

COMPOSITION OF FINAL REPORT

Volume 1	SUMMARY
Volume 2	MAIN REPORT
Volume 3	SUPPORTING REPORT
Sector A	General Physical Conditions
Sector B	Socioeconomic Conditions
Sector C	Land Use and Watershed Management
Sector D	Natural Environment
Sector E	Water Quality
Sector F	Social Environment
Sector G	Hydrological Analysis
Sector H	River Conditions, Flooding and Inundation
Sector I	Water Use
Sector J	Inland Waterway Transport
Sector K	Organization, Institution and Legal Systems
Sector L	Database
Volume 4	DATA BOOK

**THE STUDY ON COMPREHENSIVE WATER MANAGEMENT
OF MUSI RIVER BASIN
IN THE REPUBLIC OF INDONESIA**

FINAL REPORT

VOLUME 1

SUMMARY

TABLE OF CONTENTS

LOCATION MAP

EXECUTIVE SUMMARY	S-1
COMPOSITION OF FINAL REPORT.....	i
TABLE OF CONTENTS	iii
LIST OF TABLES	viii
LIST OF FIGURES	x
ABBREVIATIONS	xii
MEASUREMENT UNITS	xviii

CHAPTER 1 INTRODUCTION..... 1

1.1 Background of the Study.....	1
1.2 Objectives of the Study	2
1.3 Study Area.....	2
1.4 Study Flow	2
1.5 Implementation Organization of the Study	2

**CHAPTER 2 POLICY BACKGROUND FOR BASIN WATER
MANAGEMENT 3**

2.1 National and Regional Development Plans.....	3
2.2 Basic Laws	4
2.3 Water Resources Sector Adjustment Program (WATSAP) and Related Programs	5
2.3.1 WATSAP.....	5
2.3.2 Related Programs	7
2.4 Leading Actors in Water Sector for Musi River Basin	8

**CHAPTER 3 PRESENT CONDITION OF THE BASIN AND BASIC
ANALYSIS 9**

3.1 General Natural Conditions.....	9
-------------------------------------	---

3.1.1	Topography.....	9
3.1.2	Geology	9
3.1.3	Meteorology.....	9
3.1.4	Hydrology	10
3.1.5	Groundwater	10
3.1.6	Soils	10
3.2	Socioeconomic Conditions.....	10
3.2.1	Administrative System	11
3.2.2	Population and Labor Force	11
3.2.3	National and Regional Accounts	12
3.2.4	Industries	13
3.2.5	Projection of Socioeconomic Framework to the Target Year	13
3.3	Land Use and Watershed Management.....	14
3.3.1	Land Classification	14
3.3.2	Historical Changes in Land Use	15
3.3.3	The Processes of Forest Disappearance.....	15
3.3.4	Present Watershed Management Conditions.....	16
3.3.5	Future Spatial Plan.....	16
3.4	Natural Environment	17
3.4.1	Natural Ecosystems and Human Impacts	17
3.4.2	Urban and Industrial Environment	17
3.4.3	Laws and Institutions for Environmental Management	18
3.4.4	Existing and Potential Environmental Issues	19
3.5	Water Quality	19
3.5.1	Relevant Information of Water Quality	19
3.5.2	Pollution Sources	20
3.5.3	Present Water Quality Condition.....	20
3.5.4	Specific Issues to be Solved	21
3.6	Social Environment	21
3.6.1	Social Environment Overview.....	21
3.6.2	Results of Questionnaire Survey	21
3.6.3	Issues on Spatial Planning	22
3.6.4	Conservation of Forest Area.....	22
3.6.5	Water Allocation between Irrigation and Fishpond	23
3.6.6	Development and Conservation in Swamp Area.....	23
3.6.7	Komerling Irrigation Project and Its Social Impacts	23
3.6.8	Survey on Water Level Increase in Ranau Lake and the Regulation Dam.....	23
3.7	Hydrological Analysis	24
3.7.1	Hydrological Observation Condition.....	24

3.7.2	Rainfall Analysis	24
3.7.3	Runoff Analysis on Flow Regime Estimation.....	24
3.7.4	Flood Routing Simulation for Musi River and Tributaries	25
3.7.5	Runoff and Inundation Analysis for Palembang Drainage Planning.....	25
3.7.6	Sedimentation.....	25
3.8	River Conditions, Flooding and Inundation.....	26
3.8.1	Present River Morphological Condition	26
3.8.2	Flooding and Bank Erosion.....	27
3.8.3	Inundation of Local Rainfall	28
3.8.4	Erosion, Sedimentation and Drought	28
3.9	Water Use.....	28
3.9.1	Estimation of Present Consumptive Water Use	28
3.9.2	Water Balance Model.....	31
3.9.3	Present Water Balance.....	31
3.9.4	Projection of Consumptive Water Uses to the Target Year	32
3.9.5	Potential Land Resources	32
3.9.6	Existing Plans and Strategies	33
3.10	Inland Waterway Transportation.....	35
3.10.1	River Navigation Condition in South Sumatra Province	35
3.10.2	Present Inland Transport System.....	36
3.10.3	Present Inland Transport Condition	37
3.10.4	Future Projection of Inland Transport.....	37
3.10.5	Issues to be Solved	37
3.11	Organization, Institution and Legal Systems	37
3.11.1	Existing Institutions and Organizational Setup for the Basin Water Management	37
3.11.2	Laws and Regulations on Water Management.....	38
3.11.3	WATSAP.....	40
3.11.4	Financial Status of Organizations Related to Water Management .	40
3.12	Database System Established in the Study.....	42
3.12.1	Existing Database	42
3.12.2	Establishment of Database System	42
CHAPTER 4	ISSUES ON WATER MANAGEMENT	43
4.1	Public Consultation Meetings	43
4.1.1	Pre-PCMs	43
4.1.2	Results of Public Consultation Meeting (1)	45
4.1.3	Results of Public Consultation Meeting (2)	45
4.2	Issues on Water Management	46

CHAPTER 5	RELATED PROJECTS AND PROGRAMS.....	47
5.1	Related Projects and Programs	47
5.2	Overall Evaluation.....	47
CHAPTER 6	SKELETON ON THE COMPREHENSIVE WATER MANAGEMENT MASTER PLAN.....	49
6.1	Policy for the Master Plan Formulation	49
6.2	Prerequisite for the Master Plan Formulation	49
6.2.1	National Background and Regional Development Target.....	49
6.2.2	Target Year and Socioeconomic Framework to the Target Year....	50
6.3	Super Goal for Comprehensive Water Management of the Musi River Basin	51
6.4	Formulation of Master Plan Component –Focusing on what should be started now-	51
CHAPTER 7	COMPREHENSIVE WATER MANAGEMENT MASTER PLAN.....	53
7.1	Component 1: Water Use Management	53
7.1.1	Identification of Programs and Objective.....	53
7.1.2	Evaluation of Major On-going and In-coming Irrigation Development Projects	53
7.1.3	Potential Irrigation and Swamp Area	54
7.1.4	Potential Irrigation and Swamp Development and Rice Self-Reliance	55
7.1.5	Sustainable Water Supply to Wide Area	56
7.1.6	Sustainable Irrigation and Swamp Development	57
7.1.7	Rainwater Utilization in Tidal Swamp Area	59
7.1.8	Aquaculture Water Management.....	60
7.1.9	Enhancing Water Utilization for Tourism	61
7.1.10	Modeling of Water Use Management	61
7.1.11	Selection of Priority Programs	63
7.2	Component 2: Floodplain Management	64
7.2.1	Identification of Programs and Objectives	64
7.2.2	Floodplain Management	64
7.2.3	Flood Forecasting and Warning	66
7.2.4	Sustainable River Channel Management.....	67
7.2.5	Selection of Priority Programs	67
7.3	Component 3: Watershed Rehabilitation and Conservation	67
7.3.1	Identification of Programs and Objectives	67
7.3.2	Soil Erosion Prevention -Reforestation on Land With Major Constraints-.....	68

7.3.3	Soil Erosion Prevention -Law Enforcement against Destruction of Forest-	70
7.3.4	Soil Erosion Prevention -Inner- and Inter-Basin Coordination-.....	72
7.3.5	Rehabilitation and Conservation of Natural Environment -Expansion of Forest Area-	73
7.3.6	Rehabilitation and Conservation of Natural Environment -Management of River Environment-	75
7.3.7	Rehabilitation and Conservation of Natural Environment -Conservation of Swamp and Mangrove Forests-	76
7.3.8	Selection of Priority Programs	77
7.4	Component 4: Urban Water Environment Improvement.....	78
7.4.1	Identification of Programs and Objectives.....	78
7.4.2	Community Drainage Management	79
7.4.3	Riverine Areas Conservation.....	80
7.4.4	Trunk Drainage Channels Rehabilitation.....	81
7.4.5	Drainage System Improvement Program	81
7.4.6	Selection of Priority Programs	83
7.5	Component 5: Monitoring Network Establishment	83
7.5.1	Identification of Programs and Objectives.....	83
7.5.2	Hydrological Monitoring.....	84
7.5.3	Water Quality Monitoring	87
7.5.4	Water Use Monitoring.....	90
7.5.5	Establishment of Database	91
7.5.6	Prioritization of the Programs	92
7.6	Component 6: Institutional Strengthening	92
7.6.1	Objective of the Programs.....	92
7.6.2	New Governmental Regulation on Water Resources Management (Draft).....	92
7.6.3	Institutional Development Program	93
7.6.4	Organizational Enhancement	94
7.6.5	Human Resources Development Programs.....	97
7.6.6	Action Plan for the Proposed Programs	98
7.6.7	Priority Programs	99
7.6.8	Preliminary Study on Institutional Arrangements for the River Basin Water Management	100

**CHAPTER 8 IMPLEMENTATION PLAN, COST ESTIMATES AND
PROJECT EVALUATION FOR PRIORITY PROGRAMS**
..... **101**

8.1	Implementation Plan	101
8.1.1	Implementation Schedule	101

8.1.2	Implementation Organization and Tasks	102
8.1.3	Necessary Preconditions	104
8.2	Cost Estimates	104
8.3	Evaluation of the Program.....	105
8.4	Action Plan for the Start of Management Implementation	106
8.4.1	Action Plan for Each Priority Program.....	106
8.4.2	Key Actions for the Start of Management Implementation	107
8.5	Program Summary for Priority Projects	107
CHAPTER 9	TECHNOLOGY TRANSFER THROUGH THE STUDY	149
9.1	Technology Transfer Plan	149
9.2	Overall Evaluation of Technology Transfer.....	150
CHAPTER 10	CONCLUSION AND RECOMMENDATION	151
10.1	Conclusion.....	151
10.2	Recommendation.....	152

LIST OF TABLES

Table 3.2.1	Restructuring of Autonomy in South Sumatra Province	10
Table 3.2.2	Area by Kab.	11
Table 3.2.3	Population Density, and Average Family Size of South Sumatra.....	11
Table 3.2.4	Population by Sub-basin of the Musi River Basin.....	11
Table 3.2.5	Per Capita GRDP without Oil/Gas by Regency	12
Table 3.2.6	Population Projection and Annual Growth Rates (1,000 people)	14
Table 3.2.7	Results of Future GRDP Estimation (without oil/gas, 2000 constant price).....	14
Table 3.3.1	Reduction in Forest Area from 1980 to 2000	15
Table 3.4.1	Protected Areas in South Sumatra Province	18
Table 3.4.2	Designated Forest Area in South Sumatra Province.....	19
Table 3.5.1	Total BOD Pollution Load Runoff.....	20
Table 3.7.1	Probable 12-hour Rainfall (Kenten Station at Palembang).....	24
Table 3.7.2	Natural Flow Regime Resulting from Simulation	25
Table 3.7.3	Probable Discharge Resulting from Simulation	25
Table 3.8.1	Drainage Areas at Major Points of the Musi River.....	26
Table 3.9.1	Present Domestic Water Use in the Province, 2000	29
Table 3.9.2	Classification of Irrigation Systems in Indonesia	29

Table 3.9.3	Harvested Irrigation Area in South Sumatra Province	29
Table 3.9.4	Irrigation Water Requirement by Irrigation Type	30
Table 3.9.5	Harvested Area in Swamp in South Sumatra Province	30
Table 3.9.6	Water Requirement in Swamp Paddy	30
Table 3.9.7	Present Consumptive Water Uses of the Basin	31
Table 3.9.8	Present Water Balance	31
Table 3.9.9	Consumptive Water Demand in the Basin.....	32
Table 3.9.10	Classification of Potential Irrigation Area.....	32
Table 3.9.11	Classification of Potential Swamp Area	33
Table 3.9.12	Developed Swamp Area of South Sumatra Province	34
Table 3.10.1	Existing River Navigation Condition in South Sumatra Province	35
Table 3.10.2	Record of Pre-dredge Sounding: 1997-2002	36
Table 3.11.1	Budget of Water Resources Office of South Sumatra Province in 2002	41
Table 3.11.2	Development Budget and Budget for Water Management by Regency in 2002 (APBD only, Unit: Rp. billion)	41
Table 4.1.1	Outlines of Pre-PCMs.....	43
Table 4.1.2	Outline of PCM (1).....	45
Table 4.1.3	Outline of PCM (2).....	45
Table 5.1.1	Related Projects and Programs	48
Table 6.2.1	Population Projection and Annual Growth Rates (1,000 people)	50
Table 6.2.2	Results of Future GRDP Estimation (without oil/gas, 2000 constant price)	51
Table 7.1.1	Potential Irrigation and Swamp Area in the Basin	54
Table 7.1.2	Potential Irrigation and Swamp Development in the Basin.....	55
Table 7.1.3	Target Development in South Sumatra by Study for Formulation of Irrigation Development Program, 1993.....	55
Table 7.1.4	Potential Development Area in the Basin.....	58
Table 7.1.5	Present Aquaculture Area of Fish Pond.....	60
Table 7.1.6	Priority Program Selection for Component 1	63
Table 7.2.1	Floodplain Areas by River Basin.....	65
Table 7.2.2	Land Use of Identified Floodplains	65
Table 7.2.3	Possible Location for Flood Forecasting and Warning System.....	66
Table 7.2.4	Priority Program Selection for Component 2	67
Table 7.3.1	Actions for Reforestation of Production Forests	71
Table 7.3.2	Examples of Measures against Illegal Logging.....	72
Table 7.3.3	Sub-Basins and Shared Concerns	72
Table 7.3.4	Area of Sub-Basins and Ratio of Protected Forests.....	73

Table 7.3.5	Project Components for Rehabilitation of Protected Forest	74
Table 7.3.6	Project Components for New Designation of Protected Forests	75
Table 7.3.7	Priority Program Selection for Component 3	78
Table 7.4.1	Priority Program Selection for Component 4	83
Table 7.5.1	Proposed Water Quality Monitoring Stations.....	88
Table 7.5.2	Sampling Number and Necessary Parameters on Annual Basis.....	88
Table 7.5.3	Quantities of GIS Engineers, GIS Software and Hardware.....	92
Table 7.5.4	Priority Program Selection for Component 5	92
Table 7.6.1	Priority Program Selection for Component 6	100
Table.8.1.1	Executing, Supporting and Related Agency	103
Table 8.2.1	Annual Budget for Priority Programs	105
Table 8.4.1	Action Plan for Priority Program Implementation.....	108

LIST OF FIGURES

Figure 1.4.1	Overall Study Flow	2
Figure 3.1.1	Meteorological Condition at Palembang.....	9
Figure 3.3.1	Comparison of Land Use in 1980 and 2000	15
Figure 3.3.2	Current Forest Planning	16
Figure 3.3.3	Forest Estate Area and Current Forest	16
Figure 3.8.1	Musi River Basin.....	26
Figure 3.8.2	Contour Map of the Musi Rive Basin	27
Figure 4.1.1	Summary of Pre-PCM Results.....	44
Figure 7.1.1	Demand-Responsive Approach and the Proposed Program	56
Figure 7.1.2	Potential Irrigation & Swamp Development Area by Regency and by Sub-basin.....	58
Figure 7.1.3	Proposed Water Use Management Model	62
Figure 7.2.1	Identified Floodplain Areas	65
Figure 7.2.2	Flood Forecasting and Warning System	66
Figure 7.3.1	Conceptual Map of Target Areas.....	68
Figure 7.3.2	Land with Major Constraints (Not Suitable for Agricultural Use).....	68
Figure 7.3.3	Five Steps for Designation of New Protected Forest.....	75
Figure 7.4.1	Cause and Effect of the Urban Water Environment Problem.....	79
Figure 7.4.2	Design Discharge Distribution of Bendung Channel.....	81
Figure 7.4.3	Proposed Profile for Bendung Channel Improvement.....	82
Figure 7.4.4	Design Discharge Distribution of Buah Channel	82

Figure 7.4.5	Proposed Profile for Buah Channel Improvement	83
Figure 7.5.1	New Instillation of Water Level Gaging Stations.....	85
Figure 7.6.1	Structure of Water Resources Management Authorities.....	96
Figure 7.6.2	Structure of Proposed Programs	99
Figure 8.1.1	Implementation Schedule	101
Figure 8.1.2	Image of Related Agencies for the Implementation of Priority Programs	104

ABBREVIATIONS

1. ENGLISH

ADB	:	Asian Development BANK
BHC	:	Benzene Hexachloride
BOD	:	Biochemical Oxygen Demand
COD	:	Chemical Oxygen Demand
CIFOR	:	Center for International Forestry Research
DDT	:	Dichloro-Diphenyl-Trichloro-ethane
DGWR	:	Directorate General of Water Resources
DO	:	Dissolved Oxygen
DOC	:	Department of Communication
DOF	:	Department of Finance
DSR	:	Debt-service ratio
EIA	:	Environmental Impact Assessment
EU	:	European Union
FAO	:	United Nations Food and Agriculture Organization
FFPCP	:	Forest Fire Prevention and Control Project
FWAF	:	Federation of Water User Association Federation
FY	:	Fiscal Year
GC	:	Gas Chromatography
GDP	:	Gross Domestic Product
GIS	:	Geographic Information System
GNI	:	Gross national income
GOI	:	Government of Indonesia
GRDP	:	Gross Regional Domestic Product
GRT	:	Gross Register Tonnage
GRT	:	Gross Registered Tonnage
HWL	:	High Water level
ICDP	:	Integrated Conservation and Development Program
IEEM	:	Irrigation Infrastructure Exploitation and Maintenance
IFAD	:	International Fund for Agricultural Development
IMPR	:	Irrigation Management Policy Reform
ISF	:	Irrigation Service Fee
ITTO	:	International Tropical Timber Organization
IUCN	:	International Union for Conservation of Nature
JBIC	:	Japan Bank for International Cooperation
KSNP	:	Kerinci Selabat National Park
LLW	:	Lowest Low Water Level
LPG	:	Liquefied Petroleum Gas
LWL	:	Low Water level
LWS	:	Low Water Spring
MIS	:	Management Information System
NGO	:	Non-Governmental Organization
O&M	:	Operation and Maintenance
PCM	:	Public Consultation Meeting

PCM	:	Project Cycle Management
R.E.	:	Real estate business
RePPPProT	:	Regional Physical Planning Program for Transmigration
SSSIP	:	South Sumatra Swamp Improvement Project
SWOT	:	Strengths, Weaknesses, Opportunities and Threats
TT	:	Telegraphic transfer
VCA	:	Village Conservation Agreement
VCF	:	Village Conservation Facilitator
WATSAL	:	Water Resources Sector Adjustment Loan
WATSAP	:	Water Resources Sector Adjustment Program
WISMP	:	Water Resources and Irrigation Sector Management Program
IWIRIP	:	Indonesia Water Resources and Irrigation Reform Implementation Program
WUA	:	Water User Association
WUAF	:	Water User Association Federation
WWF	:	World Wildlife Fund

2. INDONESIAN (ENGLISH)

ADIPURA	:	Kota Bersih (Clean City)
ADPEL	:	Administrator Pelabuhan (Port Administrator Office)
AMDAL	:	Analisa Mengenai Dampak Lingkungan (Environmental Impact Assessment)
ANDAL	:	Analisa Dampak Lingkungan (Decision on the environmental analysis)
APBD	:	Anggaran Pemerintah Daerah (Local Government Budget)
APBN	:	Anggaran Pemerintah Nasional (National Government Budget)
Balai PSDA	:	Balai Pengelolaan Sumber Daya Air (Water Resources Management Office)
BAPEDALDA	:	Badan Pengendalian Dampak Lingkungan Daerah (Regional Environmental Impact Control Office)
BAPPEDA	:	Badan Perencanaan dan Pembangunan Daerah (Regional Planning and Development Office)
BAPPENAS	:	Badan Perencanaan Pembangunan Nasional (National Development Planning Agency)
BEPEDAS	:	Balai Pengawasan Daerah Aliran Sungai Musi (Musi River Watershed Area Office)
BKSDA	:	Balai Konservasi Sumber Daya Alam (Provincial Nature Conservation Office)
BMG	:	Badan Meteorologi dan Geofisika (Meteorological and Geophysical Agency)
BPS	:	Badan Pusat Statistik (Central Statistic Division)

BPSDA	:	Balai Pengelolaan Sumber Daya Air (Water Resources Management Office)
Cipta Karya	:	Dinas P.U.Cipta Karya (Human Resettlement Office)
DAK	:	Dana Alokasi Khusus (Special Allocation Fund)
DAU	:	Dana Alokasi Umum (General Allocation Fund)
Dinas PUP or DPUP	:	Dinas PU Pengairan (Water Resources Department)
DKI	:	Daerah Khusus Ibukota (Special Capital District)
DPMA	:	Direktorat Penyelidikan Masalah Air (Investigation Directorate of Water Problem)
DPRD	:	Dewan Perwakilan Rakyat Daerah (Regional Parliament)
G. or Gn	:	Gunung (Mountain (or Mount.))
GBHN	:	Garis-Garis Besar Haluan Negara (General Guideline for National Development)
Lamongan	:	(Greater Surabaya Region)
HIPPA	:	Himpunan Petani Pemakai Air (Water Users Association)
HK	:	Hutan Konservasi (Conservation Forest)
HL	:	Hutan Lindung (Protection Forest)
HP	:	Hutan Produksi (Production Forest)
HSA	:	Hutan Suaka Alam (Nature Protection Forest)
IKK	:	Ibu Kota Kecamatan (Semi-Urban)
IMB	:	Ijin Mendirikan Bangunan (Building Permit)
INPRES	:	Instruksi Presiden (Presidential Instruction)
IPAIR	:	Iuran Pelayanan Irigasi (Irrigation Service Fee)
IPEDA	:	Iuran Pendapatan Daerah (Village Land Tax)
K.	:	Kali (River)
Kab.	:	Kabupaten (Regency)
KANWIL	:	Kantor Wilayah (Regional Representative Office)

Kec.	:	Kecamatan (Sub-District of a city)
Kel.	:	Kelurahan (Part of Sub-District of a city)
KIMPRASWIL	:	Departemen Permukiman dan Prasarana Wilayah (Ministry of Settlement and Regional Infrastructure)
KKPP	:	Kelompok Kerja Penanganan Banjir (Flood Control Work Team)
Kodya or Kota	:	Kotamadya (Municipal City)
Kotip	:	Kota Administratip (Administrative city (semi municipal city))
Kp.	:	Kampung (Village)
LKMD	:	Lembaga Ketahanan Masyarakat Desa (Village Development Association)
MPR	:	Majelis Permusyawaratan Rakyat (People's Consultative Assembly)
MUBA	:	Musibanyuasin (place name)
MURA	:	Musirawas (Place name)
OKI	:	Ogan Komering Ilir (Place name)
OKU	:	Ogan Komering Ulu (Place name)
P3SA	:	Proyek Perancang Pengembangan Sumber-Sumber Air (Water Resources Development Planning Project Division)
PA	:	Pompa Air (Pump Station)
PBB	:	Pajak Bumi dan Bangunan (Land and Building Tax)
PBPP	:	Proyek Banjir dan Pengamanan Pantai (Flood and Seashore Safety Project)
PDAB	:	Persahaan Daerah Air Bersih (Regional Clean Water Supply Agency)
PDAM	:	Perusahaan Daerah Air Minim (Regional Drinking Water Supply Company)
PELINDO II	:	Pelabuhan Indonesia II (Indonesia Port Corporation II)
Perda	:	Peraturan Daerah (Local Regulation)
PIR	:	Perkebunan Inti Rakyat (Nuclues Estate and Small Holders)
PJM	:	Program Jangka Menengah (Medium Term Program)
PJP	:	Perencanaan Jangka Panjang (Long-term Development Plan)

PJT	:	Perum Jasa Tirta (Jasa Tirta Public Corporation)
PKPI	:	Pembaharuan Kebijakan Pengelolaan Irigasi (Irrigation Management Policy Reform)
PLN	:	Perusahaan Listrik Negara (State Electricity Company)
POJ	:	Perum Otoritas Jatiluhur (Jatiluhur Authority Public Corporation)
PP	:	Peraturan Pemerintah (Government Regulation)
PPN	:	Pajak Pertambahan Nilai (Value Added Tax)
PPPLD	:	Pengendalian dan Penanggulangan, Pencemaran Limbah Domestik (Work Team for Controlling and Overcoming Domestic Waste Pollution)
PPPLI	:	Pengendalian dan Penanggulangan, Pencemaran Limbah Industri (Work Team for Controlling and Overcoming Industrial Waste Pollution)
PPTPA	:	Panitia Tata Pengaturan Air (River Basin Water Coordination Committee)
Pr.	:	Perkebunan Rakyat (Private plantation (small scale holder plantation))
PROKASIH	:	Program Kali Bersih (Clean River Program)
PROPEDA	:	Program Pembangunan Daerah (Local Government Plan)
PROPENAS	:	Program Pembangunan Nasional (Five Year National Development Program)
PBPP	:	Proyek Pengendalian Banjir dan Pengamanan Pantai (Flood Control and Coastal Protection Project)
PSAWS	:	Pengelolaan Sumber Daya Air Wilayah Sungai (River Basin Water Resources Management)
PT, or P.T.	:	Perseroan Terbatas (Co. Limited (Private Firms))
PTP	:	Perseroan Terbatas Perkebunan (State Owned Plantation)
PTPA	:	Panitia Tata Pengaturan Air (Provincial Water Coordination Committee)
PUP	:	Pekerjaan Umum Pengairan (Public Works Water Resources)
Puskesmas	:	Pusat Kesehatan Masyarakat (Community Health Center)
RDTRK	:	Rencana Detail Tata Ruang Kota (Detailed Urban Spatial Plan)
RENSTRA	:	Rencana Strategik (Strategic Plan)

REPERITA	:	Rencana Pemangunan Lima Tahun (Five Year Development Plan)
RKL	:	Rencana Kelola Lingkungan (Environmental Management Plan)
RPL	:	Rencana Pemantauan Lingkungan (Environmental Monitoring Plan)
RT	:	Rukun Tetangga (Neighborhood Fraternity, Small community belongs to RW.)
RTRK	:	Rencana Teknis Ruang Kota (Urban Spatial Plan for Engineering Needs)
RTRW	:	Rencan Tata Ruang Wilayah (Urban Spatial Plan)
RW	:	Rukun Warga (Citizen Fraternity. Small community belongs to Kampung)
SK	:	Surat Keputusan (Decree)
Susenas	:	Survei Sosial-ekonomi Nasional (National Socioeconomic Survey)
Telkom	:	Perusahaan Telekomunikasi (State Telecommunications Company)
UPTD	:	Unit Pelaksana Teknis Daerah (Regional Technical Implementation Unit)
UU	:	Undang-Undang (Laws)

MESUREMENT UNTS

(Length)

mm	:	millimeter(s)
cm	:	centimeter(s)
m	:	meter(s)
km	:	kilometer(s)

(Area)

mm ²	:	square millimeter(s)
cm ²	:	square centimeter(s)
m ²	:	square meter(s)
km ²	:	square kilometer(s)
ha	:	hectare(s)

(Weight)

g,gr	:	gram(s)
kg	:	kilogram(s)
ton	:	tonne(s)

(Time)

	:	
s,sec	:	second(s)
min	:	minute(s)
h,(hr)	:	hour(s)
d,(dy)	:	day(s)
y,(yr)	:	year(s)

(Volume)

cm ³	:	cubic centimeter(s)
m ³	:	cubic meter(s)
l, ltr	:	liter(s)
mcm	:	million cubic meter(s)

(Electrical Unit)

W	:	watt(s)
kW	:	kilowatt(s)
MW	:	megawatt(s)
kWh	:	kilowatt-hour
MWh	:	megawatt-hour
GWh	:	gigawatt-hour
V	:	volt(s)
kV	:	kilovolt(s)
Hz	:	Hertz

(Speed/Velocity)

cm/sec, cm/s	:	centimeter per second
m/sec, m/s	:	meter per second
km/hr, km/h	:	kilometer per hour