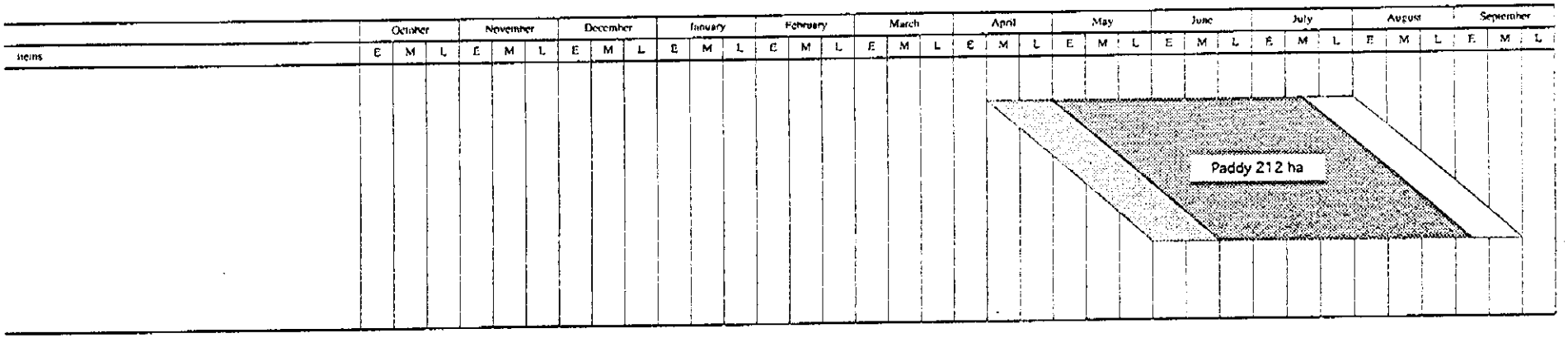
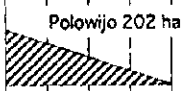
80% Dependability Water Requirement for Dry Season Paddy 212ha 1995-1996 (Jatikulon)



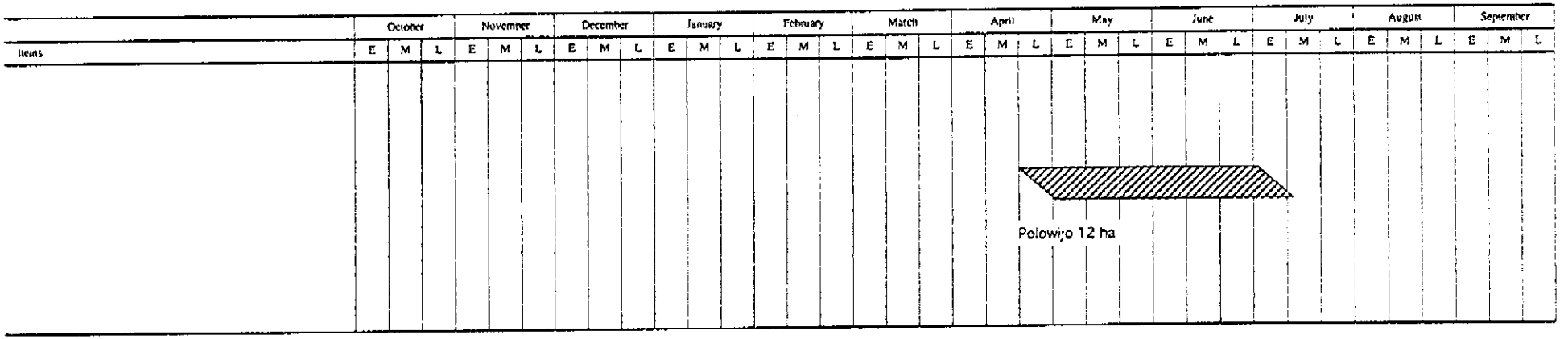
Items		October			November			December			January			February			March			April			May			June			July			August			September		
		E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L
A. Land Preparation Requirement																																					
1. Land Preparation Intensity																					1/5	2/5	2/5	2/5	2/5	1/5											
2. Land Preparation Requirement	(mm/day/area)	17.27	17.27	17.27	17.09	17.09	17.09	16.81	16.81	16.81	16.72	16.72	16.72	16.81	16.81	16.81	16.77	16.77	16.77	16.77	16.77	16.77	16.26	16.26	16.26	16.22	16.22	16.22	16.52	16.52	16.52	16.77	16.77	16.77	17.13	17.13	17.13
	(mm/day)																				3.35	6.71	6.50	6.50	6.50	3.24											
3. Water Layer Replacement Intensity																									1/5	1/5	1/5	2/5	2/5	1/5	1/5	1/5					
4. Water Layer Replacement Requirement	(mm/day/area)																								5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00					
	(mm/day)																								1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00					
5. Total Requirement for Land Preparation	(mm/day)																				3.35	6.71	6.50	6.50	7.50	4.24	1.00	2.00	2.00	1.00	1.00	1.00					
B. Crop Water Requirement																																					
1. Crop Intensity																							1/5	2/5	3/5	4/5	1	1	1	1	1	4/5	3/5	2/5	1/5		
2. Crop Coefficient																							1.10	1.10	1.10	1.07	1.05	1.05	0.98	0.32	0						
(HYV)																								1.10	1.10	1.10	1.07	1.05	1.05	0.98	0.32	0					
																									1.10	1.10	1.10	1.07	1.05	1.05	0.98	0.32	0				
																										1.10	1.10	1.10	1.07	1.05	1.05	0.98	0.32	0			
																											1.10	1.10	1.10	1.07	1.05	1.05	0.98	0.32	0		
Weighted average																							1.10	1.10	1.10	1.09	1.08	1.07	1.05	0.89	0.68	0.59	0.43	0.16	0.00		
3. Potential ET (ETo)	(mm/day/area)	5.10	5.10	5.10	4.70	4.70	4.70	4.50	4.50	4.50	4.30	4.30	4.30	4.50	4.50	4.50	4.40	4.40	4.40	4.40	4.40	4.40	3.70	3.70	3.70	3.60	3.60	3.60	3.80	3.80	3.80	4.40	4.40	4.40	4.80	4.80	4.80
4. Consumptive Use (ETc)	(mm/day/area)																						4.07	4.07	4.07	3.93	3.90	3.87	3.99	3.40	2.58	2.59	1.91	0.70	0.00		
5. Percolation	(mm/day/area)																						3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00			
6. Crop Water Requirement	(mm/day/area)																						7.07	7.07	7.07	6.93	6.90	6.87	6.99	6.40	5.58	5.59	4.91	3.70			
7. Crop Water Requirement	(mm/day)																						1.41	2.83	4.24	5.55	6.90	6.87	6.99	6.40	5.58	4.47	2.94	1.48			
C. Effective Rainfall	(mm/day)	0.32	0.40	0.57	0.23	1.31	1.10	3.87	1.81	1.21	3.00	2.24	1.89	3.21	2.69	4.12	4.04	1.57	2.41	0.67	3.11	2.57	0.70	0.59	0.27	0.99	0.19	0.59	0.06	0.53	0.02	0.00	0.00	0.00	0.13	0.05	0.18
D. Net Field Water Requirement	(mm/day)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.48	0.83	1.01	1.33	1.02	0.89	0.96	1.03	0.79	0.76	0.63	0.34	0.17	0.00	0.00	0.00
	(l/sec/ha)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E. Irrigation Efficiency		0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
F. Unit Diversion Requirement	(l/sec/ha)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.96	1.67	2.02	2.66	2.04	1.78	1.92	2.07	1.59	1.52	1.27	0.68	0.34	0.00	0.00	0.00
G. Diversion Requirement	(m3/sec)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.4	0.4	0.6	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.1	0.1	0.0	0.0	0.0

80% Dependability Water Requirement for Unlicensed paddy 202ha 1995-1996 (Jatikulon)



Items		October			November			December			January			February			March			April			May			June			July			August			September		
		E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L
A. Crop Water Requirement																																						
1. Crop Intensity		3/4	1/2	1/4																																		
2. Crop Coefficient		0.73	0.73	0.73																																		
3. Potential ET (ETo)	(mm/day/area)	5.10	5.10	5.10	4.70	4.70	4.70	4.50	4.50	4.50	4.30	4.30	4.30	4.50	4.50	4.50	4.40	4.40	4.40	4.40	4.40	4.40	3.70	3.70	3.70	3.60	3.60	3.60	3.80	3.80	3.80	4.40	4.40	4.40	4.80	4.80	4.80
4. Consumptive Use (ETc)	(mm/day/area)	3.72	3.72	3.72																																		
7. Crop Water Requirement	(mm/day)	2.79	1.86	0.93																																		
B. Effective Rain	(mm/day)	0.47	0.60	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C. Net Field Requirement	(mm/day)	2.32	1.26	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(l/sec/ha)	0.27	0.15	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
D. Irrigation Efficiency		0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
E. Unit Diversion Requirement	(l/sec/ha)	0.54	0.29	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
F. Diversion Requirement	(m3/sec)	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

80% Dependability Water Requirement for Polowijo 12ha 1995-1996 (Jatikulon)



Items		October			November			December			January			February			March			April			May			June			July			August			September		
		E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L
A. Crop Water Requirement																																						
1. Crop Intensity																						1	1	1	1	1	1	1										
2. Crop Coefficient																						0.73	0.73	0.73	0.73	0.73	0.73	0.73										
3. Potential ET (ETo)	(mm/day/area)	5.10	5.10	5.10	4.70	4.70	4.70	4.50	4.50	4.50	4.30	4.30	4.30	4.50	4.50	4.50	4.40	4.40	4.40	4.40	4.40	4.40	3.70	3.70	3.70	3.60	3.60	3.60	3.80	3.80	3.80	4.40	4.40	4.40	4.80	4.80	4.80
4. Consumptive Use (ETc)	(mm/day/area)																					3.21	2.70	2.70	2.70	2.63	2.63	2.63										
7. Crop Water Requirement	(mm/day)																					3.21	2.70	2.70	2.70	2.63	2.63	2.63										
B. Effective Rain	(mm/day)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.29	0.92	0.78	0.37	1.25	0.26	0.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C. Net Field Requirement	(mm/day)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.78	1.92	2.33	1.38	2.36	1.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(l/sec/ha)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.22	0.27	0.16	0.27	0.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
D. Irrigation Efficiency		0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
E. Unit Diversion Requirement	(l/sec/ha)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41	0.44	0.54	0.32	0.55	0.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
F. Diversion Requirement	(m3/sec)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

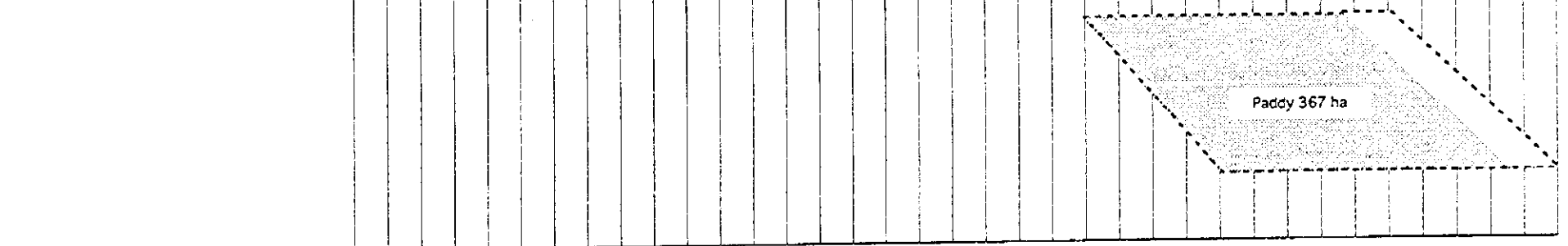
80% Dependability Water Requirement for Polowijo 5ha 1995-1996 (Jatikulon)

Items		October			November			December			January			February			March			April			May			June			July			August			September		
		E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L
A. Crop Water Requirement																																					
1. Crop Intensity																															1	1	1	1	1	1	1
2. Crop Coefficient																															0.73	0.73	0.73	0.73	0.73	0.73	0.73
3. Potential ET (ETo)	(mm/day/area)	5.10	5.10	5.10	4.70	4.70	4.70	4.50	4.50	4.50	4.30	4.30	4.30	4.50	4.50	4.50	4.40	4.40	4.40	4.40	4.40	4.40	3.70	3.70	3.70	3.60	3.60	3.60	3.80	3.80	3.80	4.40	4.40	4.40	4.80	4.80	4.80
4. Consumptive Use (ETc)	(mm/day/area)																														2.77	3.21	3.21	3.21	3.50	3.50	3.50
7. Crop Water Requirement	(mm/day)																														2.77	3.21	3.21	3.21	3.50	3.50	3.50
B. Effective Rain	(mm/day)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.21	0.08	0.26
C. Net Field Requirement	(mm/day)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.74	3.21	3.21	3.21	3.30	3.42	3.24
	(l/sec/ha)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32	0.37	0.37	0.37	0.38	0.40	0.37
D. Irrigation Efficiency		0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
E. Unit Diversion Requirement	(l/sec/ha)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.63	0.74	0.74	0.74	0.76	0.79	0.75
F. Diversion Requirement	(m3/sec)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Polowijo 5 ha

80% Dependability Water Requirement for Unlicensed Paddy 367ha 1995-1996 (Jatikulon)

Items		October			November			December			January			February			March			April			May			June			July			August			September		
		E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L
A. Crop Water Requirement																																					
1. Crop Intensity																																					
2. Crop Coefficient																																					
3. Potential ET (ETo)	(mm/day/area)	5.10	5.10	5.10	4.70	4.70	4.70	4.50	4.50	4.50	4.30	4.30	4.30	4.50	4.50	4.50	4.40	4.40	4.40	4.40	4.40	4.40	3.70	3.70	3.70	3.60	3.60	3.60	3.80	3.80	3.80	4.40	4.40	4.40	4.80	4.80	4.80
4. Consumptive Use (ETc)	(mm/day/area)																																				
7. Crop Water Requirement	(mm/day)																																				
B. Effective Rain	(mm/day)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C. Net Field Requirement	(mm/day)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(l/sec/ha)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
D. Irrigation Efficiency		0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
E. Unit Diversion Requirement	(l/sec/ha)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
F. Diversion Requirement	(m3/sec)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



	May		June			July			August			September		
	M	L	E	M	L	E	M	L	E	M	L	E	M	L
A. Crop Water Requirement	1/4	1/2	3/4	1	1	1	1	9/10	7/10	1/2	3/10	1/10		
1. Crop Intensity	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73		
2. Crop Coefficient	3.70	3.70	3.60	3.60	3.60	3.80	3.80	3.80	4.40	4.40	4.40	4.80	4.80	4.80
3. Potential ET (ETo)	2.70	2.70	2.63	2.63	2.63	2.77	2.77	2.77	3.21	3.21	3.21	3.50		
4. Consumptive Use (ETc)	0.68	1.35	1.97	2.63	2.63	2.77	2.77	2.50	2.25	1.61	0.96	0.35		
7. Crop Water Requirement	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B. Effective Rain	0.00	0.78	0.37	1.25	0.26	0.76	0.10	0.71	0.03	0.00	0.00	0.00	0.21	0.00	0.00
C. Net Field Requirement	0.00	0.98	0.72	2.36	1.87	2.68	2.07	2.46	2.25	1.61	0.96	0.15	0.00	0.00
	0.00	0.11	0.08	0.27	0.22	0.31	0.24	0.29	0.26	0.19	0.11	0.02	0.00	0.00
D. Irrigation Efficiency	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
E. Unit Diversion Requirement	0.00	0.23	0.17	0.55	0.43	0.62	0.48	0.57	0.52	0.37	0.22	0.03	0.00	0.00
F. Diversion Requirement	0.0	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.0	0.0	0.0

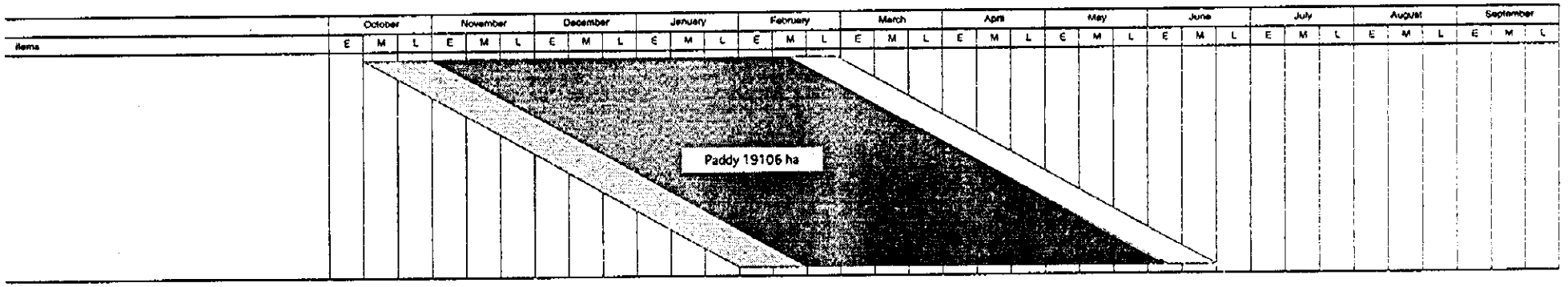
80% Dependability Water Requirement for Sugarcane 27ha 1995-1996 (Jatikulon)

Items		October			November			December			January			February			March			April			May			June			July			August			September		
		E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L
Sugarcane 27 ha																																					
A. Crop Water Requirement																																					
1. Crop Intensity		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2. Crop Coefficient		0.99	0.99	0.98	0.94	0.89	0.85	0.86	0.82	0.80	0.79	0.77	0.76	0.75	0.74	0.73	0.73	0.73	0.73	0.73	0.73	0.74	0.78	0.83	0.87	0.88	0.90	0.92	0.93	0.95	0.96	0.97	0.98	0.99	0.99	0.99	0.99
3. Potential ET (ETo)	(mm/day/area)	5.10	5.10	5.10	4.70	4.70	4.70	4.50	4.50	4.50	4.30	4.30	4.30	4.50	4.50	4.50	4.40	4.40	4.40	4.40	4.40	4.40	3.70	3.70	3.70	3.60	3.60	3.60	3.80	3.80	3.80	4.40	4.40	4.40	4.80	4.80	4.80
4. Consumptive Use (ETc)	(mm/day/area)	5.05	5.05	5.00	4.42	4.18	4.00	3.78	3.69	3.60	3.40	3.31	3.27	3.38	3.33	3.29	3.21	3.21	3.21	3.21	3.21	3.26	2.89	3.07	3.22	3.17	3.24	3.31	3.53	3.61	3.65	4.27	4.31	4.36	4.75	4.75	4.75
7. Crop Water Requirement	(mm/day)	5.05	5.05	5.00	4.42	4.18	4.00	3.78	3.69	3.60	3.40	3.31	3.27	3.38	3.33	3.29	3.21	3.21	3.21	3.21	3.21	3.26	2.89	3.07	3.22	3.17	3.24	3.31	3.53	3.61	3.65	4.27	4.31	4.36	4.75	4.75	4.75
B. Effective Rain	(mm/day)	0.52	0.66	0.91	0.37	1.89	1.58	5.16	2.49	1.69	3.91	2.94	2.50	4.06	3.42	5.10	5.11	2.08	3.13	0.92	3.95	3.31	0.94	0.81	0.39	1.32	0.28	0.83	0.10	0.77	0.04	0.00	0.00	0.00	0.23	0.09	0.29
C. Net Field Requirement	(mm/day)	4.53	4.39	4.09	4.05	2.29	2.42	0.00	1.20	1.91	0.00	0.37	0.77	0.00	0.00	0.00	0.00	1.14	0.09	2.29	0.00	0.00	1.95	2.26	2.83	1.85	2.96	2.50	3.43	2.84	3.61	4.27	4.31	4.36	4.53	4.66	4.46
	(l/sec/ha)	0.52	0.51	0.47	0.47	0.27	0.28	0.00	0.14	0.22	0.00	0.04	0.09	0.00	0.00	0.00	0.00	0.13	0.01	0.27	0.00	0.00	0.23	0.26	0.33	0.21	0.34	0.29	0.40	0.33	0.42	0.49	0.50	0.50	0.52	0.54	0.52
D. Irrigation Efficiency		0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
E. Unit Diversion Requirement	(l/sec/ha)	1.05	1.02	0.95	0.94	0.53	0.56	0.00	0.28	0.44	0.00	0.09	0.18	0.00	0.00	0.00	0.00	0.26	0.02	0.53	0.00	0.00	0.45	0.52	0.65	0.43	0.68	0.58	0.79	0.66	0.84	0.99	1.00	1.01	1.05	1.08	1.03
F. Diversion Requirement	(m3/sec)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Delta Brantas Diversion Requirements 1994-1995 (80% Dependability)

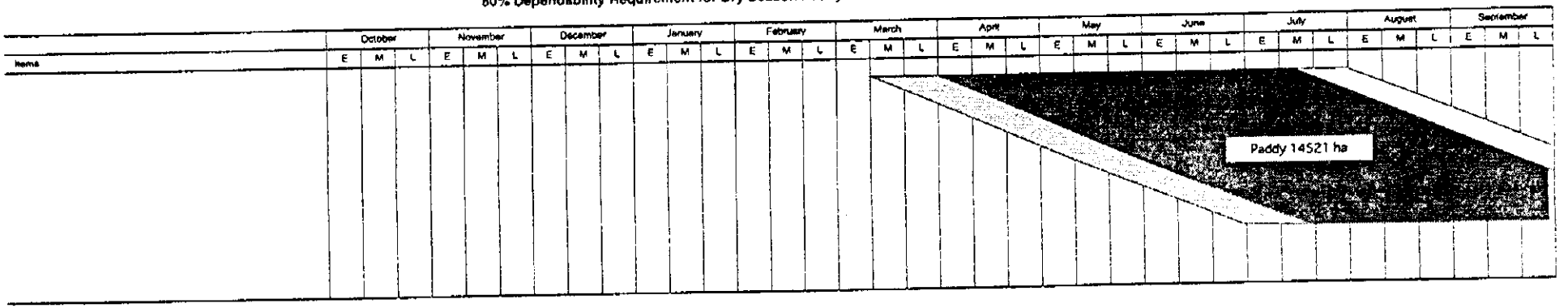
		October			November			December			January			February			March			April			May			June			July			August			September		
		E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L
Rainy Season Paddy 19106ha																																						
A. Net Field Water Requirement	(l/sec/ha)	0.00	0.07	0.32	0.41	0.42	0.31	0.25	0.50	0.50	0.34	0.44	0.66	0.42	0.23	0.13	0.14	0.27	0.16	0.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B. Irrigation Efficiency		0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
C. Unit Diversion Requirement	(l/sec/ha)	0.00	0.13	0.65	0.81	0.85	0.62	0.51	0.99	1.00	0.68	0.87	1.33	0.85	0.46	0.26	0.28	0.53	0.32	0.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
D. Diversion Reruirement	(m3/sec)	0.0	2.5	12.4	15.5	16.2	11.9	9.7	19.0	19.2	13.0	16.6	25.3	16.2	8.8	5.0	5.3	10.1	6.1	8.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dry Season Paddy 14521ha																																						
A. Net Field Water Requirement	(l/sec/ha)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.10	0.19	0.34	0.55	0.66	0.64	0.87	0.94	0.83	0.71	0.70	0.65	0.60	0.44	0.41	0.34	0.26
B. Irrigation Efficiency		0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
C. Unit Diversion Requirement	(l/sec/ha)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39	0.21	0.38	0.68	1.10	1.33	1.28	1.75	1.88	1.66	1.43	1.40	1.29	1.21	0.87	0.82	0.68	0.51
D. Diversion Reruirement	(m3/sec)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.7	3.0	5.5	9.9	15.9	19.2	18.6	25.4	27.3	24.2	20.7	20.3	18.8	17.6	12.7	12.0	9.9	7.5
Polowijo 394ha																																						
A. Net Field Water Requirement	(l/sec/ha)	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B. Irrigation Efficiency		0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
C. Unit Diversion Requirement	(l/sec/ha)	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
D. Diversion Reruirement	(m3/sec)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Polowijo 3278ha																																						
A. Net Field Water Requirement	(l/sec/ha)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.17	0.08	0.23	0.26	0.26	0.29	0.34	0.34	0.39	0.33	0.35	0.30	0.23
B. Irrigation Efficiency		0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
C. Unit Diversion Requirement	(l/sec/ha)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.22	0.34	0.16	0.47	0.52	0.51	0.57	0.67	0.69	0.79	0.67	0.70	0.61	0.46
D. Diversion Reruirement	(m3/sec)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	1.1	0.5	1.5	1.7	1.7	1.9	2.2	2.3	2.6	2.2	2.3	2.0	1.5
Polowijo 276ha																																						
A. Net Field Water Requirement	(l/sec/ha)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.08	0.23	0.26	0.26	0.29	0.34	0.34	0.39	0.14	0.00	0.00	0.00
B. Irrigation Efficiency		0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
C. Unit Diversion Requirement	(l/sec/ha)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.34	0.16	0.47	0.52	0.51	0.57	0.67	0.69	0.79	0.28	0.00	0.00	0.00
D. Diversion Reruirement	(m3/sec)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.0	0.0	0.0
Polowijo 6166ha																																						
A. Net Field Water Requirement	(l/sec/ha)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.11	0.15	0.25	0.24	0.36	0.43	0.42
B. Irrigation Efficiency		0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
C. Unit Diversion Requirement	(l/sec/ha)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.23	0.29	0.49	0.47	0.72	0.85	0.83
D. Diversion Reruirement	(m3/sec)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	1.4	1.8	3.0	2.9	4.4	5.3	5.1
Sugarcane 8923ha																																						
A. Net Field Water Requirement	(l/sec/ha)	0.54	0.44	0.55	0.51	0.39	0.11	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.15	0.23	0.13	0.30	0.34	0.35	0.39	0.45	0.47	0.53	0.47	0.57	0.58	0.57
B. Irrigation Efficiency		0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
C. Unit Diversion Requirement	(l/sec/ha)	1.07	0.88	1.11	1.01	0.78	0.21	0.00	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.00	0.00	0.30	0.45	0.26	0.60	0.68	0.69	0.78	0.89	0.94	1.06	0.94	1.13	1.16	1.14
D. Diversion Reruirement	(m3/sec)	9.6	7.8	9.9	9.0	6.9	1.9	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0	0.0	0.0	2.7	4.0	2.3	5.4	6.1	6.2	6.9	8.0	8.4	9.4	8.4	10.1	10.3	10.1
Total Diversion Requirement	(m3/sec)	9.6	10.3	22.3	24.5	23.1	13.8	9.7	20.3	19.2	13.0	16.6	25.3	16.2	8.8	5.0	5.3	10.1	6.1	16.0	3.0	5.5	9.9	19.3	24.4	21.4	32.4	35.2	32.2	30.0	32.1	31.5	32.8	26.3	28.8	27.5	24.2

80% Dependability Water Requirement for Rainy Season Paddy 19106ha 1994-1995 (Delta Brantas)



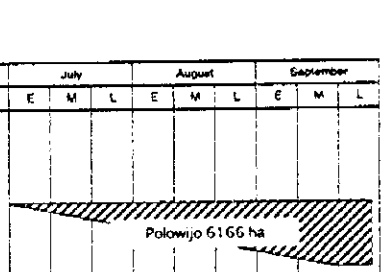
Items		October			November			December			January			February			March			April			May			June			July			August			September		
		E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L
A. Land Preparation Requirement																																					
1. Land Preparation Intensity			1/11	2/11	2/11	2/11	2/11	2/11	2/11	2/11	2/11	2/11	2/11	1/11																							
2. Land Preparation Requirement	(mm/day/area)	16.94	16.94	16.94	16.62	16.62	16.62	16.12	16.12	16.12	15.95	15.95	15.95	15.96	15.96	15.96	16.12	16.12	16.12	16.07	16.07	16.07	15.97	15.97	15.97	15.77	15.77	15.77	16.08	16.08	16.08	16.40	16.40	16.40	16.68	16.68	16.68
	(mm/day)		1.54	3.08	3.02	3.02	3.02	2.93	2.93	2.93	2.90	2.90	2.90	1.45																							
3. Water Layer Replacement Intensity								1/11	1/11	1/11	1/11	2/11	2/11	2/11	2/11	2/11	2/11	2/11	1/11	1/11	1/11	1/11															
4. Water Layer Replacement Requirement	(mm/day/area)							5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00															
	(mm/day)							0.45	0.45	0.45	0.45	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.45	0.45	0.45	0.45															
5. Total Requirement for Land Preparation	(mm/day)		1.54	3.08	3.02	3.02	3.02	3.39	3.39	3.39	3.35	3.81	3.81	2.36	0.91	0.91	0.91	0.91	0.45	0.45	0.45	0.45															
B. Crop Water Requirement																																					
1. Crop Intensity					1/11	2/11	3/11	4/11	5/11	6/11	7/11	8/11	9/11	10/11	1	1	10/11	9/11	8/11	7/11	6/11	5/11	4/11	3/11	2/11	1/11											
2. Crop Coefficient					1.10	1.10	1.10	1.09	1.08	1.08	1.04	0.86	0.53	0.49	0.16	0.00																					
(average)						1.10	1.10	1.10	1.09	1.08	1.08	1.04	0.88	0.53	0.49	0.16	0.00																				
							1.10	1.10	1.10	1.09	1.08	1.08	1.04	0.88	0.53	0.49	0.16	0.00																			
								1.10	1.10	1.10	1.09	1.08	1.08	1.04	0.86	0.53	0.49	0.16	0.00																		
									1.10	1.10	1.10	1.09	1.08	1.08	1.04	0.86	0.53	0.49	0.16	0.00																	
										1.10	1.10	1.10	1.09	1.08	1.08	1.04	0.86	0.53	0.49	0.16	0.00																
											1.10	1.10	1.10	1.09	1.08	1.08	1.04	0.86	0.53	0.49	0.16	0.00															
												1.10	1.10	1.10	1.09	1.08	1.08	1.04	0.86	0.53	0.49	0.16	0.00														
													1.10	1.10	1.10	1.09	1.08	1.08	1.04	0.86	0.53	0.49	0.16	0.00													
														1.10	1.10	1.10	1.09	1.08	1.04	0.86	0.53	0.49	0.16	0.00													
															1.10	1.10	1.10	1.09	1.08	1.08	1.04	0.86	0.53	0.49	0.16	0.00											
Weighted average					1.10	1.10	1.10	1.10	1.09	1.09	1.08	1.06	1.00	0.95	0.98	0.88	0.85	0.82	0.79	0.75	0.69	0.58	0.43	0.38	0.16	0.00											
3. Potential ET (ETo)	(mm/day/area)	5.38	5.38	5.38	5.00	5.00	5.00	4.30	4.30	4.30	4.06	4.06	4.06	3.98	3.98	3.98	4.30	4.30	4.30	4.28	4.28	4.28	4.07	4.07	4.07	3.74	3.74	3.74	4.20	4.20	4.20	4.66	4.66	4.66	5.11	5.11	5.11
4. Consumptive Use (ETc)	(mm/day/area)				6.50	5.50	5.50	4.72	4.70	4.69	4.40	4.29	4.05	3.77	3.88	3.48	3.67	3.55	3.40	3.20	2.94	2.48	1.74	1.55	0.65	0.00											
5. Percolation	(mm/day/area)				2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	3.00	4.00												
6. Crop Water Requirement	(mm/day/area)				7.50	7.50	7.50	6.72	6.70	6.69	6.40	6.29	6.05	5.77	5.88	5.48	5.67	5.55	5.40	5.20	4.94	4.48	3.74	4.55	4.65												
7. Crop Water Requirement	(mm/day)				0.68	1.36	2.05	2.44	3.05	3.65	4.07	4.57	4.95	5.24	5.88	5.48	5.15	4.54	3.93	3.31	2.69	2.04	1.36	1.24	0.65												
C. Effective Rainfall	(mm/day)	0.41	0.97	0.29	0.20	0.73	2.38	3.65	2.15	2.70	4.50	4.62	3.03	3.94	4.80	5.26	4.86	3.15	3.00	1.63	3.24	3.12	2.78	1.55	1.15	1.64	0.55	0.35	0.62	0.42	0.11	0.30	0.00	0.35	0.10	0.03	0.09
D. Net Field Water Requirement	(mm/day)	0.00	0.57	2.79	3.51	3.66	2.69	2.18	4.29	4.34	2.93	3.76	5.73	3.66	1.99	1.13	1.20	2.29	1.38	1.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(l/sec/ha)	0.00	0.07	0.32	0.41	0.42	0.31	0.25	0.50	0.50	0.34	0.44	0.66	0.42	0.23	0.13	0.14	0.27	0.16	0.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E. Irrigation Efficiency		0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
F. Unit Diversion Requirement	(l/sec/ha)	0.00	0.13	0.65	0.81	0.85	0.62	0.51	0.99	1.00	0.68	0.87	1.33	0.85	0.46	0.26	0.28	0.53	0.32	0.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
G. Diversion Requirement	(m3/sec)	0.0	2.5	12.4	15.5	16.2	11.9	9.7	19.0	19.2	13.0	16.6	25.3	16.2	8.8	5.0	5.3	10.1	6.1	8.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

80% Dependability Requirement for Dry Season Paddy 14521ha 1994-1995 (Delta Brantas)



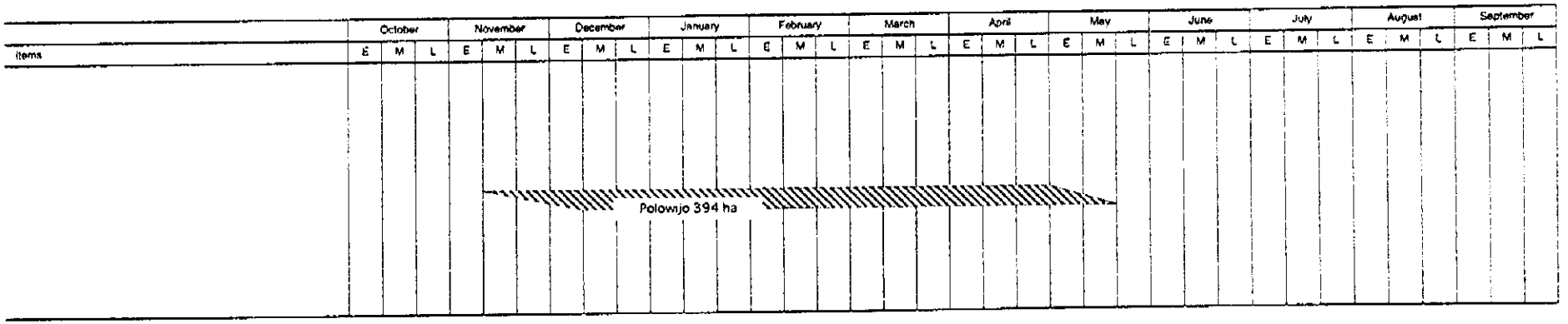
Items		October			November			December			January			February			March			April			May			June			July			August			September		
		E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L
A. Land Preparation Requirement																																					
1. Land Preparation Intensity																		1/11	2/11	2/11	2/11	2/11	2/11	2/11	2/11	2/11	2/11	1/11									
2. Land Preparation Requirement	(mm/day/area)	16.94	16.94	16.94	16.62	16.62	16.62	16.12	16.12	16.12	15.95	15.95	15.95	15.96	15.96	15.96	16.12	16.12	16.12	16.07	16.07	16.07	15.97	15.97	15.97	15.77	15.77	15.77	16.08	16.08	16.08	16.40	16.40	16.40	16.68	16.68	16.68
	(mm/day)																	1.47	2.93	2.92	2.92	2.92	2.90	2.90	2.90	2.87	2.87	2.87	1.49								
																							1/11	1/11	1/11	1/11	2/11	2/11	2/11	2/11	2/11	2/11	2/11	1/11	1/11	1/11	1/11
3. Water Layer Replacement Intensity																							5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
4. Water Layer Replacement Requirement	(mm/day/area)																						0.45	0.45	0.45	0.45	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.45	0.45	0.45	0.45
	(mm/day)																																				
5. Total Requirement for Land Preparation	(mm/day)																	1.47	2.93	2.92	2.92	2.92	3.36	3.36	3.36	3.32	3.78	3.78	2.37	0.91	0.91	0.91	0.91	0.45	0.45	0.45	0.45
B. Crop Water Requirement																																					
1. Crop Intensity																				1/11	2/11	3/11	4/11	5/11	6/11	7/11	8/11	9/11	10/11	1	1	10/11	9/11	8/11	7/11	6/11	5/11
2. Crop Coefficient																				1.10	1.10	1.10	1.09	1.08	1.08	1.04	0.86	0.53	0.49	0.16	0.00						
(average)																					1.10	1.10	1.10	1.09	1.08	1.08	1.04	0.86	0.53	0.49	0.16	0.00					
																						1.10	1.10	1.10	1.09	1.08	1.08	1.04	0.86	0.53	0.49	0.16	0.00				
																							1.10	1.10	1.10	1.09	1.08	1.08	1.04	0.86	0.53	0.49	0.16	0.00			
																								1.10	1.10	1.10	1.09	1.08	1.08	1.04	0.86	0.53	0.49	0.16	0.00		
																									1.10	1.10	1.09	1.08	1.08	1.04	0.86	0.53	0.49	0.16	0.00		
																										1.10	1.10	1.10	1.09	1.08	1.08	1.04	0.86	0.53	0.49	0.16	
																											1.10	1.10	1.10	1.09	1.08	1.08	1.04	0.86	0.53	0.49	0.16
																												1.10	1.10	1.10	1.09	1.08	1.08	1.04	0.86	0.53	0.49
																													1.10	1.10	1.10	1.09	1.08	1.08	1.04	0.86	0.53
																														1.10	1.10	1.10	1.09	1.08	1.08	1.04	0.86
																				1.10	1.10	1.10	1.10	1.09	1.09	1.08	1.08	1.00	0.95	0.88	0.78	0.74	0.70	0.66	0.50	0.51	0.41
Weighted average																																					
3. Potential ET (ETo)	(mm/day/area)	5.38	5.38	5.38	5.00	5.00	5.00	4.30	4.30	4.30	4.06	4.06	4.06	3.98	3.98	3.98	4.30	4.30	4.30	4.28	4.28	4.28	4.07	4.07	4.07	3.74	3.74	3.74	4.20	4.20	4.20	4.66	4.66	4.66	5.11	5.11	5.11
																				4.71	4.71	4.71	4.47	4.45	4.44	4.06	3.95	3.73	3.98	3.68	3.26	3.46	3.28	3.06	3.04	2.62	2.08
4. Consumptive Use (ETc)	(mm/day/area)																			2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
5. Percolation	(mm/day/area)																			6.71	6.71	6.71	6.47	6.45	6.44	6.06	5.95	5.73	5.98	5.68	5.26	5.46	5.28	5.05	5.04	4.62	4.08
6. Crop Water Requirement	(mm/day/area)																			0.61	1.22	1.83	2.35	2.93	3.51	3.85	4.33	4.69	5.43	5.68	5.26	4.97	4.32	3.67	3.21	2.52	1.86
7. Crop Water Requirement	(mm/day)																			1.83	3.24	3.12	2.78	1.55	1.15	1.64	0.55	0.35	0.42	0.42	0.11	0.30	0.00	0.35	0.10	0.03	0.08
C. Effective Rainfall	(mm/day)	0.41	0.97	0.26	0.20	0.73	2.38	3.65	2.15	2.70	4.50	4.62	3.03	3.94	4.80	5.26	4.66	3.15	3.00	1.83	3.24	3.12	2.78	1.55	1.15	1.64	0.55	0.35	0.42	0.42	0.11	0.30	0.00	0.35	0.10	0.03	0.08
D. Net Field Water Requirement	(mm/day)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.70	0.91	1.83	2.93	4.74	5.73	5.54	7.56	8.12	7.19	6.17	6.05	5.58	5.23	3.78	3.56	2.95	2.22
	(l/sec/ha)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.10	0.19	0.34	0.55	0.66	0.64	0.87	0.94	0.83	0.71	0.70	0.65	0.60	0.44	0.41	0.34	0.26
E. Irrigation Efficiency		0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
F. Unit Diversion Requirement	(l/sec/ha)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39	0.21	0.38	0.68	1.10	1.33	1.28	1.75	1.88	1.66	1.43	1.40	1.29	1.21	0.87	0.82	0.68	0.51
G. Diversion Requirement	(m3/sec)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.7	3.0	5.5	9.9	15.9	19.2	18.6	25.4	27.3	24.2	20.7	20.3	18.8	17.6	12.7	12.0	9.9	7.5

80% Dependability Water Requirement for Polowijo 6166ha 1994-1995 (Delta Brantas)



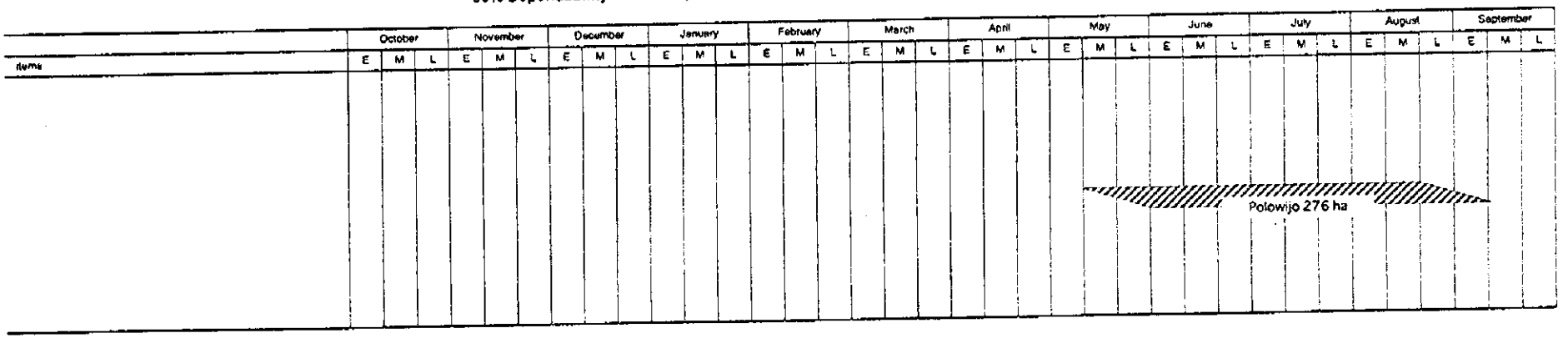
Items		October			November			December			January			February			March			April			May			June			July			August			September		
		E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L
A. Crop Water Requirement																													1/8	1/4	3/8	1/2	5/8	3/4	7/8	1	1
1. Crop Intensity																													0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73
2. Crop Coefficient																													4.20	4.20	4.20	4.66	4.66	4.66	5.11	5.11	5.11
3. Potential ET (ETo)	(mm/day/area)	5.38	5.38	5.38	5.00	5.00	5.00	4.30	4.30	4.30	4.06	4.06	4.06	3.98	3.98	3.98	4.30	4.30	4.30	4.28	4.28	4.28	4.07	4.07	4.07	3.74	3.74	3.74	3.07	3.07	3.07	3.40	3.40	3.40	3.73	3.73	3.73
4. Consumptive Use (ETc)	(mm/day/area)																												0.38	0.77	1.15	1.70	2.13	2.55	3.24	3.73	3.73
7. Crop Water Requirement	(mm/day)																												0.84	0.59	0.17	0.43	0.00	0.51	0.15	0.04	0.14
B. Effective Rain	(mm/day)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.98	1.27	2.13	2.04	3.11	3.68	3.59
C. Net Field Requirement	(mm/day)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.02	0.11	0.15	0.25	0.24	0.36	0.43	0.42
	(l/sec/ha)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
D. Irrigation Efficiency		0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
E. Unit Diversion Requirement	(l/sec/ha)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.23	0.29	0.49	0.47	0.72	0.85	0.83
F. Diversion Requirement	(m3/sec)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	1.4	1.8	3.0	2.9	4.4	5.3	5.1

80% Dependability Water Requirement for Polowijo 394ha 1994-1995 (Delta Brantas)



Items		October			November			December			January			February			March			April			May			June			July			August			September		
		E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L
A. Crop Water Requirement																																						
1. Crop Intensity						1/3	2/3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1/2															
2. Crop Coefficient						0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73															
3. Potential ET (ETo)	(mm/day/area)	5.38	5.38	5.38	5.00	5.00	5.00	4.30	4.30	4.30	4.06	4.06	4.06	3.98	3.98	3.98	4.30	4.30	4.30	4.28	4.28	4.28	4.07	4.07	4.07	3.74	3.74	3.74	4.20	4.20	4.20	4.66	4.66	4.66	5.11	5.11	5.11	
4. Consumptive Use (ETc)	(mm/day/area)					3.65	3.65	3.14	3.14	3.14	2.96	2.96	2.96	2.91	2.91	2.91	3.14	3.14	3.14	3.12	3.12	3.12	2.97															
7. Crop Water Requirement	(mm/day)					1.22	2.43	3.14	3.14	3.14	2.96	2.96	2.96	2.91	2.91	2.91	3.14	3.14	3.14	3.12	3.12	3.12	1.49															
B. Effective Rain	(mm/day)	0.00	0.00	0.00	0.00	1.03	3.18	4.60	2.78	3.46	5.51	5.66	3.79	4.76	5.74	6.26	6.04	4.00	3.82	2.37	4.07	3.93	3.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
C. Net Field Requirement	(mm/day)	0.00	0.00	0.00	0.00	0.19	0.00	0.00	0.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	(l/sec/ha)	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
D. Irrigation Efficiency		0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	
E. Unit Diversion Requirement	(l/sec/ha)	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
F. Diversion Requirement	(m3/sec)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	

80% Dependability Water Requirement for Polowijo 276ha 1994-1995 (Delta Brantas)



Items		October			November			December			January			February			March			April			May			June			July			August			September		
		E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L
A. Crop Water Requirement																																						
1. Crop Intensity																								1/2	1	1	1	1	1	1	1	1	1	1/2				
2. Crop Coefficient																								0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73				
3. Potential ET (ETo)	(mm/day/area)	5.38	5.38	5.38	5.00	5.00	5.00	4.30	4.30	4.30	4.06	4.06	4.06	3.98	3.98	3.98	4.30	4.30	4.30	4.28	4.28	4.28	4.07	4.07	4.07	3.74	3.74	3.74	4.20	4.20	4.20	4.66	4.66	4.66	5.11	5.11	5.11
4. Consumptive Use (ETc)	(mm/day/area)																							2.97	2.97	2.73	2.73	2.73	3.07	3.07	3.07	3.40	3.40	3.40				
7. Crop Water Requirement	(mm/day)																							1.49	2.97	2.73	2.73	2.73	3.07	3.07	3.07	3.40	3.40	1.70				
B. Effective Rain	(mm/day)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.51	2.04	0.72	0.47	0.84	0.59	0.17	0.43	0.00	0.51	0.00	0.00	0.00
C. Net Field Requirement	(mm/day)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.47	0.69	2.01	2.26	2.22	2.46	2.90	2.97	3.40	1.19	0.00	0.00	0.00
	(l/sec/ha)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.08	0.23	0.26	0.26	0.29	0.34	0.34	0.39	0.14	0.00	0.00	0.00
D. Irrigation Efficiency		0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
E. Unit Diversion Requirement	(l/sec/ha)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.34	0.16	0.47	0.52	0.51	0.57	0.67	0.69	0.79	0.28	0.00	0.00	0.00
F. Diversion Requirement	(m3/sec)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.0	0.0	0.0

80% Dependability Water Requirement for Polowijo 3278ha 1994-1995 (Delta Brantas)

Items		October			November			December			January			February			March			April			May			June			July			August			September		
		E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L
A. Crop Water Requirement																																					
1. Crop Intensity																					1/4	1/2	3/4	1	1	1	1	1	1	1	1	1	1	6/7	5/7	4/7
2. Crop Coefficient																					0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73
3. Potential ET (ETo)	(mm/day/area)	5.38	5.38	5.38	5.00	5.00	5.00	4.30	4.30	4.30	4.06	4.06	4.06	3.98	3.98	3.98	4.30	4.30	4.30	4.28	4.28	4.28	4.07	4.07	4.07	3.74	3.74	3.74	4.20	4.20	4.20	4.66	4.66	4.66	5.11	5.11	5.11
4. Consumptive Use (ETc)	(mm/day/area)																				3.12	3.12	2.97	2.97	2.97	2.73	2.73	2.73	3.07	3.07	3.07	3.40	3.40	3.40	3.73	3.73	3.73
7. Crop Water Requirement	(mm/day)																				0.78	1.56	2.23	2.97	2.97	2.73	2.73	2.73	3.07	3.07	3.07	3.40	3.40	3.40	3.20	2.66	2.13
B. Effective Rain	(mm/day)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.07	3.93	3.49	2.00	1.51	2.04	0.72	0.47	0.84	0.59	0.17	0.43	0.00	0.51	0.15	0.04	0.14
C. Net Field Requirement	(mm/day)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.97	1.47	0.69	2.01	2.26	2.22	2.48	2.90	2.97	3.40	2.89	3.04	2.62	1.99
	(l/sec/ha)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.17	0.08	0.23	0.26	0.26	0.29	0.34	0.34	0.39	0.33	0.35	0.30	0.23

Polowijo 3278 ha

IR-364

80% Dependability Water Requirement for Polowijo 6166ha 1994-1995 (Delta Brantas)

Items		October			November			December			January			February			March			April			May			June			July			August			September		
		E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L
A. Crop Water Requirement																													1/8	1/4	3/8	1/2	5/8	3/4	7/8	1	1
1. Crop Intensity																													0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73
2. Crop Coefficient																													4.20	4.20	4.20	4.66	4.66	4.66	5.11	5.11	5.11
3. Potential ET (ETo)	(mm/day/area)	5.38	5.38	5.38	5.00	5.00	5.00	4.30	4.30	4.30	4.06	4.06	4.06	3.98	3.98	3.98	4.30	4.30	4.30	4.28	4.28	4.28	4.07	4.07	4.07	3.74	3.74	3.74	3.07	3.07	3.07	3.40	3.40	3.40	3.73	3.73	3.73
4. Consumptive Use (ETc)	(mm/day/area)																												0.38	0.77	1.15	1.70	2.13	2.55	3.26	3.73	3.73
7. Crop Water Requirement	(mm/day)																												0.84	0.59	0.17	0.43	0.00	0.51	0.15	0.04	0.14
B. Effective Rain	(mm/day)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.98	1.27	2.13	2.04	3.11	3.69	3.59
C. Net Field Requirement	(mm/day)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.11	0.15	0.25	0.24	0.36	0.43	0.42
	(l/sec/ha)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
D. Irrigation Efficiency		0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
E. Unit Diversion Requirement	(l/sec/ha)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.23	0.29	0.49	0.47	0.72	0.85	0.83
F. Diversion Requirement	(m3/sec)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	1.4	1.8	3.0	2.9	4.4	5.3	5.1

Polowijo 6166 ha

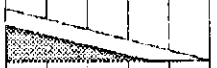
80% Dependability Water Requirement for Sugarcane 8923ha 1994-1995 (Delta Brantas)

Items		October			November			December			January			February			March			April			May			June			July			August			September		
		E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L
Sugarcane 8923 ha																																					
A. Crop Water Requirement																																					
1. Crop Intensity		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2. Crop Coefficient		0.99	0.99	0.98	0.94	0.89	0.85	0.84	0.82	0.80	0.79	0.77	0.76	0.75	0.74	0.73	0.73	0.73	0.73	0.73	0.73	0.74	0.78	0.83	0.87	0.88	0.90	0.92	0.93	0.95	0.96	0.97	0.98	0.99	0.99	0.99	0.99
3. Potential ET (ETo)	(mm/day/area)	5.38	5.38	5.38	5.00	5.00	5.00	4.30	4.30	4.30	4.06	4.06	4.06	3.98	3.98	3.98	4.30	4.30	4.30	4.26	4.26	4.26	4.07	4.07	4.07	3.74	3.74	3.74	4.20	4.20	4.20	4.66	4.66	4.66	5.11	5.11	5.11
4. Consumptive Use (ETc)	(mm/day/area)	5.33	5.33	5.27	4.70	4.45	4.25	3.61	3.53	3.44	3.21	3.13	3.09	2.99	2.95	2.91	3.14	3.14	3.14	3.12	3.12	3.17	3.17	3.38	3.54	3.29	3.37	3.44	3.91	3.99	4.03	4.52	4.57	4.61	5.06	5.06	5.06
7. Crop Water Requirement	(mm/day)	5.33	5.33	5.27	4.70	4.45	4.25	3.61	3.53	3.44	3.21	3.13	3.09	2.99	2.95	2.91	3.14	3.14	3.14	3.12	3.12	3.17	3.17	3.38	3.54	3.29	3.37	3.44	3.91	3.99	4.03	4.52	4.57	4.61	5.06	5.06	5.06
B. Effective Rain	(mm/day)	0.88	1.53	0.48	0.33	1.10	3.33	4.80	2.88	3.55	5.65	5.75	3.64	4.80	5.78	6.26	6.04	4.00	3.82	2.37	4.07	3.94	3.56	2.09	1.59	2.16	0.77	0.50	0.91	0.64	0.18	0.47	0.00	0.58	0.17	0.05	0.15
C. Net Field Requirement	(mm/day)	4.54	3.79	4.79	4.37	3.35	0.92	0.00	0.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.76	0.00	0.00	0.00	1.29	1.95	1.13	2.60	2.94	3.00	3.35	3.85	4.05	4.57	4.05	4.89	5.01	4.91
	(l/sec/ha)	0.54	0.44	0.55	0.51	0.39	0.11	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.15	0.23	0.13	0.30	0.34	0.35	0.39	0.45	0.47	0.53	0.47	0.57	0.58	0.57
D. Irrigation Efficiency		0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
E. Unit Diversion Requirement	(l/sec/ha)	1.07	0.88	1.11	1.01	0.78	0.21	0.00	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.00	0.00	0.30	0.45	0.26	0.60	0.68	0.69	0.78	0.89	0.94	1.06	0.94	1.13	1.16	1.14
F. Diversion Requirement	(m3/sec)	9.6	7.8	9.9	9.0	6.9	1.9	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0	0.0	0.0	2.7	4.0	2.3	5.4	6.1	6.2	6.9	8.0	8.4	9.4	8.4	10.1	10.3	10.1

Delta Brantas Diversion Requirements 1995-1996 (80% Dependability)

		October			November			December			January			February			March			April			May			June			July			August			September		
		E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L
Dry Season Paddy 14521ha																																					
A. Net Field Water Requirement	(l/sec/ha)	0.10	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B. Irrigation Efficiency		0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
C. Unit Diversion Requirement	(l/sec/ha)	0.21	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
D. Diversion Rerurement	(m3/sec)	3.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rainy Season Paddy 19231ha																																					
A. Net Field Water Requirement	(l/sec/ha)	0.10	0.19	0.34	0.36	0.31	0.14	0.04	0.23	0.23	0.11	0.16	0.39	0.32	0.12	0.00	0.00	0.11	0.11	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B. Irrigation Efficiency		0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
C. Unit Diversion Requirement	(l/sec/ha)	0.21	0.38	0.68	0.72	0.63	0.28	0.08	0.46	0.46	0.23	0.31	0.79	0.64	0.25	0.00	0.00	0.23	0.22	0.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
D. Diversion Rerurement	(m3/sec)	4.0	7.3	13.0	13.8	12.1	5.4	1.6	8.9	8.8	4.4	6.0	15.2	12.3	4.7	0.0	0.0	4.3	4.3	5.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dry Season Paddy 14734ha																																					
A. Net Field Water Requirement	(l/sec/ha)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.13	0.34	0.30	0.38	0.47	0.73	0.84	0.79	0.79	0.68	0.64	0.60	0.56	0.44	0.40	0.29	0.20	0.14	0.09
B. Irrigation Efficiency		0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
C. Unit Diversion Requirement	(l/sec/ha)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.27	0.68	0.60	0.76	0.95	1.47	1.68	1.58	1.58	1.35	1.28	1.19	1.12	0.89	0.81	0.58	0.41	0.29	0.18
D. Diversion Rerurement	(m3/sec)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	3.9	10.0	8.8	11.2	14.0	21.6	24.7	23.3	23.3	19.9	18.9	17.5	16.5	13.1	11.9	8.5	6.0	4.3	2.8
Polowijo 3276ha																																					
A. Net Field Water Requirement	(l/sec/ha)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B. Irrigation Efficiency		0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
C. Unit Diversion Requirement	(l/sec/ha)	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
D. Diversion Rerurement	(m3/sec)	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Polowijo 6166ha																																					
A. Net Field Water Requirement	(l/sec/ha)	0.31	0.14	0.18	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B. Irrigation Efficiency		0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
C. Unit Diversion Requirement	(l/sec/ha)	0.61	0.28	0.35	0.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
D. Diversion Rerurement	(m3/sec)	3.8	1.7	2.2	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Polowijo 386ha																																					
A. Net Field Water Requirement	(l/sec/ha)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B. Irrigation Efficiency		0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
C. Unit Diversion Requirement	(l/sec/ha)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
D. Diversion Rerurement	(m3/sec)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Polowijo 3337ha																																					
A. Net Field Water Requirement	(l/sec/ha)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.04	0.23	0.26	0.26	0.29	0.34	0.34	0.39	0.33	0.41	0.43	0.42
B. Irrigation Efficiency		0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
C. Unit Diversion Requirement	(l/sec/ha)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.08	0.47	0.52	0.51	0.57	0.67	0.69	0.79	0.67	0.83	0.85	0.83
D. Diversion Rerurement	(m3/sec)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.3	1.6	1.7	1.7	1.9	2.2	2.3	2.6	2.2	2.8	2.8	2.8
Polowijo 5664ha																																					
A. Net Field Water Requirement	(l/sec/ha)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.13	0.17	0.28	0.26	0.41	0.43	0.42
B. Irrigation Efficiency		0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
C. Unit Diversion Requirement	(l/sec/ha)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.27	0.35	0.56	0.56	0.83	0.85	0.83
D. Diversion Rerurement	(m3/sec)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	1.6	2.0	3.3	3.3	4.9	5.0	4.9
Unlicensed Paddy 277ha																																					
A. Net Field Water Requirement	(l/sec/ha)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.11	0.15	0.25	0.24	0.36	0.43	0.42
B. Irrigation Efficiency		0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
C. Unit Diversion Requirement	(l/sec/ha)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.23	0.29	0.49	0.47	0.72	0.85	0.83
D. Diversion Rerurement	(m3/sec)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.2
Sugarcane 8849ha																																					
A. Net Field Water Requirement	(l/sec/ha)	0.54	0.44	0.55	0.51	0.39	0.11	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.15	0.23	0.13	0.30	0.34	0.35	0.39	0.45	0.47	0.53	0.47	0.57	0.58	0.57
B. Irrigation Efficiency		0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
C. Unit Diversion Requirement	(l/sec/ha)	1.07	0.88	1.11	1.01	0.78	0.21	0.00	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.00	0.00	0.30	0.45	0.26	0.60	0.68	0.69	0.78	0.89	0.94	1.06	0.94	1.13	1.16	1.14
D. Diversion Rerurement	(m3/sec)	9.5	7.8	9.8	9.0	6.9	1.9	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0	0.0	2.6	4.0	2.3	5.3	6.0	6.1	6.9	7.9	8.3	9.4	8.3	10.0	10.3	10.0
Total Diversion Requirement	(m3/sec)	20.7	16.8	28.3	24.1	19.0	7.3	1.6	10.2	8.8	4.4	6.0	15.2	12.3	4.7	0.0	0.0	5.6	8.2	16.8	8.8	11.2	14.0	24.2	29.5	25.9	30.2	27.6	26.7	26.7	28.3	25.8	27.3	22.4	23.9	22.6	20.5

80% Dependability Water Requirement for Dry Season Paddy 14521ha 1995-1996 (Delta Brantas)



Items		October			November			December			January			February			March			April			May			June			July			August			September		
		E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L
A. Land Preparation Requirement																																						
1. Land Preparation Intensity																																						
2. Land Preparation Requirement	(mm/day/area)	16.94	16.94	16.94	16.62	16.62	16.62	16.12	16.12	16.12	15.95	15.95	15.95	15.96	15.96	15.96	16.12	16.12	16.12	16.07	16.07	16.07	15.97	15.97	15.97	15.77	15.77	15.77	16.08	16.08	16.08	16.40	16.40	16.40	16.68	16.68	16.68
	(mm/day)																																					
3. Water Layer Replacement Intensity																																						
4. Water Layer Replacement Requirement	(mm/day/area)																																					
	(mm/day)																																					
5. Total Requirement for Land Preparation	(mm/day)																																					
B. Crop Water Requirement																																						
1. Crop Intensity		4/11	3/11	2/11	1/11																																	
2. Crop Coefficient		0																																				
		0.16	0																																			
		0.49	0.16	0.16																																		
		0.53	0.49	0.49	0.49																																	
Weighted average		0.30	0.22	0.33	0.49																																	
3. Potential ET (ETo)	(mm/day/area)	5.38	5.38	5.38	5.00	5.00	5.00	4.30	4.30	4.30	4.06	4.06	4.06	3.98	3.98	3.98	4.30	4.30	4.30	4.28	4.28	4.28	4.07	4.07	4.07	3.74	3.74	3.74	4.20	4.20	4.20	4.66	4.66	4.66	5.11	5.11	5.11
4. Consumptive Use (ETc)	(mm/day/area)	1.59	1.17	1.75	2.45																																	
5. Percolation	(mm/day/area)	2.00	2.00	2.00																																		
6. Crop Water Requirement	(mm/day/area)	3.59	3.17	3.75																																		
7. Crop Water Requirement	(mm/day)	1.30	0.86	0.68																																		
C. Effective Rainfall	(mm/day)	0.41	0.97	0.29	0.20	0.73	2.38	3.65	2.15	2.70	4.50	4.62	3.03	3.94	4.80	5.26	4.86	3.15	3.00	1.83	3.24	3.12	2.28	1.55	1.15	1.64	0.55	0.35	0.62	0.42	0.11	0.30	0.00	0.35	0.10	0.03	0.09
D. Net Field Water Requirement	(mm/day)	0.89	0.00	0.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(l/sec/ha)	0.10	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E. Irrigation Efficiency		0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
F. Unit Diversion Requirement	(l/sec/ha)	0.21	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
G. Diversion Requirement	(m3/sec)	3.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

80% Dependability Water Requirement for Rainy Season Paddy 19231ha 1995-1996 (Delta Brantas)

Paddy 19231 ha

Items		October			November			December			January			February			March			April			May			June			July			August			September		
		E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L
A. Land Preparation Requirement																																					
1. Land Preparation Intensity		1/13	2/13	2/13	2/13	2/13	2/13	2/13	2/13	2/13	2/13	2/13	2/13	2/13	1/13																					
2. Land Preparation Requirement	(mm/day/area)	16.94	16.94	16.94	16.62	16.62	16.62	16.12	16.12	16.12	15.95	15.95	15.95	15.96	15.96	15.96	16.12	16.12	16.12	16.07	16.07	16.07	15.97	15.97	15.97	15.77	15.77	15.77	16.08	16.08	16.08	16.40	16.40	16.40	16.68	16.68	16.68
	(mm/day)	1.30	2.61	2.61	2.56	2.56	2.56	2.48	2.48	2.48	2.45	2.45	2.45	2.46	1.23																						
3. Water Layer Replacement Intensity							1/13	1/13	1/13	1/13	2/13	2/13	2/13	2/13	2/13	2/13	2/13	2/13	2/13	1/13	1/13	1/13	1/13														
4. Water Layer Replacement Requirement	(mm/day/area)							5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00														
	(mm/day)							0.38	0.38	0.38	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77																		
5. Total Requirement for Land Preparation	(mm/day)	1.30	2.61	2.61	2.56	2.56	2.56	2.86	2.86	2.86	3.22	3.22	3.22	3.22	2.00	0.77	0.77	0.77	0.77																		
B. Crop Water Requirement																																					
1. Crop Intensity				1/13	2/13	3/13	4/13	5/13	6/13	7/13	8/13	9/13	10/13	11/13	12/13	12/13	11/13	10/13	9/13	8/13	7/13	6/13	5/13	4/13	3/13	2/13	1/13										
2. Crop Coefficient				1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.08	1.05	0.98	0.32	0.00																					
(Local)					1.10	1.10	1.10	1.10	1.10	1.10	1.08	1.05	0.98	0.32	0.00																					
						1.10	1.10	1.10	1.10	1.10	1.10	1.08	1.05	0.98	0.32	0.00																				
							1.10	1.10	1.10	1.10	1.10	1.10	1.08	1.05	0.98	0.32	0.00																			
								1.10	1.10	1.10	1.10	1.10	1.10	1.08	1.05	0.98	0.32	0.00																		
									1.10	1.10	1.10	1.10	1.10	1.10	1.08	1.05	0.98	0.32	0.00																	
										1.10	1.10	1.10	1.10	1.10	1.10	1.08	1.05	0.98	0.32	0.00																
											1.10	1.10	1.10	1.10	1.10	1.10	1.08	1.05	0.98	0.32	0.00															
												1.10	1.10	1.10	1.10	1.10	1.10	1.08	1.05	0.98	0.32	0.00														
													1.10	1.10	1.10	1.10	1.10	1.10	1.08	1.05	0.98	0.32	0.00													
														1.10	1.10	1.10	1.10	1.10	1.08	1.05	0.98	0.32	0.00													
															1.10	1.10	1.10	1.10	1.10	1.08	1.05	0.98	0.32	0.00												
																1.10	1.10	1.10	1.10	1.10	1.08	1.05	0.98	0.32	0.00											
Weighted average				1.10	0.55	0.37	0.28	0.22	0.18	0.31	0.41	0.48	0.54	0.53	0.55	0.64	0.60	0.55	0.61	0.68	0.76	0.76	0.69	0.59	0.43	0.16	0.00										
3. Potential ET (ETo)	(mm/day/area)	5.38	5.38	5.38	5.00	5.00	5.00	4.30	4.30	4.30	4.06	4.06	4.06	3.98	3.98	3.98	4.30	4.30	4.30	4.28	4.28	4.28	4.07	4.07	4.07	3.74	3.74	3.74	4.20	4.20	4.20	4.66	4.66	4.66	5.11	5.11	5.11
4. Consumptive Use (ETc)	(mm/day/area)			5.92	2.75	1.83	1.38	0.95	0.79	1.35	1.66	1.96	2.18	2.11	2.19	2.55	2.58	2.37	2.62	2.91	3.25	3.23	2.79	2.39	1.76	0.60	0.00										
5. Percolation	(mm/day/area)			2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00											
6. Crop Water Requirement	(mm/day/area)			7.92	4.75	3.83	3.38	2.95	2.79	3.35	3.66	3.96	4.18	4.11	4.19	4.55	4.58	4.37	4.62	4.91	5.25	5.23	4.79	4.39	3.76	2.60											
7. Crop Water Requirement	(mm/day)			0.61	0.73	0.88	1.04	1.13	1.29	1.80	2.26	2.74	3.22	3.47	3.87	4.20	3.88	3.36	3.20	3.02	2.83	2.41	1.84	1.35	0.87	0.40											
C. Effective Rainfall	(mm/day)	0.41	0.97	0.29	0.20	0.73	2.38	3.65	2.15	2.79	4.50	4.62	3.03	3.94	4.80	5.26	4.86	3.15	3.00	1.83	3.24	3.12	2.78	1.55	1.15	1.64	0.55	0.35	0.62	0.42	0.11	0.30	0.00	0.35	0.10	0.03	0.00
D. Net Field Water Requirement	(mm/day)	0.89	1.64	2.93	3.09	2.72	1.27	0.35	2.01	1.97	0.98	1.34	3.41	2.76	1.06	0.00	0.00	0.97	0.97	1.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(l/sec/ha)	0.10	0.19	0.34	0.36	0.31	0.14	0.04	0.23	0.23	0.11	0.16	0.39	0.32	0.12	0.00	0.00	0.11	0.11	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E. Irrigation Efficiency		0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
F. Unit Diversion Requirement	(l/sec/ha)	0.21	0.38	0.68	0.72	0.63	0.28	0.08	0.46	0.46	0.23	0.31	0.79	0.64	0.25	0.00	0.00	0.23	0.22	0.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
G. Diversion Requirement	(m3/sec)	4.0	7.3	13.0	13.8	12.1	5.4	1.6	8.9	8.8	4.4	6.0	15.2	12.3	4.7	0.0	0.0	4.3	4.3	5.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

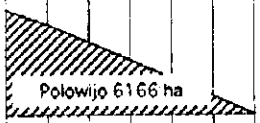
80% Dependability Water Requirement for Dry Season Paddy 14734ha 1995-1996 (Delta Brantas)

Items		October			November			December			January			February			March			April			May			June			July			August			September		
		E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L
Paddy 14734 ha																																					
A. Land Preparation Requirement																																					
1. Land Preparation Intensity																1/11	2/11	2/11	2/11	2/11	2/11	2/11	2/11	2/11	2/11	2/11	2/11	1/11									
2. Land Preparation Requirement	(mm/day/area)	16.94	16.94	16.94	16.62	16.62	16.62	16.12	16.12	16.12	15.95	15.95	15.95	15.96	15.96	15.96	16.12	16.12	16.12	16.07	16.07	16.07	15.97	15.97	15.97	15.77	15.77	15.77	16.08	16.08	16.08	16.40	16.40	16.40	16.68	16.68	16.68
	(mm/day)															1.45	2.93	2.93	2.93	2.92	2.92	2.92	2.90	2.90	2.90	2.87	1.43											
3. Water Layer Replacement Intensity																					1/11	1/11	1/11	2/11	2/11	2/11	2/11	2/11	2/11	2/11	2/11	1/11	1/11	1/11			
4. Water Layer Replacement Requirement	(mm/day/area)																				5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00			
	(mm/day)																				0.45	0.45	0.45	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.45	0.45	0.45			
5. Total Requirement for Land Preparation	(mm/day)															1.45	2.93	2.93	2.93	2.92	3.38	3.38	3.36	3.81	3.81	3.78	2.34	0.91	0.91	0.91	0.91	0.45	0.45	0.45			
B. Crop Water Requirement																																					
1. Crop Intensity																		1/11	2/11	3/11	4/11	5/11	6/11	7/11	8/11	9/11	9/11	1.00	1	10/11	9/11	8/11	7/11	6/11	5/11	4/11	3/11
2. Crop Coefficient																		1.10	1.10	1.10	1.09	1.08	1.08	1.04	0.86	0.53	0.49	0.16	0.00								
																			1.10	1.10	1.10	1.09	1.08	1.08	1.04	0.86	0.53	0.49	0.16	0.00							
																				1.10	1.10	1.10	1.09	1.08	1.08	1.04	0.86	0.53	0.49	0.16	0.00						
																					1.10	1.10	1.10	1.09	1.08	1.08	1.04	0.86	0.53	0.49	0.16	0.00					
																						1.10	1.10	1.09	1.08	1.08	1.04	0.86	0.53	0.49	0.16	0.00					
																							1.10	1.10	1.10	1.09	1.08	1.08	1.04	0.86	0.53	0.49	0.16	0.00			
																								1.10	1.10	1.10	1.09	1.08	1.08	1.04	0.86	0.53	0.49	0.16	0.00		
																									1.10	1.10	1.10	1.09	1.08	1.08	1.04	0.86	0.53	0.49	0.16	0.00	
																										1.10	1.10	1.10	1.09	1.08	1.08	1.04	0.86	0.53	0.49	0.16	0.00
																											1.10	1.10	1.10	1.09	1.08	1.08	1.04	0.86	0.53	0.49	0.16
																												1.10	1.10	1.10	1.09	1.08	1.08	1.04	0.86	0.53	0.49
Weighted average																		1.10	1.10	1.10	1.10	1.09	1.09	1.08	1.06	1.00	0.95	0.88	0.78	0.74	0.70	0.66	0.59	0.51	0.41	0.30	0.22
3. Potential ET (ETo)	(mm/day/area)	5.38	5.38	5.38	5.00	5.00	5.00	4.30	4.30	4.30	4.06	4.06	4.06	3.98	3.98	3.98	4.30	4.30	4.30	4.28	4.28	4.28	4.07	4.07	4.07	3.74	3.74	3.74	4.20	4.20	4.20	4.66	4.66	4.66	5.11	5.11	5.11
4. Consumptive Use (ETc)	(mm/day/area)																	4.73	4.73	4.71	4.70	4.68	4.44	4.41	4.30	3.73	3.54	3.27	3.26	3.12	2.95	3.03	2.77	2.39	2.08	1.51	1.11
5. Percolation	(mm/day/area)																	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
6. Crop Water Requirement	(mm/day/area)																	6.73	6.73	6.71	6.70	6.68	6.44	6.41	6.30	5.73	5.54	5.27	5.26	5.12	4.95	5.03	4.77	4.39	4.08	3.51	3.11
7. Crop Water Requirement	(mm/day)																	0.61	1.22	1.83	2.44	3.04	3.51	4.08	4.58	4.69	5.04	5.27	5.26	4.66	4.05	3.67	3.04	2.40	1.86	1.28	0.85
C. Effective Rainfall	(mm/day)	0.41	0.97	0.29	0.20	0.73	2.38	3.65	2.15	2.70	4.50	4.62	3.03	3.94	4.80	5.26	4.86	3.15	3.00	1.83	3.24	3.12	2.78	1.55	1.15	1.64	0.55	0.35	0.62	0.42	0.11	0.30	0.60	0.35	0.10	0.03	0.09
D. Net Field Water Requirement	(mm/day)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39	1.15	2.92	2.58	3.29	4.09	6.34	7.25	6.83	6.83	5.83	5.55	5.14	4.85	3.83	3.49	2.30	1.76	1.25	0.76
	(l/sec/ha)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.13	0.34	0.30	0.38	0.47	0.73	0.84	0.79	0.79	0.68	0.64	0.60	0.56	0.44	0.40	0.29	0.20	0.14	0.09
E. Irrigation Efficiency		0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
F. Unit Diversion Requirement	(l/sec/ha)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.27	0.68	0.60	0.76	0.95	1.47	1.68	1.58	1.58	1.35	1.28	1.19	1.12	0.89	0.81	0.58	0.41	0.29	0.18
G. Diversion Requirement	(m3/sec)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	3.9	10.0	8.8	11.2	14.0	21.6	24.7	23.3	23.3	19.9	18.9	17.5	16.5	13.1	11.9	8.5	6.0	4.3	2.6

80% Dependability Water Requirement for polowijo 3278ha 1995-1996 (Delta Brantas)

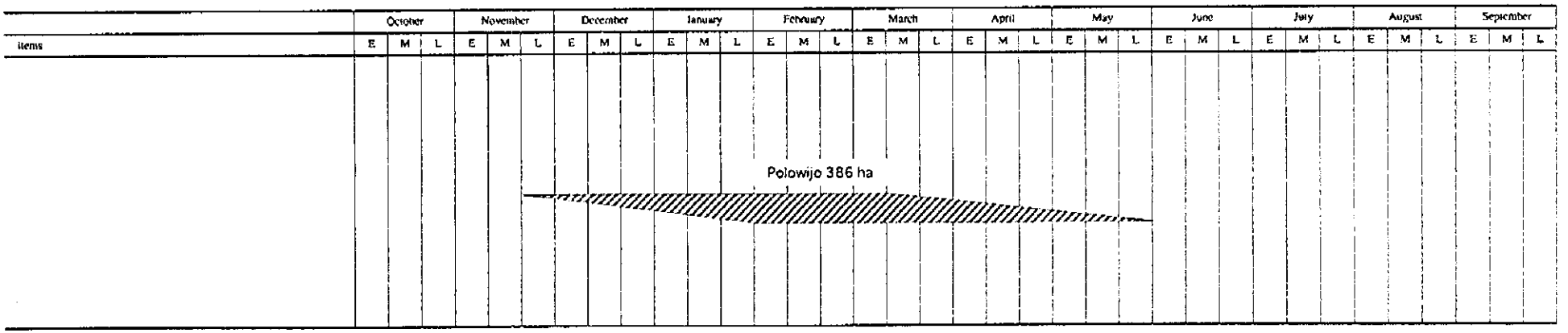
Items		October			November			December			January			February			March			April			May			June			July			August			September		
		E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L
Polowijo 3278 ha																																					
A. Crop Water Requirement																																					
1. Crop Intensity		2/7	1/7																																		
2. Crop Coefficient		0.73	0.73																																		
3. Potential ET (ETo)	(mm/day/area)	5.38	5.38	5.38	5.00	5.00	5.00	4.30	4.30	4.30	4.06	4.06	4.06	3.98	3.98	3.98	4.30	4.30	4.30	4.28	4.28	4.28	4.07	4.07	4.07	3.74	3.74	3.74	4.20	4.20	4.20	4.66	4.66	4.66	5.11	5.11	5.11
4. Consumpive Use (ETc)	(mm/day/area)	3.93	3.93																																		
7. Crop Water Requirement	(mm/day)	1.12	0.56																																		
B. Effective Rain	(mm/day)	0.62	1.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C. Net Field Requirement	(mm/day)	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(l/sec/ha)	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
D. Irrigation Efficiency		0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
E. Unit Diversion Requirement	(l/sec/ha)	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
F. Diversion Renuirement	(m3/sec)	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

80% Dependability Water Requirement for Polowijo 6166ha 1995-1996 (Delta Brantas)



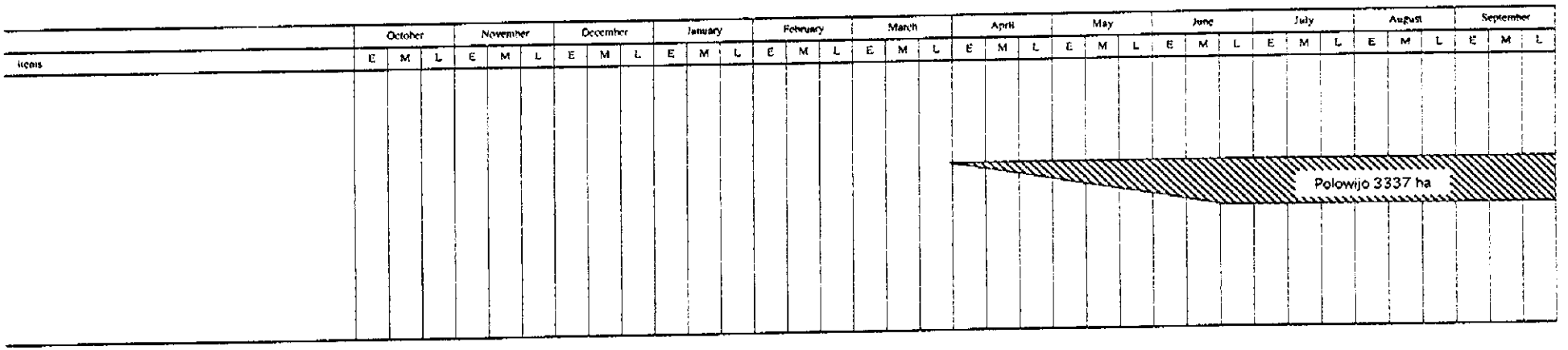
Items		October			November			December			January			February			March			April			May			June			July			August			September		
		E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L
A. Crop Water Requirement																																					
1. Crop Intensity		5/6	2/3	1/2	1/3	1/6																															
2. Crop Coefficient		0.73	0.73	0.73	0.73	0.73																															
3. Potential ET (ETo)	(mm/day/area)	5.38	5.38	5.38	5.00	5.00	5.00	4.30	4.30	4.30	4.06	4.06	4.06	3.98	3.98	3.98	4.30	4.30	4.30	4.28	4.28	4.28	4.07	4.07	4.07	3.74	3.74	3.74	4.20	4.20	4.20	4.66	4.66	4.66	5.11	5.11	5.11
4. Consumptive Use (ETc)	(mm/day/area)	3.93	3.93	3.93	3.65	3.65																															
7. Crop Water Requirement	(mm/day)	3.27	2.62	1.96	1.22	0.61																															
B. Effective Rain	(mm/day)	0.62	1.39	0.44	0.30	1.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C. Net Field Requirement	(mm/day)	2.65	1.22	1.53	0.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(l/sec/ha)	0.31	0.14	0.18	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
D. Irrigation Efficiency		0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
E. Unit Diversion Requirement	(l/sec/ha)	0.61	0.28	0.35	0.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
F. Diversion Requirement	(m3/sec)	3.8	1.7	2.2	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

80% Dependability Water Requirement for Polowijo 386ha 1995-1996 (Delta Brantas)



Items		October			November			December			January			February			March			April			May			June			July			August			September		
		E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L
A. Crop Water Requirement																																						
1. Crop Intensity							1/7	2/7	3/7	4/7	5/7	6/7	1	1	1	1	1	7/8	3/4	5/8	1/2	3/8	1/4	1/8														
2. Crop Coefficient							0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73														
3. Potential ET (ETo)	(mm/day/area)	5.38	5.38	5.38	5.00	5.60	5.00	4.30	4.30	4.30	4.06	4.06	4.06	3.98	3.98	3.98	4.30	4.30	4.30	4.28	4.28	4.28	4.07	4.07	4.07	3.74	3.74	3.74	4.20	4.20	4.20	4.66	4.66	4.66	5.11	5.11	5.11
4. Consumptive Use (ETc)	(mm/day/area)						3.65	3.14	3.14	3.14	2.96	2.96	2.96	2.91	2.91	2.91	3.14	3.14	3.14	3.12	3.12	3.12	2.97	2.97														
7. Crop Water Requirement	(mm/day)						0.52	0.90	1.35	1.79	2.12	2.54	2.96	2.91	2.91	2.91	3.14	2.75	2.35	1.95	1.56	1.17	0.74	0.37														
B. Effective Rain	(mm/day)	0.00	0.00	0.00	0.00	0.00	3.18	4.60	2.78	3.46	5.51	5.66	3.79	4.76	5.74	6.26	6.04	4.00	3.82	2.37	4.07	3.93	3.49	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C. Net Field Requirement	(mm/day)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(l/sec/ha)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
D. Irrigation Efficiency		0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
E. Unit Diversion Requirement	(l/sec/ha)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
F. Diversion Requirement	(m3/sec)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

80% Dependability Water Requirement for polowijo 3337ha 1995-1996 (Delta Brantas)



Items		October			November			December			January			February			March			April			May			June			July			August			September		
		E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L
A. Crop Water Requirement																																						
1. Crop Intensity																				1/8	1/4	5/8	1/2	5/8	3/4	7/8	1	1	1	1	1	1	1	1	1	1	1	1	1
2. Crop Coefficient																				0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73
3. Potential ET (ETo)	(mm/day/area)	5.38	5.38	5.38	5.00	5.00	5.00	4.30	4.30	4.30	4.06	4.06	4.06	3.98	3.98	3.98	4.30	4.30	4.30	4.28	4.28	4.28	4.07	4.07	4.07	3.74	3.74	3.74	4.20	4.20	4.20	4.66	4.66	4.66	5.11	5.11	5.11			
4. Consumptive Use (ETc)	(mm/day/area)																			3.12	3.12	3.12	2.97	2.97	2.97	2.73	2.73	2.73	3.07	3.07	3.07	3.40	3.40	3.40	3.73	3.73	3.73			
7. Crop Water Requirement	(mm/day)																			0.39	0.78	1.17	1.49	1.86	2.23	2.39	2.73	2.73	3.07	3.07	3.07	3.40	3.40	3.40	3.73	3.73	3.73			
B. Effective Rain	(mm/day)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.37	4.07	3.93	3.49	2.00	1.51	2.04	0.72	0.47	0.84	0.59	0.17	0.43	0.00	0.51	0.15	0.04	0.14			
C. Net Field Requirement	(mm/day)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.72	0.35	2.01	2.26	2.22	2.48	2.90	2.97	3.40	2.89	3.58	3.69	3.59		
	(l/sec/ha)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.04	0.23	0.26	0.26	0.29	0.34	0.34	0.39	0.33	0.41	0.43	0.42			
D. Irrigation Efficiency		0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50			
E. Unit Diversion Requirement	(l/sec/ha)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.08	0.47	0.52	0.51	0.57	0.67	0.69	0.79	0.67	0.83	0.85	0.83			
F. Diversion Requirement	(m3/sec)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.3	1.6	1.7	1.7	1.9	2.2	2.3	2.6	2.2	2.8	2.8	2.8			

80% Dependability Water Requirement for Polowijo 5864ha 1995-1996 (Delta Brantas)

Items		October			November			December			January			February			March			April			May			June			July			August			September		
		E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L
																													Polowijo 5864 ha								
A. Crop Water Requirement																													1/7	2/7	3/7	4/7	5/7	6/7	1	1	1
1. Crop Intensity																													0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73
2. Crop Coefficient																													4.20	4.20	4.20	4.66	4.66	4.66	5.11	5.11	5.11
3. Potential ET (ETo)	(mm/day/area)	5.38	5.38	5.38	5.00	5.00	5.00	4.30	4.30	4.30	4.06	4.06	4.06	3.98	3.98	3.98	4.30	4.30	4.30	4.28	4.28	4.28	4.07	4.07	4.07	3.74	3.74	3.74	3.07	3.07	3.07	3.40	3.40	3.40	3.73	3.73	3.73
4. Consumptive Use (ETc)	(mm/day/area)																												0.44	0.88	1.31	1.94	2.43	2.92	3.73	3.73	3.73
7. Crop Water Requirement	(mm/day)																												0.84	0.59	0.17	0.43	0.00	0.51	0.15	0.04	0.14
B. Effective Rain	(mm/day)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29	1.15	1.51	2.43	2.41	3.58	3.69	3.59
C. Net Field Requirement	(mm/day)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.13	0.17	0.28	0.28	0.41	0.43	0.42
	(l/sec/ha)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
D. Irrigation Efficiency		0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.00	0.07	0.27	0.35	0.56	0.56	0.83	0.85	0.83
E. Unit Diversion Requirement	(l/sec/ha)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.4	1.6	2.0	3.3	3.3	4.9	5.0	4.9
F. Diversion Requirement	(m3/sec)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	1.6	2.0	3.3	3.3	4.9	5.0	4.9

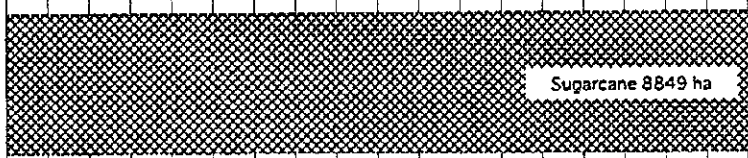
80% Dependability Water Requirement for Unlicensed Paddy 276ha 1995-1996 (Delta Brantas)

Items		October			November			December			January			February			March			April			May			June			July			August			September		
		E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L
A. Crop Water Requirement																													1/8	1/4	3/8	1/2	5/8	3/4	7/8	1	1
1. Crop Intensity																													0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73
2. Crop Coefficient																													4.20	4.20	4.20	4.66	4.66	4.66	5.11	5.11	5.11
3. Potential ET (ETo)	(mm/day/area)	5.38	5.38	5.38	5.00	5.00	5.00	4.30	4.30	4.30	4.06	4.06	4.06	3.98	3.98	3.98	4.30	4.30	4.30	4.28	4.28	4.28	4.07	4.07	4.07	3.74	3.74	3.74	3.07	3.07	3.07	3.40	3.40	3.40	3.73	3.73	3.73
4. Consumptive Use (ETc)	(mm/day/area)																												0.38	0.77	1.15	1.70	2.13	2.55	3.26	3.73	3.73
7. Crop Water Requirement	(mm/day)																												0.84	0.59	0.17	0.43	0.00	0.51	0.15	0.04	0.14
B. Effective Rain	(mm/day)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.98	1.27	2.13	2.04	3.11	3.69	3.59
C. Net Field Requirement	(mm/day)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.11	0.15	0.25	0.24	0.36	0.43	0.42
	(l/sec/ha)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
D. Irrigation Efficiency		0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.00	0.04	0.23	0.29	0.49	0.47	0.72	0.85	0.83
E. Unit Diversion Requirement	(l/sec/ha)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.2
F. Diversion Requirement	(m3/sec)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.2

Paddy 277 ha

80% Dependability Water Requirement for Sugarcane 8849ha 1995-1996 (Delta Brantas)

Items		October			November			December			January			February			March			April			May			June			July			August			September		
		E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L
A. Crop Water Requirement																																					
1. Crop Intensity		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2. Crop Coefficient		0.99	0.99	0.98	0.94	0.89	0.85	0.84	0.82	0.80	0.79	0.77	0.76	0.75	0.74	0.73	0.73	0.73	0.73	0.73	0.73	0.74	0.78	0.83	0.87	0.88	0.90	0.92	0.93	0.95	0.96	0.97	0.98	0.99	0.99	0.99	0.99
3. Potential ET (ETo)	(mm/day/area)	5.38	5.38	5.38	5.00	5.00	5.00	4.30	4.30	4.30	4.06	4.06	4.06	3.98	3.98	3.98	4.30	4.30	4.30	4.28	4.28	4.28	4.07	4.07	4.07	3.74	3.74	3.74	4.20	4.20	4.20	4.66	4.66	4.66	5.11	5.11	5.11
4. Consumptive Use (ETc)	(mm/day/area)	5.33	5.33	5.27	4.70	4.45	4.25	3.61	3.53	3.44	3.21	3.13	3.09	2.99	2.95	2.91	3.14	3.14	3.14	3.12	3.12	3.17	3.17	3.38	3.54	3.29	3.37	3.44	3.91	3.99	4.03	4.52	4.57	4.61	5.06	5.06	5.06
7. Crop Water Requirement	(mm/day)	5.33	5.33	5.27	4.70	4.45	4.25	3.61	3.53	3.44	3.21	3.13	3.09	2.99	2.95	2.91	3.14	3.14	3.14	3.12	3.12	3.17	3.17	3.38	3.54	3.29	3.37	3.44	3.91	3.99	4.03	4.52	4.57	4.61	5.06	5.06	5.06
B. Effective Rain	(mm/day)	0.68	1.53	0.48	0.33	1.10	3.33	4.80	2.88	3.55	5.65	5.75	3.84	4.80	5.76	6.26	6.04	4.00	3.82	2.37	4.07	3.94	3.56	2.09	1.59	2.16	0.77	0.50	0.91	0.64	0.18	0.47	0.00	0.56	0.17	0.05	0.15
C. Net Field Requirement	(mm/day)	4.64	3.79	4.79	4.37	3.35	0.92	0.00	0.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.76	0.00	0.00	0.00	1.29	1.95	1.13	2.60	2.94	3.00	3.35	3.85	4.05	4.57	4.05	4.89	5.01	4.91
	(l/sec/ha)	0.54	0.44	0.55	0.51	0.39	0.11	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.15	0.23	0.13	0.30	0.34	0.35	0.39	0.45	0.47	0.53	0.47	0.57	0.58	0.57
D. Irrigation Efficiency		0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
E. Unit Diversion Requirement	(l/sec/ha)	1.07	0.88	1.11	1.01	0.78	0.21	0.00	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.00	0.00	0.30	0.45	0.26	0.60	0.68	0.69	0.78	0.89	0.94	1.06	0.94	1.13	1.16	1.14
F. Diversion Requirement	(m3/sec)	9.5	7.8	9.8	9.0	6.9	1.9	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0	0.0	2.6	4.0	2.3	5.3	6.0	6.1	6.9	7.9	8.3	9.4	8.3	10.0	10.3	10.0



RS
RIVER SURVEY

THE STUDY

ON

COMPREHENSIVE MANAGEMENT PLAN

FOR

THE WATER RESOURCES OF THE BRANTAS RIVER BASIN

IN

THE REPUBLIC OF INDONESIA

FINAL REPORT

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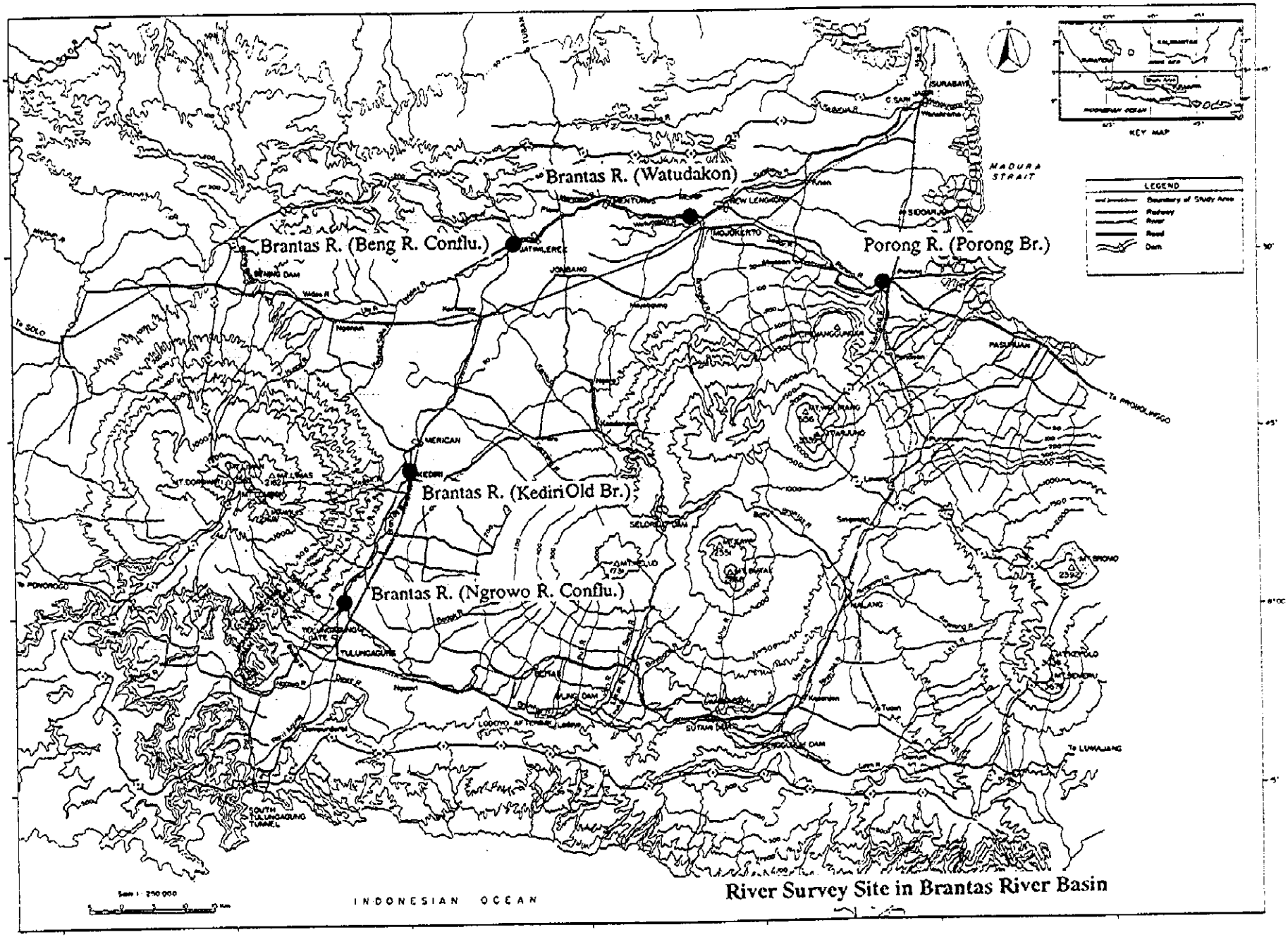


River Survey Site in Brantas River Basin

LIST COORDINATE OF BENCH MARK
LOCATION : PORONG RIVER (PORONG BRIDGE)

No	BM Number	Coordinates (UTM)		Elevation (m)	Remarks
		X(E)	Y(N)		
1.	Kp 150 L	686541.126	9165614.189	+ 9.295	
2.	Kp 150 -1 L	686602.524	9165616.150	+ 9.213	
3.	Kp 151 L	686702.141	9165622.844	+ 9.555	
4.	Kp 151 -1 L	686797.179	9165668.532	+ 8.681	
5.	Kp 152 L	686877.560	9165728.042	+ 8.715	
6.	Kp 152 -1 L	686995.016	9165738.308	+ 8.695	
7.	Kp 153 L	687075.657	9165687.899	+ 8.780	
8.	Kp 153 -1 L	687162.049	9165624.514	+ 8.716	
9.	Kp 154 L	687262.196	9165689.970	+ 9.942	
10.	Kp 154 -1 L	687347.389	9165697.449	+ 8.431	
11.	Kp 155 L	687447.425	9165693.326	+ 8.845	
12.	Kp 150 R	686585.959	9165347.939	+ 9.285	
13.	Kp 150 -1 R	686646.134	9165360.579	+ 9.177	
14.	Kp 151 R	686804.235	9165422.142	+ 9.249	
15.	Kp 151 -1 R	686863.168	9165474.121	+ 9.240	
16.	Kp 152 R	686948.382	9165523.562	+ 8.724	
17.	Kp 152 -1 R	687009.255	9165537.053	+ 8.308	
18.	Kp 153 R	687072.452	9165539.782	+ 8.804	
19.	Kp 153 -1 R	687121.074	9165544.359	+ 8.808	
20.	Kp 154 R	687220.839	9165547.203	+ 9.725	
21.	Kp 154 -1 R	687325.290	9165552.804	+ 8.685	
22.	Kp 155 R	687425.052	9165559.043	+ 8.381	

LIST COORDINATE OF BENCH MARK
LOCATION : BRANTAS RIVER (WATUDAKON)

No	BM Number		Coordinates (UTM)		Elevation	Remarks
			X (E)	Y (N)	(m)	
1	KB 53.8	L	655246,814	9175529,790	+ 23.958	
2	KB 53.8 -1	L	655146,228	9175534,470	+ 23.684	
3	KB 54.0	L	655047,040	9175546,347	+ 23.996	
4	KB 54.0 -1	L	654953,278	9175551,893	+ 23.900	
5	KB 54.2	L	654853,385	9175558,264	+ 24.263	
6	KB 54.2 -1	L	654752,890	9175556,895	+ 24.093	
7	KB 54.3	L	654702,977	9175560,275	+ 24.242	
8	KB 54.3 -1	L	654668,357	9175560,365	+ 24.207	
9	KB 54.4	L	654638,386	9175562,943	+ 24.544	
10	KB 54.4 -1	L	654537,154	9175559,387	+ 24.168	
11	KB 54.6	L	654450,150	9175548,825	+ 24.377	
12	KB 54.6 -1	L	654349,830	9175540,339	+ 24.177	
13	KB 54.8	L	654252,200	9175564,948	+ 24.435	
14	KB 53.8	R	655220,965	9175325,034	+ 25,325	
15	KB 53.8 -1	R	655131,180	9175333,053	+ 24,216	
16	KB 54.0	R	655015,214	9175343,389	+ 24,260	
17	KB 54.0 -1	R	654932,221	9175350,898	+ 23,892	
18	KB 54.2	R	654832,956	9175360,748	+ 24,456	
19	KB 54.2 -1	R	654783,039	9175361,758	+ 24,248	
20	KB 54.3	R	654732,899	9175361,260	+ 24,262	
21	KB 54.3 -1	R	654701,282	9175361,299	+ 24,322	
22	KB 54.4	R	654668,934	9175352,302	+ 24,397	
23	KB 54.4 -1	R	654569,577	9175341,574	+ 24,094	
24	KB 54.6	R	654435,687	9175304,240	+ 24,106	
25	KB 54.6 -1	R	654347,103	9175351,855	+ 24,020	
26	KB 54.8	R	654203,112	9175394,224	+ 24,198	

LIST COORDINATE OF BENCH MARK
LOCATION : BRANTAS RIVER (BENG)

No	BM Number		Coordinates (UTM)		Elevation	Remarks
			X (E)	Y (N)	(m)	
1	KB 85.8	L	629380.545	9172311.157	+ 36.843	
2	KB 85.8 -1	L	629287.638	9172264.323	+ 36.667	
3	KB 86.0	L	629196.254	9172224.060	+ 36.919	
4	KB 86.0 -1	L	629105.123	9172183.030	+ 36.996	
5	KB 86.2	L	628980.608	9172160.264	+ 37.347	
6	KB 86.2 -1	L	628864.591	9172141.639	+ 37.052	
7	KB 86.2 -2	L	628817.760	9172128.773	+ 37.148	
8	KB 86.4	L	628755.991	9172087.796	+ 36.687	
9	KB 86.4 -1	L	628642.615	9172022.859	+ 36.716	
10	KB 86.6	L	628571.732	9171982.665	+ 36.732	
11	KB 86.6 -1	L	628525.185	9171956.353	+ 36.761	
12	KB 86.8	L	628445.091	9171878.253	+ 35.769	
13	KB 85.8	R	629415.937	9172046.794	+ 37.131	
14	KB 85.8 -1	R	629363.203	9172030.144	+ 37.031	
15	KB 86.0	R	629313.058	9172015.144	+ 37.295	
16	KB 86.0 -1	R	629169.592	9171971.352	+ 37.308	
17	KB 86.2	R	629076.624	9171933.465	+ 37.366	
18	KB 86.2 -1	R	628983.156	9171895.365	+ 37.028	
19	KB 86.2 -2	R	628938.212	9171874.516	+ 37.087	
20	KB 86.4	R	628915.790	9171864.342	+ 37.357	
21	KB 86.4 -1	R	628853.477	9171759.910	+ 37.297	
22	KB 86.6	R	628825.675	9171705.464	+ 37.337	
23	KB 86.6 -1	R	628769.031	9171681.189	+ 37.065	
24	KB 86.8	R	628662.767	9171851.440	+ 37.371	

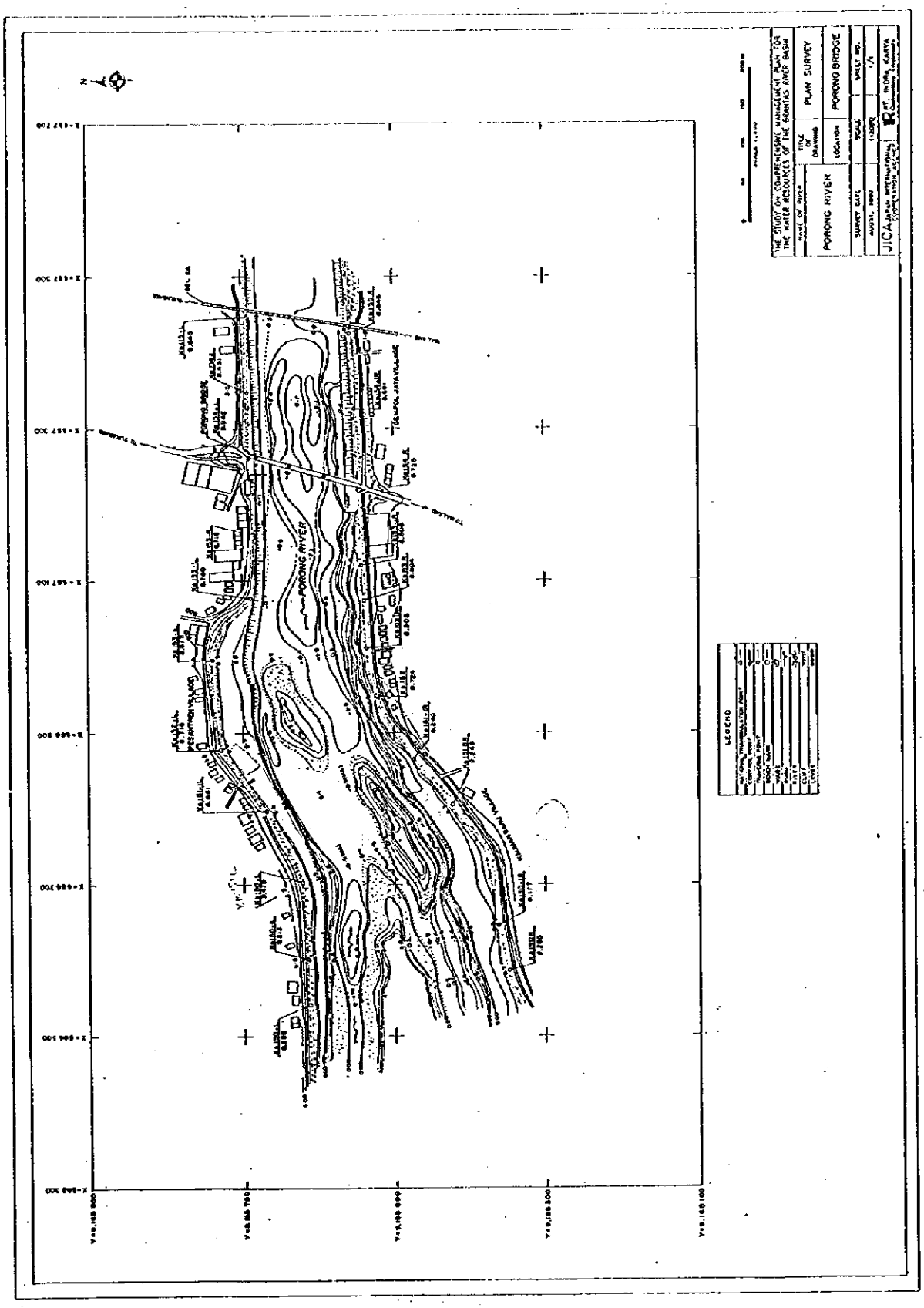
LIST COORDINATE OF BENCH MARK
LOCATION : BRANTAS RIVER (KEDIRI)

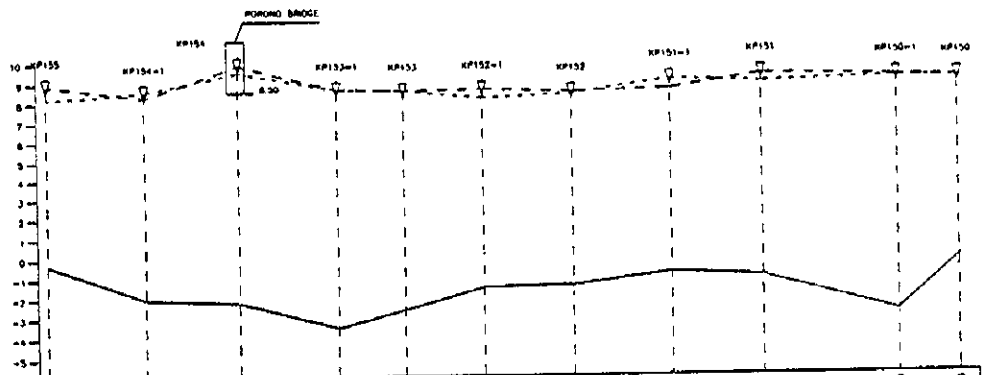
No	BM Number		Coordinates (UTM)		Elevation	Remarks
			X (E)	Y (N)	(m)	
1	KB 131.0	L	610573.145	9137372.605	+ 63.197	
2	KB 131.0 -1	L	610592.034	9137273.755	+ 62.868	
3	KB 131.2	L	610616.734	9137143.083	+ 62.984	
4	KB 131.2 -1	L	610622.779	9137042.177	+ 63.166	
5	KB 131.4	L	610624.756	9136947.913	+ 63.215	
6	KB 131.4 -1	L	610638.591	9136848.563	+ 63.257	
7	KB 131.6	L	610657.129	9136734.325	+ 63.399	
8	KB 131.6 -1	L	610668.803	9136662.792	+ 63.417	
9	KB 131.8	L	610660.034	9136540.517	+ 63.862	
10	KB 131.8 -1	L	610686.317	9136380.541	+ 64.693	
11	KB 132.0	L	610654.430	9136311.751	+ 64.377	
12	KB 131.0	R	610774.419	9137353.803	+ 61.760	
13	KB 131.0 -1	R	610792.556	9137271.160	+ 60.466	
14	KB 131.2	R	610841.834	9137175.509	+ 63.444	
15	KB 131.2 -1	R	610852.839	9137073.523	+ 63.274	
16	KB 131.4	R	610859.010	9136974.952	+ 63.712	
17	KB 131.4 -1	R	610861.572	9136870.690	+ 63.676	
18	KB 131.6	R	610867.320	9136753.414	+ 63.906	
19	KB 131.6 -1	R	610870.384	9136668.225	+ 63.564	
20	KB 131.8	R	610872.660	9136529.566	+ 63.798	
21	KB 131.8 -1	R	610849.350	9136367.093	+ 64.744	
22	KB 132.0	R	610824.560	9136318.175	+ 63.249	

LIST COORDINATE OF BENCH MARK
LOCATION : BRANTAS RIVER (NGROWO)

No	BM Number		Coordinates (UTM)		Elevation	Remarks
			X (E)	Y (N)	(m)	
1	KB 157.0	L	600668.142	9117020.537	+ 82.051	
2	KB 157.1	L	600593.486	9116939.064	+ 82.177	
3	KB 157.2	L	600509.324	9116889.287	+ 82.141	
4	KB 157.3	L	600434.369	9116839.071	+ 82.185	
5	KB 157.4	L	600370.056	9116763.422	+ 82.306	
6	KB 157.5	L	600332.552	9116670.705	+ 82.471	
7	KB 157.6	L	600337.355	9116536.897	+ 82.648	
8	KB 157.7	L	600414.007	9116514.279	+ 82.091	
9	KB 157.8	L	600489.908	9116433.17	+ 81.105	
10	KB 157.9	L	600381.212	9116247.689	+ 83.186	
11	KB 158.0	L	600408.115	9116184.131	+ 83.240	
12	KB 157.0	R	600765.135	9116894.847	+ 82.062	
13	KB 157.1	R	600665.535	9116852.008	+ 80.845	
14	KB 157.2	R	600580.329	9116814.468	+ 81.664	
15	KB 157.3	R	600551.904	9116775.056	+ 81.862	
16	KB 157.4	R	600497.253	9116706.657	+ 81.928	
17	KB 157.5	R	600517.786	9116640.340	+ 82.026	
18	KB 157.6	R	600474.299	9116595.040	+ 82.744	
19	KB 157.7	R	600499.534	9116568.970	+ 81.851	
20	KB 157.8	R	600600.629	9116636.273	+ 82.650	
21	KB 157.9	R	600686.170	9116620.022	+ 82.798	
22	KB 158.0	R	600742.954	9116586.155	+ 82.793	

Porong River (Porong Bridge)


THE STUDY ON COMPREHENSIVE MANAGEMENT PLAN FOR THE WATER RESOURCES OF THE BRANTAS RIVER BASIN
NAME OF RIVER
PORONG RIVER
TITLE OF DRAWING
PLAN SURVEY
LOCATION
PORONG BRIDGE
SURVEY DATE
SCALE
SHEET NO.
AUGUST, 1997
1:1000
1/1
JICA JAPAN INTERNATIONAL COOPERATION AGENCY
PT. INDRA KARYA
PORONG RIVER
LEGEND

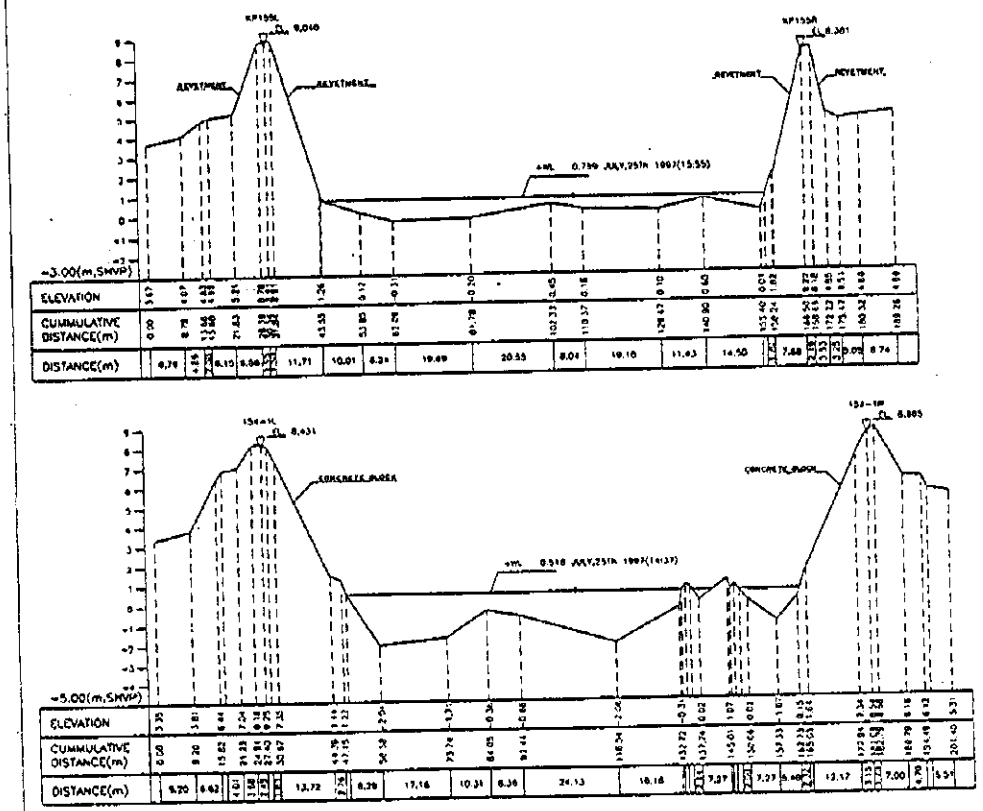


-6.00(m.SHVP)

ELEVATION	TOP OF LEVEE (RIGHT)	8.22	8.54	9.51	8.58	8.50	8.13	9.32	9.03	8.84	8.50	8.99
	TOP OF LEVEE (LEFT)	8.51	8.25	9.84	8.59	8.51	8.57	8.41	8.54	9.28	8.56	8.38
	CHANNEL BED	-0.31	-2.06	-2.26	-3.56	-2.67	-1.57	-1.45	0.81	-0.69	-2.63	-0.43
DISTANCE	CUMMULATIVE	0.00	100.00	194.90	295.00	362.85	443.16	533.30	632.81	724.83	861.40	922.89
	BETWEEN TWO STA.		100.00	94.90	100.10	67.85	80.51	90.14	99.51	92.02	136.57	61.49
STATION NO.		KP155	KP154+1	KP154	KP153+1	KP153	KP152+1	KP152	KP151+1	KP151	KP150+1	KP150

THE STUDY ON COMPREHENSIVE MANAGEMENT PLAN FOR THE WATER RESOURCES OF THE BRANTAS RIVER BASIN

NAME OF RIVER	TITLE OF DRAWING	LONG SECTION
PORONG RIVER	LOCATION	PORONG KP155.0 – KP150.0
SURVEY DATE	SCALE	SHEET NO.
AUGUST, 1997	V:100 m:2000	1/1
JICA JAPAN INTERNATIONAL COOPERATION AGENCY	PT. INDRA KARYA Consulting Engineers	

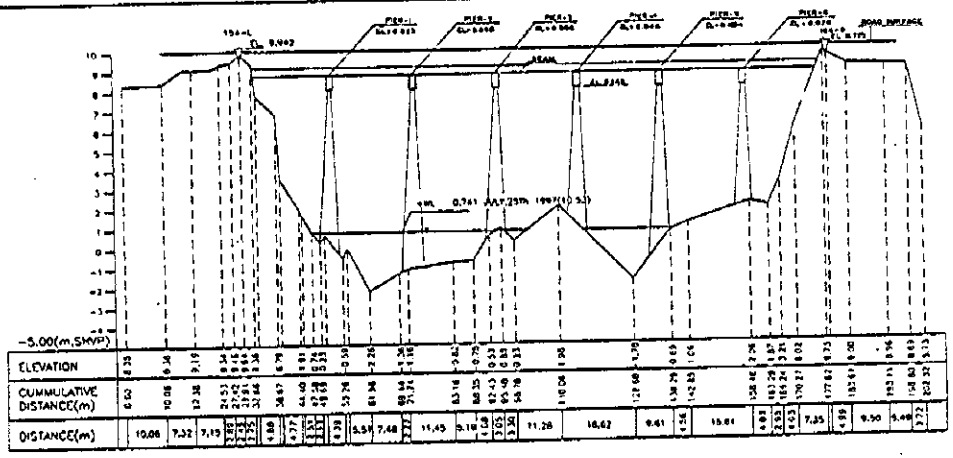


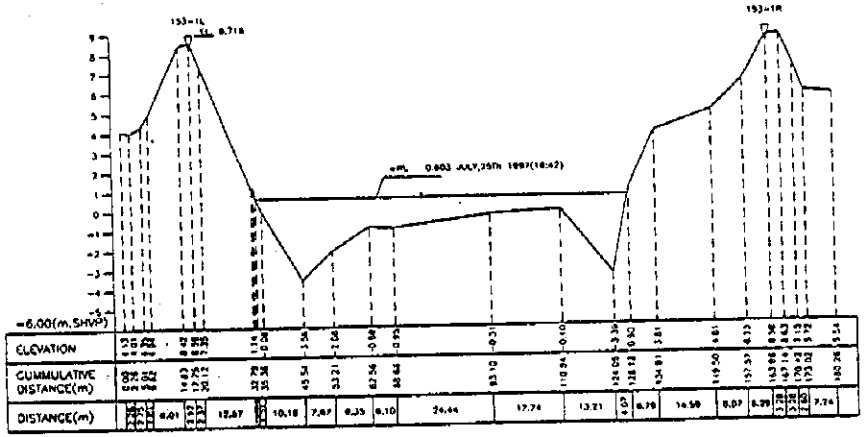
THE STUDY ON COMPREHENSIVE MANAGEMENT PLAN FOR THE WATER RESOURCES OF THE BRANTAS RIVER BASIN

NAME OF RIVER	TITLE OF DRAWING	CROSS SECTION
PORONG RIVER	LOCATION	PORONG BRIDGE
SURVEY DATE	SCALE	SHEET NO.
AUGST. 1997	V:1/100 H:1/500	1/8

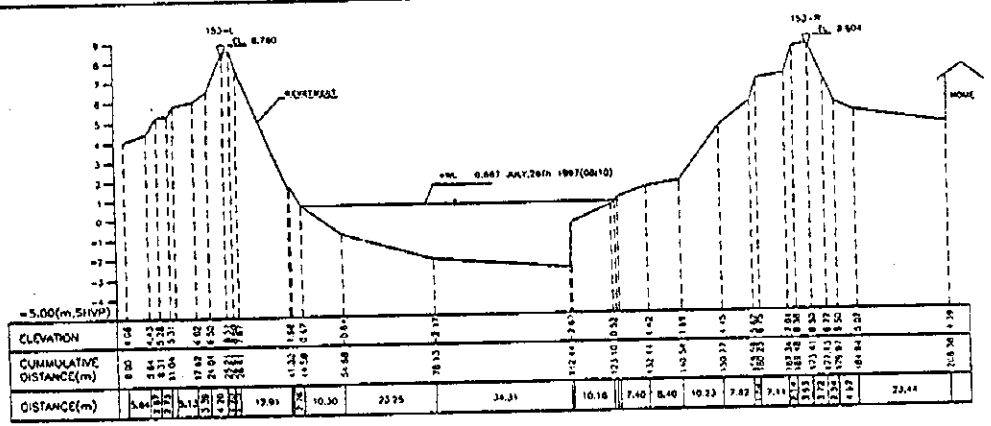
JICA JAPAN INTERNATIONAL COOPERATION AGENCY

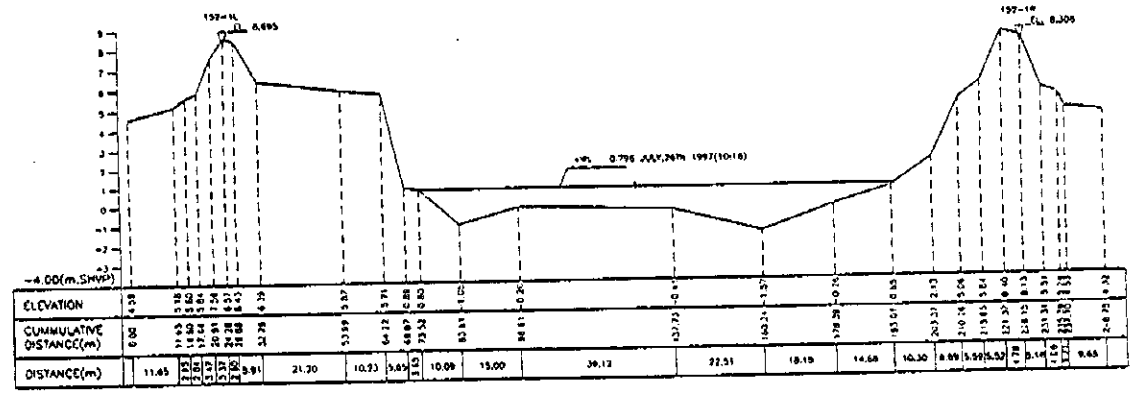
PT. INDRA KARYA Consulting Engineers





THE STUDY ON COMPREHENSIVE MANAGEMENT PLAN FOR THE WATER RESOURCES OF THE BRANTAS RIVER BASIN		
NAME OF RIVER	TITLE OF DRAWING	CROSS SECTION
PORONG RIVER	LOCATION	PORONG BRIDGE
SURVEY DATE	SCALE	SHEET NO.
AUGUST, 1997	H:1:100 H:1:500	2/2
JICA JAPAN INTERNATIONAL COOPERATION AGENCY	PT. INDRA KARYA Consulting Engineers	



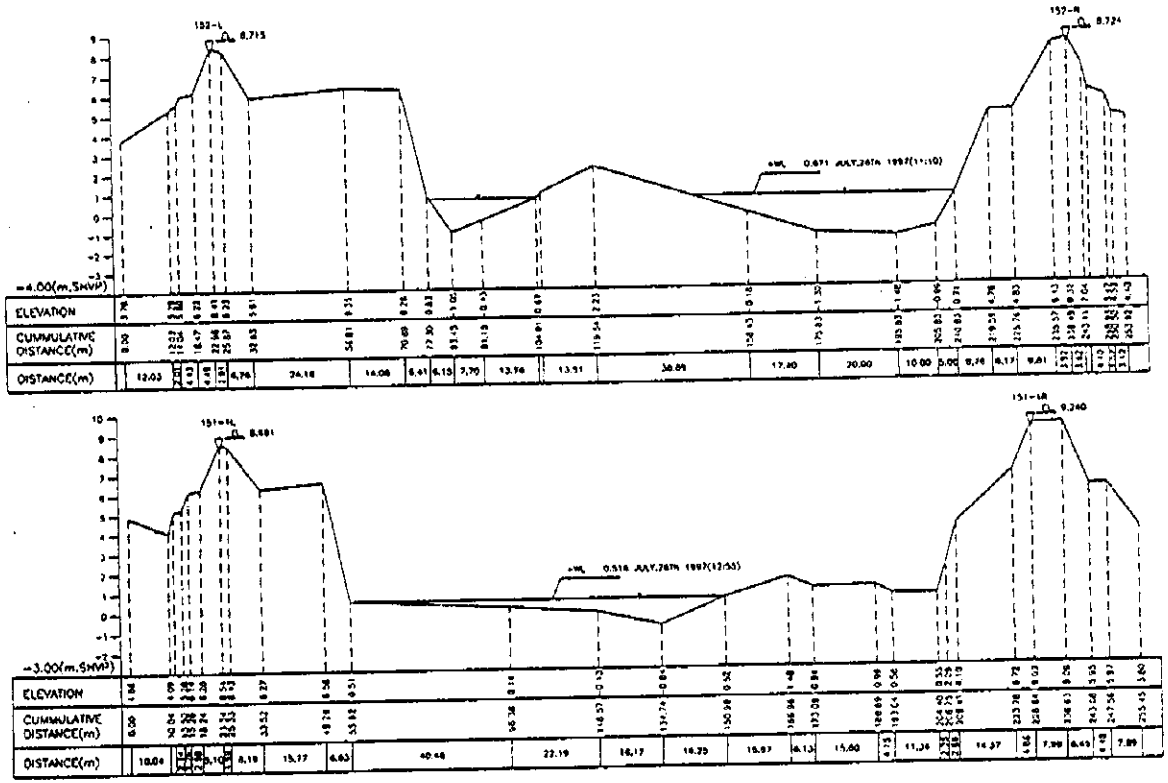


THE STUDY ON COMPREHENSIVE MANAGEMENT PLAN FOR THE WATER RESOURCES OF THE BRANTAS RIVER BASIN

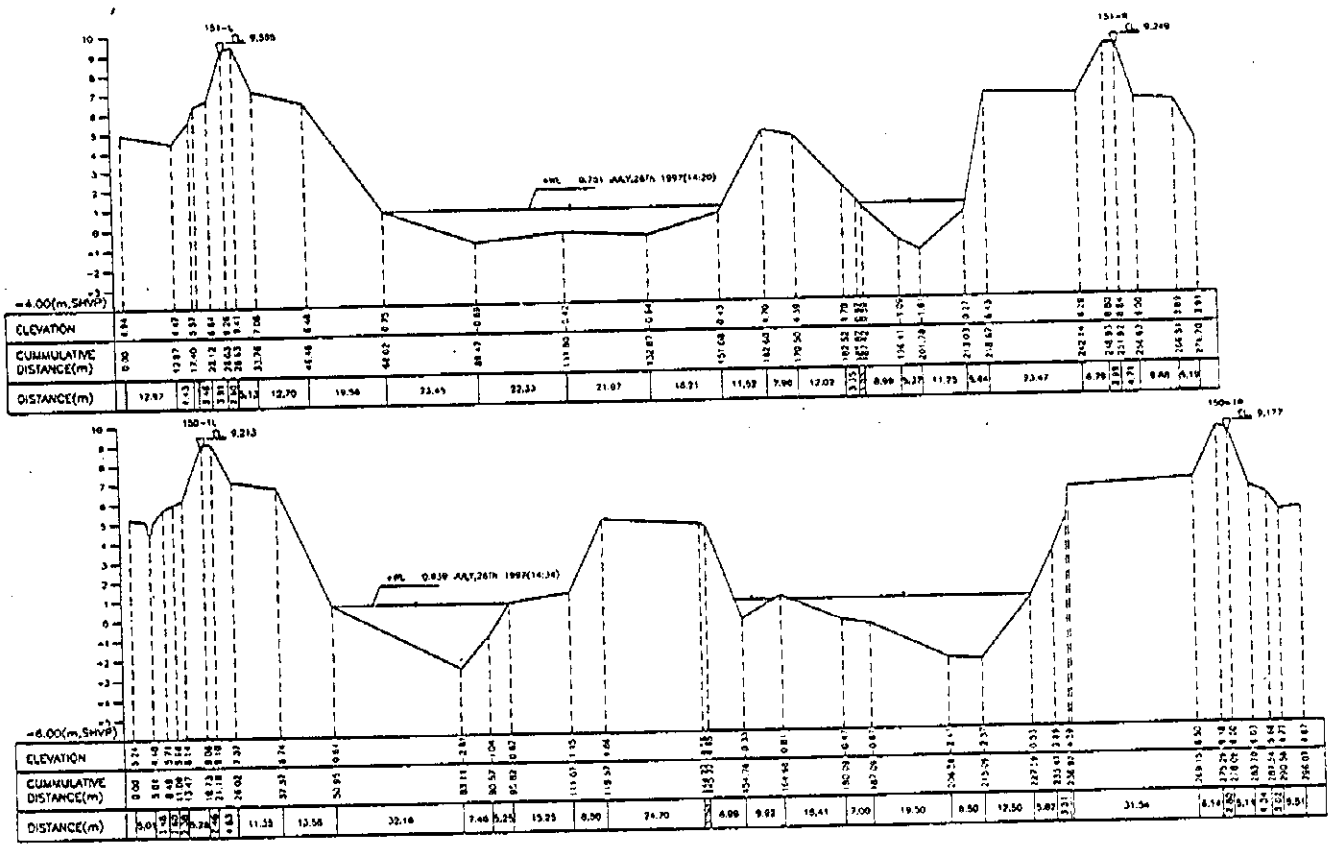
NAME OF RIVER	TITLE OF DRAWING	CROSS SECTION
PORONG RIVER	LOCATION	PORONG BRIDGE
SURVEY DATE	SCALE	SHEET NO.
AUGUST, 1997	V:100 H:100	3/6

JICA JAPAN INTERNATIONAL COOPERATION AGENCY

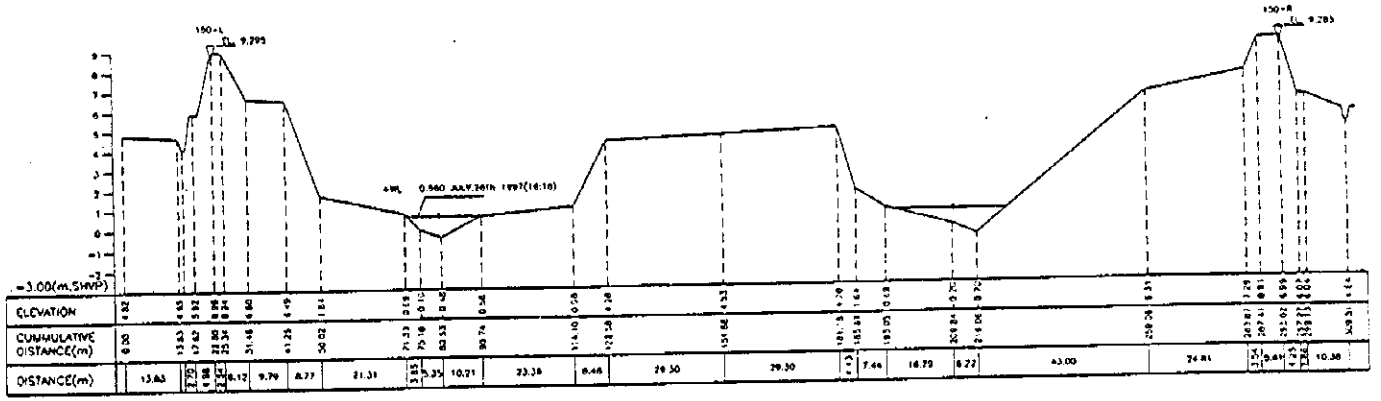
PT. INDRA KARYA Consulting Engineers



THE STUDY ON COMPREHENSIVE MANAGEMENT PLAN FOR THE WATER RESOURCES OF THE BRANTAS RIVER BASIN		
NAME OF RIVER	TYPE OF DRAWING	CROSS SECTION
PORONG RIVER	LOCATION	PORONG BRIDGE
SURVEY DATE	SCALE	SHEET NO.
AUGUST, 1997	V:1/100 H:1/500	4/8
JICA JAPAN INTERNATIONAL COOPERATION AGENCY	PT. INDRA KARYA Consulting Engineers	



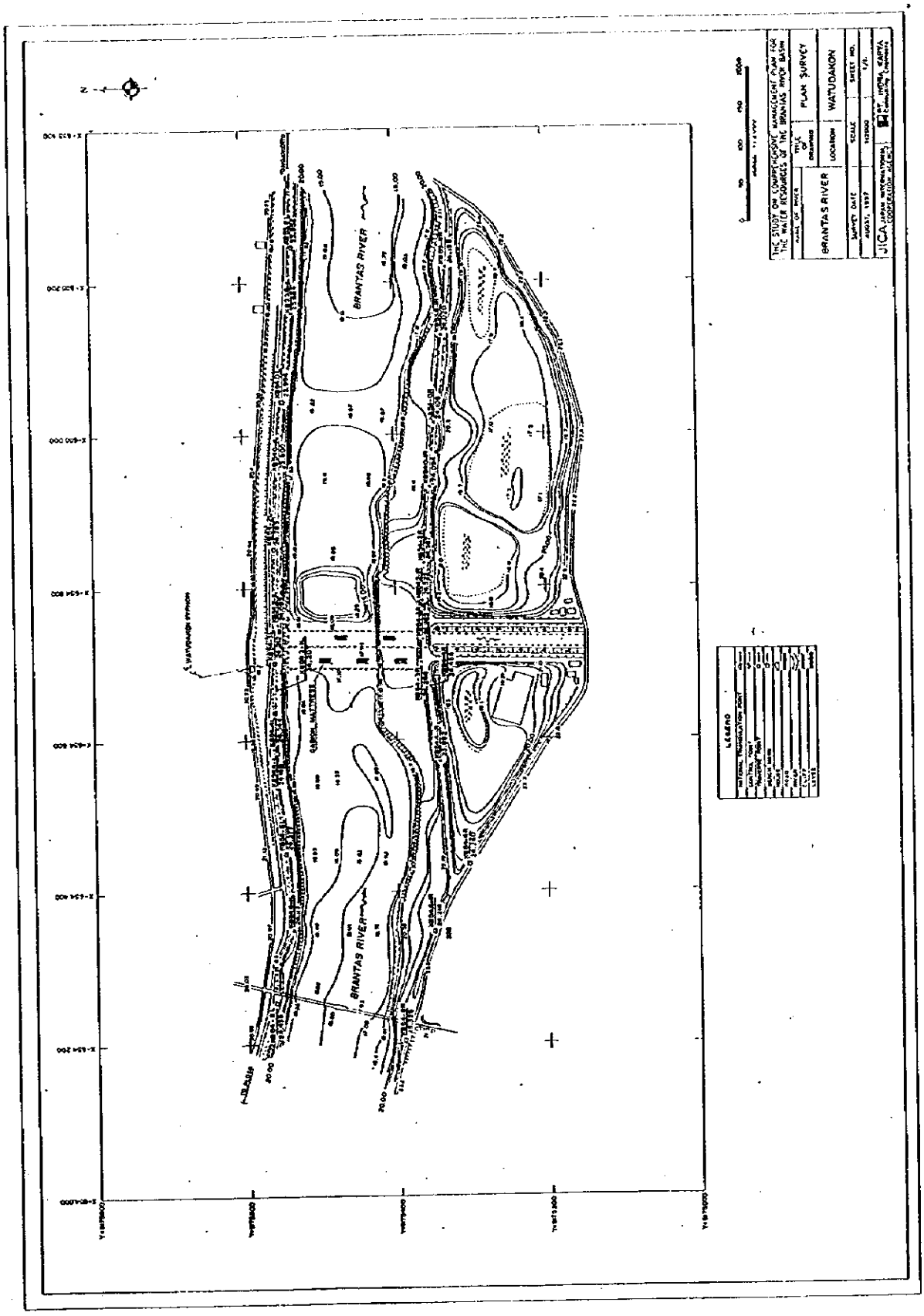
THE STUDY ON COMPREHENSIVE MANAGEMENT PLAN FOR THE WATER RESOURCES OF THE BRANTAS RIVER BASIN		
NAME OF RIVER	TITLE OF DRAWING	CROSS SECTION
PORONG RIVER	LOCATION	PORONG BRIDGE
SURVEY DATE	SCALE	SHEET NO.
AUGUST, 1997	V:1/100 H:1/500	8/8
JICA JAPAN INTERNATIONAL COOPERATION AGENCY	PT. INDRA KARYA Consulting Engineers	

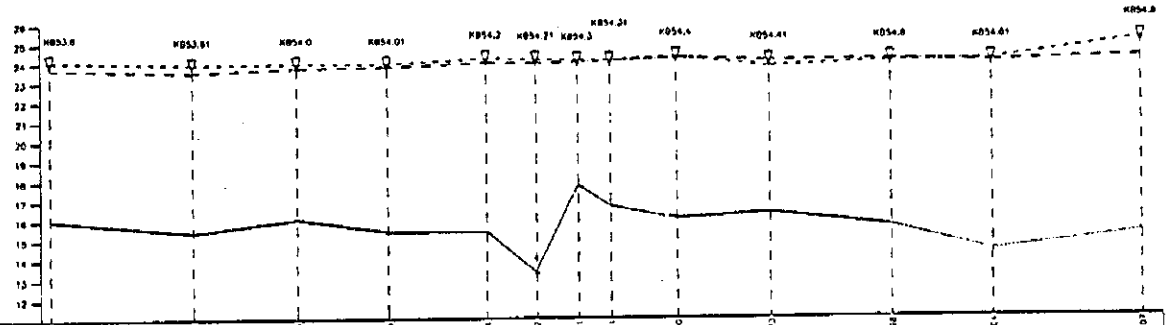


THE STUDY ON COMPREHENSIVE MANAGEMENT PLAN FOR THE WATER RESOURCES OF THE BRANTAS RIVER BASIN

NAME OF RIVER	TITLE OF DRAWING	CROSS SECTION
PORONG RIVER	LOCATION	PORONG BRIDGE
SURVEY GmTZ	SCALE	SHEET NO.
AUGST. 1997	H:1/100 V:1/500	6/8
JICA JAPAN INTERNATIONAL COOPERATION AGENCY	PT. INDRA KARYA Consulting Engineers	

Brantas River (Watudakon)

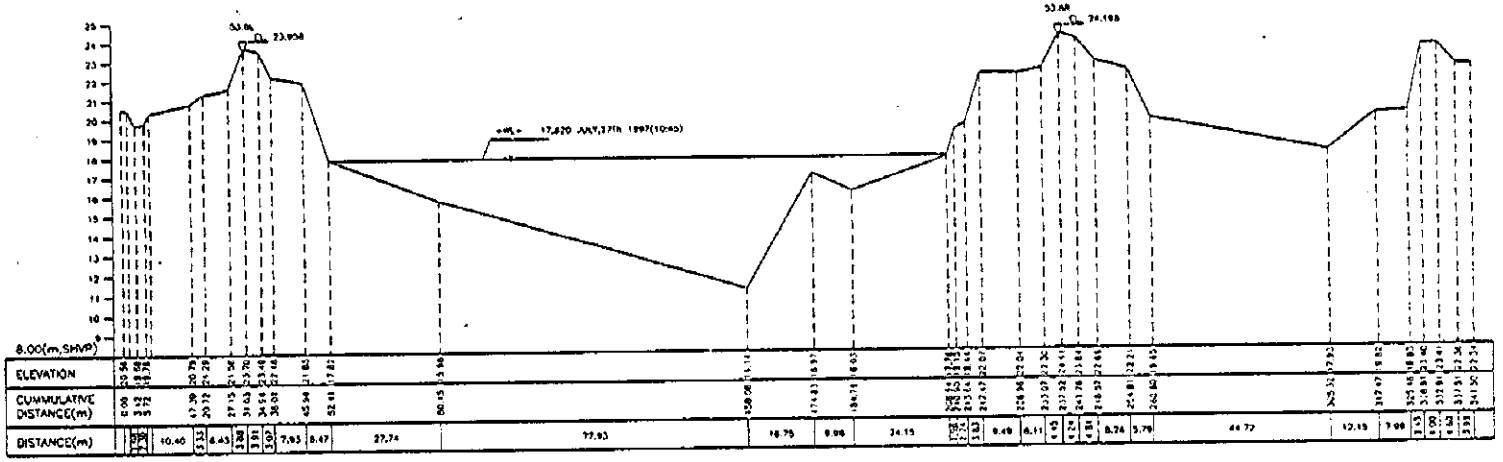

THE STUDY ON COMPREHENSIVE MANAGEMENT PLAN FOR THE WATER RESOURCES OF THE BRANTAS RIVER BASIN
NAME OF RIVER
BRANTAS RIVER
TITLE OF DRAWING
PLAN SURVEY
LOCATION
WATUDAKON
SURVEY DATE
AUGUST, 1992
SCALE
1:2000
SHEET NO.
1/1
JICA
JAPAN INTERNATIONAL COOPERATION AGENCY
PT. INDRA KARYA
Consulting Engineers
BRANTAS RIVER
BRANTAS RIVER
LEGEND



11.00(m,SHVP)

ELEVATION	TOP OF LEVEE (RIGHT)	24.11	23.92	23.96	23.95	24.24	24.11	24.11	24.30	24.11	23.73	23.98	24.64	25.07
	TOP OF LEVEE (LEFT)	23.70	23.30	23.72	23.78	23.78	24.00	24.00	24.05	24.05	24.58	23.93	24.15	24.15
	CHANNEL BED	16.85	15.38	15.40	15.40	15.59	13.29	17.71	16.80	16.05	16.85	15.83	14.76	15.32
DISTANCE	CUMMULATIVE	0.00	145.30	250.48	342.19	442.33	492.61	534.99	567.84	635.27	728.06	851.46	953.36	1103.46
	BETWEEN TWO STA.	145.30	105.18	91.71	100.14	50.28	42.38	32.85	67.43	93.79	122.40	101.90	150.10	
STATION NO.		KB53.8	KB53.81	KB54.0	KB54.01	KB54.2	KB54.21	KB54.3	KB54.31	KB54.4	KB54.41	KB54.8	KB54.81	KB54.8

THE STUDY ON COMPREHENSIVE MANAGEMENT PLAN FOR THE WATER RESOURCES OF THE BRANTAS RIVER BASIN		
NAME OF RIVER	TITLE OF DRAWING	LONG SECTION
BRANTAS RIVER	LOCATION	WATUDAKON KB53.8 – KB54.8
SURVEY DATE	SCALE	SHEET NO.
AUGST, 1997	V:100 H:2000	1/1
JICA JAPAN INTERNATIONAL COOPERATION AGENCY	PT. INDRA KARYA Consulting Engineers	

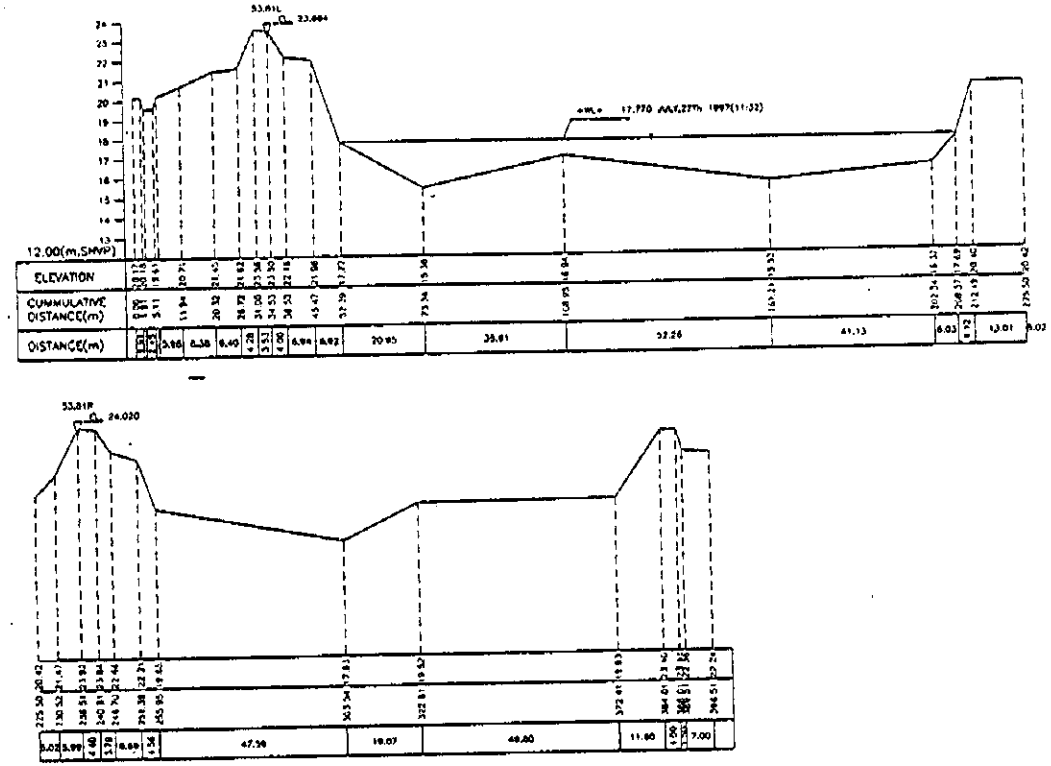


THE STUDY ON COMPREHENSIVE MANAGEMENT PLAN FOR THE WATER RESOURCES OF THE BRANTAS RIVER BASIN

NAME OF RIVER	TITLE OF DRAWING	CROSS SECTION
BRANTAS RIVER	LOCATION	WATUDAKON
SURVEY DATE	SCALE	SHEET NO.
AUGUST, 1997	V:1/100 H:1/500	1/11

JICA JAPAN INTERNATIONAL COOPERATION AGENCY

PT. INDRA KARYA Consulting Engineers

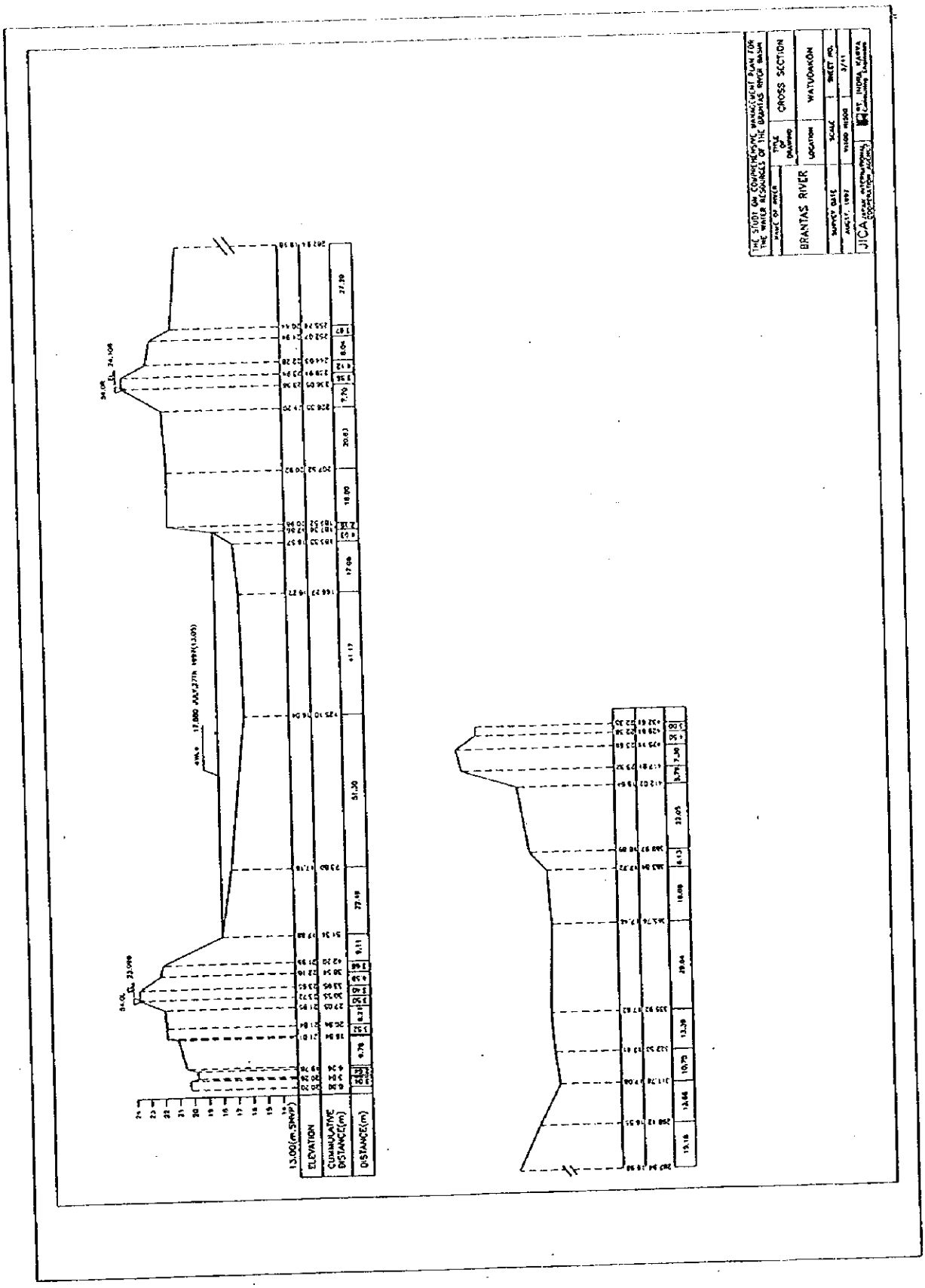


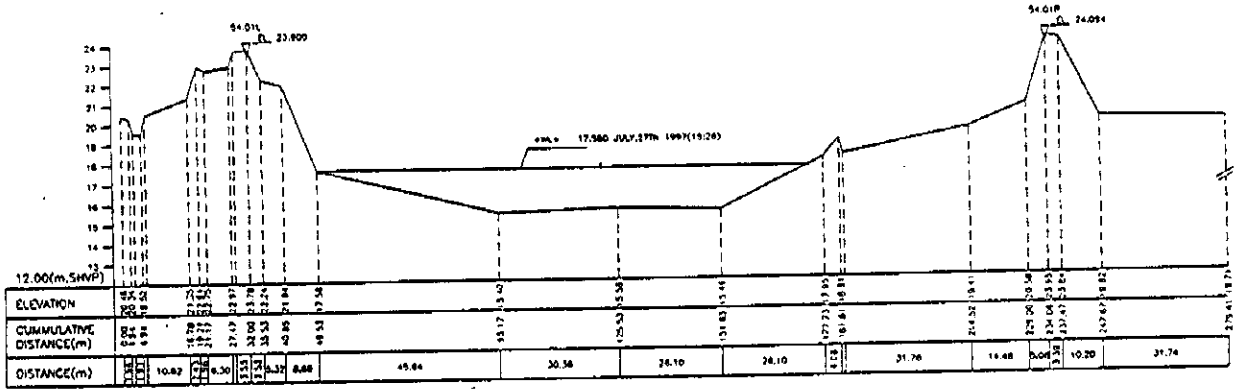
THE STUDY ON COMPREHENSIVE MANAGEMENT PLAN FOR THE WATER RESOURCES OF THE BRANTAS RIVER BASIN

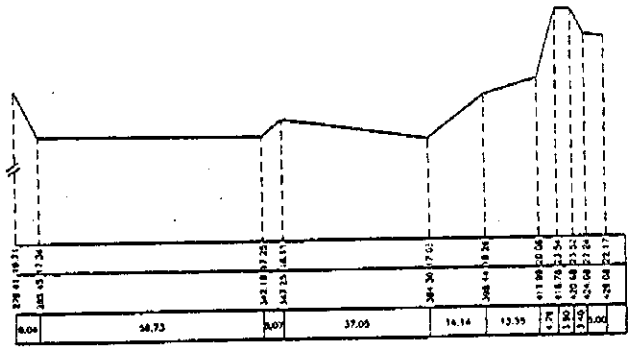
NAME OF RIVER	TITLE OF DRAWING	CROSS SECTION
BRANTAS RIVER	LOCATION	WATUDAKON
SURVEY DATE	SCALE	SHEET NO.
AUGUST, 1997	VISOR NISOR	2/11

JICA JAPAN INTERNATIONAL COOPERATION AGENCY

PT. INDRA KARYA Consulting Engineers


THE STUDY ON COMPREHENSIVE MANAGEMENT PLAN FOR THE WATER RESOURCES OF THE BRANTAS RIVER BASIN
NAME OF RIVER
BRANTAS RIVER
TITLE OF DRAWING
CROSS SECTION
LOCATION
WATUDAKON
SURVEY DATE
SCALE
SHEET NO.
AUGUST, 1997
JICA
ELEVATION
CUMMULATIVE DISTANCE(m)
DISTANCE(m)

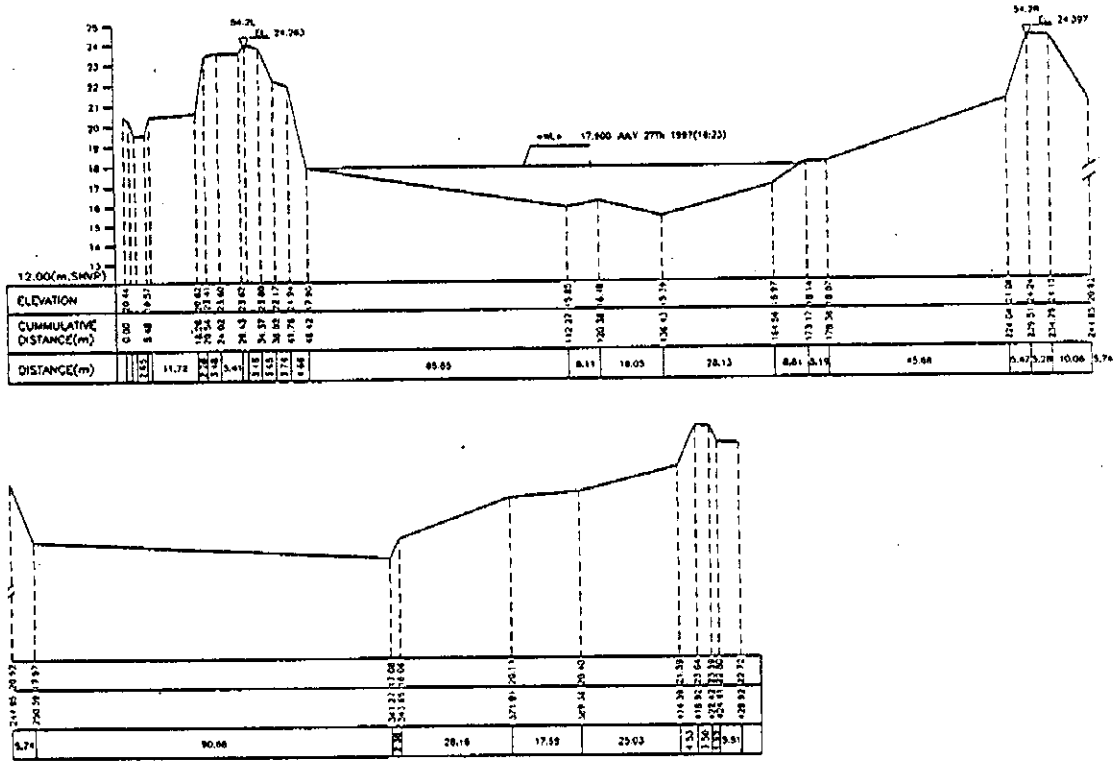




THE STUDY ON COMPREHENSIVE MANAGEMENT PLAN FOR THE WATER RESOURCES OF THE BRANTAS RIVER BASIN

NAME OF RIVER	TITLE OF DRAWING	CROSS SECTION
BRANTAS RIVER	LOCATION	WATUDAKON
SURVEY DATE	SCALE	SHEET NO.
AUGUST, 1997	V:1/100 H:1/500	4/11

JICA JAPAN INTERNATIONAL COOPERATION AGENCY | PT. INDRA KARYA Consulting Engineers

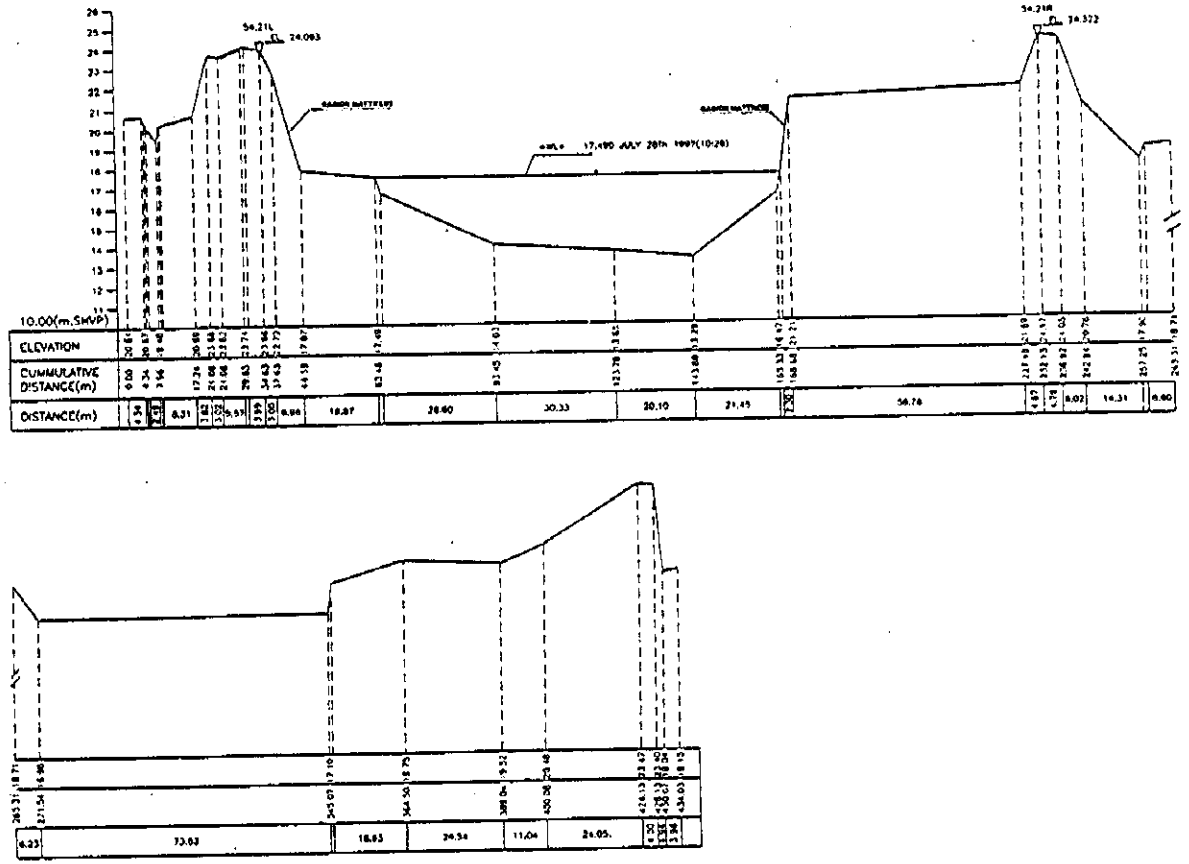


THE STUDY ON COMPREHENSIVE MANAGEMENT PLAN FOR THE WATER RESOURCES OF THE BRANTAS RIVER BASIN

NAME OF RIVER	TITLE OF DRAWING	CROSS SECTION
BRANTAS RIVER	LOCATION	WATUDAKON
SURVEY DATE	SCALE	SHEET NO.
AUGUST, 1997	V:1:100 H:1:500	5/11

JICA JAPAN INTERNATIONAL COOPERATION AGENCY

PT. INDRA KARYA Consulting Engineers

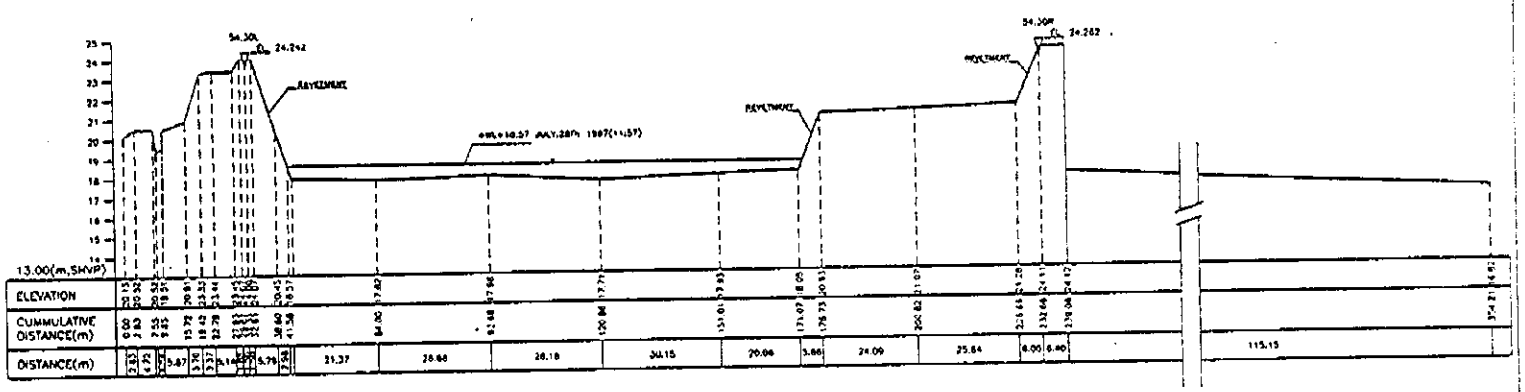


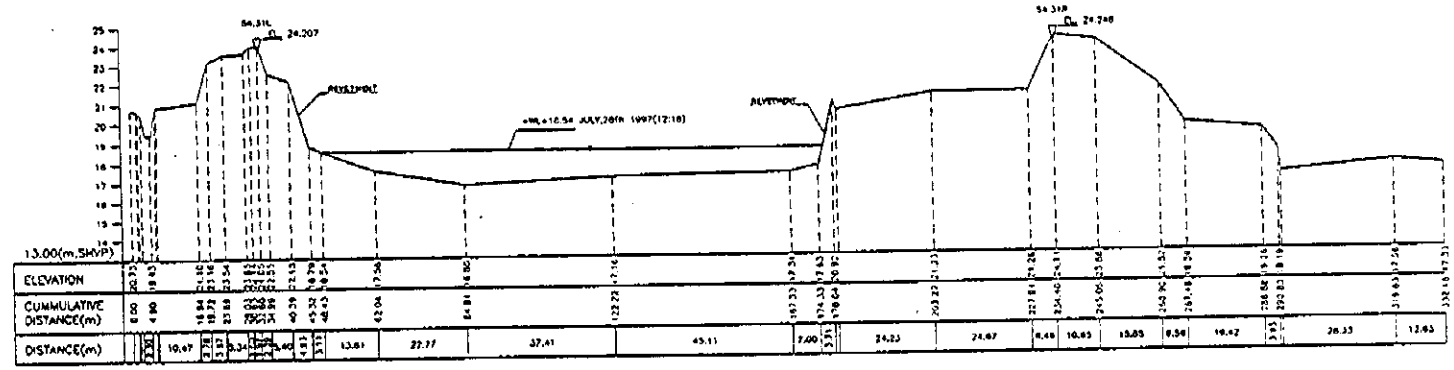
THE STUDY ON COMPREHENSIVE MANAGEMENT PLAN FOR THE WATER RESOURCES OF THE BRANTAS RIVER BASIN

NAME OF RIVER	TITLE OF DRAWING	CROSS SECTION
BRANTAS RIVER	LOCATION	WATUDAKON
SURVEY DATE	SCALE	SHEET NO.
AUGST, 1997	V:1/100 H:1/500	8/11

JICA JAPAN INTERNATIONAL COOPERATION AGENCY

PT. INDRA KARYA Consulting Engineers

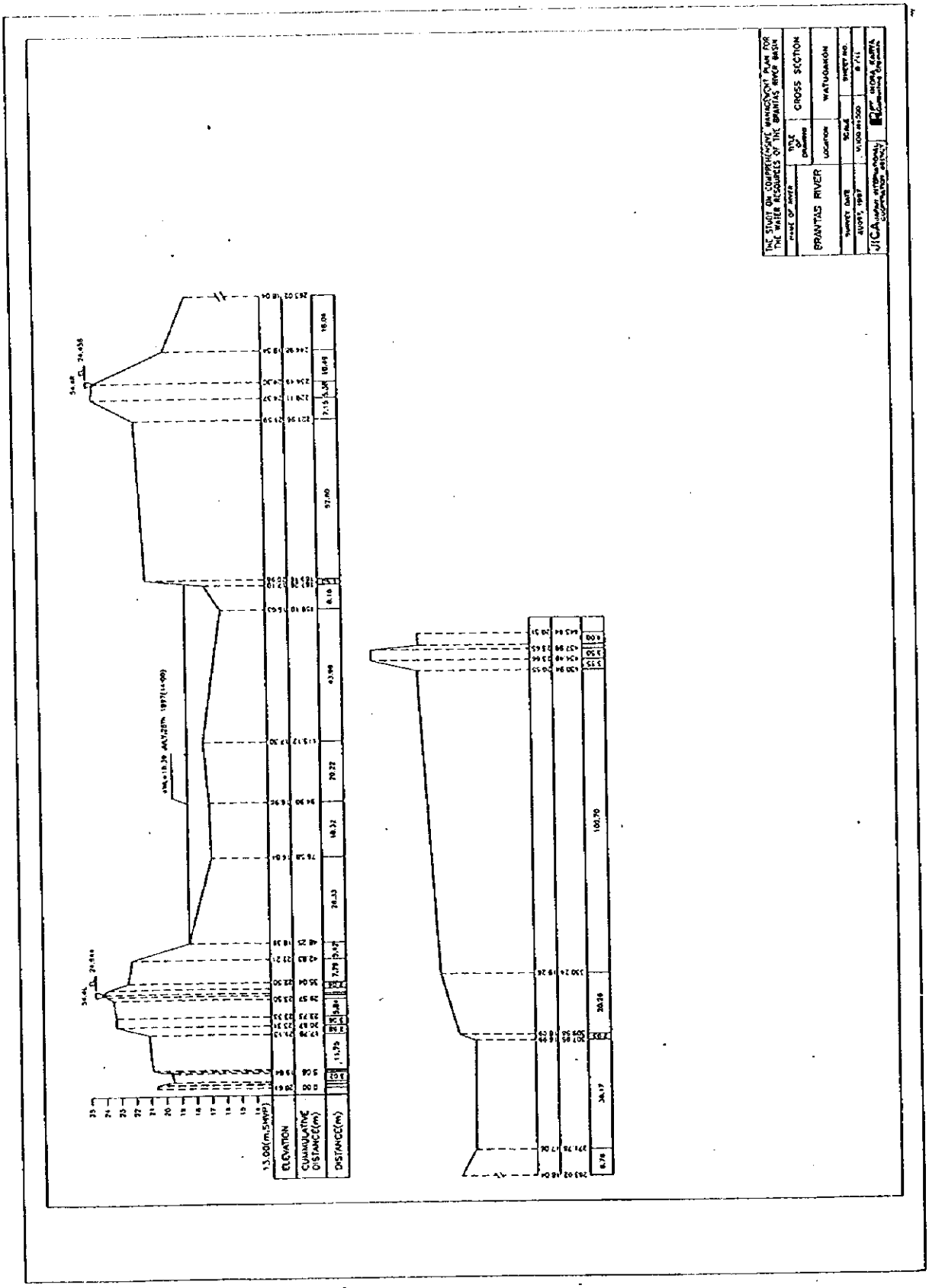


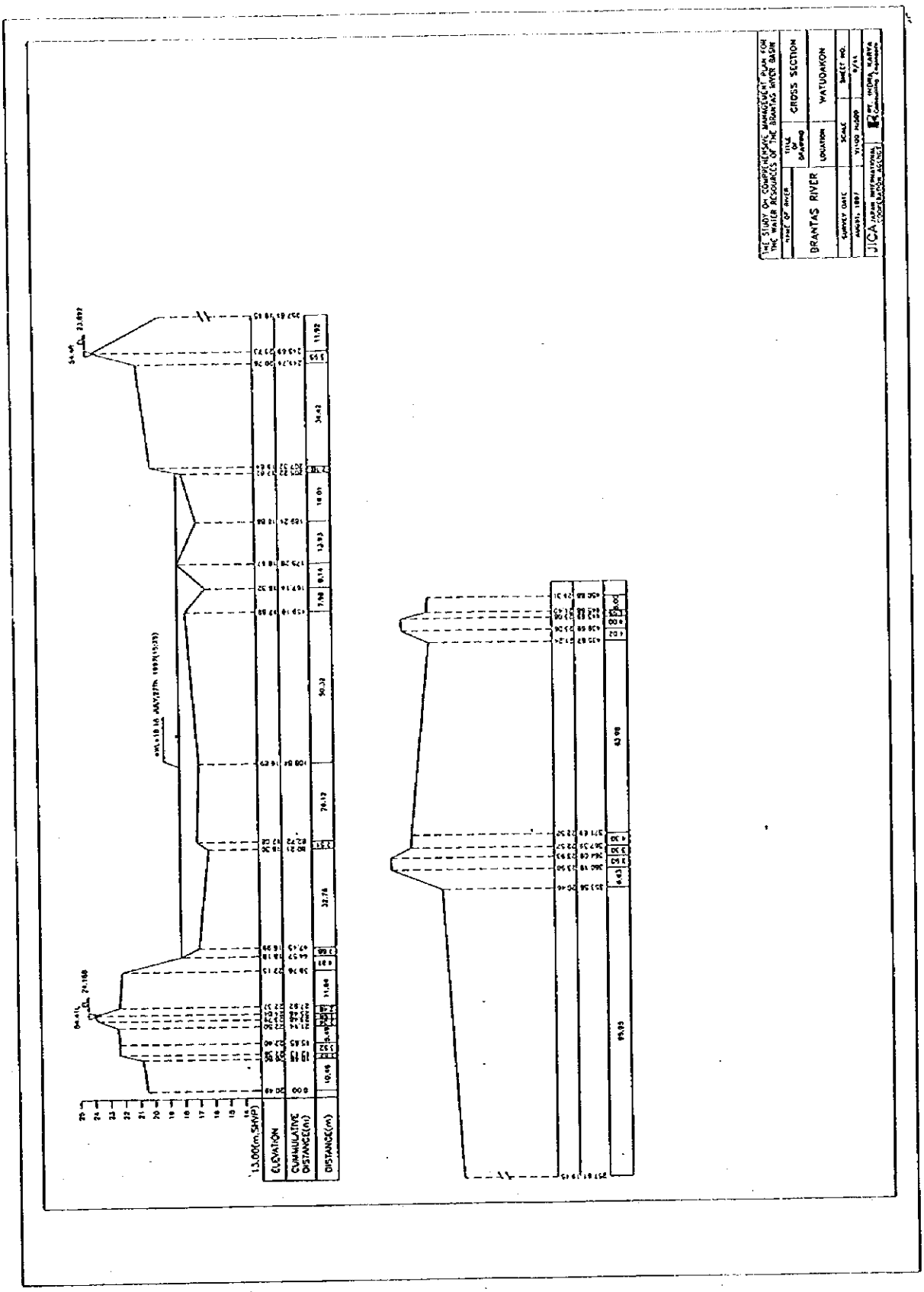


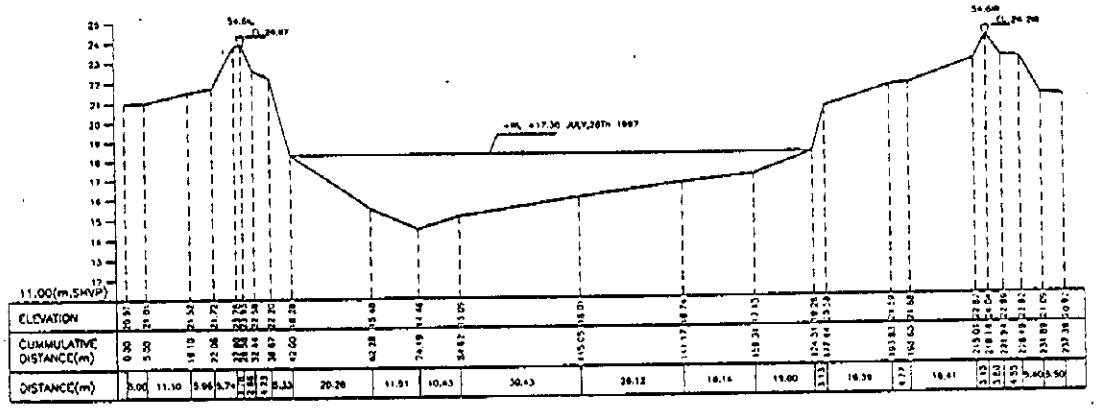
THE STUDY ON COMPREHENSIVE MANAGEMENT PLAN FOR THE WATER RESOURCES OF THE BRANTAS RIVER BASIN

NAME OF RIVER	TITLE OF DRAWING	CROSS SECTION
BRANTAS RIVER	LOCATION	WATUDAKON
SURVEY DATE	SCALE	SHEET NO.
AUGST. 1997	V:1:100 H:1:100	7/11

JICA JAPAN INTERNATIONAL COOPERATION AGENCY | PT. INDRA KARYA Consulting Engineers


THE STUDY ON COMPREHENSIVE MANAGEMENT PLAN FOR THE WATER RESOURCES OF THE BRANTAS RIVER BASIN
NAME OF RIVER
BRANTAS RIVER
TITLE OF DRAWING
CROSS SECTION
LOCATION
WATUGAKON
SURVEY DATE
AUGUST, 1997
SCALE
SHEET NO.
JICA
ELEVATION
CUMMULATIVE DISTANCE(m)
DISTANCE(m)
13.00(m,SHVP)

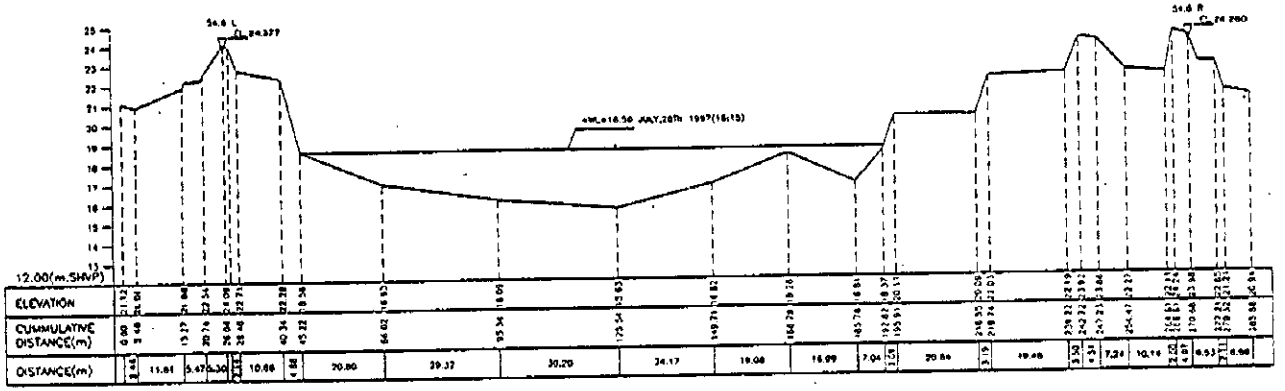

THE STUDY ON COMPREHENSIVE MANAGEMENT PLAN FOR THE WATER RESOURCES OF THE BRANTAS RIVER BASIN
NAME OF RIVER
BRANTAS RIVER
TITLE OF DRAWING
CROSS SECTION
LOCATION
WATUDAKON
SURVEY DATE
SCALE
SHEET NO.
JICA JAPAN INTERNATIONAL COOPERATION AGENCY
ELEVATION
CUMMULATIVE DISTANCE(m)
DISTANCE(m)
13.00(m,SHVP)

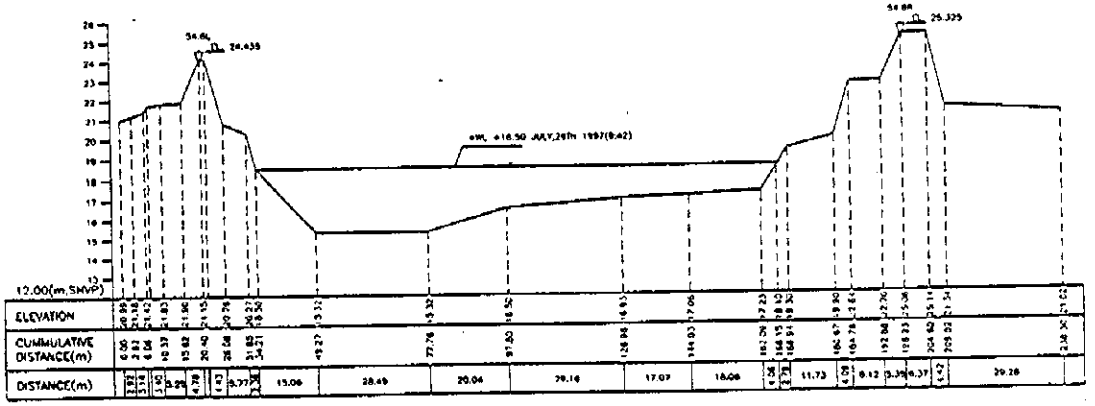


THE STUDY ON COMPREHENSIVE MANAGEMENT PLAN FOR THE WATER RESOURCES OF THE BRANTAS RIVER BASIN

NAME OF RIVER	TITLE OF DRAWING	CROSS SECTION
BRANTAS RIVER	LOCATION	WATUDAKON
SURVEY DATE	SCALE	SHEET NO.
AUGST. 1997	V:1:100 H:1:500	10/11

JICA JAPAN INTERNATIONAL COOPERATION AGENCY | PT. INDRA KARYA Consulting Engineers



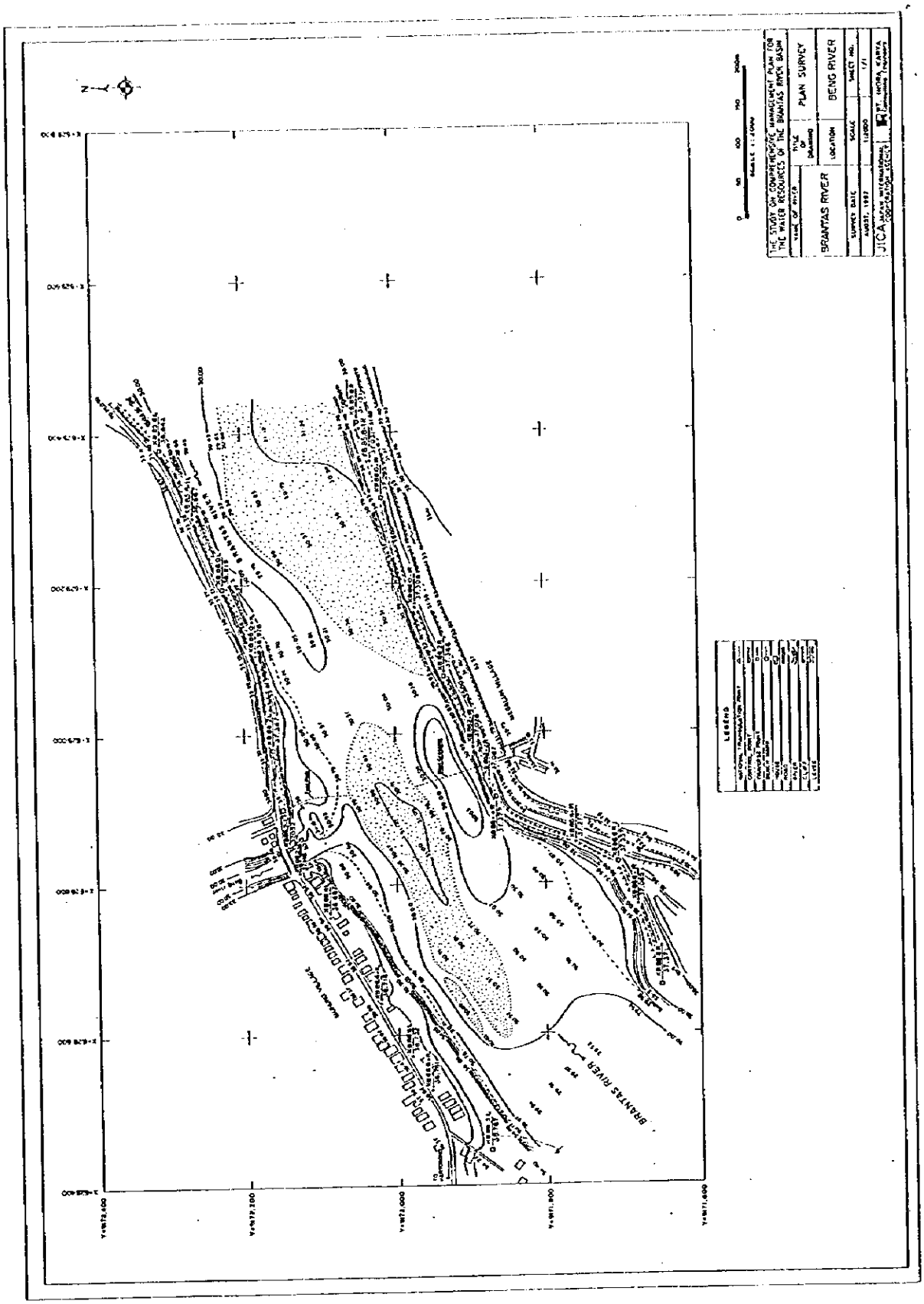


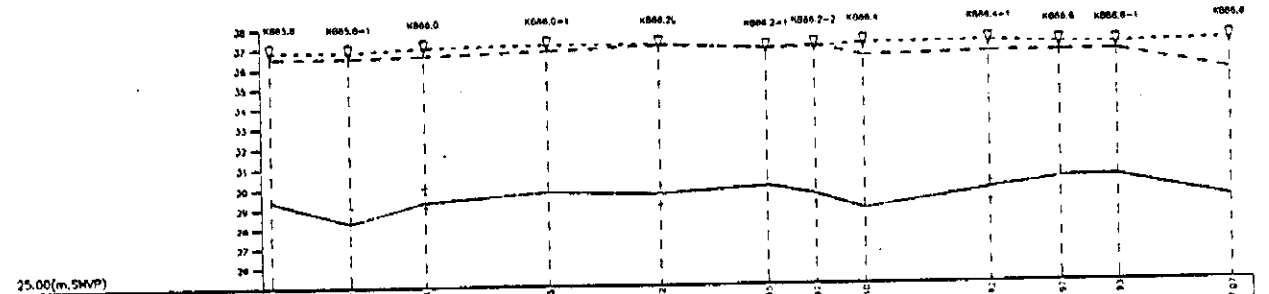
THE STUDY ON COMPREHENSIVE MANAGEMENT PLAN FOR THE WATER RESOURCES OF THE BRANTAS RIVER BASIN

NAME OF RIVER	TYPE OF DRAWING	CROSS SECTION
BRANTAS RIVER	LOCATION	WATUDAKON
SURVEY DATE	SCALE	SHEET NO.
AUGUST, 1997	V:1/100 H:1/500	11/14

JICA JAPAN INTERNATIONAL COOPERATION AGENCY | PT. INDRA KARYA Consulting Engineers

Brantas River (Beng River)


THE STUDY ON COMPREHENSIVE MANAGEMENT PLAN FOR THE WATER RESOURCES OF THE BRANTAS RIVER BASIN
BRANTAS RIVER
PLAN SURVEY
BENG RIVER
LOCATION
SCALE
SHEET NO.
JICA
LEGEND
BRANTAS RIVER

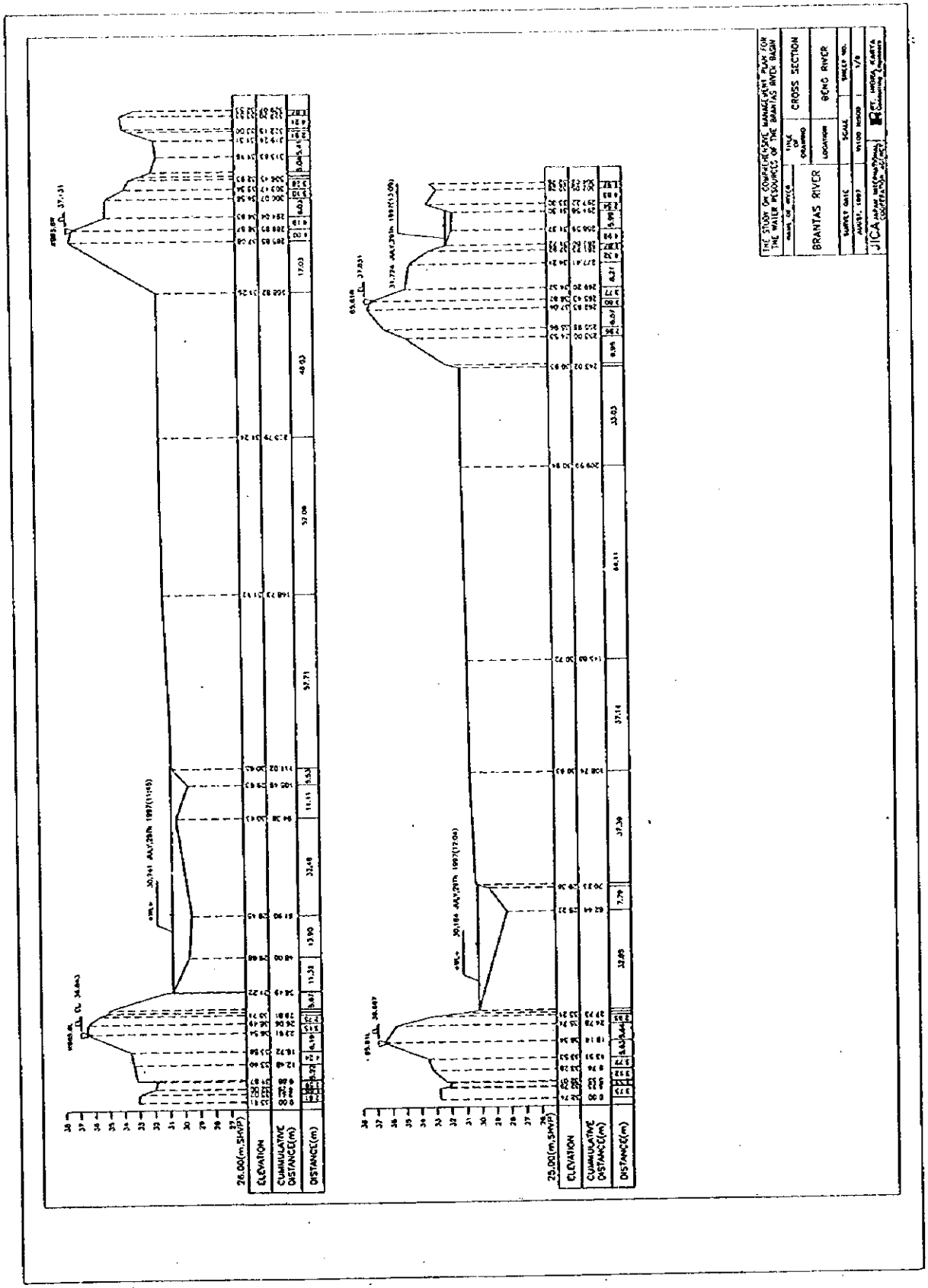


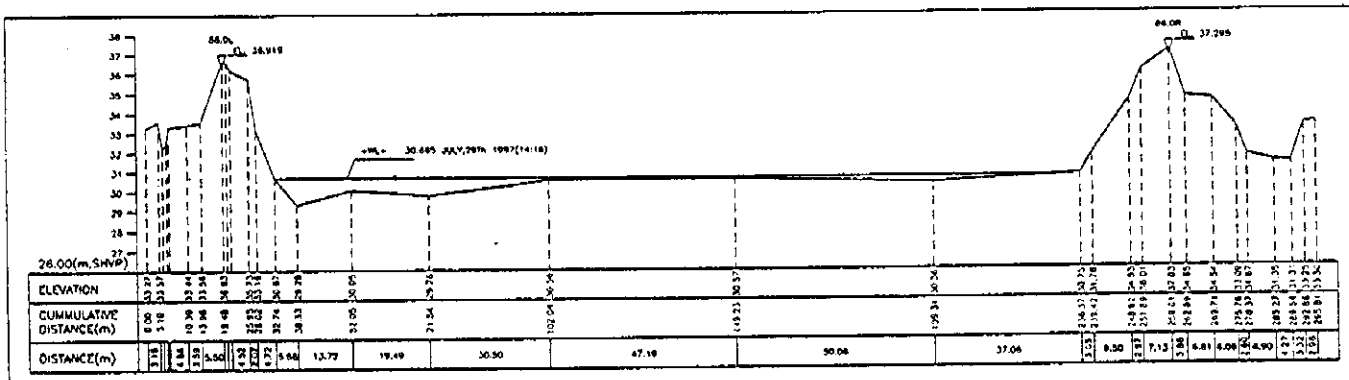
25.00(m.SWVP)

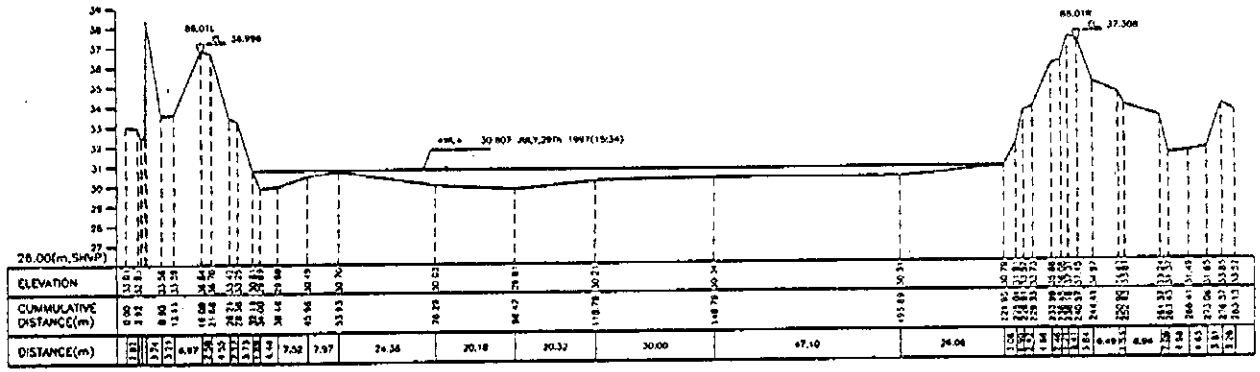
ELEVATION	TOP OF LEVEE (RIGHT)	36.87																
	TOP OF LEVEE (LEFT)	36.34																
	CHANNEL BED	29.45	28.25	29.29	28.61	30.07	30.45	30.51	30.61	29.29	30.28	30.36	30.36	35.35				
DISTANCE	CUMMULATIVE	0.00	79.87	155.77	250.74	364.23	473.45	523.51	573.51	697.75	768.10	825.45	857.04	971.23				
	BETWEEN TWO STA.		79.87	76.10	124.97	113.49	109.22	49.06	49.43	126.24	71.35	57.35	114.19					
STATION NO.		K885.8	K885.8=1	K886.0	K886.0=1	K886.2	K886.2=1	K886.2=2	K886.4	K886.4=1	K886.6	K886.6=1	K886.8					

THE STUDY ON COMPREHENSIVE MANAGEMENT PLAN FOR THE WATER RESOURCES OF THE BRANTAS RIVER BASIN

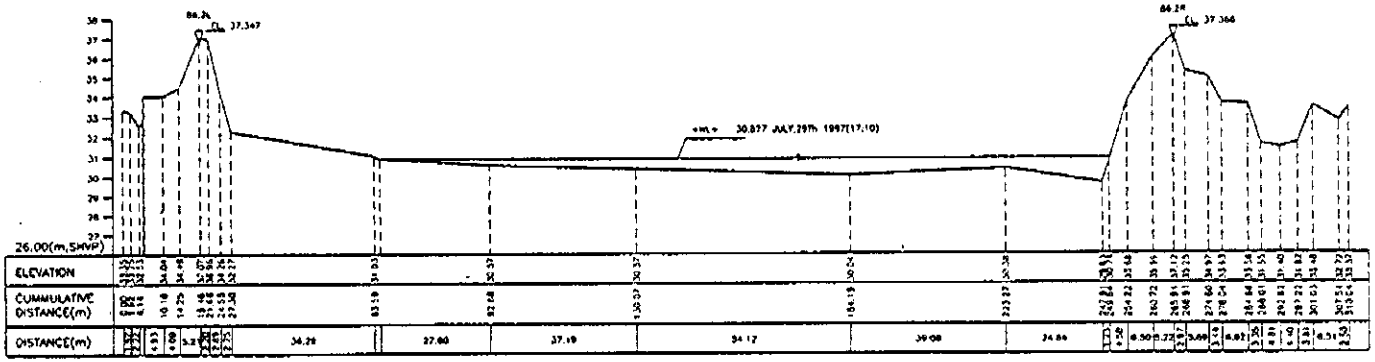
NAME OF RIVER	TITLE OF DRAWING	LONG SECTION
BRANTAS RIVER	LOCATION	BENG K885.8 - K886.8
SURVEY DATE	SCALE	SHEET NO.
AUGUST, 1997	H:100 V:1000	1/1
JICA JAPAN INTERNATIONAL COOPERATION AGENCY	PT. INDRA KARYA Consulting Engineers	

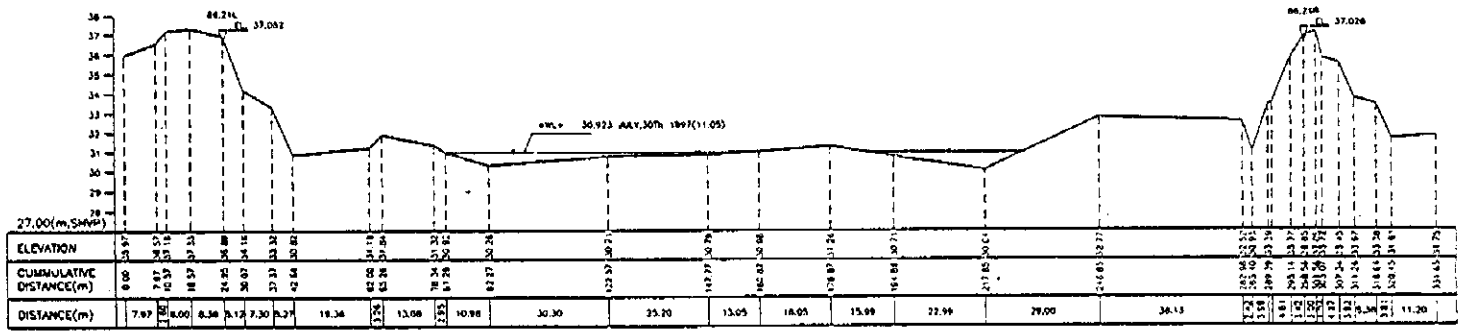

THE STUDY ON COMPREHENSIVE MANAGEMENT PLAN FOR THE WATER RESOURCES OF THE BRANTAS RIVER BASIN
BRANTAS RIVER
CROSS SECTION
BENG RIVER
JICA
ELEVATION
CUMMULATIVE DISTANCE(m)
DISTANCE(m)
26.00(m,SHVP)
25.00(m,SHVP)





THE STUDY ON COMPREHENSIVE MANAGEMENT PLAN FOR THE WATER RESOURCES OF THE BRANTAS RIVER BASIN		
NAME OF RIVER: BRANTAS RIVER	TITLE OF DRAWING	CROSS SECTION
	LOCATION	BENG RIVER
SURVEY DATE	SCALE	SHEET NO.
AUGUST, 1997	V:1:100 H:1:500	2/9
JICA JAPAN INTERNATIONAL COOPERATION AGENCY	PT. INDRA KARYA Consulting Engineers	



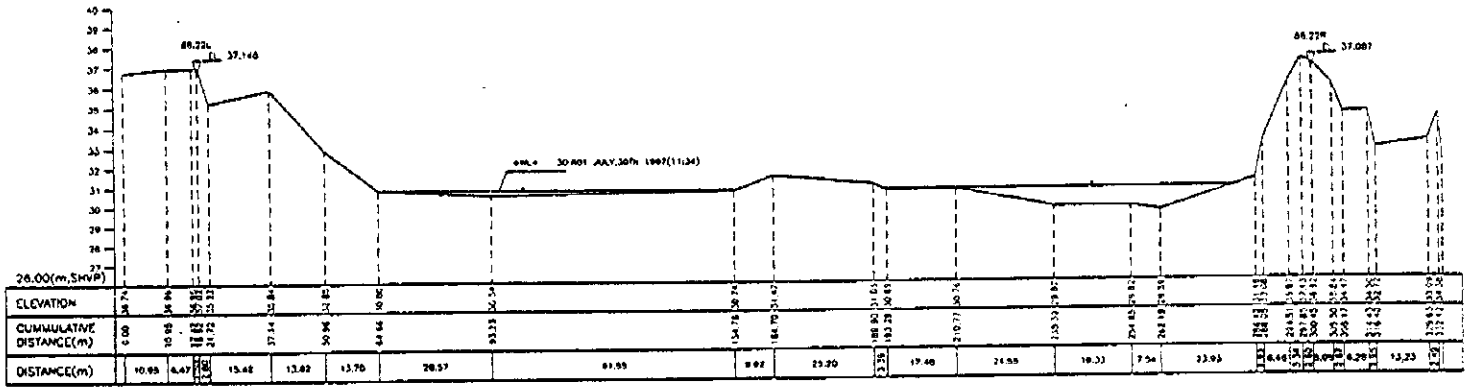


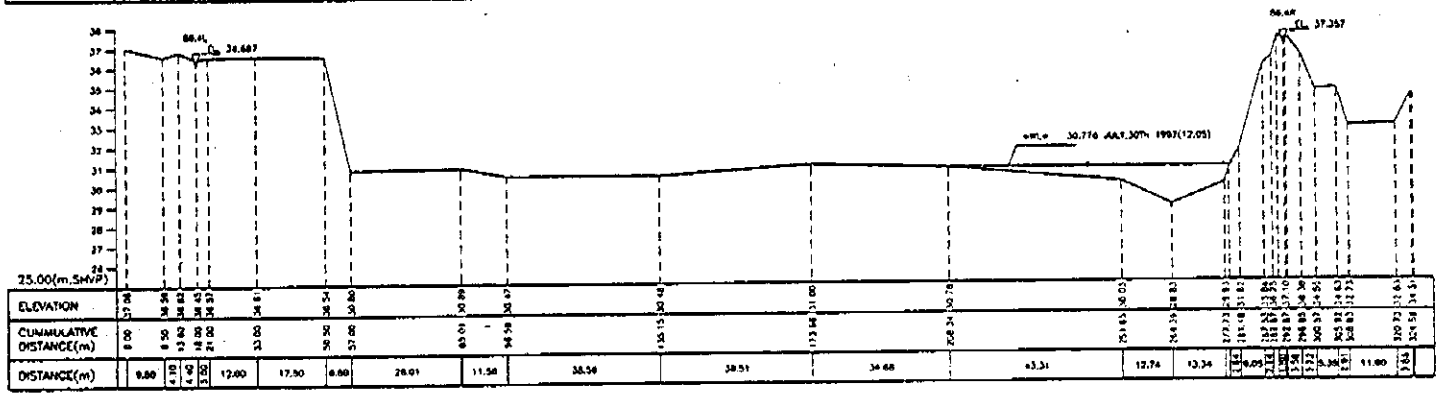
THE STUDY ON COMPREHENSIVE MANAGEMENT PLAN FOR THE WATER RESOURCES OF THE BRANTAS RIVER BASIN

NAME OF RIVER	TITLE OF DRAWING	CROSS SECTION
BRANTAS RIVER	LOCATION	BENG RIVER
SURVEY DATE	SCALE	SHEET NO.
AUGUST, 1997	V1100 H1500	3/8

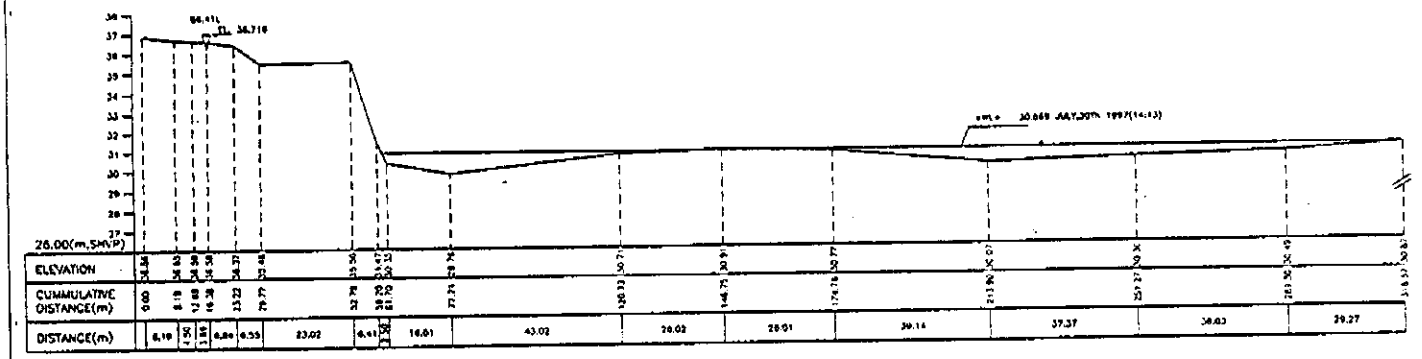
JICA JAPAN INTERNATIONAL COOPERATION AGENCY

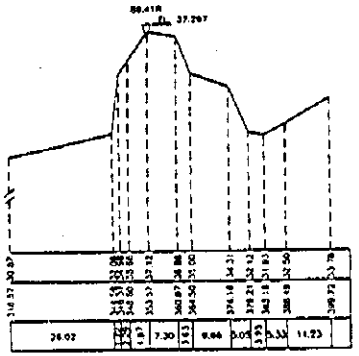
PT. INDRA KARYA Consulting Engineers



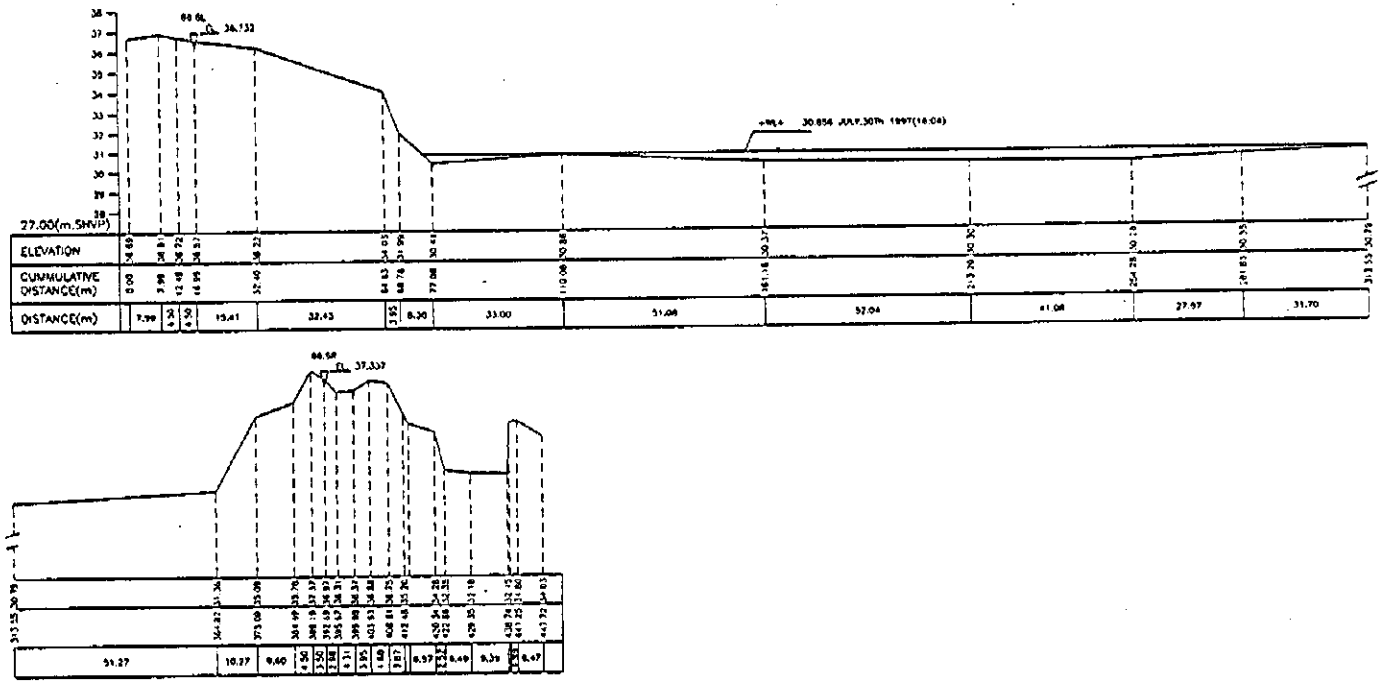


THE STUDY ON COMPREHENSIVE MANAGEMENT PLAN FOR THE WATER RESOURCES OF THE BRANTAS RIVER BASIN		
NAME OF RIVER	TITLE OF DRAWING	CROSS SECTION
BRANTAS RIVER	LOCATION	BENO RIVER
SURVEY DATE	SCALE	SHEET NO.
AUGST, 1997	H:1/00 V:1/500	4/8
JICA JAPAN INTERNATIONAL COOPERATION AGENCY	PT. INDRA KARYA Consulting Engineers	





THE STUDY ON COMPREHENSIVE MANAGEMENT PLAN FOR THE WATER RESOURCES OF THE BRANTAS RIVER BASIN		
NAME OF RIVER	TITLE OF DRAWING	CROSS SECTION
BRANTAS RIVER	LOCATION	BENG RIVER
SURVEY DATE	SCALE	SHEET NO.
AUGST, 1997	V:1/100 H:1/500	5/8
JICA JAPAN INTERNATIONAL COOPERATION AGENCY	PT. INDRA KARYA Consulting Engineers	

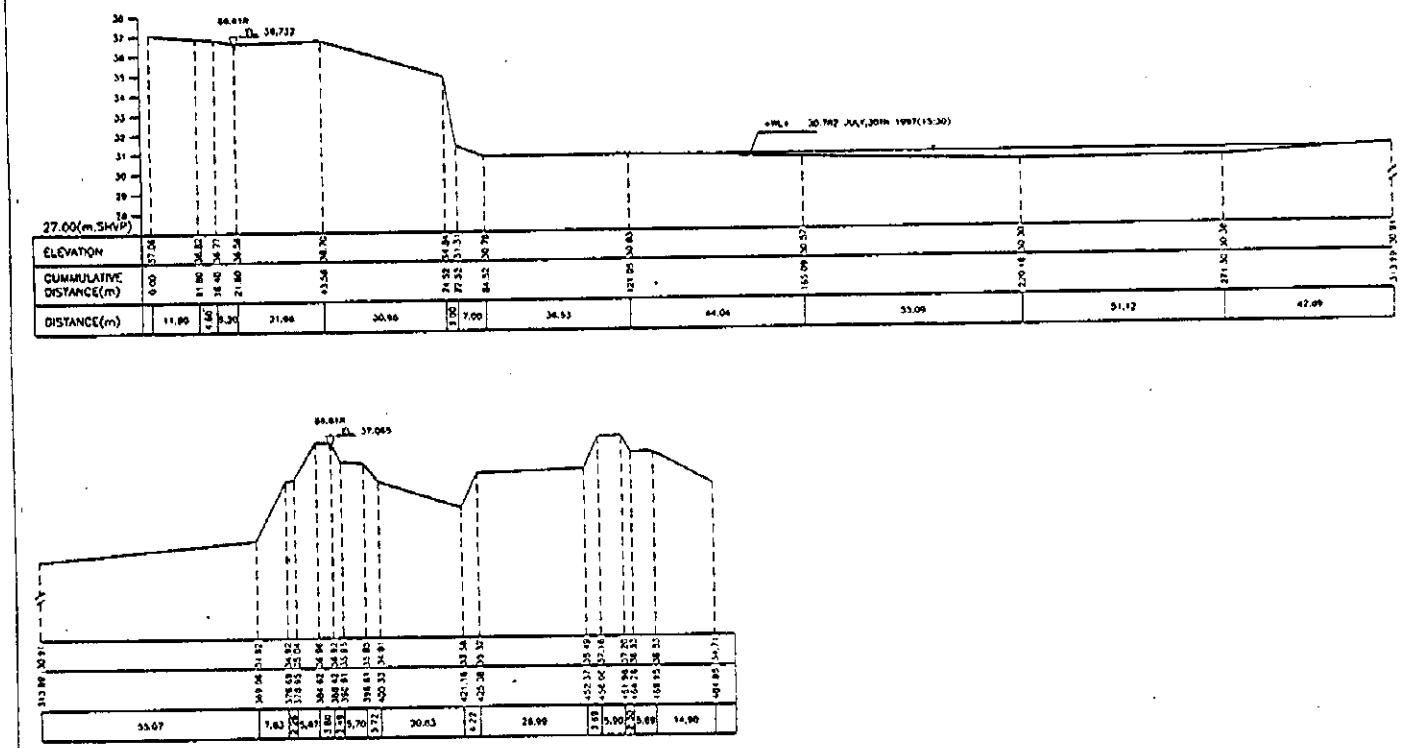


THE STUDY ON COMPREHENSIVE MANAGEMENT PLAN FOR THE WATER RESOURCES OF THE BRANTAS RIVER BASIN

NAME OF RIVER: BRANTAS RIVER	TITLE OF DRAWING	CROSS SECTION
	LOCATION	BENG RIVER
SURVEY DATE	SCALE	SHEET NO.
AUGUST, 1997	V:1:400 H:1:500	4/8

JICA JAPAN INTERNATIONAL COOPERATION AGENCY

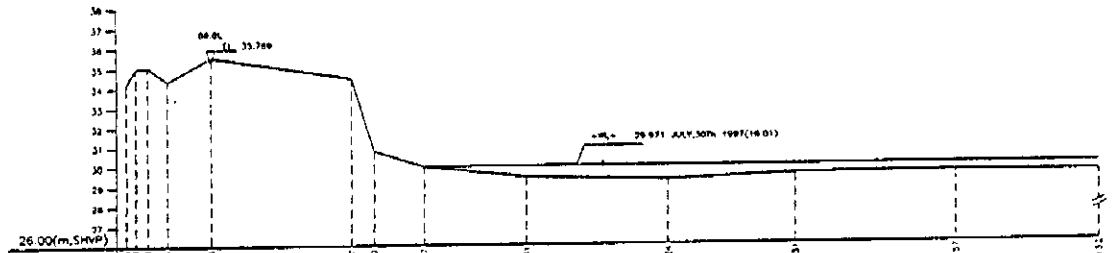
PT. INDRA KARYA Consulting Engineers

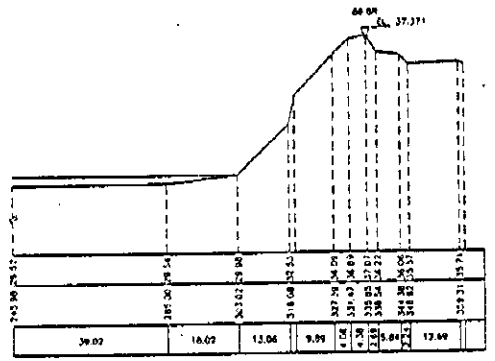


THE STUDY ON COMPREHENSIVE MANAGEMENT PLAN FOR THE WATER RESOURCES OF THE BRANTAS RIVER BASIN

NAME OF RIVER	TITLE OF DRAWING	CROSS SECTION
BRANTAS RIVER	LOCATION	BENG RIVER
SURVEY DATE	SCALE	SHEET NO.
AUGST, 1997	V:1:100 H:1:500	7/8

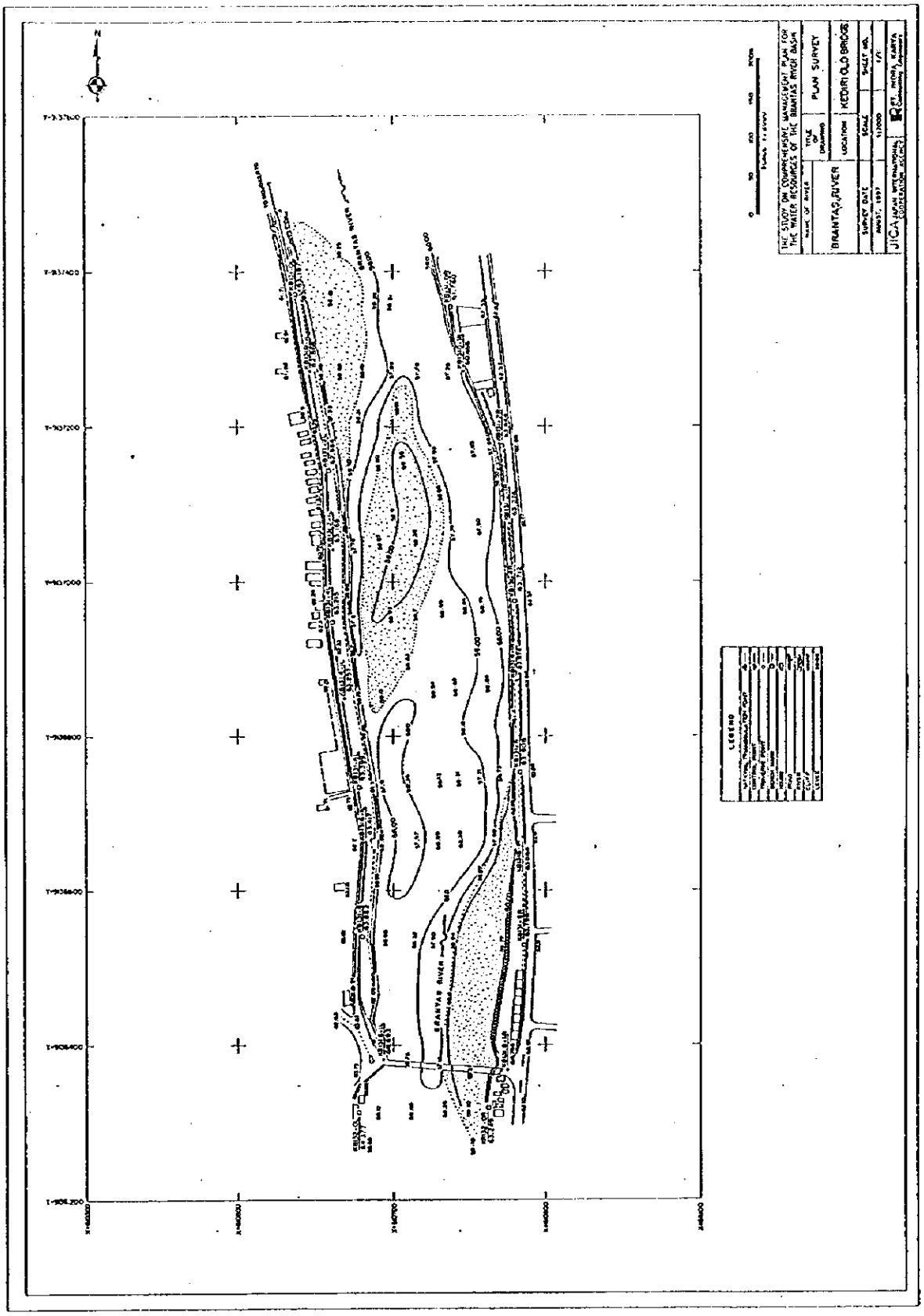
JICA JAPAN INTERNATIONAL COOPERATION AGENCY | PT. INDRA KARYA Consulting Engineers

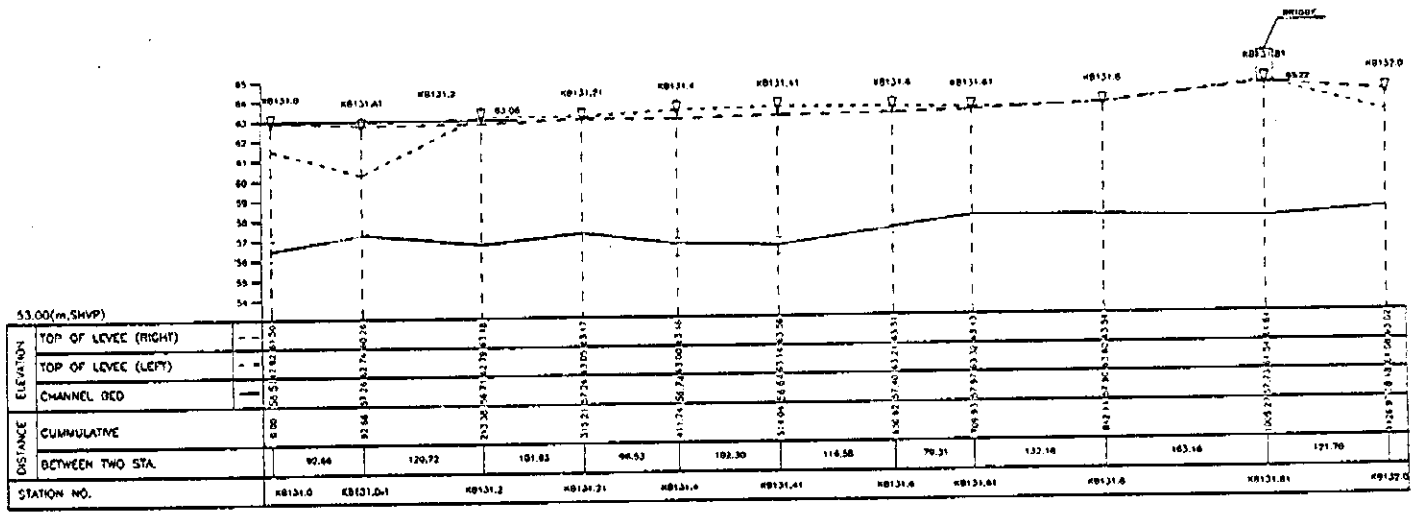




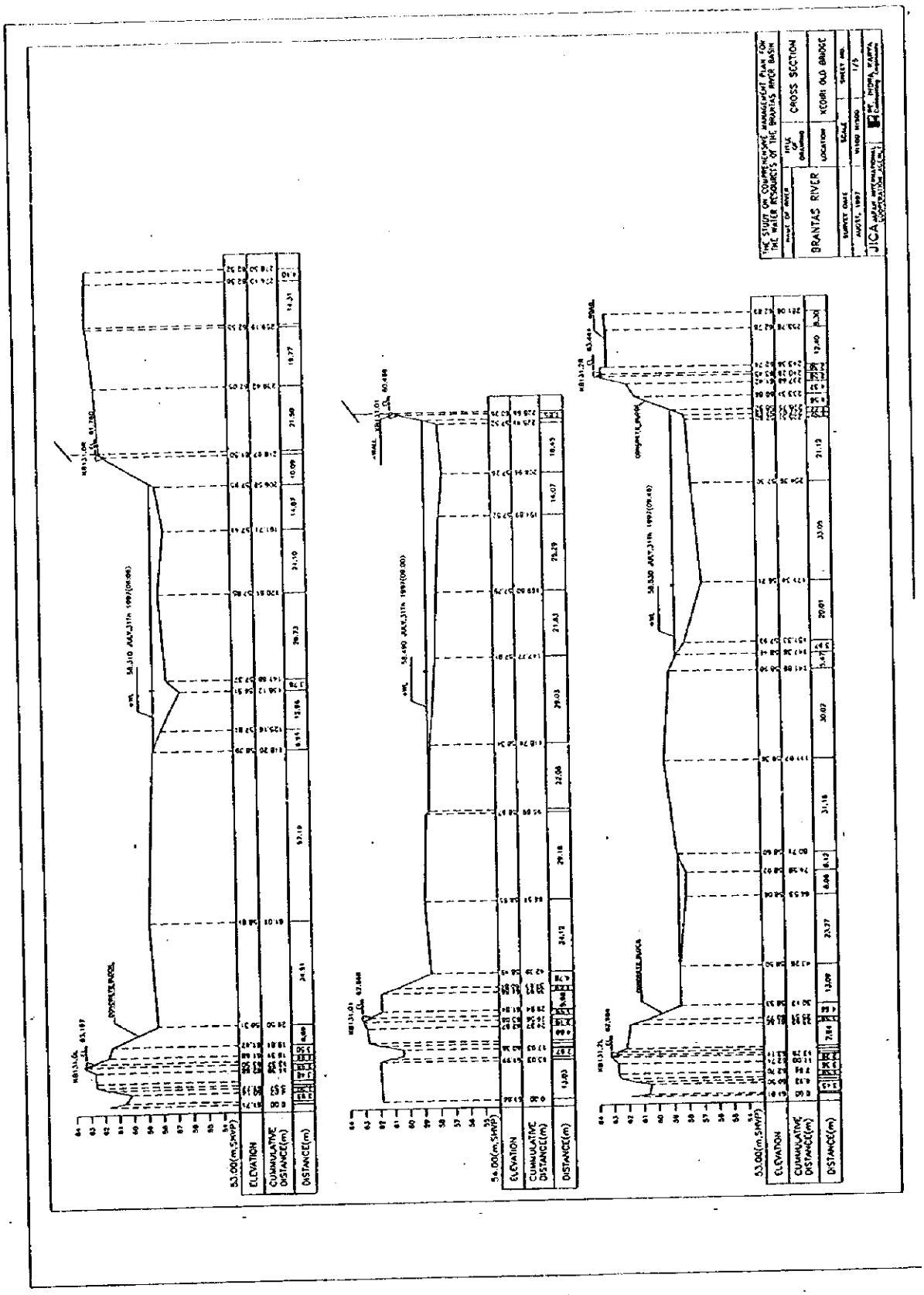
THE STUDY ON COMPREHENSIVE MANAGEMENT PLAN FOR THE WATER RESOURCES OF THE BRANTAS RIVER BASIN	
NAME OF RIVER: BRANTAS RIVER	TITLE OF DRAWING: CROSS SECTION
	LOCATION: BENG RIVER
SURVEY DATE: AUGUST, 1997	SCALE: V:1/100 H:1/500
	SHEET NO.: 6/8
JICA JAPAN INTERNATIONAL COOPERATION AGENCY	PT. INDRA KARYA Consulting Engineers

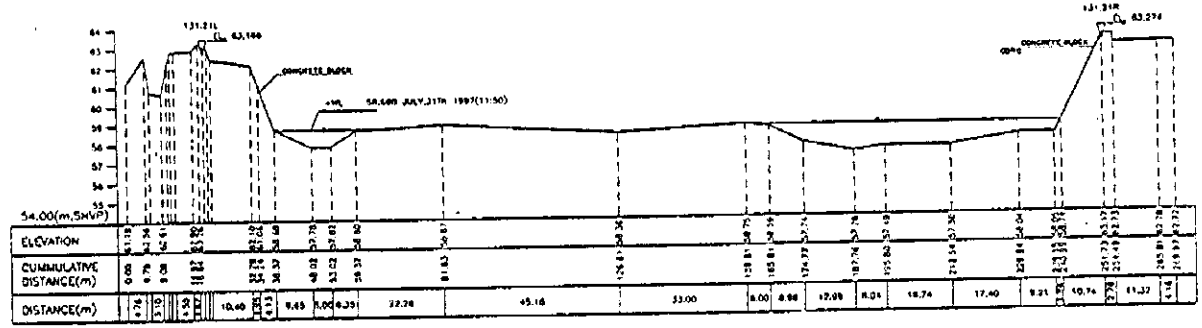
Brantas River (Kediri Old Bridge)

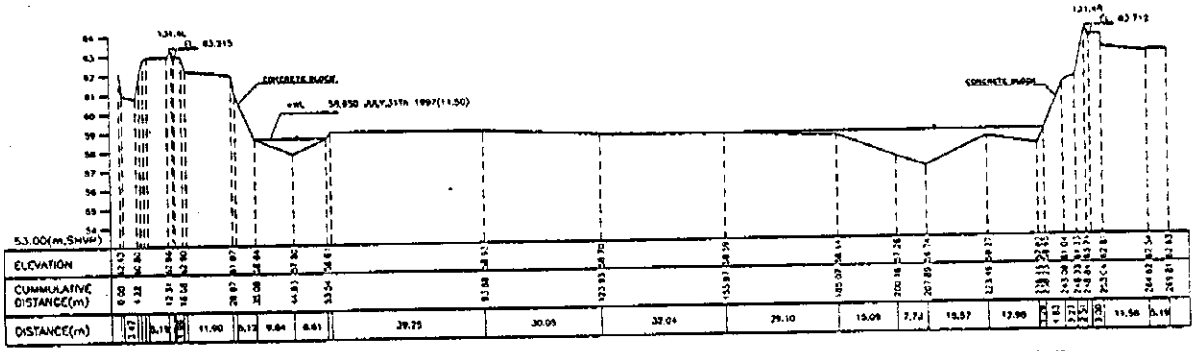

THE STUDY ON COMPREHENSIVE MANAGEMENT PLAN FOR THE WATER RESOURCES OF THE BRANTAS RIVER BASIN
NAME OF RIVER
BRANTAS RIVER
TITLE OF DRAWING
PLAN SURVEY
LOCATION
KEDIRI OLD BRIDGE
SURVEY DATE
AUGUST, 1997
SCALE
1:2000
SHEET NO.
JICA JAPAN INTERNATIONAL COOPERATION AGENCY
PT. INDRA KARYA Consulting Engineers
LEGEND
BRANTAS RIVER

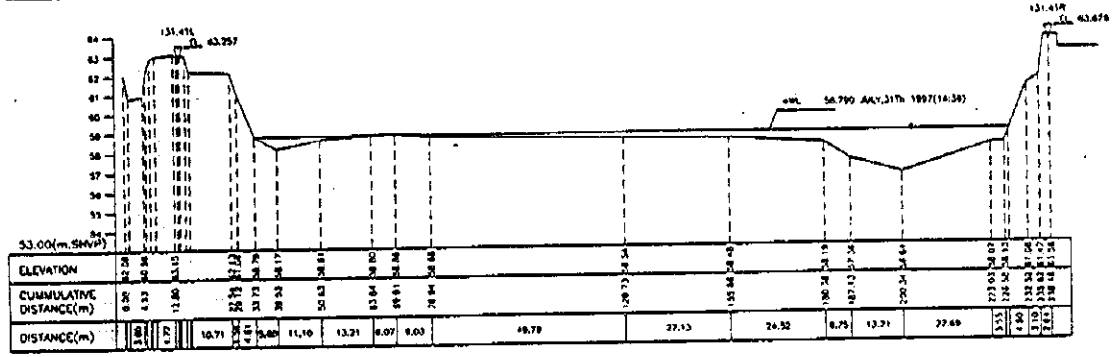


THE STUDY ON COMPREHENSIVE MANAGEMENT PLAN FOR THE WATER RESOURCES OF THE BRANTAS RIVER BASIN		
NAME OF RIVER	TITLE OF DRAWING	LONG SECTION
BRANTAS RIVER	LOCATION	KEDIRI OLD BRIDGE KB131.0=KB132.0
SURVEY DATE	SCALE	SHEET NO.
AUGST, 1997	V:100 H:2000	1/1
JICA JAPAN INTERNATIONAL COOPERATION AGENCY	PT. INDRA KARYA Consulting Engineers	

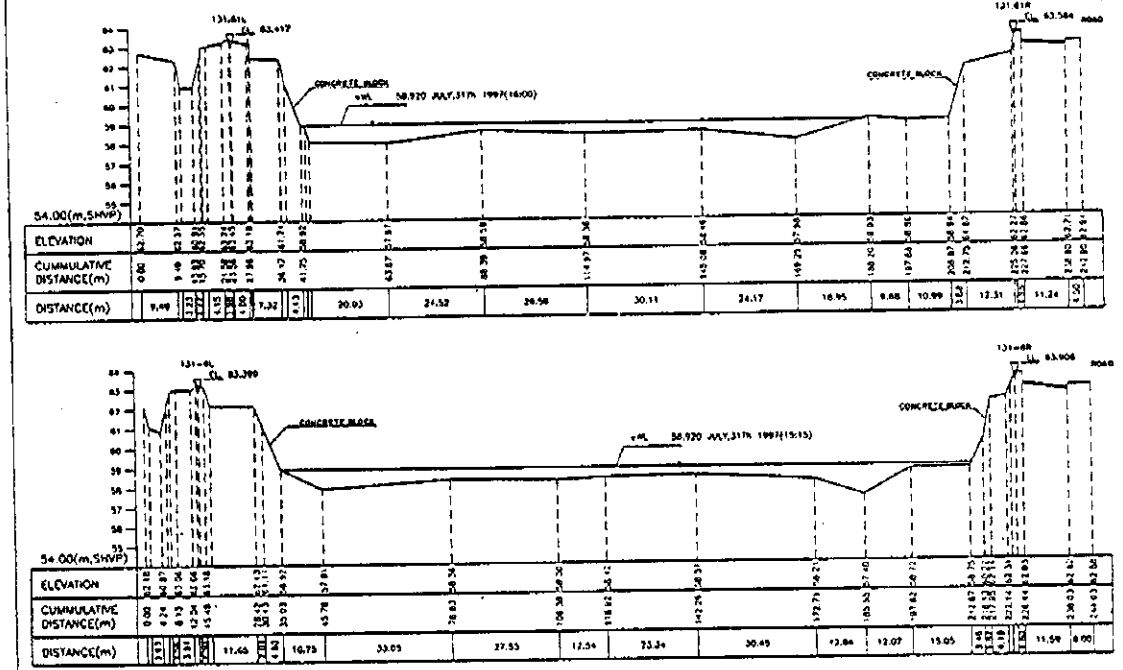

THE STUDY ON COMPREHENSIVE MANAGEMENT PLAN FOR THE WATER RESOURCES OF THE BRANTAS RIVER BASIN
BRANTAS RIVER
CROSS SECTION
KEDIRI OLD BRIDGE
JICA
ELEVATION
CUMMULATIVE DISTANCE(m)
DISTANCE(m)



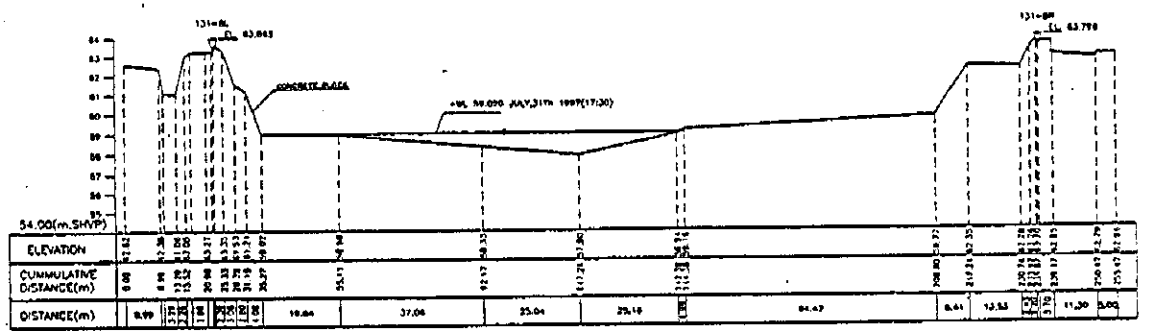




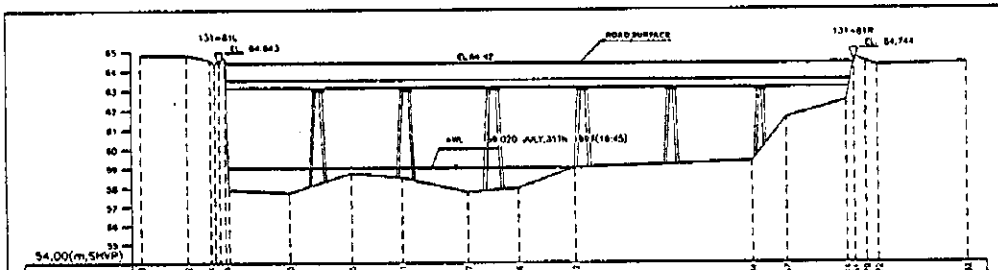
THE STUDY ON COMPREHENSIVE MANAGEMENT PLAN FOR THE WATER RESOURCES OF THE BRANTAS RIVER BASIN		
NAME OF RIVER	TITLE OF DRAWING	CROSS SECTION
BRANTAS RIVER	LOCATION	KEDIRI OLD BRIDGE
SURVEY DATE	SCALE	SHEET NO.
AUGST. 1997	V:1/100 H:1/200	1/3
JICA JAPAN INTERNATIONAL COOPERATION AGENCY	PT. INDRA KARYA Consulting Engineers	

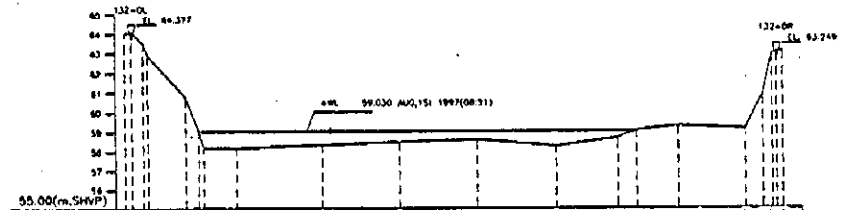


THE STUDY ON COMPREHENSIVE MANAGEMENT PLAN FOR THE WATER RESOURCES OF THE BRANTAS RIVER BASIN		
NAME OF RIVER	TITLE OF DRAWING	CROSS SECTION
BRANTAS RIVER	LOCATION	KEDIRI OLD BRIDGE
SURVEY DATE	SCALE	SHEET NO.
AUGUST, 1997	V:1/100 H:1/500	3/3
JICA JAPAN INTERNATIONAL COOPERATION AGENCY	PT. INDRA KARYA Consulting Engineers	



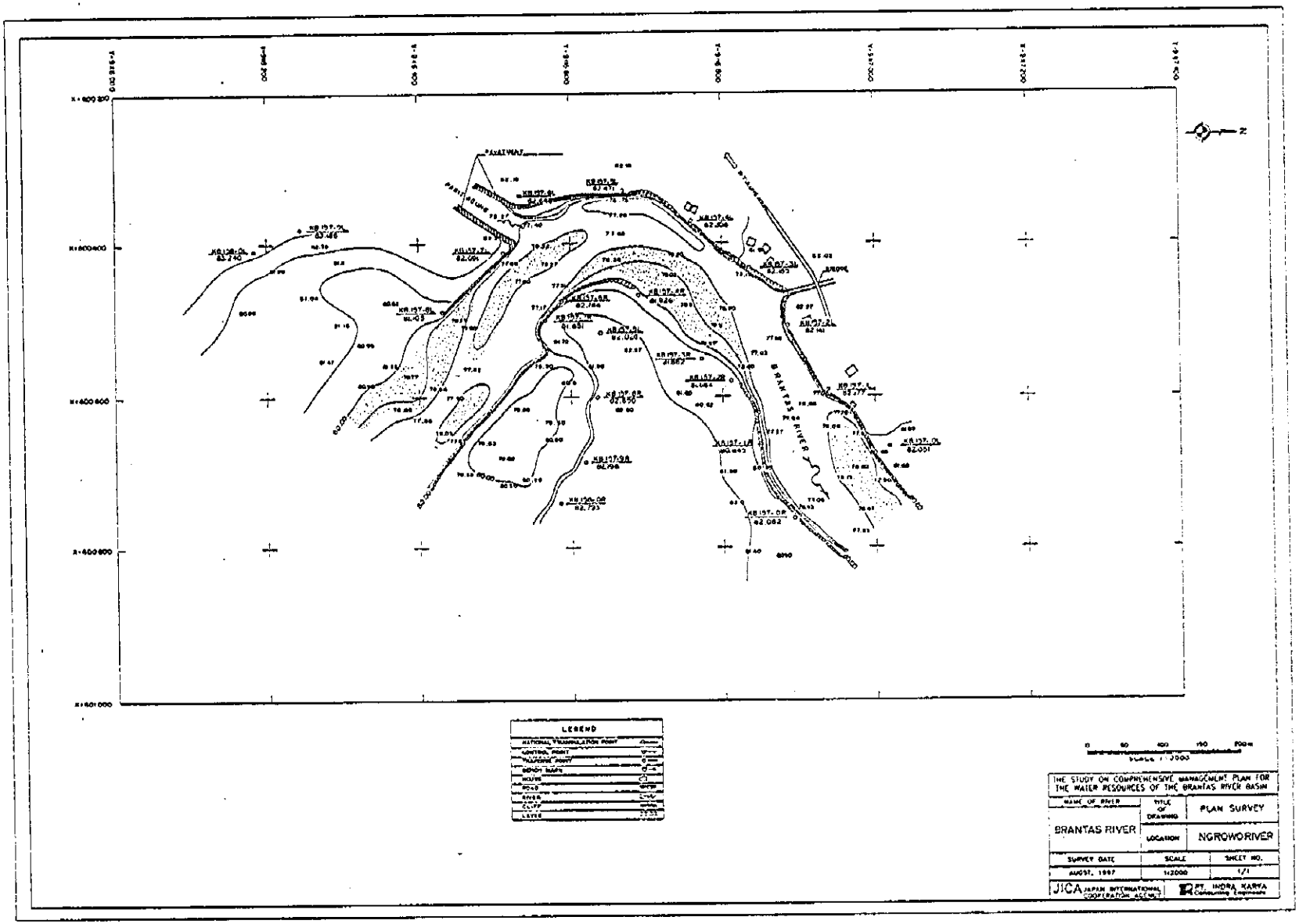
THE STUDY ON COMPREHENSIVE MANAGEMENT PLAN FOR THE WATER RESOURCES OF THE BRANTAS RIVER BASIN		
NAME OF RIVER	TITLE OF DRAWING	CROSS SECTION
BRANTAS RIVER	LOCATION	KEDIRI OLD BRIDGE
SURVEY DATE	SCALE	SHEET NO.
AUGUST, 1997	V:100 H:500	4/6
JICA JAPAN INTERNATIONAL COOPERATION AGENCY	PT. INDRA KARYA Consulting Engineers	

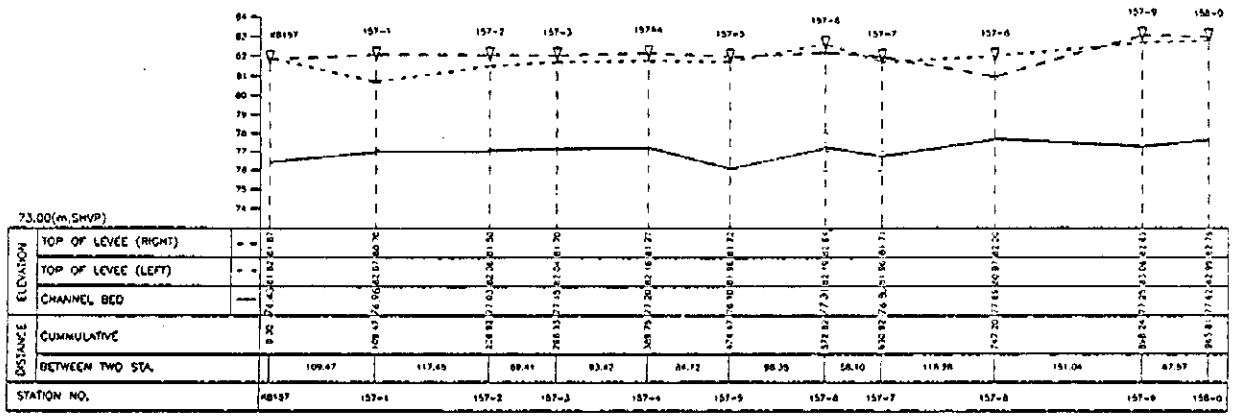




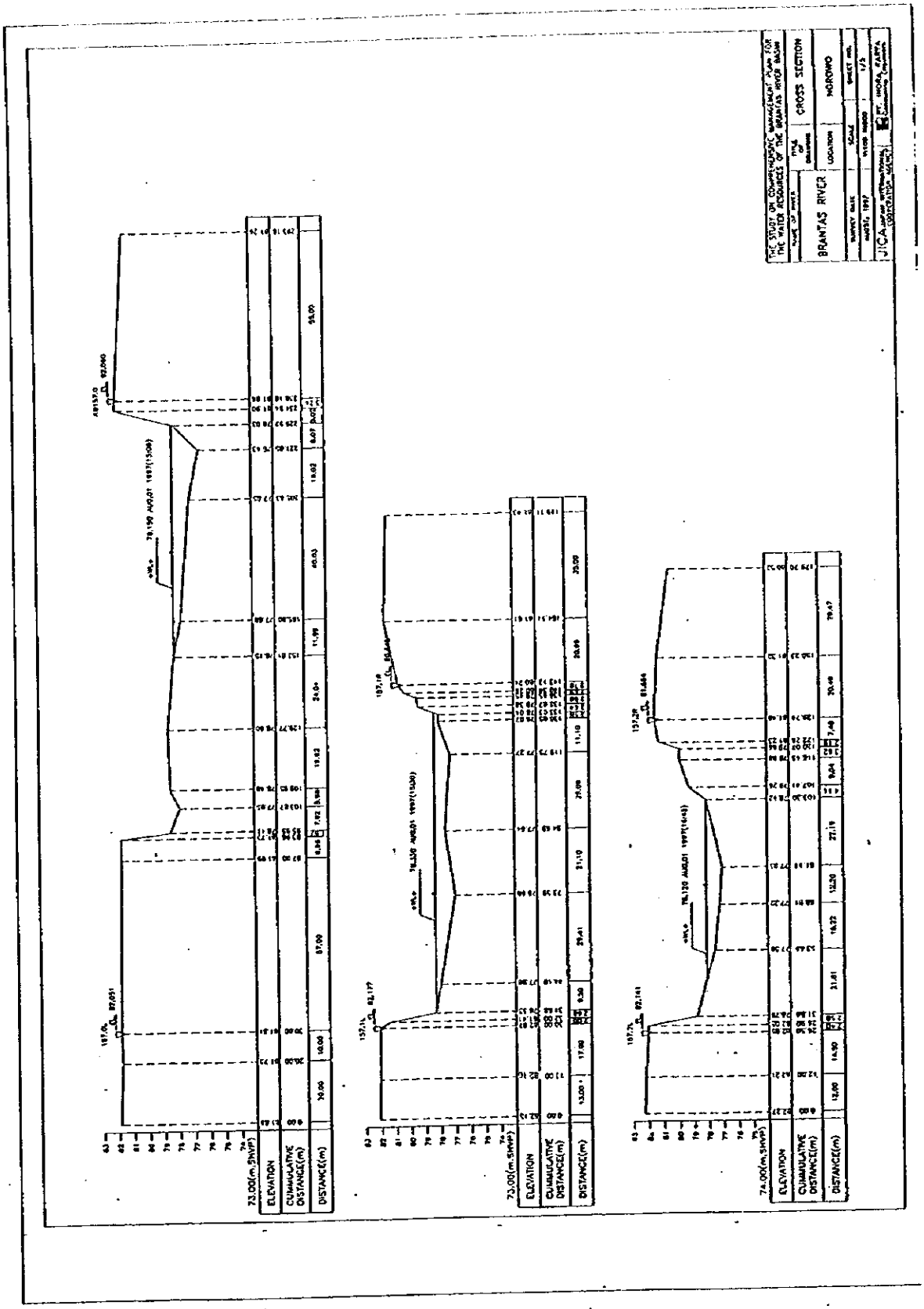
THE STUDY ON COMPREHENSIVE MANAGEMENT PLAN FOR THE WATER RESOURCES OF THE BRANTAS RIVER BASIN			
NAME OF RIVER	TYPE OF DRAWING	CROSS SECTION	
BRANTAS RIVER	LOCATION	KEDIRI OLD BRIDGE	
SURVEY DATE	SCALE	SHEET NO.	
AUGUST, 1997	V:1/100 H:1/500	9/9	
JICA JAPAN INTERNATIONAL COOPERATION AGENCY	PT. INDRA KARYA Consulting Engineers		

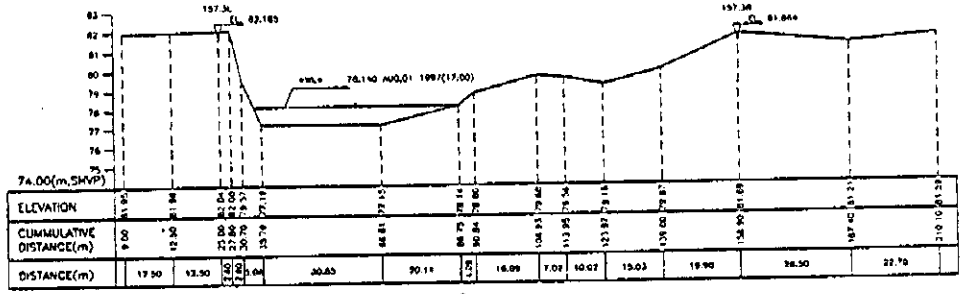
Brantas River (Ngrowo)

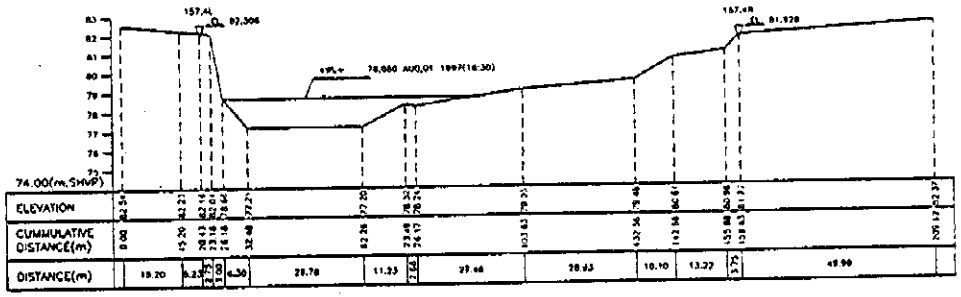

LEGEND
THE STUDY ON COMPREHENSIVE MANAGEMENT PLAN FOR THE WATER RESOURCES OF THE BRANTAS RIVER BASIN
NAME OF RIVER
BRANTAS RIVER
TITLE OF DRAWING
PLAN SURVEY
LOCATION
NGROWO RIVER
SURVEY DATE
AUGST, 1997
SCALE
1:2000
SHEET NO.
1/1
JICA JAPAN INTERNATIONAL COOPERATION AGENCY
PT. INDRA KARYA Consulting Engineers

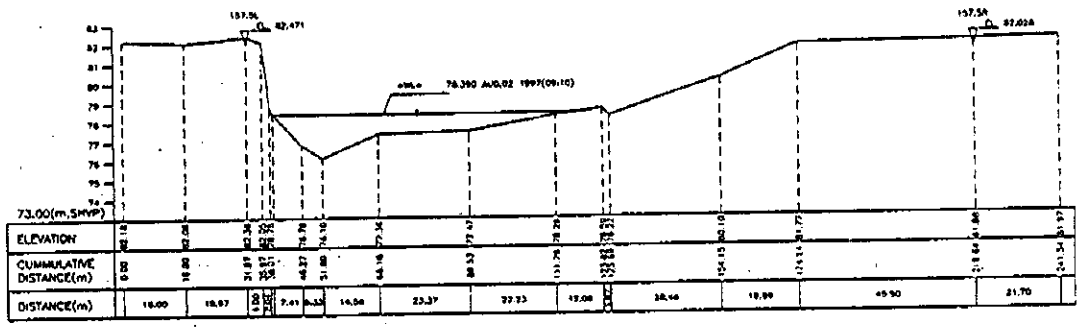


THE STUDY ON COMPREHENSIVE MANAGEMENT PLAN FOR THE WATER RESOURCES OF THE BRANTAS RIVER BASIN		
NAME OF RIVER	TITLE OF DRAWING	LONG SECTION
BRANTAS RIVER	LOCATION	NGROWO KB157.0 – KB158.0
SURVEY DATE	SCALE	SHEET NO.
AUGUST, 1997	V:100 H:2000	1/4
JICA JAPAN INTERNATIONAL COOPERATION AGENCY	PT. INDRA KARYA Consulting Engineers	

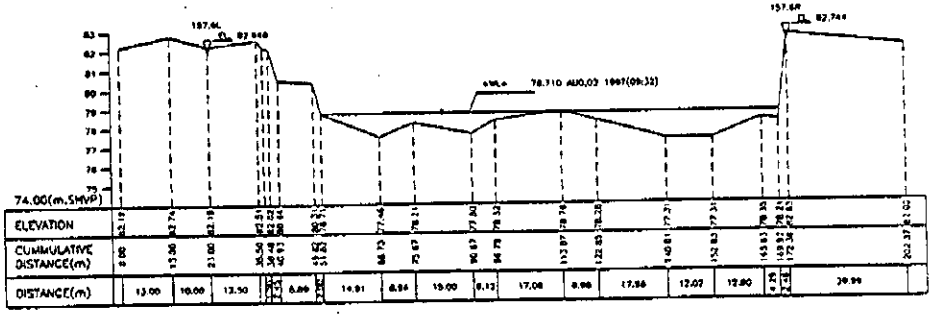

THE STUDY ON COMPREHENSIVE MANAGEMENT PLAN FOR THE WATER RESOURCES OF THE BRANTAS RIVER BASIN
BRANTAS RIVER
CROSS SECTION
MOROWO
JICA
ELEVATION
CUMMULATIVE DISTANCE(m)
DISTANCE(m)

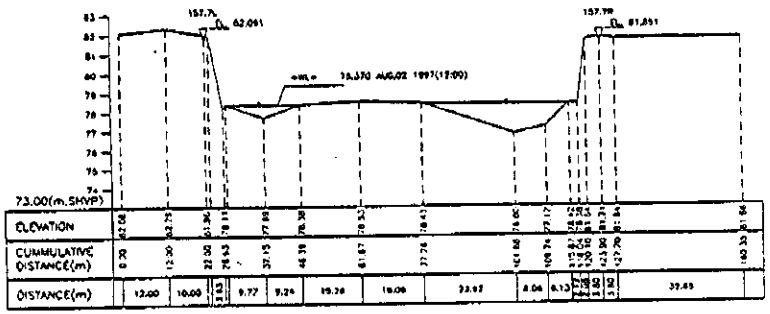






THE STUDY ON COMPREHENSIVE MANAGEMENT PLAN FOR THE WATER RESOURCES OF THE BRANTAS RIVER BASIN		
NAME OF RIVER	TYPE OF DRAWING	CROSS SECTION
BRANTAS RIVER	LOCATION	NGROWO
SURVEY DATE	SCALE	SHEET NO.
AUGUST, 1997	V:1:100 H:1:500	2/3
JICA JAPAN INTERNATIONAL COOPERATION AGENCY	PT. INDRA KARYA Consulting Engineers	



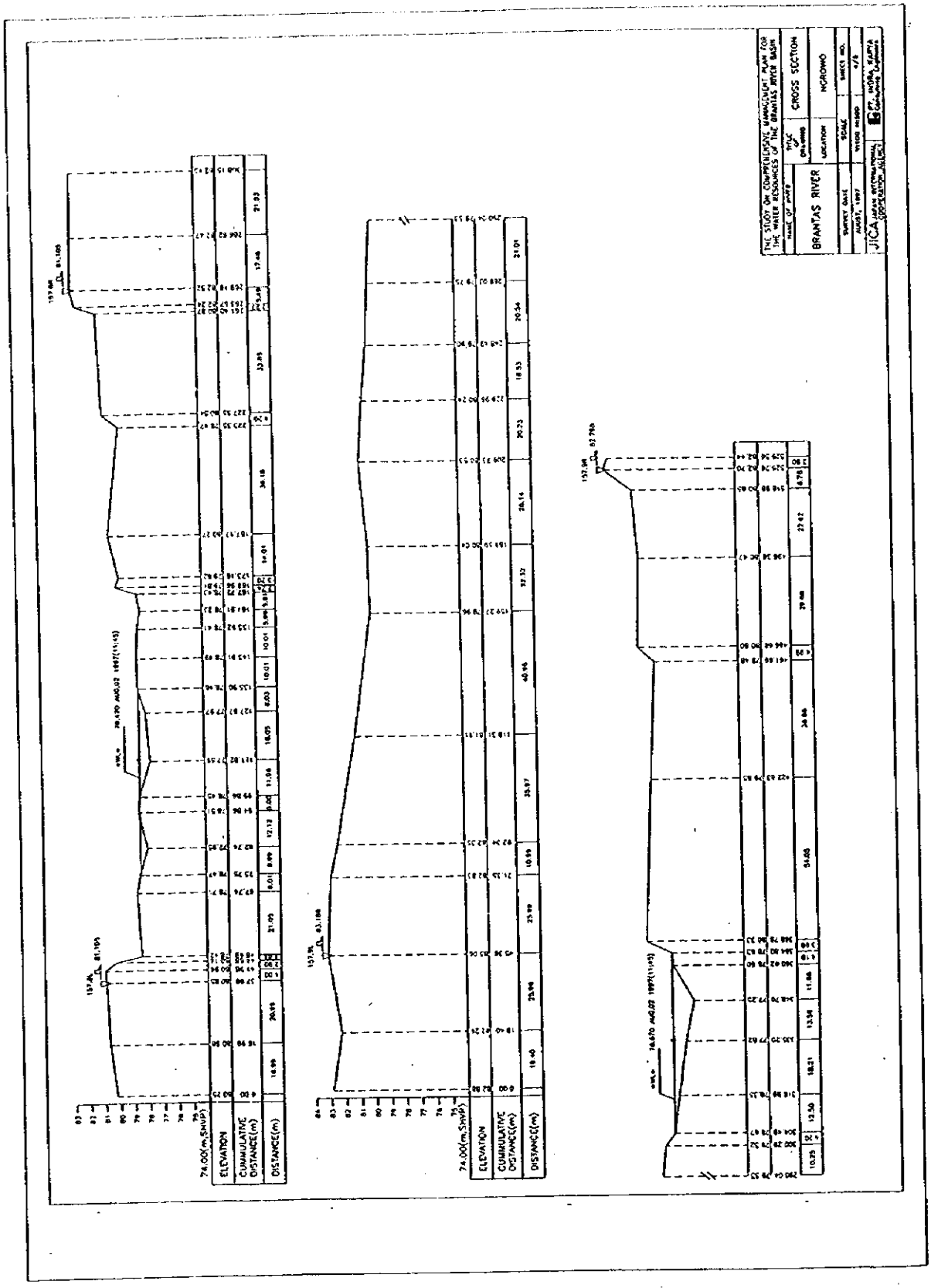


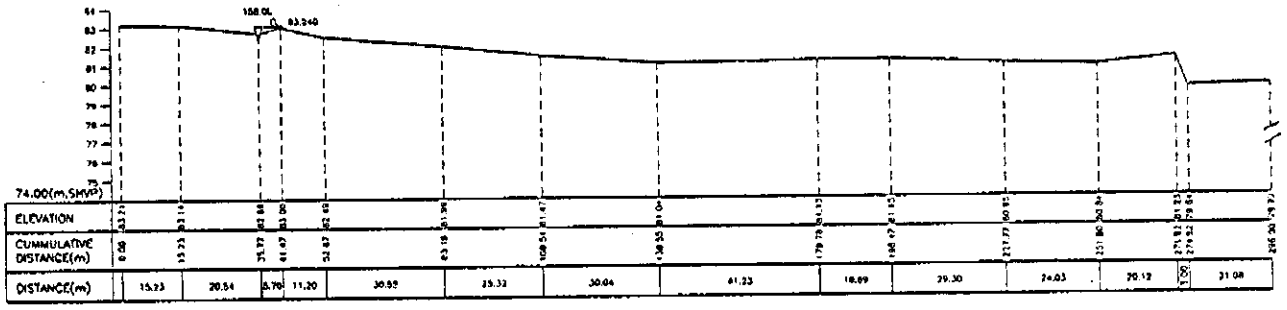
THE STUDY ON COMPREHENSIVE MANAGEMENT PLAN FOR THE WATER RESOURCES OF THE BRANTAS RIVER BASIN

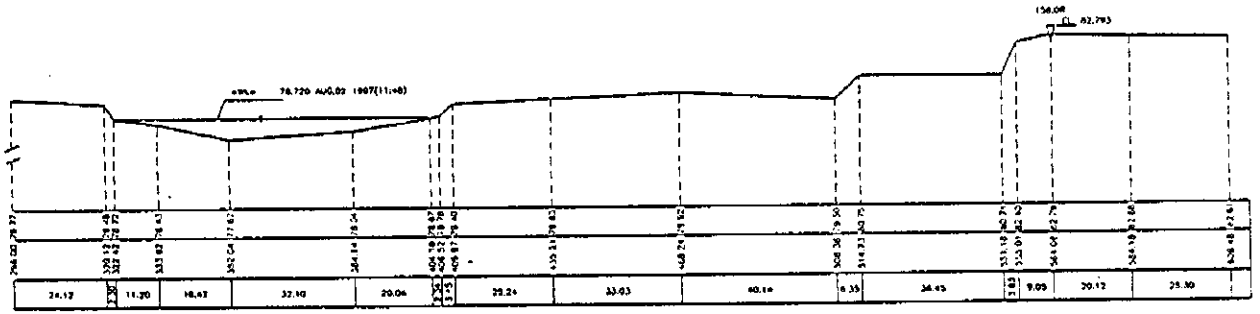
NAME OF RIVER	TYPE OF DRAWING	CROSS SECTION
BRANTAS RIVER	LOCATION	NGROWO
SURVEY DATE	SCALE	SHEET NO.
AUGUST, 1997	V:1/100 H:1/500	3/3

JICA JAPAN INTERNATIONAL COOPERATION AGENCY

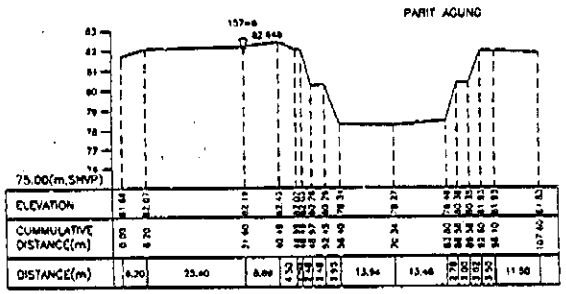
PT. HYDRA KARYA Consultants Engineers


THE STUDY ON COMPREHENSIVE MANAGEMENT PLAN FOR THE WATER RESOURCES OF THE BRANTAS RIVER BASIN
NAME OF RIVER
BRANTAS RIVER
TITLE OF DRAWING
CROSS SECTION
LOCATION
NGROWO
SURVEY DATE
SCALE
SHEET NO.
4/6
JICA
PT. INDRA KARYA





PARIT AGUNG



THE STUDY OR COMPREHENSIVE MANAGEMENT PLAN FOR THE WATER RESOURCES OF THE BRANTAS RIVER BASIN		
NAME OF RIVER	TITLE OF DRAWING	CROSS SECTION
BRANTAS RIVER	LOCATION	NGROWO
SURVEY DATE	SCALE	SHEET NO.
AUGST. 1997	H:1:00 H:1:500	9/9
JICA JAPAN INTERNATIONAL COOPERATION AGENCY	PT. INDRA KARYA Consulting Engineers	