70	90	69



**Table Daily Rainfall**

Station : **Bontosallang**  
 Year : **1996**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	10	15	25	0	15	20	0	0	0	0	5	15
2	5	20	40	0	10	0	0	0	0	75	20	10
3	20	15	20	0	5	0	0	0	0	20	0	150
4	0	60	0	0	0	0	0	0	0	0	0	10
5	0	25	0	0	0	0	0	0	0	0	15	25
6	0	0	0	0	0	0	0	0	0	3	30	15
7	0	0	60	33	0	0	0	0	0	0	50	80
8	0	20	0	17	0	0	0	0	0	0	50	50
9	0	25	0	3	0	0	0	0	0	0	0	75
10	0	35	10	0	0	0	0	0	0	0	0	100
11	5	25	50	0	0	0	0	0	0	0	50	80
12	10	65	0	0	0	0	0	0	0	0	0	75
13	0	30	0	0	0	40	0	0	0	0	15	50
14	0	15	10	0	0	0	0	0	0	0	10	15
15	0	13	0	0	0	0	0	0	0	0	20	25
16	0	5	0	0	0	0	0	0	0	0	10	100
17	0	0	0	28	0	0	0	0	0	10	15	15
18	0	0	0	2	0	0	0	0	0	0	5	25
19	20	0	0	6	0	0	0	0	0	0	0	50
20	15	0	0	0	0	10	0	0	0	0	0	100
21	0	0	15	0	0	0	0	0	0	0	5	25
22	3	5	20	0	0	0	0	0	0	0	15	30
23	10	5	10	0	0	0	0	0	0	0	20	50
24	28	30	25	0	0	0	0	0	0	0	0	50
25	30	10	15	0	0	0	0	0	0	3	0	25
26	10	48	13	0	0	0	0	0	0	0	0	10
27	15	25	0	0	0	0	0	0	0	0	0	5
28	10	30	0	0	0	0	0	0	0	0	0	0
29	50	75	20	1	0	0	0	0	0	0	10	10
30	43		15	0	0	0	0	0	0	30	0	50
31	15		0		0		0	0		0		0

<b>Monthly</b>	299	596	348	90	30	70	0	0	0	141	345	1320
<b>Rainy Days</b>	17	22	15	7	3	3	0	0	0	6	17	29
<b>Max.</b>	50	75	60	33	15	40	0	0	0	75	50	150
<b>Average</b>	10	21	11	3	1	2	0	0	0	5	12	43

<b>Annual</b> :	3239	<b>No.</b> :	119	<b>Max.</b> :	150	<b>Ave.</b> :	9
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	35	135	85	0	30	20	0	0	0	95	40	210
2	0	80	70	53	0	0	0	0	0	3	130	320
3	15	148	60	0	0	40	0	0	0	0	95	245
4	35	5	0	36	0	10	0	0	0	10	30	290
5	71	50	85	0	0	0	0	0	0	3	40	180
6	143	178	48	1	0	0	0	0	0	30	10	75

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	50	363	215	53	30	60	0	0	0	98	265	775
<b>2nd</b>	249	233	133	37	0	10	0	0	0	43	80	545

**Table Daily Rainfall**

Station : **Bontosallang**  
 Year : **1997**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	5	0	53	0	0	0	0	0	0	0	0	8
2	0	0	111	0	0	0	0	0	0	0	0	0
3	50	0	3	5	0	0	10	0	0	0	0	0
4	10	0	17	3	0	0	0	0	0	0	0	0
5	10	5	11	0	0	0	0	0	0	0	0	15
6	0	130	6	0	0	0	0	0	0	0	0	8
7	0	68	3	0	0	0	0	0	0	0	0	18
8	15	30	25	0	0	0	0	0	0	0	0	0
9	60	8	0	0	0	0	0	0	0	0	0	0
10	25	5	0	0	0	0	0	0	0	0	0	0
11	15	0	0	0	0	0	0	0	0	0	0	10
12	0	0	0	3	0	0	0	0	0	0	0	0
13	50	0	3	0	0	0	0	0	0	0	0	0
14	0	15	25	0	0	0	0	0	0	0	0	0
15	0	5	0	5	0	0	0	0	0	0	0	0
16	60	10	0	0	0	0	0	0	0	0	0	0
17	100	68	0	0	0	0	0	0	0	0	0	0
18	25	8	0	0	0	0	0	0	0	0	0	0
19	0	20	0	0	0	0	0	0	0	0	0	0
20	0	3	0	0	0	0	0	0	0	0	0	0
21	15	13	0	0	0	0	0	0	0	0	0	0
22	25	100	0	0	0	0	0	0	0	0	0	0
23	40	75	0	0	0	0	0	0	0	0	0	150
24	10	40	0	0	0	0	0	0	0	0	0	176
25	5	18	0	0	0	0	0	0	0	0	35	0
26	0	28	0	0	0	0	0	0	0	0	0	0
27	3	23	0	0	0	0	0	0	0	0	0	45
28	0	30	0	0	0	0	0	0	0	0	0	0
29	0		0	15	0	0	0	0	0	0	0	0
30	0		0	0	0	0	0	0	0	0	0	0
31	0		0		0		0	0		0		0

<b>Monthly</b>	523	702	257	31	0	0	10	0	0	0	35	430
<b>Rainy Days</b>	18	21	10	5	0	0	1	0	0	0	1	8
<b>Max.</b>	100	130	111	15	0	0	10	0	0	0	35	176
<b>Average</b>	17	25	8	1	0	0	0	0	0	0	1	14

<b>Annual</b> :	1988	<b>No.</b> :	64	<b>Max.</b> :	176	<b>Ave.</b> :	6
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	75	5	195	8	0	0	10	0	0	0	0	23
2	100	241	34	0	0	0	0	0	0	0	0	26
3	65	20	28	8	0	0	0	0	0	0	0	10
4	185	109	0	0	0	0	0	0	0	0	0	0
5	95	246	0	0	0	0	0	0	0	0	35	326
6	3	81	0	15	0	0	0	0	0	0	0	45

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	240	266	257	16	0	0	10	0	0	0	0	59
<b>2nd</b>	283	436	0	15	0	0	0	0	0	0	35	371

**Table Daily Rainfall**

Station : **Bontosallang**  
 Year : **1998**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	10	0	0	14	50	0	0	0	0	0	50	15
2	0	0	0	0	5	0	0	0	0	0	20	50
3	0	0	0	7	0	0	0	0	0	0	25	0
4	0	0	0	0	0	0	0	0	0	0	75	0
5	0	0	0	0	8	0	0	0	0	0	50	0
6	0	0	0	12	0	0	0	0	0	0	125	0
7	0	0	0	0	0	0	0	0	0	0	30	60
8	0	0	0	19	0	0	0	0	0	0	3	5
9	0	0	0	0	0	0	0	0	0	0	80	10
10	0	0	0	3	0	0	0	10	0	0	10	8
11	0	0	0	2	10	0	0	0	0	0	20	20
12	0	0	0	3	0	0	0	0	0	0	75	10
13	0	0	0	2	0	0	0	0	0	0	60	50
14	8	0	0	0	0	0	0	0	0	0	15	15
15	0	0	0	9	0	0	0	0	0	0	45	20
16	50	15	0	0	0	0	25	0	0	0	15	75
17	0	0	3	0	0	0	0	0	0	0	23	40
18	0	0	100	0	0	0	0	0	0	0	25	25
19	0	0	0	0	0	0	0	0	0	2	18	35
20	0	0	0	3	0	20	0	0	0	0	10	15
21	0	20	0	0	0	0	0	0	15	18	5	40
22	0	0	0	0	0	0	0	0	0	22	13	75
23	0	0	0	0	0	0	0	0	8	3	10	25
24	0	0	0	2	0	0	0	0	25	27	5	25
25	10	0	0	2	0	0	15	0	0	0	20	15
26	0	0	10	0	0	0	20	0	0	0	0	80
27	0	0	0	3	0	0	10	15	0	0	0	160
28	0	0	5	2	5	0	50	10	50	33	0	100
29	0		3	0	0	30	20	5	75	1	0	175
30	0		10	0	0	15	15	0	0	41	5	50
31	0		8		0		20	0		0		150

<b>Monthly</b>	78	35	139	83	78	65	175	40	173	147	832	1348
<b>Rainy Days</b>	4	2	7	14	5	3	8	4	5	8	26	27
<b>Max.</b>	50	20	100	19	50	30	50	15	75	41	125	175
<b>Average</b>	3	1	4	3	3	2	6	1	6	5	28	43

<b>Annual</b> :	3193	<b>No.</b> :	113	<b>Max.</b> :	175	<b>Ave.</b> :	9
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	10	0	0	21	63	0	0	0	0	0	220	65
2	0	0	0	34	0	0	0	10	0	0	248	83
3	8	0	0	16	10	0	0	0	0	0	215	115
4	50	15	103	3	0	20	25	0	0	2	91	190
5	10	20	0	4	0	0	15	0	48	70	53	180
6	0	0	36	5	5	45	135	30	125	75	5	715

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	18	0	0	71	73	0	0	10	0	0	683	263
<b>2nd</b>	60	35	139	12	5	65	175	30	173	147	149	1085

**Table Daily Rainfall**

Station : **Bontosallang**  
 Year : **1999**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	50	10	21	3	0	0	0	0	0	0	0	0
2	20	5	44	0	0	0	0	0	0	0	0	0
3	25	8	38	14	0	0	0	0	0	0	8	0
4	75	0	1	35	0	0	0	0	0	0	40	0
5	50	3	3	14	0	0	4	0	0	0	3	0
6	125	0	0	14	0	0	0	0	0	0	9	35
7	30	0	4	0	0	0	0	0	0	0	0	53
8	3	5	3	0	10	0	3	0	0	0	0	15
9	80	10	0	0	0	0	0	0	0	0	0	16
10	10	0	0	0	9	0	0	0	0	0	0	40
11	20	0	0	0	5	0	0	0	0	0	0	13
12	70	0	0	0	0	0	0	0	0	0	0	38
13	60	10	0	0	0	0	0	0	0	0	0	0
14	10	15	10	0	0	0	0	0	0	0	0	0
15	40	10	15	18	0	0	0	0	0	4	28	18
16	10	100	3	28	0	0	0	0	0	0	3	40
17	23	38	58	100	0	0	0	0	0	0	0	0
18	25	10	0	75	2	0	0	0	0	0	40	25
19	40	48	0	53	0	0	0	0	0	0	3	45
20	10	50	0	5	0	0	0	0	0	0	0	0
21	50	47	0	0	0	8	0	0	0	0	0	0
22	23	18	13	0	0	0	0	0	0	10	0	0
23	15	8	3	0	0	0	0	0	0	15	0	0
24	8	6	0	0	0	0	0	0	0	10	0	43
25	10	25	4	0	0	0	0	0	0	0	0	48
26	5	3	34	0	0	4	0	0	0	0	0	0
27	100	0	3	0	0	0	0	0	0	0	0	0
28	75	38	25	0	0	0	0	0	0	0	0	0
29	20		50	0	0	0	0	0	0	0	0	0
30	18		8	0	0	0	0	0	0	5	0	0
31	30		3		0		0	0		0		0

<b>Monthly</b>	1130	467	343	359	26	12	7	0	0	44	134	429
<b>Rainy Days</b>	31	21	20	11	4	2	2	0	0	5	8	13
<b>Max.</b>	125	100	58	100	10	8	4	0	0	15	40	53
<b>Average</b>	36	17	11	12	1	0	0	0	0	1	4	14

<b>Annual</b> :	2951	<b>No.</b> :	117	<b>Max.</b> :	125	<b>Ave.</b> :	8
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	220	26	107	66	0	0	4	0	0	0	51	0
2	248	15	7	14	19	0	3	0	0	0	9	159
3	200	35	25	18	5	0	0	0	0	4	28	69
4	108	246	61	261	2	0	0	0	0	0	46	110
5	106	104	20	0	0	8	0	0	0	35	0	91
6	248	41	123	0	0	4	0	0	0	5	0	0

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	668	76	139	98	24	0	7	0	0	4	88	228
<b>2nd</b>	462	391	204	261	2	12	0	0	0	40	46	201

**Table Daily Rainfall**

Station : **Bontosallang**  
 Year : **2000**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0	0	0	0	0	0	0	0	0	0	25
2	0	0	0	0	0	0	0	0	0	0	0	48
3	0	0	0	0	0	0	0	0	0	0	0	41
4	0	0	0	0	0	0	20	0	0	0	0	60
5	0	0	0	0	0	0	0	0	0	0	0	8
6	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	48	0	0	0	0	0	0	0	10
8	0	0	0	0	0	0	0	0	0	0	0	95
9	0	0	0	0	0	0	18	0	0	0	0	5
10	0	0	0	0	0	0	0	0	0	0	0	18
11	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	45	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	10
14	0	0	0	25	0	0	0	0	0	0	0	58
15	0	0	0	10	0	60	0	0	0	0	0	0
16	0	0	0	20	0	0	0	0	0	0	50	0
17	0	0	0	20	0	0	0	0	0	0	0	0
18	0	0	0	23	0	0	0	0	0	0	0	0
19	0	0	0	0	0	15	0	0	0	0	0	0
20	0	0	0	0	0	20	0	0	0	0	0	33
21	0	0	0	75	0	0	0	0	0	0	0	75
22	0	0	0	5	0	0	0	0	0	4	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	25	0
25	0	0	0	0	0	0	0	0	0	5	0	0
26	0	0	0	0	15	0	0	0	0	0	40	0
27	0	0	0	0	0	0	0	0	0	0	63	0
28	0	0	0	5	18	0	0	0	0	0	20	0
29	0	0	0	0	0	0	0	0	0	0	83	0
30	0	0	0	0	0	0	0	0	0	0	25	0
31	0	0	0	0	0	0	0	0	0	0	0	0

<b>Monthly</b>	0	0	0	276	33	95	38	0	0	9	306	486
<b>Rainy Days</b>	0	0	0	10	2	3	2	0	0	2	7	13
<b>Max.</b>	0	0	0	75	18	60	20	0	0	5	83	95
<b>Average</b>	0	0	0	9	1	3	1	0	0	0	10	16

<b>Annual</b> :	1243	<b>No.</b> :	39	<b>Max.</b> :	95	<b>Ave.</b> :	3
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0	0	0	0	0	20	0	0	0	0	182
2	0	0	0	48	0	0	18	0	0	0	0	128
3	0	0	0	80	0	60	0	0	0	0	0	68
4	0	0	0	63	0	35	0	0	0	0	50	33
5	0	0	0	80	0	0	0	0	0	9	25	75
6	0	0	0	5	33	0	0	0	0	0	231	0

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	0	0	0	128	0	60	38	0	0	0	0	378
<b>2nd</b>	0	0	0	148	33	35	0	0	0	9	306	108

**Table Daily Rainfall**

Station : **Bontosallang**  
 Year : **2001**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	50	13	0	0	0	0	0	0	0	0	45
2	0	18	38	0	0	0	0	0	0	0	0	25
3	0	73	18	0	0	0	0	0	0	0	28	60
4	0	110	0	0	0	0	0	0	0	0	0	35
5	115	50	75	0	0	0	0	0	5	0	0	33
6	0	68	60	0	0	0	0	0	0	0	0	25
7	18	125	0	0	0	0	0	0	0	0	0	15
8	45	53	0	95	0	0	0	0	0	0	0	25
9	165	0	0	0	0	0	0	0	0	0	2	25
10	118	0	0	0	0	0	0	0	0	0	0	0
11	208	0	0	20	0	0	0	0	0	0	0	50
12	18	0	88	0	0	28	0	0	0	0	0	0
13	13	0	8	0	0	0	0	0	0	0	0	0
14	23	50	50	0	0	0	0	0	0	0	0	0
15	50	8	0	0	0	20	0	0	0	0	46	0
16	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	38	0	0	0	0	0	0	0	3	0
19	0	33	90	0	0	0	0	0	0	0	0	0
20	0	20	0	0	0	0	0	0	0	0	0	0
21	25	8	0	0	0	0	0	0	0	0	0	0
22	50	0	0	0	0	0	0	0	0	0	0	25
23	0	0	0	0	0	0	0	0	0	0	5	0
24	0	0	15	0	0	0	0	0	0	3	0	0
25	0	0	0	0	0	0	0	0	0	0	6	0
26	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	5	22	53
28	75	0	0	0	0	0	0	0	0	0	0	50
29	0	0	8	0	0	0	0	0	0	0	0	15
30	0	0	0	0	3	0	0	0	0	0	0	0
31	0	0	0	0	0	0	0	0	0	0	0	0

<b>Monthly</b>	923	666	501	115	3	48	0	0	5	8	112	481
<b>Rainy Days</b>	13	13	12	2	1	2	0	0	1	2	7	14
<b>Max.</b>	208	125	90	95	3	28	0	0	5	5	46	60
<b>Average</b>	30	24	16	4	0	2	0	0	0	0	4	16

<b>Annual</b> :	2862	<b>No.</b> :	67	<b>Max.</b> :	208	<b>Ave.</b> :	8
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	115	301	144	0	0	0	0	0	5	0	28	198
2	346	246	60	95	0	0	0	0	0	0	2	90
3	312	58	146	20	0	48	0	0	0	0	46	50
4	0	53	128	0	0	0	0	0	0	0	3	0
5	75	8	15	0	0	0	0	0	0	3	11	25
6	75	0	8	0	3	0	0	0	0	5	22	118

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	773	605	350	115	0	48	0	0	5	0	76	338
<b>2nd</b>	150	61	151	0	3	0	0	0	0	8	36	143

**Table Daily Rainfall**

Station : **Barembeng**  
 Year : **1976**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0	0	0	0	0	10	0	0	0	0	0
2	14	0	0	0	0	0	1	0	0	5	0	0
3	0	69	0	0	0	0	0	0	0	0	14	0
4	0	10	0	0	0	0	0	0	0	6	0	37
5	32	12	9	0	0	0	0	0	0	0	0	50
6	0	10	0	0	0	0	0	0	0	0	0	49
7	11	9	10	0	0	5	0	0	0	0	75	39
8	41	0	90	62	0	0	0	0	0	0	0	27
9	12	10	8	0	0	0	0	0	0	0	12	16
10	6	30	0	0	0	0	0	0	0	0	0	0
11	0	31	0	0	0	5	0	0	0	0	5	1
12	100	0	0	0	0	0	0	0	0	0	15	4
13	155	0	0	0	0	0	0	0	0	0	0	35
14	109	0	0	0	0	0	0	0	0	0	0	32
15	76	0	10	3	0	0	0	0	0	0	9	38
16	70	0	17	0	0	0	0	0	0	0	37	22
17	89	0	4	0	0	0	0	0	0	0	9	0
18	0	59	0	0	0	0	0	0	0	0	2	25
19	0	0	0	0	0	0	0	0	0	1	20	70
20	22	0	0	0	0	0	0	0	0	1	30	4
21	0	20	0	0	0	0	0	0	0	1	0	0
22	0	30	0	0	5	0	0	0	0	2	0	10
23	0	45	0	0	0	0	0	0	0	0	0	0
24	4	0	0	0	0	0	0	0	0	0	15	0
25	0	0	0	0	0	0	0	0	0	0	0	2
26	5	15	0	0	0	0	0	0	0	2	6	0
27	0	0	0	0	0	6	0	0	0	3	0	0
28	0	9	0	0	0	5	0	0	0	0	0	0
29	0		0	0	0	0	0	0	0	0	0	2
30	0		0	0	0	0	0	0	0	0	0	0
31	0		0		0		0	0		0		2

<b>Monthly</b>	746	359	148	65	5	21	11	0	0	21	249	465
<b>Rainy Days</b>	15	14	7	2	1	4	2	0	0	8	13	19
<b>Max.</b>	155	69	90	62	5	6	10	0	0	6	75	70
<b>Average</b>	24	13	5	2	0	1	0	0	0	1	8	15

<b>Annual</b> :	2090	<b>No.</b> :	85	<b>Max.</b> :	155	<b>Ave.</b> :	6
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	46	91	9	0	0	0	11	0	0	11	14	87
2	70	59	108	62	0	5	0	0	0	0	87	131
3	440	31	10	3	0	5	0	0	0	0	29	110
4	181	59	21	0	0	0	0	0	0	2	98	121
5	4	95	0	0	5	0	0	0	0	3	15	12
6	5	24	0	0	0	11	0	0	0	5	6	4

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	556	181	127	65	0	10	11	0	0	11	130	328
<b>2nd</b>	190	178	21	0	5	11	0	0	0	10	119	137

**Table Daily Rainfall**

Station : **Barembeng**  
 Year : **1977**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	22	37	0	2	15	0	0	0	0	0	0	100
2	30	11	0	2	0	0	0	0	0	0	0	3
3	0	0	0	0	0	0	0	0	0	0	0	0
4	38	0	14	8	0	0	0	0	0	2	9	0
5	9	70	0	0	0	0	0	0	0	0	0	0
6	23	18	71	0	0	0	0	0	0	0	0	0
7	30	13	20	0	0	4	0	0	0	0	0	0
8	50	12	5	2	0	0	0	0	0	0	0	8
9	43	50	9	7	0	0	0	0	0	0	0	24
10	30	35	4	4	0	0	0	0	0	0	0	8
11	25	55	0	95	0	9	0	0	0	0	0	0
12	30	33	0	27	0	0	0	0	0	0	0	0
13	25	103	11	19	0	8	0	0	0	0	0	5
14	22	30	3	0	3	56	0	0	0	0	0	20
15	21	110	20	0	0	8	0	0	0	0	0	16
16	8	90	0	0	0	0	0	0	0	0	0	18
17	0	27	20	0	0	0	0	0	0	0	0	10
18	40	72	8	0	0	8	0	0	0	0	0	4
19	121	17	57	0	0	0	0	0	0	0	9	50
20	30	24	21	0	0	0	0	0	0	0	5	4
21	62	13	2	0	0	0	0	0	0	0	6	10
22	85	33	3	0	18	0	0	0	0	0	7	25
23	86	125	1	0	0	0	0	0	0	0	0	21
24	160	57	34	0	18	0	0	0	0	0	0	9
25	78	77	43	0	0	0	0	0	0	0	0	0
26	10	73	0	0	0	0	0	0	15	0	0	0
27	0	67	0	0	0	0	0	0	0	0	0	0
28	0	50	0	0	0	0	0	0	0	0	13	0
29	0		0	0	0	0	0	0	0	0	18	0
30	0		0	0	0	0	0	0	0	0	43	0
31	72		5		0		0	0		0		0

<b>Monthly</b>	1150	1302	351	166	54	93	0	0	15	2	110	335
<b>Rainy Days</b>	25	26	19	9	4	6	0	0	1	1	8	17
<b>Max.</b>	160	125	71	95	18	56	0	0	15	2	43	100
<b>Average</b>	37	47	11	6	2	3	0	0	1	0	4	11

<b>Annual</b> :	3578	<b>No.</b> :	116	<b>Max.</b> :	160	<b>Ave.</b> :	10
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	99	118	14	12	15	0	0	0	0	2	9	103
2	176	128	109	13	0	4	0	0	0	0	0	40
3	123	331	34	141	3	81	0	0	0	0	0	41
4	199	230	106	0	0	8	0	0	0	0	14	86
5	471	305	83	0	36	0	0	0	0	0	13	65
6	82	190	5	0	0	0	0	0	15	0	74	0

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	398	577	157	166	18	85	0	0	0	2	9	184
<b>2nd</b>	752	725	194	0	36	8	0	0	15	0	101	151



**Table Daily Rainfall**

Station : **Barembeng**  
 Year : **1978**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	90	0	0	0	0	6	0	0	0	38	0	5
2	0	19	0	0	0	0	0	0	0	0	0	25
3	0	122	0	0	7	0	0	0	0	2	0	16
4	0	15	0	11	0	0	2	0	0	0	0	18
5	0	25	0	97	0	0	10	0	0	0	0	32
6	0	24	0	4	0	0	0	0	0	0	4	26
7	17	10	10	35	0	1	0	0	0	0	25	0
8	40	15	2	13	0	2	0	0	14	0	15	10
9	8	9	2	0	0	0	10	0	0	0	2	0
10	17	0	2	6	5	5	15	0	0	0	0	2
11	68	25	3	0	12	0	0	0	0	0	5	14
12	79	11	118	0	14	0	2	5	0	0	0	22
13	8	20	0	0	13	0	10	0	8	0	0	0
14	0	5	0	0	19	0	2	0	0	0	0	3
15	0	52	0	0	13	13	0	0	0		12	0
16	0	19	2	0	53	0	0	0	0	0	13	29
17	0	0	0	0	36	0	0	6	0	0	0	0
18	0	0	0	40	0	0	0	0	1	0	0	38
19	70	0	0	0	0	1	0	0	0	0	15	13
20	6	0	80	0	0	27	0	0	0	0	0	50
21	10	0	0	0	0	0	0	0	0	0	12	24
22	15	0	0	0	0	0	0	0	0	0	0	3
23	33	0	0	0	0	1	0	0	0	0	3	18
24	16	0	87	0	0	0	0	0	0	2	38	95
25	64	0	25	0	0	0	0	0	0	5	0	70
26	20	0	3	0	0	1	0	0	0	0	26	22
27	0	0	25	0	24	0	0	0	2	0	0	58
28	0	0	24	0	0	0	0	0	0	0	0	37
29	0		12	6	0	0	5	0	0	0	0	39
30	0		0	0	0	0	0	0	0	0	0	20
31	0		0		20		3	0		0		4

<b>Monthly</b>	561	371	395	212	216	57	59	11	27	45	170	693
<b>Rainy Days</b>	16	14	14	8	11	9	9	2	5	3	12	26
<b>Max.</b>	90	122	118	97	53	27	15	6	14	38	38	95
<b>Average</b>	18	13	13	7	7	2	2	0	1	2	6	22

<b>Annual</b> :	2817	<b>No.</b> :	129	<b>Max.</b> :	122	<b>Ave.</b> :	8
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	90	181	0	108	7	6	12	0	2	38	0	96
2	82	58	16	58	5	8	25	0	14	0	46	38
3	155	113	121	0	71	13	14	5	8	0	17	39
4	76	19	82	40	89	28	0	6	1	0	28	130
5	138	0	112	0	0	1	0	0	0	7	53	210
6	20	0	64	6	44	1	8	0	2	0	26	180

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	327	352	137	166	83	27	51	5	24	38	63	173
<b>2nd</b>	234	19	258	46	133	30	8	6	3	7	107	520

**Table Daily Rainfall**

Station : **Barembeng**  
 Year : **1979**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	45	62	0	0	0	0	0	0	0	0	0	53
2	4	8	6	0	0	16	0	0	0	0	0	0
3	7	25	13	0	27	0	0	0	0	0	0	56
4	4	82	8	0	0	29	0	0	0	0	0	56
5	33	76	9	0	0	66	0	0	0	0	0	0
6	115	1	75	0	0	0	0	0	0	0	0	39
7	88	0	47	6	26	0	0	0	0	0	0	23
8	120	0	46	0	0	6	0	0	0	0	0	133
9	83	35	0	0	0	2	0	0	0	0	0	32
10	78	12	10	0	0	0	0	0	0	0	0	18
11	110	3	59	0	2	0	0	0	4	0	3	7
12	11	0	24	0	5	0	0	0	0	0	0	3
13	16	6	4	0	0	0	0	0	0	0	40	0
14	25	0	0	0	7	2	0	0	0	0	0	23
15	4	5	0	0	0	0	0	0	0	0	0	0
16	85	0	0	0	0	0	0	0	0	0	0	15
17	0	3	0	0	0	0	0	0	0	0	0	0
18	2	0	0	0	0	0	0	0	0	0	4	0
19	4	4	0	0	0	0	0	0	0	0	0	0
20	15	17	0	5	0	0	0	0	0	0	0	0
21	7	12	0	0	0	0	0	0	0	0	0	15
22	10	0	0	4	0	0	0	0	0	0	0	0
23	0	40	0	0	0	0	0	0	0	4	0	0
24	2	60	0	0	0	0	0	0	0	0	0	7
25	22	70	4	7	0	0	0	0	0	0	5	0
26	62	15	0	5	0	0	0	0	0	0	0	13
27	3	63	0	0	20	0	0	0	0	0	0	4
28	3	2	22	0	0	0	0	0	0	0	0	0
29	0		37	3	0	0	0	0	0	0	4	12
30	0		0	0	0	0	0	0	0	0	12	65
31	22		0		0		0	0		0		0

<b>Monthly</b>	980	601	364	30	87	121	0	0	4	4	68	574
<b>Rainy Days</b>	27	21	14	6	6	6	0	0	1	1	6	18
<b>Max.</b>	120	82	75	7	27	66	0	0	4	4	40	133
<b>Average</b>	32	21	12	1	3	4	0	0	0	0	2	19

<b>Annual</b>	: 2833	<b>No.</b>	: 106	<b>Max.</b>	: 133	<b>Ave.</b>	: 8
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	93	253	36	0	27	111	0	0	0	0	0	165
2	484	48	178	6	26	8	0	0	0	0	0	245
3	166	14	87	0	14	2	0	0	4	0	43	33
4	106	24	0	5	0	0	0	0	0	0	4	15
5	41	182	4	11	0	0	0	0	0	4	5	22
6	90	80	59	8	20	0	0	0	0	0	16	94

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	743	315	301	6	67	121	0	0	4	0	43	443
<b>2nd</b>	237	286	63	24	20	0	0	0	0	4	25	131

**Table Daily Rainfall**

Station : **Barembeng**  
 Year : **1980**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0	14	0	0	0	0	0	0	0	0	0
2	9	0	11	0	0	0	0	0	0	0	0	0
3	20	3	0	0	0	0	0	0	0	0	0	3
4	30	10	0	0	2	0	0	0	0	0	0	
5	19	0	0	0	0	0	0	0	0	0	0	0
6	10	17	0	0	0	0	0	0	0	0	0	0
7	15	56	0	23	9	0	0	3	0	0	3	
8	25	13	0	0	0	0	0	0	0	0	0	0
9	37	5	0	12	0	0	0	0	0	0	0	4
10	40	6	7	5	0	0	0	0	0	0	0	0
11	89	27	0	7	0	0	0	0	0	0	0	80
12	15	21	0	1	0	0	0	0	0	0	12	40
13	13	81	7	7	0	0	0	0	0	0	0	8
14	12	43	92	10	0	0	0	0	0	7	0	52
15	2	14	143	6	0	0	0	0	0	0	0	42
16	9	12	3	77	0	0	0	0	0	0	0	6
17	0	25	5	7	0	0	0	0	0	0	0	0
18	1	20	43	3	0	0	0	0	0	0	0	12
19	40	0	0	0	0	0	0	0	0	0	0	7
20	117	3	0	1	0	0	0	0	0	0	0	0
21	71	0	59	0	0	0	0	0	0	0	0	13
22	5	0	0	0	0	0	0	0	0	0	0	62
23	7	3	0	0	0	0	0	0	0	0	0	10
24	15	25	0	2	0	0	0	0	0	0	0	31
25	43	23	15	0	0	0	0	0	0	0	0	34
26	0	0	0	10	9	0	0	0	0	0	0	10
27	0	0	0	0	0	0	0	0	0	0	0	2
28	9	0	0	9	0	0	0	0	0	0	0	11
29	6	4	0	0	3	10	0	0	0	0	0	3
30	0		0	9	3	0	0	0	0	0	0	26
31	0		0		0		0	0		0		43

<b>Monthly</b>	659	411	399	189	26	10	0	3	0	7	15	499
<b>Rainy Days</b>	25	20	11	16	5	1	0	1	0	1	2	21
<b>Max.</b>	117	81	143	77	9	10	0	3	0	7	12	80
<b>Average</b>	21	14	13	6	1	0	0	0	0	0	1	17

<b>Annual</b> :	2218	<b>No.</b> :	103	<b>Max.</b> :	143	<b>Ave.</b> :	6
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	78	13	25	0	2	0	0	0	0	0	0	3
2	127	97	7	40	9	0	0	3	0	0	3	4
3	131	186	242	31	0	0	0	0	0	7	12	222
4	167	60	51	88	0	0	0	0	0	0	0	25
5	141	51	74	2	0	0	0	0	0	0	0	150
6	15	4	0	28	15	10	0	0	0	0	0	95

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	336	296	274	71	11	0	0	3	0	7	15	229
<b>2nd</b>	323	115	125	118	15	10	0	0	0	0	0	270

**Table Daily Rainfall**

Station : **Barembeng**  
 Year : **1981**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	8	0	7	7	0	0	0	0	0	0	0	17
2	25	0	25	0	67	0	6	0	0	0	4	9
3	8	1	0	0	0	0	3	0	0	0	0	5
4	19	20	0	41	42	0	4	0	0	0	0	0
5	7	1	0	16	0	0	0	0	3	0	35	25
6	18	0	0	0	0	0	0	0	6	0	3	29
7	39	10	0	0	0	0	0	0	5	21	7	16
8	19	16	0	0	0	0	146	0	0	0	0	38
9	2	36	0	0	0	0	0	0	2	0	0	62
10	0	11	0	0	0	0	0	0	0	0	2	84
11	25	22	0	0	10	0	0	0	0	0	0	9
12	29	24	0	0	0	0	5	0	0	0	5	0
13	0	5	0	8	0	0	20	0	0	0	13	13
14	4	0	0	0	0	0	0	0	0	0	0	0
15	0	4	0	0	4	0	3	0	0	0	0	0
16	0	60	0	0	0	0	8	0	0	0	0	4
17	21	24	0	0	0	0	0	0	0	0	15	25
18	30	5	0	0	0	0	0	0	0	0	34	9
19	20	0	0	8	0	17	0	0	0	0	17	19
20	7	0	0	0	0	0	0	0	0	0	0	30
21	18	0	0	0	0	0	4	0	0	0	1	13
22	3	0	0	0	0	0	5	0	0	0	0	0
23	11	9	0	0	0	0	0	0	0	4	0	0
24	10	8	1	0	0	0	0	0	0	0	8	73
25	0	10	4	0	0	0	0	0	0	0	19	18
26	7	0	24	0	44	0	0	0	0	0	17	13
27	96	12	0	0	0	0	0	13	0	13	56	0
28	7	9	41	0	0	9	0	0	0	0	90	9
29	13		33	0	0	0	0	0	0	0	25	20
30	14		24	0	0	0	0	0	0	0	0	8
31	0		0		0		0	0		0		10

<b>Monthly</b>	460	287	159	80	167	26	204	13	16	38	351	558
<b>Rainy Days</b>	25	19	8	5	5	2	10	1	4	3	17	24
<b>Max.</b>	96	60	41	41	67	17	146	13	6	21	90	84
<b>Average</b>	15	10	5	3	5	1	7	0	1	1	12	18

<b>Annual</b> :	2359	<b>No.</b> :	123	<b>Max.</b> :	146	<b>Ave.</b> :	6
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	67	22	32	64	109	0	13	0	3	0	39	56
2	78	73	0	0	0	0	146	0	13	21	12	229
3	58	55	0	8	14	0	28	0	0	0	18	22
4	78	89	0	8	0	17	8	0	0	0	66	87
5	42	27	5	0	0	0	9	0	0	4	28	104
6	137	21	122	0	44	9	0	13	0	13	188	60

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	203	150	32	72	123	0	187	0	16	21	69	307
<b>2nd</b>	257	137	127	8	44	26	17	13	0	17	282	251



**Table Daily Rainfall**

Station : **Barembeng**  
 Year : **1983**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	53	0	9	0	4	0	17	0	0		0	14
2	18	0	0	0	3	0	0	0	0		0	50
3	0	0	0	0	0	0	0	0	0		0	0
4	0	14	0	0	0	0	0	0	0		0	29
5	44	8	0	3	0	0	0	0	0		0	0
6	3	0	0	0	0	0	0	0	0		0	0
7	0	0	0	4	0	0	0	0	0		21	0
8	0	0	0	0	0	0	0	0	0		44	0
9	0	3	0	0	0	2	0	0	0		4	0
10	0	0	0	0	0	1	0	0	0		0	0
11	4	0	0	0	3	0	0	0	0		4	0
12	25	8	0	0	0	0	0	0	0		0	0
13	5	0	0	55	0	0	0	0	0		0	4
14	0	0	0	0	0	0	0	0	0		1	40
15	1	9	0	0	0	0	0	0	0		0	3
16	5	2	0	17	0	0	0	0	0		23	0
17	0	0	0	0	2	0	0	0	0		0	0
18	0	0	0	0	0	0	0	0	0		0	0
19	0	0	0	0	0	0	0	0	0		28	0
20	0	0	0	10	0	0	0	0	0		0	0
21	3	0	6	0	0	0	0	0	0		0	0
22	42	0	0	3	0	0	0	0	0		14	0
23	0	0	3	0	0	0	0	0	0		5	0
24	11	0	0	18	0	0	0	0	0		19	0
25	0	0	0	0	0	0	0	0	0		66	5
26	2	5	0	0	0	0	0	0	0		28	11
27	12	0	65	0	0	7	0	0	0		0	20
28	0	0	0	31	0	0	0	0	0		4	0
29	7		0	0	0	0	0	0	0		23	0
30	0		0	5	0	0	0	0	0		83	99
31	11		0		0		0	0				29

<b>Monthly</b>	246	49	83	146	12	10	17	0	0	0	367	304
<b>Rainy Days</b>	16	7	4	9	4	3	1	0	0	0	15	11
<b>Max.</b>	53	14	65	55	4	7	17	0	0	0	83	99
<b>Average</b>	8	2	3	5	0	0	1	0	0	0	12	10

<b>Annual</b> :	1234	<b>No.</b> :	70	<b>Max.</b> :	99	<b>Ave.</b> :	3
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	115	22	9	3	7	0	17	0	0	0	0	93
2	3	3	0	4	0	3	0	0	0	0	69	0
3	35	17	0	55	3	0	0	0	0	0	5	47
4	5	2	0	27	2	0	0	0	0	0	51	0
5	56	0	9	21	0	0	0	0	0	0	104	5
6	32	5	65	36	0	7	0	0	0	0	138	159

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	153	42	9	62	10	3	17	0	0	0	74	140
<b>2nd</b>	93	7	74	84	2	7	0	0	0	0	293	164

**Table Daily Rainfall**

Station : **Barembeng**  
 Year : **1984**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	43	0	0	0	0	0	0	0	0		0	0
2	24	4	0	0	0	0	0	0	0		0	0
3	0	0	8	0	15	0	0	0	0		0	0
4	28	67	0	0	0	0	0	0	0		0	0
5	26	21	9	4	0	4	0	0	0		0	0
6	4	0	0	0	13	0	0	0	0		0	0
7	0	0	0	0	0	0	0	0	0		0	4
8	0	12	4	0	18	0	0	0	0		0	5
9	28	89	84	0	3	0	0	0	0		0	0
10	3	41	0	0	37	5	0	0	0		0	0
11	0	0	87	0	4	0	0	0	0		0	8
12	0	0	12	0	3	0	0	0	0		5	81
13	0	32	8	24	0	0	0	0	0		11	2
14	15	0	0	29	0	0	0	0	0		16	6
15	47	25	0	0	0	0	0	0	0		0	45
16	0	29	0	14	0	0	9	0	0		3	100
17	1	6	0	0	24	0	0	0	0		6	41
18	69	7	5	0	0	0	0	0	0		0	0
19	17	3	0	0	0	0	0	0	0		0	117
20	4	0	4	0	0	0	0	0	0		22	51
21	0	25	9	0	0	0	0	0	0		18	19
22	0	0	0	7	0	0	0	0	0		3	0
23	79	20	0	0	0	0	0	0	0		20	12
24	0	29	9	0	0	0	5	0	0		9	0
25	0	7	6	4	0	0	0	0	0		47	0
26	0	0	14	0	0	0	0	0	0		0	0
27	3	0	0	0	4	0	0	0	0		0	23
28	0	0	0	6	0	0	0	0	0		59	18
29	131	0	0	0	0	0	0	0	0		6	16
30	21		0	0	0	2	0	0	0		7	58
31	10		0		0		0	0				0

<b>Monthly</b>	553	417	259	88	121	11	14	0	0	0	232	606
<b>Rainy Days</b>	18	16	13	7	9	3	2	0	0	0	14	17
<b>Max.</b>	131	89	87	29	37	5	9	0	0	0	59	117
<b>Average</b>	18	14	8	3	4	0	0	0	0	0	8	20

<b>Annual</b>	: 2301	<b>No.</b>	: 99	<b>Max.</b>	: 131	<b>Ave.</b>	: 6
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	121	92	17	4	15	4	0	0	0	0	0	0
2	35	142	88	0	71	5	0	0	0	0	0	9
3	62	57	107	53	7	0	0	0	0	0	32	142
4	91	45	9	14	24	0	9	0	0	0	31	309
5	79	81	24	11	0	0	5	0	0	0	97	31
6	165	0	14	6	4	2	0	0	0	0	72	115

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	218	291	212	57	93	9	0	0	0	0	32	151
<b>2nd</b>	335	126	47	31	28	2	14	0	0	0	200	455

**Table Daily Rainfall**

Station : **Barembeng**  
 Year : **1985**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0	21	5	8	0	0	0	0	0	0	14
2	0	0	0	4	0	0	0	0	0	0	0	26
3	0	0	8	56	0	0	0	0	0	0	0	0
4	132	0	69	0	0	0	0	0	0	0	5	0
5	15	5	46	0	0	0	0	0	0	0	7	4
6	31	0	144	0	0	0	0	0	0	0	0	0
7	0	0	61	0	0	6	0	0	0	0	0	0
8	0	0	29	0	0	0	0	0	0	0	0	0
9	0	0	26	0	6	0	0	0	0	0	0	0
10	0	0	38	18	0	13	0	0	0	0	0	5
11	5	9	0	0	23	0	0	0	0	0	0	8
12	0	23	0	0	0	0	0	0	0	0	0	4
13	0	17	0	0	0	0	0	0	0	0	0	0
14	0	13	0	0	0	4	0	0	0	0	0	0
15	0	94	0	6	20	0	0	0	0	0	0	0
16	0	54	0	9	0	0	0	0	0	0	0	3
17	6	26	0	0	0	0	0	0	0	0	0	0
18	62	0	0	0	0	0	5	0	5	0	0	0
19	8	0	0	0	0	0	0	0	0	0	0	0
20	48	0	0	0	0	0	0	0	0	0	20	25
21	4	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	2
23	0	20	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0
25	3	9	0	13	0	0	0	0	0	0	6	23
26	186	0	0	0	11	0	0	0	9	4	4	0
27	8	0	0	0	0	0	0	0	0	0	0	5
28	0	143	0	0	0	0	0	0	0	45	21	43
29	0		0	0	1	0	0	0	0	0	7	0
30	0		0	0	0	0	3	3	0	0	16	0
31	28		0		0		0	0		0		0

<b>Monthly</b>	536	413	442	111	69	23	8	3	14	49	86	162
<b>Rainy Days</b>	13	11	9	7	6	3	2	1	2	2	8	12
<b>Max.</b>	186	143	144	56	23	13	5	3	9	45	21	43
<b>Average</b>	17	15	14	4	2	1	0	0	0	2	3	5

<b>Annual</b> :	1916	<b>No.</b> :	76	<b>Max.</b> :	186	<b>Ave.</b> :	5
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	147	5	144	65	8	0	0	0	0	0	12	44
2	31	0	298	18	6	19	0	0	0	0	0	5
3	5	156	0	6	43	4	0	0	0	0	0	12
4	124	80	0	9	0	0	5	0	5	0	20	28
5	7	29	0	13	0	0	0	0	0	0	6	25
6	222	143	0	0	12	0	3	3	9	49	48	48

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	183	161	442	89	57	23	0	0	0	0	12	61
<b>2nd</b>	353	252	0	22	12	0	8	3	14	49	74	101



**Table Daily Rainfall**

Station : **Barembeng**  
 Year : **1986**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0	0	3	0	7	5	0	0	0	0	0
2	0	5	0	0	0	0	0	0	0	0	18	0
3	8	26	23	8	0	0	0	0	0	0	0	0
4	5	0	71	18	0	0	2	0	0	0	25	0
5	0	0	7	0	0	0	0	0	0	0	6	0
6	48	0	0	0	0	0	0	0	0	0	0	0
7	23	0	0	0	0	0	0	0	0	0	0	0
8	4	18	0	0	0	5	0	0	0	8	0	0
9	19	3	0	0	0	0	0	0	0	0	0	0
10	35	10	6	5	0	23	0	0	0	2	0	0
11	86	59	0	0	0	0	0	0	0	0	0	9
12	65	66		0	0	0	0	0	0	0	4	4
13	108	0	4	7	0	0	0	0	0	0	0	21
14	64	7	5	31	0	0	0	0	0	0	0	52
15	45	55	9	12	0	0	0	0	0	0	2	0
16	0	35	6	0	0	0	0	0	0	0	0	0
17	12	13	0	0	0	0	0	0	0	0	7	0
18	9	14	3	0	0	0	0	0	0	0	63	0
19	7	0	59	23	0	0	0	0	0	0	0	0
20	4	6	3	0	0	0	0	0	0	0	0	0
21	0	72	0	0	0	0	0	0	0	0	8	0
22	28	0	27	0	0	0	0	0	0	0	24	0
23	7	16	37	0	0	0	0	0	0	0	20	0
24	5	22	0	0	0	0	0	0	0	0	0	68
25	23	36	0	0	0	0	0	0	0	0	75	0
26	31	0	5	0	0	0	0	0	0	0	12	3
27	145	8	0	0	0	0	0	0	0	0	19	13
28	29	31	22	0	0	0	0	0	0	8	7	11
29	15		0	0	0	0	0	0	0	22	0	5
30	0		0	0	0	0	0	0	0	11	0	0
31	0		0		0		0	0		0		0

<b>Monthly</b>	825	502	287	107	0	35	7	0	0	51	290	186
<b>Rainy Days</b>	24	19	15	8	0	3	2	0	0	5	14	9
<b>Max.</b>	145	72	71	31	0	23	5	0	0	22	75	68
<b>Average</b>	27	18	10	4	0	1	0	0	0	2	10	6

<b>Annual</b> :	2290	<b>No.</b> :	99	<b>Max.</b> :	145	<b>Ave.</b> :	6
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	13	31	101	29	0	7	7	0	0	0	49	0
2	129	31	6	5	0	28	0	0	0	10	0	0
3	368	187	18	50	0	0	0	0	0	0	6	86
4	32	68	71	23	0	0	0	0	0	0	70	0
5	63	146	64	0	0	0	0	0	0	0	127	68
6	220	39	27	0	0	0	0	0	0	41	38	32

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	510	249	125	84	0	35	7	0	0	10	55	86
<b>2nd</b>	315	253	162	23	0	0	0	0	0	41	235	100

**Table Daily Rainfall**

Station : **Barembeng**  
 Year : **1987**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	35	38	55	0	0	0	0	0	0	0	0
2	0	20	0	9	0	0	0	0	0	0	0	0
3	0	12	0	0	0	0	0	0	0	0	0	0
4	16	0	0	0	0	0	0	0	0	0	0	0
5	28	0	0	0	0	0	0	0	0	0	0	0
6	0	24	40	0	0	0	0	0	0	0	0	11
7	23	46	0	16	25	0	0	0	0	0	0	0
8	35	2	0	7	16	0	0	0	0	0	0	0
9	53	0	0	0	0	0	0	0	0	0	0	0
10	9	21	15	0	0	0	0	0	0	0	0	16
11	24	0	0	0	28	0	0	0	0	0	0	0
12	51	29	0	0	5	0	0	0	0	0	0	0
13	37	23	0	0	0	0	0	0	0	0	0	0
14	48	0	0	0	0	0	0	0	0	0	0	5
15	94	0	0	0	0	0	0	0	0	0	0	40
16	88	0	0	0	0	0	0	0	0	0	0	158
17	49	0	0	0	0	0	0	0	0	0	0	153
18	0	0	38	0	0	0	0	0	0	0	0	11
19	22	0	0	0	0	0	0	0	0	0	0	8
20	5	7	0	0	0	0	0	0	0	0	0	42
21	49	14	0	0	0	0	0	0	0	0	0	78
22	132	0	32	0	0	0	0	0	0	0	0	136
23	7	21	24	0	0	0	0	0	0	0	0	148
24	26	18	8	0	0	0	0	0	0	0	0	28
25	6	0	0	0	0	0	0	0	0	0	0	43
26	19	8	0	0	0	0	0	0	0	0	0	0
27	5	0	0	0	0	0	0	0	0	8	0	0
28	11	0	54	0	0	0	0	0	0	0	0	0
29	94		35	0	0	0	0	0	0	0	0	0
30	46		0	0	0	0	0	0	0	0	0	0
31	79		0		0		0	0		0		0

<b>Monthly</b>	1056	280	284	87	74	0	0	0	0	8	0	877
<b>Rainy Days</b>	26	14	9	4	4	0	0	0	0	1	0	14
<b>Max.</b>	132	46	54	55	28	0	0	0	0	8	0	158
<b>Average</b>	34	10	9	3	2	0	0	0	0	0	0	28

<b>Annual</b> :	2666	<b>No.</b> :	72	<b>Max.</b> :	158	<b>Ave.</b> :	7
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	44	67	38	64	0	0	0	0	0	0	0	0
2	120	93	55	23	41	0	0	0	0	0	0	27
3	254	52	0	0	33	0	0	0	0	0	0	45
4	164	7	38	0	0	0	0	0	0	0	0	372
5	220	53	64	0	0	0	0	0	0	0	0	433
6	254	8	89	0	0	0	0	0	0	8	0	0

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	418	212	93	87	74	0	0	0	0	0	0	72
<b>2nd</b>	638	68	191	0	0	0	0	0	0	8	0	805

**Table Daily Rainfall**

Station : **Barembeng**  
 Year : **1988**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	8	0	53	0	0	0	0	0	0	0	28
2	0	3	10	70	0	0	0	0	0	0	0	99
3	0	115	0	0	0	0	0	8	0	0	0	10
4	4	103	0	0	0	0	0	0	11	0	0	11
5	3	58	0	0	0	0	0	0	0	0	28	32
6	0	5	0	0	0	0	0	0	0	48	20	23
7	0	0	0	0	0	0	0	0	0	0	0	42
8	2	0	0	0	0	0	0	0	0	0	0	11
9	11	30	0	0	33	0	0	0	0	0	0	8
10	8	45	0	0	0	0	0	0	0	11	0	18
11	51	63	41	0	0	0	0	0	0	5	44	36
12	0	152	0	0	43	0	0	0	0	0	0	51
13	0	105	7	0	0	0	0	0	0	8	0	43
14	9	83	4	0	0	0	0	0	0	0	0	27
15	0	61	0	0	26	0	0	0	0	0	24	88
16	0	62	0	0	0	0	0	0	0	0	19	26
17	4	40	0	0	0	0	0	0	0	0	0	20
18	0	26	0	0	0	0	0	0	0	21	0	0
19	0	0	0	0	0	0	0	0	3	0	0	17
20	0	0	0	0	0	0	0	0	0	0	0	35
21	6	0	0	0	0	0	0	0	0	42	0	21
22	0	0	0	0	0	0	0	0	0	0	0	45
23	0	0	0	0	0	0	0	0	0	0	0	72
24	0	0	26	0	0	0	0	12	0	0	0	14
25	0	0	45	0	0	0	0	0	0	0	38	54
26	0	0	31	0	0	0	0	9	0	0	30	68
27	0	0	46	0	0	0	0	0	0	0	45	0
28	0	18	0	0	0	0	0	0	0	0	19	0
29	0	0	0	0	0	0	0	0	0	0	27	0
30	0	0	0	0	0	0	0	0	0	0	0	0
31	0	0	0	0	0	0	0	0	0	0	0	5

<b>Monthly</b>	98	977	210	123	102	0	0	29	14	135	294	904
<b>Rainy Days</b>	9	17	8	2	3	0	0	3	2	6	10	26
<b>Max.</b>	51	152	46	70	43	0	0	12	11	48	45	99
<b>Average</b>	3	34	7	4	3	0	0	1	0	4	10	29

<b>Annual</b> :	2886	<b>No.</b> :	86	<b>Max.</b> :	152	<b>Ave.</b> :	8
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	7	287	10	123	0	0	0	8	11	0	28	180
2	21	80	0	0	33	0	0	0	0	59	20	102
3	60	464	52	0	69	0	0	0	0	13	68	245
4	4	128	0	0	0	0	0	0	3	21	19	98
5	6	0	71	0	0	0	0	12	0	42	38	206
6	0	18	77	0	0	0	0	9	0	0	121	73

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	88	831	62	123	102	0	0	8	11	72	116	527
<b>2nd</b>	10	146	148	0	0	0	0	21	3	63	178	377

**Table Daily Rainfall**

Station : **Barembeng**  
 Year : **1989**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	47	70	0	0	0	0	0	0	0	29	0
2	0	40	0	0	0	0	0	0	0	0	0	13
3	9	51	0	0	0	0	0	0	0	0	13	0
4	0	43	0	0	0	0	0	0	0	0	0	0
5	12	11	0	8	0	0	0	0	0	0	0	0
6	0	68	35	15	14	0	0	0	0	0	0	8
7	0	0	28	0	5	0	0	0	0	0	0	14
8	0	0	0	0	0	0	0	0	0	0	0	18
9	0	0	45	13	0	12	0	0	0	0	0	33
10	0	0	18	0	0	0	0	0	0	0	0	25
11	0	0	58	0	0	0	0	0	0	0	0	8
12	0	26	34	0	0	0	0	0	0	0	28	31
13	0	78	64	0	0	0	0	0	0	0	8	57
14	0	41	27	0	0	0	0	0	0	43	0	0
15	0	27	39	0	0	0	5	0	0	0	0	0
16	8	12	57	0	0	0	0	0	0	0	0	0
17	15	20	0	24	0	0	0	0	0	18	0	0
18	0	28	0	52	0	0	0	0	0	0	0	0
19	0	8	0	14	0	0	0	0	0	0	0	0
20	0	59	0	25	0	0	0	0	0	0	0	0
21	0	13	0	25	0	0	0	0	0	38	0	0
22	0	41	0	0	0	0	0	0	0	0	0	0
23	35	22	0	0	0	0	0	0	0	27	15	19
24	55	7	0	0	0	0	7	0	0	16	8	0
25	40	15	0	0	0	8	0	0	0	0	15	0
26	125	82	0	0	0	15	0	0	0	0	10	0
27	83	13	0	38	0	0	0	0	0	19	0	13
28	107	45	0	13	0	0	0	0	0	0	0	8
29	79		0	10	0	0	0	0	0	0	0	10
30	100		0	0	0	0	0	0	0	0	0	0
31	95		0		0		0	0		0		0

<b>Monthly</b>	763	797	475	237	19	35	12	0	0	161	126	257
<b>Rainy Days</b>	13	23	11	11	2	3	2	0	0	6	8	13
<b>Max.</b>	125	82	70	52	14	15	7	0	0	43	29	57
<b>Average</b>	25	28	15	8	1	1	0	0	0	5	4	8

<b>Annual</b> :	2882	<b>No.</b> :	92	<b>Max.</b> :	125	<b>Ave.</b> :	8
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	21	192	70	8	0	0	0	0	0	0	42	13
2	0	68	126	28	19	12	0	0	0	0	0	98
3	0	172	222	0	0	0	5	0	0	43	36	96
4	23	127	57	115	0	0	0	0	0	18	0	0
5	130	98	0	25	0	8	7	0	0	81	38	19
6	589	140	0	61	0	15	0	0	0	19	10	31

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	21	432	418	36	19	12	5	0	0	43	78	207
<b>2nd</b>	742	365	57	201	0	23	7	0	0	118	48	50

**Table Daily Rainfall**

Station : **Barembeng**  
 Year : **1990**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0	0	0	0	0	0	0	0	0	0	0
2	18	0	0	0	0	0	0	0	0	0	0	0
3	15	18	18	18	0	0	0	0	0	0	0	18
4	0	39	39	0	0	0	0	0	0	0	0	21
5	23	15	15	0	0	0	0	0	0	0	0	13
6	12	0	0	0	0	0	0	0	0	0	18	18
7	0	8	8	0	0	0	0	0	0	0	0	0
8	48	0	0	12	0	0	0	0	0	0	22	0
9	51	0	27	0	0	0	0	0	0	0	0	0
10	37	0	46	0	0	0	0	0	0	0	15	0
11	19	27	18	0	0	0	0	0	0	0	0	0
12	12	46	0	0	0	0	0	0	0	0	0	0
13	23	0	0	0	0	0	0	0	0	0	0	12
14	0	0	0	0	0	0	0	0	0	0	0	9
15	8	0	0	0	0	0	0	0	0	0	0	0
16	20	0	23	0	0	0	0	0	0	0	0	0
17	35	18	14	18	48	0	0	0	0	13	0	15
18	28	0	0	0	25	0	0	0	0	0	0	25
19	13	0	18	0	0	0	0	0	0	0	0	32
20	9	0	0	0	0	0	0	0	0	0	0	0
21	26	0	0	0	0	0	0	0	0	22	0	0
22	15	0	0	0	0	0	0	0	0	11	0	19
23	0	0	0	0	0	0	0	0	0	0	0	35
24	29	28	0	0	0	0	0	0	0	0	0	68
25	13	15	0	0	0	0	0	0	0	0	0	13
26	38	0	0	0	0	0	0	0	0	0	0	18
27	0	13	0	0	0	0	0	0	0	0	0	37
28	16	17	0	0	0	0	0	0	0	0	0	12
29	0		0	0	0	0	0	0	0	0	32	0
30	0		0	0	0	0	0	0	0	0	0	0
31	18		0		0		0	0		0		0

<b>Monthly</b>	526	244	226	48	73	0	0	0	0	46	87	365
<b>Rainy Days</b>	23	11	10	3	2	0	0	0	0	3	4	16
<b>Max.</b>	51	46	46	18	48	0	0	0	0	22	32	68
<b>Average</b>	17	9	7	2	2	0	0	0	0	1	3	12

<b>Annual</b> :	1615	<b>No.</b> :	72	<b>Max.</b> :	68	<b>Ave.</b> :	4
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	56	72	72	18	0	0	0	0	0	0	0	52
2	148	8	81	12	0	0	0	0	0	0	55	18
3	62	73	18	0	0	0	0	0	0	0	0	21
4	105	18	55	18	73	0	0	0	0	13	0	72
5	83	43	0	0	0	0	0	0	0	33	0	135
6	72	30	0	0	0	0	0	0	0	0	32	67

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	266	153	171	30	0	0	0	0	0	0	55	91
<b>2nd</b>	260	91	55	18	73	0	0	0	0	46	32	274



**Table Daily Rainfall**

Station : **Barembeng**  
 Year : **1992**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0		0	0	0	0	0	0	0	0	5
2	0	0		0	0	0	0	0	0	0	0	0
3	0	0		0	0	0	0	0	0	0	0	20
4	0	0		0	0	0	0	0	0	0	0	0
5	0	0		0	0	0	0	0	0	5	0	0
6	0	0		0	0	0	0	0	0	0	0	40
7	0	11		0	0	0	0	0	0	0	0	35
8	51	0		0	0	0	0	0	0	0	0	75
9	0	0		0	0	0	0	0	0	0	0	0
10	108	0		0	0	0	0	0	0	0	0	0
11	0	0		0	0	0	0	0	0	0	0	0
12	0	0		0	0	0	0	0	0	0	0	0
13	0	11		0	0	0	0	0	0	0	0	0
14	0	38		0	0	0	0	0	0	0	0	0
15	0	0		0	0	0	0	0	0	0	0	0
16	0	0		0	0	0	0	0	0	0	0	0
17	0	12		0	0	0	0	0	0	0	0	0
18	0	0		0	0	0	0	0	0	0	23	0
19	0	0		0	0	0	0	0	0	0	0	0
20	0	0		0	0	0	0	0	0	0	0	0
21	0	0		0	0	0	0	0	0	0	0	0
22	0	0		0	0	0	0	0	0	0	0	0
23	0	0		0	0	0	0	0	0	0	0	5
24	12	0		0	0	0	0	0	0	0	0	0
25	0	28		0	0	0	0	0	0	0	0	78
26	13	0		0	0	0	0	0	0	0	0	10
27	0	0		0	0	0	0	0	0	0	0	0
28	0	0		0	0	0	0	0	0	0	0	0
29	22	0		0	0	0	0	0	0	0	0	0
30	0			0	0	0	0	0	0	0	10	10
31	0				0		0	0		0		0

<b>Monthly</b>	206	100	0	0	0	0	0	0	0	5	33	278
<b>Rainy Days</b>	5	5	0	0	0	0	0	0	0	1	2	9
<b>Max.</b>	108	38	0	0	0	0	0	0	0	5	23	78
<b>Average</b>	7	3	0	0	0	0	0	0	0	0	1	9

<b>Annual</b>	: 622	<b>No.</b>	: 22	<b>Max.</b>	: 108	<b>Ave.</b>	: 2
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0	0	0	0	0	0	0	0	5	0	25
2	159	11	0	0	0	0	0	0	0	0	0	150
3	0	49	0	0	0	0	0	0	0	0	0	0
4	0	12	0	0	0	0	0	0	0	0	23	0
5	12	28	0	0	0	0	0	0	0	0	0	83
6	35	0	0	0	0	0	0	0	0	0	10	20

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	159	60	0	0	0	0	0	0	0	5	0	175
<b>2nd</b>	47	40	0	0	0	0	0	0	0	0	33	103







**Table Daily Rainfall**

Station : **Barembeng**  
 Year : **1995**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0	0	0	0	4	0	0	0	0	0	0
2	0	0	19	0	0	0	0	0	0	0	0	5
3	0	0	75	0	0	0	0	0	0	0	0	7
4	0	0	148	0	0	0	0	0	0	0	0	18
5	0	33	0	4	0	0	0	0	0	0	0	0
6	16	17	0	29	0	0	0	0	0	0	0	13
7	0	20	0	21	0	0	0	0	0	0	0	42
8	0	14	90	93	0	0	0	0	0	0	0	100
9	19	0	13	32	0	0	0	0	0	0	0	23
10	0	0	0	10	0	0	0	0	0	0	0	0
11	17	0	0	0	0	0	0	0	0	0	0	23
12	20	4	0	0	0	0	0	0	0	0	0	95
13	23	0	19	0	3	0	0	0	0	0	0	24
14	22	18	20	0	4	0	0	0	0	0	18	0
15	11	9	8	4	0	0	0	0	0	0	0	0
16	10	0	0	0	0	0	0	0	0	5	20	9
17	12	10	0	0	0	0	0	0	0	0	0	8
18	0	0	0	0	0	0	0	0	0	0	0	10
19	0	0	0	22	0	0	0	0	0	0	0	32
20	19	14	0	0	0	0	0	0	0	0	9	14
21	28	28	0	0	0	0	0	0	0	0	0	49
22	42	21	0	0	0	0	0	0	0	0	12	0
23	83	0	0	0	0	0	0	0	4	0	0	0
24	18	0	0	0	0	0	0	0	0	0	0	0
25	14	0	0	0	0	0	0	0	0	0	0	0
26	0	3	5	0	0	0	0	0	0	0	4	0
27	0	80	18	0	0	0	0	0	0	0	18	0
28	0	12	24	0	0	0	0	0	0	0	10	0
29	0	0	7	0	0	0	0	0	0	0	0	0
30	0	0	19	0	0	0	0	0	0	0	0	0
31	0	0	24	0	0	0	0	0	0	0	0	0

<b>Monthly</b>	354	283	489	215	7	4	0	0	4	5	91	472
<b>Rainy Days</b>	15	14	14	8	2	1	0	0	1	1	7	16
<b>Max.</b>	83	80	148	93	4	4	0	0	4	5	20	100
<b>Average</b>	11	10	16	7	0	0	0	0	0	0	3	15

<b>Annual</b> :	1924	<b>No.</b> :	79	<b>Max.</b> :	148	<b>Ave.</b> :	5
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	33	242	4	0	4	0	0	0	0	0	30
2	35	51	103	185	0	0	0	0	0	0	0	178
3	93	31	47	4	7	0	0	0	0	0	18	142
4	41	24	0	22	0	0	0	0	0	5	29	73
5	185	49	0	0	0	0	0	0	4	0	12	49
6	0	95	97	0	0	0	0	0	0	0	32	0

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	128	115	392	193	7	4	0	0	0	0	18	350
<b>2nd</b>	226	168	97	22	0	0	0	0	4	5	73	122

**Table Daily Rainfall**

Station : **Barembeng**  
 Year : **1996**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	22	43	0	15	0	5	0	0			0
2	50	80	18	0	23	0	1	0	0			0
3	0	28	11	0	0	0	0	0	0			9
4	35	175	0	0	0	0	0	0	0			4
5	52	0	14	0	0	0	0	0	0			10
6	35	0	0	0	0	0	0	0	0			12
7	28	0	0	4	0	0	0	0	0			18
8	0	80	0	0	0	0	0	0	0			41
9	0	112	0	0	0	0	0	0	0			7
10	0	24	0	0	0	0	0	0	0			50
11	0	42	0	0	0	0	0	0	0			80
12	0	195	35	0	0	0	0	0	0			14
13	0	120	0	0	0	0	0	0	0			23
14	0	24	0	0	0	0	0	0	0			120
15	0	25	0	0	0	0	0	0	0			9
16	0	12	50	3	0	0	0	0	0			35
17	0	5	13	0	0	0	0	0	0			13
18	0	0	0	0	0	0	0	0	0			4
19	58	0	0	0	0	0	0	0	0			75
20	42	0	0	0	0	0	0	0	0			70
21	80	0	9	0	0	0	2	0	0			31
22	32	23	15	0	0	0	3	0	0			18
23	50	18	19	0	0	0	0	0	0			8
24	48	9	68	0	0	0	0	0	0			7
25	53	12	33	0	0	0	0	0	0			14
26	47	20	9	0	0	0	0	0	0			0
27	78	68	0	0	0	0	0	0	0			0
28	75	24	0	0	0	0	0	0	0			0
29	83	18	0	0	0	0	3	0	0			15
30	28		0	0	0	0	0	0	0			0
31	20		0		0		0	0				0

<b>Monthly</b>	894	1136	337	7	38	0	14	0	0	0	0	687
<b>Rainy Days</b>	18	22	13	2	2	0	5	0	0	0	0	24
<b>Max.</b>	83	195	68	4	23	0	5	0	0	0	0	120
<b>Average</b>	29	39	11	0	1	0	0	0	0	0	0	22

<b>Annual</b> :	3113	<b>No.</b> :	86	<b>Max.</b> :	195	<b>Ave.</b> :	9
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	137	305	86	0	38	0	6	0	0	0	0	23
2	63	216	0	4	0	0	0	0	0	0	0	128
3	0	406	35	0	0	0	0	0	0	0	0	246
4	100	17	63	3	0	0	0	0	0	0	0	197
5	263	62	144	0	0	0	5	0	0	0	0	78
6	331	130	9	0	0	0	3	0	0	0	0	15

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	200	927	121	4	38	0	6	0	0	0	0	397
<b>2nd</b>	694	209	216	3	0	0	8	0	0	0	0	290



**Table Daily Rainfall**

Station : **Barembeng**  
 Year : **1998**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0	0	0	0	7	0	0	0	0	0	75
2	0	0	0	15	18	2	0	0	0	0	6	35
3	0	0	0	0	0	2	0	0	0	0	14	15
4	0	0	0	18	0	0	0	0	0	0	18	35
5	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	50
7	0	0	0	40	0	0	10	0	0	0	0	175
8	3	0	0	23	0	0	20	0	0	0	0	21
9	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	9	0	0	0	0	0	0
11	0	0	0	18	0	0	25	0	0	5	0	0
12	0	0	0	15	13	0	0	0	0	0	30	0
13	0	0	0	0	0	0	0	0	0	0	0	0
14	4	15	0	18	0	0	0	6	0	0	0	0
15	14	0	0	0	0	0	0	10	0	0	0	0
16	0	0	58	0	0	0	0	0	0	0	0	110
17	0	0	0	22	0	0	0	0	0	0	0	15
18	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	50	0	0	0	0	0	0	0	0	0
20	0	0	17	0	0	10	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	15	0	60
23	0	0	0	0	10	0	0	0	0	0	23	0
24	0	0	0	0	0	0	25	0	0	0	18	0
25	0	0	10	0	0	0	50	6	0	0	0	85
26	0	0	0	0	0	0	75	0	0	0	15	138
27	0	0	0	0	25	0	0	0	0	0	33	0
28	0	7	0	0	15	9	3	0	0	0	18	0
29	0		0	0	0	0	4	0	0	55	55	150
30	0		0	0	0	0	6	105	0	0	40	60
31	0		0		0		5	0		0		0

<b>Monthly</b>	21	22	135	169	81	39	223	127	0	75	270	1024
<b>Rainy Days</b>	3	2	4	8	5	6	10	4	0	3	11	14
<b>Max.</b>	14	15	58	40	25	10	75	105	0	55	55	175
<b>Average</b>	1	1	4	6	3	1	7	4	0	2	9	33

<b>Annual</b> :	2186	<b>No.</b> :	70	<b>Max.</b> :	175	<b>Ave.</b> :	6
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0	0	33	18	11	0	0	0	0	38	160
2	3	0	0	63	0	9	30	0	0	0	0	246
3	18	15	0	51	13	0	25	16	0	5	30	0
4	0	0	125	22	0	10	0	0	0	0	0	125
5	0	0	10	0	10	0	75	6	0	15	41	145
6	0	7	0	0	40	9	93	105	0	55	161	348

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	21	15	0	147	31	20	55	16	0	5	68	406
<b>2nd</b>	0	7	135	22	50	19	168	111	0	70	202	618

**Table Daily Rainfall**

Station : **Barembeng**  
 Year : **1999**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	90	0	40	0	0	0	0	0	0	0	0	0
2	122	10	150	0	0	0	0	0	0	0	0	0
3	64	40	250	30	50	0	0	0	0	0	15	0
4	0	240	150	13	0	0	0	0	0	0	105	0
5	0	50	0	0	0	0	0	0	0	0	11	0
6	0	25	0	0	45	0	0	0	0	0	58	0
7	0	30	0	0	30	0	0	0	0	0	15	140
8	0	40	0	0	0	0	0	0	0	0	0	115
9	12	0	0	0	0	0	0	0	0	0	0	40
10	51	0	0	0	0	0	0	0	0	0	0	50
11	0	0	0	0	0	0	0	0	0	0	0	0
12	53	25	0	0	0	0	0	0	0	0	13	0
13	0	70	30	0	0	0	0	0	0	0	0	0
14	43	0	0	0	0	0	0	0	0	0	0	0
15	1	0	0	16	0	0	0	0	0	0	0	0
16	37	100	63	0	0	0	0	0	0	0	23	0
17	19	140	0	85	0	0	0	0	0	0	40	25
18	0	70	0	75	0	15	0	0	0	0	0	38
19	0	50	0	0	0	0	0	0	0	0	0	0
20	0	40	0	0	0	0	0	0	0	0	0	0
21	0	15	0	0	0	10	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0
23	0	15	0	0	0	0	0	0	0	0	0	0
24	26	40	0	0	0	0	0	0	0	28	0	100
25	0	0	0	0	0	0	0	0	0	11	0	70
26	34	0	35	0	0	0	0	0	0	0	0	0
27	27	0	0	0	0	0	0	0	0	0	0	0
28	26	0	0	0	0	0	0	0	0	3	0	0
29	78		0	0	0	0	0	0	0	10	0	28
30	48		13	0	0	0	0	0	0	0	0	0
31												

<b>Monthly</b>	731	1000	731	219	125	25	0	0	0	52	280	606
<b>Rainy Days</b>	16	17	8	5	3	2	0	0	0	4	8	9
<b>Max.</b>	122	240	250	85	50	15	0	0	0	28	105	140
<b>Average</b>	24	36	24	7	4	1	0	0	0	2	9	20

<b>Annual</b> :	3769	<b>No.</b> :	72	<b>Max.</b> :	250	<b>Ave.</b> :	11
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	276	340	590	43	50	0	0	0	0	0	131	0
2	63	95	0	0	75	0	0	0	0	0	73	345
3	97	95	30	16	0	0	0	0	0	0	13	0
4	56	400	63	160	0	15	0	0	0	0	63	63
5	26	70	0	0	0	10	0	0	0	39	0	170
6	213	0	48	0	0	0	0	0	0	13	0	28

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	436	530	620	59	125	0	0	0	0	0	217	345
<b>2nd</b>	295	470	111	160	0	25	0	0	0	52	63	261

**Table Daily Rainfall**

Station : **Barembeng**  
 Year : **2000**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	40	0	0	0	30	10	0	0	0	0	5
2	0	75	0	0	0	0	0	0	0	0	0	6
3	0	255	0	0	0	0	0	0	0	0	0	10
4	0	15	0	50	0	0	0	0	0	0	0	0
5	60	175	0	0	0	75	0	0	0	0	0	0
6	0	25	0	0	15	0	0	0	0	0	0	0
7	20	70	75	0	0	0	0	0	0	0	0	8
8	40	30	0	0	0	15	0	0	0	0	0	0
9	0	43	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	50	0	0	0	0	0	0
11	50	1	0	0	5	0	0	0	0	0	4	0
12	15	1	5	30	0	0	0	0	0	0	0	3
13	0	1	150	0	0	0	0	0	0	0	0	0
14	0	1	0	0	0	0	0	0	0	0	1	15
15	0	1	25	0	0	15	0	0	0	0	0	0
16	35	1	50	0	0	0	0	0	0	0	3	0
17	0	1	10	0	0	0	0	0	0	0	0	0
18	175	1	63	0	0	0	0	0	0	0	0	0
19	25	1	0	0	0	0	0	0	0	0	0	0
20	45	1	100	105	0	0	0	0	0	0	0	4
21	0	35	30	0	0	0	0	0	0	0	0	0
22	40	0	40	0	0	0	0	0	0	0	3	0
23	0	0	0	50	0	0	0	0	0	0	5	1
24	25	30	0	0	0	0	0	0	0	0	0	0
25	35	200	0	0	0	0	0	0	0	0	0	2
26	0	14	0	10	0	0	0	0	0	0	10	0
27	0	0	0	0	0	0	0	0	0	0	10	0
28	30	0	0	5	0	0	0	0	0	0	10	0
29	75	0	0	0	0	0	0	0	0	0	3	0
30	100		0	38	10	0	0	0	0	0	0	0
31	70		0		0		0	0		0		0

<b>Monthly</b>	840	1017	548	288	30	185	10	0	0	0	49	54
<b>Rainy Days</b>	16	23	10	7	3	5	1	0	0	0	9	9
<b>Max.</b>	175	255	150	105	15	75	10	0	0	0	10	15
<b>Average</b>	27	35	18	10	1	6	0	0	0	0	2	2

<b>Annual</b> :	3021	<b>No.</b> :	83	<b>Max.</b> :	255	<b>Ave.</b> :	8
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	60	560	0	50	0	105	10	0	0	0	0	21
2	60	168	75	0	15	65	0	0	0	0	0	8
3	65	5	180	30	5	15	0	0	0	0	5	18
4	280	5	223	105	0	0	0	0	0	0	3	4
5	100	265	70	50	0	0	0	0	0	0	8	3
6	275	14	0	53	10	0	0	0	0	0	33	0

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	185	733	255	80	20	185	10	0	0	0	5	47
<b>2nd</b>	655	284	293	208	10	0	0	0	0	0	44	7

**Table Daily Rainfall**

Station : **Barembeng**  
 Year : **2001**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	11	25	0	0	0	0	0	0	0	0	100
2	0	155	45	0	0	0	0	0	0	0	15	135
3	0	125	30	0	25	0	0	0	0	0	0	80
4	0	145	50	0	0	0	0	0	0	0	0	20
5	0	40	100	0	0	0	0	0	0	0	0	25
6	0	85	18	0	0	0	0	0	0	0	0	100
7	0	95	0	0	0	0	0	0	0	0	0	80
8	100	210	0	0	0	3	0	0	0	0	0	55
9	100	45	0	0	0	80	0	0	0	0	0	40
10	180	0	0	0	0	0	0	0	0	0	0	55
11	40	0	0	0	0	0	0	0	0	0	0	75
12	30	5	100	0	0	0	0	0	0	0	0	50
13	0	28	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0
15	25	0	0	0	0	0	0	0	0	0	0	0
16	0	0	70	0	0	0	0	0	0	0	58	0
17	0	26	15	0	0	0	0	0	0	0	0	0
18	0	0	75	0	0	0	0	0	0	0	0	15
19	0	5	0	0	0	0	0	0	0	0	0	25
20	0	60	0	0	0	0	0	0	0	0	0	0
21	50	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	65	0
23	0	0	25	0	0	0	0	0	0	0	0	0
24	15	0	0	0	0	0	0	0	0	0	0	0
25	60	0	0	0	0	40	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	40	0
27	0	0	0	0	0	0	0	0	0	0	18	0
28	0	0	0	0	0	0	0	0	0	0	0	100
29	29		0	0	0	0	0	0	0	0	0	95
30	0		0	0	0	0	0	0	0	0	0	15
31	0		0		0		0	0		0		125

<b>Monthly</b>	629	1035	553	0	25	123	0	0	0	0	196	1190
<b>Rainy Days</b>	10	14	11	0	1	3	0	0	0	0	5	18
<b>Max.</b>	180	210	100	0	25	80	0	0	0	0	65	135
<b>Average</b>	20	37	18	0	1	4	0	0	0	0	7	38

<b>Annual</b> :	3751	<b>No.</b> :	62	<b>Max.</b> :	210	<b>Ave.</b> :	10
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	476	250	0	25	0	0	0	0	0	15	360
2	380	435	18	0	0	83	0	0	0	0	0	330
3	95	33	100	0	0	0	0	0	0	0	0	125
4	0	91	160	0	0	0	0	0	0	0	58	40
5	125	0	25	0	0	40	0	0	0	0	65	0
6	29	0	0	0	0	0	0	0	0	0	58	335

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	475	944	368	0	25	83	0	0	0	0	15	815
<b>2nd</b>	154	91	185	0	0	40	0	0	0	0	181	375



**Table Daily Rainfall**

Station : Sanrobone  
 Year : 1975

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1				0	0	0	0	0	2	0		3
2				0	0	0	0	0	0	0		4
3				0	0	0	0	0	0	0		0
4				0	12	0	0	0	0	0		0
5				0	0	0	0	0	0	0		2
6				0	0	0	0	0	2	2		4
7				0	0	0	0	0	0	0		0
8				0	0	0	0	0	0	0		0
9				0	0	0	0	0	4	0		1
10				0	0	0	0	0	2	0		3
11				0	0	0	0	0	0	3		0
12				0	4	0	0	0	0	0		0
13				0	1	0	0	0	0	0		4
14				0	0	0	0	0	0	0		0
15				0	0	0	0	0	0	0		0
16				0	0	0	0	0	6	0		0
17				0	0	0	0	0	0	0		0
18				185	3	0	0	0	0	0		0
19				4	1	0	0	0	3	1		0
20				28	0	0	0	1	0	0		0
21				133	13	0	0	0	0	0		0
22				0	0	0	0	8	0	3		0
23				0	0	0	0	0	0	2		0
24				0	0	0	0	0	0	0		0
25				0	0	0	0	0	0	0		0
26				0	0	0	4	0	0	6		0
27				0	0	0	0	15	3	0		1
28				5	1	0	0	0	0	3		2
29				38	0	0	0	0	0	0		5
30				0	0	0	0	0	0	0		6
31				0	0		0	0		0		3

<b>Monthly</b>	0	0	0	393	35	0	4	24	22	20	0	38
<b>Rainy Days</b>	0	0	0	6	7	0	1	3	7	7	0	12
<b>Max.</b>	0	0	0	185	13	0	4	15	6	6	0	6
<b>Average</b>	0	0	0	13	1	0	0	1	1	1	0	1

<b>Annual</b> :	536	<b>No.</b> :	43	<b>Max.</b> :	185	<b>Ave.</b> :	1
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0	0	0	12	0	0	0	2	0	0	9
2	0	0	0	0	0	0	0	0	8	2	0	8
3	0	0	0	0	5	0	0	0	0	3	0	4
4	0	0	0	217	4	0	0	1	9	1	0	0
5	0	0	0	133	13	0	0	8	0	5	0	0
6	0	0	0	43	1	0	4	15	3	9	0	17

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	0	0	0	0	17	0	0	0	10	5	0	21
<b>2nd</b>	0	0	0	393	18	0	4	24	12	15	0	17

**Table Daily Rainfall**

Station : Sanrobone  
Year : 1976

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0	0	0	0	0	0	0	0	0	0	0
2	0	4	0	0	0	0	0	0	0	0	0	0
3	0	56	0	0	0	0	0	0	0	0	0	0
4	6	3	0	0	0	0	0	0	0	0	0	36
5	2	5	0	0	0	0	0	0	0	0	0	0
6	0	10	0	0	0	0	0	0	0	0	0	24
7	0	0	0	0	0	4	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0
9	0	7	0	0	0	0	0	0	0	0	0	15
10	0	34	0	13	0	0	0	0	0	0	0	27
11	7	19	0	0	0	0	0	0	0	0	0	0
12	5	10	0	0	0	0	0	0	0	0	0	0
13	0	7	0	0	0	0	0	0	0	0	0	12
14	0	0	0	0	0	0	0	0	0	0	0	25
15	0	0	0	0	0	0	0	0	0	0	0	32
16	0	0	0	0	0	0	0	0	0	0	0	8
17	0	0	0	0	0	0	0	0	0	0	0	13
18	2	20	0	0	0	0	0	0	0	0	0	22
19	0	0	0	0	0	0	0	0	0	0	0	32
20	0	0	0	0	0	0	0	0	0	0	0	0
21	0	29	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0
23	0	42	0	0	0	0	0	0	0	0	0	0
24	0	57	0	0	0	0	0	0	0	0	35	0
25	0	7	0	0	0	0	0	0	0	0	0	0
26	1	9	0	0	0	0	0	0	0	0	0	0
27	4	0	0	0	0	0	0	0	0	0	0	0
28	10	0	0	0	0	9	0	0	0	0	0	0
29	0		0	0	0	0	0	0	0	0	0	35
30	0		0	0	0	0	0	0	0	0	0	22
31	0		0		0		0	0		0		11

<b>Monthly</b>	37	319	0	13	0	13	0	0	0	0	35	314
<b>Rainy Days</b>	8	16	0	1	0	2	0	0	0	0	1	14
<b>Max.</b>	10	57	0	13	0	9	0	0	0	0	35	36
<b>Average</b>	1	11	0	0	0	0	0	0	0	0	1	10

<b>Annual</b>	:	731	<b>No.</b>	:	42	<b>Max.</b>	:	57	<b>Ave.</b>	:	2
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	8	68	0	0	0	0	0	0	0	0	0	36
2	0	51	0	13	0	4	0	0	0	0	0	66
3	12	36	0	0	0	0	0	0	0	0	0	69
4	2	20	0	0	0	0	0	0	0	0	0	75
5	0	135	0	0	0	0	0	0	0	0	35	0
6	15	9	0	0	0	9	0	0	0	0	0	68

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	20	155	0	13	0	4	0	0	0	0	0	171
<b>2nd</b>	17	164	0	0	0	9	0	0	0	0	35	143

**Table Daily Rainfall**

Station : **Sandrobone**  
 Year : **1977**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	13	35	0	0	0	0	0	0	0	0	8
2	45	0	0	0	0	0	0	0	0	0	0	6
3	7	0	0	0	8	0	0	0	0	0	0	9
4	28	0	0	0	0	0	0	0	0	0	0	0
5	0	89	0	0	0	0	0	0	0	0	0	15
6	13	10	28	0	0	0	0	0	0	0	0	8
7	10	11	65	3	0	0	0	0	0	0	0	10
8	63	70	18	0	0	0	0	0	0	0	0	5
9	8	48	5	4	0	0	0	0	0	0	0	7
10	23	49	1	3	0	0	0	0	0	0	0	7
11	60	32	24	55	0	0	0	0	0	0	0	0
12	15	21	0	23	0	13	0	0	0	0	0	0
13	15	63	0	30	0	28	0	0	0	0	0	0
14	10	35	5	0	0	6	0	0	0	0	0	0
15	0	76	0	0	0	0	0	0	0	0	0	0
16	3	63	25	0	0	0	0	0	0	0	0	0
17	4	52	0	0	0	0	0	0	0	0	0	14
18	13	0	25	0	0	0	0	0	0	0	2	11
19	43	50	38	0	0	0	0	0	0	0	2	35
20	64	19	45	0	0	0	0	0	0	0	7	2
21	46	21	3		25	0	0	0	0	0	0	2
22	75	95	2	0	0	0	0	0	0	0	0	9
23	98	80	8	0	0	0	0	0	0	0	5	0
24	103	25	8	0	0	0	0	0	0	0	0	0
25	45	90	13	0	0	0	0	0	0	0	0	0
26		51	18	0	0	0	0	0	0	0	2	0
27	0	72	28	0	0	0	0	0	0	0	5	0
28	0	37	0	0	0	0	0	0	0	0	9	0
29	0	0	1	0	0	0	0	0	0	0	1	
30	54		2	0	0	0	0	0	0	0	64	12
31	16		4		0	0	0	0	0	0		13

<b>Monthly</b>	861	1172	401	118	33	47	0	0	0	0	97	173
<b>Rainy Days</b>	24	24	22	6	2	3	0	0	0	0	9	17
<b>Max.</b>	103	95	65	55	25	28	0	0	0	0	64	35
<b>Average</b>	29	40	13	4	1	2	0	0	0	0	3	6

<b>Annual</b> :	2902	<b>No.</b> :	107	<b>Max.</b> :	103	<b>Ave.</b> :	8
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	80	102	35	0	8	0	0	0	0	0	0	38
2	117	188	117	10	0	0	0	0	0	0	0	37
3	100	227	29	108	0	47	0	0	0	0	0	0
4	127	184	133	0	0	0	0	0	0	0	11	62
5	367	311	34	0	25	0	0	0	0	0	5	11
6	70	160	53	0	0	0	0	0	0	0	81	25

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	297	517	181	118	8	47	0	0	0	0	0	75
<b>2nd</b>	564	655	220	0	25	0	0	0	0	0	97	98

**Table Daily Rainfall**

Station : **Sandrobone**  
 Year : **1978**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	49	0	0	0	0	0	0	0	0	0	0	5
2	0	0	0	0	0	0	0	0	0	105	0	3
3	0	72	0	0	0	0	0	0	0	0	0	30
4	0	0	0	38	43	0	0	0	0	0	0	10
5	0	0	0	63	0	0	0	0	0	0	0	35
6	0	0	15	8	0	0	63	0	0	0	0	15
7	23	0	0	13	38	18	0	0	16	0	0	15
8	4	75	0	0	0	0	0	0	18	0	0	0
9	4	3	0	0	0	0	0	0	0	0	0	0
10	18	0	0	0	18	33	0	0	0	0	0	0
11	40	0	0	0	13	0	0	0	0	0	0	0
12	50	8	75	0	0	0	0	0	0	0	13	18
13	1	0	0	0	0	15	0	0	0	0	0	3
14	0	15	0	0	0	0	0	0	19	0	0	0
15	0	15	0	0	23	18	8	0	0	0	0	0
16	1	35	0	0	36	0	0	0	0	0	18	0
17	0	18	3	0	0	0	0	0	0	0	40	0
18	0	8	0	0	0	0	0	0	0	0	0	0
19	46	25	0	0	0	0	0	0	0	0	3	3
20	3	23	0	0	0	0	0	0	0	0	0	6
21	0	11	0	0	0	0	0	0	0	0	0	48
22	15	18	0	0	0	0	0	0	0	0	0	33
23	38	33	0	0	0	0	0	0	0	0	0	34
24	25	0	45	0	0	0	0	0	0	0	0	18
25	33	48	29	0	0	0	0	3	0	0	10	38
26	16	5	15	0	0	0	0	0	0	0	3	0
27	0	8	18	0	0	0	0	0	0	0	0	65
28	0	10	14	0	0	0	0	0	0	0	0	41
29	0		0	0	0	0	0	0	0	0	0	45
30	0		0	0	0	0	0	0	0	0	0	24
31	0		0		0		0	0		0		43

<b>Monthly</b>	366	430	214	122	171	84	71	3	53	105	87	532
<b>Rainy Days</b>	16	18	8	4	6	4	2	1	3	1	6	21
<b>Max.</b>	50	75	75	63	43	33	63	3	19	105	40	65
<b>Average</b>	12	15	7	4	6	3	2	0	2	3	3	17

<b>Annual</b> :	2238	<b>No.</b> :	90	<b>Max.</b> :	105	<b>Ave.</b> :	6
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	49	72	0	101	43	0	0	0	0	105	0	83
2	49	78	15	21	56	51	63	0	34	0	0	30
3	91	38	75	0	36	33	8	0	19	0	13	21
4	50	109	3	0	36	0	0	0	0	0	61	9
5	111	110	74	0	0	0	0	3	0	0	10	171
6	16	23	47	0	0	0	0	0	0	0	3	218

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	189	188	90	122	135	84	71	0	53	105	13	134
<b>2nd</b>	177	242	124	0	36	0	0	3	0	0	74	398

**Table Daily Rainfall**

Station : **Sandrobone**  
 Year : **1979**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	13	0	0	0	0	0	0	0	0	0	43
2	56	13	0	5	0	0	0	0	0	0	0	0
3	1	8	18	2	0	10	0	0	0	0	0	24
4	18	8	10	0	23	0	0	0	0	0	0	0
5	13	20	10	0	0	4	0	0	0	0	0	0
6	5	33	15	0	0	40	0	0	0	0	0	0
7	123	0	70	5	0	0	0	0	0	0	0	34
8	83	0	35	14	31	0	0	0	0	0	0	73
9	103	0	70	0	0	3	0	0	0	0	0	35
10	98	33	0	0	0	0	0	0	0	0	0	34
11	108	13	0	0	0	0	0	0	0	0	5	14
12	73	3	18	0	0	0	6	0	0	0	0	0
13	15	0	18	0	6	0	0	0	0	0	41	0
14	15	0	3	0	0	0	0	0	0	0	0	0
15	13	0	13	0	8	0	0	0	0	0	0	0
16	8	0	3	0	0	0	0	0	0	0	0	0
17	6	13	0	0	0	0	0	0	0	0	0	15
18	0	3	0	0	0	0	0	0	0	0	0	18
19	0	8	0	0	0	0	0	0	0	0	24	0
20	0	5	3	0	0	0	0	0	0	0	0	3
21	13	4	0	0	0	0	0	0	0	0	0	0
22	15	0	0	0	0	0	0	0	0	0	0	0
23	43	3	0	0	0	0	0	0	0	0	0	0
24	0	5	0	0	0	5	0	0	0	0	0	0
25	0	30	1	25	0	0	0	0	0	0	0	0
26	13	38	3	0	4	0	0	0	0	0	20	3
27	79	18	40	8	0	0	0	0	0	0	0	0
28	0	54	3	0	0	0	0	0	0	0	0	0
29	0		0	0	0	0	0	0	0	0	5	0
30	0		5	1	0	0	0	0	0	0	2	75
31	0		3		0		0	0		0		0

<b>Monthly</b>	901	325	341	60	72	62	6	0	0	0	97	371
<b>Rainy Days</b>	21	20	19	7	5	5	1	0	0	0	6	12
<b>Max.</b>	123	54	70	25	31	40	6	0	0	0	41	75
<b>Average</b>	29	12	11	2	2	2	0	0	0	0	3	12

<b>Annual</b>	: 2235	<b>No.</b>	: 96	<b>Max.</b>	: 123	<b>Ave.</b>	: 6
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	88	62	38	7	23	14	0	0	0	0	0	67
2	412	66	190	19	31	43	0	0	0	0	0	176
3	224	16	52	0	14	0	6	0	0	0	46	14
4	14	29	6	0	0	0	0	0	0	0	24	36
5	71	42	1	25	0	5	0	0	0	0	0	0
6	92	110	54	9	4	0	0	0	0	0	27	78

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	724	144	280	26	68	57	6	0	0	0	46	257
<b>2nd</b>	177	181	61	34	4	5	0	0	0	0	51	114

**Table Daily Rainfall**

Station : **Sandrobone**  
 Year : **1980**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0
3	0	10	0	0	0	0	0	0	0	0	0	0
4	50	8	0	0	0	0	0	0	0	0	0	24
5	0	0	0	0	0	0	0	0	0	0	0	0
6	10	0	0	0	0	0	0	0	0	0	0	0
7	3	0	0	0	8	0	0	0	0	0	0	54
8	7	0	0	0	0	0	0	0	0	0	0	3
9	45	35	0	23	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	5	0
11	110	15	0	0	0	0	0	0	0	0	7	48
12	23	30	0	0	0	0	0	0	0	0	0	53
13	10	73	0	15	0	0	0	0	0	0	0	3
14	10	38	0	80	0	0	0	0	0	0	0	53
15	0	8	23	18	0	0	0	0	0	0	0	48
16	18	29	0	3	0	0	0	0	0	0	0	2
17	0	15	0	5	0	0	0	0	0	0	0	0
18	0	9	0	0	0	0	0	0	0	0	0	9
19	0	0	0	0	0	0	0	0	0	0	0	0
20	28	8	0	3	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	29	19
22	0	0	0	0	0	0	0	0	0	0	0	45
23	30	0	0	0	0	0	0	0	0	0	0	17
24	80	53	0	0	0	0	0	0	0	0	0	28
25	48	0	0	0	0	0	0	0	0	0	0	40
26	0	0	0	0	0	0	0	0	0	0	0	8
27	0	0	0	0	3	0	0	0	0	0	0	0
28	13	0	0	0	0	0	0	0	0	0	0	19
29	0	0	0	0	0	8	0	0	0	0	29	8
30	0	0	0	70	0	0	0	0	0	0	0	23
31	0	0	0	0	0	0	0	0	0	0	0	0

<b>Monthly</b>	485	331	23	217	11	8	0	0	0	0	70	504
<b>Rainy Days</b>	15	13	1	8	2	1	0	0	0	0	4	19
<b>Max.</b>	110	73	23	80	8	8	0	0	0	0	29	54
<b>Average</b>	16	11	1	7	0	0	0	0	0	0	2	16

<b>Annual</b> :	1649	<b>No.</b> :	63	<b>Max.</b> :	110	<b>Ave.</b> :	5
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	50	18	0	0	0	0	0	0	0	0	0	24
2	65	35	0	23	8	0	0	0	0	0	5	57
3	153	164	23	113	0	0	0	0	0	0	7	205
4	46	61	0	11	0	0	0	0	0	0	0	11
5	158	53	0	0	0	0	0	0	0	0	29	149
6	13	0	0	70	3	8	0	0	0	0	29	58

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	268	217	23	136	8	0	0	0	0	0	12	286
<b>2nd</b>	217	114	0	81	3	8	0	0	0	0	58	218

**Table Daily Rainfall**

Station : **Sandrobone**  
 Year : **1981**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	75	0	9	0	0	0	0	0	0	0	0	14
2	26	0	28	0	0	0	0	0	0	0	0	10
3	37	0	0	0	0	0	0	0	0	0	0	8
4	38	0	0	38	0	0	0	0	0	0	0	0
5	6	4	3	17	0	0	15	0	0	18	8	7
6	6	2	0	0	0	0	0	0	0	0	5	66
7	58	9	0	0	0	0	0	0	0	4	10	20
8	30	18	0	0	0	0	78	0	0	0	0	32
9	6	28	0	0	0	0	0	0	0	0	0	80
10	0	25	0	0	0	0	12	0	0	0	56	105
11	61	45	0	43	0	0	0	0	0	0	0	48
12	8	0	0	0	0	0	12	0	0	0	3	0
13	0	20	0	0	0	0	0	0	0	0	0	18
14	0	0	0	0	0	0	4	0	0	0	0	8
15	0	45	0	0	0	0	5	0	0	0	0	0
16	0	8	0	10	0	0	0	0	0	0	10	10
17	21	18	0	0	0	0	0	0	0	0	22	60
18	23	0	0	0	0	0	0	0	0	0	49	5
19	34	0	0	21	10	10	0	0	0	0	6	9
20	13	0	0	14	0	0	0	0	0	0	28	23
21	8	0	0	0	0	0	0	0	0	0	0	45
22	0	0	0	0	0	0	7	0	0	0	0	0
23	13	11	0	0	0	0	2	0	0	8	0	1
24	8	7	0	0	0	0	0	0	0	2	8	73
25	16	0	0	0	0	0	0	0	0	0	8	24
26	8	18	6	0	0	0	0	0	0	0	8	4
27	116	23	5	0	0	0	0	0	0	0	36	0
28	39	7	44	0	0	0	0	0	0	0	56	9
29	18	0	32	0	0	0	0	0	0	0	42	0
30	44	0	5	0	0	0	0	0	0	0	0	0
31	0	0	0	0	0	0	0	0	0	0	0	8

<b>Monthly</b>	712	288	132	143	10	10	135	0	0	32	355	687
<b>Rainy Days</b>	24	16	8	6	1	1	8	0	0	4	16	24
<b>Max.</b>	116	45	44	43	10	10	78	0	0	18	56	105
<b>Average</b>	23	9	4	5	0	0	4	0	0	1	11	22

<b>Annual</b> :	2504	<b>No.</b> :	108	<b>Max.</b> :	116	<b>Ave.</b> :	7
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	182	4	40	55	0	0	15	0	0	18	8	39
2	100	82	0	0	0	0	90	0	0	4	71	303
3	69	110	0	43	0	0	21	0	0	0	3	74
4	91	26	0	45	10	10	0	0	0	0	115	107
5	45	18	0	0	0	0	9	0	0	10	16	143
6	225	48	92	0	0	0	0	0	0	0	142	21

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	351	196	40	98	0	0	126	0	0	22	82	416
<b>2nd</b>	361	92	92	45	10	10	9	0	0	10	273	271





**Table Daily Rainfall**

Station : **Sandrobone**  
 Year : **1983**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	52	2	0	0	4	0	0	0	0	0	0	56
2	52	3	0	0	4	0	0	0	0	0	0	49
3	3	18	1	0	7	0	0	0	0	0	0	3
4	27	15	0	0	2	0	0	0	0	10	0	50
5	4	5	0	0	0	0	0	0	0	0	0	1
6	82	24	0	0	0	0	0	0	0	0	33	0
7	0	0	0	2	0	0	0	0	0	0	22	0
8	0	0	0	3	0	0	0	0	0	0	13	0
9	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	5	3	0
11	9	0	0	0	5	13	0	0	0	0	0	0
12	16	0	0	0	4	0	0	0	0	0	10	0
13	54	0	0	0	0	0	0	0	0	0	0	13
14	0	0	0	74	0	6	0	0	0	0	0	17
15	27	46	0	0	5	0	0	0	0	0	0	17
16	15	0	0	0	7	0	0	0	0	0	3	0
17	0	0	0	0	2	0	2	0	0	18	1	0
18	0	0	0	0	0	0	2	0	0	10	0	0
19	0	0	0	0	0	0	0	0	0	0	13	0
20	3	0	0	2	0	0	0	0	0	0	7	0
21	0	0	20	2	0	0	0	0	0	0	14	0
22	35	0	2	0	0	0	0	0	0	0	23	0
23	2	6	0	0	0	0	0	0	0	0	48	0
24	0	0	0	31	0	0	0	0	0	2	18	0
25	0	0	0	0	0	0	0	0	0	0	99	23
26	2	22	0	0	0	0	0	0	0	0	11	71
27	0	0	90	0	0	10	0	0	0	0	3	22
28	0	0	6	0	0	20	0	0	0	12	3	14
29	0		0	0	0	1	0	0	0	0	41	73
30	1		0	4	0	0	0	0	0	0	99	98
31	2		0		0		0	0		0		11

<b>Monthly</b>	386	141	119	118	40	50	4	0	0	57	464	518
<b>Rainy Days</b>	17	9	5	7	9	5	2	0	0	6	19	15
<b>Max.</b>	82	46	90	74	7	20	2	0	0	18	99	98
<b>Average</b>	12	5	4	4	1	2	0	0	0	2	15	17

<b>Annual</b> :	1897	<b>No.</b> :	94	<b>Max.</b> :	99	<b>Ave.</b> :	5
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	138	43	1	0	17	0	0	0	0	10	0	159
2	82	24	0	5	0	0	0	0	0	5	71	0
3	106	46	0	74	14	19	0	0	0	0	10	47
4	18	0	0	2	9	0	4	0	0	28	24	0
5	37	6	22	33	0	0	0	0	0	2	202	23
6	5	22	96	4	0	31	0	0	0	12	157	289

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	326	113	1	79	31	19	0	0	0	15	81	206
<b>2nd</b>	60	28	118	39	9	31	4	0	0	42	383	312

**Table Daily Rainfall**

Station : **Sandrobone**  
 Year : **1984**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	99	30	0	0	5	0	2	0	0	0	0	0
2	99	0	0	0	0	0	0	0	0	0	0	0
3	30	24	0	0	0	0	0	0	0	0	0	0
4	39	13	0	0	0	0	0	0	0	0	0	0
5	45	0	0	0	0	0	0	0	0	0	0	0
6	51	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	5	0	0	0	0	0	0	0	0
8	0	0	4	3	97	0	0	0	0	0	0	0
9	0	20	77	0	2	3	0	0	0	0	0	0
10	0	67	28	1	6	2	0	0	0	0	0	0
11	0	74	8	2	71	0	0	0	0	0	0	0
12	0	30	3	6	8	0	0	0	0	0	3	5
13	0	40	0	11	0	0	0	0	0	0	38	28
14	9	100	0	9	0	0	0	0	0	0	0	48
15	18	43	0	0	0	0	0	0	0	0	0	84
16	39	63	0	0	0	0	0	0	0	0	0	102
17	41	15	0	9	2	0	0	0	0	0	0	98
18	0	30	0	3	93	0	0	0	0	0	0	40
19	0	20	0	6	0	0	0	0	0	0	0	15
20	0	5	0	0	0	0	0	0	0	0	0	3
21	0	29	0	0	0	0	0	0	0	0	6	0
22	0	58	0	9	0	0	0	0	0	0	7	0
23	25	22	0	5	0	0	0	0	0	0	18	5
24	99	3	0	0	0	0	13	0	0	0	5	16
25	0	0	5	0	0	0	0	0	0	0	5	0
26	0	0	16	2	0	0	0	0	0	0	0	0
27	0	0	0	3	0	0	0	0	0	0	0	14
28	25	0	0	3	0	0	0	0	0	0	4	56
29	60		0	2	0	0	0	0	0	0	22	54
30	13		0	0	0	0	0	0	0	0	3	16
31	56		0		0		0	0		0		0

<b>Monthly</b>	748	686	141	79	284	5	15	0	0	0	111	584
<b>Rainy Days</b>	16	19	7	16	8	2	2	0	0	0	10	15
<b>Max.</b>	99	100	77	11	97	3	13	0	0	0	38	102
<b>Average</b>	24	25	5	3	9	0	0	0	0	0	4	19

<b>Annual</b> :	2653	<b>No.</b> :	95	<b>Max.</b> :	102	<b>Ave.</b> :	7
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	312	67	0	0	5	0	2	0	0	0	0	0
2	51	87	109	9	105	5	0	0	0	0	0	0
3	27	287	11	28	79	0	0	0	0	0	41	165
4	80	133	0	18	95	0	0	0	0	0	0	258
5	124	112	5	14	0	0	13	0	0	0	41	21
6	154	0	16	10	0	0	0	0	0	0	29	140

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	390	441	120	37	189	5	2	0	0	0	41	165
<b>2nd</b>	358	245	21	42	95	0	13	0	0	0	70	419

**Table Daily Rainfall**

Station : **Sandrobone**  
 Year : **1985**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0	57	0	0	3	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	32	35	0	0	0	0	0	0	0	0
4	52	12	52	0	0	0	0	0	0	0	0	9
5	30	0	73	0	0	0	0	0	0	0	0	0
6	6	0	83	0	7	0	0	0	0	0	0	0
7	4	0	124	0	0	8	0	0	0	0	0	0
8	0	4	62	0	0	0	0	0	0	0	0	0
9	0	0	6	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	6	0	0	0	0	0	0
11	0	6	0	14	0	0	0	0	0	0	0	24
12	0	0	0	0	0	0	0	0	0	0	0	0
13	0	13	0	17	28	12	0	0	0	0	0	0
14	0	56	0	0	0	0	0	0	0	0	0	0
15	0	73	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0
17	0	32	0	0	0	0	0	0	0	0	0	0
18	5	42	0	0	0	0	4	0	0	0	0	0
19	3	0	0	0	0	0	0	0	0	0	0	0
20	3	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	14
22	0	0	0	0	0	0	0	0	0	0	0	0
23	0	47	0	0	30	0	0	0	0	0	0	0
24	0	0	0	7	0	0	0	0	0	4	0	0
25	2	0	0	0	25	0	0	0	0	0	0	21
26	5	12	0	0	0	0	0	0	0	0	0	13
27	111	19	0	0	0	0	0	0	0	3	0	0
28	0	83	0	13	3	0	0	0	0	12	0	7
29	0		0	0	0	0	0	16	0	0	29	0
30	0		3	0	4	0	7	0	0	0	34	0
31	66		7		0		0	0		0		0

<b>Monthly</b>	287	399	499	86	97	29	11	16	0	19	63	88
<b>Rainy Days</b>	11	12	10	5	6	4	2	1	0	3	2	6
<b>Max.</b>	111	83	124	35	30	12	7	16	0	12	34	24
<b>Average</b>	9	14	16	3	3	1	0	1	0	1	2	3

<b>Annual</b> :	1594	<b>No.</b> :	62	<b>Max.</b> :	124	<b>Ave.</b> :	4
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	82	12	214	35	0	3	0	0	0	0	0	9
2	10	4	275	0	7	14	0	0	0	0	0	0
3	0	148	0	31	28	12	0	0	0	0	0	24
4	11	74	0	0	0	0	4	0	0	0	0	0
5	2	47	0	7	55	0	0	0	0	4	0	35
6	182	114	10	13	7	0	7	16	0	15	63	20

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	92	164	489	66	35	29	0	0	0	0	0	33
<b>2nd</b>	195	235	10	20	62	0	11	16	0	19	63	55

**Table Daily Rainfall**

Station : **Sandrobone**  
 Year : **1986**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	22	0	0	4	0	0	0	0	0	0
3	33	18	25	0	0	0	0	0	0	0	0	0
4	0	0	17	17	0	0	0	0	0	0	23	0
5	44	0	0	11	0	0	0	0	0	0	0	0
6	24	0	0	0	0	0	0	0	0	0	0	0
7	70	0	0	0	0	0	0	0	0	0	4	0
8	0	7	0	0	0	0	0	0	0	0	3	0
9	28	4	0	0	0	0	0	0	0	0	0	0
10	0	0	7	0	0	7	0	0	0	0	0	0
11	68	13	0	0	0	0	0	0	0	0	0	33
12	33	0	0	0	0	0	0	0	0	0	0	0
13	88	0	0	0	0	0	0	0	0	0	3	0
14	162	0	0	20	0	0	0	0	0	0	0	74
15	38	8	0	4	0	0	0	0	0	9	0	61
16	0	5	0	0	0	0	0	0	0	0	0	0
17	20	24	0	0	0	0	0	0	0	0	0	0
18	0	0	9	0	0	0	0	0	0	0	8	0
19	14	6	18	9	0	0	0	0	0	0	0	0
20	9	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	13
22	0	33	0	0	0	0	0	0	0	0	27	0
23	0	7	0	0	0	0	0	0	0	0	0	0
24	6	0	0	0	0	0	0	0	0	0	0	63
25	0	0	0	0	0	0	0	0	0	0	4	0
26	0	0	0	0	0	0	0	0	0	0	6	0
27	8	3	0	0	0	0	0	0	0	0	0	66
28	11	8	0	0	0	0	0	0	0	11	0	0
29	4		29	0	0	0	0	0	0	4	0	3
30	0		0	0	0	0	0	0	0	0	0	0
31	0		0		0		0	0		0		0

<b>Monthly</b>	660	136	127	61	0	11	0	0	0	24	78	313
<b>Rainy Days</b>	17	12	7	5	0	2	0	0	0	3	8	7
<b>Max.</b>	162	33	29	20	0	7	0	0	0	11	27	74
<b>Average</b>	21	5	4	2	0	0	0	0	0	1	3	10

<b>Annual</b> :	1410	<b>No.</b> :	61	<b>Max.</b> :	162	<b>Ave.</b> :	4
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	77	18	64	28	0	4	0	0	0	0	23	0
2	122	11	7	0	0	7	0	0	0	0	7	0
3	389	21	0	24	0	0	0	0	0	9	3	168
4	43	35	27	9	0	0	0	0	0	0	8	0
5	6	40	0	0	0	0	0	0	0	0	31	76
6	23	11	29	0	0	0	0	0	0	15	6	69

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	588	50	71	52	0	11	0	0	0	9	33	168
<b>2nd</b>	72	86	56	9	0	0	0	0	0	15	45	145

**Table Daily Rainfall**

Station : **Sandrobone**  
 Year : **1987**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0	0	46	0	0	0	0	0	0	0	0
2	0	32	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0
4	43	0	0	0	0	0	0	0	0	0	17	16
5	26	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	22	0	17	0	0	0	0	0	0	21
8	19	0	0	0	0	0	0	0	0	0	34	0
9	30	0	0	0	19	0	0	0	0	0	0	0
10	0	93	0	0	0	0	0	0	0	0	0	73
11	27	0	0	0	37	0	0	0	0	0	0	0
12	9	43	0	0	0	0	0	0	0	0	0	0
13	10	0	0	0	0	0	0	0	0	0	15	0
14	25	0	0	0	0	0	0	0	0	0	0	7
15	0	0	19	0	0	0	0	0	0	0	0	94
16	8	0	37	0	0	0	0	0	0	0	0	134
17	5	0	14	0	0	0	0	0	0	0	0	134
18	0	0	0	0	0	0	0	0	0	0	33	3
19	0	0	0	0	0	0	0	0	0	0	3	0
20	7	80	0	0	0	0	0	0	0	0	0	0
21	42	16	0	0	0	0	0	0	0	0	0	132
22	91	0	27	0	0	0	0	0	0	0	0	139
23	15	0	17	0	0	0	0	0	0	0	0	125
24	25	21	0	0	0	0	0	0	0	0	0	65
25	15	0	47	0	0	0	0	0	0	0	0	8
26	0	0	0	0	0	0	0	0	0	0	0	65
27	13	0	0	0	0	0	0	0	0	0	0	134
28	15	0	0	0	0	0	0	0	0	0	0	0
29	115		25	0	0	0	0	0	0	0	0	0
30	31		0	0	0	0	0	0	0	0	0	0
31	89		0		0		0	0		0		0

<b>Monthly</b>	660	285	208	46	73	0	0	0	0	0	102	1150
<b>Rainy Days</b>	21	6	8	1	3	0	0	0	0	0	5	15
<b>Max.</b>	115	93	47	46	37	0	0	0	0	0	34	139
<b>Average</b>	21	10	7	2	2	0	0	0	0	0	3	37

<b>Annual</b>	: 2524	<b>No.</b>	: 59	<b>Max.</b>	: 139	<b>Ave.</b>	: 7
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	69	32	0	46	0	0	0	0	0	0	17	16
2	49	93	22	0	36	0	0	0	0	0	34	94
3	71	43	19	0	37	0	0	0	0	0	15	101
4	20	80	51	0	0	0	0	0	0	0	36	271
5	188	37	91	0	0	0	0	0	0	0	0	469
6	263	0	25	0	0	0	0	0	0	0	0	199

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	189	168	41	46	73	0	0	0	0	0	66	211
<b>2nd</b>	471	117	167	0	0	0	0	0	0	0	36	939

**Table Daily Rainfall**

Station : **Sandrobone**  
 Year : **1988**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	43	0	0	0	0	0	0	0	0	0	0
2	0	0	4	70	0	0	0	0	0	0	0	0
3	0	89	0	0	0	0	0	0	0	0	0	0
4	0	123	0	0	0	0	0	0	0	0	0	0
5	0	28	0	0	0	0	0	0	35	0	0	0
6	0	5	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0
8	10	49	28	0	0	0	0	0	0	0	0	0
9	52	25	0	0	0	0	0	0	0	0	0	0
10	0	23	0	0	0	0	0	0	0	0	0	0
11	0	46	0	0	0	0	0	0	0	0	0	0
12	0	114	0	0	0	0	0	0	0	0	0	0
13	0	117	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0
15	0	161	0	0	0	0	0	0	0	0	0	75
16	27	120	0	0	0	0	0	0	0	0	0	58
17	33	68	0	0	4	0	0	0	0	0	0	0
18	14	81	0	0	0	0	0	0	0	0	0	0
19	0	0	26	0	0	0	0	0	0	0	0	6
20	10	0	0	0	0	0	0	0	0	0	0	50
21	28	0	65	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	62
23	0	0	28	0	0	0	0	0	0	0	0	23
24	0	0	0	0	0	0	0	14	0	0	38	5
25	43	0	39	0	0	0	0	0	24	0	23	0
26	83	0	76	0	0	0	0	0	0	0	53	30
27	0	0	49	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	78	0
29	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
31	0	0	36	0	0	0	0	0	0	0	0	0

<b>Monthly</b>	300	1092	351	70	4	0	0	14	59	0	192	309
<b>Rainy Days</b>	9	15	9	1	1	0	0	1	2	0	4	8
<b>Max.</b>	83	161	76	70	4	0	0	14	35	0	78	75
<b>Average</b>	10	38	11	2	0	0	0	0	2	0	6	10

<b>Annual</b>	: 2391	<b>No.</b>	: 50	<b>Max.</b>	: 161	<b>Ave.</b>	: 7
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	283	4	70	0	0	0	0	35	0	0	0
2	62	102	28	0	0	0	0	0	0	0	0	0
3	0	438	0	0	0	0	0	0	0	0	0	75
4	84	269	26	0	4	0	0	0	0	0	0	114
5	71	0	132	0	0	0	0	14	24	0	61	90
6	83	0	161	0	0	0	0	0	0	0	131	30

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	62	823	32	70	0	0	0	0	35	0	0	75
<b>2nd</b>	238	269	319	0	4	0	0	14	24	0	192	234

**Table Daily Rainfall**

Station : **Sandrobone**  
 Year : **1989**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	45	75	0	0	0	0	0	0			0
2	0	50	23	0	0	0	0	0	0			0
3	0	0	0	0	0	0	0	0	0			0
4	0	0	0	0	0	0	0	0	0			0
5	0	0	0	0	0	75	0	0	0			0
6	0	55	25	0	60	0	0	0	0			0
7	0	39	4	0	0	0	0	0	0			0
8	0	30	13	0	0	0	0	0	0			0
9	0	0	20	0	16	0	0	0	0			0
10	0	0	10	0	0	0	0	0	0			37
11	0	0	0	0	0	0	0	0	0			53
12	0	0	0	0	23	0	0	0	0			20
13	0	0	38	0	0	0	0	0	0			17
14	0	0	0	0	0	0	0	0	0			0
15	0	15	0	0	0	0	0	0	0			0
16	0	25	0	0	0	0	0	0	0			0
17	0	20	0	0	0	0	0	0	0			0
18	0	9	0	120	0	0	0	0	0			0
19	0	0	0	42	0	0	0	0	0			0
20	0	82	4	49	0	0	0	0	0			0
21	0	25	0	7	0	0	0	0	0			0
22	0	10	0	0	0	0	3	0	0			0
23	0	26	0	15	0	0	0	0	0			0
24	0	13	0	0	0	0	0	0	0			0
25	82	16	0	0	0	0	0	0	0			0
26	68	0	0	0	0	0	0	0	0			0
27	35	33	0	0	0	0	0	0	0			0
28	92	0	0	44	0	0	0	0	0			5
29	0		0	7	0	0	0	0	0			0
30	58		0	0	0	0	0	0	0			0
31	0		0		0		0	0				0

<b>Monthly</b>	335	493	212	284	99	75	3	0	0	0	0	132
<b>Rainy Days</b>	5	16	9	7	3	1	1	0	0	0	0	5
<b>Max.</b>	92	82	75	120	60	75	3	0	0	0	0	53
<b>Average</b>	11	18	7	9	3	3	0	0	0	0	0	4

<b>Annual</b> :	1633	<b>No.</b> :	47	<b>Max.</b> :	120	<b>Ave.</b> :	5
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	95	98	0	0	75	0	0	0	0	0	0
2	0	124	72	0	76	0	0	0	0	0	0	37
3	0	15	38	0	23	0	0	0	0	0	0	90
4	0	136	4	211	0	0	0	0	0	0	0	0
5	82	90	0	22	0	0	3	0	0	0	0	0
6	253	33	0	51	0	0	0	0	0	0	0	5

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	0	234	208	0	99	75	0	0	0	0	0	127
<b>2nd</b>	335	259	4	284	0	0	3	0	0	0	0	5

**Table Daily Rainfall**

Station : **Sandrobone**  
 Year : **1990**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	18	0	12	0	0	0	0	0	0	0	0	0
2	8	0	0	0	0	0	0	0	0	0	0	0
3	130	0	35	0	0	0	0	0	0	0	0	0
4	0	0	4	0	0	0	0	0	0	0	0	0
5	11	12	45	0	0	0	0	0	0	0	0	0
6	0	18	7	0	0	0	0	0	0	0	0	31
7	37	0	3	0	0	0	0	0	0	0	0	14
8	96	0	18	0	0	0	0	0	0	0	0	20
9	140	0	83	0	0	0	0	0	0	0	0	21
10	24	57	0	0	0	0	0	0	0	0	0	5
11	0	0	15	0	0	0	0	0	0	0	0	8
12	0	87	23	0	0	0	0	0	0	0	0	0
13	0	0	0	28	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	58
17	0	0	0	0	93	0	0	0	0	0	0	74
18	65	0	0	0	29	0	0	0	0	0	0	35
19	80	12	0	0	0	0	0	0	0	0	0	0
20	95	0	0	0	0	0	0	0	0	0	0	3
21	40	0	0	0	0	0	0	0	0	0	0	35
22	19	0	0	0	0	0	0	0	0	0	0	20
23	35	0	0	0	0	0	0	0	0	0	0	150
24	18	45	0	0	0	0	0	0	0	0	0	75
25	117	0	0	0	0	0	0	0	0	0	0	53
26	0	0	0	0	0	0	0	0	0	0	0	40
27	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
31	0	0	0	0	6	0	0	0	0	0	0	0

<b>Monthly</b>	933	231	245	28	128	0	0	0	0	0	0	642
<b>Rainy Days</b>	16	6	10	1	3	0	0	0	0	0	0	16
<b>Max.</b>	140	87	83	28	93	0	0	0	0	0	0	150
<b>Average</b>	30	8	8	1	4	0	0	0	0	0	0	21

<b>Annual</b> :	2207	<b>No.</b> :	52	<b>Max.</b> :	150	<b>Ave.</b> :	6
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	167	12	96	0	0	0	0	0	0	0	0	0
2	297	75	111	0	0	0	0	0	0	0	0	91
3	0	87	38	28	0	0	0	0	0	0	0	8
4	240	12	0	0	122	0	0	0	0	0	0	170
5	229	45	0	0	0	0	0	0	0	0	0	333
6	0	0	0	0	6	0	0	0	0	0	0	40

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	464	174	245	28	0	0	0	0	0	0	0	99
<b>2nd</b>	469	57	0	0	128	0	0	0	0	0	0	543





**Table Daily Rainfall**

Station : Sandrobone  
 Year : 1992

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0	0	0	0	0	0	5	0	0	0	0
2	0	0	108	0	0	0	0	0	0	0	0	0
3	0	78	25	0	0	0	0	0	0	0	0	55
4	18	0	0	0	0	0	6	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	57	0	0	0	0	0	0	0	0	51
8	50	13	0	0	0	0	0	0	0	0	58	34
9	83	0	9	0	0	0	0	0	0	0	0	0
10	68	0	0	0	0	0	0	0	0	0	0	0
11	9	0	21	0	0	0	0	0	0	0	0	0
12	0	17	27	0	0	0	0	0	0	0	0	0
13	0	39	0	0	0	0	0	0	55	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	16
15	0	0	0	0	0	0	0	0	0	0	0	8
16	0	0	0	0	0	0	0	0	0	0	9	0
17	0	0	0	0	0	0	0	0	0	0	81	29
18	0	15	0	0	0	0	0	0	0	0	0	0
19	0	15	22	0	0	0	0	0	0	0	0	0
20	0	27	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	9	0	0	0	0	0	0	0	0	22
23	27	14	5	0	0	0	0	0	0	0	0	0
24	15	0	0	0	0	0	0	0	0	0	0	10
25	0	0	0	0	0	0	0	0	0	0	0	35
26	0	0	0	0	0	0	0	0	0	0	0	0
27	0	6	6	0	0	0	0	0	0	0	0	0
28	0	0	18	0	0	0	0	0	0	0	11	0
29	0	0	27	0	0	0	0	0	0	0	0	18
30	0	0	0	0	0	0	0	0	0	0	0	40
31	0	0	0	0	0	0	0	0	0	0	0	32

<b>Monthly</b>	270	224	334	0	0	0	6	5	55	0	159	350
<b>Rainy Days</b>	7	9	12	0	0	0	1	1	1	0	4	12
<b>Max.</b>	83	78	108	0	0	0	6	5	55	0	81	55
<b>Average</b>	9	8	11	0	0	0	0	0	2	0	5	11

<b>Annual</b> :	1403	<b>No.</b> :	47	<b>Max.</b> :	108	<b>Ave.</b> :	4
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	18	78	133	0	0	0	6	5	0	0	0	55
2	201	13	66	0	0	0	0	0	0	0	58	85
3	9	56	48	0	0	0	0	0	55	0	0	24
4	0	57	22	0	0	0	0	0	0	0	90	29
5	42	14	14	0	0	0	0	0	0	0	0	67
6	0	6	51	0	0	0	0	0	0	0	11	90

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	228	147	247	0	0	0	6	5	55	0	58	164
<b>2nd</b>	42	77	87	0	0	0	0	0	0	0	101	186



**Table Daily Rainfall**

Station : **Sandrobone**  
 Year : **1994**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0	0	0	3	0	0	0	0	0	0	0
2	0	0	0	0	0	2	0	0	0	0	0	0
3	35	0	117	0	6	0	0	0	0	0	0	0
4	82	0	52	0	0	0	0	0	0	0	0	0
5	40	0	13	0	0	0	0	0	0	0	0	23
6	6	0	39	0	0	0	0	0	0	0	0	35
7	0	28	7	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	56	0	0	0	0	0	0	0	0	0
10	19	13	41	0	0	0	0	0	0	0	0	19
11	0	0	18	8	0	0	0	0	0	0	0	0
12	74	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0
14	0	50	0	0	0	0	0	0	0	0	11	0
15	52	35	116	0	0	0	0	0	0	0	0	0
16	0	12	9	0	0	0	0	0	0	0	0	53
17	24	0	0	18	0	0	0	0	0	0	0	14
18	0	0	0	0	0	0	0	0	0	0	0	69
19	122	47	0	36	0	0	0	0	0	0	0	54
20	0	57	0	22	0	0	0	0	0	0	0	85
21	23	34	0	0	0	0	0	0	0	0	0	0
22	55	23	0	0	0	0	0	0	0	0	0	0
23	70	13	12	0	0	0	0	0	0	0	0	0
24	0	0	91	0	0	0	0	0	0	0	0	0
25	72	8	28	0	0	0	0	0	0	0	0	0
26	51	0	0	0	0	0	0	0	0	0	0	0
27	127	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	6	0
29	0	0	0	0	0	0	0	0	0	0	7	0
30	0	0	18	5	0	0	0	0	0	3	20	0
31	13	0	50	0	0	0	0	0	0	32	0	3

<b>Monthly</b>	865	320	667	89	9	2	0	0	0	35	44	355
<b>Rainy Days</b>	16	11	15	5	2	1	0	0	0	2	4	9
<b>Max.</b>	127	57	117	36	6	2	0	0	0	32	20	85
<b>Average</b>	28	11	22	3	0	0	0	0	0	1	1	11

<b>Annual</b> :	2386	<b>No.</b> :	65	<b>Max.</b> :	127	<b>Ave.</b> :	7
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	157	0	182	0	9	2	0	0	0	0	0	23
2	25	41	143	0	0	0	0	0	0	0	0	54
3	126	85	134	8	0	0	0	0	0	0	11	0
4	146	116	9	76	0	0	0	0	0	0	0	275
5	220	78	131	0	0	0	0	0	0	0	0	0
6	191	0	68	5	0	0	0	0	0	35	33	3

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	308	126	459	8	9	2	0	0	0	0	11	77
<b>2nd</b>	557	194	208	81	0	0	0	0	0	35	33	278

**Table Daily Rainfall**

Station : Sandrobone  
Year : 1995

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	30	13	0	25	0	0	0	0	0		0	0
2	3	0	0	0	0	24	0	0	0		0	0
3	0	6	54	0	0	0	0	0	0		0	0
4	0	0	28	0	0	0	0	0	0		0	19
5	0	0	79	23	0	0	0	0	0		0	25
6	0	127	0	0	0	0	0	0	0		0	71
7	24	0	0	40	0	4	0	0	0		0	31
8	0	0	99	124	0	0	0	0	0		0	75
9	50	0	0	13	0	0	0	0	0		0	0
10	5	0	0	10	0	0	0	0	0		0	0
11	12	6	0	9	4	29	0	0	0		0	40
12	28	0	0	0	0	0	0	0	0		0	95
13	123	67	0	0	4	0	0	0	0		0	44
14	156	0	0	0	0	0	0	0	0		0	0
15	67	0	40	3	0	0	0	0	0		0	0
16	14	0	0	0	0	0	0	0	0		0	0
17	0	0	0	0	0	0	0	0	0		0	48
18	0	14	0	0	16	0	0	0	0		0	0
19	0	3	0	0	0	0	0	0	0		0	6
20	0	0	5	0	0	0	0	0	0		0	9
21	0	0	0	0	0	0	0	0	0		0	0
22	0	0	4	0	0	0	0	0	0		55	0
23	129	0	0	0	0	0	0	0	23		0	17
24	16	0	0	0	0	0	0	0	0		0	0
25	45	18	0	0	0	0	0	0	0		0	0
26	0	14	0	0	0	0	0	0	0		0	0
27	15	16	18	0	0	0	0	0	0		0	0
28	0	25	12	0	0	0	0	0	0		9	0
29	0		34	0	0	0	0	0	0		13	0
30	0		0	0	0	0	0	0	0		0	0
31	0		0		0		0	0				0

<b>Monthly</b>	717	309	373	247	24	57	0	0	23	0	77	480
<b>Rainy Days</b>	15	11	10	8	3	3	0	0	1	0	3	12
<b>Max.</b>	156	127	99	124	16	29	0	0	23	0	55	95
<b>Average</b>	23	11	12	8	1	2	0	0	1	0	3	15

<b>Annual</b> :	2307	<b>No.</b> :	66	<b>Max.</b> :	156	<b>Ave.</b> :	6
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	33	19	161	48	0	24	0	0	0	0	0	44
2	79	127	99	187	0	4	0	0	0	0	0	177
3	386	73	40	12	8	29	0	0	0	0	0	179
4	14	17	5	0	16	0	0	0	0	0	0	63
5	190	18	4	0	0	0	0	0	23	0	55	17
6	15	55	64	0	0	0	0	0	0	0	22	0

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	498	219	300	247	8	57	0	0	0	0	0	400
<b>2nd</b>	219	90	73	0	16	0	0	0	23	0	77	80

**Table Daily Rainfall**

Station : Sandrobone  
 Year : 1996

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0			0	0	0	0	0	0	46	23	0
2	79			0	0	0	0	0	0	23	0	31
3	0			0	11	0	0	0	0	0	32	39
4	0			0	0	0	0	0	0	4	38	0
5	0			5	0	0	0	0	0	0	2	0
6	15			7	0	0	0	0	0	0	1	0
7	23			4	0	0	0	0	0	0	0	0
8	0			5	0	3	0	0	0	0	0	9
9	0			0	0	2	0	0	0	0	0	0
10	0			0	0	0	0	0	0	15	0	8
11	0			4	0	0	0	0	0	0	3	28
12	0			0	0	0	0	0	0	0	0	0
13	0			0	0	0	0	0	0	0	3	34
14	0			0	0	0	0	0	0	0	4	90
15	0			0	0	0	0	0	0	0	0	26
16	0			0	0	0	0	0	0	0	0	8
17	0			0	0	0	0	0	0	0	0	3
18	0			0	0	0	0	0	0	0	0	2
19	0			0	0	0	0	0	0	0	0	14
20	65			0	0	0	0	0	0	0	0	97
21	85			0	0	3	0	0	2	0	26	79
22	4			0	0	0	0	0	0	0	0	55
23	8			0	0	0	0	0	0	0	0	5
24	8			5	19	0	0	0	0	0	0	4
25	11			0	0	0	0	0	0	0	0	3
26	121			0	0	0	0	2	0	1	0	0
27	18			0	0	0	0	0	0	0	0	0
28	44			0	0	0	0	0	0	2	0	0
29	19			0	0	0	0	0	0	0	13	54
30	6			0	0	9	0	0	0	0	0	11
31	0				0		0	0		0		0

<b>Monthly</b>	506	0	0	30	30	17	0	2	2	91	145	600
<b>Rainy Days</b>	14	0	0	6	2	4	0	1	1	6	10	20
<b>Max.</b>	121	0	0	7	19	9	0	2	2	46	38	97
<b>Average</b>	16	0	0	1	1	1	0	0	0	3	5	19

<b>Annual</b>	: 1423	<b>No.</b>	: 64	<b>Max.</b>	: 121	<b>Ave.</b>	: 4
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	79	0	0	5	11	0	0	0	0	73	95	70
2	38	0	0	16	0	5	0	0	0	15	1	17
3	0	0	0	4	0	0	0	0	0	0	10	178
4	65	0	0	0	0	0	0	0	0	0	0	124
5	116	0	0	5	19	3	0	0	2	0	26	146
6	208	0	0	0	0	9	0	2	0	3	13	65

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	117	0	0	25	11	5	0	0	0	88	106	265
<b>2nd</b>	389	0	0	5	19	12	0	2	2	3	39	335



**Table Daily Rainfall**

Station : Sandrobone  
 Year : 1998

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1			4	14				25				14
2					25							71
3				7	30						18	45
4												12
5											14	37
6				12								13
7											40	24
8				19							8	32
9												22
10				3						52	12	30
11				2	15							
12				3						61	8	15
13				2							30	
14		20					4				59	
15				9			10				18	
16	8		10		20						25	
17			10								8	
18			74									
19											5	25
20			33	3							20	18
21			32								12	31
22						10			8		12	
23											21	
24				2					13		12	
25				2			3					22
26			21									28
27	2			3					4	4		40
28			8	2		52					11	31
29										7		17
30			7				105			7		98
31										28		47

<b>Monthly</b>	10	20	199	83	90	62	122	25	25	159	333	672
<b>Rainy Days</b>	2	1	9	14	4	2	4	1	3	6	18	21
<b>Max.</b>	8	20	74	19	30	52	105	25	13	61	59	98
<b>Average</b>	5	20	22	6	23	31	31	25	8	27	19	32

<b>Annual</b> :	1800	<b>No.</b> :	85	<b>Max.</b> :	105	<b>Ave.</b> :	21
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0	4	21	55	0	0	25	0	0	32	179
2	0	0	0	34	0	0	0	0	0	52	60	121
3	0	20	0	16	15	0	14	0	0	61	115	15
4	8	0	127	3	20	0	0	0	0	0	58	43
5	0	0	32	4	0	10	3	0	21	0	57	53
6	2	0	36	5	0	52	105	0	4	46	11	261

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	0	20	4	71	70	0	14	25	0	113	207	315
<b>2nd</b>	10	0	195	12	20	62	108	0	25	46	126	357



**Table Daily Rainfall**

Station : **Sandrobone**  
 Year : **1999**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	72	0	38	0	0	0	0	0	0	0	19	0
2	94	0	125	0	0	0	0	0	0	0	10	0
3	124	0	26	15	45	0	0	0	0	0	9	0
4	68	46	14	0	0	0	0	0	0	0	25	0
5	35	68	0	0	0	0	0	0	0	10	25	0
6	0	47	0	0	37	0	0	0	0	0	50	20
7	21	59	0	0	28	0	0	0	0	0	0	20
8	25	69	0	3	0	0	0	0	0	3	0	59
9	19	43	0	0	0	0	0	0	0	0	0	25
10	0	0	0	0	0	0	0	0	0	0	0	39
11	23	0	0	0	0	0	0	0	0	0	0	0
12	4	0	0	0	0	0	0	0	0	0	0	50
13	0	75	0	0	0	0	0	0	0	0	0	76
14	0	31	0	0	0	0	0	0	0	3	10	0
15	0	0	0	0	6	0	0	0	0	9	10	0
16	0	8	57	13	0	0	0	0	0	0	0	25
17	0	52	0	0	0	0	0	0	0	0	9	25
18	3	48	0	71	0	23	0	0	0	0	10	20
19	10	56	0	63	0	0	0	0	0	0	0	25
20	0	0	0	0	0	0	0	0	0	0	0	0
21	10	51	0	0	0	8	0	0	0	0	0	0
22	33	68	0	0	0	0	0	0	0	0	0	0
23	45	0	0	0	0	0	0	0	0	0	0	0
24	56	0	0	0	0	13	0	0	0	0	0	34
25	61	47	0	0	0	0	0	0	0	0	0	50
26	68	32	24	0	0	0	0	0	0	4	0	0
27	57	0	0	0	0	0	0	0	0	0	0	0
28	37	0	0	0	0	0	0	0	0	0	0	0
29	37		0	0	0	0	0	0	0	15	0	0
30	39		16	0	0	0	0	0	0	0	0	4
31	0		0		0		0	0		0		40

<b>Monthly</b>	941	800	300	165	116	44	0	0	0	44	177	512
<b>Rainy Days</b>	22	16	7	5	4	3	0	0	0	6	10	15
<b>Max.</b>	124	75	125	71	45	23	0	0	0	15	50	76
<b>Average</b>	30	29	10	6	4	1	0	0	0	1	6	17

<b>Annual</b> :	3099	<b>No.</b> :	88	<b>Max.</b> :	125	<b>Ave.</b> :	9
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	393	114	203	15	45	0	0	0	0	10	88	0
2	65	218	0	3	65	0	0	0	0	3	50	163
3	27	106	0	0	6	0	0	0	0	12	20	126
4	13	164	57	147	0	23	0	0	0	0	19	95
5	205	166	0	0	0	21	0	0	0	0	0	84
6	238	32	40	0	0	0	0	0	0	19	0	44

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	485	438	203	18	116	0	0	0	0	25	158	289
<b>2nd</b>	456	362	97	147	0	44	0	0	0	19	19	223

**Table Daily Rainfall**

Station : **Sandrobone**  
 Year : **2000**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	143	0	0	0	0	0	0	0	0	0	25
2	0	50	0	0	0	0	0	0	0	0	0	10
3	0	50	0	0	0	0	0	0	0	0	10	9
4	0	50	0	0	0	0	0	0	0	0	0	9
5	10	0	0	0	0	0	0	0	0	0	0	10
6	30	0	0	0	0	0	0	0	0	0	0	7
7	125	40	0	0	0	0	0	0	0	0	0	15
8	12	67	0	0	0	0	0	0	0	0	0	25
9	13	25	0	0	0	0	0	0	0	0	0	3
10	0	25	0	0	0	0	0	0	0	0	0	0
11	14	0	0	0	0	0	0	0	0	0	0	0
12	50	0	0	0	0	0	0	0	0	0	0	9
13	44	0	0	0	0	0	0	0	0	0	0	50
14	6	0	50	0	0	0	0	0	0	0	0	10
15	6	0	18	25	0	0	0	0	0	0	0	25
16	0	0	16	0	0	0	0	0	0	0	0	25
17	0	0	25	25	0	0	0	0	0	0	20	0
18	83	0	10	0	0	0	0	0	0	0	25	0
19	59	0	25	0	0	0	0	0	0	0	10	0
20	25	0	0	0	0	0	0	0	0	0	9	0
21	0	0	0	25	0	0	0	0	0	10	10	0
22	25	0	0	2	0	0	0	0	0	15	0	0
23	0	0	25	0	0	0	0	0	0	0	3	0
24	34	0	0	0	0	0	0	0	0	0	10	5
25	44	75	0	20	0	0	0	0	0	0	9	25
26	0	75	0	20	0	0	0	0	0	0	10	0
27	0	25	0	4	0	0	0	0	0	0	25	0
28	14	0	0	10	0	10	0	0	0	10	25	0
29	7	0	0	3	0	0	0	0	0	3	20	0
30	7	0	0	20	0	0	0	0	0	9	9	0
31	0	0	0	0	0	0	0	0	0	0	0	0

<b>Monthly</b>	608	625	169	154	0	10	0	0	0	47	195	262
<b>Rainy Days</b>	19	11	7	10	0	1	0	0	0	5	14	16
<b>Max.</b>	125	143	50	25	0	10	0	0	0	15	25	50
<b>Average</b>	20	22	5	5	0	0	0	0	0	2	7	8

<b>Annual</b> :	2070	<b>No.</b> :	83	<b>Max.</b> :	143	<b>Ave.</b> :	6
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	10	293	0	0	0	0	0	0	0	0	10	63
2	180	157	0	0	0	0	0	0	0	0	0	50
3	120	0	68	25	0	0	0	0	0	0	0	94
4	167	0	76	25	0	0	0	0	0	0	64	25
5	103	75	25	47	0	0	0	0	0	25	32	30
6	28	100	0	57	0	10	0	0	0	22	89	0

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	310	450	68	25	0	0	0	0	0	0	10	207
<b>2nd</b>	298	175	101	129	0	10	0	0	0	47	185	55

**Table Daily Rainfall**

Station : **Sandrobone**  
 Year : **2001**

Unit : mm

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	25	0	0	0	0	0	0	0	0	26	10
2	0	125	23	0	0	6	0	0	0	0	0	9
3	0	50	42	0	0	0	0	0	0	0	0	25
4	10	150	20	0	0	3	0	0	0	0	0	11
5	25	25	0	16	0	2	0	0	0	0	0	7
6	25	35	115	0	0	0	0	0	0	0	0	25
7	10	90	15	0	0	0	0	0	0	0	0	20
8	7	70	14	0	0	0	0	0	0	0	0	10
9	25	30	0	17	0	0	0	0	0	0	0	9
10	17	0	0	0	0	0	0	0	0	0	47	50
11	0	0	67	0	0	0	0	0	0	0	0	7
12	0	0	82	0	0	0	0	0	0	0	0	0
13	20	0	2	0	0	0	0	0	0	0	0	0
14	25	25	22	0	0	0	0	0	0	0	37	0
15	10	0	0	0	0	0	0	0	0	0	0	0
16	0	10	33	0	0	0	0	0	0	0	0	0
17	0	9	0	0	0	0	0	0	0	0	0	0
18	20	50	15	0	0	0	0	0	0	0	0	0
19	25	25	4	0	0	0	0	0	0	0	0	0
20	20	10	16	0	0	0	0	0	0	0	0	9
21	0	5	0	0	0	0	0	0	0	0	0	0
22	10	0	0	0	0	0	0	0	0	0	0	0
23	25	0	0	0	0	0	0	0	0	0	0	0
24	7	0	0	0	0	0	0	0	0	0	0	0
25	10	0	0	0	0	0	0	0	0	0	45	8
26	0	0	0	7	0	0	0	0	0	9	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0
28	25	0	6	1	0	0	0	0	0	0	0	19
29	10		0	12	0	0	0	0	0	0	0	25
30	0		6	0	0	0	0	0	0	0	0	0
31	0		0		0		0	0		0		0

<b>Monthly</b>	326	734	482	53	0	11	0	0	0	9	155	244
<b>Rainy Days</b>	19	16	16	5	0	3	0	0	0	1	4	15
<b>Max.</b>	25	150	115	17	0	6	0	0	0	9	47	50
<b>Average</b>	11	26	16	2	0	0	0	0	0	0	5	8

<b>Annual</b> :	2014	<b>No.</b> :	79	<b>Max.</b> :	150	<b>Ave.</b> :	6
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<b>5-Day Rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	35	375	85	16	0	11	0	0	0	0	26	62
2	84	225	144	17	0	0	0	0	0	0	47	114
3	55	25	173	0	0	0	0	0	0	0	37	7
4	65	104	68	0	0	0	0	0	0	0	0	9
5	52	5	0	0	0	0	0	0	0	0	45	8
6	35	0	12	20	0	0	0	0	0	9	0	44

<b>Half-monthly rainfall</b>												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>1st</b>	174	625	402	33	0	11	0	0	0	0	110	183
<b>2nd</b>	152	109	80	20	0	0	0	0	0	9	45	61

***Data Book B***

***WATER QUALITY DATA***

## Table B.1 (a) Results of Raw Water Quality Analysis by PDAM Makassar at Installation I - Ratulangi (1/3)

Name of WTP : I - Ratulangi ( Q = 50 Liter/sec)  
Raw water sources : The Jeneberang River

Remarks: ttd Not Detected  
- Not Measured  
n.a Not Available

Location : Pandang-Pandang village, Somba Opu ( 119o 27' 46" ; ' 5o 12' 36" )

Source: PDAM Makassar

Parameters	Unit	Year 2000											
		10-Jan.	14-Feb.	6-Mar	10-Apr.	8-May	2000/6/13	11-Jul	14-Aug.	Sept.	10-Oct.	7-Nov.	4-Dec.
<b>Physical :</b>													
Color	Hazen	37	32	30	48	47	28	34	34.0	24.0	20.0	24	22
Odor	-	Traces	Traces	Traces	Traces	Traces	Traces	Traces	Traces	Traces	Traces	Traces	Traces
Taste	-	Traces	Traces	Traces	Traces	Traces	Traces	Traces	Traces	Traces	Traces	Traces	Traces
Temperature	° C	29.0	29.0	29.0	29	29	28	28	28.0	28.0	28.0	28	28
Turbidity	NTU	170	109	99	46	56.5	1.99	43.6	43.6	40.0	35.1	42.5	45.5
Total Dissolved Solids(TDS)	mg/l	112	97	86	77	71	79	75	75.0	72.0	65.0	55	60.8
<b>Chemical</b>													
pH.	-	7	7	7.1	7.20	7.2	7.2	7.1	7.1	7.2	7.2	7.2	7.2
Total Alkalic ( CaCO <sub>3</sub> )	mg/l	21.00	20	25.50	27.50	6.2	25	20.75	20.8	21.5	20.5	20	21
Iron ( Fe )	mg/l	0.2	0.2	0.2	0.33	0.33	0.29	0.2	0.2	0.2	0.2	0.2	0.2
Mangan ( Mn )	mg/l	0.3	0.3	0.3	0.36	0.2	0.28	0.35	0.4	0.3	0.3	0.25	0.25
Copper( Cu )	mg/l	0.1	0.1	0.24	0.23	0.07	0	0	0.0	0.0	0.0	0.008	0.008
Zinc (Zn)	mg/l	0.2	0.3	0.3	0.3	0.33	0.11	0.33	0.0	0.0	0.0	0.04	0.04
Chromium ( Cr <sup>6+</sup> )	mg/l	0.07	0.06	0.14	0.13	0.08	0.24	0.07	0.3	0.3	0.3	0.25	0.25
Cadmium ( Cd )	mg/l	0.09	0.07	0.06	0.119	0.009	0.08	0.007	0.0	0.0	0.0	0.05	0.005
Leat ( Pb )	mg/l	0.1	0.09	0.08	0.6	0.1	0.09	0.04	0.1	0.1	0.1	0.006	0.05
Sianida(CN <sup>-</sup> )	mg/l	0.12	0.1	0.10	0.009	0.018	0	0.008	0.0	0.0	0.0	0.04	0.006
Hydrogen Sulphide ( HS <sup>-</sup> )	mg/l	0.04	0.02	0.01	0.05	0.06	0.06	0.04	0.0	0.0	0.0	27	0.04
Sulphat ( SO <sub>4</sub> )	mg/l	130.0	100	101	98.0	92	80	40	40.0	35.0	30.0	0.3	27
Flouride ( F <sup>-</sup> )	mg/l	-	-	-	0.51	0.6	0.65	0.5	0.5	0.5	0.4	27.8	0.3
Chloride ( Cl <sup>-</sup> )	mg/l	11	12.5	12	11	11.01	12	41	41.0	38.0	28.2	0.04	25.5
Amoniac ( NH <sub>3</sub> -N )	mg/l	0.1	0.04	0.05	0.04	0.09	0.03	0.03	0.0	0.0	0.0	1.98	0.04
Nitrat ( NO <sub>3</sub> -N )	mg/l	1.35	1.02	0.45	0.5	1.39	2.7	2	2.0	2.0	2.0	0.02	1.9
Nitrit ( NO <sub>2</sub> -N )	mg/l	0.2	0.2	0.04	0.05	0.17	0.1	0.02	0.0	0.0	0.0	0.02	0.02
Phenol	mg/l	0.1	0.1	0.11	0.06	0.05	0.05	0.06	0.1	0.0	0.0	0.1	0.02
Aluminium ( Al )	mg/l	0.1	0.04	15.2	0.13	0.15	0.11	0.1	0.1	0.1	0.1	0	0.1
Arsenic ( As )	mg/l	0.1	0.1	0.14	0.1	0.1	0	0	0.0	0.0	0.0	0.05	0
Silver ( Ag )	mg/l	0.05	0.1	0.05	0.09	0.08	0.07	0.05	0.1	0.1	0.1	7.85	0.05
Organic matter( KMnO <sub>4</sub> )	mg/l	11.25	8.25	0.10	13.18	3.59	0	8.11	8.1	8.0	8.0	-	7.82
Rest Chloride ( Cl <sub>2</sub> )	mg/l	-	-	-	-	-	-	-	-	-	-	-	-
Dissolved Oxygen( DO )	mg/l												
Nickel ( Ni )	mg/l												
Boron ( B )	mg/l												
<b>Bacteriology :</b>													
Total Coliform	/100ml	37,000	32500	30000	19,270	11000	14200	12000	12000.0	12000.0	12000.0	11000	11000
Feces Coliform	/100ml	11,000	8700	6200	0	0	1500	1200	1200.0	1200.0	1200.0	1000	1000

Parameters	Unit	Year 2001											
		9-Jan.	13-Feb.	12-Mar	9-Apr.	8-May	38149	July	Augst	18-Sept.	8-Oct.	6-Nov.	5-Dec.
<b>Physical :</b>													
Color	Hazen	34	35	40	47	42	40	n.a	n.a	27.0	31.0	23	97
Odor	-	Traces	Traces	Traces	Traces	Traces	Traces	n.a	n.a	Traces	Traces	Traces	Traces
Taste	-	Traces	Traces	Traces	Traces	Traces	Traces	n.a	n.a	Traces	Traces	Traces	Traces
Temperature	° C	28.0	28.0	28.0	28	28	28	n.a	n.a	29.0	29.0	27	27
Turbidity	NTU	53	68.2	71	62	78	82	n.a	n.a	27.0	34.0	17	68
Total Dissolved Solids(TDS)	mg/l	40	45	47	40	38	30	n.a	n.a	22.0	23.0	20	24
<b>Chemical</b>													
pH.	-	7.2	7.2	7.1	7.10	7.1	7.1	n.a	n.a	7.3	7.1	7	6.9
Total Alkalic ( CaCO <sub>3</sub> )	mg/l	28.00	32	35.00	40.00	47	42	n.a	n.a	23.0	25.0	19	18
Iron ( Fe )	mg/l	0.2	0.15	0.2	0.3	0.4	0.4	n.a	n.a	0.2	0.2	0.15	0.2
Mangan ( Mn )	mg/l	0.25	0.2	0.2	0.35	0.3	0.25	n.a	n.a	0.7	0.5	0.27	0.3
Copper( Cu )	mg/l	0.05	0.01	0.02	0.04	0.45	0.05	n.a	n.a	0.3	0.3	0.3	0.3
Zinc (Zn)	mg/l	0.0	0.3	0.2	0.3	0.45	0.4	n.a	n.a	0.5	0.4	0.067	0.069
Chromium ( Cr <sup>6+</sup> )	mg/l	0.2	0.2	0.2	0.2	0.08	0.07	n.a	n.a	0.0	0.0	0.07	0.07
Cadmium ( Cd )	mg/l	0.005	0.005	0.005	0.006	0.006	0.006	n.a	n.a	0.0	0.0	0	0.01
Leat ( Pb )	mg/l	0.05	0.05	0.05	0.07	0.07	0.06	n.a	n.a	0.1	0.0	0.4	0.3
Sianida(CN <sup>-</sup> )	mg/l	0.008	0.004	0.00	0.006	0.008	0.007	n.a	n.a	0.0	0.0	0.012	0.01
Hydrogen Sulphide ( HS <sup>-</sup> )	mg/l	0.04	0.04	0.03	0.03	0.04	0.04	n.a	n.a	0.1	0.1	0.03	0.03
Sulphat ( SO <sub>4</sub> )	mg/l	30.0	36	32	30.0	40	40	n.a	n.a	78.0	38.0	22	20
Flouride ( F <sup>-</sup> )	mg/l	0.35	0.3	0.3	0.40	0.45	0.4	n.a	n.a	0.6	0.5	0	0
Chloride ( Cl <sup>-</sup> )	mg/l	27	20	15	20	28	27	n.a	n.a	6.0	5.0	8	7
Amoniac ( NH <sub>3</sub> -N )	mg/l	0.1	0.06	0.05	0.07	0.06	0.05	n.a	n.a	0.1	0.0	0.04	0.04
Nitrat ( NO <sub>3</sub> -N )	mg/l	1.7	1.2	1	1.3	0.95	0.89	n.a	n.a	0.1	0.1	0.18	0.15
Nitrit ( NO <sub>2</sub> -N )	mg/l	0.02	0.02	0.02	0.04	0.08	0.07	n.a	n.a	0.2	0.2	0.13	0.1
Phenol	mg/l	0.02	0.02	0.02	0.02	0.04	0.04	n.a	n.a	0.0	0.0	0	0
Aluminium ( Al )	mg/l	0.1	0.1	0.1	0.15	0.2	0.2	n.a	n.a	0.0	0.0	0.14	0.16
Arsenic ( As )	mg/l	0	0	0	0	0	0	n.a	n.a	0.0	0.0	0	0
Silver ( Ag )	mg/l	0.05	0.05	0.04	0.04	0.05	0.05	n.a	n.a	0.0	0.0	0.03	0.03
Organic matter( KMnO <sub>4</sub> )	mg/l	7.35	6.7	7.00	9.75	8.5	7.8	n.a	n.a	0.0	0.0	0	0
Rest Chloride ( Cl <sub>2</sub> )	mg/l	-	-	-	-	-	-	n.a	n.a	-	-	-	-
Dissolved Oxygen( DO )	mg/l	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	0.9	0.6	0.4	0.4
Nickel ( Ni )	mg/l												
Boron ( B )	mg/l												
<b>Bacteriology :</b>													
Total Coliform	/100ml	12,000	11500	12500	12,000	13000	10000	n.a	n.a	8700.0	1300.0	1450	1500
Feces Coliform	/100ml	1,000	1100	1300	1200	1000	1000	n.a	n.a	970.0	60.0	45	50

## Table B.1 (a) Results of Raw Water Quality Analysis by PDAM Makassar at Installation I - Ratulangi (2/3)

Name of WTP : I - Ratulangi ( Q = 50 Liter/sec)

Raw water sources : The Jeneberang River

Location : Pandang-Pandang village, Somba Opu ( 119o 27' 46" ; ' 5o 12' 36" )

Remarks: ttd Not Detected

- Not Measured

n.a Not Available

Source: PDAM Makassar

Parameters	Unit	Year 2002											
		9-Jan	11-Feb.	18-Mar	12-Apr	May	June	9-Jul	13-Aug.	16-Sept.	8-Oct.	38317	19-Dec.
<b>Physical :</b>													
Color	Hazen	87	94	94	28	n.a	n.a	29	25.0	29.0	12.0	13	159
Odor	-	Traces	Traces	Traces	Traces	n.a	n.a	Traces	Traces	Traces	Traces	Traces	Traces
Taste	-	Traces	Traces	Traces	Traces	n.a	n.a	Traces	Traces	Traces	Traces	Traces	Traces
Temperature	<sup>o</sup> C	27.0	27.0	28.0	28	n.a	n.a	29	28.0	28.0	28.0	28	27
Turbidity	NTU	102	103	89	28	n.a	n.a	56	62.0	33.5	10.8	9.27	145
Total Dissolved Solids(TDS)	mg/l	47	51	45	59	n.a	n.a	31	30.0	10.0	12.0	0.5	9.2
<b>Chemical</b>													
pH.	-	6.9	7.1	7	7.10	n.a	n.a	7.2	7.1	6.9	7.0	7.1	6.9
Total Alkalic ( CaCO <sub>3</sub> )	mg/l	25.00	15	47.00	26.00	n.a	n.a	32	50.0	31.0	21.0	27.5	8.7
Iron ( Fe )	mg/l	0.3	0.62	0.37	0.18	n.a	n.a	0.3	0.4	0.3	0.2	0.18	0.2
Mangan ( Mn )	mg/l	0.7	1.05	0.8	0.33	n.a	n.a	0.4	0.3	0.5	0.2	0.73	1.46
Copper( Cu )	mg/l	0.45	0.51	0.45	0.17	n.a	n.a	0.2	0.2	0.2	0.1	0.09	0.83
Zinc (Zn)	mg/l	0.1	-	0.05	2.0	n.a	n.a	0.8	0.9	0.7	0.3	0.43	0.34
Chromium ( Cr <sup>6+</sup> )	mg/l	0.06	0.04	0.04	0.07	n.a	n.a	0.06	0.1	0.1	0.0	0.04	0.24
Cadmium ( Cd )	mg/l	0.01	-	0.025	0.031	n.a	n.a	0.004	-	-	0.0	0.005	0.202
Leat ( Pb )	mg/l	0.2	0.04	0.2	0.03	n.a	n.a	0.04	0.1	0.1	-	0.05	1.4
Sianida(CN <sup>-</sup> )	mg/l	0.02	0.034	0.02	0.075	n.a	n.a	0.05	0.0	0.0	0.0	0.02	0.26
Hydrogen Sulphide ( HS <sup>-</sup> )	mg/l	0.03	0.14	0.02	0.008	n.a	n.a	0.006	0.1	0.1	0.0	0.02	0.21
Sulphat ( SO <sub>4</sub> )	mg/l	27.0	22	20	74.0	n.a	n.a	40	36.0	64.0	40.0	0.41	49
Flouride ( F <sup>-</sup> )	mg/l	0.04	-	0.05	0.00	n.a	n.a	0	-	-	0.6	0.06	0.09
Chlouride ( Cl <sup>-</sup> )	mg/l	7	9	6.8	7	n.a	n.a	11	3.0	5.0	5.0	5	12
Amoniac ( NH <sub>3</sub> -N )	mg/l	0.1	0.19	0.04	0.17	n.a	n.a	0.8	0.8	0.1	0.1	0.09	0.28
Nitrat ( NO <sub>3</sub> -N )	mg/l	1.25	0.7	4	2.9	n.a	n.a	1	3.8	3.1	2.3	2.5	6.2
Nitrit ( NO <sub>2</sub> -N )	mg/l	1.05	0.22	0.17	0.09	n.a	n.a	0.05	0.1	0.1	0.1	0.06	0.34
Phenol	mg/l	0.01	0.9	0.17	0.3	n.a	n.a	-	0.5	0.1	-	-	0.03
Aluminium ( Al )	mg/l	0.1	0.09	0.11	0.13	n.a	n.a	0.2	0.1	0.3	0.1	0.14	0.25
Arsenic ( As )	mg/l	0	0	0	0	n.a	n.a	0	0.0	0.0	0.0	0	0
Silver ( Ag )	mg/l	0.03	0.02	0.19	0.19	n.a	n.a	0.04	-	-	-	0.014	0.15
Organic matter( KMnO <sub>4</sub> )	mg/l	4.25	5.5	6.75	6.75	n.a	n.a	8.2	8.5	9.5	1.1	3.09	8.75
Rest Chlouride ( Cl <sub>2</sub> )	mg/l	-	-	-	-	n.a	n.a	0	-	-	-	-	-
Dissolved Oxygen( DO )	mg/l	0.5	0.4	0.5	1.5	n.a	n.a	1.5	1.4	1.4	1.4	1	0.9
Nickel ( Ni )	mg/l												
Boron ( B )	mg/l												
<b>Bacteriology :</b>													
Total Coliform	/100ml	-	1000	1400	1,600	n.a	n.a	8567	9250.0	7200.0	8100.0	18000	6700
Feces Coliform	/100ml	-	89	89	97	n.a	n.a	89	97.0	50.0	42.0	0	0
<b>Year 2003</b>													
Parameters	Unit	Jan.	18-Feb.	18-Mar	14.April	20-May	38155	15-Jul	20-Aug.	12-Sept.	20-Oct.	19-Nov.	Dec.
<b>Physical :</b>													
Color	Hazen	n.a	7	27	30	21	19	24	20.0	20.0	18.0	43	n.a
Odor	-	n.a	Traces	Traces	Traces	Traces	Traces	Traces	Traces	Traces	Traces	Traces	n.a
Taste	-	n.a	Traces	Traces	Traces	Traces	Traces	Traces	Traces	Traces	Traces	Traces	n.a
Temperature	<sup>o</sup> C	n.a	27.0	27.0	27	27	27	27	27.0	27.0	28.0	28	n.a
Turbidity	NTU	n.a	39.5	42	36	17.4	14.2	13.2	34.8	5.9	18.6	30.1	n.a
Total Dissolved Solids(TDS)	mg/l	n.a	18	16	20	13	18	20	47.0	42.0	48.0	12	n.a
<b>Chemical</b>													
pH.	-	n.a	7.1	7.1	7.10	7.1	7.1	7.1	7.0	7.2	7.2	7.1	n.a
Total Alkalic ( CaCO <sub>3</sub> )	mg/l	n.a	32	24.00	21.00	21	25	27	31.0	32.6	22.5	17.5	n.a
Iron ( Fe )	mg/l	n.a	0.25	0.29	0.15	0.5	0.3	0.3	0.6	0.3	0.2	0.3	n.a
Mangan ( Mn )	mg/l	n.a	0.7	0.5	0.3	0.4	0.35	0.26	0.5	0.2	0.2	0.34	n.a
Copper( Cu )	mg/l	n.a	0.4	0.22	0.12	0.3	0.08	0.09	0.2	0.1	0.1	0.35	n.a
Zinc (Zn)	mg/l	n.a	0.8	0.24	0.6	0.67	0.48	0.49	0.4	0.1	0.1	0.07	n.a
Chromium ( Cr <sup>6+</sup> )	mg/l	n.a	0.04	0.07	0.08	0.1	0.05	0.05	0.1	0.0	0.0	0.04	n.a
Cadmium ( Cd )	mg/l	n.a	-	-	0.08	0.099	0.02	0.02	0.0	0.0	0.0	0.2	n.a
Leat ( Pb )	mg/l	n.a	0.09	-	-	-	0.21	0.2	0.4	0.0	0.0	0	n.a
Sianida(CN <sup>-</sup> )	mg/l	n.a	0.09	0.01	0.008	0.005	0.008	0.006	0.0	0.0	0.0	0.005	n.a
Hydrogen Sulphide ( HS <sup>-</sup> )	mg/l	n.a	0.1	0.04	0.08	0.04	0.05	0.03	0.1	0.0	0.0	0.04	n.a
Sulphat ( SO <sub>4</sub> )	mg/l	n.a	27	47	47.0	46	27	68	95.0	77.0	87.0	68	n.a
Flouride ( F <sup>-</sup> )	mg/l	n.a	0.7	0.65	0.05	0.16	0.17	-	TTD	TTD	0.0	TTD	n.a
Chlouride ( Cl <sup>-</sup> )	mg/l	n.a	7	21	0	16	9	6	4.0	5.0	1.0	6	n.a
Amoniac ( NH <sub>3</sub> -N )	mg/l	n.a	0.25	0.2	0.15	0.13	0.08	0.08	0.1	0.3	0.3	0.3	n.a
Nitrat ( NO <sub>3</sub> -N )	mg/l	n.a	8.5	6	4.5	11.5	3.9	2.9	2.2	3.6	0.8	0.6	n.a
Nitrit ( NO <sub>2</sub> -N )	mg/l	n.a	1.5	0.13	0.09	0.11	0.21	0.09	0.1	0.1	0.1	0.08	n.a
Phenol	mg/l	n.a	0.003	-	-	0.1	0.3	0.004	0.2	0.3	0.0	0	n.a
Aluminium ( Al )	mg/l	n.a	0.3	0.15	0.17	0.15	0.18	0.13	0.2	0.1	0.1	0.04	n.a
Arsenic ( As )	mg/l	n.a	0	0	0	-	0	0	0.0	0.0	0.0	0	n.a
Silver ( Ag )	mg/l	n.a	0.07	0.09	0.2	0.18	4.25	0.16	0.2	0.2	0.0	0.17	n.a
Organic matter( KMnO <sub>4</sub> )	mg/l	n.a	3.5	6.75	12.5	6.2	4.25	5.25	16.2	8.8	12.8	11.25	n.a
Rest Chlouride ( Cl <sub>2</sub> )	mg/l	n.a	-	-	-	-	-	-	-	-	-	-	n.a
Dissolved Oxygen( DO )	mg/l	n.a	1.4	1.4	1.5	1.2	1.4	1.8	3.8	3.2	3.2	3.2	n.a
Nickel ( Ni )	mg/l	n.a						0.2	0.2	TTD	0.2	0.0	0.26
Boron ( B )	mg/l	n.a						0.4	0.03	0.0	TTD	TTD	0.02
<b>Bacteriology :</b>													
Total Coliform	/100ml	n.a	26700	9700	6,000	7600	18500	43000	8700.0	46000.0	19000.0	21000	n.a
Feces Coliform	/100ml	n.a	0	1000	1000	100	0	38000	6000.0	27000.0	8200.0	8000	n.a



**Table B.1 (b) Results of Raw Water Quality Analysis by PDAM Makassar  
at Installation II - Panaikang (1/3)**

Name of WTP : II - Panaikang (Q = 1,000 Liter/sec)  
Raw water sources : The Lekopancing River  
Location : ( 50 12' 87.9" ; 1190 63'80.0" )

Remarks: ttd Not Detected  
- Not Measured  
n.a Not Available

Source: PDAM Makassar

Parameters	Unit	Year 2000											
		10-Jan.	15-Feb.	7-Mar	10-Apr.	8-May	13-Jun	11-Jul	14-Augst	6-Sept.	10-Oct.	7-Nov.	4-Dec.
<b>Physical :</b>													
Color	Hazen	81.0	74.0	20.0	45.0	68.0	48.0	84.0	59.0	17.0	54.0	70.0	78.0
Odor	-	Traces	Traces	Traces	Traces	Traces	Traces	Traces	Traces	Traces	Traces	Traces	Traces
Taste	-	Traces	Traces	Traces	Traces	Traces	Traces	Traces	Traces	Traces	Traces	Traces	Traces
Temperature	° C	29.0	29.0	29.0	29.0	28.0	27.0	28.0	29	28	28.0	28.0	27
Turbidity	NTU	272.0	250.0	69.0	194.0	216.0	99.0	63.6	189.0	158.4	63.6	187.5	362.0
Total Dissolved Solids(TDS)	mg/l	170.0	154.0	79.0	80.0	108.0	130.0	105.0	95.0	80.0	75.0	75.0	80.0
<b>Chemical</b>													
pH.	-	6.8	6.8	7.1	7.2	7.2	7.2	7.2	7.4	7.2	7.4	7.2	7.2
Total Alkalic ( CaCO <sub>3</sub> )	mg/l	28.5	32.49	21.0	25.0	61.0	27.5	23.50	19.5	44.0	36.0	35.2	32.0
Iron ( Fe )	mg/l	0.23	0.22	0.20	0.26	0.41	0.33	0.40	0.32	0.27	0.26	0.06	0.04
Mangan ( Mn )	mg/l	0.27	0.29	0.15	0.29	0.35	0.36	0.53	0.42	0.17	0.26	0.5	0.3
Coppert Cu	mg/l	0.004	0.003	0.003	0.24	0.08	0.03	0.01	0.27	0.13	0.17	0.06	0.04
Zinc (Zn)	mg/l	0.009	0.36	0.20	0.30	0.25	0.12	0.31	0.10	0.11	0.15	0.10	0.30
Chromium ( Cr <sup>6+</sup> )	mg/l	0.08	0.09	0.07	0.14	0.08	0.08	0.10	0.17	0.12	0	0.009	0.009
Cadmium ( Cd )	mg/l	0.004	0.004	0.009	0.140	0.008	0.09	0.008	0.007	0.007	0.007	0.008	0.007
Leat ( Pb )	mg/l	0.06	0.06	0.04	0.8	0.2	0.10	0.05	0.04	0.08	0.04	0.05	0.05
Sianida(CN <sup>-</sup> )	mg/l	0.009	0.009	0.007	0.010	0.081	0.004	0.025	0.014	0.007	0.009	0.17	0.15
Hydrogen Sulphide ( HS )	mg/l	0.007	0.007	0.004	0.04	0.02	0.07	0.07	0.03	0.04	0.05	0.09	0.07
Sulphat ( SO <sub>4</sub> )	mg/l	118.0	105.0	98.0	93.0	97.0	92.0	58.0	50.0	40.0	38.0	40.0	43.0
Flouride ( F <sup>-</sup> )	mg/l	-	-	-	0.66	0.7	0.65	0.60	0.35	0.30	0.49	0.28	0.25
Chlouride ( Cl <sup>-</sup> )	mg/l	6.25	5.01	6.5	7.5	11.72	12.0	56.56	8.2	28.0	5.0	31.2	5.0
Amoniac ( NH <sub>3</sub> -N )	mg/l	0.08	0.007	0.07	0.05	0.03	0.10	0.06	0.13	0.07	0.06	0.08	0.06
Nitrat ( NO <sub>3</sub> -N )	mg/l	3.1	3.5	2.7	0.53	0.52	2.1	2.3	3.0	1.6	3.5	0.14	0.14
Nitrit ( NO <sub>2</sub> -N )	mg/l	0.85	0.6	0.5	0.05	0.19	0.12	0.04	0.12	0.08	0.03	0.14	0.10
Phenol	mg/l	0.004	0.004	0.2	0.5	0.05	0.06	0.06	0.5	0.06	0.03	0.009	0.008
Aluminium ( Al )	mg/l	0.05	0.05	0.05	0.09	0.18	0.13	0.16	0.11	0.12	0.10	0.07	0.05
Arsenic ( As )	mg/l	0	0	0	0	0.1	0	0	0	0	0	0	0
Silver ( Ag )	mg/l	0.06	0.04	0.10	0.08	0.06	0.06	0.06	0.05	0.05	0.05	0.05	0.05
Organic matter( KMnO <sub>4</sub> )	mg/l	4.2	4.25	6.50	5.22	6.92	2.17	7.76	4.19	8.20	6.9	12.0	14.5
Rest Chlouride ( Cl <sub>2</sub> )	mg/l	-	-	-	-	-	-	-	-	-	-	-	-
Dissolved Oxygen (DO)	mg/l												
Nickel ( Ni )	mg/l												
Boron ( B )	mg/l												
<b>Bacteriology :</b>													
Total Coliform	/100ml	70,500	62,000	35,000	98,560	51,366	40,000	32,000	28,000	36,000	30,000	14,000	27,000
Feces Coliform	/100ml	14,000	10,500	7,000	35,470	0	9,200	8,000	11,000	7,800	7,200	1,500	1,800
Parameters	Unit	Year 2001											
		9-Jan.	13-Feb.	12-Mar	9-Apr.	8-May	11-Jun	9-Jul	7-Aug	11-Sept.	8-Oct.	6-Nov.	5-Dec.
<b>Physical :</b>													
Color	Hazen	72.0	98.0	95.0	87.0	80.0	89.0	88.0	63.0	62.0	66.0	42.0	116.0
Odor	-	Traces	Traces	Traces	Traces	Traces	Traces	Traces	Traces	Traces	Traces	Traces	Traces
Taste	-	Traces	Traces	Traces	Traces	Traces	Traces	Traces	Traces	Traces	Traces	Traces	Traces
Temperature	° C	28	27	28	28	28	28	28	28	29	29	27	27
Turbidity	NTU	96.0	210.0	220.0	197.0	102.0	284.0	99.8	73.0	39.0	109.0	45.0	137.0
Total Dissolved Solids(TDS)	mg/l	72.0	105.0	98.0	92.0	87.0	92.0	75.0	68.0	52.0	69.0	40.0	42.0
<b>Chemical</b>													
pH.	-	7.2	7.1	7.1	7.1	7.3	7.2	7.2	7.3	7.3	7.3	7.1	6.9
Total Alkalic ( CaCO <sub>3</sub> )	mg/l	38.0	40	35.0	42.0	45.0	43.0	21.0	43.0	37.0	40.0	23.0	21.0
Iron ( Fe )	mg/l	0.05	0.06	0.05	0.07	0.08	0.08	0.09	0.44	0.40	0.40	0.13	0.71
Mangan ( Mn )	mg/l	0.04	0.04	0.04	0.06	0.07	0.07	0.17	0.62	0.50	0.45	0.26	1.05
Coppert Cu	mg/l	0.08	0.08	0.07	0.08	0.08	0.07	0.08	0.36	0.30	0.30	0.20	0.47
Zinc (Zn)	mg/l	0.35	0.30	0.30	0.35	0.45	0.40	0.45	0.60	0.60	0.50	0.068	0.6
Chromium ( Cr <sup>6+</sup> )	mg/l	0.06	0.06	0.06	0.09	0.08	0.07	0.09	0.10	0.10	0.10	0.09	0.15
Cadmium ( Cd )	mg/l	0.008	0.005	0.05	0.07	0.009	0.005	0.005	0.007	0.006	0.005	0	0.177
Leat ( Pb )	mg/l	0.06	0.05	0.04	0.06	0.06	0.06	0.06	0.06	0.05	0.05	0.3	0.90
Sianida(CN <sup>-</sup> )	mg/l	0.006	0.005	0.004	0.007	0.006	0.006	0.006	0.007	0.005	0.005	0.012	0.029
Hydrogen Sulphide ( HS )	mg/l	0.04	0.04	0.04	0.06	0.06	0.05	0.07	0.06	0.06	0.04	0.08	0.14
Sulphat ( SO <sub>4</sub> )	mg/l	32.0	45.0	40.0	45.0	42.0	45.0	36.0	32.0	19.0	15.0	13.0	16.0
Flouride ( F <sup>-</sup> )	mg/l	0.30	0.30	0.30	0.45	0.40	0.40	0.58	0.6	0.60	0.50	0	0.43
Chlouride ( Cl <sup>-</sup> )	mg/l	11.5	7.0	8.0	15.0	22.0	25.0	6.0	5.0	5.0	5.0	7.0	6.0
Amoniac ( NH <sub>3</sub> -N )	mg/l	0.04	0.04	0.04	0.08	0.07	0.06	0.06	0.09	0.07	0.07	0.04	0.19
Nitrat ( NO <sub>3</sub> -N )	mg/l	1.20	0.80	0.70	0.90	0.08	0.07	2.6	1.8	1.5	1.2	0.89	0.78
Nitrit ( NO <sub>2</sub> -N )	mg/l	0.08	0.08	0.08	0.08	0.08	0.06	0.04	0.11	0.10	0.10	0.21	0.21
Phenol	mg/l	0.005	0.005	0.005	0.005	0.005	0.005	0.04	0.04	0.04	0.04	0	0.50
Aluminium ( Al )	mg/l	0.04	0.04	0.05	0.05	0.04	0.04	0.05	0.05	0.04	0.04	0.14	0.24
Arsenic ( As )	mg/l	0	0	0	0	0	0	0	0	0	0	0	0
Silver ( Ag )	mg/l	0.03	0.03	0.03	0.03	0.03	0.04	0.03	0.04	0.04	0.03	0.03	0.04
Organic matter( KMnO <sub>4</sub> )	mg/l	4.20	7.25	6.70	9.20	8.25	8.15	9.50	7.80	6.50	7.20	6.50	5.75
Rest Chlouride ( Cl <sub>2</sub> )	mg/l	-	-	-	-	-	-	-	-	-	-	-	-
Dissolved Oxygen (DO)	mg/l							0.90	0.70	0.50	0.50	0.40	0.40
Nickel ( Ni )	mg/l												
Boron ( B )	mg/l												
<b>Bacteriology :</b>													
Total Coliform	/100ml	18,000	20,000	15,000	14,000	12,000	14,000	17,000	11,000	8,900	1,950	1,800	2,100
Feces Coliform	/100ml	1,100	1,000	1,200	1,400	1,100	1,200	1,400	1,100	1,000	125	112	150



**Table B.1 (b) Results of Raw Water Quality Analysis by PDAM Makassar  
at Installation II - Panaikang (2/3)**

Name of WTP : II - Panaikang (Q = 1,000 Liter/sec)  
Raw water sources : The Lekopancing River  
Location : ( 50 12' 87.9" ; 1190 63'80.0" )

Remarks: ttd Not Detected  
- Not Measured  
n.a Not Available

Source: PDAM Makassar

Parameters	Unit	Year 2002											
		9-Jan.	11-Feb.	18-Mar	12-Apr.	May	June	9-Jul	13-Aug.	10-Sept.	8-Oct.	11-Nov.	17-Dec.
<b>Physical :</b>													
Color	Hazen	128.0	50.0	67.0	61.0	n.a	n.a	5.6	46.0	18.0	22.0	18.0	42
Odor	-	Traces	Traces	Traces	Traces	n.a	n.a	Traces	Traces	Traces	Traces	Traces	Traces
Taste	-	Traces	Traces	Traces	Traces	n.a	n.a	Traces	Traces	Traces	Traces	Traces	Traces
Temperature	° C	27	27	28.0	28	n.a	n.a	29	28	28	28	28	27.0
Turbidity	NTU	135.0	53.0	24.0	67.0	n.a	n.a	40.0	41.0	16.8	16.6	24.1	48.5
Total Dissolved Solids(TDS)	mg/l	52.0	47.0	7.0	42.0	n.a	n.a	37.0	21.0	5.0	8.5	7.0	8.5
<b>Chemical</b>													
pH.	-	7.1	7.0	7.0	7.1	n.a	n.a	7.1	7.2	7.1	7.1	7.1	7.2
Total Alkalic ( CaCO <sub>3</sub> )	mg/l	27.0	11.0	10.0	28.0	n.a	n.a	29.0	52.0	32.5	41.0	43.0	48.0
Iron ( Fe )	mg/l	0.65	0.30	0.50	0.41	n.a	n.a	0.08	0.38	0.34	0.13	0.17	0.29
Mangan ( Mn )	mg/l	0.95	0.47		0.61	n.a	n.a	0.04	0.39	0.15	0.17	0.27	0.18
Coppert Cu	mg/l	0.40	0.22	0.62	0.46	n.a	n.a	0.04	0.26	0.08	0.10	0.17	0.12
Zinc (Zn)	mg/l	0.60	-	0.40	0.02	n.a	n.a	1.03	0.85	0.22	0.23	0.35	0.27
Chromium ( Cr <sup>6+</sup> )	mg/l	0.20	0.25	0.25	0.20	n.a	n.a	0.07	0.08	0.04	0.04	0.04	0.04
Cadmium ( Cd )	mg/l	0.150	-	0.30	0.065	n.a	n.a	0.002	-	-	0	0.006	0.12
Leat ( Pb )	mg/l	0.75	0.03	0.01	0.5	n.a	n.a	0	0.04	-	-	-	0.8
Sianida(CN <sup>-</sup> )	mg/l	0.025	0.013	0.01	0.03	n.a	n.a	0.04	0.015	0.005	0.005	0.017	0.002
Hydrogen Sulphide ( HS )	mg/l	0.15	0.08	0.032	0.021	n.a	n.a	0.004	0.08	0.03	0.03	0.04	0.05
Sulphat ( SO <sub>4</sub> )	mg/l	18.0	20.0	0.10	79.0	n.a	n.a	45.0	38.0	40.0	42.0	40.0	38.0
Flouride ( F <sup>-</sup> )	mg/l	0.43	-	0	n.a	n.a	n.a	0	-	-	0.02	0.08	0.01
Chlouride ( Cl <sup>-</sup> )	mg/l	5.0	5.0	0.50	5.0	n.a	n.a	8.0	3.0	3.0	3.0	4.0	5.0
Amoniac ( NH <sub>3</sub> -N )	mg/l	0.17	0.25	6.0	0.17	n.a	n.a	0.07	0.15	0.12	0.09	0.75	0.10
Nitrat ( NO <sub>3</sub> -N )	mg/l	0.97	2.4	0.22	2.90	n.a	n.a	1.3	2.7	2.3	6.9	1.67	4.2
Nitrit ( NO <sub>2</sub> -N )	mg/l	0.25	0.12	3.80	0.03	n.a	n.a	0.03	0.12	0.06	0.04	0.09	1.0
Phenol	mg/l	0.40	0.3	0.16	0.3	n.a	n.a	-	0.5	0.2	0.4	-	0.2
Aluminium ( Al )	mg/l	0.27	0.19	0.60	0.15	n.a	n.a	0.13	0.12	0.17	0.13	0.21	0.17
Arsenic ( As )	mg/l	0	0	0.20	0	n.a	n.a	0	0	0	0	0	0
Silver ( Ag )	mg/l	0.04	0.02	0	0.78	n.a	n.a	0.4	-	-	-	0.52	0.7
Organic matter( KMnO <sub>4</sub> )	mg/l	9.25	8.75	0.27	6.5	n.a	n.a	8.5	7.68	3.25	1.14	2.75	9.06
Rest Chlouride ( Cl <sub>2</sub> )	mg/l	-	-	7.2	-	n.a	n.a	-	-	-	-	-	-
Dissolved Oxygen( DO )	mg/l	0.30	0.30	0.20	0.90	n.a	n.a	2.2	2.6	2.6	1.7	1.9	1.2
Nickel ( Ni )	mg/l												
Boron ( B )	mg/l												
<b>Bacteriology :</b>													
Total Coliform	/100ml	-	1,800	2,600	1,700	n.a	n.a	18,500	17,200	11,000	7,800	17,000	23,000
Feces Coliform	/100ml	-	100	275	325	n.a	n.a	120	93	60	71	0	0

Parameters	Unit	Year 2003											
		7-Jan.	18-Feb.	18-Mar	14-Apr.	13-May	10-Jun	July	20-Aug.	12-Sept.	20-Oct.	19-Nov.	Dec.
<b>Physical :</b>													
Color	Hazen	54.0	57.0	42.0	38.0	24.0	15.0	23.0	18.0	21.0	34.0	37.0	n.a
Odor	-	Traces	Traces	Traces	Traces	Traces	Traces	Traces	Traces	Traces	Traces	Traces	n.a
Taste	-	Traces	Traces	Traces	Traces	Traces	Traces	Traces	Traces	Traces	Traces	Traces	n.a
Temperature	° C	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	28.0	28.0	n.a
Turbidity	NTU	112.0	137.0	60.9	88.0	80.1	63.9	32.5	47.9	28.9	39.8	47.5	n.a
Total Dissolved Solids(TDS)	mg/l	28.0	26.0	19.0	27.0	20.0	22.0	20.0	68.0	47.0	52.0	27.0	n.a
<b>Chemical</b>													
pH.	-	7.0	7.1	7.1	7.2	7.1	7.2	7.1	7.1	7.1	7.1	7.1	n.a
Total Alkalic ( CaCO <sub>3</sub> )	mg/l	36.0	32.5	27.0	25.0	35.0	28.0	27.0	31.5	31.8	22.5	28.5	n.a
Iron ( Fe )	mg/l	0.25	0.30	0.31	0.30	0.35	0.27	0.25	0.28	0.22	0.28	0.25	n.a
Mangan ( Mn )	mg/l	0.20	0.10	0.46	0.40	0.65	0.25	0.30	0.21	0.17	0.11	0.20	n.a
Coppert Cu	mg/l	0.15	0.15	0.26	0.20	0.38	0.15	0.10	0.15	0.10	0.17	0.20	n.a
Zinc (Zn)	mg/l	0.23	0.25	0.31	0.30	0.35	0.30	0.35	0.2	0.17	0.08	0.07	n.a
Chromium ( Cr <sup>6+</sup> )	mg/l	0.08	0.06	0.10	0.10	0.14	0.11	0.10	0.04	0.07	0.06	0.01	n.a
Cadmium ( Cd )	mg/l	-	-	-	0.007	0.019	0.02	0.02	0.016	0.01	0	0	n.a
Leat ( Pb )	mg/l	0.03	0.02	-	-	-	0.09	0.09	0.2	0	0	0.1	n.a
Sianida(CN <sup>-</sup> )	mg/l	0.03	0.02	0.014	0.08	0.023	0.015	0.02	0.007	0.005	0.016	0.02	n.a
Hydrogen Sulphide ( HS )	mg/l	0.05	0.05	0.02	0.08	0.10	0.07	0.07	0.05	0.04	0.05	0.05	n.a
Sulphat ( SO <sub>4</sub> )	mg/l	36.0	39.0	27.0	39.0	41.0	48.0	53.0	99.0	69.0	87.0	69.0	n.a
Flouride ( F <sup>-</sup> )	mg/l	-	0.7	0.58	0.27	0.20	0.12	0.10	TTD	TTD	0.53	TTD	n.a
Chlouride ( Cl <sup>-</sup> )	mg/l	4.0	5.0	5.0	5.0	6.0	6.0	6.0	3.0	4.0	2.0	4.0	n.a
Amoniac ( NH <sub>3</sub> -N )	mg/l	0.32	0.25	0.18	0.14	0.15	0.09	0.10	0.07	0.20	0.40	0.40	n.a
Nitrat ( NO <sub>3</sub> -N )	mg/l	3.7	4.5	4.4	3.5	5.5	4.2	3.0	1.4	0.04	1.5	1.27	n.a
Nitrit ( NO <sub>2</sub> -N )	mg/l	0.24	1.2	0.13	0.12	0.20	0.10	0.10	0.19	0.04	0.12	0.26	n.a
Phenol	mg/l	0.002	0.003	-	-	0.70	0.003	0.003	0.1	0.2	0	0	n.a
Aluminium ( Al )	mg/l	0.18	0.20	0.19	0.15	0.18	0.16	0.20	0.08	0.10	0.06	0.05	n.a
Arsenic ( As )	mg/l	0	0	0	0	0	0	0	0	0	0	0	n.a
Silver ( Ag )	mg/l	0.7	0.08	0.05	0.08	0.06	0.10	0.12	0.10	0.18	0	0	n.a
Organic matter( KMnO <sub>4</sub> )	mg/l	11.25	10.65	9.75	12.75	11.5	14.5	11.5	1.6	8.28	14.04	11.25	n.a
Rest Chlouride ( Cl <sub>2</sub> )	mg/l	-	-	-	-	-	-	-	-	-	-	-	n.a
Dissolved Oxygen( DO )	mg/l	2.15	1.6	1.2	2.1	3.5	4.8	3.6	1.8	3.2	4.5	3.5	n.a
Nickel ( Ni )	mg/l						0.23	0.24	TTD	0.21	0	1.17	n.a
Boron ( B )	mg/l						0.02	0.02	0.02	TTD	TTD	0.03	n.a
<b>Bacteriology :</b>													
Total Coliform	/100ml	7,200	24,000	9,700	20,000	3,733	4,750	12,700	11,000	15,000	21,000	23,000	n.a
Feces Coliform	/100ml	0	13,000	800	2,000	600	0	8,500	6,000	9,200	7,500	6,000	n.a



**Table B.1 (c) Results of Raw Water Quality Analysis by PDAM Makassar  
at Installation III - Antang (1/3)**

Name of WTP : III - Antang (Q = 90 Liter/sec)  
Raw water sources : The Lekopancing River  
Location : ( 50 12' 87.9" ; 1190 63'80.0" )

Remarks: ttd Not Detected  
- Not Measured  
n.a Not Available

Source: PDAM Makassar

Parameters	Unit	Year 2000											
		12-Jan	15-Feb.	7-Mar	10-Apr	8-May	13-Jun	11-Jul	14-Aug	6-Sept.	10-Oct.	7-Nov.	4-Dec.
<b>Physical :</b>													
Color	Hazen	74.0	83.0	89.0	48.0	53.0	48.0	76.0	12.0	12.0	52.0	55.0	80.0
Odor	-	traces	Traces	Traces	Traces	Traces	Traces	Traces	Traces	Traces	Traces	Traces	Traces
Taste	-	traces	Traces	Traces	Traces	Traces	Traces	Traces	Traces	Traces	Traces	Traces	Traces
Temperature	° C	29.0	29	29	29	28	27	28	28	28	28	28	27
Turbidity	NTU	287.0	207.0	175.0	185.0	56.0	41.0	43.2	140.4	140.0	54.3	67.8	163.6
Total Dissolved Solids(TDS)	mg/l	119.0	110.0	108.0	97.0	52.0	38.0	98.6	98.6	52.0	69.0	65.0	75.0
<b>Chemical</b>													
pH.	-	6.9	6.9	6.9	7.0	7.2	7.2	7.3	7.2	7.2	7.3	7.3	7.1
Total Alkalic ( CaCO <sub>3</sub> )	mg/l	27.5	24.0	27.0	8.0	26.0	25.5	22.5	37.0	37.0	36.0	32.0	42.0
Iron ( Fe )	mg/l	0.30	0.35	0.35	0.25	0.30	0.35	0.40	0.17	0.17	0.26	0.24	0.28
Mangan ( Mn )	mg/l	0.25	0.25	0.20	0.30	0.40	0.51	0.53	0.17	0.17	0.24	0.25	0.23
Copper ( Cu )	mg/l	0.07	0.06	0.09	0.28	0.27	0.010	0.31	0.15	0.15	0.17	0.16	0.18
Zinc ( Zn )	mg/l	0.15	0.20	0.20	0.38	0.36	0.30	0.01	0.10	0.10	0.16	0.15	0.16
Chromium ( Cr <sup>6+</sup> )	mg/l	0.04	0.05	0.06	0.14	0.13	0.10	0.10	0.05	0.05	0	0.03	0.04
Cadmium ( Cd )	mg/l	0.04	0.05	0.05	0.140	0.12	0.008	0.008	0.007	0.007	0.007	0.007	0.006
Lead ( Pb )	mg/l	0.07	0.07	0.09	0.8	0.7	0.05	0.05	0.06	0.06	0.04	0.04	0.04
Sianida ( CN <sup>-</sup> )	mg/l	0.008	0.006	0.008	0.010	0.010	0.024	0.025	0.009	0.009	0.009	0.009	0.008
Hydrogen Sulphide ( HS )	mg/l	0.05	0.03	0.05	0.12	0.11	0.06	0.07	0.03	0.03	0.05	0.05	0.05
Sulphat ( SO <sub>4</sub> )	mg/l	127.0	118.0	105.0	87.0	85.0	48.0	58.0	37.0	37.0	38.0	35.0	36.0
Flouride ( F <sup>-</sup> )	mg/l	-	-	-	0.60	0.50	0.60	0.60	0.30	0.30	0.49	0.40	0.38
Chlouride ( Cl <sup>-</sup> )	mg/l	10.0	6.5	7.0	11.5	11.0	56.56	56.56	20.0	20.0	5.0	5.0	5.0
Amoniac ( NH <sub>3</sub> -N )	mg/l	0.04	0.04	0.06	0.05	0.05	0.05	0.06	0.06	0.06	0.06	0.05	0.04
Nitrat ( NO <sub>3</sub> -N )	mg/l	1.20	1.10	1.75	0.50	0.50	2.3	2.3	2.5	2.5	3.45	2.75	2.85
Nitrit ( NO <sub>2</sub> -N )	mg/l	0.26	0.20	0.35	0.05	0.05	0.04	0.04	0.07	0.07	0.03	0.03	0.03
Phenol	mg/l	0.08	0.07	0.10	0.6	0.6	0.06	0.06	0.20	0.05	0.04	0.04	0.04
Aluminium ( Al )	mg/l	0.10	0.01	0.10	0.08	0.07	0.16	0.16	0.20	0.20	9.0	8.0	6.5
Arsenic ( As )	mg/l	0.1	0.10	0	0	0	0	0	0	0	0	0	0
Silver ( Ag )	mg/l	0.07	0.03	0.04	0.11	0.10	0.06	0.06	0.06	0.05	0.05	0.05	0.04
Organic matter ( KMnO <sub>4</sub> )	mg/l	8.2	5.75	5.5	3.57	3.57	7.76	7.76	7.75	9.75	6.9	7.5	7.8
Rest Chlouride ( Cl <sub>2</sub> )	mg/l	-	-	-	-	-	-	-	-	-	-	-	-
Dissolved Oxygen ( DO )	mg/l	-	-	-	-	-	-	-	-	-	-	-	-
<b>Bacteriology :</b>													
Total Coliform	/100ml	76,000	52,000	49,000	0	4,670	27,000	26,800	21,000	20,000	21,000	24,000	22,000
Feces Coliform	/100ml	11,000	8,700	7,000	0	2,114	1,400	1,350	1,200	7,000	6,900	7,500	8,000
<b>YEAR 2001</b>													
<b>Physical :</b>													
Color	Hazen	78.0	82.0	80.0	68.0	56.0	48.0	22.0	29.0	21.0	23.0	63.0	84.0
Odor	-	Traces	Traces	Traces	Traces	Traces	Traces	Traces	Traces	Traces	Traces	Traces	Traces
Taste	-	Traces	Traces	Traces	Traces	Traces	Traces	Traces	Traces	Traces	Traces	Traces	Traces
Temperature	° C	27.5	27	28	28.0	27.5	28.0	28.0	27.5	27.5	27.5	27.0	26.0
Turbidity	NTU	205.0	214.0	83.0	56.0	63.0	41.0	19.6	53.06	35.5	35.5	198.0	27.0
Total Dissolved Solids(TDS)	mg/l	80.0	86.0	86.0	74.0	81.0	72.0	70.0	73.5	93.5	85.5	96.0	98.0
<b>Chemical</b>													
pH.	-	7.1	7.0	7.1	7.1	7.3	7.3	7.3	7.3	7.3	7.3	7.2	7.1
Total Alkalic ( CaCO <sub>3</sub> )	mg/l	48.0	47.0	41.0	39.0	38.0	36.0	25.0	24.6	24.9	25.5	28.0	32.0
Iron ( Fe )	mg/l	0.29	0.31	0.30	0.28	0.3	0.35	0.15	0.13	0.14	0.15	0.18	0.2
Mangan ( Mn )	mg/l	0.25	0.26	0.08	0.09	0.07	0.08	0.17	0.15	0.16	0.17	0.19	0.7
Copper ( Cu )	mg/l	0.17	0.06	0.05	0.06	0.04	0.04	0.09	0.07	0.08	0.09	0.08	0.07
Zinc ( Zn )	mg/l	0.07	0.05	0.04	0.07	0.08	0.08	0.1	0.10	0.12	0.13	0.14	0.12
Chromium ( Cr <sup>6+</sup> )	mg/l	0.04	0.04	0.02	0.02	0.04	0.03	0.04	0.05	0.07	0.08	0.07	0.05
Cadmium ( Cd )	mg/l	0.005	0.004	0.003	0.003	0.004	0.003	0.003	0.004	0.005	0.005	0.004	0.003
Lead ( Pb )	mg/l	0.03	0.03	0.02	0.03	0.03	0.02	0.03	0.03	0.05	0.06	0.05	0.04
Sianida ( CN <sup>-</sup> )	mg/l	0.007	0.006	0.004	0.003	0.006	0.004	0.004	0.004	0.005	0.005	0.004	0.003
Hydrogen Sulphide ( HS )	mg/l	0.02	0.02	0.02	0.02	0.02	0.03	0.04	0.05	0.05	0.06	0.03	0.03
Sulphat ( SO <sub>4</sub> )	mg/l	38.0	37.0	32.0	28.0	27.0	25.0	25.0	24.9	24.7	25.5	28.0	36.0
Flouride ( F <sup>-</sup> )	mg/l	0.37	0.36	0.34	0.32	0.4	0.34	0.58	0.52	0.49	0.45	0.42	0.48
Chlouride ( Cl <sup>-</sup> )	mg/l	6.0	6.1	7.0	8.0	6.0	5.0	9.0	9.0	9.2	10.1	7.4	6.5
Amoniac ( NH <sub>3</sub> -N )	mg/l	0.04	0.03	0.04	0.03	0.03	0.04	0.07	0.06	0.08	0.09	0.06	0.05
Nitrat ( NO <sub>3</sub> -N )	mg/l	2.95	2.83	0.6	0.8	2.76	2.83	2.4	2.3	2.6	3.1	2.95	3.85
Nitrit ( NO <sub>2</sub> -N )	mg/l	0.04	0.04	0.07	0.06	0.04	0.05	0.06	0.06	0.06	0.07	0.05	0.08
Phenol	mg/l	0.03	0.02	0.005	0.004	0.02	0.02	0.03	0.03	0.04	0.05	0.03	0.04
Aluminium ( Al )	mg/l	0.03	0.03	0.05	0.06	0.03	0.02	0.12	0.12	0.14	0	0.13	0.12
Arsenic ( As )	mg/l	0	0	0	0	0	0	0	0	0	0.15	0	0
Silver ( Ag )	mg/l	0.45	0.43	0.03	0.02	0.32	0.28	0.46	0.43	0.46	0	0.38	0.41
Organic matter ( KMnO <sub>4</sub> )	mg/l	8.2	9.2	6.7	7.3	7.8	7.6	8.50	7.46	8.15	0.45	8.2	9.3
Rest Chlouride ( Cl <sub>2</sub> )	mg/l	-	-	-	-	-	-	-	-	-	7.25	-	-
Dissolved Oxygen ( DO )	mg/l	n.a	n.a	n.a	n.a	n.a	n.a	0.4	0.5	0.5	-	0.6	0.6
<b>Bacteriology :</b>													
Total Coliform	/100ml		28,000	8,000	7,800	7,200	7,500	9,000	8,000	10,000	500	18,000	18,700
Coliform Feces	/100ml		8,850	1,000	1,100	1,200	1,000	1,100	1,000	1,000	75	7,600	8,600

**Table B.1 (c) Results of Raw Water Quality Analysis by PDAM Makassar  
at Installation III - Antang (2/3)**

Name of WTP : III - Antang (Q = 90 Liter/sec)  
Raw water sources : The Lekopancing River  
Location : ( 50 12' 87.9" ; 1190 63'80.0" )

Remarks: ttd Not Detected  
- Not Measured  
n.a Not Available

Source: PDAM Makassar

Parameters	Unit	Year 2002											
		9-Jan	11-Feb.	18-Mar	12-Apr	May	June	9-Jul	19-Aug	Sept	14-Oct	18-Nov.	18-Dec
<b>Physical :</b>													
Color	Hazen	93.0	42.0	Traces	42.0	n.a	n.a	54.0	26.0	n.a	22.0	81.0	40.0
Odor	-	Traces	Traces	Traces	Traces	n.a	n.a	Traces	Traces	n.a	Traces	Traces	Traces
Taste	-	Traces	Traces	Traces	Traces	n.a	n.a	Traces	Traces	n.a	Traces	Traces	Traces
Temperature	°C	27.0	27.0	30.0	28.0	n.a	n.a	29.0	28.0	n.a	28.0	28.0	27.0
Turbidity	NTU	223.0	46.0	24.0	51.0	n.a	n.a	72.0	18.5	n.a	30.1	205	31.3
Total Dissolved Solids(TDS)	mg/l	102.0	64.0	52.0	59.0	n.a	n.a	41.0	40.0	n.a	13.0	80.0	9.0
<b>Chemical</b>													
pH.	-	7,1	7,2	7,1	7,3	n.a	n.a	7,2	7,8	n.a	7,6	7,4	7,1
Total Alkalic ( CaCO <sub>3</sub> )	mg/l	27.0	10.0	8,5	24,5	n.a	n.a	30,0	74,0	n.a	53,5	47,5	56,0
Iron ( Fe )	mg/l	0,20	0,31	0,4	0,27	n.a	n.a	0,10	0,21	n.a	0,15	0,75	0,25
Mangan ( Mn )	mg/l	0,17	0,42	0,47	0,42	n.a	n.a	0,06	0,18	n.a	0,22	0,94	0,29
Copper( Cu )	mg/l	0,09	0,24	0,25	0,30	n.a	n.a	0,04	0,07	n.a	0,13	0,57	0,23
Zinc (Zn)	mg/l	0,21	-	0,15	1,22	n.a	n.a	1,04	0,37	n.a	0,32	0,35	0,70
Chromium ( Cr <sup>6+</sup> )	mg/l	0,06	0,05	-	0,20	n.a	n.a	0,06	0,04	n.a	0,05	0,14	0,02
Cadmium ( Cd )	mg/l	0,008	-	0,004	0,045	n.a	n.a	0,002	-	n.a	0,006	0,006	0,02
Leat ( Pb )	mg/l	0,11	0,02	0,8	0,03	n.a	n.a	0,01	0,07	n.a	-	-	0,3
Sianida(CN <sup>-</sup> )	mg/l	0,009	0,09	0,025	0,021	n.a	n.a	0,06	0,005	n.a	0,007	0,031	0,010
Hydrogen Sulphide ( HS <sup>-</sup> )	mg/l	0,06	0,06	0,1	0,012	n.a	n.a	0,005	0,03	n.a	0,04	0,03	0,04
Sulphat ( SO <sub>4</sub> )	mg/l	38,0	35,0	30,0	98,0	n.a	n.a	48,0	34	n.a	44,0	47,0	43,0
Flouride ( F <sup>-</sup> )	mg/l	0,40	-	0,04	0	n.a	n.a	0	-	n.a	0,03	0,04	0,06
Chlouride ( Cl <sup>-</sup> )	mg/l	6,0	4,0	4,0	4,0	n.a	n.a	6,0	3,0	n.a	4,0	4,0	4,0
Amoniac ( NH <sub>3</sub> -N )	mg/l	0,05	0,14	0,14	0,23	n.a	n.a	0,09	0,09	n.a	0,11	0,15	0,10
Nitrat ( NO <sub>3</sub> -N )	mg/l	2,75	2,7	1,90	0,5	n.a	n.a	1,08	1,2	n.a	3,2	2,4	2,6
Nitrit ( NO <sub>2</sub> -N )	mg/l	1,11	1,10	0,19	0,10	n.a	n.a	0,11	0,07	n.a	0,07	0,22	0,11
Phenol	mg/l	0,04	0,1	0,6	0,2	n.a	n.a	-	0,1	n.a	-	-	0,2
Aluminium ( Al )	mg/l	0,10	0	0,22	0,23	n.a	n.a	0,20	0,29	n.a	0,25	0,3	0,10
Arsenic ( As )	mg/l	0	0	0	0	n.a	n.a	0	0	n.a	0	0	0
Silver ( Ag )	mg/l	0,32	0,002	0,28	0,14	n.a	n.a	0,20	-	n.a	-	0,27	0,17
Organic matter( KMnO <sub>4</sub> )	mg/l	9,5	-	8,50	7,0	n.a	n.a	9,0	16,4	n.a	31,79	18,5	7,5
Rest Chlouride ( Cl <sub>2</sub> )	mg/l	-	-	-	-	n.a	n.a	-	-	n.a	-	-	-
Dissolved Oxygen( DO )	mg/l	0,7	0,5	1,5	1,5	n.a	n.a	1,5	1,6	n.a	1,0	-	1,2
<b>Bacteriology :</b>													
Total Coliform	/100ml	-	1,700	2,800	2,300	n.a	n.a	9,2	11,000	n.a	8,3	11,000	9,500
Feces Coliform	/100ml	-	90	420	175	n.a	n.a	87	90,0	n.a	47	0	0
Parameters	Unit	Year 2003											
		20-Jan	18-Feb	18-Mar	14-Apr	20-May	17-Jun	15-Jul	20-Aug.	12-Sep	20-Oct	19-Nov	Dec.
<b>Physical :</b>													
Color	Hazen	38.0	75.0	68.0	41.0	19.0	11.0	22.0	15.0	32.0	36.0	65.0	n.a
Odor	-	Traces	Traces	Traces	Traces	Traces	Traces	Traces	Traces	Traces	Traces	Traces	n.a
Taste	-	Traces	Traces	Traces	Traces	Traces	Traces	Traces	Traces	Traces	Traces	Traces	n.a
Temperature	°C	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	28.0	28.0	n.a
Turbidity	NTU	39.5	80.7	79.5	36.0	16.9	28.4	28.6	19.0	33.9	27.4	65.6	n.a
Total Dissolved Solids(TDS)	mg/l	20.0	24.0	20.0	18.0	17.0	21.0	15.0	62.0	28.0	56.0	37.0	n.a
<b>Chemical</b>													
pH.	-	7,0	7,1	7,0	7,2	7,1	7,2	7,1	7,0	7,1	7,2	7,0	n.a
Total Alkalic ( CaCO <sub>3</sub> )	mg/l	29,0	26	23,0	24,0	25,0	23,0	27	37,5	36,9	13,08	15,5	n.a
Iron ( Fe )	mg/l	0,25	0,42	0,30	0,35	0,34	0,23	0,25	0,28	0,36	0,18	0,4	n.a
Mangan ( Mn )	mg/l	0,19	0,77	0,44	0,38	0,18	0,23	0,24	0,34	0,31	0,20	0,55	n.a
Copper( Cu )	mg/l	0,15	0,39	0,21	0,18	0,11	0,13	0,12	0,19	0,05	0,26	0,32	n.a
Zinc (Zn)	mg/l	0,20	0,66	0,39	0,26	0,61	0,29	0,32	0,20	0,06	0,13	0,11	n.a
Chromium ( Cr <sup>6+</sup> )	mg/l	0,07	0,15	0,06	0,12	0,05	0,07	0,06	0,04	0,07	0,07	0,05	n.a
Cadmium ( Cd )	mg/l	-	-	-	0,007	0,012	0,01	0,005	0,021	0,02	0	0	n.a
Leat ( Pb )	mg/l	0,04	0,05	-	-	-	0,07	0,1	0	0	0	0,003	n.a
Sianida(CN <sup>-</sup> )	mg/l	0,02	0,023	0,011	0,013	0,005	0,014	0,006	0,006	0,01	0,016	0,011	n.a
Hydrogen Sulphide ( HS <sup>-</sup> )	mg/l	0,05	0,11	0,05	0,11	0,04	0,05	0,04	0,04	0,04	0,03	0,03	n.a
Sulphat ( SO <sub>4</sub> )	mg/l	38,0	47	35,0	37,0	44,0	67,0	109,0	97,0	78,0	94,0	76,0	n.a
Flouride ( F <sup>-</sup> )	mg/l	-	0,08	0,47	0,11	0,11	0,10	-	ttd	ttd	0,40	ttd	n.a
Chlouride ( Cl <sup>-</sup> )	mg/l	5,0	5,0	5,0	4,0	4,0	5,0	4,0	3,0	4,0	2,0	4,0	n.a
Amoniac ( NH <sub>3</sub> -N )	mg/l	0,10	0,17	0,12	0,10	0,06	0,09	0,66	0,07	0,20	0,5	0,4	n.a
Nitrat ( NO <sub>3</sub> -N )	mg/l	2,80	0,77	4,2	2,3	3,8	3,7	2,7	2,0	2,3	2,8	2,6	n.a
Nitrit ( NO <sub>2</sub> -N )	mg/l	0,10	2,3	0,13	0,11	0,09	0,09	0,10	0,23	0,15	0,13	0,16	n.a
Phenol	mg/l	0,001	0,4	-	-	0,1	0,002	0,002	0	0,03	0	0	n.a
Aluminium ( Al )	mg/l	0,12	0,18	0,14	0,25	0,18	0,17	0,24	0,12	0,15	0,12	0,12	n.a
Arsenic ( As )	mg/l	0	0	0	0	0	0	0	0	0	0	0	n.a
Silver ( Ag )	mg/l	0,6	0,27	0,19	0,19	0,1	0,1	0,21	0,2	0	0	0	n.a
Organic matter( KMnO <sub>4</sub> )	mg/l	10,5	15	11,5	10,75	14,0	13	13,5	11,17	9,94	13,5	12,5	n.a
Rest Chlouride ( Cl <sub>2</sub> )	mg/l	-	-	-	-	-	-	-	-	-	-	-	n.a
Dissolved Oxygen( DO )	mg/l	1,7	1,8	1,2	1,4	1,5	1,6	1,7	1,6	2,0	4,5	3,5	n.a
Nickel ( Ni )							0,20	0,23	ttd	0,20	0	0,48	n.a
Boron ( B )							0,03	0,02	0,01	ttd	ttd	0,06	n.a
<b>Bacteriology :</b>													
Total Coliform	/100ml	2,700	16,000	16,700	16,000	5,350	24,466	18,900	9,800	15,000	12,000	14,000	n.a
Feces Coliform	/100ml	0	4,900	1,100	12,000	2,000	0	6,400	6,066	7,000	3,700	4,000	n.a





**Table B.1 (d) Results of Raw Water Quality Analysis by PDAM Malassar  
at Installation IV - Maccini Sombala (2/3)**

Name of WTP : IV - Maccini Sombala (Q = 200 Liter/sec)

Remarks: ttd Not Detected

Raw water sources : The Jeneberang River

- Not Measured

Location : Balang Baru village - Tamalate ( 119o 24' 46" ; -5o 11' 14" )

n.a Not Available

Source: PDAM Makassar

Parameters	Unit	Year 2002											
		Jan	Feb	March	April	May	June	9-Jul	14-Aug	10-Sep	9-Oct	18-Nov	18-Dec
<b>Physical :</b>													
Color	Hazen	n.a	n.a	n.a	n.a	n.a	n.a	32.0	27.0	9.0	8.0	6.0	11.0
Odor	-	n.a	n.a	n.a	n.a	n.a	n.a	Traces	Traces	Traces	Traces	Traces	Traces
Taste	-	n.a	n.a	n.a	n.a	n.a	n.a	Traces	Traces	Traces	Traces	Traces	Traces
Temperature	<sup>o</sup> C	n.a	n.a	n.a	n.a	n.a	n.a	19.0	28.0	28.0	28	28	27
Turbidity	NTU	n.a	n.a	n.a	n.a	n.a	n.a	40.0	14.2	12.52	9.38	7.26	37.2
Total Dissolved Solids(TDS)	mg/l	n.a	n.a	n.a	n.a	n.a	n.a	28.0	29.3	24.1	21.0	20.4	11.0
<b>Chemical</b>													
pH	-	n.a	n.a	n.a	n.a	n.a	n.a	7.0	7.0	6.8	6.9	6.9	7.0
Total Alkali(c CaCO <sub>3</sub> )	mg/l	n.a	n.a	n.a	n.a	n.a	n.a	26.28	34.0	25.0	28.0	18.2	24.5
Iron ( Fe )	mg/l	n.a	n.a	n.a	n.a	n.a	n.a	0.04	0.04	0.1	0.05	0.07	0.07
Mangan ( Mn )	mg/l	n.a	n.a	n.a	n.a	n.a	n.a	0.08	0.06	0.06	0.07	0.07	0.09
Cupper ( Cu )	mg/l	n.a	n.a	n.a	n.a	n.a	n.a	0.04	0.04	0.04	0.03	0.004	0.12
Zinc (Zn)	mg/l	n.a	n.a	n.a	n.a	n.a	n.a	1.02	0.24	0.1	0.14	0.11	0.50
Chromium ( Cr <sup>6+</sup> )	mg/l	n.a	n.a	n.a	n.a	n.a	n.a	0.07	0.06	0.04	0.04	0.08	0.04
Cadmium( Cd )	mg/l	n.a	n.a	n.a	n.a	n.a	n.a	0.002	-	-	0.004	0.004	0.7
Leat ( Pb )	mg/l	n.a	n.a	n.a	n.a	n.a	n.a	0.01	0.06	0.04	-	-	0.7
Cyan (CN <sup>-</sup> )	-	n.a	n.a	n.a	n.a	n.a	n.a	0.04	0.002	0.04	0.003	0.03	0.008
Hydrogen Sulphine ( HS )	mg/l	n.a	n.a	n.a	n.a	n.a	n.a	0.0	0.0	0.01	0.02	0.04	0.05
Sulphat( SO <sub>4</sub> )	mg/l	n.a	n.a	n.a	n.a	n.a	n.a	45.0	29.0	21.0	83.0	62	87
Flourine ( F <sup>-</sup> )	mg/l	n.a	n.a	n.a	n.a	n.a	n.a	0.0	-	-	0.55	0.51	0.56
Chlourine(Cl <sup>-</sup> )	mg/l	n.a	n.a	n.a	n.a	n.a	n.a	38.28	20.79	24.21	8.0	6	7.0
Amoniac( NH <sub>3</sub> -N )	mg/l	n.a	n.a	n.a	n.a	n.a	n.a	0.07	0.06	0.03	0.06	0.04	0.08
Nitrat ( NO <sub>3</sub> -N )	mg/l	n.a	n.a	n.a	n.a	n.a	n.a	0.06	0.6	1.2	0.05	0.06	0.10
Nitrit ( NO <sub>2</sub> -N )	mg/l	n.a	n.a	n.a	n.a	n.a	n.a	0.04	0.04	0.01	0.6	0.9	0.02
Phenol	mg/l	n.a	n.a	n.a	n.a	n.a	n.a	-	0.06	0.04	-	-	0.5
Alminum ( Al )	mg/l	n.a	n.a	n.a	n.a	n.a	n.a	0.13	0.4	0.4	0.14	0.16	0.20
Arsenic ( As )	mg/l	n.a	n.a	n.a	n.a	n.a	n.a	0.0	0.0	0.0	0	0	0
Silver ( Ag )	mg/l	n.a	n.a	n.a	n.a	n.a	n.a	0.0	-	-	-	1.20	0.19
Organic matter( KMnO <sub>4</sub> )	mg/l	n.a	n.a	n.a	n.a	n.a	n.a	19.25	1.58	1.39	1.20	1.50	9.5
Residual Chlouride ( Cl <sub>2</sub> )	mg/l	n.a	n.a	n.a	n.a	n.a	n.a	-	-	-	-	-	-
Dissolved Oxigen( DO )	mg/l	n.a	n.a	n.a	n.a	n.a	n.a	1.7	2.1	1.1	1.2	1.7	1.2
<b>Bacteriology :</b>													
Total Coliform	/100ml	n.a	n.a	n.a	n.a	n.a	n.a	4,033	3,023	2,012	1,700	300	1,200
Fecal Coliform	/100ml	n.a	n.a	n.a	n.a	n.a	n.a	98.0	86.0	74	43	0.0	0

Parameters	Unit	Year 2003											
		20-Jan	18-Feb	18-Mar	15-Apr	20-May	17-Jun	15-Jul	20-Aug	12-Sep	20-Oct	19-Nov	4-Dec.
<b>Physical :</b>													
Color	Hazen	17.0	20.0	38.0	33.0	31.0	31.0	17.0	14.0	15.0	11.0	20.0	n.a
Odor	-	Traces	Traces	Traces	Traces	Traces	Traces	Traces	Traces	Traces	Traces	Traces	n.a
Taste	-	Traces	Traces	Traces	Traces	Traces	Traces	Traces	Traces	Traces	Traces	Traces	n.a
Temperature	<sup>o</sup> C	28.0	28.0	28.0	27.0	27.0	28.0	28.0	28.0	27.0	28.0	28.0	n.a
Turbidity	NTU	34.7	37.3	47.3	21.9	39.9	18.5	17.4	20.1	19.7	18.9	18.4	n.a
Total Dissolved Solids(TDS)	mg/l	12.0	19.0	21.1	15.1	20.4	18.1	16.0	48.0	36.0	32.0	27.0	n.a
<b>Chemical</b>													
pH	-	7.1	7.0	6.9	7.0	6.9	6.9	6.9	7.0	6.9	7.0	7.0	n.a
Total Alkali(c CaCO <sub>3</sub> )	mg/l	27.0	22.9	25.2	22.7	23.6	19.7	20.0	33.6	52.4	21.5	20.5	n.a
Iron ( Fe )	mg/l	0.09	0.09	0.3	0.06	0.09	0.04	0.04	0.03	0.17	0.16	0.07	n.a
Mangan ( Mn )	mg/l	0.09	0.29	0.33	0.04	0.06	0.03	0.03	0.03	0.19	0.17	0.13	n.a
Cupper ( Cu )	mg/l	0.19	0.08	0.16	0.09	0.08	0.06	0.06	0.04	0.09	0.10	0.11	n.a
Zinc (Zn)	mg/l	0.24	0.5	0.60	0.20	0.15	0.25	0.17	0.2	0.09	0.08	0.06	n.a
Chromium ( Cr <sup>6+</sup> )	mg/l	0.06	0.10	0.06	0.02	0.01	0	0.03	0	0.03	0.03	0.06	n.a
Cadmium( Cd )	mg/l	-	-	-	0.078	0.032	0.01	0.01	0.01	0.06	0	0.04	n.a
Leat ( Pb )	mg/l	0.03	0.02	-	-	-	0.20	0.02	0.08	0	0	0	n.a
Cyan (CN <sup>-</sup> )	mg/l	0.002	0.010	0.007	0.007	0.008	0.007	0.004	0.004	0.003	0.006	0.008	n.a
Hydrogen Sulphine ( HS )	mg/l	0.07	0.05	0.02	0.05	0.04	0.04	0.04	0.03	0.03	0.02	0.02	n.a
Sulphat( SO <sub>4</sub> )	mg/l	43.0	25	37.0	39.0	47.0	54.0	96.0	97.0	81.0	82.0	72.0	n.a
Flourine ( F <sup>-</sup> )	mg/l	-	0.51	0.62	0.39	0.39	0.19	0.15	0	ttd	0	0.41	n.a
Chlourine(Cl <sup>-</sup> )	mg/l	10.0	23	9.0	15.0	36.0	20.0	33.0	9.0	9.0	1.0	8.0	n.a
Amoniac( NH <sub>3</sub> -N )	mg/l	0.10	0.08	0.03	0.09	0.09	0.07	0.05	0.06	0.1	0.3	0.3	n.a
Nitrat ( NO <sub>3</sub> -N )	mg/l	0.04	0.04	4.0	0.7	0.5	1.0	0.03	0.3	0.02	1.1	3.8	n.a
Nitrit ( NO <sub>2</sub> -N )	mg/l	0.03	0.04	0.08	0.09	0.08	0.06	0.03	0.04	0.02	0.3	0.07	n.a
Phenol	mg/l	0.004	0	-	-	0.5	0.5	0.001	ttd	0.03	0	0	n.a
Alminum ( Al )	mg/l	0.009	0.16	0.13	0.12	0.11	0.10	0.12	0.07	0.10	0.17	0.18	n.a
Arsenic ( As )	mg/l	0	0	0	0	0	0	0	0	0	0	0	n.a
Silver ( Ag )	mg/l	0.10	0.06	0.12	0.16	0.12	0.04	0.11	0.1	0.12	0	0	n.a
Organic matter( KMnO <sub>4</sub> )	mg/l	8.5	6.9	8.2	6.3	7.1	5.1	6.5	15.3	8.83	12.12	11.5	n.a
Residual Chlouride ( Cl <sub>2</sub> )	mg/l	-	-	-	-	-	-	-	-	-	-	-	n.a
Dissolved Oxigen( DO )	mg/l	1.9	1.7	1.9	1.7	1.9	1.4	1.2	1.7	1.9	3.2	3.0	n.a
Nickel ( Ni )	mg/l	n.a	n.a	n.a	n.a	n.a	n.a	0.20	ttd	0.04	0	0.22	n.a
Boron ( B )	mg/l	n.a	n.a	n.a	n.a	n.a	n.a	0.03	0.02	ttd	ttd	0.04	n.a
<b>Bacteriology :</b>													
Total Coliform	/100ml	900	15,000	0	20,000	500	1,050	12,500	5,800	14,700	27,000	21,000	n.a
Feces Coliform	/100ml	0	600	0	0	0	0	6,400	300	7,200	9,500	8,000	n.a





**Table B.1 (e) Results of Raw Water Quality Analysis by PDAM Malassar at Installation V - Somba Opu (1/2)**

Name of WTP : V - Somba Opu (Q = 1,000 Liter/sec)

Raw water sources : The Jeneberang River, Bili-Bili Dam

Location : Pattaliking Village , Parangloe ( 119o 34' 54" ; -5o 16' 46" )

Remarks: ttd Not Detected

- Not Measured

n.a Not Available

Source: PDAM Makassar

Parameters	Unit	Year 2001											
		Jan.	Feb.	March	Apr.	5-May	4-Jun	4-Jul	4-Aug	17-Sep	8-Oct	6-Nov	7-Dec
<b>Physical :</b>													
Color	Hazen	n.a	n.a	n.a	n.a	20.0	10	15	9	8.0	7.0	6.6	187
Odor	-	n.a	n.a	n.a	n.a	Traces	Traces	Traces	Traces	Traces	Traces	Traces	Traces
Taste	-	n.a	n.a	n.a	n.a	Traces	Traces	Traces	Traces	Traces	Traces	Traces	Traces
Temperature	° C	n.a	n.a	n.a	n.a	28.0	28	27	27.8	28	28	29	27
Turbidity	NTU	n.a	n.a	n.a	n.a	30.5	5.88	7.69	7.31	5.26	4.2	6.72	183
Total Dissolved Solids(TDS)	mg/l	n.a	n.a	n.a	n.a	25.0	25	20	15	14.0	14.0	15.0	18
<b>Chemical</b>													
pH.	-	n.a	n.a	n.a	n.a	7.63	7.55	7.72	7.69	6.95	6.9	6.91	7.3
Total Alkalic ( CaCO <sub>3</sub> )	mg/l	n.a	n.a	n.a	n.a	18	16	15	13	12.0	12.0	14.0	52
Iron ( Fe )	mg/l	n.a	n.a	n.a	n.a	0.24	0.25	0.16	0.22	0.21	0.2	0.2	0.05
Mangan ( Mn )	mg/l	n.a	n.a	n.a	n.a	0.35	0.40	0.21	0.17	0.15	0.19	0.2	0.1
Copper( Cu )	mg/l	n.a	n.a	n.a	n.a	0.12	0.08	0.06	0.03	0.03	0.03	0.03	0.05
Zinc (Zn)	mg/l	n.a	n.a	n.a	n.a	0.61	0.54	0.50	0.60	0.09	0.5	0.90	0.5
Chromium ( Cr <sup>6+</sup> )	mg/l	n.a	n.a	n.a	n.a	0.05	0.04	0.03	0.05	0.09	0.06	0.06	0.05
Cadmium ( Cd )	mg/l	n.a	n.a	n.a	n.a	0.005	0.006	0.002	0.003	0.006	0.005	0.003	0.056
Leat ( Pb )	mg/l	n.a	n.a	n.a	n.a	0.06	0.05	0.05	0.07	0	0	0.10	0
Sianida(CN <sup>-</sup> )	mg/l	n.a	n.a	n.a	n.a	0.006	0.007	0.005	0.004	0.001	0.001	0.001	0.03
Hydrogen Sulphide ( HS )	mg/l	n.a	n.a	n.a	n.a	0.07	0.08	0.02	0.10	0.1	0.1	0.10	0.02
Sulphat ( SO <sub>4</sub> )	mg/l	n.a	n.a	n.a	n.a	75	88	100	99	95.0	90.0	95.0	96
Flouride ( F <sup>-</sup> )	mg/l	n.a	n.a	n.a	n.a	0.55	0.52	0.36	0.64	0.09	0.09	0.10	0.05
Chlouride ( Cl <sup>-</sup> )	mg/l	n.a	n.a	n.a	n.a	25	20	14	12	10.0	10.0	10.5	25
Amoniac ( NH <sub>3</sub> -N )	mg/l	n.a	n.a	n.a	n.a	0.06	0.05	0.05	0.04	0.04	0.04	0.04	0.26
Nitrat ( NO <sub>3</sub> -N )	mg/l	n.a	n.a	n.a	n.a	8	8	6	8	8.0	8	8.0	3
Nitrit ( NO <sub>2</sub> -N )	mg/l	n.a	n.a	n.a	n.a	0.25	0.20	0.17	0.18	0.16	0.16	0.16	0.12
Phenol	mg/l	n.a	n.a	n.a	n.a	0.05	0.04	0.04	0.03	0.02	0.02	0.02	0
Aluminium ( Al )	mg/l	n.a	n.a	n.a	n.a	0.5	0.45	0.56	0.35	0.30	0.30	0.30	0.11
Arsenic ( As )	mg/l	n.a	n.a	n.a	n.a	0	0	0	0	0	0	0	0
Silver ( Ag )	mg/l	n.a	n.a	n.a	n.a	0.06	0.08	0.05	0.08	0.06	0.06	0.06	0.02
Organic matter( KMnO <sub>4</sub> )	mg/l	n.a	n.a	n.a	n.a	ttd	ttd	ttd	ttd	ttd	ttd	ttd	ttd
Rest Chlouride ( Cl <sub>2</sub> )	mg/l	n.a	n.a	n.a	n.a	-	-	-	-	-	-	-	-
Dissolved Oxygen( DO )	mg/l	n.a	n.a	n.a	n.a	1.8	2.5	2.0	1.9	1.8	1.8	1.6	2.6
<b>Bacteriology :</b>													
Total Coliform	/100ml	n.a	n.a	n.a	n.a	13	14	15	14	100.0	100.0	135.0	125
Feces Coliform	/100ml	n.a	n.a	n.a	n.a	8	9	11	9	0	0	0	0

Parameters	Unit	Year 2002											
		6-Jan	11-Feb	14-Mar	12-Apr	May	June	July	15-Aug	10-Sep	9-Oct	13-Nov	19-Dec
<b>Physical :</b>													
Color	Hazen	218.0	9.4	38.0	32.0	n.a	n.a	13	13	12.0	5.0	8	37
Odor	-	Traces	Traces	Traces	Traces	n.a	n.a	trces	Traces	Traces	Traces	Traces	Traces
Taste	-	Traces	Traces	Traces	Traces	n.a	n.a	trces	Traces	Traces	Traces	Traces	Traces
Temperature	° C	26.6	26.8	27.8	28.0	n.a	n.a	28	28	28	28	Traces	28
Turbidity	NTU	227.0	48.1	21.2	19.5	n.a	n.a	7.12	9.56	6.21	5.26	2.7	16
Total Dissolved Solids(TDS)	mg/l	20.0	14.0	12.0	10.0	n.a	n.a	5.8	5.6	1.5	1.6	40.0	40
<b>Chemical</b>													
pH.	-	7.2	7.3	7.4	7.4	n.a	n.a	7.3	7.3	7.3	7.3	7.3	7.15
Total Alkalic ( CaCO <sub>3</sub> )	mg/l	65.0	7.5	6.5	7.0	n.a	n.a	6	28	31.5	27.5	35.0	33.87
Iron ( Fe )	mg/l	0.7	0.5	1.0	1.0	n.a	n.a	0.15	0.14	0.2	0.23	0.19	0.53
Mangan ( Mn )	mg/l	1.7	1.0	0.3	0.3	n.a	n.a	0.14	0.26	0.05	0.06	0.07	0.48
Copper( Cu )	mg/l	0.1	0.0	0.2	0.2	n.a	n.a	0.07	0.08	0.03	0.02	0.02	0.15
Zinc (Zn)	mg/l	1.5	-	1.2	1.0	n.a	n.a	0.03	0.36	0.28	0.44	0.27	0.32
Chromium ( Cr <sup>6+</sup> )	mg/l	0.0	0.0	0.1	0.1	n.a	n.a	0.03	0.02	0.04	0.03	0.03	0.06
Cadmium ( Cd )	mg/l	0.1	-	0.1	0.1	n.a	n.a	0.159	-	0.09	0.014	0.147	-
Leat ( Pb )	mg/l	1.1	0.1	0.0	0.0	n.a	n.a	0.3	0.6	0.4	-	-	0.7
Sianida(CN <sup>-</sup> )	mg/l	0.1	0.1	0.0	0.0	n.a	n.a	0.03	0.005	0.002	0.001	0.003	0.009
Hydrogen Sulphide ( HS )	mg/l	0.2	0.1	0.0	0.0	n.a	n.a	0.02	0.01	0.01	0.02	0.01	0.04
Sulphat ( SO <sub>4</sub> )	mg/l	98.0	65.0	56.0	50.0	n.a	n.a	6.5	45	58.0	98.0	43.0	62
Flouride ( F <sup>-</sup> )	mg/l	0.1	-	0.1	0.1	n.a	n.a	0.29	-	0.67	0.58	0.34	-
Chlouride ( Cl <sup>-</sup> )	mg/l	27.2	4.0	4.0	4.0	n.a	n.a	3	10	3.0	1.0	4	9
Amoniac ( NH <sub>3</sub> -N )	mg/l	0.3	0.2	0.1	0.1	n.a	n.a	0.08	0.06	0.1	0.08	0.07	0.13
Nitrat ( NO <sub>3</sub> -N )	mg/l	3.2	2.5	0.8	3.2	n.a	n.a	3.4	1.9	1.3	1	2.3	1.9
Nitrit ( NO <sub>2</sub> -N )	mg/l	0.4	0.4	0.1	0.0	n.a	n.a	0.01	0.05	0.1	0.07	0.04	0.1
Phenol	mg/l	0.0	0.0	0.8	0.2	n.a	n.a	-	0.4	0.3	0.03	-	0.5
Aluminium ( Al )	mg/l	0.3	0.2	0.1	0.1	n.a	n.a	0.13	0	0.20	0.29	0.13	0.15
Arsenic ( As )	mg/l	0.0	0.0	0.0	0.0	n.a	n.a	0	0	0	0	0	0
Silver ( Ag )	mg/l	0.1	0.0	0.1	0.2	n.a	n.a	0.13	-	-	-	0.14	0.23
Organic matter( KMnO <sub>4</sub> )	mg/l	TTD	0.0	0.0	3.8	n.a	n.a	2.6	0	1.75	1.5	1.7	1.8
Rest Chlouride ( Cl <sub>2</sub> )	mg/l	-	-	-	-	n.a	n.a	-	-	-	-	-	-
Dissolved Oxygen( DO )	mg/l	2.5	2.0	2.5	3.0	n.a	n.a	2.0	2.1	4.2	3.5	1.1	1.1
<b>Biological</b>													
Total Coliform	/100ml	-	98.0	95.0	110.0	n.a	n.a	98	87	42.0	30.0	0.0	0
Feces Coliform	/100ml	-	3.0	3.0	18.0	n.a	n.a	0	0	0	0	0	0



**Table B.2 Result of Water Quality Monitoring by PLN in Year 2004 (1/4)**

Period: January 2004

Parameter	Unit	Location				
		near PLTA	Bili-Bili Outlet	Bili-Bili Bridge	Pattalikang Bridge	Sumur Penduduk
<b>A. Physical</b>						
Temperature	°C	29.8	29.7	29.9	29.4	29.6
Total Dissolved Solids	mg/L	65.3	64.5	68.2	58.6	107.2
Total Suspendid Solids	mg/L	90.8	92.6	52.8	35.9	3.2
Turbidity	NTU	61.9	63.3	27.9	19.8	1.7
Electric Conductivity	ms/cm	0.131	0.129	0.136	0.117	0.214
Color	TCU	219.6	238.7	179.3	89.7	14.5
<b>B. Chemical</b>						
pH		6.98	6.94	7.18	7.19	6.96
Iron (Fe)	mg/L	2.349	2.696	1.092	0.098	0.184
Calsium (Ca)	mg/L	20.58	20.84	19.53	18.7	82.44
Magnesium (Mg)	mg/L	17.82	17.42	18.95	17.2	60.38
Lead (Pb)	mg/L	0.008	0.009	0.009	0.010	0.007
Clorida (Cl)	mg/L	126.32	125.29	132.27	158.86	194.16
Ammoniac Nitrogen (N-NH <sub>3</sub> )	mg/L	0.034	0.035	0.020	0.017	0.029
Nitrite Nitrogen (N-NO <sub>2</sub> )	mg/L	0.015	0.016	0.012	0.006	0.015
Nitrate Nitrogen (N-NO <sub>3</sub> )	mg/L	0.087	0.089	0.094	0.094	0.068
Orthophosphate (PO <sub>4</sub> )	mg/L	0.045	0.046	0.042	0.053	0.031
Sulphate (SO <sub>4</sub> )	mg/L	8.75	8.89	9.23	6.43	7.94
Dissolved Oxygen (DO)	mg/L	6.28	6.38	6.63	6.78	6.32
Biochemical Oxygen Demand (BOD)	mg/L	5.43	5.65	3.93	2.46	4.98
Chemical Oxygen Demand (COD)	mg/L	11.21	11.98	9.88	8.87	13.21
Oil/Grease	mg/L	0.00	0.00	0.00	0.00	0.00
<b>C. Microbiological</b>						
Total Coliform	sel/100ml	240	250	310	190	210
Fecal Coliform	sel/100ml	16	17	21	13	14

Period: February 2004

Parameter	Unit	Location				
		near PLTA	Bili-Bili Outlet	Bili-Bili Bridge	Pattalikang Bridge	Sumur Penduduk
<b>A. Physical</b>						
Temperature	°C	29.8	29.6	29.8	29.9	29.3
Total Dissolved Solids	mg/L	65.9	66.1	69.2	60.7	106.1
Total Suspendid Solids	mg/L	115.0	117.2	88.4	43.2	4.8
Turbidity	NTU	75.2	76.6	54.7	24.8	3.2
Electric Conductivity	ms/cm	0.132	0.132	0.138	0.121	0.212
Color	TCU	327.4	329.8	219.8	128.5	17.4
<b>B. Chemical</b>						
pH		6.95	6.93	7.11	7.12	6.87
Iron (Fe)	mg/L	2.586	2.721	1.032	0.102	0.213
Calsium (Ca)	mg/L	22.92	23.04	21.28	19.8	83.67
Magnesium (Mg)	mg/L	19.32	18.83	18.16	17.7	61.54
Lead (Pb)	mg/L	0.009	0.010	0.009	0.009	0.007
Clorida (Cl)	mg/L	127.93	129.42	134.38	147.68	187.43
Ammoniac Nitrogen (N-NH <sub>3</sub> )	mg/L	0.038	0.037	0.018	0.018	0.032
Nitrite Nitrogen (N-NO <sub>2</sub> )	mg/L	0.015	0.016	0.013	0.009	0.014
Nitrate Nitrogen (N-NO <sub>3</sub> )	mg/L	0.077	0.079	0.089	0.087	0.068
Orthophosphate (PO <sub>4</sub> )	mg/L	0.051	0.053	0.047	0.049	0.034
Sulphate (SO <sub>4</sub> )	mg/L	7.95	8.42	9.03	6.98	7.64
Dissolved Oxygen (DO)	mg/L	6.38	6.29	6.72	6.86	6.35
Biochemical Oxygen Demand (BOD)	mg/L	5.42	5.83	3.24	2.12	4.76
Chemical Oxygen Demand (COD)	mg/L	13.04	12.98	9.84	8.98	12.24
Oil/Grease	mg/L	0.00	0.00	0.00	0.00	0.00
<b>C. Microbiological</b>						
Total Coliform	sel/100ml	240	230	270	170	200
Fecal Coliform	sel/100ml	16	15	17	12	13

**Table B.2 Result of Water Quality Monitoring by PLN in Year 2004 (2/4)**

**Period: March 2004**

Parameter	Unit	Location				
		near PLTA	Bili-Bili Outlet	Bili-Bili Bridge	Pattalikang Bridge	Sumur Penduduk
<b>A. Physical</b>						
Temperature	°C	29.7	29.6	29.8	30.1	29.9
Total Dissolved Solids	mg/L	65.9	66.1	68.7	61.9	110.6
Total Suspendid Solids	mg/L	234.8	238.7	198.6	52.4	5.2
Turbidity	NTU	157.9	159.3	132.8	29.7	3.7
Electric Conductivity	ms/cm	0.132	0.132	0.137	0.124	0.221
Color	TCU	470.4	479.2	403.3	148.3	19.3
<b>B. Chemical</b>						
pH	-	6.94	6.92	7.13	7.14	6.84
Iron (Fe)	mg/L	2.793	2.984	1.176	0.119	0.232
Calsium (Ca)	mg/L	24.63	24.54	22.87	21.2	82.95
Magnesium (Mg)	mg/L	19.82	19.73	18.93	19.6	63.29
Lead (Pb)	mg/L	0.011	0.012	0.010	0.008	0.008
Clorida (Cl)	mg/L	131.50	130.29	133.87	141.54	188.29
Ammoniac Nitrogen (N-NH <sub>3</sub> )	mg/L	0.036	0.038	0.019	0.019	0.033
Nitrite Nitrogen (N-NO <sub>2</sub> )	mg/L	0.009	0.011	0.013	0.008	0.011
Nitrate Nitrogen (N-NO <sub>3</sub> )	mg/L	0.079	0.074	0.087	0.082	0.072
Orthophosphate (PO <sub>4</sub> )	mg/L	0.054	0.057	0.048	0.051	0.033
Sulphate (SO <sub>4</sub> )	mg/L	7.82	7.95	8.72	6.87	7.64
Dissolved Oxygen (DO)	mg/L	6.34	6.21	6.84	6.72	6.39
Biochemical Oxygen Demand (BOD)	mg/L	6.03	5.94	3.19	2.03	4.39
Chemical Oxygen Demand (COD)	mg/L	13.90	13.21	9.83	8.94	119.2
Oil/Grease	mg/L	0.00	0.00	0.00	0.00	0.00
<b>C. Microbiological</b>						
Total Coliform	sel/100ml	200	210	280	180	230
Fecal Coliform	sel/100ml	14	14	17	12	15

**Period: April 2004**

Parameter	Unit	Location				
		near PLTA	Bili-Bili Outlet	Bili-Bili Bridge	Pattalikang Bridge	Sumur Penduduk
<b>A. Physical</b>						
Temperature	°C	30.1	29.9	30.2	30.3	29.6
Total Dissolved Solids	mg/L	63.9	64.2	66.4	59.8	109.3
Total Suspendid Solids	mg/L	785.7	798.3	643.7	54.9	7.8
Turbidity	NTU	578.8	589.2	458.6	32.8	4.6
Electric Conductivity	ms/cm	0.128	0.128	0.133	0.120	0.218
Color	TCU	1827.0	1889.0	1760.0	164.9	23.9
<b>B. Chemical</b>						
pH	-	6.98	6.92	7.13	7.14	6.84
Iron (Fe)	mg/L	2.914	2.984	1.176	0.119	0.232
Calsium (Ca)	mg/L	24.23	24.54	22.87	21.2	82.95
Magnesium (Mg)	mg/L	19.39	19.73	18.93	19.6	63.29
Lead (Pb)	mg/L	0.010	0.012	0.010	0.008	0.008
Clorida (Cl)	mg/L	131.27	130.29	133.87	141.54	188.29
Ammoniac Nitrogen (N-NH <sub>3</sub> )	mg/L	0.037	0.038	0.019	0.019	0.033
Nitrite Nitrogen (N-NO <sub>2</sub> )	mg/L	0.010	0.011	0.013	0.008	0.011
Nitrate Nitrogen (N-NO <sub>3</sub> )	mg/L	0.078	0.074	0.087	0.082	0.072
Orthophosphate (PO <sub>4</sub> )	mg/L	0.055	0.057	0.048	0.051	0.033
Sulphate (SO <sub>4</sub> )	mg/L	7.29	7.95	8.72	6.87	7.64
Dissolved Oxygen (DO)	mg/L	6.15	6.21	6.84	6.72	6.39
Biochemical Oxygen Demand (BOD)	mg/L	5.89	5.94	3.19	2.03	4.39
Chemical Oxygen Demand (COD)	mg/L	12.76	13.21	9.83	8.94	11.92
Oil/Grease	mg/L	0.00	0.00	0.00	0.00	0.00
<b>C. Microbiological</b>						
Total Coliform	sel/100ml	200	210	280	180	230
Fecal Coliform	sel/100ml	13	14	17	12	15

**Table B.2 Result of Water Quality Monitoring by PLN in Year 2004 (3/4)**

Period: May 2004

Parameter	Unit	Location				
		near PLTA	Bili-Bili Outlet	Bili-Bili Bridge	Pattalikang Bridge	Sumur Penduduk
<b>A. Physical</b>						
Temperature	°C	29.9	30.1	30.3	30.1	29.7
Total Dissolved Solids	mg/L	64.6	66.1	64.2	58.8	106.1
Total Suspendid Solids	mg/L	5109.0	5380.0	2760.0	51.3	6.8
Turbidity	NTU	3870.0	3920.0	1830.0	30.4	4.5
Electric Conductivity	ms/cm	0.129	0.132	0.128	0.118	0.212
Color	TCU	9530.0	9890.0	5230.0	152.6	20.3
<b>B. Chemical</b>						
pH	-	6.92	6.87	7.03	7.12	6.86
Iron (Fe)	mg/L	5.696	5.772	1.097	0.108	0.214
Calsium (Ca)	mg/L	17.42	18.59	17.53	20.4	79.24
Magnesium (Mg)	mg/L	20.90	27.05	21.95	18.7	64.32
Lead (Pb)	mg/L	0.016	0.015	0.013	0.006	0.009
Clorida (Cl)	mg/L	100.17	103.78	107.42	140.39	182.72
Ammoniac Nitrogen (N-NH <sub>3</sub> )	mg/L	0.290	0.281	0.178	0.018	0.030
Nitrite Nitrogen (N-NO <sub>2</sub> )	mg/L	0.009	0.008	0.007	0.007	0.010
Nitrate Nitrogen (N-NO <sub>3</sub> )	mg/L	0.079	0.081	0.074	0.072	0.074
Orthophosphate (PO <sub>4</sub> )	mg/L	0.924	0.898	0.849	0.030	0.034
Sulphate (SO <sub>4</sub> )	mg/L	10.16	9.97	11.03	6.89	7.21
Dissolved Oxygen (DO)	mg/L	6.57	6.49	6.81	6.62	6.43
Biochemical Oxygen Demand (BOD)	mg/L	6.87	7.12	4.76	1.98	4.12
Chemical Oxygen Demand (COD)	mg/L	18.92	19.21	13.42	8.92	10.87
Oil/Grease	mg/L	0.00	0.00	0.00	0.00	0.00
<b>C. Microbiological</b>						
Total Coliform	sel/100ml	190	180	210	170	190
Fecal Coliform	sel/100ml	13	12	14	12	13

Period: June 2004

Parameter	Unit	Location				
		near PLTA	Bili-Bili Outlet	Bili-Bili Bridge	Pattalikang Bridge	Sumur Penduduk
<b>A. Physical</b>						
Temperature	°C	29.9	29.7	30.1	30.4	29.9
Total Dissolved Solids	mg/L	65,9	67.8	68.4	60.4	109.2
Total Suspendid Solids	mg/L	8970.0	8830.0	7890.0	23.4	6.2
Turbidity	NTU	5950.0	5680.0	4760.0	15.7	4.1
Electric Conductivity	ms/cm	0.133	0.136	0.139	0.121	0.218
Color	TCU	17580.0	16980.0	15360.0	73.9	19.4
<b>B. Chemical</b>						
pH	-	6.90	6.84	7.12	7.09	6.82
Iron (Fe)	mg/L	5.219	5.435	1.028	0.114	0.209
Calsium (Ca)	mg/L	19.98	21.32	18.32	22.8	79.43
Magnesium (Mg)	mg/L	21.54	24.68	20.87	19.7	65.91
Lead (Pb)	mg/L	0.014	0.013	0.012	0.007	0.008
Clorida (Cl)	mg/L	112.65	116.29	108.82	139.8	187.45
Ammoniac Nitrogen (N-NH <sub>3</sub> )	mg/L	0.264	0.251	0.098	0.019	0.032
Nitrite Nitrogen (N-NO <sub>2</sub> )	mg/L	0.012	0.010	0.007	0.008	0.011
Nitrate Nitrogen (N-NO <sub>3</sub> )	mg/L	0.098	0.106	0.113	0.079	0.092
Orthophosphate (PO <sub>4</sub> )	mg/L	0.872	0.823	0.718	0.032	0.037
Sulphate (SO <sub>4</sub> )	mg/L	10.16	10.32	9.32	6.92	7.37
Dissolved Oxygen (DO)	mg/L	6.28	6.37	6.73	6.58	6.48
Biochemical Oxygen Demand (BOD)	mg/L	11.91	12.76	7.98	1.97	3.96
Chemical Oxygen Demand (COD)	mg/L	23.87	25.43	18.76	8.64	10.29
Oil/Grease	mg/L	0.00	0.00	0.00	0.00	0.00
<b>C. Microbiological</b>						
Total Coliform	sel/100ml	230	260	200	160	210
Fecal Coliform	sel/100ml	16	17	13	11	14

**Table B.2 Result of Water Quality Monitoring by PLN in Year 2004 (4/4)**

Period: July 2004

Parameter	Unit	Location				
		near PLTA	Bili-Bili Outlet	Bili-Bili Bridge	Pattalikang Bridge	Sumur Penduduk
<b>A. Physical</b>						
Temperature	°C	29.8	29.7	30.0	30.2	29.8
Total Dissolved Solids	mg/L	64.6	67.2	67.6	62.6	106.1
Total Suspendid Solids	mg/L	1960.0	2070.0	1340.0	9.2	5.9
Turbidity	NTU	1320.0	1430.0	870.0	6.8	3.8
Electric Conductivity	ms/cm	0.129	0.134	0.135	0.125	0.212
Color	TCU	5150.0	6120.0	3390.0	21.3	16.3
<b>B. Chemical</b>						
pH	-	6.90	6.87	7.06	7.11	6.91
Iron (Fe)	mg/L	5.219	4.985	1.438	0.109	0.214
Calsium (Ca)	mg/L	23.76	24.21	19.43	23.7	80.27
Magnesium (Mg)	mg/L	22.19	23.64	17.92	20.5	68.65
Lead (Pb)	mg/L	0.013	0.012	0.013	0.006	0.009
Clorida (Cl)	mg/L	113.98	114.74	118.21	142.87	189.72
Ammoniac Nitrogen (N-NH <sub>3</sub> )	mg/L	0.173	0.167	0.097	0.028	0.034
Nitrite Nitrogen (N-NO <sub>2</sub> )	mg/L	0.015	0.013	0.011	0.009	0.012
Nitrate Nitrogen (N-NO <sub>3</sub> )	mg/L	0.113	0.109	0.128	0.083	0.096
Orthophosphate (PO <sub>4</sub> )	mg/L	0.479	0.418	0.161	0.036	0.038
Sulphate (SO <sub>4</sub> )	mg/L	9.82	9.54	8.42	7.18	7.29
Dissolved Oxygen (DO)	mg/L	6.38	6.42	6.82	6.72	6.21
Biochemical Oxygen Demand (BOD)	mg/L	4.95	5.12	3.98	1.86	3.84
Chemical Oxygen Demand (COD)	mg/L	12.83	12.17	10.34	8.37	9.83
Oil/Grease	mg/L	0.00	0.00	0.00	0.00	0.00
<b>C. Microbiological</b>						
Total Coliform	sel/100ml	190	210	180	150	200
Fecal Coliform	sel/100ml	13	14	12	11	14

Period: August 2004

Parameter	Unit	Location				
		near PLTA	Bili-Bili Outlet	Bili-Bili Bridge	Pattalikang Bridge	Sumur Penduduk
<b>A. Physical</b>						
Temperature	°C	29.8	29.7	30.0	30.2	29.8
Total Dissolved Solids	mg/L	64.6	67.2	67.6	62.6	106.1
Total Suspendid Solids	mg/L	1960.0	2070.0	1340.0	9.2	5.9
Turbidity	NTU	1320.0	1430.0	870.0	6.8	3.8
Electric Conductivity	ms/cm	0.129	0.134	0.135	0.125	0.212
Color	TCU	5150.0	6120.0	3390.0	21.3	16.3
<b>B. Chemical</b>						
pH	-	6.90	6.87	7.06	7.11	6.91
Iron (Fe)	mg/L	5.219	4.985	1.438	0.109	0.214
Calsium (Ca)	mg/L	23.76	24.21	19.43	23.7	80.27
Magnesium (Mg)	mg/L	22.19	23.64	17.92	20.5	68.65
Lead (Pb)	mg/L	0.013	0.012	0.013	0.006	0.009
Clorida (Cl)	mg/L	113.98	114.74	118.21	142.87	189.72
Ammoniac Nitrogen (N-NH <sub>3</sub> )	mg/L	0.173	0.167	0.097	0.028	0.034
Nitrite Nitrogen (N-NO <sub>2</sub> )	mg/L	0.015	0.013	0.011	0.009	0.012
Nitrate Nitrogen (N-NO <sub>3</sub> )	mg/L	0.113	0.109	0.128	0.083	0.096
Orthophosphate (PO <sub>4</sub> )	mg/L	0.479	0.418	0.161	0.036	0.038
Sulphate (SO <sub>4</sub> )	mg/L	9.82	9.54	8.42	7.18	7.29
Dissolved Oxygen (DO)	mg/L	6.38	6.42	6.82	6.72	6.21
Biochemical Oxygen Demand (BOD)	mg/L	4.95	5.12	3.98	1.86	3.84
Chemical Oxygen Demand (COD)	mg/L	12.83	12.17	10.34	8.37	9.83
Oil/Grease	mg/L	0.00	0.00	0.00	0.00	0.00
<b>C. Microbiological</b>						
Total Coliform	sel/100ml	190	210	180	150	200
Fecal Coliform	sel/100ml	13	14	12	11	14

**Table B.3 Result of Water Quality Monitoring at 7 River Basins surrounding the Study Area in 2003 (1/2)**

a. Chemranar River  
at Tampangeng Bridge

YEAR 2003

No	Parameter	Unit	2003/8/28 15:40	2003/9/30 13:10	2003/10/26 9:30	2003/12/4 13:30	Standard
<b>A Physical</b>							
1	Electric Conductivity	umhos/cm	0.222	0.262	0.317	0.314	Air Temp. ± 3C 1,500 30 20
2	Turbidity	NTU	14	9	23	20	
3	Temperature	°C	29.1	30.9	31.5	31.6	
4	Total Dissolved Solids	mg/L	77	103	74	852	
5	Total Suspended Solids	mg/L	40	9	33	71	
6	Organic Matter	mg/L	9.80	3.16	18.70	8.53	
7	Salinity	ppt	0.10	0.10	0.10	0.10	
<b>B Chemical</b>							
1	Ammoniac (NH <sub>3</sub> -N)	mg/L	-	-	-	-	-
2	Biochemical Oxygen Demand (BOD)	mg/L	8.80	9.50	8.10	8.10	-
3	Chemical Oxygen Demand (COD)	mg/L	23.00	20.00	20.70	20.10	-
4	Nitrate Nitrogen (NO <sub>3</sub> -N)	mg/L	-	-	-	-	10
5	Nitrite Nitrogen (NO <sub>2</sub> -N)	mg/L	-	-	-	-	1
6	Dissolved Oxygen (DO)	mg/L	4.70	2.74	4.32	2.66	-
7	pH		7.26	7.13	7.17	7.32	6.5-9.0
8	Orthophosphate (PO <sub>4</sub> <sup>-</sup> )	mg/L	-	-	-	-	-
9	Sulfate (SO <sub>4</sub> <sup>-</sup> )	mg/L	-	-	-	-	400
<b>C Microbiological</b>							
1	Fecal Coliform	per 100 ml	-	-	-	-	-
2	Total Coliform	per 100 ml	-	-	-	-	10,000
D	Discharge	m <sup>3</sup> /sec	150	78.00	52.00	67.921	-

b. Tanrutedong River  
at Tanrutedong Bridge

YEAR 2003

No	Parameter	Unit	2003/8/28 14:30	2003/9/30 14:15	2003/10/26 11:00	2003/12/4 14:30	Standard
<b>A Physical</b>							
1	Electric Conductivity	umhos/cm	0.09	0.276	0.267	0.172	Air Temp. ± 3C 1,500 30 20
2	Turbidity	NTU	47	23	35	68	
3	Temperature	°C	28.6	32.5	32.2	28.5	
4	Total Dissolved Solids	mg/L	75	107	86	3324	
5	Total Suspended Solids	mg/L	150	8	50	277	
6	Organic Matter	mg/L	12.01	2.84	7.90	6.64	
7	Salinity	ppt	0.00	0.00	0.10	0.10	
<b>B Chemical</b>							
1	Ammoniac (NH <sub>3</sub> -N)	mg/L	-	-	-	-	-
2	Biochemical Oxygen Demand (BOD)	mg/L	8.40	8.40	6.00	7.60	-
3	Chemical Oxygen Demand (COD)	mg/L	22.00	14.00	11.00	19.00	-
4	Nitrate Nitrogen (NO <sub>3</sub> -N)	mg/L	-	-	-	-	10
5	Nitrite Nitrogen (NO <sub>2</sub> -N)	mg/L	-	-	-	-	1
6	Dissolved Oxygen (DO)	mg/L	7.66	7.29	8.17	2.82	-
7	pH		7.30	7.34	7.32	7.33	6.5-9.0
8	Orthophosphate (PO <sub>4</sub> <sup>-</sup> )	mg/L	-	-	-	-	-
9	Sulfate (SO <sub>4</sub> <sup>-</sup> )	mg/L	-	-	-	-	400
<b>C Microbiological</b>							
1	Fecal Coliform	per 100 ml	-	-	-	-	-
2	Total Coliform	per 100 ml	-	-	-	-	10,000
D	Discharge	m <sup>3</sup> /sec	21.5	14.60	2.12	100.7	-

e. Bilokka River  
at Bilokka Bridge

YEAR 2003

No	Parameter	Unit	2003/8/28 19:25	2003/9/30 9:40	2003/10/26 6:45	2003/12/4 10:15	Standard
<b>A Physical</b>							
1	Electric Conductivity	umhos/cm	1.2	0.0769	0.0008	0	Air Temp. ± 3C 1,500 30 20
2	Turbidity	NTU	5	8	8	54	
3	Temperature	°C	28.3	29.3	27.2	29.8	
4	Total Dissolved Solids	mg/L	101	144	98	1,416	
5	Total Suspended Solids	mg/L	9.0	15.0	9.0	118.0	
6	Organic Matter	mg/L	12.96	2.85	127.00	7.8	
7	Salinity	ppt	0.00	0.00	0.00	0.00	
<b>B Chemical</b>							
1	Ammoniac (NH <sub>3</sub> -N)	mg/L	-	-	-	-	-
2	Biochemical Oxygen Demand (BOD)	mg/L	7.4	8.0	6.3	19.2	-
3	Chemical Oxygen Demand (COD)	mg/L	14.00	14.00	15.60	48.00	-
4	Nitrate Nitrogen (NO <sub>3</sub> -N)	mg/L	-	-	-	-	10
5	Nitrite Nitrogen (NO <sub>2</sub> -N)	mg/L	-	-	-	-	1
6	Dissolved Oxygen (DO)	mg/L	4.83	9.26	2.01	3.43	-
7	pH		7.37	7.30	7.15	7.46	6.5-9.0
8	Orthophosphate (PO <sub>4</sub> <sup>-</sup> )	mg/L	-	-	-	-	-
9	Sulfate (SO <sub>4</sub> <sup>-</sup> )	mg/L	-	-	-	-	400
<b>C Microbiological</b>							
1	Fecal Coliform	per 100 ml	-	-	-	-	-
2	Total Coliform	per 100 ml	-	-	-	-	10,000
D	Discharge	m <sup>3</sup> /sec	-	0.008	0.003	0.005	-

f. Tallo lulu River  
at Sawagi Bridge

YEAR 2003

No	Parameter	Unit	2003/8/28 10:15	2003/9/29 10:00	2003/10/22 10:00	2003/12/5 10:15	Standard
<b>A Physical</b>							
1	Electric Conductivity	umhos/cm	50	100.4	0.0854	0.0091	Air Temp. ± 3C 1,500 30 20
2	Turbidity	NTU	(*)	17	23	110	
3	Temperature	°C	30.30	32.80	31.00	25.50	
4	Total Dissolved Solids	mg/L	18,400	10,680	74	1,692	
5	Total Suspended Solids	mg/L	11.0	44.0	43.0	141.0	
6	Organic Matter	mg/L	12.96	5.70	8.22	2.84	
7	Salinity	ppt	29.10	0.00	0.00	0.00	
<b>B Chemical</b>							
1	Ammoniac (NH <sub>3</sub> -N)	mg/L	-	-	-	-	-
2	Biochemical Oxygen Demand (BOD)	mg/L	20.0	8.0	6.8	7.1	-
3	Chemical Oxygen Demand (COD)	mg/L	50.00	18.00	16.00	14.30	-
4	Nitrate Nitrogen (NO <sub>3</sub> -N)	mg/L	-	-	-	-	10
5	Nitrite Nitrogen (NO <sub>2</sub> -N)	mg/L	-	-	-	-	1
6	Dissolved Oxygen (DO)	mg/L	2.52	5.57	6.00	2.59	-
7	pH		7.24	7.40	7.18	7.09	6.5-9.0
8	Orthophosphate (PO <sub>4</sub> <sup>-</sup> )	mg/L	-	-	-	-	-
9	Sulfate (SO <sub>4</sub> <sup>-</sup> )	mg/L	-	-	-	-	400
<b>C Microbiological</b>							
1	Fecal Coliform	per 100 ml	-	-	-	-	-
2	Total Coliform	per 100 ml	-	-	-	-	10,000
D	Discharge	m <sup>3</sup> /sec	-	0.019	0.077	-	-

(\*) Ingorably small

**Table B.3 Result of Water Quality Monitoring at 7 River Basins surrounding the Study Area in 2003 (2/2)**

c. Walaenae River at Cabenge Bridge						YEAR 2003							
No	Parameter	Unit	2003/8/28	2003/9/30	2003/10/26	2003/12/4	Standard						
								2003/8/28	2003/9/30	2003/10/26	2003/12/4	Standard	
								17.00	12.15	8.30	12.15		
<b>A Physical</b>													
1	Electric Conductivity	umhos/cm	0.086	0.3268	0.293	0.245							
2	Turbidity	NTU	5	14	14	110	25						
3	Temperature	°C	29.9	30.5	29.5	29.6	Air Temp. ± 3C						
4	Total Dissolved Solids	mg/L	117	126	58	4536	1,500						
5	Total Suspended Solids	mg/L	5.0	11.0	17.0	378.0	30						
6	Organic Matter	mg/L	0.63	10.75	5.37	3.5	20						
7	Salinity	ppt	0.00	0.00	0.10	0.10							
<b>B Chemical</b>													
1	Ammoniac (NH <sub>3</sub> -N)	mg/L	-	-	-	-	-						
2	Biochemical Oxygen Demand (BOD)	mg/L	6.80	9.70	6.00	10.00	-						
3	Chemical Oxygen Demand (COD)	mg/L	15.00	22.00	11.20	26.00	-						
4	Nitrate Nitrogen (NO <sub>3</sub> -N)	mg/L	-	-	-	-	10						
5	Nitrite Nitrogen (NO <sub>2</sub> -N)	mg/L	-	-	-	-	1						
6	Dissolved Oxygen (DO)	mg/L	8.07	7.01	6.76	3.60	-						
7	pH		7.45	7.41	7.38	7.34	6.5-9.0						
8	Orthophosphate (PO <sub>4</sub> )	mg/L	-	-	-	-	-						
9	Sulfate (SO <sub>4</sub> )	mg/L	-	-	-	-	400						
<b>C Microbiological</b>													
1	Fecal Coliform	per 100 ml	-	-	-	-	-						
2	Total Coliform	per 100 ml	-	-	-	-	10,000						
<b>D Discharge</b>		m <sup>3</sup> /sec	17.54	4.30	4.30	18.355							

d. Batu-Batu River at Batu-Batu Bridge						YEAR 2003							
No	Parameter	Unit	2003/8/28	2003/9/30	2003/10/26	2003/12/4	Standard						
								2003/8/28	2003/9/30	2003/10/26	2003/12/4	Standard	
								18.25	10.30	7.30	11.00		
<b>A Physical</b>													
1	Electric Conductivity	umhos/cm	0.299	0.1891	0.511	0.351							
2	Turbidity	NTU	5	20	14	50	25						
3	Temperature	°C	28.2	28	27.4	28.5	Air Temp. ± 3C						
4	Total Dissolved Solids	mg/L	238	255	116	720	1,500						
5	Total Suspended Solids	mg/L	14	17	18	60	30						
6	Organic Matter	mg/L	6.95	4.43	18.64	11.7	20						
7	Salinity	ppt	0.20	0.10	0.20								
<b>B Chemical</b>													
1	Ammoniac (NH <sub>3</sub> -N)	mg/L	-	-	-	-	-						
2	Biochemical Oxygen Demand (BOD)	mg/L	6.80	9.50	10.00	11.30	-						
3	Chemical Oxygen Demand (COD)	mg/L	15.00	20.00	25.16	17.60	-						
4	Nitrate Nitrogen (NO <sub>3</sub> -N)	mg/L	-	-	-	-	10						
5	Nitrite Nitrogen (NO <sub>2</sub> -N)	mg/L	-	-	-	-	1						
6	Dissolved Oxygen (DO)	mg/L	4.83	2.45	3.04	3.98	-						
7	pH		7.28	7.21	7.26	7.47	6.5-9.0						
8	Orthophosphate (PO <sub>4</sub> )	mg/L	-	-	-	-	-						
9	Sulfate (SO <sub>4</sub> )	mg/L	-	-	-	-	400						
<b>C Microbiological</b>													
1	Fecal Coliform	per 100 ml	-	-	-	-	-						
2	Total Coliform	per 100 ml	-	-	-	-	10,000						
<b>D Discharge</b>		m <sup>3</sup> /sec		0.055	0.068	0.538							

e. Hilir River at Nipa-Nipa Bridge						YEAR 2003							
No	Parameter	Unit	2003/8/28	2003/9/29	2003/10/24	2003/12/5	Standard						
								2003/8/28	2003/9/29	2003/10/24	2003/12/5	Standard	
								9.30	12.00	7.30	7.30		
<b>A Physical</b>													
1	Electric Conductivity	umhos/cm	25.71	15.8	5.24	0.0024							
2	Turbidity	NTU	5	9	23	310	25						
3	Temperature	°C	29.50	30.80	30.30	25.30	Air Temp. ± 3C						
4	Total Dissolved Solids	mg/L	854	2,320	236	6,372	1,500						
5	Total Suspended Solids	mg/L	15.0	67.0	21.0	531.0	30						
6	Organic Matter	mg/L	34.44	29.27	14.90	3.5	20						
7	Salinity	ppt	14.30	8.20	2.50	0.00							
<b>B Chemical</b>													
1	Ammoniac (NH <sub>3</sub> -N)	mg/L	-	-	-	-	-						
2	Biochemical Oxygen Demand (BOD)	mg/L	20.0	13.6	11.0	11.0	-						
3	Chemical Oxygen Demand (COD)	mg/L	50.0	31.2	28.0	27.0	-						
4	Nitrate Nitrogen (NO <sub>3</sub> -N)	mg/L	-	-	-	-	10						
5	Nitrite Nitrogen (NO <sub>2</sub> -N)	mg/L	-	-	-	-	1						
6	Dissolved Oxygen (DO)	mg/L	3.34	2.94	4.61	1.39	-						
7	pH		7.15	7.10	7.04	6.92	6.5-9.0						
8	Orthophosphate (PO <sub>4</sub> )	mg/L	-	-	-	-	-						
9	Sulfate (SO <sub>4</sub> )	mg/L	-	-	-	-	400						
<b>C Microbiological</b>													
1	Fecal Coliform	per 100 ml	-	-	-	-	-						
2	Total Coliform	per 100 ml	-	-	-	-	10,000						
<b>D Discharge</b>		m <sup>3</sup> /sec	-	-	-	-							

JENEBERANG RIVER at Kampiri Weir						YEAR 2000							
No	Parameter	Unit	Aug, 2000	Sep, 2000	Oct, 2000	Nov, 2000	Standard						
								Aug, 2000	Sep, 2000	Oct, 2000	Nov, 2000	Standard	
<b>A Physical</b>													
1	Electric Conductivity	umhos/cm											
2	Turbidity	NTU	1.67	2.33			25						
3	Temperature	°C					Air Temp. ± 3C						
4	Total Dissolved Solids	mg/L	40.17	40.67			1,500						
5	Total Suspended Solids	mg/L	4.33	5.67			30						
6	Organic Matter	mg/L					20						
7	Salinity	ppt											
<b>B Chemical</b>													
1	Ammoniac (NH <sub>3</sub> -N)	mg/L					-						
2	Biochemical Oxygen Demand (BOD)	mg/L	4.31	3.75			-						
3	Chemical Oxygen Demand (COD)	mg/L					-						
4	Nitrate Nitrogen (NO <sub>3</sub> -N)	mg/L					10						
5	Nitrite Nitrogen (NO <sub>2</sub> -N)	mg/L					1						
6	Dissolved Oxygen (DO)	mg/L					-						
7	pH		7.16	7.24			6.5-9.0						
8	Orthophosphate (PO <sub>4</sub> )	mg/L					-						
9	Sulfate (SO <sub>4</sub> )	mg/L					400						
<b>C Microbiological</b>													
1	Fecal Coliform	per 100 ml					-						
2	Total Coliform	per 100 ml					10,000						
<b>D Discharge</b>		m <sup>3</sup> /sec											

Source: Bili-Bili Multipurpose Dam Project



**Table B.4 Results of Industrial Liquid Waste Capacity and Water Quality Analysis  
around the Jeneberang River in Gowa Regency (1/6)**

Source: Laboratory of Industry Center of Makassar City

No	Name of Company	Location	Waste Type	YEAR 1998/1999					
				pH	TSS (mg/l)	BOD (mg/l)	COD (mg/l)	CN (mg/l)	Metilen (mg/l)
1	Soft Drink Factory(UD. Kian J.)	S. Minasa/Gowa	liquid	-	-	-	-	-	-
2	Soft Drink Factory(DHT.)	S. Minasa/Gowa	liquid	-	-	-	-	-	-
3	Ice Factory Bar ( Indra M.)	S. Minasa/Gowa	liquid	6.7	248	70	143	-	-
4	Food Processing Factory	S. Minasa/Gowa	liquid	-	-	-	-	-	-
5	Tapioka Processing Factory	Pallangga Subdistrict	liquid	6.5	346*	10.6*	208*	-	-
6	Coconut oil Factory	Pallangga Subdistrict	liquid	7.2	108	98	160	-	-
7	PT. Uma Pelita	Pallangga Subdistrict	liquid						
8	Mangasa Jaya	S. Minasa/Gowa	liquid						
9	Sumber Pangan	Malino	liquid						
10	PT. Usaha Timur		liquid						
11	Tulung agung	Pallangga Subdistrict	liquid						
12	PT. Markisa segar	Malino	liquid						
13	UD. Malino	Malino	liquid						
14	PT. Netto Malino	Malino	liquid						
15	HTL. Celebes	Malino	liquid						
16	PT.Katelindo Tulus S.	Bonto Maranu	liquid						
17	Restaurant Satelit	Gowa	liquid						
18	Kios Sentosa	Gowa	liquid						
19	Kios Delta	Gowa	liquid						
20	UD. Cipta Persada Makmur	Gowa	liquid						
21	PT. Surya NusantaraPerkasa	Gowa	liquid						
22	PT.Tiga Permata Tarsis	Gowa	liquid						
23	SPBU. Limbung (Fuel Station)	Gowa	liquid						
24	Pesanggarahan malino (Hostle)	Malino Town/Gowa	liquid						
25	Pinang Mas Hotel	Sunggu Minasa/Gowa	liquid						

**Remarks**

\* Above the maximum Recommended Value Standard

**Table B.4 Results of Industrial Liquid Waste Capacity and Water Quality Analysis  
around the Jeneberang River in Gowa Regency (2/6)**

Source: Laboratory of Industry Center of Makassar City

No	Name of Company	Location	Waste Type	YEAR 1999/2000					
				pH	TSS (mg/l)	BOD (mg/l)	COD (mg/l)	CN (mg/l)	Metilen (mg/l)
1	Soft Drink Factory(UD. Kian J.)	S. Minasa/Gowa	liquid	-	-	-	-	-	-
2	Soft Drink Factory(DHT.)	S. Minasa/Gowa	liquid	-	-	-	-	-	-
3	Ice Factory Bar ( Indra M.)	S. Minasa/Gowa	liquid	7.2	109	98	160	-	-
4	Food Processing Factory	S. Minasa/Gowa	liquid	-	-	-	-	-	-
5	Tapioka Processing Factory	Pallangga Subdistrict	liquid	6.5	346*	106*	208*	-	-
6	Coconut oil Factory	Pallangga Subdistrict	liquid	6.7	248	70	143	-	-
7	PT. Uma Pelita	Pallangga Subdistrict	liquid						
8	Mangasa Jaya	S. Minasa/Gowa	liquid						
9	Sumber Pangan	Malino	liquid						
10	PT. Usaha Timur		liquid						
11	Tulung agung	Pallangga Subdistrict	liquid						
12	PT. Markisa segar	Malino	liquid						
13	UD. Malino	Malino	liquid						
14	PT. Netto Malino	Malino	liquid						
15	HTL. Celebes	Malino	liquid						
16	PT.Katelindo Tulus S.	Bonto Maranu	liquid						
17	Restaurant Satelit	Gowa	liquid						
18	Kios Sentosa	Gowa	liquid						
19	Kios Delta	Gowa	liquid						
20	UD. Cipta Persada Makmur	Gowa	liquid						
21	PT. Surya NusantaraPerkasa	Gowa	liquid						
22	PT.Tiga Permata Tarsis	Gowa	liquid						
23	SPBU. Limbung (Fuel Station)	Gowa	liquid						
24	Pesanggarahan malino (Hostle)	Malino Town/Gowa	liquid						
25	Pinang Mas Hotel	Sunggu Minasa/Gowa	liquid						

**Remarks**

\* Above the maximum Recommended Value Standard

**Table B.4 Results of Industrial Liquid Waste Capacity and Water Quality Analysis  
around the Jeneberang River in Gowa Regency (3/6)**

Source: Laboratory of Industry Center of Makassar City

No	Name of Company	Location	Waste Type	YEAR 2000					
				pH	TSS (mg/l)	BOD (mg/l)	COD (mg/l)	CN (mg/l)	Metilen (mg/l)
1	Soft Drink Factory(UD. Kian J.)	S. Minasa/Gowa	liquid	7.70	2.24	340*	513		
2	Soft Drink Factory(DHT.)	S. Minasa/Gowa	liquid	5.4*	421*	490*	751*		
3	Ice Factory Bar ( Indra M.)	S. Minasa/Gowa	liquid	7.2	164	120	170		
4	Food Processing Factory	S. Minasa/Gowa	liquid	-	5.3	379	600		
5	Tapioka Processing Factory	Pallangga Subdistrict	liquid	4.65*	1315*	2900*	4400*	0.0020	
6	Coconut oil Factory	Pallangga Subdistrict	liquid	7.11	49	188*	305*	62*	3
7	PT. Uma Pelita	Pallangga Subdistrict	liquid						
8	Mangasa Jaya	S. Minasa/Gowa	liquid						
9	Sumber Pangan	Malino	liquid						
10	PT. Usaha Timur		liquid						
11	Tulung agung	Pallangga Subdistrict	liquid						
12	PT. Markisa segar	Malino	liquid						
13	UD. Malino	Malino	liquid						
14	PT. Netto Malino	Malino	liquid						
15	HTL. Celebes	Malino	liquid						
16	PT.Katelindo Tulus S.	Bonto Maranu	liquid						
17	Restaurant Satelit	Gowa	liquid						
18	Kios Sentosa	Gowa	liquid						
19	Kios Delta	Gowa	liquid						
20	UD. Cipta Persada Makmur	Gowa	liquid						
21	PT. Surya NusantaraPerkasa	Gowa	liquid						
22	PT.Tiga Permata Tarsis	Gowa	liquid						
23	SPBU. Limbung (Fuel Station)	Gowa	liquid						
24	Pesanggarahan malino (Hostle)	Malino Town/Gowa	liquid						
25	Pinang Mas Hotel	Sunggu Minasa/Gowa	liquid						

**Remarks**

\* Above the maximum Recommended Value Standard

**Table B.4 Results of Industrial Liquid Waste Capacity and Water Quality Analysis  
around the Jeneberang River in Gowa Regency (4/6)**

Source: Laboratory of Industry Center of Makassar City

No	Name of Company	Location	Waste Type	YEAR 2001					
				pH	TSS (mg/l)	BOD (mg/l)	COD (mg/l)	CN (mg/l)	MBAS (mg/l)
1	Soft Drink Factory(UD. Kian J.)	S. Minasa/Gowa	liquid	6.7	107	97	160		
2	Soft Drink Factory(DHT.)	S. Minasa/Gowa	liquid	5.7	407	265*	484		
3	Ice Factory Bar ( Indra M.)	S. Minasa/Gowa	liquid	7.3	359*	93	139		
4	Food Processing Factory	S. Minasa/Gowa	liquid	8.6	510*	975*	1750*		
5	Tapioka Processing Factory	Pallangga Subdistrict	liquid	5.83*	65*	107*	220*	0.003	
6	Coconut oil Factory	Pallangga Subdistrict	liquid	7.37	46	89	176	11	0.034
7	PT. Uma Pelita	Pallangga Subdistrict	liquid						
8	Mangasa Jaya	S. Minasa/Gowa	liquid						
9	Sumber Pangan	Malino	liquid						
10	PT. Usaha Timur		liquid						
11	Tulung agung	Pallangga Subdistrict	liquid						
12	PT. Markisa segar	Malino	liquid						
13	UD. Malino	Malino	liquid						
14	PT. Netto Malino	Malino	liquid						
15	HTL. Celebes	Malino	liquid						
16	PT. Katelindo Tulus S.	Bonto Maranu	liquid						
17	Restaurant Satelit	Gowa	liquid						
18	Kios Sentosa	Gowa	liquid						
19	Kios Delta	Gowa	liquid						
20	UD. Cipta Persada Makmur	Gowa	liquid						
21	PT. Surya NusantaraPerkasa	Gowa	liquid						
22	PT. Tiga Permata Tarsis	Gowa	liquid						
23	SPBU. Limbung (Fuel Station)	Gowa	liquid						
24	Pesanggarahan malino (Hostle)	Malino Town/Gowa	liquid						
25	Pinang Mas Hotel	Sunggu Minasa/Gowa	liquid						

**Remarks**

\* Above the maximum Recommended Value Standard

**Table B.4 Results of Industrial Liquid Waste Capacity and Water Quality Analysis  
around the Jeneberang River in Gowa Regency (5/6)**

Source: Laboratory of Industry Center of Makassar City

No	Name of Company	Location	Waste Type	YEAR 2002					
				pH	TSS (mg/l)	BOD (mg/l)	COD (mg/l)	CN (mg/l)	MBAS (mg/l)
1	Soft Drink Factory(UD. Kian J.)	S. Minasa/Gowa	liquid	6.970	263.00	214*	390*		
2	Soft Drink Factory(DHT.)	S. Minasa/Gowa	liquid	6.905	527.00	162.20	301.00		
3	Ice Factory Bar ( Indra M.)	S. Minasa/Gowa	liquid	7.49	99.00	52.10	86.70		
4	Food Processing Factory	S. Minasa/Gowa	liquid	6.972	155.00	362.50	650.76*		
5	Tapioka Processing Factory	Pallangga Subdistrict	liquid	4.524*	2690*	137.5*	228*	0.55*	
6	Coconut oil Factory	Pallangga Subdistrict	liquid	8.16	19.0	91.00	183.60	0.021	0.28
7	PT. Uma Pelita	Pallangga Subdistrict	liquid	4.524	269.0	137.5	228.48	0.55	
8	Mangasa Jaya	S. Minasa/Gowa	liquid	6.163	113	264.5	474.3		
9	Sumber Pangan	Malino	liquid	6.800	23	106	198.9		
10	PT. Usaha Timur		liquid	6.6	920	935	2279.7		
11	Tulung agung	Pallangga Subdistrict	liquid	11.650	344	124.5	208.1		
12	PT. Markisa segar	Malino	liquid	3.736	730	4158.5	8404.8		
13	UD. Malino	Malino	liquid	4.375	161	815.5	157.9		
14	PT. Netto Malino	Malino	liquid	6.206	145	832.2	1545.3		
15	HTL. Celebes	Malino	liquid	6.838	141	827.5	154.3		
16	PT.Katelindo Tulus S.	Bonto Maranu	liquid	7.005	298	848.6	1581.00	0.16	
17	Restaurant Satelit	Gowa	liquid						
18	Kios Sentosa	Gowa	liquid						
19	Kios Delta	Gowa	liquid						
20	UD. Cipta Persada Makmur	Gowa	liquid						
21	PT. Surya NusantaraPerkasa	Gowa	liquid						
22	PT.Tiga Permata Tarsis	Gowa	liquid						
23	SPBU. Limbung (Fuel Station)	Gowa	liquid						
24	Pesanggarahan malino (Hostle)	Malino Town/Gowa	liquid						
25	Pinang Mas Hotel	Sunggu Minasa/Gowa	liquid						

**Remarks**

\* Above the maximum Recommended Value Standard

**Table B.4 Results of Industrial Liquid Waste Capacity and Water Quality Analysis  
around the Jeneberang River in Gowa Regency (6/6)**

Source: Laboratory of Industry Center of Makassar City

No	Name of Company	Location	Waste Type	YEAR 2003							
				Temp. (oC)	pH	DO* (mg/l)	TSS (mg/l)	BOD (mg/l)	COD (mg/l)	CN (mg/l)	MBAS (mg/l)
1	Soft Drink Factory(UD. Kian J.)	S. Minasa/Gowa	liquid	-	10*	0.0	20	281*	480.88*	-	-
2	Soft Drink Factory(DHT.)	S. Minasa/Gowa	liquid	-	7.2	0.8	20	200*	457*	-	-
3	Ice Factory Bar ( Indra M.)	S. Minasa/Gowa	liquid	-	6.837	1.8	30	120*	138*	-	-
4	Food Processing Factory	S. Minasa/Gowa	liquid	-	4.86*	0.0	60	100	173	-	-
5	Tapioka Processing Factory	Pallangga Subdistrict	liquid	n.a	n.a	n.a	n.a	n.a	n.a	-	-
6	Coconut oil Factory	Pallangga Subdistrict	liquid	-	8.03	9.40	7	40*	66*	-	-
7	PT. Uma Pelita	Pallangga Subdistrict	liquid	-	7.0	0.0	111	1300*	1811*	-	-
8	Mangasa Jaya	S. Minasa/Gowa	liquid	-	7.12	0.0	150	1850*	1650*	-	-
9	Sumber Pangan	Malino	liquid	-	7.50	0.0	280*	600*	1620*	-	-
10	PT. Usaha Timur		liquid	-	6	4.2	78	480*	682*	-	-
11	Tulung agung	Pallangga Subdistrict	liquid	-	6.991	0.0	21	60*	99*	-	-
12	PT. Markisa segar	Malino	liquid	21	6	1	29	120	190	-	-
13	UD. Malino	Malino	liquid	n.a	n.a	n.a	n.a	n.a	n.a	-	-
14	PT. Netto Malino	Malino	liquid	-	6.5	0.9	100	1010*	1650*	-	-
15	HTL. Celebes	Malino	liquid	-	6.5	0.0	31	49	68	-	-
16	PT.Katelindo Tulus S.	Bonto Maranu	liquid	-	6	0.0	155	400*	864*	-	-
17	Restaurant Satelit	Gowa	liquid	-	6.8	0.0	376*	1050*	1314*	-	-
18	Kios Sentosa	Gowa	liquid	-	6.8	0.4	521*	1400*	1566.4*	-	-
19	Kios Delta	Gowa	liquid	-	6.9	0.0	314*	1450*	1533.12*	-	-
20	UD. Cipta Persada Makmur	Gowa	liquid	-	13	7.8	74	105*	218*	-	-
21	PT. Surya NusantaraPerkasa	Gowa	liquid	-	6	0.0	118	250*	430*	-	-
22	PT.Tiga Permata Tarsis	Gowa	liquid	-	14*	3.8	22	60*	114*	-	-
23	SPBU. Limbung (Fuel Station)	Gowa	liquid	-	6.5	0.0	35	119*	145*	-	-
24	Pesanggarahan malino (Hostle)	Malino Town/Gowa	liquid	-	6	6.6	18	700*	920*	-	-
25	Pinang Mas Hotel	Sunggu Minasa/Gowa	liquid	-	6	0.0	9.6	570*	862*	-	-

**Remarks**

\* Above the maximum Recommended Value Standard

**Table B.5 Results of Raw Water Quality Analysis  
around the Jeneberang River in Gowa Regency**

Source: Laboratory of Industry Center of Makassar City

No	Name of Company	Location	Sampling Point/Type	YEAR 2002					
				pH	TSS (mg/l)	BOD (mg/l)	COD (mg/l)	CN (mg/l)	MBAS (mg/l)
26	Jeneberang River No.1	Upstream	Hanging Bridge DS.Lonjoboko Parangloe	6.877	44	1.72	2.65	6.85	
27	Jeneberang River No.2	Lebong River	Bridge of Lebong River before mixing with the Jeneberang River	7.871	37	3.15	5.92	8.14	
28	Jeneberang River No.3	Jeneberang River	About 500 meter from the junction of the Jeneberang River in Bili-Biili Dam	6.703	24.00	6.8	13.46	7.67	
29	Jeneberang River No.4	Bili-Bili Dam	Raw Water	7.813	54	1.35	2.24	7.71	
30	Jeneberang River No.5	Sunggu Minasa Bridge	in Bili -Biili Dam of Jeneberang	7.661	48.0	7.2	13.26	7.74	
31	Jeneberang River No.6	Benteng Bridge, Somba Opu	River before disputing through Downtown of Gowa before estuary of the Jeneberang River	8.068	26	9.5	16.93	7.70	

**Remarks**

\* Above the maximum Recommended Value Standard

**Table B.6 National Water Quality Standard for Water Quality Management (Government Regulation No.82/2001)**

Parameter	Unit	Class				Remarks
		I	II	III	IV	
<b>A. PHYSICAL</b>						
Temperature	°C	± 3	± 3	± 3	± 5	from the natural condition
Total Dissolved Solids (TDS)	mg/l	1,000	1,000	1,000	2,000	
Total Suspended Solids (TSS)	mg/l	50	50	400	400	
<b>B. INORGANIC CHEMICAL</b>						
pH		6-9	6-9	6-9	5-9	
Biochemical Oxygen Demand (BOD)	mg/l	2	3	6	12	
Chemical Oxygen Demand (COD)	mg/l	10	25	50	100	
Dissolved Oxygen (DO)	mg/l	6	4	3	0	Minimum Value
Total Phosphate (T-P)	mg/l	0.2	0.2	1	5	
Nitrate Nitrogen (NO <sub>3</sub> -N)	mg/l	10	10	20	20	
Ammoniac Nitrogen (NH <sub>3</sub> -N)	mg/l	0.5	(-)	(-)	(-)	≤ 0.02 mg/l (**)
Arsenic (As)	mg/l	0.05	1	1	1	
Cobalt (Co)	mg/l	0.2	0.2	0.2	0.2	
Barium (Ba)	mg/l	1	(-)	(-)	(-)	
Boron (B)	mg/l	1	1	1	1	
Selenium (Se)	mg/l	0.01	0.05	0.05	0.05	
Cadmium (Cd)	mg/l	0.01	0.01	0.01	0.01	
Hexavalent Chromium (VI) (Cr <sup>6+</sup> )	mg/l	0.05	0.05	0.05	1	
Copper (Cu)	mg/l	0.02	0.02	0.02	0.2	≤ 1 mg/l (*)
Iron (Fe)	mg/l	0.3	(-)	(-)	(-)	≤ 5 mg/l (*)
Lead (Pb)	mg/l	0.03	0.03	0.03	1	≤ 0.1 mg/l (*)
Manganese (Mn)	mg/l	0.1	(-)	(-)	(-)	
Mercury (Hg)	mg/l	0.001	0.002	0.002	0.005	
Zinc (Zn)	mg/l	0.05	0.05	0.05	2	≤ 5 mg/l (*)
Chloride (Cl)	mg/l	600	(-)	(-)	(-)	
Cyanide (CN)	mg/l	0.02	(-)	(-)	(-)	
Fluoride (F)	mg/l	0.5	1.5	1.5	(-)	
Nitrite Nitrogen (NO <sub>2</sub> -N)	mg/l	0.06	0.06	0.06	(-)	≤ 1 mg/l (*)
<b>C. PHYSICS</b>						
Sulfate (SO <sub>4</sub> )	mg/l	400	(-)	(-)	(-)	
Free Chloride (Cl <sub>2</sub> )	mg/l	0.03	0.03	0.03	(-)	not required for the ABAM
Hydrogen Sulfide (H <sub>2</sub> S)	mg/l	0.002	0.002	0.002	(-)	≤ 0.1 mg/l (*)
<b>D. MICROBIOLOGY</b>						
Fecal coliform	/100ml	100	1,000	2,000	2,000	≤ 2,000 total/100ml (*)
Total coliform	/100ml	1,000	5,000	10,000	10,000	≤ 10,000 total/100ml (*)
<b>E. RADIOACTIVITY</b>						
Gross-A	Bq/l	0.1	0.1	0.1	0.1	
Gross-B	Bq/l	1	1	1	1	
<b>F. ORGANIC CHEMISTRY</b>						
Oil and Fat	µg/l	1,000	1,000	1,000	(-)	
Detergent as MBAS <sup>†</sup>	µg/l	200	200	200	(-)	
BHC	µg/l	210	210	210	(-)	
Aldrin, dieldrin	µg/l	17	(-)	(-)	(-)	
Chlordane	µg/l	3	(-)	(-)	(-)	
DDT	µg/l	2	2	2	2	
<b>G. PHYSICS</b>						
Heptachlor and heptachlor epoxide	µg/l	18	(-)	(-)	(-)	
Lindane	µg/l	56	(-)	(-)	(-)	
Methoxychlor	µg/l	35	(-)	(-)	(-)	
Endrin	µg/l	1	4	4	(-)	
Toxaphene	µg/l	5	(-)	(-)	(-)	

(\*) criterion for a conventional drinking water processor (\*\*) for Fishery

Source: Attachment of Government Regulation Number 82 Year 2001 dated on 14 December 2001 concerning Water Quality Management and Water Pollution Control

Note: mg: milligram, µg: microgram, ml: milliliter, l: liter, Bq: Becquerel,

Note: <sup>†</sup> MBAS: Methyl Blue Activators Substances



**Table B.7 Water Quality Standard for Raw Water (South Sulawesi Governor's Decree No.14/2003)**

Parameter	Unit	Class			
		I	II	III	IV
<b>A. PHYSICAL</b>					
Temperature	°C	± 3	± 3	± 3	± 5
Total Dissolved Solids (TDS)	mg/l	800	1,000	1,000	2,000
Total Suspended Solids (TSS)	mg/l	50	50	400	400
<b>B. INORGANIC CHEMICAL</b>					
pH		6-8.5	6-8.5	6-8.5	5-8.5
Biochemical Oxygen Demand (BOD)	mg/l	2	3	6	12
Chemical Oxygen Demand (COD)	mg/l	10	25	50	100
Dissolved Oxygen (DO)	mg/l	6	4	3	0
Total phosphate (PO <sub>4</sub> )	mg/l	0.2	0.2	1	5
Nitrate Nitrogen (NO <sub>3</sub> -N)	mg/l	10	10	20	20
Ammoniac Nitrogen (NH <sub>3</sub> -N)	mg/l	0.5	(-)	(-)	(-)
Arsenic (As)	mg/l	0.05	1	1	1
Cobalt (Co)	mg/l	0.2	0.2	0.2	0.2
Barium (Ba)	mg/l	1	(-)	(-)	(-)
Boron (B)	mg/l	1	1	1	1
Selenium (Se)	mg/l	0.01	0.05	0.05	0.05
Cadmium (Cd)	mg/l	0.01	0.01	0.01	0.01
Chrome (Cr <sup>+6</sup> )	mg/l	0.05	0.05	0.05	1
Copper (Cu)	mg/l	0.02	0.02	0.02	0.2
Iron (Fe)	mg/l	0.3	(-)	(-)	(-)
Lead (Pb)	mg/l	0.03	0.03	0.03	1
Manganese (Mn)	mg/l	0.1	(-)	(-)	(-)
Mercury (Ag)	mg/l	0.001	0.002	0.002	0.005
Zinc (Zn)	mg/l	0.05	0.05	1.0	2.0
Chlorine (Cl)	mg/l	600	(-)	(-)	(-)
Cyan (CN)	mg/l	0.02	0.02	0.02	(-)
Fluorine (F)	mg/l	0.5	1.5	1.5	(-)
Nitrite Nitrogen (NO <sub>2</sub> -N)	mg/l	0.06	0.06	0.06	(-)
Sulfate (SO <sub>4</sub> )	mg/l	400	(-)	(-)	(-)
Residual Chlorine (Cl <sub>2</sub> )	mg/l	0.03	0.03	0.03	(-)
Sulfur by H <sub>2</sub> S	mg/l	0.002	0.002	0.002	(-)
<b>C. MICROBIOLOGY</b>					
Fecal Coli form	nos/100ml	100	1,000	2,000	2,000
Total Coli form	nos/100ml	1,000	5,000	10,000	10,000
<b>E. RADIOACTIVITY</b>					
Gross-A	Bq/l	0.1	0.1	0.1	0.1
Gross-B	Bq/l	1	1	1	1
<b>F. ORGANIC CHEMICAL</b>					
Oil and fat	µg/l	600	800	1000	(-)
MBAS	µg/l	100	100	100	(-)
Compound phenol as phenol	µg/l	1	1	1	(-)
BHC (LINDAN)	µg/l	100	150	200	(-)
Aldine and Dihedron	µg/l	17	(-)	(-)	(-)
Chlordane	µg/l	3	(-)	(-)	(-)
DDT	µg/l	2	2	2	2
PCB	µg/l	1	(-)	(-)	(-)
Heptachlor and Heptachlor epoxide	µg/l	15	(-)	(-)	(-)
Endrin	µg/l	1	3	4	(-)
Toxaphan	µg/l	5	(-)	(-)	(-)

Source: South Sulawesi Governor's Decree No.14/2003

Abbreviations: MBAS = Methylene Blue Active Substance,

ABAM = Raw water for drinking water heavy metal represented by the ions.

Note: mg = milligram, µg = microgram, ml = milliliter, L = Liter, Bq = Becquerel

**Table B.8 Effluent Standards of Specified Sectors  
(South Sulawesi Governor's Decree No.14/2003)**

**1. Caustic Soda Industry**

No	Parameter	Maximum limit (mg/l)	Maximum pollution load (kg/ton)
1	Total Suspended Solids (TSS)	25	75.0
2	Residual Chlorine (Cl <sup>2</sup> )	0.5	1.5
3	Copper (Cu)	1.0	3.0
4	Lead (Pb)	0.6	1.8
5	Zinc (Zn)	1.0	3.0
6	Total Chromium (Cr)	0.5	1.5
7	Nickel (Ni)	1.2	3.6
8	Mercury (Hg)	0.004	0.012
9	Alkalic Mercury	Not detected	-
10	pH	6.0 - 9.0	
11	Waste maximum discharge	3.0 m <sup>2</sup> per ton of chloride Product or 3.4 per ton of Cl <sup>2</sup>	

Remarks:

- The maximum limit for each parameter on the table above is notified in milligram parameter per liter of wastewater
- The maximum pollution load for each parameter on the table above is notified in gram per ton of caustic soda

**2. Metal Coating Industry**

No	Parameter	Maximum limit (mg/l)	Maximum pollution load (kg/ton)
1	Total Suspended Solids (TSS)	20	0.40
2	Cyanide (CN)	0.2	0.004
3	Total Chromium (Cr)	0.5	0.010
4	Chromium hexavalent (Cr <sup>6+</sup> )	0.1	0.002
5	Copper (Cu)	0.5	0.010
6	Zinc (Zn)	1.0	0.020
7	Nickel (Ni)	1.0	0.020
8	Cadmium (Cd)	0.05	0.001
9	Lead (Pb)	0.1	0.002
10	pH	6.0 - 9.0	
11	Waste maximum discharge	20 L per m <sup>2</sup> of metal coating product	

Remarks:

- The maximum limit for each parameter on the table above is notified in milligram parameter per liter of wastewater
- The maximum pollution load for each parameter on the table above is notified in gram parameter per m<sup>2</sup> of metal coating

**3. Leather Tanning Industry**

No	Parameter	Chrome use in processing		Leaves use in processing	
		Maximum limit (mg/l)	Maximum pollution load (kg/ton)	Maximum limit (mg/l)	Maximum pollution load (kg/ton)
1	Biochemical Oxygen Demand (BOD <sub>5</sub> )	50	2.0	70	2.8
2	Chemical Oxygen Demand (COD)	100	4.0	150	6.0
3	Total Suspended Solids (TSS)	60.0	2.40	50	2.0
4	Total Chromium (Cr)	0.5	0.024	0.10	0.004
5	Oil and Grease	5.0	0.20	5.0	0.20
6	Total Nitrogen (T-N)	10.0	0.40	15	0.60
7	Total Ammonia (as a NH <sub>3</sub> -N)	0.5	0.02	0.50	0.02
8	Sulfide (as H <sub>2</sub> S)	0.7	0.028	0.50	0.02
9	pH	6.0 - 9.0		6.0 - 9.0	
10	Waste maximum discharge	40 m <sup>2</sup> /ton of raw material		40 m <sup>2</sup> /ton of raw material	

Remarks:

- The maximum limit for each parameter on the table above is notified in milligram parameter per liter of wastewater
- The maximum pollution load for each parameter on the table above is notified in kg parameter per ton raw material
- Total Nitrogen is a sum of N organic + Total Ammonia + NO<sub>3</sub> + NO<sub>2</sub>

#### 4. Palm Oil Industry

No	Parameter	Maximum limit	Maximum pollution Load
		(mg/l)	(kg/ton)
1	Biochemical Oxygen Demand (BOD <sub>5</sub> )	80.0	0.20
2	Chemical Oxygen Demand (COD)	160	0.40
3	Total Suspended Solid (TSS)	200.0	0.50
4	Oil and Grease	25	0.003
5	Total Nitrogen (T-N)	50	0.125
6	pH	6.0 - 9.0	
7	Waste maximum discharge	2.5 m <sup>3</sup> /ton Palm oil production	

Remarks:

- The maximum limit for each parameter on the table above is notified in milligram parameter per liter of wastewater
- The maximum pollution load for each parameter on the table above is notified in kg parameter per ton palm oil product
- Total Nitrogen is a sum of N organic + Total Ammoniac + NO<sub>3</sub> + NO<sub>2</sub>

#### 5. Pulp & Paper Industry

Processing	Waste maximum discharge	Parameters					
		Biochemical Oxygen Demand (BOD)		Chemical Oxygen Demand (COD)		Total Suspended Solids (TSS)	
		Maximum limit	Maximum pollution load	Maximum limit	Maximum pollution load	Maximum limit	Maximum pollution load
		m <sup>3</sup> /ton product	mg/ton	kg/ton	mg/ton	kg/ton	mg/ton
<b>A. Pulp</b>							
Washed /cleaned up Craft	85	100	8.5	350	29.8	100	8.5
Suspended pulp	95	100	9.5	300	28.5	100	9.5
Unwashed /cleaned up craft	50	75	3.8	200	10.0	60	3.0
Mechanic and Ground wood	60	50	3.0	12	7.2	75	4.5
Semi-chemical	70	100	7.0	200	14.0	100	7.0
Caustic pulp	80	100	8.0	300	24.0	100	8.0
De-inkpulp (reused paper)	60	100	6.0	300	18	100	6.0
<b>B. Paper</b>							
Smooth	50	100	5.0	200	10.0	100	5.0
Raft	40	90	3.6	175	7.0	80	3.2
Sparet	175	60	10.5	100	17.5	45	7.8
Washed/cleaned up paper	35	75	2.6	160	5.6	80	2.8
pH	6.0 - 9.0						

#### 6. Rubber Industry

No	Parameter	Concentrated Latex		Rubber in dried form	
		Maximum limit	Maximum pollution load	Maximum limit	Maximum pollution load
		(mg/l)	(kg/ton)	(mg/l)	(kg/ton)
1	Biochemical Oxygen Demand (BOD <sub>5</sub> )	100	4.0	60	2.4
2	Chemical Oxygen Demand (COD)	160	6.4	150	6.0
3	Total Suspended Solids (TSS)	100	4.0	100	4.0
4	Total ammonia (NH <sub>3</sub> -N)	15	0.6	5	0.2
5	Total Nitrogen (T-N)	25.0	1.0	10	0.4
6	pH	6.0 - 9.0		6.0 - 9.0	
7	Waste maximum discharge	40 m <sup>3</sup> per ton of rubber product		40 m <sup>3</sup> per ton of rubber product	

Remarks:

- The maximum limit for each parameter on the table above is notified in milligram parameter per liter of wastewater
- The maximum pollution load for each parameter on the table above is notified in kg parameter per ton of the dried rubber product or concentrated latex product

## 7. Sugar Industry

No	Parameter	Maximum limit (mg/l)	Maximum Pollution load (kg/ton)
1	Biochemical Oxygen Demand (BOD <sub>5</sub> )	60	0.3
2	Chemical Oxygen Demand (COD)	100	0.5
3	Total Suspended Solids (TSS)	50	0.25
4	Oil and Grease	5	0.025
5	Sulfide (H <sub>2</sub> S)	0.5	0.0025
6	pH	6.0 - 9.0	
7	Waste maximum discharge	5.0 m <sup>3</sup> per ton of Sugar product	

Remarks:

- The maximum limit for each parameter on the table above is notified in milligram parameter per liter of wastewater
- The maximum pollution load for each parameter on the table above is notified in kg parameter per ton sugar product
- Waste maximum discharge is excluded injection water and refrigerating water

## 8. Tapioca Industry

No	Parameter	Maximum limit (mg/l)	Maximum pollution charge (kg/ton)
1	Biochemical Oxygen Demand (BOD <sub>5</sub> )	120	3.6
2	Chemical Oxygen Demand (COD)	200	6.0
3	Total Suspended Solids (TSS)	100	3.0
4	Cyanide (CN)	0.3	0.009
5	pH	6.0 - 9.0	
6	Waste maximum discharge	30 m <sup>3</sup> per ton of tapioca product	

Remarks:

- The maximum limit for each parameter on the table above is notified in milligram parameter per liter of wastewater
- The maximum pollution load for each parameter on the table above is notified in kg parameter per ton of tapioca product

## 9. Textile Industry

No	Parameter	Maximum limit (mg/l)	Maximum pollution load (kg/ton)							
			Integrated Textile	Cotton Washing and weaving	Sizing & desizing	Clearing & Scouring	Bleaching	Mercerization	Dyeing	Printing
1	Biochemical Oxygen Demand (BOD <sub>5</sub> )	60	6.0	0.42	0.6	1.44	1.08	0.9	1.2	0.36
2	Chemical Oxygen Demand (COD)	150	15	1.05	1.5	3.6	2.7	2.25	3.0	0.9
3	Total Suspended Solids (TSS)	50.0	5.0	0.35	0.5	1.2	0.9	0.75	1.0	0.3
4	Total phenol	0.5	0.05	0.004	0.005	0.012	0.009	0.008	0.01	0.003
5	Total Chromium (Cr)	1.0	0.1	-	-	-	-	-	0.02	0.006
6	Total ammonia (N-NH <sub>3</sub> )	8	0.8	0.056	0.08	0.192	0.144	0.12	0.16	0.048
7	Sulfide (H <sub>2</sub> S)	0.3	0.03	0.002	0.003	0.007	0.005	0.05	0.006	0.002
8	Oil and Grease	3	0.3	0.021	0.03	0.07	0.054	0.045	0.06	0.018
9	pH	6.0 - 9.0								
10	Waste maximum discharge (m <sup>3</sup> per ton of textile product)		100	7	10	24	18	15	20	6

Remarks:

- The maximum limit for each parameter on the table above is notified in milligram parameter per liter of wastewater
- The maximum pollution load for each parameter on the table above is notified in kg parameter per ton of textile product

## 10. Fertilizer Industry

No	Parameter	Urea fertilizer maximum pollution load (mg/l)	Nitrogen fertilizer maximum pollution load (kg/ton)	Ammonia Maximum pollution load (kg/ton)
1	Chemical Oxygen Demand (COD)	3.0	3.0	0.3
2	Total Suspended Solids (TSS)	1.5	3.0	0.15
3	Oil and Grease	0	0.3	0.03
4	Nitrogen Ammoniac (NH <sup>3</sup> -N)	0.75	1.5	0.30
5	TKN..... ?	1.5	2.25	-
6	pH		6.0 - 9.0	
7	Waste maximum discharge		15 m <sup>3</sup> per ton product	

Remarks:

1. Measurement of waste discharge to be done at a tail waste ditch
2. Pollution load (kg/ton product) = Concentration of each parameter x waste discharge
3. Pollution load of ammoniac Industry is being valuable also for Urea Fertilizer and other Nitrogen Fertilizer Industries producing over product of ammoniac

## 11. Ethanol Industry

No	Parameter	Maximum limit (mg/l)	Maximum pollution load (kg/ton)
1	Biochemical Oxygen Demand (BOD <sub>5</sub> )	100	1.5
2	Chemical Oxygen Demand (COD)	200	3.0
3	Total Suspended Solids (TSS)	100	1.5
4	Sulfide (H <sub>2</sub> S)	0.5	0.008
5	pH		6.0 - 9.0
6	Waste maximum discharge	15 m <sup>3</sup> per ton of Ethanol Product	

Remarks:

1. The maximum limit for each parameter in the table above is notified on mg parameter per liter wastewater
2. The maximum pollution load for each parameter in the table above is notified on Kg parameter per ton of Ethanol product

## 12. Mono Sodium Glutamate (MSG) Industry

No	Parameter	Maximum limit (mg/l)	Maximum pollution load (kg/ton)
1	Biochemical Oxygen Demand (BOD <sub>5</sub> )	80	9.6
2	Chemical Oxygen Demand (COD)	150	18.0
3	Total Suspended Solids (TSS)	100	12.0
4	pH		6.0 - 9.0
5	Waste maximum discharge	120 m <sup>3</sup> per ton of MSG Product	

Remarks:

1. The maximum limit for each parameter in the table above is notified on mg parameter per liter wastewater
2. The maximum pollution load for each parameter in the table above is notified in Kg parameter per ton of MSG product

## 13. Plywood Industry

No	Parameter	Maximum limit (mg/l)	Maximum pollution load (gram/m <sup>3</sup> product )
1	Biochemical Oxygen Demand (BOD <sub>5</sub> )	75	22.5
2	Chemical Oxygen Demand (COD)	125	37.5
3	Total Suspended Solids (TSS)	50	15.0
4	Phenol	0	0.1
5	Total ammonia (NH <sub>3</sub> -N )	4	1.2
6	pH		6.0 - 9.0
7	Waste maximum discharge	0.30 m <sup>3</sup> per m <sup>3</sup> of Plywood Product	

Remarks: 1. The maximum limit for each parameter in the table above is notified in mg parameter per liter wastewater

2. The maximum pollution load for each parameter in the table above is notified in gram per m<sup>3</sup> of plywood product

3. 1000 m<sup>2</sup> of the product = 3.6 of the product within 3.6 cm thickness

#### 14. Milk Industry and Food Produced from Milk Industry

No	Parameter	Maximum limit (mg/l)	Waste maximum discharge	
			Milk base factory (kg/ton)	Integrated Milk Industry (kg/ton)
1	Biochemical Oxygen Demand (BOD <sub>5</sub> )	0.08	0.06	0.06
2	Chemical Oxygen Demand (COD)	0.20	0.15	0.15
3	Total Suspended Solids (TSS)	0.10	0.075	0.075
4	pH		6.0 - 9.0	
5	Maximum Waste Discharge		2.0 l/kg of total solids	1.5 l/kg of milk product

Remarks:

1. Base Milk Industry produces Sweeten Condensed Milk, Cream, Liquid Milk and/or Powder Milk
2. Integrated Milk Industry Produces Products made of Milk such as Cheese, Margarine and /or Ice cream
3. Maximum content for each Parameter in the table above is to be noted in mg parameter per liter Liquid Waste

#### 15. Soft Drink Industry

No	Parameter	Maximum limit (mg/l)	Maximum pollution load (g/m <sup>3</sup> )			
			Bottle washing with Syrup making	Bottle washing without Syrup making	Syrup making without Bottle washing	Without Bottle washing/ Syrup making
1	Biochemical Oxygen Demand (BOD <sub>5</sub> )	50	175	140	85	60
2	Chemical Oxygen Demand (COD)	30	105	84	51	36
3	Total suspended Solids (TSS)	6	21	17	10.2	7.2
4	pH		6.0 - 9.0			
5	Waste maximum discharge		3.5 mg per liter of soft drink			

Remarks:

1. The maximum limit for each parameter in the table above is noted on mg parameter per liter wastewater
2. The maximum pollution load for each parameter in the table above is noted on mg parameter per m<sup>3</sup> of soft drink produced

#### 16. Soap Industry, Detergent and Vegetable Oil Industry

No	Parameter	Maximum limit (mg/l)	Maximum pollution load (kg/m <sup>3</sup> )		
			Soap	Vegetable oil	Detergent
1	Biochemical Oxygen Demand (BOD <sub>5</sub> )	75	0.60	1.88	0.075
2	Chemical Oxygen Demand (COD)	160	1.28	4.50	0.18
3	Total suspended Solids (TSS)	60	0.48	1.50	0.06
4	Oil and Grease	15	0.12	0.375	0.015
5	Phosphate (PO <sub>4</sub> )	1	0.016	0.05	0.002
6	MBAS	3	0.024	0.075	0.003
7	pH		6.0 - 9.0		
8	Waste maximum discharge		8 m <sup>3</sup> per ton of Soap	25 m <sup>3</sup> per ton of vegetable oil	1 m <sup>3</sup> per ton of detergent

Remarks:

1. The maximum limit for each parameter in the table above is noted on mg parameter per liter wastewater
2. The maximum pollution load for each parameter in the table above is noted on mg parameter per Kg parameter per ton of Soap, Vegetable oil and detergent product

#### 17. Beer Industry

No	Parameter	Maximum limit (mg/l)	Maximum pollution load
			(g/ton)
1	Biochemical Oxygen Demand (BOD <sub>5</sub> )	40	24.0
2	Chemical Oxygen Demand (COD)	100	60.0
3	Total suspended Solids (TSS)	40	24.0
4	pH		6.0 - 9.0
5	Waste maximum discharge	6 hectoliter per hectoliter of Beer	

Remarks:

1. The maximum limit for each parameter in the table above is noted on mg parameter per liter wastewater
2. The maximum pollution load for each parameter in the Table above is noted on parameter per hectoliter Beer product

## 18. Dry Battery Industry

No	Parameter	Alkaline-Manganese		Carbon-Zinc	
		Maximum limit (mg/l)	Maximum pollution load (mg/kg product)	Maximum limit (mg/l)	Maximum pollution load (mg/kg product)
1	Biochemical Oxygen Demand (BOD <sub>5</sub> )	-	-	15	3.75
2	Total suspended Solids (TSS)	8	12	10	2.5
3	Total Ammonia (NH <sub>3</sub> -N)	-	-	1	0.25
4	Oil and Grease	2	3.0	4	1.0
5	Zinc (Zn)	0	0.3	0.3	0.075
6	Mercury (Hg)	0.005	0.015	0.01	0.0025
7	Alkali Mercury	Not detected	-	-	-
8	Manganese (Mn)	0.3	0.45	0.3	0.075
9	Chromium (Cr)	0.06	0.09	-	-
10	Nickel (Ni)	0.4	0.6	-	-
11	pH	6.0 - 9.0		6.0 - 9.0	
12	Waste maximum discharge	1.5 per kg battery		0.25 per kg battery	

Remarks:

- The maximum limit for each parameter in the table above is noted on mg parameter per liter wastewater
- The maximum pollution load for each parameter in the table above is noted on milligram parameter per kg Battery product

## 19. Paint Industry

No	Parameter	Maximum limit	Maximum pollution load
		(mg/l)	(g/m <sup>3</sup> )
1	Biochemical Oxygen Demand (BOD <sub>5</sub> )	80	40
2	Total suspended Solids (TSS)	50	25
3	Mercury (Hg)	0.005	0.0025
4	Alkali mercury	Not Detected	-
5	Zinc (Zn)	1	0.50
6	Lead (Pb)	0.30	0.15
7	Copper (Cu)	0.8	0.40
8	Chromium hexavalent (Cr <sup>6+</sup> )	0.20	0.10
9	Titanium (Ti)	0.40	0.20
10	Cadmium (Cd)	0.08	0.04
11	Phenol	0.20	0.10
12	Oil and Grease	10	5
13	pH	6.0 – 9.0	
14	Waste maximum discharge	0.5 l per liter product of water base of color paint	

Remarks:

- Solvent – based of Color Paint should be zero in discharge; all waste water produced should be stored and re-processed and prohibited to through away in general aquatic area
- The maximum limit for each parameter in the table above is notified on mg parameter per liter wastewater
- The maximum pollution load for each parameter in the table above is noted on milligram parameter per m<sup>3</sup> product of color paint

## 20. Pharmaceutical Industry

No	Parameter	Maximum limit	
		Production process of formula material	Formula/Packing
		(mg/l)	(mg/l)
1	Biochemical Oxygen Demand (BOD)	100	75
2	Chemical Oxygen Demand (COD)	160	120
3	Total Suspended Solids (TSS)	100	75
4	Total Nitrogen (T-N)	30	-
5	Phenol	1.0	-
6	pH	6.0 - 9.0	

Remarks: The maximum limit for each parameter in the table above is notified on mg parameter per liter wastewater.

## 21. Pesticide Industry

No	Parameter	Technical pesticide production		Formula/packing
		Maximum limit (mg/l)	Maximum pollution load (mg/kg product)	Maximum limit (mg/l)
1	Biochemical Oxygen Demand (BOD)	30	0.60	15
2	Chemical Oxygen Demand (COD)	100	2.00	50
3	Total Suspended Solids (TSS)	25	0.50	15
4	Phenol	2	0.04	1.5
5	Benzene	0	0.002	0
6	Toluene	0.1	0.002	0
7	Total Cyanide (T-CN)	0.8	0.016	0
8	Copper (Cu)	1.0	0.02	0
9	Total Ammonia (N-NH <sub>3</sub> )	1.0	0.02	0
10	Total active material	1.0	0.02	0.05
11	pH	6.0 – 9.0		6.0 – 9.0
12	Waste maximum discharge	20 m <sup>3</sup> per ton of product		-

Remarks:

- The maximum limit for each parameter in the table above is notified on mg parameter per liter of wastewater
- The maximum pollution load for each parameter in the table above is notified on kg parameter per ton of pesticide product

## 22. Hotel Industry

No	Parameter	Maximum limit (mg/l)
1	Biochemical Oxygen Demand (BOD)	30
2	Chemical Oxygen Demand (COD)	50
3	Total Suspended Solids (TSS)	50
4	pH	6.0 – 9.0

## 23. Hospital Industry

No	Parameter	Maximum limit (mg/l)
<b>A</b>	<b>Physical</b>	
	Temperature	30 °C
<b>B</b>	<b>Chemical</b>	
	pH	6.0 – 9.0
	Biochemical Oxygen Demand (BOD)	30 mg/l
	Chemical Oxygen Demand (COD)	70 mg/l
	Total Suspended Solids (TSS)	30 mg/l
	Total NH <sub>3</sub>	0.1 mg/l
	PO <sub>4</sub> <sup>-</sup>	2 mg/l
	Microbiological	
	Coliforms (MPN)	10,000 colony/100ml
<b>C</b>	<b>Radioactive</b>	
	<sup>32</sup> P	7 x 10 <sup>2</sup> Bq/L
	<sup>35</sup> S	2 x 10 <sup>3</sup> Bq/L
	<sup>45</sup> Ca	3 x 10 <sup>2</sup> Bq/L
	<sup>51</sup> Cr	7 x 10 <sup>4</sup> Bq/L
	<sup>67</sup> Ga	1 x 10 <sup>3</sup> Bq/L
	<sup>85</sup> Sr	4 x 10 <sup>3</sup> Bq/L
	<sup>99</sup> Mo	7 x 10 <sup>3</sup> Bq/L
	<sup>113</sup> Sn	3 x 10 <sup>3</sup> Bq/L
	<sup>129</sup> I	1 x 10 <sup>4</sup> Bq/L
	<sup>131</sup> I	7 x 10 <sup>4</sup> Bq/L
	<sup>192</sup> Ir	1 x 10 <sup>4</sup> Bq/L
	<sup>201</sup> Ti	1 x 10 <sup>5</sup> Bq/L



## 24. Domestic Activity

No	Parameter	Unit	Maximum limit		
			A	B	C
1	pH	-	6 - 9	6 - 9	6 - 9
2	Biochemical Oxygen Demand (BOD)	mg/l	25	40	75
3	Chemical Oxygen Demand (COD)	mg/l	80	100	125
4	Total Suspended Solids (TSS)	mg/l	20	35	50
5	Oil and Grease	mg/l	5	8	10
6	Total coliforms	nos/100 ml	2,500	5,000	-

Remarks:

- Category A:
- Real estate area within > 200 ha in area
  - Restaurant within > 2,300 m<sup>2</sup> in area
  - Office, trade centre and apartment within > 50,000 m<sup>2</sup> in area
- Category B:
- Real Estate Area within 16 - 200 ha in area
  - Office, trade centre and apartment within 10,000 - 50,000 m<sup>2</sup> in area
- Category C:
- Restaurant within 500 – 1,400 m<sup>2</sup> in area
  - Office, trade centre and apartment within 5,000 – 10,000 m<sup>2</sup> in area

## 25. Oil - Petroleum Exploration

No	Parameter	Maximum limit	Maximum pollution load
		(mg/l)	(g/m <sup>3</sup> )
1	Biochemical Oxygen Demand (BOD)	80	80
2	Chemical Oxygen Demand (COD)	160	160
3	Oil and Grease	20	20
4	Sulfide (H <sub>2</sub> S)	0.5	0.5
5	Total ammonia (N-NH <sub>3</sub> )	5.0	5
6	Total phenol	0.5	0.5
7	Temperature		45 °C
8	pH		6.0 – 9.0
9	Waste maximum discharge	1,000 m <sup>3</sup> per m <sup>3</sup> Oil raw material	

## 26. Industrial Area \*)

No	Parameter	Maximum limit	Maximum pollution load
		(mg/l)	(kg/day)
1	Biological Oxygen Demand (BOD)	50	4.3
2	Chemical Oxygen Demand (COD)	100	8.6
3	Total Suspended Solids (TSS)	200	17.2
4	Iron (Fe)	5.0	0.43
5	Chromium hexavalent (Cr <sup>6+</sup> )	0.3	0.0258
6	Zinc (Zn)	6.0	0.516
7	Copper (Cu)	2.0	0.172
8	Nitrogen Nitrate (NO <sub>3</sub> -N)	15.0	1.29
9	Nitrogen Nitrite (NO <sub>2</sub> -N)	2.0	0.172
10	Nitrogen Ammoniac (NH <sub>3</sub> -N)	3.0	0.258
11	Sulfide (H <sub>2</sub> S)	0.03	0.00258
12	Cyanide (CN <sup>-</sup> )	0.3	0.0258
13	Oil and Grease	7.0	0.602
14	pH	6.0 – 9.0	

Remarks:

Maximum waste water Discharge: 1 liter per second per hectare for the utilized land Area

\*) After under processing at the Installation of Waste Water Treatment Unit

## 27. General Standard of Liquid Waste

No	Parameter	Unit	Standard Class	
			Class-I	Class-II
<b>A Physical</b>				
1	Temperature	°C	37	40
2	Total Dissolved Solids (TDS)	mg/L	2,000	3,000
3	Total suspended Solids (TSS)	mg/L	200	400
<b>B Chemical</b>				
1	pH	-	6.0 - 9.0	
2	Iron (Fe)	mg/L	5	10
3	Manganese (Mn)	mg/L	2	4
4	Barium (Ba)	mg/L	1.5	3
5	Copper (Cu)	mg/L	1.5	3
6	Zinc (Zn)	mg/L	4	8
7	Chromium hexavalent (Cr <sup>6+</sup> )	mg/L	0.1	0.5
8	Total Chromium (Cr)	mg/L	0.5	1
9	Cadmium (Cd)	mg/L	0.05	0.1
10	Mercury (Hg)	mg/L	0.002	0.005
11	Lead (Pb)	mg/L	0.1	0.8
12	Stannium (Sn)	mg/L	1.5	3
13	Arsenic (As)	mg/L	0.1	0.5
14	Selenium (Se)	mg/L	0.05	0.5
15	Nickel (Ni)	mg/L	0.2	0.5
16	Cobalt (Co)	mg/L	0.3	0.6
17	Cyanide (CN <sup>-</sup> )	mg/L	0.05	0.5
18	Sulfide (H <sub>2</sub> S)	mg/L	0.05	0.1
19	Fluoride (F)	mg/L	1.5	2
20	Total Chloride (Cl <sub>2</sub> )	mg/L	1	2
21	Total Ammonia (NH <sub>3</sub> -N)	mg/L	1	5
22	Nitrate (NO <sub>3</sub> -N)	mg/L	15	30
23	Nitrite (NO <sub>2</sub> -N)	mg/L	1	3
24	Biochemical Oxygen Demand (BOD)	mg/L	50	150
25	Chemical Oxygen Demand (COD)	mg/L	100	300
26	MBAS	mg/L	5	10
27	Phenol	mg/L	0.5	1.0
28	Vegetable oil	mg/L	5	10
29	Mineral oil	mg/L	10	40
30	Radioactivity**)	mg/L	-	-

**Remarks:**

To fulfill the Quality Standard, therefore, the Parameter Content should be prohibited that not to be able to obtain the Standard by mixing with water being taken directly from Water Sources. The Quality value of the parameters of the such waste liquid is stated with the permitted Maximum quality standard. Number of the Parameters measured being determined in accordance with the such kind of Liquid waste.

\*\*\*) The content of Radioactivity that is being followed the prevailing Law.









**APPENDIX SUBCONTRACT WORK OF WATER QUALITY SURVEY IN THE  
JENEBERANG RIVER  
METHODS OF SAMPLING AND ANALYSIS**

**1. Method of Sampling**

Water samples were collected at the following 7 locations twice in a month. (See Figure A-1 for the Location)

**Table Location of Water Quality Analysis**

	Sampling Site	Sample Point	Number of Sampling
No.1	Sabo Dam No.4	Under the Daraha bridge	1
No.2	Sand Pocket No.2	At overflow weir	1
No.3	Bili-Bili Reservoir	Depth of 1) 0.5 m from surface 2) 15 m (middle of the depth) 3) 25 m (bottom of the depth) at center of Bili-Bili Reservoir	3
No.4	Bili-Bili Dam	Near outlet of Bili-Bili Dam (near the intake facility of PDAM)	1
No.5	Jenelata River, nearby Jenelata Bridge	Near the water level gauge site	1
No.6	Malengkeri PDAM intake	Near the intake facility of PDAM	1
No.7	Jongaya-Panampu Drainage Canal	Near the flushing gate	1

Method of sampling is adjusted depending on site conditions:

- 1) Directly taken if the stream is shallow and enough accessible. This procedure was applied at Sabo Dam No.4, Jenelata River, PDAM outlet, and Jongaya Panampu urban drainage canal.
- 2) Water quality sampler set of Wildco, Saginaw, Michigan, USA, (Model number: 2404-1114-491) is applied at the location where water depth is deep. This equipment can sample the water column at different depth (at maximum 30m depth). This procedure is applied at the center of Bili-Bili reservoir and at the center of the Jeneberang estuary (Malengkeri). At the center of Bili-Bili reservoir, the water is sampled at three different levels: (1)  $h = 0.5$  m, (2)  $h = 15$  m and (3)  $h = 25$  m. At Malengkeri the water column is sampled at  $h=2$  m depth.
- 3) Special care in sampling water for microbiology must be applied, as enteric pathogen may be present. The bottle must be sterilized before it filled with sample water. Put the bottle in the icebox. We execute this procedure in Jongaya Panampu urban drainage canal.

The sampled water is poured into two separate containers: (1) 150 ml bottle and (2) 500 ml bottle. Add 5 ml Manganese-Sulfate and Sodium-Hydroxide into the first bottle (150 ml). Water sample for microbiological analysis is poured into another bottle.

**2. Method for Analysis and Measurement**

The following six (6) and nine (9) water quality parameters were analyzed for the Jeneberang River and Jonggaya-Panampu Drainage Canal, respectively.

**Table Items for Water Quality Analysis**

a) Common Items (for all 7 locations)	
Items	Unit
Temperature	°C
Turbidity	NTU
pH	-
Conductivity	mS/cm
TDS (Total Dissolved Solids)	mg/L
TSS (Total Suspended Solids)	mg/L

b) Additional Examination for Jongaya-Panampu Drainage Canal (for 1 location)	
Items	Unit
Biochemical Oxygen Demand (BOD)	mg/L
Chemical Oxygen Demand (COD)	mg/L
Total Coliforms (T-C)	nos./100ml

2.1 Temperature (unit: °C)

Temperature is directly measured on site using mercury-filled thermometer (scale range: -20°C-110°C).

- 1) Insert the thermometer probe into sample water at least 3 minutes
- 2) Read the indicator
- 3) Procedure completed

2.2 pH

pH is directly measured on site using pHep® digital pH meter of Hanna (serial number: H198107).

- 1) Insert the pH meter probe into sample water at least 3 minutes
- 2) Read the display
- 3) Procedure completed

2.3 Conductivity (unit: mS/cm)

Conductivity is directly measured on site using digital Conductivity meter of Lutron® (serial number: CD-4303).

- 1) Insert the conductivity meter probe into sample water at least 3 minutes
- 2) Read the display
- 3) Procedure completed

2.4 Turbidity (unit: NTU)

Turbidity is analyzed by using DR/2000 Spectrophotometer of HACH Company (catalog number: 45250-05), Program No. 750.

- 1) Collect a representative sample in a clean container. Fill a samples cell to the line (about 25 ml), taking care to handle the sample cell by the top. Cap the cell
- 2) Wipe the cell with a soft, lint-free cloth to remove water spots and fingerprints
- 3) Put the sample cell in the instrument cell compartment so the diamond or orientation mark aligns with the raised orientation mark in front of the cell compartment. Close the light shield
- 4) Select the program No. 750 (for turbidity)



- 5) Press read/enter. Procedure completed
- 6) If the equipment does not give a correct response, then rotate the wavelength dial until the small display shows: **450 nm**
- 7) Press read/enter
- 8) Procedure completed

## 2.5 Total Suspended Solids (TSS, unit: mg/l)

TSS is analyzed by using DR/2000 Spectrophotometer of HACH Company (catalog number: 45250-05), Program No. 630.

- 1) Collect a representative sample in a clean container. Fill a samples cell to the line (about 25 ml), taking care to handle the sample cell by the top. Cap the cell.
- 2) Wipe the cell with a soft, lint-free cloth to remove water spots and fingerprints.
- 3) Put the sample cell in the instrument cell compartment so the diamond or orientation mark aligns with the raised orientation mark in front of the cell compartment. Close the light shield.
- 4) Select the program No. 630 (for suspended solids)
- 5) Press read/enter. Procedure completed
- 6) If the equipment does not give a correct response, then rotate the wavelength dial until the small display shows: **810 nm**
- 7) Press read/enter
- 8) Procedure completed

## 2.6 Total Dissolved Solids (TDS, unit: mg/l)

TDS is analyzed by using gravimetric method.

- 1) Filter measured volume of well-mixed sample through glass fiber filter.
- 2) Wash with three successive 10 ml volume of distilled water.
- 3) Suction for about 3 minutes after filtration completed.
- 4) Transfer filtrate to a weighed evaporating dish, and evaporate drains on a steam bath.
- 5) Add successive portion to the dish after evaporation if filtrate volume exceeds dish capacity.
- 6) Dry for at least 1 hour in an oven at  $180\pm 2^{\circ}\text{C}$ , cool in a desiccators to balance temperature, and weight.
- 7) Repeat drying cycle of drying, cooling, desiccating, and weighting until a constant weight is obtained or until weight loss is less than 4% of previous weight or 0.5mg, whichever is less.

Calculation of TDS concentration is as follows:

$$TDS = \frac{(m_A - m_B) \times 1000}{V_s}$$

Where,

- $TDS$  = Concentration of total dissolved solids (mg/l)  
 $V_s$  = Volume of Sample (ml)  
 $m_A$  = Mass of dried residue + dish (mg)  
 $m_B$  = Mass of dish (mg)

## 2.7 Chemical Oxygen Demand (COD, unit: mg/l)

COD is analyzed by using titration method.

- 1) Add 5 ml  $K_2Cr_2O_7$  as much 0.025 N and 0.5-2.0 ml  $H_2SO_{4(P)}$  into 10 ml follow the sample, mix then hushed by during 30 minutes.
- 2) Repeat procedure (1) using with distilled water instead of sample water.
- 3) Add 7.5 ml distilled water and 2-3 drops of indicator of Fenantrolin-Ferro-Sulfate (ferroin) titration by Ferro-Ammonium-Sulfate (FAS). The sample color will change (yellow to orange/greenish blue to red chocolate).
- 4) Reactant solution:
  - a)  $K_2Cr_2O_7$  1 N  
Previously dried at  $103^\circ C$  for 2 hour, and cool down then add 1000 ml distilled water.
  - b)  $K_2Cr_2O_7$  0.025 N  
Add 25 ml  $K_2Cr_2O_7$  1 N, 100 mg Amidosulfonic acid (catalog number = 1.00103.0100) and 1000 ml distilled water.
  - c) Ferrous Ammonium Sulfate (FAS)  
Dissolve 9.8 g  $Fe (NH_4)_2(SO_4)_2 \cdot 6 H_2O$  with use 300 ml distilled water. Add 20 ml  $H_2SO_{4(P)}$  and cool down, then dilute to 1000 ml distilled water. Kept in dark place and dark bottle.
- 5) Preparation of FAS Solution: Add 10 ml  $K_2Cr_2O_7$ . 0.025 N into 45 ml distilled water (use Erlenmeyer as container). Add 1 ml  $H_2SO_{4(P)}$ , swirl and cool down. Add 2~3 drops ferroin, and swirl again. Formula for calculating FAS concentration is as follows;

$$FAS = \frac{N_{K_2Cr_2O_7} \times V_{K_2Cr_2O_7}}{V_{FAS}}$$

Where,

- $FAS$  = Concentration of FAS (N)  
 $V_{FAS}$  = Volume of FAS (ml)  
 $N_{K_2Cr_2O_7}$  = Concentration of  $K_2Cr_2O_7$  (N)  
 $V_{K_2Cr_2O_7}$  = Volume of  $K_2Cr_2O_7$  (ml)

## 2.8 Ferroin indicator solution:

We utilize ready to use Ferroin indicator solution (catalog number = 9161.0100).

Formula for calculating concentration of COD is as follows;

$$COD = \frac{(V_{FASB} - V_{FASS}) \times FAS \times 8000}{V_s}$$

Where,

- $COD$  = Concentration of Chemical Oxygen Demand (mg/l)  
 $V_{FASB}$  = Volume of FAS (ml) used for blank.  
 $V_{FASS}$  = Volume of FAS (ml) used for sample, and  
 $FAS$  = Concentration of FAS (N)  
 $V_s$  = Sample volume (ml)

## 2.9 Biochemical Oxygen Demand (BOD, unit mg/l)

BOD is analyzed by Modified Winkler Titration method.

1. Fill 30 ml sample into 500 ml bottle. Add 270 ml aerated solution, such that the sampled volume becomes 300 ml and shake it. Label bottle as **bottle-1**.
2. Provide incubation bottles (for BOD), fill with sample until overflow and close the bottle. Sign it as **bottle-2**.
3. Put bottle-1 into incubator at 20°C for 5 days.
4. Open bottle-2 and add 1 ml MnSO<sub>4</sub> and 1 ml NaOH-KI. Close and stir the bottle, wait until deposit fall down.
5. Open bottle-2 and add 1 ml H<sub>2</sub>SO<sub>4(p)</sub> (yellow). Close and stir the bottle.
6. Put into erlenmeyer and add 3 drops starch (amylum) solution. Close and shake the bottle until the solution color changes to blue.
7. Titration procedure with Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>.5H<sub>2</sub>O is applied until blue color changes to neutral [DO<sub>1</sub>, (in the first day)].
8. The same titration procedure is also applied for **bottle-2** at the fifth day [DO<sub>5</sub>].
9. Formula for calculating BOD<sub>(5)</sub>:

$$DO_1 = a \times f \times \frac{1000}{V_{(1)} - 2} \times 0.2 \quad (\text{DO at the first day})$$

$$DO_5 = a \times f \times \frac{1000}{V_{(5)} - 2} \times 0.2 \quad (\text{DO at the fifth day})$$

$$BOD = (DO_1 - DO_5) \times P$$

Where,

- DO<sub>1</sub> = Dissolved oxygen at the first day (mg/l).
- DO<sub>5</sub> = Dissolved oxygen at the fifth day (mg/l).
- a = Titration volume (ml).
- V<sub>(1)</sub> = Sample volume (ml) at the first day.
- V<sub>(5)</sub> = Sample volume (ml) at the fifth day.
- f = Concentration of Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>.5H<sub>2</sub>O (mg/l)

Procedure for preparing the solution:

1. Fill 1,000 ml distilled water into poly bottle
2. Add 1 ml buffer PO<sub>4</sub>, MgSO<sub>4</sub>, CaCl<sub>2</sub>, FeCl<sub>3</sub> solutions into each bottle and aerated for 1 hour.

## 2.10 Microbiology

Microbiology is analyzed by using **Most Probable Number (MPN) test**.

### a) Total Coliform

- 1) Set up three separate series consisting of three groups, a total of nine tubes per series, in a test tube rack; label tubes as to the water source and volume of sample inoculated.

Series 1: Sewage Water	3 tubes of BGLB-10 ml
	3 tubes of BGLB-1 ml
	3 tubes of BGLB-0.1 ml
Series 2: Pond Water	3 tubes of BGLB-10 ml
	3 tubes of BGLB-1 ml
	3 tubes of BGLB-0.1 ml
Series 3: Tap Water	3 tubes of BGLB-10 ml
	3 tubes of BGLB-1 ml
	3 tubes of BGLB-0.1 ml

Note: (BGLB: Brilliant Green Lactose Bile)

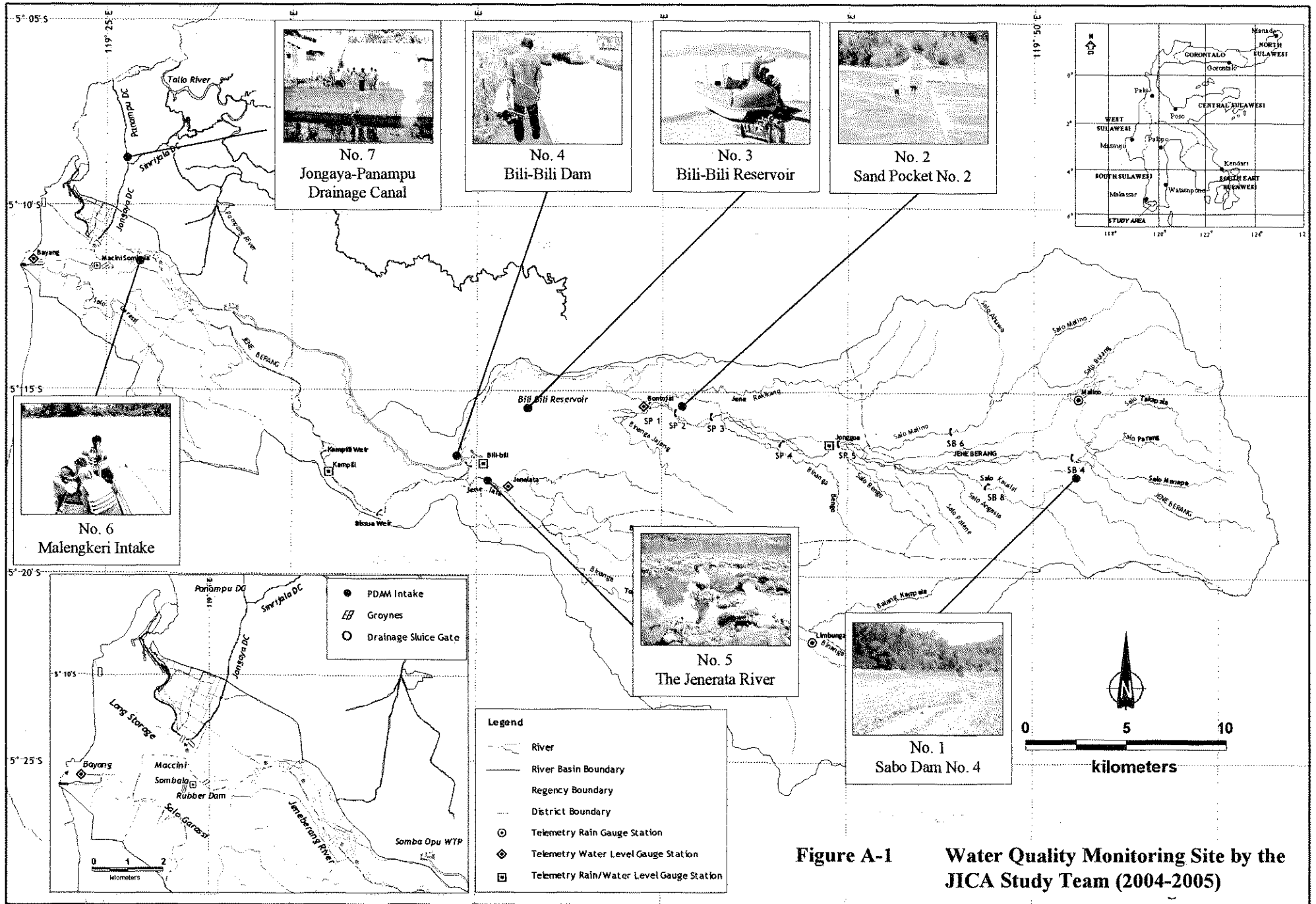
- 2) Mix sewage plant water sample by shaking thoroughly. Exercise care in handling sewage wastewater sample, as enteric pathogens may be present.
- 3) Flame bottle, and using a 10-ml pipette transfer 10-ml aliquots to the three tubes labeled BGLB 10 ml.
- 4) Flame bottle, and using a 1-ml pipette transfer 1 ml of water to three tubes labeled BGLB-1 ml.
- 5) Flame bottle, and using a 0.1-ml pipette transfer 0.1 ml of water to the three tubes labeled BGLB-0.1 ml.
- 6) Repeat steps 2 through 5 for the tap and pond water samples.
- 7) Incubate all tubes for 24 hours at 37 °C.

b) Total E-Coli (EC)

- 1) Set up three separate series consisting of three groups, a total of nine tubes per series, in a test tube rack; label tubes as to the water source and volume of sample inoculated:

Series 1: Sewage Water	3 tubes of EC-10 ml 3 tubes of EC-1 ml 3 tubes of EC-0.1 ml
Series 2: Pond Water	3 tubes of EC-10 ml 3 tubes of EC-1 ml 3 tubes of EC-0.1 ml
Series 3: Tap Water	3 tubes of EC-10 ml 3 tubes of EC-1 ml 3 tubes of EC-0.1 ml

- 2) Mix sewage plant water sample by shaking thoroughly. Exercise care in handling sewage wastewater sample, as enteric pathogens may be present.
- 3) Flame bottle, and using a 10 ml pipette transfer 10 ml aliquots to the three tubes labeled EC 10 ml.
- 4) Flame bottle, and using a 1 ml pipette transfer 1 ml of water to three tubes labeled EC-1 ml.
- 5) Flame bottle, and using a 0.1 ml pipette transfer 0.1 ml of water to the three tubes labeled EC- 0.1 ml.
- 6) Repeat steps 2 through 5 for the tap and pond water samples.
- 7) Incubate all tubes for 24 hours at 44 °C.



**Figure A-1 Water Quality Monitoring Site by the JICA Study Team (2004-2005)**

***Data Book C***

***GIS DATABASE***

# C-GIS DATABASE

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## **Summary**

### **C1 Geographical Information System**

GIS can be seen as a system of hardware, software and procedures designed to support the capture, management, manipulation, analysis, modeling and display of spatially-referenced data for solving complex planning and management problems. GIS allows us to manipulate and display geographical knowledge in new and exciting ways. GIS makes connections between activities based on geographic proximity.

Maps are primary materials for GIS. Maps provide useful ways of displaying information in meaningful way and in practice, the cost of making and printing a map is high, so its contents are often a compromise between different needs. Maps and other forms of hardcopy should be transferred into digital form. A device for extracting spatial information from maps and other hardcopy forms is digitizer or in other way by using a scanning. The result of that processing then stored into digital form. For further process, each object (text, point, line, polyline, and area) are saved into separated layer, one object one layer. The aim of this separated layer is to make maps combination easier. A sheet of RBI map (Indonesia Natural Feature Map) can be separated into 11 layers. Each layer contain a special data that called Data Embedded Object, which mean every object have the data clinging to the object and if the object have been edited, it say, divided into two object, then each of the object will have the data itself, and the data will be same as the original.

Mush GIS output is in the form of hardcopy maps or graphic displays, design of graphic output is critical if information is to be conveyed effectively to the user. In GIS types of output are: text output, graphic output, digital data and 3D images.

### **C2 Database**

Databases are packages design to create, edit, manipulate and analyze data. To be suitable for a database, the data must be consist of records which provide information on individual cases, people, places, features, etc. The objects in a spatial database are representations of real-world entities with associated attributes. The power of a GIS comes from its ability to look at entities in their geographical context and examine the relationship between entities.

In general, data can be grouped into two types: socio-economic data and natural and resources data. Socio-economic data can be obtained from field surveys, government statistics, government administrative records, secondary data collected by another group, etc. There are several different kinds of information needed in an natural and resource database, many of these are obvious: geology, vegetation, hydrology, soils; however, to address a range of issues, the natural and resource database must include several characteristics that are not generally

perceived as natural data. Natural and resource data can be obtained from thematic maps from various agencies, topographical map and remote sensing.

### **C3 Database Design**

The development of GIS database at river basin level is based on object detail and the degree of information needed for water resources management with the result that the need of the user can be facilitated in a flexibility manner. Data classification and attribute information are important elements to establish GIS database. Database structures cover data layer and layer attributes from the layer itself.

Database design is divided into two categories: data layer and data attributes. Data layer is the smallest data component and all data in this group are in the same types. Files name are given to individual layers, which indicate the type of information contained in the layer data. Data attributes are main support elements for object definition in the database. Performance of multipurpose database for data analysis and query can be measured from suitability and performance of object attribute. Basically, a data attribute must be decided by user, who understands how to manage data to perform the required analysis.

3 steps in database design are; Conceptual - requires decision about dimensional and relationships will be represented, based on the processing that will be done on these object, Logical - sets out the logical structure of the database elements, determined by the data base management system used by software and Physical – requires consideration of how files will be structured for access from the disk.

### **C4 GIS of Jeneberang River Basin**

An integrated GIS/Database system is required for management and operation of the Jeneberang River Basin. With an effective GIS/Database system, required information related to conditions and situations in the Study Area can be referenced more rapidly, effectively and comprehensively.

Data for Study Area that relates with water resources development and management can be categorized based on source and type of data. Categories of type of Study Area data as follows: Data of Natural Features, Administrative Boundary Data, Land Use and Planning Data, Infrastructure Inventory Data and Catchment Area Characteristic related to water resources analysis. Data for Study Area are obtained as: buy data, copy data and borrows data. Processing map data use MapInfo V 7.5 (as main mapping software) and supporting by AutoCAD 2002 and ArcView 3.2. Many types and files format of digital data that have been converted into MapInfo file format, then can be presented into MapInfo Mapping Software. Those data can be processed to produce map layers in many quantities. Processing map or editing map consist of: object combining, object splitting, erase, object adding etc.

## **Chapter 1 Introduction to GIS**

At present, GIS (Geographical Information System) become tool that used for mapping and analyzing for many activities in the earth surface. GIS technology is merging between operation database, e.g. query and statistical analyze with maps. GIS have a power to make a map, information integrated, scenario's visualization, complex problem solving, and developing an effective solution that never had been before. As a tool, GIS have ability to use by individual or organization, like a university/school, company, government, military, business, and so on.

### **1.1 What is a GIS?**

GIS is a particular form of Information System applied to geographical data. A GIS uses geographically referenced data as well as non-spatial data and includes operations which support spatial analysis. In GIS, the common purpose is decision-making, for managing use of land, resources, transportation, retailing, oceans or any spatially distributed entities. The connection between the elements of the system is geography, e.g. location, proximity, spatial distribution. In this context GIS can be seen as a system of hardware, software and procedures designed to support the capture, management, manipulation, analysis, modeling and display of spatially-referenced data for solving complex planning and management problems.

### **1.2 Why is GIS important?**

GIS integrates spatial and other kinds of information within a single system - it offers a consistent framework for analyzing geographical data. By putting maps and other kinds of spatial information into digital form, GIS allows us to manipulate and display geographical knowledge in new and exciting ways. GIS makes connections between activities based on geographic proximity. Looking at data geographically can often suggest new insights, explanations these connections are often unrecognized without GIS, but can be vital to understanding and managing activities and resources e.g. we can link industrial waste records with PDAM Intake locations through geographic proximity. GIS allows access to administrative records - property ownership, tax files, utility cables and pipes, irrigation schemes - via their geographical positions. Thereby, GIS may be able to provide simplicities as follow:

- handling of geospatial data in the standard form will be better
- data revised and data up dating will be easier
- geospatial data and geospatial information will be ease to search, to analyze and to be presenting
- becoming product that have added value
- ability to interchange of geospatial data
- saving of cost and time
- better in the decision taking

### **1.3 Major Areas of Practical Application**

#### **1.3.1 Natural resource-based**

- management of wild and scenic rivers, recreation resources, floodplains, wetlands, agricultural lands, aquifers, forests, wildlife, sand mining's
- Environmental impact analysis (EIA)
- view shed analysis
- hazardous or toxic facility silting
- groundwater modeling and contamination tracking
- modeling for reservoir inundation plan

#### **1.3.2 Land parcel-based**

- zoning, subdivision plan review
- land acquisition
- environmental impact statements
- water quality management
- maintenance of ownership

#### **1.3.3 Facilities management**

- locating underground pipes, cables, water transmission
- balancing loads in electrical networks
- planning facility maintenance
- tracking energy use
- locating municipal drainage canal system

### **1.4 What Is A Map?**

According to the International Cartographic Association, a map is a representation, normally to scale and on a flat medium, of a selection of material or abstract features on, or in relation to, the surface of the Earth.

#### **1.4.1 Types of maps**

In practice we normally think of two types of map:

- Topographic map - a reference tool, showing the outlines of selected natural and man-made features of the Earth. Topographic map often acts as a frame for other information and word "Topography" refers to the shape of the surface, represented by contours and/or shading, but topographic maps also show roads and other prominent features.
- Thematic map - a tool to communicate geographical concepts such as the distribution of population densities, climate, movement of goods, land use etc.

#### **1.4.2 Characteristics of maps**

- maps are often stylized, generalized or abstracted, requiring careful interpretation
- usually out of date
- show only a static situation - one slice in time
- often highly elegant/artistic
- easy to use to answer certain types of questions:
  - How do I get there from here?
  - What is at this point?
- difficult or time-consuming to answer other types:
  - What is the area of this dam?
  - What places can I see from this TV tower?
  - What does that thematic map show at the point I'm interested in on this topographic map?

#### **1.4.3 Thematic maps in GIS**

Several types of thematic map are important in GIS:

- A choropleth map uses reporting zones such as counties or census tracts to show data such as average incomes, percent female, or rates of mortality. The boundaries of the zones are established independently of the data, and may be used to report many different sets of data
- An area class map shows zones of constant attributes, such as vegetation, soil type, or forest species. The boundaries are different for each map as they are determined by the variation of the attribute being mapped, e.g. breaks of soil type may occur independently of breaks of vegetation
- An isopleth map shows an imaginary surface by means of lines joining points of equal value, "isolines" (e.g. contours on a topographic map) used for phenomena which vary smoothly across the map, such as temperature, pressure, rainfall or population density

#### **1.4.4 The concept of scale d**

The scale of a map is the ratio between distances on the map and corresponding distances in the real world, if a map has a scale of 1:50,000, then 1 cm on the map equals 50,000 cm or 0.5 km on the Earth's surface. The use of the terms "small scale" and "large scale" is often confused, so it is important to be consistent. A large scale map shows great detail, small features, representative fraction is large, e.g. 1/10,000. A small scale map shows only large features, representative fraction is small, e.g. 1/250,000. The scale controls not only how features are shown, but what features are shown, a 1:2,500 map will show individual houses and lamp posts while a 1:100,000 will not.

#### **1.4.5 Map projections**

The Earth's surface is curved but as it must be shown on a flat sheet, some distortion is inevitable. Distortion is least for when the map only shows small areas, and greatest when a map attempts to show the entire surface of the Earth. A projection is a method by which the curved surface of the earth is represented on a flat surface; it involves the use of mathematical transformations between the location of places on the earth and their projected locations on the plane. Numerous projections have been invented, and arguments continue about which is best for which purposes projections can be identified by the distortions which they avoid. In general a projection can belong to only one of these classes:

- equal area projections preserve the area of features by assigning them an area on the map which is proportional to their area on the earth - these are useful for applications which require measuring area, and are popular in GIS
- conformal projections preserve the shape of small features, and show directions (bearings) correctly - they are useful for navigation
- equidistant projections preserve distances to places from one or two points

#### **1.5 GIS Compared To Maps**

Today, far more maps are made by computer than by hand and are called computer cartography, also, it is now clear that once created, digital data can serve purposes other than map-making, so it has additional value.

Advantages of computer cartography

- lower cost for simple maps, faster production
- greater flexibility in output - easy scale or projection change - maps can be tailored to user needs
- other uses for digital data

Disadvantages of computer cartography

- relatively few full-scale systems have been shown to be truly cost-effective in practice, despite early promise
- high capital cost, though this is now much reduced
- computer methods do not ensure production of maps of high quality, there is a perceived loss of regard for the "cartographic tradition" with the consequent production of "cartojunk"

##### **1.5.1 GIS and Computer Cartography**

Computer cartography has a primary goal of producing maps. This system have advanced tools for map layout, placement of labels, large symbol and font libraries, interfaces for expensive, high quality output devices, however, it is not an analytical tool, therefore, unlike data for GIS,

cartographic data does not need to be stored in ways which allow, for example, analysis of relationships between different themes such as population density and topography of region or the routing of flows along connecting highway or river segments.

### **1.5.2 Data stores**

Spatial data stored in digital format in a GIS allows for rapid access for traditional as well as innovative purposes.

Nature of maps creates difficulties when used as sources for digital data:

- most GIS take no account of differences between datasets derived from maps at different scales
- idiosyncrasies (e.g. generalization procedures) in maps become "locked in" to the data derived from them
- such errors often become apparent only during later processing of digital data derived from them

However, maps still remain an excellent way of compiling spatial information, e.g. field survey. Maps can be designed to be easy to convert to digital form, e.g. by the use of different colors which have distinct signatures when scanned by electronic sensors. As well maps can be produced by GIS as cheap, high density stores of information for the end user, however, consistent, accurate retrieval of data from maps is difficult and only limited amounts of data can be shown due to constraints of the paper medium.

### **1.6 What Are Maps Used For?**

Traditionally, maps are used as aids to navigation, as reference documents, and as wall decorations. Maps have four roles today:

#### **(1) Data display**

Maps provide useful ways of displaying information in a meaningful way and in practice, the cost of making and printing a map is high, so its contents are often a compromise between different needs.

#### **(2) Data stores**

As a means of storing data, maps can be very efficient, high density stores

- a typical 1:50,000 map might have more than 1,000 place names on it
- the basic information printed on the typical 1:50,000 topographic map sheet in the RBI, Bakosurtanal Map requires more than 30 million bytes of storage when it is converted to digital form, the information on all Jeneberang River Basin (Study Area) topographic maps would require 275 million bytes (consist of 6 sheets).



(3) Spatial indexes

A map can show the boundaries of areas (e.g. land use zones, soil, rock types or administrative) and identify each area with a label. A separate manual with corresponding entries may provide greater detail about each area and it shows in MapInfo as Database Embedded Object.

(4) Data analysis tool

Maps are used in analysis to:

- make or test hypotheses, such as the identification of factory clusters
- examine the relationship between two distributions using simple transparent overlays

## **1.7 Data Input**

Data inputting need to have tools to transform spatial data of various types into digital format. Data input is a major bottleneck in application of GIS technology, costs of input often consumes 80% or more of project costs. Data input is labor intensive, tedious, error-prone. There is a danger that construction of the database may become an end in itself and the project may not move on to analysis of the data collected. For data inputting effectiveness it is essential to find ways to reduce costs and maximize accuracy. By this way need to automate the input process as much as possible, but: automated input often creates bigger editing problems later and source documents (maps) may often have to be redrafted to meet rigid quality requirements of automated input. Because of the costs involved, many projects has gone into devising better input methods - however, few reductions in cost have been realized. Sharing of digital data is one way around the input bottleneck and by that way more and more spatial data is becoming available in digital form. Data input to a GIS involves encoding both the locational and attribute data. The locational data is encoded as coordinates on a particular spherical coordinate system. Because source maps may have different projections, scales, several stages of data transformation may be needed to bring all data to a common coordinate system. An attribute data is often obtained and stored in tables.

### **1.7.1 Modes of Data Input**

Modes of data input consist of:

- keyboard entry for non-spatial attributes and occasionally locational data
- manual locating devices, user directly manipulates a device whose location is recognized by the computer, e.g. digitizing
- automated devices, automatically extract spatial data from maps and photography, e.g. scanning
- conversion directly from other digital sources
- voice input has been tried, particularly for controlling digitizer operations, not very successful - machine needs to be recalibrated for each operator, after coffee breaks, etc.

## **1.7.2 Digitizers**

Digitizers are the most common device for extracting spatial information from maps and photographs. The map, photo, or other document is placed on the flat surface of the digitizing tablet.

### **1.7.2.1 The digitizing operation**

- (1) the map is affixed to a digitizing table
- (2) three or more control points ("reference points", "tics", etc.) are digitized for each map sheet
  - these will be easily identified points (lines of projection, intersections of major streets, major peaks, points on coastline)
  - the coordinates of these points will be known in the coordinate system to be used in the final database, e.g. lat/long, Universal Transverse Mercator, Military grid, etc.
  - the control points are used by the system to calculate the necessary mathematical transformations to convert all coordinates to the final system
  - the more control points, the better
- (3) digitizing the map contents can be done in two different modes:
  - in point mode, the operator identifies the points to be captured explicitly by pressing a button
  - in stream mode points are captured at set time intervals (typically 10 per second) or on movement of the cursor by a fixed amount
- (4) advantages and disadvantages:
  - in point mode the operator selects points subjectively, in two point mode operators will not code a line in the same way
  - stream mode generates large numbers of points, many of which may be redundant
  - stream mode is more demanding on the user while point mode requires some judgments about how to represent the line
- (5) most digitizing is currently done in point mode

### **1.7.2.2 Problems with digitizing maps**

The problem arise since most maps were not drafted for the purpose of digitizing

- paper maps are unstable: each time the map is removed from the digitizing table, the reference points must be re-entered when the map is affixed to the table again
- if the map has stretched or shrunk in the interim, the newly digitized points will be slightly off in their location when compared to previously digitized points
- errors occur on these maps, and these errors are entered into the GIS database as well
- the level of error in the GIS database is directly related to the error level of the source maps

Maps are meant to display information, and do not always accurately record locational information, for example, when a railroad, river and road all go through a narrow mountain pass; the pass may actually be depicted wider than its actual size to allow for the three symbols to be drafted in the pass. Discrepancies across map sheet boundaries can cause discrepancies in the total GIS database, e.g. roads or streams that do not meet exactly when two map sheets are placed next to each other. User error causes overshoots, undershoots (gaps) and spikes at intersection of lines or user fatigue and boredom.

### **1.7.3 Scanning**

#### Requirements for scanning

- documents must be clean (no smudges or extra markings)
- lines should be at least 0.1 mm wide
- complex line work provides greater chance of error in scanning
- text may be accidentally scanned as line features
- contour lines cannot be broken with text
- automatic feature recognition is not easy (two contour lines vs. road symbols)
- special symbols (e.g. marsh symbols) must be recognized and dealt with

If good source documents are available, scanning can be an efficient time saving mode of data input.

## **1.8 Map Layers**

The data for an area can be visualized as a set of maps of layers. A map layer is a set of data describing a single characteristic for each location within a bounded geographic area. Only one item of information is available for each location within a single layer - multiple items of information requires multiple layers. On the other hand, a topographic map can show multiple items of information for each location, within limits, e.g. elevation (contours), administrative (boundaries and area), roads, rivers, places name, etc. These would be more than 5 layers in a raster GIS. Typical raster databases contain up to a hundred layers, each layer (matrix, lattice, raster, and array) typically contains hundreds or thousands of cells. Important characteristics of a layer are its resolution, orientation and zone(s)

### **1.8.1 Label Placement**

Features shown on maps and displays can be differentiated and identified in various ways: symbols, e.g. mosque, church, bridge, colors, sizes and labels. Labels provide the greatest flexibility to attach descriptions to point, line and area features; e.g. names of administrative divisions, lakes, and rivers etc., elevations of contours, spot heights, and road numbers. In cartography, positioning labels is a complex and sophisticated process; there have been few attempts to write down the rules used.

Imhofe's basic rules:

Names on maps should:

- be legible
- be easily associated with the features they describe
- not overlap other map contents
- be placed so as to show the extent of the feature
- reflect the hierarchy of features by the use of different font sizes
- not be densely clustered nor evenly dispersed
- it may not be possible to satisfy all of these rules perfectly
- the best solution will balance conflicting objectives, e.g. need to associate name with feature vs. need to avoid overlap of contents
- label placement is a complex problem because of the vast number of possible positions that have to be searched and the number of conflicting objectives
- two labeling problems are particularly significant in automated mapping and GIS:

(1) Over posting

When features are densely packed on a map or screen, it is difficult to keep labels separated;

- labels may overlap (over posting)
- labels must be positioned to avoid over posting, but without destroying the eye's ability to associate labels with appropriate features, e.g. point features
- optimum position for a label is above and to the right
- below and to the right is less acceptable
- least acceptable positions are to the left
- label can be turned (non-horizontal) if necessary, but only by a small amount

Over posting is a problem because the computer must search a vast number of possible positions

- in practice, must limit the number of positions somehow
- some solutions define a fixed number of possible absolute positions, like a raster
- other solutions define a fixed number of positions relative to the feature

(2) Polygon labeling

Labeling polygons has become notorious within automated mapping as a difficult and challenging programming problem. The label should be central to the feature, may be reoriented or curved to fit the feature, in some cases the label may be connected with the feature by an arrow.

Some simple methods:

1. label centered on the polygon centroid, the problems are:
    - centroid may lie outside the polygon
    - a long label may have to be multi-line to fit inside
    - solution fails to meet Imhof's criterion of showing the extent of the feature
  2. variable rectangle positioned inside the polygon
    - search for feasible positions for a rectangle wholly enclosed within the polygon
    - ratio of width to height should be as high as possible
    - solution will not curve the label to fit the feature
    - largest enclosed rectangle may be in an inappropriate part of the polygon
- (3) Skeleton
- shrink the polygon by moving its edges inward at a uniform rate
  - the vertices trace out a network known as the skeleton
  - position the label along the central part of the skeleton
  - best for polygons like coastline area which require curved labels

## **1.9 Output**

Much GIS output is in the form of hard copy maps or graphic displays, design of graphic output is critical if information is to be conveyed effectively to the user. Graphic output from GIS is often poorly designed, e.g. colors used randomly without appropriate scaling. Design can benefit from principles of cartographic design developed in cartography; screen display introduces a new set of issues because of greater capabilities compared with paper maps.

Types of output

- text - tables, lists, numbers or text in response to query
- graphic - maps, screen displays, graphs, perspective plots
- digital data - on disk, tape or transmitted across a network
- other, not yet common, e.g. computer-generated sound or 3D images

### **1.9.1 Text Output**

Text output perhaps more important than maps for reporting results of analysis. Results might be a list or table of selected objects with attributes, queries might result in numerical results, e.g. totals, distances, areas, counts. Text output might be delivered by voice generator, e.g. navigation instructions like.

Tables output:

- e.g. list of all cut table areas of reservoir; seasonal area of reservoir surface, discharge, gate opening operation
- list is not of great value without an accompanying map to identify each object in the list

- examples of specialized lists:
- personalized letter to be mailed to all households within 500 m of a planned factory
- list of all hazardous materials stored within 100 m of a fire, transmitted by FAX to fire truck
- driving directions for a garbage collection route
- work order and accompanying map and marked travel route for each service vehicle operated by utility company, giving day's work locations, nature of work
- list and accompanying map of all farmer who have paddy field in the plan of irrigation scheme

## **1.9.2 Graphic Output**

### Graphics peripherals

- provide graphic input and output of maps, diagrams and charts
- interactive graphics devices allow users to point to objects and identify them in their correct spatial context
- television now the most common way users interact with computer systems
- costs are approximate, correct to order of magnitude only

### Raster and vector devices

- graphic output devices can be classified into raster and vector groups
- raster devices build a picture by filling it with uniform picture elements, usually in rows
- vector devices build a picture by drawing lines, shading areas etc.
- a raster device may be driven by vector commands, which it then converts for display, and vice versa
- conversion between raster and vector may thus occur at several points in a GIS between input and output

## **Chapter 2 Databases**

Databases are packages designed to create, edit, manipulate and analyze data. To be suitable for a database, the data must consist of records which provide information on individual cases, people, places, features, etc. Each record may contain several fields each of which contains one item of information. The number and interpretation of the fields must be constant for each class of records e.g. each record in the class of "streets" may contain fields for name, length, surface, type. Field contents can be of many types - numeric or text, fixed or variable length. There can be several classes of records in a database e.g. an Gowa Regency database might have the following classes of records and associated items: administrative: boundary of districts, districts name; area: area of regency, area of district, area of land use; population: total of regency population, sub total of district population, population density, etc.

### **2.1 Functions of a database**

- creating and editing records, using customized screens
- printing reports (summarizes of groups of records), using customized report forms, including subtotals and totals
- selecting records based on user-specified rules
- updating records based on new information
- linking records, e.g. to determine rainfall station influence by linking the annual rainfall record with the distribution of the station

### **2.2 Three types of database**

Network database, hierarchical database and relational database are different ways of modeling data within a database, although all three are used, the relational model has been most successful within GIS, well-known relational database management systems (RDBMS) include dBase, Oracle, Info, Access and many of these have been used in specific GIS. Many databases use the same language, SQL (Standard Query Language), for formulating queries. There are two major choices of data model - raster and vector:

- (1) raster model divides the entire study area into a regular grid of cells in specific sequence
  - the conventional sequence is row by row from the top left corner
  - each cell contains a single value
  - is space-filling since every location in the study area corresponds to a cell in the raster
  - one set of cells and associated values is a layer and there may be many layers in a database, e.g. soil type, elevation, land use, land cover

A raster model tells what occurs everywhere - at each place in the area.

- (2) vector model uses discrete line segments or points to identify locations
- discrete objects (boundaries, streams, cities) are formed by connecting line segments
  - vector objects do not necessarily fill space, not all locations in space need to be referenced in the model

A vector model tells where everything occurs - gives a location to every object.

### **2.3 Spatial Database**

The objects in a spatial database are representations of real-world entities with associated attributes. The power of a GIS comes from its ability to look at entities in their geographical context and examine relationships between entities, thus a GIS database is much more than a collection of objects and attributes, in this unit we look at the ways a spatial database can be assembled from simple objects; e.g. how are lines linked together to form complex hydrologic or transportation networks, how can points, lines or areas be used to represent more complex entities like surfaces?.

Phenomena in the real world can be observed in three modes: spatial, temporal and thematic

- the spatial mode deals with variation from place to place
- the temporal mode deals with variation from time to time (one slice to another)
- the thematic mode deals with variation from one characteristic to another (one layer to another)

All measurable or describable properties of the world can be considered to fall into one of these modes - place, time and theme. An exhaustive description of all three modes is not possible, when observing real-world phenomena we usually hold one mode fixed, vary one in a controlled "manner, and measure" the third; e.g. using a census of population we could fix a time such as 2002, control for location using census tracts and measure a theme such as the percentage of persons owning paddy field by irrigation.

#### Attributes

Attributes capture the thematic mode by defining different characteristics of objects. A table showing the attributes of objects is called an attribute table;

- each object corresponds to a row of the table
- each characteristic or theme corresponds to a column of the table
- thus the table shows the thematic and some of the spatial modes

#### Time

The temporal mode can be captured in several ways;



- by specifying the interval of time over which an object exists
- by capturing information at certain points in time
- by specifying the rates of movement of objects

Depending on how the temporal mode is captured, it may be included in a single attribute table, or be represented by series of attribute tables on the same objects through time.

A spatial database is a collection of spatially referenced data that acts as a model of reality. A database is a model of reality in the sense that the database represents a selected set or approximation of phenomena. These selected phenomena are deemed important enough to represent in digital form. The digital representation might be for some past, present or future time period (or contain some combination of several time periods in an organized fashion)

## **2.4 Fundamental Database Elements**

Elements of reality modeled in a GIS database have two identities:

- (1) the element in reality - entity
- (2) the element as it is represented in the database - object
  - a third identity that is important in cartographic applications is the symbol that is used to depict the object/entity as a feature on a map or other graphic display

### Entity

An entity is "a phenomenon of interest in reality that is not further subdivided into phenomena of the same kind", e.g. regency could be considered an entity and subdivided into component parts but these parts would not be called regency, they would be districts, villages or the like, a forest could be subdivided into smaller forests.

### Object

An object is "a digital representation of all or part of an entity". The method of digital representation of a phenomenon varies according to scale, purpose and other factors, e.g. a town could be represented geographically as a point if the area under consideration were island in scale. The same town could be geographically represented as an area if we are dealing with a geographic database for a province or regency.

### Attributes

An attribute is a characteristic of an entity selected for representation and usually non-spatial, though some may be related to the spatial character of the phenomena under study, e.g. area, perimeter.

### Attribute value

Attribute value is the actual value of the attribute that has been measured (sampled) and stored in the database. An entity type is almost always labeled and known by attributes, e.g. a road usually has a name and is identified according to its class - e.g. main road, collector road, other road, and path. Attributes values often are conceptually organized in attribute tables which list individual entities in the rows and attributes in the column. Entries in each cell of the table represent the attribute value of a specific attribute for a specific entity.

### Database model

Database model is a conceptual description of a database defining entity type and associated attributes. Each entity type is represented by specific spatial objects. After the database is constructed, the database model is a view of the database which the system can present to the user. Other views can be presented, but this one is likely useful because it was important in the conceptual design, e.g. the system can model the data in vector form but generate a raster for purposes of display to the user. Database model need not be related directly to the way the data are actually stored in the database, e.g. census zones may be defined as being represented by polygons, but the program may actually represent the polygon as a series of line segments. Examples of database models can be grouped by application area, e.g. transportation applications require different database models than do natural resource applications

## **2.5 Layers**

Spatial objects can be grouped into layers, also called overlays, coverage or themes. One layer may represent a single entity type or a group of conceptually related entity types, e.g. a layer may have only stream segments or may have streams, lakes, coastline and swamps. Layer options depend on the system as well as the database model. Some spatial databases have been built by combining all entities into one layer. In MapInfo, each contains the table plus any map object, such as region, points, lines, and text. Additionally style overrides and zoom layering characteristics that we can add to give the layer more prominence in the map window. There are five basic type of object: point data, line data, area (region) data, text data, and collection data.

### **2.5.1 Point Data**

Point data is the simplest type of spatial object. Choice of entities which will be represented as points depends on the scale of the map/study; e.g. on a large scale map - encode building structures as point locations, on a small scale map - encode town as point locations. The coordinates of each point can be stored as two additional attributes and information on a set of points can be viewed as an extended attribute table;

- each row is a point - all information about the point is contained in the row
- each column is an attribute
- two of the columns are the coordinates

- each point is independent of every other point, represented as a separate row in the database model

## **2.5.2 Line Data**

Line objects are open object that cover a given distance. These include lines, polylines, and arcs. Examples are roads, rivers, piping.

### Network entities

- infrastructure networks
  - transportation networks – roads
  - utility networks - gas, electric, telephone, water, irrigation scheme
  - airline networks - routes
- natural networks
  - river channels

### Network characteristics

- a network is composed of:
  - nodes - junctions, ends of dangling lines
  - links - chains in the database model
- valency of a node is the number of links at the node
  - ends of dangling lines are "1-valent"
  - 4-valent nodes are most common in street networks
  - 3-valent nodes are most common in hydrology
- a tree network has only one path between any pair of nodes, no loops or circuits are possible
  - most river networks are trees

### Attributes

- examples of link attributes:
  - direction of traffic, volume of traffic, length, number of lanes, time to travel along link
  - diameter of pipe, direction of water flow
  - voltage of electrical transmission line, height of towers
  - number of tracks, number of trains, gradient, width of most narrow tunnel, load bearing capacity of weakest bridge

### Examples of node attributes:

- presence of traffic lights, presence of overpass, names of intersecting streets
- presence of shutoff valves, transformers

Note that some attributes (e.g. names of intersecting streets) link one type of entity to another (nodes to links). Some attributes are associated with parts of network links; e.g. part of a railroad link between two junctions may be inside a tunnel or part of a highway link between two junctions may need pavement maintenance. Many GIS systems require such attributes to be attached to the network by splitting existing links and creating new nodes; e.g. split a street link at the house and attach the attributes of the house to the new (2-valent) node or create a new link for the stretch of railroad which lies inside the tunnel, plus 2 new nodes. This requirement can lead to impossibly large numbers of links and 2-valent nodes, the number of links would increase by orders of magnitude if new nodes had to be defined in order to locate bridges on links.

### **2.5.3 Area Data**

Area data is represented on area class maps, choropleth maps. Boundaries may be defined by natural phenomena, e.g. lake, or by man, e.g. forest stands, census zones.

There are several types of areas that can be represented:

- (1) Environmental/natural resource zones
  - examples include
    - land cover data - forests, wetlands, urban
    - geological data - rock types
    - forestry data - forest "stands", "compartments"
    - soil data - soil types
  - boundaries are defined by the phenomenon itself, e.g. changes of soil type
  - almost all junctions are 3-valent
- (2) Socio-economic zones
  - includes census tracts, ZIP codes, etc.
  - boundaries defined independently of the phenomenon, then attribute values are enumerated
  - boundaries may be culturally defined, e.g. neighborhoods
- (3) Land records; land parcel boundaries, land use, land ownership, tax information

#### Areal coverage

- Entities are isolated areas, possibly overlapping. Any place can be within any number of entities, or none, e.g. areas burned by forest fires. Areas do not exhaust the space.
- Any place is within exactly one entity. Areas exhaust the space. Every boundary line separates exactly two areas, except for the outer boundary of the mapped area. Areas may not overlap.

### **2.5.4 Text Data: text that describe a map or another object, such as label and titles**

### **2.5.5 Collection Data: combination of point data, line data, area data, and text data**

## **2.6 Socio-Economic Data for GIS**

### **2.6.1 Sources of socio-economic data are;**

- field surveys
  - much data used in marketing is gathered by door-to-door or street interview
  - field surveys require careful sampling design
- government statistics
  - statistics collected and reported by government as part of required activities, e.g. Centre of the Statistical Bureau
  - usually based on entire population, except sampling is used for some Census questions
- government administrative records
  - records are collected by government as part of administrative functions, e.g. tax records, auto registrations, property taxes
  - these are useful sources of data provided confidentiality can be preserved
  - usually available only to government or for research purposes
- secondary data collected by another group, often for different purposes
- increasingly socio-economic data is available in digital form from private sector companies
  - retailers and direct-mail companies are major clients for these companies
  - includes data originally from census augmented from other sources and surveys
  - data can be customized for clients (special sets of variables, special geographical coverage or aggregation)
  - customizing justifies costs, which are often higher than for "raw" census data

For use in GIS, socio-economic statistics are of little use without associated "geography," the term often used to describe locational data, e.g. data on census tracts must be supported by digital information on locations of census tract boundaries. Geography also allows data to be aggregated geographically, e.g. by merging data on individual regency into Study Area regions, thus, many suppliers of socio-economic data also supply digitized geography of reporting zones. Boundaries of many standard types of reporting zones change from time to time; e.g. changes occur occasionally in county boundaries or census enumeration districts are redefined for each census. Data is often needed for one set of reporting zones, only available for another set; e.g. data available for census tracts, required for Study Area which does not follow same boundaries, such problems of cross-area estimation are facilitated by GIS technology.

### **2.6.2 Issues in using secondary socio-economic data**

- cost, usually secondary data is much less expensive than field surveys. Large expenditures by government agencies on data collection are indirect subsidies to users, who often pay much less than real cost of data

- documentation; quality of documentation, supporting information (e.g. maps) is usually high for data collected by government
- data quality; major difficulty is undercounting, census and other social surveys tend to miss certain groups, leading to bias in results
- data conversion; conversion steps may be necessary to make data useful in GIS, e.g. format, type of data may be incompatible
- aggregation; Are data available with suitable level of spatial, temporal aggregation? e.g. study to change centre of public services boundaries will require data at resolution of district or higher or location for factory in the town will require town level data, for regional shopping much lower resolution (greater aggregation of data) is adequate
- currency
  - social data changes rapidly, can be quickly out of date because of births, deaths, migration, changing economy
  - competitive edge in retailing depends on having current data
  - Government of the Republic of Indonesia has a major census only every 10 years, so its data may be 10 years old
  - often have to estimate current or future patterns based on old data

## **2.7 Natural and Resource Data**

Natural resource-based GIS may be used:

- as an inventory tool
- to better manage the marketing of the resource
- to protect the resource from improper development
- to model the complex interactions between phenomena so that forecasts can be used in decision-making

### **2.7.1 Contents of environmental databases**

There are several different kinds of information needed in an environmental database, many of these are obvious: geology, vegetation, hydrology, soils; however, to address a range of issues, the environmental database must include several characteristics that are not generally perceived as "natural", e.g. transportation network, political boundaries, management unit boundaries. Other data may be needed for modeling, e.g. variables relating to: erosion, groundwater flow, soil productivity.

### **2.7.2 Characteristics**

Natural resource data in GIS is comparatively static and update can be infrequent. Spatial resolution can be relatively low, e.g. grid cells covering large areas. Historically, natural resource GIS have been raster-based; adequate for many planning and management applications,

can provide comprehensive coverage of a jurisdiction at reasonable cost, and could often run on existing mainframes - hardware requirements were modest.

### **2.7.3 Sources of Data**

#### Thematic

Thematic map series are compiled by various agencies:

- soil maps (e.g. Soil Department, Bogor Agriculture Institute)
- land use (e.g. Bakosurtanal Topographical Map)
- vegetation (forestry agencies, many state governments)
- surficial geology (Geological Province Service)

#### Topographic

- topographic maps can supply:
  - elevations
  - roads and railroads
  - cultural features
  - streams and lakes
  - political and administrative boundaries
  - public land survey system (PLSS) - "township and range"
- this type of data from RBI, Bakosurtanal topographic map is becoming available in digital form as AutoCAD or ArcInfo files

#### Remote sensing

Remotely sensed imagery data can be interpreted to yield many layers; e.g. urban/rural, vegetation, crops, surface geology, land use. LANDSAT and TM (Thematic Mapper) are commonly used sources

### Chapter 3 Database Design

Almost all entities of geographic reality have at least a 3-dimensional spatial character, but not all dimensions may be needed database design, e.g. embankment actually has a length which might be important, but is not as important as the width, which is not as important as the thick. Representation should be based on the types of manipulations that might be undertaken. Map-scale of the source document is important in constraining the level of detail represented in a database, e.g. on a 1:100,000 map individual houses or fields are not visible.

The development of GIS Database at river basin level is based on object detail and the degree of information needed for water resources management with the result that the need of the user can be facilitated in a flexibility manner. Data classification and attribute information are important elements to establish GIS database. Database structures cover data layer and layer attributes from the layer itself. Establishing of the database structure follows the pattern shown below:

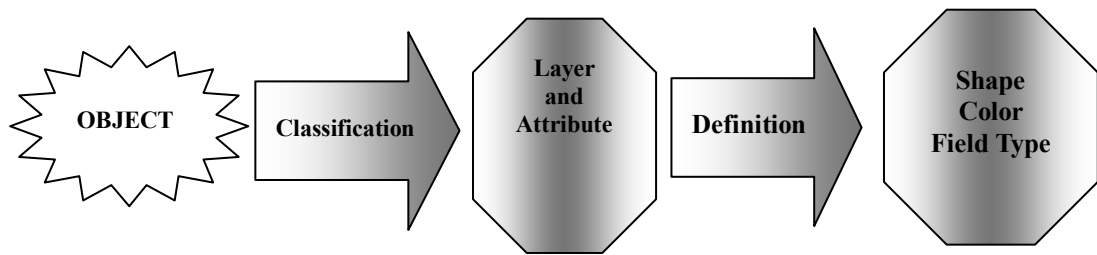


Fig. 3.1 Establishing of GIS Database Structure

The vary purpose of object classification is for object grouping based on data characteristics and data function. Definition is used to determine how the object will be represented in the GIS database.

Database design is divided into two categories; data layer and data attribute.

(1) Data Layer

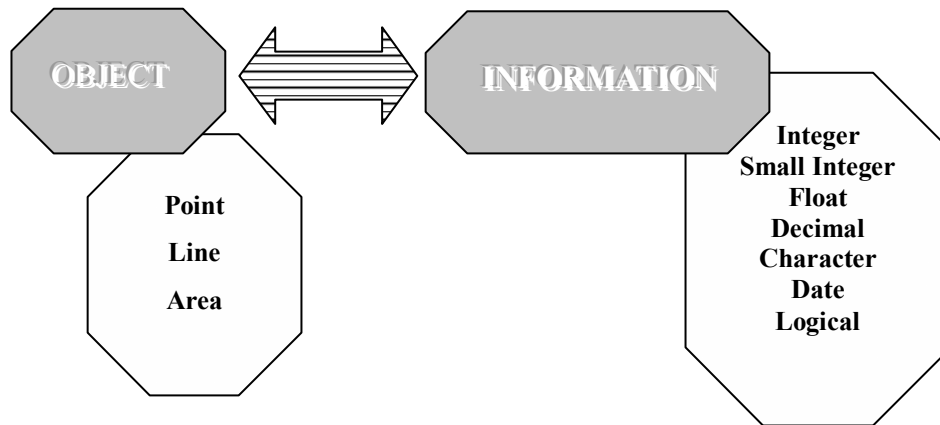
The data layer is the smallest data component and all data in this group is of the same type. File names are given to individual layers, which indicate the type of information contained in the layer data.

(2) Data Attribute



Layer data attributes are the main support elements for object definition in the database. Performance of a multi purpose database for data analysis and query can be measured from

**Fig. 3.2 Data Attribute Determination**



suitability and performance of object attributes. Basically, a data attribute must be decided by the user, who understands how to manage the data to perform the required analysis. Object information such as character data, numeric data and logical data can be decided.

The following is an example on the determination of river attributes used in GIS Database.

Data attributes include the forms of (point, line/polyline and region/area), color and data field type, for example, a hydrological station will be presented as a point that represents a position and is not presented as line or area. Different station types use a different color depending on the importance and type. Field type data will be arranged from many kinds based on characteristic and function of the field information. In creating field numbers for stations, for example, it will be better to use integer types rather than decimal types or character types, since integer numbers do not have decimals and can be counted, and are different from a character type. Data from the field such as Station Type will basically be divided into manual stations and automatically stations. In some occasions, it will be better if the data input uses coded data rather than character type. This choice has a function of avoiding mistyping and is useful when the date is processed based on a certain criteria.

(3) Data Documentation

Data already arranged in the database system needs to be documented using metadata from Map Basic Applications. Metadata for each object can be determined based on criteria and information series, as follows:

- Data Source (describing the source of the map data), map scale, projection, map date, map edition, map publisher or if possible what was the form the origin data, such as ArcInfo, Ms Access, dBase etc., or from external GIS.

- How the data was created. This information covers how the data was digitized, using digitizer or from raster data, type of raster data, using control point for registry, using projection system, how the data was entered, when the data was created.
- Degree of data detail. Explanation of need for and the degree of data detail when the data was created, either data for District, Province or national level. Was the data created for planning, designing, or for management?

#### (4) Collection and Organization of Data

Many sources of data and many forms of data must be identified, collected and arranged into many stages, as follows:

- Basic Map Digitize, either using digitizer or on screen digitize.
- Field checks to complete the data that is not yet been placed on the map, handheld GPS is important, this stage.
- Analysis of the data being put on the map.

#### (5) Back-Up Data

To ensure data integrity and security, routine back-up and virus checks on the database should be carried out. The back-up activity should be scheduled to be carried out on a regular basis. The following are some guidelines for the back-up:

- Back-up should be done at least every week (e.g. every Friday afternoon)
- Data entered should be copied into disk/diskettes during a day.
- A back-up copy of the GIS/Database should be kept in another location physically far from the original system.
- The back-up work should be assigned to a staff, which is specifically responsible for this task.
- Back-up copies should be properly labeled.
- CD writer or Zip Disks are recommended for the back-up.

#### (6) Data Securities

The basic principles for data security include:

Thoroughly testing of all new additional software being installed for viruses and implementing a regular back-up program as described above:

- Back-up critical data daily
- Beware of viruses and know the method/software for handling them
- Program/data on diskettes should always be checked for viruses before use
- Access to database should be limited to authorized persons
- Use the memory resident virus checker for all computers that contain the database.

### **3.1 Steps in database design**

(1) Conceptual

- software and hardware independent
- describes and defines included entities
- identifies how entities will be represented in the database, i.e. selection of spatial objects - points, lines, areas, raster cells
- requires decisions about how real-world dimensionality and relationships will be represented, these can be based on the processing that will be done on these objects, e.g. should a building be represented as an area or a point? and should river segments be explicitly linked in the database?

(2) Logical

- software specific but hardware independent
- sets out the logical structure of the database elements, determined by the data base management system used by the software

(3) Physical

- both hardware and software specific
- requires consideration of how files will be structured for access from the disk

### **3.2 Desirable database characteristics**

Database should be:

- contemporaneous - should contain information of the same vintage for all its measured variables
- as detailed as necessary for the intended applications (the categories of information and subcategories within them should contain all of the data needed to analyze or model the behavior of the resource using conventional methods and models)
- positionally accurate
- exactly compatible with other information that may be overlain with it
- internally accurate, portraying the nature of phenomena without error - requires clear definitions of phenomena that are included
- readily updated on a regular schedule
- accessible to whoever needs it

### **3.3 Data Sources**

#### **3.3.1 Primary data collection**

Some of the data in a spatial database may have been measured directly, e.g. by field sampling or remote sensing. The density of sampling determines the resolution of the data, e.g. samples taken every hour will capture hour-to-hour variation, but miss shorter-term variation, samples taken every 1 km will miss any variation at resolutions less than 1 km. A sample is designed to capture the variation present in a larger area, e.g. a sample of places should capture the variation present at all possible places, and a sample of times will be designed to capture variation at all possible times. There are several standard approaches to sampling:

- Random sample, every place or time is equally likely to be chosen
- Systematic samples are chosen according to a rule, e.g. every 1 km, but the rule is expected to create. No bias in the results of analysis, i.e. the results would have been similar if a truly random sample had been taken
- in a stratified sample, the researcher knows for some reason that the area contains significantly different sub-populations, and samples within each sub-population in order to achieve adequate representation of each
  - e.g. we may know that the topography is more rugged in one part of the area, and sample more densely there to ensure adequate representation
  - if a representative sample of the entire area is required, then the sub samples in each subpopulation will have to be weighted appropriately

#### **3.3.2 Secondary data sources**

Some data may have been obtained from existing maps, tables, or other databases, such sources are termed secondary. To be useful, it is important to obtain information in addition to the data themselves: information on the procedures used to collect and compile the data and information on coding schemes, accuracy of instruments. Unfortunately such information is often not available. A user of a spatial database may not know how the data were captured and processed prior to input, this often leads to misinterpretation, false expectations about accuracy.

#### **3.3.3 Errors and Accuracy**

There is a nearly universal tendency to lose sight of errors once the data are in digital form

##### Errors:

- are implanted in databases because of errors in the original sources (source errors)
- are added during data capture and storage (processing errors)
- occur when data are extracted from the computer
- arise when the various layers of data are combined in an analytical exercise

#### Original Error - errors in sources

- are extremely common in non-mapped source data, such as locations of wells, or lot descriptions
- can be caused by doing inventory work from aerial photography and misinterpreting images
- often occur because base maps are relied on too heavily
  - a recent attempt to overlay sand mining locations with 1:50,000 topographic map resulted in sand mining lying either far from river, or over settlement, and lying in the middle of paddy field
  - until they were compared in this way, it was assumed that each data set was locationally acceptable
  - the ability of GIS to overlay may expose previously unsuspected errors
  - using two different scale maps source

#### Boundaries

Boundaries of soil types are actually transition zones, but are mapped by lines less than 0.5 mm wide and reservoirs fluctuate widely in area, yet have permanently recorded shorelines.

#### Classification errors

Classification errors are common when tabular data are rendered in map form. Simple typing errors may be invisible until presented graphically; e.g. floodplain soils may appear on hilltops or pastureland may appear to be misinterpreted marsh. More complex classification errors may be due to the sampling strategies that produced the original data. Timber appraisal is commonly done using a few, randomly selected points to describe large stands. Information may exist that documents the error of the sampling technique, however, such information is seldom included in the GIS database.

#### Accuracy standards

Many agencies have established accuracy standards for geographical data; these are more often concerned with accuracy of locations of objects than with accuracy of attributes. Location accuracy standards are commonly decided from the scale of source materials; for natural resource data 1:25,000 scale accuracy is a common target, at this scale, 0.5 mm line width = 12.5 m on the ground. For Sulawesi Island, RBI, Bakosurtanal Topographical Map information is currently available in digital form at 1:50,000, this means that 0.5 mm line width = 25 m on the ground. Higher accuracy requires better source materials and accuracy standards should be determined by considering both the value of information and the cost of collection.

### **3.3.4 Base map**

To be useful, a map must include information for visual locational reference. Output of computed information alone is rarely useful need base map features as well e.g. map of

inundation for reservoir plan needs to show locations of settlements, roads, watersheds, streams and lakes, so user can locate stands on the ground, make decisions based on correct spatial context.

Base map is particularly important in raster systems. Display of a single layer is rarely useful without some form of base map for locational reference. Base map information will normally be vector, or at higher resolution than the raster, this will be difficult if the raster system does not have vector capabilities. Input of base map information can be expensive and difficult to justify digitizing of data just to support interpretation of graphic output.

### **3.3.5 Currency of data**

- to be suitable for archiving, data must be stable through time
  - some geographical data never changes - e.g. Census data and satellite images as a representative slice in time never change
  - some changes rarely - e.g. topography and hydrography
  - some changes rapidly - e.g. street networks in rapidly developing cities
- in some cases geographical data needs to be available both in archived and current forms
- advantage of digital archives is that updating, when it does occur, does not require reissuing of hardcopy products
  - updates can be made to central archive
  - updated version can be transmitted by high speed links or distributed as digital tapes

### **3.3.6 Data for digital archiving**

Therefore, data suitable for archiving must:

- be of sufficiently general use to justify cost
- remain current for sufficient period of time, or be capable of constant update
- be sufficiently self-explanatory that users do not encounter significant problems of interpretation; e.g. user must have access to definition of each object or attribute or attribute value or user should have access to a data quality report

### **3.3.7 Archive databases**

- are spatial databases developed as stores of information for general use
- provide coverage of some political jurisdiction, e.g. globe, nation, province, regency, district
- purposes often not clearly articulated
- system provides limited functionality oriented toward data retrieval

### **3.3.8 Project databases**

- are spatial databases developed to support specific projects
- coverage for study area only
- purposes usually better articulated

- system provides functionality adequate for project

### **3.3.9 Personnel requirements**

#### GIS Analyst

- analyst required to translate user needs into products
  - identify necessary data layers
  - develop appropriate data collection strategies, plans
  - design sequences of GIS functions to generate products from layers
  - design products to meet needs of users
- design of products requires personnel with ability to:
  - conceptualize the sequence of GIS processes required
  - construct algorithms for compiling the data
  - design the report format so that the information that is provided is worthwhile to the users
- these people must have:
  - understanding of subject matter to interact effectively with decision-makers who need information
  - level of technical expertise to develop GIS operation sequences to produce specified product
  - clear understanding of limitations of technology and data

#### GIS technicians

- need to know technical aspects of the operation of the software and hardware
- will use the macros to produce required products

#### Users

- generally product mode requires little technical expertise on the part of ultimate users of the data since products will usually be in traditional form - e.g. maps and tables.

## Chapter 4 GIS of Jeneberang River Basin

### 4.1 Jeneberang River Basin

Jeneberang River originates from Mt. Bawakaraeng (EL. 2,830 m) running westward and finally pours into Makassar Strait. The whole extent of the river basin and the channel length of the mainstream are about 762 km<sup>2</sup> and 85.5 km, respectively. There are fourteen second order tributaries, which join or branch off from the mainstream. The lower reaches from confluence of Jeneberang River and the principal tributary, Jenelata River are the extremely flat alluvium plain, while the upper reaches from confluence are the mountainous/hilly area formed as the foot of Mt. Bawakaraeng and its mount ranges.

Area of Jeneberang River Basin (the Study Area) is spread out between 119° 22' 20" - 119° 57' 20" East and 5° 08' 20" – 5° 26' 10" South. Based on Topographic Map (RBI) 1:50,000 on scale, produced by Bakosurtanal in year 1991 and revised in 1999, Jeneberang River Basin is laid on 6 map sheets, i.e.:

1.	Sheet Number 2010-52	Takalar
2.	Sheet Number 2010-54	Ujung pandang
3.	Sheet Number 2010-61	Sapaya
4.	Sheet Number 2010-62	Malakaji
5.	Sheet Number 2010-63	Maros
6.	Sheet Number 2010-64	Malino

Jeneberang river basin is administratively divided into Kabupaten Gowa, Kabupaten Takalar and Makassar City in South Sulawesi Province. Among others, Kabupaten Gowa occupies a substantial part of the river basin (i.e., 94% of the whole catchment area), and the whole catchment of Bili-Bili dam reservoir is within the administrative boundary of Kabupaten Gowa.

### 4.2 Objectives of GIS and Database Establishment

The Study Area, which comprises 2 Kabupaten and 1 City with varying percentages of their area within the river basin boundaries, will be managed by new Corporation in Makassar. An integrated GIS / Database system is required for management and operation of the Jeneberang River Basin. With an effective GIS/database system, required information related to conditions and situations in the Study Area can be referenced more rapidly and effectively and comprehensively. With an effective GIS/database system the study area data can be divided as follows:

- Regional data including study areas and sub areas, river catchment areas, district areas, etc.
- Line/polyline data e.g. river, road, administrative boundary, etc.



- Point/location data e.g. irrigation structure, hydrological station, river structure location, etc.

Text data e.g. river name, district name, natural features name, etc.

The data can be stored rapidly and effectively retrieved. Data mentioned above usually are in the map condition (this means that each of the objects has earth coordinates).

It is also important that the database is divided into two characteristics namely database embedded objects and the databases itself, which is separated from the objects. Usually the information is in database format (i.e. Database File (\*.dbf), MS Access (\*.mdb), etc.), and can be embedded into the map by way of a linking facility.

The objectives of GIS and Database are as follows:

- To collect all the information that relates with water resources data on the river basin into an integrated system including all data required for water resources system management.
- To store all data uniformly in database format.
- To digitalize all data, both graphic and tabular and store it into systematically stored folders.
- To display and analyze data for manipulation, both graphic and tabular, to produce a new thematic map for sector analysis as required.
- To have the ability and capability to present the results in many formats such as maps, diagrams, tables and reports.

### **4.3 GIS and Database Description**

#### **4.3.1 Introduction**

Water resources information in the river basin is in the form of spatial objects, which are related one with another and are geographically located. The data is generally topographic or hydrologic. This interconnection between the geographic object and the detailed embedded information (database) for the object needs to be one unit structurally, which can be displayed by the GIS system. The relation between the spatial object and the detailed embedded information of the object is the main basis of geographical information system (GIS).

#### **4.3.2 General Lay Out of GIS**

GIS can be described as an integrated system using computer tools to do the continuous process covering: collecting and capturing data, data storage, data retrieval, data analysis and presentation of data using the object's position on the earth surface in integrated manner to support the decision maker. The system data can be managed, by manipulation for comprehensive analysis with almost immediate presentation of the results in graphical form such as maps, tables or report forms.

### 4.3.3 Study Area Database

Database GIS must entirely and effectively cover all data necessary, including the related objects regarding inventories, which indicates the present investment in the watershed (i.e. what structures are built along the river or are part of an existing irrigation scheme). The GIS can also be used to store information regarding operation and maintenance that has been carried out on the objects of the inventory stored in the system. In this way it can be known, which of the structures has required an unusual amount of maintenance. This enables effective asset management within the Basin.

### 4.3.4 Data Category

Data that relates with water resources development and management (WRDM) can be categorized based on the source and type of data. Categories of type of data are as follows:

- Data of natural features
- Administration Boundary Data
- Land Use and planning data
- Infrastructure inventory data
- Catchment area characteristics related to water resources analysis

### 4.3.5 Common Data

Data may be used by a number of sectors and therefore can be stored and retrieved as required for use on the project. A map layer may act as the base for many other maps related to different sectors. An example of the base map might be the basic topographic map with district boundaries.

Common data can be divided into the following categories:

(1) Natural Feature Data:

The required data includes all the objects that are on the earth's surface complemented by all the objects that support the data. The objects covered are as follows: rivers, coastlines, lakes, contour lines, roads, study area boundaries, swampy land, etc. The objects are mainly obtained from topographic maps (*Peta Rupa Bumi Indonesia, RBI*) scale 1:50,000 published by Bakosurtanal (National Mapping and Surveying Agency in Cibinong, Bogor)

Type of Information

Background figures, which may be taken from the maps, are as follows:

Coastlines	Roads	Rivers
Lakes	Contour lines	Island or islands
Grid	Place Name	Town

(2) Administrative Boundaries

This category includes data related to administrative boundaries. This data shows the spatial relationship between the river basin boundaries and the district boundaries. Administrative data that will be required for GIS Database relates to the administrative boundaries i.e. province boundaries, regency boundaries, district boundaries and village boundaries. In addition the own/village name data will be needed to distinguish the towns within the district boundaries, i.e. province town, regency town and district town.

Type of Information

Objects under these criteria are the following:

Regency Area	District Area
Regency Boundaries	District Boundaries

(3) Land Use and Master Plan Data

This data is useful in developing an understanding of river basin conditions and characteristics that are related to land use development trends, in relation with water resources use and management. This is especially useful in cases where there is a change in the volume of water resources available due to construction of storage facilities such as large reservoirs or an inner watershed diversion. The sources of this data will be agencies such as the National Agency for Land Affairs (BPN), Regional Planning Agency (Bappeda), Central Bureau for Statistics (BPS). This data includes land-use data related to water resources use and can be used to predict changes in water allocation necessary due to changes in land-use.

Types of Information

Objects covered under BPN responsibility are as follows:

Land Use	Land Consolidation	Nature reserves
Land Use Plan	Land Capability	
Land Suitability	Spatial Planning	

(4) Water Resources Structure and Infrastructure Data

This is data on water resources infrastructure, including: weirs, dams, canals, dikes, irrigation areas, water structures, etc. This data can be obtained through field identification and the geographic position can be fixed using a GPS and the latest object information can be obtained concerning the object during a field visit.

Types of Information

Objects covered under above criteria are as follows:

Weirs and intakes	Measuring Devices	Groundwater wells
Small Dams and Dams	Drains or Sewage	Outflows
Canals and Diversions	Off takes	Levees or dykes
Irrigation Schemes	Sluice gates	PDAM, Industry, etc
Pumping Stations	Check Dam & Sabo	

(5) Water Resources Characteristic and Management Data

This data includes objects and information, and is very important to river basin management. The data may include hydrological stations and their characteristics, such as geographical coordinates.

Data objects in this category are hydro-meteorological station, isohyets, catchment area, water management and other object data that relate with that category.

Type of Information

Objects covered under above criteria are as follows:

River catchments	Isohyets	Radio Communication
Weir catchments	Sub SWS boundaries	Telemetry
Climatic Stations	SWS Boundaries	Gauge Stations
Rainfall Stations		

**4.3.6 Data Sources**

Data Sources for GIS-Database include:

- Topographic Maps or Thematic maps, either in raster or vector format
- Spatial Object Tables and Descriptions
- Operation and Maintenance Sheets
- Studies and Analysis

That data will be arranged to accommodate the relationship between data objects and data characteristics. Data categories based on data source are: maps, tables and object descriptions, O&M Reports, and results of project analysis or previous studies.

**4.4 Study Area Data**

**4.4.1 Type of Data**

Type of Data for Study activities consist of:

- Digital data of Topographic Map obtained from Bakosurtanal based on Utilizing Agreement Letter of Digital Data No. HK.05.02/01.02-JASINFO/PPDD/VI.2004. Those

digital data are digital form of Indonesia Topographic Map (RBI) scale 1:50,000 sheets. Format of data are ArcInfo and MapInfo files.

- Thematic Digital Data from Hasanuddin University in ArcView and ArcInfo format.
- Aerial Photographs from CTI Engineering in .tiff format
- LandSat Imagery from Water Management Plan Study for Maros-Jenepono River Basin in tiff format.
- Hard Copy/Map Sheets from related institutions
- Maps or Figures from related report
- Analyze of Topographic Map

#### 4.4.2 Hardware and Software Specification

Hardware		
1	Motherboard	: Asus P-4 P800, i865, FSB800
2	Memory	: Visipro 1GB PC3200
3	Processor	: Intel P-4 2.0 GHz (512) FSB533
4	Harddisk	: SCSI Harddisk Maxtor 6Y080L0
5	VGA Card	: NVIDIA GeForce FX 5200
6	CD-RW Drive	: Asus CRW 5232A, 52x32x52
7	Heat sink Fan	: Coolermaster IHC-L71
8	Monitor	: LG Flatron ez T710SH 17"
9	Speaker	: Simbadda CST z100
10	Casing	: Tower Simbadda, Power Supply 350 W
11	Floppy Drive	: Sony 3.44" Floppy Drive
12	Mouse	: Samsung SM 1000 Optical PS/2
13	Keyboard	: Logitech, 102 key standard Keyboard
14	A4 Scanner	: Scanner A4 Canon Scan N1220U
15	A4 Color Printer	: Color Printer A4 Canon Pixus 50i
16	A3 Printer	: HP LaserJet 5100 PS A3
17	Digital Camera	

Software		
1	Operating System	: Windows XP Pro. 2002
2	Office Tools	: Microsoft Office XP
3	Mapping Software	: MapInfo V.7.5
4	Mapping Software	: AutoCAD 2002
5	Mapping Software	: ArcView 3.2

#### 4.4.3 Data Obtain

Data for all Study activities are obtained as:

- Buy from related institution – Bakosurtanal
- Copy from related institutions with permission
- Borrow from related institutions and copy with permission

#### 4.4.4 Data Processing

(1) Hardcopy/Map Sheet data to Digital Data

- Scanning Map Sheets and stored into picture files
- Open in MapInfo Mapping Software as Raster and put coordinates with certain projection system. In Study, we choose Latitude-Longitude Projection System (If we use Universal Mercator Transverse WGS 84 Projection System for Study Area, we should use UTM Zone 50 Southern Hemisphere as Category Members). As we register the raster map into coordinate map, we can overlay with another vector map.
- “On screen Digitizing” sometimes needed to drawing new features that will be added onto geographic maps/vector maps.

(2) Digital Map Data to Study Digital Map

- Bakosurtanal Digital Data are ArcInfo format so should be changed into MapInfo files format. We use MapInfo V 7.5 to process. Actually, Bakosurtanal had changed ArcInfo files into MapInfo files; unfortunately they choose the wrong projection, i.e. Non-earth Projection, and as a consequence we should process with another geographical map. In this case we should convert the ArcInfo (\*.e00 files) into MapInfo files by our self.
- Other Digital Data various in files format and format uniform (MapInfo files format) are needed to facilitate maps overlay.

#### 4.4.5 Data Presenting

Many types and files format of digital data that have been converted into MapInfo file format, then can be presented into MapInfo Mapping Software. Those data can be processed to produce map layers in many quantities. Processing map or editing map consist of: object combining, object splitting, erase, object adding, etc.

In this Study, maps that have been produced as layers are:

1. **Common Map** – map layers that used by all sectors.

No	File Name	Remark	Data Source
1.	Basin Area	Area of Jeneberang River Basin as Study Area	Bakosurtanal, RBI 1999 Revised
2.	Bili-Bili Inundated	Area of Bili-Bili Reservoir	Bakosurtanal, RBI 1999 Revised
3.	Coastline	Coastline of Makassar Strait	Bakosurtanal, RBI 1999 Revised
4.	Contour	Contour-line CI = 25 m	Bakosurtanal, RBI 1999 Revised
5.	District Area	Area of Districts (Kec) covered by Study Area	Bakosurtanal, RBI 1999 Revised
6.	District Boundary	Boundary of District	Bakosurtanal, RBI 1999 Revised
7.	Elevation	Elevation Point (msal)	Bakosurtanal, RBI 1999 Revised
8.	Geomorphology	5 class morphological area based on slope class	Analyze of Bakosurtanal, RBI 1999 Revised
9.	Grid 5 mnt	Grid lines per 5 minutes	Analyze

No	File Name	Remark	Data Source
10.	Landuse	Land Use type	Bakosurtanal, RBI 1999 Revised, Hasanuddin University
11.	Mountain	Location and height of mountains	Bakosurtanal, RBI 1999 Revised
12.	Regency Area	Area of Regency (Kab/Kota) covered by Study Area	Bakosurtanal, RBI 1999 Revised
13.	Regency Boundary	Boundary of Regency	Bakosurtanal, RBI 1999 Revised
14.	River	River order and length	Bakosurtanal, RBI 1999 Revised, Analyze
15.	Road	Road class and type	Bakosurtanal, RBI 1999 Revised, Analyze
16.	Settlement	Distribution of settlement	Bakosurtanal, RBI 1999 Revised
17.	Slope	5 class of slope	Analyze of Bakosurtanal, RBI 1999 Revised
18.	Sulawesi Insert	Sulawesi Island	On Screen Digitize
19.	Study	Land Satellite Raster of Study Area	Maros-Jeneponto River Basin Management MP, 2001
20.	Text	Place names	Bakosurtanal, RBI 1999 Revised
21.	Town	Town places and names	Bakosurtanal, RBI 1999 Revised
22.	Village	Village covered by Study Area	Maros-Jeneponto River Basin Management MP, 2001

2. **Sectoral Maps** – Maps that used for each sectors as follows:

**Sector of Hydrology**

No	File Name	Remark	Data Source
1.	Isohyet	Isohyet based on 7 telemetric rainfall stations	Rainfall Data, Analyze
2.	SubBasins	29 catchments area based on river confluence	Bakosurtanal, RBI 1999 Revised, Analyze
3.	Telemetric	Distribution of 3 tele rainfall, 3 tele water level, and 4 tele rain/water level stations	Bili Bili Multipurpose Dam Project, Dec. 1999 : Dam Operation Rule
4.	Tele_Rainfall	Distribution of 7 telemetric rainfall stations and daily data	Bili Bili Multipurpose Dam Project, Dec. 1999 : Dam Operation Rule
5.	Tele_Waterlevel	Distribution of 7 telemetric water level stations	Bili Bili Multipurpose Dam Project, Dec. 1999 : Dam Operation Rule
6.	Thiess Polygon	Polygon area of influenced by rainfall stations	Bili Bili Multipurpose Dam Project, Dec. 1999 : Dam Operation Rule, Analyze

**Sector of River Management Facilities**

No	File Name	Remark	Data Source
1.	Inund 1976	Inundation area at 1976 flood	
2.	Inund Potential	Potentially area for major inundation	Analyze
3.	LU100m	Landuse 100 m of Jeneberang riverside	Aerial Photograph, 1999, CTI Engineering
4.	River Structures	Distribution of river structures from river mouth to upstream	Aerial Photograph, 1999, CTI Engineering, Field Check August 2004
5.	Sandmining	Distribution of sand mining along Jeneberang River	Field Check June 2004
6.	Village Irrig	Distribution of small irrigation in the Study Area	Field Check June- September 2004

**Sector of Water Supply**

No	File Name	Remark	Data Source
1.	IPA Area	Area covered by WTP Service	MasterPlan on Wastewater, Ujung Pandang, JICA, 1995
2.	Piping	Alignment of Existing Main Distribution Pipeline in Makassar City	MasterPlan on Wastewater, Ujung Pandang, JICA, 1995
3.	RWTM	Somba Opu Raw Water Transmission Main	MasterPlan on Wastewater, Ujung Pandang, JICA, 1995
4.	WTP covered	Area covered by existing Water Treatment Plant in Makassar City	MasterPlan on Wastewater, Ujung Pandang, JICA, 1995

**Sector of Water Quality**

No	File Name	Remark	Data Source
1.	Industry	Distribution of industrial that use amount of water	Proyek Induk Inventory Survey Team, June 2004
2.	Urban Canal	Urban drainage canal in Makassar City	Master Plan on Wastewater, Ujung Pandang, JICA, 1995
3.	WQ Sampling	Location of Water Sampling station along Jeneberang River	Study of Integrated Management on Jeneberang Watershed Phase II, PSL Unhas, 2001
4.	WQ Sampling Prokasih	Location of Water Quality Sampling along Jeneberang River by Bapedalda	Annual Report, Executing of Prokasih (Clean River Program), Bapedalda South Sulawesi, Oct. 2001 & Dec. 2002

**Sector of Water Resources Management**

No	File Name	Remark	Data Source
1.	Harmonization	Harmonization of Forest in the Study Area	Hasanuddin University
2.	River Pollution	Potential Water Pollution Sources in the Jeneberang River Basin	Analyze, Field Check
3.	River Structures	All the river structures in Jeneberang River Basin	Field check
4.	Water Use	Present Water Use in the Jeneberang River Basin	Analyze, Field Check
5.	Land Use Plan	Planning of Land Use	Walanae-Jeneberang River Basin Management Agency, 2003

**Sector of Non-Water Management**

No	File Name	Remark	Data Source
1.	Twin Island	Propose of tourism facility in twin island area	Bili Bili Multipurpose Dam Project, 2001
2.	Acquired Area	Potential Area of the Corporation for Long-Term Tourism Development	Bili Bili Multipurpose Dam Project, 2001

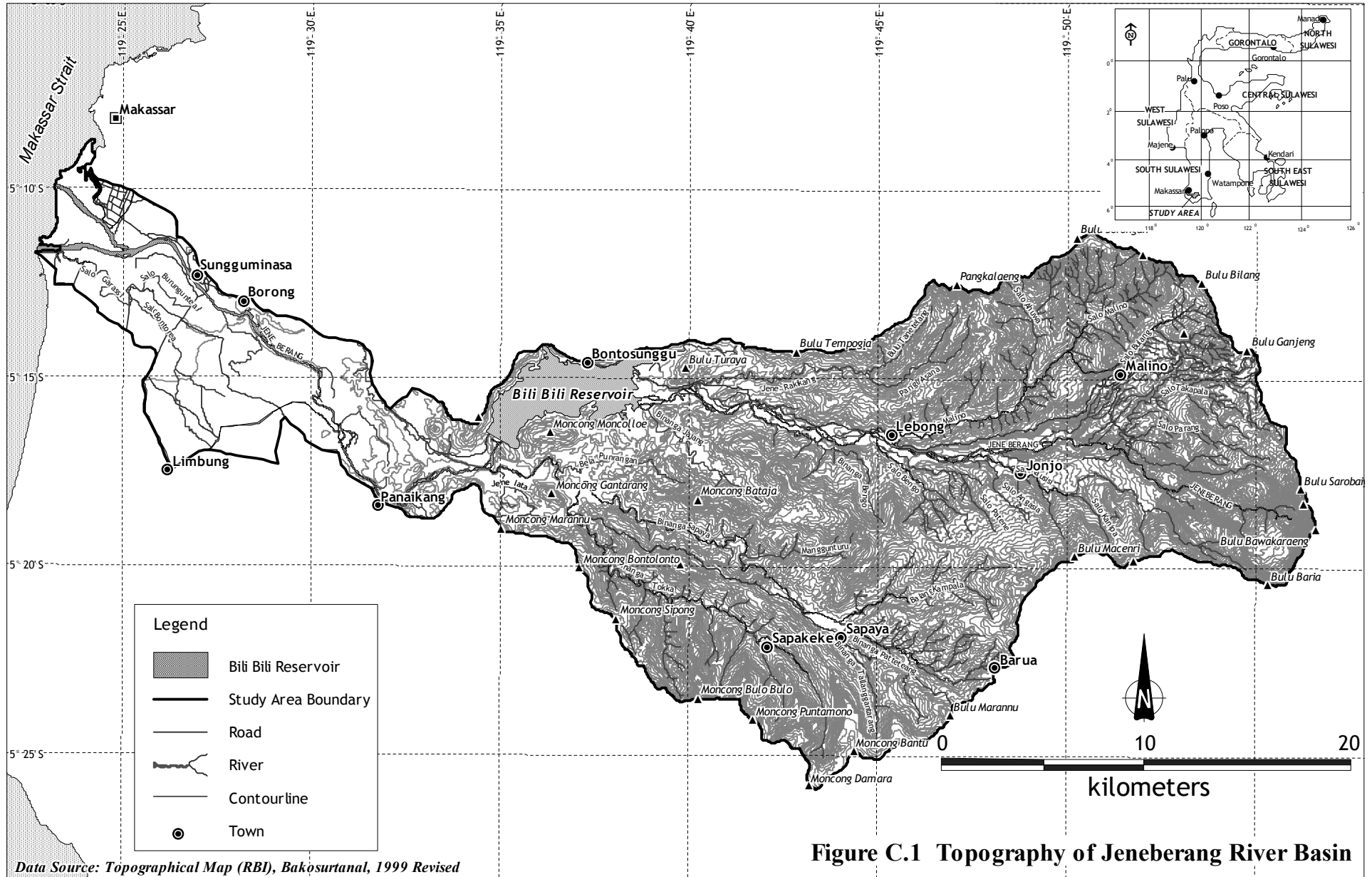


**Sector of Evaluation and Participatory Planning**

No	File Name	Remark	Data Source
1.	Administrative	Administrative Boundary of Makassar, Maros, Sungguminasa, And Takalar (Mamminasata) Metropolitan Plan	Spatial Planning of Mamminasata year 2003-2012
2.	Clean Water	Mamminasata Clean Water Service Plan	
3.	Electricity	Mamminasata Electrical Service System Plan	
4.	Garbage	Mamminasata Garbage and Sewage Service System Plan	
5.	Land Use Plan	Mamminasata Spatial Using Pattern Plan	
6.	Main Market	Mamminasata Main Market Distribution	
7.	Railway	Mamminasata Railway System Plan	
8.	Spatial Plan	Mamminasata Spatial Plan Structures	
9.	Tourism	Mamminasata Tourism Development Plan	
10.	Inland Trans	Mamminasata Inland-Air Transportation System Plan	
11.	Water Trans	Mamminasata Sea-River Transportation System Plan	
12.	WaterR Drain	Mamminasata Water Resources Management and Drainage Plan	

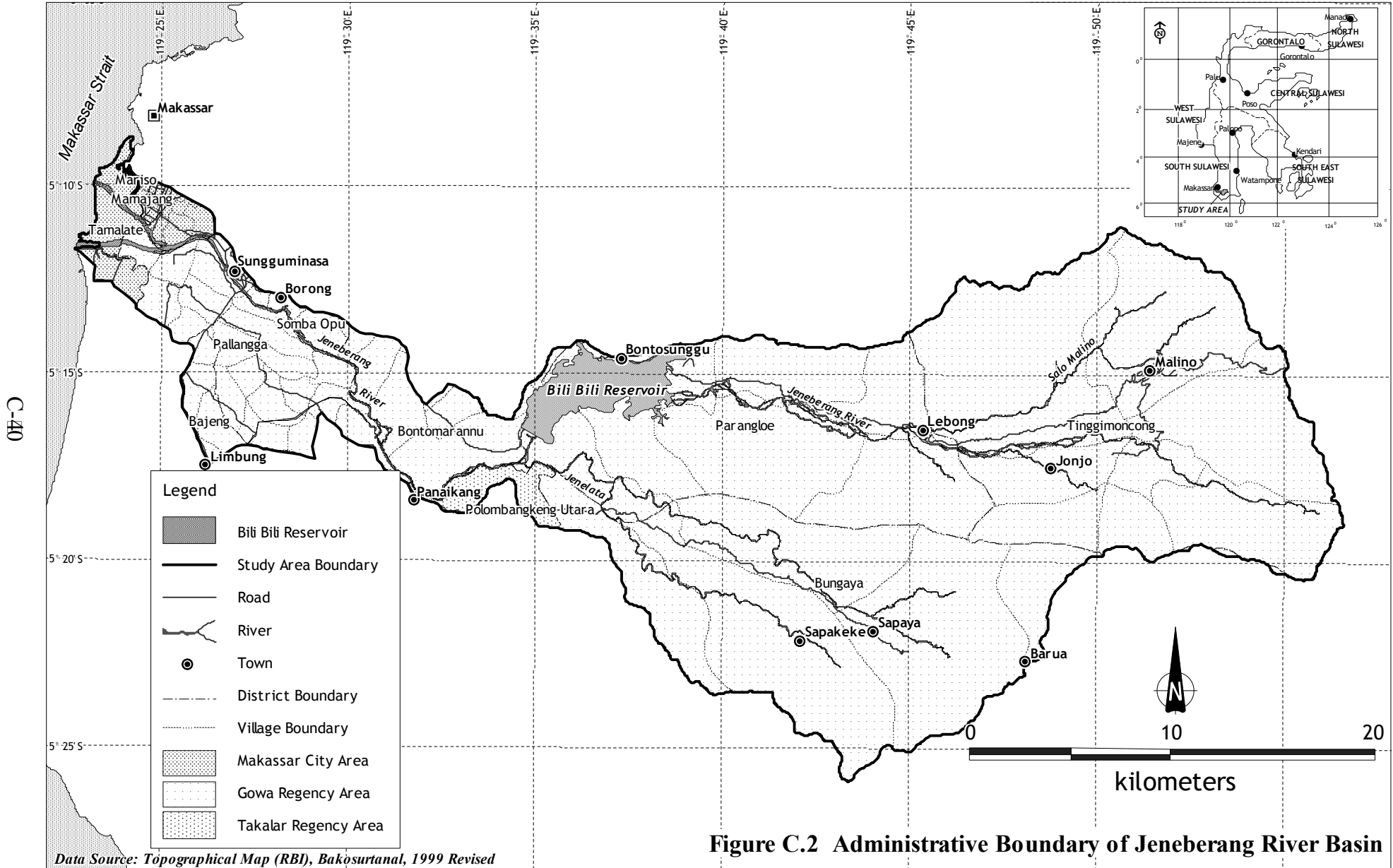
In this Study, maps that produce workspaces (overlay from layers to produce a new map) are:

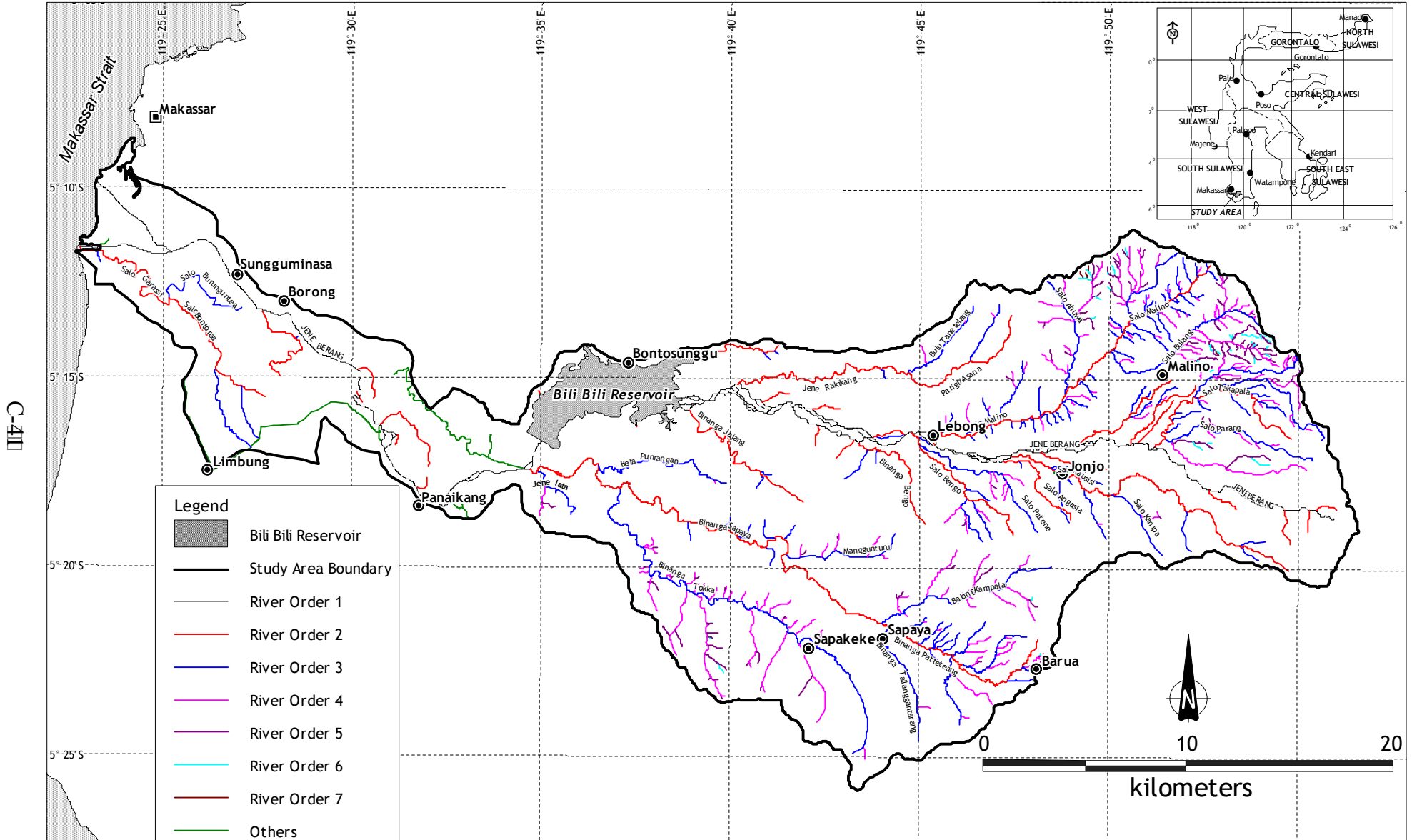
No	Workspace Name	Remark	Layers Compiler
C1	Topography	Topographical condition of the Study Area	-Study Area Boundary -Bili Bili Inundated -Coastline -River -Road -Contour line -Town -Mountain (Acts as Base Layers except Contour line and Mountain)
C2	Administrative	Administrative Boundary in the Study Area	-Base Layers -Boundary of Regencies -Boundary of Districts -Boundary of Villages
C3	River Order	Ordering all rivers based on Ministry of Settlement and Regional Infrastructure regulation	-Study Area Boundary -Bili Bili Inundated -Coastline -River Order -Town
C4	Road Class	Classification of roads based on it function	-Study Area Boundary -Bili Bili Inundated -Coastline -Road Class -Town



Data Source: Topographical Map (RBI), Bakosurtanal, 1999 Revised

Figure C.1 Topography of Jeneberang River Basin





Data Source: Topographical Map (RBI), Bakosurtanal, 1999 Revised - Analyzed

Figure C.3 River Order of Jeneberang River Basin

