Appendix-G Project Evaluation

BASIN-WIDE BASIC IRRIGATION AND DRAINAGE MASTER PLAN STUDY IN

THE KINGDOM OF CAMBODIA

FINAL REPORT

APPENDIX-G PROJECT EVALUATION

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CHAPTER G1 OBJECTIVES AND EVALUATED PROJECTS

G1.1 Objectives

The objectives of the project evaluation in this stage are as follows:

- Comparison of the economic viability of 21 projects formulated in four river basins
- Examination of the financial impact of investment to irrigation system improvement on beneficiary farmers' capacity to pay in each project

The results of economic and financial evaluations are to be employed as one of comparison factors in the screening process in order to put priority order over the respective projects.

G1.2 Evaluated Projects

Aiming at formation of irrigation and drainage development projects in four river basins like Battambang, Moung Russey, Pursat and Boribo, possible development areas are delineated through the resources assessment of potential irrigation areas identified by the JICA inventory 2006 has been made under the present study coupled with reconfirmation of irrigation areas under on-going and/or promised projects. As a result, the following 21 projects in total are listed up as candidates for the future implementation.

List of Evaluated Projects

River Basin		Project Number/Code/Name	Proposed Area (ha)
Battambang	1. BTB-01	Kong Hort Rehabilitation (I)	10,040
_	2. BTB-02	Kong Hort Rehabilitation (II)	2,733
,	3. BTB-03	Sala Taon Weir Rehabilitation	10,400
	4. BTB-04	Ratanak-Battambang Weir Rehabilitation	580
Moung Russey	5. MRB-01	Bassac Reservoir Rehabilitation	3,500
	6. MRB-02	Ream Kon Rehabilitation	2,300
	7. MRB-03	Por Canal Rehabilitation	1,200
	8. MRB-04	Nikom Le/Dai Ta Chan Rehabilitation	600
Pursat	9. PRB-01	Beoung Preah Ponley Rehabilitation	8,500
	10. PRB-02	Dam Nak Ampil Extension	8,000
	11. PRB-03	Wat Loung Rehabilitation	3,940
	12. PRB-04	Wat Chre Rehabilitation	1,000
	13. PRB-05	Anlong Knouchi, Wat Leal, Kosh Khsach Water Harvesting & Recession Rice Rehabilitation	2,602
Boribo	14. BRB-01	Lum Hach Rehabilitation	3,700
	15. BRB-02	7th January Canal Rehabilitation	2,000
	16. BRB-03	Khvet Rehabilitation	250
	17. BRB-04	Ta Ram Rehabilitation	180
	18. BRB-05	Chak Teum, Trapeang Khlong & Don Pov Rehabilitation	980
	19. BRB-06	Teuk Laak, Trapeang Thlan Rehabilitation	230
	20. BRB-07	Toul Champey Rehabilitation	360
	21. BRB-08	Chan Keak Rehabilitation	110

Source: JICA Study Team

CHAPTER G2 ECONOMIC EVALUATION

G2.1 Economic Evaluation Procedures

G2.1.1 Evaluation Procedures

The both project benefit and cost are estimated based on the following conditions;

- All the prices are expressed in constant prices as of September 2007, and the foreign currency exchange rate is fixed at USD 1.00 = Riel 4,100;
- The project life is assumed to be 50 years starting from 2010, the proposed year for commencement of project implementation;
- Economic farm gate prices of internationally traded agricultural inputs and outputs are calculated in the form of export and import parity prices as shown in Table G2-1, citing the World Bank Commodity Price Forecasts as of August 2007;
- A standard conversion factor (SCF) is determined at 0.986 as the average value for the last six years between 2001 and 2006 for the adjustment of prices reflecting the market distortion, which is estimated based on the formula as mentioned below

$$SCF = (I + E) / [(I - Is + It) + (E + Es - Et)]$$

Where, I = Total import value (CIF) to Cambodia,

E = Total export value (FOB) from Cambodia,

s = subsidy, and

t = tax;

- A shadow wage rate (SWR) is assumed to be 0.31 for the adjustment of labor costs reflecting the market distortion, which is defined as the ratio of the total annual labor force requirement for the proposed 21 irrigation project areas against the total annual labor force available in the same areas. Various relevant sources¹ are referred to for this calculation and the ratio calculated based on 2020 projected population is adjusted by multiplying by SCF (SWR = 8,102,121/26,430,987 x 0.986 = 0.3022);
- Financial construction cost is assumed to be composed of 70% for foreign currency portion and 30% for local currency portion. The foreign currency portion is further broken down into 35% for equipment cost and 65% for material cost, while the local currency portion is formed of 15% for equipment cost, 15% for material cost, 20% for common labor cost and 50% for skilled labor cost; and
- Conversion factors of financial construction cost to economic values are determined as 0.81 for material costs and 0.73 for equipment costs in the foreign currency portion as well as 0.86 for material costs and 0.78 for equipment costs in the local currency portion, all of which are estimated by excluding transfer payments such as taxes, duties, subsidies, interest, land acquisition cost, etc. included in the financial construction costs.

¹ Cambodia Statistical Yearbook 2006, NIS, Ministry of Planning; First Revision, Population Projection for Cambodia 1988 – 2020; and SEIRA Commune Database 2005, Ministry of Interior

G2.2 Economic Benefit

In the four river basins, irrigation and drainage benefits are expected to be derived from the increase in normal irrigated paddy field area coupled with the increase in paddy yield and cultivation area of secondary crops like mungbeans. The economic benefit is defined as the incremental net benefit between the present "Without Project" condition and the future "With Project" condition. In constructing proposed irrigation and drainage facilities, some part of existing paddy field will be acquired. Such change in the "right of way" area has been taken into account in formulating the future land use plan. In this regard, no production foregone as negative benefit is considered in estimating the annual economic benefit.

The incremental net benefit attributed to the proposed irrigation and drainage development, and the increase in irrigated paddy cultivation area and paddy production of 21 projects are estimated as presented in Table G2-5 based on the economic prices applied, economic crop budget under present/without project condition and economic crop budget under with project condition as shown in Tables G2-2, G2-3 and G2-4, respectively. The summary of the economic irrigation and drainage benefit is given in the following table.

Economic Irrigation and Drainage Benefit

	Economic 1111ga			ase in		Net Benef	it
	Proposed Project		Irrigated	Paddy		(Million Ri	el)
N- (C- d-	NI	Area	Area*	product	Without	With	
No./Code	Name	(ha)	(ha)	(ton)	Project	Project	Increment
1. BTB-01	Kong Hort Rehabilitation (I)	10,040	10,031	17,844	3,634	14,356	10,722
2. BTB-02	Kong Hort Rehabilitation (II)	2,733	1,584	3,293	1,756	3,900	2,143
	Salat On Weir Rehabilitation					14,860	10,738
3. BTB-03	Salat On Weir Rehab. (Pump)**	10,400	7,781	16,875	4,122	12,665	8,543
4. BTB-04	Ratanak-Battambang Weir Rehab.	580	515	936	252	864	612
5. MRB-01	Bassac Reservoir Rehabilitation	3,500	3,500	5,801	1,583	5,291	3,708
6. MRB-02	Ream Kon Rehabilitation	2,300	2,250	3,822	1,041	3,466	2,425
7. MRB-03	Por Canal Rehabilitation	1,200	1,100	2,023	540	1,807	1,267
8. MRB-04	Nikom Le/Dai Ta Chan Rehab.	600	648	1,206	272	1,005	733
9. PRB-01	Beoung Preah Ponley Rehab.	8,500	8,102	18,511	4,825	15,244	10,419
10. PRB-02	Dam Nak Ampil Extension	8,000	4,783	12,259	7,193	15,379	8,186
11. PRB-03	Wat Loung Rehabilitation	3,940	3,690	7,624	2,446	7,274	4,828
12. PRB-04	Wat Chre Rehabilitation	1,000	932	2,063	586	1,871	1,285
13. PRB-05	Anlong Knouchi, Wat Leal, Kosh Khsach Water Harvesting & Recession Rice Rehabilitation	2,602	1,257	3,709	2,111	4,500	2,388
14. BRB-01	Lum Hach Rehabilitation	3,700	2,535	5,038	3,311	6,799	3,488
15. BRB-02	7th January Canal Rehabilitation	2,000	1,417	2,789	1,755	3,719	1,964
16. BRB-03	Khvet Rehabilitation	250	225	488	152	457	305
17. BRB-04	Ta Ram Rehabilitation	180	162	351	110	338	228
18. BRB-05	Chak Teum, Trapeang Khlong & Don Pov Rehabilitation	980	882	1,911	597	1,809	1,212
19. BRB-06	Teuk Laak, Trapeang Thlan Rehab.	230	207	449	140	400	260
20. BRB-07	Toul Champey Rehabilitation	360	324	702	219	630	410
21. BRB-08	Chan Keak Rehabilitation	110	82	206	71	195	124

Note: *; Annual paddy cropped area under normal irrigated condition for with project, and normal and supplemental irrigated conditions for without project.

^{**;} Alternative case for construction of 5 pump stations instead of rehabilitation of weir

G2.3 Economic Cost

The economic investment cost items are composed of:

- Direct construction cost including preparatory works, weir and major intake structure, canals and related structures, dykes and miscellaneous works;
- Contractor's expense, and detailed design and supervision works;
- Physical contingencies; and
- FWUC level training & mobilization and agricultural & other support services.

The economic investment cost is estimated by applying relevant conversion factors to each cost components like materials, equipment, common labor and skilled labor of the both foreign and local currency portions. The annual O&M cost and major repairing cost are also converted to economic values in the same manner. The latter is allocated every 10 years. In the alternative case to construct 5 pumping stations instead of weir rehabilitation for Salat On Project, fuel cost required for pump operation is to be added to crop production cost for every crop season, as such cost should be charged to beneficiaries.

The estimated economic investment cost for the respective projects is presented in Table G2-6 and summarized in the following table.

Economic Investment, Annual O&M Cost and Major Repairing Costs

		Proposed	Initial	Annual	Major
Project	Project Name	Project	Investment	O&M	Repairing
Code	1 Toject I tame	Area	Cost	Cost	Cost
		(ha)	(M. Riel)	(M. Riel)	(M. Riel)
1. BTB-01	Kong Hort Rehabilitation (Phase I)	10,040	92,877	1,096	10,029
2. BTB-02	Kong Hort Rehabilitation (Phase II)	2,733	31,677	442	3,901
3. BTB-03	Salat On Weir Rehabilitation	10,400	198,831	1,594	16,180
3. B1B-03	Salat On Weir Rehabilitation (Alternative)	10,400	142,031	1,318	12,848
4. BTB-04	Ratanak-Battambang Weir Rehab.	580	7,578	114	995
5. MRB-01	Bassac Reservoir Rehabilitation	3,500	25,331	328	2,936
6. MRB-02	Ream Kon Rehabilitation	2,300	18,238	218	1,985
7. MRB-03	Por Canal Rehabilitation	1,200	8,168	110	978
8. MRB-04	Nikom Le/Dai Ta Chan Rehabitation	600	7,324	72	694
9. PRB-01	Beoung Preah Ponley Rehabilitation	8,500	64,305	834	7,475
10. PRB-02	Dam Nak Ampil Extension	8,000	58,430	752	6,744
11. PRB-03	Wat Loung Rehabilitation	3,940	29,080	392	3,487
12. PRB-04	Wat Chre Rehabilitation	1,000	10,066	102	961
13. PRB-05	Anlong Knouchi, Wat Leal, Kosh Khsach Water Harvest. & Recession Rice Rehab.	2,602	20,467	282	2,494
14. BRB-01	Lum Hach Rehabilitation	3,700	34,653	366	3,437
15. BRB-02	7th January Canal Rehabilitation	2,000	19,199	246	2,179
16. BRB-03	Khvet Rehabilitation	250	3,018	28	278
17. BRB-04	Ta Ram Rehabilitation	180	3,321	34	. 320
18. BRB-05	Chak Teum, Trapeang Khlong & Don Pov Rehabilitation	980	8,854	102	925
19. BRB-06	Teuk Laak, Trapeang Thlan Rehabilitation	230	2,440	34	300
20. BRB-07	Toul Champey Rehabilitation	360	2,383	34	275
21. BRB-08	Chan Keak Rehabilitation	110	1,221	16	143

G2.4 Economic Evaluation

In conducting economic evaluation, the economic cost and benefit stream is prepared for the project life period of 50 years, comprising the project investment cost, annual O&M cost and major repairing cost for the cost stream as well as annual irrigation and drainage benefit in the build-up and full swing stages for the benefit stream as presented in Table G2-7. The result of economic evaluation is expressed by the economic internal rate of return (EIRR), surplus between net present values of benefit and cost (B-C) at discount rate of 8% and benefit-cost ratio (B/C) as summarized in Table G2-8 as well as the following table.

Economic Internal Rate of Return and Net Present Value

Project		EIRR	Net Pro	sent Value ((8% discount	rate)
Code	Project Name	LIKK	Benefit	Cost	B-C	B/C
Code		<u>(%)</u>	(1	Aillion Riel)		Ratio
1. BTB-01	Kong Hort Rehabilitation (Phase I)	8.7	97,520	91,673	5,847	1.06
2. BTB-02	Kong Hort Rehabilitation (Phase II)	3.3	21,901	35,373	-13,472	0.62
3. BTB-03	Salat On Weir Rehabilitation	2.7	99,184	186,699	-87,515	0.53
3. D1D-03	Salat On Weir Rehabilitation (Alternative)	3.3	77,162	135,427	-58,561	0.57
4. BTB-04	Ratanak-Battambang Weir Rehab.	4.9	6,517	8,720	-2,203	0.75
5. MRB-01	Bassac Reservoir Rehabilitation	11.0	35,007	26,911	8,096	1.30
6. MRB-02	Ream Kon Rehabilitation	10.5	24,776	19,959	4,818	1.24
7. MRB-03	Por Canal Rehabilitation	12.4	12,945	9,132	3,814	1.42
8. MRB-04	Nikom Le/Dai Ta Chan Rehabitation	7.6	7,488	7,787	-300	0.96
9. PRB-01	Beoung Preah Ponley Rehabilitation	11.9	89,127	63,227	25,900	1.41
10. PRB-02	Dam Nak Ampil Extension	11.1	74,452	57,258	17,194	1.30
11. PRB-03	Wat Loung Rehabilitation	11.4	42,514	30,939	11,575	1.37
12. PRB-04	Wat Chre Rehabilitation	9.4	12,244	10,676	1,569	1.15
13. PRB-05	Anlong Knouchi, Wat Leal, Kosh Khsach Water Harvesting & Recession Rice Rehab.	8.5	23,874	22,853	1,021	1.04
14. BRB-01	Lum Hach Rehabilitation	7.1	32,215	35,509	-3,294	0.91
15. BRB-02	7th January Canal Rehabilitation	7.3	19,635	21,083	-1,448	0.93
16. BRB-03	Khver Rehabilitation	7.8	3,117	3,193	-76	0.98
17. BRB-04	Ta Ram Rehabilitation	4.1	2,318	3,550	-1,232	0.65
18. BRB-05	Chak Teum, Trapeang Khlong & Don Pov Rehabilitation	11.0	12,382	9,606	2,776	1.29
19. BRB-06	Teuk Laak, Trapeang Thlan Rehabilitation	7.6	2,658	2,754	-96	0.97
20. BRB-07	Toul Champey Rehabilitation	13.9	4,192	2,684	1,509	1.56
21. BRB-08	Chan Keak Rehabilitation	7.1	1,262	1,368	-106	0.92

The prospected increase in paddy production in each proposed project area is calculated as presented in Table G2-9.

CHAPTER G3 FINANCIAL EVALUATION

G3.1 Financial Evaluation Procedure

The prospected impact of each proposed project on beneficiary farmers' capacity to pay is indicated by estimating farm budget based on 1-ha size of paddy field. The increase in net return between the present "Without Project" and future "With Project" conditions reveals that how much additional capacity to pay after deducting farming cost beneficiary farmers can expect to gain through participation to the proposed project.

G3.2 Increase in Financial Net Benefit

Based on financial crop budgets under the both conditions of present/without project as shown in Table G3-1 and with project as shown in Table G3-2, the increase in financial net benefit is estimated as presented in Table G3-3, and summarized in Table G3-4 and the following table.

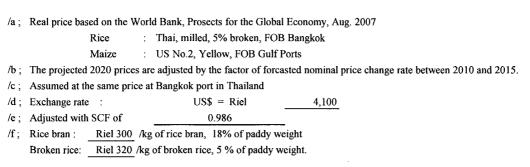
Increase in Farmers' Capacity to Pay

Doniest		Crop In	tensity	Net Retu	rn per ha	Capacit	y to Pay
Project Code	Project Name	Without	With	Without	With	Inci	ease
Code		(%)	(%)		('000 Riel)		(Ratio)
1. BTB-01	Kong Hort Rehabilitation (I)	100	101	87	849	762	8.8
2. BTB-02	Kong Hort Rehabilitation (II)	112	101	261	852	591	2.3
3. BTB-03	Salat On Weir Rehabilitation	104	104	111	849	738	6.7
3. D1D-03	Salat On Weir Rehab. (Pump)	104	104	111	603	492	4.4
4. BTB-04	Ratanak-Battambang Weir Rehab.	107	101	139	896	757	5.5
5. MRB-01	Bassac Reservoir Rehabilitation	100	102	124	897	773	6.2
6. MRB-02	Ream Kon Rehabilitation	100	102	128	898	770	6.0
7. MRB-03	Por Canal Rehabilitation	100	102	134	897	763	5.7
8. MRB-04	Nikom Le/Dai Ta Chan Rehab.	100	112	127	1,017	890	7.0
9. PRB-01	Beoung Preah Ponley Rehab.	100	110	278	1,205	927	3.3
10. PRB-02	Dam Nak Ampil Extension	115	114	518	1,225	707	1.4
11. PRB-03	Wat Loung Rehabilitation	101	110	282	1,188	906	3.2
12. PRB-04	Wat Chre Rehabilitation	102	111	298	1,219	921	3.1
13. PRB-05	Anlong Knouchi, Wat Leal, Kosh Khsach Water Harvesting & Recession Rice Rehabilitation	107	118	483	1,216	733	1.5
14. BRB-01	Lum Hach Rehabilitation	110	105	490	1,217	727	1.5
15. BRB-02	7th January Canal Rehabilitation	109	105	476	1,217	741	1.6
16. BRB-03	Khvet Rehabilitation	100	104	331	1,212	881	2.7
17. BRB-04	Ta Ram Rehabilitation	100	106	331	1,219	888	2.7
18. BRB-05	Chak Teum, Trapeang Khlong & Don Pov Rehabilitation	100	105	331	1,217	886	2.7
19. BRB-06	Teuk Laak, Trapeang Thlan Rehab.	100	104	331	1,213	882	2.7
20. BRB-07	Toul Champey Rehabilitation	100	106	331	1,220	889	2.7
21. BRB-08	Chan Keak Rehabilitation	100	109	361	1,238	877	2.4

Tables

Table G2-1 Economic Farm Gate Price of Internationally Traded Goods (1/2)

	Impo	ort Parity P	rice	Expo	rt Parity P	rice
Item	Operation	Unit	Price	Operation	Unit	Price
I. Rice/Paddy						
1. Forcasted 2015 World Price (in 2006 price) /a		US\$/ton	260		US\$/ton	260
2. Projected 2020 World Price (in 2006 price) /b		US\$/ton	251.6		US\$/ton	251.6
3. Quality Adjustment	v	%	90	x	%	90
4. CIF/FOB Price at Sihanouk Ville International Port /c	x =	US\$/ton	226.4	=	US\$/ton	226.4
5. Port Charge, Handling and Warehousing	+	US\$/ton	12.9	-	US\$/ton	12.9
6. Price at Sihanouk Ville International Port	_	US\$/ton	239.3	-	Riel/kg	213.5
Equivalent in Riel / kg /d	_		981	=	Riel/kg	875
		Riel/kg			_	
7. Transportation Cost /e (Sihanouk Ville-Phnom Penh)	+	Riel/kg	30	-	Riel/kg	30
(Phnom Penh -Pursat)	+	Riel/kg	30	-	Riel/kg	30
8. Ex-Mill /Wholesale Price in Pursat	=	Riel/kg	1,041	=	Riel/kg	815
9. Milling Cost and Margin /f	-	Riel/kg	23	-	Riel/kg	23
10. Processing Ratio	х	%	64	X	%	64
11. By-Products through Processing /e	+	Riel/kg	70	+	Riel/kg	70
12. Millgate Paddy Price	=	Riel/kg	722	=	Riel/kg	577
13. Transport/Handling from Farmgate /d	-	Riel/kg	15	-	Riel/kg	15
14. Farmgate Price	=	Riel/kg	707	=	Riel/kg	562
	50%			50%		
17. Weighted average economic farm gate price		Riel/kg	635			
II. Maize						
11. Wallet						
1. Forcasted 2015 World Price (in 2006 price) /a		US\$/ton	130		US\$/ton	130
2. Projected 2020 World Price (in 2006 price) /b		US\$/ton	121.9		US\$/ton	121.9
3. International Shipping and Handling	+	US\$/ton	40.0			
4. CIF/FOB Price at Sihanouk Ville International Port	=	US\$/ton	161.9		US\$/ton	121.9
5. Port Charge, Handling and Warehousing	+	US\$/ton	12.9	_	US\$/ton	12.9
6. Price at Sihanouk Ville International Port	=	US\$/ton	174.8	=	Riel/kg	109.0
Equivalent in Riel / kg /d	=	Riel/kg	717		Riel/kg	447
7. Transportation Cost /e (Sihanouk Ville-Phnom Penh)	+	Riel/kg	30	_	Riel/kg	30
(Phnom Penh -Pursat)	+	Riel/kg	30	_	Riel/kg	30
8. Price in Pursat		Riel/kg	777	===	Riel/kg	387
9. Transport/Handling from Farmgate /e		Riel/kg	15	_	Riel/kg	15
10. Farmgate Price	_	Riel/kg	762	<u>-</u>	Riel/kg Riel/kg	372
iv. Faimgaic File	_	KICI/Kg	702	_	Kiel/kg	312
	50%			50%		
17. Weighted average economic farm gate price		Riel/kg	570			



Note:

Table G2-1 Economic Farm Gate Price of Internationally Traded Goods (2/2)

	I	mport Parity P	rice
Item	Operation	Unit	Price
III. Fertilizer			
III. Petimizi			
(1) Urea			
1. Forcasted 2015 World Price (in 2006 price) /a		US\$/ton	225.0
2. Projected 2020 World Price (in 2006 price) /b		US\$/ton	194.0
3. International Shipping and Handling	+	US\$/ton	40.0
4. CIF/FOB Price at Sihanouk Ville International Port	=	US\$/ton	234.0
5. Port Charge, Handling and Warehousing	+	US\$/ton	12.9
6. Price at Sihanouk Ville International Port	=	US\$/ton	246.9
Equivalent in Riel / kg /c	=	Riel/kg	1,012
7. Transportation Cost /d (Sihanouk Ville-Pursat)	+	Riel/kg	60
8. Trade Price in Pursat	=	Riel/kg	1,072
9. Transport/Handling to Farmgate /d	+	Riel/kg	15
10. Farmgate Price	=	Riel/kg	1,087
Price of Nutrient (N) /e		Riel/kg	2,363
(2) DAP (Diammonium Phosphate)		TT04.	
1. Forcasted 2015 World Price (in 2006 price) /a		US\$/ton	216
2. Projected 2020 World Price (in 2006 price) /b		US\$/ton	171.4
3. International Shipping and Handling	+	US\$/ton	45.0
4. CIF/FOB Price at Sihanouk Ville International Port	=	US\$/ton	216.4
5. Port Charge, Handling, Warehousing and Bagging	+	US\$/ton	12.9
6. Price at Sihanouk Ville International Port	=	US\$/ton	229.3
Equivalent in Riel / kg /c	<u> </u>	Riel/kg	940
7. Transportation Cost /d (Kampong Som-Kampong Speu)	+	Riel/kg	60
8. Trade Price in Kampong Speu	=	Riel/kg	1,000
9. Transport/Handling to Farmgate /d	+	Riel/kg	15
10. Farmgate Price	=	Riel/kg	1,015
Price of Nutrient (P) /e		Riel/kg	2,207
Price of Nutrient (N) /e		Riel/kg	5,639
(2) Potossium Chlorido (VCI)			
(3) Potassium Chloride (KCl) 1. Forcasted 2015 World Price (in 2006 price) /a	1	US\$/ton	120.0
· · · · · · · · · · · · · · · · · · ·			130.0
2. Projected 2020 World Price (in 2006 price) /b		US\$/ton	113.8
International Shipping and Handling CIF/FOB Price at Sihanouk Ville International Port	+ _	US\$/ton US\$/ton	40.0
			153.8
5. Port Charge, Handling, Warehousing and Bagging	+ _	US\$/ton	12.9
6. Price at Sihanouk Ville International Port	=	US\$/ton	166.7
Equivalent in Riel / kg /c 7. Transportation Cost /d (Vampong Som Takes)		Riel/kg	683
7. Transportation Cost /d (Kampong Som-Takeo) 8. Trade Price in Takeo	+	Riel/kg	60
	=	Riel/kg	743
9. Transport/Handling to Farmgate /d	+	Riel/kg	15
10. Farmgate Price	=	Riel/kg	758
Price of Nutrient (K) /e	1	Riel/kg	1,263

Note: /a; Real price based on the World Bank, Prosects for the Global Economy, Aug. 2007

Urea : Bagged, FOB Black Sea
DAP : Bulk, FOB US Gulf
KCl : Bulk, FOB Vancouver

/b; The projected 2020 prices are adjusted by the factor of forcasted nominal price change rate between 2010 and 2015.

 /c; Exchange rate :
 US\$ = Riel
 4,100

 /c; Adjusted with SCF of
 0.986

/e; Nutrient content is 46%, 46%(18-46-0), and 60%, respectively for Urea, DAP and KCL.

Table G2-2 Summary of Financial and Economic Prices Applied

Particulars	s I	U nit	Financial Price Applied /a	Conversion	Economic Price Applied
1. Farm Products					
Dry Paddy	(Ri	iel/kg)	560	b	635
Mungbean	-	iel/kg)	1,500	c	1,479
Vegetable (Mornin		iel/kg)	300	c	296
Vegetable (Cucum		iel/kg)	1,200	c	1,183
2. By-Products					
By-products of Pac	idy (Ri	iel/kg)	28	c	28
By-products of Mu	ıngbean (Ri	iel/kg)	30	c	30
3. Seeds					
Paddy (Present/Wi	thout) (Ri	iel/kg)	560	c	552
Paddy (With)		iel/kg)	900	c	887
Mungbean		iel/kg)	1,400	c	1,380
Vegetable (Mornin	• • • •	lel/kg)	6,000	С	5,916
Vegetable (Cucum	ber) (Ri	el/kg)	16,000	С	15,776
4. Fertilizer					
Urea	,	el/kg)	1,640	b	1,087
DAP		el/kg)	1,630	b	1,015
KCL	•	el/kg)	1,550	b	758
Compost	(Ri	el/ton)	30,000	d	9,067
5. Chemical	(Rie	el/litre)	5,250	d	1,587
6. Labor					
Hired labor		manday)	6,400	d	1,934
Family labor	(Riel/	manday)	0	d	1,934
7. Land Preparation					
Draft animal/Tracto					
-Direct sowing	•	el/ha)	350,000	d	105,787
-Transplanting	•	el/ha)	250,000	d	75,562
-Mungbean	•	el/ha)	48,000	d	14,508
-Vegetable	(Ri	el/ha)	96,000	d	29,016
8. Pumping	~	1.0	80.000		04.505
Supplemental irriga	•	el/ha)	30,000	e	24,600
Pumping-up irrigat	ion (Ri	el/ha)	233,700	f	200,982
9. Transportation	/ - •	16	80.000		200
Ox cart	(Ri	el/ton)	30,000	d	9,067
10. Miscellaneous		•••			
5% of total of cost	items 3 to (I	Riel)			

Remarks:

/a; Dec. 2005 prices

/b; Economic price estimate based on the WB Commodity Markets Forecast

/c; Financial prices are converted to economic value multiplying by SCF of

/d; Multiplied by shadow wage rate and SCF

/e; Average conversion factors of materials (50%) and equipment (50%)

/f; Conversion factor of materials

0.9860 0.3022

0.8200

0.8600

Table G2-3 Economic Crop Budget of Rice under Present/Without Project Condition

Item Unit Normal irrigated area Normal	Normal irrigated area Vy Price Va Price Va Va Va Va Va Va Va V	lue Riel) 989 905 84 554 235 44 0	Supplement: Q'ty F Q'ty F C,000 2,000 2,000 2,000 7,000	Supplemental irrigated area O'ty Price Value (Riel) ('000 Ri. 1,372 2,000 635 1,27 2,000 28 55 4 48 6 9,067 1,0187 8 45 1,0187 8 4 45 1,0187 8 4 4 45 1,0187 8 4 4 45 1,0187 8 4 4 45 1,0187 8 4 4 45 1,0187 8 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	. 9 0 0 8 7 4 0 C		Rainfed area Price (Riel) (" (Riel) (" (Siel) (") () () () () () () () () (Value (7000 Riel) 995 953 42 412 145 44	Norma Q'ty 2,000	剌	Value (1000 Riel) 1,326	Supplemer Q'ty	Supplemental irrigated area Q'ty Price Value (Riel) ('000 Bia	d area Value
Comparison Com	(R)			10 80 61 5 10			1 10 20 21 11	Value 995 953 42 412 145 0	Q'ty 2,000		Value 1,326	Q'ty	_	Value
New Piece Riel (Riel) (1000 Riel) 1,989 1,98	(B) 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0			10.00	0 Riel) 1,326 1,276 56 483 172 44 0		100 00 01	995 995 953 42 412 145 0	2,000	1	'000 Riel) 1,326		_	
Income Riel 1,989 1,905 1,90	66 11		2,000 2,000 80 0	635 28 552 9,067 1,087 1,015	1,326 1,270 56 483 172 44 0	1,500 1,500 80 0	635 28 28 552 9,067 1,087	995 953 412 145 44 0	2,000		1,326			('000 Riel)
in products kg 3,000 635 1,905 product (straw) kg 3,000 28 84 strion Cost Riel 2,000 28 84 strion Cost Riel 2,000 28 84 strion Cost Riel 60 552 33 annue (wet) ton 0 9,067 0 tilizer kg 115 1,087 125 DAP kg 65 1,015 66 Co-chemicals liter 0 1,587 0 co-chemicals Riel 1991	6 11		2,000 2,000 80 0	635 28 28 552 9,067 1,087 1,015	1,270 56 483 172 0 0	1,500 1,500 80 0	635 28 28 552 9,067 1,087	953 412 145 44 0	2,000					566
product (straw) kg 3,000 28 84 stion Cost Riel 243 d kg 60 552 33 nure (wet) ton 0 9,067 0 tilizer kg 115 1,087 125 DAP kg 65 1,015 66 KCI kg 0 758 0 o-chemicals liter 0 1,587 0	9 11		2,000 80 0	552 9,067 1,087 1,015	56 483 172 0 0 82	1,500 80 0	552 9,067 1,087	412 148 44 0		635	1,270	1,500	635	953
tion Cost Riel 543 d Kiel 60 552 33 d Lilizer kg 60 9,067 0 Lilizer kg 115 1,087 125 DAP kg 65 1,015 66 KCI kg 0 778 0 O-chemicals liter 0 1,587 0	2, 11	554 235 44 0 125	80 0 75	552 9,067 1,087 1,015	483 172 44 0 82	08 0	552 9,067 1,087	412 145 44 0	2,000	28	99	1,500	28	42
d kiel 60 552 33 nume (wet) ton 0 9,067 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	0, 11	235 44 0 125	80 0 75	552 9,067 1,087 1,015	672 44 0 0 82	08 0	552 9,067 1,087	145 0			458			455
td wet) kg 60 552 33 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	0,	44 0 125	80 0 77	552 9,067 1,087 1,015	4° %	08 0 G	552 9,067 1,087	4 °			172			150
nure (wet) ton 0 9,067 0 1ilizer Ulrea kg 115 1,087 125 1 DAP kg 65 1,015 66 1,015 kg 0 758 0 1,015 1,010 1,587 0 1,58	o	0 125	0 275	9,067 1,087 1,015	0 %	O 9	9,067	0	120	552	99	120	552	99
vilizer kg 115 1,087 125 1 DAP kg 65 1,015 66 6 KCI kg 0 758 0 ro-chemicals liter 0 1,587 0		125	75	1,087	22	09	1,087		0	6,067	0	0	6,067	0
Urea kg 115 1,087 125 1 DAP kg 65 1,015 66 6 KCI kg 0 758 0 ro-chemicals liter 0 1,587 0 Riot Riot 1991 1991		125	75	1,087	2	9	1,087							
DAP kg 65 1,015 66 KCI kg 0 758 0 ro-chemicals liter 0 1,587 0 Riel Real Real Real Real Real Real Real Re			4	1,015	1	3	1 015	65	09	1,087	65	50	1,087	54
KCI kg 0 758 ro-chemicals liter 0 1,587 Riel		99	5		46	35	1,017	36	40	1,015	41	30	1,015	30
ro-chemicals liter 0 1,587	0 758	0	0	758	0	0	758	0	0	758	0	0	758	0
Riol	0 1,587	0	0	1,587	0	0	1,587	0	0	1,587	0	0	1,587	0
		161			170			158			141			139
	•	16	6	1,934	17	œ	1,934	15	12	1,934	23	12	1,934	23
_	89 1,934	172	42	1,934	153	74	1,934	143	61	1,934	118	09	1,934	116
2.3 Land preparation Riel 76		92			76			26			106			106
Tractor	1 75,562	92	1 7	75,562	. 9/	_	75,562	9/	_	105,787	106	-	105,787	106
2.4 Pumping Riel 0		0			25			0			0			25
Pumping ha 0 24,600 0 0	0 24,600	0	1 2	24,600	25	0	24,600	0	0	24,600	0	-	24,600	25
2.5 Transportation Riel 27		27			18			14			18			14
ton 3 9,067	3 9,067	27	7	2,067	18	1.5	6,067	14	2	6,067	18	1.5	6,067	14
us Riel		25			22			61			21			21
3. Net Return Riel 1,446		1,435			843			583			898			540
Net Return/Production Cost Ratio 2.67		2.59			1.74			1.42			1.90			1.19

		Wet Season		Direct Sowing						Dry Season	eason					
1		2	Rainfed area		Norma	Normal irrigated area	area	Supplem	Supplemental irrigated area	ited area		Rainfed area		Æ	Recession area	ea.
Item		O'ty	Price	Value	O'ty	Price	Value	(t)	Price	Value	O'ty	Price	Value	Q'ty	Price	Value
		,	(Riel)	('000 Riel)		(Riel)	('000 Riel)		(Riel)	('000 Riel)	•	(Riel)	('000 Riel)	,	(Riel)	('000 Riel)
I. Gross Income	Riel			699			1,989			1,658			1,326			1,326
Main products	ķ	1,000	635	635	3,000	635	1,905	2,500	635	1,588	2,000	635	1,270	2,000	635	1,270
By-product (straw)	. 26	1,000	28	28	3,000	28	84	2,500	28	70	2,000	28	99	2,000	28	99
2. Production Cost	Riel			368			543			527			445			422
2.1 Inputs	Riel			129			224			192			191			139
Seed	kg	120	552	99	09	552	33	09	552	33	9	552	33	09	552	33
Manure (wet)	to	0	6,067	0	0	6,067	0	0	6,067	0	0	6,067	0	0	6,067	0
Fertilizer				****									,			
Urea	kg	40	1,087	43	115	1,087	125	95	1,087	103	75	1,087	82	9	1,087	92
DAP	, X	20	1,015	20	65	1,015	99	55	1,015	99	45	1,015	46	40	1,015	4
KCI		0	758	0	0	758	0	0	758	0	0	758	0	0	758	0
Agro-chemicals	liter	0	1,587	0	0	1,587	0	0	1,587	0	0	1,587	0	0	1,587	0
2.2 Labor	manday			137			161			187			170			170
Hired labor	manday	12	1,934	23	10	1,934	19	10	1,934	19	6	1,934	17	6	1,934	17
Family labor	manday	59	1,934	114	68	1,934	172	87	1,934	168	79	1,934	153	79	1,934	153
2.3 Land preparation	Riel			92			92			92			92			9/
Draft animal/Tractor	ha		75,562	76	1	75,562	9/	-	75,562	9/	-	75,562	9/	-	75,562	9/
2.4 Pumping	Riel			0			0			25			0			0
Pumping	ha	0	24,600	0.	0	24,600	0	-	24,600	25	0	24,600	0	0	24,600	0
2.5 Transportation	Riel			0			27			23			18			18
Ox-cart	ton	-	6,067	6	ю	6,067	27	2.5	6,067	23	2	6,067	18	7	6,067	18
2.6 Miscellaneous	Riel			17			25			24			20			19
3. Net Return	Riel			295			1,446			1,131			188			904
Net Return/Production Cost Ratio	Jost Ratio			0.80			2.67			2.15			1.98			2.14

Table G2-4 Economic Crop Budget of Rice under With Project Condition

		Karly	Farly Wet Season			W	Wet Sesson Transplanting	ansolantin				M	of Season D	Wet Season Direct Sowing				Dry Season	
		Normal	irrigated 8	rea	Norma	mal irrivated area		Normal irr	igated area	dann vd	Norms	Normal irrigated area		Normal irr	gated area	omno vd	Norma	Normal irrigated area	area
Item	Cnit ⊢	0'ty	ty Price Va	Value	0'ty	Price	lue	0'ty	O'ty Price Value	Value	0,tx	Price	lue	O'ty Price Value	Price	Value	0'ty	Price	Value
		,	(Riel) (('000 Riel)	,	J	즟	;	(Riel)	('000 Riel)	,		ᆿ	;	(Riel)	('000 Riel)	,		('000 Riel)
I. Gross Income	Riel	003 6	303	2,321	003.0	367	2,321	000	303	2,321	000	307	1,856	6	307	1,856	002	300	2,321
By-product (straw)	x x 20 20	3,500	033 28	86	3,500	933 28	86	3,500	033 28	98	2,800	28	78	2,800	28	1,,78	3,500	28	86
2. Production Cost	Riel			109			119			822			615			730			109
2.1 Inputs	Riel			253	ç		253	•		253	ć	i c	229	Š		229	ć	i c	253
Seed	Kg;	30	/88/	7.7	30	/88/	7.7	30	/88/	1.7	90-	/88/	1/.) R	/88/	1/	30	/88/	17
Fertilizer		-	7,00,6	r	-	7,00,6	J.	1	7,00,6	J.	7	100,6	n	-	7,00,6	n	-	790,6	3
Urea	kg	115	1,087	125	115	1,087	125	115	1,087	125	80	1,087	87	80	1,087	87	115	1,087	125
DAP	kg kg	9	1,015	99	65	1,015	99	65	1,015	99	20	1,015	51	20	1,015	51	65	1,015	99
KCI	, Kg	40	758	98	40	758	30	40	758	30	2	758	15	20	758	15	40	758	30
Agro-chemicals	liter	0	1,587	0	0	1,587	0	0	1,587	0	0	1,587	0	0	1,587	0	0	1,587	0
	manday	:	1 074	213	-	100	222	-	1014	222	7	, 00,	135	7	1001	33	Ξ	1 024	213
	manday	100	1,934	12 5	102	1,934	67	102	1,934	57	± 3	1,934	77	14 56	1,934	/7	I 8	1,934	17
7.3 I and promountion	manday	66	1,934	72	103	1,934	661	601	1,934	199	20	1,934	907	90	1,934	901	44	1,734	761
	ha	_	75.562	92	1	75.562	9/	-	75.562	9/		105.787	901	1	105.787	901	-	75.562	9/
2.4 Pumping	Riel			0			0		•	201		-	0			201			0
Pumping	ha	0	24,600	0	0	24,600	0		200,982	201	0	24,600	0	7	200,982	201	0	24,600	0
2.5 Transportation	Riel			32			32			32			25			25			32
Ox-cart	ton	3.5	6,067	32	3.5	6,067	32	3.5	6,067	32	7.8	6,067	25	2.8	6,067	25	3.5	6,067	32
_	Riei			/7			97			38			47			4,			/7
5. Net Return Not Return/Production Cost Retio	Kiel et Patio			1,720			2.80			1,499			7.58			1,126			1,720
THE WEIGHT FOR CLOSE	armu s			7.00			700.7			70.7			00.4			4:34			
		Ğ	Dry Season			n	Upland Crops (Mungbean)	(Mungbean			Upland Crops (Morning Glory)	ps (Morni	ng Glory)	Upland (Upland Crops (Cucumber)	mber)			
Item	11mit		Recession area		- 1	Irrigated area	- 1	ļ	Rainfed area			Irrigated area		- !	Irrigated area				
	— i	Q'ty	Price	Value	Q'ty	Price (Dia)	Value	Qʻty	Price	Value	O'ty	Price (Piel)	Value	Λ. O	Price	Value			
			١	1 (50			1 050		ı	755		ı	(000 INICI)		ı	6 2 3 4			
1. Oross Income Paddy	kg kg	2,500	635	1,588	0	635	0,00	0	635	0	0	635	0	0	635	0,3,24			
Mungbean	g	0	1,479	0	700	1,479	1,035	200	1,479	740	0	1,479	0	0	1,479	0			
Vegetable (morning glo	쬬.	0	296	0	0	596	0	0	296	0	14,000	796	4,141	0	296	0			
Vegetable (cucumber	g,	0 0	1,183	0 6	0	1,183	00	0	1,183	0 0	0 0	1,183	0	4,500	1,183	5,324			
By-product (straw)	30 5 4 .2	000,7	9 6	2 0	200	97 97	2.0	2005	97	15	-	9 02	> 0	o c	9 05	0 0			
2. Production Cost	Riel	,	3	425	8	3	371	8	3	282	,	3	1.018			1,363			
~	Riel			186			217			146			530			302			
Seed	kg	30	1,380	4	20	1,380	69	20	1,380	69	20	5,916	118	13.3	15,776	210			
Manure (wet)	ton	-	6,067	6	2	6,067	8	~	6,067	6	10	9,067	91	20	9,067	18			
	ķα	09	1 087	65	55	1 087	. 09	40	1 087	43	153	1.087	166	200	1.087	217			
DAP	0 ដ	40	1,015	41	20	1,015	51	25	1,015	25	153	1,015	155	277	1,015	281			
KCI	, 50 00	40	758	30	25	758	19	0	758	0	0	758	0	0	758	0			
Agro-chemicals	liter	0	1,587	0	0	1,587	0	0	1,587	0	0	1,587	0	∞	1,587	13			
•	manday	;		704			911			103			290	:		328			
	manday	22	1,934	43	<u>8</u>	1,934	35	J6	1,934	33	45	1,934	28.2	55	1,934	100			
Family labor in	manday	ŝ	1,954	161	47	1,954	81	3/	1,934	7/	501	1,934	203	CIT	1,934	777			
Tractor	ha	-	14,508	15	_	14,508	15	1	14,508	15		29,016	29	-	29,016	36			
	Riel			0			9			5			127			11			
	ton	0.0	6,067	0	0.7	6,067	9	0.5	6,067	\$	14.0	6,067	127	4.5	6,067	41			
sne	Riel			20			17			13			42			63			
S. Net Keturn	Kiel			1,233			690			1 60			5,123			3,901			
Iver Actural Frontection Cost Autio	St Matto			4.70			1.04			7.00			3.0			4:71			

Table G2-5 Economic Irrigation Benefit and Increase in Paddy Production (1/22)

Battambang River Basin Kong Hort Rehabilitation Project Phase I

1							
	P	Present Condition	lition	Wit	With Project Condition	ondition	
	Planted	Net Produ	Net Production Value	Planted	Net Prod	Net Production Value	Incremental
Crops	Area	Per ha	Total	Area	Per ha	Total	NPV
	(ha)	(Riel '000)	(Riel '000) (Riel 'Million)	(ha)	(Riel '000)		(Riel 'Million) (Riel 'Million)
Rice	10,560		3,634	10,040		14,065	
Early Wet Season							
- Normal irrigation area	0	1,446	0	0	1,720	0	
Wet Season Transplanting							
- Normal irrigation area	0	1,435	0	1,707	1,710	2,920	
- Supplemental irrigation area	7	843	2	0	0	0	
- Rainfed area	1,794	583	1,046	0	0	0	
Wet Season Direct Sowing							
- Normal irrigation area	0	898	0	8,333	1,338	11,145	
- Supplemental irrigation area	7	540	4	0	0	0	
- Rainfed area	8,757	295	2,582	0	0	0	
Dry Season							
- Normal irrigation area		1,446	0	0	1,720	0	
- Supplemental irrigation area	0	1,131	0	0	0	0	
- Rainfed area	0	881	0	0	0	0	
- Recession area	0	904	0	0	1,233	0	
Upland Crops	01		0	ଥ		291	
- Mungbean (recession area)	0	0	0	0	1,233	0	
- Mungbean (irrigated)	0	0	0	20	685	14	
- Morning Glory (irrigated)	0	0	0	0	3,123	0	
- Cucumber (irrigated)	0	0	0	70	3,961	277	
Total	10,560		3,634	10,130		14,356	10,722

		Increase	Increase in Paddy Production	roduction	
	Present	Present Condition	With Proje	With Project Condition	Paddy
emental NPV	Paddy	Production	Paddy Vield	Production	Production
'Million)	(ton/ha)	(ton)	(ton/ha)	(ton)	(ton)
	3.0	0	3.5	0	
	3.0	0 4	3.5	5,975	
	1.5	2,691			
	2.0	0	2.8	23,332	
· ************	1.0	8,757			
···	3.0	0	3.5	0	
	2.0	00			
	2.0	0	2.5	0	
<u>.</u>	<u> </u>				
10,722		11,463		29,307	17,844

10,040	101	1,430	4,100	349
10,560	100	344	4,100	84
(ha)	%)	000 Riel)	(Riel)	(OSD)
Total Physical Area	Cropping Intensity	NPV per ha C	Exchange rate (1 USD equiv.)	NPV per ha

Table G2-5 Economic Irrigation Benefit and Increase in Paddy Production (2/22)

Battambang River Basin Kong Hort Rehabilitation Project Phase II

	Incre	mental Eco	Incremental Economic Irrigation Benefit	n Benefit			
	P	Present Condition	lition	Wit	With Project Condition	ondition	
	Planted	Net Produ	Net Production Value	Planted	Net Prod	Net Production Value	Incremental
Crops	Area	Per ha	Total	Area	Per ha	Total	NPV
	(ha)	(Riel '000)	(Riel 'Million)	(ha)	(Riel '000)	(Riel 'Million)	(Riel 'Million) (Riel 'Million)
Rice	3,225		1,756	2,733		3,821	
Early Wet Season							
- Normal irrigation area	S	1,446	7	0	1,720	0	
Wet Season Transplanting							
- Normal irrigation area	40	1,435	57	456	1,710	780	
- Supplemental irrigation area	86	843	83	0	0	0	
- Rainfed area	344	583	201	0	0	0	
Wet Season Direct Sowing							
- Normal irrigation area	196	898	170	2,229	1,338	2,981	
- Supplemental irrigation area	476	540	257	0	0	0	
- Rainfed area	1,682	295	496	0	0	0	
Dry Season							
- Normal irrigation area	236	1,446	341	0	1,720	0	
- Supplemental irrigation area	20	1,131	57	0	0	0	
- Rainfed area	20	881	44	0	0	0	
- Recession area	48	904	43	48	1,233	59	
Upland Crops	0		0	<u>20</u>		79	
- Mungbean (recession area)	0	0	0	0	1,233	0	
- Mungbean (irrigated)	0	0	0	0	685	0	
- Morning Glory (irrigated)	0	0	0	0	3,123	0	
- Cucumber (irrigated)	0	0	0	20	3,961	79	:
Total	3,225		1,756	2,753		3,900	2,143

			Increase	Increase in Paddy Production	roduction	
		Present	Present Condition	With Proje	With Project Condition	Paddy
63	Incremental	Paddy		Paddy		Production
	NPV	Yield	Production	Yield	Production	Increase
(uc	(Riel 'Million)	(ton/ha)	(ton)	(ton/ha)	(ton)	(ton)
=	·····	···				
-0		3.0	15	3.5	0	
0		3.0	120	3.5	1,596	
0		2.0	196			
0		1.5	516			
		2.0	392	2.8	6,241	
0		1.5	714		,	
0		1.0	1,682			
		3.0	708	3.5	0	
0		2.5	125			
0		2.0	100			
6		2.0	96	2.5	120	
010						
 >						
00						
9	2,143		4,664		7,957	3,293

2,733	101	1,427	4,100	348
2,884	112	609	4,100	149
(ha)	(%)	000 Riel)	v.) (Riel)	(OSD)
Total Physical Area	Cropping Intensity	NPV per ha	Exchange rate (1 USD equiv.)	NPV per ha

Table G2-5 Economic Irrigation Benefit and Increase in Paddy Production (3/22)

Battambang River Basin Sala Taon Wetr Rehabilitation Project

	Incre	mental Eco	Incremental Economic Irrigation Benefit	n Benefit			
	Ъ	Present Condition	lition	Wit	With Project Condition	ondition	
	Planted	Net Produ	Net Production Value	Planted	Net Produ	Net Production Value	Incremental
Crops	Area	Per ha	Total	Area	Per ha	Total	NPV
	(ha)	(Riel '000)	(Riel 'Million)	(ha)	(Riel '000)	(Riel 'Million) (Riel 'Million)	(Riel 'Million)
Rice	10,970		4,122	10,400		14,569	
Early Wet Season							
- Normal irrigation area	0	1,446	0	0	1,720	0	
Wet Season Transplanting							
- Normal irrigation area	20	1,435	29	1,768	1,710	3,024	
- Supplemental irrigation area	189	843	159	0	0	0	
- Rainfed area	1,630	583	950	0	0	0	
Wet Season Direct Sowing							
- Normal irrigation area	26	898	. 84	8,632	1,338	11,545	
- Supplemental irrigation area	276	540	149	0	0	0	
- Rainfed area	8,601	295	2,536	0	0	0	
Dry Season							
 Normal irrigation area 	117	1,446	169	0	1,720	0	
 Supplemental irrigation area 	40	1,131	45	0	0	0	
- Rainfed area	0	881	0	0	0	0	
- Recession area	0	904	0	0	1,233	0	
Upland Crops	01		01	8		291	
- Mungbean (recession area)	0	0	0	0	1,233	0	
- Mungbean (irrigated)	0	0	0	20	685	14	
 Morning Glory (irrigated) 	0	0	0	0	3,123	0	
- Cucumber (irrigated)	0	0	0	70	3,961	277	
Total	10,970		4,122	10,490		14,860	10,738

		Increase	Increase in Paddy Production	roduction	
	Present (Present Condition	With Proje	With Project Condition	Paddy
Incremental	Paddy		Paddy		Production
NPV (Riel 'Million)	Yield (ton/ha)	Production (ton)	Yield (ton/ha)	Production (ton)	Increase (ton)
				1	
	3.0	0	3.5	0	
	3.0	09	3.5	6,188	
	2.0	378			
	1.5	2,445			
	2.0	194	2.8	24,170	
	1.5	414			
	1.0	8,601			
	3.0	351	3.5	0	
	2.5	100			
	2.0	0 0	2.5	C	
10,738		12,543		30,358	17,815

10,040	104	1,480	4,100	361
10,560	104	390	4,100	95
(ha)	(%)	000 Riel)	equiv.) (Riel)	(OSD)
Total Physical Area	Cropping Intensity	NPV per ha	Exchange rate (1 USD e	NPV per ha

Table G2-5 Economic Irrigation Benefit and Increase in Paddy Production (4/22)

Battambang River Basin Sala Taon Wetr Rehabilitation Project (Pump Station)

	Incre	mental Ecor	Incremental Economic Irrigation Benefit	n Benefit			
	Ь	Present Condition	lition	Wit	With Project Condition	ondition	
	Planted	Net Produ	Net Production Value	Planted	Net Produ	Net Production Value	Incremental
Crops	Area	Per ha	Total	Area	Per ha	Total	NPV
	(ha)	(Riel '000)	(Riel 'Million)	(ha)	(Riel '000)	(Riel 'Million)	(Riel 'Million) (Riel 'Million)
Rice	10,970		4,122	10,400		12,374	
Early Wet Season							
- Normal irrigation area	0	1,446	0	0	1,720	0	
Wet Season Transplanting							
- Normal irrigation area	70	1,435	29	1,768	1,499	2,651	
- Supplemental irrigation area	189	843	159	0	0	0	
- Rainfed area	1,630	583	950	0	0	0	
Wet Season Direct Sowing							
- Normal irrigation area	6	898	84	8,632	1,126	9,724	
- Supplemental irrigation area	276	540	149	0	0	0	
- Rainfed area	8,601	295	2,536	0	0	0	
Dry Season							
- Normal irrigation area	117	1,446	169	0	1,720	0	
- Supplemental irrigation area	40	1,131	45	0	0	0	
- Rainfed area	0	881	0	0	0	0	
- Recession area	0	904	0	0	1,233	0	
Upland Crops	0		0	81		291	
- Mungbean (recession area)	0	0	0	0	1,233	0	
- Mungbean (irrigated)	0	0	0	70	685	14	
 Morning Glory (irrigated) 	0	0	0	0	3,123	0	
- Cucumber (irrigated)	0	0	0	70	3,961	277	
Total	10,970		4,122	10,490		12,665	8,543

		Increase	Increase in Paddy Production	roduction	
	Present	Present Condition	With Proje	With Project Condition	Paddy
Incremental	Paddy		Paddy		Production
NPV	Yield	Production	Yield	Production	Increase
Riel 'Million)	(ton/ha)	(ton)	(ton/ha)	(ton)	(ton)
	3.0	0	3.5	0	
	3.0	09	3.5	6,188	
· virui	2.0	378		`	
	1.5	2,445			
	2.0	194	2.8	24,170	
	1.5	414			
	1.0	8,601	-		
	3.0	351	3.5	0	
<u> </u>	2.5	100			
	2.0	0			
	2.0	0	2.5	0	
8,543		12,543		30,358	17,815

Total Physical Area Cropping Intensity	(ha) (%)	10,560 104	10,040 104
NPV per ha 0	00 Riel)	390	1,261
Exchange rate (1 USD equiv.)	(Riel)	4,100	4,100
NPV per ha	(OSD)	95	308

Table G2-5 Economic Irrigation Benefit and Increase in Paddy Production (5/22)

Battambang River Basin Ratanak-Battambang Water Haevesting Rehabilitation Project

	Incre	mental Econo	Incremental Economic Irrigation Benefit	n Benefit					
	Ь	Present Condition	tion	Wit	With Project Condition	ondition			F.
	Planted	Net Production Value	tion Value	Planted	Net Prodi	Net Production Value	Incremental		Pac
Crops	Area	Per ha	Total	Area	Per ha	Total	NPV		Ϋ́
	(ha)	(Riel '000)	(Riel 'Million)	(ha)	(Riel '000)	(Riel 'Million)	(Riel 'Million) (Riel 'Million)		(ton
Rice	634		252	$\overline{280}$		813			
Early Wet Season									
- Normal irrigation area	0	1,446	0	0	1,720	0			
Wet Season Transplanting									
- Normal irrigation area	0	1,435	0	66	1,710	169			
- Supplemental irrigation area	4	843	3	0	0	0			
- Rainfed area	26	583	57	0	0	0			
Wet Season Direct Sowing									
- Normal irrigation area	0	898	0	481	1,338	643			
- Supplemental irrigation area	9	540	3	0	0	0			
- Rainfed area	487	295	144	0	0	0			
Dry Season									
- Normal irrigation area	0	1,446	0	0	1,720	0			
- Supplemental irrigation area	40	1,131	45	0	0	0			
- Rainfed area	0	881	0	0	0	0			
- Recession area	0	904	0	0	1,233	0			
Upland Crops	0		0	13		52			
- Mungbean (recession area)	0	0	0	0	1,233	0			
- Mungbean (irrigated)	0	0	0	0	685	0			
- Morning Glory (irrigated)	0	0	0	0	3,123	0			
- Cucumber (irrigated)	0	0	0	13	3,961	52			
Total	634		252	593		864	612		
								İ	

580	102	1,490	4,100	363
594	107	424	4,100	103
(ha)	%	000 Riel)	v.) (Riel)	(OSD)
Total Physical Area	Cropping Intensity	NPV per ha	Exchange rate (1 USD equiv.)	NPV per ha

Table G2-5 Economic Irrigation Benefit and Increase in Paddy Production (6/22)

Moung Ruessei River Basin Bassac Reservoir Rehabilitation Project

	Incre	mental Eco	Incremental Economic Irrigation Benefit	n Benefit			
	124	Present Condition	lition	Wit	With Project Condition	ondition	
	Planted	Net Prodi	Net Production Value	Planted	Net Prodi	Net Production Value	Incremental
Crops	Area	Per ha	Total	Area	Per ha	Total	NPV
	(ha)	(Riel '000)	(Riel 'Million)	(ha)	(Riel '000)	(Riel 'Million) (Riel 'Million)	(Riel 'Million)
Rice	4,120		1,583	3,500		5,086	
Early Wet Season							
- Normal irrigation area	0	1,446	0	0	1,720	0	
Wet Season Transplanting						. ———	
- Normal irrigation area	0	1,435	0	1,085	1,710	1,856	
- Supplemental irrigation area	0	843	0	0	0	0	
- Rainfed area	1,277	583	745	0	0	0	
Wet Season Direct Sowing							
- Normal irrigation area	0	898	0	2,415	1,338	3,230	
- Supplemental irrigation area	0	540	0	0	0	0	
- Rainfed area	2,843	295	838	0	0	0	
Dry Season							
- Normal irrigation area	0	1,446	0	0	1,720	0	
- Supplemental irrigation area	0	1,131	0	0	0	0	
- Rainfed area	0	881	0	0	0	0	
- Recession area	0	904	0	0	1,233	0	
Upland Crops	01		0	9		205	
- Mungbean (recession area)	0	0	0	0	1,233	0	
- Mungbean (irrigated)	0	0	0	10	685	7	
- Morning Glory (irrigated)	0	0	0	0	3,123	0	
- Cucumber (irrigated)	0	0	0	20	3,961	198	
Total	4,120		1,583	3,560		5,291	3,708

_		Increase	Increase in Paddy Production	roduction	
	Present	Present Condition	With Proje	With Project Condition	Paddy
	Paddy Yield	Production	Paddy Yield	Production	Production Increase
(ii)	(ton/ha)	(ton)	(ton/ha)	(ton)	(ton)
	3.0	0	3.5	0	
	3.0	0 0 1,916	3.5	3,798	
	2.0	0 0 2,843	2.8	6,762	
	3.0	0 0	3.5	0	
	2.0	0	2.5	0	
<u></u>		4,759		10,560	5,801

3,500	102	1,512	4,100	369
4,120	100	384	4,100	94
(ha)	%	00 Riel)	(Riel)	(USD)
Total Physical Area	Cropping Intensity		(D equiv.)	

Table G2-5 Economic Irrigation Benefit and Increase in Paddy Production (7/22)

Moung Ruessei River Basin Ream Kon Rehabilitation Project

	Incre	mental Econ	Incremental Economic Irrigation Benefit	n Benefit			
	d L	Present Condition	dition	Wit	With Project Condition	ondition	
	Planted	Net Produ	Net Production Value	Planted	Net Prod	Net Production Value	Incremental
Crops	Area	Per ha	Total	Area	Per ha	Total	NPV
	(ha)	(Riel '000)	(Riel 'Million)	(ha)	(Riel '000)	(Riel 'Million)	(Riel 'Million) (Riel 'Million)
Rice	2,670		1,041	2,300		3,340	
Early Wet Season							
- Normal irrigation area	0	1,446	0	0	1,720	0	
Wet Season Transplanting							
- Normal irrigation area	0	1,435	0	710	1,710	1,214	
- Supplemental irrigation area	12	843	10	0	0	0	
- Rainfed area	812	583	473	0	0	0	
Wet Season Direct Sowing							
- Normal irrigation area	0	898	0	1,580	1,338	2,113	
- Supplemental irrigation area	28	540	15	0	0	0	
- Rainfed area	1,808	295	533	0	0	0	
Dry Season							
- Normal irrigation area	0	1,446	0	0	1,720	0	
- Supplemental irrigation area	0	1,131	0	0	0	0	
- Rainfed area	0	881	0	0	0	0	
- Recession area	10	904	6	10	1,233	12	
Upland Crops	01		01	위		126	Q
- Mungbean (recession area)	0	0	0	0	1,233	0	
- Mungbean (irrigated)	0	0	0	10	685	7	
- Morning Glory (irrigated)	0	0	0	0	3,123	0	
- Cucumber (irrigated)	0	0	0	30	3,961	119	
Total	2,670		1,041	2,340		3,466	2,425

		Increase	Increase in Paddy Production	roduction	
	Present	Present Condition	With Proje	With Project Condition	Paddy
cremental	Paddy	Droduotion	Paddy	Dundungtion	Production
el 'Million)	(ton/ha)	(ton)	t lellu (ton/ha)	(ton)	(ton)
• 11 · · · · · · · ·					
	3.0	· 0	3.5	0	
	3.0	0	3.5	2,485	
	2.0	24			
	1.5	1,218			
	2.0	0	2.8	4,424	
	1.5	42			
	1.0	1,808			
	3.0	0	3.5	0	
	2.5	0			
	2.0	0			
	2.0	20	2.5	25	
2,425		3,112		6,934	3,822

2,300	102	1,507	4,100	368
2,670	100	390	4,100	95
(ha)	%	00 Riel)	(Riel)	(OSD)
	Cropping Intensity		quiv.)	

Table G2-5 Economic Irrigation Benefit and Increase in Paddy Production (8/22)

Moung Ruessei River Basin Por Canal Rehabilitation Project

	Incre	mental Eco	Incremental Economic Irrigation Benefit	n Benefit			
	d	Present Condition	dition	Wit	With Project Condition	ondition	
	Planted	Net Produ	Net Production Value	Planted	Net Produ	Net Production Value	Incremental
Crops	Area	Per ha	Total	Area	Per ha	Total	NPV
	(ha)	(Riel '000)	(Riel 'Million)	(ha)	(Riel '000)	(Riel 'Million)	(Riel 'Million)
Rice	1,340		540	1,200		1,744	
Early Wet Season							
- Normal irrigation area	0	1,446	0	0	1,720	0	
Wet Season Transplanting							
- Normal irrigation area	0	1,435	0	372	1,710	989	
- Supplemental irrigation area	31	843	26	0	0	0	
- Rainfed area	384	583	224	0	0	0	
Wet Season Direct Sowing							
- Normal irrigation area	0	898	0	828	1,338	1,108	
- Supplemental irrigation area	69	540	37	0	0	0	
- Rainfed area	856	295	252	0	0	0	
Dry Season							
- Normal irrigation area	0	1,446	0	0	1,720	0	
- Supplemental irrigation area	0	1,131	0	0	0	0	
- Rainfed area	0	881	0	0	0	0	
- Recession area	0	904	0	0	1,233	0	
Upland Crops	01		01	S 		63	
- Mungbean (recession area)	0	0	0	0	1,233	0	
- Mungbean (irrigated)	0	0	0	5	685	3	
- Morning Glory (irrigated)	0	0	0	0	3,123	0	
- Cucumber (irrigated)	0	0	0	15	3,961	59	
Total	1,340		540	1,220		1,807	1,267

		Increase	Increase in Paddy Production	roduction	
	Present	Present Condition	With Proje	With Project Condition	Paddy
cremental	Paddy	Ducklink	Paddy	0.04	Production
iel 'Million)	r reid (ton/ha)	rroduction (ton)	r ielu (ton/ha)	rroduction (ton)	(ton)
	3.0	0	3.5	0	
	3.0	0	3.5	1,302	
	2.0	62			
	1.5	276			
	2.0	0	2.8	2,318	
	1.5	104			
	1.0	856			
	3.0	0	3.5	0	
	2.5	0			
	2.0	0			
	2.0	0	2.5	0	
1,267		1,598		3,620	2,023

1,200	102	1,506	4,100	367
0	0		0	•
1,34	100	40	4,100	8
(ha)	8	00 Riel)	(Riel)	(OSD)
Total Physical Area	Cropping Intensity		quiv.)	

Table G2-5 Economic Irrigation Benefit and Increase in Paddy Production (9/22)

Moung Ruessei River Basin Nikom Le/Dai Ta Chan Rehabilitation Project

Planted Name Present Condition Net Production	tion	77/88	T Publicat	ondition		
Crops Crops Area (ha) (ha)	Net Produc		WIL	with Project Condition	Olluminoli	
Crops Area (ha) 1y Wet Season Normal irrigation area Normal irrigation area Normal irrigation area Supplemental irrigation area 8 Automated area 213	Don ho	Net Production Value	Planted	Net Produ	Net Production Value	Incremental
ty Wet Season Normal irrigation area Normal irrigation area Normal irrigation area Supplemental irrigation area Rainfed area		Total	Area	Per ha	Total	NPV
ly Wet Season Normal irrigation area t Season Transplanting Normal irrigation area Supplemental irrigation area	(Riel '000) ((Riel 'Million)	(ha)	(Riel '000)	(Riel 'Million)	(Riel 'Million)
on area planting on area rrigation area		272	099		975	
area					-	
area	1,446	0	99	1,720	103	
	1,435	0	186	1,710	318	
	843	æ	0	0	0	
	583	124	0	0	0	
Wet Season Direct Sowing						
	898	0	414	1,338	554	
- Supplemental irrigation area 8	540	4	0	0	0	
- Rainfed area 475	295	140	0	0	0	
Dry Season						
- Normal irrigation area 0	1,446	0	0	1,720	0	
- Supplemental irrigation area 0	1,131	0	0	0	0	
- Rainfed area 0	881	0	0	0	0	
- Recession area 0	904	0	0	1,233	0	
Upland Crops 0		01	10		30	
- Mungbean (recession area) 0	0	0	0	1,233	0	
- Mungbean (irrigated) 0	0	0	æ	685	2	
- Morning Glory (irrigated) 0	0	0	0	3,123	0	
- Cucumber (irrigated) 0	0	0	7	3,961	28	
Total 700		272	029		1,005	733

		Increase	Increase in Paddy Production	roduction	
Pres	ent (Present Condition	With Proje	With Project Condition	Paddy
Paddy Yield	ت ج	Production	Paddy Yield	Production	Production Increase
(ton/ha)	(g	(ton)	(ton/ha)	(ton)	(ton)
	,	G		010	
	3.0	o e	5.5 \$ 5	210	
	2.0	· •		9	
	1.5	320			
	2.0	0	2.8	1,159	
	1.5	12			
	1.0	475			
	3.0	0	3.5	0	
	2.5	0		•	
	2.0	0			
	2.0	0	2.5	0	
······································					
		815		2,020	1,206

600 112 1,675 4,100 408

Table G2-5 Economic Irrigation Benefit and Increase in Paddy Production (10/22)

Pursat River Basin Beoung Preah Ponley Rehabilitation Project

			Anciemental economic III iganon Denem	III DONOR II			
	Ы	Present Condition	lition	Wit	With Project Condition	ondition	
<u>a</u>	Planted	Net Produ	Net Production Value	Planted	Net Produ	Net Production Value	Incremental
Crops	Area	Per ha	Total	Area	Per ha	Total	NPV
	(ha)	(Riel '000)	(Riel 'Million)	(ha)	(Riel '000)	(Riel 'Million)	(Riel 'Million)
Rice	8,673		4,825	9,300		15,186	
Early Wet Season							
- Normal irrigation area	0	1,446	0	790	1,720	1,359	
Wet Season Transplanting							
- Normal irrigation area	23	1,435	33	6,545	1,710	11,195	
- Supplemental irrigation area	876	843	738	0	0	0	
- Rainfed area	5,756	583	3,356	0	0	0	
Wet Season Direct Sowing							
- Normal irrigation area	7	898	9	1,955	1,338	2,615	
- Supplemental irrigation area	262	540	142	0	0	0	
- Rainfed area	1,719	295	202	0	0	0	
Dry Season							
- Normal irrigation area	30	1,446	43	10	1,720	17	
- Supplemental irrigation area	0	1,131	0	0	0	0	
- Rainfed area	0	881	0	0	0	0	
- Recession area	0	904	0	0	1,233	0	
Upland Crops	01		01	ଛା		59	
- Mungbean (recession area)	0	0	0	10	1,233	12	
- Mungbean (irrigated)	0	0	0	10	685	7	
- Morning Glory (irrigated)	0	0	0	0	3,123	0	
- Cucumber (irrigated)	0	0	0	10	3,961	40	
Total	8,673		4,825	9,330		15,244	10,419

			Increase	Increase in Paddy Production	roduction	
		Present	Present Condition	With Proje	With Project Condition	Paddy
Incre	Incremental	Paddy		Paddy		Production
Ż	. VPV	Yield	Production	Yield	Production	Increase
n) (Riel 'Million)	Million)	(ton/ha)	(ton)	(ton/ha)	(ton)	(ton)
VOI		Market days (Baranda				
		3.0	0	3.5	2,765	
		3.0	69	3.5	22,908	
		2.0	1,752			
		1.5	8,634			
		2.0	14	2.8	5,474	
		1.5	393			
		1.0	1,719			
.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		3.0	96	3.5	35	
*******		2.5	0			
		2.0	0			
		2.0	0	2.5	0	
7/ 0/						
t I	10,419		12,671		31,182	18,511

8,500 110 1,793 4,100 437

Table G2-5 Economic Irrigation Benefit and Increase in Paddy Production (11/22)

Pursat River Basin Damnak Ampil Extension Project

	Incre	mental Ecor	Incremental Economic Irrigation Benefit	n Benefit			
	P	Present Condition	lition	Wit	With Project Condition	ondition	
	Planted	Net Produ	Net Production Value	Planted	Net Prod	Net Production Value	Incremental
Crops	Area		Total	Area	Per ha	Total	NPV
	(ha)	(Riel '000)	(Riel 'Million)	(ha)	(Riel '000)	(Riel 'Million)	(Riel 'Million) (Riel 'Million)
Rice	9,220		7,193	8,755		14,296	
Early Wet Season							
- Normal irrigation area	0	1,446	0	740	1,720	1,273	
Wet Season Transplanting							
- Normal irrigation area	901	1,435	1,293	6,160	1,710	10,536	
- Supplemental irrigation area	1,257	843	1,060	0	0	0	
- Rainfed area	4,041	583	2,356	0	0	0	
Wet Season Direct Sowing							
- Normal irrigation area	569	898	234	1,840	1,338	2,461	
- Supplemental irrigation area	375	540	203	0	0	0	
- Rainfed area	1,207	295	356	0	0	0	
Dry Season							
- Normal irrigation area	1,170	1,446	1,692	15	1,720	26	
- Supplemental irrigation area	0	1,131	0	0	0	0	
- Rainfed area	0	881	0	0	0	0	
- Recession area	0	904	0	0	1,233	0	
Upland Crops	01		OI	325		1.083	
- Mungbean (recession area)	0	0	0	15	1,233	19	
- Mungbean (irrigated)	0	0	0	20	685	34	
- Morning Glory (irrigated)	0	0	0	0	3,123	0	
- Cucumber (irrigated)	0	0	0	260	3,961	1,030	
Total	9,220		7,193	9,080		15,379	8,186

		Increase	Increase in Paddy Production	roduction	
	Present	Present Condition	With Proje	With Project Condition	Paddy
-E	Paddy Yield	Production	Paddy Yield	Production	Production Increase
ê	(ton/ha)	(ton)	(ton/ha)	(ton)	(ton)
	3.0	0	3.5	2,590	
	3.0		3.5	21,560	
	2.0	2,514			
	2.0	538	2.8	5,152	
	1.0	-			
	3.6	3,510	3.5	53	
	2.0		2.5	0	
9		17,096		29,355	12,259

8,000	114	1,922	4,100	469
8,050	115	893	4,100	218
(ha)	%)	0	quiv.)	
Total Physical Area	Cropping Intensity	NPV per ha	Exchange rate (1 USD)	NPV per ha

Table G2-5 Economic Irrigation Benefit and Increase in Paddy Production (12/22)

Wat Loung Rehabilitation Project **Pursat River Basin**

	Incre	mental Econ	Incremental Economic Irrigation Benefit	n Benefit			
	J	Present Condition	lition	Wit	With Project Condition	ondition	
	Planted	Net Produ	Net Production Value	Planted	Net Prode	Planted Net Production Value	
Crops	Area	Per ha	Total	Area	Per ha	Total	
	(ha)	(Riel '000)	(Riel '000) (Riel 'Million)	(ha)	(Riel '000)	(Riel '000) (Riel 'Million)	
Rice	4,380		2,446	4,190		6,831	
Early Wet Season							
- Normal irrigation area	0	1,446	0	240	1,720	413	
Wet Season Transplanting							
- Normal irrigation area	35	1,435	50	3,034	1,710	5,190	
- Supplemental irrigation area	316	843	266	0	0	0	
- Rainfed area	2,988	583	1,742	0	0	0	
Wet Season Direct Sowing							
- Normal irrigation area	10	898	6	906	1,338	1,212	
- Supplemental irrigation area	94	540	51	0	0	0	
- Rainfed area	892	295	263	0	0	0	
			_				•

Present Condition Paddy Yield Production (ton/ha) (ton) (ton/ha) (ton) (ton/ha) (ton) (ton/ha) (ton) (ton) (ton/ha) (ton) (ton) (ton/ha) (ton) (
Paddy Vield Prod (ton/ha) (t 3.0 2.0 2.0 1.5 1.5 1.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0	Present Condition	With Proje	With Project Condition	Paddy
Yield Prod (ton/ha) (t (ton/ha) (t 3.0 3.0 2.0 1.5 1.5 1.0 1.0 3.0 2.5 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0	Paddy	Paddy		Production
(ton/ha) (t 3.0 3.0 3.0 2.0 1.5 1.5 1.0 3.0 2.5 2.0 2.0		Yield	Production	Increase
		(ton/ha)	(ton)	(ton)
		3.5	840	
		3.5	10,619	
			`	
		2.8	2,537	
	_		•	
		3.5	35	
		2.5	0	
4,828 6,407	6,407		14,031	7,624

1,2/4					
	3.940	110	1,846	4,100	450
4,350					
2,446 4,350					
	4.335	101	564	4,100	138
4,380	(ha)	%	000 Riel)	(Riel)	(USD)
Total	Total Physical Area	١.	•	te (1 USD equiv.)	NPV per ha

443 12 34

1,233

1,233

1,446

- Supplemental irrigation area

- Recession area

Upland Crops

- Rainfed area

- Normal irrigation area

Dry Season

- Mungbean (recession area) - Mungbean (irrigated) - Morning Glory (irrigated)

- Cucumber (irrigated)

881 904

685 3,123 3,961

Table G2-5 Economic Irrigation Benefit and Increase in Paddy Production (13/22)

Pursat River Basin

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	Incre	mental Ecor	Incremental Economic Irrigation Benefit	n Benefit		:	
		Present Condition	lition	Wit	With Project Condition	ondition	
Planted	eq	Net Produ	Net Production Value	Planted	Net Produ	Net Production Value	Incremental
Area		Per ha	Total	Area	Per ha	Total	NPV
(ha)		(Riel '000)	(Riel 'Million)	(ha)	(Riel '000)	(Riel 'Million)	(Riel 'Million) (Riel 'Million)
1,020	اسما		586	1,070		1,745	
0		1,446	0	70	1,720	120	
15		1,435	22	770	1,710	1,317	
75		843	63	0	0	0	
629		583	396	0	0	0	
Ś		898	4	230	1,338	308	
23		540	12	0	0	0	
203		295	09	0	0	0	
70		1,446	29	0	1,720	0	
0		1,131	0	0	0	0	
0		881	0	0	0	0	
0		904	0	0	1,233	0	
0			0	9		126	
0		0	0	0	1,233	0	
0		0	0	10	685	7	
0		0	0	0	3,123	0	
0		0	0	30	3,961	119	
1,020	- 1		586	1,110		1,871	1,285

	Increase	Increase in Paddy Production	roduction	
Present	Present Condition	With Proje	With Project Condition	Paddy
Paddy Yield	Production	Paddy Yield	Production	Production Increase
		(6011)114)	(ion)	(IIII)
3.0	0	3.5	245	
3.0 2.0 1.5	45 150 1,019	3.5	2,695	
2.0 1.5 1.0	10 35 203	2.8	644	
3.0 2.5 2.0	09	3.5	0	
2.0	0	2.5	0	
	1,521		3,584	2,063

1,000	111	1,871	4,100	456
1,000	102	586	4,100	143
(ha)	(%)	000 Riel)	equiv.) (Riel)	(OSD)
Total Physical Area	Cropping Intensity	NPV per ha	te (1 USL	NPV per ha

Table G2-5 Economic Irrigation Benefit and Increase in Paddy Production (14/22)

Anlong Knouchi, Wat Leal, Kosh Khsach Water Harvesting & Recession Rice Rehabilitation Project Pursat River Basin

	Incre	mental Econ	Incremental Economic Irrigation Benefit	n Benefit			
	P	Present Condition	lition	Wit	With Project Condition	ondition	
	Planted	Net Produ	Net Production Value	Planted	Net Produ	Net Production Value	Incremental
Crops	Area	Per ha	Total	Area	Per ha	Total	NPV
	(ha)	(Riel '000)	(Riel 'Million)	(ha)	(Riel '000)		(Riel 'Million) (Riel 'Million)
Rice	2,789		2,111	2,926		4,247	
Early Wet Season							
- Normal irrigation area	0	1,446	0	224	1,720	385	
Wet Season Transplanting							
- Normal irrigation area	0	1,435	0	948	1,710	1,622	
- Supplemental irrigation area	174	843	147	0	0	0	
- Rainfed area	783	583	457	0	0	0	
Wet Season Direct Sowing							
- Normal irrigation area	0	898	0	283	1,338	379	
- Supplemental irrigation area	52	540	28	0	0	0	
- Rainfed area	234	295	69	0	0	0	
Dry Season							
- Normal irrigation area	0	1,446	0	100	1,720	172	
- Supplemental irrigation area	72	1,131	81	0	0	0	
- Rainfed area	103	881	91	0	0	0	
- Recession area	1,371	904	1,239	1,371	1,233	1,690	
Upland Crops	01		0	147		252	
- Mungbean (recession area)	0	0	0	26	1,233	120	
- Mungbean (irrigated)	0	0	0	20	685	14	
- Morning Glory (irrigated)	0	0	0	0	3,123	0	
- Cucumber (irrigated)	0	0	0	30	3,961	119	
Total	2,789		2,111	3,073		4,500	2,388

		Increase	Increase in Paddy Production	roduction	
	Present (Present Condition	With Proje	With Project Condition	Paddy
ncremental	Paddy		Paddy		Production
NPV Riel 'Million)	Yield (ton/ha)	Production (ton)	Yield (ton/ha)	Production (ton)	Increase (ton)
		•		i i	
	3.0	0	3.5	784	
. a. a. programa	3.0	0	3.5	3,318	
	2:0	348			
	1.5	1,175			
	2.0	0	2.8	792	
	1.5	78			
	1.0	234	·····		
	3.0	0	3.5	350	
	2.5	180			
	2.0	206			
<u></u>	2.0	2,742	2.5	3,428	
2,388		4,963		8,672	3,709

2,602	118	1,729	4,100	422
2,614	107	808	4,100	197
(ha)	(%)	000 Riel)	iiv.) (Riel)	(OSD)
Total Physical Area	Cropping Intensity	NPV per ha	Exchange rate (1 USD equ	NPV per ha

Table G2-5 Economic Irrigation Benefit and Increase in Paddy Production (15/22)

Boribo River Basin

Lum Hach Rehabilitation Project

			,																					•		
		Incremental	NPV	(Riel 'Million)																				vi 1010 A		3,488
	ndition	Net Production Value	Total	(Riel 'Million) (Riel 'Million)	6,329		0		6,329	0	0		0	0	0		0	0	0	0	470	0	34	0	436	6,799
	With Project Condition	Net Produ	Per ha	(Riel '000)			1,720		1,710	0	0		1,338	0	0		1,720	0	0	1,233		1,233	685	3,123	3,961	
n Benefit	Wit	Planted	Area	(ha)	3,700		0		3,700	0	0		0	0	0		0	0	0	0	160	0	20	0	110	3,860
Incremental Economic Irrigation Benefit	ition	Net Production Value	Total	(Riel 'Million)	3,311		0	adrouet es-l	545	341	1,875		0	0	0		550	0	0	0	0	0	0	0	0	3,311
mental Econ	Present Condition	Net Produ	Per ha	(Riel '000)			1,446		1,435	843	583		898	540	295		1,446	1,131	881	904		0	0	0	0	
Incre	P	Planted	Area	(ha)	4,380		0		380	405	3,215		0	0	0		380	0	0	0	01	0	0	0	0	4,380
			Crops		Rice	Early Wet Season	- Normal irrigation area	Wet Season Transplanting	- Normal irrigation area	- Supplemental irrigation area	- Rainfed area	Wet Season Direct Sowing	- Normal irrigation area	- Supplemental irrigation area	- Rainfed area	Dry Season	- Normal irrigation area	- Supplemental irrigation area	- Rainfed area	- Recession area	Upland Crops	- Mungbean (recession area)	- Mungbean (irrigated)	- Morning Glory (irrigated)	- Cucumber (irrigated)	Total

	Increase	Increase in Paddy Production	roduction	
Present	Present Condition	With Proje	With Project Condition	Paddy
Paddy Vield	Production	Paddy	Production	Production
(ton/ha)	(ton)	t iciu (ton/ha)	(ton)	(ton)
Ċ	C	3 0	d	
3.0	1 140	C. C	12 950	
2.0	810 4,823	}		
2.0 1.5 1.0	000	5.8	0	
3.0	1,140	3.5	0	
2.0	0	. 2.5	0	
	7,913		12,950	5,038

3,700 104 1,837 4,100 448

Table G2-5 Economic Irrigation Benefit and Increase in Paddy Production (16/22)

Boribo River Basin 7th January Canal Rehabilitation Project

Present Condition With Planted Net Production Value Planted Area Per ha Total Area area (Riel '000) (Riel 'Million) (ha) (ha) area 0 1,446 0 0 gation area 190 1,435 2,000 0 aving 0 1,777 583 1,036 0 aving 0 540 0 0 aving 0 540 0 0 gation area 190 1,446 275 0 gation area 0 1,131 0 0 ion area 0 1,131 0 0 ion area 0 0 0 0 0 <		Incre	mental Ecor	Incremental Economic Irrigation Benefit	n Benefit			
Crops Area (ha) Net Production Value (ha) Planted (ha) Net Production Value (ha) Planted (ha) <		Ь	resent Cond	lition	Wit	With Project Condition	ondition	
Crops Area Per ha (ha) For ha (Riel '000) Total (ha) Area (ha) <th></th> <th>Planted</th> <th>Net Produ</th> <th>ection Value</th> <th>Planted</th> <th>Net Prod</th> <th>Net Production Value</th> <th>Incremental</th>		Planted	Net Produ	ection Value	Planted	Net Prod	Net Production Value	Incremental
1,446 1,445 1,000 1,446 1,445 1,000 1,446 1,445 1,000 1,445 1,000 1,445 1,000 1,445 1,000 1,445 1,000 1,445 1,000 1,477 1,445 1,000 1,445 1,000 1,446 1,445 1,000 1,446 1,44	Crops	Area	Per ha	Total	Area	Per ha		NPV
1y Wet Season 1,446 0 1,755 2,000 Normal irrigation area 0 1,446 0 0 A Season Transplanting 190 1,435 273 2,000 Normal irrigation area 203 843 171 0 Supplemental irrigation area 0 868 0 0 Normal irrigation area 0 540 0 0 Normal irrigation area 0 295 0 0 Supplemental irrigation area 0 1,446 275 0 Supplemental irrigation area 0 1,131 0 0 Assoon 0 1,131 0 0 Recession area 0 1,131 0 0 Mungbean (recession area 0 0 0 0 Mungbean (irrigated) 0 0 0 0 Cucumber (irrigated) 0 0 0 0 Outcomber (irrigated) 0 0 0		(RII)	(Maei man)	(Riel Million)	(BB)	(Riel '000)		(Kiel Million) (Kiel Million)
rigation area 0 1,446 0 0 0 Transplanting rigation area 203 843 171 0 Interest Sowing 1,777 583 1,036 0 Direct Sowing 0 868 0 0 Interest of the sea 0 0 295 0 0 Interest of the sea 0 0 0 0 0 Interest of the sea 0 0 0 0 0 0 Interest of the sea 0 0 0 0 0 Interest of the sea 0 0 0 0 0 Interest of the sea 0 0 0 0 0 Interest of the sea 0 0 0 0 0 Interest of the sea 0 0 0 0 0 Interest of the sea 0 0 0 0 0 Interest of the sea 0 0 0 0 0 Interest of the sea 0 0 0 0 0 Interest of the sea 0 0 0 0 0 Interest of the sea 0 0 0 0 0 Interest of the sea 0 0 0 0 0 Interest of the sea 0 0 0 0 0 Interest of the sea 0 0 0 0 0 0 Interest of the sea 0 0 0 0 0 0 Interest of the sea 0 0 0 0 0 0 Interest of the sea 0 0 0 0 0 0 0 Interest of the sea 0 0 0 0 0 0 0 0 Interest of the sea 0 0 0 0 0 0 0 0 0 0 Interest of the sea 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Rice	2,360		1,755	2,000		3,421	-
rigation area 0 1,446 0 0 0 Transplanting 190 1,435 273 2,000 rigation area 203 843 171 0 Direct Sowing 0 868 0 0 Interest of the sea 0 0 295 0 0 Interest of the sea 0 0 0 0 0 Interest of the sea 0 0 0 0 0 0 Interest of the sea 0 0 0 0 0 0 0 Interest of the sea 0 0 0 0 0 0 0 Interest of the sea 0 0 0 0 0 0 Interest of the sea 0 0 0 0 0 0 Interest of the sea 0 0 0 0 0 0 Interest of the sea 0 0 0 0 0 0 Interest of the sea 0 0 0 0 0 0 Interest of the sea 0 0 0 0 0 0 Interest of the sea 0 0 0 0 0 0 Interest of the sea 0 0 0 0 0 0 Interest of the sea 0 0 0 0 0 0 Interest of the sea 0 0 0 0 0 0 Interest of the sea 0 0 0 0 0 0 0 Interest of the sea 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Early Wet Season							
Transplanting 190 1,435 273 2,000 rigation area 203 843 171 0 nrea 1,777 583 1,036 0 Direct Sowing 0 868 0 0 rigation area 0 540 0 0 rigation area 0 295 0 0 rigation area 190 1,446 275 0 rigation area 0 1,131 0 0 n area 0 904 0 0 n (recession area) 0 0 0 0 n (irrigated) 0 0 0 0 or (irrigated) 0 0 0 0 or (irrigated) 0 0 0 0 or (irrigated) 0 0 0 0	- Normal irrigation area	0	1,446	0	0	1,720	0	
rigation area 190 1,435 273 2,000 antal irrigation area 203 843 171 0 Direct Sowing Direct Sowing rigation area 0 540 0 0 or area 0 1,777 583 1,036 0 Direct Sowing rigation area 0 540 0 0 or area 0 1,131 0 0 or area 0 904 0 0 or (irrigated) 0 0 0 0	Wet Season Transplanting							
rigation area 203 843 171 0 I.777 583 1,036 0 Direct Sowing 0 868 0 0 rigation area 0 540 0 0 I.131 0 0 I.295 0 0 I	- Normal irrigation area	190	1,435	273	2,000	1,710	3,421	
rigation area 0 868 0 0 rigation area 0 868 0 0 antal irrigation area 0 295 0 0 rrea 190 1,446 275 0 rrea 0 1,131 0 0 rrea 0 904 0 0 n (recession area) 0 0 904 0 0 n (irrigated) 0 0 0 0 rrigation area 0 770 n (irrigated) 0 0 0 0 70 rigation area 0 770 n (irrigated) 0 0 0 70	- Supplemental irrigation area	203	843	171	0	0	0	
Direct Sowing 868 0 0 rigation area 0 540 0 0 nrea 0 295 0 0 rigation area 190 1,446 275 0 rrea 0 1,131 0 0 nrea 0 1,131 0 0 nrea 0 904 0 0 n (recession area) 0 904 0 0 n (irrigated) 0 0 0 0 d (irrigated) 0 0 0 0 r (irrigated) 0 0 0 0	- Rainfed area	1,777	583	1,036	0	0	0	
rigation area 0 868 0 0 antal irrigation area 0 295 0 0 rigation area 190 1,446 275 0 antal irrigation area 0 1,131 0 0 area 0 904 0 0 area 0 904 0 0 area 0 904 0 0 area 0 0 0 0 0 0 0 0 area 0 0 0 0 0 area 0 0 0 ar	Wet Season Direct Sowing							
rigation area 0 540 0 0 0 0 1	- Normal irrigation area	0	898	0	0	1,338	0	
rigation area 190 1,446 275 0 rigation area 190 1,446 275 0 rrea 0 1,131 0 0 rrea 0 904 0 0 n area 0 904 0 0 n (recession area) 0 0 0 0 r (irrigated) 0 0 0 0	- Supplemental irrigation area	0	540	0	0	0	0	
rigation area 190 1,446 275 0 or area 0 1,131 0 0 or area 0 904 0 0 or (recession area) 0 0 0 0 0 or (irrigated) 0 0 0 0 0	- Rainfed area	0	295	0	0	0	0	
rigation area 190 1,446 275 0 Integration area 0 1,131 0 0 Integration area 0 1,131 0 0 Integrated 0 0 0 0 0 Integrated 0 0 0 0 0 Integrated 0 0 0 0 0 Integrated 0 0 0 0 0 Integrated 0 0 0 0 Integrated 0 0 0 0 0 Integrate	Dry Season							
nrea 0 1,131 0 0 Irea 0 881 0 0 Inca 0 904 0 0 Increasion area 0 904 0 0 Incression area 0 0 0 0 0 Increasion area 0 0 0 0 0 0 0 Increasion area 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	- Normal irrigation area	190	1,446	275	0	1,720	0	
nrea 0 881 0 0 0 1 area 0 1 area 0 904 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	- Supplemental irrigation area	0	1,131	0	0	0	0	
n area 0 904 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	- Rainfed area	0	881	0	0	0	0	
n (recession area) 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	- Recession area	0	904	0	0	1,233	0	
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Upland Crops	01		0	100		298	
0 0 0 0 30 0 0 0 0 0 30 0 0 0 0 3	- Mungbean (recession area)	0	0	0	0	1,233	0	
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	- Mungbean (irrigated)	0	0	0	30	685	21	
0 0 0 0 0	- Morning Glory (irrigated)	0	0	0	0	3,123	0	
	- Cucumber (irrigated)	0	0	0	70	3,961	277	
2,360 1,755	Total	2,360		1,755	2,100		3,719	1,964

			Increase	Increase in Paddy Production	roduction	
dition		Present	Present Condition	With Proje	With Project Condition	Paddy
ion Value	Incremental	Paddy		Paddy		Production
Total	NPV	Yield	Production	Yield	Production	Increase
Riel 'Million)	(Riel 'Million)	(ton/ha)	(ton)	(ton/ha)	(ton)	(ton)
3,421						
0		3.0	0	3.5	0	
3,421	-	3.0		3.5	7,000	
0		2.0				
0		1.5	2,666			
0		2.0		2.8	0	
0		1.5				
0		1.0	0			
0		3.0	570	3.5	0	
0		2.5			1	
0		2.0				
0		2.0	0	2.5	0	
298						
0						
21						
0						
277						
3,719	1,964		4,212		7,000	2,789

Table G2-5 Economic Irrigation Benefit and Increase in Paddy Production (17/22)

Boribo River Basin Khvet Rehabilitation Project

	Incre	mental Eco	Incremental Economic Irrigation Benefit	n Benefit			
	P	Present Condition	lition	Wit	With Project Condition	ondition	
	Planted	Net Prod	Net Production Value	Planted	Net Prod	Net Production Value	Incremental
Crops	Area	Per ha	Total		Per ha	Total	NPV
	(ha)	(Riel '000)	(Riel 'Million)	(ha)	(Riel '000)	(Riel 'Million)	(Riel 'Million) (Riel 'Million)
Rice	250		152	250		428	
Early Wet Season							
- Normal irrigation area	0	1,446	0	0	1,720	0	
Wet Season Transplanting							
- Normal irrigation area	0	1,435	0	250	1,710	428	
- Supplemental irrigation area	25	843	21	0	0	0	
- Rainfed area	225	583	131	0	0	0	
Wet Season Direct Sowing							
 Normal irrigation area 	0	898	0	0	1,338	0	
- Supplemental irrigation area	0	540	0	0	0	0	
- Rainfed area	0	295	0	0	0	0	
Dry Season							
- Normal irrigation area	0	1,446	0	0	1,720	0	
- Supplemental irrigation area	0	1,131	0	0	0	0	
- Rainfed area	0	881	0	0	0	0	
- Recession area	0	904	0	0	1,233	0	
Upland Crops	01		0	의		30	
- Mungbean (recession area)	0	0	0	0	1,233	0	
- Mungbean (irrigated)	0	0	0	33	685	2	
- Morning Glory (irrigated)	0	0	0	0	3,123	0	
- Cucumber (irrigated)	0	0	0	7	3,961	28	
Total	250		152	260		457	305

250 104 1,830 4,100 446

250 100 609 4,100 149

(ha) (%) 000 Riel) '.) (Riel) (USD)

Cropping Intensity

NPV per ha

Exchange rate (1 USD equiv.)

NPV per ha

Total Physical Area

		Increase	Increase in Paddy Production	roduction	
	Present	Present Condition	With Proje	With Project Condition	Paddy
ncremental	Paddy	;	Paddy		Production
NFV tiel 'Million)	Yield (ton/ha)	Production (ton)	Yield (ton/ha)	Production (ton)	Increase (ton)
			e e		
	3.0	0	3.5	0	
	3.0	0	3.5	875	
	2.0	50			
	1.5	338			
	2.0	0	2.8	0	
	1.5	0			
	1.0	0			
	3.0	0	3.5	0	
	2.5	0			
	2.0	0			
	2.0	0	2.5	0	
,					
305		388		875	488

Table G2-5 Economic Irrigation Benefit and Increase in Paddy Production (18/22)

Boribo River Basin

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tion]
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	Incre	nental Ecor	Incremental Economic Irrigation Benefit	n Benefit				
	P	Present Condition	lition	Wit	With Project Condition	ondition		a ⊷
	Planted	Net Produ	Net Production Value	Planted	Net Produ	Net Production Value	Incremental	
Crops	Area	Per ha	Total	Area	Per ha	Total	NPV	
	(ha)	(Riel '000)	(Riel 'Million)	(ha)	(Riel '000)	(Riel 'Million)	(Riel 'Million)	- CE
Rice	180		110	081		308		
Early Wet Season								
- Normal irrigation area	0	1,446	0	0	1,720	0		
Wet Season Transplanting								
- Normal irrigation area	0	1,435	0	180	1,710	308		
- Supplemental irrigation area	18	843	15	0	0	0		
- Rainfed area	162	583	95	0	0	0		
Wet Season Direct Sowing							••••	
- Normal irrigation area	0	898	0	0	1,338	0		
- Supplemental irrigation area	0	540	0	0	0	0		
- Rainfed area	0	295	0	0	0	0		
Dry Season								
- Normal irrigation area	0	1,446	0	0	1,720	0		
- Supplemental irrigation area	0	1,131	0	0	0	0		
- Rainfed area		881	0	0	0	0		
- Recession area		904	0	0	1,233	0		
Upland Crops	01		0	9		ଛା		
- Mungbean (recession area)		0	0	0	1,233	0		
- Mungbean (irrigated)	0	0	0	c	685	2	-,,,,	
- Morning Glory (irrigated)	0	0	0	0	3,123	0		
- Cucumber (irrigated)	0	0	0	7	3,961	28		
Total	180		110	190		338	228	

	Increase	Increase in Paddy Production	roduction	
Present	Present Condition	With Proje	With Project Condition	Paddy
Paddy Yield	Production	Paddy Yield	Production	Production Increase
(ton/ha)	(ton)	(ton/ha)	(ton)	(ton)
3.0	0	3.5	0	
3.0	0	3.5	929	
2.0	36 243			
2.0	000	2.8	0	
3.0		3.5	0	
2.0	0 0	2.5	0	
	279		630	351

Table G2-5 Economic Irrigation Benefit and Increase in Paddy Production (19/22)

Boribo River Basin Chak Teum, Trapeang Khong & Don Poy Rehabilitation Project

	Incre	mental Ecor	Incremental Economic Irrigation Benefit	n Benefit			
	P	Present Condition	lition	Wit	With Project Condition	ondition	
	Planted	Net Produ	Net Production Value	Planted	Net Prod	Net Production Value	Incremental
Crops	Area	Per ha	Total	Area	Per ha	Total	NPV
	(ha)	(Ricl '000)	(Riel 'Million)	(ha)	(Riel '000)		(Riel 'Million) (Riel 'Million)
Rice	086		297	086		1,676	
Early Wet Season							
- Normal irrigation area	0	1,446	0	0	1,720	0	
Wet Season Transplanting							
- Normal irrigation area	0	1,435	0	086	1,710	1,676	
- Supplemental irrigation area	86	843	83	0	0	0	
- Rainfed area	882	583	514	0	0	0	
Wet Season Direct Sowing							
- Normal irrigation area	0	898	0	0	1,338	0	
- Supplemental irrigation area	0	540	0	0	0	0	
- Rainfed area	0	295	0	0	0	0	
Dry Season							
- Normal irrigation area	0	1,446	0	0	1,720	0	
- Supplemental irrigation area	0	1,131	0	0	0	0	
- Rainfed area	0	881	0	0	0	0	
- Recession area	0	904	0	0	1,233	0	
Upland Crops	01		0	<u>20</u>		133	
- Mungbean (recession area)	0	0	0	0	1,233	0	
- Mungbean (irrigated)	0	0	0	70	685	14	
- Morning Glory (irrigated)	0	0	0	0	3,123	0	
- Cucumber (irrigated)	0	0	0	30	3,961	119	
Total	086		597	1,030		1,809	1,212

		THE VAS	THE CASE IN TACAS TOWNS IN	Martin	
	Present (Present Condition	With Proje	With Project Condition	Paddy
Incremental	Paddy		Paddy		Production
NPV	Yield	Production	Yield	Production	Increase
(Riel 'Million)	(ton/ha)	(ton)	(ton/ha)	(ton)	(ton)
	3.0	0	3.5	0	
	3.0	0	3.5	3,430	
	2.0	196			
	1.5	1,323			
	2.0	0	2.8	0	
	1.5	0			
	1.0	0			
	3.0	0	3.5	0	
	2.5	0			
	2.0	0			
	2.0	0	2.5	0	
	٠				
1,212		1,519		3,430	1,911

086	105	1,846	4,100	450
086	100	609	4,100	149
	%)	_	quiv.)	
Total Physical Area	Cropping Intensity	NPV per ha	Exchange rate (1 USD e	NPV per ha

Table G2-5 Economic Irrigation Benefit and Increase in Paddy Production (20/22)

Teuk Laak & Trapeang Thlan Rehabilitation Project **Boribo River Basin**

Incren Planted 0 23 207 230 Area 230 (ha) Supplemental irrigation area
 Rainfed area - Supplemental irrigation area - Rainfed area Normal irrigation area
 Supplemental irrigation area <u>Úpland Crops</u> - Mungbean (recession area) - Morning Glory (irrigated) - Cucumber (irrigated) Wet Season Direct Sowing Wet Season Transplanting - Normal irrigation area Normal irrigation area - Normal irrigation area - Mungbean (irrigated) Total Crops Early Wet Season - Recession area - Rainfed area Dry Season

Increase in Paddy Production	With Project Condition Paddy	dy Production	d Production Increase	ha) (ton) (ton)		3.5 0	3.5 805			2.8 0			3.5 0			2.5 0					
Increase in Pac	Present Condition With	Pad	Production Yield	(ton) (ton/ha)		0	0	46	311	0	0	0	0	0	0	0			-		
	Present	Paddy	Yield	(ton/ha)		3.0	3.0	2.0	1.5	2.0	1.5	1.0	3.0	2.5	2.0	2.0					
		Incremental	NPV	(Riel 'Million)													,				
	ondition	Net Production Value	Total	(Riel 'Million)	393	0	393	0	0	0	0	0	0	0	0	0	7	0	7	0	
	With Project Condition	Net Produ	Per ha	(Riel '000)		1,720	1,710	0	0	1,338	0	0	1,720	0	0	1,233		1,233	685	3,123	
n Benefit	With	Planted	Area	(ha)	230	0	230	0	0	0	0	0	0	0	0	0	2	0	10	0	(
emental Economic Irrigation	lition	Net Production Value	Total	(Riel 'Million)	140	0	0	19	121	0	0	0	0	0	0	0	0	0	0	0	(
al Econ	Present Condition	et Produ	Per ha	(Riel '000)		1,446	1,435	843	583	898	540	295	1,446	1,131	881	904		0	0	0	<

230	104	1,740	4,100	424
230	100	609	4,100	149
(ha)	(%)	000 Riel)	equiv.) (Riel)	(OSD)
Total Physical Area	Cropping Intensity	NPV per ha	Exchange rate (1 USD eq.	NPV per ha

Table G2-5 Economic Irrigation Benefit and Increase in Paddy Production (21/22)

Toul Champey Rehabilitation Project **Boribo River Basin**

	Incre	mental Eco	Incremental Economic Irrigation Benefit	n Benefit				
	di .	Present Condition	lition	Wit	With Project Condition	ondition		Pres
	Planted	Net Prod	Net Production Value	Planted	Net Prod	Net Production Value	Incremental	Padd
Crops	Area	Per ha	Total	Area	Per ha	Total	NPV	Yield
	(ha)	(Riel '000)	(Riel 'Million)	(ha)	(Riel '000)	(Riel 'Million) (Riel 'Million)	(Riel 'Million)	(ton/h
Rice	360		219	<u> </u>		616		
Early Wet Season								
- Normal irrigation area	0	1,446	0	0	1,720	0		
Wet Season Transplanting								
- Normal irrigation area	0	1,435	0	360	1,710	616		
 Supplemental irrigation area 	36	843	30	0	0	0		
- Rainfed area	324	583	189	0	0	0		
Wet Season Direct Sowing								
- Normal irrigation area	0	898	0	0	1,338	0		
- Supplemental irrigation area	0	540	0	0	0	0		
- Rainfed area	0	295	0	0	0	0		
Dry Season								
- Normal irrigation area	0	1,446	0	0	1,720	0		
 Supplemental irrigation area 	0	1,131	0	0	0	0		
- Rainfed area	0	881	0	0	0	0		
- Recession area	0	904	0	0	1,233	0		
Upland Crops	01		0	20		41		
- Mungbean (recession area)	0	0	0	0	1,233	0		
- Mungbean (irrigated)	0	0	0	20	685	14		
 Morning Glory (irrigated) 	0	0	0	0	3,123	0		
- Cucumber (irrigated)	0	0	0	0	3,961	0		
Total	360		219	380		630	410	

mental Economic Irrigation Benefit	n beneut					THEFE	mercase in Launy 110 duction	Control	
resent Condition	Wit	With Project Condition	tion		Present	Present Condition	With Proje	With Project Condition	Paddy
Net Production Value	Planted	Net Production Value	n Value	Incremental	Paddy		Paddy		Production
Total	Area	Per ha	Total	NPV	Yield	Production	Yield	Production	Increase
(Riel 'Million)	(ha)	(Riel '000) (Rie	el 'Million)	(Riel 'Million) (Riel 'Million)	(ton/ha)	(ton)	(ton/ha)	(ton)	(ton)
219	360		919						
0	0	1,720	0		3.0	0	3.5	0	
0	360	1,710	616		3.0	0	3.5	1,260	
30	0	0	0		2.0	72			
189	0	0	0		1.5	486			
0	0	1,338	0		2.0	0	2.8	0	
0	0	0	0		1.5	0			
0	0	0	0		1.0	0			
0	0	1,720	0		3.0	0	3.5	0	
0	0	0	0		2.5	0			
0	0	0	0		2.0	0			
0	0	1,233	0		2.0	0	2.5	0	
0	SI S0		14						
0	0	1,233	0						
0	70	685	14						
0	0	3,123	0						
0	0	3,961	0						
219	380		630	410		250		1 260	505

360 106 1,749 4,100 426

Table G2-5 Economic Irrigation Benefit and Increase in Paddy Production (22/22)

Chan Keak Rehabilitation Project **Boribo River Basin**

=	Present Condit	,	Produ) (to			3.0		3.0	2.0	1.5		2.0	1.5	1.0		3.0	2.5	2.0	0.						
	Prese	Paddy	Yield	(ton/ha)			<u>.</u>		~	7			- 5		_		<u>ω</u>	2	7	2						
		Incremental	NPV	(Riel 'Million)																						124
	ondition	Net Production Value	Total	(Riel 'Million)	188		0		188	0	0		0	0	0		0	0	0	0	7	0	7	0	0	195
	With Project Condition	Net Prod	Per ha	(Riel '000)			1,720		1,710	0	0		1,338	0	0		1,720	0	0	1,233		1,233	685	3,123	3,961	
on Benefit	Wi	Planted	Area	(ha)	110		0		110	0	0		0	0	0		0	0	0	0	10	0	10	0	0	120
Incremental Economic Irrigation Benefit	lition	Net Production Value	Total	(Riel 'Million)	71		0		0	24	48		0	0	0		0	0	0	0	0	0	0	0	0	71
mental Ecor	Present Condition	Net Produ	Per ha	(Riel '000)			1,446		1,435	843	583		898	540	295		1,446	1,131	881	904		0	0	0	0	
Incre	I	Planted	Area	(ha)	110		0		0	28	82		0	0	0		0	0	0		01	0	0	0	0	110
			Crops		Rice	Early Wet Season	- Normal irrigation area	Wet Season Transplanting	- Normal irrigation area	- Supplemental irrigation area	- Rainfed area	Wet Season Direct Sowing	- Normal irrigation area	- Supplemental irrigation area	- Rainfed area	Dry Season	- Normal irrigation area	- Supplemental irrigation area	- Rainfed area	- Recession area	Upland Crops	- Mungbean (recession area)	- Mungbean (irrigated)	- Morning Glory (irrigated)	- Cucumber (irrigated)	Total

THURSDAY TOO	CHEST ECONOMIC IN I BANGIL DENETH	יוו דורווור					THAT ISH	and the many a rounding	TOTAL TOTAL	
Present Condition	dition	Wit	With Project Condition	dition		Present	Present Condition	With Proje	With Project Condition	Paddy
Net Prod	Net Production Value	Planted	Net Production Value	tion Value	Incremental	Paddy		Paddy		Production
Per ha	Total (Riel 'Million)	Area (ha)	Per ha	Total (Riel 'Million)	NPV (Riel 'Million)	Yield (ton/ha)	Production (ton)		Production (ton)	Increase (ton)
	71	011		188						
1,446	0	0	1,720	0		3.0	0	3.5	0	
1,435	0	110	1,710	188		3.0	0	3.5	385	
843	24	0	0	0		2.0	99			
583	48	0	0	0		1.5	123			
898	0	0	1,338	0		2.0	0	2.8	0	
540	0	0	0	0	•	1.5	0			
295	0	0	0	0		1.0	0			
1,446	0	0	1,720	0		3.0	0	3.5	0	
1,131	0	0	0	0	•	2.5	0			
881	0	0	0	0		2.0	0			
904	0	0	1,233	0		2.0	0	2.5	0	
	0	10		7						
0	0	0	1,233	0						•
0	0	10	685	7						
0	0	0	3,123	0						
0	0	0	3,961	0						
	71	120		195	124		179		385	206

Table G2-6 Conversion of Financial Cost to Economic Cost (1/22)

Battambang River Basin Kong Hort Rehabilitation Project Phase I

Danagadian					Finar	Financial Cost									Economic Cost	Cost							
Description	Total	fæl		F/C					I/C		[F/C				7	271		I			
Cescribacii	OSD	Equivalent	Material E	Material Equipment Labor		Total	Material Equipment Labor	пртеп І			Total	Material Equipment Labor	uipment L	abor Total	i I	Material Equipment	men Labor	ŀ	or Total	1	Construction Conversion Factor	nversion F	otor
		Riel		1	F Consul			ಕ	Common Si	Skilled			F	F Consul			Com	Common Skilled	led		Total Cost		Factors
	000	Million							ວິ	Conversion Factor	ıctor	/A 0.81	/B 0.73 1	1.00	0	0.86	0.78 0	0.30 0	0.61	Financial		Есопотіс	
1. Preparatory Works		5,548	825	1,532	0	3,883	250	250	333	832	1,664	668.2 1,	1,118.3	0.0 1,786.5		214.7 19	194.7 10	100.6 50	507.6 1,017.6		5,547.6 2	2,804.1	0.51
2 Direct Cost		73,202	17,934	33,307	0	51,241	3,294	3,294	4,392	10,980 2	21,961 14	14,526.9 24,	24,314.0	0.0 38,840.9		2,833 2,	2,569 1,	1,328 6,0	6,698 13,428		73,201.7 52	52,268.7	0.71
 Weir & major intake structures 	3,300	13,530	3,315	6,156	0	9,471	609	609	812	2,030	4,059 2	2,685.0 4,	4,494.0	0.0 7,179.0		523.6 47	474.9 24	245.4 1,23	1,238.0 2,481.9		13,530.0	6'099'6	0.71
Canals & related structures	13,124	53,808	13,183	24,483	0	37,666		2,421	3,229	8,071	16,143 10	10,678.3 17,872.5	872.5	0.0 28,550.8	3.8 2,082.4		1,888.7 97	975.8 4,92	4,923.5 9,870.4		53,808.4 38	38,421.2	0.71
3. Dykes	77	316	11	144	0	221	14	14	19	47	95	62.7	104.9	0.0 167.6		12.2	11.1	5.7 2	28.9 57	57.9 3	315.7	225.5	0.71
4. Miscellaneous works		5,548	1,359	2,524	0	3,883	250	250	333	837	1,664 1	1,100.9 1,	1,842.6	0.0 2,943.5		214.7 19	194.7 10	100.6 50	507.6 1,017.6		5,547.6 3	3,961.1	0.71
3. Contractor's Expenses		70,455	17,261	32,057	0	49,318	3,170	3,170	4,227	10,568 2	21,136	1,489.9 2,	2,247.4	0.0 3,737.3		308.5 25	253.8 5	50.8 51	517.3 1,130.4		70,455.0 4	4,867.7	0.07
4. Administration Cost		27,738	6,796	12,621	0	19,417	1,248	1,248	1,664	4,161	8,321	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	27,738.2	0.0	0.00
5. Consulting Services		27,738	0	0	19,417	19,417	0	0	0	8,321	8,321	0:0	0.0	0.0 19,416.7 19,416.7		0.0	0.0	0.0 5,076.1	6.1 5,076.1		27,738.2 24	24,492.8	0.88
Total			42,817	719,517	19,417 143,276	13,276	7,962	7,962 10	10,617 3.	34,863 6	61,404 16	16,685.0 27,679.7 19,416.7	619.7 19,	416.7 63,781.4		3,356 3,0	3,018 1,	1,479 12,3	12,799 20,652	52 204,680.7		84,433.3	0.41
6. Physical Contingencies			4,282	7,952	1,942	14,328	796	961	1,062	3,486 (6,140 1	1,668.5 2,	2,768.0 1,941.7	941.7 6,378.1		335.6 30	301.8 14	147.9 1,279.9	9.9 2,065.2		20,468.0 8	8,443.3	0.41
GRAND TOTAL			47,098	87,468	21,358 157,604	77,604	8,759	8,759	11,678 31	38,349 67	67,545 18	353.5 30,	447.7 21,	18,353.5 30,447.7 21,358.4 70,159.5	3,691.7	1.7 3,319.7		6.8 14,07	1,626.8 14,078.9 22,717.1	.1 225,148.7		92,876.6	0.41

	Financial	Conversion Economic	Economic									Total	Riel (mil.)	225,149	92,877	
		Factor	%		Major repairing cost	g cost							US\$('000)	56,287	23,219	
	%					Material 3quipment		Labor]	Labor	Total						
Overhead cost and miscellaneous	90.9	0.10	09.0				දි	Common S	Skilled							
Company Tax /1	1.40	1.00	1.40		Share	0.35	0.65	0.00	0.00			Target Area	rea			
Minimum Tax /2	1.00	1.00	1.00		F/C	0.25	0.45	0.00	0.00	0.70		(BE)	(ha) 16,700			
Profit	7.00	0.10	0.70		Share	0.15	0.15	09'0	0.10				Riel('000)/ha	13,482	5,561	
VAT	10.00	1.00	10.00		I/C	0.05	0.05	0.18	0.03	0.30			US\$('000)/he		1.39	
	25.4		13.7										,			
	Fac	Factor for Materials	98.0		Conversion Factor	ıctor	0.686 3conomic Cost (MR)	omic Cost		10,029.7		FWUC	1,077	3,797.5	5 years	
	Fac	Factor for Equipment	0.78		Financial Cost ('000\$)	ı	3,566 Economic Cost (T\$)	nomic Cost		2,446.3		Aggi	115.75	408.1	5 years	
/1; 20% of the Profit									•						١.	
/2;1% of Turnover					Annual O&M cost	cost					Year	Invest	FWUC	Agri	Total	Build-up
						Material 3q	Material 3quipment Labor		Labor	Total	_	4,898.6			4,898.6	
/A; Excluding the following transfer payment		/B; Excludi	ing the followi	/B; Excluding the following transfer payment			Ŝ	Common S	Skilled		2	30,792.3	759.5		31,551.8	
Import tariff	7.0 %	Ħ	Import tarifi	15.0 %	Share	0.15	0.15	09.0	0.10		3	30,792.3	759.5	81.6	31,633.4	
Company tax	1.4 %	ŭ	Company ta	1.4 %	I/C	0.15	0.15	09.0	0.10	1.00	4	13,196.7	759.5	81.6	14,037.8	9.0
Minimum tax	1.0 %	×	Minimum ta	1.0 %							2	13,196.7	759.5	81.6	14,037.8	0.7
VAT	10.0 %	'n	VAT	10.0 %	Conversion Factor	ıctor	0.488 3conomic Cost (MR)	iomic Cost		1,096.4	9		759.5	81.6	841.1	8.0
					Financial Cost ('000\$)	(\$000.)	548 Ecc	548 Economic Cost (T\$)	(T\$)	267.4	7			81.7	81.7	6.0

0.6 0.7 0.8 0.9

Table G2-6 Conversion of Financial Cost to Economic Cost (2/22)

Battambang River Basin Kong Hort Rehabilitation Project Phase II

																							(Omt. rae	(Unit : ruels, million)
	-,-1					Fina	Financial Cost									Eco;	Economic Cost							
		To	Total		P/C					IVC				F/C					I/C					
Description	Ę	OSD	Equivalent	Material 1	Material Equipment Labor	Labor	Total	Material Eq	uipment Labor		Labor	Total	Material Equipment Labor	quipmen	Labor	Total	Material Equipment	uipmen	Labor	Labor	Total	Constructio	Construction Conversion Factor	n Factor
			Riel			F Consul			ರ	Common	Skilled			-	F Consul			S	Common	Skilled		Total Cost	Cost	Factors
													Ψ/	/B								Financial	Economic	
		000	Million							ŭ	Conversion Factor	actor	0.81	0.73	1.00		0.86	0.78	0:30	0.61				
1. Preparatory Works	Vorks		1,902	211	393	0	1,332	98	%	114	285	571	171.3	286.7	0.0	458.0	73.6	8.99	34.5	174.1	349.0	1,902.2	807.0	0.42
2 Direct Cost			25,100	6,150	11,421	0	17,570	1,130	1,130	1,506	3,765	7,530	4,981.1	8,336.9	0.0	13,318.0	176	881	455	2,297	4,604	25,100.0	17,922.4	0.71
1. Weir & m	1. Weir & major intake structures	0	0	0	0	0	0	0	0	0	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. Canals & 1	2. Canals & related structures	4,210	17,261	4,229	7,854	0	12,083	777	777	1,036	2,589	5,178	3,425.4	5,733.2	0.0	9,158.6	0.899	602.9	313.0	1,579.4	3,166.3	17,261.0	12,324.9	0.71
3. Dykes	•	1,448	5,937	1,455	2,701	0	4,156	267	267	356	891	1,781	1,178.2	1,971.9	0.0	3,150.1	229.8	208.4	107.7	543.2	1,089.1	5,936.8	4,239.2	0.71
4. Miscellaneous works	eous works		1,902	466	998	0	1,332	98	98	114	285	172	377.5	631.8	0.0	1,009.3	73.6	8.99	34.5	174.1	349.0	1,902.2	1,358.3	0.71
3. Contractor's Expenses	xpenses		24,158	5,919	10,992	0	16,911	1,087	1,087	1,449	3,624	7,247	510.9	770.6	0.0	1,281.5	105.8	87.0	17.4	177.4	387.6	24,158.2	1,669.1	0.07
4. Administration Cost	ı Cost		9,511	2,330	4,328	0	859'9	428	428	57.1	1,427	2,853	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9,511.1	0.0	00:00
5. Consulting Services	rvices		9,511	0	0	6,658	6,658	0	0	0	2,853	2,853	0.0	0.0	6,657.8	6,657.8	0:0	0.0	0.0	1,740.5	1,740.5	9,511.1	8,398.3	0.88
Total				14,610	27,133	6,658	49,128	2,730	2,730	3,640 1	11,954	21,055	5,663.3	9,394.2	6,657.8 2	21,715.3	1,151	1,035	507	4,389	7,082	70,182.6	28,796.8	0.41
6. Physical Contingencies	ingencies			1,461	2,713	999	4,913	273	273	364	1,195	2,106	566.3	939.4	8.599	2,171.5	115.1	103.5	50.7	438.9	708.2	7,018.3	2,879.7	0.41
GRAND TOTAL	TOTAL			16,071	29,846	7,324	54,041	3,003	3,003	4,004	13,149	23,160	6,229.6 10,333.6		7,323.6 23,886.8		1,265.9	1,138.4	557.8 4	4,827.6	7,789.7	77,200.9	31,676.5	0.41

Equipment and Materials																
	Financial	Conversion Economic	сопотіс									Total	Riel (mil.)	77,201	31,677	
		Factor	%		Major repairing cost	ng cost							US\$('000)	19,300	7,919	
	%					Material 3quipment		Labor	Labor	Total						
Overhead cost and miscellaneous	90.9	0.10	09:0				ŏ	Common	Skilled							
Company Tax /1	1.40	1.00	1.40		Share	0.35	0.65	0.00	0.00			Target Area	rea			
Minimum Tax /2	1.00	1.00	1.00		F/C	0.25	0.45	0.00	0.00	0.70		(h	(ha) 16,700			
Profit	7.00	01.0	0.70		Share	0.15	0.15	09'0	0.10				Riel('000)/ha	4,623	1,897	
VAT	10.00	1.00	10.00		1/C	0.05	0.05	0.18	0.03	0.30			US\$('000)/hs		0.47	
	25.4		13.7										,			
	Fac	Factor for Materials	98.0		Conversion Factor	ctor	0.686 300	0.686 3conomic Cost (MR)		3,901.1		FWUC	365	1,287.0	4 years	
	Faci	Factor for Equipment	0.78		Financial Cost ('000\$)	ı	1,387 Economic Cost (T\$)	onomic Cos		951.5		Agri	31.42	110.8	4 vears	
/1; 20% of the Profit						ı			ı			:				
/2;1% of Turnover					Annual O&M cost	cost					Year	Invest	FWUC	Agri	Total	Build-up
						Material 3q	Material 3quipment Labor		Labor	Total	1	2,799.4	321.7		3,121.2	ı
/A; Excluding the following transfer payment		/B; Excludin	ng the followir	/B; Excluding the following transfer payment			ບັ	Common :	Skilled		7	28,877.1	321.7	27.7	29,226.5	
Import tariff	7.0 %	Ĭwį	Import tariff	15.0 %	Share	0.15	0.15	09.0	0.10		3		321.8	27.7	349.5	0.7
Company tax	1.4 %	Cor	Company ta	1.4 %	LVC	0.15	0.15	09.0	0.10	1.00	4		321.8	7.72	349.5	8.0
Minimum tax	1.0 %	Mir	Minimum ta	1.0 %							\$			7.72	7.72	6.0
VAT	10.0 %	VAT	þ	10.0 %	Conversion Factor	ıctor	0.488 3co	0.488 3conomic Cost (MR)	(MR)	442.2	9					1.0
					Financial Cost ('000\$)	(\$000,)	221 Eo	221 Economic Cost (T\$)	t (TS)	107.8	7					

Table G2-6 Conversion of Financial Cost to Economic Cost (3/22)

Battambang River Basin Sala Taon Weir Rehabilitation Project

S, IMMORIL)		n Factor		0.51	0.71	0.71	0.71	1,444	0.71	0.07	0.00	0.88	0.41	0.41	0.41
(Out) : Mess, ivitation		Construction Conversion Factor Total Cost Factor	Есопотіс	6,020.5	111,885.9	66,455.2	36,951.3	0.0	8,479.4	10,419.5	0.0	52,429.3	180,755.2	18,075.5	198,830.7
		Construction Co	Financial	11,875.3	156,695.5	93,070.0	51,750.2	0.0	11,875.3	150,815.8	59,376.3	59,376.3	438,139.0	43,813.9	481,952.9
		Total		2,178.4	28,743	17,072.3	9,492.7	0.0	2,178.4	2,419.6	0.0	10,865.9	44,207	4,420.7	48,628.0
		Labor		215.4 1,086.6	14,338	8,515.9	4,735.1	0.0	1,086.6	1,107.4	0.0	0.0 10,865.9 10,865.9	27,398	2,739.8	3,482.4 30,137.3 48,628.0
	22	Labor	0.30	215.4	2,842	1,687.8	938.5	0.0	215.4	108.7	0.0	0.0	3,166	316.6	3,482.4
		Material Equipment Labor	0.78	416.8	5,500	3,266.8	1,816.4	0.0	416.8	543.2	0.0	0.0	6,460	646.0	7,106.0
Economic Cost		Material	0.86	459.6	6,064	3,601.8	2,002.7	0.0	459.6	660.3	0.0	0.0	7,184	718.4	7,902.4
Ā		Total		3,842.1	83,142.5	49,382.9	27,458.6	0.0	6,301.0	7,999.9	0.0	41,563.4	136,548	4,156.3 13,654.8	150,202.7
	F/C	Labor F Consul	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 41,563.4	41,563.4	4,156.3	45,719.7
	F	Material Equipment Labor	/B 0.73	2,405.1	52,046.4	30,913.2	17,188.8	0.0	3,944.4	4,810.7	0.0	0.0	59,262.2 41,563.4	5,926.2	65,188.4
		Material	/A 0.81	1,437.0 2,405.1	31,096.1 52,046.4	18,469.7 30,913.2	10,269.8 17,188.8	0.0	2,356.6	3,189.2	0:0	0.0	35,722.3	3,572.2	39,294.5 65,188.4 45,719.7 150,202.7
		Total	r Factor	3,563	47,009	27,921	15,525	0	3,563	45,245	17,813	17,813	131,442	13,144	144,586
		Labor	Conversion Factor	1,781	23,504	13,961	7,763	0	1,781	22,622	8,906	17,813	74,627	7,463	82,090
	I/C	Labor Common		713	9,402	5,584	3,105	0	713	9,049	3,563	0	22,726	2,273	24,998
		3quipment		534	7,051	4,188	2,329	0	534	6,787	2,672	0	17,044	1,704	18,749
#		Material Equipment Labor		534	7,051	4,188	2,329	0	534	6,787	2,672	0	17,044	1,704	18,749
Financial Cost		Total		8,313	109,687	65,149	36,225	0	8,313	0 105,571	41,563	41,563	306,697	30,670	337,367
足	F/C	Labor F Consul		0	0	0	0	0	0	0	0	41,563	41,563	4,156	45,720 337,367
	F/	Equipmen		3,295	71,296	42,347	23,546	0	5,403	68,621	27,016	0	91,661 170,228	17,023	100,828 187,251
		Material	!	1,774	38,390	22,802	12,679	0	2,909	36,950	14,547	0	91,661	9,166	100,828
	Total	Equivalent Material Equipment Labor Riel F Consu	Million	11,875	156,695	93,070	51,750	0	11,875	150,816	59,376	59,376			
	T	OSD	000			22,700	12,622	0							
		Description		1. Preparatory Works	2 Direct Cost	1. Weir & major intake structures	2. Canals & related structures	3. Dykes	4. Miscellaneous works	3. Contractor's Expenses	4. Administration Cost	5. Consulting Services	Total	6. Physical Contingencies	GRAND TOTAL
				<u>ı ≓</u>	77					e.	4		т.		

Equipment and Materials																
	Financial	Conversion Economic	conomic									Total	Riel (mil.)	481,953	198,831	
		Factor	%		Major repairing cost	ng cost							US\$('000)	120,488	49,708	
	%					Material 3quipment		Labor	Labor	Total						
Overhead cost and miscellaneous	90.9	0.10	09:0				ව	Common S	Skilled							
Company Tax /1	1.40	1.00	1.40		Share	0.35	0.65	0.00	0.00			Target Area	rea			
Minimum Tax /2	1.00	1.00	1.00		F/C	0.25	0.45	0.00	0.00	0.70		(Pa	(ha) 16,700			
Profit	7.00	0.10	0.70		Share	0.15	0.15	09.0	0.10				Riel('000)/ha	ha 28,859	11,906	
VAT	10.00	1.00	10.00		27.	0.05	0.05	0.18	0.03	0.30			US\$('000)/hz			
	25.4		13.7													
	Faci	Factor for Materials	98.0		Conversion Factor	actor	0.686 Economic Cost (MR) 16,180.9	nomic Cost	(MR) 16	,180.9		FWUC	2237	7,887.7	5 years	
	Faci	Factor for Equipment	0.78		Financial Cost ('000\$) 5,753 Economic Cost (T\$)	t ('000\$)	5,753 Ec	mornic Cos		3,946.6		Agri	118.59	418.1		
/1; 20% of the Profit												:				
/2; 1% of Turnover					Annual O&M cost	f cost					Year	Invest	FWUC	Agri	Total	Build-up
						Material रि	Material squipment Labor		Labor	Total		10,485.9			10,485.9	
/A; Excluding the following transfer payment		/B; Excludii	ng the followin	/B; Excluding the following transfer payment			ပိ	Common	Skilled		7	65,920.7	1,577.5		67,498.2	
Import tariff	7.0 %	Ē	Import tari	15.0 %	Share	0.15	0.15	09.0	0.10			65,920.7	1,577.5	83.6	67,581.9	
Company tax	1.4 %	S	Company t	1.4 %	1/C	0.15	0.15	09.0	0.10	1.00	4	28,251.7	1,577.5	83.6	29,912.9	9.0
Minimum tax	1.0 %	Mi	Minimum t	1.0 %							'n	28,251.7	1,577.6	83.6	29,913.0	0.7
VAT	10.0 %	۸V	VAT	10.0 %	Conversion Factor	1	0.488 Economic Cost (MR)	nomic Cost		1,594.6	9		1,577.6	83.6	1,661.3	8.0
					Financial Cost ('000\$) 797 Economic Cost (T\$)	t ('000\$)	797 Ec	nomic Cos	(TS)	388.9	7			83.7	83.7	6.0

0.6 0.7 0.8 0.9

Table G2-6 Conversion of Financial Cost to Economic Cost (4/22)

Battambang River Basin Sala Taon Weir Rehabilitation Project by Construction of 5 Pump Stattions as Alternative Case

					ì											-							
					Finan	Financial Cost									Econ	Economic Cost							
	ĭ	Total		F/C					27				F/C					27					
Description	asn	Equivalent	Material E	Material Equipment Labor		Total 1	Material Equipment Labor	uipment l		Labor	Total 1	Material E	Material Equipment Labor		Total	Material Equipment Labor	uipmen		Labor	Total	Construction Conversion Factor	Conversion	Factor
		Riel		14	F Consul			ರ	Common S	Skilled			124	F Consul			٥	Common	Skilled		Total Cost	ost	Factors
	000								(Ψ,	B G				1		,		Financial	Economic	
	906	Million							೮	Conversion Factor	actor	0.81	0.73	1.00		0.86	0.78	0.30	0.61				
I. Preparatory Works		8,554	744	2,907	0	5,988	385	385	513	1,283	2,566	602.9	2,121.8	0.0 2,	2,724.7	331.0	300.2	155.1	782.7	1,569.0	8,553.6	4,293.7	0.50
2 Direct Cost		112,866	16,982	62,024	0	900,62	5,079	5,079	6,772	16,930 3	33,860	13755.5 4	45277.5	0.0	59033.0	4,368	3,962	2,047	10,327	20,703	112,865.8	79,736.3	0.71
1. Pump Station & Regulator	12,820	52,562	2,208	34,586	0	36,793	2,365	2,365	3,154	7,884 1	15,769	1,788.2 23	25,247.6	0.0 27,	27,035.8	2,034.1	1,844.9	953.2 4	4,809.4	9,641.6	52,562.0	36,677.4	0.70
2. Canals & related structures	12,622	51,750	12,679	23,546	0	36,225	2,329	2,329	3,105	7,763 1	15,525 1	10,269.8 13	17,188.8	0.0 27,	27,458.6	2,002.7	1,816.4	938.5 4	4,735.1	9,492.7	51,750.2	36,951.3	0.71
3. Dykes	0	0	0	0	0	0	0	0	0	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. Miscellaneous works	-	8,554	2,096	3,892	0	5,988	385	382	513	1,283	2,566	1,697.5	2,841.1	0.0	4,538.6	331.0	300.2	155.1	782.7	1,569.0	8,553.6	6,107.6	
3. Contractor's Expenses		108,631	26,615	49,427	0	76,042	4,888	4,888	6,518 1	16,295 3	32,589	1,338.1	4,244.1	0.0 5,	5,582.2	475.6	391.2	78.3	97.6	1,742.7	108,630.7	7,324.9	0.07
4. Administration Cost		42,768	10,478	19,459	0	29,938	1,925	1,925	2,566	6,415 1	12,830	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	42,768.0	0.0	0.00
5. Consulting Services	raum.	42,768	0	0	29,938 2	29,938	0	0	0	12,830 1	12,830	0.0	0.0 29	0.0 29,937.6 29,937.6	937.6	0.0	0.0	0.0	7,826.5	7,826.5	42,768.0	37,764.1	0.88
Total			54,819 1	133,817 2	29,938 220	220,910	12,277	12,277	16,369 5	53,753 9	94,676 13	5,696.5	1,643.4 29	15,696.5 51,643.4 29,937.6 97,277.5	277.5	5,174	4,653	2,280	19,734	31,842	315,586.1	129,119.0	0.41
6. Physical Contingencies			5,482	13,382	2,994 2	22,091	1,228	1,228	1,637	5,375	9,468	1,569.7	5,164.3 2	2,993.8 9,	9,727.8	517.4	465.3	228.0 1	1,973.4	3,184.2	31,558.6	12,912.0	0.41
GRAND TOTAL			60,301 147,199		32,931 243,001	13,001	13,505 1	13,505 1	18,006 5	59,128 10	104,143 17	7,266.2 54	5,807.7 32	17,266.2 56,807.7 32,931.4 107,005.3		5,691.8 5,	5,118.2 2	,508.2 21	2,508.2 21,707.4 35,025.7	5,025.7	347,144.7	142,031.0	0.41

	Financial	Conversion Economic	conomic									Total	Riel (mil.)	347,145	142,031	
		Factor	%		Major repairing cost	iring cost							US\$('000)	86,786	35,508	
	%					Material 3	Material 3quipment Labor	Labor	Labor	Total						
Overhead cost and miscellaneous	00.9	0.10	09.0				C	Сопшоп	Skilled							
Company Tax /1	1.40	1.00	1.40		Share	e 0.35	0.65	0.00	0.00			Target Area	Vrea			
Minimum Tax /2	1.00	1.00	1.00		F/C	0.25	0.45	0.00	0.00	0.70		Ē	(ha) 16,700			
Profit	7.00	0.10	0.70		Share	e 0.15	0.15	0.60	0.10				Riel('000)/ha	20,787	8,505	
VAT	10.00	1.00	10.00		NC	0.05	0.05	0.18	0.03	0.30			US\$('000)/he	5.20	2.13	
	25.4		13.7										,			
	Fac	actor for Materials	98.0		Conversion Factor	Factor	0.686 30	0.686 3conomic Cost (MR)		12,848.0		FWUC	2237	7,887.7	5 years	
	Fac	Factor for Equipment	0.78		Financial C	Financial Cost ('000\$)	4,568 Economic Cost (T\$)	conomic C	ost (T\$)	3,133.6		Agn	118.59	418.1	5 vears	
/1; 20% of the Profit		,				•						:			,	
/2 ; 1% of Turnover					Annual O&M cost	M cost					Year	Invest	FWUC	Agri	Total	Build-up
						Material 3	Material 3quipment	Labor	Labor	Total	-	7,552.8	~		7,552.8	
/A; Excluding the following transfer payment		/B; Excludir	ig the followi	/B; Excluding the following transfer payment			٥	Соштоп	Skilled		2	47,067.4	1,577.5		48,644.9	
Import tariff	7.0 %	ImI	Import tarifi	15.0 %	Share	e 0.15	0.15	09.0	0.10		3	47,067.4	1,577.5	83.6	48,728.5	
Company tax	1.4 %	Co	Company ta	1.4 %	ΓζC	0.15	0.15	09.0	0.10	1.00	4	20,171.7	1,577.5	83.6	21,832.9	9.0
Minimum tax	1.0 %	Min	Minimum ta	1.0 %							32	20,171.7	1,577.6	83.6	21,833.0	0.7
VAT	10.0 %	VAT	H	10.0 %	Conversion Factor	Factor	0.488 30	0.488 3conomic Cost (MR)	st (MR)	1,318.5	9		1,577.6	83.6	1,661.3	8.0
					Financial C	Financial Cost ('000\$)	629 E	659 Economic Cost (T\$)	ost (T\$)	321.6	7			83.7	83.7	6.0
						•			•		•					•

Equipment and Materials

Table G2-6 Conversion of Financial Cost to Economic Cost (5/22)

Battambang River Basin Ratanak-Battambang Water Harvesting Rehabilitation Project

																				(Unit : Riels; Million)	Million)
Financial Cost	Financial Cost	Financial Cost	inancial Cost										Econ	Economic Cost							
Total F/C	F/C	F/C					VC				F/C				I	7/C					
USD Equivalent Material Equipment Labor Total Material Equipment	Material Equipment Labor Total	Total		Material E	Ġ.	uipment I	Labor	Labor	Total	Material Equipment Labor	upmen L.		Total	Material Equipment		Labor L	Labor T	Total	Construction Conversion Factor	Conversion	actor
Riel F Consul	F Consul	F Consul				ບ	Common S	Skilled			FC	F Consul			CO	Common SI	Skilled		Total Cost	ost	Factors
										Ψ/	B.							"	Financial E	Есопотіс	
000 Million							ర	Conversion Factor	actor	0.81	0.73 1.	1.00		98.0	0.78	0.30	0.61				
461 8 14 0 323	14 0	0			21	21	88	99	 8EI	6.3	10.5	0.0	16.8	17.9	16.2	8.4	42.2	84.7	461.3	101.5	0.22
6,086 1,491 2,769 0 4,261	2,769 0	0			274	274	365	913	1,826	1,207.8 2,	2,021.6	0.0	3,229.4	236	214	111	557	1,117	6,086.5	4,346.1	0.71
0 0 0 0 0	0 0 0 0	0 0 0	0		0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
154 631 155 287 0 442	287 0	0	442		28	28	38	95	189	125.3	209.7	0.0	335.0	24.4	22.2	11.5	57.8	115.9	631.4	450.9	0.71
1,218 4,994 1,223 2,272 0 3,496	2,272 0	0	3,496		225	225	300	749	1,498	991.0 1,	1,658.7	0.0	2,649.7	193.3	175.3	9.06	456.9	916.1	4,993.8	3,565.8	0.71
461 113 210 0 323	210 0	0	323		21	21	82	8	138	91.5	153.2	0.0	244.7	17.9	16.2	8.4	42.2	84.7	461.3	329.4	0.71
5,858 1,435 2,665 0 4,101	2,665 0	0			264	264	351	879	1,757	123.9	186.9	0.0	310.8	25.6	21.1	4.2	43.0	93.9	5,858.1	404.7	0.07
2,306 565 1,049 0 1,614	1,049 0	0			104	104	138	346	692	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2,306.3	0.0	0.00
2,306 0 0 1,614 1,614	0 1,614	1,614			0	0	0	692	692	0.0	0.0 1,6	1,614.4 L	1,614.4	0:0	0.0	0.0	422.1	422.1	2,306.3	2,036.5	0.88
3,499 6,499 1,614 11,913	6,499 1,614	1,614			299	299	883	2,899	5,106	1,338.0 2,	2,219.0 1,6	1,614.4 5,	5,171.4	279	251	123	1,064	1,717	17,018.5	6,888.8	0.40
350 650 161 1,191	650 161	161			99	99	88	290	511	133.8	221.9	161.4	517.1	27.9	25.1	12.3	106.4	171.7	1,701.9	688.8	0.40
3,849 7,148 1,776 13,104	7,148 1,776	1,776			728	728	176	3,189	5,616	1,471.8 2,	2,440.9 1,7	1,775.8 5,	5,688.5	307.0	276.1	135.4 1,1	1,170.6 1,8	1,889.1	18,720.4	7,577.6	0.40
				l																	

	Financial	Conversion Economic	Sconomic									Total	Riel (mil.)	18,720	7,578	
		Factor	%		Major repairing cost	z cost							US\$('000)	4,680	1,894	
	%					Material 3quipment Labor	ipment		Labor	Total						
Overhead cost and miscellaneous	00.9	0.10	09.0				Ö	Common Si	Skilled							
Company Tax /1	1.40	1.00	1.40		Share	0.35	0.65	0.00	0.00			Target Area	œa			
Minimum Tax /2	1.00	1.00	1.00		F/C	0.25	0.45	0.00	0.00	0.70		(ha)	(ha) 16,700			
Profit	7.00	0.10	0.70		Share	0.15	0.15	09.0	0.10				Riel('000)/ha	1,121	454	
VAT	10.00	1.00	10.00		I/C	0.05	0.05	0.18	0.03	0.30			US\$('000)/hz	0.28	0.11	
-	25.4		13.7													
	Fa	Factor for Materials	98.0		Conversion Factor		0.686 3conomic Cost (MR)	nomic Cost		995.7		FWUC	116	409.0	3 years	
	Fa	Factor for Equipment	0.78		Financial Cost ('000\$)		354 Economic Cost (T\$)	nomic Cost		242.8		Agri	10.06	35.5	3 years	
/1; 20% of the Profit		i i							ļ		i					
/2; 1% of Turnover					Annual O&M cost	sost					Year	Invest	FWUC	Agri	Total	Build-up
						Material 3quipment Labor	ipment	Labor 1	Labor	Total	-	678.8	136.3		815.2	
/A; Excluding the following transfer payment		/B; Excludi	ing the followi	B; Excluding the following transfer payment			Co	Common Skilled	killed		7	6,898.8	136.3	11.8	7,046.9	
Import tariff	7.0 %	Ē	Import tarifl	15.0 %	Share	0.15	0.15	09.0	0.10		e		136.4	11.8	148.3	8.0
Company tax	1.4 %	රි	Company ta	1.4 %	170	0.15	0.15	0.60	0.10	1.00	4			11.9	11.9	6.0
Minimum tax	1.0 %	W	Minimum ta	1.0 %							'n					1.0
VAT	10.0 %	7A	VAT	10.0 %	Conversion Factor		0.488 :conomic Cost (MR)	omic Cost		114.0	9					
					Financial Cost ('000\$)	(,000%)	57 Eco	57 Economic Cost (T\$)	(\$L)	27.8	7					

Table G2-6 Conversion of Financial Cost to Economic Cost (6/22)

Moung Ruessei River Basin Bassac Reservoir Rehabilitation Project

				i																	(Unit : Riels; Million)	Million)
			Financial Cost	and Cost										Ecoi	Economic Cost							
Total F/C	F/C	F/C				- 1		1,0				F/C				,	I/C					
USD Equivalent Material Equipment Labor Total Material Equipment Riel FConsul	Total Material Equi	Total Material Equi	Total Material Equi	Material Equi	faterial Еquiря	.	pmen L	Labor L	Labor 3	Total	Material Equipment	uipment F	Labor	Total	Material Equipment	ipment L	Labor I	Labor	Total	Construction Conversion Factor	Conversion	Factor
						ı		1			/A	B					1			Financial	Economic	
000 Million								రి	Conversion Factor	actor	0.81	0.73	1.00		98.0	0.78	0:30	0.61				
1,513 226 420 0 1,059 68	420 0 1,059	0 1,059	1,059		89		89	16	227	454	183.1	306.4	0.0	489.5	58.5	53.1	27.4	138.4	277.4	1,512.9	766.9	0.51
19,963 4,891 9,083 0 13,974 8	9,083 0 13,974	0 13,974	13,974		ŏ	868	868	1,198	2,994	5,989	3,961.6 6,	6,630.6	0.0 10	10,592.2	773	701	362	1,827	3,662	19,962.9	14,253.9	0.71
300 1,230 301 560 0 861	560 0	0	0 861	198		55	55	74	185	369	244.1	408.5	0.0	652.6	47.6	43.2	22.3	112.5	225.6	1,230.0	878.2	0.71
4,200 17,220 4,219 7,835 0 12,054 7	7,835 0 12,054	0 12,054	12,054		7	775	277	1,033	2,583	5,166	3,417.3 5	5,719.6	0.0	9,136.9	666.4	604.4	312.3 1,	1,575.6 3	3,158.7	17,220.0	12,295.6	0.71
0 0 0 0 0	0		0 0	0		0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1,513 371 688 0 1,059 6	688 0 1,059	0 1,059	1,059		•	89	89	16	722	454	300.2	502.5	0.0	802.7	58.5	53.1	27.4	138.4	277.4	1,512.9	1,080.1	0.71
19,214 4,707 8,742 0 13,450 865	8,742 0 13,450	0 13,450	13,450		8	ν,	865	1,153	2,882	5,764	406.3	612.9	0.0	1,019.2	84.1	69.2	13.9	141.1	308.3	19,213.8	1,327.5	0.02
7,565 1,853 3,442 0 5,295 3	3,442 0 5,295	0 5,295	5,295		6	340	340	454	1,135	2,269	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7,564.5	0.0	0.00
7,565 0 0 5,295 5,295	0 5,295	5,295		5,295		0	0	0	2,269	2,269	0.0	0.0 5,	5,295.2 5	5,295.2	0.0	0.0	0.0 1,	1,384.3	1,384.3	7,564.5	6,679.5	0.88
11,678 21,687 5,295 39,073 2,171	21,687 5,295 39,073	5,295 39,073	39,073		2,17		2,171	2,895	9,507 1	16,746	4,551.0 7,	7,549.9 5,	5,295.2 17	17,396.1	915	823	403	3,490	5,632	55,818.6	23,027.8	0.41
1,168 2,169 530 3,907 217	2,169 530 3,907	530 3,907	3,907		21	1	217	290	951	1,675	455.1	755.0	529.5	1,739.6	91.5	82.3	40.3	349.0	563.2	5,581.9	2,302.8	0.41
12,845 23,856 5,825 42,980 2,389	23,856 5,825 42,980	5,825 42,980	42,980		2,3	68	2,389	3,185	10,458	18,420	5,006.1 8,	8,304.9 5,	5,824.7 19,135.7		1,006.6	905.3	443.6 3,	3,839.3 6	6,194.9	61,400.5	25,330.6	0.41
Approximate an annual section of the																						

Equipment and Materials																
	Financial	Conversion Economic	Economic									Total	Riel (mil.)	61,401	25,331	
		Factor	%		Major repairing cost	ing cost							US\$('000)	15,350	6,333	
	%					Material 3	Material 3quipment Labor	Labor	Labor	Total						
Overhead cost and miscellaneous	00.9	0.10	09'0				0	Common	Skilled							
Company Tax /1	1.40	1.00	1.40		Share	0.35	0.65	00:00	0.00			Target Area	65			٠
Minimum Tax /2	1.00	1.00	1.00		F/C	0.25	0.45	0.00	0.00	0.70		(ha)	(ha) 16,700			
Profit	7.00	0.10	0.70		Share	0.15	0.15	09:0	0.10				Riel('000)/ha	3,677	1,517	
VAT	10.00	1.00	10.00		1/0	0.05	0.05	0.18	0.03	0.30			US\$('000)/he	0.92	0.38	
	25.4		13.7													
	Fact	Factor for Materials	0.86		Conversion Factor	actor	0.686 30	0.686 3conomic Cost (MR)		2,936.4		FWUC	298	1,050.7	3 years	
	Fact	Factor for Equipment	0.78		Financial Cost ('000\$)	st ('000\$)	1,044 E	1,044 Economic Cost (T\$)	st (T\$)	716.2		Agg.	42.37	149.4	3 years	
/1; 20% of the Profit												;			,	
/2;1% of Turnover					Annual O&M cost	A cost					Year	Invest	FWUC	Agri	Total B	Build-up
						Material 3	Material squipment Labor	Labor	Labor	Total	-	2,226.5			2,226.5	
/A; Excluding the following transfer payment		/B; Exclud	ling the followi	/B; Excluding the following transfer payment			0	Common	Skilled		7	11,552.1	350.2		1,902.3	
Import tariff	7.0 %	Л	Import tarifi	15.0 %	Share	0.15	0.15	09:0	0.10		ю	11,552.1	350.2	49.8	11,952.1	
Company tax	1.4 %	O	Company ta	1.4 %	2	0.15	0.15	0.60	0.10	1.00	4		350.3	49.8	400.1	8.0
Minimum tax	1.0 %	2	Minimum ta	1.0 %							2			49.8	49.8	6.0
VAT	10.0 %	>	VAT	10.0 %	Conversion Factor	actor	0.488 30	0.488 3conomic Cost (MR)	t (MR)	328.1	9					1.0
					Financial Cost ('000\$)	st ('000\$)	164 E	164 Economic Cost (T\$)	st (TS)	80.0	7					

Table G2-6 Conversion of Financial Cost to Economic Cost (7/22)

Moung Ruessei River Basin Ream Kon Rehabilitation Project

																						(Unit : Riels; Million)	Million)
					Finan	Financial Cost									Econ	Economic Cost							
	Total	ie.		F/C					I/C				F/C					1/C					
Description	USD	Equivalent	Material Equipment Labor	quipment 1		Total	Material Equ	puipmen I	Labor	Labor	Total	Material Equipment		Labor	Total	Material Equipment		Labor	Labor	Total	Construction	Construction Conversion Factor	Factor
		Riel		Œ.	F Consul	1		ರ	Common	Skilled				F Consul			ರ	Common	Skilled		Total Cost	Cost	Factors
												Ψ/	В								Financial	Economic	
	000	Million							σ	Conversion Factor	actor	0.81	0.73	1.00		98.0	0.78	0.30	0.61				
1. Preparatory Works		1,089	163	302	0	763	49	49	65	163	327	131.8	220.6	0.0	352.4	42.2	38.2	19.8	7.66	199.9	1,089.3	552.3	0.51
2 Direct Cost		14,373	3,521	6,540	0	10,061	647	647	862	2,156	4,312	2,852.4	4,774.1	0.0	7,626.5	556	504	261	1,315	2,637	14,373.3	10,263.1	0.71
1. Weir & major intake structures	009	2,460	603	1,119	0	1,722	1111	111	148	369	738	488.2	817.1	0.0	1,305.3	95.2	86.3	44.6	225.1	451.2	2,460.0	1,756.5	0.71
2. Canals & related structures	2,640	10,824	2,652	4,925	0	7,577	487	487	649	1,624	3,247	2,148.0	3,595.2	0.0	5,743.2	418.9	379.9	196.3	990.4	1,985.5	10,824.0	7,728.7	0.71
3. Dykes	0	0	0	0	0	0	0	0	0	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. Miscellaneous works		1,089	267	496	Ф	763	49	49	99	163	327	216.2	361.8	0.0	578.0	42.2	38.2	19.8	7.66	199.9	1,089.3	6.777	0.71
3. Contractor's Expenses		13,834	3,389	6,294	0	9,684	623	623	830	2,075	4,150	292.5	441.3	0.0	733.8	9.09	49.8	10.0	101.6	222.0	13,834.0	955.8	70.0
4. Administration Cost		5,446	1,334	2,478	Ф	3,813	245	245	327	817	1,634	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5,446.4	0.0	0.00
5. Consulting Services		5,446	0	0	3,813	3,813	0	Φ	0	1,634	1,634	0.0	0:0	3,812.5	3,812.5	0:0	0.0	0.0	7.966	7.966	5,446.4	4,809.2	0.88
Total			8,408	15,615	3,813 2	28,133	1,563	1,563	2,085	6,845	12,057	3,276.7	5,436.0	3,812.5	12,525.2	629	592	291	2,513	4,055	40,189.4	16,580.4	0.41
6. Physical Contingencies	,		841	1,562	381	2,813	156	156	209	685	1,206	327.7	543.6	381.3	1,252.5	62.9	59.2	29.1	251.3	405.5	4,019.0	1,658.0	0.41
GRAND TOTAL			9,249	17,176	4,194 3	30,946	1,720	1,720	2,293	7,530	13,263	3,604.4	5,979.6	4,193.8	13,777.7	725.0	651.6	319.6 2	2,764.5 4	4,460.7	44,208.4	18,238.4	0.41

Equipment and Materials																
	Financial	Conversion Economic	Sconomic									Total	Riel (mil.)	44,208	18,238	
		Factor	%		Major repairing cost	g cost						י	US\$('000)	11,052	4,560	
	%					Material 3quipment Labor	pment		Labor	Total						
Overhead cost and miscellaneous	00'9	0.10	09:0				Cor	Common Sk	Skilled							
Company Tax /1	1.40	1.00	1.40		Share	0.35	9.0	0.00	0.00			Target Area				
Minimum Tax /2	1.00	1.00	1.00		F/C	0.25	0.45	0.00	0.00	0.70		(ha)	(ha) 16,700			
Profit	7.00	0.10	0.70		Share	0.15	0.15	0.60	0.10				Riel('000)/ha	2,647	1,092	
VAT	10.00	1.00	10.00		Ϋ́	0.05	0.05	0.18 0	0.03	0.30		1	US\$('000)/he	0.66	0.27	
	25.4		13.7										,			
	Œ	Factor for Materials	98.0		Conversion Factor		0.686 3con	0.686 3conomic Cost (MR)		1,985.7		FWUC	213	751.0	3 years	
	H.	Factor for Equipment	0.78		Financial Cost ('000\$)	(\$000.)	706 Eco	706 Economic Cost (T\$)		484.3		Agn	25.63	90.4	3 years	
/1; 20% of the Profit		•							l			;				
/2; 1% of Turnover					Annual O&M cost	cost					Year	Invest	FWUC	Agri	Total B	Build-up
						Material squipment Labor	pment		Labor	Total	-	1,603.1	250.3		1,853.4	
/A; Excluding the following transfer payment		/B; Excludi	ing the following	/B; Excluding the following transfer payment			Cor	Common Sk	Skilled		2	16,635.3	250.3	30.1	16,915.8	
Import tariff	7.0 %	Ā	Import tariff	15.0 %	Share	0.15	0.15	0.60	0.10		33		250.4	30.1	280.6	8.0
Company tax	1.4 %	ర	Company ta	1.4 %	2/1	0.15	0.15	0.60 0	0.10	1.00	4			30.2	30.2	6.0
Minimum tax	1.0 %	W	Minimum ta	1.0 %							'n					1.0
VAT	10.0 %	7.	VAT	10.0 %	Conversion Factor		0.488 3con	0.488 3conomic Cost (MR)		218.1	9					
					Financial Cost ('000\$)	(\$000)	109 Eco	109 Economic Cost (T\$)		53.2	7					

Table G2-6 Conversion of Financial Cost to Economic Cost (8/22)

Moung Ruessei River Basin Por Canal Rehabilitation Project

																						(,
					Finan	Financial Cost									Econ	Economic Cost							
	Total	ĘĘ		F/C					I/C		 		F/C					22					
Description	usp	Ħ	Material Equipment Labor	quipment I	_	Total	Material Equipment Labor	ipment I	١,		Total N	Material Equipment Labor	uipmen	abor	Total	Material Equipment Labor	upmen 1		Labor	Total	Construction Conversion Factor	Conversion	Factor
		Mel		-	Consu			3	Common	Skilled				r Consul			ٽا ا	Common	Skilled		Total Cost	ost	Factors
	000	Million							රි	Conversion Factor	ctor	/A 0.81	В 0.73	1 00		0.86	82	0.30	190		Financial	Есолотіс	
									3											-			
1. Preparatory Works		488	73	135	0	341	23	22	29	73	146	59.0	8.8	0.0	157.8	18.9	17.1	89	44.6	89.4	487.8	247.2	0.51
2 Direct Cost		6,437	1,577	2,929	0	4,506	290	290	386	996	1,931	1,277.4 2,	2,138.0	0.0	3,415.4	249	226	111	589	1,181	6,436.9	4,596.0	0.71
1. Weir & major intake structures	0	0	0	0	0	0	0	0	0	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. Canals & related structures	1,451	5,949	1,458	2,707	0	4,164	268	268	357	892	1,785	1,180.6 1,	1,976.0	0.0	3,156.6	230.2	208.8	107.9	544.3	1,091.2	5,949.1	4,247.8	0.71
3. Dykes	0	0	0	0	0	0	0	0	0	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. Miscellaneous works		488	120	222	0	341	22	23	53	23	146	8.96	162.0	0.0	258.8	18.9	17.1	89. 89.	44.6	89.4	487.8	348.2	0.71
3. Contractor's Expenses		6,195	1,518	2,819	0	4,337	279	279	372	626	1,859	131.0	197.6	0.0	328.6	27.1	22.3	4.5	45.5	99.4	6,195.4	428.0	0.07
4. Administration Cost		2,439	298	1,110	0	1,707	110	110	146	366	732	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2,439.1	0.0	0.00
5. Consulting Services		2,439	0	0	1,707	1,707	0	0	0	732	732	0.0	0.0	1,707.4	1,707.4	0.0	0.0	0.0	446.4	446.4	2,439.1	2,153.8	0.88
Total			3,765	6,993	1,707, 1	12,599	700	700	934	3,066	5,400	1,467.4 2,	2,434.4 1,	1,707.4 \$	5,609.2	295	265	130	1,125	1,816	17,998.4	7,425.0	0.41
6. Physical Contingencies			377	669	171	1,260	70	70	83	307	540	146.7	243.4	170.7	560.9	29.5	26.5	13.0	112.5	181.6	1,799.9	742.5	0.41
GRAND TOTAL			4,142	7,692	1,878 1	13,859	170	077	1,027	3,372	5,940	1,614.1 2,	2,677.8	1,878.1 6	6,170.1	324.6	291.8	143.0	1,237.9	1,997.4	19,798.3	8,167.5	0.41

	Financial	Conversion Economic	Economic								Total	Riel (mil.)	19,798	8,168	
		Factor	%		Major repairing cost	_						(000,) S SN	4,950	2,042	
	%				Mate	Material 3quipment	nt Labor	r Labor	Total						
Overhead cost and miscellaneous	90.9	0.10	09'0				Соттоп	n Skilled							
Company Tax /1	1.40	1.00	1.40		Share 0.	0.35 0.65	5 0.00	0.00			Target Area	gţ			
Minimum Tax /2	1.00	1.00	1.00		F/C 0.	0.25 0.45	5 0.00	0.00	0.70		(ha)	(ha) 16,700			
Profit	7.00	0.10	0.70		Share 0.	0.15 0.15	5 0.60	0.10				Riel('000)/ha	1,186	489	
VAT	10.00	1.00	10.00		I/C 0.	0.05 0.05	5 0.18	0.03	0.30			US\$('000)/hz	0.30	0.12	
	25.4		13.7									,			
	Fact	Factor for Materials	98.0		Conversion Factor	0.68	6 3conomic	0.686 3conomic Cost (MR)	978.8		FWUC	76	342.0	3 years	
	Fact	Factor for Equipment	0.78		Financial Cost ('000\$)		8 Econom	348 Economic Cost (T\$)	238.7		Agn	14.04	49.5	3 years	
/1; 20% of the Profit							ı				:				
/2 ; 1% of Turnover					Annual O&M cost					Year	Invest	FWUC	Agri	Total	Build-up
					Mate	Material 3quipment Labor	nt Labo	r Labor	Total	_	717.9	114.0		831.9	
/A; Excluding the following transfer payment		/B; Exclud	ding the followi	/B; Excluding the following transfer payment			Соптоп	n Skilled		2	7,449.6	114.0	16.5	7,580.1	
Import tariff	7.0 %	П	Import tarifl	15.0 %	Share 0.	0.15 0.15	5 0.60	0.10		8		114.0	16.5	130.5	0.8
Company tax	1.4 %	0	Company ta	1.4 %	L/C 0.	0.15 0.15	5 0.60	0.10	1.00	4			16.5	16.5	6.0
Minimum tax	1.0 %	2	Minimum ta	1.0 %						3					1.0
VAT	10.0 %	>	VAT	10.0 %	Conversion Factor	0.48	8 3conomic	0.488 :conomic Cost (MR)	110.0	9					
					Financial Cost ('000\$)		5 Econom	55 Economic Cost (T\$)	26.8	7					
							l			•					_

Table G2-6 Conversion of Financial Cost to Economic Cost (9/22)

Moung Ruessei River Basin Nikom Le/Dai Ta Chan Rehabilitation Project

																						COLUIT - INCOM	(Unit: Kiels; Million)
					Finan	Financial Cost									Eco	Economic Cost							
	Total	īg.		F/C					I/C				F/C					22					
Description	OSD	Equivalent Riel	Material Equipment Labor	uipmen	-	Total	Material Equipment	uipment I	Labor I Common S	Labor Skilled	Total	Material Equipment Labor	luipmen' F	Labor F Consul	Total	Material Equipment Labor	lupmeni C	_	Labor Skilled	Total	Construction Conversion Factor Total Cost Factor	Conversion	Factor
L	000	Million							ပိ	Conversion Factor	actor	/A 0.81	/B 0.73	1.00		98.0	0.78	ł	0.61		Financial	Economic	
I. Preparatory Works	2 2	437	68	121	0	306	20	79	26	99	131	52.9	88.6	0.0	141.5	16.9	15.4	7.9	40.0	80.2	437.4	221.7	0.51
2 Direct Cost		5,771	1,414	2,626	0	4,040	260	260	346	998	1,731	1,145.4	0.716,1	0.0	3,062.4	223	203	105	528	1,059	5,771.5	4,121.1	0.71
1. Weir & major intake structures	540	2,214	542	1,007	0	1,550	100	100	133	332	664	439.4	735.4	0.0	1,174.8	85.7	77.7	40.2	202.6	406.2	2,214.0	1,581.0	0.71
Canals & related structures	761	3,120	764	1,420	0	2,184	140	140	187	468	936	619.2	1,036.3	0.0	1,655.5	120.7	109.5	9.99	285.5	572.3	3,120.1	2,227.8	0.71
3. Dykes	0	0	0	0	0	0	0	0	0	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. Miscellaneous works		437	107	199	0	306	20	70	56	98	131	86.8	145.3	0.0	232.1	16.9	15.4	7.9	40.0	80.2	437.4	312.3	0.71
3. Contractor's Expenses		5,555	1,361	2,527	0	3,888	250	250	333	833	1,666	117.5	177.2	0.0	294.7	24.3	20.0	4.0	40.8	89.1	5,554.9	383.8	0.07
4. Administration Cost		2,187	536	995	0	1,531	86	86	131	328	959	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2,187.0	0.0	0.00
5. Consulting Services		2,187	0	0	1,531	1,531	0	0	Φ	959	929	0.0	0.0	1,530.9	1,530.9	0.0	0.0	0.0	400.2	400.2	2,187.0	1,931.1	0.88
Total			3,376	6,270	1,531	11,296	829	628	837	2,749	4,841	1,315.8 2	2,182.8	1,530.9	5,029.5	265	238	117	1,009	1,628	16,137.8	6,657.7	0.41
6. Physical Contingencies			338	627	153	1,130	63	8	84	275	484	131.6	218.3	153.1	503.0	26.5	23.8	11.7	100.9	162.8	1,613.7	8.599	0.41
GRAND TOTAL			3,714	6,897	1,684 1	12,426	691	169	921	3,024	5,325	1,447.4 2	2,401.1 1,684.0		5,532.5	291.0	261.8	128.3	1,110.0	1,791.0	17,751.5	7,323.5	0.41

	Financial	Conversion Economic	Есопотіс									Total	Riel (mil.)	17,751	7,324	
		Factor	%		Major repairing cost	ng cost							US\$('000)	4,438	1,831	
	%					Material 3	Material squipment Labor	Labor	Labor	Total						
Overhead cost and miscellaneous	90.9	0.10	09.0				Ú	Сопппоп	Skilled							
Company Tax /1	1.40	1.00	1.40		Share	0.35	0.65	00.00	0.00			Target Area	\rea			
Minimum Tax /2	1.00	1.00	1.00		F/C	0.25	0.45	0.00	0.00	0.70		ð	(ha) 16,700			
Profit	7.00	0.10	0.70		Share	0.15	0.15	09.0	0.10	i			Riel('000)/ha	1,063	439	
VAT	10.00	1.00	10.00		I/C	0.05	0.05	0.18	0.03	0.30			US\$('000)/he	0.27	0.11	
	25.4		13.7													
	Fax	Factor for Materials	0.86		Conversion Factor	actor	0.686 3conomic Cost (MR)	nomic Cos	st (MR)	694.7		FWUC	84	296.2	3 years	
	Fac	Factor for Equipment	0.78		Financial Cost ('000\$)	it ('000\$)	247 Ec	247 Economic Cost (T\$)	st (T\$)	169.4		Aggi	10.14	35.8	3 years	
/1 ; 20% of the Profit															,	
/2 ; 1% of Turnover					Annual O&M cost	f cost					Year	Invest	FWUC	Agri	Total	Build-up
						Material 3q	Material 3quipment Labor		Labor	Total	-	643.7	7 98.7		742.4	
/A; Excluding the following transfer payment		/B; Excludi	ing the follow.	/B; Excluding the following transfer payment			บี	Сопппоп	Skilled		7	8.679.8	8 98.7	11.9	6,790.4	
Import tariff	7.0 %	Ħ	Import tariff	15.0 %	Share	0.15	0.15	09'0	0.10		<u>«</u>		8.86	11.9	110.7	8.0
Company tax	1.4 %	ช	Company ta	1.4 %	LC	0.15	0.15	09.0	0.10	1.00	4			12.0	12.0	6.0
Minismum tax	1.0 %	M	Minimum ta	1.0 %							٠,					1.0
VAT	10.0 %	Λ'	VAT	10.0 %	Conversion Factor	actor	0.488 :conomic Cost (MR)	nomic Co.	st (MR)	72.0	9					
					Financial Cost ('000\$)	tt ('000\$)	36 Ec	36 Economic Cost (T\$)	ost (T\$)	17.6	7					
																-

Equipment and Materials

Table G2-6 Conversion of Financial Cost to Economic Cost (10/22)

Pursat River Basin Beoung Preah Ponley Rehabilitation Project

s; Million)			n Factor	Factors			0.50	0.71	0.71	0.71	0.71	0.71	0.07	0.00	0.88	0.41	0.41	0.41
(Unit : Riels; Million)			Construction Conversion Factor	Cost	Economic		1,935.6	36,193.0	2,107.7	31,020.3	322.1	2,742.9	3,370.6	0.0	16,959.9	58,459.1	5,845.9	64,305.0
			Constructic	Total Cost	Financial		3,841.4	50,688.0	2,952.0	43,443.6	451.0	3,841.4	48,786.0	19,207.1	19,207.1	141,729.7	14,173.0	155,902.7
			Total				704.7	9,298	541.4	7,969.1	87.8	704.7	782.7	0.0	3,514.9	14,300	1,430.0	15,730.3
			Labor	Skilled		0.61	351.5	4,638	270.1	3,975.1	41.3	351.5	358.2	0.0	3,514.9	8,863	886.3	9,748.9 15,730.3
		IVC	Labor	Common		0.30	69.7	919	53.5	787.8	8.2	69.7	35.2	0.0	0.0	1,024	102.4	1,126.5
	+		Material Equipment Labor			0.78	134.8	1,779	103.6	1,524.9	15.8	134.8	175.7	0.0	0.0	2,090	209.0	2,298.6
	Economic Cost		Material 1			0.86	148.7	1,962	114.2	1,681.3	17.5	148.7	213.6	0.0	0.0	2,324	232.4	2,556.4
	Ec		Total				1,230.9	26,895.0	1,566.3	23,051.2	239.3	2,038.2	2,587.9	0.0	13,445.0	44,158.8	4,415.9	48,574.7
		F/C	Labor	F Consul		1.00	0:0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 13,445.0 13,445.0	13,445.0	1,344.5	14,789.5
		F/	Material Equipment Labor		/B	0.73	770.5	16,836.0	980.5	14,429.8	149.8	1,275.9	1,556.2	0.0	0.0	11,551.1 19,162.7 13,445.0 44,158.8	1,916.3	12,706.2 21,079.0 14,789.5 48,574.7
			Material		Ψ/	0.81	460.4	10,059.0 16,836.0	585.8	8,621.4	89.5	762.3	1,031.7	0.0	0.0	11,551.1	1,155.1	12,706.2
			Total			Factor	1,152	15,206	988	13,033	135	1,152	14,636	5,762	5,762	42,519	4,252	46,771
			Labor	Skilled		Conversion Factor	576	7,603	443	6,517	89	576	7,318	2,881	5,762	24,141	2,414	26,555
		ΣŅ	Labor	Common		Ü	230	3,041	177	2,607	27	230	2,927	1,152	0	7,351	735	8,086
			quipmen Labor	,			173	2,281	133	1,955	20	173	2,195	864	0	5,514	551	6,065
			Material Eq				173	2,281	133	1,955	20	173	2,195	864	0	5,514	551	6,065
	Financial Cost		Total				2,689	35,482	2,066	30,411	316	2,689	34,150	13,445	13,445	99,211	9,921	109,132
	묘	ย	Labor	F Consul			0	0	0	0	0	0	0	0	13,445	13,445	1,345	14,789 109,132
		F/C	Material Equipment Labor				1,055	23,063	1,343	19,767	205	1,748	22,198	8,739	0	55,055	5,506	195'09
			Material 1				998	12,419	723	10,644	110	941	11,953	4,706	0	29,645	2,965	32,610
		al	Equivalent	Riel		Million	3,841	50,688	2,952	43,444	451	3,841	48,786	19,207	19,207			
		Total	USD			000			720	10,596	110							
			Description		<u> </u>		1. Preparatory Works	2 Direct Cost	1. Weir & major intake structures	2. Canals & related structures	3. Dykes	4. Miscellaneous works	3. Contractor's Expenses	4. Administration Cost	5. Consulting Services	Total	6. Physical Contingencies	GRAND TOTAL

	Financial	Conversion Economic	Sconomic									Total	Riel (mil.)	155,903	64,305	
		Factor	%		Major repairing cost	cost							US\$('000)	38,976	16,076	
	%					Material 3quipment Labor	pment 1		Labor	Total						
Overhead cost and miscellaneous	6.00	0.10	09.0				Con	Common Sl	Skilled							
Company Tax /1	1.40	1.00	1.40		Share	0.35	0.65	0.00	0.00			Target Area	ea			
Minimun Tax /2	1.00	1.00	1.00		F/C	0.25	0.45	0.00	0.00	0.70		(ha)	(ha) 16,700			
Profit	7.00	0.10	0.70		Share	0.15	0.15	0.60	0.10				Riel('000)/ha	9,335	3,851	
VAT	10.00	1.00	10.00		1/C	0.05	0.05	0.18	0.03	0.30			US\$('000)/hz	2.33	0.96	
	25.4		13.7										,			
	μij	actor for Materials	98.0		Conversion Factor		0.686 3conomic Cost (MR)	orruic Cost (7,475.9		FWUC	755	2,662.1	5 years	
	ír,	Factor for Equipment	0.78		Financial Cost ('000\$)		2,658 Economic Cost (T\$)	tomic Cost		1,823.4		Agni	95.84	337.9	5 years	
/1; 20% of the Profit									ı			:				
/2; 1% of Turnover					Annual O&M cost	ost					Year	Invest	FWUC	Agri	Total Bu	Build-up
						Material !quipment Labor	pment 1		Labor	Total	-	3,392.0			3,392.0	
/A; Excluding the following transfer payment		/B; Excludi	ing the follow	/B; Excluding the following transfer payment			2	Common SI	Skilled		7	15,228.3	532.4		15,760.7	
Import tariff	7.0 %	<u>"H</u>	Import tarifl	15.0 %	Share	0.15	0.15	09.0	0.10		3	15,228.3	532.4	9.79	15,828.3	
Company tax	1.4 %	රි	Company ta	1.4 %	2/1	0.15	0.15	0.60	0.10	1.8	4	15,228.3	532.4	9.79	15,828.3	9.0
Minimum tax	1.0 %	M	Minimum ta	1.0 %							s	15,228.3	532.4	9.19	15,828.3	0.7
VAT	10.0 %	7A	VAT	10.0 %	Conversion Factor	ļ	0.488 3conomic Cost (MR)	omic Cost (834.3	9		532.4	9.79	0.009	8.0
					Financial Cost ('000\$)	(\$000.)	417 Econ	417 Economic Cost (T\$)	I	203.5	7			67.5	67.5	6.0
											∞	Ì				1.0

Equipment and Materials

Table G2-6 Conversion of Financial Cost to Economic Cost (11/22)

Pursat River Basin Damnak Ampil Extension Project

í	E				rinanciai Cost	II Coat			,						Economic Cost	16						
	Ĕ١			F/C	-	i		- 1			ı		F/C				170					
Description	OSD —	Equivalent Riel	Material Eq	Material Equipment Labor F Consul	or Total nsul		Material Equipment	neni Labor Common	or Labor non Skilled	or Total ed		Material Equipment	m Labor F Consul	Total	Material	Material Equipment	Labor	Labor	Total	Construction Conversion Factor Total Cost Eactor	퇴덕	Convers
	000	Million								Conversion Factor	A/ 0.81	/B 1 0.73			0.86	0.78	0.30	0.61		Financial	ıμ	Economic
1. Preparatory Works		3,490	521	896	0 2,4	2,443	157 1	157 2	209	523 1,047	7 422.3	3 706.8	0.0	1,129.1	135.1	122.5	63.3	319.3	640.2	3,489.8		1,769.3
2 Direct Cost		46,048	11,282	20,952	0 32,233		2,072 2,072	72 2,763		6,907 13,814		9,138.1 15,294.7		0.0 24,432.8	1,782	1,616	835	4,213	8,447	46,047.8	<u>(u)</u>	32,879.5
1. Weir & major intake structures	780	3,198	784	1,455	0 2,2	2,239		144	7 761	480 959	9 634.6	5 1,062.2		1,696.8	123.8	112.2	58.0	292.6	586.6	3,198.0		2,283.4
2. Canals & related structures	009'6	39,360	9,643	17,909	0 27,552		1,771 1,771	71 2,362		5,904 11,808	8 7,811.0	13,073.4	0.0	20,884.4	1,523.2	1,381.5	713.8	3,601.4	7,219.9	39,360.0	28	28,104.3
3. Dykes	0	0	0	0	0	0	0	0	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. Miscellaneous works		3,490	855	1,588	0 2,4	2,443	157 1	157 2	209	523 1,047	7 692.5	1,159.1	0.0	1,851.6	135.1	122.5	63.3	319.3	640.2	3,489.8	4	2,491.8
3. Contractor's Expenses		44,320	10,858	20,166	0 31,024		1,994 1,994	2,659		6,648 13,296	6 937.2	1,413.7	0.0	2,350.9	194.0	159.6	32.0	325.4	711.0	44,319.9	9,	3,061.9
4. Administration Cost		17,449	4,275	7,939	0 12,214		785 7	785 1,047		2,617 5,235	5 0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17,448.8		0.0
5. Consulting Services		17,449	0	0 12,214	12,214	214	0	0	0 5,235	35 5,235	5 0.0		12,214.1	0.0 12,214.1 12,214.1	0.0	0.0	0.0	3,193.1	3,193.1	17,448.8	15,	15,407.2
Total			26,936	50,025 12,214	14 90,128		5,009 5,009		6,678 21,931	31 38,626		10,497.6 17,415.2 12,214.1	12,214.1	40,126.9	2,111	1,898	930	8,051	12,991	128,755.0	53,1	53,117.9
6. Physical Contingencies			2,694	5,003 1,221		9,013	501 5	501 6	668 2,1	2,193 3,863	3 1,049.8	3 1,741.5	1,221.4	4,012.7	211.1	189.8	93.0	805.1	1,299.1	12,875.4	5,3	5,311.8
GRAND TOTAL			29,630	55,027 13,436	136 99,141		5,510 5,510	1,346	46 24,124	24 42,489	9 11,547.4	19,156.7	13,435.5	44,139.6	2,322.3	2,088.1	1,023.4	8,856.2	14,290.1	141,630.4	58,4	58,429.7
Equipment and Materials			臣	Financial	Conversion	sion Economic	mic											Total	Riel (mil.)	141.630	8	58.430
				;	Fa	Factor	%			Major	Major repairing cost		Ì	-					US\$('000)	35,408	-	14,607
Overhead cost and miscellaneous	iicellaneous			% S		010	09.0				Maten	Material :quipment	it Labor	r Labor	Total							
Company Tax /1				1.40	, -		1.40			"	Share 0.35	0.65						Target Area	œ			
Minimum Tax /2				1.00	-	1.00	1.00			F/C	0.25	5 0.45			0.70			(Ba)	16,700			
Profit				7.00	J	0.10	0.70			02	Share 0.15	6 0.15	09.0					,	Kiel('000)/ha	8,481	.,	3,499
VAT				10.00		1.00	10.00			Σ	0.05	0.05	0.18	0.03	0.30				US\$('000)/hz	2.12		0.87
				25.4	,		13.7			ţ		Ġ										
				racto	ractor for Materials		6.80			Conver	Conversion Factor		conomic	0.686 :conomic Cost (MR)	6,744.6			FWUC	889	2,425.9	47)	5 years
/1 ; 20% of the Profit	ij			Factor	ractor tor Equipment		8/.0			Financi	Financial Cost ('000\$)		Econom	2,398 Economic Cost (T\$)	1,645.0			Agn	93.29	328.9	ν,	5 years
/2 ; 1% of Tumover										Annual	Annual O&M cost						Year	Invest	FWUC	Aeri	ľ	Total
											Materi	Material Squipment	t Labor	r Labor	Total		1	3,081.4)	3,0	3,081.4
/A; Excluding the following transfer payment	ollowing trans	fer payment			/B;]	/B; Excluding the following transfer payment	following	ransfer pa	yment				Common	n Skilled			7	13,837.1	485.1		14,3	14,322.1
Import tariff	iff.		7.0 %			Import tariff		15.0 %		8	Share 0.15	0.15	09:0	0.10			3	13,837.1	485.1	65.8	14,3	14,387.9
Company tax	tax		1.4 %			Company ta		1.4 %		ΓζC	0.15	0.15	0.60	0.10	1.00		4	13,837.1	485.2	8.59	14,3	14,388.0
Mirumum tax	tax		1.0 %			Minimum ta		1.0 %									S	13,837.1	485.2	65.8	14,3	14,388.0
VAT			10.0 %			VAT	=	10.0 %		Conven	Conversion Factor		3conomic	0.488 3conomic Cost (MR)	752.3		9		485.2	65.8	ν.	551.0
										Financi	Financial Cost ('000\$)		Economi	376 Economic Cost (T\$)	183.5		۰.			65.7	•	65.7

0.6 0.7 0.8 0.9

Table G2-6 Conversion of Financial Cost to Economic Cost (12/22)

Pursat River Basin Wat Loung Rehabilitation Project

Financial Cost	Financial Cost	Financial Cost	Financial Cost	Financial Cost	1cial Cost										E	Economic Cost							
	Total			F/C					ΙΛC				FA	F/C				27					
USD Equivalent Riel	quival		Material Equipment Labor F Consu	quipmen		Total	Material Equipment Labor	nupment C	_	Labor Skilled	Total	Material	Material Equipment Labor	Labor F Consul	Total	Material Equipment	quipment	Labor	Labor	Total	Construction Co Total Cost	Construction Conversion Factor Total Cost Factors	Factor Factors
000 Million	Mil									Conversion Factor	Factor	/A 0.81	/B 0.73	1.00		0.86	0.78	0.30	0.61		Financial	Economic	
	~	1,737	259	482	0	1,216	78	78	104	261	521	210.2	351.8	0.0	562.0	67.2	61.0	31.5	158.9	318.6	1,736.8	880.6	0.51
22	22	716,22	5,615	10,427	0	16,042	1,031	1,031	1,375	3,438	6,875	4,548.0	7,612.0	0.0	0.0 12,160.0	887	804	416	2,097	4,204	22,917.4	16,363.8	0.71
0		0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
5,166 21	5	21,181	5,189	9,637	0	14,826	953	953	1,271	3,177	6,354	4,203.3	7,035.1	0.0	11,238.4	819.7	743.4	384.1	1,938.0	3,885.2	21,180.6	15,123.6	0.71
0		0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		1,737	426	790	0	1,216	78	78	104	261	521	344.7	576.9	0.0	921.6	67.2	61.0	31.5	158.9	318.6	1,736.8	1,240.2	0.71
7	64	22,057	5,404	10,036	0	15,440	993	993	1,323	3,309	6,617	466.4	703.6	0.0	1,170.0	96.6	79.4	15.9	162.0	353.9	22,057.5	1,523.9	0.07
		8,684	2,128	3,951	0	6,079	391	391	521	1,303	2,605	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8,684.0	0.0	0.00
		8,684	0	0	6,079	6,079	0	0	0	2,605	2,605	0.0	0.0	6,078.8	6,078.8	0.0	0.0	0.0	1,589.2	1,589.2	8,684.0	7,668.0	0.88
			13,406	24,897	6,079 4	44,856	2,493	2,493	3,324	10,915	19,224	5,224.6	8,667.4	6,078.8	6,078.8 19,970.8	1,051	945	463	4,007	6,466	64,079.8	26,436.3	0.41
			1,341	2,490	809	4,486	249	249	332	1,092	1,922	522.5	866.7	607.9	1,997.1	105.1	94.5	46.3	400.7	646.6	6,408.0	2,643.7	0.41
			14,747	27,386	6,687 4	49,341	2,742	2,742	3,656	12,006	21,146	T-39	9,534.1	6,686.7	6,686.7 21,967.9	1,155.8	1,039.3	509.3	4,407.7	7,112.1	70,487.8	29,080.0	0.41
	ı																						

Equipment and Materials															
	Financial	Conversion Economic	conomic								Total	Riel (mil.)	70,488	29,080	
		Factor	%		Major repairing cost	ost						US\$('000)	17,622	7,270	
	%				M	Material 3quipment	ment Labor	bor Labor	Total						
Overhead cost and miscellaneous	00.9	0.10	09.0				Common	on Skilled							
Company Tax /1	1.40	1.00	1.40		Share	0.35 (0.65 0.	0.00 0.00			Target Area	gg			
Minimum Tax /2	1.00	1.00	1.00		F/C	0.25 (0.45 0.	0.00 0.00	0.70		(Ba)	(ha) 16,700			
Profit	7.00	0.10	0.70		Share	0.15 (0.15 0.	0.60 0.10				Riel('000)/ha	4,221	1,741	
VAT	10.00	1.00	10.00		ΓΛC	0.05	0.05 0.	0.18 0.03	0.30			US\$('000)/he	1.06	0.44	
	25.4		13.7												
	Fact	Factor for Materials	98.0		Conversion Factor		686 Зсопоп	0.686 3conomic Cost (MR)	3,487.6		FWUC	342	1,205.9	4 years	
	Fact	Factor for Equipment	0.78		Financial Cost ('000\$)		240 Econo	1,240 Economic Cost (T\$)	850.6		Agri	45.7	161.1	4 years	
/1; 20% of the Profit									ı		:			,	
/2;1% of Turnover					Annual O&M cost	st				Year	Invest	FWUC	Agri	Total Increment	crement
					M	Material 3quipment Labor	nent La	oor Labor	Total	_	2,556.0			2,556.0	
/A; Excluding the following transfer payment		/B; Excludin	ng the following	/B; Excluding the following transfer payment			Common	ion Skilled		2	13,262.0	301.5		13,563.5	
Import tariff	7.0 %	Įmį	Import tarifl	15.0 %	Share	0.15	0.15 0.	0.60 0.10		8	13,262.0	301.5	40.3	13,603.8	
Company tax	1.4 %	Co	Company ta	1.4 %	I/C	0.15	0.15 0.	0.60 0.10	1.00	4		301.4	40.3	341.7	0.7
Minimum tax	1.0 %	Min	Minimum ta	1.0 %						\$		301.4	40.3	341.7	8.0
VAT	10.0 %	VA	VAT	10.0 %	Conversion Factor	١	488 Зсопоп	0.488 3conomic Cost (MR)	392.2	9			40.2	40.2	6.0
					Financial Cost ('000\$)		196 Econo	196 Economic Cost (T\$)	95.6	7					1.0

Table G2-6 Conversion of Financial Cost to Economic Cost (13/22)

Pursat River Basin Wat Chre Rehabilitation Project

						Joint Court										1						(Unit : Riels; Million)	Million)
	بُ	Total		P/C		arican Cost			3/1				E/C		ECOI	ECOHORING COST		١					
Description	OSD	Equivalent Riel	Material E	Material Equipment Labor	Labor	Total	Material Equipment		Labor	Labor 1	Total	Material Equipmen	uipmen L	Labor	Total	Material Equipment		1	Labor	Total	Construction Conversion Factor	Conversion	Factor
	000	Million						2		Conversion Factor	nctor -	/A 0.81	/B 0.73	1.00	1	98.0	87.0	0.30	0.61		Financial	Есопотіс	racions
1. Preparatory Works		569	88	158	0	398	56	56	34	88	171	68.9	115.3	0.0	184.2	22.0	20.0	10.3	52.1	104.4	569.2	288.6	0.51
2. Direct Cost		7.510	1.840	3.417	0	5.257	338	338	451	1.127	2.253	1.490.5 2.	2.494.7	0.0	3.985.2	290 6	9896	136.2	1 687 7	13776	7 510 5	8 292 5	0.71
1. Weir & major intake structures	540	2.214	542	1.007	0	1.550	001	100	133				735.4		1 1748		77.7	40.2		406.2	2.214.0	1 581 0	1.0
2. Canals & related structures	1.153	4,727	1.158	2.151	. 0	3.309	213	213	284		1.418	_	1.570.2		2.508.3	182.9	165.9	2.58	437.5	0.004	4 777 3	3 375 3	1 2
3. Dykes	0	0	0	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. Miscellaneous works		569	139	259	0	398	26	79	34	88	171	113.0	189.1	0.0	302.1	22.0	20.0	10.3	52.1	104.4	569.2	406.5	0.71
3. Contractor's Expenses		7,229	1,771	3,289	0	5,060	325	325	434	1,084	2,169	152.9	230.6	0.0	383.5	31.6	26.0	5.2	53.1	115.9	7,228.7	499.4	0.07
4. Administration Cost		2,846	169	1,295	0	1,992	128	128	171	427	854	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2,845.9	0.0	0.00
5. Consulting Services		2,846	0	0	1,992	1,992	0	0	0	854	854	0.0	0.0	1,992.2 1,	1,992.2	0.0	0.0	0.0	520.8	520.8	2,845.9	2,513.0	0.88
Total			6,233	11,576	1,992	19,957	1,155	1,155	1,540	4,703	8,553 3,	3,202.8 5,3	5,335.3 1,9	1,992.2 10,530.3	,530.3	634.8	573.2	287.9 2,	2,000.4 3,	3,496.3	21,000.2	8,663.8	0.41
6. Physical Contingencies	····		623	1,158	199	1,996	116	116	154	470	855	320.3	533.5	199.2	1,053.0	63.5	57.3	28.8	200.0	349.6	2,851.0	1,402.6	0.49
GRAND TOTAL			6,857	12,734	2,191	21,953	1,270	1,270	1,694	5,174	9,409 3,	3,523.1 5,8	5,868.8 2,1	2,191.4 11,	11,583.3	698.3	630.5	316.7 2,	2,200.4 3,	3,845.9	23,851.2	10,066.4	0.42
Equipment and Materials																		1					
٠			•	rmanciai	ร	Conversion E Factor	Economic %			Ma	Major repairing cost	cost						Ξ	Total Rue US	Kiel (mil.) US\$('000)	23,851 5,963	10,066	
				%						1	2	Material 3quipment		Labor	Labor	Total					•		
Overhead cost and miscellaneous	scellaneous			00.9		0.10	09.0			1			S	Common	Skilled								
Company Tax /1				1.40		1.00	1.40			i	Share	0.35	0.65	0.00	0.00	į		Ta	Target Area				
Munimum 1 ax /2 Profit				20.1		3 5	36.5			3	Shore	0.25	0.45	00.0	0.00	0.70			(ha) 16,700	16,700	7,00	8	
VAT				10.00		1.00	10.00			271		0.05	0.05	0.18	0.03	0.30			r s	US\$('000)/he	0.36	0.15	
				25.4			13.7																
				ET E	Factor for Materials	Aaterials	0.86			S E	Conversion Factor	 	0.686 3conomic Cost (MR)	.686 3conomic Cost (MR)	t (MR)	961.9		ш,	FWUC	110	387.9	4 years	
/1 ; 20% of the Profit	,#			•		manuda k	3			•) isoo minim		200		 	0.57			ī.	Š	£	4 years	
/2 ; 1% of Tumover										Am	Annual O&M cost	ost					Ľ	Year b	Invest F	FWUC	Agri	Total	Build-up
											Ž	Material squipment		Labor	Labor	Total			837.7	6.96		934.5	
/A; Excluding the following transfer payment	llowing tra	ısfer paymen			•	B; Excludi	$\ensuremath{\mbox{/B}}$; Excluding the following transfer payment	ving transfe	r payment	١			Ü	Common	Skilled		,		9,228.7	97.0	12.3	9,338.0	
Import tariff	Œ.		7.0 %	%		Ē	Import tariff	15.0 %			Share	0.15	0.15	09.0	0.10			£		6.96	12.4	109.2	0.7
Company tax	tax		1.4 %	%		ರ :	Company ta	1.4 %		외	,	0.15	0.15	09.0	0.10	1.00		4		97.0	12.4	109.3	8.0
Minimum tax	XB1		1.0 %	% ·		ΣŽ	Minimum ta VAT	1.0 %		Ç	Conversion Factor		0.488 3000	Opet (MD)	(4)	0.001		s v			12.4	12.4	0.9

0.7 0.8 0.9 1.0

102.0

Conversion Factor 0.488 3 conomic Cost (MR)
Financial Cost (7000\$) 51 Economic Cost (T\$)

0.488 3conomic Cost (MR)

15.0 % 1.4 % 1.0 % 10.0 %

Company ta Minimum ta VAT Import tariff

7.0 % 1.4 % 1.0 %

Company tax Minimum tax VAT

Table G2-6 Conversion of Financial Cost to Economic Cost (14/22)

Pursat River Basin Anlong Khouch, Wat Leap, Kosh Khsach Water Harvesting and Recession Rice Project

s; Million)			7 Factor	Factors			0.46	0.71		0.71	0.71	0.71	0.07	0.00	0.88	0.41	0.41	0.41
(Unit : Riels; Million)			Construction Conversion Factor	Total Cost	Economic		559.9	11,555.3	0.0	9,016.8	1,662.8	875.7	1,076.1	0.0	5,414.8	18,606.1	1,860.6	20,466.7
			Construction	Total	Financial		1,226.5	16,183.3	0.0	12,628.0	2,328.8	1,226.5	15,576.0	6,132.3	6,132.3	45,250.3	4,525.0	49,775.3
			Total				224.9	2,968	0.0	2,316.4	427.1	224.9	249.9	0.0	1,122.2	4,565	456.5	5,021.9
			Labor	Skilled		0.61	112.2	1,481	0.0	1,155.5	213.1	112.2	114.4	0.0	1,122.2	2,830	283.0	3,112.6
		ΓΛC	Labor	Common		0.30	22.2	293	0.0	229.0	42.2	22.2	11.2	0.0	0.0	327	32.7	359.5
			quipment			0.78	43.0	999	0.0	443.2	81.7	43.0	56.1	0.0	0.0	299	66.7	733.7
	Economic Cost		Material Equipment Labor			0.86	47.5	929	0.0	488.7	90.1	47.5	68.2	0.0	0.0	742	74.2	816.2
	Ec		Total				335.0	8,586.9	0.0	6,700.4	1,235.7	8.059	826.2	0:0	4,292.6	4,040.7	1,404.1	5,444.8
		r)	Labor	F Consul		1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4,292.6	4,292.6 14,040.7	429.3	4,721.9 15,444.8
		F/C	Material Equipment Labor		В	0.73	209.7	5,375.3	0.0	4,194.4	773.5	407.4	496.8	0.0	0.0	6,081.8	608.2	6,690.0
			Material E		Ψ/	0.81	125.3	3,211.6	0.0	2,506.0	462.2	243.4	329.4	0.0	0.0	3,666.3	366.6	4,032.9
			Total			Factor	368	4,855	0	3,788	669	368	4,673	1,840	1,840	13,575	1,358	14,933
			Labor	Skilled		Conversion Factor	184	2,427	Φ	1,894	349	184	2,336	920	1,840	7,707	177	8,478
		ΣÇ	Labor	Common		O	74	971	0	758	140	74	935	368	0	2,347	235	2,582
			quipment				55	728	0	268	105	55	701	276	0	1,760	176	1,936
			Material Equipment Labor				55	728	0	999	105	55	701	276	0	1,760	176	1,936
	Financial Cost		Total				829	11,328	0	8,840	1,630	829	10,903	4,293	4,293	31,675	3,168	34,843
	臣		Labor	F Consul			0	0	0	0	0	0	0	0	4,293	4,293	429	4,722
		F/C	quipmen				287	7,363	0	5,746	1,060	558	7,087	2,790	0	17,528	1,753	19,281
			Material Equipment Labor				155	3,965	0	3,094	57.1	300	3,816	1,502	0	9,438	944	10,382
		ارها	Equivalent	Riel		Million	1,226	16,183	0	12,628	2,329	1,226	15,576	6,132	6,132			
		Total	USD			000			0	3,080	268							
			Description				l. Preparatory Works	2. Direct Cost	1. Weir & major intake structures	2. Canals & related structures	3. Dykes	4. Miscellaneous works	3. Contractor's Expenses	4. Administration Cost	5. Consulting Services	Total	6. Physical Contingencies	GRAND TOTAL

	Financial	Conversion Economic	Economic									Total	Riel (mil.)	49,775	20,467	
		Factor	%		Major repairing cost	ring cost							US\$('000)	12,444	5,117	
	%					Material 3q	Material squipment Labor	Labor	Labor	Total						
Overhead cost and miscellaneous	6.00	0.10	09:0				Ü	Common	Skilled							
Сощрапу Тах /1	1.40	1.00	1.40		Share	3 0.35	0.65	00.00	0.00			Target Area	rea			
Minimum Tax /2	1.00	1.00	1.00		F/C	0.25	0.45	0.00	00.00	0.70		(Ba	(ha) 16,700			
Profit	7.00	0.10	0.70		Share	3 0.15	0.15	09:0	0.10				Riel('000)/ha	2,981	1,226	
VAT	10.00	1.00	10.00		27	0.05	0.05	0.18	0.03	0.30			US\$('000)/he	0.75	0.31	
	25.4		13.7													
		Factor for Materials	0.86		Conversion Factor	Factor	0.686 3∝	0.686 3conomic Cost (MR)		2,494.8		FWUC	240	846.2	4 years	
	•	Factor for Equipment	0.78		Financial Cost ('000\$)	st ('000\$)	887 Ec	887 Economic Cost (T\$)	st (T\$)	608.5		Agni	34.19	120.6	4 years	
/1; 20% of the Profit												:			,	
/2; 1% of Turnover					Annual O&M cost	M cost					Year	Invest	FWUC	Agri	Total In	Increment
						Material 3q	Material squipment Labor Labor	Labor	Labor	Total	1	1,804.9	211.6		2,016.5	
/A; Excluding the following transfer payment		/B; Exclud	ing the follow	/B; Excluding the following transfer payment			Ü	Common	Skilled		7	18,661.8	211.6	30.2	18,903.6	
Import tariff	7.0 %	Ħ	Import tariff	15.0 %	Share	0.15	0.15	09.0	0.10		<u>س</u>		211.6	30.1	241.7	0.7
Company tax	1.4 %	ŭ	Company ta	1.4 %	1/0	0.15	0.15	09.0	0.10	1.00	4		211.6	30.1	241.7	8.0
Minimum tax	1.0 %	M	Minimum ta	1.0 %							'n			30.2	30.2	6.0
VAT	10.0 %	Λ'	VAT	10.0 %	Conversion Factor	Factor	0.488 :conomic Cost (MR)	mornic Cos	# (MR)	282.1	٥					1.0
					Financial Co	Financial Cost ('000\$) 141 Economic Cost (T\$)	141 Ec	опотіс Сс	rst (T\$)	8.89	7					
											_					-

Equipment and Materials

Table G2-6 Conversion of Financial Cost to Economic Cost (15/22)

Boribo River Basin Lum Hach Rehabilitation Project

Description					Finan	Financial Cost									Ecol	Economic Cost							
Description	Total	[g		F/C					170		1		F/C					22					
	USD	' 뷵	Material Equipment Labor	1mpmen 1		Total	Material Equipment	ipmen! L	Labor L	Labor T	Total	Material Equipment Labor	ipmen I		Total	Material Equipment	nipment	Labor	Labor	Total	Constructio	Construction Conversion Factor	Factor
		Riel		[+.	F Consul			ට	Common SI	Skilled			F	F Consul			O	Common	Skilled		Total Cost	Cost	Factors
	000	Million							Ö	Conversion Factor	ctor	/A 0.81	/B 0.73	1.00		0.86	0.78	0.30	0.61		Financial	Есопотіс	
1. Preparatory Works		2,070	309	574	0	1,449	83	93	124	310	621	250.4	419.2	0.0	9.699	80.1	72.6	37.5	189.4	379.6	2,069.6	1,049.2	0.51
2 Direct Cost		27,309	6,691	12,426	0	19,116	1,229	1,229	, 689,	4,096	8,193 5	5,419.5 9,0	9,070.8	0.0 14,490.3	,490.3	1,057	959	495	2,499	5,010	27,309.2	19,499.8	0.71
1. Weir & major intake structures	2,130	8,733	2,140	3,974	0	6,113	393	393	524	1,310	2,620 1	1,733.1 2,9	2,900.7	0.0	4,633.8	338.0	306.5	158.4	799.1	1,602.0	8,733.0	6,235.8	0.71
2. Canals & related structures	4,026	16,507	4,044	7,511	0 1	11,555	743	743	066	2,476 4	4,952 3	3,275.7 5,	5,482.7	0.0	8,758.4	638.8	579.4	299.3	1,510.4	3,027.9	16,506.6	11,786.3	0.71
3. Dykes	0	0	0	0	0	0	0	0	0	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. Miscellaneous works		2,070	507	942	0	1,449	93	93	124	310	621	410.7	687.4	0.0	1,098.1	80.1	72.6	37.5	189.4	379.6	2,069.6	1,477.7	0.71
3. Contractor's Expenses		26,285	6,440	11,959	0 1	18,399	1,183	1,183	: 772,1	3,943	7,885	555.8	838.4	0.0	1,394.2	115.1	94.7	19.0	193.0	421.8	26,284.5	1,816.0	0.01
4. Administration Cost		10,348	2,535	4,708	0	7,244	466	466	621	1,552 3	3,104	0.0	0:0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10,348.2	0.0	0.00
5. Consulting Services		10,348	0	0	7,244	7,244	0	0	0	3,104 3	3,104	0.0	0.0	7,243.8 7,	7,243.8	0.0	0.0	0.0	1,893.7	1,893.7	10,348.2	9,137.5	0.88
Total			15,975	29,668	7,244 5	53,452	2,971	2,971	3,961 13	13,006 22	22,908 6	6,225.7 10,328.4		7,243.8 23,	23,797.9	1,252	1,126	552	4,775	7,705	76,359.9	31,502.5	0.41
6. Physical Contingencies			1,598	2,967	724	5,345	297	297	396	1,301	2,291	622.6 1,(1,032.8	724.4 2,	2,379.8	125.2	112.6	55.2	477.5	770.5	7,636.0	3,150.3	0.41
GRAND TOTAL			17,572	32,635	7,968 5	58,797 58,175	3,268	3,268	4,357 14	14,307 25	25,199 6	6,848.3 11,361.2		7,968.2 26,177.7		1,377.3	1,238.4	606.9 5	5,252.5	8,475.1	83,995.9	34,652.8	0.41

Contractor Expenses																
	Financial	Conversion Economic	Есопотіс									Total	Riel (mil.)	83,996	34,653	
		Factor	%		Major repairing cost	ig cost							US\$('000)	20,999	8,663	
	%					Material 3qu	Material 3quipment Labor		Labor	Total						
Overhead cost and miscellaneous	9009	0.10	09:0				රි	Common Si	Skilled							
Company Tax /1	1.40	1.00	1.40		Share	0.35	0.65	0.00	0.00			Target Area	eg.			
Minimum Tax /2	1.00	1.00	1.00		F/C	0.25	0.45	0.00	0.00	0.70		(ha)	(ha) 16,700			
Profit	7.00	0.10	0.70		Share	0.15	0.15	09.0	0.10				Riel('000)/ha	5,030	2,075	
VAT	10.00	1.00	10.00		2	0.05	0.05	0.18	0.03	0.30			US\$('000)/hg	1.26	0.52	
	25.4		13.7													
	Fa	Factor for Materials	98.0		Conversion Factor	ıctor	0.686 3001	0.686 3conomic Cost (MR)		3,437.0		FWUC	402	1,417.5	4 years	
	Fa	Factor for Equipment	0.78		Financial Cost ('000\$)	ı	1,222 Ecc	1,222 Economic Cost (T\$)		838.3		Agri	44.16	155.7	4 years	
/1; 20% of the Profit									i			;			,	
/2; 1% of Turnover					Annual O&M cost	cost					Year	Invest	FWUC	Agri	Total	Build-up
Equipment and Materials						Material 3q	ipment	Material squipment Labor Labor	abor	Total	-	3,045.8		ı	3,045.8	'
/A; Excluding the following transfer payment		/B; Excludi	ing the followi	/B; Excluding the following transfer payment			ပိ	Common St	Skilled		2	15,803.5	354.4		16,157.8	
Import tariff	7.0 %	Į.	Import tariff	15.0 %	Share	0.15	0.15	09.0	0.10		3	15,803.5	354.4	38.9	16,196.8	
Company tax	1.4 %	ď	Company ta	1.4 %	רוכ	0.15	0.15	0.60	0.10	1.00	4		354.4	38.9	393.3	0.7
Minimum tax	1.0 %	M	Minimum ta	1.0 %							s		354.4	38.9	393.3	8.0
VAT	10.0 %	^	VAT	10.0 %	Conversion Factor	ı	0.488 3cor	0.488 3conomic Cost (MR)		366.1	9			38.8	38.8	6.0
					Financial Cost ('000\$)	(,0000)	183 Ecc	183 Economic Cost (T\$)	(TS)	89.3	7					1.0

Table G2-6 Conversion of Financial Cost to Economic Cost (16/22)

Boribo River Basin 7th January Canal Rehabilitation Project

(Ont : Kiels, Million)	•	Construction Conversion Factor	ost Factors	Есопотіс		550.4 0.51	10,228.2 0.71	0.0	0 453 1 0 71		_	_					
		Construction	Total Cost	Financial		1,085.6	14,324.5	0.0	13,238.9		0.0	0.0	0.0 1,085.6 13,787.0	0.0 1,085.6 13,787.0 5,427.9	0.0 1,085.6 13,787.0 5,427.9	0.0 1,085.6 13,787.0 5,427.9 40,033.0	1 4
		Total				199.1	2,628	0.0	2,428.5		0.0	0.0	0.0 199.1 221.2	0.0 199.1 221.2 0.0	21 22 86	6,6 %	6,6 % %
		Labor	Skilled		0.61	99.3	1,311	0.0	1,211.4		0.0	99.3	99.3 101.2	99.3 101.2 0.0	0.0 99.3 101.2 0.0	0.0 99.3 101.2 0.0 993.3 3,815.2	99.3 101.2 0.0 993.3 3,815.2 381.5
	ΣC	Labor	Common		0.30	19.7	260	0.0	240.1	00	3	19.7	19.7	9.9	9.9	9.9 0.0 0.0	9.9 9.9 0.0 549.2 54.9
		quipmen			0.78	38.1	503	0.0	464.7	0.0		38.1	38.1	38.1 49.7 0.0	38.1 49.7 0.0	38.1 49.7 0.0 0.0	38.1 49.7 0.0 0.0 1,093.4 109.3
Economic Cost		Material Equipment			0.86	42.0	554	0.0	512.3	0.0		42.0	42.0	42.0	60.4	42.0 60.4 0.0 1,211.0	42.0 60.4 0.0 1,211.0
ш		Total				351.3	7,600.6	0.0	7,024.6	0.0		576.0	576.0	731.4	576.0 731.4 0.0 3,799.6	576.0 731.4 0.0 3,799.6	576.0 731.4 0.0 3,799.6 20,083.5
	rs)	Labor	F Consul		1.00	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0 0.0 3,799.6		
	F/C	Material Equipment		g/	0.73	219.9	4,757.9	0.0	4,397.3	0.0	360.6	,	439.8	439.8	0.0	439.8 0.0 0.0	439.8 0.0 0.0 10,175.5 1,017.6
		Material E		Ψ/	0.81	131.4	2,842.7	0.0	2,627.3	0.0	215.4		291.6	291.6	291.6	291.6 439.8 0.0 0.0 0.0 0.0 6,108.4 10,175.5	291.6 0.0 0.0 6,108.4 1
		Total			Factor	326	4,297	0	3,972	0	326		4,136	4,136	4,136	4,136 1,628 1,628 16,313	4,136 1,628 1,628 16,313
		Labor	Skilled		Conversion Factor	163	2,149	0	1,986	0	163		2,068	2,068	2,068 814 814	2,068 814 1,628 8,971	2,068 814 1,628 8,971
	2/1	Labor	Common		~	69	829	0	794	0	65		827	326	326 0	326 0 2,937	326 0 2,937 294
		quipmen	_			64	645	0	969	0	49		620	620	620 244 0	620 244 0 2,203	620 244 0 2,203 220
		Material Equi				49	645	0	296	0	49		620	620	620 244 0	620 244 0 2,203	620 244 0 2,203 220
Financial Cost		Total				760	10,027	0	9,267	0	760		159'6	9,651	9,651 3,800 3,800	9,651 3,800 3,800 3,800	9,651 3,800 3,800 38,064 3,806
Finz	,	Labor	F Consul			0	0	0	0	0	0		Φ	Ф Ф	9 0	0 3,800 3,800	0 3,800 380
	F/C	Material Equipment Labor	_			301	6,518	0	6,024	0	494		6,273	6,273	6,273	6,273 2,470 0 22,079	6,273 2,470 0 22,079 2,208
		Material E				162	3,510	0	3,244	0	266		3,378	3,378	3,378	3,378 1,330 0 11,889	3,378 1,330 0 0 11,889 1,189
	Total	Equivalent	Riel		Million	1,086	14,324	0	13,239	0	1,086		13,787	13,787	13,787 5,428 5,428	13,787 5,428 5,428	13,787 5,428 5,428
	Τc	OSD			000			0	3,229	0			-				
		Description				1. Preparatory Works	2 Direct Cost	1. Weir & major intake structures	Canals & related structures	3. Dykes	4. Miscellaneous works		3. Contractor's Expenses	3. Contractor's Expenses 4. Administration Cost	Contractor's Expenses Administration Cost Consulting Services	Contractor's Expenses Administration Cost Consulting Services Total	3. Contractor's Expenses 4. Administration Cost 5. Consulting Services Total 6. Physical Contingencies

	Financial	Conversion Economic	Economic									Total R	Riel (mil.)	45,491	19,199	
		Factor	%		Major repairing cost	g cost						ר	US\$('000)	11,373	4,800	
	%					Material 3quipment Labor	pment]		Labor	Total						
Overhead cost and miscellaneous	90'9	0.10	09.0				Con	Common Si	Skilled							
Company Tax /1	1.40	1.00	1.40		Share	0.35	0.65	0.00	0.00		c-1	Target Area				
Minimum Tax /2	1.00	1.00	1.00		F/C	0.25	0.45	0.00	0.00	0.70		(ha)	(ha) 16,700			
Profit	7.00	0.10	0.70		Share	0.15	0.15	09.0	01.0			ıΔ	Riel('000)/ha	2,724	1,150	
VAT	10.00	1.00	10.00		170	0.05	0.05	0.18	0.03	0.30		ı	US\$('000)/he	99.0	0.29	
	25.4		13.7													
	Fac	Factor for Materials	0.86		Conversion Factor		0.686 3conomic Cost (MR)	omic Cost (2,179.8		FWUC	211	744.0	4 years	
	Fac	Factor for Equipment	0.78		Financial Cost ('000\$)		775 Economic Cost (T\$)	nomic Cost		531.7		Appri	24.27	85.6	4 years	
/1; 20% of the Profit									l							
/2 ; 1% of Turnover					Annual O&M cost	cost					Year	Invest	FWUC	Agri	Total Br	Build-up
						Material squipment Labor	pment 1	abor i	Labor	Total	_	1,597.6	186.0		1,783.6	
/A; Excluding the following transfer payment		/B; Exclud	ing the followi	/B; Excluding the following transfer payment			Con	Common SI	Skilled		2 1	17,601.8	186.0	21.3 1	17,809.1	
Import tariff	7.0 %	ū	Import tarifi	15.0 %	Share	0.15	0.15	09'0	0.10		٣		186.0	21.4	207.4	0.7
Company tax	1.4 %	Ü	Company ta	1.4 %	22	0.15	0.15	09.0	0.10	1.00	4		186.0	21.4	207.4	8.0
Minimum tax	1.0 %	Ž	Minimum ta	1.0 %							۰,			21.3	21.3	6.0
VAT	10.0 %	^	VAT	10.0 %	Conversion Factor	l	0.488 3conomic Cost (MR)	omic Cost (246.1	9					1.0
					Financial Cost ('000\$) 123 Economic Cost (T\$)	(\$000,)	123 Ecoi	10mic Cost	(3 E)	0.09	7					

Equipment and Materials

Table G2-6 Conversion of Financial Cost to Economic Cost (17/22)

Boribo River Basin Khvet Rehabilitation Project

| | acto | Factors | | 0.51 | 0.71 | 0.71
 | 0.71 | : | 0.71 | 0.07 | 00'0 | 0.88 | 0.41 | 0.41
 | 0.41 | | | | | | |
 | | | | | | | |
 | Build-up | | | 0.8 | 0.9 | 1.0 |
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	onversion F		onomic	91.4	1,698.2
 | 837.4 | 0.0 | 128.8 | 158.1 | 0.0 | 795.6 | 2,743.3 | 274.3
 | 3,017.6 | | 3,018 | 754
 | | | | 181 | 0.05 | 3 Wears | 3 years |
 | | 305.2 | ,800.7 | 48.2 | 8.3 | |
 | |
| | mstruction C | Total Cos | | 180.2 | | .025.0
 | 172.6 | 0.0 | 180.2 | ,288.6 | 901.0 | 901.0 | | 664.9
 | | | 7,314 | 1,828
 | | | | 438 | 77.0 | 119.0 | 24.9 |
 | | | 8.3 2 | 8.3 | 8.3 | |
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| 1 | 1 | | 臣 | 3.1 | |
 | | | 3.1 | | 0.0 | 4.9 | | 7.1
 | | | mil.) | (000
 | | | 00/ | 000)/ha | ooo)/ne | 34 | .06 |
 | | 0.0 | 0.0 | 6.6 | | |
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 | | Target | ť | | | FWI | Agr |
 | | 265 | 2,752. | | | |
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		COMITI		·		
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 | Year | - | 7 | ю | 4 | ٧ | 9 1
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| ısı | Equipme | | 0.78 | 6.3 | 28 | 36.0
 | 41.2 | 0.0 | 6.3 | 8.2 | 0.0 | 0.0 | 8 | 8.6
 | 107.8 | | | | | | |
 | | | | | | | |
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 | |
| onomic Co | Material | | 0.86 | 7.0 | 92 | 39.7
 | 45.4 | 0.0 | 7.0 | 10.0 | 0.0 | 0.0 | 109 | 10.9
 | 120.0 | | | Total
 | | | 0.70 | 0 | 00.00 | 778 4 | 67.9 |
 | | Total | i | | 1.00 | | 28.0
 | |
| 22 | Total | | | 58.3 | 1,261.8 | 543.9
 | 622.2 | 0.0 | 95.7 | 121.4 | 0.0 | 630.7 | 2,072.2 | 207.2
 | 2,279.4 | | | Tahar
 | Skilled | 0.00 | 0.00 | 0.10 | CO.O. | set (MR) | ost (TS) |
 | | Labor | Skilled | 0.10 | 0.10 | | ost (MR)
 | |
| | Labor | Consu | 1.00 | 0.0 | 0.0 | 0.0
 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 630.7 | 630.7 | 63.1
 | 693.8 | | | Lohor
 | ommon | 0.00 | 0.00 | 0.60 | 0.10 | onomic C | сопотіс (|
 | | Labor | ошшо | 0.60 | 0.60 | | onomic Co
 | |
| | | | /B
0.73 | 36.5 | 789.9 | 340.5
 | 389.5 | 0.0 | 59.9 | 73.0 | 0.0 | 0.0 | 899.4 | 89.9
 | 989.3 | | | inment
 | _ | 0.65 | 0.45 | 0.15 | 0.00 | 0.686 | 99 E |
 | | ipment | | 0.15 | 0.15 | | 0.488 30
14 E
 | |
| | Material Eq | | /A
0.81 | 21.8 | 471.9 | 203.4
 | 232.7 | 0.0 | 35.8 | 48.4 | 0.0 | 0.0 | 542.1 | 54.2
 | 596.3 | | | g cost
Material ion
 | | 0.35 | 0.25 | 0.15 | 0.00 | ctor | (\$000,) |
 | cost | Material iqu | | 0.15 | 0.15 | | ctor
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| | 1 | | actor | 25 | 713 | 308
 | 352 | 0 | 54 | 289 | 270 | 270 | 1,995 | 200
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 | 176 | 0 | 27 | 343 | 135 | 270 | 1,132 | 113
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 | 70 | 0 | 11 | 137 | 54 | 0 | 345 | 35
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| | pment L | 3 | | ∞ | 107 | 46
 | 53 | 0 | ∞ | 103 | 41 | 0 | 259 | 56
 | 285 | | |
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 | | | ng transfer | 15.0 % | 1.4 % | 1.0 % | 10.0 %
 | |
| | faterial Equ | | | ∞ | 107 | 46
 | 53 | 0 | ∞ | 103 | 41 | Ф | 259 | 56
 | 285 | | onomic
a | %
 | 09'0 | 1.40 | 1.00 | 0.70 | 13.7 | 0.86 | 0.78 |
 | | | the followi | ort tarifi | sparry ta | imum ta | _
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| ISON IRIS | i | | | 126 | 1,664 | 718
 | 821 | 0 | 126 | 1,602 | 631 | 631 | 4,654 | 465
 | 5,119 | | | racior
 | 0.10 | 1.00 | 1.00 | 0.10 | 1.00 | terials | npment |
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| LIBRI | | OTISTI | | 0 | 0 | 0
 | Φ | 0 | 0 | 0 | 0 | 631 | 631 | 83
 | 694 | | S | | | | |
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| į | ipmen L | - | | 50 | 780,1 | 466
 | 534 | 0 | 82 | 1,041 | 410 | 0 | 2,583 | 258
 | 2,841 | | mecial | %
 | 6.00 | 1.40 | 1.00 | 7.00 | 25.4 | | Fac |
 | | | | | | |
 | |
| | faterial Equ | | | 27 | 583 | 251
 | 787 | 0 | 4 | 561 | 221 | 0 | 1,391 | 139
 | 1,530 | | F |
 | | | | | | | |
 | | | | 7.0 % | 1.4 % | 1.0 % | 10.0 %
 | |
| | , | Klei | fillion | 180 | 2,378 | 1,025
 | 1,173 | 0 | 180 | 2,289 | 901 | 901 | |
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| Total | - 1 | | | | | 250
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 | ost and miscella | Fax /1 | Гах /2 | | | | | of the Profit
 | f Turnover | | ding the followin | Import tariff | Company tax | Minimum tax | VAT
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| | Description | | | Preparatory Works | Direct Cost | 1. Weir & major intake st
 | Canals & related struct | 3. Dykes | 4. Miscellaneous works | Contractor's Expenses | Administration Cost | Consulting Services | Total | Physical Contingencies
 | GRAND TOTAL | Equipment and Materia | |
 | Overhead co | Company T | Minimum T | Profit | 101 | | | /1 ; 20% (
 | /2 ; 1% of | | /A; Exclu | | _ | |
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| | TITIZENIAN COST. C | Total Total Material Equipment Labor Total Material Equipment Labor Total Material Equipment Labor Total Com | Total FyC Limited Cost Library | Total F/C Luc Luc F/C F/C Luc Total Material Equipment Labor Total Luc Luc | Total F/C Total F/C Total Material Equipment Labor Total Material Equipment Material Equipme | Total F/C Institute F/C Total Material Equipment Labor Total Common Skilled Com | Total F/C Indicated Common Total Material Equipment Labor Total Common Skilled A | Total FiC Total Total Material Equipment Labor Total Common Skilled A | Total Fic Final Equipment Labor Total Material Equipment Labor Total Common Skilled A | Total House works House House works House works House House House works Hous | Total House Hous | Total First Firs | Trotal House Figure House Figure House Figure House Figure House House | Total First Firs | Total Tota | Total Maiorial Equipment Libor Libor | Trong Tron | Total Material Equipment Libor Total Total Material Equipment Libor Total Material Equipment Libor Total Total Total Total Total Material Libor Total Total Total Total Material Equipment Libor Total Material Equipment Libor Total Material Libor Total Tot | Total | Total Total Total Total Material Equipment Local Local | Triangle Triangle | Thing | Trial Properties Properti | Time | Type Type | Trial Tria | Total Part | Tito Figure Fig | The column Column | Trial Front Fron | Trigial Trig | Total | Trial Tria | The color of the |

Table G2-6 Conversion of Financial Cost to Economic Cost (18/22)

Boribo River Basin Ta Ram Rehabilitation Project

																					_	(Unit: Kiels; Million)	Mulhon)
					Finan	Financial Cost									Econ	Economic Cost							
	Tc	Total		F/C					I/C				F/C					I/C					
Description	OSD	Ħ	Material Equipment Labor	nipment L		Total	Material Equipment		Labor La	Labor T	Total	Material Equipment Labor	pmen L		Total	Material Equipment		Labor I	Labor	Total	Construction Conversion Factor	Conversion	Factor
1		Riel		F	F Consul			Ŝ	Common Sk	Skilled			FC	F Consul			ర	Common S	Skilled		Total Cost	ıst	Factors
												Ψ/	/B								Financial E	Economic	
	000	Million							స్	Conversion Factor	ctor	0.81	0.73 1.	1.00		0.86	0.78	0.30	0.61				
1. Preparatory Works		199	23	46	0	139	٥	o,	12	90	8	20.1	33.6	0.0	53.7	7.7	7.0	3.6	18.2	36.5	199.0	90.2	0.45
2 Direct Cost		2,626	643	1,195	0	1,838	118	118	158	394	788	521.1	872.4	0.0	1,393.5	102	. 26	48	240	482	2,626.2	1,875.2	0.71
1. Weir & major intake structures	250	1,025	251	466	0	718	46	46	62	154	308	203.4 3	340.5	0.0	543.9	39.7	36.0	18.6	93.8	188.1	1,025.0	732.0	0.71
2. Canals & related structures	244	1,000	245	455	0	700	45	45	99	150	300	198.5	332.3	0.0	530.8	38.7	35.1	18.1	91.5	183.4	1,000.4	714.2	0.71
3. Dykes	86	402	86	183	0	281	18	18	24	09	121	79.7	133.5	0.0	213.2	15.5	14.1	7.3	36.8	73.7	401.8	286.9	0.71
4. Miscellaneous works		199	49	91	0	139	6	0	12	30	90	39.5	66.1	0.0	105.6	7.7	7.0	3.6	18.2	36.5	199.0	142.1	0.71
3. Contractor's Expenses		2,528	619	1,150	0	1,769	114	114	152	379	758	53.4	80.6	0.0	134.0	11.1	9.1	1.8	18.6	40.6	2,527.7	174.6	0.07
4. Administration Cost		995	244	453	0	269	45	45	99	149	299	0.0	0.0	0.0	0:0	0.0	0.0	0.0	0.0	0.0	995.2	0.0	0.00
5. Consulting Services		995	0	0	269	269	0	0	0	299	299	0:0	0.0	9.969	9.969	0.0	0.0	0.0	182.1	182.1	995.2	878.7	88.0
Total			1,531	2,844	269	5,140	286	286	381	1,251 2	2,203	594.6	986.6	696.6 2,	2,277.8	120	108	53	459	741	7,343.3	3,018.7	0.41
6. Physical Contingencies			153	284	70	514	29	29	38	125	220	59.5	7.86	69.7	227.8	12.0	10.8	5.3	45.9	74.1	734.3	301.9	0.41
GRAND TOTAL	ļ		1,684	3,128	766	5,654	314	314	419	1,376 2	2,423	654.1 1,0	1,085.3	766.3 2,	2,505.6	132.4	119.1	58.3	505.1	815.0	8,077.6	3,320.6	0.41

Equipment and Materials																
	Financial	Conversion Economic	Economic									Total	Riel (mil.)	8,078	3,321	
		Factor	%		Major repairing cost	ig cost							US\$('000)	2,019	830	
	%					Material 3q	Material squipment Labor		Labor	Total						
Overhead cost and miscellaneous	90.9	0.10	09'0				ပိ	Common Sk	Skilled							
Company Tax /1	1.40	1.00	1.40		Share	0.35	0.65	0.00	0.00			Target Area	82			
Minimum Tax /2	1.00	1.00	1.00		F/C	0.25	0.45	0.00	0.00	0.70		(ha)	(ha) 16,700			
Profit	7.00	0.10	0.70		Share	0.15	0.15	09.0	0.10				Riel('000)/ha	484	199	
VAT	10.00	1.00	10.00		r,c	0.05	0.05	0.18	0.03	0.30			US\$('000)/he	0.12	0.05	
	25.4		13.7													
	Faci	Factor for Materials	0.86		Conversion Factor	actor	0.686 3001	0.686 3conomic Cost (MR)		320.6		FWUC	37	130.5	3 vears	
	Fac	Factor for Equipment	0.78		Financial Cost ('000\$)	(\$000.)	114 Ecc	114 Economic Cost (TS)	(LS)	78.2		Agri	6.61	23.3	3 vears	
/1; 20% of the Profit																
/2;1% of Turnover					Annual O&M cost	cost					Year	Invest	FWUC	Agri	Total	Build-up
						Material 3q	Material 3quipment Labor		Labor	Total	-	292.9	43.5	ı	336.4	•
/A; Excluding the following transfer payment		/B; Exclud	ling the followi	/B; Excluding the following transfer payment			රි	Common Sk	Skilled	İ	2	3,027.7	43.5	7.8	3,079.0	
Import tariff	7.0 %	П	Import tariff	15.0 %	Share	0.15	0.15	0.60	0.10		3		43.5	7.8	51.3	8.0
Company tax	1.4 %	O	Company ta	1.4 %	ĽC	0.15	0.15	0.60	0.10	1.00	4			7.7	7.7	6.0
Minimum tax	1.0 %	2	Minimum ta	1.0 %							8					1.0
VAT	10.0 %	Α	VAT	10.0 %	Conversion Factor	retor	0.488 300	0.488 3conomic Cost (MR)	MR)	34.0	9					
					Financial Cost ('000\$)	(,000\$)		17 Economic Cost (T\$)	(TS)	8.3	7					
																•

Table G2-6 Conversion of Financial Cost to Economic Cost (19/22)

Boribo River Basin Chak Teum, Trapeang Khlong & Don Poy Rehabilitation Project

-					1																	(Unit: Kie	(Unit: Riels; Million)
	- 1				rinanc	rinancial Cost									Eco	Economic Cost							
Total	- 1	1		F/C					2				F/C					ΓC					
USD Equivalent	2		Material Equipment Labor	upmen L		Total M	Material Equipment			Labor	Total	Material Equipment		Labor	Total	Material Equipment Labor	quipmen	Labor	Labor	Total	Construction	Construction Conversion Factor	n Factor
2		Riel		E	F Consul			ರ	Common	Skilled			_	F Consul				Common	Skilled		Total Cost	Cost	Factors
000 Mi		Million							ರ	Conversion Factor	'actor	/A 0.81	/B 0.73	1.00		0.86	0.78	0:30	0.61		Financial	Есопотиіс	ı
	1	501	73	135	0	351	23	23	30	57	150	58.8	98.4	0.0	157.2	19.4	17.6	9.1	45.8	91.9	\$00.9	249.1	0.50
	ø	6,610	1,619	3,008	0	4,627	297	297	397	166	1,983	1,311.7	2,195.6	0.0	3,507.3	256	232	120	605	1,213	6,609,9	4,719.9	0.71
250	-	1,025	251	466	0	718	46	46	62	154	308	203.4	340.5	0.0	543.9	39.7	36.0	18.6	93.8	188.1	1,025.0	732.0	0.71
1,195	4	4,900	1,200	2,229	9	3,430	220	220	294	735	1,470	972.3	1,627.4	0.0	2,599.7	189.6	172.0	88.9	448.3	838.8	4,899.5	3,498.5	0.71
45		185	45	84	0	129	00	00	11	82	55	36.6	61.3	0.0	97.9	7.1	6.5	3.3	16.9	33.8	184.5	131.7	
		501	123	228	0	351	23	23	30	22	150	99.4	166.4	0.0	265.8	19.4	17.6	9.1	45.8	91.9	500.9	357.7	0.71
	9	6,362	1,559	2,895	0	4,453	286	286	382	954	1,909	134.5	202.9	0.0	337.4	27.9	22.9	4.6	46.7	102.1	6,361.9	439.5	0.07
	7	2,505	614	1,140	0	1,753	113	113	150	376	751	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2,504.7	0.0	0.00
	14	2,505	0	0	1,753 1,	1,753	0	Φ	0	751	751	0.0	0.0	1,753.3	1,753.3	0.0	0.0	0.0	458.4	458.4	2,504.7	2,211.7	0.88
			5,484 10	10,184 1	1,753 17,	17,564	1,016	1,016	1,355	4,140	7,528	2,816.7	4,692.5	1,753.3	9,262.5	558.9	504.7	253.5	1,760.5	3,077.6	18,482.2	7,620.2	0.41
			548	1,018	175 1,	1,756	102	102	136	414	753	281.7	469.3	175.3	926.3	55.9	50.5	25.4	176.1	307.8	2,509.2	1,234.1	0.49
			6,032 11	11,203	1,929 19,	19,321	1,118	1,118	1,491	4,554	8,280	3,098.4	5,161.8	1,928.6 10,188.8	0,188.8	614.8	555.2	278.9	1,936.6	3,385.4	20,991.4	8,854.3	0.42
	1																						

Equipment and Materials																
	Financial	Conversion Economic	conomic									Total	Riel (mil.)	20,991	8,854	
		Factor	%		Major repairing cost	ing cost							US\$('000)	5.248	2.214	
	%					Material 3q	Material 3quipment Labor		Labor	Total						
Overhead cost and miscellaneous	90.9	0.10	09:0						Skilled							
Company Tax /1	1.40	1.00	1.40		Share	0.35	0.65	0.00	0.00			Target Area	jea Lea			
Minimum Tax /2	1.00	1.00	1.00		F/C	0.25	0.45	0.00	0.00	0.70		(ha	(ha) 16.700			
Profit	7.00	0.10	0.70		Share	0.15	0.15	0.60	0.10	1			Riel('000)/ha	a 1.257	530	
VAT	10.00	1.00	10.00		ΣC	0.05	0.05	0.18	0.03	0.30			US\$('000)/he		0.13	
	25.4		13.7												3	
	Fact	Factor for Materials	98.0		Conversion Factor	actor	0.686 3conomic Cost (MR)	nomic Cost		925.3		FWUC	86	345.5	3 vears	
	Fact	Factor for Equipment	0.78		Financial Cost ('000\$)	st ('000\$)	329 Economic Cost (TS)	nomic Cost		225.7		Agn	12.68	44.7	3 178979	
/1; 20% of the Profit		•				1			ŀ			į.		Ì	o Doct	
12; 1% of Turnover					Annual O&M cost	f cost					Year	Invest	FWUC	Agri	Total	Build-up
						Material 3q	Material 3quipment Labor Labor	Labor 1	abor	Total	-	737.2	115.2	,	852.4	•
/A; Excluding the following transfer payment		/B; Excludin	ng the following	/B; Excluding the following transfer payment			රි	Common S	Skilled		2	8,117.1	115.2	14.9	8,247.2	
Import tariff	7.0 %	İ	Import tariff	15.0 %	Share	0.15	0.15	09.0	0.10		3		115.1	14.9	130.0	0.8
Company tax	1.4 %	S	Company ta	1.4 %	1/C	0.15	0.15	09.0	0.10	1.00	4			14.9	14.9	6.0
Minimum tax	1.0 %	Mir	Minimum ta	1.0 %							2					1.0
VAT	10.0 %	VAT	F:	10.0 %	Conversion Factor		0.488 3conomic Cost (MR)	tomic Cost	MR)	102.0	9					
					Financial Cost ('000\$)	st ('000\$)	51 Ec	51 Economic Cost (T\$)	(XI)	24.9	7					

Table G2-6 Conversion of Financial Cost to Economic Cost (20/22)

Boribo River Basin Teuk Laak & Trapeang Thlan Rehabilitation Project

-																						(Unit : Kiels, Million)	Million)
					Financ	Financial Cost									Ecor	Economic Cost							
	Total	1		F/C					L/C				F/C					2/1					
USD	ш	Equivalent	Material Ec	Material Equipment Labor		Total	Material Equipment Labor	ipmen L		Labor 7	Total	Material Equipment Labor	uipmeni	Labor	Total	Material Equipment Labor	uipmen L		Labor	Total	Construction Conversion Factor	Conversion	Factor
		Riel		FC	F Consul			ට	Common Sl	Skilled			ΙĽ	F Consul			ບິ	Common	Skilled		Total Cost	ost	Factors
												/ A	JB								Financial	Economic	
000		Million							රි	Conversion Factor	actor	0.81	0.73	1.00		98.0	0.78	0:30	0.61				
		147	91	29	0	103	1	7	6	22	4	12.7	21.2	0.0	33.9	5.7	5.1	2.7	13.4	26.9	146.6	8.09	0.41
		1,934	474	880	0	1,354	87	87	116	290	280	383.9	642.5	0.0	1,026.4	75	8	35	171	355	1,934.2	1,381.1	0.71
	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
e.	312	1,279	313	282	0	895	28	28	11	192	384	253.9	424.9	0.0	8.879	49.5	44.9	23.2	117.0	234.6	1,279.2	913.4	0.71
	124	208	125	231	0	356	23	23	31	76	153	100.9	168.9	0.0	8.692	19.7	17.8	9.2	46.5	93.2	508.4	363.0	0.71
		147	36	<i>L</i> 9	0	103	7	1	0	22	44	29.1	48.7	0.0	77.8	5.7	5.1	2.7	13.4	26.9	146.6	104.7	0.71
		1,862	456	847	0	1,303	84	84	112	279	558	39.4	59.4	0:0	8.88	8.2	6.7	113	13.7	29.9	1,861.6	128.7	0.07
		733	180	333	0	513	33	33	44	110	220	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0:0	732.9	0.0	0.00
		733	0	٥	513	513	0	0	0	220	220	0:0	0.0	513.0	513.0	0.0	0.0	0.0	134.1	134.1	732.9	647.1	0.88
			1,125	2,090	513 3	3,786	210	210	281	921	1,622	436.0	723.1	513.0	1,672.1	88	88	39	338	546	5,408.2	2,217.7	0.41
			113	209	51	379	21	21	28	92	162	43.6	72.3	51.3	167.2	8.9	8.0	3.9	33.8	54.6	540.8	221.8	0.41
			1,238	2,299	564 4	4,164	231	231	309	1,013	1,785	479.6	795.4	564.3	1,839.3	7.76	97.6	43.0	371.9	600.2	5,949.0	2,439.5	0.41
ŀ																							

	Financial	Conversion Economic	Sconomic									Total	Riel (mil.)	5,949	2,440	
		Factor	%		Major repairing cost	ing cost							US\$('000)	1,487	610	
	%					Material 3	Material squipment Labor	Labor	Labor	Total						
Overhead cost and miscellaneous	90.9	0.10	09:0				J	Common	Skilled							
Company Tax /1	1.40	1.00	1.40		Share	0.35	0.65	0.00	0.00			Target Area	rea			
Minimum Tax /2	1.00	1.00	1.00		F/C	0.25	0.45	0.00	0.00	0.70		(ha	(ha) 16,700			
Profit	7.00	0.10	0.70		Share	0.15	0.15	0.60	0.10				Riel('000)/ha	356	146	
VAT	10.00	1.00	10.00		1/0	0.05	0.05	0.18	0.03	0.30			US\$('000)/h	0.09	0.04	
	25.4		13.7													
	Œ,	Factor for Materials	98.0		Conversion Factor	Factor	0.686 30	0.686 :conomic Cost (MR)	st (MR)	300.9		FWUC	29	102.3	3 years	
	ír,	Factor for Equipment	0.78		Financial Cost ('000\$)	st ('000\$)	107 E	107 Economic Cost (T\$)	ost (T\$)	73.4		Agn	7.53	26.6	3 years	
/1; 20% of the Profit						•				l					,	
/2 ; 1% of Turnover					Annual O&M cost	M cost					Year	Invest	FWUC	Agri	Total	Build-up
						Material 34	Material squipment Labor	Labor	Labor	Total	-	215.7	34.1		249.8	
/A; Excluding the following transfer payment		/B; Excludi	ing the follows	/B; Excluding the following transfer payment			U	Common Skilled	Skilled		2	2,223.8	34.1	8.9	2,266.7	
Import tariff	7.0 %	ij	Import tariff	15.0 %	Share	0.15	0.15	0.60	0.10		m		34.0	8.9	42.8	8.0
Company tax	1.4 %	රි	Company ta	1.4 %	273	0.15	0.15	0.60	0.10	1.00	4			8.8	80.	6.0
Minimum tax	1.0 %	Mi	Minimum ta	1.0 %							2					1.0
VAT	10.0 %	ľΛ	VAT	10.0 %	Conversion Factor	Factor	0.488 30	0.488 3conomic Cost (MR)	st (MR)	34.0	9					
					Financial Cost ('000\$)	st ('000\$)	17 E	17 Economic Cost (T\$)	ost (T\$)	8.3	7					
																_

Equipment and Materials

Table G2-6 Conversion of Financial Cost to Economic Cost (21/22)

Boribo River Basin Toul Champey Rehabilitation Project

																						(CILIT : INCIS, INIMICAL)	MILITARIA
					Finan	Financial Cost									Ecor	Economic Cost							
	Ţ	Total		F/C					T/C				F/C					T/C					
Description	USD	Equivalent	Material Equipment Labor	uipment L		Total	Material Equipment Labor	іртет І		Labor	Total	Material Equipment Labor	uipment 1		Total	Material Equipment Labor	пртеп Г		Labor	Total	Construction Conversion Factor	Conversion	Factor
-				FC	_		•	์	=	Skilled			F	F Consul			တိ	-	Skilled		Total Cost		Factors
												V/	/B								Financial E	Economic	
	000	Million							ರ	Conversion Factor	actor	0.81	0.73	1.00		0.86	0.78	0.30	0.61				
1. Preparatory Works		135	17	32	0	95	9	٥	00	50	- 4	14.1	23.6	0.0	37.7	5.2	4.7	2.5	12.4	24.8	135.2	62.5	0.46
2 Direct Cost		1,783	437	811	0	1,248	80	80	107	268	535	353.9	592.3	0.0	946.2	69	63	32	163	327	1,783.4	1,273.3	0.71
1. Weir & major intake structures	0	0	0	0	0	0	0	0	0	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. Canals & related structures	347	1,423	349	647	0	966	64	64	82	213	427	282.3	472.5	0.0	754.8	55.1	49.9	25.8	130.2	261.0	1,422.7	1,015.8	0.71
3. Dykes	55	226	55	103	0	158	10	10	14	34	89	44.8	74.9	0.0	119.7	8.7	7.9	4.1	20.6	41.3	225.5	161.0	0.71
4. Miscellaneous works		135	33	61	0	95	9	9	∞	20	41	26.8	44.9	0.0	71.7	5.2	4.7	2.5	12.4	24.8	135.2	5.96	0.71
3. Contractor's Expenses		1,716	421	781	0	1,202	77	11	103	257	515	36.3	54.7	0.0	91.0	7.5	6.2	1.2	12.6	27.5	1,716.4	118.5	0.07
4. Administration Cost		929	166	307	0	473	30	30	41	101	203	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	675.8	0.0	0.00
5. Consulting Services		929	0	0	473	473	0	0	0	203	203	0.0	0.0	473.0	473.0	0.0	0.0	0.0	123.7	123.7	675.8	596.7	0.88
Total			1,477	2,744	473	4,739	274	274	366	1,117	2,031	758.2 1	1,262.9	473.0 2	2,494.1	150.7	135.9	68.5	475.1	830.2	4,986.5	2,051.0	0.41
6. Physical Contingencies			148	274	47	474	27	27	37	112	203	75.8	126.3	47.3	249.4	15.1	13.6	6.9	47.5	83.0	0.77.0	332.4	0.49
GRAND TOTAL			1,625	3,018	520	5,213	302	302	402	1,229	2,234	834.0 1	1,389.2	520.3 2	2,743.5	165.8	149.5	75.4	522.6	913.2	5,663.5	2,383.4	0.42

Equipment and Materials																
	Financial	Conversion Economic	conomic									Total	Riel (mil.)	5,663	2,383	
		Factor	%		Major repairing cost	ng cost							US\$('000)	1,416	969	
	%					Material 3quipment		Labor	Labor	Total						
Overhead cost and miscellaneous	90.9	0.10	09:0				Ö	Common S	Skilled							
Company Tax /1	1.40	1.00	1.40		Share	0.35	0.65	0.00	0.00			Target Area	ea			
Minimum Tax /2	1.00	1.00	1.00		F/C	0.25	0.45	0.00	0.00	0.70		(ha)	(ha) 16,700			
Profit	7.00	0.10	0.70		Share	0.15	0.15	09.0	0.10				Riel('000)/ha	339	143	
VAT	10.00	1.00	10.00		1/10	0.05	0.05	0.18	0.03	0.30			US\$('000)/he	80.0	0.04	
	25.4		13.7													
	Fac	Factor for Materials	98'0		Conversion Factor	actor	0.686 3conomic Cost (MR)	omic Cost		275.6		FWUC	58	7.86	3 years	
	Fac	Factor for Equipment	0.78		Financial Cost ('000\$)	t ('000\$)	98 Eco	98 Economic Cost (T\$)		67.2		Agri	7.53	26.6	3 years	
/1; 20% of the Profit																
/2 ; 1% of Turnover					Annual O&M cost	l cost					Year	Invest	FWUC	Agri	Total B1	Build-up
						Material 3q	Material 3quipment Labor Labor	Labor	abor	Total	-	198.9	32.9		231.8	
/A; Excluding the following transfer payment		/B; Excludin	g the followin	/B; Excluding the following transfer payment			Col	Common S	Skilled		2	2,184.5	32.9	6.8	2,226.3	
Import tariff	7.0 %	dwl	Import tariff	15.0 %	Share	0.15	0.15	09.0	0.10		E.		32.8	8.9	41.7	8.0
Company tax	1.4 %	Cor	Company ta	1.4 %	T/C	0.15	0.15	0.60	0.10	1.00	4			9.0	0.6	6.0
Minimum fax	1.0 %	Mir	Minimum ta	1.0 %												1.0
VAT	10.0 %	VAT	L.	10.0 %	Conversion Factor		0.488 3conomic Cost (MR)	omic Cost	MR)	34.0	9					
					Financial Cost ('000\$)	t ('000\$)	17 Eco	17 Economic Cost (T\$)	(T\$)	8.3						

Table G2-6 Conversion of Financial Cost to Economic Cost (22/22)

Boribo River Basin Chan Keak Rehabilitation Project

Court : INCES, IMMORI		Construction Conversion Factor Total Cost Factors	1	2 0.38	.5 0.71	0.0	0.71	.8 0.71	.7 0.71	.1 0.07	0.0 0.00	3 0.88	.1 0.41	.5 0.49	.6 0.42
Commercial		Truction Conver	Есопотіс	26.2	655.5	0	360.0	245.8	49.7	61.1	Ö	307.3	1,050.1	170.5	1,220.6
		Construct	Financial	9.69	918.3	0.0	504.3	344.4	9.69	883.8	348.0	348.0	2,567.7	348.6	2,916.3
		Total		12.8	168	0.0	92.4	63.1	12.8	14.2	0.0	63.7	427.3	42.7	470.0
		Labor	0.61	6.4	84	0.0	46.1	31.5	6.4	6.5	0.0	63.7	244.6	24.5	269.1
	2	Labor	0.30	1.3	17	0.0	9.1	6.2	1.3	9.0	0.0	0.0	35.1	3.5	38.6
		quipment	0.78	2.4	32	0.0	17.7	12.1	2.4	3.2	0.0	0.0	70.0	7.0	77.0
Economic Cost		Material Equipment	0.86	2.7	36	0.0	19.5	13.3	2.7	3.9	0.0	0.0	77.6	7.8	85.4
Ĕ		Total		13.4	487.2	0.0	267.6	182.7	36.9	46.9	0.0	243.6	1,278.3	127.8	1,406.1
		Labor F Consut	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	243.6	243.6	24.4	268.0
	F/C	Material Equipment Labor	/B 0.73	8.4	305.0	0.0	167.5	114.4	23.1	28.2	0.0	0.0	646.6	64.7	711.3
		Material E	/A 0.81	5.0	182.2	0.0	100.1	68.3	13.8	18.7	0.0	0.0	388.1	38.8	426.9
		Total	Factor	20.9	275	0.0	151.3	103.3	20.9	265.2	104.4	104.4	1,045.8	104.6	1,150.4
		Labor Skilled	Conversion Factor	10.4	138	0.0	75.6	51.7	10.4	132.6	52.2	104.4	575.1	57.5	632.6
	I/C	Labor		4.2	55	0.0	30.3	20.7	4.2	53.0	20.9	0.0	188.3	18.8	207.1
		equipment		3.1	41	0.0	7.2.7	15.5	3.1	39.8	15.7	0.0	141.2	14.1	155.3
±		Material Eq		3.1	41	0.0	22.7	15.5	3.1	39.8	15.7	0.0	141.2	14.1	155.3
Financial Cost		Total		48.7	643	0.0	353.0	241.1	48.7	618.7	243.6	243.6	2,440.2	244.0	268.0 2,684.2
표	ย	Labor F Consul		0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	243.6	243.6	24.4	268.0
	F/C	Material Equipment Labor		11.5	418	0.0	229.5	156.7	31.7	402.1	158.3	0.0	1,407.6	140.8	833.7 1,548.4
		Material		6.2	225	0.0	123.6	84.4	17.1	216.5	85.3	0.0	757.9	75.8	833.7
		Equivalent Riel	Million	6	918	0	504	344	70	884	348	348			
	Total	USD	000			0	123	84							
		Description		. Preparatory Works	2 Direct Cost	1. Weir & major intake structures	2. Canals & related structures	3. Dykes	4. Miscellaneous works	3. Contractor's Expenses	4. Administration Cost	5. Consulting Services	Total	6. Physical Contingencies	GRAND TOTAL

Equipment and Materials																
	Financial	Conversion Economic	Есопотіс									Total	Riel (mil.)	2,916	1,221	
		Factor	%		Major repairing cost	s cost							US\$('000)	729	305	
	%					Material squipment Labor	ipment		Labor	Total			•			
Overhead cost and miscellaneous	90.9	0.10	09.0				රි	Common S	Skilled							
Company Tax /1	1.40	1.00	1.40		Share	0.35	0.65	0.00	0.00			Target Area	m			
Minimum Tax /2	1.00	1.00	1.00		F/C	0.25	0.45	0.00	0.00	0.70		(Pra)	(ha) 16,700			
Profit	7.00	0.10	0.70		Share	0.15	0.15	09:0	0.10				Riel('000)/ha	175	57	
VAT	10.00	1.00	10.00		ΓΛC	0.05	0.05	0.18	0.03	0.30		_	US\$('000)/hs	0.04	0.02	
	25.4		13.7										· ·			
	Fac	Factor for Materials	98.0		Conversion Factor		0.686 3cor	0.686 3conomic Cost (MR)		143.4		FWUC	14	49.4	3 years	
	Fac	Factor for Equipment	0.78		Financial Cost ('000\$)	(\$000,)	S1 Ecc	51 Economic Cost (T\$)	(\$ E)	35.0		Agri	6.23	22.0	3 years	
/1; 20% of the Profit		1										:				
/2 ; 1% of Tumover					Annual O&M cost	cost					Year	Invest	FWUC	Agri	Total B	Build-up
						Material 3quipment Labor	ipment	ı	Labor	Total	-	102.4	16.5)	118.9	•
/A; Excluding the following transfer payment		/B; Exclud	ling the followi	/B; Excluding the following transfer payment			ပိ	Common S	Skilled		7	1,118.2	16.5	7.3	1,141.9	
Import tariff	7.0 %	д	Import tarifi	15.0 %	Share	0.15	0.15	09:0	0.10		ю		16.5	7.3	23.8	8.0
Company tax	1.4 %	O	Company ta	1.4 %	L/C	0.15	0.15	09.0	0.10	1.00	4			7.3	7.3	6.0
Minimum tax	1.0 %	Z	Minimum ta	1.0 %							8					1.0
VAT	10.0 %	>	VAT	10.0 %	Conversion Factor		0.488 cor	0.488 :conomic Cost (MR)	MR)	16.0	9					
					Financial Cost ('000\$)	(,000%)	8 Ecc	8 Economic Cost (T\$)	(TS)	3.9	7					
																-

Table G2-7 Economic Cost and Benefit Stream (1/22)

Table G2-7 Economic Cost and Benefit Stream (2/22)

K.	5	-	Net Present	Net Present Value (Riel Million)	(Million)	_	Benefit	Cost	B/C Kano	- THE	פירי.		Net Present Value (Riel Million)	Value (Riel)	Villion)		Benefit	Cost	B/C Ratio
				8.00	% discount rate)	rate)	97,520	91,673	1.06					8.00	% discount rate	ite)	21,901	35,373	0.62
Vegr			Ponon	Formania Cont		i i	Eggment Dance		(Unit : Riel Million)	15%						,			Unit: Riel Million
.E.	Year	Initial	Annual	Major	Total	Irrigation	Production	Total	Cash	in in	Year	Initial	Annual Maj	Major	Total	Irrigation	Production	Total	Net Cash
Order	3	Investment	O&M	Repairing		+	Foregone		Flow	Order		Investment	O&M	Repairing		9	Foregone		Flow
- 7	2010	31.551.8			31.551.8	.0. ==		0.0	-4,898.6	- ~	70 F0 70 F0	3,121.2			3,121.2			0.0	-3,121.2
m (2012	31,633.4	_		31,633.4			0.0	-31,633.4	. w	2012	349.5	110.6		460.1	1,714.7		1,714.7	1,254.6
4	2013	14,037.8	131.6		14,169.4			6,433.3	-7,736.1	4	2013	349.5	221.1		570.6	1,929.1		1,929.1	1,358.4
'n	2014	14,037.8	263.1		14,301.0			7,505.5	-6,795.4	S	2014	27.7	331.7		359.3	2,143.4		2,143.4	1,784.1
9	2015	841.1	657.8		1,499.0			0.059,6	8,151.0	9	2015		442.2		442.2	2,143.4		2,143.4	1,701.2
7	2016	81.7	877.1		958.8			10,722.2	9,763.4	-	2016		442.2		442.2	2,143.4		2,143.4	1,701.2
∞	2017		1,096.4		1,096.4			10,722.2	9,625.8	∞	2017		442.2		442.2	2,143.4		2,143.4	1,701.2
6	2018		1,096.4		1,096.4			10,722.2	9,625.8	6	2018		442.2		442.2	2,143.4		2,143.4	1,701.2
01	2019		1,096.4		1,096.4			10,722.2	9,625.8	0	2019		442.2		442.2	2,143.4		2,143.4	1,701.2
=	2020		1,096.4		1,096.4			10,722.2	9,625.8	=	2020		442.2		442.2	2,143.4		2,143.4	1,701.2
12	2021		1,096.4		1,096.4			10,722.2	9,625.8	12	2021		442.2	3,901.1	4,343.3	2,143.4		2,143.4	-2,199.9
13	2022		1,096.4		1,096.4			10,722.2	9,625.8	13	2022		442.2		442.2	2,143.4		2,143.4	1,701.2
4	2023		1,096.4	:				10,722.2	9,625.8	14	2023		442.2		442.2	2,143.4		2,143.4	1,701.2
15	2024		1,096.4	10,029.7	_			10,722.2	403.9	15	2024		442.2		442.2	2,143.4		2,143.4	1,701.2
9 !	2025	·	1,096.4		1,096.4			10,722.2	9,625.8	16	2025		442.2		442.2	2,143.4		2,143.4	1,701.2
17	2026		1,096.4		1,096.4			10,722.2	9,625.8	17	2026	*******	442.2		442.2	2,143.4		2,143.4	1,701.2
<u>«</u>	2027		1,096.4		1,096.4			10,722.2	9,625.8	18	2027	-	442.2		442.2	2,143.4		2,143.4	1,701.2
61	2028		1,096.4		1,096.4			10,722.2	9,625.8	16	2028		442.2		442.2	2,143.4		2,143.4	1,701.2
2 2	2029		1,096.4		1,096.4			10,722.2	9,625.8	- 50	2029		442.2		442.2	2,143.4		2,143.4	1,701.2
7 5	2030		1,096.4		1,096.4	10,722.2		10,722.2	9,625.8	2 2	2030		442.2		442.2	2,143.4		2,143.4	1,701.2
7 6	1007		1,096.4		1,096.4			10,722.2	9,073.8	7 8	2021		7.744	1.10%,	4,543.3	2,143.4		2,143.4	-2,199.9
3 6	2022	-	1,096.4		1,096.4			10,722.2	9,023.8	3 6	7037		7777		442.2	2,143.4		2,143.4	1,701.2
, ,	2033		1,020.1	10.029.7			•	10,727.7	403.0	\$ X	2032		7.74		7.77	2,145.4		2,143.4	1,701.2
3 %	2034		1,006.4	10,0427.1				10,722.2	0 675 8	3 %	2035		7.744		7777	2,143.4		2,143.4	1,701.2
2.2	2036		1,096.4		1,096.4			10,722.2	9 625 8	27	2036		442.2		442.2	2,143.4		2 143 4	1,701.2
28	2037		1,096.4		1,096.4		-	10,722.2	9,625.8	78	2037		442.2		442.2	2 143 4		2 143 4	1 701 2
59	2038	•	1,096.4		1,096.4			10,722.2	9,625.8	29	2038		442.2		442.2	2,143.4		2,143.4	1,701.2
30	2039		1,096.4		1,096.4			10,722.2	9,625.8	30	2039		442.2		442.2	2,143.4		2,143.4	1,701.2
31	2040		1,096.4		1,096.4	_		10,722.2	9,625.8	31	2040		442.2		442.2	2,143.4		2,143.4	1,701.2
32	2041		1,096.4		1,096.4			10,722.2	9,625.8	32	2041		442.2	3,901.1	4,343.3	2,143.4		2,143.4	-2,199.9
33	2042		1,096.4		1,096.4	_	•	10,722.2	9,625.8	33	2042		442.2		442.2	2,143.4		2,143.4	1,701.2
34	2043		1,096.4					10,722.2	9,625.8	34	2043		442.2		442.2	2,143.4		2,143.4	1,701.2
35	2044		1,096.4	10,029.7				10,722.2	-403.9	35	20 4 4		442.2		442.2	2,143.4		2,143.4	1,701.2
36	2045	- 11 -11	1,096.4		1,096.4			10,722.2	9,625.8	36	2045		442.2		442.2	2,143.4		2,143.4	1,701.2
37	2046		1,096.4		1,096.4			10,722.2	9,625.8	37	2046		442.2		442.2	2,143.4		2,143.4	1,701.2
80 80	2047		1,096.4		1,096.4		-	10,722.2	9,625.8	æ 6	2047		442.2		442.2	2,143.4		2,143.4	1,701.2
ž, 5	2048		1,096.4		1,096.4			10,722.2	8,579,6	2 , 2	2048		442.2		442.2	2,143.4		2,143.4	1,701.2
- 7	2050		1,090.4		1,096.4	10,722.2		10,722.7	9,072.8		2049		7.744		7.74	2,143.4		2,143.4	1,701.2
.	2020		1,090.4		1,090.4			10,722.2	9,023.0	- 5	207		7777	, 100	4 2 4 2 2 3	4.145.4		4,145.4	1,701.2
4 4	2021		1,096.4		1,090.4			10,722.2	9,023.6	4 4	2051		442.2	1.10%,	4,545.5	2,145.4		2,143.4	1 201 2
44	2053		1 096 4		1 096 4			10 722 2	9 625 8	44	2053		442.2		442.2	2 143 4		2,143.4	1,701.2
45	2054		1 096 4	10 029 7	_			10 722 2	403.9	45	2054		442.2		442.2	2,143.4		2,143.4	1 701 2
46	2055		1,096.4	•				10,722.2	9.625.8	46	2055		442.2		442.2	2.143.4		2,143,4	1,701.2
47	2056		1,096.4		1,096.4			10,722.2	9,625.8	47	2056		442.2		442.2	2,143.4		2,143.4	1,701.2
48	2057		1,096.4		1,096.4	1 10,722.2		10,722.2	9,625.8	48	2057		442.2		442.2	2,143.4		2,143.4	1,701.2
49	2058		1,096.4		1,096.4			10,722.2	9,625.8	49	2058		442.2		442.2	2,143.4		2,143.4	1,701.2
20	2059		1,096.4		1,096.4	1 10,722.2		10,722.2	9,625.8	20	2059		442.2		442.2	2,143.4		2.143.4	1,701.2

Stream (3/22)

Table G2-7 Economic Cost and Benefit Stream (4/22)

Battambang River Basin: Sala Taon Weir Rehabilitation Project (Pump Station Plan)

Table G2-7 Economic Cost and Benefit Str	Sala Taon Weir Rehabilitation Project
	Battambang River Basin:

6	7 770			1.00							1	Г					,		1 2 2 1
EIKK:	6.7.7	-	Net Fresent	Net Fresent Value (Kiel Million) (8.00 % disco	Million) % discount rate)	te)	99.184	186,699	6/C Kallo 0.53	EIKK	3.3%		Net Present	Net Present Value (Riel Million)	Million) % discount rate)	ate)	<i>T7.</i> 162	Cost 135 427	B/C Ratio
								0)	(Unit : Riel Million)			,							(Unit : Riel Million)
Year			Economic Cost	uc Cost		E	Economic Benefi	, <u>.</u>	Net	Year			Econor	Economic Cost		E	Economic Benefit		Net
in Order	Year	Initial Investment	Annual	Major Repairing	Total	Irrigation	Production Foregone	Total	Cash	Order	Year	Investment	Annual	Major Repairing	Total	Irrigation	Production	Total	Cash
П	2010	10,485.9		9	10,485.9		2009	0.0	-10,485.9	-	╁	}		Sminday	7,552.8		Augus I	0.0	-7,552.8
2 6	2011	67,498.2			67,498.2			0.0	-67,498.2	0 m	2011	48,644.9			48,644.9			0.0	48,644.9
4	2013	29,912.9	255.1		30,168.0	7,516.6		7,516.6	-22,651.4	. 4	2013		211.0		22,043.8	5,125.8		5,125.8	-16,918.0
S	2014	29,913.0	510.3		30,423.3	8,590.4		8,590.4	-21,832.9	S	2014				22,254.9			5,980.1	-16,274.8
، ب	2015	1,661.3	765.4		2,426.7	9,664.2	·	9,664.2	7,237.5	9 1	2015	<u>-</u> ,	632.9		2,294.1			6,834.4	4,540.3
	2016	83.7	1,275.7		1,359.4	10,738.0		10,738.0	9,378.6		2016	83.7	1,054.8		1,138.5			8,543.0	
۰۰	2018		1,594.0		1 594.6	10,738.0		10,738.0	9,143.4 9 143.4		2018		13185		13185	8,543.0		8,543.0	7 224.5
10	2019		1,594.6		1,594.6	10,738.0		10,738.0	9,143.4		2019		1,318.5		1,318.5			8,543.0	
Ξ	2020		1,594.6		1,594.6	10,738.0		10,738.0	9,143.4	=	2020	_	1,318.5		1,318.5			8,543.0	
2 :	2021		1,594.6		1,594.6	10,738.0		10,738.0	9,143.4	12	2021		1,318.5		1,318.5			8,543.0	7,224.5
2 2	2022		1,594.6		1,594.6	10,738.0		10,738.0	9,143.4	13	2022		1,318.5		1,318.5			8,543.0	7,224.5
<u> </u>	2023		1 594 6	16 180 9	2.577.71	10,738.0		10,738.0	7,143.4	± ±	2022		1,218.5	17 848 0	14 166 5	8,543.0		8,545.0	7,224.5
2 2	2025		1.594.6	10,100.	1.594.6	10,738.0		10,738.0	9.143.4	91	2025		1,318.5		1318.5			8.543.0	7 224 5
17	2026		1,594.6		1,594.6	10,738.0		10,738.0	9,143.4	17	2026		1,318.5		1,318.5			8,543.0	7,224.5
81	2027		1,594.6		1,594.6	10,738.0		10,738.0	9,143.4	18	2027		1,318.5		1,318.5			8,543.0	7,224.5
61	2028		1,594.6		1,594.6	10,738.0		10,738.0	9,143.4	61	2028		1,318.5		1,318.5			8,543.0	7,224.5
2 5	2029		1,594.6		1,594.6	10,738.0		10,738.0	9,143.4	გ გ	2029		1,318.5		1,318.5			8,543.0	7,224.5
2 2	2030		1.594.0		1,594.0	10,738.0		10,738.0	9,145.4		2030		1,318.5		1,318.5	8,543.0		8,543.0	2,224.5
1 22	2032		1.594.6		1.594.6	10,738.0		10,738.0	9.143.4	3 2	2032		1318.5		1318.5			8 543 0	7 224 5
77	2033		1,594.6		1,594.6	10,738.0		10,738.0	9,143.4	24	2033		1,318.5		1,318.5			8,543.0	7,224.5
25	2034		1,594.6	16,180.9	17,775.5	10,738.0		10,738.0	-7,037.5	25	2034		1,318.5	12,848.0	1,318.5			8,543.0	7,224.5
2 2	2035		1,594.6		1,594.6	10,738.0		10,738.0	9,143.4	- 28	2035		1,318.5		1,318.5			8,543.0	7,224.5
7 %	2036		1,594.0		1,594.6	10,738.0	•	10,738.0	9,143.4	78 86	2036		1,318.5		1,318.5	8,543.0		8,543.0	7,224.5
3 8	2038		1,594.6		1,594.6	10,738.0		10,738.0	9,143.4	2 2	-		1,318.5		1,318.5			8,543.0	7,224.5
30	2039		1,594.6		1,594.6	10,738.0		10,738.0	9,143.4	30	2039		1,318.5		1,318.5			8,543.0	7,224.5
E 6	2040		1,594.6		1,594.6	10,738.0		10,738.0	9,143.4	31	2040		1,318.5		1,318.5			8,543.0	7,224.5
3 2	2042		1.594.6		1.594.6	10,738.0		10,738.0	9,143,4	33	2042		1,318.5		1,318.5	8,543.0		8,543.0	7 224.5
34	2043		1,594.6		1,594.6	10,738.0		10,738.0	9,143.4	%	2043		1,318.5		1,318.5			8,543.0	
35	2044		1,594.6	16,180.9	17,775.5	10,738.0		10,738.0	-7,037.5	35	2044		1,318.5	12,848.0	14,166.5			8,543.0	
\$ 5	2045		1,594.6		1,594.6	10,738.0		10,738.0	9,143.4	- 2	2045		1,318.5		1,318.5	8,543.0		8,543.0	7,224.5
. 86	2047		1,594.6		1,594.6	10,738.0		10,738.0	9,143.4	38	2047		1,318.5		1,318.5			8.543.0	
39	2048		1,594.6		1,594.6	10,738.0		10,738.0	9,143.4	39	2048		1,318.5		1,318.5			8,543.0	
\$:	2049		1,594.6		1,594.6	10,738.0		10,738.0	9,143.4	4 :	2049	_	1,318.5		1,318.5			8,543.0	
4 <i>£</i>	2050		1,594.6		1,594.6	10,738.0		10,738.0	9,143.4	 4	2050		1,318.5		1,318.5			8,543.0	7,224.5
4 4	2052		1.594.6		1.594.6	10,738.0		10,738.0	9,143.4	42 42	2052		13185		13185	8 543 0		8,543.0	7 224.5
4	2053		1,594.6		1,594.6	10,738.0		10,738.0	9,143.4	4	2053		1,318.5		1,318.5			8,543.0	
45	2054		1,594.6	16,180.9	17,775.5	10,738.0		10,738.0	-7,037.5	45	2054		1,318.5	12,848.0	14,166.5			8,543.0	
4 i	2055		1,594.6	-	1,594.6	10,738.0		10,738.0	9,143.4	9 !	2055		1,318.5		1,318.5			8,543.0	7,224.5
47	2056		1,594.6		1,594.6	10,738.0		10,738.0	9,143.4	47	2056		1,318.5		1,318.5	8,543.0		8,543.0	
÷ 4	2058		1 594 6		1 594 6	10,738.0		10,738.0	9,143.4		2058		1,318.5		1,318.5			8,543.0	7.724.5
20	2059		1,594.6		1,594.6	10,738.0		10,738.0	9,143.4	. S	2059		1,318.5		1,318.5	_		8,543.0	7,224.5

Table G2-7 Economic Cost and Benefit Stream (5/22)

Table G2-7 Economic Cost and Benefit Stream (6/22)

The control of the	EIRR:	EIRR: 4.9%	_	Net Present	Net Present Value (Riel Million)	(illion)		Benefit	Cost	B/C Ratio	EIRR	11.0%	EIRR: 11.0%	Net Present	Net Present Value (Riel Million)	(illion)		Benefit	Cast	B/C Ratio
The part The part					8.00	ount	(e)	6,517	8,720	0.75)	8.00	% discount ra	(e)	35,007	26,911	1.30
The color The										: Riel Million)										nit : Riel Million)
Marie Mari	Year	;		Econon	nic Cost		面	conomic Benefi		Net C	Year	;		Econor	nic Cost		AL	conomic Benef	, <u></u>	, se
2010 8815 ALTANIA 8812 OLIO 4413.2 1 2225.5 ALTANIA 1 2 2 1 2<	Order	Year	Instal Investment	Annual O&M	Major Repairing	Total	Irrigation	Production Foregone	Total	Flow	Order		Intral Investment	Amnual O&M	Major Repairing	Total	Irrigation	Production Foregone	Total	Cash
1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,	٦,	2010	815.2			815.2	30K 1		90.0	-815.2	- (2010	2,226.5			2,226.5			0.0	-2,226.5
2011 115 664 804 908 4 2011 400 908 1966 2067 2012 401 401 908 1966 2067 2014 401 1968 1968 2067 2014 401 1968 1968 2067 2014 401 100 101	4 W	2012	148.3	¥.		182.5	489.7		489.7	307.2	7 60	2012	11,902.3			11,902.3			0.0	-11,902.3
14.0 14.0	4	2013	11.9			80.3	550.9		550.9	470.6		2013	400.1	98,4		498.6	2,966.2		2,966.2	2,467.7
2013 11460 1140 6121 6621 6831 6 2015 2015 2015 2018	S	2014		114.0		114.0	612.1		612.1	498.1	S	2014	49.8	196.9		246.7	3,337.0		3,337.0	3,090.4
2010 1140 1140 60.21 68.22 68.22 68.22 68.22 68	9 1	2015		114.0		114.0	612.1		612.1	498.1	9	2015		328.1		328.1	3,707.8		3,707.8	3,379.7
2010 11110 1110 6121 6221 6831 9 2010 2	,	2016		114.0		114.0	612.1		612.1	498.1	7	2016		328.1		328.1	3,707.8		3,707.8	3,379.7
2010 1140 <th< td=""><td>× 0</td><td>2017</td><td></td><td>0.411</td><td></td><td>114.0</td><td>612.1</td><td></td><td>612.1</td><td>498.1</td><td>* •</td><td>707</td><td></td><td>328.1</td><td></td><td>328.1</td><td>3,707.8</td><td></td><td>3,707.8</td><td>3,379.7</td></th<>	× 0	2017		0.411		114.0	612.1		612.1	498.1	* •	707		328.1		328.1	3,707.8		3,707.8	3,379.7
2020 11410 9857 11460 6121 6621 6621 6621 6721 6721 978 1777 9778 9778 2020 1140 9857 1140 6121 6621 6821 6821 6821 6821 6821 988 14 2023 37845 37778	v 5	2018		114.0		114.0	612.1		612.1	498.1	— ~ ≘	2019		328.1		328.1	3,707.8		3,707.8	3 370 7
2022 1140 9955 11,00 9 66.21 497.6 12 202.1 338 3,706.8 370	=======================================	2020		114.0		114.0	612.1		612.1	498.1	_	2020		328.1		328.1	3.707.8		3.707.8	3 379 7
2022 11440 11440 6121 681 681 18 2022 338 3798 3708 3708 2023 1140 1140 6121 6621 681 18 2023 338 3708 3708 3708 2024 1140 1140 6121 6621 681 18 2023 338 3708 3708 3708 2025 1140 1140 6121 6621 681 18 2023 338 3708 3708 3708 2026 1140 6121 6621 681 18 2023 338 3708 3708 3708 2026 1140 6121 6621 681 681 3702 338 3708 3708 3708 2026 1140 6121 6621 6621 6621 6621 6621 6621 3708 3708 3708 3708 3708 3708 3708 3708 3708	17	2021		114.0	995.7	1,109.7	612.1		612.1	497.6	12	2021		328.1		328.1	3,707.8		3,707.8	3,379.7
2023 11440 11440 60.21 69.81 14.2 20.23 20.21 30.81 3	13	2022		114.0		114.0	612.1		612.1	498.1	13	2022		328.1	2,936.4	3,264.5	3,707.8		3,707.8	443.3
2024 1140 6121 6621 <th< td=""><td>4</td><td>2023</td><td></td><td>114.0</td><td></td><td>114.0</td><td>612.1</td><td></td><td>612.1</td><td>498.1</td><td>14</td><td>2023</td><td></td><td>328.1</td><td></td><td>328.1</td><td>3,707.8</td><td></td><td>3,707.8</td><td>3,379.7</td></th<>	4	2023		114.0		114.0	612.1		612.1	498.1	14	2023		328.1		328.1	3,707.8		3,707.8	3,379.7
202 1440 161 162 <td>13</td> <td>2024</td> <td></td> <td>114.0</td> <td></td> <td>114.0</td> <td>612.1</td> <td></td> <td>612.1</td> <td>498.1</td> <td>15</td> <td>2024</td> <td></td> <td>328.1</td> <td></td> <td>328.1</td> <td>3,707.8</td> <td></td> <td>3,707.8</td> <td>3,379.7</td>	13	2024		114.0		114.0	612.1		612.1	498.1	15	2024		328.1		328.1	3,707.8		3,707.8	3,379.7
9227 1140 <th< td=""><td>9 1</td><td>2025</td><td></td><td>0.411</td><td></td><td>114.0</td><td>612.1</td><td></td><td>612.1</td><td>498.1</td><td>16</td><td>2025</td><td></td><td>328.1</td><td></td><td>328.1</td><td>3,707.8</td><td></td><td>3,707.8</td><td>3,379.7</td></th<>	9 1	2025		0.411		114.0	612.1		612.1	498.1	16	2025		328.1		328.1	3,707.8		3,707.8	3,379.7
2028 1146 1146 6121 6881 195 2028 1281 27078 37078 37078 2029 1144 1144 6121 6121 6881 20 3281 2381 27078 37078 37078 2020 1140 6121 6121 6621 6881 22 2231 2281 27078 37078 37078 2020 1140 6121 6121 6881 22 2231 2281 27078 37078 37078 37078 2020 1140 6121 6121 6881 22 2231 2281 27078 37078 <	_ =	2070		114.0		114.0	612.1		612.1	498.1	1,4	2070		328.1		328.1	3,707.8		3,707.8	3,3/9.7
2020 1140 1140 6721 6831 20 2020 3281 37078 37078 2031 1140 9957 1,1040 6721 6621 6881 22 2031 3281 37078 37078 2032 1140 1140 6121 6621 6621 4881 22 2031 3281 37078 37078 37078 2033 1140 1140 6121 6621 4881 22 2033 3281 37078 37078 37078 2034 1140 6121 6621 4881 26 3281 3281 37078 37078 2035 1140 6121 6621 4881 26 3281 3281 37078 37078 2036 1140 6121 6621 4881 26 2034 3281 37078 37078 2037 1140 6121 6621 4881 26 2034 3281 37078	2 2	2028		114.0		114.0	612.1		612.1	498.1	19	2028		328 1		328.1	3 707 8		3,707.8	3 379 7
2000 1140 9957 1140 6121 6612 4981 21 2033 3381 3797 37778 37778 2003 1140 9957 1140 6121 6121 4981 22 2033 3281 37078 37078 37078 2003 1140 6121 6121 6821 6621 6821 4881 25 3281 37078 37078 37078 2005 1140 6121 6121 6821 6821 6821 4881 25 3281 37078	20	2029		114.0		114,0	612.1		612.1	498.1	28	2029		328.1		328.1	3,707.8		3,707.8	3,379.7
2003 11440 9957 1,1097 6121 497.6 2 2033 328.1 328.1 326.4 326.1 370.8<	71	2030		114.0		114.0	612.1		612.1	498.1	21	2030		328.1		328.1	3,707.8		3,707.8	3,379.7
2002 1140 1140 6121 4981 24 202 3284 3284 3284 3704 37078 37078 2003 1140 1140 6121 4981 25 2034 3281 37078 37078 37078 2003 1140 1140 6121 6621 4981 25 2034 3281 37078 37078 37078 2003 1140 1140 6121 4981 27 2004 3281 37078 37078 37078 2004 1140 6121 4981 29 2039 3281 37078 37078 37078 2004 1140 6121 4981 32 2041 3281 37078 37078 37078 2004 1140 6121 4981 32 2044 3281 37078 37078 37078 2004 1140 6121 4981 32 2044 3281 37078 37078 <	77	2031		114.0	995.7	1,109.7	612.1		612.1	497.6	22	2031		328.1		328.1	3,707.8		3,707.8	3,379.7
203 1140 1140 6121 6021 4981 254 2035 3581 3281 37078 37078 2035 1140 1140 6121 6621 4981 26 2035 3281 3281 37078 37078 2036 1140 1140 6121 6621 6621 4981 26 2035 3281 3281 37078 37078 37078 2037 1140 1140 6121 6621 4981 20 2036 3281 3281 37078 37078 37078 2039 1140 6121 4981 30 2039 3281 37078 37078 37078 2041 1140 6121 6621 4981 32 2041 3281 37078 37078 37078 2041 1140 6121 6621 4981 32 2041 3281 37078 37078 37078 2044 1140 6121	5 23	2032		114.0		114.0	612.1		612.1	498.1	- 33	2032		328.1	2,936.4	3,264.5	3,707.8		3,707.8	443.3
2035 1110 1140 6121 4981 25 2534 37078 37078 37078 2035 1140 1140 6121 6121 4981 25 2034 3281 37078 37078 37078 2036 1140 6121 6121 6621 4981 29 2038 3281 37078 37078 37078 2039 1140 6121 6121 4981 29 2039 3281 37078 37078 37078 2039 1140 6121 6121 4981 29 2039 3281 37078 37078 37078 2040 1140 6121 6121 4981 32 2041 3281 37078 37078 37078 2041 1140 6121 6121 4981 32 2041 3281 37078 37078 37078 2042 1140 6121 6121 4981 32 2041 3281	4 %	2033		0.4.1		114.0	017.1		612.1	498.1	4 2	2033		328.1		328.1	3,707.8		3,707.8	3,379.7
2036 1140 1140 6121 4981 27 2036 3281 3707.8 3707.8 3707.8 2037 1140 1140 6121 6121 4981 28 2037 3281 3707.8 3707.8 2039 1140 1140 6121 6121 4981 20 3038 3281 3707.8 3707.8 3707.8 2039 1140 1140 6121 6121 4981 30 2039 3281 3707.8 3707.8 3707.8 2040 1140 6121 6121 4981 30 2049 3281 3707.8 3707.8 3707.8 2042 1140 6121 6121 4981 32 2041 3281 3707.8 3707.8 3707.8 2042 1140 6121 6121 4981 32 2041 3281 3707.8 3707.8 3707.8 2044 1140 6121 6121 4981 32	3 %	2035		0.41		114.0	612.1		612.1	498.1	- 2 %	2035		328.1		328.1	3,707.8		3,707.8	3,379.7
2033 1140 1140 6121 6981 28 3381 37078 37078 37078 2038 1140 1140 6121 6621 4981 29 2039 3281 37078 37078 2039 1140 1140 6121 4981 30 2039 3281 37078 37078 2040 1140 6121 6121 4981 32 2049 3281 37078 37078 37078 2041 1140 6121 6121 4981 32 2044 3281 37078 37078 37078 2042 1140 6121 6121 4981 32 2044 3281 37078 37078 37078 2044 1140 6121 6121 4981 32 2044 3281 37078 37078 37078 2044 1140 6121 4981 32 2044 3281 37078 37078 37078	27	2036		114.0		114.0	612.1		612.1	498.1	7.2	2036		328.1		328.1	3,707.8		3,707.8	3,379.7
2038 1140 1140 6121 498.1 20 2038 328.1 3707.8 3707.8 3707.8 2039 1140 6121 6121 498.1 30 2039 328.1 3707.8 3707.8 3707.8 2040 1140 6121 6121 498.1 32 2040 328.1 3707.8 3707.8 3707.8 2040 1140 6121 498.1 32 2042 328.1 3707.8 3707.8 3707.8 2042 1140 6121 498.1 32 2042 328.1 3707.8 3707.8 3707.8 2044 1140 6121 498.1 34 2043 328.1 3707.8 3707.8 3707.8 2045 1140 6121 498.1 34 2043 328.1 3707.8 3707.8 3707.8 2046 1140 6121 498.1 34 2043 328.1 3707.8 3707.8 3707.8 <	78	2037		114.0		114.0	612.1		612.1	498.1	28	2037		328.1		328.1	3,707.8		3,707.8	3,379.7
2039 1140 1140 6121 498.1 30 2039 338.1 3707.8 3707.8 3707.8 2040 1140 1140 6121 498.1 30 2034 338.1 3707.8 3707.8 3707.8 2041 1140 995.7 1,109.7 612.1 498.1 32 204.1 328.1 3707.8 3707.8 3707.8 2043 1140 995.7 1,109.7 612.1 498.1 32 204.3 328.1 3707.8 3707.8 3707.8 2044 1140 612.1 612.1 498.1 35 204.4 328.1 3707.8 3707.8 3707.8 2045 1140 612.1 612.1 498.1 36 204.5 328.1 3707.8 3707.8 2046 1140 612.1 612.1 498.1 36 204.5 328.1 3707.8 3707.8 3707.8 2048 1140 612.1 612.1 498.1	5 29	2038		114.0		114.0	612.1		612.1	498.1	73	2038		328.1		328.1	3,707.8		3,707.8	3,379.7
2040 11470 995.7 995.7	£ 5	2039		114.0		114.0	612.1		612.1	498.1	음 : -	2039		328.1		328.1	3,707.8		3,707.8	3,379.7
2042 1140 6121 498.1 33 2042 328.1 2,936.4 3,707.8 3,707.8 3,707.8 2043 1140 6121 6121 498.1 34 2043 328.1 3,204.5 3,707.8 3,707.8 3,707.8 2044 1140 6121 6121 498.1 36 2044 328.1 3,707.8 3,70	3 6	2040		1140	4057	1 109 7	612.1		612.1	490.1	33	2040		328.1		326.1	3,707.8		3,707.8	3 370 7
2043 114.0 114.0 612.1 498.1 34 2043 328.1 3707.8 3707.8 3707.8 2044 114.0 612.1 612.1 498.1 36 2044 328.1 3707.8 3707.8 3707.8 2045 114.0 612.1 612.1 498.1 36 2045 328.1 3707.8 3707.8 3707.8 2046 114.0 612.1 612.1 498.1 36 2045 328.1 3707.8 3707.8 3707.8 2048 114.0 612.1 612.1 498.1 40 2048 328.1 3707.8 3707.8 3707.8 2049 114.0 612.1 612.1 498.1 41 2050 328.1 3707.8 3707.8 3707.8 2050 114.0 612.1 612.1 498.1 41 2050 328.1 3707.8 3707.8 3707.8 2051 114.0 612.1 612.1 498.1 42 <td< td=""><td>33</td><td>2042</td><td></td><td>114.0</td><td></td><td>114.0</td><td>612.1</td><td></td><td>612.1</td><td>498.1</td><td>33</td><td>2042</td><td></td><td>328.1</td><td>2,936.4</td><td>3,264.5</td><td>3,707.8</td><td></td><td>3.707.8</td><td>443.3</td></td<>	33	2042		114.0		114.0	612.1		612.1	498.1	33	2042		328.1	2,936.4	3,264.5	3,707.8		3.707.8	443.3
2044 114.0 612.1 498.1 35 2044 328.1 328.1 3707.8 3707.8 2045 114.0 612.1 612.1 498.1 36 2045 328.1 3707.8 3707.8 3707.8 2046 114.0 612.1 612.1 498.1 36 2046 328.1 3707.8 3707.8 3707.8 2046 114.0 612.1 612.1 498.1 36 2046 328.1 3707.8 3707.8 3707.8 2048 114.0 612.1 612.1 498.1 40 2049 328.1 3707.8 3707.8 3707.8 2049 114.0 612.1 498.1 40 2049 328.1 3707.8 3707.8 3707.8 2052 114.0 612.1 498.1 42 2050 328.1 3707.8 3707.8 3707.8 2052 114.0 612.1 498.1 42 2050 328.1 3707.8 3707.8 <td< td=""><td>34</td><td>2043</td><td></td><td>114.0</td><td></td><td>114.0</td><td>612.1</td><td></td><td>612.1</td><td>498.1</td><td>34</td><td>2043</td><td></td><td>328.1</td><td>,</td><td>328.1</td><td>3,707.8</td><td></td><td>3,707.8</td><td>3,379.7</td></td<>	34	2043		114.0		114.0	612.1		612.1	498.1	34	2043		328.1	,	328.1	3,707.8		3,707.8	3,379.7
2045 1140 6121 4981 36 2045 328.1 3707.8 3707.8 2046 1140 6121 498.1 36 2045 328.1 3707.8 3707.8 3707.8 2047 1140 6121 498.1 39 2044 328.1 3707.8 3707.8 3707.8 2048 1140 6121 498.1 39 2048 328.1 3707.8 3707.8 3707.8 2049 1140 612.1 612.1 498.1 40 2049 328.1 3707.8 3707.8 2050 1140 612.1 498.1 41 2050 328.1 3707.8 3707.8 2051 1140 612.1 612.1 498.1 42 2051 328.1 3,707.8 3,707.8 2052 1140 612.1 612.1 498.1 42 2051 328.1 3,707.8 3,707.8 2053 1140 612.1 498.1 45 <	35	2044		114.0		114.0	612.1		612.1	498.1	35	2044		328.1		328.1	3,707.8		3,707.8	3,379.7
2040 114,0 114,0 012,1 498,1 37,024 32,81 3,707,8	8 5	2045		114.0		114.0	612.1		612.1	498.1	36	2045		328.1		328.1	3,707.8		3,707.8	3,379.7
2047 11470	7 00	2040		114.0		114.0	017.1		012.1	498.1	30	2040		328.1		328.1	3,707.5		3,707.8	3,379.7
2049 1140 612.1 612.1 498.1 40 2049 328.1 3707.8 <	8 8	2047		114.0		114.0	612.1		612.1	498.1	9 02	204		328.1		328.1	3,707.8		3,707.8	3,379.7
2050 114.0 612.1 498.1 41 2050 328.1 3707.8 3,707.8	3 4	2049		114.0		114.0	612.1		612.1	498.1	. 4	2049		328.1		328.1	3,707.8		3,707.8	3,379.7
2051 114,0 995.7 1,109.7 612.1 497.6 42 2051 328.1 3707.8 3,707.8	4	2050		114.0		114.0	612.1		612.1	498.1	41	2050		328.1		328.1	3,707.8		3,707.8	3,379.7
2052 114.0 114.0 612.1 692.1 498.1 43 2052 328.1 2,936.4 3,264.5 3,707.8	4	2051		114.0	995.7	1,109.7	612.1		612.1	497.6	42	2051		328.1		328.1	3,707.8		3,707.8	3,379.7
2053 114,0 114,0 612.1 498.1 44 2053 328.1 3,707.8	43	2052		114.0		114.0	612.1		612.1	498.1	. 43	2052		328.1	2,936.4	3,264.5	3,707.8		3,707.8	443.3
2054 114,0	4 4	2053		0.4.0		114.0	612.1		612.1	498.1	44	2053		328.1		328.1	3,707.8		3,707.8	3,379.7
2056 114.0 112.0 612.1 498.1 47 2056 328.1 3,707.8 3,707.8 2057 114.0 612.1 612.1 498.1 48 2057 328.1 3,707.8 3,707.8 2058 114.0 612.1 612.1 498.1 49 2058 328.1 3,707.8 3,707.8 2050 114.0 612.1	3 4	2024		1140		114.0	612.1		612.1	498.1	4 4	2055		328.1		328.1	3,707.8		3,707.8	3,379.7
2057 114.0 612.1 612.1 498.1 48 2057 328.1 3707.8 3,707.8 3,707.8 2058 114.0 612.1 612.1 498.1 49 2058 328.1 3,707.8 3,707.8 3050 114.0 612.1 612.1 612.1 612.1 62	4	2056		114.0		114.0	612.1		612.1	498.1		2056		328.1		328.1	3,707.8		3,707.8	3,379.7
2058 114.0 612.1 612.1 498.1 49 2058 328.1 3,707.8 3,707.8 3,707.8 3,707.8 3,707.8	48	2057		114.0		114.0	612.1		612.1	498.1	48	2057		328.1		328.1	3,707.8		3,707.8	3,379.7
	46	2058		114.0		114.0	612.1		612.1	498.1	49	2058		328.1		328.1	3,707.8		3,707.8	3,379.7

Table G2-7 Economic Cost and Benefit Stream (7/22)

Moung Ruessei River Basin: Ream Kon Rehabilitation Project

EIRR:	10.5%		Net Present	Net Present Value (Riel Million)	fillion)		Benefit	Cost	B/C Ratio	EIRR
)	8.00	% discount rate)	ite)	24,776	ଥା	1.24	
,			,			1			(Unit : Riel Million)	[:
Year	;		Economic Cost	nc Cost		ig	Economic Benefit	Ħ	Net (Year
in Order	Year	Initial Investment	Annual O&M	Major Repairing	Total	Irrigation	Production Foregone	Total	Cash Flow	in Order
-	2010	1,853.4			1,853.4			0.0	-1,853.4	-
71 71	2011	16,915.8	7 29		16,915.8	1 020 9		0.0	-16,915.8	- 7
4	2012	30.2	130.9		161.1	2.182.3		2.182.3	2.021.2	J 4
· v	2014		218.1		218.1	2,424.8		2,424.8	2,206.7	. v
9	2015		218.1		218.1	2,424.8		2,424.8	2,206.7	9
7	2016		218.1		218.1	2,424.8		2,424.8	2,206.7	7
œ	2017		218.1		218.1	2,424.8		2,424.8	2,206.7	•
6	2018		218.1		218.1	2,424.8		2,424.8	2,206.7	6
0 ;	2019		218.1		218.1	2,424.8		2,424.8	2,206.7	10
= :	2020		218.1		218.1	2,424.8		2,424.8	2,206.7	=
2 5	2021		218.1	1,985.7	2,203.8	2,424.8		2,424.8	221.0	12
C 4	2022		218.1		218.1	2,424.6		0.474.0	2,206.7	5 2
. 2	202		218.1		218.1	2 424 8		2,424.6	2 206.7	
91	2025		218.1		218.1	2,424.8		2,424.8	2,206.7	91
11	2026		218.1		218.1	2,424.8		2,424.8	2,206.7	17
18	2027		218.1		218.1	2,424.8		2,424.8	2,206.7	18
16	2028		218.1		218.1	2,424.8		2,424.8	2,206.7	19
20	2029		218.1		218.1	2,424.8		2,424.8	2,206.7	20
21	2030		218.1		218.1	2,424.8		2,424.8	2,206.7	21
55	2031		218.1	1,985.7	2,203.8	2,424.8		2,424.8	221.0	22
5 53	2032		218.1		218.1	2,424.8		2,424.8	2,206.7	23
4 %	2033		218.1		218.1	2,424.8		2,424.8	2,206.7	24
3 %	2034		218.1		218.1	2,424.0		0.474.0	2,206.7	
27	2036		218.1		218.1	2 424 8		2 424.8	2,206.7	27
28	2037		218.1		218.1	2,424.8		2,424.8	2,206.7	78
53	2038		218.1		218.1	2,424.8		2,424.8	2,206.7	29
30	2039		218.1		218.1	2,424.8		2,424.8	2,206.7	30
31	2040		218.1		218.1	2,424.8		2,424.8	2,206.7	33
7 6	2041		218.1	1,985.7	2,203.8	2,424.8		2,424.8	221.0	32
3 2	2043		218.1		218.1	2,727.0		0.424.0	2,200.7	3,4
35	2044		218.1		218.1	2,424.8		2,424.8	2,206.7	35
36	2045		218.1		218.1	2,424.8		2,424.8	2,206.7	36
37	2046		218.1		218.1	2,424.8		2,424.8	2,206.7	37
38	2047		218.1		218.1	2,424.8		2,424.8	2,206.7	38
39	2048		218.1	***************************************	218.1	2,424.8		2,424.8	2,206.7	39
3 :	2049		218.1		218.1	2,424.8		2,424.8	2,206.7	
1 5	2050		218.1	1 006 7	218.1	2,424.8		2,424.8	2,206.7	14 :
7 5	2051		210.1	1,785.7	2,203.8	2,424.8		2,424.8	0.122	47
3 4	2022		218.1		218.1	2,424.0		2,424.0	2,206.7	. 4
45	2054		218.1		218.1	2 424 8		2,424.8	2 206 7	45
46	2055		218.1		218.1	2,424.8		2,424.8	2,206.7	46
47	2056		218.1		218.1	2,424.8		2,424.8	2,206.7	47
48	2057		218.1		218.1	2,424.8		2,424.8	2,206.7	48
49	2058		218.1		218.1	2,424.8		2,424.8	2,206.7	49
50	2059		218.1		218.1	2,424.8		2,424.8	2,206.7	- 50

Table G2-7 Economic Cost and Benefit Stream (8/22)

roject
ehabilitation P
Por Canal R
River Basin:
ung Ruessei R
Mo

esent	resent Value (Riel Million)	(illion)		Benefit	Cost	B/C Ratio	EIR	EIRR: 12.4%	8	Net Present	Net Present Value (Riel Million)	Million)		Benefit	Cost	B/C Ratio
4	800	% discount rate)	(te)	24,776	19,959	1.24	[8.00	% discount rate)	ite)	12,945	9,132	1.42
						(Unit : Riel Million)	Į	-	ļ							(Unit : Riel Million)
conon	conomic Cost		ជ	Economic Benefit	fft	Net	Year	<u>я</u>		Econor	Economic Cost		E	Economic Benefit	it	Net
inal N	Major	Total	Irrigation	Production	Total	Cash	. s 7	Year		Amnual	Major	Total	Irrigation	Production	Total	Cash
Ę	Mepaning	1.853.4		Torcgone	0.0	-1 853 4	5	2010	My 831 9	OSIM	repairing	8310		roregone	00	F10W
		16,915.8			0.0	-16,915.8	- 5		7			7,580.1			0.0	-7,580.1
65.4		346.0	1,939.8		1,939.8	1,593.8		2012	130.5			163.5	1,013.5		1,013.5	850.0
20.7		101.1	2,182.3		2,182.3	2,021.2		2013		1100		82.5	1,140.2		1,140.2	1,057.7
18.1		218.1	2,424.8		2,424.8	2,206.7		2015	· •	110.0		110.0	1,200.9		1,266.9	1,156.9
18.1		218.1	2,424.8		2,424.8	2,206.7		2016	9	110.0		110.0	1,266.9		1,266.9	1.156.9
18.1		218.1	2,424.8		2,424.8	2,206.7		2017	7	110.0		110.0	1,266.9		1,266.9	1,156.9
18.1		218.1	2,424.8		2,424.8	2,206.7		2018		110.0		110.0	1,266.9		1,266.9	1,156.9
18.1		218.1	2,424.8		2,424.8	2,206.7	_	0 2019	6	110.0		110.0	1,266.9		1,266.9	1,156.9
18.1		218.1	2,424.8		2,424.8	2,206.7		1 2020	0	110.0		110.0	1,266.9		1,266.9	1,156.9
8.	1,985.7	2,203.8	2,424.8		2,424.8	221.0		2021		110.0	978.8	1,088.8	1,266.9		1,266.9	178.1
		218.1	2,424.8		2,424.8	2,206.7		3 2022		110.0		110.0	1,266.9		1,266.9	1,156.9
× .		218.1	2,424.8		2,424.8	2,206.7		2023		110.0		110.0	1,266.9		1,266.9	1,156.9
10.1		218.1	2,424.8		2,424.8	7,206.7		2024	4+ v	110.0		110.0	1,266.9		1,266.9	1,156.9
18.1		218.1	2,424.6		2,424.6	2,200.7		202	2 42	110.0		110.0	1,200.9		6,002,1	1,156.9
8		218.1	2,424.8		2,424.8	2,206.7		2027		110.0		110.0	1 266 9		1 266 9	1,156.9
18.1		218.1	2,424.8		2,424.8	2,206.7	- 16		. 00	110.0		110.0	1 266 9		1 266 9	11569
18.1		218.1	2,424.8		2,424.8	2,206.7	78		. 6	110.0		110.0	1,266.9		1.266.9	1,156.9
18.1		218.1	2,424.8		2,424.8	2,206.7	- 7		0	110.0		110.0	1,266.9		1,266.9	1.156.9
18.1	1,985.7	2,203.8	2,424.8		2,424.8	221.0	- '	2 2031		110.0	978.8	1,088.8	1,266.9		1,266.9	178.1
18.1		218.1	2,424.8		2,424.8	2,206.7	23		2	110.0		110.0	1,266.9		1,266.9	1,156.9
18.1		218.1	2,424.8		2,424.8	2,206.7		2033	3	110.0		110.0	1,266.9		1,266.9	1,156.9
186		218.1	2,424.8		2,424.8	2,206.7			4	110.0		110.0	1,266.9		1,266.9	1,156.9
18.1		218.1	2,424.8		2,424.8	2,206.7	7		· ·	110.0		110.0	1,266.9		1,266.9	1,156.9
. i		718.1	2,424.8		2,424.8	2,206.7				110.0		110.0	1,266.9		1,266.9	1,156.9
18.1		218.1	2,424.8		2,424.8	2,206.7				110.0		110.0	1,266.9		1,266.9	1,156.9
10.1		218.1	2,424.8		2,424.8	7,206.7	67 6	2038	×0 c	110,0		110.0	1,266.9		1,266.9	1,156.9
1 0		210.1	2,424.0		0,424.0	2,206.7				110.0		110.0	1,200.9		1,200.9	1,156.9
	1 985 7	2 203 8	2 424.0		2,424.0	221.0	3 5			110.0	078.8	1.088.8	1,200.9		1,200.9	1,136.9
		218.1	2,424.8		2 424 8	2 206 7	33.6			1100	276.0	1,000.0	1,200.7		1 266 0	1.671
18.1		218.1	2,424.8		2,424.8	2,206.7			1 60	110.0		110.0	1,266.9		1,266.9	1,156.9
18.1		218.1	2,424.8		2,424.8	2,206.7	35		*	110.0		110.0	1,266.9	-	1,266.9	1,156.9
18.1		218.1	2,424.8		2,424.8	2,206.7	36		5	110.0		110.0	1,266.9	•	1,266.9	1,156.9
18.1		218.1	2,424.8		2,424.8	2,206.7	37			110.0		110.0	1,266.9		1,266.9	1,156.9
		218.1	2,424.8		2,424.8	2,206.7	38			110.0		110.0	1,266.9		1,266.9	1,156.9
1.8		218.1	2,424.8		2,424.8	2,206.7		2048	20 (110.0		110.0	1,266.9		1,266.9	1,156.9
× 1 × 1		218.1	2,424.8		2,424.8	2,206.7	4.	2049	<u> </u>	0.011		110.0	1,266.9		1,266.9	1,156.9
10.1	1 005 7	2 202 6	2,424.8		2,424.8	2,206.7	4 - 4	0607		110.0	9	10.00	1,266.9		1,266.9	1,156.9
10.1	1,765.1	2,203.0	2,424.0		2,424.0	7 305 7	1 4	1007		110.0	9/6.8	1,088.8	6,002,1		6.007,1	1/8/1
		2181	2,424.8		2,424.8	2,206.7	. 4	2027	4 m	110.0		110.0	1,266.9		1,266.9	1,156.9
8.1		218.1	2,424.8		2 424 8	2,206.7	4	2054		110.0		110.0	1 266 9		1 266 9	1,156.0
18.1		218.1	2,424.8	ï	2,424.8	2,206.7		2055		110.0		110.0	1.266.9		1,266.9	1,156.9
18.1		218.1	2,424.8		2,424.8	2,206.7	4	7 2056	•	110.0		110.0	1,266.9		1,266.9	1,156.9
18.1		218.1	2,424.8		2,424.8	2,206.7	4	3 2057	7	110.0		110.0	1,266.9		1,266.9	1,156.9
18.1		218.1	2,424.8		2,424.8	2,206.7	4	2058	*	110.0		110.0	1,266.9		1,266.9	1,156.9
<u>~</u>		218.1	2,424.8		2,424.8	2,206.7)S	2059	6	110.0		110.0	1,266.9		1,266.9	1,156.9

Table G2-7 Economic Cost and Benefit Stream (9/22)

Table G2-7 Economic Cost and Benefit Stream (10/22)

Moung	Ruessei Riv	Moung Ruessei River Basin :	Nikom Le/D	Nikom Le/Dai Ta Chan Rehabilitation Project	ehabilitation	Project				Pur		Basin:	Beoung Pr	Beoung Preah Ponley Rehabilitation Project	habilitation	Project			
EIRR:	7.6%		Net Present	5	(fillion)			Cost	B/C Ratio	EII	EIRR: 11.9%	%6	Net Presei	Net Present Value (Riel Million)	Million)		Benefit	Cost	B/C Ratio
				9.00	% discount rate	arc)	7,400	D)	(Unit : Riel Million)	_		7		8.00	% discount rate)	rate)	89,127	63,227	(Init - Riel Million)
Year			Есопол	Economic Cost		ь	Economic Benefit		Net	Ě	Year		Есоп	Economic Cost			Economic Benefit		Net
in Order	Year	Initial Investment	Annual O&M	Major Repairing	Total	Irrigation	Production Foregone	Total	Cash Flow	- 6	in Year Order	ar Initial Investment	Annual out O&M	Major Repairing	Total	Irrigation	Production Foregone	Total	Cash
-	2010	742.4			742.4			0.0	-742.4		┼		_	9	3,392.0	0		0.0	-3,392.0
~ ~	2011	6,790.4	216		6,790.4	6 785		0.0	-6,790.4		2011	11 15,760.7	، نا		15,760.7			0.0	-15,760.7
4	2013	12.0	43.2		55.2	590.5		5.629.5	604.3		2012			-	15,828.3	5 3.125.7		3.125.7	-15,828.3
2	2014		72.0		72.0	732.8		732.8	8.099		5 2014	15			16,120.3			5,209.6	-10,910.7
9	2015		72.0		72.0	732.8		732.8	8.099		6 2015	_		_	1,184.0			7,293.4	6,109.3
7	2016		72.0		72.0	732.8		732.8	8.099		7 2016				818.4			9,377.2	8,558.8
∞ ·	2017		72.0		72.0	732.8		732.8	8.099			17	834.3		834.3			10,419.1	9,584.8
ο 5	2018		72.0		72.0	732.8		732.8	8.099				834.3		834.3			10,419.1	9,584.8
2 =	2020		0.27		7.00	727.8		737.0	8.000	-	6107 01	61	834.3		834.3			10,419.1	9,584.8
2 2	2021		72.0	694.7	766.7	732.8		732.8	-33.9	_	2021	2.7	8343		834.3	3 10,419.1		10,419.1	9,384.8
13	2022		72.0		72.0	732.8		732.8	8099		13 2022	- 22	834.3		834.3			10,419.1	9.584.8
14	2023		72.0		72.0	732.8		732.8	8.099	_	14 2023	23	834.3					10,419.1	9,584.8
15	2024		72.0		72.0	732.8		732.8	8.099		15 2024	24	834.3	7,475.9	8,310.2			10,419.1	2,108.9
9!	2025		72.0		72.0	732.8		732.8	8.099	_	16 2025	25	834.3		834.3			10,419.1	9,584.8
_ :	2026		72.0		72.0	732.8		732.8	8.099			26	834.3		834.3			10,419.1	9,584.8
8 0	707		72.0		7.0	732.8		732.8	8.099			27	834.3		834.3			10,419.1	9,584.8
20	2070		72.0		7.0	722.8		737.0	87000	- c	8707 61	87.8	834.3		834.3			10,419.1	9,584.8
2 5	2030		72.0		72.0	732.8		737.8	6,000	7 2		67	834.3		0.4.0	10,419.1		10,419.1	9,584.8
22	2031		72.0	694.7	766.7	732.8		732.8	-33.9				834.3		834.3			10,419.1	9.584.8
23	2032		72.0		72.0	732.8		732.8	8.099	7	23 2032	32	834.3		834.3	_		10,419.1	9,584.8
24	2033		72.0		72.0	732.8		732.8	8.099	- 24		33	834.3			_		10,419.1	9,584.8
52 5	2034		72.0		72.0	732.8		732.8	8.099			34	834.3	7,475.9	∞°			10,419.1	2,108.9
9 7	2035		72.0		72.0	732.8		732.8	8.099		26 2035	35	834.3		834.3			10,419.1	9,584.8
28	2037		72.0		72.0	732.8		732.8	8000				834.3		834.3	3 10,419.1		10,419.1	9,384.8
53	2038		72.0		72.0	732.8		732.8	8.099	- 7		38	834.3		834.3			10,419.1	9.584.8
30	2039		72.0		72.0	732.8		732.8	8.099			39	834.3		834.3			10,419.1	9,584.8
3 33	2040		72.0		72.0	732.8		732.8	8.099	· ·		- 40	834.3		834.3	_		10,419.1	9,584.8
3 6	2041		72.0	094.7	790.7	732.8		73.7 8	-33.9	. r	22 2041		834.3		834.3	3 10,419.1		10,419.1	9,584.8
34	2043		72.0		72.0	732.8		732.8	8.099			13	8343		8343	_		10,419.1	9,304.0
35	2044		72.0		72.0	732.8		732.8	8.099	- m	-	. 4	834.3	7,475.9	00			10,419.1	2,108.9
36	2045		72.0		72.0	732.8		732.8	8.099			45	834.3					10,419.1	9,584.8
37	2046		72.0		72.0	732.8		732.8	8.099	37		46	834.3		834.3			10,419.1	9,584.8
38	2047		72.0		72.0	732.8		732.8	660.8			47	834.3		834.3			10,419.1	9,584.8
y 6	2040		72.0		7.0	732.8		732.0	800.8	-	2048	× c	834.3		834.3			10,419.1	9,584.8
} 4	2050		72.0		72.0	732.8		73.7 8	900.8			A C	834.3		834.3			10,419.1	9,584.8
: 2	2051		72.0	694.7	766.7	732.8		732.8	-33.9	- 4			834.3		834.3	10,419.1		10,419.1	9,584.8
43	2052		72.0		72.0	732.8		732.8	8.099	43		22	834.3		834.3			10,419.1	9.584.8
44	2053		72.0		72.0	732.8		732.8	8.099	4		53	834.3		834.3	_		10,419.1	9,584.8
45	2054		72.0		72.0	732.8		732.8	8.099	45		42	834.3	7,475.9	œ.	_		10,419.1	2,108.9
9 :	2055		72.0		72.0	732.8		732.8	8.099	46		25	834.3		834.3	_		10,419.1	9,584.8
, ¢	2050		72.0		72.0	732.8		732.8	8,099	47		9 !	834.3		834.3			10,419.1	9,584.8
\$ 64	2058		72.0		72.0	737.8		737.8	900.8	4 4	202	/ ×	834.3		834.3	10,419.1		10,419.1	9,584.8
50	2059		72.0		72.0	732.8		732.8	6,000	r vñ		2 05	8343		8343			10,419.1	0,784.0
]						1			

Table G2-7 Economic Cost and Benefit Stream (11/22)

Table G2-7 Economic Cost and Benefit Stream (12/22)

Pursat	Pursat River Basin :	 [Total Marie Dasa			3	mafe a more management and					
EIRR	EIRR: 11.1%		Net Present	Net Present Value (Riel Million)	Million)		Benefit	Cost	B/C Ratio	EIRR:	11.4%		Net Present	Net Present Value (Riel Million)	Million)		Benefit	Cost	B/C Ratio
		7		×.00	% discount rate)	(e)	74,452	57,258 (m)	(Onit - Riel Million)					00.8	% discount rate)	ite)	42,514	30,939	Tinit - Piel Million
Year			Econon	Economic Cost		E	Economic Benefit		Net	Year			Economic Cost	iic Cost		E	Economic Benefit		Net
in	Year	Initial	Annual O&M	Major Repairing	Total	Irrigation	Production Foregone	Total	Cash	in	Year	Initial	Annual	Major	Total	Irrigation	Production Foregone	Total	Cash
-	2010	-			3,081.4		9	0.0	-3,081	_	2010	2,556.0		9	2,556.0		9	0.0	-2,556.0
7 0	2011				14,322.1			0.0	-14,322	7	2011	13,563.5			13,563.5			0.0	-13,563.5
m <	2012	14,387.9	90		14,387.9	4 011 5		0.0	-14,388	m z	2012	13,603.8	1 70		13,603.8	1 440 3		0.0	-13,603.8
t ^	2013				14,476.3	5 730 1		5 730 1	9668-	4 ~	2012	7.17	188.3		433.8	7 806 5		2 806 5	1,012.5
9	2015				1,002.3	7,367.3		7.367.3	6.365	• •	2015	40.2	313.8		353.9	4 344 8		4 344 8	3 990 8
	2016				667.5	8,185.9		8,185.9	7,518	7	2016	1	353.0		353.0	4,827.5		4,827.5	4,474.5
∞	2017		752.3		752.3	8,185.9	•	8,185.9	7,434	∞	2017		392.2		392.2	4,827.5		4,827.5	4,435.3
6	2018		752.3		752.3	8,185.9		8,185.9	7,434	6	2018		392.2		392.2	4,827.5		4,827.5	4,435.3
2 :	2019		752.3		752.3	8,185.9		8,185.9	7,434	10	2019		392.2		392.2	4,827.5		4,827.5	4,435.3
= :	2020		752.3		752.3	8,185.9		8,185.9	7,434	= :	2020		392.2		392.2	4,827.5		4,827.5	4,435.3
2 5	202		757 3		757 3	8,185.9		8,185.9	7,434	2 5	2021		302.7	3 187 6	3 970 2	4,827.5		4,827.5	4,435.3
7 4	2023		752.3		7523	8 185 9		8 185 9	7.434	7 4	2023		392.2	0.101.0	397.7	4,827.5		4.827.5	4 435 3
15	2024		752.3	6.744.6	7,496.9	8,185.9		8,185.9	689	15	2024	•	392.2		392.2	4.827.5		4.827.5	4.435.3
16	2025		752.3		752.3	8,185.9		8,185.9	7,434	16	2025		392.2		392.2	4,827.5		4,827.5	4,435.3
17	2026		752.3		752.3	8,185.9		8,185.9	7,434	17	2026		392.2		392.2	4,827.5		4,827.5	4,435.3
	2027		752.3		752.3	8,185.9		8,185.9	7,434	<u>~</u>	2027		392.2		392.2	4,827.5		4,827.5	4,435.3
5 6	2028		752.3		752.3	8,185.9		8,185.9	7,434	<u> </u>	2028	••••	392.2		392.2	4,827.5		4,827.5	4,435.3
3 5	2030		7523		752.3	6,162.3		8 185 0	7.434	2 2	2030	•	302.7		302.7	4,927.5		4,027.5	4,455.5
; z	2031		752.3		752.3	8,185.9		8,185.9	7,434	: 23	2031		392.2		392.2	4,827.5		4.827.5	4,435.3
23	2032		752.3		752.3	8,185.9		8,185.9	7,434	23	2032		392.2	3,487.6	3,879.8	4,827.5		4,827.5	947.7
24	2033		752.3		752.3	8,185.9		8,185.9	7,434	24	2033		392.2		392.2	4,827.5		4,827.5	4,435.3
- 52	2034		752.3	6,744.6	7,496.9	8,185.9	•	8,185.9	689	7, 25	2034		392.2		392.2	4,827.5		4,827.5	4,435.3
2 2	2036		752.3		752.3	8.185.9		8.185.9	7,434	7 5	2036		392.2		392.2	4,827.5	,	4,827.5	4,435.3
	2037		752.3		752.3	8,185.9		8,185.9	7,434	78	2037		392.2		392.2	4,827.5		4,827.5	4,435.3
29	2038		752.3		752.3	8,185.9		8,185.9	7,434	53	2038		392.2		392.2	4,827.5		4,827.5	4,435.3
30	2039		752.3		752.3	8,185.9		8,185.9	7,434	2 3	2039	-	392.2		392.2	4,827.5		4,827.5	4,435.3
	2040		752.3		752.3	8,185.9		8,185.9	7,434	<u></u> £	2040	•••	392.2		392.2	4,827.5		4,827.5	4,435.3
33	2042		752.3		752.3	8.185.9		8,185.9	7,434	3 2	2042	•	392.2	3.487.6	3.879.8	4,827.5		4,827.5	947.7
34	2043		752.3		752.3	8,185.9		8,185.9	7,434	8	2043		392.2		392.2	4,827.5		4,827.5	4,435.3
35	2044	·	752.3	6,744.6	7,496.9	8,185.9		8,185.9	689	35	2044		392.2		392.2	4,827.5		4,827.5	4,435.3
36	2045		752.3		752.3	8,185.9		8,185.9	7,434	3, 39	2045	•	392.2		392.2	4,827.5		4,827.5	4,435.3
36	2040		757 3		5.257	6,185.9		8,185.9	7,434	36	2040		302.7		27.765	4,827.5		2.728,4	4,435.3
S &	2048		752.3		752.3	8 185 9		8 185 9	7.434	۶ <u>۶</u>	2048		392.2		392.7	4,627.5		4,027.5	4,455.5
40	2049		752.3		752.3	8,185.9		8,185.9	7,434	9 6	2049		392.2		392.2	4,827.5		4,827.5	4,435.3
41	2050		752.3		752.3	8,185.9		8,185.9	7,434	41	2050		392.2		392.2	4,827.5		4,827.5	4,435.3
42	2051		752.3		752.3	8,185.9		8,185.9	7,434	42	2051		392.2		392.2	4,827.5		4,827.5	4,435.3
24.	2022		752.3		757.3	8,185.9		8,185.9	7,434	54.	2022		2.765	3,487.6	3,8/9.8	4,827.5		4,827.5	4.75.7
4 4	2023		752.3	6 744 6	7 406 9	8,185.9		8,185.9	7,434	<u> </u>	2022		302.7		302.2	4,827.5		2,724.5	4,435.3
4	2055		752.3) ()	752.3	8.185.9		8 185 9	7 434	5 4	2055		392.2		392.2	4,827.5		4,027.5	4,455.5
47	2056		752.3		752.3	8,185.9		8,185.9	7,434	47	2056		392.2		392.2	4,827.5		4,827.5	4,435.3
48	2057		752.3		752.3	8,185.9		8,185.9	7,434	48	2057	•	392.2		392.2	4,827.5		4,827.5	4,435.3
46	2058		752.3		752.3	8,185.9		8,185.9	7,434	49	2058		392.2		392.2	4,827.5		4,827.5	4,435.3
ઝ	2059		752.3		752.3	8,185.9		8,185.9	7,434	8	2059		392.2		392.2	4,827.5		4,827.5	4,435.3

Table G2-7 Economic Cost and Benefit Stream (13/22)

Wat Chre Rehabilitation Project

Pursat River Basin :

On Tapoung/Boueng Khnar Water Harvesting & Recession Rice Rehabilitation Project

Pursat River Basin:

Table G2-7 Economic Cost and Benefit Stream (14/22)

				Attras,	_	Donoge		2/C Date:	. dura	702 0 . 01	70.	2	E	A DECEMBER		•			4 57 4
		(8.00 % disc	8.00	% discount rate	(F)	12.244	10.676	1.15				יומו לומי	Net rresent value (Riet Million)	% disco	% discount rate)	De C	23 874	22 853	1 04
1 H							(Unit	(Unit : Riel Million)] []]	7	Jnit : Riel Million
_1		Economic Cost	ric Cost		В	Economic Benefit	1	Net	Year	TR.		Eco	Economic Cost		-	Есопоп	Economic Benefit		Net
	Initial Investment	Annual O&M	Major Repairing	Total	Irrigation	Production Foregone	Total	Cash	i Orde	r Year	ar Initial	l Annual	l Major Repairing	Total		Irrigation For	Production Foregone	Total	Cash
-	934.5			934.5)	0.0	-934.5	Ľ		\vdash		<u> </u>	├-	6.5			0.0	-2,016.5
	109.2	25.5		7,338.0	385.4		385.4	250.6		2012	11 18,905.0	3.0		312.2		1 671 7		0.0	-18,903.6
	109.3	51.0		160.3	770.7		770.7	610.4	. 4	2013			, -			1.910.5		910.5	1.527.7
	12.4	76.5		88.9	1,156.1		1,156.1	1,067.2	•	2014			9.	- 5		2,149.3		2,149.3	1,907.5
		102.0		102.0	1,284.5		1,284.5	1,182.5		5 2015	15	282.		~		2,388.1		2,388.1	2,106.0
		102.0		102.0	1,284.5		1,284.5	1,182.5	.~	7 2016	16	282.1		~		2,388.1		2,388.1	2,106.0
		102.0		102.0	1,284.5		1,284.5	1,182.5		2017	17	282		~	_	2,388.1		2,388.1	2,106.0
		102.0		102.0	1,284.5		1,284.5	1,182.5		2018	18	282		7		2,388.1		2,388.1	2,106.0
		102.0		102.0	1,284.5		1,284.5	1,182.5		0 2019	19	282		~		2,388.1		2,388.1	2,106.0
		102.0		102.0	1,284.5		1,284.5	1,182.5	_	1 2020	70	282.	_			2,388.1		2,388.1	2,106.0
		102.0	961.9	1,063.9	1,284.5		1,284.5	220.6		2 2021	21	282.1	2,494.8		_	2,388.1		2,388.1	-388.8
		102.0		102.0	1,284.5		1,284.5	1,182.5	<u>-</u>	3 2022	77	282.		~		2,388.1		2,388.1	2,106.0
-		102.0		102.0	1,284.5		1,284.5	1,182.5		4 2023	23	282		~		2,388.1		2,388.1	2,106.0
		102.0		102.0	1,284.5		1,284.5	1,182.5		5 2024	24	282		~	_	2,388.1		2,388.1	2,106.0
2025		102.0		102.0	1,284.5		1,284.5	1,182.5		6 2025	25	282.		~		2,388.1		2,388.1	2,106.0
2026		102.0		102.0	1,284.5		1,284.5	1,182.5		7 2026	92	282		~		2,388.1		2,388.1	2,106.0
2027		102.0		102.0	1,284.5		1,284.5	1,182.5		8 2027	27	282	=	~		2,388.1		2,388.1	2,106.0
2028	•	102.0		102.0	1,284.5		1,284.5	1,182.5	_	9 2028	28	282	=	~~		2,388.1		2,388.1	2,106.0
2029		102.0		102.0	1,284.5		1,284.5	1,182.5	~	0 2029	29	282.1	=	~		2,388.1		2,388.1	2,106.0
2030		102.0		102.0	1,284.5		1,284.5	1,182.5	7		20	282				2,388.1		2,388.1	2,106.0
2031		102.0	961.9	1,063.9	1,284.5		1,284.5	220.6				282	2,494.8			2,388.1		2,388.1	-388.8
7007		102.0		102.0	1,284.5		1,284.5	1,182.5	~ ·	2032	75.5	787		~ ~		2,388.1		2,388.1	2,106.0
		102.0		102.0	2,484.7	-	2,484.7	1,182.5		2033		787		~ ~	7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	2,388.1		2,388.1	2,106.0
		102.0		102.0	1 284 5	-	1 284 5	1,182.5				787				2,366.1		2,300.1	2,106.0
2036	•	102.0		102.0	1284.5	•	1.284.5	1.182.5	- 27			282	-			2.388.1		388 1	2,106.0
2037		102.0		102.0	1,284.5		1,284.5	1,182.5	28		37	282				2,388.1		388.1	2,106.0
2038		102.0		102.0	1,284.5		1,284.5	1,182.5	~		38	282		58		2,388.1	_	2,388.1	2,106.0
2039	•	102.0		102.0	1,284.5		1,284.5	1,182.5	30		39	282		~~		2,388.1		2,388.1	2,106.0
2040		102.0		102.0	1,284.5		1,284.5	1,182.5	E :		9 :	282.1				2,388.1		2,388.1	2,106.0
2041		102.0	901.9	1,063.9	284.5		2,84.5	220.6	32			282	2,494.8			2,388.1		2,388.1	-388.8
2042		102.0		102.0	1,284.5		1,284.5	1,182.5	3, 7	2047	7 5	787		~ ~		2,388.1		1,388.1	2,106.0
2042		102.0		102.0	2,404,1		2 402,1	1,162.3	75			707	7 :	~ ~	787.1	2,388.1		2,388.1	2,106.0
2045	_	102.0		102.0	1 284 5		1 284 5	1 182 5			- 	282				2,388.1		2,388.1	2,106.0
2046		1020		102.0	1 284 5		1 284 5	1.182.5	37			282	-			2,388.1		2 388 1	2,106.0
2047		102.0		102.0	1,284.5		1,284.5	1,182.5	38		- 42	282				2,388.1		2,388.1	2,106.0
2048		102.0		102.0	1,284.5		1,284.5	1,182.5	39			282		58		2,388.1		2,388.1	2,106.0
2049		102.0		102.0	1,284.5		1,284.5	1,182.5			60	282.1		- 58		2,388.1		2,388.1	2,106.0
2050		102.0		102.0	1,284.5		1,284.5	1,182.5	41		20	282				2,388.1		2,388.1	2,106.0
		102.0	6.196	1,063.9	1,284.5		1,284.5	220.6	4	2051	- 21	282	2,494.8			2,388.1		2,388.1	-388.8
		102.0		102.0	1,284.5		1,284.5	1,182.5	4.	3 2052	25	282.1		~		2,388.1		2,388.1	2,106.0
2053		102.0		102.0	1,284.5		1,284.5	1,182.5	4	2053	. X3	282.1	_	- 53		2,388.1		388.1	2,106.0
		102.0		102.0	1,284.5		1,284.5	1,182.5	4	2054	- - -	282.	-	- 58		2,388.1		2,388.1	2,106.0
2022		102.0		0.701	2,482,1		1,284.5	1,182.5	4 ,	2022	2 2	282.		~ ~		2,388.1		2,388.1	2,106.0
		102.0		102.0	2,404,1		1 284 5	1,182.5	+ 4	2020		787		7 6	282.1	2,388.1		2,388.1	2,106.0
		102.0		102.0	1 284 5		1 284 5	1,182.5		_		282	-			2,388.1		388.1	2,106.0
				102.0	1 284 5		2 787	1 182 5	- 7	_		38.5				1,000.1		4,700.1	2,100.0

Table G2-7 Economic Cost and Benefit Stream (15/22)

Table G2-7 Economic Cost and Benefit Stream (16/22)

## Gracecount rate) 32,215 35,509	EIRR:	7.1%		Net Present	Net Present Value (Riel Million)	Million)		Benefit	Cost	B/C Ratio	EIRR:	R: 7.3%	%	Net Present	Net Present Value (Riel Million)	(Illion)		Benefit	Cost	B/C Ratio
Character Character			_	\exists	800	% discount 1	ate)	32,215	35,509	0.91					8.00	% discount	ate)	19,635	21,083	0
Characteristic Char										nit: Riel Million)	Ŀ									Unit : Riel Mil
2001 13,043.8 104.0 Annior 104.0 Annior Annior <th>ı. ear</th> <th></th> <th>1.00.1</th> <th>CCONOR</th> <th>nic Cost</th> <th></th> <th>n</th> <th>conomic Benefi</th> <th></th> <th>Set</th> <th>Ye</th> <th></th> <th></th> <th>Econor</th> <th>mic Cost</th> <th></th> <th>Ā</th> <th>conomic Benef</th> <th><u> </u></th> <th>Net</th>	ı. ear		1.00.1	CCONOR	nic Cost		n	conomic Benefi		Set	Ye			Econor	mic Cost		Ā	conomic Benef	<u> </u>	Net
2010 3,545.8 1,545.8 1,545.8 1,545.8 1,545.8 1,745.8 1,745.9 1	ııı Jrder	Year	Initial	O&M	Major Repairing	Total			Total	Cash	Ord			Annual O&M	Major Repairing	Total	Imgation	Production Foregone	Total	Cash
0.10 0.10 <th< td=""><td>- (</td><td>2010</td><td>3,045.8</td><td></td><td></td><td>3,045.8</td><td></td><td></td><td>0.0</td><td>-3,045.8</td><td></td><td>201</td><td></td><td></td><td></td><td>1,783.6</td><td></td><td></td><td>0.0</td><td>-1,78</td></th<>	- (2010	3,045.8			3,045.8			0.0	-3,045.8		201				1,783.6			0.0	-1,78
0.11 3.95 9.1 4.44 0.1000 1.000 2.0	71 0	202	16,157.8			16,157.8			0.0	-16,157.8		201	13			17,809.1			0.0	-17,80
016 318.3 18.2 <th< td=""><td>٠ -</td><td>2102</td><td>10,190.8</td><td>2</td><td></td><td>10,190.6</td><td></td><td></td><td>0.0</td><td>-10,190.8</td><td>n •</td><td>2 2</td><td></td><td>61.5</td><td></td><td>268.9</td><td>1,374.9</td><td></td><td>1,374.9</td><td>1,10</td></th<>	٠ -	2102	10,190.8	2		10,190.6			0.0	-10,190.8	n •	2 2		61.5		268.9	1,374.9		1,374.9	1,10
1015 318.5 314.6 314.8	1 4	5105	595.5	51.5		484.8			2,441.4	1,956.6		5 50		123.1		330.4	1,571.3		1,571.3	1,240
916 166 <td>n 4</td> <td>2014</td> <td>393.3</td> <td>1.63.1</td> <td></td> <td>576.5</td> <td>2,790.2</td> <td></td> <td>7,067,7</td> <td>2,215.8</td> <td>Λ ·</td> <td>2 2</td> <td></td> <td>184.6</td> <td></td> <td>205.9</td> <td>1,767.7</td> <td>•</td> <td>1,767.7</td> <td>1,56</td>	n 4	2014	393.3	1.63.1		576.5	2,790.2		7,067,7	2,215.8	Λ ·	2 2		184.6		205.9	1,767.7	•	1,767.7	1,56
MICHAIL SSCII <	۰ ۱	5107	38.8	2/4.0		315.4	3,138.9		3,138.9	2,825.5	•	25	S.	246.1		246.1	1,964.1		1,964.1	1,71
2011 3061 3661 3461 3461 3661 <th< td=""><td>_</td><td>2016</td><td></td><td>366.1</td><td></td><td>366.1</td><td>3,487.7</td><td></td><td>3,487.7</td><td>3,121.6</td><td>_</td><td>501</td><td>9</td><td>246.1</td><td></td><td>246.1</td><td>1,964.1</td><td>-</td><td>1,964.1</td><td>1,71</td></th<>	_	2016		366.1		366.1	3,487.7		3,487.7	3,121.6	_	501	9	246.1		246.1	1,964.1	-	1,964.1	1,71
2018 3661 3661 3687 3681 3681 3661 19641 19641 19641 2019 3661 3661 3487 3487 3487 3487 3487 3487 31216 19 200 3661 19641 19641 19641 2020 3661 3487 3487 31216 11 202 2661 2661 19641 19641 2021 3661 3487 3487 31216 15 202 2661 2661 19641 19641 2022 3661 3487 3487 31216 15 202 2661 2661 19641 19641 2022 3661 3487 3487 31216 15 202 2661 19641 19641 19641 2023 3661 3487 3487 31216 12 202 2661 19641 19641 19641 2023 3661 3487 3487 31216	∞	2017		366.1	_	366.1	3,487.7		3,487.7	3,121.6	∞	201	7	246.1		246.1	1,964.1		1,964.1	1,71
2010 3661 3661 3661 3661 3661 3661 3661 1961 <th< td=""><td>6</td><td>2018</td><td></td><td>366.1</td><td>_</td><td>366.1</td><td>3,487.7</td><td></td><td>3,487.7</td><td>3,121.6</td><td>6</td><td>201</td><td><u></u></td><td>246.1</td><td></td><td>246.1</td><td>1,964.1</td><td></td><td>1,964.1</td><td>1,71</td></th<>	6	2018		366.1	_	366.1	3,487.7		3,487.7	3,121.6	6	201	<u></u>	246.1		246.1	1,964.1		1,964.1	1,71
2020 3661 34671 34877 31216 11 2020 2661 2729 3661 134877 31216 11 2020 2661 2729 2621 134871 13126 11 2020 2661 12429 13641	10	2019		366.1	_	366.1	3,487.7		3,487.7	3,121.6	-10	201	6	246.1		246.1	1,964.1	,	1,964.1	1.71
2023 3661 34877 34877 313.4 12 2023 2661 3769 19641 19641 2024 3661 34877 34877 313.4 12 202 2661 3661 19641 19641 2025 3661 34877 34877 31216 16 202 2661 3661 19641 19641 2025 3661 34877 34877 31216 16 202 2661 3661 19641 19641 2026 3661 34877 34877 31216 17 202 2661 3661 19641 19641 2028 3661 34877 34877 31216 20 20 2661 3661 19641 19641 2029 3661 34877 34877 31216 20 20 2661 3661 19641 19641 2029 3661 34877 34877 31216 20 20 2661 3661 <td>11</td> <td>2020</td> <td></td> <td>366.1</td> <td>_</td> <td>366.1</td> <td>3,487.7</td> <td></td> <td>3,487.7</td> <td>3,121.6</td> <td>=</td> <td>202</td> <td>0.</td> <td>246.1</td> <td></td> <td>246.1</td> <td>1,964.1</td> <td></td> <td>1.964.1</td> <td>1.71</td>	11	2020		366.1	_	366.1	3,487.7		3,487.7	3,121.6	=	202	0.	246.1		246.1	1,964.1		1.964.1	1.71
2022 3661 34770 34877 3,1314 11 2022 2661 9,641 1,9641 1,9641 2023 3661 3,4877 3,4877 3,1316 15 2023 2661 1,9641 1,9641 1,9641 2024 3661 3,4877 3,4877 3,1216 15 2023 2661 1,9641 1,9641 1,9641 2025 3661 3,4877 3,4877 3,1216 19 2061 1,9641 1,9641 1,9641 2025 3661 3,4877 3,4877 3,1216 19 2061 1,9641 1,9641 1,9641 2025 3661 3,4877 3,4877 3,1216 20 20 20 20 20 20 1,9641 <td< td=""><td>12</td><td>2021</td><td></td><td>366.1</td><td>_</td><td>366.1</td><td>3,487.7</td><td></td><td>3,487.7</td><td>3,121.6</td><td>12</td><td>202</td><td></td><td>246.1</td><td>2.179.8</td><td>2.425.9</td><td>1.964.1</td><td></td><td>1,964.1</td><td>4</td></td<>	12	2021		366.1	_	366.1	3,487.7		3,487.7	3,121.6	12	202		246.1	2.179.8	2.425.9	1.964.1		1,964.1	4
2023 3661 34877 34817 31216 14 2023 2661 15641<	13	2022		366.1	3,437.0		3,487.7		3,487.7	-315.4	13		51	246.1	•	246.1	1,964.1		1 964 1	171
2023 3661 3661 34877 34877 311216 15 2023 2661 2661 15642 </td <td>14</td> <td>2023</td> <td></td> <td>366.1</td> <td></td> <td></td> <td>3.487.7</td> <td></td> <td>3 487 7</td> <td>3 121 6</td> <td>14</td> <td></td> <td></td> <td>246 1</td> <td></td> <td>246 1</td> <td>1 964 1</td> <td></td> <td>1 964 1</td> <td>17.</td>	14	2023		366.1			3.487.7		3 487 7	3 121 6	14			246 1		246 1	1 964 1		1 964 1	17.
2022 3661 3661 3867 3487 31216 16 2022 3661 3661 3867 3187 3487 3487 3487 31216 16 2022 3661 3661 1864 1	2	2024		366.1		366.1	3 487 7		3 487 7	3 121 6	51			246 1		246.1	1.0641		1.064	7.7
956 366 3677 34877 3411 17 2025 266 266 188 186 188 186 188 186 188	. 4	2005		366 1		366 1	3.487.7		2.487.7	3.121.6	: 1			246.1		246.1	1.0641		1,204.1	
2022 3661 3661 3877 34877 34116 18 2022 3661 3661 18877 34877 34116 18 2022 2661 2661 18877 1861 18 2022 2661 2661 18877 34877 34126 20 2029 2661 3661 3681 34877 34126 20 2029 2661 3661 3681 34877 34126 20 2029 2661 3661 3681 34877 34126 20 2029 2661 3661 36877 34877 34126 20 2029 2661 3661 36877 34877 34126 20 2029 2661 3661 36877 34877 34126 20 2029 2661 3661 36877 3661 36877 34877 34877 34126 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 <t< td=""><td>12</td><td>202</td><td></td><td>366.1</td><td></td><td>366.1</td><td>2.487.7</td><td></td><td>2,487.7</td><td>3,121.6</td><td>- 1</td><td></td><td>. Y</td><td>246.1</td><td></td><td>246.1</td><td>1,904.1</td><td></td><td>1,904.1</td><td>1,7</td></t<>	12	202		366.1		366.1	2.487.7		2,487.7	3,121.6	- 1		. Y	246.1		246.1	1,904.1		1,904.1	1,7
2003 3661 3677 31216 20 2003 2661 3661		2020		366.1		366 1	2,467.7		7,407.7	2,121.0	1 01			240.1		240.1	1,904.		1,904.1	7.
200 3661 3661 3681 3661 3681 3661 3681 3661 3681 3661 3681 3661 3681 3661 3681 3661 3681 3661 3681 3661 3681	0 0	707		366.1		300.1	7,407.7		7,467.7	5,121.0	91			240.1		240.1	1,904.1		1,964.	1,1
2001 3661 34877 34877 31116 20 2461 2461 19641 19641 2003 3661 34877 34877 31216 20 2461 2461 19641 19641 2003 3661 34877 34877 31216 22 203 2461 2461 19641 19641 2003 3661 34877 34877 31216 22 203 2461 2461 19641 19641 2003 3661 34877 34877 31216 22 203 2461 2461 19641 19641 2003 3661 34877 34877 31216 22 203 2461 3661 19641 19641 2004 3661 34877 34877 31216 22 2041 2461 19641 19641 2004 3661 34877 34877 31216 22 2041 2461 19641 19641 200	y 6	0707		300.1		200.1	2,487.7		2,487.7	3,121.0	- 5	-	× •	246.1		740.1	1,964.1		1,964.	1,7
2001 3661 3487 3487 31216 21 2030 2461 2179 2461 15641		6707		300.1		300.1	3,487.7		3,487.7	3,121.0	7			240.1		246.1	1,964.1		1,964.1	1,71
2021 3661 34877 34877 31516 22 2031 2461 21798 24515 19641 19641 2003 3661 34877 34877 31216 22 2033 2461 24751 19641 19641 2003 3661 34877 34877 31216 25 2033 2461 2461 19641 19641 2003 3661 34877 34877 31216 26 2061 2661 19641 19641 19641 2003 3661 34877 31216 26 2061 3661		2030		366.1		366.1	3,487.7		3,487.7	3,121.6	21	-	9	246.1		246.1	1,964.1		1,964.1	1,71
2022 3661 34870 34877 3154 23 2032 2461 3661 19641 19641 19641 2034 3661 34870 34877 31216 25 2034 2461 3661 19641 19641 2034 3661 34877 34877 31216 25 2034 2461 3661 19641 19641 2037 3661 34877 34877 31216 28 2037 2461 2461 19641 19641 2038 3661 34877 34877 31216 28 2037 2461 2461 19641 19641 2039 3661 34877 34877 31216 30 2039 2461 2461 19641 19641 2039 3661 34877 34877 31216 30 2046 2461 19641 19641 2040 3661 34877 31216 32 2046 2461 19641 <t< td=""><td>77</td><td>2031</td><td></td><td>366.1</td><td>-</td><td>366.1</td><td>3,487.7</td><td></td><td>3,487.7</td><td>3,121.6</td><td>22</td><td></td><td></td><td>246.1</td><td>2,179.8</td><td>2,425.9</td><td>1,964.1</td><td></td><td>1,964.1</td><td>4</td></t<>	77	2031		366.1	-	366.1	3,487.7		3,487.7	3,121.6	22			246.1	2,179.8	2,425.9	1,964.1		1,964.1	4
2003 3661 3661 34877 3,1216 24 2033 2461 2641 19641 19641 2004 3661 3661 34877 3,1216 26 2035 2461 2661 19641 19641 2005 3661 3661 34877 3,1216 26 2035 2461 2661 19641 19641 2005 3661 3661 34877 3,1216 28 2036 2661 19641 19641 2009 3661 3661 34877 3,1216 29 2038 2461 2661 19641 19641 2009 3661 34877 3,1216 39 2039 2461 2661 19641 19641 2004 3661 3,4877 3,1216 32 2044 2461 19641 19641 2004 3661 3,4877 3,1216 34 2461 19641 19641 2004 3661 3,4877	? :	7507		300.1	3,437.0	3,803.1	3,487.7		3,487.7	-315.4	- 23		- 23	246.1		246.1	1,964.1		1,964.1	1,7
2034 3661 34877 3,1216 25 2034 2461 1,9641 1,9641 2035 3661 3661 34877 3,1216 25 2034 2461 1,9641 1,9641 2035 3661 34877 3,4877 3,1216 28 2035 2461 1,9641 1,9641 2039 3661 34877 3,4877 3,1216 28 2037 2461 1,9641 1,9641 2039 3661 3,4877 3,1216 29 2039 2461 1,9641 1,9641 2040 3661 3,4877 3,1216 30 2039 2461 1,9641 1,9641 2041 3661 3,4877 3,1216 30 2461 2461 1,9641 1,9641 2042 3661 3,4877 3,1216 35 2461 2461 1,9641 1,9641 2042 3661 3,4877 3,1216 35 2461 2461 1,9641	54	2033		366.1		366.1	3,487.7		3,487.7	3,121.6	- 24		<u>ຄ</u>	246.1		246.1	1,964.1		1,964.1	1,71
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2036 3661 3681 <th< td=""><td>- 56</td><td>2035</td><td></td><td>366.1</td><td>_</td><td>366.1</td><td>3,487.7</td><td></td><td>3,487.7</td><td>3,121.6</td><td>78</td><td></td><td>5</td><td>246.1</td><td></td><td>246.1</td><td>1,964.1</td><td></td><td>1,964.1</td><td>1,71</td></th<>	- 56	2035		366.1	_	366.1	3,487.7		3,487.7	3,121.6	78		5	246.1		246.1	1,964.1		1,964.1	1,71
2037 3661 3661 34877 34877 31216 29 2037 2461 19641 19641 19641 2038 3661 3661 34877 3,1216 30 2038 2461 19641 19641 19641 2039 3661 3661 34877 3,1216 30 2039 2461 2461 19641 19641 2040 3661 34877 3,4877 3,1216 30 2039 2461 2461 19641 19641 2041 3661 3,4877 3,4877 3,1216 30 2042 2461 19641 19641 2042 3661 3,4877 3,4877 3,1216 35 2042 2461 19641 19641 2044 3661 3,4877 3,4877 3,1216 35 2042 2461 19641 19641 2044 3661 3,661 3,4877 3,4877 3,1216 36 2461 19641 19	7.	2036		366.1		366.1	3,487.7		3,487.7	3,121.6	27		9	246.1		246.1	1,964.1		1,964.1	1,71
2038 3661 3661 34877 3,1216 20 2038 2461 1,9641 1,9641 1,9641 1,9641 2040 3661 3661 34877 3,1216 30 2039 2461 2461 1,9641 1,9641 2040 3661 3,4877 3,1216 30 2004 2461 2461 1,9641 1,9641 2040 3661 3,4877 3,1216 30 2042 2461 2461 1,9641 1,9641 2042 3661 3,4877 3,1216 30 2042 2461 2461 1,9641 1,9641 2043 3661 3,4877 3,1216 35 2044 2461 2461 1,9641 1,9641 2044 3661 3,4877 3,1216 35 2044 2461 2461 1,9641 1,9641 2044 3661 3,4877 3,1216 35 2044 2461 2461 1,9641 1,9641	28	2037		366.1		366.1	3,487.7		3,487.7	3,121.6	78		- 2	246.1		246.1	1,964.1		1,964.1	1,71
2039 366.1 3487.7 3,487.7 3,121.6 30 2039 246.1 246.1 1,964.1	6	2038		366.1	_	366.1	3,487.7		3,487.7	3,121.6	29	_	90	246.1		246.1	1,964.1		1,964.1	1,71
2040 366.1 366.1 368.1 366.1 368.1	 %	2039		366.1		366.1	3,487.7		3,487.7	3,121.6	30		<u>ō</u>	246.1		246.1	1,964.1		1,964.1	1,71
2041 3661 3.4877 3.1216 3.2 2041 2461 2,179.8 2,425.9 1,964.1 1,964.1 2042 3661 3,4877 3,4877 3,1216 34 2042 246.1 2,179.8 2,425.9 1,964.1 1,964.1 2042 3661 3,4877 3,4877 3,1216 35 2042 246.1 2,461 1,964.1 1,964.1 2044 3661 3,4877 3,4877 3,1216 36 246.1 246.1 1,964.1 1,964.1 2045 3661 3,4877 3,4877 3,1216 36 246.1 246.1 1,964.1 1,964.1 2045 366.1 3,4877 3,4877 3,1216 36 246.1 246.1 1,964.1 1,964.1 2049 366.1 3,4877 3,4877 3,1216 40 2046 246.1 1,964.1 1,964.1 2049 366.1 3,4877 3,4877 3,1216 40 2046 246.1	31	2040		366.1		366.1	3,487.7		3,487.7	3,121.6	31		0.	246.1		246.1	1,964.1		1,964.1	1.71
2042 366.1 3,437.0 3,487.7 3,115.4 33 2042 246.1 1,964.1	32	2041		366.1			3,487.7		3,487.7	3,121.6	32			246.1	2,179.8	2,425.9	1,964.1		1,964.1	4
2043 366.1 3487.7 3487.7 31216 34 2043 246.1 246.1 1,964.1	33	2042		366.1	3,437.0		3,487.7		3,487.7	-315.4	33		- 2	246.1		246.1	1,964.1		1,964.1	1,718
2044 366.1 366.1 3487.7 3,121.6 35 2044 246.1 246.1 1,964.1 1,964.1 2045 366.1 3,487.7 3,121.6 36 2045 246.1 246.1 1,964.1 1,964.1 2045 366.1 3,487.7 3,121.6 36 2046 246.1 246.1 1,964.1 1,964.1 2047 366.1 3,487.7 3,121.6 36 2046 246.1 246.1 1,964.1 1,964.1 2048 366.1 3,487.7 3,121.6 40 2049 246.1 246.1 1,964.1 1,964.1 2049 366.1 3,487.7 3,121.6 40 2049 246.1 1,964.1 1,964.1 2041 366.1 3,487.7 3,121.6 40 2049 246.1 1,964.1 1,964.1 2051 366.1 3,487.7 3,121.6 41 2050 246.1 1,964.1 1,964.1 2052 366.1 3,487.7 </td <td>34</td> <td>2043</td> <td></td> <td>366.1</td> <td></td> <td>366.1</td> <td>3,487.7</td> <td></td> <td>3,487.7</td> <td>3,121.6</td> <td>34</td> <td></td> <td></td> <td>246.1</td> <td></td> <td>246.1</td> <td>1,964.1</td> <td></td> <td>1,964.1</td> <td>1,71</td>	34	2043		366.1		366.1	3,487.7		3,487.7	3,121.6	34			246.1		246.1	1,964.1		1,964.1	1,71
2045 366.1 3,487.7 3,121.6 36 2045 246.1 1,964.1 1,964.1 1,964.1 2046 366.1 3,487.7 3,121.6 37 2046 246.1 1,964.1 1,964.1 2047 366.1 3,487.7 3,121.6 39 2048 246.1 1,964.1 1,964.1 2048 366.1 3,487.7 3,121.6 39 2048 246.1 1,964.1 1,964.1 2049 366.1 3,487.7 3,121.6 40 2049 246.1 246.1 1,964.1 1,964.1 2050 366.1 3,487.7 3,121.6 40 2049 246.1 2,46.1 1,964.1 1,964.1 2051 366.1 3,487.7 3,121.6 42 2051 246.1 1,964.1 1,964.1 2052 366.1 3,487.7 3,121.6 42 2052 246.1 1,964.1 1,964.1 2053 366.1 3,487.7 3,487.7 3,121.6 <td< td=""><td>35</td><td>2044</td><td></td><td>366.1</td><td></td><td>366.1</td><td>3,487.7</td><td></td><td>3,487.7</td><td>3,121.6</td><td>35</td><td></td><td>4</td><td>246.1</td><td></td><td>246.1</td><td>1,964.1</td><td></td><td>1,964.1</td><td>1,718</td></td<>	35	2044		366.1		366.1	3,487.7		3,487.7	3,121.6	35		4	246.1		246.1	1,964.1		1,964.1	1,718
2046 366.1 3487.7 3,487.7 3,121.6 37 2046 246.1 1,964.1	96	2045		366.1		366.1	3,487.7		3,487.7	3,121.6	36		5	246.1		246.1	1,964.1		1,964.1	1,71
2047 366.1 3,487.7 3,121.6 38 2047 246.1 1,964.1 1,964.1 1,964.1 2048 366.1 3,487.7 3,121.6 39 2048 246.1 1,964.1 1,964.1 2049 366.1 3,487.7 3,121.6 40 2049 246.1 1,964.1 1,964.1 2050 366.1 3,487.7 3,121.6 41 2050 246.1 2,46.1 1,964.1 1,964.1 2051 366.1 3,487.7 3,121.6 41 2050 246.1 2,46.1 1,964.1 1,964.1 2052 366.1 3,487.7 3,121.6 42 2051 246.1 2,179.8 2,45.1 1,964.1 2053 366.1 3,487.7 3,121.6 42 2053 246.1 2,964.1 1,964.1 2054 366.1 3,487.7 3,121.6 44 2053 246.1 2,964.1 1,964.1 2055 366.1 3,487.7 3,121.6 <td< td=""><td>37</td><td>2046</td><td></td><td>366.1</td><td></td><td>366.1</td><td>3,487.7</td><td></td><td>3,487.7</td><td>3,121.6</td><td>37</td><td></td><td>9</td><td>246.1</td><td></td><td>246.1</td><td>1,964.1</td><td></td><td>1,964.1</td><td>1,718</td></td<>	37	2046		366.1		366.1	3,487.7		3,487.7	3,121.6	37		9	246.1		246.1	1,964.1		1,964.1	1,718
2048 366.1 3,487.7 3,487.7 3,121.6 39 2048 246.1 1,964.1 1,964.1 1,964.1 2049 366.1 3,487.7 3,121.6 40 2269 246.1 1,964.1 1,964.1 1,964.1 2050 366.1 3,487.7 3,121.6 42 2051 246.1 246.1 1,964.1 1,964.1 2051 366.1 3,487.7 3,121.6 42 2051 246.1 2,46.1 1,964.1 1,964.1 2052 366.1 3,487.7 3,121.6 42 2051 246.1 2,964.1 1,964.1 2053 366.1 3,487.7 3,121.6 42 2052 246.1 2,964.1 1,964.1 2054 366.1 3,487.7 3,121.6 44 2053 246.1 246.1 1,964.1 2055 366.1 3,487.7 3,121.6 46 2055 246.1 1,964.1 1,964.1 2055 366.1 3,487.7 3	38	2047		366.1		366.1	3,487.7		3,487.7	3,121.6	38		- 1	246.1		246.1	1,964.1		1,964.1	1,71
2049 366.1 3,487.7 3,121.6 40 2049 246.1 246.1 1,964.1 1,964.1 2050 366.1 3,487.7 3,121.6 41 2050 246.1 2,179.8 2,425.9 1,964.1 1,964.1 2051 366.1 3,487.7 3,121.6 42 2051 246.1 2,179.8 2,425.9 1,964.1 1,964.1 2052 366.1 3,487.7 3,487.7 3,121.6 44 2053 246.1 2,179.8 2,425.9 1,964.1 1,964.1 2053 366.1 3,487.7 3,487.7 3,121.6 44 2053 246.1 2,179.8 2,46.1 1,964.1 1,964.1 2054 366.1 3,487.7 3,121.6 45 2053 246.1 2,194.1 1,964.1 1,964.1 1,964.1 1,964.1 1,964.1 1,964.1 1,964.1 1,964.1 1,964.1 1,964.1 1,964.1 1,964.1 1,964.1 1,964.1 1,964.1 1,964.1 1,964.1	36	2048		366.1		366.1	3,487.7		3,487.7	3,121.6	39			246.1		246.1	1,964.1		1,964.1	1,71
2050 366.1 3,487.7 3,487.7 3,121.6 41 2050 246.1 2,179.8 2,455.9 1,964.1 1,964.1 2051 366.1 3,487.7 3,121.6 42 2051 246.1 2,179.8 2,455.9 1,964.1 1,964.1 2052 366.1 3,487.7 3,121.6 42 2051 246.1 2,179.8 2,455.9 1,964.1 1,964.1 2053 366.1 3,487.7 3,121.6 44 2053 246.1 1,964.1 1,964.1 1,964.1 2054 366.1 3,487.7 3,121.6 45 2053 246.1 1,964.1 1,964.1 1,964.1 2055 366.1 3,487.7 3,121.6 45 2055 246.1 246.1 1,964.1 1,964.1 2056 366.1 3,487.7 3,121.6 47 2056 246.1 246.1 1,964.1 1,964.1 2057 366.1 3,487.7 3,121.6 47 2056 246.1	-	2049		366.1		366.1	3,487.7		3,487.7	3,121.6	40		6:	246.1		246.1	1,964.1		1,964.1	1,71
2051 366.1 3,487.7 3,487.7 3,121.6 42 2051 246.1 2,179.8 2,425.9 1,964.1 1,964.1 2052 366.1 3,487.7 3,487.7 -315.4 43 2052 246.1 2,179.8 2,425.9 1,964.1 1,964.1 2053 366.1 3,487.7 3,121.6 44 2053 246.1 1,964.1 1,964.1 1,964.1 2054 366.1 3,487.7 3,121.6 45 2054 246.1 246.1 1,964.1 1,964.1 1,964.1 2055 366.1 3,66.1 3,487.7 3,121.6 46 2055 246.1 246.1 1,964.1 1,964.1 1,964.1 2056 366.1 3,487.7 3,121.6 46 2055 246.1 246.1 1,964.1 1,964.1 1,964.1 2057 366.1 3,487.7 3,121.6 49 2055 246.1 246.1 1,964.1 1,964.1 2058 366.1 3,487.7 <td>41</td> <td>2050</td> <td></td> <td>366.1</td> <td></td> <td>366.1</td> <td>3,487.7</td> <td></td> <td>3,487.7</td> <td>3,121.6</td> <td>41</td> <td></td> <td>0</td> <td>246.1</td> <td></td> <td>246.1</td> <td>1,964.1</td> <td></td> <td>1,964.1</td> <td>1,71</td>	41	2050		366.1		366.1	3,487.7		3,487.7	3,121.6	41		0	246.1		246.1	1,964.1		1,964.1	1,71
2052 366.1 3,437.0 3,883.1 3,487.7 -315.4 43 2052 246.1 1,964.1 1,964.1 1,964.1 2053 366.1 3,487.7 3,487.7 3,121.6 44 2053 246.1 1,964.1 <td>25</td> <td>2051</td> <td></td> <td>366.1</td> <td></td> <td>366.1</td> <td>3,487.7</td> <td></td> <td>3,487.7</td> <td>3,121.6</td> <td>42</td> <td></td> <td></td> <td>246.1</td> <td>2,179.8</td> <td>2,425.9</td> <td>1,964.1</td> <td></td> <td>1,964.1</td> <td>4</td>	25	2051		366.1		366.1	3,487.7		3,487.7	3,121.6	42			246.1	2,179.8	2,425.9	1,964.1		1,964.1	4
2053 366.1 3,487.7 3,487.7 3,121.6 44 2053 246.1 1,964.1 1,964.1 1,964.1 2054 366.1 3,487.7 3,121.6 45 2054 246.1 246.1 1,964.1 1,964.1 2055 366.1 3,66.1 3,487.7 3,121.6 46 2055 246.1 246.1 1,964.1 1,964.1 2056 366.1 3,66.1 3,487.7 3,121.6 47 2056 246.1 246.1 1,964.1 1,964.1 2057 366.1 3,487.7 3,121.6 48 2057 246.1 246.1 1,964.1 1,964.1 2058 366.1 3,487.7 3,121.6 49 2058 246.1 1,964.1 1,964.1 2058 366.1 3,487.7 3,121.6 49 2058 246.1 1,964.1 1,964.1 2058 366.1 3,487.7 3,121.6 49 2058 246.1 1,964.1 1,964.1	43	2022		366.1	3,437.0	3,803.1	3,487.7		3,487.7	-315.4	43		- 2	246.1	-	246.1	1,964.1		1,964.1	1,71
2054 366.1 3,487.7 3,487.7 3,121.6 45 2054 246.1 1,964.1	4	2053		366.1		366.1	3,487.7		3,487.7	3,121.6	4		<u> </u>	246.1		246.1	1,964.1		1,964.1	1,718
2055 366.1 3,487.7 3,487.7 3,121.6 46 2055 246.1 1,964.1	45	2054		366.1		366.1	3,487.7		3,487.7	3,121.6	45		-	246.1		246.1	1,964.1		1,964.1	1,71
2056 366.1 3,487.7 3,487.7 3,121.6 47 2056 246.1 1,964.1		2055		366.1		366.1	3,487.7		3,487.7	3,121.6	46		5	246.1		246.1	1,964.1		1,964.1	1,718
2057 366.1 3,487.7 3,121.6 48 2057 246.1 1,964.1	74	2056		366.1		366.1	3,487.7		3,487.7	3,121.6	47			246.1		246.1	1,964.1		1,964.1	1,718
2058 366.1 3,487.7 3,121.6 49 2058 246.1 1,964	<u>*</u>	2057		366.1		366.1	3,487.7		3,487.7	3,121.6	48			246.1		246.1	1,964.1		1,964.1	1,71
	49	2058	•	366.1		366.1	3,487.7		3,487.7	3,121.6	- 49			246.1		246.1	1,964.1		1,964.1	1,718

Table G2-7 Economic Cost and Benefit Stream (17/22)

Table G2-7 Economic Cost and Benefit Stream (18/22)

EIRR:	7.8%		Net Present	<u>=</u>	(illion)		Benefit	Cost	B/C Ratio	EIRR:	EIRR: 4.1%		Net Present	Net Present Value (Riel Million)	Million)		Benefit	Cost	B/C Ratio
				8.00	% discount rate)	(te)	3,117	3,193	0.98					8.00	% discount rate)	rate)	2,318	3,550	0.65
Year			Econon	Economic Cost		Ē	Economic Benefi		Net Net	Year	ļ		Есопоп	Economic Cost			Economic Benefit		(Unit : Riel Million)
in	Year	Initial Investment	Annual O&M	Major Repairing	Total	Irrigation	Production Foregone	Total	Cash	in	Year	Initial	Annual	Major	Total	Irrigation	Production Foregone	Total	Cash
	2010	305.2	<u> </u>		305.2		0	0.0	-305.2	1	+	336.4			336.4		amagana :	0.0	-336.4
۳ ۲۹	2011	2,800.7	8		2,800.7	244 1		0.0	-2,800.7		2011	3,079.0	10.2		3,079.0	182.4		0.0	-3,079.0
, 4	2013	8.3	_		25.1	274.6		274.6	249.5	. 4	2013	7.7	20.4		28.1			189.0	160.9
S	2014				28.0	305.1		305.1	277.1	S	2014		34.0		34.0			228.0	194.0
9 1	2015		28.0		28.0	305.1		305.1	277.1	9	2015		34.0		34.0		**********	228.0	194.0
۰ ۵	2016		28.0		28.0	305.1		305.1	277.1		2016		34.0		34.0			228.0	0.75
0 0	2018		28.0		28.0	305.1		305.1	277.1	• •	2018		34.0		34.0	228.0		228.0	0.4.0 0.4.0
10	2019		28.0		28.0	305.1		305.1	277.1	10	2019		34.0		34.0			228.0	194.0
= :	2020		28.0		28.0	305.1		305.1	277.1	= :	2020		34.0		34.0			228.0	194.0
7 5	2021		78.0	278.4	306.4	305.1		305.1	-1.3	12	2021		34.0	320.6	354.6			228.0	-126.6
. T	2022		280		28.0	305.1		305.1	277.1	CI 1	2027		4, 5, 0, 0, 0		2, 2,			228.0	194.0
15	2024		28.0	not are that of the	28.0	305.1		305.1	277.1	15	2024		34.0		34.0	228.0		228.0	194.0
16	2025		28.0	No. Calabase Co.	28.0	305.1		305.1	277.1	16	2025		34.0		34.0			228.0	194.0
17	2026		28.0		28.0	305.1		305.1	277.1	17	2026		34.0		34.0			228.0	194.0
æ c	2027		28.0		28.0	305.1		305.1	277.1	<u> </u>	2027		34.0		34.0			228.0	194.0
20.7	2029		280		28.0	305.1		305.1	277.1	20 20	2029		, 4 0 4 0 0		2, 2,	228.0		228.0	194.0
21	2030		28.0		28.0	305.1		305.1	277.1	21	2030		34.0		34.0			228.0	194.0
22	2031		28.0	278.4	306.4	305.1		305.1	-1.3	22	2031		34.0	320.6	354.6	228.0		228.0	-126.6
5 23	2032		28.0		28.0	305.1		305.1	277.1	- 73	2032		34.0		34.0			228.0	194.0
25	2034		28.0	*********	28.0	305.1	•	305.1	277.1		2033		34.0		34.0			228.0	0.70
792	2035		28.0		28.0	305.1		305.1	277.1	78	2035		34.0		34.0	228.0		228.0	194.0
27	2036		28.0		28.0	305.1		305.1	277.1	27	2036		34.0		34.0			228.0	194.0
788	2037		28.0		28.0	305.1		305.1	277.1		2037		34.0		34.0			228.0	194.0
30.	2030		280		28.0	305.1		305.1	277.1	5 F	2030		24.0		2.4.0			228.0	104.0
31	2040		28.0		28.0	305.1		305.1	277.1	3.5	2040		34.0		34.0			228.0	194.0
32	2041		28.0	278.4	306.4	305.1		305.1	-1.3	32	2041		34.0	320.6	354.6			228.0	-126.6
33	2042		28.0		28.0	305.1		305.1	277.1	3	2042		34.0		34.0			228.0	194.0
3.5	2045		28.0		28.0	305.1		305.1	277.1		2045		34.0		34.0			0.822	194.0
36	2045		28.0		28.0	305.1		305.1	277.1	36	2045		34.0		34.0			228.0	1940
37	2046		28.0		28.0	305.1		305.1	277.1	37	2046		34.0		34.0			228.0	194.0
38	2047		28.0		28.0	305.1		305.1	277.1	38	2047		34.0		34.0			228.0	194.0
6 4	2048		28.0		28.0	305.1		305.1	277.1	ες 4	2048		34.0		34.0	228.0		228.0	194.0
41	2050		28.0		28.0	305.1		305.1	277.1	4	2050		34.0		34.0			228.0	194.0
42	2051		28.0	278.4	306.4	305.1		305.1	-1.3	42	2051		34.0	320.6	354.6			228.0	-126.6
43	2052		28.0		28.0	305.1		305.1	277.1	43	2052		34.0		34.0			228.0	194.0
4 4	2053		28.0		28.0	305.1		305.1	277.1	4 4	2053		34.0		34.0	228.0		228.0	194.0
45	2024		0.87		78.0	305.1		305.1	277.1	4 4	2024		34.0		34.0			228.0	194.0
47	2056		280		28.0	305.1		305.1	277.1	0 4 7	2056		34.0		34.0	228.0		228.0	194.0
48	2057		28.0		28.0	305.1		305.1	277.1	48	2057		34.0		34.0			228.0	194.0
46	2058		28.0		28.0	305.1		305.1	277.1	49	2058		34.0		34.0			228.0	194.0
20	2059		28.0		28.0	305.1		305.1	277.1	20	2059		34.0		34.0	228.0		228.0	194.0

Table G2-7 Economic Cost and Benefit Stream (19/22)

Table G2-7 Economic Cost and Benefit Stream (20/22)

	Net Present	Net Present Value (Riel Million)	fillion)		Benefii	Cost	B/C Ratio	EIRR:	R: 7.6%		Net Present	Net Present Value (Riel Million)	Million)		Benefit	Cost	B/C Ratio
		8.00	% discount rate)	te)	12,382	9,606	06 1.29			\neg		8.00	% discount rate	ate)	2,658	2,754	0.97
	Economic Cost	ic Cost		品	Economic Benefit		Net	Year	II.		Econon	nic Cost			Economic Benefi		Unit: Kiel Mittion
Initial Investment	20	Major Repairing	Total	Irrigation	Production Foregone	Total	Cash Flow	in	Year	r Initial Investment	Annual Majo	Major Repairing	Total	Irrigation	Production Foregone	Total	Cash
852.4	4		852.4			0.0	-852.4	1 ,	2010	 	<u> </u>		249.8			0.0	-249.8
130.0	30.6		160.6	969.4		969.4	808.9	1 m	2012		10.2		53.0	208.1		208.1	155.0
14			76.1	1,090.6		1,090.6	1,014.5	4	2013	8.8	20.4		29.2			234.1	204.9
			102.0	1,211.8		1,211.8	1,109.8		2014		34.0		34.0			260.1	226.1
	102.0		102.0	1,211.8		1,211.8	1,109.8	9	2015		34.0		34.0	260.1	-	260.1	226.1
	102.0		102.0	1,211.8		1,211.8	1,109.8	7	2016	2	34.0		34.0			260.1	226.1
	102.0		102.0	1,211.8		1,211.8	1,109.8	∞	2017	_	34.0		34.0			260.1	226.1
	102.0		102.0	1,211.8		1,211.8	1,109.8	6	2018	~	34.0		34.0			260.1	226.1
	102.0		102.0	1,211.8		1,211.8	1,109.8	10	2019	_	34.0		34.0			260.1	226.1
	102.0		102.0	1 211 8		12118	1 109.8	=	2020		340		34.0			260.1	226.1
	1020	0753	1 0273	9117		91121	197.5		202	····	24.0	3000	227.0			360.1	1.077
	102.0	5.62.5	5.720,1	0,117,1		0,112,1	100.0	7 [707		24.0	5005	234.9			7007	-/4.0
	0.201		102.0	1,211.8		1,211.8	1,109.8		7707		34.0		34.0			7007	770.1
	102.0		102.0	1,211.8		1,211.8	1,109.8	14	2023		34.0		34.0			260.1	226.1
	102.0		102.0	1,211.8		1,211.8	1,109.8	15	2024		34.0		34.0	260.1		260.1	226.1
	102.0		102.0	1,211.8		1,211.8	1,109.8	16	5025	10	34.0		34.0	260.1		260.1	226.1
	102.0		102.0	1,211.8		1,211.8	1,109.8	17	2026	,,	34.0		34.0	260.1		260.1	226.1
	102.0		102.0	1.211.8		1.211.8	1,109.8	18	2027		34.0		34.0			260.1	226.1
	102.0		102.0	1.211.8		1211.8	1.109.8	- 61			34.0		340			260 1	226.1
	102.0		102.0	1 211 8		1 211 8	1 109 8	-		. ~	340		34.0			260.1	226
	102.0		102.0	1 211 8		1 211 8	1 109.8	_			340		34.0			260.1	226.1
	102.0	9253	1 027 3	1 211 8		1 211 8	184 5	22	_		340	300 9	3349			260.1	24.5
	10.20		102.0	1 2 1 1 8		1 2 1 1 8	1 109 8	7 1		. ~	340		34.0			260.1	226.1
	0.201		102.0	0.112,1		0.112,1	1,100.6	1 6			0.7.0		2.50			200.1	226.
	1020		102.0	1,211.6		0.112,1	1,100.6	1, 5			340		34.0			2,007	226.
	102.0		102.0	0.117.1		0.112,1	1,107.0	- 4	-		2.5		2.5			200.1	770.1
	102.0		102.0	1,211.8		1,211.8	1,109.8	79			34.0		34.0			260.1	226.1
	102.0		102.0	1,211.8		1,211.8	1,109.8	27			34.0		34.0			260.1	226.1
	102.0		102.0	1,211.8		1,211.8	1,109.8	- 28			34.0		34.0	260.1		260.1	226.1
	102.0		102.0	1,211.8		1,211.8	1,109.8	29	2038		34.0		34.0	260.1		260.1	226.1
	102.0		102.0	1.211.8		1.211.8	1.109.8	30	2039		34.0		34.0			260.1	226.1
	102.0		102.0	1 211 8		1211.8	1 109.8	31		_	340		34.0			260.1	226.1
	10.01	9253	1 027 3	1 2 1 1 8		1 211 8	184.5	3.5			340	3000	334 0			260.1	2 74 8
	102.0		1020	1 211 8		1 211 8	1 100 8	- 5	-		340		37.0			260.1	3.76
	0.00		201	0.110.1		1,411.0	1,100.0	-					2 .			200.1	2000
	102.0		102.0	0.112,1		0.112,1	1,109.0	ξ ;			24.0		24.0			200.1	770.1
	107.0		102.0	1,411.6		0.117,	1,109.6	લ :	-		0.4.0		0.4°C			7007	770.1
	102.0		102.0	1,211.8		1,211.8	1,109.8	36		· ·	34.0		34.0			260.1	226.1
	102.0		102.0	1,211.8		1,211.8	1,109.8	37	2046		34.0		34.0	260.1		260.1	226.1
	102.0		102.0	1,211.8		1,211.8	1,109.8	38	2047	_	34.0		34.0	260.1		260.1	226.1
	1020		102.0	1 211 8		1 211 8	1 100 8	30			340		340			260.1	1966
	10.20		102.0	1 211 8		1 2 1 1 8	1 100 8	40	-		340		34.0			260.1	226.1
	1020		1030	0 110		1 211 8	1 100 0	-	-		27.0		27.0			260.1	200
	0.70	,	102.0	0.112,1		0.117.1	1,107.6	; ;			0.0	0	0.4.0			200.1	220.1
	102.0	C.C2%	1,027.5	0.112,1		1,211.6	184.5	4:			0.4.0	300.9	534.9			200.1	-/4.
	107.0		102.0	1,211.8		1,211.8	1,109.8	- 45			34.0		34.0			260.1	776.1
	102.0		102.0	1,211.8		1,211.8	1,109.8				34.0		34.0			260.1	226.1
	102.0		102.0	1,211.8		1,211.8	1,109.8	45			34.0		34.0			260.1	226.1
	102.0		102.0	1,211.8		1,211.8	1,109.8	46	2055	ıc	34.0		34.0	260.1		260.1	226.1
	102.0		102.0	1,211.8		1,211.8	1,109.8	47	2056	٠,	34.0		34.0			260.1	226.1
	102.0		102.0	1,211.8		1,211.8	1,109.8	48		_	34.0		34.0	260.1		260.1	226.1
	102.0		102.0	1,211.8		1 211 8	1 100 8	70		_					_		
						1,411.0	1,107.0	<i>}</i>	7028	_	34.0		34.0	260.1		260.1	226.1

Table G2-7 Economic Cost and Benefit Stream (21/22)

Table G2-7 Economic Cost and Benefit Stream (22/22)

	Net Present	Net Present Value (Riel Million)	(illion)		Renefit	Coet	R/C Patio	FIRE	7 1%	_	Not Prosont	Not Present Volue (Riel Million)	William		Ronofit	Cost	B/C Datio
)	8.00	% discount rate)	9	4.192	2,684	1.56)	8.00	% discount rate)	rate)	1 262	1368	0.92
.						(Unit	Rie			7						Chris	(Unit : Riel Million)
	Economic Cost	ic Cost		Æ	Economic Benefit		Net	Year	_		Econon	Economic Cost		E	Economic Benefit	t	Net
Initial Investment	Annual O&M	Major Repairing	Total	Irrigation	Production Foregone	Total	Cash Flow	in Order	Year	Initial Investment	Annual O&M	Major Repairing	Total	Irrigation	Production Foregone	Total	Cash
231.8			231.8			0.0	-231.8	- ,	2010	 			118.9		0	0:0	-118.9
41.7	10.2		51.9	328.2		328.2	276.4	4 100	2012		4 8		786	8 86		0.00	-1,141.9
9.0	20.4		29.4	369.3		369.3	339.9	4	2013	7.3			16.9	_		111.2	94.2
	34.0		34.0	410.3		410.3	376.3	5	2014		_		16.0			123.5	107.5
	34.0		34.0	410.3		410.3	376.3	9	2015		16.0		16.0	123.5		123.5	107.5
	34.0		34.0	410.3		410.3	376.3	7	2016		16.0		16.0			123.5	107.5
	34.0		34.0	410.3		410.3	376.3	•••	2017		16.0		0'91			123.5	107.5
	34.0		34.0	410.3		410.3	376.3	- 6	2018		16.0		16.0			123.5	107.5
	34.0		34.0	410.3		410.3	376.3	≘ :	2019		16.0		0.91			123.5	107.5
	0.45	7220	0.45	410.3		410.3	3/6.3	= :	2020		16.0		16.0			123.5	107.5
	0.4.0	0.612	309.0	410.3		410.3	376.3	7 5	2021		0.61	145.4	159.4			123.5	45.9
	34.0		2, 2	410.7		410.7	3763		2022		16.0		16.0	123.3		7 2 2 1	107.5
	34.0		2. 2.	410.3		410.3	376.3		202		16.0		16.0			122.5	107.5
	34.0		0.45	410.3		410.3	3763	51	202		16.0		10.0			7.551	107.5
	34.0		2. 4	4103		410.3	3763	- 1	202		16.0		16.0			123.5	107.5
	340		34.0	4103		4103	3763	: ==	2027		16.0		16.0			123.5	107.5
	34.0		34.0	410.3		410.3	376.3	19	2028		16.0		16.0			123.5	107.5
	34.0		34.0	410.3		410.3	376.3	2	2029		16.0		16.0			123.5	107.5
	34.0		34.0	410.3		410.3	376.3	21	2030		16.0		16.0			123.5	107.5
	34.0	275.6	309.6	410.3		410.3	100.7	22			16.0	143.4	159.4			123.5	-35.9
	34.0		34.0	410.3		410.3	376.3	23	2032		16.0		16.0			123.5	107.5
	34.0		34.0	410.3		410.3	376.3	- 24			16.0		16.0			123.5	107.5
	34.0		34.0	410.3		410.3	376.3	- 23			16.0		16.0			123.5	107.5
	34.0		34.0	410.3		410.3	376.3	79			16.0		16.0			123.5	107.5
	34.0		34.0	410.3	•	410.3	376.3	27	2036		16.0		16.0			123.5	107.5
	0.4.0		34.0	410.3		410.3	3/6.3	2 8			16.0		0.01		•••	123.5	107.5
	24.0		0.4.0	410.3		410.3	376.3	S 6			10.0		10.0			5.621	107.5
	0.45		0.4.6	410.3		410.3	3/6.3	3 :	2039		16.0		16.0	123.5		123.5	107.5
	0.4.5	2350	7 66	410.3		410.3	5,00.5	7 (10.0		160			123.3	5.701
	34.0	0.012	34.0	410.3		410.3	176.1	7 55	207		16.0	4.04	159.4	122.5		2.621	7.00-
	340		340	4103		4103	3763	3.5	2043		16.0		16.0			123.5	107.5
	340		340	4103		4103	3763	35	2044		16.0		16.0			123.5	107.5
	34.0		34.0	4103		4103	3763	3,6			160		16.0			123.5	107.5
	34.0		34.0	410.3		410.3	376.3	37			16.0		160			123.5	107.5
	34.0		34.0	410.3		410.3	376.3	38	2047	_	16.0		16.0			123 5	107.5
	34.0		34.0	410.3		410.3	376.3	36	2048		16.0		16.0			123.5	107.5
	34.0		34.0	410.3		410.3	376.3	- 4	2049	_	16,0		16.0			123.5	107.5
	34.0		34.0	410.3		410.3	376.3	4	2050	_	16.0		16.0			123.5	107.5
	34.0	275.6	309.6	410.3		410.3	100.7	42	2051		16.0	143.4	159.4			123.5	-35.9
	34.0		34.0	410.3		410.3	376.3	43	2052		16.0		16.0			123.5	107.5
	34.0		34.0	410.3		410.3	376.3	44	2053		16.0		16.0			123.5	107.5
	34.0		34.0	410.3		410.3	376.3	45	2054		16.0		16.0			123.5	107.5
	34.0		34.0	410.3		410.3	376.3	46	2055		16.0		16.0			123.5	107.5
	34.0		34.0	410.3		410.3	376.3	47	2056		16.0		16.0			123.5	107.5
	34.0		34.0	410.3		410.3	376.3	48	2057	_	16.0		16.0			123.5	107.5
	34.0		34.0	410.2								_	_			_	
			7	7.01	_	410.3	376.3	49	2058		16.0		16.0	123.5		123.5	107.5

Table G2-8 Comparison of Economic Viability of 21 Projects

			Proposed	Investment Cost	ıt Cost	Increase in		Z	NPV (8% discount rate)	count rate)	
		Project	Irri. Area	Total	Per ha	Production	EIRR	Benefit	Cost	B-C	B/C
			(ha)	(1000USD)	(USD)	(paddy ton)	(%)	(Million Riel)	(Million Riel)	(Million Riel) (Million Riel) (Million Riel)	Ratio
	1 BTB-01	1 Kong Hort Rehabilitation (Phase I)	10,040	27,267	2,716	17,844	8.7	97,520	91,673	5,847	1.06
. 4	2 BTB-01	I Kong Hort Rehabilitation (Phase II)	2,733	9,340	3,418	3,293	3.3	21,901	35,373	-13,472	0.62
	3 BTB-02	2 Sala Taon Weir Rehabilitation	10,400	58,239	5,600	17,815	2.7	99,184	186,699	-87,515	0.53
	BTB-02	2 Sala Taon Weir Rehabilitation (Alternative)	10,400	41,983	4,037	17,815	3.3	77,162	135,427	-58,265	0.57
7	4 BTB-03	3 Ratanak-Battambang Water Harvest. Rehabil	280	2,266	3,907	944	4.9	6,517	8,720	-2,203	0.75
41	5 MRB-01	1 Bassac Reservoir Rehabilitation	3,500	7,447	2,128	5,801	11.0	35,007	26,911	8,096	1.30
	6 MRB-02	2 Ream Kon Rehabilitation	2,300	5,357	2,329	3,822	10.5	24,776	19,959	4,818	1.24
• • •	7 MRB-03	3 Por Canal Rehabilitation	1,200	2,402	2,002	2,023	12.4	12,945	9,132	3,814	1.42
	8 MRB-0	MRB-04 Nikom Le/Dai Ta Chan Rehabilitation	009	2,150	3,584	1,206	9.7	7,488	7,787	-300	96.0
	9 PRB-01	Beoung Preah Ponley Rehabilitation	8,500	18,897	2,223	18,511	11.9	89,127	63,227	25,900	1.41
10	DRB-02	2 Damnak Ampil Extension	8,000	17,175	2,147	12,259	11.1	74,452	57,258	17,194	1.30
	1 PRB-03	3 Wat Loung Rehabilitation	3,940	8,545	2,169	7,624	11.4	42,514	30,939	11,575	1.37
12	2 PRB-04	t Wat Chre Rehabilitation	1,000	2,800	2,800	2,063	9.4	12,244	10,676	1,569	1.15
13	3 PRB-05	o Anlong Knouchi, Wat Leal, Kosh Khsach,	2 602	9209	2 825	3 709	۷ «	23 874	22 853	1 00 1	104
	Wa	Watger Harvest. & Recession Rice Rehabilitation	2,004	0,000	2,92	52.5		1,0,07	77,000	1,041	r 0:-
14		BRB-01 Lum Hach Rehabilitation	3,700	10,174	2,750	5,038	7.1	32,215	35,509	-3,294	0.91
15	5 BRB-02	2 7th January Canal Rehabilitation	2,000	5,339	2,670	2,789	7.3	19,635	21,083	-1,448	0.93
16	5 BRB-03	3 Khvet Rehabilitation	250	890	3,560	488	7.8	3,117	3,193	9/-	0.98
17	7 BRB-04	4 Ta Ram Rehabilitation	180	981	5,448	351	4.1	2,318	3,550	-1,232	0.65
18	8 BRB-05	5 Chak Teum, Trpean Khlong	086	2,465	2,515	1,911	11.0	12,382	9,606	2,776	1.29
		& Don Poy Rehabilitation		`		`		`			
19		BRB-06 Teuk Laak & Trapeang Thlan Rehabilitation	230	744	3,233	446	7.6	2,658	2,754	96-	0.97
20		BRB-07 Toul Champey Rehabilitation	360	685	1,901	702	13.9	4,192	2,684	1,509	1.56
21	1 BRB-08	8 Chan Keak Rehabilitation	110	355	3,229	206	7.1	1,262	1,368	-106	0.92
		Total & Average	63,205	189,553	2,999	108,845					

Table G2-9 Annual Paddy Production Increas in Proposed Project Area

		Present/Without	Without				Ę.	Future/With					Production
	Project Code & Project Name	Area	Production	Area	Ýear 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Increase
	,	(ha)	(ton)	(ha)	(ton)	(ton)	(ton)	(ton)	(ton)	(ton)	(ton)	(ton)	(ton)
1 BTB-01	BTB-01 Kong Hort Rehabilitation (Phase I)	10,560	11,463	10,040	11,463	11,463	11,463	17,584	20,515	23,446	26,376	29,307	17,844
2 BTB-01	BTB-01 Kong Hort Rehabilitation (Phase II)	2,884	4,664	2,733	4,664	4,664	5,570	998'9	7,161	7,957	7,957	7,957	3,293
, OTT-0	Sala Taon Weir Rehabilitation	10.012	12 402	10 400	12 402	12 492	12 492	19 215	21.251	786 16	77 277	30 358	16.875
- 70-919 c	Sala Taon Weir Rehabilitation (Alternative	10,013	15,465	10,400	13,463	13,403	13,403	10,61	167,17	74,200	776,17	00000	10,01
4 BTB-03	BTB-03 Ratanak-Battambang Weir Rehabilitation	594	757	580	757	757	1,354	1,524	1,693	1,693	1,693	1,693	936
5 MRB-01	5 MRB-01 Bassac Reservoir Rehabilitation	4,120	4,759	3,500	4,759	4,759	4,759	8,448	9,504	10,560	10,560	10,560	5,801
6 MRB-02	6 MRB-02 Ream Kon Rehabilitation	2,670	3,112	2,300	3,112	3,112	5,547	6,241	6,934	6,934	6,934	6,934	3,822
7 MRB-03	7 MRB-03 Por Canal Rehabilitation	1,340	1,598	1,200	1,598	1,598	2,896	3,258	3,620	3,620	3,620	3,620	2,022
8 MRB-04	8 MRB-04 Nikom Le/Dai Ta Chan Rehabilitation	700	815	009	815	815	1,616	1,818	2,020	2,020	2,020	2,020	1,205
9 PRB-01	PRB-01 Beoung Preah Ponley Rehabilitation	8,643	12,671	8,500	12,671	12,671	12,671	18,709	21,827	24,946	28,064	31,182	18,511
10 PRB-02	PRB-02 Damnak Ampil Extension	8,050	17,096	8,000	17,096	17,096	17,096	17,613	20,549	23,484	26,420	29,355	12,259
11 PRB-03	PRB-03 Wat Loung Rehabilitation	4,335	6,407	3,940	6,407	6,407	6,407	9,822	11,225	12,628	14,031	14,031	7,624
12 PRB-04	PRB-04 Wat Chre Rehabilitation	1,000	1,521	086	1,521	1,521	2,509	2,867	3,226	3,584	3,584	3,584	2,063
13 PRB-05	PRB-05 Ou Tapoung/Boueng Khnar Water	2,614	4,963	2,602	4,963	4,963	6,070	6,938	7,805	8,672	8,672	8,672	3,709
ł	Harvesting & Kecession Kice Kenabilitation								0,0		000	0.00	000
14 BRB-01	Lum Hach Rehabilitation	4,000	7,913	3,700	7,913	7,913	7,913	9,065	10,360	11,655	12,950	12,950	5,037
15 BRB-02	BRB-02 7th January Canal Rehabilitation	2,170	4,212	2,000	4,212	4,212	4,900	5,600	6,300	7,000	7,000	7,000	2,788
16 BRB-03	Khvet Rehabilitation	250	388	250	388	388	700	788	875	875	875	875	487
17 BRB-04	BRB-04 Ta Ram Rehabilitation	180	279	180	279	279	504	267	630	630	630	630	351
18 BRB-05	BRB-05 Chak Teum, Trpean Khlong	086	1,519	086	1,519	1,519	2,744	3,087	3,430	3,430	3,430	3,430	1,911
	& Don Poy Rehabilitation	230	357	230	357	357	644	725	805	805	805	805	448
19 BRB-06	BRB-06 Teuk Laak & Trapeang Thlan Rehabilitatiq	7.70	, 77	3			-			3		;	
20 BRB-07	BRB-07 Toul Champey Rehabilitation	360	558	360	558	258	1,008	1,134	1,260	1,260	1,260	1,260	702
21 BRB-08	Chan Keak Rehabilitation	110	179	110	179	179	308	347	385	385	385	385	206
	Total	66,603	98,714	73,605	98,714	98,714	110,163	140,713	161,374	179,870	194,588	206,608	107,894
					0	0	11,449	41,999	62,660	81,156	95,874	107,894	

Table G3-1 Financial Crop Budget of Rice under Present/Without Project Condition

Normal irrigated area Normal irrigated area Supplemental irrigated area Normal irrigated area Alue Qly Price Value Qly			Ear	Early Wet Season	ISON				Wet Sea	Wet Season Transplanting	anting					3	Wet Season Direct Sowing	irect Sowin	_	
Charles Char	t t	1111	Norm	al irrigate	d area	Norma	l irrigated	area	Suppleme	ntal irrigat	ed area	2	ainfed area		Norm	l irrigated	area	Suppleme	Supplemental irrigated area	ed area
Richard Rich	TION TO THE TION THE TION TO T		Q'ty	Price	Value		Price	Value	Ą.O	Price	Value	Q.	Price	Value	Q'ty	Price	Value	O'ty	Price	Value
ctsts Riel 3,000 560 1,764 1,764 2,000 560 1,776 4 2,000 560 1,764 2,000 28 1,176 1,500 560 42 2,000 560 1,600 560 1,600 560 1,500 560 1,500 560 1,500 560 1,500 560 1,500 560 1,500 560 1,500 560 1,500 560 1,500 560 1,500 560 1,500 560 1,500 560 1,500 560 1,500 57 1,600 57 1,600 57 1,600 1,500 500 1,500 500 1,500 500 1,500 500 1,500 500 1,500 500 1,500 500 1,500 500 1,500 500 1,500 500 1,500 500 1,500 500 1,500 500 1,500 500 1,500 500 1,500 500 1,500 500 1				(Riel)	('000 Riel)		(Riel)	('000 Riel)		(Riel)	('000 Riel)		(Riel)	('000 Riel)		(Riel)	('000 Riel)		(Riel)	('000 Riel)
kg 3,000 560 1,680 3,000 560 1,880 2,000 560 1,120 1,500 560 840 2,000 560 1,120 1,500 580 840 2,000 580 1,120 1,500 28 3,11 2,000 580 3,11 3,000 28 3,11 3,000 38 3,11 3,000 39 3,000 30	1. Gross Income	Riel			1,764			1,764			1,176			882			1,176			882
Kg 5,000 28 84 3,000 28 84 2,000 28 56 1,500 28 42 2,000 28 84 80 80 80 80 80 80 8	Main products	kg	3,000	260	1,680	3,000	999	1,680	2,000	960	1,120	1,500	260	840	2,000	260	1,120	1,500	560	840
st Riel 775 777 668 571 241 571 241 571 240 240 241 <td>By-product (straw)</td> <td>kg</td> <td>3,000</td> <td>28</td> <td>84</td> <td>3,000</td> <td>28</td> <td>84</td> <td>2,000</td> <td>28</td> <td>99</td> <td>1,500</td> <td>28</td> <td>42</td> <td>2,000</td> <td>28</td> <td>26</td> <td>1,500</td> <td>28</td> <td>42</td>	By-product (straw)	kg	3,000	28	84	3,000	28	84	2,000	28	99	1,500	28	42	2,000	28	26	1,500	28	42
Kg 6.6 560 340 80 560 45 80 560 45 80 560 45 80 560 45 100 9 560 45 100 9 9 560 45 80 560 45 100 9	2. Production Cost	Riel			765			777			899			571			750			733
kg 60 560 34 80 560 45 80 560 45 120 560 45 120 560 45 100 90 30,000 <	2.1 Inputs	Riel			329			340			241			200			230			198
Kg 115 1,640 189 115 1,640 189 75 1,640 123 60 1,640 98 60 1,640 1,550	Seed	kg	99	260	34	80	999	45	80	260	45	80	260	45	120	260	29	120	999	67
kg 115 1,640 189 75 1,640 123 60 1,640 98 60 1,640 189 75 1,640 123 60 1,640 98 60 1,640 1,550 0 1,550 0 1,550 0 1,550 0 1,550 0 1,550 0 1,550 0 1,550 0 1,550 0 1,550 0 1,550 0 1,550 0 1,550 0 1,550 0 1,550 0 1,550 0 1,550 0 1,550 0 1,550	Manure (wet)	ton	0	30,000	0	0	30,000	0	0	30,000	0	0	30,000	0	0	30,000	0	0	30,000	0
kg 115 1,640 189 75 1,640 123 66 1,640 98 60 1,640 98 60 1,640 98 60 1,640 98 60 1,640 98 60 1,640 98 60 1,640 98 60 1,640 98 60 1,640 90 1,640 90 1,630 77 40 1,630 Riel Riel 0 5,250 0 0 5,250 0 0 5,250 0 1,630 ion Riel 10 6,400 64 0 6,400 58 8 6,400 51 0 5,250 0 1,530 0 5,250 0 0 5,250 0 0 5,250 0 0 5,250 0 0 5,250 0 0 5,250 0 0 5,250 0 0 5,250 0 0 1,550 0 0 1,550 <td>Fertilizer</td> <td></td>	Fertilizer																			
kg 65 1,630 106 65 1,630 106 45 1,630 73 35 1,630 57 40 1,630 icals liter 0 5,250 0 0 5,250 0 0 5,250 0 0 1,540 0 0 0 0 <t< td=""><td>Urea</td><td>kg</td><td>115</td><td>1,640</td><td>189</td><td>115</td><td>1,640</td><td>189</td><td>75</td><td>1,640</td><td>123</td><td>09</td><td>1,640</td><td>86</td><td>09</td><td>1,640</td><td>86</td><td>20</td><td>1,640</td><td>82</td></t<>	Urea	kg	115	1,640	189	115	1,640	189	75	1,640	123	09	1,640	86	09	1,640	86	20	1,640	82
Riel	DAP	kg S	65	1,630	106	65	1,630	106	45	1,630	73	35	1,630	57	40	1,630	65	30	1,630	49
icals liter 0 5,250 0 0 5,250 0 0 5,250 0 0 5,250 0 0 5,250 0 0 5,250 0 0 5,250 0 0 5,250 0 0 5,250 0 0 5,250 0 0 5,250 0 0 5,250 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	KCI	Kg 8	0	1,550	0	0	1,550	0	0	1,550	0	0	1,550	0	0	1,550	0	0	1,550	0
Riel 64 64 64 9 6,400 58 8 6,400 51 12 6,400 ion manday 89 0 0 64 9 6,400 58 8 6,400 51 12 6,400 al/Tractor Riel 1 250 0 74 0 0 61 0 6,400 51 12 6,400 51 0 6,400 51 12 6,400 51 12 6,400 51 6,400 51 6,400 51 6,400 51 6,400 51 6,400 51 6,400 51 6,400 51 6,400 51 6,400 51 6,400 51 6,400 60 61 6,400 60 61 61 0 61 0 61 0 61 0 61 0 61 61 0 61 0 61 61 61 61 61 <	Agro-chemicals	liter	0	5,250	0	0	5,250	0	0	5,250	0	0	5,250	Q	0	5,250	0	0	5,250	0
r manday 10 6,400 64 10 6,400 64 9 6,400 58 8 6,400 51 12 6,400 r manday 89 0 0 79 0 79 0 74 0 61 0 sion Riel 1 250,000 250 1 250,000 250 1 250,000 250 1 250,000 250 1 250,000 250 1 250,000 250 1 250,000 250 1 250,000 250 1 250,000 250 1 250,000 250 1 250,000 250 1 250,000 250 1 250,000 250 1 250,000 250 1 250,000 250 1 250,000 250 1 250,000 2 2 2 2 2 2 2 2 2 2 2 2 2 2 <t< td=""><td>2.2 Labor</td><td>Riel</td><td></td><td></td><td>64</td><td></td><td></td><td>64</td><td></td><td></td><td>28</td><td></td><td></td><td>51</td><td></td><td></td><td>77</td><td></td><td></td><td>77</td></t<>	2.2 Labor	Riel			64			64			28			51			77			77
Nr manday 89 0 79 0 74 0 61 0 ion Riel 250 250 250 1 250 7 0 61 0 al/Tractor Riel 0 30,000 25 1 250,000 250 1 250,000 250 1 350,000 n Riel 0 30,000 0 30,000 90 1 30,000 60 1.5 30,000 45 2 30,000 Riel 3 30,000 90 2 30,000 60 1.5 30,000 45 2 30,000 Riel 3 30,000 90 2 30,000 60 1.5 30,000 45 2 30,000 Riel 3 30,000 90 2 30,000 60 1.5 30,000 25 30,000 Riel 99 3 30,000 60 1.5	Hired labor	manday	10	6,400	64	10	6,400	64	6	6,400	58	∞	6,400	51	12	6,400	77	12	6,400	77
Hall contributed rate in the transformation Riel contributed rate in the transformation 1 250,000 (a) 250 (b) 250 (b) 250 (c)	Family labor	manday	68	0	0	68	0	0	79	0	0	. 74	0	0	61	0	0	09	0	0
All Tractor ha	2.3 Land preparation	Riel			250			250			250			250			350			350
Riel 0 30,000 0 0	Draft animal/Tractor	ha	-	250,000	250	_	250,000	250	-	250,000	250	_	250,000	250	-	350,000	350	_	350,000	350
n Riel 9 30,000 0 1 30,000 30 0 30,000 0 30,000 n Riel 3 30,000 90 2 30,000 60 1.5 30,000 45 2 30,000 Riel 3 30,000 90 2 30,000 60 1.5 30,000 45 2 30,000 Riel 33 999 987 508 311 45 2	2.4 Pumping	Riel			0			0			30			0			0			30
n Riel 90 90 90 2 30,000 60 1.5 30,000 45 2 30,000 Riel 32 30,000 90 2 30,000 60 1.5 30,000 45 2 30,000 Riel 32 32 33 34 25 30,000 45 2 30,000	Pumping	ha	0	30,000	0	0	30,000	0	_	30,000	30	0	30,000	0	0	30,000	0	_	30,000	30
ton 3 30,000 90 3 30,000 90 2 30,000 60 1.5 30,000 45 2 30,000 Riel 32 33 36 33 37 58 25 30,000 Riel 999 999 987 568 311 6	2.5 Transportation	Riel			90			96			09			45			09			45
Rie 32 33 2.9 25 25 25 25 25 25 25 25	Ox-cart	ton	33	30,000	96	60	30,000	96	2	30,000	09	1.5	30,000	45	7	30,000	9	1.5	30,000	45
Rie 999 987 508 311	2.6 Miscellaneous	Riel			32			33			29			25			33			33
100	3. Net Return	Riel			666			786			208			311			426			149
1.31 1.27 0.76 0.54	Net Return/Production Cost Ratio	ost Ratio			1.31			1.27			0.76			0.54			0.57			0.20

	••••	Wet Sea	Wet Season Direct Sowing	Sowing						Dry Season	CASOR					
Item		4	Rainfed area	æ	Norm	Normal irrigated area	area	Supplem	Supplemental irrigated area	ited area		Rainfed area	eş	R	Recession area	88
TION .	i	Q'ty	Price	Value	Q'ty	Price	Value	Ç.	Price	Value	Q.ty	Price	Value	O'ty	Price	Value
			(Riel)	('000 Riel)		(Riel)	('000 Riel)		(Riel)	('000 Riel)		(Riel)	('000 Riel)		(Riel)	('000 Riel)
1. Gross Income	Riel			588			1,764			1,470			1,176			1,176
Main products	-X	1,000	260	260	3,000	260	1,680	2,500	260	1,400	2,000	260	1,120	2,000	999	1,120
By-product (straw)	kg.	1,000	28	28	3,000	28	84	2,500	28	70	2,000	28	99	2,000	28	56
2. Production Cost	Riel			548			292			730			625			590
2.1 Inputs	Riel			166			329			280			230			197
Seed	Кg	120	560	29	09	260	34	99	260	34	9	260	34	9	260	34
Manure (wet)	ton	0	30,000	0	0	30,000	0	0	30,000	0	0	30,000	0	0	30,000	0
Fertilizer																
Urea	Хg	40	1,640	99	115	1,640	189	95	1,640	156	75	1,640	123	09	1,640	86
DAP	, K	70	1,630	33	9	1,630	106	55	1,630	06	45	1,630	73	40	1,630	65
KCI	, K.,	0	1,550	0	0	1,550	0	0	1,550	0	0	1,550	0	0	1,550	0
Agro-chemicals	liter	0	5,250	0	0	5,250	0	0	5,250	0	0	5,250	0	0	5,250	0
2.2 Labor	manday			77			64			64			28			58
Hired labor		12	6,400	77	10	6,400	64	10	6,400	64	6	6,400	58	6	6,400	58
Family labor	manday	59	0	0	68	0	0	87	0	0	79	0	0	79	0	0
3.3 Land preparation	Riel			250			250			250			250			250
Draft animal/Tractor	ha	-	250,000	250	-	250,000	250	1	250,000	250	_	250,000	250		250,000	250
2.4 Pumping	_			0			0			30			0			0
Pumping	ha	0	30,000	0	0	30,000	0	-	30,000	30	0	30,000	0	0	30,000	0
2.5 Transportation	Riel			30			96			75			09			9
Ox-cart	ton	1	30,000	30	ю	30,000	06	2.5	30,000	75	2	30,000	09	7	30,000	09
2.6 Miscellaneous	Riel			25			32			31			27			25
3. Net Return	Riel			40			666			740			551			586
Nat Daturn/Production Cost Datio	ort Datio			100			101			101			000			000

Table G3-2 Financial Crop Budget of Rice under With Project Condition

		Earl	Early Wet Season	uoı		W	Wet Season Transplanting	ransplantin	bit			We	Wet Season Direct Sowing	rect Sowing			I	Dry Season	
Item	. 1	Norms	Normal irrigated area	area	Norm	Normal irrigated area	area	Normal irr	Normal irrigated area by pump	by pump	Norm	Normal irrigated area		Normal irrigated area by pump	gated area	amna vd	Norma	Normal irrigated area	rea
	1	ή,γ O	Price	Value	Q'ty	Price	Value	Q'ty	Price	Value	O'tà	Price	Value	O'ty	Price	Value	Otv	Price	Value
			(Riel)	('000 Riel)		(Riel)	('000 Riel)		(Riel)	('000 Riel)		_	('000 Riel)	,	(Riel)	('000 Riel)	;	_	('000 Riel)
1. Gross Income	Riel			2,058			2,058			2,058			1,646			1,646			2,058
Paddy	kg	3,500	260	1,960	3,500	260	1,960	3,500	260	1,960	2,800	560	1,568	2,800	999	1,568	3,500	260	1.960
By-product (straw)	kg	3,500	78	86	3,500	78	86	3,500	28	86	2,800	28	78	2,800	28	78	3,500	78	86
2. Production Cost	Riel			998			867			1,113			894			1,139			998
2.1 Inputs	Riel			399			399			399			331			331			399
Seed	, K	30	800	27	30	006	27	30	006	27	08	006	72	80	006	72	30	900	27
Manure (wet)	ton	1	30,000	15	,	30,000	15	⊷	30,000	15		30,000	15		30,000	15	-	30,000	15
Fertilizer																			
Urea	kg g	115	1,640	189	115	1,640	189	1115	1,640	189	80	1,640	131	80	1,640	131	115	1,640	189
DAP	26	65	1,630	106	65	1,630	106	99	1,630	106	20	1,630	82	50	1,630	82	65	1,630	106
KCI	-2g	40	1,550	62	40	1,550	62	40	1,550	62	70	1,550	31	20	1,550	31	40	1,550	62
Agro-chemicals	liter	0	5,250	0	0	5,250	0	0	5,250	Q	0	5,250	0	0	5,250	0	0	5,250	0
2.2 Labor	manday			70			77			77			06			90			70
Hired labor	manday	=	6,400	70	17	6,400	77	12	6,400	77	14	6,400	96	14	6,400	8	=	6,400	7
Family labor	manday	66	0	0	103	0	0	103	0	0	99	0	0	99	0	0	66	0	0
2.3 Land preparation	Riel			250			250			250			350			350			250
Draft animal/Tractor	ha	-	250,000	250	_	250,000	250	-	250,000	250	-	350,000	350	-	350,000	350	_	250,000	250
2.4 Pumping	Riel			0			•			234			•			234			0
Pumping	ha	0	30,000	0	0	30,000	0		233,700	234	0	30,000	0		233,700	234	0	30,000	0
2.5 Transportation	Riel			105			105			105			3			\$			105
Ox-cart	ton	3.5	30,000	105	3.5	30,000	105	3.5	30,000	105	2.8	30,000	84	2.8	30,000	84	3.5	30,000	105
2.6 Miscellaneous	Riel			36			36			48			39			95			36
3. Net Return	Riel			1,198			1,191			945			752			507			1,198
Net Return/Production Cost Ratio	ost Ratio			1.39			1.37			0.85			0.84			0.44			1.39

		4	Dry Season			'n	Upland Crops (Mungbean)	(Mungbea	<u> </u>		Upland C	Upland Crops (Morning Glory)	ing Glory)	Upland	Upland Crops (Cucumber)	cumber)
Item	Unit	- 1	Recession area	ea	Ē	Irrigated area		4	Rainfed area	č		Irrigated area	E.	-	Irrigated area	
		Q'ty	Price	Value	Q'ty	Price	Value	Q'ty	Price	Value	Q'ty	Price	Value	Q'ty	Price	Value
			(Riel)	('000 Riel)		(Riel)	('000 Riel)		(Riel)	('000 Riel)		(Riel)	('000 Riel)	,	(Riel)	('000 Riel)
1. Gross Income	Riel			1,470			1,071			765			4,200			5,400
Paddy	kg g	2,500	260	1,400	0	260	0	0	260	0	0	560	0	0	260	
Mungbean	kg	0	1,500	0	700	1,500	1,050	200	1,500	750	0	1,500	0	0	1,500	0
Vegetable (morning glo	ę,	0	300	0	0	300	. 0	0	300	0	14,000	300	4,200	0	300	0
Vegetable (cucumber	ķg	Q	1,200	0	0	1,200	0	0	1,200	0	0	1,200	0	4,500	1,200	5.400
By-product (straw)	kg	2,500	78	70	0	78	0	0	78	0	0	28	0	0	28	0
By-product (mungbea	kg	0	30	0	700	30	21	200	30	15	0	30	0	0	30	0
2. Production Cost	Riel			510			550			390			1,789			2,322
2.1 Inputs	Riel			297			341			207			920			1.635
Seed	kg	30	1,400	42	20	1,400	20	20	1,400	70	20	6,000	120	13.3	16,000	213
Manure (wet)	ton	-	30,000	30	7	30,000	99		30,000	30	10	30,000	300	20	30,000	009
Fertilizer										-	_					
Urea	kg	09	1,640	86	55	1,640	96	40	1,640	99	153	1,640	251	200	1,640	328
DAP	30	40	1,630	99	20	1,630	82	25	1,630	41	153	1,630	249	277	1,630	452
KCI	s,	40	1,550	62	25	1,550	39	0	1,550	0	0	1,550	0	0	1,550	0
Agro-chemicals	liter	0	5,250	0	0	5,250	0	0	5,250	0	0	5,250	0	•	5,250	42
2.2 Labor	manday			141			115			102			288		,	352
Hired labor	manday	22	6,400	141	18	6,400	115	16	6,400	102	45	6,400	288	55	6,400	352
Family labor	manday	83	0	0	42	0	0	37	0	0	105	0	0	115		0
2.3 Land preparation	Riel			48			84			48	_		96			96
Draft animal/Tractor	ha	1	48,000	48	-	48,000	48	-	48,000	48	1	96,000	96	1	96,000	96
2.5 Transportation	Riel			0			21			15			420			135
Ox-cart	ton	0.0	30,000	0	0.7	30,000	21	0.5	30,000	15	14.0	30,000	420	4.5	30,000	135
2.6 Miscellaneous	Riel			77			25			18			99			104
3. Net Return	Riel			096			521			375			2,411			3,078
Net Return/Production Cost Ratio	ost Ratio			1.88			0.95			96.0			1.35			1.33

Table G3-3 Finacial Irrigation Benefit (1/22)

Battambang River Basin

Kong Hort Rehabilitation Project Phase I

·		Present Conditi	ion	Wi	th Project Con	dition	
]	Planted	Net Produ	ction Value	Planted	Net Produ	ction Value	Incremental
Crops	Area	Per ha	Total	Area	Per ha	Total	Net Benefit
	(ha)	(Riel '000)	(Riel Million)	(ha)	(Riel '000)	(Riel Million)	(Riel Million)
Rice	10,560		<u>913</u>	10,040		8,303	
Early Wet Season							
- Normal irrigation area	0	999	0	0	1,198	0	
Wet Season Transplanting							
- Normal irrigation area	0	987	0	1,707	1,191	2,033	
- Supplemental irrigation area	2	508	1	0	0	0	
- Rainfed area	1,794	311	558	0	0	0	
Wet Season Direct Sowing							
- Normal irrigation area	0	426	0	8,333	752	6,270	
- Supplemental irrigation area	7	149	1	0	0	0	
- Rainfed area	8,757	40	353	0	0	0	
Dry Season							
- Normal irrigation area	0	999	0	0	1,198	0	
- Supplemental irrigation area	0	740	0	0	0	0	
- Rainfed area	0	551	0	0	0	0	
- Recession area	0	586	0	0	960	0	
Upland Crops	<u>0</u>		<u>0</u>	<u>90</u>		<u>226</u>	
- Mungbean (irrigated)	0	0	0	0	960	0	
- Mungbean (raifed)	0	0	0	20	521	10	
- Morning Glory (irrigated)	0	0	0	. 0	2,411	0	
- Cucumber (irrigated)	0	. 0	0	70	3,078	215	
Total	10,560		913	10,130		8,529	7,615

Table G3-3 Finacial Irrigation Benefit (2/22)

Battambang River Basin

Kong Hort Rehabilitation Project Phase II

		Present Condit	tion	W	ith Project Co	ndition	
	Planted	Net Produ	ction Value	Planted	Net Produ	ction Value	Ingremental
Crops	Area	Per ha	Total	Area	Per ha	Total	NPV
	(ha)	(Riel '000)	(Riel 'Million)	(ha)	(Riel '000)	(Riel 'Million)	(Riel 'Million)
Rice	3,225		<u>752</u>	<u>2,733</u>		<u>2,266</u>	
Early Wet Season							
- Normal irrigation area	5	999	5	0	1,198	0	
Wet Season Transplanting							
- Normal irrigation area	40	987	40	456	1,191	543	
- Supplemental irrigation area	98	508	50	0	0	0	
- Rainfed area	344	311	107	0	0	0	
Wet Season Direct Sowing							
- Normal irrigation area	196	426	84	2,229	752	1,677	
- Supplemental irrigation area	476	149	71	0	0	0	
- Rainfed area	1,682	40	68	0	0	0	
Dry Season							
- Normal irrigation area	236	999	236	0	1,198	0	
- Supplemental irrigation area	50	740	37	. 0	0	0	
- Rainfed area	50	551	28	0	0	0	
- Recession area	48	586	28	48	960	46	
Upland Crops	<u>0</u>		<u>0</u>	<u>20</u>		<u>62</u>	
- Mungbean (irrigated)	0	. 0	0	0	960	0	
- Mungbean (raifed)	0	0	0	0	521	0	
- Morning Glory (irrigated)	0	0	0	0	2,411	0	
- Cucumber (irrigated)	0	0	0	20	3,078	62	
Total	3,225		752	2,753		2,328	1,576

Table G3-3 Finacial Irrigation Benefit (3/22)

Battambang River Basin

Sala Taon Wetr Rehabilitation Project

		Present Condit	ion	Wi	th Project Cor	ndition	
	Planted	Net Produ	ction Value	Planted	Net Produ	ction Value	Incremental
Crops	Area	Per ha	Total	Area	Per ha	Total	Net Benefit
	(ha)	(Riel '000)	(Riel Million)	(ha)	(Riel '000)	(Riel Million)	(Riel Million)
Rice	10,970		<u>1,199</u>	<u>10,400</u>		<u>8,600</u>	
Early Wet Season							
- Normal irrigation area	0	999	0	0	1,198	0	
Wet Season Transplanting							
 Normal irrigation area 	20	987	20	1,768	1,191	2,105	
- Supplemental irrigation area	189	508	96	0	0	0	
- Rainfed area	1,630	311	507	0	0	0	
Wet Season Direct Sowing							
- Normal irrigation area	97	426	41	8,632	752	6,495	
- Supplemental irrigation area	276	149	41	0	0	0	
- Rainfed area	8,601	40	347	0	0	0	
Dry Season							
- Normal irrigation area	117	999	117	0	1,198	0	
- Supplemental irrigation area	40	740	30	0	0	0	
- Rainfed area	0	551	0	0	0	0	
- Recession area	0	586	0	0	960	0	
Upland Crops	<u>0</u>		<u>0</u>	<u>90</u>		<u>226</u>	
- Mungbean (irrigated)	0	0	0	0	960	0	
- Mungbean (raifed)	0	0 .	0	20	521	10	
- Morning Glory (irrigated)	0	0	0	0	2,411	0	
- Cucumber (irrigated)	0	0	0	70	3,078	215	
Total	10,970		1,199	10,490	·	8,826	7,628

Table G3-3 Finacial Irrigation Benefit (4/22)

Battambang River Basin

Sala Taon Wetr Rehabilitation Project (Pump Station)

		Present Condit	ion	W	ith Project Cor	ıdition	
	Planted	Net Produ	ction Value	Planted	Net Produ	ction Value	Incremental
Crops	Area	Per ha	Total	Area	Per ha	Total	Net Benefit
	(ha)	(Riel '000)	(Riel Million)	(ha)	(Riel '000)	(Riel Million)	(Riel Million)
Rice	10,970		1,199	10,400		<u>6,045</u>	
Early Wet Season							
 Normal irrigation area 	0	999	0	0	1,198	0	
Wet Season Transplanting	1						
- Normal irrigation area	20	987	20	1,768	945	1,671	•
 Supplemental irrigation area 	189	508	96	0	0	0	
- Rainfed area	1,630	311	507	0	0	0	
Wet Season Direct Sowing							
 Normal irrigation area 	97	426	41	8,632	507	4,374	
- Supplemental irrigation area	276	149	41	0	0	0	
- Rainfed area	8,601	40	347	0	0	0	
Dry Season							
 Normal irrigation area 	117	999	117	0	1,198	0	
- Supplemental irrigation area	40	740	30	0	0	0	
- Rainfed area	0	551	0	0	0	0	
- Recession area	0	586	0	0	960	0	
Upland Crops	<u>o</u>		<u>0</u>	<u>90</u>		<u>226</u>	
- Mungbean (irrigated)	0	0	0	0	960	0	
- Mungbean (raifed)	0	0	0	20	521	10	
- Morning Glory (irrigated)	0	0	0	0	2,411	0	
- Cucumber (irrigated)	0	0	0	70	3,078	215	
Total	10,970		1,199	10,490		6,271	5,072

Table G3-3 Finacial Irrigation Benefit (5/22)

Battambang River Basin

Ratanak-Battambang Water Haevesting Rehabilitation Project

		Present Condit	ion	W	ith Project Cor	dition	
	Planted	Net Produ	ction Value	Planted	Net Produ	ction Value	Incremental
Crops	Area	Per ha	Total	Area	Per ha	Total	Net Benefit
:	(ha)	(Riel '000)	(Riel Million)	(ha)	(Riel '000)	(Riel Million)	(Riel Million)
Rice	<u>634</u>		<u>82</u>	<u>580</u>		<u>480</u>	
Early Wet Season							
- Normal irrigation area	0	999	0	0	1,198	0	
Wet Season Transplanting							
- Normal irrigation area	0	987	0	99	1,191	118	
- Supplemental irrigation area	4	508	2	0	0	0	
- Rainfed area	97	311	30	0	0	0	
Wet Season Direct Sowing							
- Normal irrigation area	0	426	0	481	752	362	
- Supplemental irrigation area	6	149	1	0	0	0	
- Rainfed area	487	40	20	0	0	0	
Dry Season							
- Normal irrigation area	0	999	0	0	1,198	0	
- Supplemental irrigation area	40	740	30	0	0	0	i
- Rainfed area	0	551	0	0	0	0	
- Recession area	0	586	0	0	960	0	
Upland Crops	<u>0</u>		<u>0</u>	<u>13</u>		<u>40</u>	
- Mungbean (irrigated)	0	0	0	0	960	0	
- Mungbean (raifed)	0	0	0	0	521	0	
- Morning Glory (irrigated)	0	0	0	0	2,411	0	
- Cucumber (irrigated)	0	0	0	13	3,078	40	
Total	634		82	593		520	437

Table G3-3 Finacial Irrigation Benefit (6/22)

Moung Ruessei River Basin

Bassac Reservoir Rehabilitation Project

		Present Condit	ion	W	ith Project Cor	dition	
	Planted	Net Produ	ction Value	Planted	Net Produ	ction Value	Incremental
Crops	Area	Per ha	Total	Area	Per ha	Total	Net Benefit
	(ha)	(Riel '000)	(Riel Million)	(ha)	(Riel '000)	(Riel Million)	(Riel Million)
Rice	4,120		<u>512</u>	3,500		<u>3,109</u>	
Early Wet Season			ŀ				
- Normal irrigation area	0	999	0	0	1,198	0	
Wet Season Transplanting							
- Normal irrigation area	0	987	0	1,085	1,191	1,292	
- Supplemental irrigation area	0	508	0	0	0	0	
- Rainfed area	1,277	311	397	0	0	0	
Wet Season Direct Sowing							
- Normal irrigation area	0	426	0	2,415	752	1,817	
- Supplemental irrigation area	0	149	0	0	0	0	
- Rainfed area	2,843	40	115	0	0	0	
Dry Season							
- Normal irrigation area	0	999	0	0	1,198	0	
- Supplemental irrigation area	0	740	0	0	0	0	
- Rainfed area	0	551	0	0	0	0	
- Recession area	0	586	0	0	960	0	
Upland Crops	<u>0</u>		<u>o</u>	<u>60</u>		<u>159</u>	
- Mungbean (irrigated)	0	0	0	0	960	0	
- Mungbean (raifed)	0	0	0	10	521	5	
- Morning Glory (irrigated)	0	0	0	0	2,411	0	
- Cucumber (irrigated)	0	0	0	50	3,078	154	
Total	4,120		512	3,560		3,268	2,756

Table G3-3 Finacial Irrigation Benefit (7/22)

Moung Ruessei River Basin

Ream Kon Rehabilitation Project

		Present Condit	ion	W	ith Project Cor	ndition	
	Planted	Net Produ	ction Value	Planted	Net Produ	ction Value	Incremental
Crops	Area	Per ha	Total	Area	Per ha	Total	Net Benefit
	(ha)	(Riel '000)	(Riel Million)	(ha)	(Riel '000)	(Riel Million)	(Riel Million)
Rice	2,670		<u>342</u>	2,300		2,044	
Early Wet Season							
- Normal irrigation area	0	999	0	0	1,198	0	
Wet Season Transplanting							
- Normal irrigation area	0	987	0	710	1,191	845	
- Supplemental irrigation area	12	508	6	0	0	0	
- Rainfed area	812	311	253	0	0	0	
Wet Season Direct Sowing							
- Normal irrigation area	0	426	0	1,580	752	1,189	
- Supplemental irrigation area	28	149	4	0	0	0	
- Rainfed area	1,808	40	73	0	0	0	
Dry Season							
- Normal irrigation area	0	999	0	0	1,198	0	
- Supplemental irrigation area	0	740	0	0	0	0	
- Rainfed area	0	551	0	0	0	0	
- Recession area	10	586	6	10	960	10	
Upland Crops	<u>0</u>		<u>0</u>	<u>40</u>		<u>98</u>	
- Mungbean (irrigated)	0	0	0	0	960	0	
- Mungbean (raifed)	0	0	0	10	521	5	
- Morning Glory (irrigated)	0	0	0	0	2,411	0	
- Cucumber (irrigated)	0	0	0	30	3,078	92	
Total	2,670		342	2,340		2,141	1,800

Table G3-3 Finacial Irrigation Benefit (8/22)

Moung Ruessei River Basin

Por Canal Rehabilitation Project

		Present Condit	ion	W	ith Project Cor	ndition	,
	Planted	Net Produ	ction Value	Planted	Net Produ	iction Value	Incremental
Crops	Area	Per ha	Total	Area	Per ha	Total	Net Benefit
	(ha)	(Riel '000)	(Riel Million)	(ha)	(Riel '000)	(Riel Million)	(Riel Million)
Rice	1,340		<u>180</u>	1,200		<u>1,066</u>	
Early Wet Season							
- Normal irrigation area	0	999	0	0	1,198	0	
Wet Season Transplanting						i	
- Normal irrigation area	0	987	0	372	1,191	443	
- Supplemental irrigation area	31	508	16	0	0	0	
- Rainfed area	384	311	119	0	0	0	
Wet Season Direct Sowing							
- Normal irrigation area	0	426	0	828	752	623	
- Supplemental irrigation area	69	149	10	0	0	0	
- Rainfed area	856	40	35	0	0	0	
Dry Season							
- Normal irrigation area	0	999	0	0	1,198	0	
- Supplemental irrigation area	0	740	0	0	0	0	
- Rainfed area	0	551	0	0	0	0	
- Recession area	0	586	0	0	960	0	
Upland Crops	<u>0</u>		<u>0</u>	<u>20</u>		<u>49</u>	
- Mungbean (irrigated)	0	0	0	0	960	0	
- Mungbean (raifed)	0	0	0	5	521	3	
- Morning Glory (irrigated)	0	0	0	0	2,411	0	
- Cucumber (irrigated)	0	0	0	15	3,078	46	
Total	1,340		180	1,220		1,115	935

Table G3-3 Finacial Irrigation Benefit (9/22)

Moung Ruessei River Basin

Nikom Le/Dai Ta Chan Rehabilitation Project

		Present Condit	ion	Wi	th Project Cor	ndition	
	Planted	Net Produ	ction Value	Planted	Net Produ	ction Value	Incremental
Crops	Area	Per ha	Total	Area	Per ha	Total	Net Benefit
	(ha)	(Riel '000)	(Riel Million)	(ha)	(Riel '000)	(Riel Million)	(Riel Million)
Rice	<u>700</u>		<u>89</u>	<u>660</u>		<u>605</u>	
Early Wet Season	,						
- Normal irrigation area	0	999	0	60	1,198	72	
Wet Season Transplanting							
- Normal irrigation area	0	987	0	186	1,191	222	
- Supplemental irrigation area	4	508	2	0	0	0	
- Rainfed area	213	311	66	0	0	0	
Wet Season Direct Sowing							
- Normal irrigation area	0	426	0	414	752	312	
- Supplemental irrigation area	8	149	1	0	0	0	
- Rainfed area	475	40	19	0	0	0	
Dry Season							
- Normal irrigation area	0	999	0	0	1,198	0	
- Supplemental irrigation area	0	740	0	0	0	0	
- Rainfed area	0	551	0	0	0	0	
- Recession area	0	586	0	0	960	0	
Upland Crops	<u>0</u>		<u>0</u>	<u>10</u>		<u>23</u>	
- Mungbean (irrigated)	0	0	0	0	960	0	
- Mungbean (raifed)	0	0	. 0	3	521	2	
- Morning Glory (irrigated)	0	0	0	0	2,411	0	
- Cucumber (irrigated)	0	0	0	7	3,078	22	
Total	700		89	670		628	539

Table G3-3 Finacial Irrigation Benefit (10/22)

Pursat River Basin

Beoung Preah Ponley Rehabilitation Project

		Present Condit	ion	Wi	ith Project Cor	ndition	
	Planted	Net Produ	ction Value	Planted	Net Produ	ction Value	Incremental
Crops	Area	Per ha	Total	Area	Per ha	Total	Net Benefit
	(ha)	(Riel '000)	(Riel Million)	(ha)	(Riel '000)	(Riel Million)	(Riel Million)
Rice	8,673		2,399	9,300		10,223	
Early Wet Season							
 Normal irrigation area 	0	999	0	790	1,198	947	
Wet Season Transplanting							
- Normal irrigation area	23	987	23	6,545	1,191	7,793	
- Supplemental irrigation area	876	508	445	0	0	0	
- Rainfed area	5,756	311	1,790	0	0	0	
Wet Season Direct Sowing							
- Normal irrigation area	7	426	3	1,955	752	1,471	
- Supplemental irrigation area	262	149	39	0	0	0	
- Rainfed area	1,719	40	69	0	0	0	
Dry Season							
- Normal irrigation area	30	999	30	10	1,198	12	
- Supplemental irrigation area	0	740	0	0	0	0	
- Rainfed area	0	551	0	0	0	0	
- Recession area	0	586	0	0	960	0	
Upland Crops	<u>0</u>		<u>0</u>	<u>30</u>		<u>46</u>	
- Mungbean (irrigated)	0	0	0	10	960	10	
- Mungbean (raifed)	0	0	0	10	521	5	
- Morning Glory (irrigated)	0	0	0	0	2,411	0	
- Cucumber (irrigated)	0	0	0	10	3,078	31	
Total	8,673		2,399	9,330	***************************************	10,268	7,869

Table G3-3 Finacial Irrigation Benefit (11/22)

Pursat River Basin

Damnak Ampil Extension Project

		Present Condi	tion	W	ith Project Cor	ndition	
	Planted	Net Produ	ction Value	Planted	Net Produ	ction Value	Incremental
Crops	Area	Per ha	Total	Area	Per ha	Total	Net Benefit
	(ha)	(Riel '000)	(Riel Million)	(ha)	(Riel '000)	(Riel Million)	(Riel Million)
Rice	9,220		<u>4,173</u>	<u>8,755</u>		<u>9,624</u>	
Early Wet Season							
- Normal irrigation area	0	999	0	740	1,198	887	ļ . i
Wet Season Transplanting							
- Normal irrigation area	901	987	890	6,160	1,191	7,335	
- Supplemental irrigation area	1,257	508	639	0	0	0	ļ. l
- Rainfed area	4,041	311	1,257	0	0	0	{
Wet Season Direct Sowing							1
- Normal irrigation area	269	426	115	1,840	752	1,385	
- Supplemental irrigation area	375	149	56	0	0	0	
- Rainfed area	1,207	40	49	0	0	0	
Dry Season							
- Normal irrigation area	1,170	999	1,169	15	1,198	18	
- Supplemental irrigation area	0	740	0	0	0	0	
- Rainfed area	0	551	0	0	0	0	
- Recession area	0	586	0	0	960	0	
<u>Upland Crops</u>	<u>0</u>		<u>o</u>	<u>325</u>		<u>841</u>	
- Mungbean (irrigated)	0	0	0	15	960	14	
- Mungbean (raifed)	0	0	0	50	521	26	
- Morning Glory (irrigated)	0	0	0	0	2,411	0	
- Cucumber (irrigated)	0	0	0	260	3,078	800	
Total	9,220		4,173	9,080	*	10,464	6,292

Table G3-3 Finacial Irrigation Benefit (12/22)

Pursat River Basin

Wat Loung Rehabilitation Project

		Present Condi	tion	W	ith Project Co	ndition	
	Planted	Net Produ	ction Value	Planted	Net Produ	ction Value	Incremental
Crops	Area	Per ha	Total	Area	Per ha	Total	Net Benefit
	(ha)	(Riel '000)	(Riel Million)	(ha)	(Riel '000)	(Riel Million)	(Riel Million)
Rice	4,380		1,223	4,190		4,594	
Early Wet Season	}						
 Normal irrigation area 	0	999	0	240	1,198	288	
Wet Season Transplanting							
 Normal irrigation area 	35	987	35	3,034	1,191	3,613	
- Supplemental irrigation area	316	508	161	0	0	0	
- Rainfed area	2,988	311	929	0	0	0	
Wet Season Direct Sowing							
- Normal irrigation area	10	426	4	906	752	682	
 Supplemental irrigation area 	94	149	14	0	0	0	
- Rainfed area	892	40	36	0	0	0	
Dry Season							
- Normal irrigation area	45	999	45	10	1,198	12	
- Supplemental irrigation area	0	740	0	0	0	0	
- Rainfed area	0	551	0	0	0	0	
- Recession area	0	586	0	0	960	0	
Upland Crops	<u>0</u>		<u>o</u>	<u>160</u>		<u>343</u>	
- Mungbean (irrigated)	0	0	0	10	960	10	
- Mungbean (raifed)	0	0	0	50	521	26	
- Morning Glory (irrigated)	0	0	0	0	2,411	0	
- Cucumber (irrigated)	0	0	0	100	3,078	308	
Total	4,380		1,223	4,350		4,937	3,714

Table G3-3 Finacial Irrigation Benefit (13/22)

Pursat River Basin

Wat Chre Rehabilitation Project

		Present Condit	tion	W	ith Project Cor	ndition	
	Planted	Net Produ	ction Value	Planted	Net Produ	ction Value	Incremental
Crops	Area	Per ha	Total	Area	Per ha	Total	Net Benefit
	(ha)	(Riel '000)	(Riel Million)	(ha)	(Riel '000)	(Riel Million)	(Riel Million)
Rice	1,020		<u>298</u>	1,070		<u>1.174</u>	
Early Wet Season							
 Normal irrigation area 	0	999	. 0	70	1,198	84	
Wet Season Transplanting							
- Normal irrigation area	15	987	15	770	1,191	917	
- Supplemental irrigation area	75	508	38	0	0	0	
- Rainfed area	679	311	211	0	0	0	
Wet Season Direct Sowing							
- Normal irrigation area	5	426	2	230	752	173	
- Supplemental irrigation area	23	149	3	0	0	0	
- Rainfed area	203	40	8	0	0	0	·
Dry Season							
- Normal irrigation area	20	999	20	0	1,198	0	
- Supplemental irrigation area	0	740	0	0	0	0	
- Rainfed area	0	551	0	0	0	0	
- Recession area	0	586	0	0	960	0	
Upland Crops	<u>0</u>		<u>0</u>	<u>40</u>		<u>98</u>	
- Mungbean (irrigated)	0	0	0	0	960	0	
- Mungbean (raifed)	0	0	0	10	521	5	
- Morning Glory (irrigated)	0	. 0	0	0	2,411	0	
- Cucumber (irrigated)	0	0	0	30	3,078	92	
Total	1,020		298	1,110		1,271	974

Table G3-3 Finacial Irrigation Benefit (14/22)

Pursat River Basin

Ou Tapoung/Boeung Khnar Water Harvesting & Recession Rice Rehabilitation Project

		Present Condit	ion	W	ith Project Cor	ndition	
	Planted	Net Produ	ction Value	Planted	Net Produ	ction Value	Incremental
Crops	Area	Per ha	Total	Area	Per ha	Total	Net Benefit
	(ha)	(Riel '000)	(Riel Million)	(ha)	(Riel '000)	(Riel Million)	(Riel Million)
Rice	2,789		<u>1,262</u>	<u>2,926</u>		<u>3,046</u>	
Early Wet Season							
- Normal irrigation area	0	999	0	224	1,198	268	
Wet Season Transplanting							
 Normal irrigation area 	0	987	0	948	1,191	1,129	
- Supplemental irrigation area	174	508	88	0	0	0	
- Rainfed area	783	311	244	0	0	0	
Wet Season Direct Sowing							
 Normal irrigation area 	0	426	0	283	752	213	
- Supplemental irrigation area	52	149	8	0	0	0	
- Rainfed area	234	40	9	0	0	0	
Dry Season							
 Normal irrigation area 	0	999	0	100	1,198	120	
- Supplemental irrigation area	72	740	53	0	0	0	
- Rainfed area	103	551	57	0	0	0	
- Recession area	1,371	586	803	1,371	960	1,316	
Upland Crops	<u>0</u>		<u>0</u>	<u>147</u>		<u>196</u>	
- Mungbean (irrigated)	0	0	0	97	960	93	
- Mungbean (raifed)	0	0	0	20	521	10	
- Morning Glory (irrigated)	0	0	0	0	2,411	0	
- Cucumber (irrigated)	0	0	0	30	3,078	92	
Total	2,789		1,262	3,073		3,241	1,979

Table G3-3 Finacial Irrigation Benefit (15/22)

Lum Hach Rehabilitation Project

		Present Condit	ion	W	ith Project Cor	ıdition	
	Planted	Net Produ	ction Value	Planted	Net Produ	ction Value	Incremental
Crops	Area	Per ha	Total	Area	Per ha	Total	Net Benefit
	(ha)	(Riel '000)	(Riel Million)	(ha)	(Riel '000)	(Riel Million)	(Riel Million)
Rice	<u>4,380</u>		<u>1,960</u>	<u>3,700</u>		<u>4,406</u>	
Early Wet Season							
- Normal irrigation area	0	999	0	0	1,198	0	
Wet Season Transplanting							
- Normal irrigation area	380	987	375	3,700	1,191	4,406	
- Supplemental irrigation area	405	508	206	0	0	0	
- Rainfed area	3,215	311	1,000	0	0	0	
Wet Season Direct Sowing							
- Normal irrigation area	0	426	0	0	752	0	
- Supplemental irrigation area	0	149	0	0	0	0	
- Rainfed area	0	40	0	0	0	0	
Dry Season							
- Normal irrigation area	380	999	380	0	1,198	0	
- Supplemental irrigation area	0	740	0	0	0	0	
- Rainfed area	0	551	0	0	0	0	
- Recession area	0	586	0	0	960	0	
Upland Crops	<u>0</u>		<u>0</u>	<u>160</u>		<u>365</u>	
- Mungbean (irrigated)	0	0	0	0	960	0	
- Mungbean (raifed)	0	0	0	50	521	26	
- Morning Glory (irrigated)	0	0	0	0	2,411	0	
- Cucumber (irrigated)	0	0	0	110	3,078	339	
Total	4,380		1,960	3,860		4,770	2,810

Table G3-3 Finacial Irrigation Benefit (16/22)

Boribo River Basin

7th January Canal Rehabilitation Project

		Present Condit	ion	W	ith Project Cor	dition	
	Planted	Net Produ	ction Value	Planted	Net Produ	ction Value	Incremental
Crops	Area	Per ha	Total	Area	Per ha	Total	Net Benefit
	(ha)	(Riel '000)	(Riel Million)	(ha)	(Riel '000)	(Riel Million)	(Riel Million)
Rice	<u>2,360</u>		1,033	2,000		2,381	
Early Wet Season							
- Normal irrigation area	.0	999	0	0	1,198	0	
Wet Season Transplanting							
 Normal irrigation area 	190	987	188	2,000	1,191	2,381	
- Supplemental irrigation area	203	508	103	0	0	0	
- Rainfed area	1,777	311	553	0	0	0	
Wet Season Direct Sowing							
- Normal irrigation area	0	426	0	0	752	0	
- Supplemental irrigation area	0	149	0	0	0	0	•
- Rainfed area	0	40	0	0	0	0	
Dry Season							
 Normal irrigation area 	190	999	190	0	1,198	0	
- Supplemental irrigation area	0	740	0	0	0	0	
- Rainfed area	0	551	0	0	0	0	
- Recession area	0	586	0	0	960	0	
Upland Crops	<u>0</u>		<u>0</u>	<u>100</u>		<u>231</u>	
- Mungbean (irrigated)	0	0	0	0	960	0	
- Mungbean (raifed)	0	0	0	30	521	16	
- Morning Glory (irrigated)	0	0	0	0	2,411	0	
- Cucumber (irrigated)	0	0	0	70	3,078	215	
Total	2,360		1,033	2,100		2,612	1,579

Table G3-3 Finacial Irrigation Benefit (17/22)

Khvet Rehabilitation Project

		Present Condit	ion	W	ith Project Cor	ndition	
	Planted	Net Produ	ction Value	Planted	Net Produ	ction Value	Incremental
Crops	Area	Per ha	Total	Area	Per ha	Total	Net Benefit
	(ha)	(Riel '000)	(Riel Million)	(ha)	(Riel '000)	(Riel Million)	(Riel Million)
Rice	<u>250</u>		<u>83</u>	<u>250</u>		<u>298</u>	
Early Wet Season							
- Normal irrigation area	0	999	0	0	1,198	0	
Wet Season Transplanting							
- Normal irrigation area	0	987	0	250	1,191	298	
- Supplemental irrigation area	25	508	13	0	0	0	
- Rainfed area	225	311	70	0	0	0	
Wet Season Direct Sowing							
- Normal irrigation area	0	426	0	0	752	0	
- Supplemental irrigation area	0	149	0	0	0	0	
- Rainfed area	0	40	0	0	0	0	
Dry Season							
- Normal irrigation area	0	999	0	0	1,198	0	
- Supplemental irrigation area	0	740	0	0	0	0	
- Rainfed area	0	551	0	0	0	0	
- Recession area	0	586	0	0	960	0	
Upland Crops	<u>0</u>		<u>0</u>	<u>10</u>		<u>23</u>	
- Mungbean (irrigated)	0	0	0	0	960	0	
- Mungbean (raifed)	0	0	0	3	521	2	
- Morning Glory (irrigated)	0	0	0	0	2,411	0	
- Cucumber (irrigated)	0	0	0	7	3,078	22	
Total	250		83	260		321	238

Table G3-3 Finacial Irrigation Benefit (18/22)

Boribo River Basin

Ta Ram Rehabilitation Project

	Present Condition			W			
	Planted	Net Produ	ction Value	Planted	Net Produ	ction Value	Incremental
Crops	Area	Per ha	Total	Area	Per ha	Total	Net Benefit
	(ha)	(Riel '000)	(Riel Million)	(ha)	(Riel '000)	(Riel Million)	(Riel Million)
Rice	<u>180</u>		<u>60</u>	180		214	
Early Wet Season							
- Normal irrigation area	0	999	0	0	1,198	0	
Wet Season Transplanting							
- Normal irrigation area	0	987	0	180	1,191	214	
- Supplemental irrigation area	18	508	9	0	0	0	
- Rainfed area	162	311	50	0	0	0	
Wet Season Direct Sowing							
- Normal irrigation area	0	426	0	0	752	0	
- Supplemental irrigation area	0	149	0	0	0	0	
- Rainfed area	0	40	0	0	0	0	
Dry Season							
- Normal irrigation area	0	999	0	0	1,198	0	1
- Supplemental irrigation area	0	740	0	0	0	0	
- Rainfed area	0	551	0	0	0	0	
- Recession area	0	586	0	0	960	0	
Upland Crops	<u>0</u>		<u>o</u>	<u>10</u>		23	
- Mungbean (irrigated)	0	0	<u></u>	0	960	0	
- Mungbean (raifed)	0	0	0	3	521	2	
- Morning Glory (irrigated)	0	0	0	0	2,411	0	
- Cucumber (irrigated)	0	0	0	7	3,078	22	
Total	180		60	190		237	178

Table G3-3 Finacial Irrigation Benefit (19/22)

Chak Teum, Trapeang Khong & Don Poy Rehabilitation Project

		Present Condit	ion	W	ith Project Cor	dition	
	Planted	Net Produ	ction Value	Planted	Net Produ	ction Value	Incremental
Crops	Area	Per ha	Total	Area	Per ha	Total	Net Benefit
	(ha)	(Riel '000)	(Riel Million)	(ha)	(Riel '000)	(Riel Million)	(Riel Million)
Rice	<u>980</u>		<u>324</u>	<u>980</u>		<u>1,167</u>	
Early Wet Season							
- Normal irrigation area	0	999	0	0	1,198	0	
Wet Season Transplanting							
- Normal irrigation area	0	987	0	980	1,191	1,167	
- Supplemental irrigation area	98	508	50	0	0	0	
- Rainfed area	882	311	274	0	0	0	
Wet Season Direct Sowing							
- Normal irrigation area	0	426	0	0	752	0	
- Supplemental irrigation area	0	149	0	0	0	0	
- Rainfed area	0	40	0	0	0	0	
Dry Season							
- Normal irrigation area	0	999	0	0	1,198	0	
- Supplemental irrigation area	0	740	0	0	0	0	
- Rainfed area	0	551	0	0	0	0	
- Recession area	0	586	0	0	960	0	
Upland Crops	<u>0</u>		<u>0</u>	<u>50</u>		<u>103</u>	
- Mungbean (irrigated)	0	0	0	0	960	-0	
- Mungbean (raifed)	0	0	0	20	521	10	
- Morning Glory (irrigated)	0	0	0	0	2,411	0	
- Cucumber (irrigated)	0	0	0	30	3,078	92	
Total	980		324	1,030		1,270	946

Table G3-3 Finacial Irrigation Benefit (20/22)

Boribo River Basin

Teuk Laak & Trapeang Thlan Rehabilitation Project

		Present Condit	ion	W	ith Project Cor	ndition	
	Planted	Net Produ	ction Value	Planted	Net Produ	iction Value	Incremental
Crops	Area	Per ha	Total	Area	Per ha	Total	Net Benefit
	(ha)	(Riel '000)	(Riel Million)	(ha)	(Riel '000)	(Riel Million)	(Riel Million)
Rice	230		<u>76</u>	230		<u>274</u>	
Early Wet Season			-				
- Normal irrigation area	0	999	0	0	1,198	0	
Wet Season Transplanting							
- Normal irrigation area	0	987	0	230	1,191	274	
- Supplemental irrigation area	23	508	12	0	0	0	
- Rainfed area	207	311	64	0	0	0	
Wet Season Direct Sowing							
- Normal irrigation area	0	426	0	0	752	0	•
- Supplemental irrigation area	0	149	0	0	0	0	
- Rainfed area	0	40	0	0	0	0	
Dry Season							
- Normal irrigation area	0	999	0	0	1,198	0	
- Supplemental irrigation area	0	740	0	0	0	0	
- Rainfed area	0	551	0	0	0	0	
- Recession area	0	586	0	0	960	0	
Upland Crops	<u>0</u>		Q	<u>10</u>		<u>5</u>	
- Mungbean (irrigated)	0	0	0	0	960	0	
- Mungbean (raifed)	0	0	0	10	521	5	
- Morning Glory (irrigated)	0	0	0	0	2,411	0	
- Cucumber (irrigated)	0	0	0	0	3,078	0	
Total	230		76	240	·	279	203

Table G3-3 Finacial Irrigation Benefit (21/22)

Toul Champey Rehabilitation Project

		Present Condition			ith Project Cor	ndition	
	Planted	Net Produ	ction Value	Planted	Net Produ	ction Value	Incremental
Crops	Area	Per ha	Total	Area	Per ha	Total	Net Benefit
	(ha)	(Riel '000)	(Riel Million)	(ha)	(Riel '000)	(Riel Million)	(Riel Million)
Rice	<u>360</u>		<u>119</u>	<u>360</u>		<u>429</u>	
Early Wet Season							
- Normal irrigation area	0	999	0	0	1,198	0	
Wet Season Transplanting							
- Normal irrigation area	0	987	0	360	1,191	429	
- Supplemental irrigation area	36	508	18	0	0	0	
- Rainfed area	324	311	101	0	0	0	
Wet Season Direct Sowing							
- Normal irrigation area	0	426	0	0	752	0	
- Supplemental irrigation area	0	149	0	0	0	0	
- Rainfed area	0	40	0	0	0	0	
Dry Season							
- Normal irrigation area	0	999	0	0	1,198	0	
- Supplemental irrigation area	0	740	0	0	0	0	
- Rainfed area	0	551	0	0	0	0	
- Recession area	0	586	. 0	0	960	0	
Upland Crops	<u>0</u>		<u>0</u>	<u>20</u>		<u>10</u>	
- Mungbean (irrigated)	0	0	0	0	960	0	
- Mungbean (raifed)	0	0	0	20	521	10	
- Morning Glory (irrigated)	0	0	0	0	2,411	0	
- Cucumber (irrigated)	0	0	0	0	3,078	0	
Total	360		119	380		439	320

Table G3-3 Finacial Irrigation Benefit (22/22)

Boribo River Basin

Chan Keak Rehabilitation Project

		Present Condit	ion	W	ith Project Cor	ndition	·
	Planted	Net Produ	ction Value	Planted	Net Produ	iction Value	Incremental
Crops	Area	Per ha	Total	Area	Per ha	Total	Net Benefit
	(ha)	(Riel '000)	(Riel Million)	(ha)	(Riel '000)	(Riel Million)	(Riel Million)
Rice	110		<u>40</u>	<u>110</u>		<u>131</u>	
Early Wet Season							
- Normal irrigation area	0	999	0	0	1,198	0	
Wet Season Transplanting							
- Normal irrigation area	0	987	0	110	1,191	131	
- Supplemental irrigation area	28	508	14	0	0	0	
- Rainfed area	82	311	26	0	0	0	•
Wet Season Direct Sowing							
- Normal irrigation area	0	426	0	0	752	0	
- Supplemental irrigation area	0	149	0	0	0	0	
- Rainfed area	0	40	0	0	0	0	
Dry Season							
- Normal irrigation area	0	999	0	0	1,198	0	
- Supplemental irrigation area	0	740	0	0	0	0	
- Rainfed area	0	551	0	0	0	0	
- Recession area	0	586	0	0	960	0	
Upland Crops	<u>o</u>		<u>o</u>	10		<u>5</u>	
- Mungbean (irrigated)	0	0	0	0	960	0	
- Mungbean (raifed)	0	0	0	10	521	5	
- Morning Glory (irrigated)	0	0	0	0	2,411	0	
- Cucumber (irrigated)	0	0	0	0	3,078	0	
Total	110		40	120		136	97

Table G3-4 Increase in Net Benefit per 1 ha

		Present/	Present/Without Project	oject	M	With Project	Į,	Increase in Net	in Net
	Proposed Project	Area	Net Benefit	nefit	Area	Net Benefit	enefit	Benefit par 1 ha	ar 1 ha
		(ha) ((M. Riel) ('000 Riel)	000 Riel)	(ha)	(M. Riel)	('000 Riel)	(M. Riel) ('000 Riel)('000 Riel)	
1 BTB-01	Kong Hort Rehabilitation (Phase I)	10,560	913.1	86.5	10,040	8,528.5	849.5	763.0	8.8
2 BTB-01	Kong Hort Rehabilitation (Phase II)	2,884	752.1	260.8	2,733	2,327.9	851.8	591.0	2.3
3 BTB-02	BTB-02 Salat On Weir Rehabilitation	10,813	1,198.6	110.8	10,400	8,826.1	848.7	737.8	6.7
	Salat On Weir Rehabilitation (Alternative)					6,270.9	603.0	492.1	4.4
4 BTB-03	Ratanak-Battambang Weir Rehabilitation	594	82.4	138.7	580	519.8	896.2	757.5	5.5
5 MRB-0]	5 MRB-01 Bassac Reservoir Rehabilitation	4,120	511.8	124.2	3,500	3,268.2	933.8	809.5	6.5
6 MRB-02	6 MRB-02 Ream Kon Rehabilitation	2,670	341.7	128.0	2,300	2,141.4	931.0	803.1	6.3
7 MRB-03	7 MRB-03 Por Canal Rehabilitation	1,340	179.9	134.3	1,200	1,114.7	928.9	794.7	5.9
8 MRB-04	8 MRB-04 Nikom Le/Dai Ta Chan Rehabilitation	700	9.88	126.6	009	628.0	1,046.7	920.1	7.3
9 PRB-01	9 PRB-01 Beeoun Preah Ponley Rehabilitation	8,643	2,399.1	277.6	8,500	10,268.2	1,208.0	930.4	3.4
10 PRB-02	10 PRB-02 Damnak Ampil Extension	8,050	4,172.7	518.3	8,000	8,000 10,464.4	1,308.1	7.687	1.5
11 PRB-03	Wat Loung Rehabilitation	4,335	1,223.4	282.2	3,940	4,937.2	1,253.1	6.076	3.4
12 PRB-04	Wat Chre Rehabilitation	1,000	297.7	297.7	086	1,271.3	1,297.2	999.5	3.4
13 PRB-05	Ou Tapoung/Boueng Khnar Water	2,614	1,262.3	482.9	2,602	3,241.4	1,245.7	762.8	1.6
	Harvesting & Recession Rice Rehabilitation								
14 BRB-01	Lum Hach Rehabilitation	4,000	1,960.3	490.1	3,700	4,770.2	1,289.2	799.2	1.6
15 BRB-02	BRB-02 7th January Canal Rehabilitation	2,170	1,033.1	476.1	2,000	2,612.4	1,306.2	830.1	1.7
16 BRB-03	16 BRB-03 Khyet Rehabilitation	250	82.7	330.8	250	320.8	1,283.2	952.4	2.9
17 BRB-04	Ta Ram Rehabilitation	180	59.5	330.6	180	237.4	1,318.9	988.3	3.0
18 BRB-05	BRB-05 Chak Teum, Trpean Khlong	086	324.1	330.7	086	1,269.6	1,295.5	964.8	2.9
	& Don Poy Rehabilitation								
19 BRB-06	19 BRB-06 Teuk Laal & Trapeang Thlan Rehabilitation	230	76.1	330.9	230	279.1	1,213.5	882.6	2.7
20 BRB-07	20 BRB-07 Toul Champey Rehabilitation	360	119.0	330.6	360	439.1	1,219.7	889.2	2.7
21 BRB-08	BRB-08 Chan Keak Rehabilitation	110	39.7	360.9	110	136.2	1,238.2	877.3	2.4