Table VIII-2 WORK DIVISION AND QUANTITY

North Sumatera

(1/3)

WORKS	UNIT	SUMBARI 60008	RAUNING B 60038	S. BERA. 50025	SIDOMUKUTI 50057	AEK PALIA 50091	PAM. B 50129	AEK SIPA. 50141	KUTAMALE 50218	ASAHAN 8 50240	AEK SIHIM 50256
1. GENERAL ITEMS	ha	77	66	124	27	38	48	26	40	66	48
2.DIRECT CONSTRUCTION											
Clearing	ha	32	44		3	4	3	1	3	13	8
Leveling S		42	47		3	5	3	2	8	19	8
Formatting		42	47		3	5	3	2	8	19	8
Weir (LOW) h=	m							Reha. 20m			15
Weir (midle)h=	m				h=1.0 m		h=2.5 m	Weir up	Rehabili.		
(high) h=	m				8 m		10	+0.2m	Spillway		
Intake gate	nos				2				1		
Excavation	m3								5		
Revetment Work	nos				1		1				
Rehabili. Apron	nos					1					
New Canal I	m	200	500								
Canal II	m				200		500			600	
Canal III	m										
Reh. Canal I	m			1,000				400			
Canal II	m					800			600	600	1,200
S.Del.Canal	m	2,000	2,900		2,000	200	2,150	100	400	1,000	400
Turnout	nos			4					1		2
Culvert	nos	2	2	2	2		2			6	2
O&M ROAD	m		300		750		800	200	200		800
Aqua-Duct	m									Pump 2 set	
Base	set									@2.7m3/mi	
Canal Cover	m										

WORKS	UNIT	KALU 20003	PAJJENGE 10055	KADIENG 10099	KAINDI 10115	LEM. BATA 10140	PANRITA 10168	MARIO. 10182	PAKELLI II 10201	PADAELO 10227	MALIMBU 10287	SALU AKUNG 10332	MARIRI 10354
1. GENERAL ITEMS	ha	70	143	224	71	76	65	57	54	138	32	26	63
2.DIRECT CONSTRUCTION													
Clearing	ha			1		4			16	41			
Leveling S		23		53	57	4	2	7	35	61			29
Formatting		23		53	57	4	2	7	35	61			29
Weir HEIGHT h=	m		h=0.5 m	h=1.0 m	h=1.0 m x2	h=1.5 m	h=0.6 m	h=0.5 m	h=0.8 m		h=1.0 m	h=2.0 m	h=1.0 m
LENGTH	m		28	30	6+15	30	Rehabi.	10	50		40	15	17
Intake gate	nos						L=7.0 m	2					
Excavation	m3												
Revetment Work	nos		1	1	2	1		1	1		1	1	1
Rehabili. Apron	nos												
New Canal I	m									1,000			
Canal II	m					900		400		2,000	100		1,500
Canal III	m												
Reh. Canal I	m	500	1,000	4,000					600				600
Canal II	m				600	600	400	800			400	500	
S.Del.Canal	m	1,100		2,500	2,700	200	100	400	1,600	4,500			600
Turnout	nos		3	8		5					1		
Culvert	nos	2	3		3			1	4				
O&M ROAD	m	400	1,400	2,000	2,000			300	400			550	
Aqua-Duct	m									PUMP 4 set			
Base	set									@3.0m3/min			
Canal Cover	m												

West Nusa Tenggara

(3/3)

WORKS	UNIT	D. JENGK 45010	M. MANINI 32013	UMA LEBANGL. 33050	TRIPAS 34004	L. DUDU 35035	K. UDANG 35045	R. SANGGA 36016	M. SAPAH 37003
1. GENERAL ITEMS	ha	120	70	89	34	26	111	111	33
2.DIRECT CONSTRUCTION									
Clearing	ha	115				2			
Leveling n		115		21		2	6		
Formatting		115		21		2	6		
Weir (midle)h=	m	h=1.2 M	h=0.8 m	h=1.5 m	h=1.9 m	h=4.0 m	h=0.5 m		h=0.9 m
Length	m	10	12	7	7	20	6		10
Intake gate	nos	1				1			
Excavation	m3	3,000							
Revetment Work	nos	1	1	1	1	1	1		1
Rehabi. Apron	nos								
New Canal I	m			150				400	
Canal II	m	2,000			100				
Canal III	m								
Reh. Canal I	m	400	450	500			650	400	
Canal II	m				600	30			350
S.Del.Canal	m	5,000	400	1,000		94	300		2,300
Turnout	nos	3		1	2	2	2		
Culvert	nos	1	1	1	2		4	2	2
O&M ROAD	m		600	2,000	500		450		350
Aqua-Duct	m	28							
Base	set	1							
Canal Cover	m	1,000							

Table VIII-3 SUMMARY OF PROJECT COST FOR REPRESENTATIVE 30 SCHEMES US$ 1.0= 2,000 Rp

CODE	Project Name	TYPE	Irri. Area		Project	Construction	Project Cost		(1,000Rp)
			Present	Plan	Area	(1000 Rp)	L/C	F/C	Total
	[NTB]		ha	ha	ha				
45010	Danar Jengkang	A4	5	120	227	411,885	288,621	270,177	558,798
32013	Mada Manini	C2	70	70	98	85,021	72,091	72,506	144,597
33050	Uma Lebang	B1	68	89	96	98,536	86,085	86,212	172,297
34004	Lokok Tripas	C1	34	34	57	50,861	42,245	39,167	81,412
35035	Lengkok Dudu	B1	24	26	45	79,982	49,679	62,489	112,168
35045	Kelokos Udang	B5	105	111	128	66,855	67,371	79,836	147,207
36016	Raba Sangga	C1	111	111	125	58,038	61,478	75,077	136,555
37003	Montong Sapah/Puri	C1	13	33	37	36,070	31,125	32,198	63,323
	SUB-TOTAL		430	594	813	887,248	698,695	717,662	1,416,357
	[SULAWESI SELATAN]								
20003	Kalu	A3	47	70	101	66,101	50,033	43,573	93,606
10055	Pajjenge	C1	100	143	160	99,114	94,891	110,435	205,326
10099	Kadieng	B1	171	224	270	342,922	276,691	271,590	548,281
10115	kaindi	B4	67	124	195	133,862	117,024	118,894	235,918
10140	Lembang Bata	B5	72	76	175	104,898	65,909	70,897	136,806
10168	Panrita	B2	55	65	78	24,419	29,024	39,388	68,412
10182	Mario I-II-III	B4	50	57	74	68,139	56,224	58,745	114,969
10201	Pakelli II	B5	19	54	168	117,479	86,905	87,315	174,220
10227	Padaelo	B3	77	138	161	283,806	207,954	210,162	418,116
10287	Malimbu	C2	0	32	44	46,823	33,067	42,279	75,346
10332	Salu Akung	C1	26	26	30	50,625	35,472	41,239	76,711
10354	Mariri	B1	0	63	151	133,118	98,392	94,646	193,038
	SUB-TOTAL		684	1,072	1,607	1,471,306	1,151,586	1,189,163	2,340,749
	[NORTH SMATERA]								
60011	Sumbari	A4	34	77	163	112,830	85,801	75,619	161,420
60038	Rauning B	A2	5	66	99	137,250	104,396	89,509	193,905
60025	Sumbul Berampu	C1	124	124	234	101,994	93,418	104,010	197,428
60057	Sidomukuti	B1	12	27	68	48,745	38,093	36,057	74,150
60091	Aek Palia	B1	34	38	64	57,284	46,698	45,240	91,938
60129	Pangambatan (B)	B2	30	48	56	85,673	63,453	66,535	129,988
60141	Aek Siparbu	B4	23	26	37	51,993	38,885	39,478	78,363
60218	Kutamale	B4	32	40	69	55,443	45,805	45,108	90,913
60240	Asahan VIII	B3	45	66	100	136,985	100,072	102,222	202,294
60256	Aek Sihim	B5	40	48	103	77,339	61,589	60,558	122,147
	SUB-TOTAL		379	560	993	865,536	678,210	664,336	1,342,546
	(1,000 Rp)		1,493	2,226	3,413	3,224,090	2,528,491	2,571,161	5,099,652
	TOTAL (1,000 US$)					1,612	1,264	1,286	2,550
	(US$/Ha)					724			1,145

Table VIII-4 PROJECT COST OF REPRESENTATIVE SCHEMES

North Sumatra <1>

Unit : 10x3 Rp.

Code No.	60011			60038			50025			50057		
Name of Scheme	Sumbari			Rauning B			Sumbul Berampu			Sidomukti		
Group	LD A4			LD A2			VI C1			VI B1		
Item	Project Cost			Project Cost			Project Cost			Project Cost		
	Foreign Portion	Local Portion	Total	Foreign Portion	Local Portion	Total	Foreign Portion	Local Portion	Total	Foreign Portion	Local Portion	Total
1.Preparatory Works	2,142	1,428	3,570	2,397	1,598	3,995	6,324	4,216	10,540	1,377	918	2,295
2.Civil Work												
2.1 Land Development	39,628	39,628	79,256	35,199	35,199	70,398	0	0	0	2,883	2,883	5,766
2.2 Intake Facilities	0	0	0	0	0	0	0	0	0	6,914	3,471	10,385
2.3 Canal & Structure	16,708	16,868	33,576	32,499	34,354	66,853	52,758	49,237	101,995	14,462	17,397	31,859
Sub total	56,336	56,496	112,832	67,698	69,553	137,251	52,758	49,237	101,995	24,259	23,751	48,010
3.Training	202	1,142	1,344	226	1,278	1,504	595	3,373	3,968	130	734	864
4.O&M Equipments	2,533	281	2,814	2,834	315	3,149	7,477	831	8,308	1,628	181	1,809
5.Land Acquisition & Crop Compensation		588	588		658	658		1,736	1,736		378	378
6.Administration		5,642	5,642		6,863	6,863		5,100	5,100		2,401	2,401
7.Engineering Services	10,806	2,701	13,507	12,092	3,023	15,115	31,903	7,976	39,878	6,947	1,737	8,683
Total(1-7)	72,018	68,279	140,297	85,247	83,288	168,535	99,057	72,468	171,525	34,340	30,099	64,440
8.Phisical Contingency	3,601	3,414	7,015	4,262	4,164	8,427	4,953	3,623	8,576	1,717	1,505	3,222
Total	75,619	71,693	147,312	89,509	87,452	176,961	104,010	76,091	180,101	36,057	31,604	67,662
9.Value Added Tax		14,108	14,108		16,944	16,944		17,327	17,327		6,488	6,488
Grand total	75,619	85,801	161,420	89,509	104,396	193,906	104,010	93,418	197,428	36,057	38,093	74,150

North Sumatra <2>

Unit : 10x3 Rp.

Code No.	50091			50129			50141			50218		
Name of Scheme	Aek Palia			Pangambatan B			Aek Siparbue			Kutamale		
Group	VI B1			VI B2			VI B4			VI B4		
Item	Project Cost			Project Cost			Project Cost			Project Cost		
	Foreign Portion	Local Portion	Total	Foreign Portion	Local Portion	Total	Foreign Portion	Local Portion	Total	Foreign Portion	Local Portion	Total
1.Preparatory Works	1,938	1,292	3,230	2,448	1,632	4,080	1,326	884	2,210	2,040	1,360	3,400
2.Civil Work												
2.1 Land Development	4,281	4,281	8,562	2,883	2,883	5,766	1,612	1,612	3,224	5,923	5,923	11,846
2.2 Intake Facilities	65	65	130	18,158	8,289	26,447	6,844	2,933	9,777	761	330	1,091
2.3 Canal & Structure	24,551	24,042	48,593	24,403	27,216	51,619	19,434	19,559	38,993	21,341	21,167	42,508
Sub total	28,897	28,388	57,285	45,444	38,388	83,832	27,890	24,104	51,994	28,025	27,420	55,445
3.Training	182	1,034	1,216	230	1,306	1,536	125	707	832	192	1,088	1,280
4.O&M Equipments	2,291	255	2,546	2,894	322	3,216	1,568	174	1,742	2,412	268	2,680
5.Land Acquisition & Crop Compensation		532	532		672	672		364	364		560	560
6.Administration		2,864	2,864		4,192	4,192		2,600	2,600		2,772	2,772
7.Engineering Services	9,777	2,444	12,221	12,349	3,087	15,437	6,689	1,672	8,362	10,291	2,573	12,864
Total(1-7)	43,085	36,809	79,894	63,366	49,598	112,964	37,598	30,505	68,103	42,960	36,041	79,001
8.Phisical Contingency	2,154	1,840	3,995	3,168	2,480	5,648	1,880	1,525	3,405	2,148	1,802	3,950
Total	45,240	38,649	83,889	66,535	52,078	118,613	39,478	32,031	71,508	45,108	37,843	82,951
9.Value Added Tax		8,049	8,049		11,375	11,375		6,854	6,854		7,962	7,962
Grand total	45,240	46,698	91,938	66,535	63,453	129,988	39,478	38,885	78,363	45,108	45,805	90,913

North Sumatra <3>

Unit : 10x3 Rp.

Code No.	50240			50256								
Name of Scheme	Asahan III Pengajian			Aek Sihim								
Group	VI B3			VI B5								
Item	Project Cost			Project Cost			Project Cost			Project Cost		
	Foreign Portion	Local Portion	Total	Foreign Portion	Local Portion	Total	Foreign Portion	Local Portion	Total	Foreign Portion	Local Portion	Total
1.Preparatory Works	3,366	2,244	5,610	2,448	1,632	4,080						
2.Civil Work												
2.1 Land Development	15,113	15,113	30,226	8,548	8,548	17,096						
2.2 Intake Facilities	17,640	7,560	25,200	5,133	2,200	7,333						
2.3 Canal & Structure	39,958	39,393	79,351	26,071	26,840	52,911						
Sub total	72,711	62,066	134,777	39,752	37,588	77,340						
3.Training	317	1,795	2,112	230	1,306	1,536						
4.O&M Equipments	3,980	442	4,422	2,894	322	3,216						
5.Land Acquisition & Crop Compensation		924	924		672	672						
6.Administration		6,739	6,739		3,867	3,867						
7.Engineering Services	16,980	4,245	21,226	12,349	3,087	15,437						
Total(1-7)	97,354	78,455	175,809	57,674	48,474	106,148						
8.Phisical Contingency	4,868	3,923	8,790	2,884	2,424	5,307						
Total	102,222	82,378	184,600	60,558	50,897	111,455						
9.Value Added Tax		17,694	17,694		10,692	10,692						
Grand total	102,222	100,072	202,294	60,558	61,589	122,147						

South Sulawesi <1>

Unit : 10x3 Rp.

Code No.	20003			10055			10099			10115		
Name of Scheme	Kalu			Pajjenge			Kadieng			Kaindi		
Group	LD A3			VI C1			VI B1			VI B4		
Item	Project Cost			Project Cost			Project Cost			Project Cost		
	Foreign Portion	Local Portion	Total	Foreign Portion	Local Portion	Total	Foreign Portion	Local Portion	Total	Foreign Portion	Local Portion	Total
1.Preparatory Works	1,173	782	1,955	7,293	4,862	12,155	11,424	7,616	19,040	6,324	4,216	10,540
2.Civil Work												
2.1 Land Development	11,908	11,908	23,816	0	0	0	22,046	22,046	44,092	29,512	29,512	59,024
2.2 Intake Facilities	0	0	0	7,544	3,610	11,154	12,799	5,862	18,661	9,816	4,960	14,776
2.3 Canal & Structure	21,002	21,284	42,286	44,239	43,722	87,961	140,175	139,994	280,169	27,605	32,459	60,064
Sub total	32,910	33,192	66,102	51,783	47,332	99,115	175,020	167,902	342,922	66,933	66,931	133,864
3.Training	110	626	736	686	3,890	4,576	1,075	6,093	7,168	595	3,373	3,968
4.O&M Equipments	1,387	154	1,541	8,623	958	9,581	13,507	1,501	15,008	7,477	831	8,308
5.Land Acquisition & Crop Compensation		322	322		2,002	2,002		3,136	3,136		1,736	1,736
6.Administration		3,305	3,305		4,956	4,956		17,146	17,146		6,693	6,693
7.Engineering Services	5,917	1,479	7,397	36,791	9,198	45,989	57,631	14,408	72,038	31,903	7,976	39,878
Total(1-7)	41,498	39,860	81,358	105,176	73,197	178,374	258,657	217,801	476,459	113,232	91,755	204,988
8.Phisical Contingency	2,075	1,993	4,068	5,259	3,660	8,919	12,933	10,890	23,823	5,662	4,588	10,249
Total	43,573	41,853	85,426	110,435	76,857	187,292	271,590	228,691	500,281	118,894	96,343	215,237
9.Value Added Tax		8,180	8,180		18,033	18,033		48,000	48,000		20,681	20,681
Grand total	43,573	50,033	93,606	110,435	94,891	205,326	271,590	276,691	548,281	118,894	117,024	235,918

South Sulawesi <2>

Unit : 10x3 Rp.

Code No.	10140			10168			10182			10201		
Name of Scheme	Lembang Bata			Panrita			Mario I-II-III			Pakelli II		
Group	VI B5			VI B2			VI B4			VI B5		
Item	Project Cost			Project Cost			Project Cost			Project Cost		
	Foreign Portion	Local Portion	Total	Foreign Portion	Local Portion	Total	Foreign Portion	Local Portion	Total	Foreign Portion	Local Portion	Total
1.Preparatory Works	3,876	2,584	6,460	3,315	2,210	5,525	2,907	1,938	4,845	2,754	1,836	4,590
2.Civil Work												
2.1 Land Development	2,136	2,136	4,272	823	823	1,646	3,624	3,624	7,248	22,122	22,122	44,244
2.2 Intake Facilities	1,594	1,594	3,188	1,721	738	2,459	4,624	2,359	6,983	16,927	7,631	24,558
2.3 Canal & Structure	35,414	32,723	68,137	10,699	9,617	20,316	26,417	26,287	52,704	23,946	24,734	48,680
Sub total	39,144	36,453	75,597	13,243	11,178	24,421	34,665	32,270	66,935	62,995	54,487	117,482
3.Training	365	2,067	2,432	312	1,768	2,080	274	1,550	1,824	259	1,469	1,728
4.O&M Equipments	4,583	509	5,092	3,920	436	4,355	3,437	382	3,819	3,256	362	3,618
5.Land Acquisition & Crop Compensation		1,064	1,064		910	910		798	798		756	756
6.Administration		3,780	3,780		1,221	1,221		3,347	3,347		5,874	5,874
7.Engineering Services	19,553	4,888	24,442	16,723	4,181	20,904	14,665	3,666	18,331	13,893	3,473	17,366
Total(1-7)	67,521	51,346	118,866	37,513	21,903	59,416	55,948	43,951	99,899	83,158	68,257	151,415
8.Phisical Contingency	3,376	2,567	5,943	1,876	1,095	2,971	2,797	2,198	4,995	4,158	3,413	7,571
Total	70,897	53,913	124,810	39,388	22,999	62,387	58,745	46,149	104,894	87,315	71,670	158,985
9.Value Added Tax		11,997	11,997		6,026	6,026		10,075	10,075		15,236	15,236
Grand total	70,897	65,909	136,806	39,388	29,024	68,412	58,745	56,224	114,969	87,315	86,905	174,221

South Sulawesi <3>

Unit : 10x3 Rp.

Code No.	10227			10287			10332			10354		
Name of Scheme	Padaelo			Malimbu			Salu Akung			Mariri		
Group	VI B3			VI C2			VI C1			VI B1		
Item	Project Cost			Project Cost			Project Cost			Project Cost		
	Foreign Portion	Local Portion	Total	Foreign Portion	Local Portion	Total	Foreign Portion	Local Portion	Total	Foreign Portion	Local Portion	Total
1.Preparatory Works	7,038	4,692	11,730	1,632	1,088	2,720	1,326	884	2,210	3,213	2,142	5,355
2.Civil Work												
2.1 Land Development	35,336	35,336	70,672	0	0	0	0	0	0	11,926	11,926	23,852
2.2 Intake Facilities	35,280	15,120	50,400	16,846	7,596	24,442	16,870	7,606	24,476	7,539	3,607	11,146
2.3 Canal & Structure	78,012	78,697	156,709	11,472	10,608	22,080	12,697	13,453	26,150	47,151	46,452	93,603
Sub total	148,628	129,153	277,781	28,318	18,204	46,522	29,567	21,059	50,626	66,616	61,985	128,601
3.Training	662	3,754	4,416	154	870	1,024	125	707	832	302	1,714	2,016
4.O&M Equipments	8,321	925	9,246	1,930	214	2,144	1,568	174	1,742	3,799	422	4,221
5.Land Acquisition & Crop Compensation		1,932	1,932		448	448		364	364		882	882
6.Administration		13,889	13,889		2,326	2,326		2,531	2,531		6,430	6,430
7.Engineering Services	35,505	8,876	44,381	8,233	2,058	10,291	6,689	1,672	8,362	16,209	4,052	20,261
Total(1-7)	200,154	163,220	363,375	40,266	25,209	65,475	39,275	27,392	66,667	90,139	77,627	167,766
8.Phisical Contingency	10,008	8,161	18,169	2,013	1,260	3,274	1,964	1,370	3,333	4,507	3,881	8,388
Total	210,162	171,381	381,544	42,279	26,470	68,749	41,239	28,762	70,000	94,646	81,508	176,154
9.Value Added Tax		36,572	36,572		6,597	6,597		6,710	6,710		16,884	16,884
Grand total	210,162	207,954	418,116	42,279	33,067	75,347	41,239	35,472	76,711	94,646	98,392	193,038

West Nusa Tenggara <1>

Unit : 10x3 Rp.

Code No.	45010			32013			33050			34004		
Name of Scheme	Damar Jengkang			Mada Manini			Uma Lebang			Lokok Tripas		
Group	LD A4			VI C2			VI B1			VI C1		
Item	Project Cost			Project Cost			Project Cost			Project Cost		
	Foreign Portion	Local Portion	Total	Foreign Portion	Local Portion	Total	Foreign Portion	Local Portion	Total	Foreign Portion	Local Portion	Total
1.Preparatory Works	5,865	3,910	9,775	3,570	2,380	5,950	4,539	3,026	7,565	1,734	1,156	2,890
2.Civil Work												
2.1 Land Development	80,453	80,453	160,906	0	0	0	8,706	8,706	17,412	0	0	0
2.2 Intake Facilities	9,538	6,440	15,978	4,651	2,387	7,038	5,104	2,582	7,686	8,447	4,015	12,462
2.3 Canal & Structure	124,382	104,400	228,782	38,266	39,718	77,984	35,066	38,374	73,440	19,091	18,999	38,090
Sub total	214,373	191,293	405,666	42,917	42,105	85,022	48,876	49,662	98,538	27,538	23,014	50,552
3.Training	552	3,128	3,680	336	1,904	2,240	427	2,421	2,848	163	925	1,088
4.O&M Equipments	6,935	771	7,705	4,221	469	4,690	5,367	596	5,963	2,050	228	2,278
5.Land Acquisition & Crop Compensation		1,610	1,610		980	980		1,246	1,246		476	476
6.Administration		20,283	20,283		4,251	4,251		4,927	4,927		2,528	2,528
7.Engineering Services	29,587	7,397	36,984	18,010	4,502	22,512	22,898	5,724	28,622	8,748	2,187	10,934
Total(1-7)	257,312	228,392	485,703	69,054	56,592	125,645	82,107	67,602	149,709	40,233	30,513	70,746
8.Phisical Contingency	12,866	11,420	24,285	3,453	2,830	6,282	4,105	3,380	7,485	2,012	1,526	3,537
Total	270,177	239,811	509,988	72,506	59,421	131,927	86,212	70,983	157,195	42,245	32,039	74,283
9.Value Added Tax		48,810	48,810		12,670	12,670		15,102	15,102		7,128	7,128
Grand total	270,177	288,621	558,798	72,506	72,091	144,597	86,212	86,085	172,297	42,245	39,167	81,411

West Nusa Tenggara <2>

Unit : 10x3 Rp.

Code No.	35035			35045			36016			37003		
Name of Scheme	Lengkok Dudu			Kelokos Udang			Raba Sangga			Montong Sapah/Puri		
Group	VI B1			VI B5			VI C1			VI C1		
Item	Project Cost			Project Cost			Project Cost			Project Cost		
	Foreign Portion	Local Portion	Total	Foreign Portion	Local Portion	Total	Foreign Portion	Local Portion	Total	Foreign Portion	Local Portion	Total
1.Preparatory Works	1,326	884	2,210	5,661	3,774	9,435	5,661	3,774	9,435	1,683	1,122	2,805
2.Civil Work												
2.1 Land Development	1,399	1,399	2,798	3,127	3,127	6,254	0	0	0	0	0	0
2.2 Intake Facilities	33,747	14,857	48,604	2,187	1,331	3,518	0	0	0	4,795	2,449	7,244
2.3 Canal & Structure	14,659	13,923	28,582	29,275	27,810	57,085	30,057	27,981	58,038	13,548	15,279	28,827
Sub total	49,805	30,179	79,984	34,589	32,268	66,857	30,057	27,981	58,038	18,343	17,728	36,071
3.Training	125	707	832	533	3,019	3,552	533	3,019	3,552	158	898	1,056
4.O&M Equipments	1,568	174	1,742	6,693	744	7,437	6,693	744	7,437	1,990	221	2,211
5.Land Acquisition & Crop Compensation		364	364		1,554	1,554		1,554	1,554		462	462
6.Administration		3,999	3,999		3,343	3,343		2,902	2,902		1,804	1,804
7.Engineering Services	6,689	1,672	8,362	28,558	7,140	35,698	28,558	7,140	35,698	8,490	2,123	10,613
Total(1-7)	59,513	37,980	97,493	76,034	51,841	127,875	71,502	47,113	118,616	30,665	24,357	55,021
8.Phisical Contingency	2,976	1,899	4,875	3,802	2,592	6,394	3,575	2,356	5,931	1,533	1,218	2,751
Total	62,489	39,879	102,367	79,836	54,433	134,269	75,077	49,469	124,546	32,198	25,575	57,772
9.Value Added Tax		9,800	9,800		12,937	12,937		12,009	12,009		5,551	5,551
Grand total	62,489	49,679	112,168	79,836	67,371	147,206	75,077	61,478	136,555	32,198	31,125	63,323

Table VIII-5 BREAKDOWN OF GENERAL ITEMS FOR CONSTRUCTION (Rp/1000Ha)

NO.	DESCRIPTION	UNIT	Q'TY	UNIT PRICE	AMOUNT
1	Maintenance of Access Road	L/S	1	5,000,000	5,000,000
	SUB TOTAL				5,000,000
2	Contractor site office, quater labour camp, stores, include land hirring, Report (Daily, Monthly, Photograph)	L/S	1	5,000,000	5,000,000
	Testing apparatus;				
	(1) Speedy moisture tests	nos	2	3,000,000	6,000,000
	(2) Cone penetrometer	nos	3	2,000,000	6,000,000
	(3) Field permeability apparatus	nos	1	1,500,000	1,500,000
	(4) Field density apparatus	nos	1	3,000,000	3,000,000
	(5) Graduated cylinder (1000cc)	nos	1	500,000	500,000
	(6) Slump test apparatus	nos	1	500,000	500,000
	Cost for tests	L/S	1	1,000,000	1,000,000
	Misscellaneous Works (including mobilization in area)	L/S	1	30,000,000	30,000,000
	SUB TOTAL				53,500,000
3	Communication system;				
	(1) New Rig (25watt)	L/S	1	1,000,000	1,000,000
	(2) New Handy Talkey (Icom 2N)	L/S	2	600,000	1,200,000
	(3) O & M cost	L/S	18	50,000	900,000
	SUB TOTAL				3,100,000
4	Assistance Engineer's staff;				
	(1) New motor cycle (100cc), 1989	L/S	4	3,000,000	12,000,000
	(2) O & M Cost for motor cycle	L/S	18	500,000	9,000,000
	SUB TOTAL				21,000,000
5	Setting out of canal, structure, staking reference peg	L/S	1	2,000,000	2,000,000
	Longitudinal section of canal and other construction drawing	L/S	1	4,000,000	4,000,000
	SUB TOTAL				6,000,000
	TOTAL				88,600,000
					88,600 /HA

60011

Table VIII-6 BREAKDOWN OF DIRECT CONSTRUCTION COST

[SUMBARI] (1/30)

WORKS	UNIT	QUANT.	PRICE(Rp)	AMOUNT	L/C	F/C	L.Amount
				(1,000Rp)	(1,000Rp)	(1,000Rp)	(1,000Rp)
1. GENERAL ITEMS	ha	77	88,600	6,822 *	2,729	4,093	0
2.DIRECT CONSTRUCTION							
Clearing	ha	32	1,050,000	33,600 *	16,800	16,800	0
Leveling S		42	572,194	24,032 *	12,016	12,016	0
Formatting		42	514,840	21,623 *	10,812	10,812	21,623
Weir (LOW) h=	m						
Weir (midle)h=	m						
(high) h=	m						
Intake gate	nos						
Excavation	m3						
Revetment Work	nos						
Rehabili. Apron	nos						
New Canal I	m	200	89,169	17,833 *	8,917	8,917	0
Canal II	m						
Canal III	m						
Reh. Canal I	m						
Canal II	m						
S.Del.Canal	m	2,000	4,137	8,274 *	4,964	3,310	2,128
Turnout	nos						
Culvert	nos	2	323,363	646 *	258	388	0
O&M ROAD	m						
Aqua-Duct	m						
Base	set						
Canal Cover	m						
sub-total				112,830 *	56,496	56,334	23,751

60038

[RUNING B]

WORKS	UNIT	QUANT.	PRICE(Rp)	AMOUNT	L/C	F/C	L.Amount
				(1,000Rp)	(1,000Rp)	(1,000Rp)	(1,000Rp)
1. GENERAL ITEMS	ha	66	88,600	5,847 *	2,339	3,508	0
2.DIRECT CONSTRUCTION							
Clearing	ha	44	1,050,000	46,200 *	23,100	23,100	0
Leveling	ha	47		0			0
Formatting		47	514,840	24,197 *	12,099	12,099	24,197
Weir (LOW) h=	m						
Weir (midle) h=	m						
(high) h=	m						
Intake gate	nos						
Excavation	m3						
Revetment Work	nos						
Rehabili. Apron	nos						
New Canal I	m	500	89,169	44,584 *	22,292	22,292	0
Canal II	m						
Canal III	m						
Reh. Canal I	m						
Canal II	m						
S.Del.Canal	m	2,900	4,137	11,997 *	7,198	4,799	3,085
Turnout	nos						
Culvert	nos	2	323,363	646 *	258	388	0
O&M ROAD	m	300	12,597	3,779 *	2,267	1,512	664
Aqua-Duct	m						
Base	set						
Canal Cover	m						
sub-total				137,250 *	69,553	67,697	27,946

50025

[SUMBUL BERAMPU]

WORKS	UNIT	QUANT.	PRICE(Rp)	AMOUNT	L/C	F/C	L.Amount
				(1,000Rp)	(1,000Rp)	(1,000Rp)	(1,000Rp)
1. GENERAL ITEMS	ha	124	88,600	10,986 *	4,394	6,592	0
2.DIRECT CONSTRUCTION							
Clearing	ha						
Leveling n	ha						
Formatting							
Weir (LOW) h=	m						
Weir (midle)h=	m						
(high) h=	m						
Intake gate	nos						
Excavation	m3						
Revetment Work	nos						
Rehabili. Apron	nos						
New Canal I	m						
Canal II	m						
Canal III	m						
Reh. Canal I	m	1,000	84,397	84,397 *	42,199	42,199	15,955
Canal II	m						
S.Del.Canal	m						
Turnout	nos	4	1,491,417	5,965 *	2,386	3,579	0
Culvert	nos	2	323,363	646 *	258	388	0
O&M ROAD	m						
Aqua-Duct	m						
Base	set						
Canal Cover	m						
sub-total				101,994 *	49,237	52,757	15,955

50057

(4/30)

[SIDOMUKUTI]

WORKS	UNIT	QUANT.	PRICE(Rp)	AMOUNT	L/C	F/C	L. Amount
				(1,000Rp)	(1,000Rp)	(1,000Rp)	(1,000Rp)
1. GENERAL ITEMS	ha	27	88,600	2,392 *	957	1,435	0
2.DIRECT CONSTRUCTION							
Clearing	ha	3	1,050,000	3,150 *	1,575	1,575	0
Leveling n	ha	3	357,621	1,072 *	536	536	0
Formatting		3	514,840	1,544 *	772	772	1,544
Weir (LOW) h= 1	m	8	806,720	6,453 *	1,936	4,517	0
Weir (midle)h=	m						
(high) h=	m						
Intake gate	nos	2	1,077,694	2,155 *	647	1,509	0
Excavation	m3						
Revetment Work	nos	1	1,776,988	1,776 *	888	888	0
Rehabili. Apron	nos						
New Canal I	m						
Canal II	m	200	59,182	11,836 *	5,918	5,918	0
Canal III	m						
Reh. Canal I	m						
Canal II	m						
S.Del.Canal	m	2,000	4,137	8,274 *	4,964	3,310	2,128
Turnout	nos						
Culvert	nos	2	323,363	646 *	258	388	0
O&M ROAD	m	750	12,597	9,447 *	5,668	3,779	1,660
Aqua-Duct	m						
Base	set						
Canal Cover	m						
sub-total				48,745 *	24,119	24,626	5,332

50091

[AEK PALIA]

WORKS	UNIT	QUANT.	PRICE(Rp)	AMOUNT	L/C	F/C	L.Amount
				(1,000Rp)	(1,000Rp)	(1,000Rp)	(1,000Rp)
1. GENERAL ITEMS	ha	38	88,600	3,366 *	1,346	2,020	0
2.DIRECT CONSTRUCTION							
Clearing	ha	4	1,050,000	4,200 *	2,100	2,100	0
Leveling n	ha	5	357,621	1,788 *	894	894	0
Formatting		5	514,840	2,574 *	1,287	1,287	2,574
Weir (LOW) h=	m						
Weir (midle)h=	m						
(high) h=	m						
Intake gate	nos						
Excavation	m3						
Revetment Work	nos						
Rehabili. Apron	nos	1	129,502	129 *	65	65	166
New Canal I	m						
Canal II	m						
Canal III	m						
Reh. Canal I	m						
Canal II	m	800	55,501	44,400 *	22,200	22,200	8,456
S.Del.Canal	m	200	4,137	827 *	496	331	212
Turnout	nos						
Culvert	nos						
O&M ROAD	m						
Aqua-Duct	m						
Base	set						
Canal Cover	m						
sub-total				57,284 *	28,388	28,896	11,408

50129

[PAMGAMBATAN B]

WORKS	UNIT	QUANT.	PRICE(Rp)	AMOUNT	L/C	F/C	L.Amount
				(1,000Rp)	(1,000Rp)	(1,000Rp)	(1,000Rp)
1. GENERAL ITEMS	ha	48	88,600	4,252 *	1,701	2,551	0
2.DIRECT CONSTRUCTION							
Clearing	ha	3	1,050,000	3,150 *	1,575	1,575	0
Leveling n	ha	3	357,621	1,072 *	536	536	0
Formatting		3	514,840	1,544 *	772	772	1,544
Weir (LOW) h=	m						
Weir (midle) h=	m						
(high) h= 2.5	m	10	2,467,145	24,671 *	7,401	17,270	0
Intake gate	nos						
Excavation	m3						
Revetment Work	nos	1	1,776,988	1,776 *	888	888	0
Rehabili. Apron	nos						
New Canal I	m						
Canal II	m	500	59,182	29,591 *	14,796	14,796	0
Canal III	m						
Reh. Canal I	m						
Canal II	m						
S.Del.Canal	m	2,150	4,137	8,894 *	5,336	3,558	2,287
Turnout	nos						
Culvert	nos	2	323,363	646 *	258	388	0
O&M ROAD	m	800	12,597	10,077 *	6,046	4,031	1,771
Aqua-Duct	m						
Base	set						
Canal Cover	m						
sub-total				85,673 *	39,310	46,363	5,602

50141

(7/30)

[AEK SIPARBUE]

WORKS	UNIT	QUANT.	PRICE (Rp)	AMOUNT	L/C	F/C	L. Amount
				(1,000Rp)	(1,000Rp)	(1,000Rp)	(1,000Rp)
1. GENERAL ITEMS	ha	26	88,600	2,303 *	921	1,382	0
2. DIRECT CONSTRUCTION							
Clearing	ha	1	1,050,000	1,050 *	525	525	0
Leveling s	ha	2	572,194	1,144 *	572	572	0
Formatting		2	514,840	1,029 *	515	515	1,029
Weir (LOW) h= 0.2	m	20	488,869	9,777 *	2,933	6,844	0
Weir (midle) h=	m						
(high) h=	m						
Intake gate	nos						
Excavation	m3						
Revetment Work	nos						
Rehabili. Apron	nos						
New Canal I	m						
Canal II	m						
Canal III	m						
Reh. Canal I	m	400	84,397	33,758 *	16,879	16,879	6,382
Canal II	m						
S.Del.Canal	m	100	4,137	413 *	248	165	106
Turnout	nos						
Culvert	nos						
O&M ROAD	m	200	12,597	2,519 *	1,511	1,008	442
Aqua-Duct	m						
Base	set						
Canal Cover	m						
sub-total				51,993 *	24,104	27,889	7,959

50218

(8/30)

[KUTAMALE]

WORKS	UNIT	QUANT.	PRICE(Rp)	AMOUNT	L/C	F/C	L. Amount
				(1,000Rp)	(1,000Rp)	(1,000Rp)	(1,000Rp)
1. GENERAL ITEMS	ha	40	88,600	3,544 *	1,418	2,126	0
2. DIRECT CONSTRUCTION							
Clearing	ha	3	1,050,000	3,150 *	1,575	1,575	0
Leveling s	ha	8	572,194	4,577 *	2,289	2,289	0
Formatting		8	514,840	4,118 *	2,059	2,059	4,118
Weir (LOW) h=	m						
Weir (midle) h=	m						
(high) h=	m						
Intake gate	nos	1	1,077,694	1,077 *	323	754	0
Excavation	m3	5	2,705	13 *	7	7	0
Revetment Work	nos						
Rehabili. Apron	nos						
New Canal I	m						
Canal II	m						
Canal III	m						
Reh. Canal I	m						
Canal II	m	600	55,501	33,300 *	16,650	16,650	6,342
S.Del.Canal	m	400	4,137	1,654 *	992	662	425
Turnout	nos	1	1,491,417	1,491 *	596	895	0
Culvert	nos						
O&M ROAD	m	200	12,597	2,519 *	1,511	1,008	442
Aqua-Duct	m						
Base	set						
Canal Cover	m						
sub-total				55,443 *	27,420	28,023	11,327

50240

[ASAHAN VIII]

WORKS	UNIT	QUANT.	PRICE(Rp)	AMOUNT	L/C	F/C	L.Amount
				(1,000Rp)	(1,000Rp)	(1,000Rp)	(1,000Rp)
1. GENERAL ITEMS	ha	66	88,600	5,847 *	2,339	3,508	0
2.DIRECT CONSTRUCTION							
Clearing	ha	13	1,050,000	13,650 *	6,825	6,825	0
Leveling n	ha	19	357,621	6,794 *	3,397	3,397	0
Formatting		19	514,840	9,781 *	4,891	4,891	9,781
Weir (LOW) h=	m						
Weir (midle)h=	m						
(high) h=	m						
Intake gate	nos						
Excavation	m3						
Revetment Work	nos						
Rehabili. Apron	nos						
New Canal I	m						
Canal II	m	600	59,182	35,509 *	17,755	17,755	0
Canal III	m						
Reh. Canal I	m						
Canal II	m	600	55,501	33,300 *	16,650	16,650	6,342
S.Del.Canal	m	1,200	4,137	4,964 *	2,978	1,986	1,276
Turnout	nos						
Culvert	nos	6	323,363	1,940 *	776	1,164	0
O&M ROAD	m						
Aqua-Duct	m						
Pump q=2.7m3/m	set	2	12,600,000	25,200 *	7,560	17,640	0
Canal Cover	m						
sub-total				136,985 *	63,170	73,815	17,399

[AEK SIHIM]

WORKS	UNIT	QUANT.	PRICE(Rp)	AMOUNT	L/C	F/C	L.Amount
				(1,000Rp)	(1,000Rp)	(1,000Rp)	(1,000Rp)
1. GENERAL ITEMS	ha	48	88,600	4,252 *	1,701	2,551	0
2.DIRECT CONSTRUCTION							
Clearing	ha	8	1,050,000	8,400 *	4,200	4,200	0
Leveling s	ha	8	572,194	4,577 *	2,289	2,289	0
Formatting		8	514,840	4,118 *	2,059	2,059	4,118
Weir (LOW) h= 0.5	m	15	488,869	7,333 *	2,200	5,133	0
Weir (midle)h=	m						
(high) h=	m						
Intake gate	nos						
Excavation	m3						
Revetment Work	nos						
Rehabili. Apron	nos						
New Canal I	m						
Canal II	m						
Canal III	m						
Reh. Canal I	m						
Canal II	m	600	55,501	33,300 *	16,650	16,650	6,342
S.Del.Canal	m	400	4,137	1,654 *	992	662	425
Turnout	nos	2	1,491,417	2,982 *	1,193	1,789	0
Culvert	nos	2	323,363	646 *	258	388	0
O&M ROAD	m	800	12,597	10,077 *	6,046	4,031	1,771
Aqua-Duct	m						
Base	set						
Canal Cover	m						
sub-total				77,339 *	37,588	39,751	12,656

[KALU]

WORKS	UNIT	QUANT.	PRICE(Rp)	AMOUNT	L/C	F/C	L. Amount
				(1,000Rp)	(1,000Rp)	(1,000Rp)	(1,000Rp)
1. GENERAL ITEMS	ha	70	88,600	6,202 *	2,481	3,721	0
2. DIRECT CONSTRUCTION							
Clearing	ha						
Leveling S		23	567,989	13,063 *	6,532	6,532	0
Formatting		23	467,519	10,752 *	5,376	5,376	10,752
Weir (LOW) h=	m						
Weir (midle) h=	m						
(high) h=	m						
Intake gate	nos						
Excavation	m3						
Revetment Work	nos						
Rehabili. Apron	nos						
New Canal I	m						
Canal II	m						
Canal III	m						
Reh. Canal I	m	500	54,409	27,204 *	13,602	13,602	3,799
Canal II	m						
S.Del.Canal	m	1,100	3,478	3,825 *	2,295	1,530	558
Turnout	nos						
Culvert	nos	2	315,633	631 *	252	379	0
O&M ROAD	m	400	11,061	4,424 *	2,654	1,770	422
Aqua-Duct	m						
Base	set						
Canal Cover	m						
sub-total				66,101 *	33,192	32,909	15,531

10055

(12/30)

[PAJJENGE]

WORKS	UNIT	QUANT.	PRICE(Rp)	AMOUNT	L/C	F/C	L. Amount
				(1,000Rp)	(1,000Rp)	(1,000Rp)	(1,000Rp)
1. GENERAL ITEMS	ha	143	88,600	12,669 *	5,068	7,601	0
2.DIRECT CONSTRUCTION							
Clearing	ha						
Leveling	ha						
Formatting							
Weir (LOW) h= 0.5	m	28	351,312	9,836 *	2,951	6,885	0
Weir (midle)h=	m						
(high) h=	m						
Intake gate	nos						
Excavation	m3						
Revetment Work	nos	1	1,318,440	1,318 *	659	659	0
Rehabili. Apron	nos						
New Canal I	m						
Canal II	m						
Canal III	m						
Reh. Canal I	m	1,000	54,409	54,409 *	27,205	27,205	7,598
Canal II	m						
S.Del.Canal	m						
Turnout	nos	3	1,483,848	4,451 *	1,780	2,671	0
Culvert	nos	3	315,633	946 *	378	568	0
O&M ROAD	m	1,400	11,061	15,485 *	9,291	6,194	1,478
Aqua-Duct	m						
Base	set						
Canal Cover	m						
sub-total				99,114 *	47,332	51,782	9,076

[KADIENG]

WORKS	UNIT	QUANT.	PRICE(Rp)	AMOUNT	L/C	F/C	L.Amount
				(1,000Rp)	(1,000Rp)	(1,000Rp)	(1,000Rp)
1. GENERAL ITEMS	ha	224	88,600	19,846 *	7,938	11,908	0
2.DIRECT CONSTRUCTION							
Clearing	ha	1	500,000	500 *	250	250	0
Leveling n	ha	53	354,993	18,814 *	9,407	9,407	0
Formatting		53	467,519	24,778 *	12,389	12,389	24,778
Weir (LOW) h= 1	m	30	578,121	17,343 *	5,203	12,140	0
Weir (midle)h=	m						
(high) h=	m						
Intake gate	nos						
Excavation	m3						
Revetment Work	nos	1	1,318,440	1,318 *	659	659	0
Rehabili. Apron	nos						
New Canal I	m						
Canal II	m						
Canal III	m						
Reh. Canal I	m	4,000	54,409	217,636 *	108,818	108,818	30,392
Canal II	m						
S.Del.Canal	m	2,500	3,478	8,695 *	5,217	3,478	1,268
Turnout	nos	8	1,483,848	11,870 *	4,748	7,122	0
Culvert	nos						
O&M ROAD	m	2,000	11,061	22,122 *	13,273	8,849	2,111
Aqua-Duct	m						
Base	set						
Canal Cover	m						
sub-total				342,922 *	167,903	175,020	58,549

[KAINDI]

WORKS	UNIT	QUANT.	PRICE(Rp)	AMOUNT	L/C	F/C	L.Amount
				(1,000Rp)	(1,000Rp)	(1,000Rp)	(1,000Rp)
1. GENERAL ITEMS	ha	71	88,600	6,290 *	2,516	3,774	0
2.DIRECT CONSTRUCTION							
Clearing	ha						
Leveling S	ha	57	567,989	32,375 *	16,188	16,188	0
Formatting		57	467,519	26,648 *	13,324	13,324	26,648
Weir (LOW) h= 1	m	21	578,121	12,140 *	3,642	8,498	0
Weir (midle)h=	m						
(high) h=	m						
Intake gate	nos						
Excavation	m3						
Revetment Work	nos	2	1,318,440	2,636 *	1,318	1,318	0
Rehabili. Apron	nos						
New Canal I	m						
Canal II	m						
Canal III	m						
Reh. Canal I	m						
Canal II	m	600	35,526	21,315 *	10,658	10,658	3,020
S.Del.Canal	m	2,700	3,478	9,390 *	5,634	3,756	1,369
Turnout	nos						
Culvert	nos	3	315,633	946 *	378	568	0
O&M ROAD	m	2,000	11,061	22,122 *	13,273	8,849	2,111
Aqua-Duct	m						
Base	set						
Canal Cover	m						
sub-total				133,862 *	66,931	66,931	33,148

10140

(15/30)

[LEMBANG BATA]

WORKS	UNIT	QUANT.	PRICE (Rp)	AMOUNT (1,000Rp)	L/C (1,000Rp)	F/C (1,000Rp)	L. Amount (1,000Rp)
1. GENERAL ITEMS	ha	76	88,600	6,733 *	2,693	4,040	0
2. DIRECT CONSTRUCTION							
Clearing	ha	4	500,000	2,000 *	1,000	1,000	0
Leveling S	ha	4	567,989	2,271 *	1,136	1,136	0
Formatting		4	467,519	1,870 *	935	935	1,870
Weir (LOW) h=	m						
Weir (midle) h= 1.5	m	30	886,424	26,592 *	7,978	18,614	0
(high) h=	m						
Intake gate	nos						
Excavation	m3						
Revetment Work	nos	1	1,318,440	1,318 *	659	659	0
Rehabili. Apron	nos						
New Canal I	m						
Canal II	m	900	38,539	34,685 *	17,343	17,343	0
Canal III	m						
Reh. Canal I	m						
Canal II	m	600	35,526	21,315 *	10,658	10,658	3,020
S. Del. Canal	m	200	3,478	695 *	417	278	101
Turnout	nos	5	1,483,848	7,419 *	2,968	4,451	0
Culvert	nos						0
O&M ROAD	m						
Aqua-Duct	m						
Base	set						
Canal Cover	m						
sub-total				104,898 *	45,785	59,113	4,991

[PANRITA]

WORKS	UNIT	QUANT.	PRICE(Rp)	AMOUNT	L/C	F/C	L. Amount
				(1,000Rp)	(1,000Rp)	(1,000Rp)	(1,000Rp)
1. GENERAL ITEMS	ha	65	88,600	5,759 *	2,304	3,455	0
2. DIRECT CONSTRUCTION							
Clearing	ha						
Leveling n	ha	2	354,993	709 *	355	355	0
Formatting		2	467,519	935 *	468	468	935
Weir (LOW) h= 0.6	m	7	351,312	2,459 *	738	1,721	0
Weir (midle) h=	m						
(high) h=	m						
Intake gate	nos						
Excavation	m3						
Revetment Work	nos						
Rehabili. Apron	nos						
New Canal I	m						
Canal II	m						
Canal III	m						
Reh. Canal I	m						
Canal II	m	400	35,526	14,210 *	7,105	7,105	2,013
S.Del.Canal	m	100	3,478	347 *	208	139	50
Turnout	nos						
Culvert	nos						
O&M ROAD	m						
Aqua-Duct	m						
Base	set						
Canal Cover	m						
sub-total				24,419 *	11,177	13,243	2,998

10182

(17/30)

[MARIO I-II-III]

WORKS	UNIT	QUANT.	PRICE (Rp)	AMOUNT	L/C	F/C	L. Amount
				(1,000Rp)	(1,000Rp)	(1,000Rp)	(1,000Rp)
1. GENERAL ITEMS	ha	57	88,600	5,050 *	2,020	3,030	0
2. DIRECT CONSTRUCTION							
Clearing	ha						
Leveling s	ha	7	567,989	3,975 *	1,988	1,988	0
Formatting		7	467,519	3,272 *	1,636	1,636	3,272
Weir (LOW) h= 0.5	m	10	351,312	3,513 *	1,054	2,459	0
Weir (midle) h=	m						
(high) h=	m						
Intake gate	nos	2	1,076,057	2,152 *	646	1,506	0
Excavation	m3						
Revetment Work	nos	1	1,318,440	1,318 *	659	659	0
Rehabili. Apron	nos						
New Canal I	m						
Canal II	m	400	38,539	15,415 *	7,708	7,708	0
Canal III	m						
Reh. Canal I	m						
Canal II	m	800	35,526	28,420 *	14,210	14,210	4,027
S.Del.Canal	m	400	3,478	1,391 *	835	556	202
Turnout	nos						
Culvert	nos	1	315,633	315 *	126	189	0
O&M ROAD	m	300	11,061	3,318 *	1,991	1,327	316
Aqua-Duct	m						
Base	set						
Canal Cover	m						
sub-total				68,139 *	32,871	35,268	7,817

[PAKELLI II]

WORKS	UNIT	QUANT.	PRICE(Rp)	AMOUNT	L/C	F/C	L.Amount
				(1,000Rp)	(1,000Rp)	(1,000Rp)	(1,000Rp)
1. GENERAL ITEMS	ha	54	88,600	4,784 *	1,914	2,870	0
2.DIRECT CONSTRUCTION							
Clearing	ha	16	500,000	8,000 *	4,000	4,000	0
Leveling s	ha	35	567,989	19,879 *	9,940	9,940	0
Formatting		35	467,519	16,363 *	8,182	8,182	16,363
Weir (LOW) h= 0.8	m	50	464,804	23,240 *	6,972	16,268	0
Weir (midle)h=	m						
(high) h=	m						
Intake gate	nos						
Excavation	m3						
Revetment Work	nos	1	1,318,440	1,318 *	659	659	0
Rehabili. Apron	nos						
New Canal I	m						
Canal II	m						
Canal III	m						
Reh. Canal I	m	600	54,409	32,645 *	16,323	16,323	4,558
Canal II	m						
S.Del.Canal	m	1,600	3,478	5,564 *	3,338	2,226	811
Turnout	nos						
Culvert	nos	4	315,633	1,262 *	505	757	0
O&M ROAD	m	400	11,061	4,424 *	2,654	1,770	422
Aqua-Duct	m						
Base	set						
Canal Cover	m						
sub-total				117,479 *	54,486	62,993	22,154

10227

(19/30)

[PADAELO]

WORKS	UNIT	QUANT.	PRICE(Rp)	AMOUNT	L/C	F/C	L.Amount
				(1,000Rp)	(1,000Rp)	(1,000Rp)	(1,000Rp)
1. GENERAL ITEMS	ha	138	88,600	12,226 *	4,890	7,336	0
2.DIRECT CONSTRUCTION							
Clearing	ha	41	500,000	20,500 *	10,250	10,250	0
Leveling n	ha	61	354,993	21,654 *	10,827	10,827	0
Formatting		61	467,519	28,518 *	14,259	14,259	28,518
Weir (LOW) h=	m						
Weir (midle)h=	m						
(high) h=	m						
Intake gate	nos						
Excavation	m3						
Revetment Work	nos						
Rehabili. Apron	nos						
New Canal I	m	1,000	57,779	57,779 *	28,890	28,890	0
Canal II	m	2,000	38,539	77,078 *	38,539	38,539	0
Canal III	m						
Reh. Canal I	m						
Canal II	m						
S.Del.Canal	m	4,500	3,478	15,651 *	9,391	6,260	2,283
Turnout	nos						
Culvert	nos						
O&M ROAD	m						
Aqua-Duct	m						
Pump q=3.0m3/m	set	4	12,600,000	50,400 *	15,120	35,280	0
Canal Cover	m						
sub-total				283,806 *	132,166	151,641	30,801

10287

(20/30)

[MALIMBU]

WORKS	UNIT	QUANT.	PRICE(Rp)	AMOUNT	L/C	F/C	L. Amount
				(1,000Rp)	(1,000Rp)	(1,000Rp)	(1,000Rp)
1. GENERAL ITEMS	ha	32	88,600	2,835 *	1,134	1,701	0
2. DIRECT CONSTRUCTION							
Clearing	ha						
Leveling	ha						
Formatting							
Weir (LOW) h= 1 m	m	40	578,121	23,124 *	6,937	16,187	0
Weir (midle) h=	m						
(high) h=	m						
Intake gate	nos						
Excavation	m3						
Revetment Work	nos	1	1,318,440	1,318 *	659	659	0
Rehabili. Apron	nos						
New Canal I	m						
Canal II	m	100	38,539	3,853 *	1,927	1,927	0
Canal III	m						
Reh. Canal I	m						
Canal II	m	400	35,526	14,210 *	7,105	7,105	2,013
S.Del.Canal	m						
Turnout	nos	1	1,483,848	1,483 *	593	890	0
Culvert	nos						
O&M ROAD	m						
Aqua-Duct	m						
Base	set						
Canal Cover	m						
sub-total				46,823 *	18,355	28,468	2,013

10332

(21/30)

[SALU AKUNG]

WORKS	UNIT	QUANT.	PRICE(Rp)	AMOUNT	L/C	F/C	L. Amount
				(1,000Rp)	(1,000Rp)	(1,000Rp)	(1,000Rp)
1. GENERAL ITEMS	ha	26	88,600	2,303 *	921	1,382	0
2. DIRECT CONSTRUCTION							
Clearing	ha						
Leveling	ha						
Formatting							
Weir (LOW) h=	m						
Weir (midle) h=	m						
(high) h= 2	m	15	1,543,883	23,158 *	6,947	16,211	0
Intake gate	nos						
Excavation	m3						
Revetment Work	nos	1	1,318,440	1,318 *	659	659	0
Rehabili. Apron	nos						
New Canal I	m						
Canal II	m						
Canal III	m						
Reh. Canal I	m						
Canal II	m	500	35,526	17,763 *	8,882	8,882	2,516
S.Del.Canal	m						
Turnout	nos						
Culvert	nos						
O&M ROAD	m	550	11,061	6,083 *	3,650	2,433	580
Aqua-Duct	m						
Base	set						
Canal Cover	m						
sub-total				50,625 *	21,059	29,566	3,096

[MARIRI]

WORKS	UNIT	QUANT.	PRICE(Rp)	AMOUNT	L/C	F/C	L.Amount
				(1,000Rp)	(1,000Rp)	(1,000Rp)	(1,000Rp)
1. GENERAL ITEMS	ha	63	88,600	5,581 *	2,232	3,349	0
2.DIRECT CONSTRUCTION							
Clearing	ha						
Leveling n	ha	29	354,993	10,294 *	5,147	5,147	0
Formatting		29	467,519	13,558 *	6,779	6,779	13,558
Weir (LOW) h= l	m	17	578,121	9,828 *	2,948	6,880	0
Weir (midle) h=	m						
(high) h=	m						
Intake gate	nos						
Excavation	m3						
Revetment Work	nos	1	1,318,440	1,318 *	659	659	0
Rehabili. Apron	nos						
New Canal I	m						
Canal II	m	1,500	38,539	57,808 *	28,904	28,904	0
Canal III	m						
Reh. Canal I	m	600	54,409	32,645 *	16,323	16,323	4,558
Canal II	m						
S.Del.Canal	m	600	3,478	2,086 *	1,252	834	304
Turnout	nos						
Culvert	nos						
O&M ROAD	m						
Aqua-Duct	m						
Base	set						
Canal Cover	m						
sub-total				133,118 *	64,244	68,874	18,420

45010

(23/30)

[DANAR JENGKANG]

WORKS	UNIT	QUANT.	PRICE(Rp)	AMOUNT	L/C	F/C	L. Amount
				(1,000Rp)	(1,000Rp)	(1,000Rp)	(1,000Rp)
1. GENERAL ITEMS	ha	120	88,600	10,632 *	4,253	6,379	0
2.DIRECT CONSTRUCTION							
Clearing	ha	115	570,000	65,550 *	32,775	32,775	0
Leveling n		115	355,235	40,852 *	20,426	20,426	0
Formatting		115	473,947	54,503 *	27,252	27,252	54,503
Weir (LOW) h=	m						
Weir (midle) h= 1.2	m	10	667,233	6,672 *	2,002	4,670	0
(high) h=	m						
Intake gate	nos	1	1,076,334	1,076 *	323	753	0
Excavation	m3	3,000	2,283	6,849 *	3,425	3,425	0
Revetment Work	nos	1	1,380,860	1,380 *	690	690	0
Rehabili. Apron	nos						
New Canal I	m						
Canal II	m	2,000	40,887	81,774 *	40,887	40,887	0
Canal III	m						
Reh. Canal I	m	400	57,777	23,110 *	11,555	11,555	3,494
Canal II	m						
S.Del.Canal	m	5,000	3,574	17,870 *	10,722	7,148	2,913
Turnout	nos	3	1,247,821	3,743 *	1,497	2,246	0
Culvert	nos	1	274,050	274 *	110	164	0
O&M ROAD	m						
Aqua-Duct	m	28	1,841,708	51,567 *	15,470	36,097	0
Base	set	1	8,257,303	8,257 *	4,129	4,129	0
Canal Cover	m	1,000	37,776	37,776 *	18,888	18,888	0
sub-total				411,885 *	194,402	217,483	60,910

[MADA MANINI]

WORKS	UNIT	QUANT.	PRICE(Rp)	AMOUNT	L/C	F/C	L.Amount
				(1,000Rp)	(1,000Rp)	(1,000Rp)	(1,000Rp)
1. GENERAL ITEMS	ha	70	88,600	6,202 *	2,481	3,721	0
2.DIRECT CONSTRUCTION							
Clearing	ha						
Leveling	ha						
Formatting							
Weir (LOW) h= 0.8	m	12	471,510	5,658 *	1,697	3,961	0
Weir (midle)h=	m						
(high) h=	m						
Intake gate	nos						
Excavation	m3						
Revetment Work	nos	1	1,380,860	1,380 *	690	690	0
Rehabili. Apron	nos						
New Canal I	m						
Canal II	m						
Canal III	m						
Reh. Canal I	m	1,000	57,777	57,777 *	28,889	28,889	8,737
Canal II	m						
S.Del.Canal	m	400	3,574	1,429 *	857	572	233
Turnout	nos						
Culvert	nos	1	274,050	274 *	110	164	0
O&M ROAD	m	1,100	11,183	12,301 *	7,381	4,920	1,333
Aqua-Duct	m						
Base	set						
Canal Cover	m						
sub-total				85,021 *	42,104	42,917	10,303

33050

[UMA LEBANG]

WORKS	UNIT	QUANT.	PRICE (Rp)	AMOUNT	L/C	F/C	L. Amount
				(1,000Rp)	(1,000Rp)	(1,000Rp)	(1,000Rp)
1. GENERAL ITEMS	ha	89	88,600	7,885 *	3,154	4,731	0
2. DIRECT CONSTRUCTION							
Clearing	ha						
Leveling n	ha	21	355,235	7,459 *	3,730	3,730	0
Formatting		21	473,947	9,952 *	4,976	4,976	9,952
Weir (LOW) h=	m						
Weir (midle) h= 1.5	m	7	900,861	6,306 *	1,892	4,414	0
(high) h=	m						
Intake gate	nos						
Excavation	m3						
Revetment Work	nos	1	1,380,860	1,380 *	690	690	0
Rehabili. Apron	nos						
New Canal I	m	150	61,367	9,205 *	4,603	4,603	0
Canal II	m						
Canal III	m						
Reh. Canal I	m	500	57,777	28,888 *	14,444	14,444	4,368
Canal II	m						
S.Del.Canal	m	1,000	3,574	3,574 *	2,144	1,430	582
Turnout	nos	1	1,247,821	1,247 *	499	748	0
Culvert	nos	1	274,050	274 *	110	164	0
O&M ROAD	m	2,000	11,183	22,366 *	13,420	8,946	2,423
Aqua-Duct	m						
Base	set						
Canal Cover	m						
sub-total				98,536 *	49,660	48,876	17,325

34004

[LOKOK TRIPAS]

WORKS	UNIT	QUANT.	PRICE(Rp)	AMOUNT	L/C	F/C	L.Amount
				(1,000Rp)	(1,000Rp)	(1,000Rp)	(1,000Rp)
1. GENERAL ITEMS	ha	34	88,600	3,012 *	1,205	1,807	0
2.DIRECT CONSTRUCTION							
Clearing	ha						
Leveling n	ha						
Formatting							
Weir (LOW) h=	m						
Weir (midle)h=	m						
(high) h= 1.9	m	7	1,583,240	11,082 *	3,325	7,757	0
Intake gate	nos						
Excavation	m3						
Revetment Work	nos	1	1,380,860	1,380 *	690	690	0
Rehabili. Apron	nos						
New Canal I	m						
Canal II	m	100	40,887	4,088 *	2,044	2,044	0
Canal III	m						
Reh. Canal I	m						
Canal II	m	600	37,776	22,665 *	11,333	11,333	3,473
S.Del.Canal	m						
Turnout	nos	2	1,247,821	2,495 *	998	1,497	0
Culvert	nos	2	274,050	548 *	219	329	0
O&M ROAD	m	500	11,183	5,591 *	3,355	2,236	605
Aqua-Duct	m						
Base	set						
Canal Cover	m						
sub-total				50,861 *	23,168	27,693	4,078

[LENGKOK DUDU]

WORKS	UNIT	QUANT.	PRICE(Rp)	AMOUNT	L/C	F/C
				(1,000Rp)	(1,000Rp)	(1,000Rp)
1. GENERAL ITEMS	ha	26	88,600	2,303 *	921	1,382
2.DIRECT CONSTRUCTION						
Clearing	ha	2	570,000	1,140 *	570	570
Leveling n	ha	2	355,235	710 *	355	355
Formatting		2	473,947	947 *	474	474
Weir (LOW) h=	m					
Weir (midle)h=	m					
(high) h= 4	m	20	2,307,429	46,148 *	13,844	32,304
Intake gate	nos	1	1,076,334	1,076 *	323	753
Excavation	m3					
Revetment Work	nos	1	1,380,860	1,380 *	690	690
Rehabili. Apron	nos					
New Canal I	m					
Canal II	m					
Canal III	m					
Reh. Canal I	m					
Canal II	m	600	37,776	22,665 *	11,333	11,333
S.Del.Canal	m					
Turnout	nos	2	1,247,821	2,495 *	998	1,497
Culvert	nos					
O&M ROAD	m	100	11,183	1,118 *	671	447
Aqua-Duct	m					
Base	set					
Canal Cover	m					
sub-total				79,982 *	30,178	49,804

[Kerokos Udang]

WORKS	UNIT	QUANT.	PRICE(Rp)	AMOUNT	L/C	F/C	L.Amount
				(1,000Rp)	(1,000Rp)	(1,000Rp)	(1,000Rp)
1. GENERAL ITEMS	ha	111	88,600	9,834 *	3,934	5,900	0
2.DIRECT CONSTRUCTION							
Clearing	ha						
Leveling s	ha	6	568,376	3,410 *	1,705	1,705	0
Formatting		6	473,947	2,843 *	1,422	1,422	2,843
Weir (LOW) h= 0.5	m	6	356,368	2,138 *	641	1,497	0
Weir (midle)h=	m						
(high) h=	m						
Intake gate	nos						
Excavation	m3						
Revetment Work	nos	1	1,380,860	1,380 *	690	690	0
Rehabili. Apron	nos						
New Canal I	m						
Canal II	m						
Canal III	m						
Reh. Canal I	m	650	57,777	37,555 *	18,778	18,778	5,679
Canal II	m						
S.Del.Canal	m	300	3,574	1,072 *	643	429	174
Turnout	nos	2	1,247,821	2,495 *	998	1,497	0
Culvert	nos	4	274,050	1,096 *	438	658	0
O&M ROAD	m	450	11,183	5,032 *	3,019	2,013	545
Aqua-Duct	m						
Base	set						
Canal Cover	m						
sub-total				66,855 *	32,268	34,587	9,241

[RABA SANGGA]

WORKS	UNIT	QUANT.	PRICE(Rp)	AMOUNT	L/C	F/C	L.Amount
				(1,000Rp)	(1,000Rp)	(1,000Rp)	(1,000Rp)
1. GENERAL ITEMS	ha	111	88,600	9,834 *	3,934	5,900	0
2.DIRECT CONSTRUCTION							
Clearing	ha						
Leveling s	ha						
Formatting							
Weir (LOW) h=	m						
Weir (midle)h=	m						
(high) h=	m						
Intake gate	nos						
Excavation	m3						
Revetment Work	nos						
Rehabili. Apronnos							
New Canal I	m	400	61,367	24,546 *	12,273	12,273	0
Canal II	m						
Canal III	m						
Reh. Canal I	m	400	57,777	23,110 *	11,555	11,555	3,494
Canal II	m						
S.Del.Canal	m						
Turnout	nos						
Culvert	nos	2	274,050	548 *	219	329	0
O&M ROAD	m						
Aqua-Duct	m						
Base	set						
Canal Cover	m						
sub-total				58,038 *	27,981	30,057	3,494

[MONTONG SAPAH]

WORKS	UNIT	QUANT.	PRICE (Rp)	AMOUNT	L/C	F/C	L. Amount
				(1,000Rp)	(1,000Rp)	(1,000Rp)	(1,000Rp)
1. GENERAL ITEMS	ha	33	88,600	2,923 *	1,169	1,754	0
2. DIRECT CONSTRUCTION							
Clearing	ha						
Leveling s	ha						
Formatting							
Weir (LOW) h= 0.9	m	10	586,464	5,864	1,759	4,105	0
Weir (midle) h=	m						
(high) h=	m						
Intake gate	nos						
Excavation	m3						
Revetment Work	nos	1	1,380,860	1,380 *	690	690	0
Rehabili. Apron	nos						
New Canal I	m						
Canal II	m						
Canal III	m						
Reh. Canal I	m						
Canal II	m	350	37,776	13,221 *	6,611	6,611	2,026
S.Del.Canal	m	2,300	3,574	8,220 *	4,932	3,288	1,340
Turnout	nos						
Culvert	nos	2	274,050	548 *	219	329	0
O&M ROAD	m	350	11,183	3,914 *	2,348	1,566	424
Aqua-Duct	m						
Base	set						
Canal Cover	m						
sub-total				36,070 *	17,729	18,342	3,790

Table VIII-7 BASIC MATERIAL PRICE & LABOURS COST

(NORTH SUMATERA)

ITEM	UNIT	UNIT PRICE(Rp)	COMPONENT F(%)	COMPONENT L(%)	UNIT PRICE(Rp) F/P	UNIT PRICE(Rp) L/P	REMARKS
1.LABOUR							
Labour	m.day	4,200		100	0	4,200	
Foreman	m.day	5,200		100	0	5,200	
Carpenter	m.day	5,800		100	0	5,800	
Head of Carpenter	m.day	6,900		100	0	6,900	
Worker(Excavation)	m.day	5,400		100	0	5,400	
Brick Layer	m.day	5,800		100	0	5,800	
Steel Worker	m.day	5,800		100	0	5,800	
Head of Steel worker	m.day	6,900		100	0	6,900	
Painter	m.day	5,800		100	0	5,800	
Head of Painter	m.day	6,900		100	0	6,900	
Operator(Heavy Equ.)	m.day	8,000		100	0	8,000	
Assistant	m.day	4,200		100	0	4,200	
Driver	m.day	6,000		100	0	6,000	
Mechanical	m.day	4,500		100	0	4,500	
Head of Mechanical	m.day	5,000		100	0	5,000	
Electric Worker	m.day	4,500		100	0	4,500	
Watchman	m.day	4,200		100	0	4,200	
2.MATERIAL							
Portland Cement	zac	6,400	80	20	5,120	1,280	
Sand for Concrete	m3	7,100	80	20	5,680	1,420	*
Gravrl for Concrete	m3	16,300	90	10	14,670	1,630	*
Gravel for Masonry	m3	20,000	80	20	16,000	4,000	*
Brick	nos	65		100	0	65	
Asphalt	kg	480	50	50	240	240	
Reinforcement Bar	t	1,400,000	100	0	1,400,000	0	
Binding Wire	kg	2,000	100	0	2,000	0	
Nail	kg	1,600	100	0	1,600	0	
Timber II	m3	297,300	0	100	0	297,300	
Light Oil	l	350	34	66	119	231	**
Gasoline	l	550	60	40	330	220	**
Heavy Oil	l	280	34	66	95	185	**
Engine Oil	l	5,300	96	4	5,088	212	**
Gear Oil	l	5,700	96	4	5,472	228	**
Steel Gate	m2	466,000	90	10	419,400	46,600	
3.EQUIPMENT							
Track (4 t)	hr	20,000	90	10	18,000	2,000	
Bulldozer t-16	hr	52,000	90	10	46,800	5,200	
Excavator 0.7 m3	hr	50,000	90	10	45,000	5,000	
Compactor 9-12 ton	hr	45,000	90	10	40,500	4,500	
Vibro roller 0.6 t	hr	5,000	90	10	4,500	500	
Tamping Rammer 80 kg	hr	4,000	90	10	3,600	400	
Diesel Engine 5 ps	hr	400	90	10	360	40	
Concrete Mixer 0.22m3	hr	2,000	90	10	1,800	200	

Sorce; DAFTAR HARGA SATUAN BAHAN
BANGUNAN/PEKERJA PROPINSI SUMATERA UTARA

Note; 1) Transportation cost by track is included
2) Forign cost were estimated withoexcluding oil price in INDONESIA
3) Equipment cost were estimated by hearing

(SOUTH SULAWESI)

ITEM	UNIT	UNIT PRICE(Rp)	COMPONENT F(%)	COMPONENT L(%)	UNIT PRICE(Rp) F/P	UNIT PRICE(Rp) L/P	REMARKS
1.LABOUR							
Labour	m.day	2,000		100	0	2,000	
Foreman	m.day	4,000		100	0	4,000	
Carpenter	m.day	4,500		100	0	4,500	
Head of Carpenter	m.day	5,000		100	0	5,000	
Worker(Excavation)	m.day	2,000		100	0	2,000	
Brick Layer	m.day	4,500		100	0	4,500	
Steel Worker	m.day	4,500		100	0	4,500	
Head of Steel worker	m.day	5,000		100	0	5,000	
Painter	m.day	4,500		100	0	4,500	
Head of Painter	m.day	5,000		100	0	5,000	
Operator(Heavy Equ.)	m.day	7,000		100	0	7,000	
Assistant	m.day	2,000		100	0	2,000	
Driver	m.day	6,000		100	0	6,000	
Mechanical	m.day	4,500		100	0	4,500	
Head of Mechanical	m.day	5,000		100	0	5,000	
Electric Worker	m.day	4,500		100	0	4,500	
Watchman	m.day	3,000		100	0	3,000	
2.MATERIAL							
Portland Cement	zac	5,800	80	20	4,640	1,160	
Sand for Concrete	m3	8,100	80	20	6,480	1,620	*
Gravrl for Concrete	m3	9,100	90	10	8,190	910	*
Gravel for Masonry	m3	10,000	80	20	8,000	2,000	*
Brick	nos	38		100	0	38	
Asphalt	kg	600	50	50	300	300	
Reinforcement Bar	t	1,400,000	100	0	1,400,000	0	
Binding Wire	kg	2,340	100	0	2,340	0	
Nail	kg	2,700	100	0	2,700	0	
Timber II	m3	428,000	0	100	0	428,000	
Light Oil	l	350	34	66	119	231	**
Gasoline	l	550	60	40	330	220	**
Heavy Oil	l	280	34	66	95	185	**
Engine Oil	l	5,300	96	4	5,088	212	**
Gear Oil	l	5,700	96	4	5,472	228	**
Steel Gate	m2	466,000	90	10	419,400	46,600	
3.EQUIPMENT							
Track (4 t)	hr	20,000	90	10	18,000	2,000	
Bulldozer t-16	hr	52,000	90	10	46,800	5,200	
Excavator 0.7 m3	hr	50,000	90	10	45,000	5,000	
Compactor 9-12 ton	hr	45,000	90	10	40,500	4,500	
Vibro roller 0.6 t	hr	5,000	90	10	4,500	500	
Tamping Rammer 80 kg	hr	4,000	90	10	3,600	400	
Diesel Engine 5 ps	hr	400	90	10	360	40	
Concrete Mixer 0.22m3	hr	2,000	90	10	1,800	200	

Sorce; DAFTAR HARGA SATUAN BAHAN
BANGUNAN/PEKERJA PROPINSI SULAWESI SELATAN

Note; 1) Transportation cost by track is included
2) Forign cost were estimated withoexcluding oil price in INDONESIA
3) Equipment cost were estimated by hearing

(WEST NUSA TENGGARA)

ITEM	UNIT	UNIT PRICE(Rp)	COMPONENT F(%)	COMPONENT L(%)	UNIT PRICE(Rp) F/P	UNIT PRICE(Rp) L/P	REMARKS
1.LABOUR							
Labour	m.day	2,300		100	0	2,300	
Foreman	m.day	4,500		100	0	4,500	
Carpenter	m.day	4,200		100	0	4,200	
Head of Carpenter	m.day	4,800		100	0	4,800	
Worker(Excavation)	m.day	3,500		100	0	3,500	
Brick Layer	m.day	4,100		100	0	4,100	
Steel Worker	m.day	4,200		100	0	4,200	
Head of Steel worker	m.day	2,800		100	0	2,800	
Painter	m.day	3,900		100	0	3,900	
Head of Painter	m.day	4,200		100	0	4,200	
Operator(Heavy Equ.)	m.day	7,000		100	0	7,000	
Assistant	m.day	2,300		100	0	2,300	
Driver	m.day	6,000		100	0	6,000	
Mechanical	m.day	4,500		100	0	4,500	
Head of Mechanical	m.day	5,000		100	0	5,000	
Electric Worker	m.day	4,500		100	0	4,500	
Watchman	m.day	2,500		100	0	2,500	
2.MATERIAL							
Portland Cement	zac	7,100	80	20	5,680	1,420	
Sand for Concrete	m3	6,000	80	20	4,800	1,200	*
Gravrl for Concrete	m3	8,500	90	10	7,650	850	*
Gravel for Masonry	m3	8,500	80	20	6,800	1,700	*
Brick	nos	39		100	0	39	
Asphalt	kg	600	50	50	300	300	
Reinforcement Bar	t	1,017,000	100	0	1,017,000	0	
Binding Wire	kg	1,200	100	0	1,200	0	
Nail	kg	1,900	100	0	1,900	0	
Timber II	m3	248,300	0	100	0	248,300	
Light Oil	l	350	34	66	119	231	**
Gasoline	l	550	60	40	330	220	**
Heavy Oil	l	280	34	66	95	185	**
Engine Oil	l	5,300	96	4	5,088	212	**
Gear Oil	l	5,700	96	4	5,472	228	**
Steel Gate	m2	466,000	90	10	419,400	46,600	
3.EQUIPMENT							
Track (4 t)	hr	20,000	90	10	18,000	2,000	
Buildozer t-16	hr	52,000	90	10	46,800	5,200	
Excavator 0.7 m3	hr	50,000	90	10	45,000	5,000	
Compactor 9-12 ton	hr	45,000	90	10	40,500	4,500	
Vibro roller 0.6 t	hr	5,000	90	10	4,500	500	
Tamping Rammer 80 kg	hr	4,000	90	10	3,600	400	
Diesel Engine 5 ps	hr	400	90	10	360	40	
Concrete Mixer 0.22m3	hr	2,000	90	10	1,800	200	

Sorce; DAFTAR HARGA SATUAN BAHAN
BANGUNAN/PEKERJA PROPINSI NUSA TENGGARA BARAT

Note; 1) Transportation cost by track is included
2) Forign cost were estimated withoexcluding
oil price in INDONESIA
3) Equipment cost were estimated by hearing

Table VIII-8 (1/3) UNIT PRICE OF MAJOR WORKS IN NORTH SUMATRA

NO	ITEM	UNIT	UNIT PRICE(RP)	C. Labours Cost
E-1	Bulldozer 11t	hr	53,055	600
E-2	Bulldozer 16t	hr	62,195	600
E-3	Excavator 0.4m3	hr	50,135	600
E-4	Excavator 0.7m3	hr	56,726	600
E-5	Compactor 9-12t	hr	49,712	600
E-6	Vivro roller 0.6t	hr	7,250	600
E-7	Tamping Rummer 80kg	hr	5,887	600
E-8	Concrete Mixer 0.22m3	day	27,744	4,200
S-E1	Earthfill I(Mech.)	m3	3,017	32
S-E2	Earthfill II(Man)	m3	5,527	970
S-E3	Trimming Work	m2	309	268
S-E4	Excavation I(Mech.)	m3	3,008	36
S-E5	Excavation II(Man)	m3	1,699	1,512
S-E6	Earthfill III(Road)	m3	3,348	526
S-E7	Back-fill for Structure	m3	6,517	1,399
S-E8	Asphalt Pavement	m2	5,375	113
S-E9	Gravel Metaling	m2	3,366	533
S-E10	Clearing	m2	92	92
S-E11	Backfill for Borrowpit	m3	906	10
S-E12	Grass and Sod	m2	1,113	546
S-S1	Concrete Type I(T.BOX))	m3	70,415	4,187
S-S2	Concrete Type II(Siphon)	m3	84,328	4,187
S-S3	Concrete Type III(lining)	m3	68,630	4,187
S-S4	Concrete Type IV(leveling	m3	53,512	4,187
S-S5	Reinforcement Work	t	1,482,960	5,460
S-S6	Wooden Form	m2	15,883	672
S-S7	Brick Masonry	m3	122,230	26,460
S-S8	Masonry Work	m3	71,486	8,400
S-S9	Mortar	m3	89,092	4,620
S-S10	Mortar Plastering	m2	5,122	16
S-S11	Asphalt joint	m2	5,689	109
S-S12	Gabion	m3	30,329	3,586

Table VIII-8 (2/3) UNIT PRICE OF MAJOR WORKS IN SOUTH SULAWESI

NO	ITEM	UNIT	UNIT PRICE(RP)	C.Labours Cost
E-1	Bulldozer 11t	hr	52,598	286
E-2	Bulldozer 15t	hr	61,738	286
E-3	Excavator 0.4m3	hr	49,678	286
E-4	Excavator 0.7m3	hr	56,269	286
E-5	Compactor 9-12t	hr	49,255	286
E-6	Vivro roller 0.6t	hr	6,936	286
E-7	Tamping Rummer 80kg	hr	5,573	286
E-8	Concrete Mixer 0.22m3	day	25,544	2,000
S-E1	Earthfill I(Mech.)	m3	2,993	15
S-E2	Earthfill II(Man)	m3	5,019	463
S-E3	Trimming Work	m2	160	128
S-E4	Excavation I(Mech.)	m3	2,980	17
S-E5	Excavation II(Man)	m3	864	720
S-E6	Earthfill III(Road)	m3	3,008	251
S-E7	Back-fill for Structure	m3	5,655	667
S-E8	Asphalt Pavement	m2	5,682	54
S-E9	Gravel Metaling	m2	2,434	254
S-E10	Clearing	m2	44	44
S-E11	Backfill for Borrowpit	m3	899	5
S-E12	Grass and Sod	m2	812	260
S-S1	Concrete Type I(T.BOX))	m3	59,880	1,994
S-S2	Concrete Type II(Siphon)	m3	72,401	1,994
S-S3	Concrete Type III(lining)	m3	58,319	1,994
S-S4	Concrete Type IV(leveling	m3	44,393	1,994
S-S5	Reinforcement Work	t	1,476,050	2,600
S-S6	Wooden Form	m2	21,852	320
S-S7	Brick Masonry	m3	77,330	12,600
S-S8	Masonry Work	m3	51,428	4,000
S-S9	Mortar	m3	80,340	2,200
S-S10	Mortar Plastering	m2	4,138	8
S-S11	Asphalt joint	m2	7,020	52
S-S12	Gabion	m3	19,300	1,708

Table VIII-8 (3/3) UNIT PRICE OF MAJOR WORKS IN NTB

NO	ITEM	UNIT	UNIT PRICE(RP)	C. Labours Cost
E-1	Bulldozer 11t	hr	52,640	328
E-2	Bulldozer 16t	hr	61,780	328
E-3	Excavator 0.4m3	hr	49,720	328
E-4	Excavator 0.7m3	hr	56,311	328
E-5	Compactor 9-12t	hr	49,297	328
E-6	Vivro roller 0.6t	hr	6,978	328
E-7	Tamping Rummer 80kg	hr	5,615	328
E-8	Concrete Mixer 0.22m3	day	25,844	2,300
S-E1	Earthfill I(Mech.)	m3	2,994	17
S-E2	Earthfill II(Man)	m3	5,088	531
S-E3	Trimming Work	m2	183	147
S-E4	Excavation I(Mech.)	m3	2,983	20
S-E5	Excavation II(Man)	m3	990	828
S-E6	Earthfill III(Road)	m3	3,070	288
S-E7	Back-fill for Structure	m3	5,809	766
S-E8	Asphalt Pavement	m2	4,947	61
S-E9	Gravel Metaling	m2	2,242	291
S-E10	Clearing	m2	50	50
S-E11	Backfill for Borrowpit	m3	899	6
S-E12	Grass and Sod	m2	857	299
S-S1	Concrete Type I(T.BOX))	m3	67,960	2,293
S-S2	Concrete Type II(Siphon)	m3	83,393	2,293
S-S3	Concrete Type III(lining)	m3	66,187	2,293
S-S4	Concrete Type IV(leveling	m3	49,306	2,293
S-S5	Reinforcement Work	t	1,075,700	2,990
S-S6	Wooden Form	m2	13,277	368
S-S7	Brick Masonry	m3	82,340	14,490
S-S8	Masonry Work	m3	54,757	4,600
S-S9	Mortar	m3	94,225	2,530
S-S10	Mortar Plastering	m2	4,152	9
S-S11	Asphalt joint	m2	7,028	59
S-S12	Gabion	m3	14,707	1,964

Table VIII-9 PROJECT COST OF 795 F/S SCHEMES

North Sumatra

No.	CODE No.	Area Name	Gr.	Gross Paddy Fields (Ha)		L.D. Area (Ha)		Civil Work	Grand Total	Unit Cost	
		IRR		Listed	Planned	Listed	Planned	1000Rp.	1000Rp.	1000Rp./Ha	US$/Ha
1	60002	Kuta Gambir	A4	144	101	104	73	226,300	317,022	4,343	2,172
2	60003	Siarung Arung	A4	197	138	47	33	102,300	143,311	4,343	2,172
3	60004	Gapaulako-Galian Pancur nandi	A4	192	134	42	29	89,900	125,940	4,343	2,172
4	60005	Parikki II	A4	200	140	160	112	347,200	486,389	4,343	2,172
5	60006	Kabau Tengah	A4	185	130	160	112	347,200	486,389	4,343	2,172
6	60008	Amborgang	A1	300	210	125	88	211,200	307,766	3,497	1,749
7	60010	Lae Pangaroan	A3	148	104	58	41	102,500	148,343	3,618	1,809
8	*60011	Sumbari	A4	110	77	60	42	130,200	182,396	4,343	2,172
9	60012	Lae Rakkom	A2	140	98	40	28	84,000	118,216	4,222	2,111
10	60013	Lae Pinagar	A4	117	82	117	82	254,200	356,107	4,343	2,172
11	60014	Paniki I	A2	75	53	65	46	138,000	194,211	4,222	2,111
12	60016	Sileu leu Sagala Raja	A4	150	105	30	21	65,100	91,198	4,343	2,172
13	60017	Simanduma	A3	175	122	25	18	45,000	65,126	3,618	1,809
14	60020	Mungkur	A4	199	139	159	111	344,100	482,047	4,343	2,172
15	60021	Paluh Paki	A2	709	496	300	210	630,000	886,617	4,222	2,111
16	60022	Timbang Lawang	A2	825	578	25	18	54,000	75,996	4,222	2,111
17	60023	Sinar Toba Simanggala	A2	50	35	45	31	93,000	130,882	4,222	2,111
18	60025	Ulu Mahuan	A2	75	53	50	35	105,000	147,770	4,222	2,111
19	60027	Aek Tobang	A2	57	40	36	25	75,000	105,550	4,222	2,111
20	60028	Mandailing	A2	265	186	215	151	453,000	637,520	4,222	2,111
21	60029	Aek Baja	A2	100	70	55	39	117,000	164,658	4,222	2,111
22	60031	Aek Sipalis	A1	225	158	0	0	0	0	****	****
23	60033	Parlunggean	A4	245	172	50	35	108,500	151,997	4,343	2,172
24	60034	Sisuhar-Suhar	A4	550	385	200	140	434,000	607,987	4,343	2,172
25	60035	Aek Silalang	A3	245	172	0	0	0	0	****	****
26	60036	Aek Sidoras	A3	75	53	0	0	0	0	****	****
27	60037	Silinggom-Linggom	A4	285	200	210	147	455,700	638,386	4,343	2,172
28	*60038	Rauning B	A2	94	66	67	47	141,000	198,433	4,222	2,111
29	60040	Aek Solok	A1	125	88	0	0	0	0	****	****
30	60041	tahalak Rauning A	A2	500	350	375	263	789,000	1,110,383	4,222	2,111
31	60042	Aek Suhat	A2	140	98	45	31	93,000	130,882	4,222	2,111
32	60045	Saba Bolak	A3	80	56	5	4	10,000	14,472	3,618	1,809
	Total				4,889		2,012	6,045,400	8,505,993	117,131	58,572
	Average				153		72	215,907	303,785	4,183	2,092

Remarks : * ; Representative Scheme

COST ESTIMATION North Sumatra

No.	CODE NO.	Area Name	Gr.	Gross Paddy Fields (Ha)		L.D. Area (Ha)		Civil Work	Grand Total	Unit Cost	
		IRR		Listed	Planned	Listed	Planned	1000Rp.	1000Rp.	1000Rp. /Ha	US$/Ha
1	50001	Parongil Jehe	C1	85	60	0	0	72,600	123,687	2,060	1,030
2	50002	Marsada	B4	140	98	40	28	154,800	245,636	2,506	1,253
3	50003	Lae Jering	C1	55	39	0	0	47,520	80,743	2,070	1,035
4	50004	Ulu Merah	B4	190	133	40	28	202,000	323,598	2,433	1,217
5	50005	Simantas	C1	55	39	0	0	47,280	80,453	2,063	1,032
6	50006	Lae Panginuman	C1	90	63	0	0	75,600	129,026	2,048	1,024
7	50007	Bantun Kerbo	C1	100	70	0	0	87,000	146,986	2,100	1,050
8	50008	Pandeangan	B1	65	46	35	25	88,100	133,945	2,912	1,456
9	50009	Tiga Serangkai I	C1	75	53	0	0	67,600	113,377	2,139	1,070
10	50010	Sopokomil	B4	150	105	150	105	263,300	380,868	3,627	1,814
11	50011	Simatupang	C3	50	35	0	0	43,000	72,889	2,083	1,042
12	50012	Jumajoring	C3	106	74	0	0	88,800	151,555	2,048	1,024
13	50013	Galian Bendar Bt. Beruk	B1	45	32	10	7	48,500	77,735	2,429	1,215
14	50014	Bekasi (A)	B1	150	105	150	105	265,700	383,767	3,655	1,828
15	50015	Bekasi (B)	B1	60	42	60	42	108,200	155,826	3,710	1,855
16	50016	Garuh (Hutarahu)	C1	200	140	0	0	176,000	296,387	2,117	1,059
17	50017	Kuta Gambir	B4	150	105	110	77	226,700	336,664	3,206	1,603
18	50018	Jumagulangan	C1	70	49	0	0	66,800	110,016	2,245	1,123
19	50019	Lae Laklik Rambong	B1	160	112	110	77	235,300	351,242	3,136	1,568
20	50020	Gapanlaho	B4	192	134	42	29	200,900	322,868	2,409	1,205
21	50021	Gabe Padas/Lae Lahlak	B4	150	105	105	74	223,000	332,196	3,164	1,582
22	50022	Siaring-aring	B4	197	138	47	33	218,500	346,519	2,511	1,256
23	50023	Sibora-bora	B1	80	56	40	28	104,200	159,377	2,846	1,423
24	50024	Buparsi	B4	90	63	75	53	144,980	212,820	3,378	1,689
25 *	50025	Sumbul Berampu	C1	177	124	0	0	151,800	257,580	2,077	1,039
26	50026	Lae Timokkap	C1	82	57	0	0	68,880	117,318	2,058	1,029
27	50027	Lae Lancang	B4	75	53	65	46	123,400	180,769	3,411	1,706
28	50028	Lae Situlan	C1	120	84	0	0	104,800	176,866	2,106	1,053
29	50029	Hutamanir	C1	180	126	0	0	154,800	262,401	2,083	1,042
30	50030	Jumatukko	C1	120	84	0	0	101,400	172,760	2,057	1,029
31	50031	Lae Pinagar	B4	85	60	0	0	72,000	122,882	2,048	1,024
32	50032	Sitalmak	C1	200	140	0	0	172,000	291,556	2,083	1,042
33	50033	Sopogadong	C1	60	42	0	0	50,400	86,018	2,048	1,024
34	50034	Bulu Ujung	C1	120	84	0	0	100,800	172,035	2,048	1,024
35	50035	Lingga Raja	C1	155	109	0	0	131,600	224,202	2,057	1,029
36	50036	Lae Nboang	B1	40	28	30	21	61,700	91,283	3,260	1,630
37	50037	Hutaimbaru	C1	180	126	0	0	152,800	259,985	2,063	1,032
38	50038	Lae Saradan	B4	105	74	80	56	162,400	240,445	3,249	1,625
39	50039	Jumarindang	C1	100	70	0	0	84,800	144,329	2,062	1,031
40	50040	Karing Pargaulan	B4	65	46	0	0	55,200	94,210	2,048	1,024
41	50041	Jumasianak	C1	60	42	0	0	56,400	93,264	2,221	1,111
42	50042	Jumapetak	B4	80	56	0	0	68,000	115,656	2,065	1,033
43	50043	Sikaleut	C1	60	42	0	0	50,400	86,018	2,048	1,024
44	50044	Sibintuar/Persawa	B1	55	39	25	18	71,000	109,101	2,797	1,399
45	50045	Bangun Mulia	B5	55	39	10	7	56,300	91,347	2,342	1,171
46	50046	Bukit Mas/Pantai Buaya	B1	120	84	20	14	119,800	194,982	2,321	1,161
47	50047	Sematar/Pamah	B1	30	21	15	11	49,500	72,357	3,446	1,723
48	50048	Sungai Nibung	B6	20	14	20	14	38,000	54,277	3,877	1,939
49	50049	Cinta Dapat	B2	80	56	10	7	82,300	132,927	2,374	1,187
50	50050	Kerpey	B4	120	84	0	0	100,800	172,035	2,048	1,024
51	50051	Sei Tapak Dua	C1	75	53	0	0	63,880	108,884	2,054	1,027
52	50052	Bandar Bunga	B1	70	49	0	0	58,800	100,354	2,048	1,024
53	50053	Selemak/Sejagat	B6	70	49	0	0	60,800	102,769	2,097	1,049
54	50054	Simpang Lukis	B1	60	42	0	0	51,400	87,225	2,077	1,039
55	50055	Sei Bekurman	B4	60	42	10	7	59,900	97,491	2,321	1,161
56	50056	Sei Tuakan Jaya	B5	55	39	0	0	49,800	83,497	2,141	1,071
57 *	50057	Sidosukti	B1	39	27	4	3	40,300	64,838	2,401	1,201
58	50058	Perpulungan	B5	50	35	0	0	42,000	71,681	2,048	1,024
59	50059	Sibertung	B2	55	39	0	0	46,800	79,873	2,048	1,024
60	50060	Suka Pulung	B1	170	119	0	0	142,800	243,717	2,048	1,024
61	50061	Paya Salit	B6	50	35	0	0	44,000	74,097	2,117	1,059
62	50062	Sei Sirit	B4	80	56	10	7	82,300	132,927	2,374	1,187
63	50063	Sei Tungkamsakti	B3	75	53	0	0	67,600	113,377	2,139	1,070
64	50064	Kp. Mandailing	C1	55	39	0	0	46,800	79,873	2,048	1,024
65	50065	Nanu Tembis	C1	200	140	0	0	168,000	286,725	2,048	1,024
66	50066	Bekancan	B5	105	74	0	0	98,800	163,632	2,211	1,106
67	50068	Indra Kaya	B3	115	81	35	25	129,700	205,143	2,533	1,267
68	50069	Aek Menek	B6	45	32	22	15	58,700	90,055	2,814	1,407
69	50070	Kp. Lalang II	B3	35	25	20	14	48,200	73,182	2,927	1,464
70	50072	Parmanukan	B3	100	70	93	65	168,500	245,418	3,506	1,753
71	50073	Aeksihare-hare	B1	80	56	55	39	117,900	175,923	3,141	1,571
72	50074	Aek Kandis	B1	125	88	1	1	106,900	181,797	2,066	1,033
73	50075	Janji Lobi	B3	60	42	10	7	59,500	97,008	2,310	1,155
74	50076	Sihosur	B1	80	56	50	35	112,700	169,643	3,029	1,515
75	50077	Sibara-bara	B5	135	95	100	70	205,000	304,469	3,205	1,603
76	50078	Aek Tapa	B1	150	105	50	35	173,900	272,895	2,599	1,300
77	50079	Aek Halubi	B3	85	60	45	32	113,600	173,125	2,885	1,443
78	50080	Aek Paing	B3	200	140	50	35	213,500	341,678	2,441	1,221
79	50082	Sinar Pagi/Sibara-bara II	B1	200	140	50	35	217,500	346,509	2,475	1,238

80	50084	Aek Rawa-Rawa/Aek Menek	B4	45	32	35	25	71,700	105,755	3,305	1,653
81	50085	Sibuaya	B1	300	210	150	105	390,100	596,878	2,842	1,421
82	50086	Kampung Lalang I	B1	23	16	3	2	21,800	35,909	2,244	1,122
83	50087	Kampung Lalang III	B1	125	88	50	35	153,500	238,079	2,705	1,353
84	50088	Cinta Makmur	B3	175	123	155	109	289,300	423,047	3,439	1,720
85	50089	Padang Rie	B3	75	53	40	28	102,000	154,924	2,923	1,462
86	* 50091	Aek Palia	B1	54	38	6	4	52,000	85,555	2,251	1,126
87	50092	Bangun Sari	B4	50	35	45	32	83,600	121,924	3,484	1,742
88	50095	Purbatua	B1	270	189	0	0	226,800	387,079	2,048	1,024
89	50096	Labutua	B1	180	126	0	0	171,200	282,208	2,240	1,120
90	50097	Sampang Marulun	B1	150	105	0	0	146,000	239,199	2,278	1,139
91	50098	Pangambatan	B1	235	165	60	42	254,200	405,802	2,459	1,230
92	50099	Purbatua	B1	150	105	0	0	129,200	218,909	2,085	1,043
93	50100	Sipange/Baratan	B1	87	61	0	0	73,200	124,930	2,048	1,024
94	50101	Aek Sigala-gala	B1	70	49	0	0	68,800	112,431	2,295	1,148
95	50103	Sungat Muara Anggali	B5	50	35	0	0	132,000	180,379	5,154	2,577
96	50104	Hutaimbaru	B1	125	88	0	0	106,800	181,677	2,065	1,033
97	50106	Mungkur/Aloban	B2	50	35	0	0	45,200	75,546	2,158	1,079
98	50108	Napitupalu/Hutaimbaru	B1	287	201	0	0	246,200	417,694	2,078	1,039
99	50109	Hutabalang	B1	250	175	50	35	255,500	413,359	2,362	1,181
100	50110	Pargarutan	B1	60	42	0	0	52,000	87,950	2,094	1,047
101	50111	Anggoli	B1	183	128	93	65	238,100	364,204	2,845	1,423
102	50112	Barambang	B1	125	88	87	61	194,900	288,079	3,274	1,637
103	50113	Aek Lumut	B6	100	70	60	42	198,600	281,771	4,025	2,013
104	50114	Aek Baung	C1	50	35	0	0	42,000	71,681	2,048	1,024
105	50115	Lapian	B1	385	270	115	81	429,300	680,146	2,519	1,260
106	50116	Simonosor	B3	205	144	0	0	178,800	302,164	2,098	1,049
107	50119	Poriaha/Tapian Naulu II	B1	159	111	9	6	149,000	246,415	2,220	1,110
108	50121	Sibintang	B3	225	158	5	4	194,800	329,870	2,088	1,044
109	50122	Hutanabalon	B1	116	81	0	0	98,400	167,340	2,066	1,033
110	50123	Sibuluan	B3	200	140	125	88	284,400	427,307	3,052	1,526
111	50124	Desa Lumut A	B3	75	53	40	28	180,000	249,128	4,701	2,351
112	50125	Lumut B	B3	75	53	50	35	117,100	173,161	3,267	1,634
113	50127	Unte Mungkur II	B3	80	56	0	0	73,200	121,937	2,177	1,089
114	* 50129	Pangambatan (B)	B2	69	48	9	6	67,000	109,659	2,285	1,143
115	50130	Muara Bolak A	B3	170	119	95	67	229,900	348,912	2,932	1,466
116	50131	Sigambo-Gambo	B1	60	42	0	0	62,400	100,511	2,393	1,197
117	50133	Aek Siporbas	B4	150	105	0	0	130,000	219,875	2,094	1,047
118	50134	Aek Silambu	B4	90	63	0	0	79,600	133,857	2,125	1,063
119	50135	Bandar Pangahan	B4	130	91	0	0	111,600	189,270	2,080	1,040
120	50137	Pangaribuan	B4	100	70	0	0	94,000	155,440	2,221	1,111
121	50138	Aek Asahan	B6	40	28	20	14	63,000	92,853	3,316	1,658
122	50139	Sisania	B4	235	165	50	35	249,500	400,125	2,425	1,213
123	* 50141	Aek Siparbue	B4	37	26	3	2	38,800	63,636	2,448	1,224
124	50142	Aek Binanga Bolon	B4	100	70	0	0	88,000	148,194	2,117	1,059
125	50143	Aek Sampean	B1	100	70	25	18	121,400	188,533	2,693	1,347
126	50144	Aek Simargalung/Siparpar	B4	110	77	0	0	98,000	164,462	2,136	1,068
127	50145	Danau Toba	B6	95	67	120	84	189,600	269,105	4,016	2,008
128	50146	Sibual	B3	130	91	0	0	123,200	203,280	2,234	1,117
129	50147	Sidilanitano	B4	135	95	0	0	118,800	200,361	2,109	1,055
130	50150	Aek Sihotunggal	B4	189	132	0	0	172,400	287,250	2,176	1,088
131	50153	Danau Toba	B3	172	120	25	18	215,400	331,998	2,767	1,384
132	50154	Aek Simokmok	B1	65	46	0	0	59,200	99,041	2,153	1,077
133	50155	Aek Marjambe	B2	150	105	50	35	201,500	306,229	2,916	1,458
134	50156	Aek Hariara Sitambor	B4	150	105	50	35	179,500	279,659	2,663	1,332
135	50157	Bandar Naganjang	B4	200	140	0	0	184,000	306,049	2,186	1,093
136	50158	Aek Sibargung	B4	240	168	15	11	215,900	361,341	2,151	1,076
137	50159	Aek Siparbue II	C1	150	105	60	42	130,000	219,875	2,094	1,047
138	50162	Aek Sitete	B4	250	175	0	0	216,000	365,653	2,089	1,045
139	50163	Aek Sigumbang	B4	130	91	0	0	111,200	188,787	2,075	1,038
140	50164	Waduk Hairi Gorat	B6	151	106	30	21	164,500	262,141	2,473	1,237
141	50165	Aek Siampa Julu	B4	380	266	0	0	323,200	549,609	2,066	1,033
142	50166	Aek Badingin	B1	100	70	50	35	131,900	201,214	2,874	1,437
143	50167	Aek Sijambe	B4	100	70	0	0	86,400	146,261	2,089	1,045
144	50168	Aek Silang	B4	253	177	128	90	339,400	515,887	2,915	1,458
145	50169	Aek Sitapean/Parsisioran	B1	200	140	50	35	215,500	344,093	2,458	1,229
146	50170	Parmansian	B1	50	35	0	0	43,000	72,889	2,083	1,042
147	50171	Aek Nabara	B4	220	154	75	53	253,700	398,612	2,588	1,294
148	50172	Aek Sipollas	B1	75	53	0	0	64,800	109,995	2,075	1,038
149	50173	Sikual-Kual Silah Bulugading	B4	350	245	50	35	347,500	566,384	2,312	1,156
150	50174	Sipapan/Danau Toba	B6	75	53	25	18	108,200	162,412	3,064	1,532
151	50175	Aek Mandosi	B5	500	350	0	0	450,000	753,046	2,152	1,076
152	50176	Aek Sampuran	B1	95	67	0	0	84,800	142,533	2,127	1,064
153	50177	Aek Sitasik	B4	150	105	0	0	127,200	216,493	2,062	1,031
154	50178	Aek Bari Balon	B6	95	67	40	28	132,800	200,505	2,993	1,497
155	50179	Siparolo Sulupapi Duan	B4	120	84	10	7	115,900	190,272	2,265	1,133
156	50180	Sigiro (Bandar Nagidang)	B4	270	189	20	14	246,600	410,993	2,175	1,088
157	50182	Aek Harangan	C1	150	105	25	18	129,200	218,909	2,085	1,043
158	50183	Aek Siborong-borong	B4	100	70	35	25	118,500	185,030	2,643	1,322
159	50184	Saba Bolak Pakpohan II, III, L	B2	350	245	200	140	476,000	721,580	2,945	1,473
160	50186	Aek Sigilang	B4	100	70	0	0	85,600	145,295	2,076	1,038
161	50187	Aek Sia Tunggal	B4	165	116	15	11	153,500	254,843	2,197	1,099
162	50188	Bulugading	B4	120	84	50	35	154,300	236,650	2,817	1,409
163	50189	Lau Rambung	B4	60	42	0	0	52,000	87,950	2,094	1,047
164	50190	Mandah	B4	40	28	0	0	34,800	58,794	2,100	1,050
165	50191	Nangka Glugur	B5	70	49	0	0	59,400	101,079	2,063	1,032
166	50192	Parit Rumah Gugung	B4	30	21	0	0	26,000	43,975	2,094	1,047
167	50193	Sumbeiken Elok	B1	450	315	0	0	382,000	649,963	2,063	1,032
168	50194	Lau Lenting	B4	40	28	0	0	35,600	59,761	2,134	1,067
169	50195	Serdang	B1	130	91	30	21	138,300	221,517	2,434	1,217
170	50196	Sawah Galumpang	B4	30	21	0	0	29,200	47,840	2,278	1,139
171	50197	Sabah Bernch/Lau Jandi	B4	40	28	0	0	33,600	57,345	2,048	1,024

172	50198	Dalu-Dalu Cepen	B4	100	70	0	0	85,200	144,812	2,069	1,035
173	50199	Lau Mbelin/LauJandi	C1	80	56	0	0	69,600	117,589	2,100	1,050
174	50200	Sabah Pinto	C1	40	28	0	0	33,600	57,345	2,048	1,024
175	50201	Melas	B4	80	56	40	28	107,600	163,483	2,919	1,460
176	50202	Rumanis	B4	100	70	0	0	84,480	143,942	2,056	1,028
177	50203	Pergendangen	B4	60	42	0	0	50,400	86,018	2,048	1,024
178	50204	Sabah lama	C2	100	70	0	0	86,400	146,261	2,089	1,045
179	50205	Lau Kesumpat	B1	100	70	80	56	158,800	233,702	3,339	1,670
180	50206	Sabah Lepar	B4	85	60	0	0	73,600	124,815	2,080	1,040
181	50207	Gurubenua	B4	50	35	20	14	63,200	97,286	2,780	1,390
182	50208	Sabah Dekel	B4	40	28	0	0	33,600	57,345	2,048	1,024
183	50209	Sabah Nano Lembu	B4	40	28	0	0	33,600	57,345	2,048	1,024
184	50210	Lau Galuh	B4	40	28	0	0	37,600	62,176	2,221	1,111
185	50211	Lau Pengulu	B1	90	63	20	14	98,600	156,805	2,489	1,245
186	50212	Parit Gedang Air Mas	B1	75	53	0	0	64,800	109,995	2,075	1,038
187	50213	Kacaribu	B5	50	35	30	21	69,900	105,378	3,011	1,506
188	50214	Sumbeiken	C1	300	210	0	0	256,000	434,919	2,071	1,036
189	50215	S. Kenjahe	B4	40	28	10	7	43,900	69,785	2,492	1,246
190	50216	Barong Kersap	B1	100	70	40	28	120,400	187,325	2,676	1,338
191	50217	Sukajulu	B4	80	56	40	28	104,400	159,618	2,850	1,425
192 *	50218	Kutamale	B4	57	40	11	8	61,600	98,347	2,459	1,230
193	50220	Beringin	B5	50	35	0	0	42,000	71,681	2,048	1,024
194	50225	Marjanji Aceh	B6	150	105	0	0	126,000	215,044	2,048	1,024
195	50226	Desa Gajah	B3	500	350	0	0	423,200	720,678	2,059	1,030
196	50228	Siantipa/Siou	B4	100	70	40	28	160,400	235,635	3,366	1,683
197 *	50240	Asahan VIII Pengajian	B3	94	66	27	19	123,900	189,157	2,866	1,433
198	50245	Pulorejo	B1	300	210	0	0	254,000	432,503	2,060	1,030
199	50246	Aek Sangulan	B1	70	49	10	7	67,900	111,344	2,272	1,136
200	50247	Tanohudon	B4	90	63	0	0	75,600	129,026	2,048	1,024
201	50248	Tahalak Saba Bahalan	B1	125	88	10	7	118,700	196,049	2,228	1,114
202	50249	Bondar Dolak Tamiang	B4	100	70	15	11	98,300	160,633	2,295	1,148
203	50250	Aek Sitekkean	B4	95	67	20	14	101,000	162,098	2,419	1,210
204	50251	Aek Harsik	B4	150	105	0	0	126,000	215,044	2,048	1,024
205	50252	Marsungsang Batang Pane	B4	80	56	10	7	84,300	135,343	2,417	1,209
206	50253	Sungai Sidadi	B1	150	105	10	7	135,100	226,035	2,153	1,077
207	50254	Batang Gadis	B1	200	140	15	11	182,300	303,996	2,171	1,086
208	50255	Aek Mahual	B1	50	35	0	0	42,000	71,681	2,048	1,024
209 *	50256	Aek Sihim	B5	69	48	11	8	68,000	110,866	2,310	1,155
210	50258	Sirai Bujang	B4	190	133	15	11	177,900	294,491	2,214	1,107
211	50259	Bulu Sonik	B1	155	109	60	42	188,600	293,044	2,688	1,344
212	50260	Tano Tiris I	B3	85	60	85	60	150,000	217,087	3,618	1,809
213	50261	Tano Tiris II	B2	245	172	0	0	214,400	361,925	2,104	1,052
214	50262	Sungai Batang Natal	B4	150	105	20	14	144,200	237,025	2,257	1,129
215	50263	Balimbing	B4	85	60	0	0	76,400	128,196	2,137	1,069
216	50264	Torkalas	B4	75	53	15	11	77,900	125,817	2,374	1,187
217	50265	Saba Napa Gulangan	B1	150	105	22	15	157,500	253,088	2,410	1,205
218	50266	Bondar Tamiang	B4	142	99	27	19	151,500	242,249	2,447	1,224
219	50267	Aek Aloban	B4	115	81	15	11	111,500	183,162	2,261	1,131
220	50268	Sababolak	B1	100	70	5	4	91,600	152,542	2,179	1,090
221	50269	Bondar Lapan Aek Sihim	B5	61	43	21	15	71,100	111,617	2,596	1,298
222	50270	Sungai Sidadi	B1	245	172	20	14	240,600	393,568	2,288	1,144
223	50271	Sungai Batang Natal	B4	70	49	35	25	99,300	149,268	3,046	1,523
224	50272	Bondar Bulusoma	B4	110	77	5	4	98,800	165,429	2,148	1,074
225	50273	Sungai Batang Natal	B4	75	53	25	18	93,000	144,054	2,718	1,359
226	50274	Siraja Oping	B4	100	70	40	28	120,400	187,325	2,676	1,338
227	50275	Aek Latong	C1	100	70	0	0	86,400	146,261	2,089	1,045
228	50276	Panyanggar Julu	B1	100	70	0	0	87,200	147,227	2,103	1,052
229	50277	Sabajulu/Hutaimbaru	B4	85	60	20	14	92,200	147,279	2,455	1,228
230	50278	Sihapas Batang Gadis	B2	105	74	60	42	143,400	217,498	2,939	1,470
231	50279	Sabaipar	B1	94	66	17	12	97,600	157,393	2,385	1,193
232	50283	Dusun X, XI, XII	B1	475	333	0	0	413,600	698,905	2,099	1,050
233	50288	Sei Rejo	C3	200	140	0	0	224,000	354,359	2,531	1,266
234	50289	Sei Blumei	B2	60	42	0	0	50,400	86,018	2,048	1,024
235	50293	Sungai Rambung	B1	80	56	0	0	87,200	138,845	2,479	1,240
236	50294	Bukit Cermin	B1	150	105	50	35	183,500	284,490	2,709	1,355
237	50296	Sungai Kerapuh	B1	350	245	0	0	298,000	506,600	2,068	1,034
238	50299	Paluh Kemiri	B1	187	131	0	0	162,000	274,090	2,092	1,046
239	50300	Sungai Belutu	C1	120	84	0	0	108,800	181,697	2,163	1,082
240	50302	Lau Keramat	B4	90	63	0	0	89,600	145,935	2,316	1,158
241	50303	Sungai Belutu	C1	200	140	0	0	208,000	335,035	2,393	1,197
242	50306	Sipanguapan	B2	232	162	82	57	268,500	421,276	2,600	1,300
243	50307	Bondar Julu	B5	100	70	0	0	84,000	143,363	2,048	1,024
244	50308	Sinapolan	B5	100	70	40	28	123,600	191,190	2,731	1,366
245	50309	Saba Hutadangka	B4	70	49	0	0	66,800	110,016	2,245	1,123
246	50310	Siranap	B4	150	105	125	88	248,400	362,873	3,456	1,728
247	50311	Aek Sibontar	B1	175	123	0	0	151,000	256,015	2,081	1,041
Total					21,504		4,000	32,196,120	51,760,126	605,031	302,576
Average					87		31	130,349	209,555	2,450	1,225

Remarks : * ; Representative Scheme

COST ESTIMATION South Sulawesi

No.	CODE No.	Area Name	Gr.	Gross Paddy Fields (Ha)		L.D. Area		Civil Work	Grand Total	Unit Cost	
		IRR		Listed Ha.	Planned	Listed Ha.	Planned	1000Rp.	1000Rp.	1000Rp./Ha	US$/Ha
1	20002	Cerowali	A1	800	560	0	0	0	0	****	****
2	*20003	Kalu	A3	100	70	33	23	57,500	83,217	3,618	1,809
3	20004	Leko Ballo	A1	227	159	50	35	84,000	122,407	3,497	1,749
4	20005	Taretta	A3	300	210	0	0	0	0	****	****
5	20008	Jinetalasa	A1	200	140	200	140	336,000	489,627	3,497	1,749
6	20009	Belong	A3	250	175	50	35	87,500	126,634	3,618	1,809
7	20010	Calendu I	A3	217	152	20	14	35,000	50,654	3,618	1,809
8	20011	Panaikang II	A4	210	147	10	7	21,700	30,399	4,343	2,172
9	20017	Salobunne	A1	722	505	0	0	0	0	****	****
10	20393	Sumamillan	A2	50	35	40	28	84,000	118,216	4,222	2,111
Total					2,153		282	705,700	1,021,153	26,413	13,208
Average					215		40	100,814	145,879	3,773	1,887

Remarks : * ; Representative Scheme

COST ESTIMATION South Sulawesi

No.	CODE No.	Area Name	Gr.	Gross Paddy Fields (Ha)		L.D. Area (Ha)		Civil Work	Grand Cost	Unit Cost	
		IRR		Listed	Planned	Listed	Planned	1000Rp.	1000Rp.	1000Rp./Ha	US$/Ha
1	10001	Balangnipring	B4	54	38	27	19	64,900	101,135	2,661	1,331
2	10003	Kijang	B4	120	84	60	42	135,600	214,065	2,548	1,274
3	10004	Batu Kanre	C1	64	45	0	0	54,900	93,249	2,072	1,036
4	10005	Bungloe	B5	30	21	9	6	31,500	50,618	2,410	1,205
5	10008	Sinoa I	B5	166	116	86	60	190,800	299,892	2,585	1,293
6	10009	Parangpangi	B5	97	68	63	44	136,400	205,451	3,021	1,511
7	10010	Bulu sumang	B5	60	42	0	0	49,800	85,293	2,031	1,016
8	10012	Sabarro	B5	24	17	2	1	28,600	44,720	2,631	1,316
9	10013	Woddie	B3	88	62	0	0	85,800	140,747	2,270	1,135
10	10014	Batu Gading	B3	200	140	121	85	248,500	383,949	2,742	1,371
11	10015	Cenrana	B3	250	175	0	0	160,300	298,381	1,705	853
12	10016	Lapaupang	B6	200	140	0	0	150,000	264,986	1,893	947
13	10017	Sabbang Paru	B3	200	140	0	0	133,200	244,696	1,748	874
14	10018	Lawara	B1	100	70	0	0	93,000	154,232	2,203	1,102
15	10019	Pising	B4	120	84	0	0	79,600	146,431	1,743	872
16	10020	Liu Sitoppo	B4	100	70	150	105	211,500	297,351	4,248	2,124
17	10022	Tiapa	B1	50	35	0	0	38,500	67,454	1,927	964
18	10023	Tondon Buah (Tondon)	B4	100	70	0	0	71,400	128,145	1,831	916
19	10024	Elle (Tondon)	B4	100	70	0	0	66,600	122,348	1,748	874
20	10025	Ompang Ose	B4	250	175	0	0	181,500	323,986	1,851	926
21	10026	Toila	B4	250	175	0	0	163,500	302,246	1,727	864
22	10028	Tubung	B4	360	252	0	0	228,400	426,732	1,693	847
23	10029	Balsiru	B1	200	140	0	0	138,000	250,493	1,789	895
24	10030	Ajakkang	B1	150	105	0	0	96,900	179,898	1,713	857
25	10031	Aluppang	B1	150	105	0	0	106,500	191,493	1,824	912
26	10032	Padang Lampe	B4	200	140	0	0	130,800	241,797	1,727	864
27	10033	Lappa Talle	B4	150	105	0	0	106,500	191,493	1,824	912
28	10034	Toddang Jompi	B1	100	70	0	0	70,200	126,696	1,810	905
29	10035	Goari	B4	200	140	100	70	223,000	353,152	2,523	1,262
30	10036	Salo Pokki	B3	200	140	0	0	132,000	243,246	1,737	869
31	10037	Ulu Bubung	B3	200	140	0	0	130,800	241,797	1,727	864
32	10038	Maroanging	B4	100	70	60	42	138,000	208,581	2,980	1,490
33	10039	Langi	B4	50	35	50	35	89,000	128,446	3,670	1,835
34	10040	Patukku	C1	50	35	0	0	38,100	66,971	1,913	957
35	10041	Langgara	B4	50	35	0	0	41,100	70,594	2,017	1,009
36	10042	Lakojang	B4	45	32	0	0	39,600	66,987	2,093	1,047
37	10043	Lappa Karong	B4	100	70	0	0	84,600	144,087	2,058	1,029
38	10044	S. Bakke	C1	80	56	0	0	60,400	106,477	1,901	951
39	10046	S. Lita	B1	200	140	0	0	138,000	250,493	1,789	895
40	10048	Laoni	B3	317	222	0	0	204,600	380,025	1,712	856
41	10049	Ajakkang	B1	75	53	0	0	57,700	101,420	1,914	957
42	10050	Alakkang	B1	200	140	115	81	231,300	363,176	2,594	1,297
43	10051	Batu Marajae	C3	50	35	0	0	31,500	59,000	1,686	843
44	10052	Matajang	B1	75	53	0	0	47,700	89,343	1,686	843
45	10053	Palakka	C1	200	140	0	0	138,000	250,493	1,789	895
46	10055	Pajjenge	C1	204	143	0	0	138,700	253,134	1,770	885
47	10056	Pajjeng E	C1	200	140	0	0	138,000	250,493	1,789	895
48	10057	Waepubbu	B3	313	219	92	64	280,300	469,656	2,145	1,073
49	10058	Ulo	C1	435	305	0	0	294,500	536,297	1,765	883
50	10060	Bunewe	B1	50	35	0	0	39,500	68,662	1,962	981
51	10061	Galung Beru	B2	40	28	40	28	65,200	95,510	3,411	1,706
52	10062	Baji Areng	B4	70	49	35	25	81,400	127,649	2,605	1,303
53	10063	Anisia	B2	270	189	60	42	230,700	391,789	2,073	1,037
54	10064	Balumbung	B2	200	140	0	0	150,000	264,986	1,893	947
55	10065	Kompenni	B1	150	105	20	14	121,100	209,126	1,992	996
56	10066	Lembang Tinurung	B2	150	105	0	0	114,900	201,638	1,920	960
57	10067	Kassi Buleng	B1	100	70	10	7	84,100	143,483	2,050	1,025
58	10068	Jamu	B4	75	53	0	0	59,700	103,836	1,959	980
59	10069	Sarajoko	B4	30	21	15	11	41,600	62,816	2,991	1,496
60	10070	Paocani	B4	60	42	0	0	55,800	92,539	2,203	1,102
61	10071	Patiroang	C1	25	18	0	0	27,000	43,387	2,410	1,205
62	10072	Bongkarae	B4	150	105	40	28	139,300	231,107	2,201	1,101
63	10073	Pakombong I	B5	45	32	0	0	39,600	66,987	2,093	1,047
64	10074	Pakombong II	B4	70	49	0	0	54,900	95,644	1,952	976
65	10075	Pulonggo	B4	115	81	30	21	118,200	191,254	2,361	1,181
66	10076	Sengi Panda	B4	100	70	35	25	107,500	171,745	2,453	1,227
67	10077	Marame I	B4	100	70	0	0	87,000	146,986	2,100	1,050
68	10078	Marame II	B4	30	21	0	0	42,900	64,386	3,066	1,533
69	10079	Polehali	B5	120	84	0	0	99,600	170,586	2,031	1,016
70	10080	Katute	B4	75	53	25	18	80,700	129,199	2,438	1,219
71	10081	Lembang parang	B1	100	70	0	0	76,200	133,942	1,913	957
72	10082	Capengnge	B2	139	97	50	35	132,800	218,467	2,252	1,126
73	10083	Bambaungan	C2	50	35	0	0	37,500	66,246	1,893	947
74	10084	Ili I	B4	175	123	125	88	239,500	362,901	2,950	1,475
75	10085	Ili II	B4	100	70	70	49	141,100	212,325	3,033	1,517
76	10086	Lakatoang	C1	25	18	0	0	31,800	49,184	2,732	1,366
77	10087	Balu'eja I	B4	100	70	0	0	77,400	135,392	1,934	967
78	10088	Balu'eja II (La'eja)	B4	150	105	100	70	209,500	315,891	3,008	1,504
79	10089	Bontopao	B4	75	53	25	18	86,700	136,445	2,574	1,287

80	10090	Barana II	B5	100	70	0	0	65,200	120,657	1,724	862
81	10091	Balakang	B4	120	84	55	39	126,300	202,833	2,415	1,208
82	10092	Majangka	B5	100	70	60	42	119,760	186,552	2,665	1,333
83	10093	Patontongan	B5	80	56	30	21	84,900	136,067	2,430	1,215
84	10094	Balutompo	B4	105	74	0	0	70,920	129,960	1,756	878
85	10095	Matilu	B5	75	53	5	4	56,500	99,971	1,886	943
86	10096	Lahumutti	B5	75	53	25	18	77,100	124,851	2,356	1,178
87	10097	Borongkondo	B5	100	70	25	18	94,800	156,406	2,234	1,117
88	10098	Bontorihu	B5	140	98	70	49	167,500	260,974	2,663	1,332
89 *	10099	Kadieng	B1	320	224	76	53	288,500	482,553	2,154	1,077
90	10100	Tinurung	B2	100	70	0	0	81,000	139,739	1,996	998
91	10101	Galoggo	B1	100	70	20	14	105,200	168,967	2,414	1,207
92	10102	Kabibing	B2	60	42	20	14	62,000	100,027	2,382	1,191
93	10103	Bassaran	B4	20	14	0	0	13,000	24,083	1,720	860
94	10104	Hiba	B4	100	70	0	0	66,200	121,865	1,741	871
95	10105	Lalantedong	C1	557	390	0	0	363,600	671,921	1,723	862
96	10106	Kalo Baru	B4	290	203	0	0	194,700	356,693	1,757	879
97	10107	Kalo Kimba	C1	147	103	0	0	104,700	188,121	1,826	913
98	10108	Sitodon	C1	68	48	0	0	46,800	85,262	1,776	888
99	10109	Kalolang	C1	180	126	0	0	113,400	212,400	1,686	843
100	10110	Kaloko	C1	140	98	0	0	92,600	170,514	1,740	870
101	10112	Kambiolangi II/Linoo Batu	C1	70	49	0	0	44,700	83,325	1,701	851
102	10113	Kambiolangi III	C1	58	41	0	0	40,100	72,979	1,780	890
103	10114	Totallang	C1	105	74	0	0	67,320	125,612	1,697	849
104 *	10115	Kaindi	C1	177	124	81	57	115,800	214,101	1,727	864
105	10116	Pantawan /Bonto	C1	31	22	0	0	33,400	53,511	2,432	1,216
106	10117	Parinding	C1	45	32	0	0	33,200	59,257	1,852	926
107	10118	Passaran	C1	110	77	0	0	76,500	138,496	1,799	900
108	10119	Pangurak	C2	50	35	0	0	36,300	64,797	1,851	926
109	10120	Bulawan	C1	174	122	0	0	117,800	215,319	1,765	883
110	10121	Datte Malano/Pelaa Poran	B4	110	77	0	0	74,100	135,597	1,761	881
111	10122	Gegge /Leon	B4	120	84	0	0	79,600	146,431	1,743	872
112	10123	Awo	C2	150	105	0	0	96,100	178,932	1,704	852
113	10124	Sengka	B5	191	134	76	53	191,100	311,032	2,321	1,161
114	10125	Kao /Tantido	B5	100	70	25	18	90,000	150,609	2,152	1,076
115	10126	Tua	C2	150	105	0	0	96,100	178,932	1,704	852
116	10127	Dadeko	B4	80	56	35	25	85,300	136,550	2,438	1,219
117	10128	Karrang	C1	20	14	0	0	21,000	33,745	2,410	1,205
118	10129	S. Durian	B4	75	53	0	0	47,700	89,343	1,686	843
119	10130	Membura	C1	57	40	0	0	38,520	70,472	1,762	881
120	10131	Salu Gewang	B6	36	25	0	0	24,900	45,041	1,802	901
121	10132	Baraka	B3	42	29	0	0	35,700	60,480	2,086	1,043
122	10133	Baringin	C1	30	21	0	0	21,500	38,540	1,835	918
123	10134	Salu Dara	B4	42	29	0	0	36,300	61,205	2,111	1,056
124	10135	Sarassang	B4	34	24	0	0	27,000	46,979	1,957	979
125	10136	S. Noran	B4	100	70	25	18	88,400	148,677	2,124	1,062
126	10138	Salu Kalama	B1	30	21	0	0	20,900	37,815	1,801	901
127	10139	Lembang Panai	B5	200	140	0	0	132,000	243,246	1,737	869
128 *	10140	Lembang Bata	B5	109	76	6	4	81,600	144,056	1,895	948
129	10141	Gantarang	B5	150	105	0	0	100,500	184,246	1,755	878
130	10142	Panaikang	B5	200	140	0	0	128,400	238,898	1,706	853
131	10143	Baliti	C2	225	158	0	0	150,200	276,005	1,747	874
132	10144	Paburuang	B5	150	105	0	0	96,900	179,898	1,713	857
133	10145	Kampania	C2	200	140	0	0	134,000	245,662	1,755	878
134	10146	Patalasang	C2	150	105	0	0	95,700	178,449	1,700	850
135	10147	Aerelembang	C2	150	105	0	0	96,500	179,415	1,709	855
136	10148	Panting	B5	200	140	0	0	130,000	240,831	1,720	860
137	10149	Jenebatu	C1	100	70	0	0	68,200	124,280	1,775	888
138	10150	Nyulu	C1	100	70	0	0	69,000	125,246	1,789	895
139	10151	Gonra	B1	150	105	0	0	108,900	194,391	1,851	926
140	10152	Tonrang	B1	210	147	10	7	165,400	287,776	1,958	979
141	10153	Bangkengtete	B6	150	105	0	0	94,500	177,000	1,686	843
142	10154	Pitape	B5	100	70	0	0	75,000	132,493	1,893	947
143	10155	Sulurang	B3	150	105	0	0	114,500	201,155	1,916	958
144	10156	Birangloe	B3	125	88	0	0	79,200	148,343	1,686	843
145	10157	Soga/Datara	B3	235	165	0	0	148,500	278,143	1,686	843
146	10158	Balangnabodo /Datara	B3	100	70	0	0	63,000	118,000	1,686	843
147	10159	Kalampeto	B3	250	175	0	0	193,500	338,479	1,934	967
148	10160	Tangkuluka	B5	150	105	0	0	130,500	220,479	2,100	1,050
149	10161	Tantalisi	B1	150	105	20	14	136,700	227,967	2,171	1,086
150	10162	Barobbo	B4	200	140	0	0	140,400	253,391	1,810	905
151	10163	Tabuakang	B4	150	105	0	0	106,500	191,493	1,824	912
152	10164	Kassikebo	C3	85	60	0	0	54,000	101,143	1,686	843
153	10165	Pabundukang	C1	220	154	0	0	172,200	300,180	1,949	975
154	10166	Pattiro	B3	144	101	0	0	90,900	170,257	1,686	843
155	10167	Punagaya	B1	150	105	0	0	100,500	184,246	1,755	878
156 *	10168	Panrita	B2	93	65	14	10	71,500	125,272	1,927	964
157	10169	Passaukang	B4	200	140	0	0	140,400	253,391	1,810	905
158	10170	Bontonompo	B5	200	140	0	0	144,000	257,739	1,841	921
159	10171	Pao-pao	B4	150	105	0	0	106,500	191,493	1,824	912
160	10172	Kompasa	B4	200	140	0	0	135,600	247,594	1,769	885
161	10173	Tangaparang	C1	70	49	0	0	51,300	91,296	1,863	932
162	10174	Bungaeja	C3	50	35	0	0	31,500	59,000	1,686	843
163	10175	Swadiri	B1	85	60	0	0	62,000	110,805	1,847	924
164	10176	Samanggi	B1	148	104	0	0	93,600	175,314	1,686	843
165	10177	Puca	B6	40	28	0	0	26,000	48,166	1,720	860
166	10178	Tombolo	B1	75	53	0	0	47,700	89,343	1,686	843
167	10180	Bulumarupa (Masale)	B4	150	105	82	57	192,600	295,480	2,814	1,407
168 *	10182	Mario I-II-III	B6	81	57	10	7	78,400	128,816	2,260	1,130
169	10183	Matajang I	B4	125	88	0	0	84,000	154,140	1,752	876
170	10184	Mahaka	B4	80	56	0	0	50,400	94,400	1,686	843
171	10185	Sawaru	B1	102	71	0	0	63,900	119,686	1,686	843

172	10186	Bontoa	B4	68	48	0	0	43,200	80,914	1,686	843
173	10187	Panagi	B4	100	70	0	0	81,000	139,739	1,996	998
174	10188	Malaka	B4	119	83	9	6	82,500	149,335	1,799	900
175	10189	Matanre	B4	94	66	0	0	65,400	118,504	1,796	898
176	10190	Bontotanga	B4	100	70	0	0	67,000	122,831	1,755	878
177	10191	Makdenge & Ujung	B4	100	70	0	0	69,000	125,246	1,789	895
178	10192	Bulu-bulu	B5	105	74	35	25	99,100	163,995	2,216	1,108
179	10193	Malempong	B4	140	98	0	0	88,200	165,200	1,686	843
180	10194	Wanuawaru	B5	130	91	0	0	81,900	153,400	1,686	843
181	10195	Lasipeppa	C1	265	186	0	0	168,600	314,992	1,694	847
182	10196	Bangkeng laboro	B5	30	21	0	0	21,700	38,782	1,847	924
183	10197	Arongo II	B4	30	21	8	6	32,700	52,067	2,479	1,240
184	10198	Rumpala	B5	45	32	6	4	43,600	71,818	2,244	1,122
185	10199	Buke I & II	B5	125	88	10	7	97,900	170,928	1,942	971
186	10200	Pakelli I	B6	180	126	18	13	135,100	238,608	1,894	947
187	* 10201	Pakelli II	B6	77	54	50	35	103,700	157,576	2,918	1,459
188	10202	Kalibong	B6	17	12	0	0	28,800	41,968	3,497	1,749
189	10203	Kanrung	B3	30	21	0	0	30,900	49,893	2,376	1,188
190	10204	Ciping	B6	25	18	5	4	21,400	36,623	2,035	1,018
191	10205	Kabba	B6	145	102	0	0	96,600	177,740	1,743	872
192	10206	Lebba	B6	125	88	0	0	80,800	150,275	1,708	854
193	10207	Laiya	B6	75	53	0	0	52,500	95,140	1,795	898
194	10208	Galungtoa	C3	270	189	0	0	174,900	324,397	1,716	858
195	10209	Kajade	B3	200	140	60	42	189,800	313,054	2,236	1,118
196	10210	Seppae	C2	150	105	0	0	95,460	178,159	1,697	849
197	10211	Ospo I	C1	60	42	0	0	43,800	78,046	1,858	929
198	10212	Latana	B3	150	105	75	53	163,400	260,214	2,478	1,239
199	10213	Ladope	B6	100	70	20	14	84,000	143,363	2,048	1,024
200	10215	Galung Langi	B6	100	70	0	0	65,800	121,382	1,734	867
201	10216	Iree/Cenranae II	C3	215	151	0	0	189,900	319,761	2,118	1,059
202	10217	Cenranae III/Solo	B3	85	60	0	0	108,000	166,361	2,773	1,387
203	10218	Cenranae IV/Maffabentae	C3	100	70	0	0	117,000	183,218	2,617	1,309
204	10219	Peneki	B3	150	105	0	0	99,300	182,797	1,741	871
205	10220	Lokading/Salumpare	B6	70	49	0	0	48,900	88,397	1,804	902
206	10221	Lagosi II/S.Lagoari	B4	150	105	0	0	99,300	182,797	1,741	871
207	10225	Sakkoli/Doping/Cinaga II	B1	150	105	0	0	104,100	188,594	1,796	898
208	10226	Mualla /Cingki /Keeeie	B3	100	70	0	0	69,000	125,246	1,789	895
209	* 10227	Linipua / Padaelo	B3	197	138	87	61	203,500	328,403	2,380	1,190
210	10228	Pao-Pao	B6	60	42	0	0	37,800	70,800	1,686	843
211	10229	danau latapak /Saramae	B6	400	280	0	0	254,400	474,898	1,696	848
212	10230	tarampakkae /Tokkoe	B6	150	105	0	0	98,500	181,831	1,732	866
213	10232	Kerabera	B3	100	70	0	0	99,000	161,479	2,307	1,154
214	10233	Pilallang	B4	192	134	0	0	125,000	231,200	1,725	863
215	10234	Labong(Piampo)	B3	150	105	0	0	94,500	177,000	1,686	843
216	10235	Tanlung	B3	200	140	0	0	132,000	243,246	1,737	869
217	10236	Salo-Bulo	B1	150	105	0	0	97,300	180,382	1,718	859
218	10238	Lameri	B1	100	70	0	0	82,200	141,189	2,017	1,009
219	10239	Pacciro/Akkajengnge	B1	20	14	0	0	19,400	31,813	2,272	1,136
220	10240	Lompoe/Caramele	C1	150	105	0	0	102,500	186,662	1,778	889
221	10241	Pattiro	C1	40	28	0	0	41,200	66,524	2,376	1,188
222	10242	Tanette Panasa	C3	50	35	0	0	61,500	95,232	2,721	1,361
223	10243	Batu Lotong	B6	50	35	0	0	37,500	66,246	1,893	947
224	10244	Rumbia II	C3	100	70	0	0	75,000	132,493	1,893	947
225	10245	Rumbia I	C3	100	70	0	0	73,000	130,077	1,858	929
226	10246	Sambueja	C1	100	70	0	0	65,000	120,415	1,720	860
227	10247	Swadiri	C1	150	105	0	0	102,500	186,662	1,778	889
228	10248	Akkajeng'e	C1	200	140	0	0	134,000	245,662	1,755	878
229	10249	Lamalampe	C1	150	105	0	0	100,500	184,246	1,755	878
230	10250	Labawi	C1	180	126	0	0	121,400	222,062	1,762	881
231	10251	DI. Tobangko	C1	300	210	0	0	197,000	363,662	1,732	866
232	10252	Bontoraja	B1	80	56	0	0	68,400	116,139	2,074	1,037
233	10253	Batudoli	B4	400	280	320	224	555,200	838,189	2,994	1,497
234	10271	LUMARING	B1	102	71	0	0	73,900	131,763	1,856	928
235	10272	SAMPANO	B1	234	164	0	0	159,600	290,950	1,774	887
236	10273	LALENTO	B1	300	210	54	38	248,400	425,740	2,027	1,014
237	10274	TEMBOE	B1	200	140	0	0	138,000	250,493	1,789	895
238	10275	M A L O S O	C1	60	42	0	0	43,800	78,046	1,858	929
239	10276	TOASYIK	C1	120	84	0	0	75,600	141,600	1,686	843
240	10277	B A M B A	C2	190	133	0	0	119,700	224,200	1,686	843
241	10278	KADINGE	C1	170	119	0	0	111,100	205,431	1,726	863
242	10279	KAIYANG/TOMPO	B1	280	196	0	0	184,400	340,062	1,735	868
243	10280	TIROMUNDA	C1	100	70	0	0	81,000	139,739	1,996	998
244	10281	MURANDE	C1	60	42	0	0	41,800	75,631	1,801	901
245	10282	PADANG LAMBE	C1	317	222	0	0	205,800	381,475	1,718	859
246	10283	BARANG MAMASE	C1	200	140	0	0	138,000	250,493	1,789	895
247	10284	TALLUARA	B4	125	88	0	0	85,200	155,589	1,768	884
248	* 10287	MALIMBU	C2	46	32	0	0	34,800	61,189	1,912	956
249	10288	PARARA MALALING	C1	32	22	0	0	19,800	37,086	1,686	843
250	10291	POTANTTU	C2	100	70	0	0	63,000	118,000	1,686	843
251	10292	BAEBUNTA	C2	40	28	0	0	25,200	47,200	1,686	843
252	10293	S A S S A	C2	50	35	0	0	35,500	63,831	1,824	912
253	10294	BEBESUK	C1	240	168	0	0	158,400	291,896	1,737	869
254	10295	SALULAIYA	C1	100	70	0	0	67,800	123,797	1,769	885
255	10296	WALU-WALU	C1	240	168	0	0	158,400	291,896	1,737	869
256	10297	KALUKU	C1	75	53	0	0	51,900	94,415	1,781	891
257	10298	TANDUNG	C1	30	21	0	0	20,900	37,815	1,801	901
258	10299	POMPALANGI	B1	70	49	0	0	50,100	89,846	1,834	917
259	10300	PATILLA II	C2	50	35	0	0	33,500	61,415	1,755	878
260	10301	PATILLA I	C2	150	105	0	0	94,500	177,000	1,686	843
261	10302	K A L U A	B4	100	70	0	0	63,000	118,000	1,686	843
262	10303	TOLIKU	C3	80	56	0	0	50,400	94,400	1,686	843
263	10304	PALINO	C1	60	42	0	0	47,400	82,394	1,962	981

264	10305	MEBALI	C1	55	39	0	0	35,100	65,743	1,686	843
265	10306	SAPANRA' BA	C1	110	77	0	0	72,500	133,665	1,736	868
266	10307	SAMPANG BATU II	B4	50	35	0	0	33,900	61,899	1,769	885
267	10308	DI. SAMPANG BATU I	C1	60	42	0	0	47,400	82,394	1,962	981
268	10309	DI. KADA	C1	100	70	0	0	65,800	121,382	1,734	867
269	10310	KOMBA II	C2	100	70	0	0	63,800	118,966	1,700	850
270	10311	S A P A N	B4	100	70	0	0	63,000	118,000	1,686	843
271	10312	BOMBO WAY	C1	100	70	0	0	63,000	118,000	1,686	843
272	10313	LOMBOK SODE	C1	70	49	0	0	48,500	87,914	1,794	897
273	10314	MARARA	C1	100	70	0	0	66,200	121,865	1,741	871
274	10315	TO' BATU	B1	75	53	0	0	49,300	91,275	1,722	861
275	10316	BUTU TONGKON	B4	95	67	0	0	62,300	115,358	1,722	861
276	10317	T A U R A	C1	150	105	0	0	94,500	177,000	1,686	843
277	10318	PA' DATTERAN	C1	100	70	0	0	72,600	129,594	1,851	926
278	10319	MATASALU	B1	160	112	0	0	110,400	200,394	1,789	895
279	10320	SALUASA	C2	200	140	0	0	130,800	241,797	1,727	864
280	10321	BELALANG	B5	100	70	0	0	87,000	146,986	2,100	1,050
281	10322	BURASEA	B6	112	78	0	0	76,200	138,732	1,779	890
282	10323	SA' TANDUNG LEPPAN	C1	50	35	0	0	53,100	85,087	2,431	1,216
283	10324	S. PUTTI	B5	150	105	0	0	94,500	177,000	1,686	843
284	10325	SALU RANO	B4	125	88	0	0	86,400	157,039	1,785	893
285	10326	O R O N G	B5	80	56	0	0	58,800	104,545	1,867	934
286	10327	SINAE	C1	100	70	0	0	65,000	120,415	1,720	860
287	10328	K A N A K A	C1	50	35	0	0	45,900	76,392	2,183	1,092
288	10329	LEWANGAN	C1	140	98	0	0	94,200	172,446	1,760	880
289	10330	MATANDE	C3	100	70	0	0	63,800	118,966	1,700	850
290	10331	SUNGAI URU	C1	70	49	0	0	52,500	92,745	1,893	947
291	* 10332	SALU A' KUNG	C1	37	26	0	0	27,000	48,176	1,853	927
292	10333	TO' KARAU	C1	90	63	0	0	60,300	110,548	1,755	878
293	10334	PASANG	C1	200	140	0	0	129,200	239,865	1,713	857
294	10335	PA' BASEAN DUA	C1	90	63	0	0	73,500	126,490	2,008	1,004
295	10336	PASANBONWAY	C1	100	70	0	0	83,000	142,155	2,031	1,016
296	10337	MATAKALI	C1	75	53	0	0	53,700	95,589	1,822	911
297	10338	B A T U	C1	90	63	0	0	59,100	109,099	1,732	866
298	10339	SALUPANGI	C1	80	56	0	0	53,200	97,782	1,746	873
299	10340	TAYANG PAMMASE	B1	90	63	0	0	61,500	111,997	1,778	889
300	10341	M A M M I	C2	45	32	0	0	30,000	55,392	1,731	866
301	10342	AMOLA	C2	70	49	0	0	53,700	94,194	1,922	961
302	10343	TANDAKAN	C2	60	42	0	0	46,200	80,945	1,927	964
303	10344	KALEOK	C1	65	46	0	0	47,400	84,789	1,843	922
304	10345	BUTTU LAMBA	B1	70	49	0	0	46,100	85,015	1,735	868
305	10346	SILOPO	C1	160	112	0	0	102,400	190,732	1,703	852
306	10347	PAPANDANGAN	C2	80	56	0	0	50,400	94,490	1,686	843
307	10348	K U N Y I	C2	45	32	0	0	28,800	53,943	1,686	843
308	10350	GALUNG LOMBOK	C1	80	56	0	0	54,400	99,231	1,772	886
309	10351	LAMASE	C1	70	49	0	0	50,100	89,846	1,834	917
310	10352	TANDUNG	C1	250	175	0	0	193,500	338,479	1,934	967
311	10353	BATU ALANG	B4	60	42	0	0	40,200	73,699	1,755	878
312	* 10354	MARIRI	C1	90	63	41	29	63,500	114,413	1,816	908
313	10355	TABONE	C1	30	21	0	0	23,700	41,197	1,962	981
314	10356	SALO RATTE	B5	55	39	0	0	35,500	66,226	1,698	849
315	10357	MAKAU	C1	115	81	0	0	75,300	139,441	1,721	861
316	10358	L O K O	C1	200	140	0	0	130,000	240,831	1,720	860
317	10359	P A R A K	C1	200	140	0	0	127,600	237,932	1,700	850
318	10360	OROBUA/UEKATA-S. PARAK	C2	62	44	0	0	44,400	79,969	1,817	909
319	10361	SALO BUE	C1	58	41	0	0	38,100	70,564	1,721	861
320	10362	S. PONGKO	C1	40	28	0	0	28,400	51,065	1,824	912
321	10363	DI. TONDOK BAKARU	C2	75	53	0	0	50,900	93,208	1,759	880
322	10364	DI. TAWANE	C2	75	53	0	0	48,900	90,792	1,713	857
323	10365	OSANGO	C2	200	140	0	0	127,600	237,932	1,700	850
324	10366	SARIAYO	C1	45	32	0	0	32,800	58,774	1,837	919
325	10367	PASOAN	C1	30	21	0	0	22,100	39,265	1,870	935
326	10368	MAKALANGKAN	C1	60	42	0	0	41,800	75,631	1,801	901
327	10369	PENANIAN	C1	60	42	0	0	41,000	74,665	1,778	889
328	10370	KADAKE	C1	25	18	0	0	19,400	34,208	1,900	950
329	10371	LALAKI	C1	35	25	0	0	25,700	46,008	1,840	920
330	10372	BAMBANANGKA	B4	50	35	0	0	32,700	60,449	1,727	864
331	10373	MAKAKIA	C1	100	70	0	0	66,600	122,348	1,748	874
332	10374	LEKKONG	C1	35	25	0	0	28,500	49,389	1,976	988
333	10376	S. MAMBI	C2	100	70	0	0	66,200	121,865	1,741	871
334	10377	MUKANAN	C1	60	42	0	0	41,000	74,665	1,778	889
335	10378	TINGGAS	C1	42	29	0	0	32,100	56,132	1,936	968
336	10379	S E S E	B1	30	21	0	0	18,900	35,400	1,686	843
337	10380	B U R I N G	B4	48	34	0	0	34,600	62,145	1,828	914
338	10381	BALIHANANG/WAI TUMBUR	C3	70	49	0	0	47,100	86,223	1,760	880
339	10382	T A O S A	B1	100	70	0	0	93,000	154,232	2,203	1,102
340	10383	MARURINDING	C3	52	36	0	0	35,600	64,550	1,793	897
341	10384	A N U S U	C1	65	46	0	0	53,400	92,036	2,001	1,001
342	10385	KARANAMU	C1	40	28	0	0	27,600	50,099	1,789	895
343	10386	BONDEPUTE	B3	65	46	0	0	42,200	78,509	1,707	854
344	10387	P A N I K I	B2	200	140	0	0	126,000	236,000	1,686	843
345	10388	BATU PAPAN	C1	240	168	0	0	152,200	284,408	1,693	847
346	10389	PURE II	C1	150	105	0	0	94,500	177,000	1,686	843
347	10390	KALUKKU	B3	200	140	0	0	150,000	264,986	1,893	947
348	10391	GULILING POKKA	C1	200	140	0	0	128,200	238,657	1,705	853
349	10392	PURE I	C1	250	175	0	0	157,500	295,000	1,686	843
	Total				29,365		2,236	31,981,580	56,207,695	681,135	340,645
	Average				84		35	91,638	161,054	1,952	976

Remarks : * ; Representative Scheme

COST ESTIMATION West Nusa Tenggara

No.	CODE No.	Area Name	Gr.	Gross Paddy Fields (Ha.)		L. D. Area (Ha.)		Civil Work	Grand Total	Unit Cost	
		IRR		Listed	Planned	Listed	Planned	1000Rp.	1000Rp.	1000Rp./Ha	US$/Ha.
1	43001	MOYO	A1	827	579	134	94	225,600	328,750	3,497	1,749
2	43002	BERINGIN SILA	A1	503	352	343	240	576,000	839,361	3,497	1,749
3	43003	KUANG RAKO	A1	350	245	0	0	0	0	****	****
4	43004	MARENTEH	A1	376	263	43	30	72,000	104,926	3,497	1,749
5	43005	LEKONG	A1	425	298	0	0	0	0	****	****
6	43006	TIMU KAWA	A1	703	492	53	37	88,800	129,402	3,497	1,749
7	43007	PLAMPANG	A1	400	280	0	0	0	0	****	****
8	43010	PLAMPO'D	A1	300	210	0	0	0	0	****	****
9	43011	TARUSAN	A1	510	357	0	0	0	0	****	****
10	43012	JURU MAPIN	A1	400	280	0	0	0	0	****	****
11	44007	SANTONG	A1	1577	1104	69	48	115,200	167,872	3,497	1,749
12	44008	MAGIK KEMBAR	A2	1,305	913	0	0	0	0	****	****
13	44010	REMPEK	A1	386	270	0	0	0	0	****	****
14	44012	PRAWIRA	A1	40	28	0	0	0	0	****	****
15	45004	BILE REMONG	A1	300	210	0	0	0	0	****	****
16	*45010	DANAR JENGKANG	A4	171	120	164	115	356,500	499,418	4,343	2,172
17	45016	PELEMENG	A3	350	245	48	34	85,000	123,016	3,618	1,809
18	45017	IJO DALIT	A1	388	272	363	254	609,600	888,324	3,497	1,749
19	45023	LENDANG GUAR	A3	843	590	600	420	1,050,000	1,519,607	3,618	1,809
20	46001	RABA KECIL	A3	465	326	0	0	0	0	****	****
Total					7,434		1,272	3,178,700	4,600,670	32,561	16,284
Average					372		141	353,189	511,186	3,618	1,809

Remarks : * ; Representative Scheme

COST ESTIMATION West Nusa Tenggara (11/12)

No.	CODE No.	Area Name	Gr.	Gross Paddy Fields (Ha.)		L.D. Area (Ha.)		Civil Work	Grand Total	Unit Cost	
		IRR		Listed	Planned	Listed	Planned	1000Rp.	1000Rp.	1000Rp./Ha	US$/Ha.
1	31004	GUNUNG WAKUL	C1	314	220	0	0	198,000	370,857	1,686	843
2	31005	REBAN BARU	C1	359	251	0	0	229,500	427,462	1,703	852
3	31006	RUMPANG	C2	75	53	0	0	59,700	103,836	1,959	980
4	31007	BATU PUTIK	B5	25	18	0	0	19,800	34,691	1,927	964
5	31008	SIDEMEN	B4	283	198	0	0	183,600	340,293	1,719	860
6	31009	EYAT TEREP	B4	108	76	0	0	72,600	133,187	1,752	876
7	31010	MELEP	B3	430	301	0	0	274,500	511,748	1,700	850
8	31011	PURI	C2	51	36	0	0	36,000	65,034	1,806	903
9	32002	AMARAD	C1	100	70	0	0	71,400	128,145	1,831	916
10	32003	DORO KORE	B4	70	49	70	49	113,800	166,780	3,404	1,702
11	32004	KARANG BURA	C1	27	19	0	0	29,100	46,522	2,449	1,225
12	32005	LORE/SETOLO FOO	C1	80	56	0	0	56,400	101,646	1,815	908
13	32007	KOCABO WAWO	C1	140	98	0	0	103,800	184,041	1,878	939
14	32008	KALATE KOCU	B4	100	70	0	0	70,200	126,696	1,810	905
15 *	32013	MADA MANINI	C2	100	70	0	0	70,200	126,696	1,810	905
16	32016	LANGGODU	C1	50	35	0	0	36,300	64,797	1,851	926
17	32017	NCANGA	C1	50	35	0	0	36,300	64,797	1,851	926
18	32020	WOKO I	C1	40	28	0	0	40,800	66,041	2,359	1,180
19	33002	UMPUNGKA	B1	150	105	0	0	94,500	177,000	1,686	843
20	33005	KARUAK	C1	100	70	0	0	72,000	128,870	1,841	921
21	33006	TANONG/LABUHAN	B1	113	79	0	0	71,100	133,171	1,686	843
22	33007	BANETE	B1	148	104	0	0	93,600	175,314	1,686	843
23	33009	EMPANG SABAWA	C1	80	56	0	0	60,600	106,719	1,906	953
24	33010	LOPOK BAWA	C1	200	140	0	0	132,000	243,246	1,737	869
25	33012	AI PUNTUK	C2	50	35	0	0	39,900	69,145	1,976	988
26	33013	ORONG BALE KEBA	B2	70	49	20	14	62,300	104,581	2,134	1,067
27	33014	ORONG BATU JANGO	B2	35	25	10	7	35,200	57,481	2,299	1,150
28	33015	ORONG LENGAS	B1	45	32	5	4	37,600	64,571	2,018	1,009
29	33017	ORONG MASIN	C1	40	28	0	0	43,200	68,939	2,462	1,231
30	33018	ORONG SERADING	B2	50	35	25	18	60,900	94,508	2,700	1,350
31	33019	ORONG TELAGA	C2	25	18	0	0	34,200	52,082	2,893	1,447
32	33020	AYAN	C1	90	63	0	0	62,100	112,722	1,789	895
33	33021	KEMANG KUNING	C1	75	53	0	0	47,700	89,343	1,686	843
34	33024	PENYAUNG	C1	100	70	0	0	63,000	118,000	1,686	843
35	33025	SABURUNG ATAS	B1	65	46	0	0	41,400	77,543	1,686	843
36	33029	UMA BARU (NIJANG)	C1	30	21	0	0	21,300	38,299	1,824	912
37	33030	ORONG BAKO ATAS	B1	55	39	15	11	73,400	112,000	2,872	1,436
38	33031	ORONG BAKO BAWAH	B1	45	32	0	0	33,600	59,740	1,867	934
39	33036	PAKAT	B1	155	109	40	28	134,500	227,705	2,089	1,045
40	33039	SABEDO	B1	200	140	15	11	164,300	282,257	2,016	1,008
41	33040	BATU ALANG	B1	100	70	10	7	90,100	150,730	2,153	1,077
42	33041	SEMINGKAR	C1	47	33	0	0	35,700	62,875	1,905	953
43	33042	ORONG TOAN	B1	60	42	35	25	72,100	112,226	2,672	1,336
44	33043	AI NUNUNG	C2	40	28	0	0	25,200	47,200	1,686	843
45	33044	AI SELALO	C2	77	54	0	0	53,400	96,826	1,793	897
46	33045	TARUTUM	C1	60	42	0	0	61,800	99,786	2,376	1,188
47	33046	ORONG MALA	B2	200	140	50	35	171,500	290,952	2,078	1,039
48	33047	AI MALIN	C2	75	53	0	0	53,700	96,589	1,822	911
49	33048	GAMENTE	C1	25	18	0	0	40,200	59,329	3,296	1,648
50 *	33050	UMA LEBANG	B1	127	89	30	21	122,400	201,116	2,260	1,130
51	33053	ORANG PAMONGKA	C1	25	18	0	0	25,200	41,213	2,290	1,145
52	33054	BANTIL	C1	50	35	0	0	39,900	69,145	1,976	988
53	33055	P E L A T	B1	95	67	0	0	70,500	125,262	1,870	935
54	33056	ORANG LAMEK	B1	40	28	15	11	46,700	73,167	2,613	1,307
55	33059	TIUKAPAS	B1	60	42	15	11	61,100	98,941	2,356	1,178
56	33060	PEMANGAL	C1	75	53	0	0	65,700	111,082	2,096	1,048
57	33061	REBANSAHE	B1	95	67	15	11	83,600	141,083	2,106	1,053
58	34002	MENDALA	C1	75	53	0	0	56,700	100,213	1,891	946
59	34003	LOKOK PELOK	B4	300	210	0	0	196,200	362,696	1,727	864
60 *	34004	LOKOK TRIPAS	C1	49	34	0	0	35,400	63,111	1,856	928
61	34005	LENGGORONG	C1	200	140	0	0	126,000	236,000	1,686	843
62	34006	LEKOK	C1	623	436	0	0	423,000	771,928	1,770	885
63	34007	SOLOH (TODO)	C1	115	81	0	0	82,500	148,137	1,829	915
64	34010	SESAOT II (SURANADI)	C3	192	134	0	0	120,600	225,886	1,686	843
65	34011	JONTLAK	C3	48	34	0	0	33,000	60,213	1,771	886
66	34012	BURUAN	C1	256	179	0	0	191,100	337,975	1,888	944
67	34013	MANGGALA	C1	144	101	0	0	120,900	206,490	2,044	1,022
68	34014	AMPEL DURI	C1	25	18	0	0	22,200	37,589	2,088	1,044
69	34015	MONTONG BARU I	C1	25	18	0	0	16,200	30,343	1,686	843
70	34016	BANGKET BAYAN	C3	50	35	0	0	33,900	61,899	1,769	885
71	34017	BANGKET UBAN	B1	52	36	2	1	37,300	66,604	1,850	925
72	34018	TANJUNG BIRU	C1	50	35	0	0	35,100	63,348	1,810	905
73	34021	TERES GENIT	C1	75	53	0	0	52,500	95,140	1,795	898
74	34022	TELAGA SEGOAR	B1	30	21	0	0	18,900	35,400	1,686	843
75	34023	BARUNG BIRAK	B1	50	35	40	28	67,900	102,962	2,942	1,471
76	34024	KELANJUHAN	B4	100	70	25	18	89,400	149,885	2,141	1,071
77	34025	LABUHAN POH	B5	30	21	20	14	47,900	70,425	3,354	1,677
78	35001	MELONG	C1	154	108	0	0	101,400	187,130	1,733	867
79	35002	PEROPOK	C2	197	138	0	0	132,600	242,773	1,759	880

80	35004	MADANG	B5	60	42	7	5	53,900	90,245	2,149	1,075
81	35007	NYIUR IJO	B4	103	72	18	13	84,700	145,406	2,020	1,010
82	35009	PLANTING	B5	226	158	0	0	157,800	265,184	1,505	903
83	35010	OTAK REBAN	B4	150	105	26	18	117,900	205,261	1,955	978
84	35011	TERENG BENGKOK	B4	75	53	0	0	65,700	111,082	2,096	1,048
85	35012	TIBBU BUNTAR	B4	34	24	14	10	44,200	67,752	2,823	1,412
86	35014	PENGGADANGAN	B4	104	73	9	7	83,800	144,917	1,985	993
87	35015	MENCERIP	B4	298	209	261	183	430,500	645,073	3,086	1,543
88	35017	KEDONGDONG	B4	55	39	23	16	57,700	93,038	2,386	1,193
89	35019	DURIAN	B5	57	40	0	0	40,800	73,226	1,831	916
90	35020	GOGE	B5	100	70	0	0	71,400	128,145	1,831	916
91	35021	LARUNG	B5	117	82	73	51	146,100	225,549	2,751	1,376
92	35022	AMBUNG	B4	86	60	54	38	121,400	182,545	3,042	1,521
93	35028	BONARE	B6	221	155	86	60	218,460	356,649	2,301	1,151
94	35029	DADAP/SAMBELIR	B6	242	169	94	66	246,900	399,380	2,363	1,182
95	35030	MUNDAK	B1	106	74	7	5	79,700	140,564	1,900	950
96	35031	IL UJABAB	C2	82	57	0	0	51,300	96,086	1,686	843
97	35032	SAPTA	C2	80	56	0	0	50,400	94,400	1,686	843
98	35034	KETANGGA	B5	93	65	51	36	117,300	180,587	2,778	1,389
99	* 35035	LINGKOK DUDU	B1	37	26	3	2	39,200	62,911	2,420	1,210
100	35037	KARONG	B5	96	67	0	0	60,300	112,943	1,686	843
101	* 35045	KELOKOI UDANG	B5	159	111	9	6	113,700	203,781	1,836	918
102	35046	SRIJATA	B5	132	92	14	10	104,200	180,931	1,967	984
103	36002	ABU SANAR/MANGGE	C1	105	74	0	0	72,600	131,989	1,784	892
104	36003	MILA	B1	125	88	0	0	84,000	154,140	1,752	876
105	36004	NTONA NAA	C1	150	105	0	0	98,100	181,348	1,727	864
106	36006	LAPA PAA	C1	100	70	0	0	69,000	125,246	1,789	895
107	36007	LERE	C1	125	88	0	0	94,200	166,459	1,892	946
108	36009	MONTA	B1	154	108	0	0	109,200	196,550	1,820	910
109	36010	SAPE	C1	225	158	0	0	157,200	284,459	1,800	900
110	36011	DADI	C1	200	140	0	0	138,600	251,217	1,794	897
111	36012	UMAKEKA	C1	155	109	0	0	110,100	198,236	1,819	910
112	36013	OI ROKO	C1	15	11	0	0	27,900	40,282	3,662	1,831
113	36014	DAM BROJONG	B1	125	88	0	0	97,200	170,082	1,933	967
114	36015	RABA JATI	C1	60	42	0	0	49,800	85,293	2,031	1,016
115	* 36016	RABA SANGGA	C1	159	111	0	0	107,100	195,810	1,764	882
116	36017	RADE	B1	127	89	0	0	92,100	164,521	1,849	925
117	36018	DAM NGGERU	B1	150	105	0	0	115,500	202,363	1,927	964
118	36019	PANDE	B1	210	147	0	0	147,300	265,916	1,809	905
119	36020	DAM MBODA II	C1	110	77	0	0	84,300	147,916	1,921	961
120	36023	OI KARONJ	B1	85	60	0	0	63,000	112,013	1,867	934
121	36024	LASOKI	B1	144	101	0	0	99,900	181,127	1,793	897
122	36026	NOE	C1	196	137	0	0	141,300	252,682	1,844	922
123	36027	NAE	C1	150	105	0	0	100,500	184,246	1,755	878
124	36029	MANGGE/NGGAWU-NGGAWU	C1	116	81	0	0	81,900	147,413	1,820	910
125	36031	DAM NDOLO	C1	50	35	0	0	40,500	69,870	1,996	998
126	37001	JURANG JEMBOK	B5	90	63	0	0	59,700	109,823	1,743	872
127	37002	EYAT KUBUR KELANJUR	B4	150	105	0	0	100,500	184,246	1,755	878
128	* 37003	MONTONG SAPAH/PURI	C1	47	33	0	0	41,700	70,122	2,125	1,063
129	37004	NANGKER	B6	200	140	0	0	142,800	256,290	1,831	916
130	37005	TIBU PETUNG	B4	250	175	0	0	205,500	352,972	2,017	1,009
131	37006	SUKA RAJA	B4	300	210	0	0	201,000	368,493	1,755	878
132	136002	TOLOTUY	C1	150	105	0	0	94,500	177,000	1,686	843
133	136003	DAM BOJA	B2	100	70	0	0	63,000	118,000	1,686	843
134	136004	DAM DIWU MPINGA	B2	75	53	0	0	47,700	89,343	1,686	843
135	136005	SORI TOLO LERE	C1	100	70	0	0	63,000	118,000	1,686	843
136	136006	SONCO KATIPU	C1	155	109	0	0	98,100	183,743	1,686	843
137	136007	OYI FANDA	B1	175	123	100	70	201,700	317,248	2,579	1,290
Total					11,185		920	12,397,760	21,670,279	276,724	138,392
Average					82		26	90,495	158,177	2,020	1,010

Remarks : * ; Representative Scheme

Fig. VIII- 1 IMPLEMENTATION SCHEDULE FOR THE PROJECT

I T E M	(QUANTITY)	1992	1993	1994	1995	1996	1997	1998	1999	2000
Loan Period										
I. Preparation										
1.1 Preparation of I/P										
1.2 Appraisal										
1.3 Loan Agreement				△						
1.4 Selection of Consultants										
1.5 Project Coordination										
II. Project Works										
2.1 Preparatory Works										
(1) Office arrangements	Central & Provinces									
(2) Survey and Investigation	30,400 ha									
2.2 Civil Works(North Sumatra, South Sulawesi, NTB Province)										
(1) Land Development	2,300 ha									
a. Assembling of farmer's groups	30 Groups									
b. Detailed design	30 Schemes									
c. Rehabilitation & Extension of facilities	2,300 ha									
d. Land clearing / levelling	2,300 ha									
e. Formatting, etc.	2,300 ha									
(2) Village Irrigation Development	28,100 ha									
a. Assembling of farmer'sgroups	310 Groups									
b. Detailed design	310 Schemes									
c. Rehabilitation & Extension of on-farm facilities	28,100 ha									
d. Land clearing / levelling	2,000 ha									
e. Formatting, etc.	2,000 ha									
2.3 Training	1 L.S									
2.4 Post Evaluation	340 Schemes									

Table VIII-10 ANNUAL DISBURSEMENT SCHEDULE OF FINANCIAL COST

[Unit: Million Rp.]

Item	Total cost			1993		1994		1995		1996		1997		1998		1999		2000	
	F/C	L/C	Total	F/C	L/C	F/C	L/C	F/C	L/C	F/C	L/C	F/C	L/C	F/C	L/C	F/C	L/C	F/C	L/C
1. Preparatory Works	1,550	1,033	2,583			620	413	238	159	238	159	233	155	78	52	72	48	72	48
2. Civil Works	0	0	0			0	0	0	0	0	0	0	0	0	0	0	0	0	0
2.1 Land Development	3,006	3,007	6,013			0	0	1,202	1,203	451	451	752	752	601	601	0	0	0	0
2.2 Intake & Canal Structure	16,653	16,652	33,305			0	0	4,426	4,426	3,988	3,988	4,163	4,163	4,076	4,076	0	0	0	0
3. Training & Demonstration	145	827	972			9	51	29	165	36	204	36	204	29	165	7	38	0	0
4. Institutional Strenghening	298	128	426			62	27	61	26	61	26	58	25	31	13	14	6	14	6
5. O & M Equipment	1,833	203	2,036			0	0	395	44	360	40	374	41	367	41	338	38	0	0
6. Land Acquisition	0	426	426			0	111	0	103	0	107	0	105	0	0	0	0	0	0
7. Administration	0	1,966	1,966			0	393	0	410	0	410	0	295	0	295	0	81	0	81
8. Consulting services	7,819	1,956	9,775			1,624	406	1,564	391	1,564	391	1,564	391	782	196	361	90	361	90
Sub Total(1-8)	31,304	26,198	57,502			2,315	1,402	7,915	6,927	6,697	5,776	7,179	6,131	5,963	5,438	791	301	446	225
9. Phisical Contingency	1,565	1,310	2,875			116	70	396	346	335	289	359	307	298	272	40	15	22	11
Total	32,869	27,508	60,377			2,430	1,472	8,311	7,273	7,032	6,064	7,538	6,437	6,261	5,710	831	316	469	236
10. Valu Added Tax		5,799	5,799			0	340	0	1,507	0	1,258	0	1,358	0	1,168	0	107	0	62
11. Price Escalation	0	13,472	13,472			0	301	0	2,280	0	2,640	0	3,658	0	4,036	0	301	0	254
Grand Total	32,869	46,779	79,648			2,430	2,113	8,311	11,061	7,032	9,962	7,538	11,453	6,261	10,914	831	724	469	553
Price index(1992 =100)				1.000	1.080	1.000	1.166	1.000	1.260	1.000	1.360	1.000	1.469	1.000	1.587	1.000	1.714	1.000	1.851

Remarks; 1US$=Rp2,000=¥129.0

Table VIII-11 ANNUAL DISBURSEMENT SCHEDULE OF FINANCIAL COST FOR LAND DEVELOPMENT PROJECTS

[Unit: Million Rp.]

Item	Total cost			1993		1994		1995		1996		1997		1998		1999		2000	
	F/C	L/C	Total	F/C	L/C	F/C	L/C	F/C	L/C	F/C	L/C	F/C	L/C	F/C	L/C	F/C	L/C	F/C	L/C
1. Preparatory Works	119	79	198			48	32	24	16	24	16	18	12	6	4	0	0	0	0
2. Civil Works						0	0	0	0	0	0	0	0	0	0	0	0	0	0
2.1 Land Development	1,689	1,690	3,379			0	0	676	676	253	254	422	423	338	338	0	0	0	0
2.2 Intake & Canal Structure	1,751	1,750	3,501			0	0	700	700	263	263	438	438	350	350	0	0	0	0
3. Training & Demonstration	11	64	75			2	13	2	13	2	13	2	13	2	13	0	0	0	0
4. Institutional Strenghening	23	10	33			7	3	6	3	6	3	3	2	3	2	0	0	0	0
5. O & M Equipment	141	15	156			0	0	56	6	21	2	35	4	28	3	0	0	0	0
6. Land Acquisition		33	33			0	13	0	5	0	8	0	7	0	0	0	0	0	0
7. Administration		344	344			0	69	0	86	0	86	0	52	0	52	0	0	0	0
8. Consulting services	600	151	751			180	45	120	30	120	30	120	30	60	15	0	0	0	0
Sub Total(1-8)	4,334	4,136	8,470			237	175	1,584	1,534	689	674	1,039	978	788	776	0	0	0	0
9. Phisical Contingency	216	207	423			12	9	79	77	34	34	52	49	39	39	0	0	0	0
Total	4,550	4,343	8,893			249	183	1,663	1,611	723	707	1,091	1,027	827	815	0	0	0	0
10. Valu Added Tax		852	852			0	35		318		134		206		159		0		0
11. Price Escalation	0	1,991	1,991			0	36	0	501	0	303	0	579	0	571	0	0	0	0
Grand Total	4,550	7,186	11,736			249	255	1,663	2,430	723	1,144	1,091	1,812	827	1,545	0	0	0	0
Price index(1992 =100)				1.000	1.080	1.000	1.166	1.000	1.260	1.000	1.360	1.000	1.469	1.000	1.587	1.000	1.714	1.000	1.851

Remarks; 1US$=Rp2,000=¥129.0

Table VIII-12 ANNUAL DISBURSEMENT SCHEDULE OF FINANCIAL COST FOR VI PROJECTS

[Unit; Million Rp.]

Item	Total cost			1993		1994		1995		1996		1997		1998		1999		2000	
	F/C	L/C	Total	F/C	L/C	F/C	L/C	F/C	L/C	F/C	L/C	F/C	L/C	F/C	L/C	F/C	L/C	F/C	L/C
1. Preparatory Works	1,431	954	2,385			572	382	215	143	215	143	215	143	72	48	72	48	72	48
2. Civil Works						0	0	0	0	0	0	0	0	0	0	0	0	0	0
2.1 Land Development	1,317	1,317	2,634			0	0	527	527	198	198	329	329	263	263	0	0	0	0
2.2 Intake & Canal Structure	14,902	14,902	29,804			0	0	3,726	3,726	3,726	3,726	3,726	3,726	3,726	3,726	0	0	0	0
3. Training & Demonstration	134	763	897			7	38	27	153	34	191	34	191	27	153	7	38	0	0
4. Institutional Strenghening	275	118	393			55	24	55	24	55	24	55	24	28	12	14	6	14	6
5. O & M Equipment	1,692	188	1,880			0	0	338	38	338	38	338	38	338	38	338	38	0	0
6. Land Acquisition		393	393			0	98	0	98	0	98	0	98	0	0	0	0	0	0
7. Administration		1,622	1,622			0	324	0	324	0	324	0	243	0	243	0	81	0	81
8. Consulting services	7,219	1,805	9,024			1,444	361	1,444	361	1,444	361	1,444	361	722	181	361	90	361	90
Sub Total(1-8)	26,970	22,062	49,032			2,078	1,227	6,331	5,393	6,008	5,102	6,140	5,152	5,175	4,662	791	301	446	225
9. Phisical Contingency	1,349	1,103	2,452			104	61	317	270	300	255	307	258	259	233	40	15	22	11
Total	28,319	23,165	51,484			2,182	1,288	6,647	5,662	6,309	5,357	6,447	5,410	5,434	4,896	831	316	469	236
10. Valu Added Tax		4,947	4,947				305		1,189		1,124		1,152		1,009		107		62
11. Price Escalation	0	11,481	11,481			0	265	0	1,779	0	2,336	0	3,080	0	3,465	0	301	0	254
Grand Total	28,319	39,593	67,912			2,182	1,858	6,647	8,631	6,309	8,818	6,447	9,641	5,434	9,369	831	724	469	553
Price index(1992 =100)				1.000	1.080	1.000	1.166	1.000	1.260	1.000	1.360	1.000	1.469	1.000	1.587	1.000	1.714	1.000	1.851

Remarks; 1US$=Rp2,000=¥129.0

APPENDIX-IX

PROJECT EVALUATION

APPENDIX-IX PROJECT EVALUATION

1. INTRODUCTION

This appendix presents the study results of project evaluation. The value of the Project was assessed mainly in terms of economic efficiency of investment on both individual schemes and the overall project package. Financial analysis will assess the impacts on budget of farmers or village community. Indirect and intangible effects are supportingly analyzed in the study.

The appendix consists of three distinct chapters of evaluation respectively for representative 30 schemes, every inventoried scheme, and the entire project package. Each includes both economic and financial analyses, although qualitative assessment is given only for the overall project package.

2. EVALUATION OF REPRESENTATIVE SCHEMES

In assessing representative 30 schemes of the project, traditional measures of the economic internal rate of return (EIRR) and the benefit cost ratio (B/C) were calculated for evaluating economic efficiency, while budget impact on typical size farms was analyzed for estimating financial viability.

2.1 ECONOMIC EVALUATION

2.1.1 Assumptions

The analysis of economic viability of the Project applies the traditional method of project evaluation that follows partial equilibrium framework. The calculation of EIRRs and B/Cs was made on the basis of the following assumptions.

(1) The economic useful life of every individual scheme is 30 years.

(2) All prices are given as those of 1992 constant price.

(3) An exchange rate of Rp.2,000=US$ 1.0 is used.

(4) Transfer payments such as contract tax, duty, value added tax and subsidy are excluded in valuing the project costs and benefits.

(5) All the goods and services are expressed in "efficiency price" which represents resource endowment of the economy.

Traded component is given in import/export parity price while non-traded component is adjusted the distortion by multiplying Conversion Factors(CFs).

(6) The following CFs are used for converting construction cost(World Bank 1990):

i)	Designs of irrigation works, land clearance and development, agricultural extension and preparation for O&M	--- 1.0
ii)	Construction of irrigation civil works, land development and annual O&M	- 0.9
iii)	All other goods (Standard Conversion Factor)	--- 0.8

(7) Unskilled labor is priced at 65% of actual rate for Lombok Island of West Nusa Tenggara and at 80% in North Sumatra, South Sulawesi and Sumbawa Island of West Nusa Tenggara.

(8) In evaluating individual irrigation schemes, only the tangible direct benefit to be accrued from increased agricultural products was counted. Indirect and intangible benefits will be discussed in overall project assessment given in Chapter IV.

2.1.2 Pricing of Agricultural Commodities

Agricultural products which are to be affected by the project include paddy, soybeans, groundnuts, mungbeans and others. Paddy is the first and foremost crop in the project and most of the benefit will accrue from its production increase. In this assessment, the economic prices of traded commodities were derived from the projection of world price in World Bank 1992. Adjustment of processing, transportation, handling and other charges were made for border prices to represent prices at farm-gate level. The palawija crops are represented by the one with the largest harvest area for each of three provinces, i.e., by soybeans for North Sumatra and West Nusa Tenggara and by groundnuts for South Sulawesi for simplicity. Supply demand balance and representative value years are set as follows:

(1) Supply demand balance

Whether the economic price is given in import parity price or export parity price must be based on future forecast of food balance. In this analysis, it was assumed rice and groundnuts are of self-sufficient and soybeans are of import substitute. The assumption is made considering the trade statistics of recent years as shown below and the food balance forecast of the

Ministry of Agriculture (World Bank 1991 pp.46). The economic prices are consequently valued as averages of import and export parity bases for paddy/rice and groundnuts and as an import parity base for soybeans. As for agricultural inputs, urea is valued as export parity price and TSP and KCL as import parity price.

Traded Amount of Rice, Soybeans and Groundnuts

Unit:Rp.1,000

Year		1986	1987	1988	1989	1990
Rice	Export	206	50	-	105	2
	Import	28	71	54	277	111
Soybean	Import	359	287	465	390	541
Groundnut	Import	34	46	28	14	50

Source: Ministry of Agriculture, *Statistik Pertanian 1990*

(2) Representative value-year

The criteria currently used by the Planning Department of the Ministry of Public Works favor valuing project commodities at the year when the project benefits are fully attained. Using a forecast price, however, brings a speculative aspect in project evaluation. Note for example the IBRD rice price forecast for the year 2000 fluctuated from $213/ton in January 1988 to $166/ton in October of the same year ($197/ton in the latest forecast in February 1992). Using the price at the same year may cause mal-estimates because the years of full accruement of benefit vary by individual schemes according to the difference of implementation years. In this assessment, therefore, the average of forecast price for years from 1993 to 2005 is used.

Tables IX-1 to IX-12 depict the derivation of economic prices for both agricultural products and inputs for the three provinces. Those for each of 30 representative schemes are estimated by differentiating the prices with the distance from provincial capital. The prices used for each schemes are shown in Tables IX-13 to IX-16.

2.1.3 Economic Benefits

The tangible direct benefits will accrue from increased agricultural production which is attributable to an improvement of irrigation water supply and farm input application. Benefits are estimated as the difference of annual net revenues in economic price under future with and without project conditions.

The annual net revenues were calculated from value of products and the production costs which can be derived from unit yield and applied input amount. Crop budget of paddy per ha for each representative scheme is given in Table IX-17 and that of palawija crop is in IX-18. Annual incremental benefits in terms of economic value for representative schemes are calculated as shown in Table IX-19.

The irrigation benefits are assumed to reach the expected level by the third year after facility development. 50% and 75% of yearly benefit are assumed to accrue in the first and second years, respectively.

2.1.4 Economic Costs

The financial cost estimates given in Appendix-VIII were converted to economic costs by using aforementioned CFs. The cost for land acquisition/crop compensation is excluded since it has already counted in the with-without difference of production value. The costs are divided into those to occur in the first year of implementation and those in the second year as summarized in Table IX-20. Costs for operation and maintenance are converted in the same way as initial project cost.

2.1.5 Evaluation Results

Under the pricing and cost assumptions detailed above in the text, economic cost and benefit flows are made as shown in Table IX-21. The EIRRs and B/Ss generated by the 30 representative schemes are tabulated in Table IX-22. These indices range between 11.0% and 35.2% and between 1.09 and 3.59, respectively, with cost weighted averages of 20.5% and 1.99.

All of the EIRRs pass the test of the ten percent opportunity cost of capital figure commonly applied when evaluating projects. No notable difference was observed in EIRRs by project type groups.

2.2 Farm Budget Analysis

In assessing a project, budgetary and financial impacts on economic bodies involved in it are to be analyzed. The bodies affected by the project will include individual farms, farmers' organizations and the project executing agency. In the case of this project, the cost of initial investment will be burdened by the government expect for the potion of farmers' participation

which is estimated at about 14% of direct construction cost. The budgetary expense is regarded as a subsidy by farmers or farmers' organization. Since most of the benefits attributed to a production increase will be reserved by farmers, obviously the project will bring a favorable impact on farm budget and thus on management of farmers' organization. In this section, farm incomes of the future with-project condition and the existing without-project condition are discussed.

The "farm model" set for each province in this analysis is that with a average size of all the representative schemes inclusive in the province. These models are, however, not a "representative" farm in the schemes or the provinces because the farm type varies much by regions and even within a scheme. Another model with relatively larger farm was designed additionally referring an analysis made for the Small Scale Irrigation Improvement Project (Erickson 1991). The analysis thus gives a showcase of the farm income impact rather than a typical one. The farming cost used are based on the crop budgets given in Tables IX-23 and 24. The table below summarizes the farm income analysis and shows an incremental income generated by the project. The details of annual farm budgets are given in Table IX-25.

Estimated Net Farm Income

		Existing Without Project	Future With Project	Incremental Gain
Average Size	SUMUT	Rp.381,000	Rp.575,000	Rp.194,000
	SULSEL	Rp.476,000	Rp.743,000	Rp.267,000
	NTB	Rp.371,000	Rp.489,000	Rp.118,000
Larger Size	SUMUT	Rp.923,000	Rp.1,509,000	Rp.586,000
	SULSEL	Rp.963,000	Rp.1,383,000	Rp.420,000
	NTB	Rp.1,118,000	Rp.1,598,000	Rp.481,000

The term "net farm income" above does not include income of the non-farm sources, although a farm labor income of ten days is included for the average size small farm. Thus, this may understate real family income. Without any of non-farm income, income of average size farm is much less than the minimum consumption expenditure at Rp.720,000 per family under the guidelines of the Ministry of Public Works(PSA 001, 1985). These small farmers will be well bettered off from the project, although the income will still be under the guideline's minimum

for two of the three models. Since the project schemes are generally dominated by small holders the project will benefit the poors, which shows an effect of this project in terms of "poverty alleviation."

The envisioned income increase is expected to cover the increase in operation and maintenance cost burdened by farmers. An increase of Rp.10,000/ha of O&M cost estimated in Appendix-VII is well less than a third of the above income increase estimates.

3. EVALUATION OF ALL SCHEMES INVENTORIED

3.1 Objective and Methodology

Following the result of the project evaluation for 30 representative schemes, this chapter gives an estimation of B/Cs at 10% discount rate for all the inventoried schemes. Present and future crop production and project cost estimates presented in Appendices VI and VIII, respectively, are the basis of evaluation. As discussed in Chapter VI of the Main Report, estimated B/Cs will be used in scoring all schemes for prioritization.

Estimation of B/Cs are made through the following procedure under the assumptions given in 2-1-1.

(1) Financial project cost was converted to economic cost in the same method used for 30 schemes
(2) Economic benefit to accrue annually was estimated as the difference in net production revenues in economic price between under with-project and without-project conditions. Economic commodity prices were differentiated only by provinces not by individual schemes.
(3) The ratio of annual incremental benefit over initial project cost is calculated.
(4) An estimate of B/C for each scheme is obtained using a linear correlation formula between B/Cs and annual benefit-initial cost ratio estimated from those of 30 representative schemes.

The rationale of estimating B/Cs with a correlation model can be explained as follows:

B/C is calculated by the formula;

$$B/C = \sum_{t=0}^{u} B_t(1+r)^{-t} \div \sum_{t=0}^{u} C_t(1+r)^{-t}$$

Where, B_t and $C_t$are benefit and cost at year t, r is the discount rate and u is the economic useful life.

Now, under the condition that the cost occurs at once and annual benefit accrue at the same value amount, then

$$B/C = \frac{\int_0^u B_t e^{-rt}dt}{C_s(1+r)^{-s}} = \frac{B_t(r^{-1}e^{-ru}+r^{-1})}{C_s(1+r)^{-s}} = \frac{B_s}{C_s} \times \frac{(1+e^{-ru})r^{-1}}{(1+r)^{-s}}$$

Where, e is the natural logarithmic base and s is the year of cost accruement, $B_t = B_s$ (constant).

Since the second part of the right hand side is a constant term, B/C is expressed by a linear formula of Bs/Cs. In the case of land development and village irrigation schemes, the construction of each scheme will be finished within a year, although some preparation works have to be made in the previous year. Benefits are assumed to accrue at the same amount after the third year. Thus, the assumption of linear correlation can almost be true.

The correlation equation estimated with the least square method is:

$$Y = -0.03678+7.98329X$$

r=0.996, F=3304.2, df=26
Standard deviation of X coefficient=0.139

where, Y is B/C and X is (annual benefit)/(initial cost)

The coefficient of correlation at 0.996 proves the strong correlation. The scattergram of correlation is drawn as Fig. IX-1. Note that two pump irrigation schemes were excluded because the initial costs are relatively low and operation and replacement costs are higher in pump irrigation. The ratio of annual benefit over initial cost is thus larger than other schemes with the same B/C. The upward bias in B/C estimates will result from using the same equation for pump irrigation. B/C was

calculated based on the cost benefit flow for each pump irrigation scheme. There are in total 17 pump irrigation schemes in the inventory list.

3.2 Results of B/C Estimation

The results of B/C estimation by the aforementioned method are shown in Table IX-26 and IX-27, and summarized as below. The histograms of B/C distribution are depicted in Fig. IX-1 to IX-3. The result shows that 70.5% of schemes clear the criteria of B/C≥1.0 at 10% discount rate.

Distribution of B/Cs

Scheme	B/C<1.0	1.0≤B/C<1.5	1.5≤B/C<2.0	B/C≥2.0
Land Development	10	14	8	12
Village Irrigation	203	294	116	120
Total	213	308	124	132

Note: 18 land development schemes of which development area is less than 25 ha were excluded in B/C estimation.

4. EVALUATION OF ENTIRE PROJECT PACKAGE

4.1 Economic Evaluation

4.1.1 Methodology

Evaluation of the entire project package is made dealing the 340 schemes recommended to be implemented as one project. The same assumptions in the section 2.2.1 are applied again and the total of benefits of all schemes estimated in Chapter III is used for that of the project. The implementation schedule given in Chapter VII of the Main Report is followed in making cost benefit flow of the project. The project costs after conversion to economic price in each year are given in Table IX-28. Each scheme will bring the benefit after its completion and full benefit is assumed to be obtained from the third year after two years of the "build-up period." Evaluation is made for land development scheme package and village irrigation scheme package and for overall package.

4.1.2 Economic Evaluation Results

Cost benefit stream tables are made as shown in Tables IX-29 to IX-31 under the assumption mentioned above. The project is expected to generate economic internal rates of return(EIRRs) of 12.0%, 17.2% and 16.5% for the land development scheme, the village irrigation scheme and overall project, respectively. At a 10 percent opportunity cost of capital, the project yields net present values(NPVs) of Rp. 1.0 billion from the land development scheme and Rp. 23.6 billion from the village irrigation scheme. B/Cs at the same discount rate are estimated respectively at 1.16 and 1.62 and for overall project at 1.55.

All the EIRRs pass the test of the 10 percent cost of capital figure that is commonly applied in evaluating projects.

4.1.3 Sensitivity Analysis

Sensitivity of project profitability is analyzed for the cases of cost increase and benefit decrease. 10 percent and 20 percent changes are assumed and the EIRRs are calculated as follows:

Increase in Cost	Decrease in Benefit 0%	10%	20%
0%	16.5%	14.8%	13.0%
10%	14.9%	13.3%	11.6%
20%	13.6%	12.1%	10.5%

The project still generates more than 10 percent of EIRR even in the worst case of 20 percent cost increase and benefits decrease. It is concluded that the project is economically sound against the unforeseen changes of the economy.

4.2 Financial Aspects

The major economic units affected by the project implementation include individual farm, farmers' organizations and the project executing agency. The farm budget analysis in Section 2.2 shows that the project will well better off every farm. Since economic viability is the key factor in selecting schemes to be implemented, selected schemes are those with higher returns. Thus farm income is expected to be higher in selected schemes.

The farmers' organization will be responsible for operation and maintenance of the irrigation facilities with the service fees and labor dedication from farmers. The organizations, however, are not profit seeking bodies and then their budget stability highly depends on farmers' capacity to pay service fees. As discussed in the farm budget analysis, an increase in farm income can well exceed the additional payment for operation and maintenance. Thus the organization budget will keep a balance as far as they successfully collect charges from farmers. The activities of the organizations are described in detail at Appendix-VII.

The project will be implemented with a government development budget and no fees are collected from farmers or farmers' organization. There is no use of having financial budget analysis of the executing agency. All the project costs form a subsidy to farmers for improvement of their production facilities. The expense is already proved its high viability in terms of national economy, which at the same time means feasibility of the public investment.

4.3 Indirect and intangible Impacts

4.3.1 Indirect Benefits

In addition to the direct benefit of an increase in agricultural production, the project will induce an expansion of supporting industries. These forward and backward linkages include input suppliers, processing industry, marketing sector and construction contractors. The linkage effects were analyzed briefly since detailed analysis requires a complicated general equilibrium approach.

(1) Backward Linkage

The backward linkage is an inter-industrial effect of an increased demand in a certain sector. The project investments will mainly occur in the construction sector. The demand in the sector induces an expansion of other sectors whose products are used as inputs to production in the sector(Miller and Blair 1985). The "total" linkage effect can me measured by the "output multiplier" for each sector which is the sum of the elements in a column of the Leontief inverse matrix $(I-A)^{-1}$. The multiplier obtained from the most recent input-output table of Indonesia for the construction sector is 2.1545(Biro Pusat Statistik, Table Input-Output Indonesia 1985). Since total project cost is

estimated at about Rp. 80 billion, the total indirect backward linkage effect is calculated as:

$$\text{Rp.}80,000,000,000 \times 2.1545 \fallingdotseq \text{Rp.}172,000,000,000$$

(2) Foreword Linkage

The foreword linkage, on the other hand, is an effect of an increased output in one sector. The output increase to be generated by the project is that in agriculture sector, mostly an increased rice production. The additional amount of rice will generate the activity of the sectors which use rice as an input. The "total" foreword linkage effect can be measured by the "input multiplier" for each sector. This is obtained by summing up row of the Leontief inverse matrix $(I-A)^{-1}$. The multiplier of rice sector calculated from the same source is 2.9670, while that of "other food crop" is 2.0221. An increase of about 86,800 tons of paddy (59,000 tons in terms of polished rice) will result from the project. Using the recent market price of rice at Rp.500 per kg, the increase in value is about Rp. 29.5 billion. Then the foreword linkage is:

$$\text{Rp.}29,500,000,000 \times 2.9670 \fallingdotseq \text{Rp.}87,526,500,000$$

(3) Employment Opportunity

The project will contribute to an increase of employment in the agriculture sector in the rural area. This can alleviate the "push" factor in the expansion of urban population. The indirect linkage effect discussed above also expand the employment opportunities in the related industries. The initial construction works have an employment impact in the area, though only that of short-run period.

4.3.2 Intangibles

Intangible benefits of the project may also be important factors for decision making of project implementation. The following are several of the intangibles.

(1) Poverty Alleviation

"Poverty alleviation" is one of the main objectives of the government policies in Indonesia. The farmers involved in the project are mostly in remote area and of small scale. The project thus will better off these poor farmers rather than the

riches. Higher incomes and consumption levels will imply better diets and health for the project population.

(2) Institutional Building

The project includes an institutional training program for improved operation and maintenance. Farmers do benefit from the organizations such as Water User Association (P3A), extension-organized Kolompok Tani, and local cooperative(KUD). These institutions would be strengthened through the project, which will bring enhanced community welfare. Farmers' participation to such institutions induces "consciousness" in farm management and local activities and then be a vehicle to sustainable regional development.

(3) Quality Improvement

It is expected that the quality of farm products will improve, though cannot be qualified. Crop damages are reduced through stable water supplies and maturing will be higher and more even. These will provide better marketability and higher prices for products from the project area.

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Table IX-1 ECONOMIC PRICE DERIVATION FOR PADDY IN NORTH SUMATRA PROVINCE

(in constant 1992 prices)

	Year		Import Parity 1993	1994	1995	2000	2005		Export Parity 1993	1994	1995	2000	2005
1. Export price of milled rice, 5% broken, FOB Bangkok	US$/ton		269	268	272	301	269		269	268	272	301	269
2. Quality adjustment of 10% for Indonesian rice	US$/ton	-	27	27	27	30	27	-	27	27	27	30	27
3. Freight and insurance	US$/ton	+	30	30	30	30	30	+	0	0	0	0	0
4. Border price, bagged milled rice, CIF/FOB Belawan	US$/ton	=	272	271	275	301	272	=	242	241	245	271	242
	Rp./kg	=	544	542	550	602	544	=	484	482	490	542	484
5. Cost of port handling, storage and losses	Rp./kg	+	27	27	27	30	27	-	24	24	24	27	24
6. Transport: port to wholesaler	Rp./kg	+	10	10	10	10	10	-	10	10	10	10	10
7. Price at wholesale market	Rp./kg	=	581	579	587	642	581	=	450	447	455	505	450
8. Transport: mill to wholesaler	Rp./kg	-	20	20	20	20	20	-	20	20	20	20	20
9. Ex-mill price	Rp./kg	=	561	559	567	622	561	=	430	427	435	485	430
10. Conversion to paddy	Rp./kg	=	365	363	369	404	365	=	280	278	283	315	280
11. Milling cost less value of by products	Rp./kg	-	15	15	15	15	15	-	15	15	15	15	15
12. Transport: farm to mill	Rp./kg	-	15	15	15	15	15	-	15	15	15	15	15
13. Economic farm gate price	Rp./kg	=	335	333	339	374	335	=	250	248	253	285	250
Average of Import/Export parity prices	Rp./kg		292	290	296	330	292	Average 1993-2005 =			300		

Notes:
1. Price Prospects for Major Primary Commodities, 1990-2005, The World Bank, February 1992. MUV index(1985=100) for 1992 is 152.86
2. DGWRD, Guidelines for Studies for Water Resources Projects, Ministry of Public Works, 1985.
3. Differentiated by provinces: North Sumatra $30/ton; South Selawesi $35/ton; West Nusa Tenggara $45/ton
4. Exchange rate, Rp. 1.0=US$ 2,000.
5. Costs for port handling, storage and losses assumed to be 5% of border value.
6. Differentiated by provinces: North Sumatra Rp.5/kg; South Selawesi Rp.10/kg; West Nusa Tenggara Rp.15/kg.
8. Inland transport price of Rp.100/ton/km, a distance of 200 km used here.
10. Conversion rate assumed to be 65%

Table IX-2 ECONOMIC PRICE DERIVATION FOR PADDY IN SOUTH SULAWESI PROVINCE

(in constant 1992 prices)

	Year		Import Parity 1993	1994	1995	2000	2005		Export Parity 1993	1994	1995	2000	2005
1. Export price of milled rice, 5% broken, FOB Bangkok	US$/ton		269	268	272	301	269		269	268	272	301	269
2. Quality adjustment of 10% for Indonesian rice	US$/ton	-	27	27	27	30	27	-	27	27	27	30	27
3. Freight and insurance	US$/ton	+	35	35	35	35	35	+	0	0	0	0	0
4. Border price, bagged milled rice, CIF/FOB Ujung Pandang	US$/ton	=	277	276	280	306	277	=	242	241	245	271	242
	Rp./kg	=	554	552	560	612	554	=	484	482	490	542	484
5. Cost of port handling, storage and losses	Rp./kg	+	28	28	28	31	28	-	24	24	24	27	24
6. Transport: port to wholesaler	Rp./kg	+	5	5	5	5	5	-	5	5	5	5	5
7. Price at wholesale market	Rp./kg	=	587	584	593	648	587	=	455	452	460	510	455
8. Transport: mill to wholesaler	Rp./kg	-	15	15	15	15	15	-	15	15	15	15	15
9. Ex-mill price	Rp./kg	=	572	569	578	633	572	=	440	437	445	495	440
10. Conversion to paddy	Rp./kg	=	372	370	376	411	372	=	286	284	289	322	286
11. Milling cost less value of by products	Rp./kg	-	15	15	15	15	15	-	15	15	15	15	15
12. Transport: farm to mill	Rp./kg	-	15	15	15	15	15	-	15	15	15	15	15
13. Economic farm gate price	Rp./kg	=	342	340	346	381	342	=	256	254	259	292	256
Average of Import/Export parity prices	Rp./kg		299	297	302	336	299	Average 1993-2005 =		307			

Notes:
1. Price Prospects for Major Primary Commodities, 1990-2005, The World Bank, February 1992. MUV index(1985=100) for 1992 is 152.86
2. DGWRD, Guidelines for Studies for Water Resources Projects, Ministry of Public Works, 1985.
3. Differentiated by provinces: North Sumatra $30/ton; South Selawesi $35/ton; West Nusa Tenggara $45/ton
4. Exchange rate, Rp. 1.0=US$ 2,000.
5. Costs for port handling, storage and losses assumed to be 5% of border value.
6. Differentiated by provinces: North Sumatra Rp.5/kg; South Selawesi Rp.10/kg; West Nusa Tenggara Rp.15/kg.
8. Inland transport price of Rp.100/ton/km, a distance of 150 km used here.
10. Conversion rate assumed to be 65%

Table IX-3 ECONOMIC PRICE DERIVATION FOR PADDY IN WEST NUSA TENGGARA PROVINCE

(in constant 1992 prices)

	Year		Import Parity 1993	1994	1995	2000	2005		Export Parity 1993	1994	1995	2000	2005
1. Export price of milled rice, 5% broken, FOB Bangkok	US$/ton		269	268	272	301	269		269	268	272	301	269
2. Quality adjustment of 10% for Indonesian rice	US$/ton	-	27	27	27	30	27	-	27	27	27	30	27
3. Freight and insurance	US$/ton	+	45	45	45	45	45	+	0	0	0	0	0
4. Border price, bagged milled rice, CIF/FOB Mataram	US$/ton	=	287	286	290	316	287	=	242	241	245	271	242
	Rp./kg	=	574	572	580	632	574	=	484	482	490	542	484
5. Cost of port handling, storage and losses	Rp./kg	+	29	29	29	32	29	-	24	24	24	27	24
6. Transport: port to wholesaler	Rp./kg	+	15	15	15	15	15	-	15	15	15	15	15
7. Price at wholesale market	Rp./kg	=	618	615	624	679	618	=	445	442	450	500	445
8. Transport: mill to wholesaler	Rp./kg	-	15	15	15	15	15	-	15	15	15	15	15
9. Ex-mill price	Rp./kg	=	603	600	609	664	603	=	430	427	435	485	430
10. Conversion to paddy	Rp./kg	=	392	390	396	431	392	=	280	278	283	315	280
11. Milling cost less value of by products	Rp./kg	-	15	15	15	15	15	-	15	15	15	15	15
12. Transport: farm to mill	Rp./kg	-	15	15	15	15	15	-	15	15	15	15	15
13. Economic farm gate price	Rp./kg	=	362	360	366	401	362	=	250	248	253	285	250
Average of Import/Export parity prices			306	304	309	343	306	Average 1993-2005 =		314			

Notes:
1. Price Prospects for Major Primary Commodities, 1990-2005, The World Bank, February 1992. MUV index(1985=100) for 1992 is 152.86
2. DGWRD, Guidelines for Studies for Water Resources Projects, Ministry of Public Works, 1985.
3. Differentiated by provinces: North Sumatra $30/ton; South Selawesi $35/ton; West Nusa Tenggara $45/ton
4. Exchange rate, Rp. 1.0=US$ 2,000.
5. Costs for port handling, storage and losses assumed to be 5% of border value.
6. Differentiated by provinces: North Sumatra Rp.5/kg; South Selawesi Rp.10/kg; West Nusa Tenggara Rp.15/kg.
8. Inland transport price of Rp.100/ton/km, a distance of 150 km used here.
10. Conversion rate assumed to be 65%

Table IX-4 ECONOMIC PRICE DERIVATION FOR SOYBEANS IN NORTH SUMATRA PROVINCE (in constant 1992 prices)

	Year		Import Parity 1993	1994	1995	2000	2005
1. Export price of soybeans US soybeans, CIF Rotterdam	US$/ton		246	252	252	229	245
2. Freight and insurance	US$/ton	+	35	35	35	35	35
3. Border price, CIF main ports	US$/ton	=	281	287	287	264	280
	Rp./kg	=	562	574	574	529	559
4. Cost of port handling, storage and losses	Rp./kg	+	28	29	29	26	28
5. Transport: port to wholesaler	Rp./kg	+	10	10	10	10	10
6. Price at wholesale market	Rp./kg	=	600	613	613	565	597
7. Transport: farm to wholesaler	Rp./kg	-	20	20	20	20	20
8. Collecting and handling cost	Rp./kg	-	10	10	10	10	10
9. Local losses (2.5%)	Rp./kg	-	15	15	15	14	15
10. Economic farm gate price	Rp./kg	=	555	568	568	521	552
					Average 1993-2005 =		553

Notes: 1. Price Prospects for Major Primary Commodities, 1990-2005, The World Bank, February 1991. MUV index(1985=100) for 1992 is 152.86
3. Exchange rate, Rp. 1.0=US$ 2,000.
4. Costs for port handling, storage and losses assumed to be 5% of border value.
5. Differentiated by provinces: for North Sumatra assumed to be Rp.10/kg
7. Inland transport price of Rp.100/ton/km, a distance of 200km is used here.

Table IX-5 ECONOMIC PRICE DERIVATION FOR SOYBEANS IN WEST NUSA TENGGARA PROVINCE (in constant 1992 prices)

	Year		Import Parity 1993	1994	1995	2000	2005
1. Export price of soybeans US soybeans, CIF Rotterdam	US$/ton		246	252	252	229	245
2. Freight and insurance	US$/ton	+	35	35	35	35	35
3. Border price, CIF main ports	US$/ton	=	281	287	287	264	280
	Rp./kg	=	562	574	574	529	559
4. Cost of port handling, storage and losses	Rp./kg	+	28	29	29	26	28
5. Transport: port to wholesaler	Rp./kg	+	15	15	15	15	15
6. Price at wholesale market	Rp./kg	=	605	618	618	570	602
7. Transport: farm to wholesaler	Rp./kg	-	15	15	15	15	15
8. Collecting and handling cost	Rp./kg	-	10	10	10	10	10
9. Local losses (2.5%)	Rp./kg	-	15	15	15	14	15
10. Economic farm gate price	Rp./kg	=	565	578	578	531	562
					Average 1993-2005 =		563

Notes: 1. Price Prospects for Major Primary Commodities, 1990-2005, The World Bank, February 1991. MUV index(1985=100) for 1992 is 152.86
3. Exchange rate, Rp. 1.0=US$ 2,000.
4. Costs for port handling, storage and losses assumed to be 5% of border value.
5. Differentiated by province: West Nusa Tenggara assumed to be Rp.15/kg
7. Inland transport price of Rp.100/ton/km, a distance of 150km is used here.

Table IX-6 ECONOMIC PRICE DERIVATION FOR GROUNDNUTS IN SOUTH SULAWESI PROVINCE .WESI PROVINCE

(in constant 1992 prices)

	Year		Import Parity 1993	1994	1995	2000	2005		Export Parity 1993	1994	1995	2000	2005
1. Export price of groundnut oil CIF Rotterdam	US$/ton		625	611	647	581	442		625	611	647	581	442
2. CIF/FOB Indonesia	US$/ton	=	469	459	485	436	331	=	434	424	450	401	296
Shelled groudnuts	Rp./kg	=	938	917	970	871	663	=	868	847	900	801	593
3. Cost of port handling, storage and losses	Rp./kg	+	47	46	48	44	33	-	43	42	45	40	30
4. Transport: port to wholesaler	Rp./kg	+	5	5	5	5	5	-	5	5	5	5	5
5. Price at wholesale market	Rp./kg	=	990	968	1023	920	701	=	819	800	850	756	558
6. Transport: farm to wholesaler	Rp./kg	-	15	15	15	15	15	-	15	15	15	15	15
7. Collecting and handling cost	Rp./kg	-	10	10	10	10	10	-	10	10	10	10	10
8. Local losses (2.5%)	Rp./kg	-	25	24	26	23	18	-	20	20	21	19	14
9. Economic farm gate price	Rp./kg	=	940	919	973	872	658	=	774	755	804	712	519
Average of Import/Export parity prices			857	837	888	792	589	Average 1993-2005 =		793			

Notes:
1. Price Prospects for Major Primary Commodities, 1990-2005, The World Bank, February 1992. MUV index(1985=100) for 1992 : 152.86
2. Price ratio of CIF Rotterdam groundnut oil to nut import price (1981-88 average): 0.75
   Freight and insurance of 35$/ton assumed for export parity prices
2. Exchange rate, Rp. 1.0=US$ 2,000.
3. Costs for port handling, storage and losses assumed to be 5% of border value.
4. Differentiated by provinces: North Sumatra Rp.10/kg; South Sulawesi Rp.5/kg, West Nusa Tenggara 15 Rp./kg.
6. Inland transport price of Rp.100/ton/km, a distance of 150 km used here.

Table IX-7 ECONOMIC PRICE DERIVATION FOR UREA IN NORTH SUMATRA PROVINCE (in constant 1992 prices)

	Year		Export Parity 1993	1994	1995	2000	2005	Average 1993-2005
1. World price of Urea FOB Northwestern Europe	US$/ton		161	165	165	183	171	
2. Price differential of Indonesian urea exports to Asian ports	US$/ton	+	15	15	15	15	15	
3. Ex-factory, Palembang	US$/ton	=	176	180	180	198	186	
	Rp./kg	=	351	360	360	397	372	
4. Transport to wholesaler	Rp./kg	+	15	15	15	15	15	
5. Handling and storage	Rp./kg	+	15	15	15	15	15	
6. Distribution and transport to farm	Rp./kg	+	20	20	20	20	20	
8. Economic farm gate price	Rp./kg	=	401	410	410	447	422	418

Notes: 1. Price Prospects for Major Primary Commodities, 1990-2005, The World Bank, February 1991. MUV index(1985=100) for 1992 is 152.86
3. Exchange rate, Rp. 1.0=US$ 2,000.
4. Differentiated by provinces: North Sumatra Rp.15/kg; South Sulawesi Rp.25/kg, West Nusa Tenggara 25 Rp./kg.
6. Cost of Rp.100/ton/km assumed, a distance of 200km is used here.

Table IX-8 ECONOMIC PRICE DERIVATION FOR UREA IN SOUTH SULAWESI AND WEST NUSA TENGGARA PROVINCE (in constant 1992 prices)

	Year		Export Parity 1993	1994	1995	2000	2005	Average 1993-2005
1. World price of Urea FOB Northwestern Europe	US$/ton		161	165	165	183	171	
2. Price differential of Indonesian urea exports to Asian ports	US$/ton	+	15	15	15	15	15	
3. Ex-factory, Palembang	US$/ton	=	176	180	180	198	186	
	Rp./kg	=	351	360	360	397	372	
4. Transport to wholesaler	Rp./kg	+	25	25	25	25	25	
5. Handling and storage	Rp./kg	+	15	15	15	15	15	
6. Distribution and transport to farm	Rp./kg	+	15	15	15	15	15	
8. Economic farm gate price	Rp./kg	=	406	415	415	452	427	423

Notes: 1. Price Prospects for Major Primary Commodities, 1990-2005, The World Bank, February 1991. MUV index(1985=100) for 1992 is 152.86
3. Exchange rate, Rp. 1.0=US$ 2,000.
4. Differentiated by provinces: North Sumatra Rp.20/kg; South Sulawesi Rp.25/kg, West Nusa Tenggara 25 Rp./kg.
6. Cost of Rp.100/ton/km assumed, a distance of 150km is used here.

Table IX-9 ECONOMIC PRICE DERIVATION FOR TSP IN NORTH SUMATRA PROVINCE (in constant 1992 prices)

	Year		Import Parity 1993	1994	1995	2000	2005	Average 1993-2005
1. World price of TSP FOB US.Gulf	US$/ton		138	142	147	150	150	
2. Freight and Insurance	US$/ton	+	55	55	55	55	55	
3. CIF Indonesia	US$/ton	=	193	197	202	205	205	
	Rp./kg	=	385	394	403	410	410	
4. Transport to wholesaler	Rp./kg	+	15	15	15	15	15	
5. Handling and storage	Rp./kg	+	15	15	15	15	15	
6. Distribution and transport to farm	Rp./kg	+	20	20	20	20	20	
8. Economic farm gate price	Rp./kg	=	435	444	453	460	460	450

Notes: 1. Price Prospects for Major Primary Commodities, 1990-2005, The World Bank, February 1991. MUV index(1985=100) for 1992 is 152.86

3. Exchange rate, Rp. 1.0=US$ 2,000.

4. Differentiated by provinces: North Sumatra Rp.15/kg; South Sulawesi Rp.25/kg, West Nusa Tenggara 25 Rp./kg.

6. Cost of Rp.100/ton/km assumed, a distance of 200km is used here.

Table IX-10 ECONOMIC PRICE DERIVATION FOR TSP IN SOUTH SULAWESI AND WEST NUSA TENGGARA PROVINCE

(in constant 1992 prices)

	Year		Import Parity 1993	1994	1995	2000	2005	Average 1993-2005
1. World price of TSP FOB US.Gulf	US$/ton		138	142	147	150	150	
2. Freight and Insurance	US$/ton	+	55	55	55	55	55	
3. CIF Indonesia	US$/ton	=	193	197	202	205	205	
	Rp./kg	=	385	394	403	410	410	
4. Transport to wholesaler	Rp./kg	+	25	25	25	25	25	
5. Handling and storage	Rp./kg	+	15	15	15	15	15	
6. Distribution and transport to farm	Rp./kg	+	15	15	15	15	15	
8. Economic farm gate price	Rp./kg	=	440	449	458	465	465	455

Notes: 1. Price Prospects for Major Primary Commodities, 1990-2005, The World Bank, February 1991. MUV index(1985=100) for 1992 is 152.86

3. Exchange rate, Rp. 1.0=US$ 2,000.

4. Differentiated by provinces: North Sumatra Rp.15/kg; South Sulawesi Rp.25/kg, West Nusa Tenggara 25 Rp./kg.

6. Cost of Rp.100/ton/km assumed, a distance of 150km is used here.

Table IX-11 ECONOMIC PRICE DERIVATION FOR KCL IN NORTH SUMATRA PROVINCE (in constant 1992 prices)

	Year		Import Parity 1993	1994	1995	2000	2005	Average 1993-2005
1. World price of KCL FOB Vancouver	US$/ton		110	110	110	109	109	
2. Freight and Insurance	US$/ton	+	50	50	50	50	50	
3. CIF Indonesia	US$/ton	=	160	160	160	159	159	
	Rp./kg	=	320	320	320	317	317	
4. Transport to wholesaler	Rp./kg	+	15	15	15	15	15	
5. Handling and storage	Rp./kg	+	15	15	15	15	15	
6. Distribution and transport to farm	Rp./kg	+	10	10	10	10	10	
8. Economic farm gate price	Rp./kg	=	360	360	360	357	357	359

Notes: 1. Price Prospects for Major Primary Commodities, 1990-2005, The World Bank, February 1991. MUV index(1985=100) for 1992 is 152.86
3. Exchange rate, Rp. 1.0=US$ 2,000.
4. Differentiated by provinces: North Sumatra Rp.15/kg; South Sulawesi Rp.25/kg, West Nusa Tenggara 25 Rp./kg.
6. Cost of Rp.50/ton/km assumed, a distance of 200km is used here.

Table IX-12 ECONOMIC PRICE DERIVATION FOR KCL IN SOUTH SULAWESI AND WEST NUSA TENGGARA PROVINCE (in constant 1992 prices)

	Year		Import Parity 1993	1994	1995	2000	2005	Average 1993-2005
1. World price of KCL FOB Vancouver	US$/ton		110	110	110	109	109	
2. Freight and Insurance	US$/ton	+	50	50	50	50	50	
3. CIF Indonesia	US$/ton	=	160	160	160	159	159	
	Rp./kg	=	320	320	320	317	317	
4. Transport to wholesaler	Rp./kg	+	25	25	25	25	25	
5. Handling and storage	Rp./kg	+	15	15	15	15	15	
6. Distribution and transport to farm	Rp./kg	+	8	8	8	8	8	
8. Economic farm gate price	Rp./kg	=	368	368	368	365	365	366

Notes: 1. Price Prospects for Major Primary Commodities, 1990-2005, The World Bank, February 1991. MUV index(1985=100) for 1992 is 152.86
3. Exchange rate, Rp. 1.0=US$ 2,000.
4. Differentiated by provinces: North Sumatra Rp.15/kg; South Sulawesi Rp.25/kg, West Nusa Tenggara 25 Rp./kg.
6. Cost of Rp.50/ton/km assumed, a distance of 150km is used here.

Table IX-13 ECONOMIC FARMGATE PRICE FOR PADDY IN REPRESENTATIVE SCHEMES

Unit: Rp./kg

No.	Code	Name of F/S Scheme	Distance	1993	1994	1995	2000	2005	1993-2005
NORTH SUMATRA									Average
1	60011	Sumbari	109	298	296	302	336	298	306
2	60038	Rauning B	500	273	271	276	310	273	281
3	50025	Sumbul Berampu	160	295	293	298	332	295	303
4	50057	Sidomukti	35	303	301	307	341	303	311
5	50091	Aek Palia/Tegal Legok	234	290	288	294	328	290	298
6	50129	Pangambatan (B)	375	281	279	284	318	281	289
7	50141	Aek Siparbue	216	291	289	295	329	291	299
8	50218	Kutamale	97	299	297	303	336	299	307
9	50240	Asahan VIII Pengajian	168	294	293	298	332	294	302
10	50256	Aek Sihim	474	274	273	278	312	274	282
SOUTH SULAWESI									
1	20003	Kalu	141	299	298	303	337	299	307
2	10055	Pajjenge	116	301	299	305	339	301	309
3	10099	Kadieng	202	296	294	299	333	296	303
4	10115	Kaindi	242	293	291	297	330	293	301
5	10140	Lembong Bata	78	304	302	307	341	304	311
6	10168	Panrita	152	299	297	302	336	299	307
7	10182	Mario I-II-III	83	303	301	307	341	303	311
8	10201	Pakelli II	203	295	294	299	333	295	303
9	10227	Limpua/Padaelo	210	295	293	299	333	295	303
10	10287	Malimbu	433	281	279	284	318	281	288
11	10332	Salu A'kung	337	287	285	290	324	287	295
12	10354	S. Mariri	296	289	288	293	327	289	297
WEST NUSA TENGGARA									
1	45010	Danar Jengkang	58	312	310	315	349	312	320
2	32013	Mada Manini	438	287	285	291	325	287	295
3	33050	Uma Lebang	350	293	291	296	330	293	301
4	34004	Lokok Tripas	80	310	308	314	348	310	318
5	35035	Lengkok Dudu	56	312	310	315	349	312	320
6	35045	Kelokos Udang	42	313	311	316	350	313	321
7	36016	Raba Sangga	450	286	284	290	324	286	294
8	37003	Montong Sapah/Puri	56	312	310	315	349	312	320

Note: "Distance" is that from provincial capital cited from the inventory survey result.

Table IX-14 ECONOMIC FARMGATE PRICE FOR UREA IN REPRESENTATIVE SCHEMES

Unit: Rp./kg

No.	Code	Name of F/S Scheme	Distance(km)	1993	1994	1995	2000	2005	Average
NORTH SUMATRA									
1	60011	Sumbari	109	395	404	404	441	416	412
2	60038	Rauning B	500	421	430	430	466	442	438
3	50025	Sumbul Berampu	160	398	408	408	444	420	416
4	50057	Sidomukti	35	390	399	399	436	412	407
5	50091	Aek Palia/Tegal Legok	234	403	412	412	449	425	420
6	50129	Pangambatan (B)	375	412	422	422	458	434	430
7	50141	Aek Siparbue	216	402	411	411	448	423	419
8	50218	Kutamale	97	394	403	403	440	416	411
9	50240	Asahan VIII Pengajian	168	399	408	408	445	420	416
10	50256	Aek Sihim	474	419	428	428	465	440	436
SOUTH SULAWESI									
1	20003	Kalu	141	400	410	410	446	422	418
2	10055	Pajjenge	116	399	408	408	445	420	416
3	10099	Kadieng	202	404	414	414	450	426	422
4	10115	Kaindi	242	407	416	416	453	428	424
5	10140	Lembong Bata	78	396	405	405	442	418	413
6	10168	Panrita	152	401	410	410	447	423	418
7	10182	Mario I-II-III	83	397	406	406	443	418	414
8	10201	Pakelli II	203	404	414	414	450	426	422
9	10227	Limpua/Padaelo	210	405	414	414	451	426	422
10	10287	Malimbu	433	419	429	429	465	441	437
11	10332	Salu A'kung	337	413	422	422	459	435	430
12	10354	S. Mariri	296	410	420	420	456	432	428
WEST NUSA TENGGARA									
1	45010	Danar Jengkang	58	395	404	404	441	416	412
2	32013	Mada Manini	438	420	429	429	466	441	437
3	33050	Uma Lebang	350	414	423	423	460	435	431
4	34004	Lokok Tripas	80	396	406	406	442	418	414
5	35035	Lengkok Dudu	56	395	404	404	441	416	412
6	35045	Kelokos Udang	42	394	403	403	440	415	411
7	36016	Raba Sangga	450	421	430	430	466	442	438
8	37003	Montong Sapah/Puri	56	395	404	404	441	416	412

Note: "Distance" is that from provincial capital cited from the inventory survey result.

Table IX-15 ECONOMIC FARMGATE PRICE FOR TSP IN REPRESENTATIVE SCHEMES

Unit: Rp./kg

No.	Code	Name of F/S Scheme	Distance(km)	1993	1994	1995	2000	2005	Average
NORTH SUMATRA									
1	60011	Sumbari	109	429	438	448	454	454	445
2	60038	Rauning B	500	455	464	473	479	479	470
3	50025	Sumbul Berampu	160	433	442	451	457	457	448
4	50057	Sidomukti	35	424	434	443	449	449	440
5	50091	Aek Palia/Tegal Legok	234	437	447	456	462	462	453
6	50129	Pangambatan (B)	375	447	456	465	471	471	462
7	50141	Aek Siparbue	216	436	445	455	461	461	451
8	50218	Kutamale	97	428	438	447	453	453	444
9	50240	Asahan VIII Pengajian	168	433	442	451	458	458	448
10	50256	Aek Sihim	474	453	462	471	477	477	468
SOUTH SULAWESI									
1	20003	Kalu	141	435	444	453	459	459	450
2	10055	Pajjenge	116	433	442	451	457	457	448
3	10099	Kadieng	202	439	448	457	463	463	454
4	10115	Kaindi	242	441	450	459	466	466	456
5	10140	Lembong Bata	78	430	440	449	455	455	446
6	10168	Panrita	152	435	444	454	460	460	451
7	10182	Mario I-II-III	83	431	440	449	455	455	446
8	10201	Pakelli II	203	439	448	457	463	463	454
9	10227	Limpua/Padaelo	210	439	448	457	464	464	454
10	10287	Malimbu	433	454	463	472	478	478	469
11	10332	Salu A'kung	337	447	456	466	472	472	463
12	10354	S. Mariri	296	445	454	463	469	469	460
WEST NUSA TENGGARA									
1	45010	Danar Jengkang	58	429	438	448	454	454	444
2	32013	Mada Manini	438	454	463	472	478	478	469
3	33050	Uma Lebang	350	448	457	466	473	473	463
4	34004	Lokok Tripas	80	431	440	449	455	455	446
5	35035	Lengkok Dudu	56	429	438	447	453	453	444
6	35045	Kelokos Udang	42	428	437	446	453	453	443
7	36016	Raba Sangga	450	455	464	473	479	479	470
8	37003	Montong Sapah/Puri	56	429	438	447	453	453	444

Note: "Distance" is that from provincial capital cited from the inventory survey result.

Table IX-16 ECONOMIC FARMGATE PRICE FOR KCL IN REPRESENTATIVE SCHEMES

Unit: Rp./kg

No.	Code	Name of F/S Scheme	Distance(km)	1993	1994	1995	2000	2005	Average
NORTH SUMATRA									
1	60011	Sumbari	109	354	354	354	351	351	353
2	60038	Rauning B	500	380	380	380	377	377	378
3	50025	Sumbul Berampu	160	358	358	358	354	354	356
4	50057	Sidomukti	35	349	349	349	346	346	348
5	50091	Aek Palia/Tegal Legok	234	362	362	362	359	359	361
6	50129	Pangambatan (B)	375	371	371	371	368	368	370
7	50141	Aek Siparbue	216	361	361	361	358	358	360
8	50218	Kutamale	97	353	353	353	350	350	352
9	50240	Asahan VIII Pengajian	168	358	358	358	355	355	357
10	50256	Aek Sihim	474	378	378	378	375	375	377
SOUTH SULAWESI									
1	20003	Kalu	141	360	360	360	356	356	358
2	10055	Pajjenge	116	358	358	358	355	355	357
3	10099	Kadieng	202	363	363	363	360	360	362
4	10115	Kaindi	242	366	366	366	363	363	365
5	10140	Lembong Bata	78	355	355	355	352	352	354
6	10168	Panrita	152	360	360	360	357	357	359
7	10182	Mario I-II-III	83	356	356	356	353	353	355
8	10201	Pakelli II	203	364	364	364	361	361	362
9	10227	Limpua/Padaelo	210	364	364	364	361	361	363
10	10287	Malimbu	433	379	379	379	375	375	377
11	10332	Salu A'kung	337	372	372	372	369	369	371
12	10354	S. Mariri	296	370	370	370	367	367	368
WEST NUSA TENGGARA									
1	45010	Danar Jengkang	58	354	354	354	351	351	353
2	32013	Mada Manini	438	379	379	379	376	376	378
3	33050	Uma Lebang	350	373	373	373	370	370	372
4	34004	Lokok Tripas	80	356	356	356	353	353	354
5	35035	Lengkok Dudu	56	354	354	354	351	351	353
6	35045	Kelokos Udang	42	353	353	353	350	350	352
7	36016	Raba Sangga	450	380	380	380	377	377	378
8	37003	Montong Sapah/Puri	56	354	354	354	351	351	353

Note: "Distance" is that from provincial capital cited from the inventory survey result.