STREAMFLOW DATA

2. MEAN MONTHLY DISCHARGE DATA

NATIONAL WATER RESOURCES BOARD

MEAN MONTHLY DISCHARGE DATA TABLE

STATION NAME : LAOAG RIVER, POBLACION, LAOAG, ILOCOS NORTE

DRAINAGE AREA : 1355 sq.kms.

PERIOD OF TARGET YEARS : 1958 to 1996

MEAN MONTHLY DISCHARGE, IN CUBIC METER PER SECOND

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1958											25.22	22.61	
1959	17.51	10.97	7.72	7.38	8.46		118.01		189.83	40.01	382.29		
1960		11.50	10.61	7.62	7.22			818.35				15.50	
1961	15.08	11.43	9.95	9.18	68.80	83.93	1286.42	893.90	295.54	139.93	30.52	18.18	241.84
1962	16.09	11.88	9.84		9.43	93.82	530.96	568.92	216.14	110.52	56.31	32.08	
1963	19.95	11.94	7.01	6.84	6.68	379.20	323.79	178.42	451.69	48.99	19.54	21.42	125.56
1964	13.80	9.19	7.93	7.05	44.35	115.43	83.71	439.78	568.96	112.82	80.83	97.17	135.15
1965	33.97	9.14	6.73	8.24	22.56	208.83	191.25	113.22	268.32	44.99	41.82	16.68	80.87
1966	13.15	8.62	8.01	6.97	16.96	32.85	56.06			33.58	57.29	33.67	
1967	20.42	12.74	8.74	19.68	13.34	235.54	142.30	199.32	195.65	841.57	35.81	17.58	129.58
1968	14.42	11.52	12.15	10.86	7.88	17.68	332.85	484.07	410.32	94.85	25.27	16.50	120.86
1969	15.57	15.57	9.61	15.51	84.78	134.94	378.40	156.01	198.62	189.05	33.29	25.93	106.47
1970	15.80	10.32	8.90	5.84	14.10	82.87	32.20	95.20	161.65	92.20	66.41	49.65	52.82
1971	22.34	12.96	11.43	9.45	10.59	54.33	325.00	336.88	454.35	313.99	61.35	39.27	138.61
1972	17.70	7.33	5.25	4.85	13.20	59.11	1297.03	233.09	35.01	17.80	13.20	12.45	144.98
1973	11.58	5.89	5.08		8.86	36.05	46.53	123.76	215.92	874.35	25.24	19.02	
1974	16.84	15.72					107.79	471.13	659.13	1195.52	585.23	399.68	
1975	151.38	33.72	16.00	14.87	24.32	107.42	53.71		42.78	30.96	19.85	11.73	
1976	2.17	0.78	0.35	0.19	13.56	2.68	65.57	139.27	103.37	52.41	32.28	17.19	36.02
1977	12.08	7.96	6.47	5.82	15.04	95.88	1349.26		427.43	24.20	11.83		
1978													
1979													
1980													
1981													
1982													
1983													
1984	15.00		7.05	5.79	93.38	136.14	159.39	448.89	208.68	42.36	33.89	19.44	
1985	9.74	6.93	5.13	3.91	15.45	149.26	186.77	414.84	200.00	160.91	56.06		
1986	10.37	5.24	4.87	8.54	18.11	34.62	388.45	723.42	858.52	96.27	109.79	29.99	191.36
1987	11.14	8.54	7.73	4.65	4.61	64.38	100.87	88.69	537.25	106.02	107.93		
1988							331.36	259.08	96.67	118.33	25.55	13.30	
1989	11.72	7.10	4.75	4.31	5.34	39.90	269.42	355.45	498.70	491.41	8.74	3.99	143.26
1990	6.54	5.42	1.58	1.10	1.92	228.77	332.23	636.27	917.57	43.56	21.79	16.99	225.37
1991	7.99	5.81	3.75	16.88	22.87	108.01	711.03	606.74	594.93	550.20	161.14	22.67	236.37
1992	20.81	16.53	11.81	7.23	30.89	70.21	57.17						
1993	14.83	9.32	6.55	7.43	13.37	56.20	198.37	296.06	294.07	112.47	20.99	17.83	79.36
1994	9.90	7.42	5.25	4.54	12.50	55.12	445.17	326.78	313.99	30.81	10.48	7.59	103.31
1995	5.43	4.01	3.31	2.60	6.75	9.87	57.94	177.43	141.10	19.59	15.66	8.40	37.90
1996	4.70	3.22	2.21	2.79	7.52	11.42	338.98	120.39	137.77	44.67	63.81	5.27	62.29
MEAN	18.68	9.94	7.12	7.43	21.14	114.44	328.58	361.35	335.74	189.31	72.23	38.28	125.93

Note : Blank means that the data are not available

NATIONAL WATER RESOURCES BOARD

MEAN MONTHLY DISCHARGE DATA TABLE

STATION NAME : BONGA RIVER, BANGAY, DINGRAS, ILOCOS NORTE

DRAINAGE AREA : 534 sq.kms.

PERIOD OF TARGET YEARS : 1957 to 1980

MEAN MONTHLY DISCHARGE, IN CUBIC METER PER SECOND

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1957	6.35	5.06	3.86	2.51	2.62	65.09	48.48	78.56	150.20	29.83	19.49	8.32	35.01
1958	4.74	3.51	2.52	2.17	3.29	42.61	51.80	49.34	77.39	41.30	8.22	4.17	24.33
1959	3.37	2.94	2.65	2.09	2.59	4.92	24.67	71.54	56.95	9.23	25.56	3.72	17.59
1960	2.82	3.40	3.46	3.06	4.74	11.56	13.83	77.03	31.51	18.03	8.89	5.10	15.21
1961	3.85	3.19	2.94	2.84	3.71	17.36	152.95	139.48	47.74	20.56	8.38	4.99	34.41
1962	3.53	2.76	2.15	1.84	1.51	25.83	170.49	128.71	78.95	47.72	27.09	21.44	43.08
1963	14.95	8.95	5.26	1.58	1.82	114.21	143.81	80.19	108.20	8.75	5.79	4.05	41.37
1964	4.36	3.92	3.92	2.27	0.58	33.38	27.55	196.75	196.09	31.94	21.40	26.83	46.29
1965	11.07	8.71	4.46	2.00	15.29	72.22	68.60	31.46	76.34	42.53	16.90	6.74	29.58
1966	5.35	3.61	2.85	2.41	4.51	7.61	18.53	126.81	45.82	9.09	14.17	8.87	20.88
1967	2.26	3.22	2.29	3.68	0.60	124.46	93.70	116.39	146.00	86.44	9.27	7.33	50.82
1968	4.85	2.74	2.19	2.36	2.24	6.19	26.91	61.33	79.50	20.91	5.72	3.76	18.24
1969	2.84	2.78	2.35	1.89	4.68	21.18	85.81	37.24	39.87	40.34	12.20	7.35	21.73
1970	5.21	4.16	2.80	1.84	1.65	20.49	12.52	24.40	24.79	24.75	22.97	8.83	12.89
1971	1.72	1.88	1.13	0.86	0.86	1.96	41.87	30.88	14.71	24.99	5.40	2.86	10.89
1972	1.72	1.89	1.38	0.98	1.71	2.12	147.77	15.55	6.85	4.90	3.43	3.07	18.16
1973	2.98	2.85	2.68	2.56	2.36	2.09	4.08	5.50	11.99	53.59	3.29	2.42	8.11
1974	1.87	1.64	1.38	1.21	1.21	3.88	2.86	27.07	41.60	78.48	30.59	1.88	16.21
1975	1.32	1.10	1.01	0.94	0.98	4.01	5.25	49.27	5.58	5.29	3.60	2.88	8.33
1976	2.28	2.06	1.81	1.57	15.12	18.70	27.66	8.02	8.03	4.86	3.46	2.39	7.94
1977	1.93	1.77	1.51	1.25	1.78			12.66				0.15	
1978		0.13	0.13										
1979													
1980			0.23			0.29	2.13	0.49	3.05				
MEAN	4.25	3.19	2.39	1.98	3.93	28.57	55.77	61.85	59.49	30.81	12.59	6.42	23.85

Note : Blank means that the data are not available

NATIONAL WATER RESOURCES BOARD

MEAN MONTHLY DISCHARGE DATA TABLE

STATION NAME : GASGAS RIVER, MANALPAC, SOLSONA, ILOCOS NORTE

DRAINAGE AREA : 73 sq.kms.

PERIOD OF TARGET YEARS : 1958 to 1988

MEAN MONTHLY DISCHARGE, IN CUBIC METER PER SECOND

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1958	2.10	1.19	0.85	0.70	1.20	10.33	9.38	7.61	14.99	7.52	3.90	2.30	5.21
1959	4.34	0.88	1.61	0.68	1.55	4.60	8.77	19.20	10.33	4.87	10.71	4.90	5.82
1960	3.34	3.49	1.22	0.86	1.50	8.30	5.02	13.23	5.53	8.89	2.33	2.30	4.33
1961	1.81	0.93	0.84	0.56	2.72	5.09	21.83	15.84	13.12	9.26	3.81	2.69	5.56
1962	1.82	1.22	0.61	0.72	1.46	7.85	17.22	16.57	17.21	5.54	4.39	2.89	6.74
1963	1.91	1.74	0.82	0.80	0.54	13.09	13.13	10.07	14.16	4.42	2.25	3.05	5.47
1964	1.65	1.62	1.06	0.80	4.48	13.60	7.57	21.13	24.49	9.10	13.47	11.22	9.18
1965	4.02	1.99	0.89	1.57	4.52	16.04	11.73	7.58	10.82	4.97	2.69	2.36	5.97
1966	1.08	0.72	0.34	0.25	4.86	8.49	5.24	17.49	12.06	3.10	11.87	4.82	5.70
1967	8.23	4.19	2.40	2.63	2.05	21.81	32.99	8.59	8.75	7.26	8.65	8.04	8.85
1968	3.30	1.64		1.30	3.55	10.42	13.41	12.15	10.83	4.12	2.21	2.06	
1969	1.41	0.89	0.46	0.52	1.65	5.48	10.46	4.33	9.34	7.46	4.10	2.92	4.12
1970	1.52	1.27	1.43	2.15	4.36	5.81	3.57	5.02	5.41	4.44	6.18	6.11	3.93
1971	5.36	2.36	1.75	1.07	1.37	1.91	11.45	6.88	4.20	3.83	2.52	2.39	3.60
1972	1.69	1.25	1.23	1.43	2.46	3.22	10.52	4.44	2.23	2.08	2.24	2.42	2.95
1973	1.75	1.36	1.10	1.08	1.71	2.16	1.72	2.82	3.48	9.98	1.70	0.99	2.50
1974	0.50	0.26	0.15	0.27	0.46	0.87	1.48	2.70	3.09	5.65	5.92	1.47	1.91
1975	3.72	3.06	2.10	1.94	2.83	4.85	4.05	7.89	6.27	4.13	3.52		
1976	2.77	1.91	0.89	1.01	3.67	4.92	8.41	5.39	4.88	3.90	4.15	2.62	3.57
1977		2.04	1.34	1.29	1.95	3.86	8.14					2.27	
1978	1.77	1.43	1.29	1.49									
1979				1.27	2.40	4.20	6.56	6.47	2.66	3.58	3.26	2.48	
1980	2.10	1.86	1.42	1.32	2.83	2.73	5.48	4.17	5.15	3.28	8.47		
1981					3.37	4.97	4.26	4.44	6.37				
1982							3.56	4.42	4.72				
1983	1.53	1.16	0.99	0.64	0.81	3.11	6.91	8.21	8.84	6.83	1.65	1.48	3.55
1984			1.16	1.20	3.83	4.95	6.48	9.73	1.80	6.29	10.01	8.94	
1985	1.43	1.23	0.94	1.78	1.76	9.41	3.71	4.89	15.71	3.97	1.47		
1986	2.21	0.96	0.93	0.56	2.11	4.15	15.85	15.78	23.80	6.60	9.80	5.00	7.32
1987	4.86	2.54	0.81	1.06	2.83	7.90	6.65	4.70	23.56	26.59	15.28		
1988							29.22	13.68	0.34	0.36	0.26	0.14	
MEAN	2.36	1.66	1.09	1.11	2.44	6.85	9.76	9.10	9.31	6.27	5.29	3.50	5.12

Note : Blank means that the data are not available

NATIONAL WATER RESOURCES BOARD

MEAN MONTHLY DISCHARGE DATA TABLE

STATION NAME : ABRA RIVER, BUMAGCAT, TAYUM, ABRA

DRAINAGE AREA : 2575 sq.kms.

PERIOD OF TARGET YEARS : 1958 to 1988

MEAN MONTHLY DISCHARGE, IN CUBIC METER PER SECOND

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1958											83.95	49.14	
1959	32.30	21.19	21.92	15.45	55.67	109.63	199.62	286.95	268.82	99.88	202.67	85.16	116.96
1960	39.52	30.67	26.53	38.72	70.13	106.66	93.93	724.68	288.68	242.40	82.72	30.99	147.13
1961	18.21	14.59	18.16	19.01					377.25	216.84	65.63	49.04	
1962	30.94	26.75	27.44	29.15	36.57	118.63	732.37	483.50	548.46	125.11	52.10	34.56	188.28
1963	24.56	19.17	15.93	15.06	25.05	199.93	317.47	203.18	552.76	120.36	54.67	41.90	132.72
1964	29.87	26.31	25.14	33.38	63.64	147.82	187.99	478.20	545.71	168.87	119.01	107.97	154.81
1965	51.32	31.80	24.50	31.87	66.81	183.20	249.72	174.54	222.61	121.19	52.28	34.72	99.24
1966	26.73	23.91	23.53	27.27	81.02	84.61	97.42	258.03	201.71	60.00	56.81	44.08	82.46
1967	30.72	25.33	23.58	32.91	32.70	489.15	225.92	309.00	331.29	423.24	86.53	40.26	167.27
1968	28.65	19.82	17.20	13.10	29.50	77.63	336.72	633.41	664.41	209.03	48.86	36.80	181.55
1969	32.79	29.43	26.10	30.85	58.47	129.21	397.37	175.77	186.62	196.07	53.06	45.61	114.44
1970	43.69	36.76	37.46	46.75	134.46	202.72	123.30	243.56	295.24	115.50	78.37	52.95	117.81
1971	42.43	36.76	30.59	24.73	33.24	82.15	475.46	300.11	230.45	308.07	75.65	59.94	142.91
1972	48.34	33.27	30.02	38.54	27.96	98.45		437.52	104.66	81.84	39.01	31.78	
1973	16.93	16.93	16.93	16.95	20.30	21.86	21.64	28.03	45.90	190.51	20.63	18.67	38.54
1974	18.60	18.60	18.88	18.76	18.76	19.54		187.97	103.82	354.31	192.06	20.58	
1975	17.64		17.38	17.69	21.82	29.22	32.07	97.06	32.53	26.10	17.54	17.63	
1976	17.33	17.36	17.80	17.61	105.77	171.28	279.33		40.01	33.33	20.75	19.14	
1977	18.60	18.11	17.43	17.45	18.56	20.67	27.15		277.99	42.81	19.43	18.20	
1978													
1979													
1980													
1981													
1982													
1983													
1984													
1985	51.38	37.00	26.11	46.84	169.57	862.10	454.70	840.09	524.90	269.44	135.99		
1986	266.04	13.52	8.61	8.94	47.93	117.64	585.48	231.93	988.88		141.45	66.84	
1987	38.69	23.51	21.35	29.63	94.70	180.03	127.40	225.35	490.84	451.36	214.59	87.14	165.94
1988	45.93	25.89	15.99	30.31	125.03	320.00	466.08	432.30	305.43	302.58	164.76	78.78	193.53
MEAN	42.22	24.84	21.98	28.11	80.49	180.54	297.52	362.61	330.39	187.22	84.85	46.26	138.11

Note : Blank means that the data are not available

NATIONAL WATER RESOURCES BOARD

MEAN MONTHLY DISCHARGE DATA TABLE

STATION NAME : PINACANAUAN RIVER, LARION ALTO, TUGUEGARAO, CAGAYAN

DRAINAGE AREA : 655 sq.kms.

PERIOD OF TARGET YEARS : 1957 to 1996

MEAN MONTHLY DISCHARGE, IN CUBIC METER PER SECOND

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1957	52.17	24.04	20.72	16.47	14.07	24.51	41.70	24.42	66.64	50.79	187.73	35.44	48.45
1958	20.99	19.88	14.17	9.51	9.31	12.15	11.68	24.02	78.35	87.58	115.11	34.06	36.18
1959	18.33	30.13	76.21	14.88	93.02	18.71	10.89	33.40	23.81	57.72	132.75	114.50	44.88
1960	68.79	85.50	32.19	9.23	8.13	6.44	7.29	11.30	23.09	120.52	38.84	37.83	35.84
1961	21.80	16.33	16.34	13.80	7.95	6.14	51.44	40.10	35.84	97.53	164.14	66.48	44.75
1962	26.64	20.70	12.80	12.91	8.83	12.03	20.81	18.65	24.77	87.85	104.57	54.32	32.10
1963	20.69	19.84	10.83	10.83	6.90	25.19	56.07	22.83	21.71	20.27	18.05	92.93	27.28
1964	32.11	27.32	17.04	10.45	9.91	19.00	18.75	50.66	60.91	106.48	466.42	101.13	76.27
1965	54.20	53.36	21.15	11.68	7.80	10.90	34.21	17.86	29.46	44.03	92.58	69.12	37.68
1966	61.87	18.72	47.56	8.44	77.75	14.05	20.66	13.84	7.80	33.30	67.08	147.86	45.34
1967	154.21	27.83	26.46	18.42	9.54	33.69	75.85	88.43	18.60	169.85		160.26	
1968	124.76	73.86	66.69	46.76	50.16	86.95	40.06	138.06	120.19	79.35	92.57	61.91	80.93
1969	40.51	13.60	12.75	8.84	5.41	20.68	64.55	28.13	45.84	60.94	121.31	148.17	47.82
1970	73.19	20.71	35.20	21.44	23.27	12.79	8.07	25.87	51.36	221.59	296.82	172.61	80.83
1971	59.95	46.14	38.69	3.47	8.10	10.34	79.46	36.23	26.47	112.62	131.80	204.89	63.37
1972	57.17	16.46	10.33	17.45	13.19	9.36	13.83	17.11	20.86	15.01	62.91	82.69	26.41
1973	21.41	15.36	9.10	6.30	4.40	9.25	63.53	38.19	26.44	131.63	440.01	253.97	85.15
1974	93.23	24.58	9.80	12.05	8.84	6.84							
1975							8.66	5.56	6.47	9.84	16.80	48.36	
1976	24.06	5.97	5.00	3.88	34.24	13.85	12.48			21.26	108.45		
1977													
1978								25.71	8.88				
1979							17.43	2.65	1.16	10.90	10.49		
1980													
1981													
1982													
1983	107.65	17.09	8.31	5.24	4.57	4.05	5.33	5.92	20.24	118.01	63.51	36.55	34.92
1984	21.50	14.20	24.97	8.91	19.19	16.99	28.83	82.87	24.80	97.72	115.98	108.51	48.08
1985	19.70	11.63	15.33	26.90	7.77	65.27	30.65	39.61	93.06	265.99	182.60	78.89	70.05
1986	40.27	32.75	23.80	14.56	8.90	8.20	139.89	224.14	27.10	315.89	273.75	174.63	107.88
1987	29.41	16.46	6.08	4.30	4.60	14.26	9.78	68.11	33.03	53.45	82.60	113.73	36.53
1988	52.14	57.38	11.62	7.49	4.85	4.23	57.77	18.80	14.60	236.48	278.85	68.26	67.51
1989	129.16	27.34	15.66	10.66						158.71	82.95	14.79	
1990			1.16	0.84	0.91	44.13	22.18	29.75	17.49	73.01	79.48	142.35	
1991	5.08	18.20	1.31	17.67	0.93	0.54	21.00	53.29	5.97	120.13	112.52	34.28	32.67
1992	27.35	5.17	4.20	2.13	2.47	3.66	5.57	9.35	102.41	128.45	104.47		
1993	5.99	7.64	4.68	2.44	0.83	7.62	8.46	10.73	50.80	152.41	227.37	333.39	67.57
1994	17.20	3.56	2.10	1.59	2.10	2.05	4.55	11.68	53.28		32.27	20.15	
1995	6.87	6.23	0.90	0.55	2.66	2.11	25.17	10.39	25.43	71.59	421.92	522.39	91.83
1996	14.55	6.56	3.19	5.76	35.30	20.43	112.35	38.57	124.46	199.08	535.85		
MEAN	47.59	24.25	17.73	11.06	12.38	18.23	34.00	38.69	39.05	105.75	150.00	117.16	54.69

Note : Blank means that the data are not available

NATIONAL WATER RESOURCES BOARD

MEAN MONTHLY DISCHARGE DATA TABLE

STATION NAME : ABULOG RIVER, BULU, KABUGAO, KALINGA APAYAO

DRAINAGE AREA : 1609 sq.kms.

PERIOD OF TARGET YEARS : 1967 to 1994

MEAN MONTHLY DISCHARGE, IN CUBIC METER PER SECOND

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1967	156.50	126.81	89.33	317.08	85.78	358.06	214.88	276.09	266.85	656.59	284.78	284.32	260.67
1968	199.07	127.27	82.67	62.58	59.17	118.99	211.86	638.10	533.60	326.47	249.74	125.72	228.62
1969		74.12	35.09	23.21	100.38	155.04	331.16	195.16	142.90	531.76	336.11	706.92	
1970	311.80	96.14	35.20	17.41	17.32	16.57	17.44	107.14	276.38	348.15	867.50	426.77	212.65
1971	137.53	121.46	199.15	101.72	73.07	139.61	322.50	249.27	324.30	644.13			
1972	178.46	137.46	133.24	167.85	128.26	146.84	593.23	162.47	137.05	130.54	181.61	210.37	193.10
1973		83.20	44.26	26.16	41.72	43.85	62.62	82.07	166.27	893.41	758.47	420.82	
1974	223.18	167.05	93.89	64.60	48.28	174.02	64.45	148.40	197.92	2072.39	2005.06	823.09	506.82
1975	275.87	158.61	102.88	69.70	317.60	358.84	373.03		153.61	99.70	271.85		
1976	275.17	158.61	102.88	69.70	317.64	359.46	350.83		222.76	99.70	278.33	171.61	
1977	135.17	95.61		55.36	85.04	48.66	196.12	139.56	305.52	108.81	195.46	112.83	
1978	74.57	57.78	49.73	47.69	64.63	58.87	72.59	262.69	166.43	350.54	337.73	207.81	139.60
1979	85.60	60.50	51.38	49.64	55.43		80.44	103.16		235.23	235.15	142.27	
1980				39.95	102.41	45.15	148.08	95.90	96.34	201.06	568.87	206.45	
1981	143.31	82.51	58.87	50.53	86.04	123.28	93.56	94.90	251.78	240.41	277.73	224.25	142.39
1982	131.42		62.85	66.51	67.36	87.60	163.40	134.72	194.15	220.16	126.07	186.53	
1983	483.73	86.48	51.54	41.79	36.14	41.97	49.44	73.42	129.47	127.20	220.17	124.47	122.60
1984	65.46	44.39	49.20	33.05	75.63	66.45	53.47					159.39	
1985	366.48					477.20					356.01	247.72	
1986	202.08	190.76	123.80	75.39	87.48	84.70	383.93	262.63	454.24	420.59	413.82	207.57	244.21
1987	177.45	145.82	80.80	19.53	38.85	150.07	29.14		202.95	355.47			
1988	176.95	335.99	84.61		20.62	98.39	484.04			254.49	315.27		
1989	502.05	140.16	335.04	196.37	29.27	130.89	136.48	154.26	306.87	433.84	179.08	223.27	231.91
1990	342.82	226.07	28.44	25.26	31.94	222.65	501.17	268.00	322.74	561.20	278.37	310.84	259.82
1991	163.18	100.54	86.26	55.12	41.88	33.07	87.06	96.15	84.90	289.30	283.47	226.35	127.80
1992	144.91	86.85	48.23	53.80	58.79	56.63	63.49	121.25	588.78	495.05	443.83	227.51	199.06
1993	108.89	124.55	73.85	69.24	63.25	85.35	72.26	109.86	174.67	420.56	452.01	500.01	186.13
1994	261.99	125.14	103.53	92.62	102.85	109.47	228.95	200.89	212.14	157.56	180.36	85.26	156.20
MEAN	213.63	125.43	86.66	72.38	80.81	140.78	186.73	179.45	247.36	402.82	404.81	274.03	214.24

Note : Blank means that the data are not available

NATIONAL WATER RESOURCES BOARD

MEAN MONTHLY DISCHARGE DATA TABLE

STATION NAME : AMBAYOAN RIVER, SANTA MARIA, SAN NICOLAS, PANGASINAN

DRAINAGE AREA : 281 sq.kms.

PERIOD OF TARGET YEARS : 1958 to 1972

MEAN MONTHLY DISCHARGE, IN CUBIC METER PER SECOND

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1958					2.61	21.05	20.22	28.92	37.31	17.06	7.75	6.97	
1959	5.06	3.98	3.74	3.11	5.15	2.94	9.55	19.14	20.83	13.03	14.05	7.12	9.09
1960	3.34	2.70	2.53	1.87	2.37	5.49	8.99	109.06	26.25	27.02	12.43	7.39	17.43
1961	4.58	3.17	3.64	2.74	3.42	24.13	135.03	28.89	23.54	15.97	6.18	3.24	21.27
1962	3.00	2.92	2.67	2.97	2.84	5.54	82.25	38.14	56.78	27.04	12.18	7.92	20.46
1963	4.68	3.84	3.23	3.28	3.56	56.18	43.54	39.43	60.73	15.15	11.29	6.74	20.08
1964	6.38	5.44	3.86	3.35	6.96	10.70	9.83	72.41	40.86	46.24	23.10	15.93	20.50
1965	7.45	6.03	3.58	3.96	8.26	15.84	53.07	26.56	33.53	19.82	10.06	6.94	16.02
1966	4.52	3.10	2.75	2.31	37.81	32.80	44.51	87.34	92.65	20.85	24.11	12.86	28.65
1967	7.50	3.78	6.80	9.73	6.67	51.41	24.73	82.40	61.80	71.51	29.12	12.48	30.84
1968	8.44	7.00	5.04	3.88	6.66	5.48	19.72	82.20	110.13	34.71	13.05	6.54	25.31
1969	3.51	4.32	3.92	3.38	2.52	4.97	33.60	73.30	55.40	25.18	7.20	3.29	18.55
1970	3.12	2.08	2.16	1.77	2.42	12.86	14.97	34.70	53.76	30.03	13.45	8.27	14.99
1971	5.74	5.07	4.46	3.69	4.64	14.32	36.33	41.98	31.24	56.69	14.19	7.31	18.96
1972	7.07	7.48	5.23	4.26	6.96	12.14	279.31	124.68	31.39	8.33	3.65	3.40	25.55
MEAN	5.30	4.49	3.80	3.58	8.73	18.37	54.24	57.86	49.08	28.59	13.08	7.71	20.61

Note : Blank means that the data are not available

NATIONAL WATER RESOURCES BOARD

MEAN MONTHLY DISCHARGE DATA TABLE

STATION NAME : AGNO RIVER, POBLACION, BAYAMBANG, PANGASINAN

DRAINAGE AREA : 2284 sq.kms.

PERIOD OF TARGET YEARS : 1957 to 1976

MEAN MONTHLY DISCHARGE, IN CUBIC METER PER SECOND

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1957								224.38					
1958	41.44	36.22	28.38	26.64	29.88	87.50	156.97	201.73	335.51	144.54	61.75	43.56	99.68
1959	29.74	18.77	21.30	21.41	26.31	27.49	29.55	89.97	140.61	67.50	55.33	37.34	47.20
1960	34.60	23.72	12.78	15.54	25.09	73.00	87.87	561.62	288.73	157.89	61.18	45.84	114.37
1961	23.77	17.57	13.03	13.22	14.17	53.42	324.54	227.64	302.26	166.16	76.31	45.84	107.17
1962	29.47	16.07	16.93	15.88	20.99	29.16	268.20	301.26	353.35	149.45	49.38	51.92	109.23
1963	37.71	29.50	22.23	22.17	29.85	197.35	245.66	227.87	373.70	100.71	32.90	54.87	114.78
1964	36.76	18.02	15.37	13.06	26.63	76.37	70.68	369.00	234.75	222.51	143.00	122.35	112.68
1965	61.13	37.07	26.65	34.20	46.31	119.03	213.85	186.06	198.58	114.94	61.70	30.85	92.91
1966	22.45	20.29	13.31	14.92	115.86	132.47	132.10	169.52	305.53	110.78	107.00	113.37	105.11
1967	52.88	38.48	37.65	53.63	58.92	187.01	159.45	338.86	282.32	261.79	147.23	65.22	139.07
1968	43.35	32.82	22.24	23.47	35.35	34.13	94.74	339.12	311.41	141.93	47.02	37.11	96.91
1969	23.20	18.07	17.38	20.51	42.38	82.52	122.93	179.27	163.80	106.84	36.76	37.30	71.29
1970	33.18	20.90	20.45	33.80	48.01	90.59	87.56	146.08	175.22	149.74	51.54	44.00	75.22
1971	34.33	43.96	26.18	31.03	26.32	61.28	132.00	157.68	122.57	196.81	65.75	34.16	78.49
1972	60.56	45.90	29.52	29.70	35.23	67.07	274.18	390.95	148.08	103.11	56.13	38.16	149.57
1973	48.86	18.51	11.85	8.82	12.75	36.97	61.39	115.10	147.51	207.77	103.41	54.17	89.31
1974							123.98	342.83	179.64	397.28	190.45	52.12	
1975	20.00	5.84	4.15	4.26			38.02	103.71	117.32	304.14	25.69	7.70	
1976	8.67	8.29	5.66	4.86	89.23	355.51	265.11						
MEAN	35.51	24.96	18.95	21.47	38.91	99.48	177.57	245.83	232.17	181.33	75.14	50.88	98.94

Note : Blank means that the data are not available

NATIONAL WATER RESOURCES BOARD

MEAN MONTHLY DISCHARGE DATA TABLE

STATION NAME : ANGAT RIVER, LONGOS, PULILAN, BULACAN

DRAINAGE AREA : 959 sq.kms.

PERIOD OF TARGET YEARS : 1958 to 1979

MEAN MONTHLY DISCHARGE, IN CUBIC METER PER SECOND

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1958												3.38	
1959	8.18	15.74	28.91	4.60	4.93	3.06	7.49	73.17	75.23	22.40	518.02	74.73	36.33
1960	54.48	43.58	11.71	9.00	10.32	48.85	26.91	433.10	132.51	244.02	25.70	12.88	88.13
1961	13.05	15.07	15.33	4.26	12.18	84.50	127.72	79.85	161.89	99.86	57.92	8.70	57.22
1962	15.43	20.76	15.25	7.23	2.38	1.51	261.42	127.79	247.16	45.22	102.75	35.28	73.77
1963	12.08	42.61	10.42	4.34	4.17	127.71	107.55	97.17	195.00	25.63	13.21	29.15	55.54
1964	11.56	26.66	24.76	10.66	7.02	7.83	43.82	108.79	68.99	56.07	130.79	122.60	51.58
1965	22.03	23.09	6.03	3.97	3.78	15.24	517.78	40.14	61.64	29.71	78.61	66.84	40.84
1966	15.05	16.77	10.25	7.53	94.20	20.72	22.49	42.55	63.89	22.65	15.19	112.98	38.96
1967	111.04	18.55	28.19	27.88	50.98	49.06	20.23	157.86	58.95	34.58	72.54	32.48	55.49
1968	12.90	16.09	33.04	36.09	25.41	19.71	27.92	86.53	109.79	69.90	3.72	3.99	37.15
1969	1.59	1.07	1.11	2.49	8.28	5.69	28.45	161.90	50.73	26.09	1.66	3.96	24.80
1970	1.75	1.73	40.69	49.43	77.15		57.73	55.73	75.70	45.09	43.22	69.81	
1971	29.92	41.13	64.52				85.38	69.89	48.04	138.15	69.52	181.51	
1972	74.72	25.95	47.39	30.66	14.80	26.55		331.24	95.61	60.55	59.05	62.17	
1973							17.56	23.99	20.91	122.13	29.82	36.04	
1974	9.17	12.56	15.40	15.68	6.83	43.49	31.61	178.61	42.38	64.68	189.11	126.24	61.59
1975	33.34	24.98	28.61	33.83	33.25	30.92	19.86	43.36	43.23	43.58	31.63	31.86	33.07
1976	12.66	15.28	15.92	38.05	182.14	122.29	932.49	104.08	108.49	49.62	30.57		
1977	23.05	46.87	9.86	8.86	11.44	9.76	32.36	37.74	28.30	7.05	47.43	4.34	22.04
1978	4.20	5.92	6.87	17.67	13.55	21.42	17.48	104.32	97.66	201.75	135.30	16.86	53.41
1979	12.22	21.64		12.48	17.87	36.52	47.00	98.04	14.70	59.38	9.60	7.04	
MEAN	23.89	21.55	21.86	17.02	30.56	37.87	61.66	115.95	87.48	89.93	80.27	43.86	48.66

Note : Blank means that the data are not available

NATIONAL WATER RESOURCES BOARD

MEAN MONTHLY DISCHARGE DATA TABLE

STATION NAME : PAMPANGA RIVER, PASIG, CANDABA, PAMPANGA

DRAINAGE AREA : 7468 sq.kms.

PERIOD OF TARGET YEARS : 1958 to 1972

MEAN MONTHLY DISCHARGE, IN CUBIC METER PER SECOND

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1958										341.89	151.23	53.69	
1959	45.93	47.89	87.51	56.26	68.44	79.47	88.07	296.27	535.56	242.39	293.69	141.53	153.75
1960	82.65	77.88	62.72	66.09	70.90	150.44	326.47	1002.90	792.84	803.26	143.63	64.28	308.20
1961	54.53	38.72	43.15	53.35	87.61	195.91	619.31	878.43	857.79	513.00	149.84	71.25	306.59
1962	58.80	49.55	50.80	87.83	72.25	87.89	459.59	654.57	843.91	379.01	167.47	82.16	250.84
1963	49.66	50.86	52.73	58.69	69.07	391.75	622.40	607.23	895.18	180.44	28.26	83.35	258.22
1964	48.53	47.13	49.52	58.62	74.84	65.62	345.59	717.74	495.50	612.74	661.49	537.12	312.49
1965	114.45	69.32	63.26	68.79	88.39	188.33	803.38	457.42	587.35	314.83	214.80	50.54	254.71
1966	25.58	24.29	25.83	29.76	447.66	259.59	277.81	453.94	698.86	116.11	461.78	360.84	266.09
1967	109.76	26.14	27.25	32.08	39.45	142.98	251.55	962.43	919.74	642.81	412.47	31.44	301.25
1968	22.35	21.54	22.61	28.62	32.72	41.27	134.93	547.34	643.67	420.40	42.55	92.71	187.93
1969	50.47	50.17	56.77	77.91	87.59	104.99	200.26	677.49	451.18	284.21	98.12	68.64	185.18
1970	44.49	47.14	50.93	61.75	75.35	150.58	194.03	338.12	505.93	593.47	610.51	217.34	274.27
1971	68.45	53.37	82.22	51.03	45.26		611.75	836.18	167.99	793.01	256.06	330.05	
1972	312.58	94.43	88.03	85.96	68.92	88.87	989.69	1141.10	824.67	91.54	104.76	68.02	315.45
MEAN	77.80	51.09	53.12	56.98	94.69	153.75	448.27	655.08	687.15	421.95	252.51	150.27	260.35

Note : Blank means that the data are not available

NATIONAL WATER RESOURCES BOARD

MEAN MONTHLY DISCHARGE DATA TABLE

STATION NAME : PAMPANGA RIVER, SAN AGUSTIN, ARAYAT, PAMPANGA

DRAINAGE AREA : 6487 sq.kms.

PERIOD OF TARGET YEARS : 1957 to 1996

MEAN MONTHLY DISCHARGE, IN CUBIC METER PER SECOND

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1957	120 33	54 31	33 94	27 59	17 59	95 14	337 85	426 79	617 59	298 78	455 55	75 03	213 74
1958	58 04	37 18	27 02	13 15	17 79	151 73	245 23	292 81	760 19	354 64	132 55	51 85	178 82
1959	43 37	40 36	61 96	31 51	36 17	35 27	35 80	284 75	471 88	230 87	263 49	132 43	139 90
1960	75 31	82 16	36 43	23 66	26 58	183 15	260 82	1330 71	726 03	298 19	126 27	55 80	314 39
1961	51 92	30 21	31 19	17 13	68 95	177 15	905 92	633 11	771 92	421 49	116 07	55 66	275 42
1962	47 31	29 70	19 65	18 04	15 20	23 84	585 06	530 28	802 17	434 35	158 27	86 64	235 71
1963	50 95	56 06	29 59	20 63	17 08	387 13	820 00	607 72	912 46	185 21	54 71	100 92	252 44
1964	56 55	45 89	34 75	22 25	33 38	66 97	291 42	686 43	451 87	550 65	613 34	478 94	282 19
1965	132 48	84 58	39 32	27 33	39 37	158 29	815 23	416 57	553 66	295 70	223 81	88 02	243 93
1966	50 65	43 04	24 42	11 14	558 87	252 10	275 13	443 60	750 69	108 10	480 16	371 41	281 82
1967	136 52	55 19	28 11	17 08	13 68	228 93	279 70	954 64	867 93	569 47	427 60	62 08	318 44
1968	42 84	26 83	35 93	32 19	37 99	57 30	163 90	598 18	906 90	396 10	45 03	87 03	202 84
1969	33 48	18 91	10 79	11 48	12 58	40 90	172 23	686 96	422 64	260 42	99 28	85 92	155 87
1970	42 61	26 52	18 76	28 54	17 56	118 15	189 69	418 35	877 01	627 54	390 58	203 27	247 75
1971	68 82	43 01	44 01	23 78	74 80	464 66	691 62	437 74	312 65	1835 18	372 32	388 77	400 14
1972	368 96	122 21	69 33	52 97	58 99	124 78	1620 95	1398 29	592 65	129 77	141 81	83 46	401 89
1973	7 72	8 00	3 90	5 55	4 03	7 57	16 65	161 87	203 31	965 54	157 57	18 23	128 93
1974	9 15	6 89	6 82	5 51	5 88	112 21	176 56	906 85	95 52	591 88	740 92	137 65	234 77
1975	78 72	64 65	59 62	75 73	122 54	134 58	161 83	694 75	167 36	268 96	104 75		
1976	121 43	68 89	45 81	51 17	51 74	68 96	57 87	148 65	209 31	363 99	78 19	168 94	121 75
1977													
1978	55 30	23 60	5 23	5 19	852 94	806 85							
1979											218 95	104 39	
1980													
1981												137 02	
1982	109 33	97 84	79 10	131 71	81 49	87 91	499 06	640 11	465 36	181 98	152 62	102 24	213 40
1983	99 21	61 52	52 01	35 10	40 74	42 26	114 17	232 41	114 61	370 11	144 73	43 72	113 28
1984	38 45	34 57	29 09	33 86	127 27	220 87	239 51	479 54	511 46	368 27	337 91	65 10	200 25
1985	51 35	52 55	52 40	61 10	68 11	643 44	844 97	530 56	142 27	474 24	121 50	101 45	230 53
1986				64 93	83 99	128 93	405 81	570 73	822 12	727 00	273 88	172 67	
1987	88 70	64 44	52 79	52 10	40 57	55 78	97 57	424 97	431 75	107 39	114 24		
1988	62 51		34 45				165 93	264 11	117 38	609 83	768 57	28 47	
1989	48 78	45 87	52 34	91 62	138 69		332 22	773 28	578 75	472 04	296 43	75 32	
1990	55 84	49 92	38 34	44 90	52 45	436 00	696 01	728 09	1041 63	310 91			
1991	57 25	50 10	47 93	43 47	59 58	395 09	88 11	459 24	677 21	480 79	130 15	47 22	210 77
1992	63 79	63 14	51 69	83 52	54 14	61 73	420 99	558 39	972 62	416 24	181 95	93 71	250 42
1993	79 75	57 26	63 31	70 49	54 76	105 06	212 33	426 41	259 89		427 30	240 99	
1994	106 94	77 15	72 96	72 07	73 01	79 45	559 17	519 74	643 85	257 71	87 53	111 46	222 95
1995	95 34	79 87	68 84	56 38	72 75	93 28	178 66	303 90	740 97	814 64	525 17	276 00	279 06
1996	95 80	63 32	65 72	91 42	109 10	93 33	267 68			193 03			
MEAN	77 26	51 34	40 72	40 89	89 26	172 91	370 74	560 33	553 64	457 43	263 77	132 81	235 02

Note : Blank means that the data are not available

NATIONAL WATER RESOURCES BOARD

MEAN MONTHLY DISCHARGE DATA TABLE

STATION NAME : SANAYSAYAN RIVER, PALUBUBAN, GEN. TRIAS, CAVITE

DRAINAGE AREA : 29 sq.kms.

PERIOD OF TARGET YEARS : 1957 to 1995

MEAN MONTHLY DISCHARGE, IN CUBIC METER PER SECOND

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1957						0.19	0.87	1.28	0.87	2.38	0.22	0.14	
1958	0.18	0.13	0.10	0.11	0.11	0.57	2.64	2.60	1.75	0.78	0.31	0.17	0.79
1959	0.11	0.12	0.13	0.11	0.13	0.15	0.29	0.74	0.27	0.20	0.26	0.17	0.22
1960	0.26	0.15	0.15	0.20	0.54	2.24	0.43	5.09	1.62	4.71	0.34	0.21	1.34
1961	0.21	0.20	0.20	0.25	0.29	2.65	1.22	1.96	1.27	0.80	0.85	0.24	0.85
1962	0.20	0.14	0.14	0.17	0.17	0.23	5.20	7.71	0.44	0.40	0.25	0.21	2.03
1963	0.20	0.20	0.24	0.36	0.46	1.76	1.19	1.50	0.53	0.65	0.21	0.21	1.37
1964	0.13	0.11	0.12	0.18	0.21	0.72	0.64	2.27	2.58	0.69	0.52	0.73	2.04
1965	0.21	0.15	0.14	0.10	0.27	0.41	1.71	0.61	0.79	0.87	0.25	0.20	0.48
1966	0.18	0.16	0.17	0.13	2.47	0.56	1.13	0.72	3.27	0.39	1.76	2.98	1.19
1967	0.67	0.33	0.16	0.14	0.12	1.69	2.62	2.24	1.42	0.75	1.32	0.42	0.98
1968	0.20	0.18	0.13	0.15	0.33	0.59	1.42	2.44	2.05	0.65	0.17	0.20	0.73
1969	0.18		0.65	0.42	0.17	0.24	1.17	1.17	0.85	0.75	0.23	0.19	
1970	0.14	0.14	0.14	0.14	0.15	1.01	0.90	1.04	3.05	4.64	4.61	0.26	1.35
1971	0.14	0.13	0.17	0.13	0.27	3.09	4.74	1.46	0.97	4.16	0.55	1.34	1.44
1972	0.73	0.21	0.10	0.08	0.50	1.79	6.17	2.90	1.08	0.23	0.29	0.22	1.17
1973													
1974													
1975													
1976													
1977													
1978													
1979													
1980													
1981													
1982												0.26	
1983	0.20	0.24	0.19	0.15	0.19	0.27	1.10	1.25	0.44				
1984	0.18	0.18	0.11	0.08	0.66	2.72	0.51	4.29	0.54	1.63	0.44	0.24	0.97
1985	0.18	0.22	0.23	0.22	0.22	5.74		1.32	0.58	1.63	0.33	0.25	
1986	0.25	0.25	0.21	0.16	0.25	0.25	1.56	2.99	2.35	2.78	1.36	0.41	1.08
1987	0.31	0.24	0.14	0.10	0.16	0.21	0.25	0.90	2.58	0.38	0.52	0.38	0.51
1988	0.29	0.22	0.18	0.16	0.21	2.21	1.10	0.89	0.41	4.48	2.14	0.28	1.05
1989	0.27	0.27	0.30	0.22	0.68	0.57	1.40	1.81	1.82	1.77	0.27	0.24	0.61
1990	0.23	0.19	0.14	0.12	0.19	1.05	0.81	3.47	1.78	0.88	0.89	0.26	0.83
1991	0.17	0.09	0.14	0.06	0.12	0.18	1.16	6.56	1.31	0.74	1.06	0.25	1.00
1992	0.20	0.23	0.25	0.26	0.16	0.13	0.65	1.30	1.36	0.29	0.44	0.23	0.48
1993	0.17	0.13	0.09	0.07	0.06	0.32	0.33	1.76	0.81	0.93	0.54	3.56	0.74
1994	0.32	0.21	0.25	0.27	0.29	0.72	3.93	1.21	0.34	1.33	0.34	0.24	0.80
1995	0.08	0.06	0.18	0.20	0.21	0.29	0.40	0.63	2.38	1.75	2.46	0.44	0.76
MEAN	0.24	0.18	0.19	0.17	0.34	1.33	1.94	2.23	1.96	1.50	0.82	0.52	1.00

Note : Blank means that the data are not available

NATIONAL WATER RESOURCES BOARD

MEAN MONTHLY DISCHARGE DATA TABLE

STATION NAME : CAGURAY RIVER, OTOYAN, SAN JOSE, OCCIDENTAL MINDORO

DRAINAGE AREA : 136 sq.kms.

PERIOD OF TARGET YEARS : 1956 to 1969

MEAN MONTHLY DISCHARGE, IN CUBIC METER PER SECOND

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1956				75.07	101.46	140.88	177.83	350.75	356.00	277.93	149.52	121.10	
1957	12.79	2.01	1.12	0.80	0.71	2.43	82.58	71.19	67.26	49.50	28.65	2.58	27.06
1958	1.13	1.12	0.73	0.57	3.57	3.02	25.48	27.45	55.53	42.28	13.70	1.45	14.72
1959	1.09	1.25	0.86	0.76	0.73	0.82	34.54	22.50	12.80	3.78	13.77	25.00	8.92
1960	35.61	10.58	7.45	5.78	4.97	35.81		25.34	100.81	28.65	5.06		
1961	2.40	0.87	1.04	1.18	10.54	15.63	36.48	59.58	24.51	7.13	8.09	1.80	14.08
1962	0.78	0.71	0.83	0.76	2.75	9.21	32.27	38.35	68.64	6.82	30.96	3.68	15.50
1963	1.06	0.73	0.64	0.49	0.43	13.81	6.48	12.87	12.34	7.45	5.37		
1964	1.20	0.68	0.59	0.54									
1965	2.23	1.28	0.68	0.63	1.00	3.70	14.49	2.31	20.10	8.50	4.93	3.74	5.73
1966	2.35	1.91	1.52	1.07	17.38	8.59	15.63	13.87	12.83	7.15	9.05	8.72	8.40
1967	8.63	6.07	4.93	4.37	4.18	9.57	13.79	26.37	9.45	8.14	7.98	0.93	8.56
1968	0.45	0.38	0.34	0.28	0.40	0.72	5.25	19.69	9.27	6.95	0.60		
1969	0.27	0.27											
MEAN	5.34	2.14	1.74	7.10	12.34	19.67	40.65	56.02	62.46	37.66	22.97	18.77	13.00

Note : Blank means that the data are not available

NATIONAL WATER RESOURCES BOARD

MEAN MONTHLY DISCHARGE DATA TABLE

STATION NAME : BICOL RIVER, STO. DOMINGO, NABUA, CAMARINES SUR

DRAINAGE AREA : 905 sq.kms.

PERIOD OF TARGET YEARS : 1960 to 1995

MEAN MONTHLY DISCHARGE, IN CUBIC METER PER SECOND

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1960	113.88	35.75	16.88	16.79	23.88	58.52	74.76	41.03	24.50	123.66	69.14	33.73	53.26
1961	20.70	12.77	11.67	11.17	12.68	19.85	50.63	58.49	68.75	64.50	42.81	57.60	36.16
1962	30.66	15.82	15.13	14.46	24.98	43.75	59.98	53.71	66.74	60.38	44.70	38.56	39.23
1963	15.12	12.94	11.34	10.85	10.71	13.69	37.29	98.36	80.30	48.85	27.13	23.06	32.63
1964	21.55	14.31	12.35	11.51	11.99	12.34	27.13	28.94	38.57	102.04	67.91	105.02	38.00
1965	56.30	38.45	21.03	18.02	24.11	58.14	122.06	72.41	83.71	43.99	35.78	41.96	49.67
1966	43.01	16.47	11.64	9.39	8.97	9.36	23.22	44.78	35.17	20.37	20.31	37.21	23.18
1967	19.25	43.71	27.63	12.64	10.10	8.72	17.61	60.31	85.35	60.70	120.78	29.89	41.67
1968	15.45	22.14	11.01	8.16	8.76	6.90	10.85	45.60	29.66	46.89	14.19	7.95	18.99
1969	4.48	3.67	3.19	2.09	2.49	5.81	20.29	21.63	18.49	18.65	15.85	51.20	14.09
1970	39.51	87.72	42.16	10.01	8.65	4.64	23.81	59.67	57.23	140.60	152.10	110.22	53.14
1971	47.32	35.43	53.75	23.05	45.79	60.39	94.98	35.80			33.56	70.68	
1972	132.69	73.72						44.90	67.90	37.66	23.59	22.99	
1973	37.48	10.52					7.81	16.99	37.70	122.73	73.72	125.82	
1974	66.86	19.66	12.47	10.02	8.20	59.67	51.56	41.58	18.15	30.10	74.05	82.01	38.00
1975	47.05	15.86	10.58		11.25	12.13	19.48	31.71			23.33	39.19	
1976	95.25	26.41	15.58	9.19	20.16	41.47	70.04	68.12	58.38	50.17	49.13	123.05	51.93
1977	74.11	26.62	50.52	48.13	47.81	48.09	61.80	61.55	60.58	54.44	72.57	55.95	57.04
1978	11.55	7.22	8.37	7.67	7.35	13.36				84.13	65.17	26.18	
1979													
1980													
1981													
1982	52.16	39.49	20.53	20.97	15.17	17.14	54.28	73.66	121.45	27.06	32.21	34.66	48.40
1983	21.55	12.63	7.07	3.93	3.17	3.50	48.70	39.37	24.95	56.59			
1984	38.58	31.79	26.43	14.41	20.06	25.12		50.88	63.03	74.22	54.64	60.26	
1985	33.54	30.78	11.73	12.00	10.25	11.83	60.25	51.70	34.26	101.16	83.75	63.42	42.22
1986		23.42	11.65	19.20	11.33		33.75	72.24	37.20				
1987	14.21	8.54	8.53		3.19	6.25	38.38	55.44	89.73	36.77	72.66	154.20	
1988							29.11	23.07	28.16	123.16	205.43	88.21	
1989	72.82	144.54	80.73	36.34	33.82	59.83	67.87	38.01	42.92	64.02	32.75	48.48	59.66
1990	47.31	17.66	9.11	6.95	5.58	22.64	70.12	65.26	22.65	31.38	49.35		
1991	21.53	10.21	11.92	8.26	7.61	42.38		55.42	58.03	21.04	25.92	35.94	
1992	17.86	11.54	4.21	0.38	0.22	0.48	45.06	47.33	52.84	44.10	24.35		
1993	13.09	7.60	6.31	3.20	2.05	2.20	14.10	36.76	88.82	35.73	48.41	169.26	35.69
1994	126.75	56.88	14.97	15.69		34.96	154.15	63.77		49.43			
1995	51.45	19.21	9.75	9.80	14.01	29.32	34.11	63.65	93.29	57.78	115.93	188.18	54.32
MEAN	44.58	26.92	17.54	13.38	14.32	25.98	48.66	50.69	54.09	63.07	59.30	68.62	41.44

Note : Blank means that the data are not available

NATIONAL WATER RESOURCES BOARD

MEAN MONTHLY DISCHARGE DATA TABLE

STATION NAME : PAYO RIVER, SAN MIGUEL, PANGANIBAN, CATANDUANES

DRAINAGE AREA : 29 sq.kms.

PERIOD OF TARGET YEARS : 1957 to 1995

MEAN MONTHLY DISCHARGE, IN CUBIC METER PER SECOND

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1957	11.92	2.82	1.51	2.77	0.67	0.41	9.89	1.15	2.22	10.83	24.57	4.72	6.12
1958	4.80	4.10	1.44	1.27	4.67	1.37	1.01	2.30	1.45	20.76	3.84	7.85	4.80
1959	5.15	2.71	4.92	0.79	3.70	0.23	0.73	0.38	0.21	0.36	12.45	9.31	3.41
1960	3.42	1.26	1.85	1.03	0.84	1.36	0.90	1.17	2.67	8.67	15.80	5.10	3.65
1961	10.62	0.88	2.75	1.74	1.68	1.12	0.79	1.55	6.97	1.79	8.90	22.68	5.02
1962	2.88	2.88	2.18	1.35	3.89	2.69	1.69	0.15	1.31	0.65	1.07	3.03	1.98
1963	6.43	5.67	0.61	0.25	1.06	7.62	3.61	13.18	3.20	2.36	4.10	8.50	4.74
1964	3.60	1.83	1.15	1.05	0.99	0.95	5.27	1.19	1.98	7.92	8.44	17.57	4.36
1965	6.69	2.01	2.09	0.79	4.86	1.51	5.32	3.50	1.37	3.45	8.14	8.59	4.05
1966	7.16	3.60	2.65	0.94	1.22	0.73	3.55	1.25	0.38	2.87	5.24	12.65	3.52
1967	6.04	2.72	1.53	3.32	0.78	0.79	2.15	2.68	2.29	3.87	4.45	11.43	3.52
1968	10.89	5.67	4.08	1.68	1.30	1.05	1.68	1.41	2.66	2.99	1.71	4.83	3.33
1969	0.49	0.39	0.14	0.75	1.08	0.73	1.20	2.07	1.53	3.89	22.74	7.21	3.51
1970	7.28	5.67	11.87		0.51	0.69			6.51	27.35	23.67	0.69	
1971	0.80	3.37	1.77	0.79	9.64	4.97	0.74	0.63	0.82	8.13	2.32		
1972													
1973					0.26	0.25					2.04	2.74	
1974		3.41	1.04	0.83	1.13	2.26	0.93	0.72	0.54	1.70	2.52	3.31	
1975	2.18										1.77	4.43	
1976	1.24	0.57						0.42					
1977					0.75	0.74			1.17				
1978													
1979													
1980													
1981													
1982							1.52	0.41	1.04	1.12	4.09	4.11	
1983	1.47	0.99	0.53	0.34	0.27	0.23	0.63	0.90	0.96	1.86	9.93	7.54	2.14
1984	4.76	3.64	2.69	0.98	0.62	0.53	0.56	0.37	0.75	1.27	4.65	5.60	2.20
1985	7.17	2.62	1.39	0.74	1.29	1.02	0.92	0.33	1.59	6.60			
1986	3.98	2.41	1.50										
1987	1.48	1.06	0.68	0.38	0.19	0.15	1.77	1.06	0.34	0.32	3.80	7.04	1.55
1988								0.31	0.39	3.93	2.97	7.09	
1989	4.64	4.74	3.20	1.45	0.92		0.52	0.17	0.14	1.36	2.21		
1990	1.71	0.82	0.24	0.13	0.13								
1991	3.70		0.58	0.26	0.20	1.29	0.53	0.18	0.05				
1992	3.23	0.89	0.14	0.07	0.06	0.05	0.36	0.22	0.14	1.68	1.83	1.29	0.82
1993	1.10	1.51	1.13	0.17	0.06	0.68	0.41	0.06	0.20	2.04	4.08	4.12	1.30
1994	1.36	0.54	0.15	0.13	0.04	14.18	12.66	4.63	8.30	45.71	38.14	49.85	14.43
1995	45.63	47.01	26.99	0.96	1.03	3.09	4.56	5.01	6.68				
MEAN	6.04	4.11	2.96	0.96	1.51	1.89	2.69	1.69	1.97	6.62	8.17	8.90	3.91

Note : Blank means that the data are not available

NATIONAL WATER RESOURCES BOARD

MEAN MONTHLY DISCHARGE DATA TABLE

STATION NAME : PANAY RIVER, STA. RITA, CUARTESO, CAPIZ

DRAINAGE AREA : 880 sq.kms.

PERIOD OF TARGET YEARS : 1957 to 1995

MEAN MONTHLY DISCHARGE, IN CUBIC METER PER SECOND

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1957	166.15	30.37	13.87	35.09	11.38	25.84	76.06	87.95	45.37	63.37	44.16	19.30	50.20
1958	24.14	12.38	10.43	15.79	18.15	37.08	50.71	84.02	31.14	156.17	137.43	51.70	51.03
1959	19.12	9.97	24.60	7.20	37.63	29.78	126.03	58.84	105.07	136.39	119.39	75.62	60.32
1960	21.61	26.18	12.86	58.31	27.58	67.88	80.16	64.96	39.68	104.04	157.55	59.04	59.64
1961	36.09	21.95	12.82	6.38	24.39	40.96	59.19	46.23	59.30	101.03	68.26	32.11	42.82
1962	35.31	27.81	28.44	9.59	8.50	51.11	102.91	112.11	198.94	43.07	122.60	101.94	70.21
1963	60.65	29.68	14.66	9.11	7.55	7.96	21.43	90.39	51.08	58.85	44.26	27.80	39.66
1964	25.03	14.79	6.89	6.57	25.95	9.04			104.62	51.51	145.03	101.99	
1965	85.11	27.87	44.83	22.78	13.55	43.59	62.53	51.35	49.41	66.10	24.77	90.26	52.78
1966	32.08	13.15	8.21	6.57	53.81	51.99	92.08	100.93	130.97	168.30	194.31	84.58	78.19
1967	246.99	93.75	61.73	14.64	9.97	14.52	33.15	27.10	47.45	57.11	113.08	31.13	60.52
1968	25.59	24.14	39.81	48.82	47.79	45.01	57.51	47.43	37.38	103.98	131.64	21.74	48.85
1969		5.87	3.64	2.06	3.62	26.21	102.11	39.99	54.88	44.78	55.05	153.72	
1970	14.00	35.02	33.95	16.01	3.45	25.98	127.66	25.57	38.89	54.03	133.78	101.56	49.58
1971	47.71	58.50	23.84	6.27	45.31	178.88	55.93	24.02			89.94	55.98	
1972													
1973	33.47	31.13	26.22	20.45	9.73	14.33	22.09	39.20	149.77	91.78	470.22	247.58	125.12
1974	103.45	137.87	68.17	14.72	19.32	29.74		29.95	36.54	66.37	46.63	47.04	
1975	45.31	84.65	27.81	16.37	8.20	85.16	58.76	88.71	122.50	73.75	60.81	133.03	66.90
1976	82.45	67.13	18.68	37.84	52.39	67.67	43.32	233.03	47.48	14.98	99.20	85.83	71.54
1977	38.79	21.06	29.97	5.44	13.02	66.69	62.30	49.54	50.92	49.29	69.32	44.15	41.82
1978	25.60	37.44	7.05	27.55	53.35	76.21		12.37	29.62	58.48	87.44	93.14	
1979	24.99	2.96	1.58		34.30	205.00	129.56	94.01	54.70	75.43	220.54		
1980													
1981													
1982													
1983													
1984	13.54	7.29	43.83	21.65	55.22	65.24	44.71	23.24	97.33	106.30	127.39	85.94	60.52
1985	72.20	55.61	34.25	26.42	53.03	45.78	75.42	47.47	123.09	87.99	114.31	98.28	69.60
1986	104.81	47.45	37.44	18.80	17.92	61.74	60.27	39.57	42.30	99.37	102.55	37.51	55.87
1987	38.60	25.98	8.38	3.03	3.24	10.93	27.54	41.97	36.15	33.58	85.80	61.52	31.24
1988	14.15	5.57	2.89	5.37	3.87	37.22	55.84	32.22	37.23	66.65	203.53	74.68	46.54
1989	64.55	64.99	53.52	26.81	37.68	63.81	69.54	39.10	120.81				
1990	20.70	20.05	12.35	7.84	67.70	86.62	81.80	115.83	75.72	108.09	160.75	56.47	68.06
1991	29.23	48.97	69.76	63.89	70.29	79.52	115.83	87.52	98.07	122.00	133.59	106.25	85.63
1992	69.65	44.93	31.10	35.96	63.32	84.07	120.24	119.87	78.36	87.77	156.36	102.44	82.82
1993	77.42	78.04	76.65	55.73	45.10	83.05	108.62	139.55	137.62	120.67	135.20	203.43	102.81
1994	128.00	86.02	73.68	91.03	117.74	179.81	118.64	117.80	145.83	127.71	98.87	139.17	118.63
1995	121.33	67.73	48.76	38.83	80.15	130.31	112.42	145.85	164.70	175.23	135.71	231.00	121.18
MEAN	58.06	40.33	29.24	23.69	33.68	62.23	75.76	71.45	80.03	86.38	123.18	90.87	67.12

Note : Blank means that the data are not available

NATIONAL WATER RESOURCES BOARD

MEAN MONTHLY DISCHARGE DATA TABLE

STATION NAME : JALAUR RIVER, CALIAN, POTOTAN, ILOILO

DRAINAGE AREA : 1499 sq.kms.

PERIOD OF TARGET YEARS : 1957 to 1995

MEAN MONTHLY DISCHARGE, IN CUBIC METER PER SECOND

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1957	131.07	24.03	7.41	22.39	5.59	11.41	95.30	138.53	77.02	68.08	37.30	16.06	53.34
1958	27.21	21.12	13.01	12.12	14.46	24.88	66.39	75.59	34.44	157.77	102.93	35.44	43.93
1959	19.23	11.27	25.29	5.93	21.49	43.49	127.48	107.04	73.76	136.64	131.00	61.93	65.74
1960	38.70	30.24	14.93	48.18	32.88	127.35	120.78	118.60	99.83	206.74	175.76	54.78	88.13
1961	21.24	14.59	4.51	2.61	27.67	71.40	108.34	109.34	54.83	69.49	165.49	133.51	65.60
1962	111.55	129.91	14.15	2.37	1.97	31.21	147.68	152.29	224.90	104.37	68.28	39.92	85.70
1963	22.63	18.90	18.04	17.24	16.75	16.69	16.83	70.50	169.13	81.87	38.47	54.43	45.18
1964	28.45	24.83	3.30	5.66	48.38	20.82	155.84	59.42	77.18	92.88	308.45	55.11	72.95
1965	33.94	14.60	45.82	59.14	4.59	51.22	110.71	84.73	66.48	237.35	47.26	157.66	76.88
1966	17.67	3.65	1.41	22.98	122.89	72.29	192.87	95.45	18.05	103.95	133.09	97.90	74.22
1967	197.79	102.26	22.16	3.66	0.79	15.89	71.29	65.21	84.75	140.30	119.57	9.29	67.82
1968	8.30	3.49	2.47	1.21	1.63	13.17	57.68	63.59	37.23	42.26	35.78	18.90	23.93
1969	5.09	0.66	0.39	0.42	0.65	2.36	124.05	48.51	86.04	82.74	32.64	84.11	39.21
1970	16.85	4.57	1.22	2.49	1.68	33.58	122.95	20.63	38.32	187.80	267.79	202.70	75.50
1971	74.12	113.35	39.13	19.69	140.51	256.66	200.82	40.57	104.42	269.59	176.47	79.79	126.22
1972	141.38	12.33	41.74	12.45	38.65	70.94		60.60	393.82	91.65	185.17		
1973	13.58	18.26	9.49	4.69	2.14	10.77	69.40	62.67		93.10	310.18	91.05	
1974	59.25	11.09	5.08	179.02	213.26	137.76	61.29	54.96	68.43	407.91	85.25	57.61	112.51
1975	41.48	50.34	3.86	50.81	40.94	64.38	58.50	17.87	112.50	78.60	34.85	37.34	49.13
1976	10.36	20.00	6.89	7.28	25.81	108.81	45.80	93.05	62.89	18.36	56.35	121.81	49.78
1977	9.87	28.09	16.30	9.71	9.03	37.87	32.61	66.32	91.79	24.59	15.56	6.62	28.27
1978	1.59	2.34	6.24	3.44	2.42	132.45							
1979													
1980													
1981													
1982													
1983													
1984		33.58	54.07	13.00	25.46	45.28	53.95	29.02	92.32	121.31	124.50	33.84	
1985	25.57	13.96	4.36	5.55	22.78	12.65	57.59	23.15	80.81	89.33	56.19	74.69	38.64
1986	61.01	24.69	10.34	11.84	7.92	55.72	79.84	103.44	53.95	89.60	81.54	23.03	50.45
1987	22.75	9.32	2.52	1.92	3.31	3.61	12.40	63.70	71.31	42.50	80.74	25.86	28.38
1988	5.86	2.86	2.79	8.47	5.33	35.30	61.22	22.18	47.94	158.35	245.97	27.42	51.83
1989	17.66	17.54	23.28	4.62			69.11	40.92	28.14	30.70	20.18	8.03	
1990	8.74	3.43	3.91	2.51	71.66	91.25	56.25	124.24	30.61	99.58	147.37	13.26	54.69
1991	4.06	8.42	8.96	3.83	2.59	14.25	51.28	37.22	11.61	29.03	21.14	6.71	16.53
1992	3.57	1.92	1.35	2.67	2.15	12.62	41.35	34.45	0.99	6.47		0.83	
1993	0.24	0.17	2.79	1.73	1.08	2.24	54.81	15.53	12.71	20.17	51.80	197.65	30.46
1994	12.17	5.84	1.27		14.65	68.98	46.70	31.07	26.12	43.66	2.94	12.34	
1995	6.72	1.28	0.81	0.22	5.06	10.09	16.65	53.74	55.02	213.18	23.90	88.50	40.10
MEAN	36.33	22.97	12.19	16.42	28.25	51.74	80.68	66.06	74.93	110.45	105.06	60.81	57.86

Note : Blank means that the data are not available

NATIONAL WATER RESOURCES BOARD

MEAN MONTHLY DISCHARGE DATA TABLE

STATION NAME : JALAUR RIVER, SIMSIMAN, CALINOG, ILOILO

DRAINAGE AREA : 169 sq.kms.

PERIOD OF TARGET YEARS : 1957 to 1979

MEAN MONTHLY DISCHARGE, IN CUBIC METER PER SECOND

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1957	42.27	12.57	5.90	9.58	5.17	5.64	24.24	21.85	18.29	11.29	12.07	7.22	14.75
1958	10.47	9.51	8.64	9.88	5.35	5.97	10.58	8.84	8.44	20.30	22.68	10.85	10.80
1959	9.88	4.37	12.38	3.76	8.82	12.60	23.27	12.72	20.77	12.82	32.92	22.31	14.80
1960	15.28	23.07	8.49	27.85	13.64	25.30	17.33	26.77	20.85	35.28	41.06	14.81	22.44
1961	11.42	13.24	3.76	4.72	9.58	20.19	25.58	42.45	18.50	27.11	25.93	27.70	19.25
1962	12.23	14.18	10.95	7.95	8.35	28.54	39.87	29.19	29.17	18.93	35.06	33.98	22.25
1963	26.19	16.94	6.82	8.06	15.38	16.56	21.68	34.37	23.69	14.68	12.88	32.57	19.06
1964	12.87	23.43	8.26	8.19	19.45	29.40	36.17	24.75	18.55	26.40	74.84	16.44	23.74
1965	17.31	9.89	14.34	6.26	3.18	9.16	19.40	21.80	13.33	33.10	10.08	43.45	16.91
1966	11.34	2.45	1.93	2.48	9.72	19.18	22.61	16.19	8.14	29.18	18.21	21.96	13.22
1967	45.69	27.93	16.09	3.98	2.25	6.66	18.61	15.02	11.67	24.52	29.02	9.77	17.47
1968	10.09	5.35	3.15	2.30	3.34	8.70	20.42	19.36	8.02	8.66	25.31	10.72	10.47
1969	3.92	1.65					8.43	8.72	14.84	11.91	11.60	27.67	
1970	9.58	6.26	2.99	2.71	4.00	10.64	24.27	5.54	7.97	58.27	73.42	32.27	20.00
1971	35.24	33.28	0.85	1.03	12.29	18.58	25.41	17.42	12.10	47.29	33.54	20.09	21.38
1972	38.79	8.26	25.20	114.57	8.24	15.49	18.35	12.85	45.56	20.87	14.01		
1973	20.94	13.53	9.77	19.12	12.83	13.05	9.55	20.48	21.31	10.13	15.71	4.14	14.18
1974	2.73	1.40	0.54	0.45	0.50	1.20	0.68	0.70	0.65	1.38	1.06	1.67	1.08
1975		1.29	0.53	24.64	0.95	1.04	0.81	15.54	17.40	24.22	8.10	21.51	
1976	19.63	9.38	9.33	5.45	39.66	16.18	15.70						
1977			2.24	1.24	1.89	7.18	10.23	2.59	9.89	5.58	2.90	2.69	
1978	2.43	0.98	0.73	0.57		10.36	9.81	9.40	13.93	9.61	20.26		
1979	5.33	5.33	1.03	0.59									
MEAN	17.32	11.09	7.00	11.88	8.79	12.88	18.28	17.45	16.14	21.30	24.78	19.05	16.36

Note : Blank means that the data are not available

NATIONAL WATER RESOURCES BOARD

MEAN MONTHLY DISCHARGE DATA TABLE

STATION NAME : ILOG RIVER, PANDAN ORONG, KABANKALAN, NEGROS OCCIDENTAL

DRAINAGE AREA : 1453 sq.kms.

PERIOD OF TARGET YEARS : 1957 to 1979

MEAN MONTHLY DISCHARGE, IN CUBIC METER PER SECOND

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1957	64.31	16.92	10.82	8.30	11.31	30.88	85.29	150.26	150.68	64.37	32.45	12.25	51.73
1958	8.34	6.79	5.92	8.83	15.64	24.93	33.51	62.27	97.64	75.43	104.59	26.21	39.06
1959	13.59	9.81	9.61	11.08	16.65	37.68	214.12	187.28	105.25	199.72	51.84	25.72	72.65
1960	12.86	11.21	9.00	14.28	32.11	129.56	105.84	113.49	122.38	208.72	56.92	16.21	68.34
1961	11.95	9.43	8.72	7.52	14.07	110.96	108.65	155.04	84.97	101.83	46.17	20.43	56.97
1962	13.11	10.57	9.85	24.43	12.54	45.80	175.48	211.37	107.98	56.76	53.27	35.56	63.79
1963	11.27	9.89	9.57	8.80	13.42	64.02	58.02	182.93	119.10	139.61	28.84	52.67	58.44
1964	24.74	23.87	16.31	23.82	79.98	100.15	141.54	90.61	146.88	113.70	258.63	99.47	92.99
1965	50.65	30.86	28.39	23.82	45.73	123.34	272.53	176.55	132.21	87.77	38.45	20.50	87.27
1966	12.16	10.30	7.10	9.92	61.55	92.29	165.49	117.16	99.59	130.70	106.43	84.43	75.26
1967	84.82	57.54	70.41	47.76	67.34	75.05	243.64	194.72	155.83	270.19	220.39	73.11	131.54
1968	60.21	58.99	54.10	53.01	87.84	112.87	174.36	194.52	194.31	135.99	170.82	45.50	111.73
1969	31.60	25.74	21.71	20.08	34.75	68.02	126.70	85.83	128.16	91.57	39.34	38.51	59.83
1970	25.56	22.76	18.77	15.98	23.72	71.70	143.88	93.05	72.87	216.37	69.04	32.62	68.14
1971	30.99	33.24		19.86	68.29	124.28	136.12	153.42	90.13	373.98	112.60	64.78	
1972	55.43	31.40	15.76	27.68	67.56	114.87		72.05	206.80	74.13	39.36	43.03	
1973	11.44	9.43	7.16	8.51	7.17	15.85	45.63	73.80	81.20	60.47	194.27	17.62	44.17
1974	15.87	15.25	12.30	10.58	14.43	73.44	88.27	37.66	28.95	610.81			
1975						15.51	25.88	93.25	16.45	38.96	8.00	8.28	
1976	7.65	7.33	6.59	6.75	79.18	17.87	88.26	74.02	89.90	172.20	7.11	6.66	45.66
1977	8.43	8.16	7.20	8.47	6.19	18.45	8.97	244.25	268.65	15.95	16.33	8.45	45.86
1978	6.70	5.83	5.30	5.00	10.06	20.21	47.75	42.39	91.58	131.29	65.55	11.21	37.13
1979	5.76	5.25	5.60	5.37	20.87	100.31	212.92	101.69	43.39				
MEAN	26.28	19.12	16.21	16.31	35.83	68.39	122.28	124.70	112.40	153.07	81.68	35.12	67.25

Note : Blank means that the data are not available

NATIONAL WATER RESOURCES BOARD

MEAN MONTHLY DISCHARGE DATA TABLE

STATION NAME : MAMBUSAO RIVER, TUMALAUD, MAMBUSAO, CAPIZ

DRAINAGE AREA : 307 sq.kms.

PERIOD OF TARGET YEARS : 1957 to 1972

MEAN MONTHLY DISCHARGE, IN CUBIC METER PER SECOND

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1957	41.48	14.76	8.11	23.77	6.19	9.45	22.11	16.84	11.31	23.71	19.53	8.88	17.21
1958	12.82	8.02	9.43	6.22	6.09	10.76	12.55	25.73	7.02	39.17	35.87	16.37	15.72
1959	6.87	4.21	10.95	3.91	8.04	13.92	28.73	14.84	8.10	21.31	30.27	24.09	14.68
1960	12.04	8.36	6.91	17.93	9.17	21.00	28.75	9.29	17.56	33.44	43.88	19.00	18.93
1961	8.21	3.89	2.65	2.24	4.63	17.58	13.57	10.52	16.78	53.25	20.41	7.57	10.88
1962	18.17	12.74	13.11	4.07	8.10	26.26	24.56	23.84	45.60	11.18	24.69	41.33	20.87
1963	24.82	5.07				1.79	5.54	18.80	25.21	15.73	18.08	27.68	
1964	8.03	7.41	4.41	6.46	9.25	11.37	8.08	9.27	23.30	26.30	57.71	19.43	15.70
1965	19.11	8.92	8.50	3.75	6.13	11.18	11.74	7.78	11.47	23.73			
1966	25.18	4.02	3.47	3.18	22.39	10.35	27.59	12.84	4.59	30.85	7.62	34.43	15.74
1967	69.87	14.04	9.55	2.72	2.41	4.73	4.25	3.62	3.36	16.53	11.16	3.91	12.24
1968	3.95	3.00	2.36	1.61	1.64	4.41	4.45	9.20	3.40	6.96	28.01	3.37	6.03
1969	2.15	1.83	1.17	0.54	0.84	9.12	25.90	6.39	22.35	16.11	15.59	18.48	10.08
1970	3.75	3.10	2.63	1.87	1.34	2.41	1.63	2.73	2.73	18.15		60.28	
1971	82.76	50.77	65.29	1.35	1.15	8.21	6.98	6.56	6.56	11.44	19.01	12.95	19.29
1972	13.97	5.27	5.25	1.81	1.82	6.84		13.83	12.82				
MEAN	20.82	9.71	10.23	5.44	5.81	10.42	14.96	12.01	14.06	23.19	25.52	21.27	14.75

Note : Blank means that the data are not available

NATIONAL WATER RESOURCES BOARD

MEAN MONTHLY DISCHARGE DATA TABLE

STATION NAME : CAGDAR RIVER, POBLACION, CAGDAR, CEGU

DRAINAGE AREA : 31 sq.kms.

PERIOD OF TARGET YEARS : 1957 to 1996

MEAN MONTHLY DISCHARGE, IN CUBIC METER PER SECOND

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1957	1.42	1.56	0.59	0.31	0.49	0.49	0.56	0.61	0.53	0.78	0.66	0.39	0.69
1958	0.23	0.18	0.32	0.28	0.31	0.31	0.33	0.31	0.31	0.43	0.34	0.66	0.34
1959	0.31	0.37	0.37	0.27	0.30	0.23	0.34	1.21	0.82	0.58	0.57	0.45	0.47
1960	0.38	0.32	0.25	2.62	1.37	0.83	0.57	0.33	0.86	0.20	0.24	0.22	0.68
1961	0.20	0.18	0.18	0.19	0.19	0.23	0.20	0.19	0.17	0.22	0.23	0.22	0.20
1962	0.21	0.22	0.23	0.23	0.18	0.20	0.33	0.60	0.33	0.29	0.39	0.45	0.31
1963	0.37	0.28	0.29	0.26	0.27	0.23	0.22	0.24	0.26	0.23	0.21	0.35	0.27
1964	0.37	1.09	0.40	0.41	0.49	1.45	2.33	0.59	0.44	0.65	1.83		
1965	0.92	0.29	1.18	0.56	0.44	0.59	0.39	0.44	0.44	0.86	0.78	0.33	0.60
1966	0.25	0.23	0.22	0.22	0.22	0.21	0.20	0.20	0.21	0.20	0.21	0.21	0.22
1967	0.77	0.65	1.12	0.74	0.68	0.60	0.52	0.37	0.27	0.25	1.37	0.55	0.56
1968	0.34	0.27	0.28	0.23	0.21	0.19	0.25	0.21	0.22	0.21	1.50	0.24	0.34
1969	0.24	0.22	0.23	0.25	0.26	0.26	0.27	0.19	0.21	0.27	0.20	0.19	0.23
1970	0.18	0.17	0.15	0.15	0.18	0.16	0.17	0.24	0.15	0.15	0.23	0.62	0.21
1971	0.61	0.19	0.19	0.18	0.19	0.62	0.78	0.22	0.48	1.45	0.75	0.46	0.51
1972	0.24	0.38	0.17	0.16	0.16	0.16	0.16	0.17	0.16	0.24	0.33	0.26	0.22
1973													
1974													
1975													
1976													
1977													
1978													
1979													
1980													
1981													
1982													
1983													
1984							0.14	0.13	0.32	0.20	0.27	0.34	
1985	1.02	0.18	0.12	0.11	0.11	0.13	1.34	0.10	0.15	1.43	0.43	0.28	0.45
1986	0.30	0.15	1.39	0.12	1.82	0.11	0.21	0.11	0.10	0.17	0.19	0.17	0.41
1987	0.23	0.18	0.15	0.14	0.13	0.13	0.13	0.16	0.12	0.19	0.29	0.18	0.17
1988	0.17	0.13	0.14	0.13	0.14	0.15	0.15	0.18	0.22	0.31	2.12	0.39	0.35
1989	0.43	0.43	0.38	0.48	0.35	0.37	0.45	0.31	0.30	0.40	0.40	0.30	0.38
1990	0.33	0.27	0.17	0.12	0.13	0.13	0.13	0.12	0.13	0.18	0.33		
1991		0.58	0.51	0.36	0.27	0.21	0.27	0.20	0.16	0.08	0.08	0.08	
1992	0.08	0.08	0.08	0.07	0.07	0.05	0.05	0.15	0.06	0.06	0.06	0.06	0.07
1993	0.06	0.07	0.08	0.05	0.04	0.02	0.02	0.03	0.02	0.03	0.05	0.17	0.05
1994	0.14	0.07	0.06	0.12	0.08	0.09	0.10	0.06	0.09	0.08	0.08	0.08	0.09
1995	0.07	0.06	0.06	0.07	0.06	0.06	0.06	0.17	0.15	0.28	0.18	0.19	0.12
1996	0.52	0.56	0.48	0.38	0.32	0.35	0.38	0.38	0.32	0.32	0.37	0.37	0.39
MEAN	0.38	0.34	0.35	0.33	0.33	0.31	0.39	0.28	0.27	0.37	0.51	0.30	0.34

Note : Blank means that the data are not available

NATIONAL WATER RESOURCES BOARD

MEAN MONTHLY DISCHARGE DATA TABLE

STATION NAME : LOBOC RIVER, TIGBAO, LOBOC, BOHOL

DRAINAGE AREA : 618 sq.kms.

PERIOD OF TARGET YEARS : 1957 to 1972

MEAN MONTHLY DISCHARGE, IN CUBIC METER PER SECOND

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1957	25.26	22.32	19.34	19.21	10.91	15.99	23.26	23.65	9.73	15.80	17.77	8.80	16.97
1958	9.26	8.73	8.04	7.92	8.07	10.73	17.80	18.74	15.96	14.74	18.87	9.26	12.37
1959	17.71	5.00	14.28	8.26	7.21	8.32	38.15	26.28	17.53	18.87	8.99	13.06	15.28
1960	18.30	12.57	10.22	13.67	13.88	19.92	25.82	9.55	29.09	27.51	27.54	19.47	19.04
1961	22.26	18.79	8.03	9.43	14.54	26.90	17.41	8.52	14.51	27.65	15.80	13.71	16.32
1962	14.78	28.52	23.97	9.63	9.45	24.74	29.13	28.94	41.54	27.37	31.11	17.84	23.86
1963	38.28	19.43	23.23	9.30	8.37	7.25	9.51	27.71	11.22	36.68	24.73	13.14	19.13
1964	8.09	24.15	9.29	8.13	26.63	15.93	30.34	8.30	18.89	24.59	66.50	29.62	22.48
1965	40.22	21.95	20.58	17.38	11.27	21.73	20.47	23.57	21.86	45.45	18.74	18.09	23.49
1966	9.40	7.71	7.06	7.12	11.21	21.81	48.87	28.07	14.17	30.57	26.60	25.23	19.94
1967	45.25	31.17	34.00	11.88	10.61	13.25	18.83	8.60	9.92	17.49	24.50	22.18	20.62
1968	19.88	16.88	8.78	7.84	13.20	16.89	18.85	13.16	15.44	19.13	20.26		
1969	10.70	9.12	8.55	8.46	8.85	13.74	20.75	12.79	12.92	17.10	11.48	15.76	12.59
1970	11.00	17.56	10.00	8.95	9.41	12.02	16.49	11.91	11.55	21.55	16.53	13.66	13.37
1971	14.51	18.76	13.37	10.63	21.47	24.48	19.06	14.24	21.53	27.66	25.40	13.49	18.68
1972	28.77	12.27	16.06	13.34	13.57	21.78		15.60	24.95	18.32	12.71	14.56	
MEAN	20.88	17.15	14.29	10.72	12.29	17.22	23.52	17.48	18.23	24.37	22.59	16.53	18.16

Note : Blank means that the data are not available

NATIONAL WATER RESOURCES BOARD

MEAN MONTHLY DISCHARGE DATA TABLE

STATION NAME : PITOGO RIVER, PITOGO, CONSOLACION, CEBU

DRAINAGE AREA : 40 sq.kms.

PERIOD OF TARGET YEARS : 1957 to 1977

MEAN MONTHLY DISCHARGE, IN CUBIC METER PER SECOND

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1957	0.27	0.31	0.18	0.17	0.14	0.36	0.16	0.13	0.08	0.24	0.08	0.08	0.18
1958	0.10	0.09	0.14	0.26	0.20	0.09	0.16	0.11	0.11	0.13	0.13	0.09	0.13
1959	0.07	0.08	0.08	0.07	0.07	0.10	0.14	1.31	0.83	0.52	0.12	0.17	0.30
1960	0.16	0.18	0.36	2.18	0.11	2.11	0.64	0.41	0.70	1.95	3.36	0.18	1.02
1961	0.17	0.14	0.12	0.11	0.25	0.12	0.33	0.34	0.65	0.84	0.12	0.14	0.28
1962	0.15	0.68	0.15	0.10	0.10	0.47	3.29	3.59	5.57	2.34	0.44	0.18	1.43
1963	0.42	0.12	0.11	0.11	0.11	0.11	0.23	7.23	0.35	3.83	2.25	0.10	1.26
1964	0.11	0.59	0.42	0.10	3.82	1.71	3.77	0.17	1.28	1.53	2.33	0.32	1.35
1965	0.25	0.39	1.05	0.15	0.17	0.93	0.18	2.85	0.56	0.26	0.25	1.03	0.68
1966	0.33	0.28	0.24	0.13	0.47	0.17	0.70	0.95	0.15	0.30	0.33	0.36	0.37
1967	4.22	0.32	0.18	0.16	0.15	0.13	0.54	0.16	0.42	0.13	0.18	0.20	0.58
1968	0.12	0.10	0.10	0.10	0.05	0.04	0.03	0.58	0.05	0.06	1.48	0.22	0.24
1969	0.13	0.09	0.06	0.07	0.04	0.05	0.05	0.05	0.06	0.06	0.05	0.04	0.06
1970	0.04	0.05	0.04	0.05	0.05	0.05	0.09	0.10	0.12	0.16	0.15	0.13	0.09
1971	0.14	0.10	0.07	0.02	0.09	0.42	0.24	0.06	0.06	1.13	0.52	1.32	0.35
1972	1.20	0.22	0.17	0.13	0.35	1.72	0.35	0.05	0.10	0.09	0.90	0.17	0.45
1973	0.04	0.03	0.00	0.01	0.00	0.01	0.02	0.02	0.03	0.02	1.63	0.84	0.22
1974	3.48	2.22	0.16	0.05	0.03	0.03	0.12	0.13	0.03	0.08	0.13	0.12	0.54
1975	0.12	0.10	0.09	0.05	0.07	0.08	0.08	0.09	0.12	0.12	0.12	0.13	0.10
1976	0.28	0.73	0.69	0.73	0.83	0.84	0.86	0.90	0.90	1.09	1.24	1.50	0.89
1977	1.71	2.71											
MEAN	0.64	0.45	0.22	0.24	0.35	0.43	0.89	0.96	0.60	0.75	0.79	0.37	0.52

Note : Blank means that the data are not available

NATIONAL WATER RESOURCES BOARD

MEAN MONTHLY DISCHARGE DATA TABLE

STATION NAME : WAWIG-PAMACSALAN RIVER, PILAR, , BOHOL

DRAINAGE AREA : 141 sq.kms.

PERIOD OF TARGET YEARS : 1977 to 1990

MEAN MONTHLY DISCHARGE, IN CUBIC METER PER SECOND

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1977												2.36	
1978	16.24	14.59	1.93	2.53	2.16	5.57	2.89	1.42	12.43	12.68	2.92	6.05	6.73
1979	4.11	1.45	0.96	0.74	1.41	8.10	5.24	1.88	1.94	2.96	2.30	4.38	2.97
1980	10.04	7.35	1.11	0.84	0.46	13.22	6.07	12.31	4.45	9.23	12.99		
1981	26.43	7.77	2.02	1.10	0.47	0.75	1.92	0.48	0.74	5.56	4.55	17.87	5.83
1982	5.33	13.29	6.38	1.60	0.79	1.51	4.46	7.71	1.28	3.31	2.59	1.85	4.13
1983	1.31	0.26	0.08	0.03	0.04	0.13	4.94	7.33	6.63	6.54	2.95	15.38	3.50
1984	5.17	8.25	2.68	1.34	1.24	0.88	1.41	0.92	24.18	7.01	10.34	18.18	6.43
1985	12.28	4.43	2.31	2.53	2.90	1.83	6.72	2.65	9.35	11.54	4.39	6.51	5.64
1986	20.41	4.75	3.51	2.97	2.90	5.26	6.55	3.25	5.92	7.52	8.38	8.75	6.41
1987	4.27	4.90	2.45	0.90	0.60	0.93	2.86	6.65	1.52	3.41	7.54	4.12	3.34
1988	1.17	1.92	0.75	1.10	0.63	1.89	3.16	3.47	2.78	5.33	12.74	10.24	3.79
1989	8.64	2.03	3.04	3.28	1.45	1.95	3.38	3.48	2.43	4.63	4.80	2.24	3.84
1990	13.42	2.05	0.84	0.35	0.85	1.68	2.60	5.77	4.89				
MEAN	9.91	5.85	2.18	1.49	1.24	3.36	4.03	4.41	6.03	6.64	6.21	7.43	4.79

Note : Blank means that the data are not available

NATIONAL WATER RESOURCES BOARD

MEAN MONTHLY DISCHARGE DATA TABLE

STATION NAME : DAGUITAN RIVER, POBLACION, BURAUEN, LEYTE

DRAINAGE AREA : 135 sq.kms.

PERIOD OF TARGET YEARS : 1957 to 1996

MEAN MONTHLY DISCHARGE, IN CUBIC METER PER SECOND

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1957									8.00	7.86	7.39	5.43	
1958	10.15	14.19	12.04	8.74	16.36	7.14	7.57	7.52	8.23	18.45	16.21	11.88	11.70
1959	11.10	12.15	14.18	9.51	12.36	9.29	10.81	8.22	7.31	6.73	15.74	21.41	11.58
1960	19.21	25.26	11.46	38.74	9.71	11.23	10.52	9.42	9.97	29.40	23.33	13.90	17.64
1961	12.89	17.91	9.26	7.62	11.12	7.16	8.32	7.89	6.27	6.80	18.53		
1962	20.50	22.01	25.85	12.43	30.84	19.04	21.89	34.09		18.76	20.95	24.19	
1963	37.53	32.11	17.99	10.14	8.47	7.80	8.32	12.68	8.03	8.61	9.82	8.40	13.87
1964	8.96	17.26	14.27	16.27	15.34	10.30	12.22	8.67	8.02	7.32	21.63	13.41	12.64
1965	18.41	20.29	23.61	15.31	11.65	9.77	10.12	8.74	8.60	9.63	10.27	33.65	15.03
1966	13.17	10.90	11.66	7.11	12.51	10.83	15.33	11.17	8.95	9.63	10.13	16.53	11.95
1967	49.19	28.63	29.43	12.50	10.26	8.49	8.88	8.60	8.32	12.13	29.05	12.24	17.36
1968	12.14	8.71	8.31	5.50	4.93	4.31	4.57	4.63	6.95	6.04	12.84	8.48	7.10
1969	8.43	7.14	6.35	6.04	5.75	5.44	7.30	6.85	6.22	7.23	9.25	19.11	8.31
1970	17.21	20.37	9.91	7.36	7.59	9.69	15.89	9.46	8.45	14.02	18.26	17.77	12.95
1971	13.84	10.32	9.26	9.48	13.55	17.50	9.06	6.15	6.97	9.35	7.63	8.77	8.94
1972	20.09	5.41	8.32	6.23	4.12	3.28		3.68	4.64	4.02	5.50	5.52	
1973	4.66	4.29	2.92	4.46	4.03	3.10	2.95	3.97	8.54	7.52	18.97	10.38	6.14
1974	8.51	9.11	4.91	4.02	4.13	5.15	2.06	2.18	3.87	18.76	9.73	6.66	6.58
1975	7.53	13.46	7.29	6.57	7.37	7.30	8.47	6.97	5.93	5.34	10.35	14.62	8.25
1976													
1977													
1978													
1979													
1980													
1981													
1982												8.13	
1983	10.28	4.56	4.18	3.65	3.02	4.40	7.70	7.12	6.66	9.94	7.66		
1984	26.68	49.82	14.40	10.01	7.32	10.02	4.33	5.74	10.29	7.70	18.77	14.68	14.80
1985	25.00	19.61	8.27	7.44	15.08	13.49	10.38		14.36	21.19	17.91	10.54	
1986	23.71	12.07	12.48	16.31			8.47	10.49	8.83	12.78	13.19	9.73	
1987				5.48	4.10	4.79	9.52	13.92	9.08	6.94	20.85	32.09	
1988	28.81	11.89	12.15	10.50	12.20	10.49	7.70					11.71	
1989	26.80	24.59	15.23	12.46	9.81	10.34	8.56	6.32	3.76	8.86			
1990	17.38	8.89	1.41	2.96	11.43	12.40	7.16	5.45	3.48	8.31	27.84	15.02	10.14
1991	14.12	14.03	25.10	13.66	9.30	15.38	11.63	9.90	8.88	10.48			
1992													
1993				3.09	2.26	2.20	2.45	3.64	2.50	3.17	20.59	43.27	
1994							13.63	12.91	17.38	13.36	14.78	35.07	
1995				0.51	0.36	0.38	0.41	0.35	0.38	2.03	1.46	3.06	
1996	8.70	10.12	13.66	3.69	10.48	4.03	0.44						
MEAN	17.63	16.12	12.44	9.33	9.71	8.44	8.35	8.32	7.45	10.35	14.62	15.56	11.47

Note : Blank means that the data are not available

NATIONAL WATER RESOURCES BOARD

MEAN MONTHLY DISCHARGE DATA TABLE

STATION NAME : TENANE RIVER, TENANE, WRIGHT, SAMAR

DRAINAGE AREA : 392 sq.kms.

PERIOD OF TARGET YEARS : 1959 to 1996

MEAN MONTHLY DISCHARGE, IN CUBIC METER PER SECOND

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1959							11.71	12.75	10.06	9.48	24.32	100.19	
1960	25.56	14.44	11.79	15.45	12.13	25.48	16.37	15.13	10.01	61.61	45.52	43.17	25.03
1961	17.07	19.25	10.39	8.67	13.22	8.02	9.61	29.30	11.24	17.19	21.80	16.92	15.49
1962	25.63	18.23	19.07	7.74	12.01	14.51	20.28	21.90	39.56	28.02	33.47	25.66	22.02
1963	37.96	11.53	8.98	7.86	6.50	13.55	15.87	58.67	22.24	29.74	32.75	27.40	22.88
1964	14.06	21.02	11.45	10.19	13.88	8.09	18.38	10.54	18.60	19.75	69.10	41.44	21.33
1965	41.22	25.45	32.04	15.24	28.53	33.14	65.61	18.61	13.77	17.16	12.85	106.39	34.41
1966	19.49	10.79	8.45	8.33									
1967					7.59	5.57	9.82	15.09	9.53	14.87	33.80	23.75	
1968	30.01	20.19	12.59	6.75	5.44	5.83	10.39	11.04	6.16	11.97	38.25	27.12	15.46
1969	8.57	5.33	4.49	4.19	3.99	7.11	12.83	10.07	16.58	18.81	15.85	33.21	11.64
1970	28.61	17.48	7.92	5.34	3.97	5.40	19.30	10.72	10.63	30.56	41.37	35.94	18.14
1971	20.89	37.24	27.70			36.09	31.32	7.92	6.13	34.02	18.03	15.76	
1972	87.48	11.86	9.00	6.55	3.98	11.23		4.45	17.98	4.87	25.85	30.14	
1973	10.37	7.77	6.69	6.43	6.04	6.13	5.93	7.22	18.02	24.26	39.43	38.01	14.74
1974	18.20	13.20	10.38	7.84		31.27	10.92	11.85	6.98	34.29	46.80	41.64	
1975	65.70	18.79	10.50	15.51	9.76	12.31	12.83	10.65	14.95	11.77	9.69	81.64	22.93
1976	61.89	32.57	19.85	9.30	19.57	44.83				12.80	24.42		
1977													
1978	12.90	21.01	13.83	11.81	10.62	10.62	10.96	10.83	27.67	21.60	20.85	37.08	17.46
1979	14.32	11.17	7.78				11.59	9.83	13.22	15.19			
1980													
1981													
1982													
1983													
1984												39.21	
1985	70.77	80.72	14.91	12.00	17.75	22.75	30.39	12.11	16.66	26.20	29.50	18.29	29.10
1986	99.63	17.01	22.64	99.89			17.71	30.24	17.00	40.08	23.42	20.31	
1987	14.09	7.35		6.00	4.60	4.25	7.91	49.25	12.00	10.56	81.59	52.86	
1988	18.01	11.31	8.47	6.25	7.31	10.43	19.54				111.36	93.66	
1989	145.19	61.80	57.32	28.86	36.78	27.90	18.56	17.82	18.92	33.25			
1990	39.70	15.15	10.94	9.21	15.73	45.31	26.99	20.09	11.21	34.00	58.31	24.73	25.47
1991	29.16	20.23	25.06	22.19	20.35	27.69	25.21	19.30	14.69	21.58	37.11	37.69	24.30
1992	19.15	13.66	9.58	6.95	7.23	7.94	17.83	11.62	8.43	11.85	20.29	13.38	12.34
1993							16.97	10.06	14.91	12.29	29.14	85.63	
1994	31.22	22.54	12.49	21.13	12.06	23.82	48.38	15.06	38.97	24.54	16.60	42.20	25.45
1995	32.83	13.69	12.12	13.13	13.93	15.75	26.01	27.80	55.16	42.44	57.58	81.51	32.62
1996	74.46	39.13	91.64	52.56	19.66	16.48	13.82	9.82	13.43	10.30	43.58	101.75	40.73
MEAN	37.38	22.42	17.79	15.68	12.51	17.88	19.15	17.55	17.06	22.73	38.82	46.21	22.72

Note : Blank means that the data are not available

NATIONAL WATER RESOURCES BOARD

MEAN MONTHLY DISCHARGE DATA TABLE

STATION NAME : LINGAYON RIVER, LINGAYON, ALANGALANG, LEYTE

DRAINAGE AREA : 10 sq.kms.

PERIOD OF TARGET YEARS : 1957 to 1992

MEAN MONTHLY DISCHARGE, IN CUBIC METER PER SECOND

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1957	2.64	2.04	0.89	0.87	0.59	0.52	0.79	0.67	0.32	0.59	1.13	0.68	0.98
1958	1.14	1.27	1.13	0.98	1.04	1.01	0.93	1.37	1.66	1.31	2.22	2.12	1.35
1959	1.12	0.82	1.54	1.12	1.25	0.89	1.06	0.86	0.86	0.80	1.11	1.62	1.07
1960	1.18	1.74	1.01	1.17	0.87	0.71	0.56	0.70	0.74	1.21	1.52	1.39	1.05
1961	1.12	1.79	0.55	0.37	1.07	0.87	0.68	0.68	0.43	0.80	1.10	1.20	0.85
1962	1.49	2.13	1.81	0.94	1.55	0.83	0.99	1.09	1.12	0.83	1.38	1.17	1.27
1963	2.10	2.27	1.08	0.84	0.87	0.83	0.80	1.89	0.90	0.70	1.95	1.22	1.27
1964	1.06	4.18	3.44	1.13	1.12	1.03	1.85	0.87	0.68	0.83	2.66	1.32	1.69
1965	2.55	1.36	2.00	1.38	0.84	0.78	0.72	0.64	0.72	0.86	1.25	3.75	1.42
1966	0.92	0.94	0.77	0.73	1.70	0.84	2.03	1.02	0.77	0.88	1.04	3.97	1.31
1967	17.82	5.49	3.60	0.65	0.49	0.21	0.27	0.28	0.22	0.80	4.70	2.72	3.13
1968	1.65	1.82	0.81	0.65	0.43	0.70	0.47	0.48	0.78	0.65	4.24	1.66	1.29
1969	0.91	0.68	0.56	0.52	0.77	0.53	1.13	0.92	0.65	0.72	2.14	3.62	1.10
1970	1.89	2.25	0.89	0.69	0.57	0.59	0.72	0.85	1.00	1.90	2.48	2.35	1.32
1971			3.44	2.29	1.56	2.45	3.32	0.80	0.74	1.47	1.63	1.00	
1972	7.44	0.77	1.85	0.86	0.84	1.24	0.68	2.16	0.78	0.95	1.13	3.76	1.85
1973	0.56	0.46	0.55	0.49	0.47	0.53	0.69	0.65	0.62	0.84	0.99	3.10	0.83
1974	1.06	0.76	0.95	0.72	0.61	0.68	0.65	0.43	0.49	0.77	1.49	1.12	0.81
1975	0.96	0.76	0.61	1.92	0.88	0.95	1.05	1.22	0.65	1.45	1.18	2.47	1.22
1976	4.51	1.55	1.44	0.84	0.49	0.54				0.84	1.04		
1977													
1978	0.90	0.87	1.27	2.41	0.85	0.97	0.66	0.68		0.86	0.99	3.29	
1979	0.96	0.84	0.64										
1980	3.80	1.99	1.10	0.94	0.59	0.92	1.04	1.31	0.87	1.04			
1981													
1982													
1983													
1984													
1985										0.89	1.07	1.04	
1986	5.95	1.42	1.70				0.68	0.72	0.60	3.35	2.52	1.46	
1987	1.10	0.85		0.55	0.37	0.47					1.43	0.95	
1988	0.57	0.63	0.53	0.61	0.59	0.77	0.62	0.53	0.64			5.76	
1989	4.17	3.19	2.51	1.12	3.10	1.15	1.06	0.55					
1990	1.99	0.58	0.45	0.41	1.38	0.58	0.65	0.47	0.43	0.79	2.30	1.05	0.96
1991	2.24	2.61	8.09	0.78	0.69	0.87	1.29	0.85	0.44	0.45	0.95	4.08	1.91
1992	1.87			0.34	0.35	0.37	0.64	0.43	0.41	0.68	0.85	0.60	
MEAN	2.61	1.62	1.63	0.93	0.92	0.82	0.96	0.88	0.72	1.00	1.78	2.17	1.33

Note : Blank means that the data are not available

NATIONAL WATER RESOURCES BOARD

MEAN MONTHLY DISCHARGE DATA TABLE

STATION NAME : AGUSAN RIVER, KALAW BRIDGE, MONKAYO, DAVAO

DRAINAGE AREA : 925 sq.kms.

PERIOD OF TARGET YEARS : 1958 to 1933

MEAN MONTHLY DISCHARGE, IN CUBIC METER PER SECOND

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1958				16.86	26.69	39.16		33.89	34.54	31.39			
1959									38.80	50.00	54.97	41.29	
1960	59.68	75.59	38.74	42.80	37.34	49.34	63.15	57.46	52.71	55.18	97.33	182.67	63.48
1961	147.71	176.69	131.83	72.16	59.91	82.72	38.45	45.50	36.93			60.25	
1962	477.54	535.16	176.06	64.42	55.04	72.34	67.77	46.93	59.49	48.75	53.85	72.45	148.27
1963	258.16	548.69		61.04	58.26	47.13	63.84	65.63	61.75	59.05	43.15	38.75	
1964				108.10	106.82				63.59	58.23	83.16	51.52	
1965	200.15	215.74	119.68	83.48	64.01	80.75	60.42	51.85	62.03	88.45	49.23	59.37	93.66
1966	83.76	44.43	33.67	25.40	40.19	47.07	61.96	56.24	44.46	44.33	38.70	41.89	46.96
1967	161.43	134.40	96.42	37.28	45.45	33.12	38.78	23.57	40.82	27.55	42.62	35.33	60.46
1968	69.70		82.51		37.50	38.17							
1969						46.03			36.95	34.14			
1970								43.62	31.18	35.62			
1971	213.97	209.49	84.69	65.23									
1972													
1973													
1974													
1975													
1976													
1977													
1978						80.43	69.45	58.02	71.23			95.91	
1979	114.59	118.35		54.71	80.55	76.15	72.63	46.69	57.08		74.43		
1980	255.99	188.43	67.51	67.27	59.91			96.35	65.68				
1981			91.75	98.67	83.52	97.45							
1982	165.24	257.81	95.58	44.54	50.99								
1983	45.11	20.30		11.96	9.33	17.68	28.21	70.00	89.61	129.83	82.06	114.21	
MEAN	173.23	209.91	92.59	58.99	54.37	56.27	56.47	53.50	52.91	55.04	63.49	72.15	82.61

Note : Blank means that the data are not available

NATIONAL WATER RESOURCES BOARD

MEAN MONTHLY DISCHARGE DATA TABLE

STATION NAME : TAGOLOAN RIVER, PINA-ANAN, ,

DRAINAGE AREA : 533 sq.kms.

PERIOD OF TARGET YEARS : 1974 to 1991

MEAN MONTHLY DISCHARGE, IN CUBIC METER PER SECOND

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1974								33.78	28.03	43.13	31.99	35.66	
1975	51.50	24.81	24.20	24.97	34.54	46.22	47.05	33.05	37.57	53.09	22.88	22.44	35.30
1976	43.37	24.72	16.99	19.50	16.43	24.03	21.58	21.54	24.62	18.90	19.52	26.44	22.43
1977	17.37	29.93	20.59	10.31	15.20	18.06	42.78	43.54	24.87	27.34	40.07	15.34	25.42
1978	19.25	15.74	10.30	8.46	14.49	27.35	37.05	43.68	34.82	30.02	32.79	26.17	25.08
1979	15.38	13.51	11.01	8.16	13.92	37.51	39.53	27.61	33.14	32.15	27.88	27.26	25.68
1980	27.09	22.83	18.48	11.07	9.97	38.55	31.83	37.97	34.94	51.55	21.69	24.51	27.02
1981	65.80	43.30	17.18	14.06	20.93	31.89	39.06	25.16	23.35	24.90	25.87	17.92	29.04
1982	49.56	47.43	30.23	17.50	23.44	26.09	23.82	28.17	29.83	34.21	23.99	16.06	29.10
1983	14.16	9.38	8.19	7.50	7.98	22.07	37.20	45.96	48.81	39.03	28.03	22.04	24.29
1984	24.25	29.45	27.50	22.21	46.74	45.93	31.93	22.85	39.06	36.00	19.52	14.05	30.02
1985	21.46	12.92	11.32	13.12	23.00	18.42	22.37	24.59	37.27	35.87	23.77	29.30	22.78
1986	32.02	20.70	21.54	12.44	12.63	34.64	37.49	34.79	23.19	27.24	32.14	18.92	25.68
1987	18.84	24.26	14.34	8.80	9.12	13.26	23.81	33.99	27.42	34.71	35.71	25.22	22.55
1988	10.20	11.34	8.57	15.90	14.63	18.58	26.60	25.20	38.60	56.77	31.65	22.27	23.23
1989	18.55	17.83	19.48	13.87	31.57	40.46	41.28	47.71	34.25	33.04	24.80	11.90	27.94
1990	13.29	11.75	7.85	7.56	15.27	22.45	21.96	37.39	23.98	33.98	46.75	18.71	21.62
1991	21.09	519.85	10.38	12.89	14.55	20.88	30.78	22.57	18.21				
MEAN	27.25	51.74	15.95	12.90	19.08	28.55	32.71	32.75	31.21	36.00	28.74	21.92	25.97

Note : Blank means that the data are not available

NATIONAL WATER RESOURCES BOARD

MEAN MONTHLY DISCHARGE DATA TABLE

STATION NAME : CAGAYAN RIVER, UGUITAAN, MISAMIS ORIENTAL, CAGAYAN DE ORO

DRAINAGE AREA : 632 sq.kms.

PERIOD OF TARGET YEARS : 1977 to 1990

MEAN MONTHLY DISCHARGE, IN CUBIC METER PER SECOND

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1977	52.43	74.01	48.48	41.15	44.83	64.02	76.01	91.37	49.57	64.26	68.22	46.05	59.13
1978	35.03	34.93	30.78	35.85	54.43	99.93	78.84	91.32	79.64	71.25	73.42	56.07	61.90
1979	43.65	37.82	29.27	26.12	40.40	95.89	71.68	48.96	78.47	60.06	62.78	72.90	57.35
1980	291.50	50.61	34.24	32.88	34.66	89.55	64.89	81.75	66.59	94.53	62.84	62.83	80.93
1981	93.99	57.45	54.51	30.31	52.10	60.32	67.18	39.66	49.13	51.32	86.04	45.13	55.57
1982	65.31	85.60	52.33	51.52	50.91	71.94	44.47	65.53	57.17	61.36	59.86	49.59	59.43
1983	32.54	22.45	19.54	17.51	22.04	48.52	73.53	88.22	79.77	70.51	73.03	62.83	50.83
1984	61.88	58.33	52.39	62.65	95.81	108.68	72.36	49.82	58.34	57.38	51.04	51.09	64.54
1985	59.20	32.56	43.47	55.32	74.58	63.13	54.29	67.26	73.84	79.25	77.62	68.27	62.59
1986	90.80	58.92	48.75	37.88	47.55	80.43	74.65	56.70	79.51	79.85	72.23	54.28	65.15
1987	50.15	57.69	35.25	36.36	48.86	55.36	79.88	94.23	50.24	58.49	62.45	49.68	56.60
1988	33.83	34.45	26.86	45.13	54.24	52.92	73.93	76.19	60.06	75.68	83.94	57.72	56.61
1989	45.39	50.70	55.73	57.85	80.24	80.15	78.66	57.14	56.12	67.35	56.90	39.65	61.40
1990	34.58	26.92	26.17	25.49	50.13	82.89	48.80	66.92	59.11	86.54	88.33	44.87	51.85
MEAN	70.73	49.75	38.55	39.81	53.61	73.84	68.51	68.79	66.26	69.64	69.91	54.36	60.31

Note : Blank means that the data are not available

NATIONAL WATER RESOURCES BOARD

MEAN MONTHLY DISCHARGE DATA TABLE

STATION NAME : PAIDAN RIVER, LAPULAPAO, MAGONOY, DAVAO DEL SUR

DRAINAGE AREA : 821 sq.kms.

PERIOD OF TARGET YEARS : 1957 to 1978

MEAN MONTHLY DISCHARGE, IN CUBIC METER PER SECOND

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1957	9.88	9.89	7.78	10.42	8.25	14.13	23.67	15.44	13.73	16.08	13.02	7.09	12.28
1958	6.36	5.65	6.14	5.51	5.84	9.35	5.97	12.14	14.80	12.21	10.33	6.56	8.41
1959	3.76	1.97	1.67	3.16	3.73	7.10	12.42	18.42	24.01	14.89	11.51	8.66	9.14
1960	2.78	5.38	2.97	3.97	7.66	20.80	17.34	23.85	15.14	38.52	24.58	18.27	16.21
1961	8.45	15.52	13.93	11.49	22.99	15.47	23.73	18.72	15.79	15.76	9.79	6.89	14.85
1962	12.80	38.75	30.30	21.83	24.83	29.34	26.39	25.72	34.87	27.01	30.09	23.96	26.87
1963	22.31	22.57	24.55	18.56	23.97	20.37	33.31	38.81	24.29	28.75	18.81	13.09	24.17
1964	9.57	18.11	11.29	13.25	21.83	16.58	18.21	27.03	22.83	28.87	34.66	18.01	20.01
1965	16.21	13.88		20.45	30.99	28.02	26.92	20.16	26.51	22.26	12.53	11.02	
1966	14.41	12.87	20.14	12.33	20.68	20.10	27.70	26.13	19.98	25.29	22.83	15.50	19.90
1967	11.20	12.68		8.58	18.79	22.83	15.23	13.53	6.81	22.57	20.51	9.24	
1968	6.49	4.15		12.16	12.57	14.62	10.72	13.68	13.75	17.53			
1969									13.34	7.52	13.45		
1970	23.18	25.87	19.71	18.70	20.29	31.45	41.01	31.41	27.25	31.07	29.35	20.07	25.82
1971	15.80	19.30	7.72	19.28	13.88	35.38	35.03	36.19	30.42	35.43	36.92	22.43	25.82
1972	17.33	13.51	15.95	15.62	20.71	24.43	19.21	26.04	34.30		10.18	9.30	
1973	4.77	3.09	2.90	4.87	6.16	11.72	22.74	12.43	20.13	14.68	16.93	18.11	11.59
1974	15.91	11.47	10.83	19.59	17.28	18.79	13.45	19.07	25.59	15.13	17.20	18.09	16.89
1975	13.47	7.32	20.09	18.44	7.93	10.99	12.70	13.90	26.35	19.82	23.19	22.54	16.54
1976	27.42	38.37	26.07	18.59	29.27	24.51	25.39	31.56	25.82				
1977				15.33	22.59	24.04	27.01	24.11	20.49				
1978	26.43	25.51	23.72	24.29	25.60								
MEAN	13.41	15.19	14.45	13.74	17.73	20.15	21.96	22.61	22.01	21.86	20.28	14.64	17.84

Note : Blank means that the data are not available

NATIONAL WATER RESOURCES BOARD

MEAN MONTHLY DISCHARGE DATA TABLE

STATION NAME : ALIP RIVER, DATU, PAGLAS, MAGUINDANAO

DRAINAGE AREA : 380 sq.kms.

PERIOD OF TARGET YEARS : 1981 to 1989

MEAN MONTHLY DISCHARGE, IN CUBIC METER PER SECOND

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1981								2.89	10.11	18.89	12.06	3.93	
1982	3.10	24.98	0.61	0.77	3.26	15.55	3.01	28.62	9.82	3.89			
1983	0.13	0.06	1.05	0.47	1.31	27.19	11.99	19.42	4.69	35.05	14.72	13.61	10.89
1984	6.89	4.90	0.92	0.81	1.61	9.61	13.44	0.47	24.79	18.13	2.59	1.82	7.12
1985	0.22	0.36	1.45	9.77	28.61	11.68	12.64	13.13	45.55	10.22	58.08	61.45	21.18
1986		6.86			26.84			8.96	21.21		14.01	7.35	
1987	6.35	18.83	1.58	2.65	2.14	33.06	30.53	14.58		5.04	3.38		
1988	3.50	4.27	5.83	2.81	3.19	1.55	7.24	2.56	10.32	11.19	10.39	1.63	5.35
MEAN	3.87	8.61	1.91	2.85	9.58	18.44	13.14	11.32	18.04	14.63	15.45	15.00	11.13

Note : Blank means that the data are not available

NATIONAL WATER RESOURCES BOARD

MEAN MONTHLY DISCHARGE DATA TABLE

STATION NAME : ALLAH RIVER, KOLAMBOG, ISULAN, COTABATO

DRAINAGE AREA : 926 sq.kms.

PERIOD OF TARGET YEARS : 1958 to 1989

MEAN MONTHLY DISCHARGE, IN CUBIC METER PER SECOND

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1958									42.36	42.54	44.44	61.65	
1959	39.67	39.85	32.85	35.48	68.90	56.27	76.58	74.07	72.87	75.45	71.20	67.05	59.51
1960	10.73	15.45	13.41	14.02	34.87	43.79	38.29			47.45	48.17	39.48	
1961		21.48	25.75	22.68	41.45	53.04	43.31						
1962							46.37	27.16	35.18	46.28	28.62	25.76	
1963						25.77	27.22	30.07	27.39	30.78	30.67	36.95	
1964	29.92	26.76	27.33	51.60	38.30	50.19	39.23	61.40	31.69	33.77	34.58	34.43	38.29
1965	19.24	19.72	27.22										
1966													
1967			22.70	27.47	60.53	54.64	43.57			49.79	51.39	41.11	
1968	40.45	58.14	19.10	30.63	40.58	32.03	41.82	39.79	54.47	15.37	55.46	44.68	44.38
1969	60.92	24.77	15.61	10.33	85.15	133.31	192.21	134.69	57.80	38.04	41.06	48.21	87.94
1970	47.51	46.87	43.82	37.13	50.81	127.75	33.29	24.27	29.91	74.30	66.99	57.00	53.23
1971	50.75	31.18	30.71	31.37	27.30	12.47	39.78	13.99	71.69	73.74	71.75	27.47	40.16
1972	24.29	48.57	61.50	45.66	37.22	33.55	26.58	24.32	25.44	32.28	32.96	25.73	34.61
1973	29.59	19.76	13.29	12.72	29.24	58.13	61.32	63.04		55.05	67.32	58.41	
1974	54.75	58.65	57.03	66.54	70.21	70.20	62.51	52.50	52.61	49.67	45.64	56.71	58.32
1975	55.78	45.50	46.44				63.35	58.59	61.55	60.48	63.18	60.19	
1976	58.87	58.47	61.43	60.30									
1977													
1978													
1979													
1980						1.56	0.55	0.90	0.47	1.00	0.77	1.33	
1981	1.32	0.66	0.16	0.14	43.61	52.03	56.31	42.54	54.36	64.26	27.74	64.35	39.04
1982	60.22	74.22	39.21	39.27	41.77	43.63	17.91	27.08	19.08	18.92	18.73	18.16	34.24
1983	15.36	9.87	4.89	3.92	4.72	15.17	23.32	23.77	23.92	17.05	14.68	21.46	14.89
1984													
1985													
1986		26.26	15.17					37.09	33.58	40.54	38.26		
1987	16.28	16.56	9.36	12.40	15.60	17.78	18.18	32.20		21.71	16.48		
1988	18.14	19.85	22.14	20.37	24.06	18.35	35.91	59.76	34.94	60.46	38.54	25.81	31.63
1989	8.68	16.97	30.37	39.32	77.92	80.88	70.25						
MEAN	33.80	32.36	28.16	29.54	44.13	49.19	48.36	41.96	40.54	45.77	43.62	39.70	43.02

Note : Blank means that the data are not available

NATIONAL WATER RESOURCES BOARD

MEAN MONTHLY DISCHARGE DATA TABLE

STATION NAME : BUBUNAWAN RIVER, KABUI IMBATUG, BAUNGON, BUKIDNON

DRAINAGE AREA : 187 sq.kms.

PERIOD OF TARGET YEARS : 1991 to 1994

MEAN MONTHLY DISCHARGE, IN CUBIC METER PER SECOND

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1991	11.01	12.70	11.00	12.31	11.76	14.08	19.29	12.97	13.53	18.19	14.72	12.63	13.52
1992	10.58	10.22	9.59	9.79	11.00	13.63	14.17	14.58	12.88	14.76	13.71	11.29	12.19
1993	10.72	14.19	12.68	11.22	11.35		18.02	15.77	21.64	15.55	13.35	17.30	
1994	12.92	11.61	11.00		15.56	16.81	13.11	13.63	14.12	14.51	10.56	10.76	
MEAN	11.30	12.18	11.06	11.11	12.42	15.51	15.65	14.24	15.54	15.25	13.08	13.00	12.86

Note : Blank means that the data are not available

NATIONAL WATER RESOURCES BOARD

MEAN MONTHLY DISCHARGE DATA TABLE

STATION NAME : MULETA RIVER, CMONAY (NO.3), DANULOG, BUKIDNON

DRAINAGE AREA : 1001 sq.kms.

PERIOD OF TARGET YEARS : 1977 to 1992

MEAN MONTHLY DISCHARGE, IN CUBIC METER PER SECOND

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1977					16.61	30.80	52.78	53.33	26.02	34.69	36.91	23.45	
1978	17.86	15.41	14.62	13.51	13.81	18.75	24.50	23.54	26.40	27.60	23.57	14.12	19.51
1979	9.83	9.61	8.95	12.10	33.10	80.09	35.96	14.97	25.98	27.60	26.62	17.69	25.29
1980	16.67	13.89	10.35	11.30	10.42	26.67	25.29	22.66	17.63	25.93	21.34	24.63	18.91
1981	16.87	10.45	9.80	9.39	13.93	14.09	18.45	10.90	11.07	19.44	15.50	10.56	13.15
1982	11.41	15.03	10.38	11.51	17.38	32.61	12.21	15.01	15.68	18.92	18.20	15.94	16.08
1983	12.50	10.29	9.50	8.53	11.54	17.78	36.75	49.54	65.27	38.12	28.38	24.55	28.01
1984	20.86	22.78	20.67	26.69	36.78	49.98	49.93	30.47	37.05	30.57	19.43	13.25	30.38
1985	13.84	15.30	12.61	15.57	19.42	18.58	23.32	20.10	25.15	21.32	10.76	19.38	17.97
1986	21.51	42.61	11.41	17.38	26.73	40.95	25.43	9.11	12.73	16.05	10.75	9.63	20.66
1987	6.35	6.11	5.98	6.44	8.12	13.26	38.86	68.62	61.30	83.69	68.75	55.45	36.82
1988	48.59	46.77	44.71	51.55	62.55	59.62	67.98	60.06	69.50	59.74	60.98	51.38	56.99
1989	46.16	44.96	47.16	48.67	65.12	78.38	73.10	56.74	57.49	56.19	52.57	37.35	55.37
1990	37.14	32.19	26.32	26.79	50.50	57.45	46.43	52.02	48.87	64.30	63.93	38.06	45.41
1991	35.90	35.64	29.91	30.77	36.60	44.29	53.99	37.21	34.76	39.73	36.33	30.64	37.18
1992	28.55	27.06	27.81	33.33	33.93	46.64	41.85	45.30	40.51	40.43			
MEAN	22.93	23.21	19.35	21.57	28.38	39.38	39.16	36.72	35.89	37.52	32.80	26.15	29.98

Note : Blank means that the data are not available

NATIONAL WATER RESOURCES BOARD

MEAN MONTHLY DISCHARGE DATA TABLE

STATION NAME : PULANGI RIVER, BUSDI (NO.1), MALAYBALAY, BUKIDNON

DRAINAGE AREA : 376 sq.kms.

PERIOD OF TARGET YEARS : 1991 to 1994

MEAN MONTHLY DISCHARGE, IN CUBIC METER PER SECOND

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1991	35.23	22.04	17.45		26.67	27.03		22.33	16.19	14.03	16.17	19.07	
1992	17.43	13.03	14.55	12.53	15.17	21.45	24.88	19.31	11.04	21.62	14.18	30.51	18.04
1993	25.83	29.17	26.63	19.57	15.80	17.58		12.80	22.59	21.74	19.75	24.03	
1994		27.89	27.85	21.23		33.00	24.43	30.86	22.43			24.96	
MEAN	26.19	23.03	21.63	17.76	19.15	24.02	24.67	21.35	18.56	19.13	17.37	24.64	18.04

Note : Blank means that the data are not available

NATIONAL WATER RESOURCES BOARD

MEAN MONTHLY DISCHARGE DATA TABLE

STATION NAME : PULANGI RIVER, MARAGUSAN (NO.2), CABANGLASAN, BUKIDNON

DRAINAGE AREA : 734 sq.kms.

PERIOD OF TARGET YEARS : 1975 to 1994

MEAN MONTHLY DISCHARGE, IN CUBIC METER PER SECOND

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1975	70.06	62.73	54.37	54.49		60.43	52.41	35.14	49.93	58.49	30.38	37.33	
1976	52.35	40.93	37.12	29.76	27.80	27.23	23.68	29.76	30.11	35.24	24.45	45.45	33.18
1977	35.12	70.80	57.45	22.08	30.60	29.76	48.71	43.54	27.84	30.30	30.66	21.22	37.58
1978	47.93	42.06	28.28	18.93	40.14	37.54	47.42	41.41	38.39	41.21	42.16	55.50	40.00
1979	32.20	28.81	27.15	15.31	27.89	39.25	39.85	25.06	39.90	37.50	30.05	40.84	32.02
1980	72.23	60.42	19.76	23.76	17.75	44.55	27.95	33.37	22.58	45.45	29.17	41.55	36.57
1981	93.28	80.94	40.15	37.84	33.62	31.28	40.37	21.55	25.22	27.76	38.46	31.74	41.63
1982	44.99	77.05	54.02	33.38	28.93	33.31	22.32	32.40	25.47	33.93	30.59	25.75	36.57
1983	34.28	15.58	12.83	9.83	11.44	35.86	54.11	73.72	58.45	51.27	44.35	45.84	37.45
1984	53.09	78.75	58.96	53.59	55.42	57.65	37.52	24.08	49.19	58.20	27.12	35.53	45.95
1985	48.45	42.89	47.16	31.65	43.15	35.01	33.89	30.54	59.17	42.60	31.45	47.55	40.87
1986	77.89	51.00	65.93	33.75	39.31	58.28	48.09	39.08	43.56	42.80	55.49	41.88	49.77
1987	45.02	62.13	49.45	118.03	25.39	34.50	39.44		39.34	57.02	57.87	315.99	
1988	37.09	51.11	41.49	50.21	47.03	41.89	44.95		51.91	48.43	57.74	45.81	
1989	49.29	39.27	53.94	50.47	51.85	67.13	55.20	55.20	47.30	38.11	32.39	24.17	47.92
1990	45.52	46.96	28.03	20.58	39.53	48.61	30.29	50.64	28.47	36.05	54.76	42.37	38.83
1991	71.02	60.53	41.41	34.84	42.34	50.63	45.74	40.34	31.21	29.11	33.93	35.12	42.93
1992	31.99	24.60	27.43	21.19	24.65	35.30	39.81	38.76	27.86	44.43	29.10	58.99	33.79
1993	54.87	64.45	48.54	45.18	33.64	28.88	45.35	31.41	47.66	37.49	39.48	63.17	44.90
1994	58.69	130.97	79.28	54.18	48.82	64.59	55.51	48.32	49.03	52.70	41.54	66.05	61.68
MEAN	52.67	56.75	43.38	37.39	35.45	42.93	41.63	38.76	39.47	42.36	38.05	56.09	41.43

Note : Blank means that the data are not available

NATIONAL WATER RESOURCES BOARD

MEAN MONTHLY DISCHARGE DATA TABLE

STATION NAME : PULANGI RIVER, LUNDAYAO (NO.3), VALENCIA, BUKIDNON

DRAINAGE AREA : 1393 sq.kms.

PERIOD OF TARGET YEARS : 1974 to 1992

MEAN MONTHLY DISCHARGE, IN CUBIC METER PER SECOND

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1974								61.04	49.58	64.45	87.65	82.26	
1975	83.79	66.37	81.64	94.31	89.59	91.96	88.72	59.16	64.33		62.59	71.05	
1976	77.58	60.65	49.15	33.95	49.55	51.95	48.04	285.17	50.64	60.69	44.85	71.38	74.08
1977	63.30	91.75	81.05	35.27	48.52	53.76	66.72	66.23	56.99	71.52	67.82	55.71	66.57
1978	75.45	74.61	54.88	32.25	75.41	79.12	86.92	83.27	81.39	81.24	317.61	85.17	93.76
1979	63.95	58.20	51.56	36.05	55.55	69.02	80.68	58.87	74.40	76.04	67.08	80.72	66.08
1980													
1981				37.78	30.12	48.60	64.39	29.31	38.51	48.76	65.20		
1982	57.31	111.45	72.68	58.00	59.40	73.54	53.83	74.12	52.97	77.71	87.13	77.45	70.76
1983	84.96	57.63	53.17	50.25	47.77	75.24	97.46	112.25	95.84		93.53		
1984													
1985	94.69	92.56	96.49	87.17	79.10	76.83	37.78	42.02	63.22	52.88		51.17	
1986	42.45		63.30	64.68	45.57	60.12	48.00	39.10	52.82	55.43	58.37	35.07	
1987	47.05	45.24	48.43	37.74	39.68	49.62	57.29	69.59	48.15	64.57	59.37	50.61	51.44
1988	47.65	45.69	57.43	59.56	45.04	42.18	47.37	50.05	65.61	59.61	59.98	49.21	52.15
1989	67.94	68.65	65.57	64.81	74.88	94.58	94.27	85.27	79.18	73.69	60.56	24.42	71.76
1990	52.86	68.83	54.04	57.31	71.30	77.55	69.39	81.03	87.58	82.73	84.10	67.83	71.09
1991	76.68	84.72	71.45	312.64	77.14	81.59	77.27	66.61	45.39	53.42	59.37	75.70	89.56
1992	72.98	58.12	63.41	55.43	61.34	68.25	63.26	72.18	55.22	77.04			
MEAN	67.86	72.17	64.15	68.64	59.36	69.60	68.58	79.68	63.64	66.87	83.55	62.48	70.72

Note : Blank means that the data are not available

NATIONAL WATER RESOURCES BOARD

MEAN MONTHLY DISCHARGE DATA TABLE

STATION NAME : PULANGI RIVER, PANADTALAN (NO.4), MARAMAG, BUKIDNON

DRAINAGE AREA : 3100 sq.kms.

PERIOD OF TARGET YEARS : 1953 to 1981

MEAN MONTHLY DISCHARGE, IN CUBIC METER PER SECOND

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1953					114.12	150.55	160.19	206.85	269.96	168.10	154.24	192.66	
1954	158.55	113.96	105.29	57.03	179.52	168.13	277.55	169.52	186.27	226.03	150.79	139.80	161.70
1955	242.03	68.86	66.13	59.27	102.76	241.47	187.52	243.10	209.93	177.90	147.53	169.29	156.30
1956	205.90	88.17	112.26	186.40	436.67	208.20	141.32	108.58	158.24	211.03	138.77	209.29	187.09
1957		118.21	151.61	95.60	114.42	437.50	209.68	241.45	200.00	154.87	110.10	94.38	
1958	92.28	106.94	126.72	68.78	132.76	129.47	155.76	139.94	196.00	175.41	147.71	111.82	131.33
1959	109.06	76.82	80.35	81.67	113.77	147.13	180.32	229.40	373.23	228.29	110.30	112.35	153.54
1960	97.00	110.48	71.65	64.07	118.32	163.03	219.64	89.13	236.11	155.42	217.00	130.65	138.69
1961	249.71	260.50	140.10	103.17	115.97	205.57	134.48	158.35	178.70	219.52	109.50	123.29	170.99
1962	235.51	345.75	285.29	104.53	372.52	257.22	192.87	273.26	381.93	172.56	126.63	124.13	219.38
1963	248.55	262.57	267.53	77.80	131.68	107.63	197.71	302.03	267.03	286.52	129.20	90.65	193.97
1964	165.03	279.57	272.00	334.71	395.21	403.64	346.52	261.19	486.48	425.11	527.38	319.93	333.43
1965	205.07	151.65	141.27	150.64	96.53	178.52	148.35	227.41	233.36	225.52	132.59	116.49	167.34
1966		83.68	76.27	81.49	160.47	155.73	253.51	211.78	129.65	129.10	126.22	102.02	
1967	140.64	142.60	110.25	62.75	134.12	132.16	161.12	129.52	105.93	150.39	84.87	78.96	120.35
1968	137.03	84.51	125.87	46.57	53.31	71.45	141.82	149.57	130.89	119.00	105.23	113.60	107.45
1969	103.24	87.65	73.52	68.81	65.59	158.99	159.81	107.50	133.91	137.37	162.94	134.26	115.17
1970	83.12	135.34	91.10	52.64	59.96		154.43	207.98	96.82	103.28	124.79	143.57	
1971	95.99	203.45	89.74	67.79	185.59	310.45	155.36	219.41	280.87	231.03	144.85	149.13	177.30
1972													
1973	65.57	63.15	52.04	73.95	57.80	80.95	154.73	141.78	262.03	105.71	206.94	94.80	113.23
1974	188.35	212.95	114.30	135.54	183.92	121.70	150.82	137.03	118.73	200.45	169.24	156.89	155.12
1975	239.23	178.29	196.99	116.80	173.12	314.87	239.65	135.50	205.79	335.40	143.82	138.57	201.69
1976													
1977	88.68	146.20	104.14	50.64	63.93	86.50	187.16	208.79	101.40	136.65	147.78	77.23	116.84
1978	96.61	89.48	59.07	44.38	92.73	129.87	151.99	171.83	161.27	144.34	176.01	123.57	119.05
1979	76.09	64.86	54.64	40.23	78.38	179.50	159.00	94.65	139.08	126.93	113.25	119.00	102.82
1980													
1981	229.92	189.89	79.74	91.76	72.89	119.95	174.08	71.68	88.75	95.42	105.22	62.77	111.19
MEAN	151.67	146.82	121.13	92.57	138.01	185.47	184.11	179.79	205.00	188.21	152.85	132.01	157.18

Note : Blank means that the data are not available

NATIONAL WATER RESOURCES BOARD

MEAN MONTHLY DISCHARGE DATA TABLE

STATION NAME : PULANGI RIVER, DUMARAS (NO.5), KIBAWE, BUKIDNON

DRAINAGE AREA : 3915 sq.kms.

PERIOD OF TARGET YEARS : 1988 to 1994

MEAN MONTHLY DISCHARGE, IN CUBIC METER PER SECOND

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1988												104.03	
1989	121.87	99.41	113.20	140.02	230.05	393.17	383.50	323.05	283.52	255.04	121.52	68.03	230.05
1990	91.99	82.80	53.19	55.58	164.93	275.63	159.60	311.03	159.17	330.66	258.64	73.29	158.37
1991	150.43	138.17	84.93	53.48	95.33	119.43	225.85	168.51	77.70	76.99	63.28	67.50	131.90
1992	66.69	54.33	54.64	52.36	56.06		128.08	154.77	63.74	195.61	108.64	134.67	
1993	111.65		79.38	85.54	71.44	94.43	190.01	170.39	313.32	179.83	109.68	155.14	
1994	149.41						177.43	168.51		161.83	82.16	151.85	
MEAN	115.18	93.68	77.07	77.39	123.58	220.66	219.74	216.04	175.49	199.96	127.02	107.79	163.44

Note : Blank means that the data are not available

NATIONAL WATER RESOURCES BOARD

MEAN MONTHLY DISCHARGE DATA TABLE

STATION NAME : TIGUA RIVER, HALAPITAN, SAN FERNANDO, BUKIDNON

DRAINAGE AREA : 200 sq.kms.

PERIOD OF TARGET YEARS : 1980 to 1992

MEAN MONTHLY DISCHARGE, IN CUBIC METER PER SECOND

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1980		7.26	3.85	5.77	7.31	15.00	12.58	10.25	7.09	10.14	7.83	11.18	
1981	21.70	19.49	15.73	18.61	15.21	15.52	8.09	5.62	5.22	3.78	7.47	4.26	12.13
1982	9.45	17.73	8.86	6.05	7.63	9.48	4.87	8.90	3.88	4.93	5.99	2.84	7.43
1983	4.27	1.35	0.82	0.23	0.74	4.24	7.39	17.92	16.72	15.86	9.52	4.71	7.52
1984	13.08	14.75	11.30	16.35	5.29	12.17		7.72	8.89	10.58	7.82	6.04	
1985	8.28	8.40	10.28	9.64	11.55	7.60	8.10	8.65	9.61	9.44	7.29	9.11	9.02
1986	12.17	7.34	11.99	7.24	9.29	10.48	11.00	6.31	9.96	10.22	12.62	7.65	9.71
1987	9.29	10.90	7.08	5.37	7.22	14.20	10.62	14.61	9.34	12.78	11.72	11.00	10.35
1988	7.35	10.79	10.60	10.72	10.55	9.90	13.37	12.29	12.84	10.07	10.88	9.20	10.73
1989	11.45	10.69	9.65	11.20	11.81	13.14	12.44	12.10	11.01	9.83	8.69	8.93	10.73
1990	10.00	10.13	7.62	8.80		12.50	8.41	10.44	11.55	13.08	11.83	9.59	
1991	12.77	12.84	9.42	8.02	7.83	10.31	15.59	12.12	12.73	12.05	14.78	14.02	11.85
1992	14.91	13.76	13.46	12.78	13.26	14.38	15.44	15.57	14.41	15.17			
MEAN	11.23	11.19	9.30	9.29	8.97	11.45	10.65	10.85	10.28	10.59	9.69	8.05	9.95

Note : Blank means that the data are not available

DATA BOOK

III IRRIGATION DATA

III. IRRIGATION DATA

TABLE OF CONTENTS

IRRIGATION DATA

1. SALIENT FEATURES OF NATIONAL IRRIGATION SYSTEM

NATIONAL WATER RESOURCES BOARD

SALIENT FEATURES OF NATIONAL IRRIGATION SYSTEM

Name of System	***AMBURAYAN***		
1) Water Resources Region	*1*	*2) Source of Water Supply*	*Amburayan River*
3) Approved Water Rights	*9750*	*4) Official Opening of the System*	*1927*
5) Original Construction Cost	*P 2,500,000.00*	*6) Date of Rehabilitation*	*1978 NISIP*
7) Cost of Rehabilitation	*P 22,000,000.00*	*8) Current Status*	*Partially Oper.(1996 typhoon*
9) Firmed-up Service Area	*3420*	*10) Designed Area*	*3500*
11) Potential Area	*5300*	*12) Number of Landowners*	*14626*
13) Number of Farmers Served	*19000*	*14) Average Farm Size*	*0.16*
15) Number of Lots	*20041*	*16) Diversion Type*	*Intake*
17) Diversion Capacity	*7.5*	*18) Length of Main Canal*	*20420*
19) Length of Laterals	*63.054*	*20) Number of Turnouts*	*260*
21) Length of Service Roads	*20.42*	*22) Length of Access Roads*	*43.354*
23) Drainage Density	*48.16*	*24) Farmditch Density*	
25) Climatic Condition (Coronas)	*Type 1*	*26) Average Annual Rainfall*	*2190*
27) Main Crops	*Rice*		

28) Towns / Province Served

Towns	*Province*	*Area (ha)*
Bangar	*La Union*	*1550*
Luna	*La Union*	*1311*
Sudipen	*La Union*	*116*
Balaoan	*La Union*	*413*
	Total	*3420*

29) Irrigated / Benefitted Area

Average	*1966-1986*		
Season	***Wet***	***Dry***	***Third***
Irrigated Area (ha)	*3157*	*2348*	
Benefitted Area (ha)	*3132*	*2307*	
Average Yield (cav/ha)	*89*	*91*	

30) Farmers Irrigators Association (FIA) with Memorandum of Agreement for Operation and Maintenance

Nature of Contract	*Number of FIA*	*Length of Canal (km) under contract*	*Area Covered (ha)*
Stage I & II	*10*	*66.74*	*3420*

31) Future Expansion	*Upper Amburayan RIP (service area is 1,500 has.)*
32) Deterioration of the System	*Damaged by 1996 Typhoon Gloring needs 15M to rehabilitate.*
33) Other Information	*One of the oldest irrigation system in the Philippines.*

NATIONAL WATER RESOURCES BOARD	SALIENT FEATURES OF NATIONAL IRRIGATION SYSTEM

Name of System	***BOLO***			
1) Water Resources Region	*1*	*2) Source of Water Supply*	*Bolo River*	
3) Approved Water Rights	*3000*		*4) Official Opening of the System*	*1970*
5) Original Construction Cost			*6) Date of Rehabilitation*	*1978-1995*
7) Cost of Rehabilitation	*P 7,981,367.00*		*8) Current Status*	*Operating System*
9) Firmed-up Service Area	*425*		*10) Designed Area*	*525*
11) Potential Area	*525*		*12) Number of Landowners*	*998*
13) Number of Farmers Served	*513*		*14) Average Farm Size*	*1.12*
15) Number of Lots	*4010*		*16) Diversion Type*	*Intake*
17) Diversion Capacity	*1.33*		*18) Length of Main Canal*	*18.2*
19) Length of Laterals	*21.26*		*20) Number of Turnouts*	*74*
21) Length of Service Roads	*14.16*		*22) Length of Access Roads*	*9.5*
23) Drainage Density	*31*		*24) Farmditch Density*	*128.26*
25) Climatic Condition (Coronas)	*Type I*		*26) Average Annual Rainfall*	*73.6*
27) Main Crops	*Rice, Garlic*			

28) Towns / Province Served	*Towns*	*Province*	*Area (ha)*
	Bangui *Ilocos N.* *425*	*Ilocos Norte*	*425*
		Total	*3420*

29) Irrigated / Benefitted Area				
Average	*1985-1995*			
Season	*Wet*	*Dry*	*Third*	
Irrigated Area (ha)	*370*	*374*		
Benefitted Area (ha)	*362*	*373*		
Average Yield (cav/ha)	*74*	*79*		

30) Farmers Irrigators Association (FIA) with Memorandum of Agreement for Operation and Maintenance	*Nature of Contract*	*Number of FIA*	*Length of Canal (km) under contract*	*Area Covered (ha)*
		1	*18.2*	*425*

31) Future Expansion	
32) Deterioration of the System	
33) Other Information	

NATIONAL WATER RESOURCES BOARD

SALIENT FEATURES OF NATIONAL IRRIGATION SYSTEM

Name of System	***BONGA PUMP #1***		
1) Water Resources Region	*1*	*2) Source of Water Supply*	*Bonga River*
3) Approved Water Rights		*4) Official Opening of the System*	*1977*
5) Original Construction Cost		*6) Date of Rehabilitation*	*1988-1995*
7) Cost of Rehabilitation	*P 882,918.00*	*8) Current Status*	*Operating System*
9) Firmed-up Service Area	*298*	*10) Designed Area*	*298*
11) Potential Area	*298*	*12) Number of Landowners*	*2875*
13) Number of Farmers Served	*272*	*14) Average Farm Size*	*1.37*
15) Number of Lots	*2175*	*16) Diversion Type*	*Electric Pump*
17) Diversion Capacity	*0.4*	*18) Length of Main Canal*	*3.38*
19) Length of Laterals	*7.24*	*20) Number of Turnouts*	*33*
21) Length of Service Roads	*1.13*	*22) Length of Access Roads*	*2*
23) Drainage Density	*6.04*	*24) Farmditch Density*	*33.22*
25) Climatic Condition (Coronas)	*Type I*	*26) Average Annual Rainfall*	*28.9*
27) Main Crops	*Rice, Garlic, Tomato, Vegetables*		

28) Towns / Province Served

Towns	*Province*	*Area (ha)*
Sarrat	*Ilocos Norte*	*172*
S.Nicolas	*Ilocos Norte*	*126*
	Total	*3420*

29) Irrigated / Benefitted Area

Average	*1985-1995*		
Season	*Wet*	*Dry*	*Third*
Irrigated Area (ha)	*146*	*125*	
Benefitted Area (ha)	*142*	*123*	
Average Yield (cav/ha)	*73*	*83*	

30) Farmers Irrigators Association (FIA) with Memorandum of Agreement for Operation and Maintenance

Nature of Contract	*Number of FIA*	*Length of Canal (km) under contract*	*Area Covered (ha)*
	1	*7.24*	*298*

31) Future Expansion

32) Deterioration of the System

33) Other Information

NATIONAL WATER RESOURCES BOARD

SALIENT FEATURES OF NATIONAL IRRIGATION SYSTEM

Name of System	***BONGA PUMP #2***			
1) Water Resources Region	*1*	*2) Source of Water Supply*	*Bonga River*	
3) Approved Water Rights		*4) Official Opening of the System*	*1977*	
5) Original Construction Cost		*6) Date of Rehabilitation*	*1978-1995*	
7) Cost of Rehabilitation	*P 11,897,133.00*	*8) Current Status*	*Operating System*	
9) Firmed-up Service Area	*655*	*10) Designed Area*	*699*	
11) Potential Area	*699*	*12) Number of Landowners*	*2646*	
13) Number of Farmers Served	*503*	*14) Average Farm Size*	*1.118*	
15) Number of Lots	*6029*	*16) Diversion Type*	*Electric Pump*	
17) Diversion Capacity	*1.8*	*18) Length of Main Canal*	*14.18*	
19) Length of Laterals	*23.74*	*20) Number of Turnouts*	*216*	
21) Length of Service Roads	*21.87*	*22) Length of Access Roads*	*0.55*	
23) Drainage Density	*12.2*	*24) Farmditch Density*	*100.46*	
25) Climatic Condition (Coronas)	*Type 1*	*26) Average Annual Rainfall*	*33.7*	
27) Main Crops	*Rice, Garlic, Tomato, Monggo*			

28) Towns / Province Served

Towns	*Province*	*Area (ha)*
S. Nicolas	*Ilocos Norte*	*450*
Laoag	*Ilocos Norte*	*175*
	Total	*3420*

29) Irrigated / Benefitted Area

Average	*1985-1995*		
Season	***Wet***	***Dry***	***Third***
Irrigated Area (ha)	*344*	*147*	
Benefitted Area (ha)	*336*	*144*	
Average Yield (cav/ha)	*78*	*85*	

30) Farmers Irrigators Association (FIA) with Memorandum of Agreement for Operation and Maintenance

Nature of Contract	*Number of FIA*	*Length of Canal (km) under contract*	*Area Covered (ha)*
	1	*23.74*	*655*

31) Future Expansion

32) Deterioration of the System

33) Other Information

NATIONAL WATER RESOURCES BOARD

SALIENT FEATURES OF NATIONAL IRRIGATION SYSTEM

Name of System	***BONGA PUMP #3***			
1) Water Resources Region	*1*	*2) Source of Water Supply*	*Bonga River*	
3) Approved Water Rights		*4) Official Opening of the System*	*1977*	
5) Original Construction Cost	*No available Data*	*6) Date of Rehabilitation*	*1988-1995*	
7) Cost of Rehabilitation	*P 806,417.00*	*8) Current Status*	*Operating System*	
9) Firmed-up Service Area	*201*	*10) Designed Area*	*202*	
11) Potential Area	*202*	*12) Number of Landowners*	*325*	
13) Number of Farmers Served	*207*	*14) Average Farm Size*	*1.448*	
15) Number of Lots	*1395*	*16) Diversion Type*	*Electric Pump*	
17) Diversion Capacity	*0.38*	*18) Length of Main Canal*	*5.16*	
19) Length of Laterals	*7.79*	*20) Number of Turnouts*	*32*	
21) Length of Service Roads		*22) Length of Access Roads*		
23) Drainage Density	*3.46*	*24) Farmditch Density*	*42.08*	
25) Climatic Condition (Coronas)	*Type 1*	*26) Average Annual Rainfall*	*33.4*	
27) Main Crops	*Rice, Garlic, Tomato, Monggo*			

28) Towns / Province Served	***Towns***	***Province***	***Area (ha)***
	Laoag	*Ilocos Norte*	*201*
		Total	***3420***

29) Irrigated / Benefitted Area				
Average	*1985-1995*			
Season	***Wet***	***Dry***	***Third***	
Irrigated Area (ha)	*148*	*114*		
Benefitted Area (ha)	*148*	*114*		
Average Yield (cav/ha)	*83*	*88*		

30) Farmers Irrigators Association (FIA) with Memorandum of Agreement for Operation and Maintenance	***Nature of Contract***	***Number of FIA***	***Length of Canal (km) under contract***	***Area Covered (ha)***
		1	*7.786*	*201*

31) Future Expansion	
32) Deterioration of the System	
33) Other Information	

NATIONAL WATER RESOURCES BOARD

SALIENT FEATURES OF NATIONAL IRRIGATION SYSTEM

Name of System	***CURA***				
1) Water Resources Region	*1*	*2) Source of Water Supply*	*Barbequeza River*		
3) Approved Water Rights			*4) Official Opening of the System*	*1972*	
5) Original Construction Cost			*6) Date of Rehabilitation*	*1977-1995*	
7) Cost of Rehabilitation	*P 6,289,334.00*		*8) Current Status*	*Operating System*	
9) Firmed-up Service Area	*431*		*10) Designed Area*	*676*	
11) Potential Area	*676*		*12) Number of Landowners*	*1086*	
13) Number of Farmers Served	*334*		*14) Average Farm Size*	*1.49*	
15) Number of Lots	*2891*		*16) Diversion Type*	*Intake*	
17) Diversion Capacity	*1.72*		*18) Length of Main Canal*	*13.13*	
19) Length of Laterals	*26.95*		*20) Number of Turnouts*	*125*	
21) Length of Service Roads	*22.29*		*22) Length of Access Roads*	*6.43*	
23) Drainage Density	*32.72*		*24) Farmditch Density*	*141.41*	
25) Climatic Condition (Coronas)	*Type I*		*26) Average Annual Rainfall*	*61.6*	
27) Main Crops	*Rice, Peanut, Corn*				

28) Towns / Province Served

Towns	*Province*	*Area (ha)*
Carasi	*Ilocos Norte*	*1*
Solsona	*Ilocos Norte*	*422*
Piddig	*Ilocos Norte*	*8*
	Total	*3420*

29) Irrigated / Benefitted Area

Average	*1985-1995*			
Season	*Wet*	*Dry*	*Third*	
Irrigated Area (ha)	*429*	*317*		
Benefitted Area (ha)	*429*	*310*		
Average Yield (cav/ha)	*66*	*64*		

30) Farmers Irrigators Association (FIA) with Memorandum of Agreement for Operation and Maintenance

Nature of Contract	*Number of FIA*	*Length of Canal (km) under contract*	*Area Covered (ha)*
	4	*28.95*	*431*

31) Future Expansion

32) Deterioration of the System

33) Other Information

NATIONAL WATER RESOURCES BOARD	SALIENT FEATURES OF NATIONAL IRRIGATION SYSTEM

Name of System	***DINGRAS***			
1) Water Resources Region	*1*	*2) Source of Water Supply*	*Bonga River*	
3) Approved Water Rights	*3196*		*4) Official Opening of the System*	*1930*
5) Original Construction Cost			*6) Date of Rehabilitation*	*1978-1995*
7) Cost of Rehabilitation	*P 10,595,840.00*		*8) Current Status*	*Operating System*
9) Firmed-up Service Area	*1016*		*10) Designed Area*	*1016*
11) Potential Area	*1016*		*12) Number of Landowners*	*4148*
13) Number of Farmers Served	*1186*		*14) Average Farm Size*	*1728*
15) Number of Lots	*5891*		*16) Diversion Type*	*Intake*
17) Diversion Capacity	*3.31*		*18) Length of Main Canal*	*14.46*
19) Length of Laterals	*27.45*		*20) Number of Turnouts*	*91*
21) Length of Service Roads	*21.29*		*22) Length of Access Roads*	*1.48*
23) Drainage Density	*1.48*		*24) Farmditch Density*	*70.01*
25) Climatic Condition (Coronas)	*Type I*		*26) Average Annual Rainfall*	*48.8*
27) Main Crops	*Rice, Tobacco, Garlic, Vegetables*			

28) Towns / Province Served

Towns	*Province*	*Area (ha)*
Marcos	*Ilocos Norte*	*93*
Dingras	*Ilocos Norte*	*921*
	Total	*3420*

29) Irrigated / Benefitted Area

	Average	*1985-1995*		
	Season	*Wet*	*Dry*	*Third*
	Irrigated Area (ha)	*972*	*824*	
	Benefitted Area (ha)	*965*	*805*	
	Average Yield (cav/ha)	*81*	*81*	

30) Farmers Irrigators Association (FIA) with Memorandum of Agreement for Operation and Maintenance

Nature of Contract	*Number of FIA*	*Length of Canal (km) under contract*	*Area Covered (ha)*
	3	*28.45*	*1016*

31) Future Expansion

32) Deterioration of the System

33) Other Information

NATIONAL WATER RESOURCES BOARD

SALIENT FEATURES OF NATIONAL IRRIGATION SYSTEM

Name of System	***LABUGAON***				
1) Water Resources Region	*1*	*2) Source of Water Supply*	*Labugaon River*		
3) Approved Water Rights	*6014*		*4) Official Opening of the System*	*Jun. 1986*	
5) Original Construction Cost	*P 12,599,741.25*		*6) Date of Rehabilitation*	*Aug.-Sept. 1993*	
7) Cost of Rehabilitation	*P 5,956,127.66*		*8) Current Status*	*Operating System*	
9) Firmed-up Service Area	*1961*		*10) Designed Area*	*1961*	
11) Potential Area	*1961*		*12) Number of Landowners*		
13) Number of Farmers Served	*2153*		*14) Average Farm Size*	*0.91*	
15) Number of Lots			*16) Diversion Type*	*Diversion Dam*	
17) Diversion Capacity	*4.707*		*18) Length of Main Canal*	*13.908*	
19) Length of Laterals	*17.342*		*20) Number of Turnouts*	*111*	
21) Length of Service Roads	*3.596*		*22) Length of Access Roads*	*10879*	
23) Drainage Density			*24) Farmditch Density*	*31.08*	
25) Climatic Condition (Coronas)	*Type II*		*26) Average Annual Rainfall*	*7.4*	
27) Main Crops	*Rice*				
28) Towns / Province Served	***Towns***		***Province***	***Area (ha)***	
	Solsona		*Ilocos Norte*	*1839.9*	
	Dingras		*Ilocos Norte*	*122.1*	
			Total	*3420*	
29) Irrigated / Benefitted Area					
Average	*1985-1995*				
Season	***Wet***	***Dry***	***Third***		
Irrigated Area (ha)	*1290*	*790*			
Benefitted Area (ha)	*1290*	*790*			
Average Yield (cav/ha)	*80*	*60*			
30) Farmers Irrigators Association (FIA) with Memorandum of Agreement for Operation and Maintenance	***Nature of Contract***	***Number of FIA***	***Length of Canal (km) under contract***	***Area Covered (ha)***	
	Type III	*6*	*31.25*	*1169.94*	
31) Future Expansion	*Expansion of about 790 has. when the system is provided with drainage re-use structure in the d/stream areas,& 650 has. When the Palsiguan RMPP, Phase II is implemented.*				
32) Deterioration of the System					
33) Other Information					

NATIONAL WATER RESOURCES BOARD

SALIENT FEATURES OF NATIONAL IRRIGATION SYSTEM

Name of System	***LAOAG-VINTAR***		
1) Water Resources Region	*1*	*2) Source of Water Supply*	*Vintar River*
3) Approved Water Rights	*8800*	*4) Official Opening of the System*	*1952*
5) Original Construction Cost		*6) Date of Rehabilitation*	*1977-1995*
7) Cost of Rehabilitation	*P 55,586,030.00*	*8) Current Status*	*Operating System*
9) Firmed-up Service Area	*2377*	*10) Designed Area*	*2536*
11) Potential Area	*2536*	*12) Number of Landowners*	*16146*
13) Number of Farmers Served	*2206*	*14) Average Farm Size*	*21028*
15) Number of Lots	*21028*	*16) Diversion Type*	*Intake*
17) Diversion Capacity	*5.1*	*18) Length of Main Canal*	*31.3*
19) Length of Laterals	*72.98*	*20) Number of Turnouts*	*388*
21) Length of Service Roads	*62.77*	*22) Length of Access Roads*	*2.62*
23) Drainage Density	*10.07*	*24) Farmditch Density*	*87.43*
25) Climatic Condition (Coronas)	*Type I*	*26) Average Annual Rainfall*	*30.6*
27) Main Crops	*Rice, Garlic, Corn, Monggo, Watermelon, Vegetables*		

28) Towns / Province Served

Towns	*Province*	*Area (ha)*
Laoag	*Ilocos Norte*	*1785*
Vintar	*Ilocos Norte*	*446*
Bacarra	*Ilocos Norte*	*75*
Sarrat	*Ilocos Norte*	*71*
	Total	*3420*

29) Irrigated / Benefitted Area

Average *1985-1995*

Season	*Wet*	*Dry*	*Third*
Irrigated Area (ha)	*2272*	*1678*	
Benefitted Area (ha)	*2251*	*1655*	
Average Yield (cav/ha)	*81*	*81*	

30) Farmers Irrigators Association (FIA) with Memorandum of Agreement for Operation and Maintenance

Nature of Contract	*Number of FIA*	*Length of Canal (km) under contract*	*Area Covered (ha)*
	5	*72.98*	*2377*

31) Future Expansion

32) Deterioration of the System

33) Other Information

NATIONAL WATER RESOURCES BOARD

SALIENT FEATURES OF NATIONAL IRRIGATION SYSTEM

Name of System	***MADONGAN***				
1) Water Resources Region	*1*	*2) Source of Water Supply*		*Madongan River*	
3) Approved Water Rights	*6045*		*4) Official Opening of the System*		*Jun. 1986*
5) Original Construction Cost	*P 40,862,094.58*		*6) Date of Rehabilitation*		*Aug.-Sept. 1993*
7) Cost of Rehabilitation	*P 10,176,197.77*		*8) Current Status*		*Operating system*
9) Firmed-up Service Area	*3621*		*10) Designed Area*		*3621*
11) Potential Area	*3621*		*12) Number of Landowners*		
13) Number of Farmers Served	*2016*		*14) Average Farm Size*		*1.8*
15) Number of Lots			*16) Diversion Type*		*Diversion Dam*
17) Diversion Capacity	*8.178*		*18) Length of Main Canal*		*15.39*
19) Length of Laterals	*54.749*		*20) Number of Turnouts*		*409*
21) Length of Service Roads	*105.61*		*22) Length of Access Roads*		*47.61*
23) Drainage Density			*24) Farmditch Density*		*44*
25) Climatic Condition (Coronas)	*Type II*		*26) Average Annual Rainfall*		*7.75*
27) Main Crops	*Rice*				

28) Towns / Province Served

Towns	*Province*	*Area (ha)*
Dingras	*Ilocos Norte*	*2581.7*
Marcos	*Ilocos Norte*	*1039.3*
	Total	*3420*

29) Irrigated / Benefitted Area

Average	*1985-1995*		
Season	*Wet*	*Dry*	*Third*
Irrigated Area (ha)	*2802*	*1460*	
Benefitted Area (ha)	*2802*	*1350*	
Average Yield (cav/ha)	*85*	*70*	

30) Farmers Irrigators Association (FIA) with Memorandum of Agreement for Operation and Maintenance

Nature of Contract	*Number of FIA*	*Length of Canal (km) under contract*	*Area Covered (ha)*
Type III	*3*	*70.139*	*2802.47*

31) Future Expansion	*Expansion of about 810 has. when the system is provided with drainage re-use structure in the d'stream areas,& 1008 has. When the Palsiguan RMPP, Phase II is implemented.*
32) Deterioration of the System	
33) Other Information	

NATIONAL WATER RESOURCES BOARD

SALIENT FEATURES OF NATIONAL IRRIGATION SYSTEM

Name of System	***MASALIP***			
1) Water Resources Region	*1*	*2) Source of Water Supply*	*Aringay River*	
3) Approved Water Rights	*5000*		*4) Official Opening of the System*	*Jun. 17, 1963*
5) Original Construction Cost	*P 5,550,000.00*		*6) Date of Rehabilitation*	*1978 NISIP, 1995 ERP*
7) Cost of Rehabilitation	*P 50,000,000.00*		*8) Current Status*	*Operating System*
9) Firmed-up Service Area	*1453*		*10) Designed Area*	*1620*
11) Potential Area	*1600*		*12) Number of Landowners*	*5707*
13) Number of Farmers Served	*2166*		*14) Average Farm Size*	*0.26*
15) Number of Lots	*6396*		*16) Diversion Type*	*Ogee Dam*
17) Diversion Capacity	*2.5*		*18) Length of Main Canal*	*14.5*
19) Length of Laterals	*30.6*		*20) Number of Turnouts*	*149*
21) Length of Service Roads	*35*		*22) Length of Access Roads*	
23) Drainage Density			*24) Farmditch Density*	
25) Climatic Condition (Coronas)	*Type I*		*26) Average Annual Rainfall*	
27) Main Crops	*Rice*			

28) Towns / Province Served

Towns	*Province*	*Area (ha)*
Agoo	*La Union*	*801*
Aringay	*La Union*	*13*
S. Tomas	*La Union*	*353*
Tubao	*La Union*	*162*
	Total	*3420*

29) Irrigated / Benefitted Area

Average	*1985-1995*		
Season	*Wet*	*Dry*	*Third*
Irrigated Area (ha)	*1400*	*1345*	
Benefitted Area (ha)	*1250*	*1300*	
Average Yield (cavha)	*85*	*90*	

30) Farmers Irrigators Association (FIA) with Memorandum of Agreement for Operation and Maintenance

Nature of Contract	*Number of FIA*	*Length of Canal (km) under contract*	*Area Covered (ha)*
Stage I	*6*	*34*	*1453*

31) Future Expansion	*150 has. Of downstream portion.*
32) Deterioration of the System	*Not applicable*
33) Other Information	*The system has just rehabilitated from the damaged caused by 1990 earthquake, however, farm facilities and other appurtenant structures needs improvement.*

NATIONAL WATER RESOURCES BOARD

SALIENT FEATURES OF NATIONAL IRRIGATION SYSTEM

Name of System	***NMC & PASUQUIN***		
1) Water Resources Region	*I*	*2) Source of Water Supply*	*Vintar River*
3) Approved Water Rights	*1050*	*4) Official Opening of the System*	*1955*
5) Original Construction Cost		*6) Date of Rehabilitation*	*1977-1995*
7) Cost of Rehabilitation	*P 17,451,264.00*	*8) Current Status*	*Operating System*
9) Firmed-up Service Area	*729*	*10) Designed Area*	*746*
11) Potential Area	*746*	*12) Number of Landowners*	*6612*
13) Number of Farmers Served	*1210*	*14) Average Farm Size*	*930*
15) Number of Lots	*7351*	*16) Diversion Type*	*Intake*
17) Diversion Capacity	*1.52 cms*	*18) Length of Main Canal*	*34.24*
19) Length of Laterals	*35*	*20) Number of Turnouts*	*145*
21) Length of Service Roads	*32.34*	*22) Length of Access Roads*	*9.91*
23) Drainage Density	*28.28*	*24) Farmditch Density*	*81.64*
25) Climatic Condition (Coronas)	*Type I*	*26) Average Annual Rainfall*	*35*
27) Main Crops	*Rice, Garlic, Tomato, Corn, Onion, Monggo, Peanut*		

28) Towns / Province Served

Towns	*Province*	*Area (ha)*
Vintar	*Ilocos Norte*	*158*
Pasuquin	*Ilocos Norte*	*81*
Bacarra	*Ilocos Norte*	*490*
	Total	*3420*

29) Irrigated / Benefitted Area

Average	*1985-1995*		
Season	*Wet*	*Dry*	*Third*
Irrigated Area (ha)	*638*	*550*	
Benefitted Area (ha)	*607*	*516*	
Average Yield (cav/ha)	*79*	*81*	

30) Farmers Irrigators Association (FIA) with Memorandum of Agreement for Operation and Maintenance

Nature of Contract	*Number of FIA*	*Length of Canal (km) under contract*	*Area Covered (ha)*
	1	*35*	*729*

31) Future Expansion

32) Deterioration of the System

33) Other Information

NATIONAL WATER RESOURCES BOARD

SALIENT FEATURES OF NATIONAL IRRIGATION SYSTEM

Name of System	**NUEVA ERA**			
1) Water Resources Region	*1*	*2) Source of Water Supply*	*Bongo River*	
3) Approved Water Rights	*6046*		*4) Official Opening of the System*	*Jun. 1986*
5) Original Construction Cost	*P 7,626,733.24*		*6) Date of Rehabilitation*	
7) Cost of Rehabilitation			*8) Current Status*	*Operating System*
9) Firmed-up Service Area	*680*		*10) Designed Area*	*680*
11) Potential Area	*680*		*12) Number of Landowners*	
13) Number of Farmers Served	*626*		*14) Average Farm Size*	*1.08*
15) Number of Lots			*16) Diversion Type*	*Diversion Dam*
17) Diversion Capacity	*1.584*		*18) Length of Main Canal*	*4.491*
19) Length of Laterals	*8.609*		*20) Number of Turnouts*	*78*
21) Length of Service Roads	*11.733*		*22) Length of Access Roads*	*12.89*
23) Drainage Density			*24) Farmditch Density*	*50.6*
25) Climatic Condition (Coronas)	*Type II*		*26) Average Annual Rainfall*	*4.9*
27) Main Crops	*Rice*			

28) Towns / Province Served	*Towns*	*Province*	*Area (ha)*
	N. Era	*Ilocos Norte*	*601.3*
	Bonna	*Ilocos Norte*	*"8."*
		Total	*3420*

29) Irrigated / Benefitted Area			
Average	*1985-1995*		
Season	*Wet*	*Dry*	*Third*
Irrigated Area (ha)	*677*	*120*	
Benefitted Area (ha)	*677*	*100*	
Average Yield (cav/ha)	*70*	*50*	

30) Farmers Irrigators Association (FIA) with Memorandum of Agreement for Operation and Maintenance	*Nature of Contract*	*Number of FIA*	*Length of Canal (km) under contract*	*Area Covered (ha)*
	Type III	*2*	*6.84*	*258*

31) Future Expansion	*Expansion of 422 has. and an increase in the cropping intensity of 100% when the Polsiguan RMP, Ph. II is implemented.*
32) Deterioration of the System	
33) Other Information	

NATIONAL WATER RESOURCES BOARD

SALIENT FEATURES OF NATIONAL IRRIGATION SYSTEM

Name of System	***PAPA***				
1) Water Resources Region	*1*	*2) Source of Water Supply*	*Papa River*		
3) Approved Water Rights	*6542*		*4) Official Opening of the System*	*Jun. 1986*	
5) Original Construction Cost	*P 23,646,243.72*		*6) Date of Rehabilitation*	*Aug.-Sept. 1993*	
7) Cost of Rehabilitation	*P 7,049,149.56*		*8) Current Status*	*Operating system*	
9) Firmed-up Service Area	*2822*		*10) Designed Area*	*2822*	
11) Potential Area	*2822*		*12) Number of Londowners*		
13) Number of Farmers Served	*1856*		*14) Average Farm Size*	*1.49*	
15) Number of Lots			*16) Diversion Type*	*Diversion Dam*	
17) Diversion Capacity	*6.827*		*18) Length of Main Canal*	*12.813*	
19) Length of Laterals	*35.649*		*20) Number of Turnouts*	*266*	
21) Length of Service Roads	*5.567*		*22) Length of Access Roads*	*36.142*	
23) Drainage Density			*24) Farmditch Density*	*53*	
25) Climatic Condition (Coronas)	*Type II*		*26) Average Annual Rainfall*	*5.85*	
27) Main Crops	*Rice*				

28) Towns / Province Served	***Towns***	***Province***	***Area (ha)***
	Marcos	*Ilocos Norte*	*1058.25*
	Bacsa	*Ilocos Norte*	*1698.95*
	Nueva Era	*Ilocos Norte*	*643*
		Total	*3420*

29) Irrigated / Benefitted Area				
Average	*1985-1995*			
Season	*Wet*	*Dry*	*Third*	
Irrigated Area (ha)	*1486*	*185*		
Benefitted Area (ha)	*1486*	*150*		
Average Yield (cav/ha)	*70*	*50*		

30) Farmers Irrigators Association (FIA) with Memorandum of Agreement for Operation and Maintenance	*Nature of Contract*	*Number of FIA*	*Length of Canal (km) under contract*	*Area Covered (ha)*
	Type III	*3*	*37.818*	*1486.8*

31) Future Expansion	*Expansion of 1336.20 has when the Palsiguan river MP, Phase II is implemeted, likewise an increase in the cropping intensity of 100%.*
32) Deterioration of the System	
33) Other Information	

NATIONAL WATER RESOURCES BOARD

SALIENT FEATURES OF NATIONAL IRRIGATION SYSTEM

Name of System	***SOLSONA RIVER***			
1) Water Resources Region	*1*	*2) Source of Water Supply*	*Solsona River*	
3) Approved Water Rights	*6048*		*4) Official Opening of the System*	*Jun. 1986*
5) Original Construction Cost	*P 19,519725.91*		*6) Date of Rehabilitation*	*Aug.-Sept., 1993*
7) Cost of Rehabilitation	*P 4,006,367.53*		*8) Current Status*	*Operating system*
9) Firmed-up Service Area	*1818*		*10) Designed Area*	*1818*
11) Potential Area	*1818*		*12) Number of Landowners*	
13) Number of Farmers Served	*1163*		*14) Average Farm Size*	*1.56*
15) Number of Lots			*16) Diversion Type*	*Diversion Dam*
17) Diversion Capacity	*5.434*		*18) Length of Main Canal*	*10.029*
19) Length of Laterals	*13.241*		*20) Number of Turnouts*	*115*
21) Length of Service Roads	*6918*		*22) Length of Access Roads*	*15.991*
23) Drainage Density			*24) Farmditch Density*	*42*
25) Climatic Condition (Coronas)	*Type II*		*26) Average Annual Rainfall*	*6.81*
27) Main Crops	*Rice*			

28) Towns / Province Served

Towns	*Province*	*Area (ha)*
Solsona	*Ilocos Norte*	*1413.25*
Dingras	*Ilocos Norte*	*404.75*
	Total	*3420*

29) Irrigated / Benefitted Area

Average	*1985-1995*		
Season	*Wet*	*Dry*	*Third*
Irrigated Area (ha)	*397*	*250*	
Benefitted Area (ha)	*397*	*240*	
Average Yield (cav/ha)	*80*	*70*	

30) Farmers Irrigators Association (FIA) with Memorandum of Agreement for Operation and Maintenance

Nature of Contract	*Number of FIA*	*Length of Canal (km) under contract*	*Area Covered (ha)*
Type II	*4*	*11.849*	*397.2*

31) Future Expansion

Expansion of about 789 has. thru the rehabilitation/completion of one lateral canal & about 304 has. After having turned over this year 1997 FIA

32) Deterioration of the System

33) Other Information

NATIONAL WATER RESOURCES BOARD

SALIENT FEATURES OF NATIONAL IRRIGATION SYSTEM

Name of System	***STA. LUCIA-CANDON***				
1) Water Resources Region	*1*	*2) Source of Water Supply*	*Buaya River*		
3) Approved Water Rights	*4300*		*4) Official Opening of the System*	*1952*	
5) Original Construction Cost	*P 1,319,045.00*		*6) Date of Rehabilitation*	*1979 NISP*	
7) Cost of Rehabilitation	*P 7,478,187.00*		*8) Current Status*	*Operating System*	
9) Firmed-up Service Area	*1542*		*10) Designed Area*	*1800*	
11) Potential Area			*12) Number of Landowners*	*2579*	
13) Number of Farmers Served	*2508*		*14) Average Farm Size*	*0.257*	
15) Number of Lots	*6001*		*16) Diversion Type*	*Intake*	
17) Diversion Capacity	*3534*		*18) Length of Main Canal*	*16.02*	
19) Length of Laterals	*30.865*		*20) Number of Turnouts*	*157*	
21) Length of Service Roads	*43.731*		*22) Length of Access Roads*	*3.809*	
23) Drainage Density			*24) Farmditch Density*		
25) Climatic Condition (Coronas)	*Type I*		*26) Average Annual Rainfall*	*1487*	
27) Main Crops	*Rice*				

28) Towns / Province Served	***Towns***	***Province***	***Area (ha)***
	Sta Lucia	*Ilocos Sur*	*956*
	Candon	*Ilocos Sur*	*545*
	Sta Cruz	*Ilocos Sur*	*41*
		Total	*3420*

29) Irrigated / Benefitted Area			
Average	*1985-1995*		
Season	***Wet***	***Dry***	***Third***
Irrigated Area (ha)	*1468*	*219*	
Benefitted Area (ha)	*1465*	*211*	
Average Yield (cav/ha)	*78.2*	*70.4*	

30) Farmers Irrigators Association (FIA) with Memorandum of Agreement for Operation and Maintenance	***Nature of Contract***	***Number of FIA***	***Length of Canal (km) under contract***	***Area Covered (ha)***
	Type I	*3*	*2.49*	*114*

31) Future Expansion	*Proposed area for expansion is depend on the available water supply. However with the proposed transbasin, the irrigated area will be increased.*
32) Deterioration of the System	*Damages on typhoons/other calamities Deteriorations of facilities.*
33) Other Information	*Yearly change of river course at the dam where river training and dam protection dike are being considred to protect the dam, intake and canal network.*

NATIONAL WATER RESOURCES BOARD

SALIENT FEATURES OF NATIONAL IRRIGATION SYSTEM

Name of System	***STA. MARIA-BURGOS***			
1) Water Resources Region	*1*	*2) Source of Water Supply*	*Sta. Maria River*	
3) Approved Water Rights	*1574*		*4) Official Opening of the System*	*1963*
5) Original Construction Cost			*6) Date of Rehabilitation*	*1978 NISP*
7) Cost of Rehabilitation	*P 7,833,014.00*		*8) Current Status*	*Operating System*
9) Firmed-up Service Area	*919*		*10) Designed Area*	*1200*
11) Potential Area			*12) Number of Landowners*	*1913*
13) Number of Farmers Served	*1465*		*14) Average Farm Size*	*0.173*
15) Number of Lots	*5310*		*16) Diversion Type*	*Intake*
17) Diversion Capacity	*2.358*		*18) Length of Main Canal*	*12.02*
19) Length of Laterals	*36.002*		*20) Number of Turnouts*	*112*
21) Length of Service Roads	*44.052*		*22) Length of Access Roads*	*15.601*
23) Drainage Density			*24) Farmditch Density*	
25) Climatic Condition (Coronas)	*Type I*		*26) Average Annual Rainfall*	*1330*
27) Main Crops	*Rice*			

28) Towns / Province Served

Towns	*Province*	*Area (ha)*
Sta Maria	*Ilocos Sur*	*"6"*
Burgos	*Ilocos Sur*	*152*
	Total	*3420*

29) Irrigated / Benefitted Area

Average	*1985-1995*		
Season	***Wet***	***Dry***	***Third***
Irrigated Area (ha)	*847*	*47*	
Benefitted Area (ha)	*784*	*47*	
Average Yield (cav/ha)	*79.5*	*77.8*	

30) Farmers Irrigators Association (FIA) with Memorandum of Agreement for Operation and Maintenance

Nature of Contract	*Number of FIA*	*Length of Canal (km) under contract*	*Area Covered (ha)*
Type I	*1*	*3.74*	*488.938*

31) Future Expansion	*Generation of irrigated area in this sytem can be attained with the construction of the Ilocos Sur Transbasin for additional water supply.*
32) Deterioration of the System	*POWs for typhoon damages and other causes were submitted for approval and fundings.*
33) Other Information	*Locations of canals network are on hillside and river banks on the other side. Washout of canals and service roads are very often during rainy season.*

NATIONAL WATER RESOURCES BOARD

SALIENT FEATURES OF NATIONAL IRRIGATION SYSTEM

Name of System	***TAGUDIN***				
1) Water Resources Region	*1*	*2) Source of Water Supply*		*Chico River*	
3) Approved Water Rights	*1180*		*4) Official Opening of the System*		*Jun. 1, 1926*
5) Original Construction Cost	*P 439,394.00*		*6) Date of Rehabilitation*		*1979 NISIp*
7) Cost of Rehabilitation	*P 4, 943,890.00*		*8) Current Status*		*Operating System*
9) Firmed-up Service Area	*1345*		*10) Designed Area*		*1450*
11) Potential Area			*12) Number of Landowners*		*7934*
13) Number of Farmers Served	*3660*		*14) Average Farm Size*		*0.17*
15) Number of Lots	*7934*		*16) Diversion Type*		*Intake*
17) Diversion Capacity	*2.856*		*18) Length of Main Canal*		*2.225*
19) Length of Laterals	*18.631*		*20) Number of Turnouts*		*63*
21) Length of Service Roads	*18.519*		*22) Length of Access Roads*		*2.457*
23) Drainage Density			*24) Farmditch Density*		
25) Climatic Condition (Coronas)	*Type 1*		*26) Average Annual Rainfall*		*1430*
27) Main Crops	*Rice*				

28) Towns / Province Served

Towns	*Province*	*Area (ha)*
Tagudin	*Ilocos Sur*	*1085*
Suyo	*Ilocos Sur*	*36*
Sta. Cruz	*Ilocos Sur*	*224*
	Total	*3420*

29) Irrigated / Benefitted Area

Average	*1985-1995*		
Season	***Wet***	***Dry***	***Third***
Irrigated Area (ha)	*1361*	*815*	
Benefitted Area (ha)	*1362*	*804*	
Average Yield (cav/ha)	*84.4*	*78.6*	

30) Farmers Irrigators Association (FIA) with Memorandum of Agreement for Operation and Maintenance

Nature of Contract	*Number of FIA*	*Length of Canal (km) under contract*	*Area Covered (ha)*
None	*2*		*1345.6*

31) Future Expansion	*No proposed expansion due to limited water supply. Additional water supply will favor the system's expansion area.*
32) Deterioration of the System	*POWs for typhoon damages and other causes were submitted for approval and fundings.*
33) Other Information	*Studies are being undertaken for the solutionof heavy siltations of drainage and canals caused by heavy erosions nearby.*

NATIONAL WATER RESOURCES BOARD

SALIENT FEATURES OF NATIONAL IRRIGATION SYSTEM

Name of System	***APAYAO-ABULOG***		
1) Water Resources Region	*2*	*2) Source of Water Supply*	*Abulog River*
3) Approved Water Rights	*25,000 lps*	*4) Official Opening of the System*	*Jun. 1, 1968*
5) Original Construction Cost	*P 14,537,000.00*	*6) Date of Rehabilitation*	*Jan. 1977-Jun. 1987*
7) Cost of Rehabilitation	*P 46,608,970.00*	*8) Current Status*	*Operating System*
9) Firmed-up Service Area		*10) Designed Area*	
11) Potential Area		*12) Number of Landowners*	*6990*
13) Number of Farmers Served	*4240*	*14) Average Farm Size*	
15) Number of Lots	*8920*	*16) Diversion Type*	*Diversion Dam*
17) Diversion Capacity	*W=14.25 cms/E=27.57cms*	*18) Length of Main Canal*	
19) Length of Laterals		*20) Number of Turnouts*	*394*
21) Length of Service Roads		*22) Length of Access Roads*	
23) Drainage Density		*24) Farmditch Density*	
25) Climatic Condition (Coronas)	*Type 3*	*26) Average Annual Rainfall*	
27) Main Crops	*Rice*		

28) Towns / Province Served

Towns	*Province*	*Area (ha)*
	Total	*3420*

29) Irrigated / Benefitted Area

Average Season	*Wet*	*Dry*	*Third*
Irrigated Area (ha)			
Benefitted Area (ha)			
Average Yield (cav/ha)			

30) Farmers Irrigators Association (FIA) with Memorandum of Agreement for Operation and Maintenance

Nature of Contract	*Number of FIA*	*Length of Canal (km) under contract*	*Area Covered (ha)*

31) Future Expansion

32) Deterioration of the System

33) Other Information

NATIONAL WATER RESOURCES BOARD

SALIENT FEATURES OF NATIONAL IRRIGATION SYSTEM

Name of System	***BAGGAO***			
1) Water Resources Region	*2*	*2) Source of Water Supply*	*Paranan,Pared & Tagun Riv.*	
3) Approved Water Rights	*3165 lps*		*4) Official Opening of the System*	*Jun. 30,1975*
5) Original Construction Cost	*P 9,350,000.00*		*6) Date of Rehabilitation*	*Pared-1985/Paranan-1985*
7) Cost of Rehabilitation	*P 237,150.00/P372,300.00*		*8) Current Status*	*Operating system*
9) Firmed-up Service Area			*10) Designed Area*	
11) Potential Area			*12) Number of Landowners*	*971*
13) Number of Farmers Served	*1305*		*14) Average Farm Size*	
15) Number of Lots	*1305*		*16) Diversion Type*	*Intake*
17) Diversion Capacity	*Pd-1.95/Pa-3.29/Tu-1.13 cms*		*18) Length of Main Canal*	
19) Length of Laterals			*20) Number of Turnouts*	*151*
21) Length of Service Roads			*22) Length of Access Roads*	
23) Drainage Density			*24) Farmditch Density*	
25) Climatic Condition (Coronas)	*Type 3*		*26) Average Annual Rainfall*	
27) Main Crops	*Rice*			
28) Towns / Province Served	***Towns***	***Province***	***Area (ha)***	
		Total	***3420***	
29) Irrigated / Benefitted Area				
Average Season	***Wet***	***Dry***	***Third***	
Irrigated Area (ha)				
Benefitted Area (ha)				
Average Yield (cav/ha)				
30) Farmers Irrigators Association (FIA) with Memorandum of Agreement for Operation and Maintenance	***Nature of Contract***	***Number of FIA***	***Length of Canal (km) under contract***	***Area Covered (ha)***
31) Future Expansion				
32) Deterioration of the System				
33) Other Information				

NATIONAL WATER RESOURCES BOARD

SALIENT FEATURES OF NATIONAL IRRIGATION SYSTEM

Name of System	**BANURBUR**			
1) Water Resources Region	*2*	*2) Source of Water Supply*	*Banurbur Creek*	
3) Approved Water Rights	*1500 lps*		*4) Official Opening of the System*	*Apr. 1, 1968*
5) Original Construction Cost	*P 743,000.00*		*6) Date of Rehabilitation*	*1978-1983*
7) Cost of Rehabilitation	*P 4,475,000.00*		*8) Current Status*	*Operating system*
9) Firmed-up Service Area			*10) Designed Area*	
11) Potential Area			*12) Number of Landowners*	*628*
13) Number of Farmers Served	*732*		*14) Average Farm Size*	
15) Number of Lots	*1187*		*16) Diversion Type*	*Ogee Dam*
17) Diversion Capacity	*1.5 cms*		*18) Length of Main Canal*	
19) Length of Laterals			*20) Number of Turnouts*	*63*
21) Length of Service Roads			*22) Length of Access Roads*	
23) Drainage Density			*24) Farmditch Density*	
25) Climatic Condition (Coronas)	*Type 3*		*26) Average Annual Rainfall*	
27) Main Crops	*Rice*			

28) Towns / Province Served	*Towns*	*Province*	*Area (ha)*
		Total	*3420*

29) Irrigated / Benefitted Area				
Average				
Season	*Wet*	*Dry*	*Third*	
Irrigated Area (ha)				
Benefitted Area (ha)				
Average Yield (cav/ha)				

30) Farmers Irrigators Association (FIA) with Memorandum of Agreement for Operation and Maintenance	*Nature of Contract*	*Number of FIA*	*Length of Canal (km) under contract*	*Area Covered (ha)*

31) Future Expansion	
32) Deterioration of the System	
33) Other Information	

NATIONAL WATER RESOURCES BOARD	SALIENT FEATURES OF NATIONAL IRRIGATION SYSTEM

Name of System	***BAUA***			
1) Water Resources Region	*2*	*2) Source of Water Supply*	*Baua River*	
3) Approved Water Rights	*No Available Data*		*4) Official Opening of the System*	*Nov. 1982*
5) Original Construction Cost	*P 22,325,000.00*		*6) Date of Rehabilitation*	*Sept. 1985-1986*
7) Cost of Rehabilitation	*P 4,620,223.00*		*8) Current Status*	*Operating System*
9) Firmed-up Service Area			*10) Designed Area*	
11) Potential Area			*12) Number of Landowners*	*484*
13) Number of Farmers Served	*452*		*14) Average Farm Size*	
15) Number of Lots	*540*		*16) Diversion Type*	*Diversion Dam*
17) Diversion Capacity	*4.75 cms*		*18) Length of Main Canal*	
19) Length of Laterals			*20) Number of Turnouts*	*91*
21) Length of Service Roads			*22) Length of Access Roads*	
23) Drainage Density			*24) Farmditch Density*	
25) Climatic Condition (Coronas)	*Type 3*		*26) Average Annual Rainfall*	
27) Main Crops	*Rice*			

28) Towns / Province Served	*Towns*	*Province*	*Area (ha)*
		Total	*3420*

29) Irrigated / Benefitted Area			
Average			
Season	*Wet*	*Dry*	*Third*
Irrigated Area (ha)			
Benefitted Area (ha)			
Average Yield (cav/ha)			

30) Farmers Irrigators Association (FIA) with Memorandum of Agreement for Operation and Maintenance	*Nature of Contract*	*Number of FIA*	*Length of Canal (km) under contract*	*Area Covered (ha)*

31) Future Expansion	
32) Deterioration of the System	
33) Other Information	

NATIONAL WATER RESOURCES BOARD	SALIENT FEATURES OF NATIONAL IRRIGATION SYSTEM

Name of System	***DUMMUN***			
1) Water Resources Region	*2*	*2) Source of Water Supply*	*Dummun River*	
3) Approved Water Rights		*4) Official Opening of the System*		*Jul. 1, 1975*
5) Original Construction Cost	*P 13,028,000.00*	*6) Date of Rehabilitation*		*No Available Data*
7) Cost of Rehabilitation		*8) Current Status*		*Operating System*
9) Firmed-up Service Area		*10) Designed Area*		
11) Potential Area		*12) Number of Landowners*		*1315*
13) Number of Farmers Served	*1676*	*14) Average Farm Size*		
15) Number of Lots	*1318*	*16) Diversion Type*		*Intake*
17) Diversion Capacity	*4.08 cms*	*18) Length of Main Canal*		
19) Length of Laterals		*20) Number of Turnouts*		*67*
21) Length of Service Roads		*22) Length of Access Roads*		
23) Drainage Density		*24) Farmditch Density*		
25) Climatic Condition (Coronas)	*Type 3*	*26) Average Annual Rainfall*		
27) Main Crops	*Rice*			
28) Towns / Province Served	*Towns*	*Province*		*Area (ha)*
			Total	*3420*

29) Irrigated / Benefitted Area				
Average Season	*Wet*	*Dry*	*Third*	
Irrigated Area (ha)				
Benefitted Area (ha)				
Average Yield (cav/ha)				
30) Farmers Irrigators Association (FIA) with Memorandum of Agreement for Operation and Maintenance	*Nature of Contract*	*Number of FIA*	*Length of Canal (km) under contract*	*Area Covered (ha)*
31) Future Expansion				
32) Deterioration of the System				
33) Other Information				

NATIONAL WATER RESOURCES BOARD

SALIENT FEATURES OF NATIONAL IRRIGATION SYSTEM

Name of System	***IGUIG-ALCALA-AMULONG***			
1) Water Resources Region	*2*	*2) Source of Water Supply*	*Cagayan River*	
3) Approved Water Rights	*20700 lps*		*4) Official Opening of the System*	*May. 1983*
5) Original Construction Cost	*P 92,600,000.00*		*6) Date of Rehabilitation*	*1993-1998*
7) Cost of Rehabilitation	*P 50,000,000.00*		*8) Current Status*	*Operating system*
9) Firmed-up Service Area	*2306*		*10) Designed Area*	*3125*
11) Potential Area	*3117*		*12) Number of Landowners*	*3737*
13) Number of Farmers Served	*2871*		*14) Average Farm Size*	*0.5*
15) Number of Lots	*4744*		*16) Diversion Type*	*Intake (Pump)*
17) Diversion Capacity	*291.5 &112.50 cu m/min*		*18) Length of Main Canal*	*15.95*
19) Length of Laterals	*30.19*		*20) Number of Turnouts*	*77*
21) Length of Service Roads	*31.84*		*22) Length of Access Roads*	*2.28*
23) Drainage Density	*173.38*		*24) Farmditch Density*	*13*
25) Climatic Condition (Coronas)	*Type III*		*26) Average Annual Rainfall*	*1680*
27) Main Crops	*Rice, Corn*			

28) Towns / Province Served

Towns	*Province*	*Area (ha)*
Alcala	*Cagayan*	*869*
Amulung	*Cagayan*	*928*
Aguig	*Cagayan*	*509*
	Total	***3420***

29) Irrigated / Benefitted Area

Average	*1985-1995*		
Season	***Wet***	***Dry***	***Third***
Irrigated Area (ha)	*1150*	*1220*	
Benefitted Area (ha)	*1000*	*1200*	
Average Yield (cav/ha)	*80*	*85*	

30) Farmers Irrigators Association (FIA) with Memorandum of Agreement for Operation and Maintenance

Nature of Contract	*Number of FIA*	*Length of Canal (km) under contract*	*Area Covered (ha)*
Stage III	*3*	*45.828*	*2306*

31) Future Expansion

32) Deterioration of the System

Sitlation at Pump intake and the constant change of the Cagayan river course. Rehabilitation of the transmission lines.

33) Other Information

NATIONAL WATER RESOURCES BOARD	SALIENT FEATURES OF NATIONAL IRRIGATION SYSTEM

Name of System	***LOWER-CHICO***			
1) Water Resources Region	*2*	*2) Source of Water Supply*		
3) Approved Water Rights			*4) Official Opening of the System*	*Jan 1, 1979*
5) Original Construction Cost	*P 1,200,000.00*		*6) Date of Rehabilitation*	*1977-1979*
7) Cost of Rehabilitation	*P 2,513,915.65*		*8) Current Status*	*Under Operation*
9) Firmed-up Service Area			*10) Designed Area*	
11) Potential Area			*12) Number of Landowners*	*1586*
13) Number of Farmers Served	*2567*		*14) Average Farm Size*	
15) Number of Lots	*1429*		*16) Diversion Type*	*Gravity*
17) Diversion Capacity	*4.75 cms*		*18) Length of Main Canal*	
19) Length of Laterals			*20) Number of Turnouts*	
21) Length of Service Roads			*22) Length of Access Roads*	
23) Drainage Density			*24) Farmditch Density*	
25) Climatic Condition (Coronas)	*Tropical and Monsoonal*		*26) Average Annual Rainfall*	
27) Main Crops	*Rice, Corn*			

28) Towns / Province Served	***Towns***	***Province***	***Area (ha)***
		Total	***3420***

29) Irrigated / Benefitted Area				
Average Season	***Wet***	***Dry***	***Third***	
Irrigated Area (ha)				
Benefitted Area (ha)				
Average Yield (cav/ha)				

30) Farmers Irrigators Association (FIA) with Memorandum of Agreement for Operation and Maintenance	***Nature of Contract***	***Number of FIA***	***Length of Canal (km) under contract***	***Area Covered (ha)***

31) Future Expansion	
32) Deterioration of the System	
33) Other Information	

NATIONAL WATER RESOURCES BOARD

SALIENT FEATURES OF NATIONAL IRRIGATION SYSTEM

Name of System	**MAGAPIT PUMP**		
1) Water Resources Region	2	2) Source of Water Supply	Cagayan River
3) Approved Water Rights	21081 lps	4) Official Opening of the System	Apr. 1985
5) Original Construction Cost	P 626,226,000.00	6) Date of Rehabilitation	
7) Cost of Rehabilitation		8) Current Status	Operating system
9) Firmed-up Service Area	10914	10) Designed Area	10875
11) Potential Area	11457	12) Number of Landowners	3226
13) Number of Farmers Served	4510	14) Average Farm Size	1.07
15) Number of Lots	8022	16) Diversion Type	Pump type
17) Diversion Capacity	340 cu.m./min for each 4 pum	18) Length of Main Canal	28.77
19) Length of Laterals	94.23	20) Number of Turnouts	277
21) Length of Service Roads	141.1	22) Length of Access Roads	6.18
23) Drainage Density	0.014	24) Farmditch Density	0.063
25) Climatic Condition (Coronas)	Type III	26) Average Annual Rainfall	2300
27) Main Crops	Rice		

28) Towns / Province Served

Towns	Province	Area (ha)
Aparri	Cagayan	93*
Camalaniugan	Cagayan	3965
Buguey	Cagayan	1218
Lal-lo	Cagayan	1043
	Total	0

29) Irrigated / Benefitted Area

Average	1985-1995		
Season	Wet	Dry	Third
Irrigated Area (ha)	3260	6350	
Benefitted Area (ha)	1377	5059	
Average Yield (cav/ha)	60	76	

30) Farmers Irrigators Association (FIA) with Memorandum of Agreement for Operation and Maintenance

Nature of Contract	Number of FIA	Length of Canal (km) under contract	Area Covered (ha)
Type I	12	61.5	7163

31) Future Expansion	Future expansion of irrigable area is 3751 has.
32) Deterioration of the System	Improvement of drainage system,canals,service roads and farm level facilities.
33) Other Information	

NATIONAL WATER RESOURCES BOARD

SALIENT FEATURES OF NATIONAL IRRIGATION SYSTEM

Name of System	***MAGAT RIIS DISTRICT I***				
1) Water Resources Region	*2*	*2) Source of Water Supply*	*Magat River*		
3) Approved Water Rights			*4) Official Opening of the System*	*Dec. 1986*	
5) Original Construction Cost	*P 4,200,000,000.00*		*6) Date of Rehabilitation*		
7) Cost of Rehabilitation			*8) Current Status*	*Operating system*	
9) Firmed-up Service Area	*21058*		*10) Designed Area*	*24468*	
11) Potential Area	*24468*		*12) Number of Landowners*	*12924*	
13) Number of Farmers Served	*13868*		*14) Average Farm Size*	*1.483*	
15) Number of Lots	*14195*		*16) Diversion Type*	*Diversion Dam*	
17) Diversion Capacity	*MARIS Dam: SMC=121.5,*		*18) Length of Main Canal*	*136.821*	
19) Length of Laterals	*297.919*		*20) Number of Turnouts*	*930*	
21) Length of Service Roads	*376.951*		*22) Length of Access Roads*	*140.026*	
23) Drainage Density	*9.3*		*24) Farmditch Density*	*41*	
25) Climatic Condition (Coronas)	*Type IV*		*26) Average Annual Rainfall*	*1916.1*	
27) Main Crops	*Rice*				

28) Towns / Province Served

Towns	*Province*	*Area (ha)*
Alicia	*Isabela*	*60*
Angadanan	*Isabela*	*36*
Cordon	*Isabela*	*3661*
Echague	*Isabela*	*2321*
Ramon	*Isabela*	*3321*
S. Isidro	*Isabela*	*127*
Santiago	*Isabela*	*7604*
Diffun	*Quirino*	*1230*
Cabbaroguis	*Quirino*	*285*
Saguday	*Quirino*	*1269*
	Total	*0*

29) Irrigated / Benefitted Area

Average	*1985-1995*		
Season	***Wet***	***Dry***	***Third***
Irrigated Area (ha)	*17415*	*17716*	
Benefitted Area (ha)	*15400*	*15979*	
Average Yield (cav/ha)	*79*	*79*	

30) Farmers Irrigators Association (FIA) with Memorandum of Agreement for Operation and Maintenance

Nature of Contract	*Number of FIA*	*Length of Canal (km) under contract*	*Area Covered (ha)*
Stage I	*60*	*234.348*	*10110*
Stage II	*9*	*39.609*	*2183*

31) Future Expansion	*Expansion of 320 has from construction of dam and upgrading of lateral canals.*
32) Deterioration of the System	*Heavy siltation, scouring/erosions of canals. Defective control gates and unmaintained drainage systems.*
33) Other Information	

NATIONAL WATER RESOURCES BOARD

SALIENT FEATURES OF NATIONAL IRRIGATION SYSTEM

Name of System	***MAGAT RIIS DISTRICT II***			
1) Water Resources Region	*2*	*2) Source of Water Supply*	*Magat River*	
3) Approved Water Rights		*4) Official Opening of the System*	*Dec. 1986*	
5) Original Construction Cost	*P 4,200,000,000.00*	*6) Date of Rehabilitation*		
7) Cost of Rehabilitation		*8) Current Status*	*Operating system*	
9) Firmed-up Service Area	*23101*	*10) Designed Area*	*24054*	
11) Potential Area	*23101*	*12) Number of Landowners*	*11060*	
13) Number of Farmers Served	*17960*	*14) Average Farm Size*	*1691*	
15) Number of Lots	*13665*	*16) Diversion Type*	*Diversion Dam*	
17) Diversion Capacity	*MARIS Dam: SMC=121.5 ,*	*18) Length of Main Canal*	*42.556*	
19) Length of Laterals	*370.307*	*20) Number of Turnouts*	*1485*	
21) Length of Service Roads	*355681*	*22) Length of Access Roads*	*110.2*	
23) Drainage Density	*9.85*	*24) Farmditch Density*	*49.24*	
25) Climatic Condition (Coronas)	*Type II*	*26) Average Annual Rainfall*	*1149*	
27) Main Crops	*Rice*			

28) Towns / Province Served

Towns	*Province*	*Area (ha)*
Alicia	*Isabela*	*5506*
Angadanan	*Isabela*	*1410*
Cabatuan	*Isabela*	*209*
Ramon	*Isabela*	*4050*
S. Isidro	*Isabela*	*2333*
S. Mateo	*Isabela*	*405*
	Total	*0*

29) Irrigated / Benefitted Area

Average	*1985-1995*		
Season	***Wet***	***Dry***	***Third***
Irrigated Area (ha)	*21139*	*21209*	
Benefitted Area (ha)	*19646*	*15979*	
Average Yield (cav/ha)	*86*	*89*	

30) Farmers Irrigators Association (FIA) with Memorandum of Agreement for Operation and Maintenance

Nature of Contract	*Number of FIA*	*Length of Canal (km) under contract*	*Area Covered (ha)*
Stage I	*28*	*115*	*8288*
Stage II	*7*	*32*	*1616*

31) Future Expansion

The objective is to irrigate the firmed-up area upon completion of WRDP.

32) Deterioration of the System

33) Other Information

NATIONAL WATER RESOURCES BOARD

SALIENT FEATURES OF NATIONAL IRRIGATION SYSTEM

Name of System	***MAGAT RIIS DISTRICT III***			
1) Water Resources Region	*2*	*2) Source of Water Supply*	*Magat River*	
3) Approved Water Rights		*4) Official Opening of the System*	*Dec. 1986*	
5) Original Construction Cost	*P 1,200,000,000.00*	*6) Date of Rehabilitation*		
7) Cost of Rehabilitation		*8) Current Status*	*Operating system*	
9) Firmed-up Service Area	*18752*	*10) Designed Area*	*24793*	
11) Potential Area	*20900*	*12) Number of Landowners*	*6653*	
13) Number of Farmers Served	*9311*	*14) Average Farm Size*	*2.332*	
15) Number of Lots	*8040*	*16) Diversion Type*	*Diversion Dam*	
17) Diversion Capacity	*MARIS Dam: SMMC=121.5 ,*	*18) Length of Main Canal*	*106.42*	
19) Length of Laterals	*253.2*	*20) Number of Turnouts*	*500*	
21) Length of Service Roads	*284*	*22) Length of Access Roads*	*67*	
23) Drainage Density	*7.74*	*24) Farmditch Density*	*19.17*	
25) Climatic Condition (Coronas)	*Type II*	*26) Average Annual Rainfall*	*1728*	
27) Main Crops	*Rice*			

28) Towns / Province Served

Towns	*Province*	*Area (ha)*
Aurora	*Isabela*	*1603*
Burgos	*Isabela*	*3402*
Gamu	*Isabela*	*795*
Quirino	*Isabela*	*1206*
Roxas	*Isabela*	*3940*
S.Manuel	*Isabela*	*705*
S. Mateo	*Isabela*	*144*
Potia	*Ifugao*	*575*
	Total	***0***

29) Irrigated / Benefitted Area

Average	*1985-1995*			
Season	***Wet***	***Dry***	***Third***	
Irrigated Area (ha)	*15583*	*16172*		
Benefitted Area (ha)	*14018*	*14278*		
Average Yield (cav/ha)	*76*	*89*		

30) Farmers Irrigators Association (FIA) with Memorandum of Agreement for Operation and Maintenance

Nature of Contract	*Number of FIA*	*Length of Canal (km) under contract*	*Area Covered (ha)*
Stage I	*26*	*96.808*	*5633*
Stage II	*5*	*17.954*	*1191*

31) Future Expansion

There will 2148 has to be expanded Intake gates, sluice gates and pumps.

32) Deterioration of the System

33) Other Information

NATIONAL WATER RESOURCES BOARD

SALIENT FEATURES OF NATIONAL IRRIGATION SYSTEM

Name of System	***MAGAT RIIS DISTRICT IV***			
1) Water Resources Region	*2*	*2) Source of Water Supply*	*Magat River*	
3) Approved Water Rights		*4) Official Opening of the System*	*Dec. 1986*	
5) Original Construction Cost	*P 4,200,000,000.00*	*6) Date of Rehabilitation*		
7) Cost of Rehabilitation		*8) Current Status*	*Operating system*	
9) Firmed-up Service Area	*18800*	*10) Designed Area*	*24087*	
11) Potential Area	*24087*	*12) Number of Landowners*	*13538*	
13) Number of Farmers Served	*13538*	*14) Average Farm Size*	*1.884*	
15) Number of Lots	*9981*	*16) Diversion Type*	*Diversion Dam*	
17) Diversion Capacity	*MARIS Dam: SMMC=121.5 ,*	*18) Length of Main Canal*	*100.486*	
19) Length of Laterals	*216.516*	*20) Number of Turnouts*	*712*	
21) Length of Service Roads	*210.602*	*22) Length of Access Roads*	*106.4*	
23) Drainage Density	*8.27*	*24) Farmditch Density*	*18.94*	
25) Climatic Condition (Coronas)	*Type IV*	*26) Average Annual Rainfall*	*1728*	
27) Main Crops	*Rice*			

28) Towns / Province Served

Towns	*Province*	*Area (ha)*
Alicia	*Isabela*	*4699*
Angadanan	*Isabela*	*632*
Cabatuan	*Isabela*	*2055*
Cauayan	*Isabela*	*"29"*
Luna	*Isabela*	*2259*
Naguilian	*Isabela*	*52*
R Mercedes	*Isabela*	*832*
S. Mateo	*Isabela*	*944*
	Total	*18800*

29) Irrigated / Benefitted Area

Average	*1985-1995*		
Season	***Wet***	***Dry***	***Third***
Irrigated Area (ha)	*16450*	*16287*	
Benefitted Area (ha)	*14153*	*15268*	
Average Yield (cav/ha)	*73*	*81*	

30) Farmers Irrigators Association (FIA) with Memorandum of Agreement for Operation and Maintenance

Nature of Contract	*Number of FIA*	*Length of Canal (km) under contract*	*Area Covered (ha)*
Stage I	*14*	*54.03*	*3304*
Stage II	*9*	*43.5*	*2510*

31) Future Expansion	*Dangan Area by pump with potential area = 150 has. Cauayan east area-topping re-use water to irrigate 100 has.*
32) Deterioration of the System	*Based from NIS assessment data, tere are works for repair which were not included under IOSP II due to fund limit.*
33) Other Information	*AS of now System improvement is on-going and this is final POW under IOSP II*

NATIONAL WATER RESOURCES BOARD	SALIENT FEATURES OF NATIONAL IRRIGATION SYSTEM

Name of System	***MAGAT RIVER INTEGRATED IRRIGATION SYSTEM (I/4-MRMP)***			
1) Water Resources Region	*2*	*2) Source of Water Supply*	*Magat River and Siffu River*	
3) Approved Water Rights		*4) Official Opening of the System*	*Aug. 1957 and Sept. 1968*	
5) Original Construction Cost	*P 13,642,101.00 and P 4,700,*	*6) Date of Rehabilitation*	*Mar. 15, 1987*	
7) Cost of Rehabilitation	*P 4,463,497,640*	*8) Current Status*	*Operating System*	
9) Firmed-up Service Area		*10) Designed Area*		
11) Potential Area		*12) Number of Landowners*	*35409*	
13) Number of Farmers Served	*49897*	*14) Average Farm Size*		
15) Number of Lots	*38422*	*16) Diversion Type*	*Reservoir*	
17) Diversion Capacity	*30000 cms*	*18) Length of Main Canal*		
19) Length of Laterals		*20) Number of Turnouts*	*3014*	
21) Length of Service Roads		*22) Length of Access Roads*		
23) Drainage Density		*24) Farmditch Density*		
25) Climatic Condition (Coronas)	*Type 3*	*26) Average Annual Rainfall*		
27) Main Crops	*Rice*			
28) Towns / Province Served	*Towns*	*Province*	*Area (ha)*	
		Total	*3420*	
29) Irrigated / Benefitted Area				
Average				
Season	*Wet*	*Dry*	*Third*	
Irrigated Area (ha)				
Benefitted Area (ha)				
Average Yield (cav/ha)				
30) Farmers Irrigators Association (FIA) with Memorandum of Agreement for Operation and Maintenance	*Nature of Contract*	*Number of FIA*	*Length of Canal (km) under contract*	*Area Covered (ha)*
31) Future Expansion				
32) Deterioration of the System				
33) Other Information				

NATIONAL WATER RESOURCES BOARD	SALIENT FEATURES OF NATIONAL IRRIGATION SYSTEM

Name of System	***MAGAT RIVER INTEGRATED IRRIGATION SYSTEM (2/4-Baligatan)***			
1) Water Resources Region	*2*	*2) Source of Water Supply*	*Magat River and Siffu River*	
3) Approved Water Rights		*4) Official Opening of the System*	*Aug. 1957 and Sept. 1968*	
5) Original Construction Cost	*P 13,612,101.00 and P 4,700,*	*6) Date of Rehabilitation*	*Mar. 15, 1987*	
7) Cost of Rehabilitation	*P 4,463,497,640*	*8) Current Status*	*Operating System*	
9) Firmed-up Service Area		*10) Designed Area*		
11) Potential Area		*12) Number of Landowners*	*35409*	
13) Number of Farmers Served	*49897*	*14) Average Farm Size*		
15) Number of Lots	*38422*	*16) Diversion Type*	*Ogee Dam*	
17) Diversion Capacity	*Rigth Intake = 26 cms / Left I*	*18) Length of Main Canal*		
19) Length of Laterals		*20) Number of Turnouts*		
21) Length of Service Roads		*22) Length of Access Roads*		
23) Drainage Density		*24) Farmditch Density*		
25) Climatic Condition (Coronas)		*26) Average Annual Rainfall*		
27) Main Crops				
28) Towns / Province Served	***Towns***	***Province***	***Area (ha)***	
	45X@PJL FOJ NAME = "MSJOB 522"			
		Total	***3420***	

29) Irrigated / Benefitted Area				
Average				
Season	***Wet***	***Dry***	***Third***	
Irrigated Area (ha)				
Benefitted Area (ha)				
Average Yield (cav/ha)				
30) Farmers Irrigators Association (FIA) with Memorandum of Agreement for Operation and Maintenance	***Nature of Contract***	***Number of FIA***	***Length of Canal (km) under contract***	***Area Covered (ha)***
31) Future Expansion				
32) Deterioration of the System				
33) Other Information				

NATIONAL WATER RESOURCES BOARD	SALIENT FEATURES OF NATIONAL IRRIGATION SYSTEM

Name of System	***MAGAT RIVER INTEGRATED IRRIGATION SYSTEM (3/4-Magat RIS)***			
1) Water Resources Region	*2*	*2) Source of Water Supply*	*Magat River and Siffu River*	
3) Approved Water Rights			*4) Official Opening of the System*	*Aug. 1957 and Sept. 1968*
5) Original Construction Cost	*P 13,642,101.00 and P 4,700,*		*6) Date of Rehabilitation*	*Mar. 15, 1987*
7) Cost of Rehabilitation	*P 4,463,497,640*		*8) Current Status*	*Operating System*
9) Firmed-up Service Area			*10) Designed Area*	
11) Potential Area			*12) Number of Landowners*	*35409*
13) Number of Farmers Served	*49597*		*14) Average Farm Size*	
15) Number of Lots	*38422*		*16) Diversion Type*	*Ogee Dam*
17) Diversion Capacity	*Rigth Intake = 121.5 cms / Le*		*18) Length of Main Canal*	
19) Length of Laterals			*20) Number of Turnouts*	
21) Length of Service Roads			*22) Length of Access Roads*	
23) Drainage Density			*24) Farenditch Density*	
25) Climatic Condition (Coronas)			*26) Average Annual Rainfall*	
27) Main Crops				

28) Towns / Province Served	*Towns*	*Province*	*Area (ha)*
		Total	*0*

29) Irrigated / Benefitted Area				
Average				
Season	*Wet*	*Dry*	*Third*	
Irrigated Area (ha)				
Benefitted Area (ha)				
Average Yield (cav/ha)				

30) Farmers Irrigators Association (FIA) with Memorandum of Agreement for Operation and Maintenance	*Nature of Contract*	*Number of FIA*	*Length of Canal (km) under contract*	*Area Covered (ha)*

31) Future Expansion	
32) Deteriorotion of the System	
33) Other Information	

NATIONAL WATER RESOURCES BOARD	SALIENT FEATURES OF NATIONAL IRRIGATION SYSTEM

Name of System	***MAGAT RIVER INTEGRATED IRRIGATION SYSTEM (4/4-Siffu)***			
1) Water Resources Region	*2*	*2) Source of Water Supply*	*Magat River and Siffu River*	
3) Approved Water Rights		*4) Official Opening of the System*	*Aug. 1957 and Sept. 1968*	
5) Original Construction Cost	*P 13,642,101.00 and P 4,700,*	*6) Date of Rehabilitation*	*Mar. 15, 1987*	
7) Cost of Rehabilitation	*P 4,463,497,640*	*8) Current Status*	*Operating System*	
9) Firmed-up Service Area		*10) Designed Area*		
11) Potential Area		*12) Number of Landowners*	*35409*	
13) Number of Farmers Served	*49597*	*14) Average Farm Size*		
15) Number of Lots	*38422*	*16) Diversion Type*	*Ogee Dam*	
17) Diversion Capacity	*Rigth Intake = 13.6 cms / Left*	*18) Length of Main Canal*		
19) Length of Laterals		*20) Number of Turnouts*		
21) Length of Service Roads		*22) Length of Access Roads*		
23) Drainage Density		*24) Farmditch Density*		
25) Climatic Condition (Coronas)		*26) Average Annual Rainfall*		
27) Main Crops				

28) Towns / Province Served	*Towns*	*Province*	*Area (ha)*
		Total	*0*

29) Irrigated / Benefitted Area			
Average			
Season	*Wet*	*Dry*	*Third*
Irrigated Area (ha)			
Benefitted Area (ha)			
Average Yield (cav/ha)			

30) Farmers Irrigators Association (FIA) with Memorandum of Agreement for Operation and Maintenance	*Nature of Contract*	*Number of FIA*	*Length of Canal (km) under contract*	*Area Covered (ha)*

31) Future Expansion	
32) Deterioration of the System	
33) Other Information	

NATIONAL WATER RESOURCES BOARD

SALIENT FEATURES OF NATIONAL IRRIGATION SYSTEM

Name of System	***MALLIG***			
1) Water Resources Region	*2*	*2) Source of Water Supply*	*Mallig River*	
3) Approved Water Rights		*4) Official Opening of the System*	*Jan. 1, 1986*	
5) Originol Construction Cost	*P 27,733,220.00*	*6) Date of Rehabilitation*	*1989-1996*	
7) Cost of Rehabilitation	*P 3,282,338.00*	*8) Current Status*	*Operating System*	
9) Firmed-up Service Area	*2427*	*10) Designed Area*	*2950*	
11) Potential Area	*2427*	*12) Number of Landowners*	*742*	
13) Number of Farmers Served	*1368*	*14) Average Farm Size*	*1.85*	
15) Number of Lots	*1086*	*16) Diversion Type*	*Ogee Type*	
17) Diversion Capacity	*4.43 cms*	*18) Length of Main Canal*	*13.748*	
19) Length of Laterals	*13.748*	*20) Number of Turnouts*	*40.091*	
21) Length of Service Roads	*115*	*22) Length of Access Roads*	*6.218*	
23) Drainage Density	*47.186*	*24) Farmditch Density*	*0.0097*	
25) Climatic Condition (Coronas)	*Type 3*	*26) Average Annual Rainfall*	*2190*	
27) Main Crops	*Rice, Corn*			
28) Towns / Province Served	***Towns***	***Province***	***Area (ha)***	
	Mallig	*Isabela*	*242*	
		Total	*0*	
29) Irrigated / Benefitted Area				
Average	*1985-1995*			
Season	*Wet*	*Dry*	*Third*	
Irrigated Area (ha)	*1340*	*1300*		
Benefitted Area (ha)	*1202*	*962*		
Average Yield (cav/ha)	*70*	*75*		
30) Farmers Irrigators Association (FIA) with Memorandum of Agreement for Operation and Maintenance	***Nature of Contract***	***Number of FIA***	***Length of Canal (km) under contract***	***Area Covered (ha)***
	Stage I and stage II	*5*	*44.453*	*2086.12*
31) Future Expansion				
32) Deterioration of the System	*Repair and rehabilitation of the system is necessary to increase the area.*			
33) Other Information	*The const. of the Casili Dam is completed to supplement the system for being inadequate during dry season.*			

NATIONAL WATER RESOURCES BOARD

SALIENT FEATURES OF NATIONAL IRRIGATION SYSTEM

Name of System	***PAMPLONA***			
1) Water Resources Region	*2*	*2) Source of Water Supply*	*Gatto Creek*	
3) Approved Water Rights	*750 lps*		*4) Official Opening of the System*	*Sept. 7, 1969*
5) Original Construction Cost	*P 240,000.00*		*6) Date of Rehabilitation*	*Mar. 1986*
7) Cost of Rehabilitation	*P 5,719,520.00*		*8) Current Status*	*Operating system*
9) Firmed-up Service Area			*10) Designed Area*	
11) Potential Area			*12) Number of Landowners*	*305*
13) Number of Farmers Served			*14) Average Farm Size*	
15) Number of Lots			*16) Diversion Type*	*Pump*
17) Diversion Capacity			*18) Length of Main Canal*	
19) Length of Laterals			*20) Number of Turnouts*	*47*
21) Length of Service Roads			*22) Length of Access Roads*	
23) Drainage Density			*24) Farmditch Density*	
25) Climatic Condition (Coronas)	*Type 3*		*26) Average Annual Rainfall*	
27) Main Crops	*Rice*			

28) Towns / Province Served	***Towns***	***Province***	***Area (ha)***
	Total		*0*

29) Irrigated / Benefitted Area			
Average			
Season	***Wet***	***Dry***	***Third***
Irrigated Area (ha)			
Benefitted Area (ha)			
Average Yield (cav/ha)			

30) Farmers Irrigators Association (FIA) with Memorandum of Agreement for Operation and Maintenance	***Nature of Contract***	***Number of FIA***	***Length of Canal (km) under contract***	***Area Covered (ha)***

31) Future Expansion	
32) Deterioration of the System	
33) Other Information	