Table 53 EIRR OF SOURCE FACILITIES

	High		Low	
	B-C (M10^6)	IRR (%)	B-C (M10^6)	IRR (%)
Jeniang/Naok	186.1	12.2	226.1	12.9
Beris	39.2	14.4	33.0	13.5
Tawar-Muda	31.3	11.5	7.2	9.0
Sari	-5.6	7.1	-6.1	7.0
Badak-Temin	-31.1	4.5	-32.9	4.2
Durian	-30.6	3.7	-32.2	3.5
Rui	11.5	8.5	-65.7	4.9
Ma	-4.9	7.4	-6.9	7.1
Khlong Thepha	61.9	14.5	57.7	13.9
Reman	139.2	19.7	107.3	17.8
Merbok	43.6	12.0	-24.9	4.1

Remarks; B-C at 8% of discount rate

Table 54 ESTIMATE OF NET IRRIGATION BENEFIT

Unit: $M\$10^6$

Year	Irrigation Net Incremental Production Value				Irrigation Cost				Net Irrigation Benefit			
	Kedah			Muda	Kedah			Muda	Kedah			Muda
	Tributary Minor	MADA Main	MADA Minor	Tributary Minor	Tributary Minor	MADA Main	MADA Minor	Tributary Minor	Tributary Minor	MADA Main	MADA Minor	Tributary Minor
1983	0.00	0.00	0.00	1.42	1.83	35.10	1.43	1.20	-1.83	-35.10	-1.43	0.22
1984	0.81	2.00	0.00	2.49	1.32	33.70	3.88	1.94	-0.51	-31.70	-3.88	0.55
1985	1.02	4.70	0.56	3.92	0.37	31.50	6.67	2.64	0.65	-26.80	-6.11	1.28
1986	1.24	8.80	1.47	4.99	0.43	29.90	5.46	2.95	0.81	-21.10	-3.99	2.04
1987	1.40	11.10	2.71	5.63	0.59	30.50	2.84	2.73	0.81	-19.40	-0.13	2.90
1988	1.44	13.30	3.33	6.09	0.80	31.00	0.45	2.38	0.64	-17.70	2.88	3.71
1989	1.49	15.60	3.77	6.41	1.51	35.10	2.31	1.94	-0.02	-19.50	1.46	4.47
1990	1.54	43.70	4.07	7.03	2.05	40.60	2.98	1.95	-0.51	3.10	1.09	5.08
1991	2.22	54.90	8.74	7.69	2.09	45.20	2.47	2.06	0.13	9.70	6.27	5.63
1992	2.66	67.70	9.13	8.23	1.36	46.30	0.62	2.05	1.30	21.40	8.51	6.18
1993	3.16	81.60	9.60	8.55	1.00	47.30	0.41	1.93	2.16	34.30	9.19	6.62
1994	3.66	89.30	9.91	9.09	1.09	49.50	0.67	2.01	2.57	39.80	9.24	7.08
1995	4.04	96.80	9.95	9.60	1.16	52.70	0.77	2.08	2.88	44.10	9.18	7.52
1996	4.33	104.60	10.12	10.46	0.92	55.30	0.68	2.42	3.41	49.30	9.44	8.04
1997	4.68	112.80	10.16	11.34	0.56	56.40	0.42	2.79	4.12	56.40	9.74	8.55
1998	4.80	121.20	10.21	12.27	0.47	57.30	0.42	3.05	4.33	63.90	9.79	9.22
1999	5.01	130.10	10.24	12.08	0.36	44.40	0.42	2.25	4.65	85.70	9.82	9.83
2000	5.23	139.70	10.24	11.79	0.28	26.80	0.42	1.29	4.95	112.90	9.82	10.50
2001	5.31	145.40	10.24	11.40	0.23	13.00	0.42	0.54	5.08	132.40	9.82	10.86
2002	5.36	147.70	10.24	11.67	0.23	13.00	0.42	0.54	5.13	134.70	9.82	11.13
2003	5.38	149.10	10.24	11.87	0.23	13.00	0.42	0.54	5.15	136.10	9.82	11.33
⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮
2031	5.38	149.10	10.24	11.87	0.23	13.00	0.42	0.54	5.15	136.10	9.82	11.33
2032	5.38	149.10	10.24	11.87	0.23	13.00	0.42	0.54	5.15	136.10	9.82	11.33
NPV (6%)									38.07	749.44	80.33	105.41
NPV (8%)									24.26	423.91	51.15	72.63
NPV (10%)									15.99	236.62	33.23	52.40
NPV (12%)									10.81	124.90	21.72	39.29
NPV (14%)									7.45	56.22	14.07	30.43
NPV (16%)									5.19	13.02	8.82	25.45
NPV (18%)									3.62	-14.62	5.13	19.61
NPV (20%)									2.51	-32.46	2.50	16.22

Remarks: In 1982 constant price

Table 55 COST AND BENEFIT CASH FLOW AND NET PRESENT WORTH OF JENIANG SYSTEM, HIGH GROWTH CASE

YEAR	NET WATAR OUTPUT FOR IRRIGATION		PROPORTION OF WATER OUTPUT TO DEFICIT		BENEFIT IN KEDAH			TOTAL BENEFIT	JENIANG COST
					IRRIGATION		D&I WATER SUPPLY		
	MADA MAIN (10^6 m^3) (a)	MADA MINOR (10^6 m^3) (b)	MADA MAIN (%) (c)	MADA MINOR (%) (d)	MADA MAIN (M10^6) (e)	MADA MINOR (M10^6) (f)	(M10^6) (g)	(M10^6) (h)	(M10^6) (i)
1983	0.00	0.00	0.00	0.00	-35.10	-1.43	0.00	-36.53	0.00
1984	0.00	0.00	0.00	0.00	-31.70	-3.88	0.00	-35.58	0.00
1985	0.00	0.00	0.00	0.00	-26.80	-6.11	0.00	-32.91	0.00
1986	0.00	0.00	0.00	0.00	-21.10	-3.99	0.00	-25.09	1.73
1987	0.00	0.00	0.00	0.00	-19.40	-0.13	0.00	-19.53	22.88
1988	0.00	0.00	0.00	0.00	-17.70	2.88	0.00	-14.82	20.42
1989	0.00	0.00	0.00	0.00	-19.50	1.46	0.00	-18.04	15.10
1990	193.20	21.80	63.97	64.12	1.98	0.70	0.00	2.68	0.67
1991	189.48	22.57	63.41	63.22	6.15	3.96	0.22	10.33	0.64
1992	185.76	23.34	62.84	62.41	13.45	5.31	0.43	19.19	0.64
1993	182.04	24.11	62.26	61.66	21.35	5.67	0.65	27.67	0.64
1994	178.32	24.88	61.66	60.98	24.54	5.63	0.86	31.04	0.66
1995	174.60	25.65	61.05	60.35	26.92	5.54	1.08	33.54	0.65
1996	170.88	26.42	60.42	59.77	29.79	5.64	1.29	36.72	0.65
1997	167.16	27.19	59.79	59.24	33.72	5.77	1.51	40.99	0.65
1998	163.44	27.96	59.13	58.74	37.79	5.75	1.72	45.26	0.69
1999	159.72	28.73	58.46	58.28	50.10	5.72	1.94	57.76	0.67
2000	156.00	29.50	57.78	57.84	65.23	5.68	2.15	73.06	0.66
2001	156.00	29.50	57.78	57.84	76.50	5.68	2.15	84.33	0.66
2002	156.00	29.50	57.78	57.84	77.83	5.68	2.15	85.66	0.66
2003	156.00	29.50	57.78	57.84	78.64	5.68	2.15	86.47	0.66
2010	156.00	29.50	57.78	57.84	78.64	5.68	2.15	86.47	0.66
2011	156.00	29.50	57.78	57.84	78.64	5.68	2.15	86.47	0.67
2031	156.00	29.50	57.78	57.84	78.64	5.68	2.15	86.47	0.67
2032	156.00	29.50	57.78	57.84	78.64	5.68	2.15	86.47	0.66
				NPV(6%)	378.61	43.25	15.59	437.45	49.61
				NPV(8%)	193.00	26.31	9.95	229.27	43.14
				NPV(10%)	87.17	15.92	6.60	109.69	37.98
				NPV(12%)	24.88	9.27	4.52	38.66	33.71
				NPV(14%)	-12.66	4.87	3.18	-4.62	30.11
				NPV(16%)	-35.62	1.87	2.29	-31.46	27.02
				NPV(18%)	-49.70	-0.20	1.68	-48.23	24.34

B-C (8%) = 186.13
(10%) = 71.71
(12%) = 4.95
(14%) = -34.73

IRR = 12.2%

Table 56 COST AND BENEFIT CASH FLOW AND NET PRESENT WORTH OF JENIANG SYSTEM, LOW GROWTH CASE

	NET WATAR OUTPUT FOR IRRIGATION		PROPORTION OF WATER OUTPUT TO DEFICIT		BENEFIT IN KEDAH			TOTAL BENEFIT	JENIANG COST
					IRRIGATION		D&I WATER SUPPLY		
YEAR	MADA MAIN ($M\$10^6$)	MADA MINOR ($M\$10^6$)	MADA MAIN (%)	MADA MINOR (%)	MADA MAIN ($M\$10^6$)	MADA MINOR ($M\$10^6$)	($M\$10^6$)	($M\$10^6$)	($M\$10^6$)
1983	0.00	0.00	0.00	0.00	-35.10	-1.43	0.00	-36.53	0.00
1984	0.00	0.00	0.00	0.00	-31.70	-3.88	0.00	-35.58	0.00
1985	0.00	0.00	0.00	0.00	-26.80	-6.11	0.00	-32.91	0.00
1986	0.00	0.00	0.00	0.00	-21.10	-3.99	0.00	-25.09	1.73
1987	0.00	0.00	0.00	0.00	-19.40	-0.13	0.00	-19.53	22.88
1988	0.00	0.00	0.00	0.00	-17.70	2.88	0.00	-14.82	20.42
1989	0.00	0.00	0.00	0.00	-19.50	1.46	0.00	-18.04	15.10
1990	197.40	17.60	65.36	65.19	2.03	0.71	0.00	2.74	0.67
1991	195.68	19.25	65.49	65.48	6.35	4.11	0.01	10.47	0.64
1992	193.96	20.90	65.62	65.72	14.04	5.59	0.02	19.65	0.64
1993	192.24	22.55	65.75	65.94	22.55	6.06	0.03	28.64	0.64
1994	190.52	24.20	65.88	66.12	26.22	6.11	0.03	32.36	0.66
1995	188.80	25.85	66.01	66.28	29.11	6.08	0.04	35.24	0.65
1996	187.08	27.50	66.15	66.43	32.61	6.27	0.05	38.93	0.65
1997	185.36	29.15	66.29	66.55	37.39	6.48	0.06	43.93	0.65
1998	183.64	30.80	66.44	66.67	42.46	6.53	0.07	49.05	0.69
1999	181.92	32.45	66.59	66.77	57.07	6.56	0.08	63.70	0.67
2000	180.20	34.10	66.74	66.86	75.35	6.57	0.08	82.00	0.66
2001	180.20	34.10	66.74	66.86	88.36	6.57	0.08	95.01	0.66
2002	180.20	34.10	66.74	66.86	89.90	6.57	0.08	96.55	0.66
2003	180.20	34.10	66.74	66.86	90.83	6.57	0.08	97.48	0.66
2010	180.20	34.10	66.74	66.86	90.83	6.57	0.08	97.48	0.66
2011	180.20	34.10	66.74	66.86	90.83	6.57	0.08	97.48	0.67
2031	180.20	34.10	66.74	66.86	90.83	6.57	0.08	97.48	0.67
2032	180.20	34.10	66.74	66.86	90.83	6.57	0.08	97.48	0.66
				NPV(6%)	452.37	50.07	0.61	503.05	49.61
				NPV(8%)	238.09	30.72	0.39	269.20	43.14
				NPV(10%)	115.76	18.89	0.26	134.90	37.98
				NPV(12%)	43.59	11.33	0.18	55.10	33.71
				NPV(14%)	-0.07	6.34	0.12	6.39	30.11
				NPV(16%)	-26.94	2.95	0.09	-23.91	27.02
				NPV(18%)	-43.60	0.60	0.07	-42.94	24.34

B-C (8%) = 226.06
(10%) = 96.92
(12%) = 21.39
(14%) = -23.72

IRR = 12.9%

Table 57 COST AND BENEFIT CASH FLOW AND NET PRESENT WORTH OF BERIS DAM, HIGH GROWTH CASE

YEAR	NET WATAR OUTPUT FOR IRRIGATION		PROPORTION OF WATER OUTPUT TO DEFICIT		BENEFIT IN KEDAH				NET WATER OUTPUT FOR IRRIGATION	PROPORTION TO DEFICIT	BENEFIT IN MUDA		TOTAL BENEFIT	BERIS COST
					IRRIGATION			D&I WATER SUPPLY			IRRIGATION	D&I WATER SUPPLY		
	MADA MAIN (10^6 m^3) (a)	MADA MINOR (10^6 m^3) (b)	MADA MAIN (%) (c)	MADA MINOR (%) (d)	MADA MAIN (M$10^6) (e)	MADA TRIBUTARY MINOR (M$10^6) (f)	MINOR (M$10^6) (g)	(M$10^6) (h)	MINOR (10^6 m^3) (i)	MINOR (%) (j)	MINOR (M$10^6) (k)	(M$10^6) (l)	(M$10^6) (m)	(M$10^6) (n)
1983	0.00	0.00	0.00	0.00	0.00	0.00	-1.83	0.00	0.00	0.00	0.00	0.00	-1.83	0.00
1984	0.00	0.00	0.00	0.00	0.00	0.00	-0.51	0.00	0.00	0.00	0.00	0.00	-0.51	0.00
1985	0.00	0.00	0.00	0.00	0.00	0.00	0.65	0.00	0.00	0.00	0.00	0.00	0.65	3.62
1986	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00	0.00	0.81	5.85
1987	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00	0.00	0.81	11.98
1988	0.00	0.00	0.00	0.00	0.00	0.00	0.64	0.00	0.00	0.00	0.00	0.00	0.64	11.98
1989	0.00	0.00	0.00	0.00	0.00	0.00	-0.02	0.00	0.00	0.00	0.00	0.00	-0.02	10.12
1990	0.00	0.00	0.00	0.00	0.00	0.00	-0.51	0.00	0.00	0.00	0.00	0.00	-0.51	1.00
1991	35.39	4.08	11.84	11.43	1.15	0.72	0.13	0.03	4.64	1.65	0.41	0.63	3.07	1.00
1992	32.18	3.76	10.89	10.05	2.33	0.86	1.30	0.06	4.78	1.70	0.43	1.12	6.10	1.00
1993	28.97	3.44	9.91	8.80	3.40	0.81	2.16	0.09	4.92	1.74	0.46	1.61	8.53	1.00
1994	25.76	3.12	8.91	7.65	3.55	0.71	2.57	0.12	5.06	1.79	0.48	2.10	9.52	1.00
1995	22.55	2.80	7.88	6.59	3.48	0.60	2.88	0.15	5.20	1.84	0.49	2.60	10.20	1.00
1996	19.34	2.48	6.84	5.61	3.37	0.53	3.41	0.18	5.34	1.89	0.50	3.09	11.08	1.00
1997	16.13	2.16	5.77	4.71	3.25	0.46	4.12	0.21	5.48	1.94	0.52	3.58	12.13	1.00
1998	12.92	1.84	4.67	3.87	2.99	0.38	4.33	0.24	5.62	1.99	0.53	4.07	12.53	1.00
1999	9.71	1.52	3.55	3.08	3.05	0.30	4.65	0.27	5.76	2.04	0.54	4.56	13.37	1.00
2000	6.50	1.20	2.41	2.35	2.72	0.23	4.95	0.30	5.90	2.09	0.56	5.05	13.80	1.00
2001	6.50	1.20	2.41	2.35	3.19	0.23	5.08	0.30	5.90	2.09	0.56	5.05	14.40	1.00
2002	6.50	1.20	2.41	2.35	3.24	0.23	5.13	0.30	5.90	2.09	0.56	5.05	14.51	1.00
2003	6.50	1.20	2.41	2.35	3.28	0.23	5.15	0.30	5.90	2.09	0.56	5.05	14.56	1.00
2010	6.50	1.20	2.41	2.35	3.28	0.23	5.15	0.30	5.90	2.09	0.56	5.05	14.56	1.84
2011	6.50	1.20	2.41	2.35	3.28	0.23	5.15	0.30	5.90	2.09	0.56	5.05	14.56	1.00
2031	6.50	1.20	2.41	2.35	3.28	0.23	5.15	0.30	5.90	2.09	0.56	5.05	14.56	1.00
2032	6.50	1.20	2.41	2.35	3.28	0.23	5.15	0.30	5.90	2.09	0.56	5.05	14.56	1.00
			NPV(6%)		29.40	3.87	38.07	2.16	53.14		4.97	36.95	115.44	42.14
			NPV(8%)		19.69	2.84	24.26	1.39	35.67		3.33	23.63	75.14	35.91
			NPV(10%)		13.72	2.15	15.99	0.92	24.90		2.33	15.70	50.80	31.21
			NPV(12%)		9.86	1.66	10.81	0.63	17.96		1.67	10.78	35.42	27.52
			NPV(14%)		7.27	1.30	7.45	0.44	13.29		1.24	7.61	25.31	24.50
			NPV(16%)		5.48	1.06	5.19	0.32	10.05		0.93	5.50	18.45	21.97
			NPV(18%)		4.20	0.84	3.62	0.23	7.74		0.72	4.05	13.65	19.82

B-C (8%) = 39.23
(10%) = 19.59
(12%) = 7.90
(14%) = 0.81
(16%) = -3.52

IRR = 14.4%

Table 58 COST AND BENEFIT CASH FLOW AND NET PRESENT WORTH OF BERIS DAM, LOW GROWTH CASE

YEAR	NET WATAR OUTPUT FOR IRRIGATION		PROPORTION OF WATER OUTPUT TO DEFICIT		BENEFIT IN KEDAH				NET WATER OUTPUT FOR IRRIGATION	PROPORTION TO DEFICIT	BENEFIT IN MUDA		TOTAL BENEFIT	BERIS COST
					IRRIGATION			D&I WATER SUPPLY			IRRIGATION	D&I WATER SUPPLY		
	MADA MAIN (M10^6$)	MADA MINOR (M10^6$)	MADA MAIN (%)	MADA MINOR (%)	MADA MAIN (M10^6$)	MADA MINOR & TRIBUTARY MINOR (M10^6$)		(M10^6$)	MINOR (M10^6$)	MINOR (%)	MINOR (M10^6$)	(M10^6$)	(M10^6$)	(M10^6$)
1983	0.00	0.00	0.00	0.00	0.00	0.00	-1.83	0.00	0.00	0.00	0.00	0.00	-1.83	0.00
1984	0.00	0.00	0.00	0.00	0.00	0.00	-0.51	0.00	0.00	0.00	0.00	0.00	-0.51	0.00
1985	0.00	0.00	0.00	0.00	0.00	0.00	0.65	0.00	0.00	0.00	0.00	0.00	0.65	3.62
1986	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00	0.00	0.81	5.85
1987	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00	0.00	0.81	11.98
1988	0.00	0.00	0.00	0.00	0.00	0.00	0.64	0.00	0.00	0.00	0.00	0.00	0.64	11.98
1989	0.00	0.00	0.00	0.00	0.00	0.00	-0.02	0.00	0.00	0.00	0.00	0.00	-0.02	10.12
1990	0.00	0.00	0.00	0.00	0.00	0.00	-0.51	0.00	0.00	0.00	0.00	0.00	-0.51	1.00
1991	37.62	3.48	12.59	11.84	1.22	0.74	0.13	0.00	4.18	1.48	0.37	0.14	2.60	1.00
1992	34.84	3.36	11.79	10.57	2.52	0.90	1.30	0.00	4.36	1.55	0.40	0.28	5.39	1.00
1993	32.06	3.24	10.96	9.47	3.76	0.87	2.16	0.00	4.54	1.61	0.42	0.41	7.63	1.00
1994	29.28	3.12	10.12	8.52	4.03	0.79	2.57	0.00	4.72	1.67	0.44	0.55	8.38	1.00
1995	26.50	3.00	9.27	7.69	4.09	0.71	2.88	0.00	4.90	1.74	0.46	0.69	8.82	1.00
1996	23.72	2.88	8.39	6.96	4.14	0.66	3.41	0.00	5.08	1.80	0.48	0.83	9.51	1.00
1997	20.94	2.76	7.49	6.30	4.22	0.61	4.12	0.00	5.26	1.87	0.50	0.97	10.42	1.00
1998	18.16	2.64	6.57	5.71	4.20	0.56	4.33	0.00	5.44	1.93	0.51	1.10	10.70	1.00
1999	15.38	2.52	5.63	5.19	4.82	0.51	4.65	0.00	5.62	1.99	0.53	1.24	11.75	1.00
2000	12.60	2.40	4.67	4.71	5.27	0.46	4.95	0.00	5.80	2.06	0.55	1.38	12.61	1.00
2001	12.60	2.40	4.67	4.71	6.18	0.46	5.08	0.00	5.80	2.06	0.55	1.38	13.65	1.00
2002	12.60	2.40	4.67	4.71	6.29	0.46	5.13	0.00	5.80	2.06	0.55	1.38	13.80	1.00
2003	12.60	2.40	4.67	4.71	6.35	0.46	5.15	0.00	5.80	2.06	0.55	1.38	13.89	1.00
2010	12.60	2.40	4.67	4.71	6.35	0.46	5.15	0.00	5.80	2.06	0.55	1.38	13.89	1.84
2011	12.60	2.40	4.67	4.71	6.35	0.46	5.15	0.00	5.80	2.06	0.55	1.38	13.89	1.00
2031	12.60	2.40	4.67	4.71	6.35	0.46	5.15	0.00	5.80	2.06	0.55	1.38	13.89	1.00
2032	12.60	2.40	4.67	4.71	6.35	0.46	5.15	0.00	5.80	2.06	0.55	1.38	13.89	1.00
				NPV(6%)	48.17	5.52	38.07	0.00	51.26		4.80	10.01	106.38	42.14
				NPV(8%)	31.20	3.89	24.26	0.00	34.28		3.21	6.39	68.94	35.91
				NPV(10%)	21.04	2.86	15.99	0.00	23.84		2.23	4.23	46.32	31.21
				NPV(12%)	14.67	2.13	10.81	0.00	17.13		1.60	2.90	32.11	27.52
				NPV(14%)	10.32	1.63	7.45	0.00	12.64		1.18	2.04	22.82	24.50
				NPV(16%)	7.72	1.28	5.19	0.00	9.53		0.89	1.47	16.54	21.97
				NPV(18%)	5.78	1.01	3.62	0.00	7.31		0.68	1.08	12.17	19.82

B-C (8%) = 33.03
(10%) = 15.11
(12%) = 4.59
(14%) = -1.68
(16%) = -5.43

IRR = 13.5%

Table 59 COST AND BENEFIT CASH FLOW AND NET PRESENT WORTH OF TAWAR-MUDA DAM, HIGH GROWTH CASE

	NET WATAR OUTPUT FOR IRRIGATION		PROPORTION OF WATER OUTPUT TO DEFICIT		BENEFIT IN KEDAH			NET WATER OUTPUT FOR IRRIGATION	PROPOR-TION TO DEMAND	BENEFIT IN MUDA		TOTAL BENEFIT	TAWAR-MUDA COST
					IRRIGATION		D&I WATER SUPPLY			IRRIGA-TION	D&I WATER SUPPLY		
YEAR	MADA MAIN (M10^6$)	MADA MINOR (M10^6$)	MADA MAIN (%)	MADA MINOR (%)	MADA MAIN (M10^6$)	MADA MINOR (M10^6$)	(M10^6$)	MINOR (M10^6$)	MINOR (%)	MINOR (M10^6$)	(M10^6$)	(M10^6$)	(M10^6$)
1983	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1984	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1985	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1986	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.82
1987	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.47
1988	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	21.14
1989	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	26.95
1990	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24.93
1991	25.90	3.00	8.64	8.53	0.84	0.53	0.09	2.91	1.03	0.26	0.96	2.68	1.05
1992	24.80	3.00	8.34	8.23	1.78	0.70	0.18	2.82	1.00	0.26	1.92	4.85	1.05
1993	23.70	3.00	8.04	7.94	2.76	0.73	0.28	2.73	0.97	0.25	2.88	6.90	1.05
1994	22.60	3.00	7.74	7.64	3.08	0.71	0.37	2.64	0.94	0.25	3.84	8.25	1.05
1995	21.50	3.00	7.44	7.35	3.28	0.67	0.46	2.55	0.90	0.24	4.81	9.46	1.05
1996	20.40	3.00	7.13	7.06	3.52	0.67	0.55	2.46	0.87	0.23	5.77	10.73	1.05
1997	19.30	3.00	6.83	6.76	3.85	0.66	0.64	2.37	0.84	0.22	6.73	12.11	1.05
1998	18.20	3.00	6.53	6.47	4.17	0.63	0.74	2.28	0.81	0.21	7.69	13.45	1.05
1999	17.10	3.00	6.23	6.17	5.34	0.61	0.83	2.19	0.78	0.21	8.65	15.63	1.05
2000	16.00	3.00	5.93	5.88	6.69	0.58	0.92	2.10	0.74	0.20	9.61	18.00	1.05
2001	16.00	3.00	5.93	5.88	7.85	0.58	0.92	2.10	0.74	0.20	9.61	19.16	1.05
2002	16.00	3.00	5.93	5.88	7.99	0.58	0.92	2.10	0.74	0.20	9.61	19.29	1.05
2003	16.00	3.00	5.93	5.88	8.07	0.58	0.92	2.10	0.74	0.20	9.61	19.38	1.05
2010	16.00	3.00	5.93	5.88	8.07	0.58	0.92	2.10	0.74	0.20	9.61	19.38	2.46
2011	16.00	3.00	5.93	5.88	8.07	0.58	0.92	2.10	0.74	0.20	9.61	19.38	1.05
2031	16.00	3.00	5.93	5.88	8.07	0.58	0.92	2.10	0.74	0.20	9.61	19.38	1.05
2032	16.00	3.00	5.93	5.88	8.07	0.58	0.92	2.10	0.74	0.20	9.61	19.38	1.05
				NPV(6%)	54.87	5.85	6.67	22.13		2.07	69.72	139.18	67.47
				NPV(8%)	34.63	4.01	4.26	15.30		1.43	44.48	88.81	57.49
				NPV(10%)	22.74	2.86	2.82	10.98		1.02	29.49	58.93	49.67
				NPV(12%)	15.44	2.10	1.93	8.12		0.75	20.20	40.42	43.34
				NPV(14%)	10.80	1.58	1.36	6.15		0.57	14.21	28.52	38.08
				NPV(16%)	7.73	1.21	0.98	4.75		0.44	10.24	20.60	33.66
				NPV(18%)	5.66	0.94	0.72	3.73		0.34	7.52	15.19	29.88

B-C (8%) = 31.32
(10%) = 9.26
(12%) = -2.92
(14%) = -9.56

IRR = 11.5%

Table 60 COST AND BENEFIT CASH FLOW AND NET PRESENT WORTH OF TAWAR-MUDA DAM, LOW GROWTH CASE

YEAR	NET WATAR OUTPUT FOR IRRIGATION		PROPORTION OF WATER OUTPUT TO DEFICIT		BENEFIT IN KEDAH			NET WATER OUTPUT OF IRRIGATION	PROPORTION TO DEFICIT	BENEFIT IN MUDA		TOTAL BENEFIT	TAWAR-MUDA COST
					IRRIGATION		D&I WATER SUPPLY			IRRIGATION	D&I WATER SUPPLY		
	MADA MAIN (M10^6$)	MADA MINOR (M10^6$)	MADA MAIN (%)	MADA MINOR (%)	MADA MAIN (M10^6$)	MADA MINOR (M10^6$)	(M10^6$)	MINOR (M10^6$)	MINOR (%)	MINOR (M10^6$)	(M10^6$)	(M10^6$)	(M10^6$)
1983	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1984	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1985	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1986	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.82
1987	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.47
1988	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	21.14
1989	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	26.95
1990	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24.93
1991	28.16	2.73	9.42	9.29	0.91	0.58	0.01	1.98	0.70	0.18	0.13	1.81	1.05
1992	27.82	2.96	9.41	9.31	2.01	0.79	0.01	1.96	0.70	0.18	0.26	3.25	1.05
1993	27.48	3.19	9.40	9.33	3.22	0.86	0.02	1.94	0.69	0.18	0.39	4.67	1.05
1994	27.14	3.42	9.38	9.34	3.74	0.86	0.02	1.92	0.68	0.18	0.52	5.32	1.05
1995	26.80	3.65	9.37	9.36	4.13	0.86	0.03	1.90	0.67	0.18	0.65	5.85	1.05
1996	26.46	3.88	9.36	9.37	4.61	0.88	0.03	1.88	0.67	0.18	0.78	6.49	1.05
1997	26.12	4.11	9.34	9.38	5.27	0.91	0.04	1.86	0.66	0.18	0.91	7.30	1.05
1998	25.78	4.34	9.33	9.39	5.96	0.92	0.04	1.84	0.65	0.17	1.04	8.13	1.05
1999	25.44	4.57	9.31	9.40	7.98	0.92	0.05	1.82	0.65	0.17	1.17	10.29	1.05
2000	25.10	4.80	9.30	9.41	10.50	0.92	0.05	1.80	0.64	0.17	1.30	12.94	1.05
2001	25.10	4.80	9.30	9.41	12.31	0.92	0.05	1.80	0.64	0.17	1.30	14.75	1.05
2002	25.10	4.80	9.30	9.41	12.52	0.92	0.05	1.80	0.64	0.17	1.30	14.97	1.05
2003	25.10	4.80	9.30	9.41	12.65	0.92	0.05	1.80	0.64	0.17	1.30	15.10	1.05
2010	25.10	4.80	9.30	9.41	12.65	0.92	0.05	1.80	0.64	0.17	1.30	15.10	2.46
2011	25.10	4.80	9.30	9.41	12.65	0.92	0.05	1.80	0.64	0.17	1.30	15.10	1.05
2031	25.10	4.80	9.30	9.41	12.65	0.92	0.05	1.80	0.64	0.17	1.30	15.10	1.05
2032	25.10	4.80	9.30	9.41	12.65	0.92	0.05	1.80	0.64	0.17	1.30	15.10	1.05
				NPV(6%)	82.66	8.43	0.37	17.65		1.65	9.43	102.54	67.47
				NPV(8%)	51.63	5.67	0.24	12.05		1.12	6.02	64.67	57.49
				NPV(10%)	33.52	3.96	0.16	8.55		0.80	3.99	42.43	49.67
				NPV(12%)	22.51	2.86	0.11	6.25		0.58	2.73	28.79	43.34
				NPV(14%)	15.55	2.12	0.08	4.69		0.44	1.92	20.10	38.08
				NPV(16%)	11.02	1.60	0.05	3.59		0.33	1.38	14.39	33.66
				NPV(18%)	7.97	1.23	0.04	2.80		0.26	1.02	10.52	29.88

B-C (6%) = 35.07
(8%) = 7.18
(10%) = -7.24
(12%) = -14.55

IRR = 9.0%

Table 61 COST AND BENEFIT CASH FLOW AND NET PRESENT WORTH OF SARI DAM, HIGH GROWTH CASE

YEAR	NET WATAR OUTPUT FOR IRRIGATION		PROPORTION OF WATER OUTPUT TO DEFICIT		BENEFIT IN KEDAH			TOTAL BENEFIT	SARI COST
					IRRIGATION		D&I WATER SUPPLY		
	MADA MAIN (M10^6$)	MADA MINOR (M10^6$)	MADA MAIN (%)	MADA MINOR (%)	MADA MAIN (M10^6$)	MADA MINOR (M10^6$)	(M10^6$)	(M10^6$)	(M10^6$)
1983	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1984	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1985	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1986	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.97
1987	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.74
1988	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.92
1989	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.35
1990	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.13
1991	15.01	1.76	5.02	4.93	0.49	0.31	0.10	0.90	1.10
1992	14.72	1.82	4.98	4.87	1.07	0.41	0.20	1.68	1.10
1993	14.43	1.88	4.94	4.81	1.69	0.44	0.30	2.44	1.10
1994	14.14	1.94	4.89	4.75	1.95	0.44	0.40	2.79	1.10
1995	13.85	2.00	4.84	4.71	2.14	0.43	0.50	3.07	1.10
1996	13.56	2.06	4.79	4.66	2.36	0.44	0.60	3.41	1.10
1997	13.27	2.12	4.75	4.62	2.68	0.45	0.71	3.83	1.10
1998	12.98	2.18	4.70	4.58	3.00	0.45	0.81	4.26	1.10
1999	12.69	2.24	4.64	4.54	3.98	0.45	0.91	5.33	1.10
2000	12.40	2.30	4.59	4.51	5.19	0.44	1.01	6.64	1.10
2001	12.40	2.30	4.59	4.51	6.08	0.44	1.01	7.53	1.10
2002	12.40	2.30	4.59	4.51	6.19	0.44	1.01	7.64	1.10
2003	12.40	2.30	4.59	4.51	6.25	0.44	1.01	7.70	1.10
2010	12.40	2.30	4.59	4.51	6.25	0.44	1.01	7.70	1.64
2011	12.40	2.30	4.59	4.51	6.25	0.44	1.01	7.70	1.10
2031	12.40	2.30	4.59	4.51	6.25	0.44	1.01	7.70	1.10
2032	12.40	2.30	4.59	4.51	6.25	0.44	1.01	7.70	1.10
			NPV(6%)		41.15	4.13	7.31	52.59	46.08
			NPV(8%)		25.75	2.79	4.66	33.21	38.77
			NPV(10%)		16.76	1.96	3.09	21.81	33.25
			NPV(12%)		11.28	1.42	2.12	14.81	28.91
			NPV(14%)		7.81	1.05	1.49	10.36	25.37
			NPV(16%)		5.54	0.80	1.07	7.42	22.43
			NPV(18%)		4.02	0.62	0.79	5.43	19.95

B-C (6%) = 6.51
(8%) = -5.56
(10%) = -11.44
(12%) = -14.10

IRR = 7.1%

Table 62 COST AND BENEFIT CASH FLOW AND NET PRESENT WORTH OF SARI DAM, LOW GROWTH CASE

	NET WATAR OUTPUT FOR IRRIGATION		PROPORTION OF WATER OUTPUT TO DEFICIT		BENEFIT IN KEDAH			TOTAL BENEFIT	SARI COST
					IRRIGATION		D&I WATER		
YEAR	MADA MAIN (M10^6$)	MADA MINOR (M10^6$)	MADA MAIN (%)	MADA MINOR (%)	MADA MAIN (M10^6$)	MADA MINOR (M10^6$)	SUPPLY (M10^6$)	(M10^6$)	(M10^6$)
1983	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1984	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1985	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1986	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.97
1987	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.74
1988	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.92
1989	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.35
1990	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.13
1991	15.46	1.53	5.17	5.20	0.50	0.33	0.01	0.84	1.10
1992	15.32	1.66	5.18	5.22	1.11	0.44	0.01	1.57	1.10
1993	15.18	1.79	5.19	5.23	1.78	0.48	0.02	2.28	1.10
1994	15.04	1.92	5.20	5.25	2.07	0.48	0.03	2.58	1.10
1995	14.90	2.05	5.21	5.26	2.30	0.48	0.04	2.82	1.10
1996	14.76	2.18	5.22	5.27	2.57	0.50	0.04	3.11	1.10
1997	14.62	2.31	5.23	5.27	2.95	0.51	0.05	3.51	1.10
1998	14.48	2.44	5.24	5.28	3.35	0.52	0.06	3.92	1.10
1999	14.34	2.57	5.25	5.29	4.50	0.52	0.06	5.08	1.10
2000	14.20	2.70	5.26	5.29	5.94	0.52	0.07	6.53	1.10
2001	14.20	2.70	5.26	5.29	6.96	0.52	0.07	7.56	1.10
2002	14.20	2.70	5.26	5.29	7.08	0.52	0.07	7.68	1.10
2003	14.20	2.70	5.26	5.29	7.16	0.52	0.07	7.75	1.10
2010	14.20	2.70	5.26	5.29	7.16	0.52	0.07	7.75	1.64
2011	14.20	2.70	5.26	5.29	7.16	0.52	0.07	7.75	1.10
2031	14.20	2.70	5.26	5.29	7.16	0.52	0.07	7.75	1.10
2032	14.20	2.70	5.26	5.29	7.16	0.52	0.07	7.75	1.10
				NPV(6%)	46.63	4.74	0.52	51.89	46.08
				NPV(8%)	29.10	3.19	0.33	32.62	38.77
				NPV(10%)	18.88	2.23	0.22	21.33	33.25
				NPV(12%)	12.67	1.61	0.15	14.42	28.91
				NPV(14%)	8.74	1.19	0.11	10.04	25.37
				NPV(16%)	6.19	0.90	0.08	7.16	22.43
				NPV(18%)	4.47	0.69	0.06	5.22	19.95

B-C (6%) = 5.81
(8%) = -6.15
(10%) = -11.92
(12%) = -14.49

IRR = 7.0%

Table 63 COST AND BENEFIT CASH FLOW AND NET PRESENT WORTH OF DURIAN DAM, HIGH GROWTH CASE

YEAR	NET WATAR OUTPUT FOR IRRIGATION		PROPORTION OF WATER OUTPUT TO DEFICIT		BENEFIT IN KEDAH			TOTAL BENEFIT	DURIAN COST
					IRRIGATION		D&I WATER SUPPLY		
	MADA MAIN ($M\$10^6$)	MADA MINOR ($M\$10^6$)	MADA MAIN (%)	MADA MINOR (%)	MADA MAIN ($M\$10^6$)	MADA MINOR ($M\$10^6$)	($M\$10^6$)	($M\$10^6$)	($M\$10^5$)
1983	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1984	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1985	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1986	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.25
1987	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.25
1988	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20.53
1989	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	30.34
1990	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25.88
1991	13.24	1.55	4.43	4.34	0.43	0.27	0.11	0.81	1.11
1992	12.98	1.60	4.39	4.28	0.94	0.36	0.22	1.53	1.11
1993	12.72	1.65	4.35	4.22	1.49	0.39	0.33	2.21	1.11
1994	12.46	1.70	4.31	4.17	1.71	0.38	0.44	2.54	1.11
1995	12.20	1.75	4.27	4.12	1.88	0.38	0.56	2.81	1.11
1996	11.94	1.80	4.22	4.07	2.08	0.38	0.67	3.13	1.11
1997	11.68	1.85	4.18	4.03	2.36	0.39	0.78	3.53	1.11
1998	11.42	1.90	4.13	3.99	2.64	0.39	0.89	3.92	1.11
1999	11.16	1.95	4.08	3.96	3.50	0.39	1.00	4.89	1.11
2000	10.90	2.00	4.04	3.92	4.56	0.39	1.11	6.05	1.11
2001	10.90	2.00	4.04	3.92	5.35	0.39	1.11	6.84	1.11
2002	10.90	2.00	4.04	3.92	5.44	0.39	1.11	6.93	1.11
2003	10.90	2.00	4.04	3.92	5.49	0.39	1.11	6.99	1.11
2010	10.90	2.00	4.04	3.92	5.49	0.39	1.11	6.99	2.51
2011	10.90	2.00	4.04	3.92	5.49	0.39	1.11	6.99	1.11
2031	10.90	2.00	4.04	3.92	5.49	0.39	1.11	6.99	1.11
2032	10.90	2.00	4.04	3.92	5.49	0.39	1.11	6.99	1.11
			NPV(2%)		106.22	9.18	22.78	138.18	105.72
			NPV(4%)		60.45	5.59	13.20	79.25	85.51
			NPV(6%)		36.18	3.60	8.05	47.84	71.39
			NPV(8%)		22.65	2.44	5.14	30.22	60.83
			NPV(10%)		14.74	1.71	3.41	19.85	52.56
			NPV(12%)		9.92	1.24	2.33	13.49	45.86
			NPV(14%)		6.87	0.92	1.64	9.43	40.30
			NPV(16%)		4.88	0.70	1.18	6.76	35.62
			NPV(18%)		3.54	0.54	0.87	4.95	31.62

B-C (2%) = 32.46
(4%) = -6.26
(6%) = -23.55
(8%) = -30.61

IRR = 3.7%

Table 64 COST AND BENEFIT CASH FLOW AND NET PRESENT WORTH OF DURIAN DAM, LOW GROWTH CASE

YEAR	NET WATAR OUTPUT FOR IRRIGATION		PROPORTION OF WATER OUTPUT TO DEFICIT		BENEFIT IN KEDAH			TOTAL BENEFIT	DURIAN COST
					IRRIGATION		D&I WATER SUPPLY		
	MADA MAIN (M10^6$)	MADA MINOR (M10^6$)	MADA MAIN (%)	MADA MINOR (%)	MADA MAIN (M10^6$)	MADA MINOR (M10^6$)	(M10^6$)	(M10^6$)	(M10^6$)
1983	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1984	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1985	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1986	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.25
1987	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.25
1988	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20.53
1989	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	30.34
1990	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25.88
1991	13.68	1.32	4.58	4.49	0.44	0.28	0.00	0.73	1.11
1992	13.56	1.44	4.59	4.53	0.98	0.39	0.00	1.37	1.11
1993	13.44	1.56	4.60	4.56	1.58	0.42	0.00	2.00	1.11
1994	13.32	1.68	4.61	4.59	1.83	0.42	0.00	2.26	1.11
1995	13.20	1.80	4.62	4.62	2.04	0.42	0.00	2.46	1.11
1996	13.08	1.92	4.63	4.64	2.28	0.44	0.00	2.72	1.11
1997	12.96	2.04	4.64	4.66	2.61	0.45	0.00	3.07	1.11
1998	12.84	2.16	4.65	4.68	2.97	0.46	0.00	3.43	1.11
1999	12.72	2.28	4.66	4.69	3.99	0.46	0.00	4.45	1.11
2000	12.60	2.40	4.67	4.71	5.27	0.46	0.00	5.73	1.11
2001	12.60	2.40	4.67	4.71	6.18	0.46	0.00	6.64	1.11
2002	12.60	2.40	4.67	4.71	6.29	0.46	0.00	6.75	1.11
2003	12.60	2.40	4.67	4.71	6.35	0.46	0.00	6.81	1.11
2010	12.60	2.40	4.67	4.71	6.35	0.46	0.00	6.81	2.51
2011	12.60	2.40	4.67	4.71	6.35	0.46	0.00	6.81	1.11
2031	12.60	2.40	4.67	4.71	6.35	0.46	0.00	6.81	1.11
2032	12.60	2.40	4.67	4.71	6.35	0.46	0.00	6.81	1.11
				NPV(2%)	122.04	10.80	0.00	132.83	105.72
				NPV(4%)	69.29	6.54	0.00	75.84	85.51
				NPV(6%)	41.36	4.19	0.00	45.55	71.39
				NPV(8%)	25.81	2.81	0.00	28.63	60.83
				NPV(10%)	16.75	1.96	0.00	18.71	52.56
				NPV(12%)	11.23	1.41	0.00	12.65	45.86
				NPV(14%)	7.76	1.05	0.00	8.80	40.30
				NPV(16%)	5.49	0.79	0.00	6.28	35.62
				NPV(18%)	3.97	0.61	0.00	4.57	31.62

B-C (2%) = 27.11
(4%) = -9.67
(6%) = -25.84
(8%) = -32.20

IRR = 3.5%

Table 65 COST AND BENEFIT CASH FLOW AND NET PRESENT WORTH OF BADAK-TEMIN DAM, HIGH GROWTH CASE

YEAR	NET WATAR OUTPUT FOR IRRIGATION		PROPORTION OF WATER OUTPUT TO DEFICIT		BENEFIT IN KEDAH			TOTAL BENEFIT	BADAK-TEMIN COST
					IRRIGATION		D&I WATER SUPPLY		
	MADA MAIN ($M\$10^6$)	MADA MINOR ($M\$10^6$)	MADA MAIN (%)	MADA MINOR (%)	MADA MAIN ($M\$10^6$)	MADA MINOR ($M\$10^6$)	($M\$10^6$)	($M\$10^6$)	($M\$10^6$)
1983	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1984	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1985	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1986	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.89
1987	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.45
1988	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	18.66
1989	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	39.32
1990	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	30.51
1991	19.42	2.28	6.50	6.39	0.63	0.40	0.15	1.18	1.90
1992	19.04	2.36	6.44	6.31	1.38	0.54	0.31	2.22	1.90
1993	18.66	2.44	6.38	6.24	2.19	0.57	0.46	3.22	1.90
1994	18.28	2.52	6.32	6.18	2.52	0.57	0.61	3.70	1.90
1995	17.90	2.60	6.26	6.12	2.76	0.56	0.77	4.09	1.90
1996	17.52	2.68	6.20	6.06	3.05	0.57	0.92	4.54	1.90
1997	17.14	2.76	6.13	6.01	3.46	0.59	1.07	5.11	1.90
1998	16.76	2.84	6.06	5.97	3.87	0.58	1.22	5.68	1.90
1999	16.38	2.92	6.00	5.92	5.14	0.58	1.38	7.10	1.90
2000	16.00	3.00	5.93	5.88	6.69	0.58	1.53	8.80	1.90
2001	16.00	3.00	5.93	5.88	7.85	0.58	1.53	9.95	1.90
2002	16.00	3.00	5.93	5.88	7.98	0.58	1.53	10.09	1.90
2003	16.00	3.00	5.93	5.88	8.07	0.58	1.53	10.17	1.90
2010	16.00	3.00	5.93	5.88	8.07	0.58	1.53	10.17	2.50
2011	16.00	3.00	5.93	5.88	8.07	0.58	1.53	10.17	1.90
2031	16.00	3.00	5.93	5.88	8.07	0.58	1.53	10.17	1.90
2032	16.00	3.00	5.93	5.88	8.07	0.58	1.53	10.17	1.90
				NPV(2%)	155.91	13.73	31.40	201.04	137.90
				NPV(4%)	88.73	8.36	18.19	115.29	108.80
				NPV(6%)	53.11	5.38	11.10	69.59	89.23
				NPV(8%)	33.24	3.63	7.08	43.95	75.08
				NPV(10%)	21.63	2.55	4.69	28.88	64.26
				NPV(12%)	14.56	1.85	3.21	19.62	55.67
				NPV(14%)	10.08	1.37	2.26	13.72	48.65
				NPV(16%)	7.16	1.04	1.63	9.83	42.81
				NPV(18%)	5.19	0.80	1.20	7.19	37.87

B-C (2%) = 63.14
(4%) = 6.49
(6%) = -19.64
(8%) = -31.13

IRR = 4.5%

Table 66 COST AND BENEFIT CASH FLOW AND NET PRESENT WORTH OF BADAK-TEMIN DAM, LOW GROWTH CASE

YEAR	NET WATAR OUTPUT FOR IRRIGATION		PROPORTION OF WATER OUTPUT TO DEFICIT		BENEFIT IN KEDAH			TOTAL BENEFIT	BADAK-TEMIN COST
					IRRIGATION		D&I WATER SUPPLY		
	MADA MAIN (M10^6$)	MADA MINOR (M10^6$)	MADA MAIN (%)	MADA MINOR (%)	MADA MAIN (M10^6$)	MADA MINOR (M10^6$)	(M10^6$)	(M10^6$)	(M10^6$)
1983	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1984	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1985	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1986	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.89
1987	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.45
1988	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	18.66
1989	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	39.32
1990	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	30.51
1991	20.02	1.97	6.70	6.70	0.65	0.42	0.01	1.08	1.90
1992	19.84	2.14	6.71	6.73	1.44	0.57	0.02	2.03	1.90
1993	19.66	2.31	6.72	6.75	2.31	0.62	0.03	2.95	1.90
1994	19.48	2.48	6.74	6.78	2.68	0.63	0.04	3.34	1.90
1995	19.30	2.65	6.75	6.79	2.98	0.62	0.05	3.64	1.90
1996	19.12	2.82	6.76	6.81	3.33	0.64	0.05	4.03	1.90
1997	18.94	2.99	6.77	6.83	3.82	0.66	0.06	4.55	1.90
1998	18.76	3.16	6.79	6.84	4.34	0.67	0.07	5.08	1.90
1999	18.58	3.33	6.80	6.85	5.83	0.67	0.08	6.58	1.90
2000	18.40	3.50	6.81	6.86	7.69	0.67	0.09	8.46	1.90
2001	18.40	3.50	6.81	6.86	9.02	0.67	0.09	9.79	1.90
2002	18.40	3.50	6.81	6.86	9.18	0.67	0.09	9.94	1.90
2003	18.40	3.50	6.81	6.86	9.27	0.67	0.09	10.04	1.90
2010	18.40	3.50	6.81	6.86	9.27	0.67	0.09	10.04	2.50
2011	18.40	3.50	6.81	6.86	9.27	0.67	0.09	10.04	1.90
2031	18.40	3.50	6.81	6.86	9.27	0.67	0.09	10.04	1.90
2032	18.40	3.50	6.81	6.86	9.27	0.67	0.09	10.04	1.90
				NPV(2%)	178.23	15.79	1.85	195.87	137.90
				NPV(4%)	101.21	9.57	1.07	111.85	108.80
				NPV(6%)	60.42	6.14	0.65	67.21	89.23
				NPV(8%)	37.71	4.12	0.42	42.25	75.08
				NPV(10%)	24.46	2.88	0.28	27.62	64.26
				NPV(12%)	16.41	2.08	0.19	18.68	55.67
				NPV(14%)	11.33	1.54	0.13	13.00	48.65
				NPV(16%)	8.02	1.16	0.10	9.27	42.81
				NPV(18%)	5.80	0.89	0.07	6.76	37.87

B-C (2%) = 57.97
(4%) = 3.05
(6%) = -22.02
(8%) = -32.83

IRR = 4.2%

Table 67 COST AND BENEFIT CASH FLOW AND NET PRESENT WORTH OF MA DAM, HIGH GROWTH CASE

YEAR	NET WATAR OUTPUT FOR IRRIGATION		PROPORTION OF WATER OUTPUT TO DEFICIT		BENEFIT IN KEDAH			TOTAL BENEFIT	MA COST
					IRRIGATION		D&I WATER SUPPLY		
	MADA MAIN ($M\$10^6$)	MADA MINOR ($M\$10^6$)	MADA MAIN (%)	MADA MINOR (%)	MADA MAIN ($M\$10^6$)	MADA MINOR ($M\$10^6$)	($M\$10^6$)	($M\$10^6$)	($M\$10^6$)
1983	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1984	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1985	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1986	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.20
1987	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.40
1988	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	19.20
1989	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	19.20
1990	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.00
1991	18.53	2.18	6.20	6.11	0.60	0.38	0.15	1.14	1.30
1992	18.16	2.26	6.14	6.04	1.31	0.51	0.31	2.13	1.30
1993	17.79	2.34	6.08	5.98	2.09	0.55	0.46	3.10	1.30
1994	17.42	2.42	6.02	5.93	2.40	0.55	0.61	3.56	1.30
1995	17.05	2.50	5.96	5.88	2.63	0.54	0.77	3.93	1.30
1996	16.68	2.58	5.90	5.84	2.91	0.55	0.92	4.38	1.30
1997	16.31	2.66	5.83	5.80	3.29	0.56	1.07	4.93	1.30
1998	15.94	2.74	5.77	5.76	3.69	0.56	1.22	5.47	1.30
1999	15.57	2.82	5.70	5.72	4.88	0.56	1.38	6.82	1.30
2000	15.20	2.90	5.63	5.69	6.36	0.56	1.53	8.44	1.30
2001	15.20	2.90	5.63	5.69	7.45	0.56	1.53	9.54	1.30
2002	15.20	2.90	5.63	5.69	7.58	0.56	1.53	9.67	1.30
2003	15.20	2.90	5.63	5.69	7.66	0.56	1.53	9.75	1.30
2010	15.20	2.90	5.63	5.69	7.66	0.56	1.53	9.75	1.30
2011	15.20	2.90	5.63	5.69	7.66	0.56	1.53	9.75	1.30
2031	15.20	2.90	5.63	5.69	7.66	0.56	1.53	9.75	1.30
2032	15.20	2.90	5.63	5.69	7.66	0.56	1.53	9.75	1.30
			NPV(6%)		50.48	5.19	11.10	66.76	56.14
			NPV(8%)		31.60	3.50	7.08	42.18	47.12
			NPV(10%)		20.57	2.46	4.69	27.72	40.29
			NPV(12%)		13.84	1.78	3.21	18.83	34.89
			NPV(14%)		9.59	1.32	2.26	13.17	30.50
			NPV(16%)		6.81	1.00	1.63	9.44	26.85
			NPV(18%)		4.94	0.77	1.20	6.91	23.77

B-C (6%) = 10.62
(8%) = -4.94
(10%) = -12.57
(12%) = -16.06

IRR = 7.4%

Table 68 COST AND BENEFIT CASH FLOW AND NET PRESENT WORTH OF MA DAM, LOW GROWTH CASE

YEAR	NET WATAR OUTPUT FOR IRRIGATION		PROPORTION OF WATER OUTPUT TO DEFICIT		BENEFIT IN KEDAH			TOTAL BENEFIT	MA COST
					IRRIGATION		D&I WATER		
	MADA MAIN ($M\$10^6$)	MADA MINOR ($M\$10^6$)	MADA MAIN (%)	MADA MINOR (%)	MADA MAIN ($M\$10^6$)	MADA MINOR ($M\$10^6$)	SUPPLY ($M\$10^6$)	($M\$10^6$)	($M\$10^6$)
1983	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1984	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1985	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1986	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.20
1987	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.40
1988	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	19.20
1989	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	19.20
1990	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.00
1991	19.13	1.86	6.40	6.33	0.62	0.40	0.01	1.03	1.30
1992	18.96	2.02	6.41	6.35	1.37	0.54	0.02	1.93	1.30
1993	18.79	2.18	6.43	6.37	2.20	0.59	0.03	2.82	1.30
1994	18.62	2.34	6.44	6.39	2.56	0.59	0.04	3.19	1.30
1995	18.45	2.50	6.45	6.41	2.84	0.59	0.05	3.48	1.30
1996	18.28	2.66	6.46	6.43	3.19	0.61	0.05	3.85	1.30
1997	18.11	2.82	6.48	6.44	3.65	0.63	0.06	4.34	1.30
1998	17.94	2.98	6.49	6.45	4.15	0.63	0.07	4.85	1.30
1999	17.77	3.14	6.50	6.46	5.57	0.63	0.08	6.29	1.30
2000	17.60	3.30	6.52	6.47	7.36	0.64	0.09	8.08	1.30
2001	17.60	3.30	6.52	6.47	8.63	0.64	0.09	9.36	1.30
2002	17.60	3.30	6.52	6.47	8.78	0.64	0.09	9.51	1.30
2003	17.60	3.30	6.52	6.47	8.87	0.64	0.09	9.60	1.30
2010	17.60	3.30	6.52	6.47	8.87	0.64	0.09	9.60	1.30
2011	17.60	3.30	6.52	6.47	8.87	0.64	0.09	9.60	1.30
2031	17.60	3.30	6.52	6.47	8.87	0.64	0.09	9.60	1.30
2032	17.60	3.30	6.52	6.47	8.87	0.64	0.09	9.60	1.30
			NPV(6%)		57.78	5.79	0.65	64.22	56.14
			NPV(8%)		36.06	3.89	0.42	40.37	47.12
			NPV(10%)		23.40	2.72	0.28	26.39	40.29
			NPV(12%)		15.69	1.96	0.19	17.84	34.89
			NPV(14%)		10.83	1.45	0.13	12.42	30.50
			NPV(16%)		7.67	1.10	0.10	8.86	26.85
			NPV(18%)		5.54	0.84	0.07	6.45	23.77

B-C (6%) = 8.08
(8%) = -6.75
(10%) = -13.90
(12%) = -17.05

IRR = 7.1%

Table 69 COST AND BENEFIT CASH FLOW AND NET PRESENT WORTH OF KHLONG THEPHA DAM, HIGH GROWTH CASE

YEAR	NET WATAR OUTPUT FOR IRRIGATION		PROPORTION OF WATER OUTPUT TO DEFICIT		BENEFIT IN KEDAH			TOTAL BENEFIT	KHLONG THEPHA COST
					IRRIGATION		D&I WATER SUPPLY		
	MADA MAIN (M$10^6)	MADA MINOR (M$10^6)	MADA MAIN (%)	MADA MINOR (%)	MADA MAIN (M$10^6)	MADA MINOR (M$10^6)	(M$10^6)	(M$10^6)	(M$10^6)
1983	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1984	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1985	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1986	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.60
1987	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.20
1988	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	21.60
1989	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	21.60
1990	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	18.00
1991	50.22	6.00	16.81	16.81	1.63	1.05	0.41	3.09	1.40
1992	49.24	6.20	16.66	16.58	3.56	1.41	0.82	5.80	1.40
1993	48.26	6.40	16.50	16.37	5.66	1.50	1.23	8.40	1.40
1994	47.28	6.60	16.35	16.18	6.51	1.49	1.64	9.64	1.40
1995	46.30	6.80	16.19	16.00	7.14	1.47	2.05	10.66	1.40
1996	45.32	7.00	16.03	15.84	7.90	1.50	2.46	11.86	1.40
1997	44.34	7.20	15.86	15.69	8.94	1.53	2.87	13.34	1.40
1998	43.36	7.40	15.69	15.55	10.02	1.52	3.28	14.83	1.40
1999	42.38	7.60	15.51	15.42	13.29	1.51	3.69	18.50	1.40
2000	41.40	7.80	15.33	15.29	17.31	1.50	4.10	22.91	1.40
2001	41.40	7.80	15.33	15.29	20.30	1.50	4.10	25.90	1.40
2002	41.40	7.80	15.33	15.29	20.65	1.50	4.10	26.26	1.40
2003	41.40	7.80	15.33	15.29	20.87	1.50	4.10	26.47	1.40
2010	41.40	7.80	15.33	15.29	20.87	1.50	4.10	26.47	1.40
2011	41.40	7.80	15.33	15.29	20.87	1.50	4.10	26.47	1.40
2031	41.40	7.80	15.33	15.29	20.87	1.50	4.10	26.47	1.40
2032	41.40	7.80	15.33	15.29	20.87	1.50	4.10	26.47	1.40
				NPV(6%)	137.41	14.03	29.74	181.18	62.55
				NPV(8%)	86.00	9.48	18.97	114.45	52.60
				NPV(10%)	55.97	6.65	12.58	75.20	45.03
				NPV(12%)	37.67	4.82	8.61	51.10	39.04
				NPV(14%)	26.09	3.58	6.06	35.73	34.15
				NPV(16%)	18.52	2.72	4.37	25.61	30.08
				NPV(18%)	13.43	2.10	3.21	18.74	26.64

B-C (8%) = 61.85
(10%) = 30.17
(12%) = 12.06
(14%) = 1.58
(16%) = -4.47

IRR = 14.5%

Table 70 COST AND BENEFIT CASH FLOW AND NET PRESENT WORTH OF KHLONG THEPHA DAM, LOW GROWTH CASE

	NET WATAR OUTPUT FOR IRRIGATION		PROPORTION OF WATER OUTPUT TO DEFICIT		BENEFIT IN KEDAH			TOTAL BENEFIT	KHLONG THEPHA COST
					IRRIGATION		D&I WATER		
YEAR	MADA MAIN ($M10^6)	MADA MINOR	MADA MAIN (%)	MADA MINOR (%)	MADA MAIN ($M10^6)	MADA MINOR ($M10^6)	SUPPLY ($M10^6)	($M10^6)	($M10^6)
1983	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1984	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1985	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1986	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.60
1987	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.20
1988	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	21.60
1989	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	21.60
1990	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	18.00
1991	51.85	5.13	17.35	17.45	1.68	1.09	0.02	2.79	1.40
1992	51.40	5.56	17.39	17.48	3.72	1.49	0.03	5.24	1.40
1993	50.95	5.99	17.42	17.51	5.98	1.61	0.05	7.63	1.40
1994	50.50	6.42	17.46	17.54	6.95	1.62	0.06	8.63	1.40
1995	50.05	6.85	17.50	17.56	7.72	1.61	0.08	9.41	1.40
1996	49.60	7.28	17.54	17.58	8.65	1.66	0.10	10.40	1.40
1997	49.15	7.71	17.58	17.60	9.91	1.71	0.11	11.74	1.40
1998	48.70	8.14	17.62	17.62	11.26	1.72	0.13	13.11	1.40
1999	48.25	8.57	17.66	17.63	15.14	1.73	0.14	17.01	1.40
2000	47.80	9.00	17.70	17.65	19.99	1.73	0.16	21.88	1.40
2001	47.80	9.00	17.70	17.65	23.44	1.73	0.16	25.33	1.40
2002	47.80	9.00	17.70	17.65	23.85	1.73	0.16	25.74	1.40
2003	47.80	9.00	17.70	17.65	24.09	1.73	0.16	25.99	1.40
2010	47.80	9.00	17.70	17.65	24.09	1.73	0.16	25.99	1.40
2011	47.80	9.00	17.70	17.65	24.09	1.73	0.16	25.99	1.40
2031	47.80	9.00	17.70	17.65	24.09	1.73	0.16	25.99	1.40
2032	47.80	9.00	17.70	17.65	24.09	1.73	0.16	25.99	1.40
				NPV(6%)	156.91	15.82	1.16	173.89	62.55
				NPV(8%)	97.92	10.63	0.74	109.29	52.60
				NPV(10%)	63.52	7.43	0.49	71.45	45.03
				NPV(12%)	42.61	5.36	0.34	48.31	39.04
				NPV(14%)	29.41	3.97	0.24	33.62	34.15
				NPV(16%)	20.81	3.00	0.17	23.98	30.08
				NPV(18%)	15.04	2.31	0.13	17.48	26.64

B-C (8%) = 56.69
(10%) = 26.42
(12%) = 9.27
(14%) = -0.53

IRR = 13.9%

Table 71 COST AND BENEFIT CASH FLOW AND NET PRESENT WORTH OF RUI 2 DAM, HIGH GROWTH CASE

YEAR	NET WATER OUTPUT FOR IRRIGATION	PROPORTION TO DEMAND	BENEFIT				TOTAL BENEFIT	RUI 2 COST
			IRRIGATION		D&I WATER SUPPLY	POWER		
	MINOR ($M\$10^6$)	MINOR (%)	MAIN MINOR ($M\$10^6$)	KETIL MINOR ($M\$10^6$)	($M\$10^6$)	($M\$10^6$)	($M\$10^6$)	($M\$10^6$)
1983	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1984	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1985	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15.66
1986	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15.70
1987	0.00	0.00	0.00	0.00	0.00	0.00	0.00	73.11
1988	0.00	0.00	0.00	0.00	0.00	0.00	0.00	78.33
1989	0.00	0.00	0.00	0.00	0.00	0.00	0.00	52.22
1990	0.00	0.00	0.00	0.00	0.00	0.00	0.00	26.10
1991	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.60
1992	9.64	3.42	0.87	0.32	5.14	13.60	19.94	2.60
1993	9.81	3.48	0.91	0.48	7.34	13.60	22.33	2.60
1994	9.98	3.54	0.94	0.64	9.53	13.60	24.71	2.60
1995	10.15	3.60	0.96	0.67	11.72	13.60	26.95	2.60
1996	10.32	3.66	0.97	0.67	13.91	13.60	29.15	2.60
1997	10.49	3.72	0.99	0.67	16.10	13.60	31.36	2.60
1998	10.66	3.78	1.00	0.67	18.30	13.60	33.57	2.60
1999	10.83	3.84	1.02	0.67	20.49	13.60	35.78	2.60
2000	11.00	3.90	1.04	0.67	22.68	13.60	37.99	2.60
2001	11.00	3.90	1.04	0.67	22.68	13.60	37.99	2.60
2002	11.00	3.90	1.04	0.67	22.68	13.60	37.99	2.60
2003	11.00	3.90	1.04	0.67	22.68	13.60	37.99	2.60
2010	11.00	3.90	1.04	0.67	22.68	13.60	37.99	2.60
2011	11.00	3.90	1.04	0.67	22.68	13.60	37.99	2.60
2031	11.00	3.90	1.04	0.67	22.68	13.60	37.99	2.60
2032	11.00	3.90	1.04	0.67	22.68	13.60	37.99	2.60
	NPV(6%)		8.97	5.69	164.51	121.86	301.03	211.38
	NPV(8%)		5.95	3.76	104.89	81.42	196.02	184.53
	NPV(10%)		4.11	2.57	69.48	56.52	132.68	162.98
	NPV(12%)		2.92	1.82	47.53	40.48	92.75	145.13
	NPV(14%)		2.13	1.32	33.40	29.73	66.59	130.03
	NPV(16%)		1.59	0.98	24.02	22.30	48.89	117.05
	NPV(18%)		1.21	0.74	17.61	17.02	36.57	105.78

B-C (6%) = 89.65
(8%) = 11.49
(10%) = -30.30
(12%) = -52.38

IRR = 8.5%

Table 72 COST AND BENEFIT CASH FLOW AND NET PRESENT WORTH OF RUI 2 DAM, LOW GROWTH CASE

YEAR	NET WATER OUTPUT FOR IRRIGATION	PROPORTION TO DEMAND	BENEFIT				TOTAL BENEFIT	RUI 2 COST
			IRRIGATION		D&I WATER SUPPLY	POWER		
	MINOR ($M10^6)	MINOR (%)	MAIN MINOR ($M10^6)	KETIL MINOR ($M10^6)	($M10^6)	($M10^6)	($M10^6)	($M10^6)
1983	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1984	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1985	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.64
1986	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.68
1987	0.00	0.00	0.00	0.00	0.00	0.00	0.00	68.35
1988	0.00	0.00	0.00	0.00	0.00	0.00	0.00	73.23
1989	0.00	0.00	0.00	0.00	0.00	0.00	0.00	48.80
1990	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24.40
1991	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.40
1992	6.58	2.33	0.60	0.32	1.10	12.20	14.22	2.40
1993	6.87	2.44	0.64	0.48	1.65	12.20	14.97	2.40
1994	7.16	2.54	0.67	0.64	2.20	12.20	15.72	2.40
1995	7.45	2.64	0.70	0.67	2.76	12.20	16.33	2.40
1996	7.74	2.74	0.73	0.67	3.31	12.20	16.90	2.40
1997	8.03	2.85	0.76	0.67	3.86	12.20	17.48	2.40
1998	8.32	2.95	0.78	0.67	4.41	12.20	18.06	2.40
1999	8.61	3.05	0.81	0.67	4.96	12.20	18.64	2.40
2000	8.90	3.16	0.84	0.67	5.51	12.20	19.22	2.40
2001	8.90	3.16	0.84	0.67	5.51	12.20	19.22	2.40
2002	8.90	3.16	0.84	0.67	5.51	12.20	19.22	2.40
2003	8.90	3.16	0.84	0.67	5.51	12.20	19.22	2.40
2010	8.90	3.16	0.84	0.67	5.51	12.20	19.22	2.40
2011	8.90	3.16	0.84	0.67	5.51	12.20	19.22	2.40
2031	8.90	3.16	0.84	0.67	5.51	12.20	19.22	2.40
2032	8.90	3.16	0.84	0.67	5.51	12.20	19.22	2.40
	NPV(2%)		18.70	15.12	112.62	283.79	430.23	275.43
	NPV(4%)		11.14	9.03	65.13	171.37	256.68	229.93
	NPV(6%)		7.01	5.69	39.64	109.31	161.66	197.31
	NPV(8%)		4.62	3.76	25.22	73.04	106.63	172.30
	NPV(10%)		3.16	2.57	16.67	50.70	73.11	152.22
	NPV(12%)		2.24	1.82	11.38	36.31	51.74	135.57
	NPV(14%)		1.62	1.32	7.98	26.67	37.59	121.48
	NPV(16%)		1.20	0.98	5.72	20.00	27.91	109.36
	NPV(18%)		0.91	0.74	4.19	15.26	21.10	98.84

B-C (4%) = 29.75
(6%) = -35.65
(8%) = -65.67

IRR = 4.9%

Table 73 COST AND BENEFIT CASH FLOW AND NET PRESENT WORTH OF REMAN DAM, HIGH GROWTH CASE

YEAR	NET WATAR OUTPUT FOR IRRIGATION		PROPORTION OF WATER OUTPUT TO DEFICIT		BENEFIT IN KEDAH			TOTAL BENEFIT	REMAN COST
					IRRIGATION		D&I WATER SUPPLY		
	MADA MAIN ($M\$10^6$)	MADA MINOR ($M\$10^6$)	MADA MAIN (%)	MADA MINOR (%)	MADA MAIN ($M\$10^6$)	MADA MINOR ($M\$10^6$)	($M\$10^6$)	($M\$10^6$)	($M\$10^6$)
1983	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1984	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1985	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1986	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.31
1987	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.54
1988	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.98
1989	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	26.68
1990	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	21.59
1991	69.08	8.59	23.12	24.06	2.24	1.51	0.13	3.89	4.75
1992	71.66	9.68	24.24	25.88	5.19	2.20	0.27	7.66	4.75
1993	74.24	10.77	25.39	27.54	8.71	2.53	0.40	11.64	4.75
1994	76.82	11.86	26.56	29.07	10.57	2.69	0.54	13.79	4.75
1995	79.40	12.95	27.76	30.47	12.24	2.80	0.67	15.71	4.75
1996	81.98	14.04	28.99	31.76	14.29	3.00	0.80	18.09	4.75
1997	84.56	15.13	30.24	32.96	17.06	3.21	0.94	21.21	4.75
1998	87.14	16.22	31.53	34.08	20.15	3.34	1.07	24.55	4.75
1999	89.72	17.31	32.84	35.11	28.14	3.45	1.21	32.80	4.75
2000	92.30	18.40	34.19	36.08	38.60	3.54	1.34	43.48	4.75
2001	92.30	18.40	34.19	36.08	45.26	3.54	1.34	50.14	4.75
2002	92.30	18.40	34.19	36.08	46.05	3.54	1.34	50.93	4.75
2003	92.30	18.40	34.19	36.08	46.53	3.54	1.34	51.41	4.75
2010	92.30	18.40	34.19	36.08	46.53	3.54	1.34	51.41	4.75
2011	92.30	18.40	34.19	36.08	46.53	3.54	1.34	51.41	4.75
2031	92.30	18.40	34.19	36.08	46.53	3.54	1.34	51.41	4.75
2032	92.30	18.40	34.19	36.08	46.53	3.54	1.34	51.41	4.75
				NPV(6%)	294.15	30.09	9.72	333.96	88.79
				NPV(8%)	182.09	19.92	6.20	208.21	68.97
				NPV(10%)	117.10	13.72	4.11	134.93	55.38
				NPV(12%)	77.83	9.76	2.82	90.40	45.56
				NPV(14%)	53.22	7.13	1.98	62.32	38.16
				NPV(16%)	37.29	5.32	1.43	44.04	32.40
				NPV(18%)	26.69	4.05	1.05	31.79	27.81
				NPV(20%)	19.46	3.13	0.78	23.37	24.07
				NPV(22%)	14.43	2.45	0.59	17.47	20.98

B-C (8%) = 139.24
(12%) = 79.55
(14%) = 24.16
(16%) = 11.64
(18%) = 3.98
(20%) = -0.70

IRR = 19.7%

Table 74 COST AND BENEFIT CASH FLOW AND NET PRESENT WORTH OF REMAN DAM, LOW GROWTH CASE

BENEFIT & COST CASH FLOW

YEAR	NET WATAR OUTPUT FOR IRRIGATION		PROPORTION OF WATER OUTPUT TO DEFICIT		BENEFIT IN KEDAH			TOTAL BENEFIT	REMAN COST
					IRRIGATION		D&I WATER SUPPLY		
	MADA MAIN ($M10^6)	MADA MINOR ($M10^6)	MADA MAIN (%)	MADA MINOR (%)	MADA MAIN ($M10^6)	MADA MINOR ($M10^6)	($M10^6)	($M10^6)	($M10^6)
1983	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1984	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1985	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1986	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.31
1987	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.54
1988	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.98
1989	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	26.68
1990	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	21.59
1991	68.27	6.90	22.85	23.47	2.22	1.47	0.00	3.69	4.75
1992	69.54	7.80	23.53	24.53	5.03	2.09	0.01	7.13	4.75
1993	70.81	8.70	24.22	25.44	8.31	2.34	0.01	10.66	4.75
1994	72.08	9.60	24.92	26.23	9.92	2.42	0.02	12.36	4.75
1995	73.35	10.50	25.65	26.92	11.31	2.47	0.02	13.80	4.75
1996	74.62	11.40	26.39	27.54	13.01	2.60	0.02	15.63	4.75
1997	75.89	12.30	27.14	28.08	15.31	2.74	0.03	18.07	4.75
1998	77.16	13.20	27.92	28.57	17.84	2.80	0.03	20.67	4.75
1999	78.43	14.10	28.71	29.01	24.60	2.85	0.04	27.49	4.75
2000	79.70	15.00	29.52	29.41	33.33	2.89	0.04	36.25	4.75
2001	79.70	15.00	29.52	29.41	39.08	2.89	0.04	42.01	4.75
2002	79.70	15.00	29.52	29.41	39.76	2.89	0.04	42.69	4.75
2003	79.70	15.00	29.52	29.41	40.17	2.89	0.04	43.10	4.75
2010	79.70	15.00	29.52	29.41	40.17	2.89	0.04	43.10	4.75
2011	79.70	15.00	29.52	29.41	40.17	2.89	0.04	43.10	4.75
2031	79.70	15.00	29.52	29.41	40.17	2.89	0.04	43.10	4.75
2032	79.70	15.00	29.52	29.41	40.17	2.89	0.04	43.10	4.75
				NPV(6%)	256.45	25.34	0.29	282.08	88.79
				NPV(8%)	159.17	16.90	0.19	176.26	68.97
				NPV(10%)	102.66	11.72	0.12	114.50	55.38
				NPV(12%)	68.44	8.39	0.08	76.91	45.56
				NPV(14%)	46.95	6.17	0.06	53.17	38.16
				NPV(16%)	33.00	4.63	0.04	37.68	32.40
				NPV(18%)	23.70	3.54	0.03	27.27	27.81
				NPV(20%)	17.34	2.75	0.02	20.11	24.07
				NPV(22%)	12.90	2.16	0.02	15.08	20.98

B-C (8%) = 107.29
(12%) = 31.35
(14%) = 15.00
(16%) = 5.28
(18%) = -0.54

IRR = 17.8%

Table 75 COST AND BENEFIT CASH FLOW AND NET PRESENT WORTH OF MERBOK DAM, HIGH GROWTH CASE

YEAR	NET WATER OUTPUT FOR IRRIGATION	PROPORTION TO DEMAND	BENEFIT IN MUDA		TOTAL BENEFIT	MERBOK COST
			IRRIGATION	D&I WATER SUPPLY		
	MINOR ($M10^6)	MINOR (%)	MINOR ($M10^6)	($M10^6)	($M10^6)	($M10^6)
1983	0.00	0.00	0.00	0.00	0.00	0.00
1984	0.00	0.00	0.00	0.00	0.00	0.00
1985	0.00	0.00	0.00	0.00	0.00	0.00
1986	0.00	0.00	0.00	0.00	0.00	0.00
1987	0.00	0.00	0.00	0.00	0.00	14.97
1988	0.00	0.00	0.00	0.00	0.00	29.93
1989	0.00	0.00	0.00	0.00	0.00	29.93
1990	0.00	0.00	0.00	0.00	0.00	24.94
1991	9.47	3.36	0.84	2.95	3.79	1.40
1992	9.64	3.42	0.87	5.14	6.02	1.40
1993	9.81	3.48	0.91	7.34	8.25	1.40
1994	9.98	3.54	0.94	9.53	10.47	1.40
1995	10.15	3.60	0.96	11.72	12.68	1.40
1996	10.32	3.66	0.97	13.91	14.88	1.40
1997	10.49	3.72	0.99	16.10	17.09	1.40
1998	10.66	3.78	1.00	18.30	19.30	1.40
1999	10.83	3.84	1.02	20.49	21.51	1.40
2000	11.00	3.90	1.04	22.68	23.72	1.40
2001	11.00	3.90	1.04	22.68	23.72	1.40
2002	11.00	3.90	1.04	22.68	23.72	1.40
2003	11.00	3.90	1.04	22.68	23.72	1.40
2010	11.00	3.90	1.04	22.68	23.72	2.21
2011	11.00	3.90	1.04	22.68	23.72	1.40
2031	11.00	3.90	1.04	22.68	23.72	1.40
2032	11.00	3.90	1.04	22.68	23.72	1.40
	NPV(6%)		9.47	166.25	175.72	81.37
	NPV(8%)		6.37	106.37	112.74	69.16
	NPV(10%)		4.46	70.73	75.19	59.65
	NPV(12%)		3.22	48.59	51.82	51.98
	NPV(14%)		2.39	34.31	36.70	45.63
	NPV(16%)		1.81	24.79	26.61	40.29
	NPV(18%)		1.40	18.27	19.67	35.74

B-C (8%) = 43.58
(10%) = 15.54
(12%) = -0.16 IRR = 12.0%

Table 76 COST AND BENEFIT CASH FLOW AND NET PRESENT WORTH OF MERBOK DAM, LOW GROWTH CASE

YEAR	NET WATER OUTPUT FOR IRRIGATION	PROPORTION TO DEMAND	BENEFIT IN MUDA		TOTAL BENEFIT	MERBOK COST
			IRRIGATION	D&I WATER SUPPLY		
	MINOR ($M\$10^6$)	MINOR (%)	MINOR ($M\$10^6$)	($M\$10^6$)	($M\$10^6$)	($M\$10^6$)
1983	0.00	0.00	0.00	0.00	0.00	0.00
1984	0.00	0.00	0.00	0.00	0.00	0.00
1985	0.00	0.00	0.00	0.00	0.00	0.00
1986	0.00	0.00	0.00	0.00	0.00	0.00
1987	0.00	0.00	0.00	0.00	0.00	11.98
1988	0.00	0.00	0.00	0.00	0.00	23.94
1989	0.00	0.00	0.00	0.00	0.00	23.94
1990	0.00	0.00	0.00	0.00	0.00	19.95
1991	6.29	2.23	0.56	0.55	1.11	1.12
1992	6.58	2.33	0.60	1.10	1.70	1.12
1993	6.87	2.44	0.64	1.65	2.29	1.12
1994	7.16	2.54	0.67	2.20	2.88	1.12
1995	7.45	2.64	0.70	2.76	3.46	1.12
1996	7.74	2.74	0.73	3.31	4.03	1.12
1997	8.03	2.85	0.76	3.86	4.61	1.12
1998	8.32	2.95	0.78	4.41	5.19	1.12
1999	8.61	3.05	0.81	4.96	5.77	1.12
2000	8.90	3.16	0.84	5.51	6.35	1.12
2001	8.90	3.16	0.84	5.51	6.35	1.12
2002	8.90	3.16	0.84	5.51	6.35	1.12
2003	8.90	3.16	0.84	5.51	6.35	1.12
2010	8.90	3.16	0.84	5.51	6.35	1.77
2011	8.90	3.16	0.84	5.51	6.35	1.12
2031	8.90	3.16	0.84	5.51	6.35	1.12
2032	8.90	3.16	0.84	5.51	6.35	1.12
		NPV(2%)	19.16	113.08	132.24	97.34
		NPV(4%)	11.53	65.52	77.05	78.27
		NPV(6%)	7.34	39.97	47.30	65.09
		NPV(8%)	4.90	25.50	30.39	55.33
		NPV(10%)	3.40	16.90	20.30	47.72
		NPV(12%)	2.44	11.58	14.01	41.58
		NPV(14%)	1.79	8.15	9.94	36.50
		NPV(16%)	1.35	5.87	7.22	32.23
		NPV(18%)	1.03	4.31	5.34	28.59

B-C (4%) = 1.22
(6%) = -18.09
(8%) = -24.94

IRR = 4.1%

Table 77 INVESTMENT COST DISBURSEMENT SCHEDULE OF WATER DEMAND AND SUPPLY BALANCE PLAN IN HIGH AND LOW GROWTH CASES

Unit: M$10^6

YEAR	Irrigation			D&I Water Supply				Source Development			Total	
	MADA Main	MADA Minor	Tributary Schemes	High Case Public	High Case Private	Low Case Public	Low Case Private	Jeniang System	Beris Dam	Tawar-Muda Dam	High Case	Low Case
1983	25.74	4.84	5.14	85.93	66.52	55.15	33.50	0.00	0.00	0.00	190.17	124.37
1984	25.74	4.84	5.14	114.58	91.37	73.54	44.66	0.00	0.00	0.00	241.67	153.92
1985	25.74	4.84	5.14	144.40	114.21	93.03	55.83	2.25	4.50	7.24	308.22	198.57
1986	34.20	0.37	4.57	152.56	130.59	93.71	57.41	25.78	15.08	10.76	373.91	241.88
1987	34.20	0.37	4.57	160.71	146.97	94.39	59.00	26.36	19.94	27.71	420.83	266.54
1988	34.20	0.37	4.57	168.87	163.36	95.07	60.58	19.54	20.91	35.88	447.7	271.12
1989	34.20	0.37	4.57	177.02	179.74	95.75	62.17	0.00	12.19	29.70	437.79	238.95
1990	34.20	0.37	4.57	185.14	196.12	96.39	63.76	0.00	0.00	0.00	420.40	199.29
1991	53.78	0.72	5.62	185.14	196.12	96.39	63.76	0.00	0.00	0.00	441.38	220.27
1992	53.78	0.72	5.62	185.14	196.12	96.39	63.76	0.00	0.00	0.00	441.38	220.27
1993	53.78	0.72	5.62	185.14	196.12	96.39	63.76	0.00	0.00	0.00	441.38	220.27
1994	53.78	0.72	5.62	185.14	196.12	96.39	63.76	0.00	0.00	0.00	441.38	220.27
1995	53.78	0.72	5.62	185.14	196.12	96.39	63.76	0.00	0.00	0.00	441.38	220.27
1996	53.78	0.72	5.62	148.34	156.90	77.32	51.00	0.00	0.00	0.00	365.36	188.44
1997	53.78	0.72	5.62	111.54	117.67	58.26	38.25	0.00	0.00	0.00	289.33	156.63
1998	53.78	0.72	5.62	74.74	78.45	39.20	25.50	0.00	0.00	0.00	213.31	124.82
1999	53.78	0.72	5.62	37.94	39.22	20.13	12.75	0.00	0.00	0.00	137.28	93.00
2000	53.78	0.72	5.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	60.12	60.12
Total	786.02	23.57	94.47	2,487.47	2,463.72	1,373.89	883.21	73.93	72.62	111.29	6,113.09	3,419.00

Remarks; In 1982 constant price.

Table 78 O&M COST DISBURSEMENT SCHEDULE OF WATER DEMAND AND SUPPLY BALANCE PLAN IN HIGH AND LOW GROWTH CASES

Unit:M$ 10^6

	Irrigation			D&I Water Supply				Source Development			Total	
				High Case		Low Case						
YEAR	MADA Main	MADA Minor	Tributary Minor	Public	Private	Public	Private	Jeniang System	Beris Dam	Tawar-Muda Dam	High Case	Low Case
1983	-	-	-	-	-	-	-	-	-	-	-	-
1984	-	-	-	-	-	-	-	-	-	-	-	-
1985	-	-	-	-	-	-	-	-	-	-	-	-
1986	1.93	0.36	0.39	2.89	2.28	1.86	1.12	-	-	-	7.85	5.66
1987	1.93	0.36	0.39	5.78	4.57	3.72	2.23	-	-	-	13.03	8.63
1988	1.93	0.36	0.39	8.66	6.85	5.58	3.35	-	-	-	18.19	11.61
1989	1.93	0.36	0.39	11.55	9.14	7.44	4.47	0.19	-	-	23.56	14.78
1990	1.93	0.36	0.39	14.44	11.42	9.30	5.58	0.16	-	-	28.70	17.72
1991	4.50	0.39	0.73	18.14	15.34	11.23	6.86	0.16	0.23	0.52	40.01	24.62
1992	4.50	0.39	0.73	21.85	19.27	13.16	8.13	0.16	0.23	0.52	47.65	27.82
1993	4.50	0.39	0.73	25.55	23.19	15.09	9.41	0.18	0.23	0.52	55.29	31.05
1994	4.50	0.39	0.73	29.25	27.11	17.01	10.68	0.17	0.23	0.52	62.90	34.23
1995	4.50	0.39	0.73	32.96	31.03	18.94	11.96	0.17	0.23	0.52	70.52	37.44
1996	8.53	0.44	1.15	36.66	34.96	20.87	13.23	0.18	0.23	0.52	82.67	45.15
1997	8.53	0.44	1.15	40.36	38.88	22.80	14.51	0.22	0.23	0.52	90.33	48.40
1998	8.53	0.44	1.15	44.06	42.80	24.72	15.78	0.19	0.23	0.52	97.92	51.56
1999	8.53	0.44	1.15	47.77	46.72	26.65	17.06	0.18	0.23	0.52	105.54	54.76
2000	8.53	0.44	1.15	51.47	50.64	28.58	18.33	0.19	0.23	0.52	113.17	57.97
Total	74.80	5.95	11.35	391.38	364.20	226.95	142.70	2.15	2.30	5.20	857.33	471.40

Remarks; In 1982 constant price.

Table 79 JOINT COST ALLOCATION OF BERIS DAM, HIGH GROWTH CASE

Unit: M$10^6

ITEM	KEDAH RIVER						MUDA RIVER				TOTAL
	IRRIGATION			D & I		RIVER MAINTE-	IRRIGATION		D & I		
	MADA MAIN	MADA TRIBUTAR- MINOR Y MINOR		PRIVATE	PUBLIC	NANCE FLOW	MAIN	TRIBUTAR- MINOR Y MINOR	PRIVATE	PUBLIC	
1.1 PROJECT COST TO BE ALLOCATED											
CONSTRUCTION											49.38
O&M											1.82
TOTAL											51.20
1.2 BENEFIT	19.69	2.84	24.26	0.49	0.90	0.00	0.39	9.68	1.86	15.03	75.14
1.3 ALTERNATIVE COST											
CONSTRUCTION	32.89	31.69	39.95	31.56	31.63	31.63	31.66	33.62	31.63	32.29	328.55
ANNUAL O&M	.19	.186	.217	.185	.185	.185	.185	.193	.185	.188	1.699
O&M	1.34	1.31	1.52	1.30	1.30	1.30	1.30	1.36	1.30	1.32	13.34
SUB TOTAL	34.23	33.00	41.47	32.86	32.93	32.93	32.96	34.98	32.93	33.61	341.89
1.4 JUSTIFIABLE EXPENDITURE	19.69	2.84	24.26	0.49	0.90	0.00	0.39	9.68	1.86	15.03	75.14
1.5 SEPARABLE COST											
CONSTRUCTION	3.57	0.67	12.43	0.31	0.36	0.36	0.37	5.57	0.38	2.31	26.53
ANNUAL O&M	.016	.002	.054	.001	.001	.001	.001	.025	.001	.011	.113
O&M	0.11	0.01	0.38	0.01	0.01	0.01	0.01	0.18	0.01	0.08	0.79
SUB TOTAL	3.68	0.68	12.81	0.32	0.37	0.37	0.38	5.75	0.39	2.39	27.12
1.6 REMAINING JUSTI- FIABLE EXPENDITURE	16.01	2.16	11.45	0.17	0.54	0.00	0.01	3.93	1.47	12.64	48.38
1.7 PERCENTAGE DIS- TRIBUTION OF 1.6	33.08	4.46	23.67	0.35	1.11	0.00	0.03	8.13	3.04	26.13	100.00
1.8 REMAINING JOINT COST											
CONSTRUCTION	7.63	1.03	5.46	0.08	0.26	0.00	0.01	1.87	0.70	6.02	23.05
O&M	0.34	0.05	0.24	0.00	0.01	0.00	0.00	0.08	0.03	0.27	1.03
SUB TOTAL	7.97	1.07	5.70	0.08	0.27	0.00	0.01	1.96	0.73	6.29	24.08
1.9 TOTAL ALLOCATED COST											
CONSTRUCTION	11.20	1.70	17.89	0.39	0.62	0.36	0.38	7.44	1.08	8.33	49.38
O&M	0.45	0.06	0.62	0.01	0.02	0.01	0.01	0.26	0.04	0.35	1.82
TOTAL	11.65	1.76	18.51	0.40	0.63	0.37	0.38	7.70	1.12	8.68	51.20
PERCENTAGE OF DIS- TRIBUTION	22.75	3.43	36.15	0.78	1.24	0.72	0.75	15.03	2.19	16.95	100.00
2.1 ANNUAL COST											
CONSTRUCTION	1.59	0.24	2.55	0.06	0.09	0.05	0.05	1.06	0.15	1.19	7.03
O&M	.064	.009	.089	.002	.003	.001	.001	.037	.005	.049	.26

REMARKS; IN 1982 CONSTANT PRICE

Table 80 JOINT COST ALLOCATION OF TAWAR-MUDA DAM, HIGH GROWTH CASE

Unit: $M\$10^6$

ITEM	KEDAH RIVER						MUDA RIVER				TOTAL
	IRRIGATION			D & I		RIVER MAINTE-	IRRIGATION		D & I		
	MADA MAIN	MADA TRIBUTAR- MINOR Y MINOR		PRIVATE	PUBLIC	NANCE FLOW	MAIN	TRIBUTAR- MINOR Y MINOR	PRIVATE	PUBLIC	
1.1 PROJECT COST TO BE ALLOCATED											
CONSTRUCTION											74.79
O&M											3.73
TOTAL											78.52
1.2 BENEFIT	34.63	4.01	0.00	1.49	2.77	0.00	1.43	0.00	4.89	39.59	88.81
1.3 ALTERNATIVE COST											
CONSTRUCTION	67.34	61.73	0.00	60.49	60.88	60.88	61.14	0.00	60.68	63.55	496.69
ANNUAL O&M	.479	.44	0	.432	.434	.434	.435	0	.433	.452	3.54
O&M	3.37	3.09	0.00	3.04	3.05	3.05	3.06	0.00	3.04	3.18	24.88
SUB TOTAL	70.71	64.82	0.00	63.52	63.93	63.93	64.20	0.00	63.72	66.73	521.57
1.4 JUSTIFIABLE EXPENDITURE	34.63	4.01	0.00	1.49	2.77	0.00	1.43	0.00	4.89	39.59	88.81
1.5 SEPARABLE COST											
CONSTRUCTION	7.26	1.56	0.00	0.30	0.86	0.86	1.37	0.00	0.67	4.19	17.07
ANNUAL O&M	.051	.011	0	.001	.006	.006	.009	0	.004	.029	0.12
O&M	0.36	0.08	0.00	0.01	0.04	0.04	0.06	0.00	0.03	0.20	0.82
SUB TOTAL	7.62	1.64	0.00	0.31	0.90	0.90	1.43	0.00	0.70	4.39	17.89
1.6 REMAINING JUSTI- FIABLE EXPENDITURE	27.01	2.37	0.00	1.18	1.87	0.00	0.00	0.00	4.19	35.20	71.82
1.7 PERCENTAGE DIS- TRIBUTION OF 1.6	37.61	3.30	0.00	1.65	2.60	0.00	0.00	0.00	5.84	49.01	100.00
1.8 REMAINING JOINT COST											
CONSTRUCTION	21.71	1.91	0.00	0.95	1.50	0.00	0.00	0.00	3.37	28.29	57.72
O&M	1.09	0.10	0.00	0.05	0.08	0.00	0.00	0.00	0.17	1.43	2.91
SUB TOTAL	22.80	2.00	0.00	1.00	1.58	0.00	0.00	0.00	3.54	29.71	60.63
1.9 TOTAL ALLOCATED COST											
CONSTRUCTION	28.97	3.47	0.00	1.25	2.36	0.86	1.37	0.00	4.04	32.48	74.79
O&M	1.45	0.17	0.00	0.05	0.12	0.04	0.06	0.00	0.20	1.63	3.73
TOTAL	30.42	3.64	0.00	1.31	2.48	0.90	1.43	0.00	4.24	34.11	78.52
PERCENTAGE OF DIS- TRIBUTION	38.74	4.64	0.00	1.66	3.16	1.15	1.82	0.00	5.40	43.44	100.00
2.1 ANNUAL COST											
CONSTRUCTION	4.12	0.49	0.00	0.18	0.34	0.12	0.19	0.00	0.57	4.62	10.64
O&M	.206	.024	0	.007	.016	.005	.008	0	.028	.231	.525

REMARKS; IN 1982 CONSTANT PRICE

Table 81 JOINT COST ALLOCATION OF BERIS DAM, LOW GROWTH CASE

Unit: $M\$10^6$

ITEM	KEDAH RIVER						MUDA RIVER				TOTAL
	IRRIGATION			D & I		RIVER MAINTE-NANCE FLOW	IRRIGATION		D & I		
	MADA MAIN	MADA MINOR	TRIBUTARY MINOR	PRIVATE	PUBLIC		MAIN	TRIBUTARY MINOR	PRIVATE	PUBLIC	
1.1 PROJECT COST TO BE ALLOCATED											
CONSTRUCTION											49.38
O&M											1.82
TOTAL											51.20
1.2 BENEFIT	31.20	3.89	24.26	0.00	0.00	0.00	0.71	5.60	0.26	3.03	68.95
1.3 ALTERNATIVE COST											
CONSTRUCTION	33.40	32.16	39.95	0.00	0.00	0.00	31.69	32.89	31.43	31.69	233.21
ANNUAL O&M	.188	.188	.217	0	0	0	.186	.184	.185	.186	1.334
O&M	1.32	1.32	1.52	0.00	0.00	0.00	1.31	1.29	1.30	1.31	9.37
SUB TOTAL	34.72	33.48	41.47	0.00	0.00	0.00	33.00	34.18	32.73	33.00	242.58
1.4 JUSTIFIABLE EXPENDITURE	31.20	3.89	24.26	0.00	0.00	0.00	0.71	5.60	0.26	3.03	68.95
1.5 SEPARABLE COST											
CONSTRUCTION	6.70	1.11	12.43	0.00	0.00	0.00	0.67	4.24	0.11	0.36	25.62
ANNUAL O&M	.03	.005	.054	0	0	0	.002	.026	.001	.001	.119
O&M	0.21	0.04	0.38	0.00	0.00	0.00	0.01	0.18	0.01	0.01	0.84
SUB TOTAL	6.91	1.15	12.81	0.00	0.00	0.00	0.68	4.42	0.12	0.37	26.46
1.6 REMAINING JUSTIFIABLE EXPENDITURE	24.29	2.74	11.45	0.00	0.00	0.00	0.03	1.18	0.14	2.66	42.49
1.7 PERCENTAGE DISTRIBUTION OF 1.6	57.16	6.46	26.95	0.00	0.00	0.00	0.06	2.77	0.34	6.27	100.00
1.8 REMAINING JOINT COST											
CONSTRUCTION	13.58	1.53	6.40	0.00	0.00	0.00	0.01	0.66	0.08	1.49	23.76
O&M	0.56	0.06	0.27	0.00	0.00	0.00	0.00	0.03	0.00	0.06	0.98
SUB TOTAL	14.14	1.60	6.67	0.00	0.00	0.00	0.02	0.69	0.08	1.55	24.74
1.9 TOTAL ALLOCATED COST											
CONSTRUCTION	20.28	2.64	18.83	0.00	0.00	0.00	0.68	4.90	0.19	1.85	49.38
O&M	0.77	0.10	0.64	0.00	0.00	0.00	0.01	0.21	0.01	0.07	1.82
TOTAL	21.05	2.74	19.48	0.00	0.00	0.00	0.70	5.11	0.20	1.92	51.20
PERCENTAGE OF DISTRIBUTION	41.12	5.36	38.04	0.00	0.00	0.00	1.37	9.98	0.39	3.75	100.00
2.1 ANNUAL COST											
CONSTRUCTION	2.89	0.38	2.68	0.00	0.00	0.00	0.10	0.70	0.03	0.26	7.03
O&M	.11	.014	.091	0	0	0	.002	.029	.001	.009	.256

REMARKS; IN 1982 CONSTANT PRICE

Table 82 JOINT COST ALLOCATION OF TAWAR-MUDA DAM, LOW GROWTH CASE

Unit: M$10^6

ITEM	KEDAH RIVER						MUDA RIVER				TOTAL
	IRRIGATION			D & I		RIVER MAINTE-	IRRIGATION		D & I		
	MADA MAIN	MADA TRIBUTAR- MINOR Y MINOR		PRIVATE	PUBLIC	NANCE FLOW	MAIN	TRIBUTAR- MINOR Y MINOR	PRIVATE	PUBLIC	
1.1 PROJECT COST TO BE ALLOCATED											
CONSTRUCTION											74.79
O&M											3.73
TOTAL											78.52
1.2 BENEFIT	51.63	5.67	0.00	0.06	0.18	0.00	1.12	0.00	0.48	5.54	64.68
1.3 ALTERNATIVE COST											
CONSTRUCTION	70.60	62.31	0.00	60.49	60.49	0.00	61.14	0.00	6.42	6.45	327.90
ANNUAL O&M	.502	.444	0	.432	.432	0	.436	0	.432	.433	3.111
O&M	3.53	3.12	0.00	3.04	3.04	0.00	3.06	0.00	3.04	3.04	21.86
SUB TOTAL	74.13	65.43	0.00	63.53	63.53	0.00	64.20	0.00	9.46	9.49	349.76
1.4 JUSTIFIABLE EXPENDITURE	51.63	5.67	0.00	0.06	0.18	0.00	1.12	0.00	0.48	5.54	64.68
1.5 SEPARABLE COST											
CONSTRUCTION	11.24	2.62	0.00	0.05	0.08	0.00	1.05	0.00	0.10	0.80	15.94
ANNUAL O&M	.079	.018	0	0	0	0	.008	0	0	.005	.11
O&M	0.56	0.13	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.04	0.77
SUB TOTAL	11.80	2.75	0.00	0.05	0.08	0.00	1.11	0.00	0.10	0.84	16.71
1.6 REMAINING JUSTI- FIABLE EXPENDITURE	39.83	2.92	0.00	0.01	0.10	0.00	0.01	0.00	0.38	4.70	47.97
1.7 PERCENTAGE DIS- TRIBUTION OF 1.6	83.05	6.09	0.00	0.02	0.21	0.00	0.03	0.00	0.79	9.81	100.00
1.8 REMAINING JOINT COST											
CONSTRUCTION	48.87	3.59	0.00	0.01	0.12	0.00	0.02	0.00	0.47	5.77	58.85
O&M	2.46	0.18	0.00	0.00	0.01	0.00	0.00	0.00	0.02	0.29	2.96
SUB TOTAL	51.33	3.77	0.00	0.01	0.13	0.00	0.02	0.00	0.49	6.06	61.81
1.9 TOTAL ALLOCATED COST											
CONSTRUCTION	60.11	6.21	0.00	0.06	0.20	0.00	1.07	0.00	0.57	6.57	74.79
O&M	3.01	0.31	0.00	0.00	0.01	0.00	0.06	0.00	0.02	0.33	3.73
TOTAL	63.12	6.51	0.00	0.06	0.21	0.00	1.12	0.00	0.59	6.90	78.52
PERCENTAGE OF DIS- TRIBUTION	80.39	8.30	0.00	0.08	0.27	0.00	1.43	0.00	0.75	8.78	100.00
2.1 ANNUAL COST											
CONSTRUCTION	8.55	0.88	0.00	0.01	0.03	0.00	0.15	0.00	0.08	0.94	10.64
O&M	.428	.043	0	0	0	0	.008	0	.003	.046	0.53

REMARKS; IN 1982 CONSTANT PRICE

Table 83 JOINT COST ALLOCATION OF JENIANG SYSTEM, HIGH GROWTH CASE

		Kedah RiveKedah River						
		Irrigation		Tributary Minor	D/I Water Supply		River Mainte-	
		MADA Main	MADA Minor	Irri-gation	Private	Public	nance Flow	Total
Net Water Output	10^6 m^3	156.0	29.5	-	6.3	11.6	11.6	215.0
Proportion in %		72.6	13.7	-	2.9	5.4	5.4	100
Total Allocated Cost								
Construc-tion	M10^6	53.72	10.14	-	2.15	4.00	4.00	74.0
Annual O&M	M10^6	0.109	0.021	-	0.004	0.008	0.008	0.15

Remarks; In 1982 constant price

Table 84 JOINT COST ALLOCATION OF JENIANG SYSTEM, LOW GROWTH CASE

		Kedah River						
		Irrigation		Tributary Minor	D/I Water Supply		River Mainte-	
		MADA Main	MADA Minor	Irri-gation	Private	Public	nance Flow	Total
Net Water Output	10^6 m^3	180.2	34.1	-	0.2	0.5	-	215.0
Proportion in %		83.8	15.9	-	0.1	0.2	-	100
Total Allocated Cost								
Construc-tion	M10^6	62.01	11.77	-	0.07	0.15	-	74.0
Annual O&M	M10^6	0.126	0.024	-	0.00	0.00	-	0.15

Remarks; In 1982 constant price

Table 85 ALLOCATION OF INVESTMENT COST FOR SOURCE FACILITIES, HIGH GROWTH CASE

Unit: $M\$10^6$

STATE AND SECTER	JENIANG SYSTEM					BERIS DAM					TAWAR-MUDA DAM				
	(%)	4MP	5MP	6MP	7MP	(%)	4MP	5MP	6MP	7MP	(%)	4MP	5MP	6MP	7MP
1. THE STSTES OF PERLIS / KEDAH															
(1) MADA MINOR IRRIGATION	13.70	0.30	9.83	0.00	0.00	3.44	0.15	2.40	0.00	0.00	4.64	0.34	4.98	0.00	0.00
(2) KEDAH TRIBUTARY IRRIGATION	0.00	0.00	0.00	0.00	0.00	36.22	1.63	25.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(3) PRIVATE WATER SUPPLY IN THE KEDAH RIVER	2.90	0.06	2.08	0.00	0.00	0.79	0.04	0.55	0.00	0.00	1.67	0.12	1.79	0.00	0.00
(4) PUBLIC WATER SUPPLY IN THE KEDAH RIVER	5.40	0.12	3.88	0.00	0.00	1.26	0.06	0.87	0.00	0.00	3.16	0.23	3.39	0.00	0.00
(5) RIVER MAINTENANCE FLOW IN THE KEDAH RIVER	5.40	0.12	3.88	0.00	0.00	0.73	0.03	0.51	0.00	0.00	1.15	0.08	1.23	0.00	0.00
(6) MUDA MAIN MINOR IRRIGATION	0.00	0.00	0.00	0.00	0.00	0.77	0.03	0.54	0.00	0.00	1.83	0.12	1.97	0.00	0.00
(7) MUDA TRIBUTARY MINOR IRRIGATION	0.00	0.00	0.00	0.00	0.00	15.06	0.68	10.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(8) PRIVATE WATER SUPPLY IN THE MUDA RIVER	0.00	0.00	0.00	0.00	0.00	1.09	0.05	0.76	0.00	0.00	2.65	0.19	2.84	0.00	0.00
(9) PUBLIC WATER SUPPLY IN THE MUDA RIVER	0.00	0.00	0.00	0.00	0.00	2.36	0.11	1.65	0.00	0.00	6.08	0.44	6.53	0.00	0.00
*** TOTAL ***	27.40	0.61	19.67	0.00	0.00	61.73	2.78	43.00	0.00	0.00	21.17	1.53	22.73	0.00	0.00
2. MADA															
(1) MADA MAIN IRRIGATION SCHEME	72.60	1.61	52.11	0.00	0.00	22.68	1.02	15.80	0.00	0.00	38.73	2.80	41.59	0.00	0.00
3. THE STATE OF PULAU PINANG															
(1) PRIVATE WATER SUPPLY IN THE MUDA RIVER	0.00	0.00	0.00	0.00	0.00	1.09	0.05	0.76	0.00	0.00	2.75	0.20	2.96	0.00	0.00
(2) PUBLIC WATER SUPPLY IN THE MUDA RIVER	0.00	0.00	0.00	0.00	0.00	14.50	0.65	10.11	0.00	0.00	37.34	2.70	40.10	0.00	0.00
*** TOTAL ***	0.00	0.00	0.00	0.00	0.00	15.60	0.70	10.87	0.00	0.00	40.10	2.90	43.06	0.00	0.00
*** GRAND TOTAL ***	100.00	2.22	71.78	0.00	0.00	100.00	4.50	69.67	0.00	0.00	100.00	7.24	107.38	0.00	0.00

Table 86 ALLOCATION OF O&M COST FOR SOURCE FACILITIES, HIGH GROWTH CASE

Unit: $M\$10^6$

STATE AND SECTER	JENIANG SYSTEM					BERIS DAM					TAWAR-MUDA DAM				
	(%)	4MP	5MP	6MP	7MP	(%)	4MP	5MP	6MP	7MP	(%)	4MP	5MP	6MP	7MP
1. THE STSTES OF PERLIS / KEDAH															
(1) MADA MINOR IRRIGATION	13.70	0.00	0.05	0.12	0.13	3.28	0.00	0.01	0.04	0.04	4.57	0.00	0.00	0.12	0.12
(2) KEDAH TRIBUTARY IRRIGATION	0.00	0.00	0.00	0.00	0.00	33.88	0.00	0.09	0.04	0.04	0.00	0.00	0.00	0.00	0.00
(3) PRIVATE WATER SUPPLY IN THE KEDAH RIVER	2.90	0.00	0.01	0.02	0.03	0.55	0.00	0.00	0.01	0.01	1.34	0.00	0.00	0.04	0.04
(4) PUBLIC WATER SUPPLY IN THE KEDAH RIVER	5.40	0.00	0.02	0.05	0.05	1.09	0.00	0.00	0.01	0.01	3.23	0.00	0.00	0.09	0.09
(5) RIVER MAINTENANCE FLOW IN THE KEDAH RIVER	5.40	0.00	0.02	0.05	0.05	0.55	0.00	0.00	0.01	0.01	1.08	0.00	0.00	0.03	0.03
(6) MUDA MAIN MINOR IRRIGATION	0.00	0.00	0.00	0.00	0.00	0.55	0.00	0.00	0.01	0.01	1.61	0.00	0.00	0.04	0.04
(7) MUDA TRIBUTARY MINOR IRRIGATION	0.00	0.00	0.00	0.00	0.00	14.21	0.00	0.04	0.18	0.18	0.00	0.00	0.00	0.00	0.00
(8) PRIVATE WATER SUPPLY IN THE MUDA RIVER	0.00	0.00	0.00	0.00	0.00	1.09	0.00	0.00	0.01	0.01	2.63	0.00	0.00	0.07	0.07
(9) PUBLIC WATER SUPPLY IN THE MUDA RIVER	0.00	0.00	0.00	0.00	0.00	2.68	0.00	0.01	0.03	0.03	6.13	0.00	0.00	0.16	0.16
*** TOTAL ***	27.40	0.00	0.10	0.23	0.26	57.87	0.00	0.15	0.75	0.75	20.60	0.00	0.00	0.55	0.55
2. MADA															
(1) MADA MAIN IRRIGATION SCHEME	72.60	0.00	0.25	0.62	0.70	24.59	0.00	0.06	0.32	0.32	38.98	0.00	0.00	1.03	1.03
3. THE STATE OF PULAU PINANG															
(1) PRIVATE WATER SUPPLY IN THE MUDA RIVER	0.00	0.00	0.00	0.00	0.00	1.09	0.00	0.00	0.01	0.01	2.74	0.00	0.00	0.07	0.07
(2) PUBLIC WATER SUPPLY IN THE MUDA RIVER	0.00	0.00	0.00	0.00	0.00	16.45	0.00	0.04	0.21	0.21	37.68	0.00	0.00	1.00	1.00
*** TOTAL ***	0.00	0.00	0.00	0.00	0.00	17.54	0.00	0.05	0.23	0.23	40.42	0.00	0.00	1.07	1.07
*** GRAND TOTAL ***	100.00	0.00	0.35	0.85	0.96	100.00	0.00	0.26	1.29	1.29	100.00	0.00	0.00	2.65	2.65

Table 87 ALLOCATION OF INVESTMENT COST FOR SOURCE FACILITIES, LOW GROWTH CASE

Unit: $M\$10^6$

STATE AND SECTER	JENIANG SYSTEM					BERIS DAM					TAWAR-MUDA DAM				
	(%)	4MP	5MP	6MP	7MP	(%)	4MP	5MP	6MP	7MP	(%)	4MP	5MP	6MP	7MP
1. THE STSTES OF PERLIS / KEDAH															
(1) MADA MINOR IRRIGATION	15.90	0.35	11.41	0.00	0.00	5.35	0.24	3.73	0.00	0.00	8.30	0.60	8.92	0.00	0.00
(2) KEDAH TRIBUTARY IRRIGATION	0.00	0.00	0.00	0.00	0.00	38.14	1.72	26.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(3) PRIVATE WATER SUPPLY IN THE KEDAH RIVER	0.10	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.01	0.09	0.00	0.00
(4) PUBLIC WATER SUPPLY IN THE KEDAH RIVER	0.20	0.00	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.02	0.29	0.00	0.00
(5) RIVER MAINTENANCE FLOW IN THE KEDAH RIVER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(6) MUDA MAIN MINOR IRRIGATION	0.00	0.00	0.00	0.00	0.00	1.38	0.06	0.96	0.00	0.00	1.43	0.10	1.54	0.00	0.00
(7) MUDA TRIBUTARY MINOR IRRIGATION	0.00	0.00	0.00	0.00	0.00	9.93	0.45	6.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(8) PRIVATE WATER SUPPLY IN THE MUDA RIVER	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.07	0.00	0.00	0.23	0.02	0.25	0.00	0.00
(9) PUBLIC WATER SUPPLY IN THE MUDA RIVER	0.00	0.00	0.00	0.00	0.00	0.45	0.02	0.31	0.00	0.00	0.97	0.07	1.04	0.00	0.00
*** TOTAL ***	16.20	0.36	11.63	0.00	0.00	55.34	2.49	38.56	0.00	0.00	11.28	0.82	12.11	0.00	0.00
2. MADA															
(1) MADA MAIN IRRIGATION SCHEME	83.80	1.86	60.15	0.00	0.00	41.08	1.85	28.62	0.00	0.00	80.37	5.82	86.30	0.00	0.00
3. THE STATE OF PULAU PINANG															
(1) PRIVATE WATER SUPPLY IN THE MUDA RIVER	0.00	0.00	0.00	0.00	0.00	0.28	0.01	0.20	0.00	0.00	0.53	0.04	0.57	0.00	0.00
(2) PUBLIC WATER SUPPLY IN THE MUDA RIVER	0.00	0.00	0.00	0.00	0.00	3.30	0.15	2.30	0.00	0.00	7.82	0.57	8.40	0.00	0.00
*** TOTAL ***	0.00	0.00	0.00	0.00	0.00	3.58	0.16	2.49	0.00	0.00	8.35	0.60	8.97	0.00	0.00
*** GRAND TOTAL ***	100.00	2.22	71.78	0.00	0.00	100.00	4.50	69.67	0.00	0.00	100.00	7.24	107.38	0.00	0.00

Table 88 ALLOCATION OF O&M COST FOR SOURCE FACILITIES, LOW GROWTH CASE

Unit: $M\$10^6$

STATE AND SECTER	JENIANG SYSTEM					BERIS DAM					TAWAR-MUDA DAM				
	(%)	4MP	5MP	6MP	7MP	(%)	4MP	5MP	6MP	7MP	(%)	4MP	5MP	6MP	7MP
1. THE STSTES OF PERLIS / KEDAH															
(1) MADA MINOR IRRIGATION	15.90	0.00	0.06	0.14	0.15	5.52	0.00	0.01	0.07	0.07	8.29	0.00	0.00	0.22	0.22
(2) KEDAH TRIBUTARY IRRIGATION	0.00	0.00	0.00	0.00	0.00	35.36	0.00	0.09	0.46	0.46	0.00	0.00	0.00	0.00	0.00
(3) PRIVATE WATER SUPPLY IN THE KEDAH RIVER	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
(4) PUBLIC WATER SUPPLY IN THE KEDAH RIVER	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.00	0.00	0.01	0.01
(5) RIVER MAINTENANCE FLOW IN THE KEDAH RIVER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(6) MUDA MAIN MINOR IRRIGATION	0.00	0.00	0.00	0.00	0.00	0.55	0.00	0.00	0.01	0.01	1.60	0.00	0.00	0.04	0.04
(7) MUDA TRIBUTARY MINOR IRRIGATION	0.00	0.00	0.00	0.00	0.00	11.60	0.00	0.03	0.15	0.15	0.00	0.00	0.00	0.00	0.00
(8) PRIVATE WATER SUPPLY IN THE MUDA RIVER	0.00	0.00	0.00	0.00	0.00	0.15	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.00	0.00
(9) PUBLIC WATER SUPPLY IN THE MUDA RIVER	0.00	0.00	0.00	0.00	0.00	0.46	0.00	0.00	0.01	0.01	0.97	0.00	0.00	0.03	0.03
*** TOTAL ***	16.20	0.00	0.06	0.14	0.16	53.65	0.00	0.14	0.69	0.69	11.29	0.00	0.00	0.30	0.30
2. MADA															
(1) MADA MAIN IRRIGATION SCHEME	83.80	0.00	0.29	0.71	0.80	42.54	0.00	0.11	0.55	0.55	80.48	0.00	0.00	2.14	2.14
3. THE STATE OF PULAU RINANG															
(1) PRIVATE WATER SUPPLY IN THE MUDA RIVER	0.00	0.00	0.00	0.00	0.00	0.40	0.00	0.00	0.01	0.01	0.37	0.00	0.00	0.01	0.01
(2) PUBLIC WATER SUPPLY IN THE MUDA RIVER	0.00	0.00	0.00	0.00	0.00	3.40	0.00	0.01	0.04	0.04	7.85	0.00	0.00	0.21	0.21
*** TOTAL ***	0.00	0.00	0.00	0.00	0.00	3.81	0.00	0.01	0.05	0.05	8.23	0.00	0.00	0.22	0.22
*** GRAND TOTAL ***	100.00	0.00	0.35	0.85	0.96	100.00	0.00	0.26	1.29	1.29	100.00	0.00	0.00	2.65	2.65

Table 89 DISBURSEMENT SCHEDULE OF PUBLIC AND PRIVATE INVESTMENT COST FOR WATER DEMAND AND SUPPLY BALANCE PLAN BY MP IN HIGH GROWTH CASE (1/2)

Unit: M$10^6

ITEM		4MP	5MP	6MP	7MP	TOTAL
I. PERLIS/KEDAH						
IRRIGATION (MINOR SCHEME)						
	DIRECT FACILITIES	49.90	23.40	31.70	31.70	136.70
	TIMAH-TASOH	0.00	18.60	0.00	0.00	18.60
	ARAN	0.00	16.00	0.00	0.00	16.00
	JENIANG	0.30	9.83	0.00	0.00	10.13
	BERIS	2.49	38.67	0.00	0.00	41.16
	TAWAR-MUDA	0.47	6.95	0.00	0.00	0.16
		53.16	113.45	31.70	31.70	222.75
PUBLIC WATER SUPPLY						
	DIRECT FACILITIES	150.70	352.60	375.80	152.80	1031.90
	AHNING	0.00	34.38	0.00	0.00	34.38
	JENIANG	0.12	3.88	0.00	0.00	4.00
	BERIS	0.17	2.52	0.00	0.00	2.69
	TAWAR-MUDA	0.67	9.92	0.00	0.00	10.59
		151.66	403.30	375.80	152.80	1083.56
PRIVATE WATER SUPPLY						
	DIRECT FACILITIES	94.20	412.40	556.60	222.50	1285.70
	AHNING	0.00	21.62	0.00	0.00	21.62
	JENIANG	0.06	2.08	0.00	0.00	2.14
	BERIS	0.09	1.31	0.00	0.00	1.40
	TAWAR-MUDA	0.31	4.63	0.00	0.00	4.94
		94.66	442.04	556.60	222.50	1315.80
RIVER MAINTENANCE FLOW						
	DIRECT FACILITIES	0.00	0.00	0.00	0.00	0.00
	JENIANG	0.12	3.88	0.00	0.00	4.00
	BERIS	0.03	0.51	0.00	0.00	0.54
	TAWAR-MUDA	0.08	1.23	0.00	0.00	1.31
		0.23	5.62	0.00	0.00	5.85
SUB-TOTAL	DIRECT FACILITIES	294.80	788.40	964.10	407.00	2454.30
	TIMAH-TASOH	0.00	18.60	0.00	0.00	18.60
	ARAN	0.00	16.00	0.00	0.00	16.00
	AHNING	0.00	56.00	0.00	0.00	56.00
	JENIANG	0.60	19.67	0.00	0.00	20.27
	BERIS	2.78	43.01	0.00	0.00	45.79
	TAWAR-MUDA	1.53	22.73	0.00	0.00	24.26
		299.71	964.41	964.10	407.00	2635.22
II. MADA						
IRRIGATION (MAJOR SCHEME)						
	DIRECT FACILITIES	128.70	171.00	268.90	268.90	837.50
	JENIANG	1.61	52.11	0.00	0.00	53.72
	BERIS	1.02	15.80	0.00	0.00	16.82
	TAWAR-MUDA	2.80	41.59	0.00	0.00	44.39
		134.13	280.50	268.90	268.90	952.43

Table 90 DISBURSEMENT SCHEDULE OF PUBLIC AND PRIVATE INVESTMENT COST FOR WATER DEMAND AND SUPPLY BALANCE PLAN BY MP IN HIGH GROWTH CASE (2/2)

Unit: M$10^6

IRRIGATION (MINOR SCHEME)						
	DIRECT FACILITIES	0.00	1.30	0.00	0.00	1.30
	JENIANG	0.00	0.00	0.00	0.00	0.00
	BERIS	0.00	0.00	0.00	0.00	0.00
	TAWAR-MUDA	0.00	0.00	0.00	0.00	0.00
		0.00	1.30	0.00	0.00	1.30
PUBLIC WATER SUPPLY						
	DIRECT FACILITIES	194.40	491.70	549.50	219.30	1454.90
	MENGKUANG	62.00	0.00	0.00	0.00	62.00
	JENIANG	0.00	0.00	0.00	0.00	0.00
	BERIS	0.65	10.11	0.00	0.00	10.76
	TAWAR-MUDA	2.70	40.10	0.00	0.00	42.80
		259.75	541.91	549.50	219.30	1570.46
PRIVATE WATER SUPPLY						
	DIRECT FACILITIES	180.00	404.40	424.10	169.60	1178.10
	JENIANG	0.00	0.00	0.00	0.00	0.00
	BERIS	0.05	0.76	0.00	0.00	0.81
	TAWAR-MUDA	0.20	2.96	0.00	0.00	3.16
		180.25	408.12	424.10	169.60	1182.07
RIVER MAINTENANCE FLOW						
	DIRECT FACILITIES	0.00	0.00	0.00	0.00	0.00
	JENIANG	0.00	0.00	0.00	0.00	0.00
	BERIS	0.00	0.00	0.00	0.00	0.00
	TAWAR-MUDA	0.00	0.00	0.00	0.00	0.00
		0.00	0.00	0.00	0.00	0.00
SUB-TOTAL	DIRECT FACILITIES	374.40	897.40	973.60	388.90	2634.30
	MENGKUANG	62.00	0.00	0.00	0.00	62.00
	JENIANG	0.00	0.00	0.00	0.00	0.00
	BERIS	0.70	10.87	0.00	0.00	11.57
	TAWAR-MUDA	2.90	43.06	0.00	0.00	45.96
		440.00	951.33	973.60	388.90	2753.83
GRAND TOTAL	T FACILITIES	797.90	1856.80	2206.60	1064.80	5926.10
	TIMAH-TASOH	0.00	18.60	0.00	0.00	18.60
	ARAN	0.00	16.00	0.00	0.00	16.00
	AMNING	0.00	56.00	0.00	0.00	56.00
	MENGKUANG	62.00	0.00	0.00	0.00	62.00
	JENIANG	2.21	71.78	0.00	0.00	73.99
	BERIS	4.50	69.68	0.00	0.00	74.18
	TAWAR-MUDA	7.23	107.38	0.00	0.00	114.61
		873.84	2196.24	2206.60	1064.80	6341.48

Table 91 DISBURSEMENT SCHEDULE OF PUBLIC AND PRIVATE O&M COST FOR WATER DEMAND AND SUPPLY BALANCE PLAN BY MP IN HIGH GROWTH CASE (1/2)

Unit: M$10^6

ITEM		4MP	5MP	6MP	7MP	TOTAL
I. PERLIS/KEDAH						
IRRIGATION (MINOR SCHEME)						
	DIRECT FACILITIES	0.00	0.75	1.10	1.58	3.42
	TIMAH-TASOH	0.00	0.00	0.45	0.45	0.90
	ARAN	0.00	0.00	0.40	0.40	0.80
	JENIANG	0.00	0.05	0.12	0.13	0.30
	BERIS	0.00	0.05	0.67	0.67	1.39
	TAWAR-MUDA	0.00	0.00	0.11	0.16	0.16
		0.00	0.85	2.85	3.39	6.97
PUBLIC WATER SUPPLY						
	DIRECT FACILITIES	0.00	19.10	54.40	92.20	165.70
	AHNING	0.00	0.00	0.93	0.93	1.86
	JENIANG	0.00	0.02	0.05	0.05	0.12
	BERIS	0.00	0.01	0.04	0.04	0.09
	TAWAR-MUDA	0.00	0.00	0.25	0.25	0.50
		0.00	19.13	55.67	93.47	168.27
PRIVATE WATER SUPPLY						
	DIRECT FACILITIES	0.00	11.80	53.10	108.70	173.60
	AHNING	0.00	0.00	0.47	0.47	0.94
	JENIANG	0.00	0.01	0.02	0.03	0.06
	BERIS	0.00	0.00	0.02	0.02	0.04
	TAWAR-MUDA	0.00	0.00	0.11	0.11	0.22
		0.00	11.81	53.72	109.33	174.86
RIVER MAINTENANCE FLOW						
	DIRECT FACILITIES	0.00	0.00	0.00	0.00	0.00
	JENIANG	0.00	0.02	0.05	0.00	0.07
	BERIS	0.00	0.00	0.01	0.01	0.02
	TAWAR-MUDA	0.00	0.00	0.03	0.03	0.06
		0.00	0.02	0.09	0.04	0.15
SUB-TOTAL	DIRECT FACILITIES	0.00	31.65	108.60	202.48	342.72
	TIMAH-TASOH	0.00	0.00	0.45	0.45	0.90
	ARAN	0.00	0.00	0.40	0.40	0.80
	AHNING	0.00	0.00	1.40	1.40	2.80
	JENIANG	0.00	0.10	0.24	0.21	0.55
	BERIS	0.00	0.06	0.74	0.74	1.54
	TAWAR-MUDA	0.00	0.00	0.50	0.55	1.05
		0.00	31.81	112.33	205.23	350.36
II. MADA						
IRRIGATION (MAJOR SCHEME)						
	DIRECT FACILITIES	0.00	1.93	4.50	8.53	14.96
	JENIANG	0.00	0.25	0.62	0.70	1.57
	BERIS	0.00	0.06	0.32	0.32	0.70
	TAWAR-MUDA	0.00	0.00	1.03	1.03	2.06
		0.00	2.24	6.47	10.58	19.29

Table 92 DISBURSEMENT SCHEDULE OF PUBLIC AND PRIVATE O&M COST FOR WATER DEMAND AND SUPPLY BALANCE PLAN BY MP IN HIGH GROWTH CASE (2/2)

Unit: M$10^6

III. PULAU-PINANG						
IRRIGATION (MINOR SCHEME)						
	DIRECT FACILITIES	0.00	0.00	0.02	0.02	0.04
	JENIANG	0.00	0.00	0.00	0.00	0.00
	BERIS	0.00	0.00	0.00	0.00	0.00
	TAWAR-MUDA	0.00	0.00	0.00	0.00	0.00
		0.00	0.00	0.02	0.02	0.04
PUBLIC WATER SUPPLY						
	DIRECT FACILITIES	0.00	24.30	73.40	128.40	226.10
	MENGKUANG	0.00	1.55	1.55	1.55	4.65
	JENIANG	0.00	0.00	0.00	0.00	0.00
	BERIS	0.00	0.04	0.21	0.21	0.46
	TAWAR-MUDA	0.00	0.00	1.00	1.00	2.00
		0.00	25.89	76.16	131.16	233.21
PRIVATE WATER SUPPLY						
	DIRECT FACILITIES	0.00	22.50	63.00	105.40	190.90
	JENIANG	0.00	0.00	0.00	0.00	0.00
	BERIS	0.00	0.00	0.01	0.01	0.02
	TAWAR-MUDA	0.00	0.00	0.07	0.07	0.14
		0.00	22.50	63.08	105.48	191.06
RIVER MAINTENANCE FLOW						
	DIRECT FACILITIES	0.00	0.00	0.00	0.00	0.00
	JENIANG	0.00	0.00	0.00	0.00	0.00
	BERIS	0.00	0.00	0.00	0.00	0.00
	TAWAR-MUDA	0.00	0.00	0.00	0.00	0.00
		0.00	0.00	0.00	0.00	0.00
SUB-TOTAL	DIRECT FACILITIES	0.00	46.80	136.42	233.82	417.04
	MENGKUANG	0.00	1.55	1.55	1.55	4.65
	JENIANG	0.00	0.00	0.00	0.00	0.00
	BERIS	0.00	0.04	0.22	0.22	0.48
	TAWAR-MUDA	0.00	0.00	1.07	1.07	2.14
		0.00	48.39	139.26	236.66	424.31
GRAND TOTAL	T FACILITIES	0.00	80.38	249.52	444.82	774.72
	TIMAH-TASOH	0.00	0.00	0.45	0.45	0.90
	ARAN	0.00	0.00	0.40	0.40	0.80
	AHNING	0.00	0.00	1.40	1.40	2.80
	MENGKUANG	0.00	1.55	1.55	1.55	4.65
	JENIANG	0.00	0.35	0.86	0.91	2.12
	BERIS	0.00	0.16	1.28	1.28	2.72
	TAWAR-MUDA	0.00	0.00	2.60	2.65	5.25
		0.00	82.44	258.06	453.46	793.96

Table 93 DISBURSEMENT SCHEDULE OF PUBLIC AND PRIVATE INVESTMENT COST FOR WATER DEMAND AND SUPPLY BALANCE PLAN BY MP IN LOW GROWTH CASE (1/2)

Unit: M$10^6

ITEM		4MP	5MP	6MP	7MP	TOTAL
I. PERLIS/KEDAH						
IRRIGATION (MINOR SCHEME)						
	DIRECT FACILITIES	49.90	23.40	31.70	31.70	136.70
	TIMAH-TASOH	0.00	21.20	0.00	0.00	21.20
	ARAN	0.00	16.00	0.00	0.00	16.00
	JENIANG	0.35	11.41	0.00	0.00	11.76
	BERIS	2.47	38.17	0.00	0.00	40.64
	TAWAR-MUDA	0.70	10.46	0.00	0.00	0.16
		53.42	120.64	31.70	31.70	226.46
PUBLIC WATER SUPPLY						
	DIRECT FACILITIES	106.20	186.50	158.30	65.30	514.30
	AHNING	0.00	34.38	0.00	0.00	34.38
	JENIANG	0.00	0.14	0.00	0.00	0.14
	BERIS	0.02	0.31	0.00	0.00	0.33
	TAWAR-MUDA	0.09	1.33	0.00	0.00	1.42
		106.31	220.66	158.30	65.30	550.57
PRIVATE WATER SUPPLY						
	DIRECT FACILITIES	37.00	83.20	87.00	34.80	242.00
	AHNING	0.00	21.62	0.00	0.00	21.62
	JENIANG	0.00	0.07	0.00	0.00	0.07
	BERIS	0.00	0.07	0.00	0.00	0.07
	TAWAR-MUDA	0.03	0.34	0.00	0.00	0.37
		37.03	105.30	87.00	34.80	264.13
RIVER MAINTENANCE FLOW						
	DIRECT FACILITIES	0.00	0.00	0.00	0.00	0.00
	JENIANG	0.00	0.00	0.00	0.00	0.00
	BERIS	0.00	0.00	0.00	0.00	0.00
	TAWAR-MUDA	0.00	0.00	0.00	0.00	0.00
		0.00	0.00	0.00	0.00	0.00
SUB-TOTAL	DIRECT FACILITIES	193.10	291.10	277.00	131.80	893.00
	TIMAH-TASOH	0.00	21.20	0.00	0.00	21.20
	ARAN	0.00	16.00	0.00	0.00	16.00
	AHNING	0.00	56.00	0.00	0.00	56.00
	JENIANG	0.35	11.62	0.00	0.00	11.97
	BERIS	2.49	38.55	0.00	0.00	41.04
	TAWAR-MUDA	0.82	12.13	0.00	0.00	12.95
		196.76	446.60	277.00	131.80	1052.16
II. MADA						
IRRIGATION (MAJOR SCHEME)						
	DIRECT FACILITIES	128.70	171.00	268.90	268.90	837.50
	JENIANG	1.86	60.15	0.00	0.00	62.01
	BERIS	1.85	28.62	0.00	0.00	30.47
	TAWAR-MUDA	5.82	86.30	0.00	0.00	92.12
		138.23	346.07	268.90	268.90	1022.10

Table 94 DISBURSEMENT SCHEDULE OF PUBLIC AND PRIVATE INVESTMENT COST FOR WATER DEMAND AND SUPPLY BALANCE PLAN BY MP IN LOW GROWTH CASE (2/2)

Unit: M$10^6

III. PULAU-PINANG						
IRRIGATION (MINOR SCHEME)						
	DIRECT FACILITIES	0.00	1.30	0.00	0.00	1.30
	JENIANG	0.00	0.00	0.00	0.00	0.00
	BERIS	0.00	0.00	0.00	0.00	0.00
	TAWAR-MUDA	0.00	0.00	0.00	0.00	0.00
		0.00	1.30	0.00	0.00	1.30
PUBLIC WATER SUPPLY						
	DIRECT FACILITIES	115.60	290.80	323.70	129.60	859.70
	MENGKUANG	62.00	0.00	0.00	0.00	62.00
	JENIANG	0.00	0.00	0.00	0.00	0.00
	BERIS	0.15	2.30	0.00	0.00	2.45
	TAWAR-MUDA	0.57	8.40	0.00	0.00	8.97
		178.32	301.50	323.70	129.60	933.12
PRIVATE WATER SUPPLY						
	DIRECT FACILITIES	97.00	219.80	231.70	92.70	641.20
	JENIANG	0.00	0.00	0.00	0.00	0.00
	BERIS	0.01	0.20	0.00	0.00	0.21
	TAWAR-MUDA	0.04	0.57	0.00	0.00	0.61
		97.05	220.57	231.70	92.70	642.02
RIVER MAINTENANCE FLOW						
	DIRECT FACILITIES	0.00	0.00	0.00	0.00	0.00
	JENIANG	0.00	0.00	0.00	0.00	0.00
	BERIS	0.00	0.00	0.00	0.00	0.00
	TAWAR-MUDA	0.00	0.00	0.00	0.00	0.00
		0.00	0.00	0.00	0.00	0.00
SUB-TOTAL	DIRECT FACILITIES	212.60	511.90	555.40	222.30	1502.20
	MENGKUANG	62.00	0.00	0.00	0.00	62.00
	JENIANG	0.00	0.00	0.00	0.00	0.00
	BERIS	0.16	2.50	0.00	0.00	2.66
	TAWAR-MUDA	0.61	8.97	0.00	0.00	9.58
		275.37	523.37	555.40	222.30	1576.44
GRAND TOTAL	DIRECT FACILITIES	534.40	974.00	1101.30	623.00	3232.70
	TIMAH-TASOH	0.00	21.20	0.00	0.00	21.20
	ARAM	0.00	16.00	0.00	0.00	16.00
	AHNING	0.00	56.00	0.00	0.00	56.00
	MENGKUANG	62.00	0.00	0.00	0.00	62.00
	JENIANG	2.21	71.77	0.00	0.00	73.98
	BERIS	4.50	69.67	0.00	0.00	74.17
	TAWAR-MUDA	7.25	107.40	0.00	0.00	114.65
		610.36	1316.04	1101.30	623.00	3650.70

Table 95 DISBURSEMENT SCHEDULE OF PUBLIC AND PRIVATE O&M COST FOR WATER DEMAND AND SUPPLY BALANCE PLAN BY MP IN LOW GROWTH CASE (1/2)

Unit: $M\$10^6$

ITEM		4MP	5MP	6MP	7MP	TOTAL
I. PERLIS/KEDAH						
IRRIGATION (MINOR SCHEME)						
	DIRECT FACILITIES	0.00	0.75	1.10	1.58	3.42
	TIMAH-TASOH	0.00	0.00	0.55	0.55	1.10
	ARAN	0.00	0.00	0.40	0.40	0.80
	JENIANG	0.00	0.06	0.14	0.15	0.35
	BERIS	0.00	0.13	0.69	0.69	1.51
	TAWAR-MUDA	0.00	0.00	0.26	0.26	0.16
		0.00	0.94	3.14	3.63	7.34
PUBLIC WATER SUPPLY						
	DIRECT FACILITIES	0.00	13.60	31.80	47.90	93.30
	AHNING	0.00	0.00	0.93	0.93	1.86
	JENIANG	0.00	0.00	0.00	0.00	0.00
	BERIS	0.00	0.00	0.01	0.01	0.02
	TAWAR-MUDA	0.00	0.00	0.04	0.04	0.08
		0.00	13.60	32.78	48.88	95.26
PRIVATE WATER SUPPLY						
	DIRECT FACILITIES	0.00	4.60	12.90	21.60	39.10
	AHNING	0.00	0.00	0.47	0.47	0.94
	JENIANG	0.00	0.00	0.00	0.00	0.00
	BERIS	0.00	0.00	0.00	0.00	0.00
	TAWAR-MUDA	0.00	0.00	0.00	0.00	0.00
		0.00	4.60	13.37	22.07	40.04
RIVER MAINTENANCE FLOW						
	DIRECT FACILITIES	0.00	0.00	0.00	0.00	0.00
	JENIANG	0.00	0.00	0.00	0.00	0.00
	BERIS	0.00	0.00	0.00	0.00	0.00
	TAWAR-MUDA	0.00	0.00	0.00	0.00	0.00
		0.00	0.00	0.00	0.00	0.00
SUB-TOTAL	DIRECT FACILITIES	0.00	18.95	45.80	71.08	135.82
	TIMAH-TASOH	0.00	0.00	0.55	0.55	1.10
	ARAN	0.00	0.00	0.40	0.40	0.80
	AHNING	0.00	0.00	1.40	1.40	2.80
	JENIANG	0.00	0.06	0.14	0.15	0.35
	BERIS	0.00	0.13	0.70	0.70	1.53
	TAWAR-MUDA	0.00	0.00	0.30	0.30	0.60
		0.00	19.14	49.29	74.58	143.00
II. MADA						
IRRIGATION (MAJOR SCHEME)						
	DIRECT FACILITIES	0.00	1.93	4.50	8.53	14.96
	JENIANG	0.00	0.29	0.71	0.80	1.80
	BERIS	0.00	0.11	0.55	0.55	1.21
	TAWAR-MUDA	0.00	0.00	2.14	2.14	4.28
		0.00	2.33	7.90	12.02	22.25

Table 96 DISBURSEMENT SCHEDULE OF PUBLIC AND PRIVATE O&M COST FOR WATER DEMAND AND SUPPLY BALANCE PLAN BY MP IN LOW GROWTH CASE (2/2)

Unit: $M\$10^6$

III. PULAU-PINANG						
IRRIGATION (MINOR SCHEME)						
	DIRECT FACILITIES	0.00	0.00	0.02	0.02	0.04
	JENIANG	0.00	0.00	0.00	0.00	0.00
	BERIS	0.00	0.00	0.00	0.00	0.00
	TAWAR-MUDA	0.00	0.00	0.00	0.00	0.00
		0.00	0.00	0.02	0.02	0.04
PUBLIC WATER SUPPLY						
	DIRECT FACILITIES	0.00	14.50	43.60	75.90	134.00
	MENGKUANG	0.00	1.55	1.55	1.55	4.65
	JENIANG	0.00	0.00	0.00	0.00	0.00
	BERIS	0.00	0.01	0.04	0.04	0.09
	TAWAR-MUDA	0.00	0.00	0.21	0.21	0.42
		0.00	16.06	45.40	77.70	139.16
PRIVATE WATER SUPPLY						
	DIRECT FACILITIES	0.00	12.20	34.10	57.30	103.60
	JENIANG	0.00	0.00	0.00	0.00	0.00
	BERIS	0.00	0.00	0.01	0.01	0.02
	TAWAR-MUDA	0.00	0.00	0.01	0.01	0.02
		0.00	12.20	34.12	57.32	103.64
RIVER MAINTENANCE FLOW						
	DIRECT FACILITIES	0.00	0.00	0.00	0.00	0.00
	JENIANG	0.00	0.00	0.00	0.00	0.00
	BERIS	0.00	0.00	0.00	0.00	0.00
	TAWAR-MUDA	0.00	0.00	0.00	0.00	0.00
		0.00	0.00	0.00	0.00	0.00
SUB-TOTAL	DIRECT FACILITIES	0.00	26.70	77.72	133.22	237.64
	MENGKUANG	0.00	1.55	1.55	1.55	4.65
	JENIANG	0.00	0.00	0.00	0.00	0.00
	BERIS	0.00	0.01	0.05	0.05	0.11
	TAWAR-MUDA	0.00	0.00	0.22	0.22	0.44
		0.00	28.26	79.54	135.04	242.84
GRAND TOTAL	T FACILITIES	0.00	47.58	128.02	212.82	388.42
	TIMAH-TASOH	0.00	0.00	0.55	0.55	1.10
	ARAN	0.00	0.00	0.40	0.40	0.80
	AHNING	0.00	0.00	1.40	1.40	2.80
	MENGKUANG	0.00	1.55	1.55	1.55	4.65
	JENIANG	0.00	0.35	0.85	0.95	2.15
	BERIS	0.00	0.25	1.30	1.30	2.85
	TAWAR-MUDA	0.00	0.00	2.66	2.66	5.32
		0.00	49.73	136.73	221.63	408.09