

APPENDIX 6
*AGRICULTURAL AND RURAL
INFRASTRUCTURE*

APPENDIX 6

Agricultural and Rural Infrastructure

	<u>Page</u>
A6-1 Main Features of Dike Embankment at 34 Polders in Development Plan.....	A6-1
A6-2 Evaluation of Function Survey and Rehabilitation Method for Sluice gates in Labutta North Polder.....	A6-2
A6-3 Evaluation of Gate Function and Rehabilitation Method for Sluice Gates at 34 Polders.....	A6-5
A6-4 Results of Work Volume for Polder Dike and Sluice Rehabilitation.....	A6-12
A6-5 Results of Quality Control by Field Density Test.....	A6-14
A6-6 Results of Final Inspection on Polder Dike and Sluice Gates Pilot Project.....	A6-15
A6-7 Priority Ranking of Polder Groups in Development Plan.....	A6-16
A6-7-1 Priority Ranking from Viewpoint of Emergency on Each Polder and Group.....	A6-17
A6-7-2 Implementation Priority by Polder and Group in Terms of Disaster Prevention Effects.....	A6-18

A6-1 Main Features of Dike Embankment at 34 Polders in Development Plan

Township	No.	Name of Polder Dike	Dike Length (mile)	JPT Revised Design ACL (ft)	ID Original Design ACL (ft)	Difference ACL between JPT&ID (ft)	ID Design Volume (1) (Sud)	Progress for ID Design Volume (%)	Remained Volume for ID design (2) (Sud)	Increased Volume (3) (Sud)	Additional Volume (4) (Sud)	Remained Necessary Volume (2)+(3)+(4) (Sud)	Total Embankment Volume (1)+(3)+(4) (Sud)
Labutta	1	Alegyun (1)	13.40	13.5	13.5	0.0	41,100	0	41,100	0	0	41,100	41,100
	2	Alegyun (2)	22.70	14.0	14.0	0.0	128,446	0	128,446	0	0	128,446	128,446
	3	Alegyun (3)	17.65	14.0	14.0	0.0	94,606	100	0	0	0	0	94,606
	4	Magyibinmadaukan	3.40	14.0	14.0	0.0	20,745	100	0	0	0	0	20,745
	5	Thingangyi	6.30	11.5	10.0	1.5	70,198	68	22,463	22,983	0	45,446	93,181
	6	Zinywe	6.00	11.5	8.5	3.0	37,132	100	0	0	40,998	40,998	78,130
	7	Leikkwin	3.75	11.5	8.5	3.0	25,743	0	25,743	20,194	0	45,937	45,937
	8	Labutta (S)	20.20	11.0	10.0	1.0	154,128	0	154,128	40,108	0	194,236	194,236
	9	Labutta (N)	38.00	11.0	10.0	1.0	186,518	86	25,518	48,482	0	74,000	235,000
	10	U Gaungpu	5.20	12.0	8.5	3.5	61,854	0	61,854	45,718	0	107,572	107,572
	11	Bitud Island (1)	14.02	12.0	10.0	2.0	97,417	23	75,011	66,034	0	141,045	163,451
	12	Bitud Island (2)	18.60	12.0	10.0	2.0	103,586	7	96,335	75,767	0	172,102	179,353
	13	Bitud Island (3)	28.00	12.0	10.0	2.0	247,500	54	113,850	144,295	0	258,145	391,795
	14	Bitud Island (4)	40.53	12.0	10.0	2.0	224,103	100	0	0	68,223	68,223	292,326
Bogalay	15	Daunggyi	37.00	12.0	8.5	3.5	35,692	17	29,624	151,047	0	180,671	186,739
	16	Daunggyi (East)	33.90	12.5	8.5	4.0	125,000	36	80,000	246,292	0	326,292	371,292
	17	Daunggyi (West)	31.60	12.0	11.0	1.0	226,630	100	0	0	32,961	32,961	259,591
	18	Daunggyi (Upper)	10.50	12.0	8.5	3.5	41,156	0	41,156	65,917	0	107,073	107,073
Phyapon	19	Daw Nyein	14.00	12.5	8.5	4.0	36,343	100	0	0	100,513	100,513	136,856
	20	Myokone	17.00	12.5	8.5	4.0	59,286	100	0	0	130,915	130,915	190,201
	21	Kyetphamwezaun	46.00	12.5	9.0	3.5	190,200	6	178,788	290,580	0	469,368	480,780
	22	Banbwezu	26.00	12.0	8.5	3.5	45,114	0	45,114	145,188	0	190,302	190,302
	23	Daydalu	13.00	12.5	9.0	3.5	61,943	100	0	0	92,932	92,932	154,875
	24	Letpanbin	20.00	12.5	8.5	4.0	35,400	100	0	0	138,356	138,356	173,756
Daydaye	25	Zinbaung	15.00	12.5	8.5	4.0	22,800	18	18,696	96,433	0	115,129	119,233
	26	Myaseinkan	13.50	13.0	13.0	0.0	134,274	72	37,597	0	0	37,597	134,274
	27	Thandi	4.25	13.0	12.0	1.0	16,931	100	0	0	4,151	4,151	21,082
	28	Suclubbaluma	7.40	13.0	11.0	2.0	5,944	100	0	0	11,654	11,654	17,598
	29	Hleseikchaunggyi	7.40	13.0	11.0	2.0	5,885	0	5,885	15,377	0	21,262	21,262
	30	Tamatakaw	7.00	14.0	12.0	2.0	3,902	100	0	0	8,021	8,021	11,923
Kyaiklatt	31	Kyonsoat	5.00	14.0	13.0	1.0	14,950	100	0	0	4,457	4,457	19,407
	32	Maubin Island (N)	12.40	13.5	10.0	3.5	12,060	0	12,060	50,940	0	63,000	63,000
	33	Maubin Island (S)	4.40	12.0	10.0	2.0	660	0	660	7,865	0	8,525	8,525
	34	Thonegwakyun	22.25	13.5	12.0	1.5	70,450	0	70,450	61,739	0	132,189	132,189
Total			585.35	Av. (12.5)	Av. (10.4)	Av. (2.2)	2,637,696	52	1,264,479	1,594,959	633,181	3,492,619	4,865,836
Total except for No.3, 4, 9, 26 Polder			512.80				2,201,553		1,201,364	1,546,477	633,181	3,381,022	4,381,211

Note: 1. JPT means JICA Project Team and progress is informed by ID as of end of March 2011.

2. Increased Volume means necessary quantity added to ID design volume based on JPT design ACL.

3. Additional Volume means raising quantity for completed (nearly 100%) embankment.

Name of Sluice	Gate Type and No.	Gate Size	Gate Leaf				Gate Guide			Gate Hoist				Rehabilitation Method of Gate								Rehabilitation of Concrete Works	Remarks		
			Corrosion	Damage	Function	Total Point	Corrosion	Damage	Total Point	Corrosion	Damage	Function	Total Point	Replacing			Repairing				Non Repair				
														Leaf	Guide	Hoist	Leaf	Guide	Hoist	Paint					
5. Labuttaloke	Flap-No.1	φ 4'	1	1	1	3	-	-	-	-	-	-	-									○			
	Flap-No.2	φ 4'	1	1	1	3	-	-	-	-	-	-	-										○		
	Flap-No.3	φ 4'	1	1	1	3	-	-	-	-	-	-	-										○		
	Flap-No.4	φ 4'	1	1	1	3	-	-	-	-	-	-	-										○		
	Flap-No.5	φ 4'	1	1	1	3	-	-	-	-	-	-	-										○		
	Flap-No.6	φ 4'	1	1	1	3	-	-	-	-	-	-	-										○		
	Flap-No.7	φ 4'	1	1	1	3	-	-	-	-	-	-	-										○		
	Flap-No.8	φ 4'	1	1	1	3	-	-	-	-	-	-	-										○		
	Flap-No.9	φ 4'	1	1	1	3	-	-	-	-	-	-	-										○		
	Sub Total																						9		
5. Labuttaloke	Slide-No.1	□4'2"	2	1	1	4	2	1	3	1	1	1	3										○		
	Slide-No.2	□4'2"	2	1	1	4	2	1	3	1	1	1	3										○		
	Slide-No.3	□4'2"	2	1	1	4	2	1	3	1	1	1	3										○		
	Slide-No.4	□4'2"	2	1	1	4	2	1	3	1	1	1	3										○		
	Slide-No.5	□4'2"	2	1	1	4	2	1	3	1	1	1	3										○		
	Slide-No.6	□4'2"	2	1	1	4	2	1	3	1	1	1	3										○		
	Slide-No.7	□4'2"	2	1	1	4	2	1	3	1	1	1	3										○		
	Slide-No.8	□4'2"	2	1	1	4	2	1	3	1	1	1	3										○		
	Slide-No.9	□4'2"	2	1	1	4	2	1	3	1	1	1	3										○		
	Sub Total																						9		
6. Hpobe	Flap-No.1	φ 4'	2	2	1	5	-	-	-	-	-	-	-				○						○		
	Flap-No.2	φ 4'	2	2	1	5	-	-	-	-	-	-	-				○						○		
	Flap-No.3	φ 4'	2	2	1	5	-	-	-	-	-	-	-				○						○		
	Flap-No.4	φ 4'	2	2	1	5	-	-	-	-	-	-	-				○						○		
	Flap-No.5	φ 4'	2	2	1	5	-	-	-	-	-	-	-				○						○		
	Flap-No.6	φ 4'	2	2	1	5	-	-	-	-	-	-	-				○						○		
	Flap-No.7	φ 4'	2	2	1	5	-	-	-	-	-	-	-				○						○		
	Flap-No.8	φ 4'	2	2	1	5	-	-	-	-	-	-	-				○						○		
	Flap-No.9	φ 4'	2	2	1	5	-	-	-	-	-	-	-				○						○		
	Flap-No.10	φ 4'	2	2	1	5	-	-	-	-	-	-	-				○						○		
Sub Total																	10					10			
6. Hpobe	Slide-No.1	□4'2"	2	2	3	7	3	3	6	2	2	3	7	○	○	○								Hoist Base	
	Slide-No.2	□4'2"	2	2	3	7	3	3	6	2	2	3	7	○	○	○								Ditto	
	Slide-No.3	□4'2"	2	2	3	7	3	3	6	2	2	3	7	○	○	○								Ditto	
	Slide-No.4	□4'2"	2	2	3	7	3	3	6	2	2	3	7	○	○	○								Ditto	
	Slide-No.5	□4'2"	2	2	3	7	3	3	6	2	2	3	7	○	○	○								Ditto	
	Slide-No.6	□4'2"	2	2	3	7	3	3	6	2	2	3	7	○	○	○								Ditto	
	Slide-No.7	□4'2"	2	2	3	7	3	3	6	2	2	3	7	○	○	○								Ditto	
	Slide-No.8	□4'2"	2	2	3	7	3	3	6	2	2	3	7	○	○	○								Ditto	
	Slide-No.9	□4'2"	2	2	3	7	3	3	6	2	2	3	7	○	○	○								Ditto	
	Slide-No.10	□4'2"	2	2	3	7	3	3	6	2	2	3	7	○	○	○								Ditto	
Sub Total													10	10	10										

Note: 1. Evaluation point shall be counted as good condition is 1, medium condition is 2 and bad condition is 3.

2. Rehabilitation method shall be selected as replace is in case larger than equal of total point 7 on each part (guide is 5), repair is between 6 and 5 (guide is 4), non-repair is less than equal 4 (guide is 3).

Name of Sluice	Gate Type and No.	Gate Size	Gate Leaf				Gate Guide			Gate Hoist				Rehabilitation Method of Gate							Rehabilitation of Concrete Works	Remarks				
			Corrosion	Damage	Function	Total Point	Corrosion	Damage	Total Point	Corrosion	Damage	Function	Total Point	Replacing			Repairing						Non Repair			
														Leaf	Guide	Hoist	Leaf	Guide	Hoist	Paint						
7. Danechaung	Flap-No.1	φ 4'	2	2	1	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Repairing leaf means to replace seal, hinge & arm and paint.	
	Flap-No.2	φ 4'	2	2	1	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	Flap-No.3	φ 4'	2	2	1	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	Flap-No.4	φ 4'	2	2	1	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	Flap-No.5	φ 4'	2	2	1	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	Flap-No.6	φ 4'	3	3	3	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	Flap-No.7	φ 4'	2	2	1	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	Sub Total																									
	Slide-No.1	□4'2"	2	2	3	7	2	3	5	2	2	3	7	○	○	○										Hoist Base
	Slide-No.2	□4'2"	2	2	3	7	2	3	5	2	2	3	7	○	○	○										Ditto
	Slide-No.3	□4'2"	2	2	3	7	2	3	5	2	2	3	7	○	○	○										Ditto
	Slide-No.4	□4'2"	2	2	3	7	2	3	5	2	2	3	7	○	○	○										Ditto
	Slide-No.5	□4'2"	2	2	3	7	2	3	5	2	2	3	7	○	○	○										Ditto
	Slide-No.6	□4'2"	2	2	3	7	2	3	5	2	2	3	7	○	○	○										Ditto
Slide-No.7	□4'2"	2	2	3	7	2	3	5	2	2	3	7	○	○	○										Ditto	
Sub Total													7	7	7											
8. Kyaukchaung	Flap-No.1	φ 4'	1	1	1	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	
	Flap-No.2	φ 4'	1	1	1	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	
	Sub Total																									2
	Slide-No.1	□4'2"	1	1	1	3	2	1	3	2	1	1	4													○
	Slide-No.2	□4'2"	1	1	1	3	2	1	3	2	1	1	4													○
Sub Total																										2
9. Shansu	Flap-No.1	φ 4'	2	1	1	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	
	Flap-No.2	φ 4'	2	1	1	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	
	Flap-No.3	φ 4'	2	1	1	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	
	Sub Total																									3
	Slide-No.1	□4'2"	2	1	1	4	2	1	3	2	1	1	4													○
	Slide-No.2	□4'2"	2	1	1	4	2	1	3	2	1	1	4													○
Slide-No.3	□4'2"	2	1	1	4	2	1	3	2	1	1	4													○	
Sub Total																										3
Total Nos.	Flap Gate	48												6	-	-	28	-	-	28	14					
	Slide Gate	48												34	34	34	-	-	-	-	14					
Summary and Quantity of Rehabilitation Works	Flap Gate: Replacing whole Gate Leaf													6												
	Flap Gate: Repairing gate leaf for seal, hinge & arm and painting													28												
	Flap Gate: Non repair at all													14												
	Slide Gate: Replacing whole gate leaf, guide flame and hoist													34												
	Slide Gate: Non Repair at all													14												
Rehabilitation of Concrete Works for Hoist Base of Slide Gate													6 sluices													

Note: 1. Evaluation point shall be counted as good condition is 1, medium condition is 2 and bad condition is 3.

2. Rehabilitation method shall be selected as replace is in case larger than equal of total point 7 on each part (guide is 5), repair is between 6 and 5 (guide is 4), non-repair is less than equal 4 (guide is 3).

A6-3 Evaluation of Gate Function and Rehabilitation Method for Sluice Gates at 34 Polders

Township	No.	Name of Polder	Name of sluice	Gate		Nos.	Gate leaf			Gate Guide		Gate Hoist			Total Point	Judgement (gate nos.)				
				River side	Size		Corrosion	Damage	Function	Corrosion	Damage	Corrosion	Damage	Function		Replace	Repair	Non-repair		
				Land side																
Labutta	1	Alegyun (1)	Sin The	Flap Gate	φ4'	4	2	2	1	/	/	/	/	/	5		○			
				Slide Gate	4'2"x4'2"	2	2	2	1	2	2	2	2	1	14		○			
				Stop Log		2	3	3	3	3	3	3	3	3	24	○				
			Aung Khaing	Flap Gate	φ4'	3	3	2	3	/	/	/	/	/	8	○				
				Slide Gate	4'2"x4'2"	3	2	2	1	2	2	2	2	1	14		○			
				Stop Log		4	2	2	1	/	/	/	/	/	5		○			
			Maung Kywet	Flap Gate	φ4'	4	2	2	1	/	/	/	/	/	5		○			
				Slide Gate	4'2"x4'2"	2	2	2	1	2	2	2	2	1	14		○			
				Stop Log		2	3	3	3	3	3	3	3	3	24	○				
			Sub Total		Flap Gate		11											3	8	
	3 nos. of sluices		Slide Gate		11											4	7			
	2	Alegyun (2)	Kun Nyut	Flap Gate	φ4'	3	2	2	1	/	/	/	/	/	5		○			
				Slide Gate	Stop Log	3	3	3	3	3	3	3	3	3	24	○				
			Thit Poke	Flap Gate	φ4'	3	2	2	1	/	/	/	/	/	5		○			
				Slide Gate	Stop Log	3	3	3	3	3	3	3	3	3	24	○				
			Kunwin	Flap Gate	φ4'	5	2	2	1	/	/	/	/	/	5		○			
				Slide Gate	4'2"x4'2"	3	2	2	1	2	2	2	2	1	14		○			
			Thingangone	Flap Gate	φ4'	11	2	2	1	/	/	/	/	/	5		○			
				Slide Gate	4'2"x4'2"	6	2	2	1	2	2	2	2	1	14		○			
			Sub Total		Flap Gate		22												22	
			4 nos. of sluices		Slide Gate		22											13	9	
	3	Alegyun (3)	Phozone	Flap Gate	φ4'	5	2	1	1	/	/	/	/	/	4			○		
				Slide Gate	4'2"x4'2"	3	2	1	1	2	2	2	2	1	13		○			
				Stop Log		2	3	3	3	3	3	3	3	3	24	○				
			Poteta	Flap Gate	φ4'	6	2	2	1	/	/	/	/	/	5		○			
				Slide Gate	4'2"x4'2"	4	2	2	1	1	1	1	2	2	12		○			
			Koebo	Flap Gate	φ4'	3	2	2	1	/	/	/	/	/	5		○			
				Slide Gate	4'2"x4'2"	3	2	3	3	2	2	2	2	3	19	○				
			Tawgaung	Flap Gate	φ4'	4	2	2	1	/	/	/	/	/	5		○			
				Slide Gate	4'2"x4'2"	2	2	2	1	2	2	1	1	1	12		○			
Sub Total			Flap Gate		18												13	5		
4 nos. of sluices		Slide Gate		18											9	9				
4	Magyibinmadaukan	Non																		

Note: Criteria of judgement is as follows; Flap gate; Replace is more than equal total point 7, Repair is between 6 and 5, and Non-repair is less than equal 4.

Slide gate; Replace is more than equal total point 17, Repair is between 16 and 12, and Non-repair is less than equal 11.

Township	No.	Name of Polder	Name of sluice	Gate		Nos.	Gate leaf			Gate Guide		Gate Hoist			Total Point	Judgement (gate nos.)			
				River side	Size		Corrosion	Damage	Function	Corrosion	Damage	Corrosion	Damage	Function		Replace	Repair	Non-repair	
				Land side															
Labutta	5	Thingangyi	Non																
	6	Zinywe	Non																
	7	Leikkwin	Leik Kwin	Flap (Wood)	6'x6'	1	3	3	3						9	○			
				Flap (Wood)	6'x6'	1	3	3	3							9	○		
				Sub Total (1 nos. sluice)	Flap Gate		2											2	
	8	Labutta (South)	Kwaklake	Flap Gate	φ4'	6	2	2	1						5		○		
				Slide Gate	4'2"x4'2"	6	2	2	1	2	2	2	2	3	16		○		
			Ganate	Flap Gate	φ4'	3	2	2	1							5		○	
				Slide Gate	4'2"x4'2"	3	1	1	1	2	1	2	1	1	10			○	
			Me Oo	Flap Gate	φ4'	8	2	2	1							5		○	
				Slide Gate	4'2"x4'2"	8	2	2	1	2	2	2	2	3	16			○	
			Sub Total 3 nos. of sluices	Flap Gate		17												17	
	Slide Gate		17													14	3		
	9	Labutta (North)	Phope	Flap Gate	φ4'	10	2	2	1						5				
				Slide Gate	4'2"x4'2"	10	2	2	3	3	3	2	2	3	20	○			
			Labuttalok	Flap Gate	φ4'	9	1	1	1							3			○
				Slide Gate	4'2"x4'2"	9	2	1	1	2	1	1	1	1	10				○
			Mayan (North)	Flap Gate	φ4'	5	2	2	1							5		○	
				Slide Gate	4'2"x4'2"	5	2	2	1	3	2	2	2	3	17	○			
			Mayan (South)	Flap Gate	φ4'	5	2	2	1							5		○	
				Slide Gate	4'2"x4'2"	5	2	2	1	3	2	2	2	3	17	○			
			Letweikwe	Flap Gate	φ4'	5	2	2	3							7	○		
				Slide Gate	4'2"x4'2"	5	2	2	2	3	2	2	2	3	18	○			
			Denetan	Flap Gate	φ4'	2	2	2	1							5		○	
				Slide Gate	4'2"x4'2"	2	2	2	2	3	2	2	2	3	18	○			
			Nyaung Lain	Slide Gate	3'10"x4'	3	Not to be used for Sluice												
				Non															
			Shansu	Flap Gate	φ4'	3	2	1	1							4			○
				Slide Gate	4'2"x4'2"	3	2	1	1	2	1	2	1	1	11				○
	Kyaukchaung	Flap Gate	φ4'	2	1	1	1							3			○		
		Slide Gate	4'2"x4'2"	2	1	1	1	2	1	2	1	1	9				○		
	Denechaung	Flap Gate	φ4'	7	2	2	1							5	○1	○6			
Slide Gate		4'2"x4'2"	7	2	2	2	2	3	2	2	2	17	○						
Sub Total 9 nos. of sluices	Flap Gate		48											6	28	14			
	Slide Gate		48											34		14			
10	U Gaungpu	Non																	
11	Bitud Island (1)	Zeephu	Flap Gate	φ4'	4	2	2	1						5		○			
			Slide Gate	4'2"x4'2"	4	2	2	1	2	2	2	2	1	14		○			
		Phonnako	Flap Gate	φ4'	6	2	2	1							5		○		
			Slide Gate	4'2"x4'2"	6	2	2	3	2	2	3	3	3	20	○				
		Sub Total 2 nos. of sluices	Flap Gate		(10)	Completed repairing assisted by CDN											(10)		
Slide Gate		(10)												(6)	(4)				

Note: Criteria of judgement is as follows; Flap gate; Replace is more than equal total point 7, Repair is between 6 and 5, and Non-repair is less than equal 4.

Slide gate; Replace is more than equal total point 17, Repair is between 16 and 12, and Non-repair is less than equal 11.

Township	No.	Name of Polder	Name of sluice	Gate		Nos.	Gate leaf			Gate Guide		Gate Hoist			Total Point	Judgement (gate nos.)				
				River side	Size		Corrosion	Damage	Function	Corrosion	Damage	Corrosion	Damage	Function		Replace	Repair	Non-repair		
				Land side																
Labutta	12	Bitud Island (2)	Satchaung	Flap Gate	φ4'	8	2	2	1	/	/	/	/	/	5		○			
				Slide Gate	4'2"x4'2"	8	2	2	1	2	2	2	2	1	14		○			
			Kantbalar	Flap Gate	φ4'	5	2	2	1	/	/	/	/	/	5		○			
				Slide Gate	4'2"x4'2"	3	2	2	1	2	2	2	2	1	14		○			
			Htonebookya	Flap Gate	φ4'	2	2	2	2	/	/	/	/	/	6		○			
				Slide Gate	4'2"x4'2"	4	2	2	1	2	2	2	2	1	14		○			
			Kyainchaung	Flap Gate	φ4'	4	2	2	1	/	/	/	/	/	5		○			
				Slide Gate	4'2"x4'2"	4	2	2	1	2	2	2	2	1	14		○			
			Sub Total 4 nos. of sluices	Flap Gate		35													35	
				Slide Gate		19													19	
			13	Bitud Island (3)	Maungnge	Flap Gate	φ4'	3	2	2	1	/	/	/	/	/	5		○	
						Slide Gate	4'2"x4'2"	3	2	2	2	3	2	2	2	3	18	○		
	Kaingtaw	Flap Gate			φ4'	6	2	2	1	/	/	/	/	/	5		○			
		Slide Gate			4'2"x4'2"	4	3	3	2	2	2	3	2	3	20	○				
	Thapyaykwin	Flap (Wood)			4'6"x4'6"	2	3	3	3	/	/	/	/	/	9	○				
		Flap (Wood)			4'2"x4'2"	2	3	3	3	/	/	/	/	/	9	○				
	Kadauksat	Non								/	/	/	/	/						
		Flap (Wood)			3'x3'	1	3	3	3	/	/	/	/	/	9	○				
	Sub Total 4 nos. of sluices	Flap Gate				16												7	9	
		Slide Gate				7												7		
	14	Bitud Island (4)	Chaungbwai	Slide Gate	4'2"x4'2"	4	1	1	1	1	1	2	2	3	12		○			
				Flap Gate	φ4'	4	2	2	1	/	/	/	/	/	5		○			
			Kakayan	Flap Gate	φ4'	5	2	2	3	/	/	/	/	/	7	○				
				Slide Gate	4'2"x4'2"	3	2	2	1	2	2	3	3	3	18	○				
			Phokhwalay	Flap Gate	φ4'	2	2	2	1	/	/	/	/	/	5		○			
				Slide Gate	4'2"x4'2"	2	3	3	3	2	2	3	3	3	20	○				
			Phokhwagi	Flap Gate	φ4'	4	2	2	1	/	/	/	/	/	5		○			
				Slide Gate	4'2"x4'2"	2	2	2	1	2	2	3	2	2	16		○			
			Katipar	Flap Gate	φ4'	2	2	2	1	/	/	/	/	/	5		○			
				Slide Gate	4'2"x4'2"	3	2	2	1	2	2	2	2	1	14		○			
			Baepauk	Flap Gate	φ4'	2	2	2	1	/	/	/	/	/	5		○			
	Slide Gate	4'2"x4'2"		4	2	2	1	2	2	3	3	3	18	○						
	Sub Total 6 nos. of sluices	Flap Gate		32												7	25			
Slide Gate			16												7	9				

Note: Criteria of judgement is as follows; Flap gate; Replace is more than equal total point 7, Repair is between 6 and 5, and Non-repair is less than equal 4.

Slide gate; Replace is more than equal total point 17, Repair is between 16 and 12, and Non-repair is less than equal 11.

Township	No.	Name of Polder	Name of sluice	Gate		Nos.	Gate leaf			Gate Guide		Gate Hoist			Total Point	Judgement (gate nos.)		
				River side	Size		Corrosion	Damage	Function	Corrosion	Damage	Corrosion	Damage	Function		Replace	Repair	Non-repair
				Land side														
Bogalay	15	Daunggyi	Satsan (Kyon Kaw)	Flap Gate	φ4'	8	2	1	1	/	/	/	/	/	4			○
				Slide Gate	4'9"x4'9"	4	2	2	1	2	2	2	1	1	13		○	
				Stop Log	4	3	3	3	3	3	3	3	3	24	○			
			Ahseekalay	Flap Gate	φ4'	9	2	1	1	/	/	/	/	/	4			○
				Slide Gate	4'6"x5'	9	2	1	1	2	1	2	1	2	12		○	
			Myit Kyo	Flap Gate	φ4'	5	2	2	1	/	/	/	/	/	5		○	
				Slide Gate	4'9"x4'9"	3	2	1	1	2	2	2	1	1	12		○	
				Stop Log	2	3	3	3	3	3	3	3	3	24	○			
			Kalagyi Chaung	Flap Gate	φ4'	6	2	1	1	/	/	/	/	/	4			○
				Slide Gate	4'6"x5'	4	2	1	1	2	2	2	2	1	13		○	
				Stop Log	2	3	3	3	3	3	3	3	3	24	○			
			Thal Chaung	Flap Gate	φ4'	6	2	1	1	/	/	/	/	/	4			○
				Slide Gate	4'6"x5'6"	4	2	1	1	2	2	2	2	1	13		○	
				Stop Log	2	3	3	3	3	3	3	3	3	24	○			
			Katthapaung	Flap Gate	φ4'	10	2	1	1	/	/	/	/	/	4			○
	Slide Gate	4'6"x5'		6	2	1	1	2	2	2	2	1	13		○			
		Stop Log	4	3	3	3	3	3	3	3	3	24	○					
		Sub Total 6 nos. of sluices	Flap Gate	44												14	5	39
			Slide Gate	44													30	
	16	Daunggyi (East)	Phonyo	Flap Gate	φ4'	8	2	2	1	/	/	/	/	5		○		
				Flap Gate	φ4'	8	3	3	3	/	/	/	/	/	9	○		
			Yaekyawtoe	Flap Gate	φ4'	21	3	2	1	/	/	/	/	/	6		○	
				Slide Gate	4'2"x4'2"	21	2	2	3	2	2	2	2	3	18	○		
			Yatphayone	Flap Gate	4'x4'	4	3	3	3	/	/	/	/	/	9	○		
				Slide Gate	Stop Log	4	3	3	3	3	3	3	3	3	24	○		
		Sub Total 3 nos. of sluices	Flap Gate	41											12	29		
			Slide Gate	25												25		
	17	Daunggyi (West)	Ponnayake	Flap Gate	φ4'	7	1	1	1	/	/	/	/	3			○	
				Slide Gate	4'2"x4'2"	7	1	1	1	2	2	2	3	3	15		○	
			Thapyi Kone	Flap Gate	φ4'	4	2	2	1	/	/	/	/	/	5		○	
				Slide Gate	4'6"x4'6"	4	2	2	1	2	1	2	2	3	15		○	
			Mangalgyi	Flap Gate	φ4'	4	2	2	1	/	/	/	/	/	5		○	
				Slide Gate	4'2"x4'2"	4	2	2	2	2	2	2	2	2	16		○	
	Mangallay	Flap Gate	5'x5'	5	2	1	1	/	/	/	/	4			○			
Slide Gate		5'x5'	5	2	1	1	2	2	2	2	3	15		○				
	Sub Total 4 nos. of sluices	Flap Gate	20												8	12		
		Slide Gate	20												20			
18	Daunggyi (Upper)	Kamakalu	Flap Gate	φ4'	5	1	1	1	/	/	/	/	3			○		
			Slide Gate	4'2"x4'2"	5	1	1	2	2	2	2	3	15		○			
			Sub Total 1 nos. of sluices	Flap Gate	5												5	
	Slide Gate	5																

Note: Criteria of judgement is as follows; Flap gate; Replace is more than equal total point 7, Repair is between 6 and 5, and Non-repair is less than equal 4.

Slide gate; Replace is more than equal total point 17, Repair is between 16 and 12, and Non-repair is less than equal 11.

Township	No.	Name of Polder	Name of sluice	Gate		Nos.	Gate leaf			Gate Guide		Gate Hoist			Total Point	Judgement (gate nos.)			
				River side	Size		Corrosion	Damage	Function	Corrosion	Damage	Corrosion	Damage	Function		Replace	Repair	Non-repair	
				Land side															
Phyapon	19	Dawnyein	Sitkalde	Flap Gate	φ4'	8	1	1	1	/	/	/	/	/	3			○	
				Slide Gate	4'2"x4'2"	4	2	1	1	1	1	2	2	2	12		○		
				Stop Log	4	3	3	3	3	3	3	3	3	24	○				
			Sub Total 1 nos. of sluices	Flap Gate		8													
				Slide Gate		8									4	4			
	20	Myokone	Awakwin	Flap Gate	φ4'	6	2	1	1	/	/	/	/	/	4			○	
				Slide Gate	4'2"x4'2"	4	2	1	1	1	1	2	2	1	11			○	
				Stop Log	2	3	3	3	3	3	3	3	3	24	○				
			Myochaung	Flap Gate	φ4'	4	2	1	1	/	/	/	/	/	4			○	
				Slide Gate	4'2"x4'2"	2	2	1	1	1	1	2	2	1	11			○	
				Stop Log	2	3	3	3	3	3	3	3	3	24	○				
			Sub Total 2 nos. of sluices	Flap Gate		10													10
					Slide Gate		10										4		
	21	Kyetphamwezaung	Kazaungma	Flap Gate	5'2"x4'2"	4	2	3	3	/	/	/	/	/	8	○			
				Slide Gate	Stop Log	4	3	3	3	3	3	3	3	3	24	○			
			Yatphalon	Flap Gate	φ4'	8	2	2	1	/	/	/	/	/	5		○		
				Slide Gate	Non	8	3	3	3	3	3	3	3	3	24	○			
			Warchaung	Flap Gate	φ4'	12	2	2	1	/	/	/	/	/	5		○		
				Slide Gate	4'2"x4'2"	6	2	2	1	2	2	2	2	3	16		○		
				Stop Log	6	3	3	3	3	3	3	3	3	24	○				
			Phalat	Flap Gate	φ4'	15	2	1	1	/	/	/	/	/	4			○	
				Slide Gate	4'2"x4'2"	15	2	1	1	2	1	2	1	1	11			○	
			Barlar	Flap Gate	φ4'	7	2	2	1	/	/	/	/	/	5		○		
				Slide Gate	Stop Log	7	3	3	3	3	3	3	3	3	24	○			
			Balayoe	Flap Gate	Non	3	3	3	3	/	/	/	/	/	9	○			
				Slide Gate	Stop Log	3	3	3	3	3	3	3	3	3	24	○			
			Aukabar	Flap Gate	φ4'	8	2	2	3	/	/	/	/	/	7	○			
Slide Gate				Stop Log	8	3	3	3	3	3	3	3	3	24	○				
Sub Total 7 nos. of sluices	Flap Gate		57											15	27	15			
		Slide Gate		57										36	6	15			

Note: Criteria of judgement is as follows; Flap gate; Replace is more than equal total point 7, Repair is between 6 and 5, and Non-repair is less than equal 4.

Slide gate; Replace is more than equal total point 17, Repair is between 16 and 12, and Non-repair is less than equal 11.

Township	No.	Name of Polder	Name of sluice	Gate		Nos.	Gate leaf			Gate Guide		Gate Hoist			Total Point	Judgement (gate nos.)		
				River side	Size		Corrosion	Damage	Function	Corrosion	Damage	Corrosion	Damage	Function		Replace	Repair	Non-repair
				Land side														
Phyapon	22	Banbwezu	Kwinwin	Flap Gate	6'5"x4'6"	4	2	2	1	/	/	/	/	/	5		○	
				Slide Gate	Non	4	3	3	3	/	/	/	/	/	9	○		
			Mahtaw	Flap Gate	φ4'	3	2	2	1	/	/	/	/	/	5		○	
				Non														
			Kyonthu (east)	Flap Gate	6'6"x6'6"	6	2	2	1	/	/	/	/	/	5		○	
				Slide Gate	Non	6	3	3	3	/	/	/	/	/	9	○		
			Theein	Flap Gate	6'5"x6'5"	6	2	2	1	/	/	/	/	/	5		○	
				Slide Gate	Non	6	3	3	3	/	/	/	/	/	9	○		
			Achan	Flap Gate	φ4'	4	2	2	1	/	/	/	/	/	5		○	
				Non														
			Kalabel	Flap Gate	φ4'	2	2	1	1	/	/	/	/	/	4			○
				Non														
			Htalon	Flap Gate	6'6"x6'6"	10	2	2	1	/	/	/	/	/	5		○	
				Slide Gate	Non	10	3	3	3	/	/	/	/	/	9	○		
	Sub Total 7 nos. of sluices	Flap Gate		35													33	2
		Slide Gate		26											26			
	23	Daydalu	Bawdima	Flap Gate	φ4'	7	2	2	1	/	/	/	/	5		○		
				Slide Gate	4'6"x4'6"	5	2	2	1	2	2	2	1	1	13		○	
				Stop Log	2	3	3	3	3	3	3	3	3	3	24	○		
			Sub Total 1 nos. of sluices	Flap Gate		7												
	Slide Gate			7											2		5	
	24	Letpanbin	Htitan	Flap Gate	φ4'	8	2	1	1	/	/	/	/	4			○	
				Slide Gate	4'4"x4'6"	8	1	1	1	2	1	2	1	1	10			○
			Condeigyi	Flap Gate	φ4'	9	2	1	1	/	/	/	/	/	4			○
				Slide Gate	4'2"x4'2"	9	2	1	1	2	1	2	1	1	11			○
			Bandway	Flap Gate	φ4'	2	2	1	1	/	/	/	/	/	4			○
				Slide Gate	Stop Log	2	3	3	3	3	3	3	3	3	24	○		
			Kamaraung	Flap Gate	φ4'	3	2	1	1	/	/	/	/	/	4			○
				Slide Gate	Stop Log	3	3	3	3	3	3	3	3	3	24	○		
			Sub Total 4 nos. of sluices	Flap Gate		22												
Slide Gate					22											5		17
25	Zinbaung	Phayakalay	Flap Gate	φ4'	3	2	2	1	/	/	/	/	5		○			
			Slide Gate	Stop Log	3	3	3	3	3	3	3	3	3	24	○			
		Kophagyi	Flap Gate	φ4'	6	2	2	2	/	/	/	/	/	6		○		
			Slide Gate	5'x4'	6	2	2	2	2	2	2	2	2	16		○		
		Kyweku	Flap Gate	5'4"x5'42"	5	2	2	1	/	/	/	/	/	5		○		
			Slide Gate	5'x4'	5	2	2	1	2	2	2	2	1	14		○		
		Zinpaung	Flap Gate	φ4'	3	2	2	1	/	/	/	/	/	5		○		
			Slide Gate	4'2"x4'2"	3	2	1	1	2	2	2	2	3	15		○		
Sub Total 4 nos. of sluices	Flap Gate		17													17		
	Slide Gate		17											3		14		

Note: Criteria of judgement is as follows; Flap gate; Replace is more than equal total point 7, Repair is between 6 and 5, and Non-repair is less than equal 4.

Slide gate; Replace is more than equal total point 17, Repair is between 16 and 12, and Non-repair is less than equal 11.

Township	No.	Name of Polder	Name of sluice	Gate			Gate leaf			Gate Guide		Gate Hoist			Total Point	Judgement (gate nos.)				
				River side	Size	Nos.	Corrosion	Damage	Function	Corrosion	Damage	Corrosion	Damage	Function		Replace	Repair	Non-repair		
				Land side																
Dadeye	26	Myaseinkan	Non																	
	27	Thandi	Non																	
	28	Suclubbaluma	Non																	
	29	Hleseikchaunggyi	Non																	
	30	Tamatakaw	Non																	
	31	Kyonsoat	Non																	
Kyaiklat	32	Maubin Island (north)	Non																	
	33	Maubin Island (Southh)	Phosan	Flap Gate	4'x4'	1	Under repairing													
				Flap Gate	4'x4'	1	Under repairing													
			Tartpart (west)	Non	4'2"x4'2"	1	Not to be used for Sluice													
				Non	4'2"x4'2"	1	Not to be used for Sluice													
			Latargyi	Flap Gate	4'x4'	1	Under repairing													
				Non	4'x4'	1	Under repairing													
	34	Thonegwakyun	Kyonmange	Non	3'6"x3'6"	2	Not to be used for Sluice ?													
				Non	3'6"x3'6"	2	Not to be used for Sluice ?													
			Kyauktaingsu	Flap Gate	8'x8'	8	2	2	1	/	/	/	/	/	5			○		
				Slide Gate	8'x8'	8	2	2	1	2	2	2	2	2	15			○		
			Mezalgone	Non																
				Flap Gate	4'x4'	2	2	1	1	/	/	/	/	/	4				○	
			Tharyargone	Non	3'6"x3'6"	2	Not to be used for Sluice ?													
				Non	3'6"x3'6"	2	Not to be used for Sluice ?													
			Htanpinpyo Lockgate	Lock Gate	Sector Gate	2	2	1	1	/	/	/	/	/	4				○	
				Lock Gate	Sector Gate	2	2	1	1	/	/	/	/	/	4				○	
			Lintun	Non																
				Flap Gate	4'x4'	2	2	2	1	/	/	/	/	/	5			○		
			Layianpin Lockgate	Lock Gate	Sector Gate	1	2	1	1	/	/	/	/	/	4				○	
				Lock Gate	Sector Gate	1	2	1	1	/	/	/	/	/	4				○	
			Htanpinpyo Sluice	Flap Gate	8'x8'	21	2	2	3	/	/	/	/	/	7	○				
				Slide Gate	8'x8'	21	2	2	1	2	2	2	2	1	14			○		
Sub Total 6 nos. of sluices	Flap Gate		33											21	10	2				
	Slide Gate		29												29					
	Lock Gate		6													6				
Grand Total			86 nos. of sluices	Flap Gate	500									73	293	134				
Grand Total			86 nos. of sluices	Slide Gate	428									193	180	55				
Grand Total (Except Labutta North)			77 nos. of sluices	Flap Gate	452									67	265	120				
Grand Total (Except Labutta North)			77 nos. of sluices	Slide Gate	380									159	180	41				

Note: Criteria of judgement is as follows; Flap gate; Replace is more than equal total point 7, Repair is between 6 and 5, and Non-repair is less than equal 4.

Slide gate; Replace is more than equal total point 17, Repair is between 16 and 12, and Non-repair is less than equal 11.

A6-4 Results of Work Volume for Polder Dike and Sluice Rehabilitation

K&L Portion

Week		Excavation (Sud)			Embankment (Sud)			Dressing slope (ft)		
		Plan (Total)	Actual (Total)	Actual (weekly)	Plan (Total)	Actual (Total)	Actual (weekly)	Plan (Total)	Actual (Total)	Actual (weekly)
0	5-Dec	0			0			0		
1	6-Dec - 12-Dec	1,540			0	0	0	0	0	0
2	13-Dec - 19-Dec	3,080	465	465	1,244	0	0	0	0	0
3	20-Dec - 26-Dec	6,379	9,397	8,932	2,489	495	495	983	0	0
4	27-Dec - 2-Jan	9,678	17,453	8,056	5,647	1,353	858	1,967	0	0
5	3-Jan - 9-Jan	12,978	21,572	4,119	8,805	4,696	3,343	4,085	0	0
6	10-Jan - 16-Jan	16,277	22,830	1,258	11,964	11,179	6,483	6,203	0	0
7	17-Jan - 23-Jan	19,577	24,456	1,626	15,122	18,381	7,202	8,321	0	0
8	24-Jan - 30-Jan	22,876	28,420	3,964	18,281	24,916	6,535	10,438	5,900	5,900
9	31-Jan - 6-Feb	26,176	34,236	5,816	21,439	31,831	6,915	12,556	7,600	1,700
10	7-Feb - 13-Feb	29,475	39,810	5,574	24,598	36,395	4,564	14,674	11,050	3,450
11	14-Feb - 20-Feb	32,775	47,484	7,674	27,756	41,663	5,268	16,792	15,400	4,350
12	21-Feb - 27-Feb	36,074	50,706	3,222	30,915	45,429	3,766	18,910	19,200	3,800
13	28-Feb - 6-Mar	39,374	54,034	3,328	34,073	48,625	3,196	21,028	24,840	5,640
14	7-Mar - 13-Mar	42,673	56,300	2,266	37,232	50,402	1,777	23,146	28,700	3,860
15	14-Mar - 20-Mar	45,973	56,300	0	40,390	51,152	750	25,264	29,300	600
16	21-Mar - 27-Mar	49,272	56,300	0	43,549	51,152	0	27,382	29,500	200
17	28-Mar - 3-Apr	49,272			44,793			29,500		
Total Quantity		49,272	110%	Exca./Bank.	44,793	114%	(Act/Plan)	29,500		

ID (Ayeyarwaddy Division) Portion

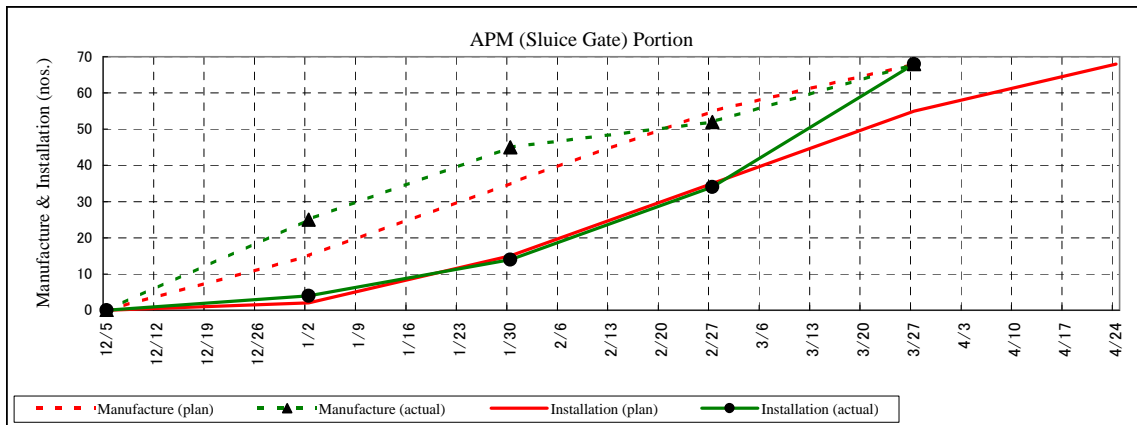
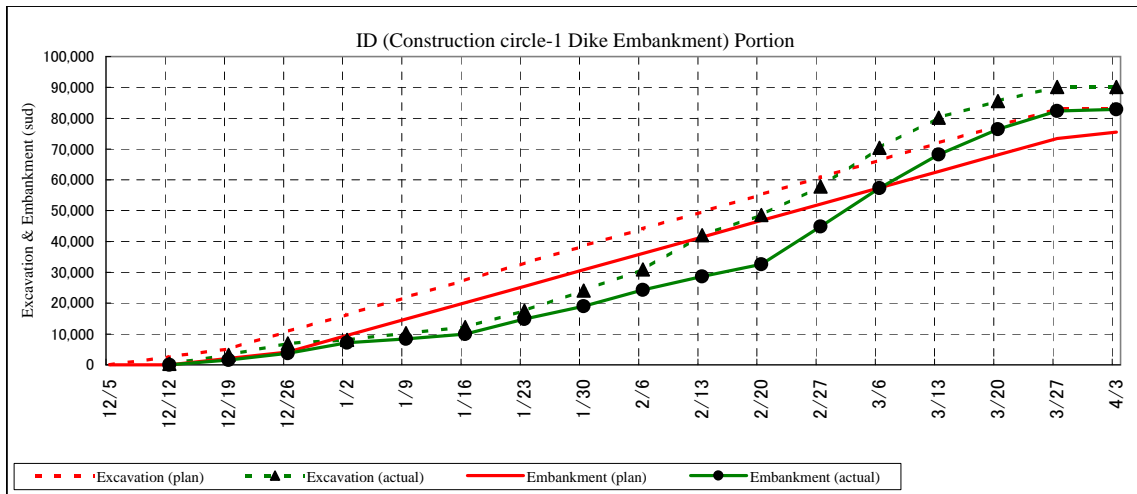
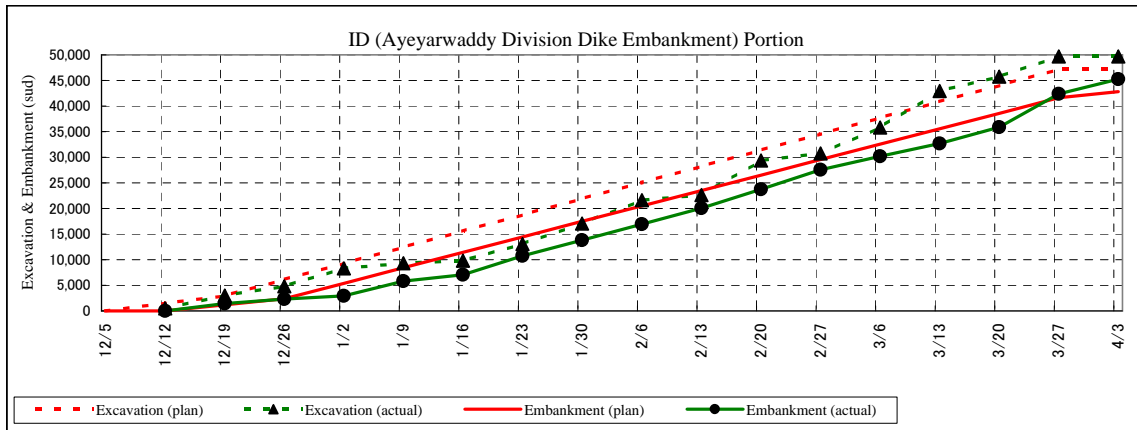
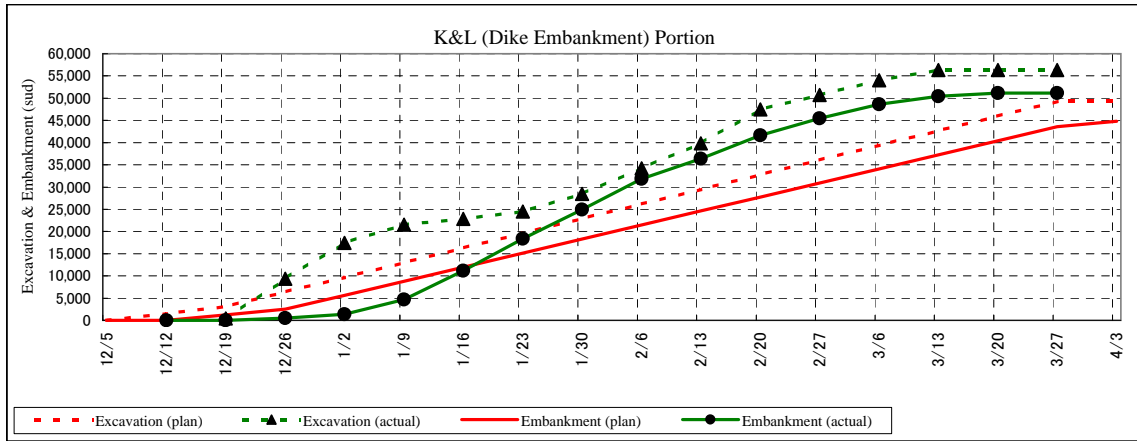
Week		Excavation (Sud)			Embankment (Sud)			Dressing slope (ft)		
		Plan (Total)	Actual (Total)	Actual (weekly)	Plan (Total)	Actual (Total)	Actual (weekly)	Plan (Total)	Actual (Total)	Actual (weekly)
0	5-Dec	0			0			0		
1	6-Dec - 12-Dec	1,475	495	495	0	0	0	0	0	0
2	13-Dec - 19-Dec	2,949	2,982	2,487	1,192	1,434	1,434	0	0	0
3	20-Dec - 26-Dec	6,109	4,799	1,817	2,383	2,295	861	1,090	0	0
4	27-Dec - 2-Jan	9,269	8,308	3,509	5,401	2,965	670	2,180	1,000	1,000
5	3-Jan - 9-Jan	12,430	9,282	974	8,418	5,828	2,863	4,528	1,500	500
6	10-Jan - 16-Jan	15,590	9,836	554	11,435	7,092	1,264	6,875	2,700	1,200
7	17-Jan - 23-Jan	18,750	13,052	3,216	14,453	10,766	3,674	9,223	5,700	3,000
8	24-Jan - 30-Jan	21,910	17,086	4,034	17,470	13,784	3,018	11,571	11,700	6,000
9	31-Jan - 6-Feb	25,070	21,633	4,547	20,487	16,921	3,137	13,918	13,200	1,500
10	7-Feb - 13-Feb	28,230	22,626	993	23,504	20,037	3,116	16,266	18,700	5,500
11	14-Feb - 20-Feb	31,390	29,401	6,775	26,522	23,735	3,698	18,614	18,700	0
12	21-Feb - 27-Feb	34,550	30,747	1,346	29,539	27,584	3,849	20,962	21,700	3,000
13	28-Feb - 6-Mar	37,710	35,831	5,084	32,556	30,178	2,594	23,309	24,700	3,000
14	7-Mar - 13-Mar	40,870	42,908	7,077	35,574	32,696	2,518	25,657	25,200	500
15	14-Mar - 20-Mar	44,030	45,762	2,854	38,591	35,870	3,174	28,005	25,200	0
16	21-Mar - 27-Mar	47,190	49,700	3,938	41,608	42,359	6,489	30,352	30,700	5,500
17	28-Mar - 3-Apr	47,190	49,700	0	42,800	45,221	2,862	32,700	32,700	2,000
Total Quantity		47,190	110%	Exca./Bank.	42,900	105%	(Act/Plan)	32,700		

ID (Construction circle-1) Portion

Week		Excavation (Sud)			Embankment (Sud)			Dressing slope (ft)		
		Plan (Total)	Actual (Total)	Actual (weekly)	Plan (Total)	Actual (Total)	Actual (weekly)	Plan (Total)	Actual (Total)	Actual (weekly)
0	5-Dec	0			0			0		
1	6-Dec - 12-Dec	2,595	301	301	0	0	0	0	0	0
2	13-Dec - 19-Dec	5,190	3,234	2,933	2,097	1,589	1,589	0	0	0
3	20-Dec - 26-Dec	10,751	6,997	3,763	4,194	3,758	2,169	2,143	910	910
4	27-Dec - 2-Jan	16,312	8,143	1,146	9,518	7,211	3,453	4,287	2,570	1,660
5	3-Jan - 9-Jan	21,873	10,284	2,141	14,841	8,402	1,191	8,903	7,070	4,500
6	10-Jan - 16-Jan	27,434	12,283	1,999	20,164	10,011	1,609	13,519	8,570	1,500
7	17-Jan - 23-Jan	32,995	17,539	5,256	25,488	14,863	4,852	18,136	12,570	4,000
8	24-Jan - 30-Jan	38,556	24,104	6,565	30,811	18,961	4,098	22,752	16,570	4,000
9	31-Jan - 6-Feb	44,117	30,985	6,881	36,134	24,337	5,376	27,369	20,570	4,000
10	7-Feb - 13-Feb	49,678	42,006	11,021	41,458	28,674	4,337	31,985	23,570	3,000
11	14-Feb - 20-Feb	55,239	48,628	6,622	46,781	32,648	3,974	36,602	26,570	3,000
12	21-Feb - 27-Feb	60,800	57,834	9,206	52,104	44,842	12,194	41,218	38,570	12,000
13	28-Feb - 6-Mar	66,361	70,429	12,595	57,428	57,358	12,516	45,834	46,570	8,000
14	7-Mar - 13-Mar	71,922	80,213	9,784	62,751	68,244	10,886	50,451	54,570	8,000
15	14-Mar - 20-Mar	77,483	85,560	5,347	68,075	76,409	8,165	55,067	55,670	1,100
16	21-Mar - 27-Mar	83,045	90,100	4,540	73,398	82,297	5,888	59,684	62,920	7,250
17	28-Mar - 3-Apr	83,045	90,100	0	75,495	82,819	522	64,300	64,300	1,380
Total Quantity		83,045	109%	Exca./Bank.	75,495	110%	(Act/Plan)	64,300		

APM (Sluice Gate) Portion

Week		Manufacture (Nos.)			Installation (Nos.)					
		Plan (Total)	Actual (Total)	Actual (weekly)	Plan (Total)	Actual (Total)	Actual (weekly)			
0	5-Dec	0	0		0	0				
4	27-Dec - 2-Jan	15	25		2	4				
8	24-Jan - 30-Jan	35	45		15	14				
12	21-Feb - 27-Feb	55	52		35	34				
16	21-Mar - 27-Mar	68	68		55	68				
20	28-Mar - 24-Apr				68					
Total Quantity		68	68		68	68				



A6-5 Results of Quality Control by Field Density Test

Herein, results for 3 kinds of tests are shown in the following table.

(A) Total Nos. of Field Test

No.	Particular	Nos. of Tests	Remarks
1	Borrow Water Content Test	31	Total quantity of field density test for existing polder & embankment is 549 nos.
2	Existing Polder Field Density Test	75	
3	Embankment Control Field Density Test	474	
	Total Number of Test	580	

(B) Borrow Water Content Test

No.	Particular	Test Results	Remarks
1	Maximum Water Content (%)	51.70	
2	Maximum Water Content (%)	25.00	
3	Maximum Water Content (%)	38.27	

(C) Existing Polder Field Density Test

No.	Particular	Test Results	Remarks
1	Maximum Field Dry Density (g/cc)	1.77	
2	Minimum Field Dry Density (g/cc)	1.29	
3	Mean Field Dry Density	1.51	
4	Maximum Water Content (%)	36.17	
5	Maximum Water Content (%)	11.25	
6	Maximum Water Content (%)	19.81	

(D) Embankment Control Field Density Test

No.	Particular	Test Results	Remarks
1	Maximum Field Dry Density (g/cc)	1.67	Max. Density Ratio =107 %
2	Minimum Field Dry Density (g/cc)	1.39	Max. Density Ratio =89 %
3	Mean Field Dry Density	1.47	Max. Density Ratio =94 %
4	Maximum Water Content (%)	36.95	
5	Maximum Water Content (%)	16.60	
6	Maximum Water Content (%)	27.81	

Note: Standard Compaction Test Results are as follows;

- Maximum Dry Density = 1.557 g/cc (Optimum Moisture Content w=23.42%)
- 90% Max. Dry Density = 1.40 g/cc
- 85% Max. Dry Density = 1.32 g/cc

A6-6 Results of Final Inspection on Polder Dike and Sluice Gates Pilot Project

Condition and function of every facility were confirmed to be adequate as shown in the following table based on final inspection by JICA project team and each party.

March 31st 2011

No.	Check Points (RD)	ACL (ft) checked by leveling survey	ACL (ft) checked by handy measure	Crest Width (ft) by handy measure	Slope Gradient by handy measure	Remarks (Sluice conditions)
1	3,500	11.05>11ft (O.K)	—	12.5>12ft (O.K)	>1:1.5 (O.K)	
2	Danedan Sluice	—	11.22>11ft (O.K)	13.0>12ft (O.K)	>1:1.5 (O.K)	Condition and function are O.K.
3	10,000	11.68>11ft (O.K)	—	17.0>12ft (O.K)	>1:1.5 (O.K)	
4	20,000	11.00=11ft (O.K)	—	13.0>12ft (O.K)	>1:1.5 (O.K)	
5	Latwalkwal Sluice	—	11.75>11ft (O.K)	12.7>12ft (O.K)	>1:1.5 (O.K)	Condition and function are O.K.
6	30,000	11.09>11ft (O.K)	—	14.5>12ft (O.K)	>1:1.5 (O.K)	
7	40,000	11.07>11ft (O.K)	—	12.0=12ft (O.K)	>1:1.5 (O.K)	
8	Mayan(South) Sluice	—	—	—	—	Condition and function are O.K.
9	Mayan(North) Sluice	—	—	—	—	Condition and function are O.K.
10	70,000	11.29>11ft (O.K)	—	12.7>12ft (O.K)	>1:1.5 (O.K)	
11	79,500	11.11>11ft (O.K)	—	12.0=12ft (O.K)	>1:1.5 (O.K)	
12	110,000	11.03>11ft (O.K)	—	13.0>12ft (O.K)	>1:1.5 (O.K)	
13	120,000	11.43>11ft (O.K)	—	12.2>12ft (O.K)	>1:1.5 (O.K)	
14	130,000	11.05>11ft (O.K)	—	12.8>12ft (O.K)	>1:1.5 (O.K)	
15	Hpobe Sluice	—	11.89>11ft (O.K)	13.8>12ft (O.K)	>1:1.5 (O.K)	Condition and function are O.K.
16	140,000	11.93>11ft (O.K)	—	14.0>12ft (O.K)	>1:1.5 (O.K)	
17	150,000	11.20>11ft (O.K)	—	13.3>12ft (O.K)	>1:1.5 (O.K)	
18	Danechaung Sluice	—	—	—	—	Condition and function are O.K.
19	179,000	11.57>11ft (O.K)	—	13.0>12ft (O.K)	>1:1.5 (O.K)	
20	190,000	11.53>11ft (O.K)	—	14.3>12ft (O.K)	>1:1.5 (O.K)	
21	Shansu Sluice	—	11.10>11ft (O.K)	14.3>12ft (O.K)	>1:1.5 (O.K)	
22	199,000	11.79>11ft (O.K)	—	13.3>12ft (O.K)	>1:1.5 (O.K)	

Note: 1. Check points are selected at sluices and 10,000ft interval along dike.

2. ACL by handy measure means to read the value of height on staff from T.B.M on sluice.

3. Measuring crest width and slope gradient are conducted by tape and triangle frame & spirit level.

A6-7 Priority Ranking of Polder Groups in Development Plan

Township	Group No.	Polder No.	Name of polder	Evaluation of Emergency		Evaluation of Disaster Prevention Effects		Overall Evaluation		Priority Ranking	Remarks	
				Each Polder (1)	Each Group (2)	Each Polder (3)	Each Group (4)	Each Polder (1)+(3)	Each Group (2)+(4)			Group Basis
Labutta	1	1	Alegyun (1)	1		3		4			0	
		2	Alegyun (2)	2		2		4			0	
		8	Labutta (South)	2	1.9	2	2.3	4	4.2	4	0	
		-	3	Alegyun (3)	1		3		4		100	
		-	4	Magybinmadaukkan	2		2		4		100	
		-	9	Labutta (North)	2		3		5		86	
		2	5	Thingangyi	3		1		4		68	
			6	Zinywe	2		1		3		100	
			7	Leikkwin	3		1		4		0	
			10	U Gaungpu	3	2.8	1	1.0	4	3.8	8	0
		3	11	Bitud Island (1)	3		1		4		23	
			12	Bitud Island (2)	2	2.5	2	1.7	4	4.2	4	7
		4	13	Bitud Island (3)	3		1		4		54	
	Bogalay		14	Bitud Island (4)	2	2.8	2	1.5	4	4.3	3	100
5		16	Daunggyi (East)	3	3.0	2	2.0	5	5.0	1	36	
		6	Daunggyi	2		3		5			17	
			17	Daunggyi (West)	2		3		5		100	
			18	Daunggyi (Upper)	2	2.0	2	2.9	4	4.9	2	0
Phyapon	7	19	Daw Nyein	2		1		3			100	
		20	Myokone	2		1		3			100	
		22	Banbwezu	2	2.0	1	1.0	3	3.0	10	0	
		8	Kyetphamwezaung	3	3.0	1	1.0	4	4.0	7	6	
		9	Daydalu	3		1		4			100	
			24	Letpanbin	2		1		3		100	
			25	Zinbaung	2	2.3	1	1.0	3	3.3	9	18
Daydaye	-	26	Myaseinkan	2		2		4			72	
	10	27	Thandi	2		2		4			100	
		28	Suclubbaluma	1		3		4			100	
		29	Hleseikchaunggyi	1		2		3			0	
		30	Tamatakaw	1		3		4			100	
		31	Kyonsoat	1		1		2			100	
Kyaiklatt		32	Maubin Island (North)	2		2		4			0	
		33	Maubin Island (South)	1		3		4			0	
		34	Thonegwakyun	2	1.8	1	2.3	3	4.1	6	0	

A6-7-1 Priority Ranking from Viewpoint of Emergency on Each Polder and Group

Township	No.	Name of Polder	Features of Polder			Evaluation on Each Polder		Evaluation on Each Group	
			Average E.C.L (ft)	Designed A.C.L (ft)	Necessary Bank Vol. (sud)	ACL-ECL (ft)	Priority Point	Group No.	Priority Point
Labutta	1	Alegyun (1)	11.8	13.5	41,100	1.7	1	1	1.9
	2	Alegyun (2)	10.8	14.0	128,446	3.2	2	1	
	3	Alegyun (3)	11.4	14.0	0	2.6	-	-	2.8
	4	Magybinmadaukkan	10.5	14.0	0	3.5	-	-	
	5	Thingangyi	3.6	11.5	45,446	7.9	3	2	2.8
	6	Zinywe	5.6	11.5	40,998	5.9	2	2	
	7	Leikkwin	4.8	11.5	45,937	6.7	3	2	2.8
	8	Labutta (South)	5.2	11.0	194,236	5.8	2	1	
	9	Labutta (North)	6.9	11.0	0	4.1	-	-	2.5
	10	U Gaungpu	1.8	12.0	107,572	10.2	3	2	
	11	Bitud Island (1)	5.5	12.0	141,045	6.5	3	3	2.5
	12	Bitud Island (2)	6.3	12.0	172,102	5.7	2	3	
	13	Bitud Island (3)	4.5	12.0	258,145	7.5	3	4	2.8
	14	Bitud Island (4)	6.8	12.0	68,223	5.2	2	4	
Bogalay	15	Daunggyi	8.0	12.0	180,671	4.0	2	6	3.0
	16	Daunggyi (East)	6.4	12.5	326,292	6.1	3	5	
	17	Daunggyi (West)	6.8	12.0	32,961	5.2	2	6	2.0
	18	Daunggyi (Upper)	6.5	12.0	107,073	5.5	2	6	
Phyapon	19	Daw Nyein polder	6.9	12.5	100,513	5.6	2	7	2.0
	20	Myokone polder	6.8	12.5	130,915	5.7	2	7	
	21	Kyetphamwezaung	5.7	12.5	469,368	6.8	3	8	3.0
	22	Banbwezu	7.8	12.0	190,302	4.2	2	7	
	23	Daydalu	5.9	12.5	92,932	6.6	3	9	2.3
	24	Letpanbin	7.9	12.5	138,356	4.6	2	9	
25	Zinbaung	7.8	12.5	115,129	4.7	2	9		
Daydaye	26	Myaseinkan	8.3	13.0	0	4.7	-	-	10
	27	Thandi	8.5	13.0	4,151	4.5	2	10	
	28	Suclubbaluma	10.7	13.0	11,654	2.3	1	10	10
	29	Hleseikchaunggyi	11.0	13.0	21,262	2.0	1	10	
	30	Tamatakaw	12.7	14.0	8,021	1.3	1	10	
31	Kyonsoat	11.3	14.0	4,457	2.7	1	10	1.8	
Kyaiklatt	32	Maubin Island (North)	8.5	13.5	63,000	5.0	2		10
	33	Maubin Island (South)	9.3	12.0	8,525	2.7	1		10
	34	Thonegwakyun	10.3	13.5	132,189	3.2	2	10	

A6-7-2 Implementation Priority by Polder and Group in terms of Disaster Prevention Effects

Township	No.	Name of Polder	Remained Embanment Volume (sud)	Remained Annual Disaster Prevention Value	Annual Value/ Embankment Volume	Points by Polder	Evaluation by Group	
							Group No.	points
Labutta	1	Alegyun (1)	41,100	215,657	5.2	3	1	2.3
	2	Alegyun (2)	128,446	480,367	3.7	2	1	
	3	Alegyun (3)	0	0	-	-	-	
	4	Magybinmadaukkan	0	0	-	-	-	
	5	Thingangyi	45,446	39,547	0.9	1	2	1.0
	6	Zinywe	40,998	36,755	0.9	1	2	
	7	Leikkwin	45,937	42,826	0.9	1	2	
	8	Labutta (South)	194,236	356,839	1.8	2	1	
	9	Labutta (North)	0	0	-	-	-	
	10	U Gaungpu	107,572	41,657	0.4	1	2	1.7
	11	Bitud Island (1)	141,045	191,709	1.4	1	3	
	12	Bitud Island (2)	172,102	396,730	2.3	2	3	
	13	Bitud Island (3)	258,145	288,168	1.1	1	4	
	14	Bitud Island (4)	68,223	268,720	3.9	2	4	1.5
Bogalay	15	Daunggyi	180,671	1,366,141	7.6	3	6	2.0
	16	Daunggyi (East)	326,292	1,305,935	4.0	2	5	
	17	Daunggyi (West)	32,961	162,976	4.9	3	6	2.9
	18	Daunggyi (Upper)	107,073	215,145	2.0	2	6	
Phyapon	19	Daw Nyein	100,513	43,424	0.4	1	7	1.0
	20	Myokone	130,915	56,150	0.4	1	7	
	21	Kyetphamwezaung	469,368	534,227	1.1	1	8	1.0
	22	Banbwezu	190,302	143,398	0.8	1	7	1.0
	23	Daydalu	92,932	38,244	0.4	1	9	
	24	Lepanbin	138,356	98,769	0.7	1	9	
25	Zinbaung	115,129	104,410	0.9	1	9		
Daydaye	26	Myaseinkan	0	0	-	-	-	2.3
	27	Thandi	4,151	14,483	3.5	2	10	
	28	Suclubbaluma	11,654	111,899	9.6	3	10	
	29	Hleseikchaunggyi	21,262	57,966	2.7	2	10	
	30	Tamatakaw	8,021	203,800	25.4	3	10	
	31	Kyonsoat	4,457	2,795	0.6	1	10	
Kyaiklatt	32	Maubin Island (North)	63,000	210,497	3.3	2	10	2.3
	33	Maubin Island (South)	8,525	75,780	8.9	3	10	
	34	Thonegwakyun	132,189	141,030	1.1	1	10	

APPENDIX 7
FARM MANAGEMENT

APPENDIX 7

Farm Management

	<u>Page</u>
A7-1 Price of Paddy and Rice in Pathein Market.....	A7-1
A7-2 Location Map of On-site Seed Production Pilot Project.....	A7-2
A7-3 Result of MAS Seed Quality Check of the On-site Seed Production Pilot Project.....	A7-3
A7-4 Result of Simple Seed Quality Check of Farmers in Labutta North Polder.....	A7-4
A7-5 Estimated Production Cost and Profit of Grain and Seed Production.....	A7-5
A7-6 Volume of Development Program on Farming.....	A7-7

A7-1 Price of Paddy and Rice in Pathein Market

Month-Year	Kyat / 100 Basket Paddy	Kyat / 100 Basket Paddy	Kyat / 100 Basket Paddy	Kyat / 100 Basket Paddy	Kyat / 1.5 Basket Rice	Kyat / 1.5 Basket Rice	Kyat / 1.5 Basket Rice	Kyat / 1.5 Basket Rice
	1st Grade	1st Grade	1st Grade	2nd Grade	1st Grade	1st Grade	1st Grade	2nd / Medium Grade
	Ayeyawady Paw San	Phyappon Paw San	Paw San Yin	Manawthukha	Ayeyawady Paw San	Phyappon Paw San	Paw San Yin	Manawthukha
Jan-05	208,750	262,500	201,875	145,625	7,800		6,913	4,875
Feb-05	221,250	176,250		148,125	7,525			5,088
Mar-05	279,333	207,500		162,000	8,875			5,670
Apr-05	303,889	233,333	296,667	183,889	9,667		9,500	6,317
May-05	300,000	245,000	283,750	190,834	9,788		9,617	6,538
Jun-05	299,333	269,000	288,000	208,333	9,780		9,467	6,970
Jul-05	302,500	257,500	298,750	222,500	9,838		9,750	7,288
Aug-05	298,667	268,894	280,667	220,700	10,140		10,350	7,070
Sep-05	293,750	270,000	274,375	218,667	10,100		9,600	7,300
Oct-05	352,500	292,500	326,667	237,500	11,663		11,700	7,283
Nov-05	392,000	306,000	272,500	197,000	13,850		9,375	7,440
Dec-05		235,000	254,500	193,750	9,225		8,875	6,538
Jan-06	333,333	255,000	307,500	197,500	10,317	9,733	9,966	6,825
Feb-06	358,760	305,000	347,500	215,000	11,763	11,375	11,675	7,263
Mar-06	385,000	342,500	362,500	242,500	13,250	12,250	12,875	8,388
Apr-06	430,000	350,000	410,000	267,500	15,250	13,250	15,250	9,420
May-06	474,000	370,000	448,000	310,000	16,100	15,600	16,300	10,000
Jun-06	500,000	407,500	495,000	322,500	16,438	16,500	16,313	10,688
Jul-06	594,000	488,000	587,500	374,200	19,250	17,780	19,300	12,000
Aug-06	639,250	515,000	630,000	345,000	21,375	18,350	20,500	10,500
Sep-06	508,750	433,000	510,000	305,000	21,438	18,500	20,688	12,013
Oct-06	533,333	484,400	512,500	320,000	22,438	20,600	21,350	12,850
Nov-06		410,000	410,000	280,000		16,250	17,375	10,950
Dec-06	480,000	410,000	437,500	322,500	19,250	15,000	17,813	11,713
Jan-07	519,000	477,000	517,000	337,000	21,450	19,200	21,350	12,830
Feb-07	532,500	500,000	532,500	386,500	22,500	21,000	22,813	14,613
Mar-07	546,250	500,000	546,250	380,000	23,000	21,000	23,000	14,213
Apr-07	573,333	500,000	566,250	421,250	23,375	21,000	23,375	14,750
May-07	626,000	534,000	619,000	453,000	24,400	22,300	24,400	15,660
Jun-07	605,000	600,000	600,000	475,000	24,400	24,500	24,888	16,625
Jul-07	644,000	600,000	640,000	473,000	25,060	24,500	25,060	16,880
Aug-07	620,000	600,000	615,000	447,500	25,100	24,250	24,975	17,050
Sep-07	600,000	600,000	600,000	415,000	24,290	24,000	24,415	16,625
Oct-07	558,000	590,000	558,000	382,000	22,600	23,000	22,350	15,730
Nov-07	502,500	580,000	502,500	350,000	19,750	20,500	19,750	13,000
Dec-07	487,500	474,000	475,200	360,000	18,938	20,600	18,100	13,080
Jan-08					19,938	20,000	19,875	12,600
Feb-08					20,699	20,000	20,688	13,013
Mar-08					21,450	20,000	21,350	13,420
Apr-08					23,083	20,000	23,083	13,420
May-08					29,313	20,000	29,063	16,063
Jun-08					30,600		30,600	16,300
Jul-08					31,000		31,000	15,475
Aug-08					33,000	30,000	33,000	13,475
Sep-08					33,200	31,200	33,200	13,520
Oct-08					33,000	30,500	33,000	12,938
Nov-08						30,000	30,500	12,750
Dec-08						24,000	18,200	10,150
Jan-09	394,285	445,000	392,094	238,050	17,125	17,500	17,438	9,663
Feb-09	398,667	460,000	389,903	232,300	17,688	18,000	17,688	9,513
Mar-09	417,067	458,000	408,304	253,920	19,250	19,800	19,100	10,730
Apr-09	490,667	480,000	473,143	299,000	20,750	21,750	20,750	11,450
May-09	541,044	495,000	536,663	324,300	24,063	22,750	24,125	12,313
Jun-09	566,475	580,000	566,875	351,360	25,500	24,800	25,450	12,750
Jul-09	558,572	640,000	525,714	381,800	23,250	26,500	23,313	12,888
Aug-09	536,338	650,000	525,714	380,880	23,000	27,000	23,000	12,900
Sep-09	525,714	650,000	525,714	286,400	22,500	25,750	22,500	13,250
Oct-09	525,714	600,000	525,714	393,300	22,000	24,250	22,000	14,688
Nov-09		606,000	414,438	363,400		25,000	17,350	13,880
Dec-09	455,619	441,731	424,952	362,250	19,250	16,250	17,750	13,463
Jan-10	456,405	490,000	443,262	376,900			16,750	
Feb-10	475,333	505,000	457,808	384,100			20,938	15,188
Mar-10	532,724	539,128	516,953	390,080			23,300	15,188
Apr-10	591,429	547,019	569,524	397,800			24,625	15,250
May-10	606,666	550,000	569,524	408,480			25,100	15,250
Jun-10	613,333	575,000	595,800	437,000			25,250	16,000
Jul-10	613,333	575,000	608,952	443,900	25,750	25,500	25,500	16,563
Aug-10	640,677	618,000	622,667	458,160	26,000	25,700	26,000	17,300
Sep-10	657,500	660,000	627,500	452,500	26,563	26,500	26,563	16,375
Oct-10		630,000	670,000	450,000	27,625	26,875	27,625	16,250
Nov-10		470,949	647,490	400,960	32,050	28,100	30,117	15,480
Dec-10	552,000	565,000	541,025	379,500	30,500	20,000	21,750	13,713
Jan-11	559,010	565,000	550,248	358,800	23,750	21,000	23,600	13,620
Feb-11	639,190	565,000	627,381	380,400				

Data Source : Market Information Service Project, Department of Planning, MOAI

A7-3 Result of MAS Seed Quality Check of the On-site Seed Production Pilot Project

Farmer No.	Standard for Certified Seed		97%			Min 80%	Max 13%	Max 10 seeds	Max 5 seeds	Remark
	Variety	Date of receipt	Purity(%)							
			Purity	Other Seed	Impurities					
1	Paw San Yin	7.12.2011	97.39	2.49	0.12	92	13.4	0	40	Not Certified
2	Paw San Yin	7.12.2013	99.75	0.13	0.12	98	12.2	0	0	Certified
4	Manawthukha	22.11.2012	99.65	0.35	very few	94	14.2	0	0	Certified after Re-dry
5	Paw San Yin	7.12.2010	99.07	0.93	very few	80	10.6	0	0	Certified
6	Paw San Yin	22.12.2010	98.89	0.87	0.24	91	12.2	1	0	Certified
7	Manawthukha	22.11.2011	98.95	0.65	0.40	91	13.6	0	0	Certified after Re-dry
9	Manawthukha	19.11.2010	99.27	0.73	very few	90	12.5	0	0	Certified
10	Manawthukha	7.12.2012	97.59	1.70	0.71	86	12.8	0	5	Certified
11	Manawthukha	21.1.2011	97.46	1.70	0.84	97	14.2	0	30	Not Certified
12	Paw San Yin	7.12.2012	99.05	0.54	0.41	92	12.9	0	0	Certified
13	Manawthukha	19.11.2010	99.38	0.37	0.25	97	12.4	0	0	Certified
14	Paw San Yin	21.1.2011	96.05	3.00	0.95	88	13.4	0	30	Not Certified
15	Paw San Yin	22.12.2010	98.89	0.69	0.42	89	13.3	0	0	Certified
16	Paw San Yin	22.12.2010	98.91	1.09	few	95	13.5	0	0	Certified
17	Manawthukha	19.11.2010	98.05	1.70	0.25	82	13.4	0	0	Certified after Re-dry
18	Paw San Yin	21.1.2011	97.73	2.27	very few	97	12.1	0	12.5	Not Certified
19	Paw San Yin	21.1.2011	97.53	2.47	very few	96	14.8	0	0	Certified after Re-dry
20	Ma Naw Thu Kha	7.2.2011	98.72	1.03	0.25	97	12.8	0	0	Certified
21	Manawthukha	22.11.2013	98.85	0.90	0.25	91	12.1	1	0	Certified
22	Manawthukha	22.11.2010	97.07	1.91	1.02	93	12	1	0	Certified
23	Sinthwelatt	19.11.2010	98.70	1.00	0.30	99	14.9	0	0	Certified after Re-dry
25	Manawthukha	19.11.2010	98.75	0.90	0.35	100	14.4	0	0	Certified after Re-dry
26	Manawthukha	22.11.2010	99.73	0.27	very few	97	14.7	0	5	Certified after Re-dry
27	Sinthwelatt	19.11.2010	99.60	0.40	very few	95	10.4	0	0	Certified
28	Paw San Yin	7.12.2011	97.41	2.59	very few	92	10.9	0	0	Certified
29	Paw San Yin	2.12.2010	97.68	2.32	0.00	84	11.6	0	0	Certified

Data Source : On Site Seed Production Pilot Project, JICA Project Team

Remark : Value with line (10) is the value lower than MAS Quality Standard

A7-4 Result of Simple Seed Quality Check of Farmers in Labutta North Polder

No	Village Tract	Variety	Physical							Germination (%)	Estimated Effective Seed								
			Nos in 300 Seeds																
			Other Variety Seed		Unfilled grain		Red seed		Total			Effective Seed							
			Max 9 seeds		Max 15 seeds		Max 3 seeds		%			%	Minimum 80%						
a)		b=a)/300		c)		d=c)/300		e)		f=e)/300		g)		h=g)/300		i)		j)=h)*i)	
Rough Evaluation Criteria *1			Max 9 seeds		Max 15 seeds		Max 3 seeds		%	%	Minimum 80%								
1	Laputtalote North	MNTK	7	2.3%	46	5.3%	7	2.3%	10.0%	90.0%	77%	69.3%							
2	Laputtalote North	TKT	3	1.0%	47	5.7%	2	0.7%	7.3%	92.7%	78%	72.3%							
3	Laputtalote North	MNTK	3	1.0%	30	10.0%	9	3.0%	14.0%	86.0%	92%	79.1%							
4	Laputtalote North	MNTK	10	3.3%	50	16.7%	20	6.7%	26.7%	73.3%	76%	55.7%							
5	Laputtalote North	MNTK	6	2.0%	15	5.0%	15	5.0%	12.0%	88.0%	83%	73.0%							
6	Laputtalote North	MNTK	4	1.3%	12	4.0%	3	1.0%	6.3%	93.7%	85%	79.6%							
7	Laputtalote North	MNTK	7	2.3%	33	11.0%	5	1.7%	15.0%	85.0%	80%	68.0%							
8	Laputtalote North	MNTK	3	1.0%	6	2.0%	9	3.0%	6.0%	94.0%	89%	83.7%							
9	Laputtalote North	MNTK	19	6.3%	43	14.3%	2	0.7%	21.3%	78.7%	79%	62.1%							
10	Laputtalote North	MNTK	2	0.7%	11	3.7%	5	1.7%	6.0%	94.0%	97%	91.2%							
11	Laputtalote North	MNTK	2	0.7%	7	2.3%	13	4.3%	7.3%	92.7%	80%	74.1%							
12	Nyaung Lein	MNTK	1	0.3%	46	5.3%	8	2.7%	8.3%	91.7%	94%	86.2%							
13	Nyaung Lein	MNTK	3	1.0%	46	5.4%	5	1.7%	8.0%	92.0%	80%	73.6%							
14	Nyaung Lein	MD	6	2.0%	21	7.0%	6	2.0%	11.0%	89.0%	90%	80.1%							
15	Nyaung Lein	PSY	10	3.3%	50	16.7%	20	6.7%	26.7%	73.3%	76%	55.7%							
16	Nyaung Lein	MNTK	2	0.5%	9	3.0%	5	1.7%	5.2%	94.8%	87%	82.4%							
17	Nyaung Lein	MNTK	6	2.0%	13	4.3%	6	2.1%	8.4%	91.6%	85%	77.9%							
18	Nyaung Lein	PSY	9	3.0%	48	6.0%	3	1.0%	10.0%	90.0%	90%	81.0%							
19	Nyaung Lein	PSY	12	4.1%	45	15.1%	12	4.0%	23.2%	76.8%	76%	58.4%							
20	Nyaung Lein	MD	6	2.0%	9	3.0%	6	2.0%	7.0%	93.0%	91%	84.6%							
21	Nyaung Lein	MNTK	9	3.1%	40	13.2%	15	5.0%	21.3%	78.7%	72%	56.7%							
22	Laputtalote South	TKT	19	6.3%	10	3.3%	9	3.0%	12.7%	87.3%	85%	74.2%							
23	Laputtalote South	TKT	5	1.7%	11	3.7%	5	1.7%	7.0%	93.0%	91%	84.6%							
24	Laputtalote South	PSY	3	1.0%	6	2.1%	4	1.2%	4.3%	95.7%	92%	88.0%							
25	Laputtalote South	MD	16	5.4%	9	3.0%	6	2.1%	10.5%	89.5%	80%	71.6%							
26	Laputtalote South	MNTK	6	2.0%	9	2.9%	6	2.1%	7.0%	93.0%	87%	80.9%							
27	Laputtalote South	TKT	4	1.2%	10	3.2%	12	4.0%	8.4%	91.6%	83%	76.0%							
28	Laputtalote South	PSY	13	4.2%	11	3.5%	15	5.0%	12.7%	87.3%	78%	68.1%							
29	Laputtalote South	TKT	10	3.2%	8	2.5%	9	3.0%	8.7%	91.3%	82%	74.9%							
30	Laputtalote South	MNTK	6	2.0%	9	3.0%	4	1.5%	6.5%	93.6%	85%	79.5%							
31	Laputtalote South	PSY	4	1.3%	8	2.7%	10	3.2%	7.3%	92.7%	89%	82.5%							
32	Laputtalote South	PSY	4	1.2%	9	3.1%	13	4.3%	8.6%	91.4%	75%	68.5%							
33	Laputtalote South	MD	10	3.2%	10	3.4%	6	2.1%	8.8%	91.3%	85%	77.6%							
34	Laputtalote South	MNTK	7	2.2%	14	4.7%	13	4.2%	11.1%	88.9%	82%	72.9%							
35	Laputtalote South	PSY	6	2.1%	9	3.1%	8	2.6%	7.8%	92.2%	91%	83.9%							
36	Laputtalote South	TKT	6	2.0%	3	1.0%	12	4.0%	7.0%	93.0%	86%	80.0%							
37	Kyauk Hmaw	PSY	3	1.0%	52	17.3%	15	5.0%	23.3%	76.7%	64%	49.1%							
38	Kyauk Hmaw	MNTK	3	1.0%	39	13.0%	5	1.7%	15.7%	84.3%	94%	79.3%							
39	Kyauk Hmaw	MNTK	1	0.3%	36	12.0%	3	1.0%	13.3%	86.7%	89%	77.1%							
40	Kyauk Hmaw	NS	2	0.7%	12	4.0%	2	0.7%	5.3%	94.7%	96%	90.9%							
41	Kyauk Hmaw	PSY	9	3.0%	24	8.1%	22	7.3%	18.5%	81.6%	75%	61.2%							
42	Kyauk Hmaw	MNTK	11	3.5%	49	6.4%	12	3.9%	13.9%	86.1%	71%	61.2%							
43	Kyauk Hmaw	NS	10	3.2%	9	2.9%	19	6.3%	12.4%	87.6%	81%	71.0%							
44	Kyauk Hmaw	PSY	10	3.2%	6	2.1%	16	5.4%	10.7%	89.3%	80%	71.4%							
45	Kyauk Hmaw	MNTK	7	2.3%	10	3.2%	7	2.2%	7.8%	92.2%	87%	80.2%							
46	Laputta	MNTK	6	2.0%	2	0.7%	2	0.7%	3.3%	96.7%	90%	87.0%							
47	Laputta	MNTK	6	2.0%	4	1.3%	6	2.1%	5.4%	94.6%	87%	82.3%							
48	Laputta	MNTK	9	3.0%	10	3.2%	14	4.7%	10.9%	89.1%	82%	73.1%							
49	Laputta	MNTK	4	1.2%	8	2.7%	7	2.3%	6.2%	93.8%	92%	86.3%							
50	Laputta	MNTK	7	2.4%	10	3.2%	10	3.2%	8.8%	91.2%	85%	77.5%							

Data Source : Result of Seed Quality Survey, On Site Seed Production Pilot Project, JICA Project Team

Remark : Value with line (40) is the value lower than evaluation criteria shown in table below.

*1 : Rough Evaluation Criteria is calculated as shown table below

	MAS Quality Standard for Certified Seed	Rough Evaluation Criteria
Germination Rate	80%	80%
Purity	97%	300 seeds - (300 seeds * 97%) = 9 seeds
Red Seed Contents	Max 5 seeds in 500 seeds	5 seeds *(300 seeds / 500seeds) = 3 seeds
Unfilled Grain	-	300 seeds * 5% = 15

A7-5 Estimated Production Cost and Profit of Grain and Seed Production (1/2)

Local Variety

Items	Unit Cost *2	Financial Price			
		Conventional Method (Normal Grain)		Seed Production	
		Quantity *2	Total	Quantity *3	Total
Production Cost					
Material Cost					
Seed	6,000 /Basket	2.0	12,000	0.0	0
Registered Seed	8,000 /Basket	0.0	0	1.5	12,000
Fertilizer (Urea:N46%)	22,000 /Bag (50kg)	0.5	11,000	1.0	22,000
Fertilizer (T-Super:P46%)	22,000 /Bag (50kg)	0.5	11,000	1.0	22,000
Fertilizer (Potash :K50%)	32,000 /Bag (50kg)	0.0	0	0.5	16,000
Agricultural Chemical etc.	3,000 /Season	1.0	3,000	1.0	3,000
Sub-Total			37,000		75,000
Labor / Animal Cost					
Plow / Harrow (Labor and Animal Power)	5,000 /man-day	7.0	35,000	7.0	35,000
Broadcasting	1,000 /man-day	1.0	1,000	0.0	0
Nursery Preparation	2,000 /man-day	0.0	0	3.0	6,000
Seedling Preparation	3,500 /man-day	0.0	0	1.0	3,500
Transplanting	30,000 /Acre	0.0	0	1.0	30,000
Weeding	1,500 /man-day	0.0	0	3.0	4,500
Rouging	1,500 /man-day	0.0	0	6.0	9,000
Harvesting	12,000 /Acre	1.0	12,000	1.0	12,000
Threshing / Dry	3,000 /man-day	5.0	15,000	7.0	21,000
Transportation	4,000 /Time	1.0	4,000	1.0	4,000
Sub-Total			67,000		125,000
Seed Quality Test					
Seed Quality Test	10,000 /Time	0.0	0	1.0	10,000
Sub-Total		0.0	0		10,000
Total		0.0	104,000		210,000
Contingency (5% of Total)		0.0	5,200		10,500
Grand Total		0.0	109,200		220,500
Gross Income					
Cropping Yield (Baskets / Acre)			42		53
Price (Kyat / Basket)			5,956		8,000
Gross Income (Kyat)			250,152		424,000
Net Income					
Net Income (Kyat)			140,952		203,500
Income (Incremental)					
Income (Incremental / Kyat)					62,548

*1 Conventional Method : Result of Harvesting Survey in Labutta North Polder, On-Site Seed Production Pilot Project, The Project, 2010
Seed Production : Result of On-Site Seed Production Project (Variety : Pawsanyin), The Project, 2011

*2 Estimated based on Farmer Interview and Monitoring, On-Site Seed Production Pilot Project, The Project, 2010

*3 Estimated based on Farmer Interview and Monitoring, On-Site Seed Production Pilot Project, The Project, 2010

*4 Seed : Mahwby Rice Research Center (Variety : Pawsanyin)

Grain Paddy : Average March 2010-February 2011 in Pathein Market (Variety : Pawsanyin)

A7-5 Estimated Production Cost and Profit of Grain and Seed Production (1/2)

HighYieldingVariety

Items	Unit Cost *2	Finacial Price			
		Conventional Method (Nomal Grain)		Seed Production	
		Quantity *2	Total	Quantity *3	Total
Production Cost					
Material Cost					
Seed	4,000 /Basket	2.0	8,000	0.0	0
Registered Seed	6,000 /Basket	0.0	0	1.5	9,000
Fertilizer (Urea:N46%)	22,000 /Bag (50kg)	0.5	11,000	1.5	33,000
Fertilizer (T-Super:P46%)	22,000 /Bag (50kg)	0.5	11,000	1.0	22,000
Fertilizer (Potash : K50%)	32,000 /Bag (50kg)	0.0	0	0.5	16,000
Agricultural Chemical etc.	3,000 /Season	1.0	3,000	1.0	3,000
Sub-Total			33,000		83,000
Labor / Animal Cost					
Plow / Harrow (Labor and Animal Power)	5,000 /man-day	7.0	35,000	7.0	35,000
Broadcasting	1,000 /man-day	1.0	1,000	0.0	0
Nursery Preparation	2,000 /man-day	0.0	0	3.0	6,000
Seedling Preparation	3,500 /man-day	0.0	0	1.0	3,500
Transplanting	30,000 /Acre	0.0	0	1.0	30,000
Weeding	1,500 /man-day	0.0	0	3.0	4,500
Rouging	1,500 /man-day	0.0	0	6.0	9,000
Harvesting	12,000 /Acre	1.0	12,000	1.0	12,000
Threshing / Dry	3,000 /man-day	5.0	15,000	7.0	21,000
Transportation	4,000 /Time	1.0	4,000	1.0	4,000
Sub-Total			67,000		125,000
Seed Quality Test					
Seed Quliaty Test	10,000 /Time	0.0	0	1.0	10,000
Sub-Total			0		10,000
Total			100,000		218,000
Contingency (5% of Total)			5,000		10,900
Grand Total			105,000		228,900
Gross Income					
Cropping Yield (Baskets / Acre)			54		74
Price (Kyat / Basket)			4,131		6,000
Gross Income (Kyat)			223,074		444,000
Net Income					
Net Income (Kyat)			118,074		215,100
Income (Incremental)					
Income (Incremental / Kyat)					97,026

*1 Conventional Method : Result of Harvesting Survey in Labutta North Polder, On-Site Seed Production Pilot Project, The Project, 2010

Seed Production : Result of On-Site Seed Production Project (Variety : Manawthukha), The Project, 2011

*2 Estimated based on Farmer Interview and Monitoring, On-Site Seed Production Pilot Project, The Project, 2010

*3 Estimated based on Farmer Interview and Monitoring, On-Site Seed Production Pilot Project, The Project, 2010

*4 Seed : Mahwby Rice Research Center (Variety : Manawthukha)

Grain Paddy : Average March 2010-February 2011 in Pathein Market (Variety : Manawthukha)

A7-6 Volume of Development Program on Farming (1/2)

(Target Area of High Quality Seed Production)

Polder	Program Implementation Starting Year by Polder	Estimated Paddy Cropping Area in Polders (Monsoon Season)				High Quality Seed Dissemination Target Area				Area for High Quality Seed Production										
		Polder Area (Protected Area)		Paddy Cropping Area		Target Extension Area		Local Variety		Improved Variety		Local Variety				Improved Variety				
		Km2	Ha	Acres	d)	Acres	e)	%	f)=d)*100%	g)=f)*56%	Acres #1	Baskets	Coefficient #2	k)=j)/i)	Area #3	Baskets	Coefficient #2	l)=m)/n)	Area #3	Baskets
1	Alegun (1)	17	1,670	4,123	1,753.2	100%	100%	1,753.2	982	771	4	1,473	4	368	6.9	1,473	4	289	3.9	
2	Alegun (2)	36	3,608	8,909	4,036.8	100%	100%	4,036.8	2,261	1,776	4	3,391	4	848	16.0	2,664	4	666	9.0	
3	Alegun (3)	36	3,646	9,002	5,196.0	100%	100%	5,196.0	2,910	2,286	4	4,365	4	1,091	20.6	3,429	4	857	11.6	
4	Magyibimadaukkan	5	548	1,353	337.9	100%	100%	337.9	189	149	284	4	71	1.3	223	4	56	0.8		
5	Thingangyi	7	699	1,726	779.4	100%	100%	779.4	436	343	655	4	164	3.1	514	4	129	1.7		
6	Zinywe	6	616	1,521	29.2	100%	100%	29.2	16	13	25	4	6	0.1	19	4	5	0.1		
7	Leikwin	4	381	941	11.4	100%	100%	11.4	6	6	5	10	2	0.0	8	4	2	0.0		
8	Labutta (South)	29	2,866	7,077	2,453.2	100%	100%	2,453.2	1,374	1,079	2,061	4	515	9.7	1,619	4	405	5.5		
9	Labutta (North)	78	7,833	19,341	9,826.7	100%	100%	9,826.7	5,503	4,324	8,254	4	2,064	38.9	6,486	4	1,621	21.9		
10	U Gaungpu	4	366	904	106.6	100%	100%	106.6	60	47	90	4	22	0.4	70	4	18	0.2		
11	Bitud Island (1)	19	1,904	4,701	662.4	100%	100%	662.4	371	291	556	4	139	2.6	437	4	109	1.5		
12	Bitud Island (2)	28	2,784	6,874	4,572.5	100%	100%	4,572.5	2,561	2,012	3,841	4	960	18.1	3,018	4	754	10.2		
13	Bitud Island (3)	32	3,215	7,938	3,881.3	100%	100%	3,881.3	2,174	1,708	3,260	4	815	15.4	2,562	4	640	8.7		
14	Bitud Island (4)	76	7,640	18,864	10,179.5	100%	100%	10,179.5	5,701	4,479	8,551	4	2,138	40.3	6,719	4	1,680	22.7		
15	Dauingyi Island	99	9,890	24,420	12,997.7	100%	100%	12,997.7	7,279	5,719	10,918	4	2,730	51.5	8,579	4	2,145	29.0		
16	Dauingyi (East)	89	8,930	22,049	18,809.7	100%	100%	18,809.7	10,533	8,276	15,800	4	3,950	74.5	12,414	4	3,104	41.9		
17	Dauingyi (West)	69	6,940	17,136	15,145.4	100%	100%	15,145.4	8,481	6,664	12,722	4	3,181	60.0	9,996	4	2,499	33.8		
18	Dauingyi (Upper)	14	1,380	3,407	2,859.2	100%	100%	2,859.2	1,601	1,258	2,402	4	600	11.3	1,887	4	472	6.4		
19	Daw Nvein	12	1,200	2,963	990.2	100%	100%	990.2	555	436	832	4	208	3.9	654	4	163	2.2		
20	Myokone	23	2,280	5,630	3,082.3	100%	100%	3,082.3	1,726	1,356	2,589	4	647	12.2	2,034	4	509	6.9		
21	Kyethphamwezaung	126	12,570	31,037	26,028.7	100%	100%	26,028.7	14,576	11,453	21,864	4	5,466	103.1	17,179	4	4,295	58.0		
22	Banbwezu	53	5,330	13,160	9,898.5	100%	100%	9,898.5	5,543	4,355	8,315	4	2,079	39.2	6,533	4	1,633	22.1		
23	Daydalu	17	1,720	4,247	2,165.5	100%	100%	2,165.5	1,213	953	1,819	4	455	8.6	1,429	4	357	4.8		
24	Leipabin	35	3,458	8,538	6,671.3	100%	100%	6,671.3	3,736	2,935	5,604	4	1,401	26.4	4,403	4	1,101	14.9		
25	Zinbaung	27	2,670	6,593	5,437.7	100%	100%	5,437.7	3,045	2,393	4,568	4	1,142	21.5	3,589	4	897	12.1		
26	Myaseinkan	55	5,469	13,504	9,532.1	100%	100%	9,532.1	5,338	4,194	8,007	4	2,002	37.8	6,291	4	1,573	21.3		
27	Thandi	14	1,388	3,427	2,617.1	100%	100%	2,617.1	1,466	1,152	2,198	4	550	10.4	1,727	4	432	5.8		
28	Suclubbaluma	29	2,949	7,281	5,879.8	100%	100%	5,879.8	3,293	2,587	4,939	4	1,235	23.3	3,881	4	970	13.1		
29	Hleseikhaungyi	9	909	2,244	1,742.8	100%	100%	1,742.8	976	767	1,464	4	366	6.9	1,150	4	288	3.9		
30	Tamatakaw	53	5,345	13,198	10,084.8	100%	100%	10,084.8	5,647	4,437	8,471	4	2,118	40.0	6,656	4	1,664	22.5		
31	Kyonsat	2	240	593	403.4	100%	100%	403.4	226	178	339	4	85	1.6	266	4	67	0.9		
32	Maubin Island (North)	110	11,000	27,160	22,681.5	100%	100%	22,681.5	12,702	9,980	19,052	4	4,763	89.9	14,970	4	3,742	50.6		
33	Maubin Island (South)	46	4,610	11,383	10,575.9	100%	100%	10,575.9	5,923	4,653	8,884	4	2,221	41.9	6,980	4	1,745	23.6		
34	Thonegwaikyun	81	8,120	20,049	15,765.1	100%	100%	15,765.1	8,828	6,937	13,243	4	3,311	62.5	10,405	4	2,601	35.2		
Total		1,342	134,174	331,294	227,194.6			227,194.6	127,229	99,966	190,843		47,711	900.2	149,948		37,487	506.6		

*1 Local and Improved Variety Share in three districts with polders in 2010 Wet Season, MAS Patheingyi

*2 Seed Renovation Frequency : Once a 4 years

*3 Average Cropping Yield of On-Site Seed Production Pilot Project, The Project, 2010

A7-6 Volume of Development Program on Farming (2/2)

(Yearly Target Seed Production Support and Extension Work Area)

Folder	Program Implementation Slatting Year by Folder	Area for High Quality Seed Production			Area for Technical Support for High Quality Paddy Seed Production * 1												Area for Direct Extension Work * 2											
		Local Variety	Improved Variety	Total	Local Variety			Improved Variety			Total			Local Variety			Improved Variety			Total								
					Acres	Acres	Acres	1st Year	2nd Year	3rd Year	4th Year	5th Year	Total	1st Year	2nd Year	3rd Year	4th Year	5th Year	Total	1st Year	2nd Year	3rd Year	4th Year	5th Year	Total			
1	Alegun (1)	6.9	3.9	10.9	1.7	3.5	3.5	1.7	1.39	1.0	2.0	2.0	2.0	1.0	7.8	123	123	123	123	123	491	96	96	96	96	96	386	
2	Alegun (2)	16.0	9.0	25.0	5.1	8.0	8.0	4.0	32.0	2.3	4.5	4.5	2.3	18.0	888	383	283	283	1,130	222	222	222	222	222	888			
3	Alegun (3)	20.6	11.6	32.2	5.1	10.3	10.3	5.1	41.2	2.9	5.8	5.8	2.9	23.2	1,443	364	364	364	1,455	286	286	286	286	286	1,143			
4	Magyibimindaukkan	1.3	0.8	2.1	0.3	0.7	0.7	0.3	2.7	0.2	0.4	0.4	0.2	1.5	74	24	24	24	95	19	19	19	19	19	74			
5	Thingangyi	3.1	1.7	4.8	0.8	1.5	1.5	0.8	6.2	0.4	0.9	0.9	0.4	3.5	171	55	55	55	218	43	43	43	43	43	171			
6	Zinywe	0.1	0.1	0.2	0.0	0.1	0.1	0.0	0.2	0.0	0.0	0.0	0.0	0.1	6	2	2	2	8	2	2	2	2	2	6			
7	Leikkwin	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	3	1	1	1	3	1	1	1	1	1	3			
8	Labutta (South)	9.7	5.5	15.2	2.4	4.9	4.9	2.4	19.4	1.4	2.7	2.7	1.4	10.9	540	172	172	172	687	135	135	135	135	135	540			
9	Labutta (North)	38.9	21.9	60.8	9.7	19.5	19.5	9.7	77.9	5.5	11.0	11.0	5.5	43.8	2,162	688	688	688	2,751	540	540	540	540	540	2,162			
10	U Gaungpu	0.4	0.2	0.7	0.1	0.2	0.2	0.1	0.8	0.1	0.1	0.1	0.1	0.5	23	7	7	7	30	6	6	6	6	6	23			
11	Bitud Island (1)	2.6	1.5	4.1	0.7	1.3	1.3	0.7	5.2	0.4	0.7	0.7	0.4	3.0	146	46	46	46	185	36	36	36	36	36	146			
12	Bitud Island (2)	18.1	10.2	28.3	4.5	9.1	9.1	4.5	36.2	2.5	5.1	5.1	2.5	20.4	1,006	320	320	320	1,280	251	251	251	251	251	1,006			
13	Bitud Island (3)	15.4	8.7	24.0	3.8	7.7	7.7	3.8	30.8	2.2	4.3	4.3	2.2	17.3	854	272	272	272	1,087	213	213	213	213	213	854			
14	Bitud Island (4)	40.3	22.7	63.0	10.1	20.2	20.2	10.1	80.7	5.7	11.3	11.3	5.7	45.4	2,240	713	713	713	2,850	560	560	560	560	560	2,240			
15	Dauingyi Island	51.5	29.0	80.5	12.9	25.8	25.8	12.9	103.0	7.2	14.5	14.5	7.2	58.0	2,860	910	910	910	3,639	715	715	715	715	715	2,860			
16	Dauingyi (East)	74.5	41.9	116.5	18.6	37.3	37.3	18.6	149.1	10.5	21.0	21.0	10.5	83.9	4,138	1,317	1,317	1,317	5,267	1,035	1,035	1,035	1,035	1,035	4,138			
17	Dauingyi (West)	60.0	33.8	93.8	15.0	30.0	30.0	15.0	120.0	8.4	16.9	16.9	8.4	67.5	3,332	1,060	1,060	1,060	4,241	833	833	833	833	833	3,332			
18	Dauingyi (Upper)	11.3	6.4	17.7	2.8	5.7	5.7	2.8	22.7	1.6	3.2	3.2	1.6	12.8	629	200	200	200	801	157	157	157	157	157	629			
19	Daw Nyein	3.9	2.2	6.1	1.0	2.0	2.0	1.0	7.8	0.6	1.1	1.1	0.6	4.4	218	69	69	69	277	54	54	54	54	54	218			
20	Myokone	12.2	6.9	19.1	3.1	6.1	6.1	3.1	24.4	1.7	3.4	3.4	1.7	13.7	678	216	216	216	863	170	170	170	170	170	678			
21	Kyethanwezaung	103.1	58.0	161.2	25.8	51.6	51.6	25.8	206.3	14.5	29.0	29.0	14.5	116.1	5,726	1,822	1,822	1,822	7,288	1,432	1,432	1,432	1,432	1,432	5,726			
22	Banbwezu	39.2	22.1	61.3	9.8	19.6	19.6	9.8	78.4	5.5	11.0	11.0	5.5	44.1	2,178	693	693	693	2,772	544	544	544	544	544	2,178			
23	Daydalu	8.6	4.8	13.4	2.1	4.3	4.3	2.1	17.2	1.2	2.4	2.4	1.2	9.7	476	152	152	152	606	119	119	119	119	119	476			
24	Leipabin	26.4	14.9	41.3	6.6	13.2	13.2	6.6	52.9	3.7	7.4	7.4	3.7	29.8	1,468	467	467	467	1,868	367	367	367	367	367	1,468			
25	Zinpaung	21.5	12.1	33.7	5.4	10.8	10.8	5.4	43.1	3.0	6.1	6.1	3.0	24.2	1,196	381	381	381	1,523	299	299	299	299	299	1,196			
26	Myaseinkan	37.8	21.3	59.0	9.4	18.9	18.9	9.4	75.5	5.3	10.6	10.6	5.3	42.5	2,097	667	667	667	2,669	524	524	524	524	524	2,097			
27	Thandi	10.4	5.8	16.2	2.6	5.2	5.2	2.6	20.7	1.5	2.9	2.9	1.5	11.7	576	183	183	183	733	144	144	144	144	144	576			
28	Suelbhalum	23.3	13.1	36.4	5.8	11.6	11.6	5.8	46.6	3.3	6.6	6.6	3.3	26.2	1,294	412	412	412	1,646	323	323	323	323	323	1,294			
29	Hsaikehaungyi	6.9	3.9	10.8	1.7	3.5	3.5	1.7	13.8	1.0	1.9	1.9	1.0	7.8	383	122	122	122	488	96	96	96	96	96	383			
30	Tamatakaw	40.0	22.5	62.4	10.0	20.0	20.0	10.0	79.9	5.6	11.2	11.2	5.6	45.0	2,219	706	706	706	2,824	555	555	555	555	555	2,219			
31	Kyonsaat	1.6	0.9	2.5	0.4	0.8	0.8	0.4	3.2	0.2	0.4	0.4	0.2	1.8	89	28	28	28	113	22	22	22	22	22	89			
32	Maubin Island (North)	89.9	50.6	140.4	22.5	44.9	44.9	22.5	179.7	12.6	25.3	25.3	12.6	101.1	4,990	1,588	1,588	1,588	6,351	1,247	1,247	1,247	1,247	1,247	4,990			
33	Maubin Island (South)	41.9	23.6	65.5	10.5	21.0	21.0	10.5	83.8	5.9	11.8	11.8	5.9	47.2	2,327	740	740	740	2,961	582	582	582	582	582	2,327			
34	Thonegwayun	62.5	35.2	97.6	15.6	31.2	31.2	15.6	124.9	8.8	17.6	17.6	8.8	70.3	3,468	1,104	1,104	1,104	4,414	867	867	867	867	867	3,468			
Total		900	507	1,406.8	225	450	450	225	1,800	127	253	253	127	1,013	49,983	15,904	15,904	15,904	63,614	12,496	12,496	12,496	12,496	12,496	49,983			
Count		34	34	34																								

*1 Supporting Period / Producer is 2 years continuously.

*2 Area for High Quality Seed Production (Yearly) * 2.

APPENDIX 8
INCOME GENERATION

APPENDIX 8

Income Generation

	<u>Page</u>
A8-1 Project Sheets of Candidate Activities.....	A8-1
A8-2 Selection of Pilot Project Sites.....	A 8-9
A8-3 Result of Baseline Survey.....	A8-11
A8-4 Implementation Process of Pilot Project.....	A 8-16
A8-5 Output of Vegetable Cultivation Pilot Project.....	A 8-18
A8-6 Result of Market Price Survey.....	A 8-20
A8-7 Result of SWOT Analysis.....	A 8-26
A8-8 Crop and Farm Budget of Development Project.....	A 8-27

A8-1 Project Sheets of Candidate Activities

Table 8-1 (1/5) Vegetable Cultivation

Activity 1	Vegetable cultivation
Activities	<ul style="list-style-type: none"> • MAS prepares technical supporting system and local government prepare administration budget and matters. • MAS gives technical support to implementers. • Implementers invest all input costs and start cultivation.
Precondition to start	<ul style="list-style-type: none"> • Guarantee of the use of paddy field during the dry season • Availability of fresh water during the dry season.
Experience in the target area	<ul style="list-style-type: none"> • Inhabitants including landless households who live in the pilot project area (Labutta North Polder) produce vegetables as supplementary income source and the produce is sold in local markets. If production volume is increased and productivity is raised, produces can get more market share and will substitute vegetables coming from other areas like Myaungmya. Cultivators will get certain amount of additional profit. • According to MAS, inhabitants actually carry out vegetable cultivation in many VTs in the study area. Socio economic condition survey shows that vegetables are cultivated in almost all VTs in Labutta and Daydaye townships while it is not common in Bogalay Township. Percentage of the land used for vegetable cultivation is 2.4% in the target polders: it is highest in Labutta Township while almost no land for vegetable cultivation in Bogalay and Kyaiklatt Townships. • A number of landless households cultivate not only their yard, but also lease paddy fields from land right holders after harvest. This lease system can be spread to the polders where vegetables cultivation is rare. • As the improvement of dyke embankment of target polders, fresh water area will expand and, thus, the land being available vegetables cultivation in dry season will increase.
Adjustment to the conditions	<ul style="list-style-type: none"> (i) easy start If land for vegetable cultivation land is arranged, this activity is easy to start. Actually a lot of landless households challenge this activity. The mental threshold is rather low for them. (ii) low technical level Though some vegetables are sensible to certain natural conditions, others are not so much difficult to grow. Damages can be caused by diseases and harmful insects but possible to prevent. If appropriate techniques are taught, people without experience can start cultivation. (iii) initial investment It is the first threshold for every income generation activity. For vegetable cultivation, seed of first cycle, fertilizer, herbicide and pesticide (organic fertilizer, natural herbicide and pesticide can be used); water can and material to make trellis, and tools.. (iv) quick profit return Harvest of vegetables is after two to three months after sowing. Shorter than rice production. If market price is good, cultivators can get cash income. (v) possibility of fund revolving Many vegetable cultivators said (before pilot project implementation) that they feel to get net profit but cannot exactly explain (no record, no data). However, many of them expend this profit to complement their livelihood instead of keeping for the next cultivation. As a result, they can afford for less inputs than required for cultivation. Thus, training of knowledge of appropriate amount of input and preparation of fund are indispensable for cultivators. Through this, entrepreneurship may be created in the mind of cultivators. (vi) market Actually vegetable cultivators sell vegetables not only at near town but also in their villages. Vegetables are transported to other islands by boat, too. If water transport condition in the delta is ameliorated, market will be expanded. (vii) Support At present, MAS township office and TPDC do not support in vegetable cultivation (it is not the duty work), though MAS central office has interest in it and accumulated experience of vegetable cultivation. It is the constraint to the extension of vegetable cultivation to the entire

	<p>study area.</p> <p>(viii) profitability</p> <p>In conclusion, vegetable cultivation will bring profit to cultivators on the condition that the government or donor's assistance exists in the field that technical and management (fund revolving) training and initial investment.</p>
Government policy	Special policy does not exist both for extension of vegetable cultivation in the Ayeyawady Region
Actual government support	<p>Nil</p> <ul style="list-style-type: none"> - No specific policy exists. - MAS has no staff specialized and in charge of vegetable cultivation in the project area.
Project volume	<ul style="list-style-type: none"> • 10% of landless households in the project area
Estimated cost	<p><Implementer></p> <ul style="list-style-type: none"> - Input to 0.1 acre cultivation of 4 vegetables, 16,305 /0.1 acre for one cropping cycle <p><MAS></p> <ul style="list-style-type: none"> - Technical supporting to the implementers (workshops, onsite consultation) - Input is estimated at 249,097,750 Kyat for 2 year support
Estimated profit	27,890 /year for 0.1 acre cultivation
Implementation structure	<ul style="list-style-type: none"> - MAS (overall implementation plan, budget acquisition, technical support), - Local government (budget allocation, administration issues, coordination)
Evaluation	Vegetable cultivation brings supplementary cash income to the implementer in a few month implementation and MAS has human resources to support them. Thus it is judge as appropriate for income generation activity.

Table 8-1 (2/5) Fruit Tree Plantation

Activity 2	Fruit tree (banana, mango) plantation
Activities	<ul style="list-style-type: none"> • MAS enlightens fruit tree plantation and gives basic technical support to the inhabitants who have intention to plant fruit trees. • Inhabitants invest all input costs and start cultivation.
Precondition to start	<ul style="list-style-type: none"> • Landless Implementer (planter) has a small plot of land to plan fruit trees at least two for 30-40 years (tree life).
Experience in the target area	<ul style="list-style-type: none"> • Inhabitants actually grow for domestic consumption. Fruit trees such as banana are planted in the backyard in every village but only on a small scale. • Actually, large quantities of apples and oranges transported from Shan state and other areas via Yangon and sold at local markets in the study area, but local fruits are not sold there so much. Sale of locally produced fruits in local markets is considered profitable by substituting imported. • Mango has high potential of high land productivity.
Adjustment to the condition	<p>(i) easy start</p> <p>As far as small scale plantation is in the scope, many landless households can plant inside their home garden. Also, inside polder embankment, ridge of paddy field, if land use is arranged.</p> <p>(ii) low technical level</p> <p>Fruits that are popular in the delta are not difficult for plant and get harvest. MAS expert thinks a training workshop is enough. But new species¹ is introduced, trial at test garden and extension workers are indispensable.</p> <p>(iii) initial investment</p> <p>It is the first threshold for every income generation activity. For fruit tree plantation, seedling, a small amount of fertilizer; water can and tools.</p> <p>(iv) quick profit return</p> <p>Fruit tree plantation does not return profit so quickly as vegetable cultivation. Harvest of fruit is after a few year waiting except banana</p> <p>(v) possibility of fund revolving</p>

¹ At the meeting with MAS central office, superior staff recommended to JICA study team to introduce guava and "zalacoaf" as high profit species. Zalacoaf has been imported from Thailand and actually are planted in Mon State. This species is thought to carefully tested at testing ground to establish plantation method suitable to the delta area and to produce seedlings.

	<p>Fruit trees live long years and planters get fruit every year once it starts production. However, management cost (dealing with insects, diseases) and input (fertilizer) must be kept in order to produce high quality (marketable) fruits. Thus, fund revolving for input of next cycle production must be kept from profit of previous cycle (not so much cost).</p> <p>(vi) Market Fruits are very common goods merchandized at markets in the delta. They transported to other islands by boat, too. If water transport condition in the delta is ameliorated, market will be expanded.</p> <p>(vii) Support At present, MAS township office and TPDC do not support in fruit tree plantation (it is not the duty work), though MAS central office has interest in it. On the other hand, people themselves do as supplementary food without any technical and management support. It is the constraint to the extension and commercialization of fruit tree plantation in the study area.</p> <p>(viii) profitability In conclusion, fruit tree plantation will bring profit to cultivators on the condition that inhabitants understand possibility and management of commercialization, and markets are ready to merchandize local fruits. Also, seedling is not appropriately distributed. For this, government or donor's assistance is necessary for these matters.</p>
Government policy	Special policy does not exist both for extension of fruit tree does not exist in Ayeyawady Region.
Actual government support	<p>Nil</p> <ul style="list-style-type: none"> - No special policy of fruit tree plantation - MAS has no duty and staff in charge of fruit tree plantation
Project volume	<ul style="list-style-type: none"> • 75% of landless households in the project area (approximately 30,000 HH)
Estimated cost	<p><Planter></p> <ul style="list-style-type: none"> - Input to plant one banana tree and one mango tree in their house yard and put fertilizer. Total cost is 1,500Kyat at maximum for one tree; one seedling is 200-300 Kyat, fertilizer is about 1,000 Kyat (not so much quantity is needed). . <p><MAS></p> <ul style="list-style-type: none"> - Preparatory workshop and technical workshop to planters supporting to the implementers (one time workshop) - Project period is 5 year to wait fruiting of mango tree. - Input is estimated at 60,000,000 Kyat for one time workshop @100.000K X 600 places (every 50 HH) = 60,000,000 Kyat
Estimated profit	<p>As the farm gate price of fruits is various according to season and place. Following are estimate based on the observation in Labutta.</p> <ul style="list-style-type: none"> - A banana tree starts to bear fruits one year after planting and it produce about 96 bunches for one year. A medium bunch can sold at 100Kyat. @100 X 96 – 1,500 = 8,100 Kyat. Net return is 36,900 Kyat/year on the Year 2 and the planter repeat this. - A mango tree starts to bear fruits 4 year after planting on average. From 5th year to 30 – 40 years it bears 7,500 fruits and a fruit is set to sell at 100Kyat. @100 X 7,500 – 1,500 = 748,500 Kat. Net return is 21.400 Kyat/year (average) in a case of 35 years fruiting.
Implementation structure	<ul style="list-style-type: none"> - MAS (overall implementation plan, budget acquisition, technical support), - Local government (budget allocation, administration issues, coordination)
Evaluation and recommendation	<ul style="list-style-type: none"> - According to MAS (principal of CARDL and other staff), plantation of banana and mango trees is easy. Once basic technique is transferred to planter, these trees do not need continuous technical support after planters start plantation. Landless households get not only monetary profit but also improve their nutrition. - Even if MAS does not give continuous onsite consultation, planters get harvest of fruit of a certain quality. If above mentioned cost of technical support is reduced to awareness raising by MAS staff included in their normal duty, it will give effect for income generation. - Thus, fruit tree plantation activity is judge effective for income generation but it does not need special technical project and not included as a sub-project in the Development Plan.

	- However, enlightenment or raising awareness of landless households is important. It is recommended to the local government who will be in charge of poverty reduction.
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Table 8-1 (3/5) Technical Improvement of Primary Processing of Small Fish and Prawn

Activity 3	Technical improvement of primary processing of small fish and prawn
Activities	<ul style="list-style-type: none"> • DoF does extension activity on hygiene standard and quality standard to small scale fishermen. • DoF also gives extension to raise the awareness of merchants and consumers about the hygiene and quality of the marine products. • Quality improvement is like: removal of impure ingredients, raise the drying degree. • It will be a good opportunity for them to raise income from marine products by selling safer foods.
Pre conditions	<ul style="list-style-type: none"> • DoF has concrete food hygiene standard applied to food processing in the target area. • Higher quality means higher market price.
Experience in the target area	<ul style="list-style-type: none"> • One of the important income sources of landless households living near to rivers, who are not fisherman with licenses, is small scale fishery without boat. They catch small fish and prawn on the riverside as the supplementary income source or main for some households, by selling catch at local markets. • But they have little means of products preservation and processing technique is not high. • By improvement of quality of processed or dried fish (removing small dust, high dryness), market value will get higher.
Adjustment to the condition	<p>(i) easy start Actually landless households in the riverside villages practice drying fish and prawn. It seems easy to improve processing method.</p> <p>(ii) low technical level It depends on the national standard and legal regulation.</p> <p>(iii) initial investment It is the first threshold for every income generation activity. For processing fish and prawn, equipment like small container must be considered.</p> <p>(iv) quick profit return It does not take so much time to process. Implementers do not need wait profit for long time after catching.</p> <p>(v) possibility of fund revolving If processed (dried) products are sold constantly, the producer get profit to a certain extent and use a part of profit to the next production cycle.</p> <p>(vi) market At present, seven kinds of fishery product processing activities are carried out in Ayeyarwady Region (fish paste, dry fish, dry shrimp, salted fish, fermented shrimp, shrimp paste and fish sauce) and total production is 6,839 tons (2009/10, source: DoF). They are mainly processing by industrial method but can be done at home manufacturing.</p> <p>(vii) support Training on processing technique as well as management is indispensable. It is the essential of success of this activity. DoF has training schools and gave training with assistance of FAO and an Italian project; however, DoF have experience neither in support of income generation activities of local people nor in working in collaboration with NGO.</p> <p>(viii) profitability If market price changes according to the quality, producers of good quality goods get more profit.</p>
Government policy	<ul style="list-style-type: none"> • National Policy for (fishery) post harvest sector <ul style="list-style-type: none"> -To promote all round development in the fishery sector but not specify small scale processing. • Fisheries Policy <ul style="list-style-type: none"> - To minimize post harvest loss and improve quality, wholesomeness and safety of fishery products for human consumption. - To develop and apply quality and safety management systems that ensure food safety through

	<p>the implementation, validation and verification of Hazard Analysis and Critical Control Point (HACCP) based systems; improve laboratory practices; and adapt quality and safety management systems as appropriate to the fishery industry.</p> <ul style="list-style-type: none"> - To develop and implement GMP guidelines and compliance standards. - To establish a food safety Farm-to-Table programs; including residue monitoring, fishery establishment monitoring, and product surveillance. - To study, develop and transfer technology to fishermen, processors, distributors and marketers of fish products to improve competency in their occupation. - To develop and implement national training programs based on assessed needs to meet the human resource requirements of the fishery sector. - To obtain assistance from national and international organization for manpower development. - To involve all stakeholders in the planning, establishment and operation of infrastructure facilities such as fishery harbours, fish landing sites, and ice plants.
Actual government support	<p>Nil.</p> <ul style="list-style-type: none"> - There is no concrete administrative system to apply above mentioned fishery policy to extreme small scale fishermen.
Project volume	<ul style="list-style-type: none"> • 10% of small scale fishery households.
Cost	-
Estimated profit	<ul style="list-style-type: none"> • Profit Increment are not clearly and systematically observed even if .
Implementation structure	<ul style="list-style-type: none"> - DoF management direction (establishment of quality standard of small fish and prawn processing, overall implementation plan, budget acquisition) - DoF township office (technical support) - Local government (budget allocation, administration issues, coordination)
Evaluation and recommendation	<ul style="list-style-type: none"> • This activity is effective only if farm gate price increases according to the quality level. Actually, the standard is neither established nor informed for small fish and prawn processing. • Thus, it is difficult to find appropriately improved processing method and, therefore, to get profit increment even when they improve processing method if quality standard is neither informed nor popular in the market. • In conclusion, this activity is not feasible under actual condition. • However, quality improvement is important for enforcement of marine industry in future in the target area. • It is recommended to DoF and local government to establish quality standard and enlighten it to the small scale fishery households and merchants.

Table 8-1 (4/5) Breeding or Fattening of Domestic Animal

Activity 4	Breeding or fattening of domestic animal
Activities	<p>A unit of sixteen landless households organizes to breed and fatten pigs.</p> <ul style="list-style-type: none"> • LBVD planning section establishes supporting structure and prepares budget • LBVD township staff gives technical assistance to landless pig keepers. • Local government allocates budget and does administration matters.
Precondition to start	<ul style="list-style-type: none"> • Animal market exists in or near to every polder
Experience in the target area	<ul style="list-style-type: none"> • Inhabitants in the villages in the study area are accustomed to raise domestic animals such as pig, duck and cock/hen in their garden. But it is small scale and not a mean of income generation; mainly it is like the provision for emergency (that is, a kind of saving). • Fattening young animal and selling the adult is supposed to bring income to landless households. • Some NGOs actually implement animal banking system to the Ayeyarwady Delta after Nargis. Their target animals are pig, goat (for Muslim people) and buffalo (for farmers). • Pig is most possible animal to breed.
Adjustment to the condition	<p>(i) easy start Actually some landless households in the project area raise animals (pig, goat, buffalo) by donation of NGOs.</p> <p>(ii) low technical level</p>

	<p>Hygiene must be kept, but LBVD supports basic veterinary service in collaboration with some NGOs in the Nargis affected area.</p> <p>(iii) initial investment A piglet of local race is 20,000K to 25,000K in the rural market. Actually many inhabitants including landless buy it but it may be difficult to the poorest households (who cannot bear to wait long term profit cycle).</p> <p>(iv) quick profit return It is difficult to get profit return in a short time. For pig fattening, it takes more than ten month from purchase of a piglet to sell adult and feeding cost is around 50,000K (example of Labutta North polder) For breeding, it takes about six months from purchase of a piglet to the time when she becomes mature, gestation period is four month, and babies can be sold at 45 days old.</p> <p>(v) possibility of fund revolving In the case of breeding, a sow gives birth at each six month after she becomes adult and continues delivery for three years. In the case of fattening, if a sow delivers piglets every six months and the participant sells them, it brings profit and pig keeper can afford to buy new pigs.</p> <p>(vi) market - There is a livestock market in Labutta where people sell and buy animals. - Meat is always sold in adjacent markets. Also, meat and domestic animals are shipped to Yangon market from Ayeyarwady Division as whole.</p> <p>(vii) Support LBVD is ready to give technical assistance to inhabitants. Some international NGOs work for this activity in the Nargis affected area.</p> <p>(viii) profitability If inhabitants can breed pig of local race without so much feeding cost, they get cash income.</p>
Government policy	No special policy but LBVD supports extension of animal breeding under financial and technical support of FAO and NGOs (after Nargis).
Actual government support	<ul style="list-style-type: none"> • Training of village animal health workers is held (give veterinary training to one villager in each village) in collaboration with International NGOs (Mercy Corps, Care Myanmar) • Also, they are ready to <ul style="list-style-type: none"> - Do IEC activity - Prepare to sell baby animals - Make guidebooks and manuals on animal breeding in collaboration with International organizations and NGOs. • Vaccination service at Township LBVD offices (vaccination fee: 200Kyat/pig, 10Kyat/chicken)
Project volume	• 5 % of landless households in 34 polders
Estimated cost	<p><Pig keeper – breeding > 718,845 Kyat for 4 years <Pig keeper - fattening> 358,024 Kyat for 4 years <MAS> - Technical supporting to the implementers (workshops, onsite consultation) Input is estimated at 79,640,000 Kyat for 4 year support</p>
Estimated profit	<p><Pig keeper- breeding> net profit is calculated 3,619,760 Kyat for 4 years < Pig keeper- fattening> net profit is calculated 361,976 Kyat for 4 years.</p>
Implementation structure	<p>- LBVD (overall implementation plan, budget acquisition, technical support), - Local government (budget allocation, administration issues, coordination)</p>
Evaluation	Pig raising bring s supplementary cash income to the implementer and LBVD has human resources and experience to support them. Though the profit is generated one year after starting, it is not a quickly responding activity but people regard it as a kind of saving. Thus it is judged as appropriate for income generation activity.

Table 8-1 (5/5) Processing of Farm Produce

Activity 5	Processing of farm produce
Activities	• This activity has a factor of 'rural economic development' adding to giving supplementary income

	<p>to landless households. By adding value to the raw materials (vegetables, rice, fruits, shrimp, fish etc.) they get profit increment. To create market value, village level industry may be appropriate instead of household processing.</p> <ul style="list-style-type: none"> • Local government with local people examine rural produces being possible material of processing and 'only one good in the area' and select possible material. • Local government in collaboration with ministry offices concerned formulate processing method and check commercialization. • They give technical training to the landless households. • Group of landless households select local raw materials that they can easily get at low cost and produce processed food and goods by using low and traditional technique. • Local government supports them in finding technical assistance and marketing in collaboration with ministries concerned (MAS, LBVD, DoF). • These ministries support them in technical and management issues
Preconditions to start	<ul style="list-style-type: none"> • Low investment in equipments, tools and low cost or free materials for production • Existence of marketing support because this activity is Low technical requirement. • As this activity mainly uses raw agricultural produces (Activity 1 and 2), this activity is regarded as the second step of income generation after landless households succeed to get income from row produces production.
Experience in the target area	<ul style="list-style-type: none"> • Processing of the primary produces in the area is one of the most popular income generation activities all over the world. • Some landless households living near to Labutta Town actually make processed food and handicrafts.
Adjustment to the condition	<p>(i) easy start Actually not so many households do processing of farm produces. However, inhabitants in the pilot area can start it if following conditions are satisfied: if not only farm households but also landless ones can manage the farm produce, mainly rice; if the market demand to the certain amount exists in the project area;</p> <p>(ii) low technical level Traditional sweets and traditional handicrafts are better choice to the inhabitants who have intension to start. Even this, transfer of the technical know-how (both for production and sale) is important.</p> <p>(iii) initial investment Initial investment depends on the selected activity. But it will not be high when traditional processing technique is adapted. If not, materials and tools may cost a lot of money.</p> <p>(iv) quick profit return It is generally making-selling produce and it does not take for long time to make one piece of processed. Producers can get cash income just after production.</p> <p>(v) possibility of fund revolving Generally this activity is a small scale business. Processing row material will bring income to the participant households in a short period since initial investment (purchase of tools, materials).</p> <p>(vi) market Local market like township centre and towns dispersed in the delta are the target market. Market survey is indispensable for each selected goods.</p> <p>(vii) Support Local government is in charge of poverty reduction and income generation. However, local government system was restructured just when this draft plan was prepared and their capacity in supporting landless people is still unknown.</p> <p>(viii) profitability Profitability of this activity more depends on market preference than vegetables, fruits, shrimps and pigs.</p>
Government policy	Nil
Actual government	Nil

support	
Project volume	Covering landless households who have intension to process and sell goods.
Estimated cost	Not specified
Estimated profit	Not specified
Implementation structure	<ul style="list-style-type: none"> • Landless households do find appropriate materials in collaboration with local government and do processing and sell the products.. • Local government <ul style="list-style-type: none"> - find appropriate materials and processing method and execute market survey of selected products Assign staff member in charge of income generation activities - Do market survey in collaboration with inhabitants and select appropriate goods. - Arrange the technical support within the organization - Give technical guidance to field staff if necessary - Do extension to landless people to organize them for business of raw material processing - Care of sanitary standard in collaboration with the organization in charge of health and sanitation • <ministries in concern> - Give technical training in producing and selling to inhabitants - Consult with inhabitants who start income generation activities • VT and village committee organize inhabitant's group for do processing industry and commercialization. • MAS and other administrative organs concerned gives technical support as implementation agency, promotion of processing, procurement of necessary materials, tools and facilities, technical transfer and training to inhabitants...
Evaluation	<ul style="list-style-type: none"> - This activity is regarded as a kind of village development adding to income generation of each landless household. - Raw material except rice is not fully available for landless households and this is the second step of income generation after they succeed production. - Even though some village people produce rice cake and other goods, small scale business is not common in all villages in the project area. - This activity must be carefully promoted by the local government for increasing village economy, but local government has not experienced in this matter at this moment. - In conclusion, this activity is confirmed s the second stage activity after landless people succeed vegetable cultivation and fruit tree plantation. When the staff of local government accumulate enough knowledge and experience in support poverty reduction, this activity can be started with the survey of available materials and market.

A8-2 Selection of Pilot Project Sites

There are five village tracts in Labutta North Polder. Basic statistical data is summarized in Table A8-2.

Table A8-2 (1/2) Basic Data of Five VTs in Labutta North Polder²

Village Tract	Number of villages	Households	Paddy field (acre)	Paddy field per land holder (acre)	Number and % of landless households
Kyauk Hmaw	6	972	4,650	23.3	772 (79.4%)
Labutta Loke South	6	903	2,397	12.0	approx 700 (77.5%)
Labutta Loke North	3	873	3,394	16.5	667 (76.4%)
Nyaung Lein	8	1,150	2,877	11.9	approx 908 (79.0%)
Sar Kyin*	5	1,676	9,350	18.8	1,179 (70.3%)
Total	28	5,574	22,668	16.9	4,229 (75.9%)

Note: Data of Sar Kyin VT includes villages located in Labutta South Polders

One site in each village tract was recommended by village tract authorities and JICA study team compared them in following items to select target sites for pilot project.

Table A8-2 (2/2) Comparison of Five Candidate Villages

VT	Kyauk Hmaw	Labutta Loke North	Labutta Loke South	Nyaung Lein	Sar Kyin
Village recommended by VT	Tha Yet Kone	Labutta Loke North	Thet Yat Kone (TYK) & Phayar Gyi Kone (PGK)	Kanyin Kone & Da Ni Chaung	Yae Saing Kone
Landless people to participate ³	Approx. 80 HH have intention	Approx. 100 HH have intention	Approx. 65 HH have intention	Approx. 60 HH have intention	Approx. 150 HH have intention
Support of VPDC ⁴	○	○	○	○	○
Land availability during dry season (approximate number)	150 ac in the first half, 50 ac in the second half	200 ac till the end of first half, 80 ac till in the second half	30 ac in the first half of dry season in TYK, 10 ac till the end of dry season in PGK	50 ac till the end of dry season	200 ac during the first half (gradually saline water penetrates into creeks)
Distance to market	2~3 km to the New Town temporary market	Approx. 9.4 km to Labutta Market	Approx. 6.3 km to Labutta Market	Approx. 3.4 km to Labutta Market	Approx. 4.9 km to Labutta Market
Desirable support items	Start of production of vegetable of easy cultivation and basic technique giving guarantee of positive harvest	Start of production of vegetable of easy cultivation and basic technique giving guarantee of positive harvest	Start of production of vegetable of easy cultivation and basic technique giving guarantee of positive harvest	Start of high market value/profitable vegetables and cultivation technique	Start of production of vegetable of easy cultivation and basic technique giving guarantee of positive harvest
Appropriate time of pilot project	From November	From November	From beginning of November	From September in accordance of desirable crops	From November

² Source: Interview to the VT chairmen, JICA Study Team 2010

³ Rough estimate

⁴ Guarantee of acquisition of land use right, problem solution and so on.

Gender related issue	Women are main vegetable producers.	Women are main vegetable producers.	Women can cultivate vegetables without men.	Men's work is indispensable for vegetable cultivation.	Women can cultivate vegetables without men.
Other social condition	All houses were blown away by Nargis and reconstructed by UNDP. Poorer impression.				Village is much larger than other candidate villages = more than 3 km long.
Comparison of situation	<ul style="list-style-type: none"> ○ Cultivable till the second half of dry season. ○ Adjacent to the market ○ Need of basic techniques ○ Desirable start time is after rainy season. ○ High benefit effect due to relatively poor condition. 	<ul style="list-style-type: none"> ○ Cultivable till the second half of dry season. ≡ Longest distance to the market among five candidates. ○ Need of basic techniques ○ Desirable start time is after rainy season. 	<ul style="list-style-type: none"> ○ Cultivable till the second half of dry season. ○ Walking distance to the market ○ Need of basic technique ○ Desirable start is after rainy season. 	<ul style="list-style-type: none"> ○ Cultivable till the second half of dry season. ○ Walking distance to the market ≡ Instead of basic technique, need of higher level technique ≡ Desirable start is September (out of scope of the pilot project) ≡ Only in the period when men's work force is available. 	<ul style="list-style-type: none"> ≡ Difficult to cultivate in the second half of dry season due to penetration of saline water ○ Walking distance to the market ○ Need of basic technique ○ Desirable start time is after rainy season. ≡ Difficult to choose participants due to big population scale.
Priority	High	medium	high	low	Low

Appendix 8-3 Result of Baseline Survey

Baseline survey was executed in two pilot project sites at the end of November 2010. 57 participant households were interviewed by a Myanmar consultant. The interview result is compiled in following table consisting of three pages.

<Data 1>

HH No	Village Tract	HH size	Education	Damage by Nargis	Income source 1	Income source 2	Income source 3
1	Labutta Loke South	5	Middle school	Poultry died, house, home garden	Vegetable growing	Agricultural labour	
2	Labutta Loke South	2	University	House	Poultry rearing	Vegetable growing	
3	Labutta Loke South	4	Primary school	House	Sawing	Agricultural labour	Wood cutting
4	Labutta Loke South	5	Monastic school	House	Agricultural labour	Vegetable growing	
5	Labutta Loke South	8	Monastic school	House	Vegetable growing	Agricultural labour	
6	Labutta Loke South	4	Primary school	House	Vegetable growing	Agricultural labour	
7	Labutta Loke South	5	Middle school	House	Vegetable growing	Agricultural labour	
8	Labutta Loke South	5	Middle school	House	Agricultural labour	Vegetable growing	
9	Labutta Loke South	4	Primary school	House	Carpenter	Agricultural labour	Vegetable growing
10	Labutta Loke South	3	Primary school	House	Vegetable growing	Agricultural labour	Temporary Teacher
11	Labutta Loke South	5	Monastic school	House	Vegetable growing	Agricultural labour	Poultry rearing
12	Labutta Loke South	5	Middle school	House	Vegetable growing	Agricultural labour	
13	Labutta Loke South	5	Middle school	House	Vegetable growing	Agricultural labour	
14	Labutta Loke South	6	Monastic school	House	Casual labour	Agricultural labour	Vegetable growing
15	Labutta Loke South	6	Middle school	House	Vegetable growing	Casual labour	
16	Labutta Loke South	9	Middle school	House	Vegetable growing	Fishery	Agricultural labour
17	Labutta Loke South	1	Middle school	Nil	Vegetable growing		
18	Labutta Loke South	3	Middle school	House	Government staff	Agricultural labour	Vegetable growing
19	Labutta Loke South	5	Middle school	House	Vegetable growing	Casual labour	
20	Labutta Loke South	2	Middle school	House	Casual labour		
21	Labutta Loke South	2	Middle school	Nil	Casual labour	Hawker	
22	Labutta Loke South	3	Middle school	House, Cattle	Vegetable growing	Agricultural labour	
23	Labutta Loke South	6	Primary school	Nil	Agricultural labour	Vegetable growing	Casual labour
24	Labutta Loke South	5	Primary school	House	Vegetable growing		
25	Labutta Loke South	5	Middle school	House, Poultry	Agricultural labour	Vegetable growing	Fishery

26	Labutta Loke South	4	Primary school	House	Agricultural labour	Vegetable growing	Animal hiring
HH No	Village Tract	HH size	Education	Damage by Nargis	Income source 1	Income source 2	Income source 3
27	Labutta Loke South	4	Monastic school	House and Vegetable field	Vegetable growing	Shop	
28	Labutta Loke South	5	Monastic school	House and One family member	Vegetable growing	Casual labour	
29	Kyauk Hmaw	3	Middle school	House	Casual labour	Agri labor	
30	Kyauk Hmaw	4	Primary school	House	Agricultural labour	Vegetable growing	
31	Kyauk Hmaw	3	Primary school	House	Casual labour	Vegetable growing	
32	Kyauk Hmaw	8	Monastic school	House	Vegetable growing	Casual labour	
33	Kyauk Hmaw	5	Primary school	House	Casual labour	Vegetable growing	
34	Kyauk Hmaw	6	Primary school	House	Casual labour	Pig rearing	
35	Kyauk Hmaw	5	Primary school	House	Casual labour	Vegetable growing	
36	Kyauk Hmaw	6	Monastic school	House	Casual labour		
37	Kyauk Hmaw	4	Primary school	House	Casual labour		
38	Kyauk Hmaw	4	High school	House	Casual labour	Hawker	
39	Kyauk Hmaw	2	Monastic school	Nil	Casual labour	Fishery	
40	Kyauk Hmaw	8	Primary school	House	Casual labour	Vegetable growing	Pig rearing
41	Kyauk Hmaw	4	Monastic school	Nil	Vegetable growing	Agricultural labour	Casual labour
42	Kyauk Hmaw	5	Primary school	House	Casual labour	Vegetable Growing	Agricultural labour
43	Kyauk Hmaw	5	Primary school	House	Casual labour	Agricultural labour	
44	Kyauk Hmaw	5	Middle school	Nil	Casual labour	Agricultural labour	Vegetable growing
45	Kyauk Hmaw	4	Middle school	House	Vegetable growing	Agricultural labour	Pig rearing
46	Kyauk Hmaw	5	Primary school	house	Land renting	Casual labour	Vegetable growing
47	Kyauk Hmaw	4	Primary school	House	Casual labour	Vegetable growing	
48	Kyauk Hmaw	3	Primary school	Nil	Casual labour	Agricultural labour	Vegetable growing
49	Kyauk Hmaw	4	Monastic school	House, materials for fishery	Carpenter	Casual labour	Vegetable growing
50	Kyauk Hmaw	3	Monastic school	House	Orchard & vegetable growing	Agricultural labour	Livestock raising
51	Kyauk Hmaw	3	Middle school	House	Hawker	Agricultural labour	Vegetable growing
52	Kyauk Hmaw	4	Monastic school	House	Casual labour		
53	Kyauk Hmaw	3	Middle school	House	Casual labour	Fishery	Vegetable growing
54	Kyauk Hmaw	5	Primary school	House	Casual labour		
55	Kyauk Hmaw	7	Primary school	House	Agricultural labour	Carpenter	Vegetable growing
56	Kyauk Hmaw	9	Middle school	House	Agricultural labour	Casual labour	Vegetable growing
57	Kyauk Hmaw	3	Primary school	House	Casual labour	Hawker	

<Data 2>

HH No	Occupation 4	Approx cash income K	Approx in-kind income	Vegetable estimate K	Estimate annual income K	Vegetable Experience	From whom learnt?
1		60,000	40 bkts (paddy)		220,000	Yes	Other growers
2		150,000	-	12,900	162,900	Yes	Other growers
3	Vegetable growing	325,000	Paddy 30 baskets	12,000	457,000	Yes	Other growers
4		60,000	42 bkts (paddy)	30,000	258,000	Yes	Other growers
5		0	-	246,000	246,000	Yes	Other growers
6		0	50 bkts (paddy)		200,000	Yes	Other growers
7		45,000	Rice 3 bkts + 80 bkts (paddy)	36,000	431,000	Yes	Other growers
8		0	35 bkts (paddy)	30,000	170,000	Yes	Other growers
9	Casual labour	90,000	75 bkts (paddy)	47,400	437,400	Yes	Other growers
10		140,000	Rice 4 bkts + 80bkts (paddy)	126,000	626,000	Yes	Other growers
11		100,000	-	120,000	220,000	Yes	Other growers
12		0	60 bkts (paddy)	150,000	390,000	Yes	Other growers
13		60,000	Rice 6 bkts + 40 bkts (paddy)	91,500	371,500	Yes	Other growers
14		365,000	60 bkts (paddy)	54,000	659,000	Yes	Other growers
15		30,000	18 bkts (paddy)	60,000	162,000	Yes	Other growers
16		600,000	-	270,000	870,000	Yes	Other growers
17		0	-	144,000	144,000	Yes	Other growers
18		600,000	35 bkts (paddy)	45,000	785,000	Yes	Other growers
19		0	20 bkts (paddy)	108,960	188,960	Yes	Other growers
20		600,000	60 bkts (paddy)	41,850	881,850	Yes	Other growers
21		200,000	-	0	200,000	Yes	Other growers
22		0	-	45,000	45,000	Yes	Other growers
23		0	70 bkts (paddy)	135,000	415,000	Yes	Other growers
24		0	-	105,000	105,000	Yes	Other growers
25		150,000	Rice 6 bkts + 80 bkts (paddy)	180,000	710,000	Yes	Other growers
26		320,000	155 bkts (paddy)	90,000	1,030,000	Yes	Other growers
27		200,000	-	144,000	344,000	Yes	Other growers
28		0	80 bkts (paddy)	51,000	371,000	Yes	Other growers
29		215,000	Rice 3 bkts + 12.5 bkts paddy	53,250	348,250	Yes	Other growers
30		280,000	-	0	280,000	Yes	Other growers
31		155,000	21 bkts (paddy)	13,380	252,380	Yes	Other growers
32		135,000	-	87,750	222,750	Yes	From parent
33		277,500	20 bkts (paddy)		357,500	Yes	Other growers
34		655,000	-	0	655,000	Yes	From parent
35		75,000	-	4,260	79,260	Yes	Other growers
36		720,000	-	10,800	730,800	Yes	From parent
37		0	60 bkts (paddy)	0	240,000	Yes	From parent
38		815,000	-	0	815,000	Yes	From parent
39		1,350,000	-	0	1,350,000	Yes	From parent
40		365,000	47 bkts (paddy)	0	553,000	Yes	Other growers
41	Poultry rearing	135,000	20 bkts (paddy)	25,920	240,920	Yes	Other growers
42		340,000	50 bkts (paddy)	0	540,000	Yes	From parent
43		245,000	-	0	245,000	Yes	From parent
44	Vegetable sales	450,000	20 bkts (paddy)		530,000	Yes	From parent
45		250,000	-	60,000	310,000	Yes	From parent
46		400,000	100 baskets (paddy)	10,800	810,800	Yes	From parent
47		50,000	-	0	50,000	Yes	Other growers
48		547,500	-	16,200	563,700	Yes	From parent
49		2,275,000	-	0	2,275,000	Yes	From parent
50		385,000	24 bkts (paddy)	0	481,000	Yes	Other growers
51		660,000	-	0	660,000	Yes	Other growers
52		150,000	-	0	150,000	Yes	From parent
53		1,392,500	-	31,500	1,424,000	Yes	Other growers
54		912,500	-	0	912,500	Yes	From parent

55	Livestock rearing		n.a.	0		Yes	Other growers
56		700,000	-	5,850	705,850	Yes	Other growers
57		1,277,500	-	0	1,277,500	Yes	Other growers

<Data 3>

HH No	Crops planted	Place of vegetable cultivation	Expect for the pilot project
1	Cucumber, Water cress, Roselle, Yard Long bean	Paddy field, home garden	Get more knowledge and more income
2	Cucumber, Roselle, Yard long bean, Lady finger, Brinjal	Paddy field, home garden	To get more income and to recycle the cultivation
3	Chili, Roselle, Water cress, Yard long bean, Cucumber	Paddy field	Get more knowledge and more income
4	Water cress, roselle, Cucumber	Paddy field	Get more knowledge and more income
5	Aster, Roselle, Water cress, Yard long bean, Radish, Cucumber, Lady finger, Betel	Own garden and orchard	Get more knowledge and more income
6	Cucumber, Casava, Yard long bean, Roselle, Water cress, Lady finger	Paddy field and home garden	Get more knowledge and more income
7	Water cress, roselle, Cucumber, Yard long bean, Betel, Brinjal	Home garden	No investment is needed
8	Cucumber	Paddy field	No investment is needed
9	Cucumber, Yard long bean, Roselle, Lady finger, Bottle gourd, Brinjal	Paddy field and home garden	To get more income
10	Cucumber, Roselle	Others' home garden	Get more knowledge and more income
11	Snake gourd, Ridged gourd, Cucumber, Roselle, YLB	Paddy field and home garden	Get more knowledge and more income
12	Cauliflower, Cucumber	Paddy field	To get inputs for vegetable cultivation
13	Radish, Roselle, YLB, Cucumber	Paddy field and home garden	To get profit
14	Roselle, Water cress	Paddy field	To gain technology
15	Roselle, Water Cress, Brinjal, Cucumber	Paddy field	To gain technology in cultivation
16	Roselle, Okra, Water cress, YLB, Cucumber, Brinjal	Paddy field	To get inputs for vegetable cultivation
17	YLB, Cucumber	Paddy field and home garden	To get inputs and technology
18	YLB, Cucumber, Okra, Roselle	Paddy field and home garden	To get more income
19	YLB, Cucumber, Roselle, Bitter gourd	Home garden	To get inputs for vegetable cultivation
20	Cucumber, Roselle	Paddy field	To get inputs for vegetable cultivation
21	Cucumber	Paddy field	To get inputs for vegetable cultivation
22	Cucumber, Roselle, Radish, YLB, Brinjal, Chili	Paddy field and home garden	To get more income
23	Cucumber, Roselle, Water Cress, YLB	Paddy field	To gain technology
24	Cucumber, Cauliflower, Roselle, Radish, Cut flower	Paddy field	To gain technology
25	Cucumber, YLB	Paddy field	To gain technology
26	YLB, Cucumber, Water cress, Roselle, Radish	Paddy field and home garden	To get inputs for vegetable cultivation
27	Roselle, Brinjal, Radish, Aster, Mustard, Cucumber, Cauliflower, Lettuce	Paddy field and home garden	To gain knowledge and get inputs for vegetable cultivation
28	Roselle, Okra, Cucumber, YLB	Home garden	
29	Cucumber, Coriander, Penny wort, Okra, Roselle, Water cress, YLB	Paddy field	To get inputs for vegetable cultivation
30	Roselle, Water cress, Okra, Coriander, Bottle Gourd, Penny wort	Paddy field	To get more income
31	Okra, Water cress, Roselle, Chili	Paddy field	To get inputs for vegetable cultivation
32	Penny wort, Okra, YLB, Cauliflower, Cut flower, Roselle, Cucumber, Water cress	Paddy field and home garden	To get more income
33	Coriander, Cucumber, Roselle, Okra, Water cress	Paddy field	To get more income
34	Penny wort, coriander, Radish, Okra	Paddy field	To get more income
35	Chili, Cauliflower, Coriander, Penny wort, Cucumber, YLB	Paddy field and home garden	To get more income
36	Bottle gourd, Pumpkin, Cucumber, Bitter gourd, Penny wort, Okra, Ridge gourd	Paddy field and home garden	To get inputs for vegetable cultivation

37	YLB, Cucumber, Penny wort, Okra, Roselle, Water cress	Paddy field and home garden	To get more income
38	Coriander, Water cress, Cucumber, cut flower	Paddy field	To get inputs for vegetable cultivation
39	nil		To get inputs for vegetable cultivation
40	Chili, Okra, Roselle, Water cress	Paddy field	To get inputs for vegetable cultivation
41	Water cress, Roselle, Coriander, Lettuce, Okra	Paddy field	To get inputs especially for cucumber and YLB
42	Coriander, Water cress, Okra, Cut flower, YLB, Cucumber	Paddy field	To get inputs for vegetable cultivation
43	Coriander, Okra, Cucumber, YLB, Water cress, Roselle, water melon, Brinjal. Cauliflower, aster, Pen	Paddy field	To get inputs especially for cucumber and YLB
44	Coriander, Okra, Water cress	Home garden	To get inputs for vegetable cultivation
45	Okra, Water cress, Roselle, Cucumber, Aster, YLB, Coriander, Leafy radish	Paddy field and home garden	To get inputs and technology
46	Coriander, Roselle, YLB, Cucumber	Paddy field	To get inputs for vegetable cultivation
47	Ridge gourd, Bitter gourd, Water cress, Roselle	Home garden	To get more income
48	Roselle, Water cress, Coriander	Home garden	To get inputs and more income
49	Okra, Coriander, Leafy radish, Cauliflower, YLB	Paddy field and home garden	To get inputs and more income
50	Penny wort, Roselle, Water cress, YLB, Cucumber	Paddy field and home garden	To get inputs for vegetable cultivation
51	YLB, Roselle, Okra	Home garden	To get more income
52	Cucumber, Okra, Roselle, Water cress, Cut flower, Coriander	Paddy field and home garden	To get more income
53	Roselle, Okra, Cucumber, Water cress, Coriander	Paddy field	To grow successfully
54	Coriander, water cress, Roselle, Brinjal, Okra, Cucumber, YLB	Paddy field	To get more income
55	Penny wort, Okra, Roselle, Water cress	Paddy field and home garden	To get inputs and technology
56	Water cress, Roselle	Home garden	To get inputs for vegetable cultivation
57	Bottle gourd, Penny wort, Cucumber, Roselle, Water cress,	Paddy field and home garden	To get more income

Appendix 8-4 Implementation Process of Pilot Project

Pilot project was planned and implemented following implementation process shown in Table A8-4.

Table A8-4 Implementation Items and expected Outputs of Income Generation Pilot Project

Implementation item	Expected output
Activity 1 Preparatory work	
<ul style="list-style-type: none"> · Preparatory workshop (Explanation and problem finding) · Selection of the participants (landless households) · Confirmation of the land for vegetable cultivation (water quality, demarcation, land use right) · Baseline survey of participant households 	<ul style="list-style-type: none"> · Agreement of project implementation by stakeholders and finding problems related to vegetable production · Final decision of the implementation condition and detailed implementation plan · Understanding of the economic/financial condition of the participant households before project
Activity 2 Vegetable production and marketing	
(1) Vegetable production by landless households (1st cycle)	
<ul style="list-style-type: none"> · Training to participants (workshop style) · Provision of inputs (seed, fertilizer) to the participants · OJT, advice and consultation during the production period · Monitoring of production 	<ul style="list-style-type: none"> · Participants get basic knowledge and techniques of vegetable cultivation. · Five vegetables that inhabitants have intention to grow and that MAS confirm the possibility of cultivation. · Problems to occur during the production period will be solved, and participants get practical knowledge of measures to be taken. · State of production, problems, measures and other condition are recorded and it will be reflected in the second cycle, manual and master plan.
(2) Marketing of the products of the 1st cycle	
<ul style="list-style-type: none"> · Survey of market price fluctuation · Sale of products and estimate of net profit by the participants · OJT, advice and consultation on sales and book keeping · Monitorin of product sales 	<ul style="list-style-type: none"> · Price fluctuation of vegetable in the two markets is recorded and understood. · Participants can clearly understand the net profit of the 1st cycle. · Problems to occur during the sales period can be solved and participants can get practical knowledge of proper measures. · Sales, problems, measures and other sale situation are recorded and will be applied to sales of the 2nd cycle.
(3) Support in the second cultivation by the participants (only to the farm where fresh water is available in the second half of dry season)	
<ul style="list-style-type: none"> · Book keeping by the participants · Purchase of input, do the second cycle production and sale, estimate of the net profit by the participants · OJT, advice and consultation on production, sales and book keeping · Monitoring of production, product sales, fund management 	<ul style="list-style-type: none"> · Participants can understand the cash flow of their own production. · Participants have experience of all cycle of production-sale-getting profit-reinvestment. · Problems to occur during production and sale can be solved and participants can get practical knowledge or proper measures. · Sales, problems, measures and other experiences are recorded and will be reflected in the manual and master plan formulation.
Activity 3 Establishment of sustainable production framework	

<ul style="list-style-type: none"> · Evaluation workshop of all stakeholders · Preparation of the manual focusing on Labutta condition · Extension workshop to public on vegetable cultivation 	<ul style="list-style-type: none"> · All stakeholders understand problems occurred during the pilot project period and their solution, as well as good practice of the participants. · Both basic knowledge and techniques necessary for vegetable cultivation and lessons learnt from the pilot project are compactly compiled in the manual in a understandable way. · Results of the pilot project are summarized and informed to the persons who have interest. And basic knowledge and techniques are distributed to the person who has intention so that they can start or improve vegetable cultivation.
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Appendix 8-5 Output of Vegetable Cultivation Pilot Project

Harvest and proceeds of each participant

PHH num	cucumber				long bean				okra	
	Harvest till April 3rd	Unit	Sale till April 3rd Kyat	Estimate sale till 3 May Kyat	Harvest till April 3rd	Unit	Sale till April 3rd Kyat	Estimate sale till 3 May Kyat	Harvest till April 3rd	Unit
1	200	piece	4,500	4,500	39	bundle	1,950	3,900	515	bundle
2	0	piece	0	0	0	bundle	0	0	0	bundle
3	0	piece	0	0	0	bundle	0	0	300	bundle
4	395	piece	14,650	14,650	61	bundle	4,270	8,540	910	bundle
5	0	piece	0	0	449	bundle	26,200	29,400	122	bundle
6	0	piece	0	0	0	bundle	0	0	0	bundle
7	0	piece	0	0	0	bundle	0	0	0	bundle
8	0	piece	0	0	0	bundle	0	0	0	bundle
9	80	piece	4,000	4,000	10	bundle	400	600	1,130	bundle
11	50	piece	1,000	1,000	0	bundle	0	0	714	bundle
12	60	piece	3,000	3,000	0	bundle	0	0	625	bundle
14	204	piece	9,820	17,490	0	bundle	0	0	30	bundle
15	570	piece	23,900	23,900	254	bundle	14,680	26,360	1,220	bundle
16	574	piece	27,440	27,440	682	bundle	40,280	46,400	3,880	bundle
17	0	piece	0	0	0	bundle	0	0	0	bundle
18	300	piece	12,000	24,000	0	bundle	0	0	300	bundle
19	140	piece	5,300	5,300	377	bundle	22,405	28,675	20	bundle
20	0	piece	0	0	0	bundle	0	0	0	bundle
21	570	piece	15,750	15,750	0	bundle	0	0	1,666	bundle
22	400	piece	10,000	12,000	0	bundle	0	0	0	bundle
23	420	piece	16,500	16,500	0	bundle	0	0	1,535	bundle
24	110	piece	5,000	7,500	0	bundle	0	0	0	bundle
26	105	piece	4,200	4,200	17	bundle	1,700	3,300	1,250	bundle
27	50	piece	1,500	1,500	0	bundle	0	0	575	bundle
28	70	piece	2,800	2,800	404	bundle	22,140	24,735	95	bundle
29	400	piece	12,500	13,250	0	bundle	0	0	70	bundle
30	260	piece	13,300	13,300	0	bundle	0	0	770	bundle
31	415	piece	25,450	28,950	0	bundle	0	0	180	bundle
32	210	piece	10,500	10,500	0	bundle	0	0	3,585	bundle
33	235	piece	5,275	5,275	126	bundle	5,740	9,840	140	bundle
34	60	piece	2,400	2,400	0	bundle	0	0	400	bundle
35	240	piece	9,400	9,400	20	bundle	700	700	1,655	bundle
36	640	piece	22,150	22,650	0	bundle	0	0	1,915	bundle
37	290	piece	13,720	13,720	98	bundle	9,200	10,450	420	bundle
38	0	piece	0	0	0	bundle	0	0	1,600	bundle
39	300	piece	12,500	12,500	0	bundle	0	0	500	bundle
40	190	piece	7,500	8,000	0	bundle	0	0	0	bundle
41	250	piece	11,800	11,800	120	bundle	6,000	10,750	220	bundle
42	300	piece	9,000	9,000	0	bundle	0	0	0	bundle
43	250	piece	10,250	10,250	0	bundle	0	0	75	bundle
44	10	piece	400	400	107	bundle	8,600	13,900	340	bundle
45	100	piece	3,000	3,000	0	bundle	0	0	200	bundle
46	200	piece	7,000	7,000	0	bundle	0	0	0	bundle
47	105	piece	4,200	4,200	0	bundle	0	0	0	bundle
48	125	piece	3,450	3,450	0	bundle	0	0	350	bundle
49	525	piece	19,825	19,825	121	bundle	5,600	9,900	1,240	bundle
50	130	piece	4,550	4,550	140	bundle	8,160	8,360	625	bundle
51	0	piece	0	0	0	bundle	0	0	630	bundle
52	190	piece	7,950	7,950	45	bundle	2,650	4,725	785	bundle
53	55	piece	2,200	2,200	0	bundle	0	0	0	bundle
54	70	piece	2,000	2,750	25	bundle	1,250	2,500	0	bundle
55	260	piece	10,400	10,400	32	bundle	1,600	2,400	1,150	bundle
56	40	piece	1,600	1,600	60	bundle	6,000	12,000	760	bundle
57	60	piece	1,800	1,800	0	bundle	0	0	349	bundle

PHH num	okra		roselle				watercress			
	Sale till April 3rd Kyat	Estimate sale till 3 May Kyat	Harvest till April 3rd	Unit	Sale till April 3rd Kyat	Estimate sale till 3 May Kyat	Harvest till April 3rd	Unit	Sale till April 3rd Kyat	Estimate sale till 3 May Kyat
1	3,055	4,915	3,750	bundle	50,450	55,450	950	bundle	4,400	8,100
2	0	0	500	bundle	7,200	7,200	700	bundle	3,700	3,700
3	2,510	3,795	2,570	bundle	25,290	30,180	1,470	bundle	8,390	12,125
4	5,660	8,825	2,470	bundle	28,260	33,760	3,690	bundle	21,520	23,620
5	1,600	2,640	1,720	bundle	24,430	24,930	2,834	bundle	22,908	22,908
6	0	0	0	bundle	0	0	0	bundle	0	0
7	0	0	915	bundle	10,725	10,725	0	bundle	0	0
8	0	0	700	bundle	6,600	7,700	600	bundle	4,200	5,600
9	6,410	9,240	995	bundle	9,495	12,242	500	bundle	1,900	1,900
11	4,370	6,182	3,200	bundle	33,650	36,725	3,340	bundle	18,490	20,790
12	3,780	4,680	1,550	bundle	17,250	19,475	1,260	bundle	8,880	12,630
14	300	450	2,740	bundle	39,290	42,165	910	bundle	6,430	6,530
15	7,905	10,710	3,400	bundle	45,300	50,700	2,590	bundle	20,000	20,600
16	29,800	37,810	7,230	bundle	92,520	105,320	5,570	bundle	41,550	47,190
17	0	0	0	bundle	0	0	0	bundle	0	0
186*	3,000	6,000	500	bundle	3,000	6,000	660	bundle	3,300	6,300
19	200	200	0	bundle	0	0	0	bundle	0	0
20	0	0	1,890	bundle	17,480	22,380	200	bundle	1,200	2,400
21	10,692	14,782	2,020	bundle	18,160	22,490	1,290	bundle	5,550	7,950
22	0	0	0	bundle	0	0	0	bundle	0	0
23	10,820	15,680	3,130	bundle	36,100	40,800	1,150	bundle	4,800	5,700
24	0	0	1,700	bundle	19,300	21,150	2,000	bundle	9,700	10,200
26	8,400	12,250	2,360	bundle	28,500	32,150	1,450	bundle	6,200	6,200
27	3,760	4,650	700	bundle	10,000	10,500	800	bundle	5,000	5,000
28	475	888	1,800	bundle	19,300	21,250	1,480	bundle	7,090	7,690
29	490	980	175	bundle	2,100	3,150	835	bundle	4,175	7,412
30	7,700	8,700	650	bundle	8,200	8,550	1,050	bundle	7,050	7,675
31	3,700	3,700	395	bundle	2,970	3,645	1,570	bundle	13,300	15,450
32	27,975	34,775	2,440	bundle	23,480	26,540	2,900	bundle	18,600	19,100
33	2,950	2,950	2,470	bundle	32,490	33,165	1,200	bundle	6,300	6,300
34	2,400	2,900	1,600	bundle	18,800	20,800	1,550	bundle	6,600	6,600
35	11,945	12,815	1,260	bundle	11,960	14,510	2,030	bundle	9,850	9,850
36	12,870	17,835	2,245	bundle	27,390	32,630	4,750	bundle	28,350	34,650
37	6,570	7,820	630	bundle	7,510	9,610	100	bundle	5,000	7,500
38	11,600	14,100	850	bundle	10,250	12,250	3,500	bundle	22,000	24,500
39	5,250	6,000	1,100	bundle	11,100	12,350	1,950	bundle	12,000	13,500
40	0	0	890	bundle	8,100	10,200	1,200	bundle	8,200	10,300
41	1,540	1,540	1,930	bundle	22,090	25,590	3,300	bundle	17,400	18,750
42	0	0	1,400	bundle	11,400	12,300	900	bundle	4,200	5,900
43	450	450	1,160	bundle	9,700	10,450	1,900	bundle	11,550	11,850
44	6,010	6,010	205	bundle	2,700	4,050	895	bundle	10,625	11,562
45	2,000	3,000	600	bundle	6,000	8,250	0	bundle	0	0
46	0	0	110	bundle	550	825	330	bundle	990	990
47	0	0	0	bundle	0	0	0	bundle	0	0
48	2,950	4,800	95	bundle	880	1,320	1,590	bundle	8,380	9,630
49	10,740	15,390	1,845	bundle	19,775	27,475	2,710	bundle	23,760	29,470
50	5,585	6,148	670	bundle	8,270	8,470	770	bundle	4,890	6,740
51	3,650	4,775	1,150	bundle	10,400	11,250	595	bundle	2,235	2,272
52	7,480	7,630	1,130	bundle	12,110	16,385	2,720	bundle	19,950	23,950
53	0	0	130	bundle	1,525	1,725	275	bundle	1,275	1,312
54	0	0	1,130	bundle	6,800	11,700	1,550	bundle	7,750	11,625
55	10,700	12,400	1,270	bundle	12,100	13,650	1,100	bundle	5,000	5,250
56	7,430	10,880	580	bundle	4,830	7,305	1,150	bundle	6,300	9,300
57	3,915	4,948	313	bundle	11,710	15,805	411	bundle	15,420	20,478

Appendix 8-6 Result of Market Price Survey

From December 2010 to March 2011, market price of target five vegetables (cucumber, long bean, okra, roselle, and watercress) was surveyed at Konelay market and Ywaynadi market in Labutta Town. Konelay market is open during the night time only and venders do not need to pay market tax while Ywaynadi market is open in the day time and venders need to pay market tax. Generally, villagers sell their produce at Konelay market because they do not want to pay the tax, but selling price is lower than that of Ywaynadi. At every weekend, five venders at each market were interviewed and market price was surveyed.

<Data 1>

Day No	Date of survey	Market	Number of vegetable sellers	Sellers of target vegetables	Day's respondent	Today's selling price, average of five sellers at each market (Kyats)			
						Cucumber	unit	Long bean	unit
1	30.12.10	Konelay	76	25	1				
			76	25	2	30/50/60	piece	50	bundle
			76	25	3	30/45/60	piece		
			76	25	4				
			76	25	5				
		Ywaynadi	38	14	6				
			38	14	7				
			38	14	8	50/60	piece		
			38	14	9				
			38	14	10	80	piece		
2	8.1.11	Konelay	65	36	1	60	piece		
			65	36	2				
			65	36	3			25	bundle
			65	36	4				
			65	36	5			50	bundle
		Ywaynadi	41	26	6	50	piece		
			41	26	7	50/70	piece		
			41	26	8	50/80	piece	20	bundle
			41	26	9	50/80	piece	30	bundle
			41	26	10	60	piece	50	bundle
3	15.1.11	Konelay	71	32	1			30	bundle
			71	32	2	30/50	piece		
			71	32	3				
			71	32	4			25	bundle
			71	32	5	40	piece		
		Ywaynadi	44	20	6	50	piece		
			44	20	7				
			44	20	8	50/60	piece	25	bundle
			44	20	9				
			44	20	10	40/50	piece	30	bundle
4	22.1.11	Konelay	69	27	1	35/45	piece		
			69	27	2			15	bundle
			69	27	3	45	piece	20	bundle
			69	27	4				
			71	32	5	40	piece		
		Ywaynadi	36	19	6			25	bundle
			36	19	7	45	piece	25	bundle
			36	19	8	50	piece		
			36	19	9			30	bundle
			36	19	10			35	bundle
5	29.1.2011	Konelay	74	28	1	50/60	piece	20	bundle
			74	28	2			25	bundle
			74	28	3	45/55	piece	20	bundle

Day No	Date of survey	Market	Number of vegetable sellers	Number of target vegetable sellers	Day's respondent	Today's selling price, average of five sellers at each market (Kyats)			
						Cucumber	unit	Long bean	unit
5	29.1.2011	Konelay	74	28	4			20	bundle
			74	28	5	50/60	piece	20	bundle
		Ywaynadi	41	16	6	50/60	piece	25	bundle
			41	16	7			25	bundle
			41	16	8	50/60	piece		
			41	16	9			20	bundle
41	16	10	60	piece					
6	5.2.2011	Konelay	79	32	1	40/50	piece		
			79	32	2				
			79	32	3	35/45	piece	18	bundle
			79	32	4			20	bundle
			79	32	5	40	piece		
		Ywaynadi	46	18	6	40/50	piece	20	bundle
			46	18	7			20	bundle
			46	18	8	40/50	piece		
			46	18	9			20	bundle
			46	18	10	45	piece		
7	12.2.2011	Konelay	68	35	1	30/40		30	bundle
			68	35	2	35/40	piece		
			68	35	3	30/35	piece		
			68	35	4	30	piece		
			68	35	5	35	piece	25	bundle
		Ywaynadi	44	21	6	35	piece	30	bundle
			44	21	7			25	bundle
			44	21	8	30	piece	25	bundle
			44	21	9			20	bundle
			44	21	10	40	piece	30	bundle
8	19.2.2011	Konelay	74	30	1	45	piece		
			74	30	2			13	bundle
			74	30	3			14	bundle
			74	30	4			15	bundle
			74	30	5			14	bundle
		Ywaynadi	41	15	6	50	piece	15	bundle
			41	15	7			25	bundle
			41	15	8	60	piece		
			41	15	9	50	piece	15	bundle
			41	15	10			20	bundle
9	26.2.2011	Konelay	81	27	1			12	bundle
			81	27	2	40	piece		
			81	27	3	45	piece		
			81	27	4				
			81	27	5	40	piece		
		Ywaynadi	45	19	6	50	piece		
			45	19	7	40	piece	20	bundle
			45	19	8				
			45	19	9	60	piece	15	bundle
			45	19	10	50	piece		
10	5.3.2011	Konelay	95	34	1				
			95	34	2	50	piece		
			95	34	3			25	bundle
			95	34	4	45	piece		
			95	34	5				
		Ywaynadi	42	17	6				
			42	17	7	40	piece	25	bundle
			42	17	8			30	bundle
			42	17	9	45	piece	25	bundle

Day No	Date of survey	Market	Number of vegetable sellers	Number of target vegetable sellers	Day's respondent	Today's selling price, average of five sellers at each market (Kyats)			
						Cucumber	unit	Long bean	unit
10	5.3.2011	Ywaynadi	42	17	10	40	piece		
11	12.3.2011	Konelay	86	31	1				
			86	31	2			20	bundle
			86	31	3	30	piece		
			86	31	4				
			86	31	5				
		Ywaynadi	39	18	6				
			39	18	7	35	piece	35	bundle
			39	18	8			25	bundle
			39	18	9	25	piece	25	bundle
			39	18	10	45	piece		
12	19.3.2011	Konelay	94	32	1				
			94	32	2				
			94	32	3			15	bundle
			94	32	4				
			94	32	5				
		Ywaynadi	35	17	6				
			35	17	7	30/40	piece		
			35	17	8			20	bundle
			35	17	9			25	bundle
			35	17	10	35	piece		

<Page 2>

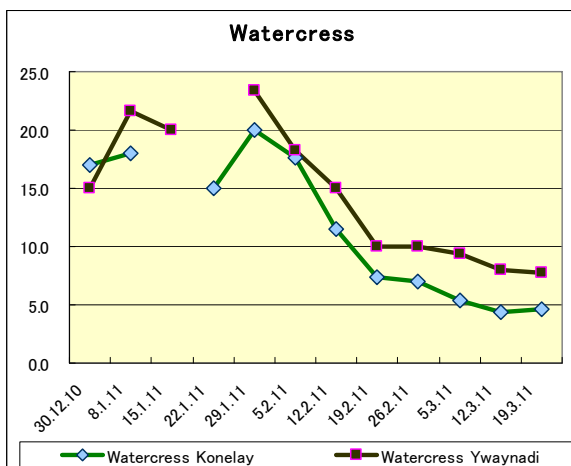
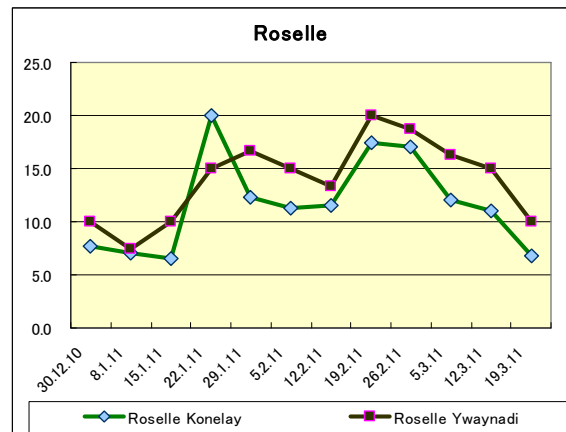
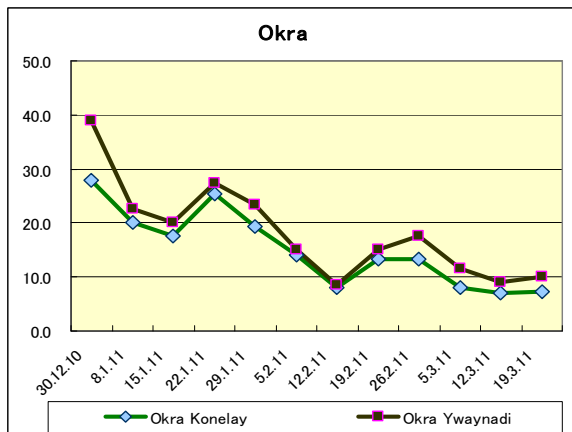
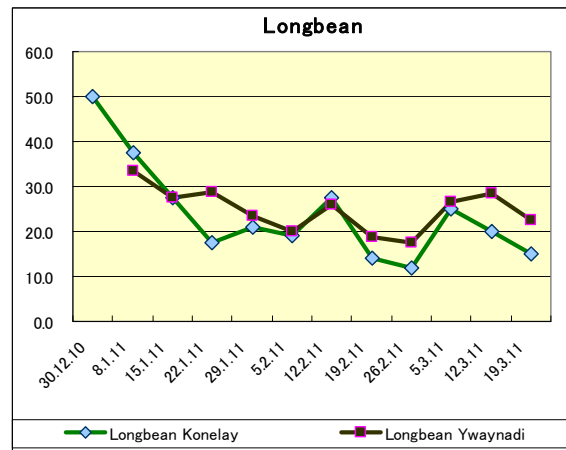
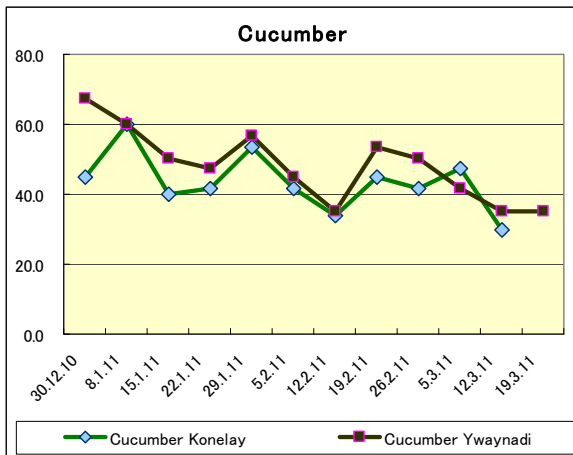
Day No	Date of survey	Market	Day's respondent	Today's selling price, average of five sellers at each market (Kyats)					
				Okra	unit	Roselle	unit	Watercress	unit
1	30.12.10	Konelay	1			8	bundle	15	bundle
			2			7	bundle		
			3						
			4	28	bundle			19	bundle
			5			8	bundle		
		Ywaynadi	6			10	bundle		
			7			10	bundle	15	bundle
			8			10	bundle		
			9	33	bundle	10	bundle		
			10	40/50	bundle	10	bundle		
2	8.1.11	Konelay	1						
			2	20	bundle				
			3						
			4					18	bundle
			5			7	bundle		
		Ywaynadi	6			10	bundle	20	bundle
			7					25	bundle
			8			10	bundle	20	bundle
			9	25	bundle				
			10	20	bundle	10	bundle		
3	15.1.11	Konelay	1			8	bundle		
			2						
			3	15	bundle	5	bundle		
			4	20	bundle				
			5						
		Ywaynadi	6					15	bundle
			7			10	bundle	15	bundle
			8						
			9	20	bundle	10	bundle		

Day No	Date of survey	Market	Day's respondent	Today's selling price, average of five sellers at each market (Kyats)					
				Okra	unit	Roselle	unit	Watercress	unit
3	15.1.11	Ywaynadi	10					10	bundle
4	22.1.11	Konelay	1						
			2	25	bundle				
			3						
			4	26	bundle			15	bundle
			5			20	bundle		
		Ywaynadi	6					15	bundle
			7			15	bundle		
			8	30	bundle				
			9			15	bundle		
			10	25	bundle	15	bundle		
5	29.1.2011	Konelay	1						
			2	20	bundle	12	bundle		
			3	20	bundle				
			4	18	bundle	10	bundle	20	bundle
			5			15	bundle		
		Ywaynadi	6			15	bundle		
			7	20	bundle	15	bundle	25	bundle
			8					20	bundle
			9	25	bundle	20	bundle	25	bundle
			10	25	bundle				
6	5.2.2011	Konelay	1					15	bundle
			2	10	bundle	12	bundle		
			3						
			4	18	bundle	10	bundle	20	bundle
			5			12	bundle	18	bundle
		Ywaynadi	6					18	bundle
			7	15	bundle			20	bundle
			8	15	bundle	15	bundle	15	bundle
			9	15	bundle	15	bundle	20	bundle
			10	15	bundle	15	bundle		
7	12.2.2011	Konelay	1			12	bundle		
			2					10	bundle
			3	8	bundle	12	bundle	14	bundle
			4			10	bundle	12	bundle
			5			12	bundle	10	bundle
		Ywaynadi	6					15	bundle
			7	10	bundle	15	bundle		
			8	7	bundle			15	bundle
			9			15	bundle	15	bundle
			10			10	bundle		
8	19.2.2011	Konelay	1			18	bundle	8	bundle
			2	14	bundle	17	bundle		
			3	13	bundle	18	bundle		
			4	13	bundle	17	bundle	7	bundle
			5	13	bundle	17	bundle	7	bundle
		Ywaynadi	6					10	bundle
			7	15	bundle	20	bundle		
			8			20	bundle	10	bundle
			9			20	bundle	10	bundle
			10	15	bundle	20	bundle	10	bundle
9	26.2.2011	Konelay	1	15	bundle	17	bundle		
			2			18	bundle	6	bundle
			3	12	bundle	15	bundle		
			4			18	bundle	8	bundle
			5	13	bundle	17	bundle	7	bundle
		Ywaynadi	6			20	bundle	10	bundle

Day No	Date of survey	Market	Day's respondent	Today's selling price, average of five sellers at each market (Kyats)					
				Okra	unit	Roselle	unit	Watercress	unit
9	26.2.2011	Ywaynadi	7			15	bundle	10	bundle
			8	15	bundle	20	bundle	10	bundle
			9						
			10	20	bundle	20	bundle		
10	5.3.2011	Konelay	1	7	bundle	10	bundle	6	bundle
			2	7	bundle	12	bundle	5	bundle
			3	8	bundle	12	bundle		
			4	8	bundle	13	bundle	5	bundle
			5	10	bundle	13	bundle		
		Ywaynadi	6	10	bundle	15	bundle	8	bundle
			7			20	bundle	10	bundle
			8	10	bundle	15	bundle		
			9					10	bundle
			10	15	bundle	15	bundle		
11	12.3.2011	Konelay	1	8	bundle	10	bundle	4	bundle
			2	6	bundle	10	bundle		
			3	5	bundle			4	bundle
			4	8	bundle	12	bundle		
			5	8	bundle	12	bundle	5	bundle
		Ywaynadi	6	8	bundle	15	bundle	8	bundle
			7			15	bundle		
			8			15	bundle		
			9					8	bundle
			10	10	bundle	15	bundle		
12	19.3.2011	Konelay	1			4	bundle	3	bundle
			2	7	bundle	8	bundle	5	bundle
			3	8	bundle	6	bundle		
			4			8	bundle	6	bundle
			5	7	bundle	8	bundle		
		Ywaynadi	6			10	bundle	7	bundle
			7			10	bundle	10	bundle
			8			10	bundle	7	bundle
			9					10	bundle
			10	10	bundle			5	bundle

<Price fluctuation>

Price of five vegetables fluctuated during the market survey period. Following graphs shows up-down of the price of one sales unit (one piece for cucumber, one bundle for other vegetables) from the end of December 2010 to 19th March 2011. It is found that generally unit price went down in this period. One problem was found that the amount of 'one bundle' is not fixed.



Appendix 8-7 Result of SWOT Analysis

Result of the SWOT analysis of two sites is summarized in the following table.

(1) Participants in Khauk Hmaw village tract

Strength	Weakness
<ul style="list-style-type: none"> ⊖ Cropping plot is located near to water source ⊖ Cropping plot is located near to home ⊖ Enough labor force for taking care of vegetables. ⊖ Able to control of pest and diseases on roselle in time ⊖ Able to apply good cultural practices. ⊖ Could do early harvesting and it brought much profit. 	<ul style="list-style-type: none"> ◦ Vegetable plots are far from water source. ◦ Starting time was late, as paddies are harvested late. ◦ Lack of family labor ◦ Busy for daily income work as casual labor in other village and could not take enough care of vegetables. ◦ Lack of previous experience and knowledge, especially cucumber and long bean. ◦ Could not attend technical training. ◦ Have no chemical sprayer, so I could not control pest and diseases in time. ◦ My crop was at poor productivity. ◦ Late starting caused low selling price. ◦ Did not fetch good price, especially in water cress and roselle
Opportunity	Threats
<ul style="list-style-type: none"> ⊛ Land right holders (farmer) planted short-term rice variety so I could start earlier. ⊛ Borrowed land without payment for vegetable cultivation. ⊛ JICA team provided input. ⊛ JICA team taught Improved in knowledge and technology. I will apply them in future. 	<ul style="list-style-type: none"> ⊛ Unexpected raining during vegetable cultivation. ⊛ Severe pest and disease infestation. ⊛ Cattle penetrated into the vegetable farm. ⊛ Lack of public transportation facility to sell vegetables in market ⊛ This village is far from market place

(2) Participants in Labutta Loke South village tract

Strength	Weakness
<ul style="list-style-type: none"> ⊖ Cultivated plot is close to house, so cattle and thieves can not be disturbed. ⊖ Enough family labor for vegetable cultivation. ⊖ Having past experience of vegetable growing ⊖ Improved in knowledge and technology ⊖ Getting higher price due to early planting and harvesting. 	<ul style="list-style-type: none"> ⊕ Cropping plots are far from resident. I faced with destructions by cattle grazing in the field. ⊕ Late start of planting due to the long-term rice variety harvest and casual works. ⊕ Family labor became available for vegetable growing was too late due to paddy farming and harvesting works. ⊕ Few family labor force in vegetable growing ⊕ Absent of own sprayer and improper application of pesticides ⊕ Weak in technology due to absent at training ⊕ Crop damaged by inappropriate application of Potash fertilizer ⊕ Not got sufficient pesticides. ⊕ Got insufficient amount of urea fertilizer ⊕ Did not fetch good price for vegetables due to high supply into the market place by project participants.
Opportunity	Threats
<ul style="list-style-type: none"> ⊛ Able to get land without payment for vegetable cultivation ⊛ Availability of fresh water year round ⊛ Good germination percentage in all vegetable provided seeds ⊛ The village is easily accessible to market 	<ul style="list-style-type: none"> ⊛ Crops are damaged due to unexpected rain during vegetable cultivation. ⊛ Soil was not good for vegetables (sandy and poor soil) ⊛ Insufficient water at sandy soil condition ⊛ Frequent pest and disease occurrence this year due to erratic weather condition: very high temperature and frequent rain and winds.

A8-8 Crop and Farm Budget of Development Project

A8-8 (1/2) Crop Budget of Four Vegetables

Long yard bean (pole type)								Okra								
Item			Unit Price	unit	Quantity	Total Cost	Source	item			Unit Price	unit	Quantity	Total Cost	Source	
Cost Kyat/0.025ac	Seed		7,000	/kg	0.1125	788	A	Cost Kyat/0.025 ac	Seed		6,000	/kg	0.1875	1,125	A	
	Fertilizer					2,240			Fertilizer						2,435	
	-	Urea	460	/Kg	2.55	1,173	A		-	Urea	460	/Kg	2.55	1,173	A	
	-	T-Super	480	/Kg	1.275	612	A		-	T-Super	480	/Kg	1.275	612	A	
	-	Potash	520	/Kg	0.875	455	B		-	Potash	520	/Kg	1.25	650	B	
	-	Organic (Cow Dung)	50	/Kg	0	0	B		-	Organic (Cow Dung)	50	/Kg	0	0	B	
	Agrochemicals					2,700			Agrochemicals						750	
	-	Pesticide (Kyat)	24,000	/set	0.025	600	C		-	Pesticide (Kyat)	24,000	/set	0.025	600	C	
	-	Fungicide (Kyat)	84,000	/set	0.025	2,100	C		-	Fungicide (Kyat)	6,000	/set	0.025	150	C	
	Transportation		4,987	/set	0.025	125			Transportation		13,329	/set	0.025	333		
	Sub-Total					5,852			Sub-Total						4,643	
Physical Contingency (5%)					293		Physical Contingency (5%)						232			
Sub-Total					6,145		Sub-Total						4,875			
Yield				kg/0.025acre	50	A & C	Yield				kg/0.025acre	97.5	A & C			
Loss					0.9		Loss					0.9				
Net Yield				kg/0.025acre	45		Net Yield				kg/0.025acre	87.75				
Farm gate price			Kyat/kg	496	C		Farm gate price			Kyat/kg	127.5	C				
Gross return			kyat/0.025ac	22,302			Gross return			kyat/0.025ac	11,188					
Net return			kyat/0.025ac	16,157			Net return			kyat/0.025ac	6,313					
Roselle								Watercress								
Item			Unit Price	unit	Quantity	Total Cost	Source	Item			Unit Price	Unit	Quantity	Total Cost	Source	
Cost Kyat/0.025ac	Seed		600	/kg	0.05	30	A	Cost Kyat/0.025ac	Seed		3,000	/kg	0.05	150	A	
	Fertilizer					2,123			Fertilizer						1,798	

-	Urea	460	/Kg	2.55	1,173	A	-	Urea	460	/Kg	2.55	1,173	A
-	T-Super	480	/Kg	0.625	300	A	-	T-Super	480	/Kg	0.625	300	A
-	Potash	520	/Kg	1.25	650	B	-	Potash	520	/Kg	0.625	325	B
-	Organic (Cow Dung)	50	/Kg	0	0	B	-	Organic (Cow Dung)	50	/Kg	0	-	B
Agrochemicals					113		Agrochemicals					113	
-	Pesticide (Kyat)	1500	/set	0.025	38	C	-	Pesticide (Kyat)	1,500	/set	0.025	38	C
-	Fungicide (Kyat)	3000	/set	0.025	75	C	-	Fungicide (Kyat)	3,000	/set	0.025	75	C
Transportation		14937	/set	0.025	373		Transportation		13,352	/set	0.025	334	
Sub-Total					2,639		Sub-Total					2,394	
Physical Contingency (5%)					132		Physical Contingency (5%)					120	
Sub-Total					2,771		Sub-Total					2,514	
Yield			kg/0.025acre	50	A & C	Yield			kg/0.025acre	50	A & C		
Loss				0.9		Loss				0.9			
Net Yield			kg/0.025acre	45		Net Yield			kg/0.025acre	45			
Farm gate price				143	C	Farm gate price				128	C		
Gross return			kyat/0.025ac	6,419		Gross return			kyat/0.025ac	5,739			
Net return			kyat/0.025ac	3,648		Net return			kyat/0.025ac	3,225			

Note: A : "Cultivation methods of vegetables in Myanmar", MAS

B: Revision of "Cultivation methods of vegetables in Myanmar", MAS

C: Pilot Project

A8-8 (2/2) Farm Budget of Pig Raising (Breeding and Fattening)

Breeding (for 6 breeding households of four year cycle)

Unit: Kyat

Item	Unit Price		1st Year		2nd Year		3rd Year		4th Year		4 year cycle
			Q	Cost	Q	Cost	Q	Cost	Q	Cost	
Cost											
Pig house	30,000	/set	6.0	180,000	0.0	0	0.0	0	0.0	0	
Piglet	20,000	/head	7.0	140,000	0.0	0	0.0	0	0.0	0	
Feed	150	/set	2,327	349,050	8,091	1,213,650	9,207	1,381,050	5,306	795,938	
Vaccines	1,000	/set	12.0	12,000	12.0	12,000	12.0	12,000	12.0	12,000	
sub-total				681,050		1,225,650		1,393,050		807,938	4,107,688
Physical Contingency (5%)				34,053		61,283		69,653		40,397	205,384
Total Cost				715,103		1,286,933		1,462,703		848,335	4,313,072
Nos.of Head (Piglet)						32		40		60	
Price / Head						20,000		20,000		20,000	
Sub Total				0		640,000		800,000		1,200,000	
Nos.of Head (Medium)						32		40		20	
Price / Head						60,000		60,000		60,000	
Sub Total				0		1,920,000		2,400,000		1,200,000	
Nos.of Head (Parent)										6	
Price / Head										100,000	
Sub Total				0		0		0		600,000	
Gross Income				0		2,560,000		3,200,000		3,000,000	8,760,000
Net Income				-715,103		1,273,068		1,737,298		2,151,665	4,446,928

Per household

Unit: Kyat

Item	1st year	2nd year	3rd year	4th year	4 year cycle
Cost	119,184	214,489	243,784	141,389	718,845
Gross Income	0	426,667	533,333	500,000	1,460,000
Net Income	-119,184	212,178	289,550	358,611	741,155

(1) Fattening (for 10 feeding households)

Unit: Kyat

Item	Unit Price		1st Year		2nd Year		3rd Year		4th Year		4 year cycle
			Q	Total Cost	Q	Total Cost	Q	Total Cost	Q	Total Cost	
Cost											
Pig house	30,000	/set	10	300,000	0	0	0	0	0	0	
Piglet	20,000	/head	10	200,000	10	200,000	10	200,000	10	200,000	
Feed	150	/set	3,716	557,438	3,716	557,438	3,716	557,438	3,716	557,438	
Vaccine	1,000	/set	20	20,000	20	20,000	20	20,000	20	20,000	
sub-total				1,077,438		777,438		777,438		777,438	3,409,752
Physical Contingency (5%)				53,872		38,872		38,872		38,872	
Total Cost				1,131,310		816,310		816,310		816,310	3,580,240
Nos.of Head (adult)				8		8		8		8	
Price / Head				225,000		225,000		225,000		225,000	
Gross Income				1,800,000		1,800,000		1,800,000		1,800,000	7,200,000
Net Income				668,690		983,690		983,690		983,690	3,619,760

Per household

Unit: Kyat

Item	1st year	2nd year	3rd year	4th year	4 year cycle
Cost	113,131	81,631	81,631	81,631	358,024
Gross Income	180,000	180,000	180,000	180,000	720,000
Net Income	66,869	98,369	98,369	98,369	361,976

(2) Pig raising sub-project total (for a pig raising unit of sixteen households)

Unit: Kyat

Item	1st Year	2nd Year	3rd Year	4th Year	4 year cycle
Cost	1,846,412	2,103,242	2,279,012	1,664,645	7,893,312
Gross Income	1,800,000	4,360,000	5,000,000	4,800,000	15,960,000
Net Income	-46,412	2,256,758	2,720,988	3,135,355	8,066,688

APPENDIX 9

MANGROVE WINDBREAK

APPENDIX 9

Mangrove Windbreak

	<u>Page</u>
A9-1 Results of Field Investigation for Mangrove Trees at 34 Polders.....	A9-1

A9-1 Results of Field Investigation for Mangrove Trees at 34 Polders

1. Alegyun (1) Polder

In the total length of 13.4 miles of the polder, about 0.1 miles along Gwe Chaung creek, near Sinthe sluice is lack of mangrove tree. Inside this part of the polder, between Sinthe sluice and Aung Khine Sluice, there are many prawn ponds. Some boundaries of the ponds are higher than the polder and the polder was also damaged.

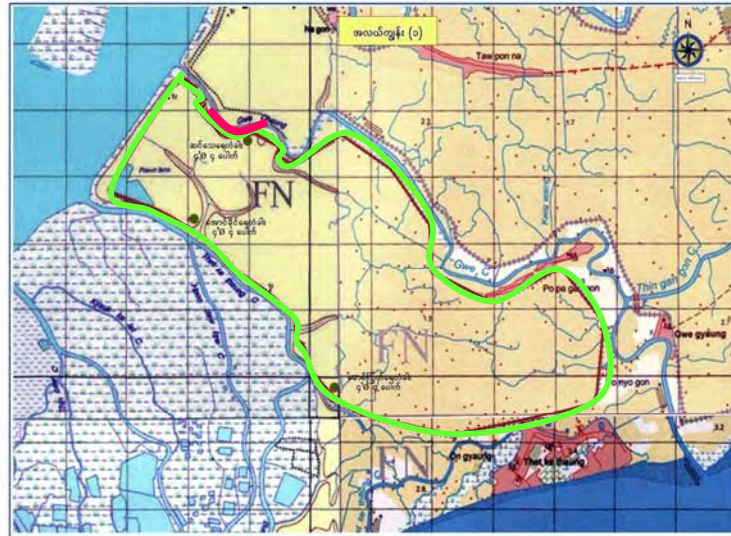


Fig (1): Alegyun (1) Polder

Beside Ngawon River, many large mangrove trees such as *Avicennia officinal* (Thamae), *Sonneratia* trees and *Sonneratia apetala* (Kanbalar) are found. Nipa palms, AO and some natural vegetation are found in other parts of the polder.

2. Alegyun (2)

About 2.5 miles out of the total length 22.7 miles is lack of mangrove trees around the polder.

About 1 mile besides Thetke Thaung River, about 0.1 miles besides Nga Won River and about 1 mile beside Pyun Wa Creek (shown in the figure) are seriously needed to rehabilitate because the rivers are wide and the polder is close to the rivers (about 50-100 feet distance between the polder and the river).

3. Alegyun(3) Polder

This is situated beside the Thet Ke Thaung River. In the total length of 18 miles, about 10 miles (especially at the side of the river) needs to rehabilitate mangrove trees.

About 100 ft to 150 ft between the polder and the river was founded and at the side of the creek, about 300 ft to 700 ft between the polder and the creek.

4. Magyibinmadaukkan

The polder on the map is wrong location and it is corrected by blue color line.

In the total length of 3.4 miles, about 1.4 miles needs to rehabilitate mangrove trees. In some parts of the polder, sun drying salt making is also founded.

5. Thingangyi

The locations of the polders are wound on the map. We went around the polder as shown in the figure (5) and the polder area is also corrected by blue color line. Thingangyi polder was recently re-established. There are no mangrove trees around Thingangyi Polder but the distance between the Polder and Ywe River is too far. However, the polder is near the mouth of Ywe River to the Sea.

6. Leikkwin

Leikkwin polder (3.75 kiles in length) is now covered by the communication road (from Labutta to Pyinsalu). It lies parallel to the creek and Zinywe polder. Nipa trees and small vegetation are found along the creek.

7. Zinywe

Zinywe Polder lies in the East of the creek which parallel to Leikkwin polder (now covered by communication road). Nipa trees and small vegetation are found along the creek.

8. Labutta (South)

Out of 20.5 miles in total length of the polder and 0.5 miles along Ywe River, about 0.25 miles along Thet Ka Thaug River, there is no mangrove tree. Besides Ywe River, the polder is too close to the river and it is almost eroded.

9. Labutta (North)

Almost all the Polder is covered with Mangrove trees. It was observed that about 1.5 miles along the polder near Mayan (North) and near Phoe Pe sluice is lack of Mangrove tree. The project rehabilitated mangrove trees near Damin Chaungalay village.

10. U Gaung Pu

The whole polder is covered by Mangrove trees and almost all Mangrove trees were not damage by Nargis.

11. Bitud Island (1)

There are no mangrove trees at about 3 miles along Pyan Ma Law River, about 0.1 miles along Ka Ka Yan River and about 0.1 miles besides the canal which connect Ka Ka Yan River and Bitud Creek in Bitud Island (1). Lack of Mangrove trees along Pyan Ma Law River can be seriously damage to the polder.

On the other parts along the polder, large mangrove trees such as Avicennia officinal (Thamae), Sonneratia trees, Sonneratia apetala (Kanbalar) and Nipa trees along Bitud creek are found.

12. Bitud Island (2)

It was observed that about 8 miles length of the polder areas is needed to rehabilitate.

From Htonebukya Sluice to Kyaingchaung sluice, the polder is far from the river bank (about 1500 ft). It is also observed that Nipa farm commercially cultivated by the villagers (about one mile) near Kyein gyaung village.

13. Bitud Island (3)

In Bitud Island (3) Polder, About 30% (nearly 10 miles) of the polder is lack of mangrove tree. At about 5 miles besides Pyan Ma Law River and Bitud Ka Lay Creek, it is seriously needed to rehabilitate mangrove trees. Lack of Mangrove trees along Pyan Ma Law River is since before Nargis and these areas are severely affected by cyclone Nargis.

In other parts along Bitud Gyi and Bitud Ka Lay creeks, though the polder is close to the creeks (average about 100-150 feet), the creeks are not too wide. In some parts of the polder, just small mangrove trees such as Nipa and natural vegetation are scarily found.

14. Bitud Island (4)

Over 50% of the length of the polder is needed to rehabilitate (about 25 Miles), especially at the side of the river. Near the Katipar Sluice, the polder is only 40 ft far from the creek. Near Chaukchaung village, it is about 80 ft far from the polder.

From Po Gwe lay Sluice to Kakayan Sluice, there is no Mangrove trees and it was observed that only 100 ft to 150 ft far from the river bank.

15. Daunggyi Polder (3/4/2011, 3/5/2011)

In the total length of 37 miles, over 7 miles length needs to rehabilitate mangrove trees. Some parts of the polder have been collapsed year by year by erosion especially in the rainy seasons.

From Kyone Kaw sluice to U Ni Zu village, there is no mangrove tree along the polder but the creek near the polder is narrow and a bit far from the polder. Paddy fields are also in both sides of the polder.

16. Daunggyi (East) Polder (3/6/2011)

From U Ni Zu village to Yatphayon Sluice, There are many Nipa trees along the polder which are maintained by farmers. The creeks besides the polder are also narrow. On other side of the polder, there are paddy fields.

17. Daunggyi (West) Polder (3/8/2011)

Filed investigation covered about $\frac{3}{4}$ of the polder. It was found that Mangrove trees (Nipa and some Sonneratia trees) are grown between the river and the polder along the whole polder. There are many Nipa farms nearby villages that grown commercially.

18. Daunggyi (Upper) Polder (3/9/2011)

Daunggyi Upper Polder is also covered with Nipa trees and there are many Nipa farm along the polder. Only a small part of the polder (about 0.2 miles), near Sakhangyi village is lack of Mangrove tree.

19. Daw Nyein Polder

Nipa trees and wild vegetations were observed from Myoe Gone village to Sitkalde sluide. Other large mangrove trees and wild vegetation were found from Sitkalde sluide to Pet Pye village beside the sea. Nipa trees are found along the other parts of the polder until Myo gon village. Because of Nargis, almost Mangrove trees and wild vegetation were damaged and recovered by their Nature.

20. Myo Gone Polder

Myo Gone Polder lies in land areas and it was found that Natural vegetative areas along the polder were substituted with paddy cultivation.

Along the polder between Awa Kwin Sluice and at the side of Dedalu polder, Nipa trees were found. Some Nipa trees were also found the other parts of the polder between the river and the polder.

21. Kyetphamwezaung Polder

Kyetphamwezaung Polder is also situated in land areas and the polder is far from the stream or river.

Mangrove trees between Balar Sluice and Warchaung Sluice were damaged by Nargis and some large trees were degraded by the use of firewood. Other parts of the polder are covered by Nipa trees and some Sonneratia trees.

22. Banbwezu Polder

From A Pyaung ta mar village to Kyonethu Sluice, there is no mangrove tree but some Nipa farms, orchards such as banana, coconut, etc and paddy fields were found.

Mangrove tree was not found along the polder since before Nargis, except some Nipa farms owned by the farmers. However, the polder is quite far from the rivers.

23. Daydalu Polder

From Bawdima Sluice to Shwe Hle Kyin village, these are village household areas along the polder. Only Nipa trees are found between the Kyone Kaw creek and the polder from Hpo Su Kyaung up to Bawdima Sluice. Natural vegetations are found other side of the polder.

24. Letpanbin Polder

Letpanbin Polder is near the sea and there are many fishermen outside the polder at the side of the sea. Accordingly, Nipa and other wild vegetations are abundantly found. Almost all mangrove trees were damaged by Nargis but now recovery by their nature.

25. Zinbaung Polder

Zinbaung Polder is close to the sea. Nipa trees are found around the polder between Phayarkalay Sluice and Zinbaung Sluices.

On the other part of the polder which related to the sea, there are fishermen and Natural vegetations are found.

26. Myaseinkan Polder

Myaseinkan polder situated besides the sea. About 1.5 miles of the total length of 13.5 miles are lack of mangrove trees. Therefore, the polder is seriously affected by sea water and wind without mangrove trees. Other 12.1 miles is covered by mangrove trees such as Nipa and other wild vegetation.

Mangrove rehabilitation has not carried out by any organization.

27. Thandi Polder

About 1.5 miles of the polder is lack of mangrove trees between the polder and the river. Inside the polder are the paddy fields. Since the river is not too wide, the damage of polder due to lack of mangrove is not occurred.

28. Suclubbaluma Polder

Suclubbaluma polder situates besides Thandi River and at the mouth of the sea. About 1 mile (from to) of the polder is lack of mangrove trees. Almost all Nipa trees were damaged by Nargis but these were recovered by their Nature. About 10% of large trees were destroyed by Nargis and so far, any organization has not rehabilitated them.

29. Hleseik chaunggyi Polder

Hleseik Chaunggyi Polder prevents salt water intrusion from Hmaw Be River and Thandi River. About 3 miles of the total 7.4 miles polder has no mangrove trees. Nipa trees, Lamu and are growing along the other parts of the polder.

30. Tamatakaw Polder

Tamatakaw Polder lies besides Toe River and at the mouth of the sea. There is no mangrove tree along the polder of the total 7 miles in length. But there is a wide plain of sand between the polder and the sea.

31. Kyonsoat Polder

Kyonsoat Polder continues Tamatakaw Polder, which lies besides Toe River. About 2.4 miles of the total 4.4 miles in length of the polder is lack of Mangrove trees even Nipa trees.

32. Maubin Island (North)

In this polder, from Hlaing Ta to Yone Daunt , without Mangrove trees, because of this portion used for transportation and live the villagers along this polder portion both side. Other portion of Maubin Island polder (North) have some Mangrove trees. But 50% damage by Nargis Cyclone . Without rebilibtation activities by organization.

33. Maubin Island (South)

Around this polder without Mangrove trees, because of the villagers live in around this polder. Without rehabilitation activities by organization.

34. Thonegwa Kyun Polder

The half of this polder without Mangrove trees, because of the villagers houses along the polder. This is from Su Ga Nan village to THa Ma Pye village. Moreover, some parts of this polder situated at farm are without mangrove trees. Other portion of Thonegwa Kyun polder from Tha Ma Pye to Lay Lan Pin have some Mangrove trees. But, this Mangrove trees is 75% damage by Nargis Cyclone in 2008. Without rehabilitation activities by organization.

APPENDIX 10
ENVIRONMENTAL EXAMINATION

APPENDIX 10

Environmental Examination

	<u>Page</u>
A10-1 Questionnaire for Environmental Impact on Embankment Work.....	A10-1
A10-2 Results of Interview Survey to Farmers who affected due to Land Acquisition.....	A10-2
A10-3 Situation of Resettled People due to Embankment Work.....	A10-4

Questionnaire for Environmental Impact on Embankment Work

Village Name: _____, Labutta Township Serial No. _____

Date: _____ Interviewer: _____

1. Name : U / Daw _____
2. Age : _____
3. Number of family members: _____
4. Occupation / Income Source : 1) _____ 2) _____ 3) _____
(If the interviewee has plural income sources, please specify in order.)
5. Do you know that the area within 50 feet from the toe is prohibited to cultivate and to build houses for the safety? Yes No
6. How many acres of your farmland in total did you have before the embankment works?
_____Acres
7. Was/is your farmland acquired for the embankment works?
Yes No If yes, how many acres of farmland did/will you provide? _____Acres
8. If yes in the Q9, were/are you compensated for the land acquisition?
Yes No If yes, how were you compensated?
1) Cash _____Kyat 2) In kind (e.g. seed) _____
3) Others _____
(Please specify the material and its quantity)
(Please specify)
9. If yes in the Q9, did you take any explanation about the embankment works beforehand?
Yes No If yes, (1) when did you get the information?

If yes, (2) how did you get the information?

10. If yes in the Q9, how do you think about the land acquisition?
1) It is inevitable for the safety and public interest in spite of no compensation ,
2) It is inevitable for the safety and public interest, however, any sympathy/compensation is needed ,
3) It is inevitable for the safety and public interest, however, the provided compensation is not sufficient
4) Others (please specify) _____
11. If you selected 2) or 3) in the Q12, what kinds of supports are desirable for you to compensate the impacts caused by the embankment works?

Thank you very much.

A10-2 Results of Interview Survey to Farmers who affected due to Land Acquisition

Village Tract	Village	Str No.	Q2	Q3	Q4			Q5	Q6	Q7		Q8		Q9		Q10	Q11
					1	2	3			Y/N	if yes,	Y/N	if yes,	Y/N	When		
Labutta loka (S)	Labutta loat (S)	1	50	6	F		Yes	15	Yes	1.5	No	No	No		2	Famland	
Labutta loka (S)	Labutta loat (S)	2	58	3	F	H	Yes	7	Yes	0.5	No	Yes	1 month before	by ID staff	1		
Labutta loka (S)	Labutta loat (S)	3	53	3	F		Yes	14	Yes	2	No	Yes	1 month before	by ID staff	2	Famland	
Labutta loka (S)	Kan Ba Lar	4	32	3	F		No	10	Yes	2	No	No	a few days before		2	Cash/ 200,000 kyat/acre	
Labutta loka (S)	Kan Ba Lar	5	40	4	F		No	10	Yes	1.5	No	No	a few days before	by neighbours	2	300,000 kyat/acre	
Labutta loka (S)	Kan Ba Lar	6	72	4	F		No	9	Yes	2	No	No	a few days before	by ID staff	2	Cash, as the price of farmland	
Labutta loka (S)	Kyein Chaung	7	63	6	F	H	No	20	Yes	1	No	No	1 month before	by project staff	2	Famland	
Labutta loka (S)	Kyein Chaung	8	47	3	F		Yes	13	Yes	1.5	No	Yes	1 month before	by ID staff	1		
Labutta loka (S)	Kyein Chaung	9	50	3	F	H	No	12	Yes	1.5	No	No	a few days before	by ID staff	1		
Labutta loka (S)	Kyein Chaung	10	45	5	F	H	Yes	8	Yes	2.5	No	No	3 days before	by ID staff	2	Famland OR Cash	
Labutta loka (S)	Kyein Chaung	11	32	5	F	L	No	10	Yes	3	No	No			1		
Labutta loka (S)	Kyein Chaung	12	58	2	F		No	10	Yes	2	No	No			1		
Labutta loka (S)	Kyein Chaung	13	49	4	F		Yes	8	Yes	1	No	Yes	10 days before	by ID staff	1	Farm machine or seed for summer crop	
Sargyin	Sargyin	14	39	4	F	Fishery	Yes	17	Yes	3.5	No	No			2	Farm machine or seed for summer crop	
Sargyin	Sargyin	15	56	5	F	H	Yes	20	Yes	0.5	No	No			1		
Sargyin	Sargyin	16	52	4	F		Yes	23	Yes	2.5	No	No			1		
Sargyin	Sargyin	17	43	3	F		Yes	20	Yes	4	No	No			2	Farm machine and Technology to grow summer crops	
Sargyin	Sargyin	18	45	4	F	PB	No	45	Yes	2	No	No			2	Cash, 200000 kyat/ac	
Sargyin	Sargyin	19	42	4	F	PB	No	30	Yes	2	No	Yes	2 months before	by ID staff	2	Cash, 200000 kyat/ac	
Sargyin	Sargyin	20	50	4	F	Shop	Yes	21	Yes	2	No	Yes	2 weeks before	by VPDC	1		
Sargyin	Sargyin	21	68	2	F		No	33	Yes	0.3	No	No			1		
Sargyin	Sargyin	22	40	4	F		Yes	25	Yes	2	No	No			2	Cash and farm inputs	
Sargyin	Sargyin	23	82	5	F		Yes	14	Yes	0.4	No	No			2	Cash, 400000 kyat/ac	
Sargyin	Sargyin	24	61	2	F		Yes	26	Yes	1	No	No			1		
Sargyin	Sargyin	25	60	4	F		No	40	Yes	6	No	No			1		
Sargyin	Htan Hna Pin	26	56	4	F		Yes	77	Yes	2.5	No	No			2	Water pump for summer crop	
Sargyin	Htan Hna Pin	27	35	3	F		Yes	13	Yes	4	No	Yes	1 month before	by ID staff	2	Farm machine and Inputs	
Sargyin	Htan Hna Pin	28	51	4	F		Yes	7	Yes	2	No	No			2	Farm machine and Inputs	
Sargyin	Htan Hna Pin	29	60	3	F		Yes	27	Yes	3	No	No			2	Water pump for summer crop	
Sargyin	Htan Hna Pin	30	46	4	F		No	18	Yes	2	No	No			2	Water pump for summer crop	
Sargyin	Htan Hna Pin	31	80	2	F		Yes	11	Yes	3	No	No			2	Water pump for summer crop	
Sargyin	Htan Hna Pin	32	60	4	F		Yes	20	Yes	3	No	No			2	Farm Machine	
Sargyin	Htan Hna Pin	33	60	4	F		Yes	14	Yes	2	No	No			1		
Sargyin	Htan Hna Pin	34	56	1	F		No	13	Yes	2	No	No			1		
Sargyin	Htan Hna Pin	35	50	3	F		No	16	Yes	2.5	No	No			1		
Sargyin	Htan Hna Pin	36	40	1	F		No	13	Yes	2	No	No			2	Water pump for summer crop	
Sargyin	Htan Hna Pin	37	43	2	F		Yes	12	Yes	2	No	No			2	Water pump for summer crop	
Sargyin	Htan Hna Pin	38	44	4	F		No	12	Yes	2	No	No			2	Water pump and tractor for summer crop	
Sargyin	Htan Hna Pin	39					No	2	Yes	1	No	Yes			3	to fill up the school's place	
Labutta loka (N)	Damin chaung Lay	40	44	5	F		No	15	Yes	1	No	No			1		
Labutta loka (N)	Labutta loat (S)	41	55	6	F		Yes	13	Yes	2	No	No			1		
Labutta loka (N)	Damin chaung Lay	42	40	2	F	T	Yes	20	Yes	1.5	No	Yes	1 year before	by ID Staff, project staff	1		
Labutta loka (N)	Damin chaung Lay	43	42	5	F	Shop	Yes	48	Yes	4.5	No	Yes	1 year before	by ID Staff, project staff	1		
Labutta loka (N)	Damin chaung Lay	44	49	5	F	Small business	Yes	14	Yes	4	No	Yes	1 year before	by ID Staff, project staff	1		
Labutta loka (N)	Damin chaung Lay	45	35	4	F		Yes	10	Yes	2	No	Yes	1 year before	by ID Staff, project staff	1		

A10-2 Results of Interview Survey to Farmers who affected due to Land Acquisition

Village Tract	Village	Sr No.	Q2	Q3	Q4			Q5	Q6	Q7		Q8		Q9		Q10	Q11
					1	2	3			Y/N	if yes,	Y/N	if yes,	Y/N	When		
Labutta loka (N)	Damin chaung Lay	46	50	4	F	Small business	Yes	16	Yes	1	No	Yes	1 year before	by ID Staff, project staff	1		
Labutta loka (N)	Damin chaung Lay	47	53	7	F	H	Yes	12	Yes	2	No	Yes	1 year before	by ID Staff, project staff	1		
Labutta loka (N)	Damin chaung Lay	48	46	4	F	Shop	Yes	16	Yes	2.5	No	Yes	1 year before	by ID Staff, project staff	1		
Labutta loka (N)	Damin chaung Lay	49	39	3	F		Yes	16	Yes	2.5	No	Yes	1 year before	by ID Staff, project staff	1		
Labutta loka (N)	Damin chaung Lay	50	55	4	F		Yes	20	Yes	1.5	No	Yes	1 year before	by ID Staff, project staff	1		
Labutta loka (N)	Damin chaung Lay	51	44	4	F	H	Yes	19	Yes	2	No	No			2	Farm Machine	
Labutta loka (N)	Damin chaung Lay	52	57	4	F		Yes	16	Yes	1	No	Yes	1 year before	by ID Staff, project staff	1		
Labutta loka (N)	Damin chaung Lay	53	60	7	F		Yes	18	Yes	3	No	Yes	1 year before	by ID Staff, project staff	1		
Labutta loka (N)	Damin chaung Lay	54	38	2	F		Yes	16	Yes	3	No	Yes	4 month before	by neighbours	1		
Labutta loka (N)	Damin chaung Lay	55	38	5	F		Yes	10	Yes	2	No	Yes	5 month before	by neighbours	1		
Labutta loka (N)	Damin chaung Lay	56	40	5	F		Yes	27	Yes	1	No	Yes	5 month before	by ID Staff	1		
Labutta loka (N)	Damin chaung Lay	57	42	4	F		Yes	40	Yes	2	No	Yes	5 month before	1 year before	1		
Labutta loka (N)	Damin chaung Lay	58	40	4	F		No	45	Yes	3	No	Yes	7 month before	by neighbours	1		
Labutta loka (N)	Damin chaung Lay	59	56	6	F	Rice mill	Yes	52	Yes	5	No	Yes	1 year before	by ID Staff	1		
Sar Kyin	Yae Sai Kone	60	62	8	F		No	12	Yes	4.5	No	No			2	Cost of Farmland	
Sar Kyin	Yae Sai Kone	61	68	6	F		No	21	Yes	3	No	No			2	Farm Machine	
Sar Kyin	Yae Sai Kone	62	43	8	F	Shop	No	15.79	Yes	1.5	No	No			1		
Sar Kyin	Yae Sai Kone	63	44	6	F	Salt making	Yes	100	Yes	4	No	No			1		
Sar Kyin	Yae Sai Kone	64	60	7	F	Shop	Yes	10.35	Yes	2	No	No			1		
Sar Kyin	Yae Sai Kone	65	59	6	F	H	Yes	6	Yes	1	No	No			1		
Sar Kyin	Yae Sai Kone	66	48	5	F		Yes	10	Yes	0.6	No	Yes	2 months before	by neighbours	1		
Sar Kyin	Yae Sai Kone	67	78	6	F		Yes	12	Yes	1	No	Yes	a few days	by neighbours	1		
Sar Kyin	Yae Sai Kone	68	37	6	F		No	10	Yes	0.5	No	No			1		
Sar Kyin	Yae Sai Kone	69	56	6	F		No	30	Yes	0.5	No	No			1		
Sar Kyin	Yae Sai Kone	70	45	8	F	Nipa	No	13.3	Yes	2	No	No			2	Farm Machine	
Kyaunk Hmaaw	Kyaunk Hmaaw	71	58	3	F	H	Yes	25	Yes	3	No	Yes	1 year before	by ID Staff, project staff	1		
Kyaunk Hmaaw	Kyaunk Hmaaw	72	35	6	F		No	11	Yes	3	No	No			1		
Kyaunk Hmaaw	Kyaunk Hmaaw	73	42	4	F	Shop	Yes	27	Yes	2	No	Yes	1 year before	by ID Staff, project staff	1		
Kyaunk Hmaaw	The Kone	74	49	5	F	Shop	Yes	3.36	Yes	1.36	No	Yes	1 year before	by ID Staff, project staff	1		
Kyaunk Hmaaw	Hle Seik	75	73	2	F		Yes	10	Yes	1.5	No	No			1		
Kyaunk Hmaaw	Hle Seik	76	51	6	F	Fishery	No	13	Yes	2.5	No	No			2	Farm Machine	
Kyaunk Hmaaw	Hle Seik	77	44	4	F		No	26	Yes	5	No	No			2	Farm Machine	
Kyaunk Hmaaw	Hle Seik	78	37	4	F		Yes	22	Yes	2	No	No			1		
Kyaunk Hmaaw	Hle Seik	79	44	4	F		Yes	5	Yes	1.3	No	No			2	Farm Machine	
Kyaunk Hmaaw	Hle Seik	80	58	9	F	Fishery	Yes	16	Yes	1.5	No	No			1		
Kyaunk Hmaaw	Hle Seik	81	47	5	F		Yes	20	Yes	2	No	No			1		
Kyaunk Hmaaw	Hle Seik	82	45	5	F		No	11	Yes	1.5	No	No			1		
Kyaunk Hmaaw	Hle Seik	83	60	3	F		Yes	17	Yes	1.5	No	Yes	3 month before	by neighbours	1		
Kyaunk Hmaaw	Hle Seik	84	58	5	F		No	26	Yes	2	No	No			2	Farm Machine	
Kyaunk Hmaaw	Hle Seik	85	28	3	F		No	37	Yes	1.5	No	No			1		
Kyaunk Hmaaw	Hle Seik	86	39	6	F		Yes	7	Yes	1	No	No			1		
Kyaunk Hmaaw	Hle Seik	87	38	3	F	Fishery	No	8	Yes	2	No	No			1		
Average							19.3			2.1						the number of respondents as 1	
No.of Yes							55		87		0	31			55		
Total							1682.8		183								

Note: Q4. Occupation; F: Farming, L: Livestock, H: Home gardening, PB: Prawn Breeding
Respondent No.39 is not individual but primary school.

A10-3 Situation of Resettled People due to Embankment Work

No.	1	2	3	4	5	6	7	8
Occupation	Fishery	Fishery	Fishery	Casual labor and fishery	Casual labor and fishery	Farming	Casual labor	Casual labor
Permanent or temporarily house	Permanent	Permanent	Permanent	Permanent	Permanent	Permanent	Temporally	Temporally
Informant of resettlement necessity	By observation of ID's survey	By observation of ID's survey	By observation of ID's survey	By observation of ID's survey	By observation of ID's survey	By observation of ID's survey	Probably, by observation of ID's survey	Probably, by observation of ID's survey
Resettlement day	5th Dec., 2010	6th Dec., 2010 (demolition)	6th Dec., 2010	6th Dec., 2010	6th Dec., 2010	6th Dec., 2010	6th Dec., 2010	8th Dec., 2010 (demolition)
Original place before resettlement for the embankment works	On the crest of the polder, between RD128030-128200ft	On the crest of the polder, between RD128030-128200ft	On the crest of the polder, between RD128030-128200ft	On the crest of the polder, between RD128030-128200ft	On the crest of the polder, between RD128030-128200ft	On the crest of the polder, RD 135700ft	Land side of RD 2500ft of the Dike	Land side of RD 4100ft
New address after the resettlement for the embankment works	About 30' to riverside of RD128 + 200	He and his family stay in U Tin Ko's house	About 30' to riverside of RD128 + 200	About 200' to landside of RD 128 + 100	About 200' to landside of RD 128 + 100	1500' to landside of RD 135 + 700	Myaunmya	Bitud (outside of the polder)
Cost for resettlement for the works shouldered by the owner	Kyat 5,000 for nail and bamboo strings etc.	Kyat 10,000 for rental boat	Kyat 5,000 for nail	Kyat 5,000 for rental boat	Kyat 5,000 for nail and bamboo strings etc.	Kyat 5,000 for nail and bamboo strings etc.	Not confirmed	Not confirmed
Length for the resettlement by the embankment works	3 days	Not sure since it has yet to be reconstructed	3 days	One week	One week	One month	2 days	2 days
Number of resettlement times after Nargis	2 times (river side → on the crest of embankment due to Nargis → river side due to the works)	2 times (river side → on the crest of embankment due to Nargis → river side due to the works)	2 times (river side → on the crest of embankment due to Nargis → river side due to the works)	3 times (river side → on the crest of embankment due to Nargis → river side near Hpobe sluice gate)	3 times (river side → on the crest of embankment due to Nargis → river side near Hpobe sluice gate)	2 times so far (land side → on the crest of embankment due to Nargis → land side in his farm) He will shift to land side near Hpobe sluice gate again.	Not confirmed	Not confirmed
Shifted by	Owner	Owner (demolition)	Owner	Owner	Owner	Owner	VPDC member	village headman
Original house in the home villages	No house in the village	No house in the village	No house in the village	No house in the village	No house in the village	No house in the village	Not confirmed	Not confirmed

Note: Since No.7 and No.8 have gone to other polders, direct interview to them were not implemented.

APPENDIX 11
COST ESTIMATES

APPENDIX 11

Cost Estimates

	<u>Page</u>
A11-1 Project Costs for Agricultural and Rural Infrastructure Rehabilitation.....	A11-1
A11-2 Project Costs for Farm Management Improvement.....	A11-3
A11-3 Project Costs for Income Generation.....	A11-5
A11-4 Project Costs for Mangrove Windbreak Rehabilitation.....	A11-11
A11-5 Overall Project Costs for Development Plan.....	A11-16

A11-1 Project Costs for Agricultural and Rural Infrastructure Rehabilitation

Project costs for agricultural and rural infrastructure in the Development Plan are estimated as follows;

1. Unit Cost of Dike Embankment Work

Unit cost of dike embankment work is determined by embankment volume based on the actual embankment costs used in the pilot project for the private company portion.

- Total amount paid: 546,319,444 Kyats
- Total embankment volume: 51,152 sud
- Unit cost of dike embankment work: $546,319,444 \div 51,152 = 10,680$ Kyats/sud

2. Unit Cost of Sluice Gate Work

Unit cost of sluice gate work is determined by piece of flap gate / slide gate based on the actual gate work in the pilot project. These unit costs include materials, manufacturing, transportation, installation and temporary work.

- Flap gate replacement: 4,580,000 Kyats/No.
- Flap gate repairing: 2,200,000 Kyats/No.
- Slide gate replacement: 6,900,000 Kyats/No.
- Slide gate repairing: 3,400,000 Kyats/No.

3. Unit Cost for Construction Supervision

Unit cost for construction supervision is determined by embankment volume based on the actual supervision work conducted by private local consultants company in the pilot project.

- Total amount paid: 50,402,000 Kyats
- Total embankment volume: 179,000 sud (ID portion + private company portion)
- Unit cost of supervision work: $50,402,000 \div 179,000 = 282$ Kyats/sud

4. Project Costs for Agricultural and Rural Infrastructure

Project costs in total and by polder for the rehabilitation of polder dike / embankment and sluice gates as agricultural and rural infrastructure under the Development Plan are estimated at 39,661 million Kyats (45.6 million US\$) as presented in **Table A11-1**.

Table A11-1 Project Costs for Rehabilitation of Polder Dike / Embankment and Sluice Gates

Unit of Cost: 1,000Ks

Township	No.	Name of Polder	Remained Embankment Volume (sud)	Remained Construction Cost for Embankment (@10,680 ks/sud)	Rehabilitation Cost for Flap Gate				Rehabilitation Cost for Slide Gate				Remained Rehabilitation Cost for Sluice Gate	Remained Supervising Cost for Dike and Sluice (@282 ks/sud)	Remained Total Construction cost (1,000 ks)
					Replace (nos.)	Cost (@4,580,000 ks/nos.)	Repair (nos.)	Cost (@2,200,000 ks/nos.)	Replace (nos.)	Cost (@6,900,000 ks/nos.)	Repair (nos.)	Cost (@3,400,000 ks/nos.)			
Labutta	1	Alegyun (1)	41,100	438,948	3	13,740	8	17,600	4	27,600	7	23,800	82,740	11,590	533,278
	2	Alegyun (2)	128,446	1,371,803	0	0	22	48,400	13	89,700	9	30,600	168,700	36,222	1,576,725
	3	Alegyun (3)	0	0	0	0	13	28,600	9	62,100	9	30,600	121,300	0	121,300
	4	Magybinmadaukkan	0	0	0	0	0	0	0	0	0	0	0	0	0
	5	Thingangyi	45,446	485,363	0	0	0	0	0	0	0	0	0	12,816	498,179
	6	Zinywe	40,998	437,859	0	0	0	0	0	0	0	0	0	11,561	449,420
	7	Leikkwin	45,937	490,607	2	9,160	0	0	0	0	0	0	9,160	12,954	512,721
	8	Labutta (South)	194,236	2,074,440	0	0	17	37,400	0	0	14	47,600	85,000	54,775	2,214,215
	9	Labutta (North)	0	0	0	0	0	0	0	0	0	0	0	0	0
	10	U Gaungpu	107,572	1,148,869	0	0	0	0	0	0	0	0	0	30,335	1,179,204
	11	Bitud Island (1)	141,045	1,506,361	0	0	0	0	0	0	0	0	0	39,775	1,546,136
	12	Bitud Island (2)	172,102	1,838,049	0	0	35	77,000	0	0	19	64,600	141,600	48,533	2,028,182
	13	Bitud Island (3)	258,145	2,756,989	7	32,060	9	19,800	7	48,300	0	0	100,160	72,797	2,929,946
	14	Bitud Island (4)	68,223	728,622	7	32,060	25	55,000	7	48,300	9	30,600	165,960	19,239	913,821
Bogalay	15	Daunggyi	180,671	1,929,566	0	0	5	11,000	14	96,600	30	102,000	209,600	50,949	2,190,115
	16	Daunggyi (East)	326,292	3,484,799	12	54,960	29	63,800	25	172,500	0	0	291,260	92,014	3,868,073
	17	Daunggyi (West)	32,961	352,023	0	0	8	17,600	0	0	20	68,000	85,600	9,295	446,918
	18	Daunggyi (Upper)	107,073	1,143,540	0	0	0	0	0	0	5	17,000	17,000	30,195	1,190,735
Phyapon	19	Daw Nyein	100,513	1,073,479	0	0	0	0	4	27,600	4	13,600	41,200	28,345	1,143,024
	20	Myokone	130,915	1,398,172	0	0	0	0	4	27,600	0	0	27,600	36,918	1,462,690
	21	Kyethphamwezaung	469,368	5,012,850	15	68,700	27	59,400	36	248,400	6	20,400	396,900	132,362	5,542,112
	22	Banbwezu	190,302	2,032,425	0	0	33	72,600	26	179,400	0	0	252,000	53,665	2,338,090
	23	Daydalu	92,932	992,514	0	0	7	15,400	2	13,800	5	17,000	46,200	26,207	1,064,921
	24	Lepanbin	138,356	1,477,642	0	0	0	0	5	34,500	0	0	34,500	39,016	1,551,158
	25	Zinbaung	115,129	1,229,578	0	0	17	37,400	3	20,700	14	47,600	105,700	32,466	1,367,744
Daydaye	26	Myaseinkan	0	0	0	0	0	0	0	0	0	0	0	0	
	27	Thandi	4,151	44,333	0	0	0	0	0	0	0	0	1,171	45,504	
	28	Suclubbaluma	11,654	124,465	0	0	0	0	0	0	0	0	3,286	127,751	
	29	Hleseikchaunggyi	21,262	227,078	0	0	0	0	0	0	0	0	5,996	233,074	
	30	Tamatakaw	8,021	85,664	0	0	0	0	0	0	0	0	2,262	87,926	
	31	Kyonsoat	4,457	47,601	0	0	0	0	0	0	0	0	1,257	48,858	
Kyaiklatt	32	Maubin Island (North)	63,000	672,840	0	0	0	0	0	0	0	0	17,766	690,606	
	33	Maubin Island (South)	8,525	91,047	0	0	0	0	0	0	0	0	2,404	93,451	
	34	Thonegwakyun	132,189	1,411,779	21	96,180	10	22,000	0	0	29	98,600	216,780	37,277	1,665,836
Total			3,381,021	36,109,305	67	306,860	265	583,000	159	1,097,100	180	612,000	2,598,960	953,448	39,661,713

A11-2 Project Costs for Farm Management Improvement

Table A11-2-1 Total and Unit Costs (per acre) for Development Programme on Farming Improvement

Item	Unit Cost		1st year		2nd year		3rd year		4th year		5th year		Grand Total		Yearly Maintenance Cost						
	Q1	Q2	Q1	Q2	Q1	Q2	Q1	Q2	Q1	Q2	Q1	Q2	Sub-Total	%	Q1	Q2	Total				
1. Cost for Technical Support for High Quality Seed Production																					
Material Cost																					
Technical Seminar on High Quality Seed Production for Farmers #1	176 Prods.	3 Times	1,056,000	352 Prods.	3 Times	2,112,000	352 Prods.	3 Times	2,112,000	352 Prods.	3 Times	2,112,000	176 Prods.	3 Times	1,056,000	8,448,000	3.6%	0 Prods.	0 Times	0	
Materials for Technical Seminar on High Quality Seed Production for Farmers	176 Prods.	0	440,000	352 Prods.	0	880,000	352 Prods.	0	880,000	352 Prods.	0	880,000	176 Prods.	0	440,000	3,520,000	1.5%	0 Prods.	0	0	
Equipment for Seed Quality Check	3 sets	0	21,000,000	0 set	0	0	0 set	0	0	0 set	0	0	0 set	0	0	21,000,000	9.1%	0 set	0	0	
Training for Seed Quality Check for MAS Staffs	6 times	0	1,800,000	6 times	0	1,800,000	0 times	0	0	0 times	0	0	0 times	0	0	3,600,000	1.6%	0 times	0	0	
Maintenance of Equipment for Seed Quality Check	3 sets	0	1,050,000	3 sets	0	1,050,000	3 sets	0	1,050,000	3 sets	0	1,050,000	3 sets	0	1,050,000	5,250,000	2.3%	3 sets	0	1,050,000	
Transportation Cost																					
Motor Cycle Rental * Fuel Included	1 days	176 Prods.	1,760,000	1 days	352 Prods.	3,520,000	1 days	352 Prods.	3,520,000	1 days	352 Prods.	3,520,000	1 days	176 Prods.	1,760,000	14,080,000	6.1%	0 days	0 Prods.	0	
Sub-Total																					
2. Cost for Extension Work on High Quality Seed and Advance Farming Technique																					
Material Cost																					
Demonstration Farm Operation	1 acre/ha	34 Polders	13,600,000	1 acre/ha	34 Polders	13,600,000	1 acre/ha	34 Polders	13,600,000	1 acre/ha	34 Polders	13,600,000	1 acre/ha	34 Polders	13,600,000	68,000,000	29.4%	0 acre/ha	0 Polders	0	
Extension Workshop on High Quality Seed and Advance Farming Technique	4 Times	34 Polders	13,600,000	4 Times	34 Polders	13,600,000	4 Times	34 Polders	13,600,000	4 Times	34 Polders	13,600,000	0 Times	0 Polders	0	54,400,000	23.5%	0 Times	0 Polders	0	
Materials for Extension Workshop on High Quality Seed and Advance Farming Technique	500 /HH	2,583 HH	0	1,291,500	2,583 HH	0	1,291,500	2,583 HH	0	1,291,500	2,583 HH	0	1,291,500	0 HH	0	5,166,000	2.2%	0 HH	0	0	
Seed Quality and Demand Survey	1 Time	0	5,000,000	0.25 Time	0	1,250,000	0.25 Time	0	1,250,000	0.25 Time	0	1,250,000	0.25 Time	0	1,250,000	10,000,000	4.3%	0 Time	0	0	
Transportation Cost																					
Motor Cycle Rental * Fuel Included	10 days	34 Polders	3,400,000	10 days	34 Polders	3,400,000	10 days	34 Polders	3,400,000	10 days	34 Polders	3,400,000	10 days	34 Polders	3,400,000	17,000,000	7.3%	0 days	0 Polders	0	
Sub-Total																					
Total																					
Contingency (10%)																					
Grand Total																					
Area for High Quality Seed Production (Acres)			352		352		352		352		352		351		0						
Area for High Quality Seed Production (Acres/Accumulate)					704		1,055		1,407		1,407		1,407		1,407						1,407
Area for Technical Support for High Quality Seed Production (Acres)			352		704		704		703		351		351		0						0
Cost / 1 Acre of the Area for Technical Support for High Quality Seed Production (Acres)			200,106		66,449		63,635		63,667		70,602		821								

#1 Area for High Quality Seed Production / 2 (2 Acres / Seed Producer)
 #2 Area for Extension Work / 11 (Average Farm Holding Size is assumed to 11 Acres / Farmer)

Table A11-2-2 Costs for Development Programme on Farming by Polder

Polder		Volume		Cost
		Supporting Area for High Quality Paddy Seed Production	Extension Area of High Quality Paddy Seed and Advance Farming Technique	Project Cost (5 Years)
		Acres	Acres	Kyat
1	Alegun (1)	10.9	1,753.2	1,787,647
2	Alegun (2)	25.0	4,036.8	4,112,473
3	Alegun (3)	32.2	5,196.0	5,295,909
4	Magyibinmadaukkan	2.1	337.9	344,823
5	Thingangyi	4.8	779.4	795,092
6	Zinywe	0.2	29.2	31,568
7	Leikkwin	0.1	11.4	13,164
8	Labutta (South)	15.2	2,453.2	2,499,857
9	Labutta (North)	60.8	9,826.7	10,013,935
10	U Gaungpu	0.7	106.6	109,210
11	Bitud Island (1)	4.1	662.4	675,271
12	Bitud Island (2)	28.3	4,572.5	4,660,130
13	Bitud Island (3)	24.0	3,881.3	3,954,502
14	Bitud Island (4)	63.0	10,179.5	10,372,054
15	Daunggyi Island	80.5	12,997.7	13,244,405
16	Daunggyi (East)	116.5	18,809.7	19,165,745
17	Daunggyi (West)	93.8	15,145.4	15,431,138
18	Daunggyi (Upper)	17.7	2,859.2	2,914,530
19	Daw Nyein	6.1	990.2	1,008,405
20	Myokone	19.1	3,082.3	3,139,664
21	Kyetphamwezaung	161.2	26,028.7	26,520,641
22	Banbwezu	61.3	9,898.5	10,086,338
23	Daydalu	13.4	2,165.5	2,207,559
24	Letpanbin	41.3	6,671.3	6,797,971
25	Zinbaung	33.7	5,437.7	5,540,789
26	Myaseinkan	59.0	9,532.1	9,711,289
27	Thandi	16.2	2,617.1	2,667,095
28	Suclubbaluma	36.4	5,879.8	5,992,269
29	Hleseikchaunggyi	10.8	1,742.8	1,777,168
30	Tamatakaw	62.4	10,084.8	10,276,007
31	Kyonsoat	2.5	403.4	411,987
32	Maubin Island (North)	140.4	22,681.5	23,109,768
33	Maubin Island (South)	65.5	10,575.9	10,776,116
34	Thonegwakyun	97.6	15,765.1	16,064,231
Total		1,406.8	227,194.6	231,508,750

A11-3 Project Costs for Income Generation

Table A11-3-1 Cost Breakdown for Vegetable Cultivation Sub-project (Unit: 1000 Kyats)

Item	Unit price		1st Year					2nd Year					Total
			Quantity 1		Quantity 2		Sub-total Y1	Quantity 1		Quantity 2		Sub-total Y2	
1. Extension of vegetable cultivation													
(1) Personnel expenses													
		/month					0					-	
(2) Materials and equipments													
		1000 Kyat											
1)	Extension workshop	5 HH	4,023	HH	1	Times	20,100		HH	-	Times		20,100
2)	Technical workshop for cultivators	5 HH	4,023	HH	2	Times	40,200	4,023	HH	2	Times	40,250	80,450
3)	Print of technical manual	3 HH	4,023	HH			10,057		HH			0	10,058
4)	Technical training for MAS staff	300 Township	5	Townships	3	Times	4,500		Townships	-	Times	0	4,500
5)	Management of demonstration farm	750 Time	34	Polders			25,500	34	Polders			25,500	51,000
(3) Transportation													
6)	Motorcycle rental (incl. Fuel & onsite training)	10 Day	1	days	4,023	HH	40.2	0.5	days	4,023	HH	20,115	60,345
Sub-total							140,588					85,865	226,453
Physical contingency (10% of sub-total)							140,588					8,587	22,645
Total							154,646					94,452	249,098

Table A11-3-2 Cost Breakdown for Pig Raising Sub-project (Unit: 1000 Kyats)

Item		Unit price		1st Year					2nd Year				
				Quantity 1		Quantity 2		Sub-total Y1	Quantity 1		Quantity 2		Sub-total Y2
2. Extension of pig raising													
(1) Personnel expenses													
			month					0				-	
(2) Materials and equipments													
1)	Extension workshop (breeding)	100	Polder	34	Polder	1	Times	3,400		Polder		Times	-
2)	Extension workshop (fattening)	100	Polder	34	Polder	1	Times	3,400		Polder		Times	-
3)	Technical training workshop (breeding)	100	Polder	34	Polder	1	Times	3,400	34	Polder	1	Times	3,400
4)	Technical training workshop (fattening)	100	Polder	34	Polder	1	Times	3,400		Polder		Times	-
5)	Print of technical manual	2.5	/HH	2,080	HH			5,200		HH			-
6)	Technical training of LBVD staff	300	Townships	5	Townships	2	Times	3,000	5	Townships	2	Times	3,000
(3) Transportation													
6)	Motorcycle rental (incl. Fuel & onsite training)	10	/Day	1	days	2,080	HH	20,800	1	days	780	HH	7,800
Sub-total								42,600					14,200
Physical contingency (10% of sub-total)								4,260					1,420
Total								46,860					15,620

Item	3rd Year			4th Year			Total
	Quantity 1	Quantity 2	Sub-total Y3	Quantity 1	Quantity 2	Sub-total Y4	
2. Extension of pig raising							
(1) Personnel expenses							

						-					-		
(2) Materials and equipments													
1)	Extension workshop (breeding)		Polder		Times	-		Polder		Times	-	3,400	
2)	Extension workshop (fattening)		Polder		Times	-		Polder		Times	-	3,400	
3)	Technical training workshop (breeding)		Polder		Times	-		Polder		Times	-	6,800	
4)	Technical training workshop (fattening)		Polder		Times	-		Polder		Times	-	3,400	
5)	Print of technical manual		HH			-		HH			-	5,200	
6)	Technical training of LBVD staff		Townships	-	Times	-		Townships	-	Times	-	6,000	
(3) Transportation													
6)	Motorcycle rental (incl. Fuel & onsite training)	1	days	780	HH	780		1	days	780	HH	780	44,200
Sub-total						780					780	72,400	
Physical contingency (10% of sub-total)						78					78	7,240	
Total						858					858	79,640	

Table A11-3-3 Project Costs for Vegetable Cultivation Sub-project by Polder

Polder No	Polder	Year of IG starting	Nos HH vegetable	Yearly Project Cost vegetable									Unit: Kyat	
				1 st year	2 nd year	3 rd year	4 th year	5 th year	6 th year	7 th year	8 th year	9 th year	Total	
1	Alegun (1)	3rd year	75	0	0	2,883,040	1,760,841	0	0	0	0	0	0	4,643,880
2	Alegun (2)	3rd year	112	0	0	4,305,339	2,629,522	0	0	0	0	0	0	6,934,862
3	Alegun (3)	1st year	60	2,306,432	1,408,673	0	0	0	0	0	0	0	0	3,715,104
4	Magyibinmadaukkan	1st year	28	1,076,335	657,381	0	0	0	0	0	0	0	0	1,733,715
5	Thingangyi	5th year	11	0	0	0	0	422,846	258,257	0	0	0	0	681,102
6	Zinywe	5th year	12	0	0	0	0	461,286	281,735	0	0	0	0	743,021

7	Leikkwin	5th year	7	0	0	0	0	269,084	164,345	0	0	0	433,429
8	Labutta (South)	3rd year	78	0	0	2,998,361	1,831,274	0	0	0	0	0	4,829,636
9	Labutta (North)	1st year	271	10,417,383	6,362,505	0	0	0	0	0	0	0	16,779,888
10	U Gaungpu	5th year	4	0	0	0	0	153,762	93,912	0	0	0	247,674
11	Bitud Island (1)	4th year	25	0	0	0	961,013	586,947	0	0	0	0	1,547,960
12	Bitud Island (2)	4th year	131	0	0	0	5,035,709	3,075,602	0	0	0	0	8,111,311
13	Bitud Island (3)	3rd year	72	0	0	2,767,718	1,690,407	0	0	0	0	0	4,458,125
14	Bitud Island (4)	3rd year	216	0	0	8,303,154	5,071,221	0	0	0	0	0	13,374,376
15	Daunggyi Island	2nd year	236	0	9,071,965	5,540,779	0	0	0	0	0	0	14,612,744
16	Daunggyi (East)	2nd year	112	0	4,305,339	2,629,522	0	0	0	0	0	0	6,934,862
17	Daunggyi (West)	2nd year	320	0	12,300,969	7,512,921	0	0	0	0	0	0	19,813,890
18	Daunggyi (Upper)	2nd year	51	0	1,960,467	1,197,372	0	0	0	0	0	0	3,157,839
19	Daw Nyein	6th year	93	0	0	0	0	0	3,574,969	2,183,443	0	0	5,758,412
20	Myokone	6th year	69	0	0	0	0	0	2,652,397	1,619,974	0	0	4,272,370
21	Kyetphamwezaung	5th year	363	0	0	0	0	13,953,912	8,522,469	0	0	0	22,476,382
22	Banbwezu	6th year	156	0	0	0	0	0	5,996,723	3,662,549	0	0	9,659,271
23	Daydalu	6th year	62	0	0	0	0	0	2,383,313	1,455,628	0	0	3,838,941
24	Letpanbin	6th year	60	0	0	0	0	0	2,306,432	1,408,673	0	0	3,715,104
25	Zinbaung	6th year	63	0	0	0	0	0	2,421,753	1,479,106	0	0	3,900,860
26	Myaseinkan	1st year	180	6,919,295	4,226,018	0	0	0	0	0	0	0	11,145,313
27	Thandi	4th year	29	0	0	0	1,114,775	680,858	0	0	0	0	1,795,634
28	Suclubbaluma	4th year	94	0	0	0	3,613,410	2,206,920	0	0	0	0	5,820,330
29	Hleseikchaunggyi	4th year	38	0	0	0	1,460,740	892,159	0	0	0	0	2,352,899
30	Tamatakaw	4th year	199	0	0	0	7,649,665	4,672,098	0	0	0	0	12,321,763

31	Kyonsoat	4th year	6	0	0	0	230,643	140,867	0	0	0	0	371,510
32	Maubin Island (North)	4th year	369	0	0	0	14,184,555	8,663,337	0	0	0	0	22,847,892
33	Maubin Island (South)	4th year	127	0	0	0	4,881,947	2,981,690	0	0	0	0	7,863,638
34	Thonegwakyun	4th year	294	0	0	0	11,301,516	6,902,496	0	0	0	0	18,204,012
Total			4.023	20,719,445	40,293,316	38,138,207	63,417,241	46,063,865	28,656,304	11,809,372	0	0	249,097,750

Table A11-3-4 Project Costs for Pig Raising Sub-project by Polder

Polder No	Polder	Year of starting	Nos HH pig	Yearly Project Cost Pig Raising									Unit: Kyat	
				1st	2nd	3rd	4th	5th	6th	7th	8th	9th	Total	
1	Alegun (1)	3rd year	32	0	0	720,923	240,308	132,000	132,000	0	0	0	1,225,231	
2	Alegun (2)	3rd year	64	0	0	1,441,846	480,615	264,000	264,000	0	0	0	2,450,462	
3	Alegun (3)	1st year	32	720,923	240,308	132,000	132,000	0	0	0	0	0	1,225,231	
4	Magyibinmadaukkan	1st year	16	360,462	120,154	66,000	66,000	0	0	0	0	0	612,615	
5	Thingangyi	5th year	16	0	0	0	0	360,462	120,154	66,000	66,000	0	612,615	
6	Zinywe	5th year	16	0	0	0	0	360,462	120,154	66,000	66,000	0	612,615	
7	Leikkwin	5th year	16	0	0	0	0	360,462	120,154	66,000	66,000	0	612,615	
8	Labutta (South)	3rd year	32	0	0	720,923	240,308	132,000	132,000	0	0	0	1,225,231	
9	Labutta (North)	1st year	128	2,883,692	961,231	528,000	528,000	0	0	0	0	0	4,900,923	
10	U Gaungpu	5th year	16	0	0	0	0	360,462	120,154	66,000	66,000	0	612,615	
11	Bitud Island (1)	4th year	16	0	0	0	360,462	120,154	66,000	66,000	0	0	612,615	
12	Bitud Island (2)	4th year	64	0	0	0	1,441,846	480,615	264,000	264,000	0	0	2,450,462	
13	Bitud Island (3)	3rd year	32	0	0	720,923	240,308	132,000	132,000	0	0	0	1,225,231	
14	Bitud Island (4)	3rd year	112	0	0	2,523,231	841,077	462,000	462,000	0	0	0	4,288,308	

15	Daunggyi Island	2nd year	112	0	2,523,231	841,077	462,000	462,000	0	0	0	0	4,288,308
16	Daunggyi (East)	2nd year	64	0	1,441,846	480,615	264,000	264,000	0	0	0	0	2,450,462
17	Daunggyi (West)	2nd year	160	0	3,604,615	1,201,538	660,000	660,000	0	0	0	0	6,126,154
18	Daunggyi (Upper)	2nd year	32	0	720,923	240,308	132,000	132,000	0	0	0	0	1,225,231
19	Daw Nyein	6th year	48	0	0	0	0	0	1,081,385	360,462	198,000	198,000	1,837,846
20	Myokone	6th year	32	0	0	0	0	0	720,923	240,308	132,000	132,000	1,225,231
21	Kyetphamwezaung	5th year	176	0	0	0	0	3,965,077	1,321,692	726,000	726,000	0	6,738,769
22	Banbwezu	6th year	80	0	0	0	0	0	1,802,308	600,769	330,000	330,000	3,063,077
23	Daydalu	6th year	32	0	0	0	0	0	720,923	240,308	132,000	132,000	1,225,231
24	Letpanbin	6th year	32	0	0	0	0	0	720,923	240,308	132,000	132,000	1,225,231
25	Zinbaung	6th year	32	0	0	0	0	0	720,923	240,308	132,000	132,000	1,225,231
26	Myaseinkan	1st year	96	2,162,769	720,923	396,000	396,000	0	0	0	0	0	3,675,692
27	Thandi	4th year	16	0	0	0	360,462	120,154	66,000	66,000	0	0	612,615
28	Suclubbaluma	4th year	48	0	0	0	1,081,385	360,462	198,000	198,000	0	0	1,837,846
29	Hleseikchaunggyi	4th year	16	0	0	0	360,462	120,154	66,000	66,000	0	0	612,615
30	Tamatakaw	4th year	96	0	0	0	2,162,769	720,923	396,000	396,000	0	0	3,675,692
31	Kyonsoat	4th year	16	0	0	0	360,462	120,154	66,000	66,000	0	0	612,615
32	Maubin Island (North)	4th year	192	0	0	0	4,325,538	1,441,846	792,000	792,000	0	0	7,351,385
33	Maubin Island (South)	4th year	64	0	0	0	1,441,846	480,615	264,000	264,000	0	0	2,450,462
34	Thonegwakyun	4th year	144	0	0	0	3,244,154	1,081,385	594,000	594,000	0	0	5,513,538
Total			2,080	6,127,846	10,333,231	10,013,385	19,822,000	13,093,385	11,463,692	5,684,462	2,046,000	1,056,000	79,640,000

A11-4 Project Costs for Mangrove Windbreak Rehabilitation

1. Unit Cost for Mangrove Windbreak Rehabilitation

Unit cost for mangrove windbreak rehabilitation is determined based on the actual rehabilitation costs used in the pilot project as follows;

Table A11-4-1 Material Costs for Mangrove Windbreak Activity

Commodity	Unit	Kyat	Remark
1. Construction materials			
Bamboo (Thick)	Pcs	2,300	10 feet length
Bamboo (Thin)	Pcs	150	10 feet length
Rope for fencing	Viss	3,800	
2. Seed and seedling			
Nypa seed	Seed	50	Price at nursery
Avicennia seedling	Seedling	100	Price at nursery
Sonneratia seedling	Seedling	100	Price at nursery
Bamboo stick for marking	Pcs	5	
3. Transportation			
Hiring of small boat	Boat/3days	180,000	Including fuel and operator 4,000seeds a boat
Hiring of big boat	Boat/3days	300,000	Including fuel and operator 4,000seedlings a boat
4. Labor cost			
Labor	Man/day	2,000	8 hours/day

Table A11-4-2 shows unit volume for the temporary nursery, fencing and planting. Unit costs for the activities of temporary nursery, fencing and planting calculate from material cost and unit volume. Table A11-4-3 shows the unit costs of temporary nursery, Table A11-4-4 for the unit costs of fencing and Table A11-4-5 for the unit costs of planting.

Table A11-4-2 Unit Volume for Each Activity

Commodity	Unit	Unit	Remark
		Quantity	
1. Temporary nursery			One temporary nursery for 1km each
Bamboo (Thick)	Pcs	10	
Bamboo (Thin)	Pcs	40	
Rope for fencing	Viss	0.2	
2. Fencing			For 1km
Bamboo (Thick)	Pcs	500	
Bamboo (Thin)	Pcs	6,000	
Rope for fencing	Viss	26.50	

3. Planting			For 1km
Nypa seed	Seed	3,750	
Avicennia seedling	Seedling	5,000	
Sonneratia seedling	Seedling	3,750	
Bamboo stick for marking	Pcs	12,500	
Rope for fixing stick and seedlings	Viss	22.30	0.3feet/seedling*1,750, 0.0085Viss/feet

Table A11-4-3 Unit Cost for Temporary Nursery Work

Commodity			Unit cost (Kyat)	Amount (Kyat)	Remark
Temporary nursery					
Bamboo (Thick)	Pcs	10	2,300	23,000	One temporary nursery For 1km each
Bamboo (Thin)	Pcs	40	150	6,000	
Rope for fencing	Viss	0.2	3,800	760	
			Total	29,760	

Table A11-4-4 Unit Cost for Fencing Work

Commodity			Unit cost (Kyat)	Amount (Kyat)	Remark
Fencing					For 1km
Bamboo (Thick)	Pcs	500	2,300	1,150,000	
Bamboo (Thin)	Pcs	6,000	150	900,000	
Rope for fencing	Viss	26.5	3,800	100,700	
			Total	2,150,700	

Table A11-4-5 Unit Cost for Planting Work

Commodity			Unit cost (Kyat)	Amount (Kyat)	Remark
Planting					
Nypa seed	Seed	3,750	50	187,500	For 1km
Avicennia seedling	Seedling	5,000	100	500,000	
Sonneratia seedling	Seedling	3,750	100	375,000	
Bamboo stick for marking	Pcs	12,500	5	62,500	
Rope for fixing stick & seedlings	Viss	22.3	3,800	84,740	
			Total	1,209,740	

Table A11-4-6 shows the unit labor costs of temporary nursery, Table A11-4-7 shows unit labor costs of fencing, Table A11-4-8 shows unit labor costs of land marking, Table A11-4-9 shows unit labor costs of seedling transportation, Table A11-4-10 shows unit labor costs of planting.

Table A11-4-6 Labor Cost for Temporary Nursery Work

Activity	man/day	Unit cost (kyat)	Amount (kyat)	Remark
Temporary nursery				For 1km each
Land clearing for Nypa nursery	1.5	2,000	3,000	

Fencing, seeding	1.5	2,000	3,000
Shading	1.5	2,000	3,000
	4.5	Total	9,000

Table A11-4-7 Labor Cost for Fencing Work

Activity	man/day	Unit cost (kyat)	Amount (kyat)	Remark
<u>Fencing</u>				For 1km
Transportation of bamboo	28.0	2,000	56,000	
Bamboo cutting	19.0	2,000	38,000	
Fence making	168.0	2,000	336,000	
	215.0	Total	430,000	

Table A11-4-8 Labor Cost for Land Marking Work

Activity	man/day	Unit cost (kyat)	Amount (kyat)	Remark
<u>Land Marking</u>				For 1km
land marking	131.0	2,000	262,000	
		Total	262,000	

Table A11-4-9 Labor Cost for Seedling Transportation

Activity	man/day	Unit cost (kyat)	Amount (kyat)	Remark
<u>Seedlings transportation</u>				For 1km
seedlings transportation from boat to temporary nursery	22.5	2,000	45,000	
		Total	45,000	

Table A11-4-10 Labor Costs for Planting Work

Activity	man/day	Unit cost (kyat)	Amount (kyat)	Remark
<u>Planting</u>				For 1km
preparing of string	5.0	2,000	10,000	
Translocation of seedling	23.0	2,000	46,000	
Planting	135.0	2,000	270,000	
	163.0	Total	326,000	

Table A11-4-11 shows combined cost for one km of mangrove windbreak rehabilitation along dike / embankment.

Table A11-4-11 Combined Cost for Mangrove Windbreak Rehabilitation for One km

Commodity	Unit	Unit cost	Amount (kyat)	Remark
1. Temporary nursery				
Materials of temporary nursery	1	29,760	29,760	
Labor cost of temporary nursery	1	9,000	9,000	
			38,760	

2. Fencing				
	Materials of fencing	1.0	2,150,700	2,150,700
	Labor cost of fencing	1.0	430,000	430,000
				2,580,700
3. Planting				
	Materials of Planting	1	1,209,740	1,209,740
	Labor cost of land Marking	1	262,000	262,000
	Labor cost of seedlings transportation	1	45,000	45,000
	Labor cost of planting	1	326,000	326,000
				1,842,740
4. Transportation of seedling				
	Boat hiring for Ao and Sa seedling	1	300,000	300,000
	Boat hiring for Nypa seed	1	180,000	180,000
				480,000
5. Supplemental planting				
	10% of planting cost + Transportation cost	1	232,200	232,200
				232,200
			Ground total	5,174,400

2. Project Costs for Mangrove Windbreak Rehabilitation

Combined unit cost is obtained from above computation as presented in the table below;

Table A11-4-12 Unit Cost for Mangrove Windbreak Rehabilitation for One km

Number of temporary nursery	Fencing	Planting	Seedling transportation	Supplemental planting	Total (Kyat)
38,760	2,580,700	1,842,740	480,000	232,200	5,174,400

A total project cost is estimated at 1,070 million Kyats and project costs by polder are presented in the following table;

Table A11-4-13 Total Project Costs by Polder

	Polder name	Target for rehabilitation (km)	No. of temporary nursery	Fencing	Planting	Seedling transportation	Supplemental planting	Total (Kyat)
1	Alegyun (1) polder	0.2	7,752	516,140	368,548	96,000	46,440	1,034,880
2	Alegyun (2) polder	4	155,040	10,322,800	7,370,960	1,920,000	928,800	20,697,600
3	Alegyun (3) polder	16	620,160	41,291,200	29,483,840	7,680,000	3,715,200	82,790,400
4	Magybinmadaukkan	2.2	85,272	5,677,540	4,054,028	1,056,000	510,840	11,383,680
5	Thingangyi	0	0	0	0	0	0	0
6	Zinywe	0	0	0	0	0	0	0
7	Leikkwin	0	0	0	0	0	0	0
8	Labutta (South)	1.2	46,512	3,096,840	2,211,288	576,000	278,640	6,209,280
9	Labutta (North)	2.4	93,024	6,193,680	4,422,576	1,152,000	557,280	12,418,560
10	U Gaungpu	0	0	0	0	0	0	0
11	Bitud Island (1)	4.8	186,048	12,387,360	8,845,152	2,304,000	1,114,560	24,837,120

12	Bitud Island (2)	12.8	496,128	33,032,960	23,587,072	6,144,000	2,972,160	66,232,320
13	Bitud Island (3)	16	620,160	41,291,200	29,483,840	7,680,000	3,715,200	82,790,400
14	Bitud Island (4)	40.8	1,581,408	105,292,560	75,183,792	19,584,000	9,473,760	211,115,520
15	Daunggyi	11.2	434,112	28,903,840	20,638,688	5,376,000	2,600,640	57,953,280
16	Daunggyi (East)	0	0	0	0	0	0	0
17	Daunggyi (West)	0	0	0	0	0	0	0
18	Daunggyi (Upper)	0.3	11,628	774,210	552,822	144,000	69,660	1,552,320
19	Daw Nyein polder	0	0	0	0	0	0	0
20	Myokone polder	0	0	0	0	0	0	0
21	Kyetphamwezaung	27.2	1,054,272	70,195,040	50,122,528	13,056,000	6,315,840	140,743,680
22	Banwezu	0	0	0	0	0	0	0
23	Daydalu	0	0	0	0	0	0	0
24	Letpanbin	0	0	0	0	0	0	0
25	Zinbaung	0	0	0	0	0	0	0
26	Myaseinkan	2.4	93,024	6,193,680	4,422,576	1,152,000	557,280	12,418,560
27	Thandi	2.4	93,024	6,193,680	4,422,576	1,152,000	557,280	12,418,560
28	Suclubbaluma	1.6	62,016	4,129,120	2,948,384	768,000	371,520	8,279,040
29	Hleseik chaunggyi	4.8	186,048	12,387,360	8,845,152	2,304,000	1,114,560	24,837,120
30	Tamatakaw	11.2	434,112	28,903,840	20,638,688	5,376,000	2,600,640	57,953,280
31	Kyonsoat	3.8	147,288	9,806,660	7,002,412	1,824,000	882,360	19,662,720
32	Maubin Island (North)	16	620,160	41,291,200	29,483,840	7,680,000	3,715,200	82,790,400
33	Maubin Island (South)	6.4	248,064	16,516,480	11,793,536	3,072,000	1,486,080	33,116,160
34	Thonegwakyun	19.2	744,192	49,549,440	35,380,608	9,216,000	4,458,240	99,348,480
	Total (Kyat)	206.9	8,019,444	533,946,830	381,262,906	99,312,000	48,042,180	1,070,583,360

A11-5 Overall Project Costs for Development Plan

Table A11-5 Overall Project Costs by Polder and by Component

Unit: 1,000 Ks

Sr. No	Polder name	Rehabilitation of agricultural & rural infrastructure	Improvement of farming	Income generation	Rehabilitation of mangrove windbreak	Total
		(1)	(2)	(3)	(4)	(5)=(1)+(2)+(3)+(4)
1	Alegyun (1)	533,278	1,788	5,869	1,035	541,970
2	Alegyun (2)	1,576,725	4,112	9,385	20,698	1,610,920
3	Alegyun (3)	121,300	5,296	4,940	82,790	214,326
4	Magybinmadaukkan	0	345	2,346	11,384	14,075
5	Thingangyi	498,179	795	1,294	0	500,268
6	Zinywe	449,420	32	1,356	0	450,808
7	Leikkwin	512,721	13	1,046	0	513,780
8	Labutta (South)	2,214,215	2,500	6,055	6,209	2,228,979
9	Labutta (North)	0	10,014	21,681	12,419	44,114
10	U Gaungpu	1,179,204	109	860	0	1,180,173
11	Bitud Island (1)	1,546,136	675	2,161	24,837	1,573,809
12	Bitud Island (2)	2,028,182	4,660	10,562	66,232	2,109,636
13	Bitud Island (3)	2,929,946	3,955	5,683	82,790	3,022,374
14	Bitud Island (4)	913,821	10,372	17,663	211,116	1,152,972
15	Daunggyi	2,190,115	13,244	18,901	57,953	2,280,213
16	Daunggyi (East)	3,868,073	19,166	9,385	0	3,896,624
17	Daunggyi (West)	446,918	15,431	25,940	0	488,289
18	Daunggyi (Upper)	1,190,735	2,915	4,383	1,552	1,199,585
19	Daw Nyein	1,143,024	1,008	7,596	0	1,151,628
20	Myokone	1,462,690	3,140	5,498	0	1,471,328
21	Kyetchamwezaung	5,542,112	26,521	29,215	140,744	5,738,592
22	Banbwezu	2,338,090	10,086	12,722	0	2,360,898
23	Daydalu	1,064,921	2,208	5,064	0	1,072,193
24	Letpanbin	1,551,158	6,798	4,940	0	1,562,896
25	Zinbaung	1,367,744	5,541	5,126	0	1,378,411
26	Myaseinkan	0	9,711	14,821	12,419	36,951
27	Thandi	45,504	2,667	2,408	12,419	62,998
28	Suclubbaluma	127,751	5,992	7,658	8,279	149,680
29	Hleseikchaunggyi	233,074	1,777	2,966	24,837	262,654
30	Tamatakaw	87,926	10,276	15,997	57,953	172,152
31	Kyonsoat	48,858	412	984	19,663	69,917
32	Maubin Island (North)	690,606	23,110	30,199	82,790	826,705
33	Maubin Island (South)	93,451	10,776	10,314	33,116	147,657
34	Thonegwakyun	1,665,836	16,064	23,718	99,348	1,804,966
	Total	39,661,713	231,509	328,738	1,070,583	41,292,543
	(In US Dollar)	(45,640,636)	(266,409)	(378,295)	(1,231,971)	(47,517,311)

APPENDIX 12
PROJECT EVALUATION

APPENDIX 12

Project Evaluation

		<u>Page</u>
A12-1	Conversion Factor for Paddy.....	A12-1
A12-2	Conversion Factor for Chemical Fertilizers.....	A12-1
A12-3	Conversion Factors for Rainfed and Irrigated Paddy Cultivation Incomes.....	A12-1
A12-4	Conversion Factor for Unskilled Labour.....	A12-2
A12-5	Conversion Factor for Construction Work.....	A12-2
Table A12-6	Project Cost in Financial and Economic Terms).....	A12-3
Table A12-7	Polder-wise Human Damage in Labutta Township (Financial Terms).....	A12-4
Table A12-8	Polder-wise Human Damage in Bogalay Township (Financial Terms).....	A12-4
Table A12-9	Polder-wise Human Damage in Phyapon Township (Financial Terms).....	A12-5
Table A12-10	Polder-wise Human Damage in Daydaye Township (Financial Terms).....	A12-5
Table A12-11	Polder-wise Human Damage in Kyaiklatt Township (Financial Terms).....	A12-6
Table A12-12	Polder-wise Crop Losses in Labutta Township (Financial Terms) (1/2).....	A12-7
Table A12-12	Polder-wise Crop Losses in Labutta Township (Financial Terms) (2/2).....	A12-7
Table A12-13	Polder-wise Crop Losses in Bogalay Township (Financial Terms) (1/2).....	A12-8
Table A12-13	Polder-wise Crop Losses in Bogalay Township (Financial Terms) (2/2).....	A12-8
Table A12-14	Polder-wise Crop Losses in Phyapon Township (Financial Terms) (1/2).....	A12-9
Table A12-14	Polder-wise Crop Losses in Phyapon Township (Financial Terms) (2/2).....	A12-9
Table A12-15	Polder-wise Crop Losses in Daydaye Township (Financial Terms) (1/2).....	A12-10
Table A12-15	Polder-wise Crop Losses in Daydaye Township (Financial Terms) (2/2).....	A12-10
Table A12-16	Polder-wise Crop Losses in Kyaiklatt Township (Financial Terms) (1/2).....	A12-11
Table A12-16	Polder-wise Crop Losses in Kyaiklatt Township (Financial Terms) (2/2).....	A12-11
Table A12-17	Polder-wise Livestock Losses in Labutta Township (Financial Terms) (1/2).....	A12-12
Table A12-17	Polder-wise Livestock Losses in Labutta Township (Financial Terms) (2/2).....	A12-12
Table A12-18	Polder-wise Livestock Losses in Bogalay Township (Financial Terms) (1/2).....	A12-13
Table A12-18	Polder-wise Livestock Losses in Bogalay Township (Financial Terms) (2/2).....	A12-13
Table A12-19	Polder-wise Livestock Losses in Phyapon Township (Financial Terms) (1/2).....	A12-14
Table A12-19	Polder-wise Livestock Losses in Phyapon Township (Financial Terms) (2/2).....	A12-14
Table A12-20	Polder-wise Livestock Losses in Daydaye Township (Financial Terms) (1/2).....	A12-15
Table A12-20	Polder-wise Livestock Losses in Daydaye Township (Financial Terms) (2/2).....	A12-15

Table A12-21	Polder-wise Livestock Losses in Kyaiklatt Township (Financial Terms) (1/2).....	A12-16
Table A12-21	Polder-wise Livestock Losses in Kyaiklatt Township (Financial Terms) (2/2).....	A12-16
Table A12-22	Polder-wise Damaged Agricultural Machinery in Labutta Township (Financial Terms).....	A12-17
Table A12-23	Polder-wise Damaged Agricultural Machinery in Bogalay Township (Financial Terms).....	A12-17
Table A12-24	Polder-wise Damaged Agricultural Machinery in Phyapon Township (Financial Terms)....	A12-18
Table A12-25	Polder-wise Damaged Agricultural Machinery in Daydaye Township (Financial Terms)....	A12-18
Table A12-26	Polder-wise Damaged Agricultural Machinery in Kyaiklatt Township (Financial Terms)....	A12-19
Table A12-27	Polder-wise Damaged Fishery Equipment in Labutta Township (Financial Terms).....	A12-19
Table A12-28	Polder-wise Damaged Fishery Equipment in Bogalay Township (Financial Terms).....	A12-20
Table A12-29	Polder-wise Damaged Fishery Equipment in Phyapon Township (Financial Terms).....	A12-20
Table A12-30	Polder-wise Damaged Fishery Equipment in Daydaye Township (Financial Terms).....	A12-21
Table A12-31	Polder-wise Damaged Fishery Equipment in Kyaiklatt Township (Financial Terms).....	A12-21
Table A12-32	Polder-wise Damaged Public Facilities in Labutta Township (Financial Terms) (1/2).....	A12-22
Table A12-32	Polder-wise Damaged Public Facilities in Labutta Township (Financial Terms) (2/2).....	A12-22
Table A12-33	Polder-wise Damaged Public Facilities in Bogalay Township (Financial Terms) (1/2).....	A12-23
Table A12-33	Polder-wise Damaged Public Facilities in Bogalay Township (Financial Terms) (2/2).....	A12-23
Table A12-34	Polder-wise Damaged Public Facilities in Phyapon Township (Financial Terms) (1/2).....	A12-24
Table A12-34	Polder-wise Damaged Public Facilities in Phyapon Township (Financial Terms) (2/2).....	A12-24
Table A12-35	Polder-wise Damaged Public Facilities in Daydaye Township (Financial Terms) (1/2).....	A12-25
Table A12-35	Polder-wise Damaged Public Facilities in Daydaye Township (Financial Terms) (2/2).....	A12-25
Table A12-36	Polder-wise Damaged Public Facilities in Kyaiklatt Township (Financial Terms) (1/2).....	A12-26
Table A12-36	Polder-wise Damaged Public Facilities in Kyaiklatt Township (Financial Terms) (2/2)....	A12-26
Table A12-37	Polder-wise Potable Water Shortage in Labutta Township (Financial Terms).....	A12-27
Table A12-38	Polder-wise Potable Water Shortage in Bogalay Township (Financial Terms).....	A12-27
Table A12-39	Polder-wise Potable Water Shortage in Phyapon Township (Financial Terms).....	A12-28
Table A12-40	Polder-wise Potable Water Shortage in Daydaye Township (Financial Terms).....	A12-28
Table A12-41	Polder-wise Potable Water Shortage in Kyaiklatt Township (Financial Terms).....	A12-29
Table A12-42	Financial and Economic Cost-Benefit Analyses for All Polders.....	A12-30
Table A12-43	Summary of Financial and Economic Viability Indicators.....	A12-31
Table A12-44	Project Costs and Benefits by Polder for 20 Years.....	A12-32
Table A12-45	Project Costs and Benefits by Polder for 20 Years.....	A12-32
Table A12-46	Financial and Economic Cost-Benefit Analyses for All Polders.....	A12-33
Table A12-47	Summary of Financial and Economic Viability Indicators.....	A12-34

A12-1 Conversion Factor for Paddy

Farmgate price of paddy is based on the 2010 FOB price and takes into account its tariff and marketing cost including transport/handling costs, after which the tariff and tax are then eliminated and the necessary conversion factor applied. Conversion factor for paddy has been estimated at 1.23, as shown in Table A12-1.

Table A12-1 Conversion Factor for Paddy

Item	Unit	Rice (financial terms)	CF	Rice (economic terms)
FOB price (Yangon)*	US\$/mt	300	-	300
Foreign exchange rate (US\$ 1 = 869 Kyats)	Kyats/mt	260,700	-	260,700
Export duty (10%)	Kyats/mt	26,070	0	0
Port and handling charges	Kyats/mt	3,000	1.02	3,060
Wholesale margin	Kyats/mt	9,265	1.02	9,450
Wholesale price in Yangon	Kyats/mt	222,365	-	248,190
Transport (Yangon – Labutta)	Kyats/mt	40,000	1.02	40,800
Ex-mill price	Kyats/mt	182,365	-	207,390
Miller's margin	Kyats/mt	94,830	1.02	96,727
Milling cost	Kyats/mt	17,000	1.02	17,340
By-product value	Kyats/mt	31,250	1.02	31,875
Farmgate price in milled rice	Kyats/mt	101,785	-	125,198
Farmgate price in paddy (milling recovery at 60%)	Kyats/mt	169,642	-	208,663

Notes: (1) All figures are as of June 2010.

(2) Paddy is of the Emhtha variety.

(3) * Exported mostly to Bangladesh and Singapore.

A12-2 Conversion Factor for Chemical Fertilizers

Conversion factors for chemical fertilizers have been estimated at 0.99 for urea, 0.98 for TSP and 0.99 for MOP respectively, based on 2010 CIF prices as shown in Table A12-2.

Table A12-2 Conversion Factors for Chemical Fertilizers

Item	Unit	Urea	TSP	MOP	CF	Urea	TSP	MOP
		(N46%)	(P46%)	(K60%)		(N46%)	(P46%)	(K60%)
		financial terms			economic terms			
CIF price (Muse/Tamu)	US\$/mt	255	260	265	-	255	260	265
Foreign exchange rate (US\$ 1 = 869 Kyats)	Kyats/mt	221,595	225,940	230,285	-	221,595	225,940	230,285
Import duty (5%)	Kyats/mt	11,080	11,297	11,514	0	0	0	0
Handling charge	Kyats/mt	1,000	1,000	1,000	1.02	1,020	1,020	1,020
Transport (Muse/Tamu – Yangon)	Kyats/mt	44,350	44,350	44,350	1.02	45,237	45,237	45,237
Wholesale margin	Kyats/mt	91,975	107,413	56,351	1.02	93,815	109,561	57,478
Wholesale price in Yangon	Kyats/mt	370,000	390,000	343,500	-	361,667	381,758	334,020
Transport (Yangon – Labutta)	Kyats/mt	40,000	40,000	40,000	1.02	40,800	40,800	40,800
Retail margin	Kyats/mt	130,000	10,000	116,500	1.02	132,600	10,200	118,830
Farmgate price	Kyats/mt	540,000	440,000	500,000	-	535,067	432,758	493,650

Note: All figures are as of June 2010.

A12-3 Conversion Factors for Rainfed and Irrigated Paddy Cultivation Incomes

Net farm income has been estimated at 140,952 Kyats/acre in financial terms and 215,346 Kyats in economic terms under rainfed paddy cultivation, while 172,764 Kyats/acre (financial

terms) and 241,262 Kyats/acre (economic terms) have been computed assuming irrigated paddy cultivation, as shown in Table A12-3.

Table A12-3 Conversion Factors for Rainfed and Irrigated Paddy Cultivation Incomes

Item	Rainfed cultivation (Kyats/acre)			Irrigated cultivation (Kyats/acre)		
	Amount (financial)	CF	Amount (economic)	Amount (financial)	CF	Amount (economic)
Seeds	12,000	1.02	12,240	6,900	1.02	7,038
Fertilizers						
- Urea	11,000	0.99	10,890	22,000	0.99	21,780
- TS	11,000	0.98	10,780	22,000	0.98	21,560
- Potash	0	0.99	0	35,000	0.99	34,650
Agro-chemicals	3,000	1.02	3,060	12,300	1.02	12,546
Hired labour cost						
- Cultivation works	63,000	0.82	51,660	79,320	0.82	65,042
- Transporting	4,000	1.02	4,080	10,000	1.02	10,200
Fuel cost for pumping	0	1.02	0	56,000	1.02	57,120
Physical contingency (5%)	5,200	-	4,636	10,461	-	11,497
Sub-total	109,200	-	92,346	219,681	-	241,433
Yield	42 baskets/acre			95 baskets/acre		
Farmgate price/basket	5,956	1.23	7,326	4,131	1.23	5,081
Gross return	250,152	-	307,692	392,445	-	482,695
Net Return	140,952	-	215,346	172,764	-	241,262

As a result of calculation based on the above, conversion factors for rainfed and irrigated paddy cultivation incomes have been estimated at 1.53 and 1.40, respectively. It should be noted that irrigated paddy cultivation takes place in 11 polders (No.11, 13, 14, 21, 22, 26, 27, 29, 32, 33 and 34) out of 34 polders.

A12-4 Conversion Factor for Unskilled Labour

Under economic evaluation, the shadow wage rate for unskilled labour has been estimated at 0.82 by setting the opportunity cost of unskilled labour (low productivity and wages) at 0.8, multiplied by the SCF of 1.02, due to high seasonal unemployment in each polder. The unemployment situation including underemployment is generally acute, indicating an excess supply of labour in the labour market, with the exception of the transplanting and harvesting seasons.

A12-5 Conversion Factor for Construction Work

Pilot construction work in Polder No.9 (Labutta North) comprises embankment work, sluice gate rehabilitation work and construction supervision. Conversion factor for the construction work has been estimated at 0.98 (0.98 for embankment work, 0.96 for sluice gate rehabilitation work, and 1.00 for construction supervision) as shown in Table A12-5.

Table A12-5 Conversion Factor for Construction Work

Item	Cost (1,000 Kyats)	Cost proportion (i) (%)	Traded goods (1.0)	Skilled labour (SCF=1.02)	Unskilled labour (SCF \times 0.8=0.82)	Non-traded goods (SCF=1.02)	Transfer payment (0)	CF (ii)	(i) x (ii)
Embankment work	1,911,720	83.6	71 (0.71)	3 (0.03)	2 (0.02)	22 (0.22)	2 (0)	100 (0.98)	0.82
Sluice gate rehabilitation work	323,680	14.2	0 (0)	1 (0.01)	14 (0.11)	82 (0.84)	3 (0)	100 (0.96)	0.14
Construction supervision	50,478	2.2	0 (0)	57 (0.58)	10 (0.08)	33 (0.34)	0 (0)	100 (1.00)	0.02
Total	2,285,878	100.0	-	-	-	-	-	-	0.98

Table A12-6 Project Cost in Financial and Economic Terms

Unit: 1,000 Kyats

Polder no.	Construction cost*		Gate replacement cost**		Total	
	Financial	Economic	Financial	Economic	Financial	Economic
1	533,278	522,612	82,740	79,430	616,018	602,042
2	1,576,725	1,545,191	168,700	161,952	1,745,425	1,707,143
5	498,179	488,215	0	0	498,179	488,215
6	449,420	440,432	0	0	449,420	440,432
7	512,721	502,467	9,160	8,794	521,881	511,261
8	2,214,215	2,169,931	85,000	81,600	2,299,215	2,251,531
10	1,179,204	1,155,620	0	0	1,179,204	1,155,620
11	1,546,136	1,515,213	0	0	1,546,136	1,515,213
12	2,028,182	1,987,618	141,600	135,936	2,169,782	2,123,554
13	2,929,946	2,871,347	100,160	96,154	3,030,106	2,967,501
14	913,821	895,545	165,960	159,322	1,079,781	1,054,867
15	2,190,115	2,146,313	209,600	201,216	2,399,715	2,347,529
16	3,868,073	3,790,712	291,260	279,610	4,159,333	4,070,322
17	446,918	437,980	85,600	82,176	532,518	520,156
18	1,190,735	1,166,920	17,000	16,320	1,207,735	1,183,240
19	1,143,024	1,120,164	41,200	39,552	1,184,224	1,159,716
20	1,462,690	1,433,436	27,600	26,496	1,490,290	1,459,932
21	5,542,112	5,431,270	396,900	381,024	5,939,012	5,812,294
22	2,338,090	2,291,328	252,000	241,920	2,590,090	2,533,248
23	1,064,921	1,043,623	46,200	44,352	1,111,121	1,087,975
24	1,551,158	1,520,135	34,500	33,120	1,585,658	1,553,255
25	1,367,744	1,340,389	105,700	101,472	1,473,444	1,441,861
27	45,504	44,594	0	0	45,504	44,594
28	127,751	125,196	0	0	127,751	125,196
29	233,074	228,413	0	0	233,074	228,413
30	87,926	86,167	0	0	87,926	86,167
31	48,858	47,881	0	0	48,858	47,881
32	690,606	676,794	0	0	690,606	676,794
33	93,451	91,582	0	0	93,451	91,582
34	1,665,836	1,632,519	216,780	208,109	1,882,616	1,840,628
Total	39,540,413	38,749,607	2,477,660	2,378,555	42,018,073	41,128,162

Note: 1) *Construction cost comprises embankment rehabilitation, slide gate rehabilitation and construction supervision.

2) ** Indicates that rehabilitated flap and slide gates will be replaced every 30 years.

Table A12-7 Polder-wise Human Damage in Labutta Township (Financial Terms)

Polder			Village Tract				Polder		
No.	Name	Planned Area (ha)	Name	Area (ha)	Human Damage Value		Human Damage Value		Annual Value
					Victims (No.)	Anticipated Income Earnings (1,000 Kyats)	Victims (No.)	Anticipated Income Earnings (1,000 Kyats)	Anticipated Income Earnings (1,000 Kyats)
1	Alegyun (1)	1,670	That Kal Thaung	3,634	981	11,509,241	451	5,289,057	176,302
2	Alegyun (2)	1,523	Thingan Kone	3,097	836	9,808,509	411	4,823,493	160,783
		1,282	Nagone	2,810	759	8,899,551	346	4,060,222	135,341
		803	Gwe Chaung	1,464	395	4,636,634	217	2,543,181	84,773
	Sub-total	3,608		7,371	1,990	23,344,694	974	11,426,897	380,897
5	Thingangyi	699	Thingangyi	4,828	1,304	15,290,759	189	2,213,803	73,793
6	Zinywe	616	Tha Pyu Kone	8,876	2,397	28,111,180	166	1,950,934	65,031
7	Leikkwin	381	Tha Pyu Kone	8,876	2,397	28,111,180	103	1,206,665	40,222
8	Labutta (South)	722	Gant Eaik	1,351	365	4,278,752	195	2,286,646	76,222
		1,502	Sarkyin	5,112	1,380	16,190,215	406	4,756,984	158,566
		642	Tha Pyu Kone	8,876	2,397	28,111,180	173	2,033,278	67,776
	Sub-total	2,866		15,339	4,142	48,580,147	774	9,076,909	302,564
10	U Gaungpu	366	Pyin Sa Lu	4,406	1,190	13,954,243	99	1,159,159	38,639
11	Bitud Island (1)	1,904	Myit Pauk	14,564	3,932	46,125,644	514	6,030,158	201,005
12	Bitud Island (2)	2,784	Bitud	3,725	1,006	11,797,448	752	8,817,206	293,907
13	Bitud Island (3)	672	Myit Pauk	14,564	3,932	46,125,644	181	2,128,291	70,943
		2,543	Maung Ngae	4,498	1,214	14,245,616	687	8,053,935	268,465
		3,215		19,062	5,147	60,371,260	868	10,182,227	339,408
14	Bitud Island (4)	2,303	Nyaung Chaung	3,172	856	10,046,041	622	7,293,831	243,128
		2,250	Ka Ka Yan	3,100	837	9,818,010	608	7,125,975	237,533
		1,589	Shaw Chaung	14,685	3,965	46,508,864	429	5,032,522	167,751
		1,498	Kyee Chaung	2,229	602	7,059,466	404	4,744,316	158,144
	Sub-total	7,640		23,186	6,260	73,432,381	2,063	24,196,644	806,555

Notes: (1) Estimated number of victims has been projected with reference to the township data of TGC.

(2) Estimated net income during a person's remaining working life span (30 years) has been computed based on the farm income survey conducted in 2010.

Sources: (1) "Post-Nargis Joint Assessment", TGC, July 2008.

(2) Farm Income Survey, 2010.

Table A12-8 Polder-wise Human Damage in Bogalay Township (Financial Terms)

Polder			Village Tract				Polder		
No.	Name	Planned Area (ha)	Name	Area (ha)	Human Damage Value		Human Damage Value		Annual Value
					Victims (No.)	Anticipated Income Earnings (1,000 Kyats)	Victims (No.)	Anticipated Income Earnings (1,000 Kyats)	Anticipated Income Earnings (1,000 Kyats)
15	Daunggyi	4,388	Set San	12,618	2,309	44,888,787	803	15,610,398	520,347
		1,323	Byu Sa Khan	1,596	292	5,677,802	242	4,706,599	156,887
		4,179	Daunggyi	13,033	2,385	46,365,158	765	14,866,876	495,563
	Sub-total	9,890		27,247	4,986	96,931,747	1,810	35,183,873	1,172,796
16	Daunggyi (East)	2,751	Daunggyi	13,033	2,385	46,365,158	503	9,786,738	326,225
		1,775	Nga Pyay Ma	2,927	536	10,412,861	325	6,314,598	210,487
		4,257	Kha Naung	3,779	692	13,443,868	779	15,144,363	504,812
		147	Paung Tae	1,360	249	4,838,227	27	522,955	17,432
	Sub-total	8,930		21,099	3,861	75,060,114	1,634	31,768,654	1,058,955
17	Daunggyi (West)	1,138	Set San	12,618	2,309	44,888,787	208	4,048,458	134,949
		1,788	Pet Pyael	1,485	272	5,282,917	327	6,360,846	212,028
		1,631	Byu Sa Khan	1,596	292	5,677,802	298	5,802,315	193,411
		530	Kamakalu	1,011	185	3,596,653	97	1,885,486	62,850
		1,427	Nga Pyay Ma	2,927	536	10,412,861	78	1,519,061	50,635
		1,408	Paung Tae	1,360	249	4,838,227	258	5,008,988	166,966
		18	Thapyaykan	1,430	262	5,087,254	3	64,035	2,135
	Sub-total	6,940		22,427	4,104	79,784,501	1,270	24,689,189	822,973
18	Daunggyi (Upper)	388	Kamakalu	1,011	185	3,596,653	71	1,380,318	46,011
		992	Sa Khan Gyi	1,066	195	3,792,316	182	3,529,060	117,633
		1,380		2,077	380	7,388,969	253	4,909,378	163,646

Notes and sources: Same as in Table A12-2.

Table A12-9 Polder-wise Human Damage in Phyaon Township (Financial Terms)

No.	Polder		Village Tract				Polder				
	Name	Planned Area (ha)	Name	Area (ha)	Human Damage Value		Human Damage Value		Annual Value		
					Victims (No.)	Anticipated Income Earnings (1,000 Kyats)	Victims (No.)	Anticipated Income Earnings (1,000 Kyats)			
19	Daw Nyein	1,200	Dawnye in	4,674	32	1,108,916	8	284,702	9,490		
20	Myokone	1,832	Myokone	4,541	31	1,077,361	12	434,646	14,488		
		448	Daydalu	8,941	61	2,121,270	3	106,289	3,543		
	Sub-total	2,280		13,482	92	3,198,631	16	540,935	18,031		
21	Kyetphamwezaung	3,844	Kyetphamwezaung	4,966	34	1,178,193	26	911,997	30,400		
		3,015	Kyonekadone	3,556	24	843,668	21	715,315	23,844		
		1,336	Byinekazee	1,463	10	347,100	9	316,969	10,566		
		705	Okkoba	831	6	197,156	5	167,263	5,575		
		1,854	Daydalu	8,941	61	2,121,270	13	439,865	14,662		
		247	Kha Naung	1,011	7	239,862	2	58,601	1,953		
		732	Thapvaykan	1,430	10	339,270	5	173,668	5,789		
		837	Nga Pyay Ma	2,927	20	694,437	6	198,580	6,619		
			Sub-total	12,570		25,125	171	5,960,957	85	2,982,258	99,409
		22	Banbwezu	960	Banbwezu	1,464	10	347,337	7	227,762	7,592
411	Kyoneduttanyin			1,185	8	281,144	3	97,511	3,250		
542	Kazaung			1,973	13	468,098	4	128,591	4,286		
763	Thaeaintaman			1,343	9	318,629	5	181,023	6,034		
839	Phyapontaman			2,024	14	480,198	6	199,054	6,635		
80	Kyoneku			1,869	13	443,424	1	18,980	633		
1,007	Gyowarhtalun			1,979	13	469,522	7	238,913	7,964		
101	Kyonekyeik			1,148	8	272,365	1	23,962	799		
627	Koecaintan			1,294	9	307,004	4	148,757	4,959		
	Sub-total			5,330		14,279	97	3,387,721	36	1,264,553	42,152
23	Daydalu	1,720	Daydalu	8,941	61	2,121,270	12	408,073	13,602		
24	Letpanbin	3,058	Lanpan	5,106	35	1,211,409	21	725,517	24,184		
		66	Kyonekadone	3,556	24	843,668	0	15,659	522		
		334	Daydalu	8,941	61	2,121,270	2	79,242	2,641		
	Sub-total	3,458		17,603	120	4,176,347	24	820,417	27,347		
25	Zinbaung	1,331	Zinbaung	2,905	20	689,217	9	315,782	10,526		
		18	Theinkone	1,453	10	344,727	0	4,271	142		
		278	Kondaing	774	5	183,633	2	65,956	2,199		
		1,043	Tinpahlwe	1,287	9	305,343	7	247,454	8,248		
			Sub-total	2,670		6,419	44	1,522,921	18	633,463	21,115

Notes and sources: Same as in Table A12-2.

Table A12-10 Polder-wise Human Damage in Daydave Township (Financial Terms)

No.	Polder		Village Tract				Polder		
	Name	Planned Area (ha)	Name	Area (ha)	Human Damage Value		Human Damage Value		Annual Value
					Victims (No.)	Anticipated Income Earnings (1,000 Kyats)	Victims (No.)	Anticipated Income Earnings (1,000 Kyats)	
27	Thandi	545	Thayar Gone	1,234	39	900,326	17	397,632	13,254
		150	Kyongdu Darmalain	1,470	47	1,072,512	5	109,440	3,648
		593	Thandi Thegonelay	1,335	43	974,016	19	432,653	14,422
		100	Thandi Zeeppu gone	1,756	56	1,281,178	3	72,960	2,432
	Sub-total	1,388		5,795	185	4,228,032	44	1,012,685	33,756
28	Suclubbaluma	708	Nakhong Chaung	981	31	715,738	23	516,557	17,219
		1,069	Kyatsinpyo	1,296	41	945,562	34	779,942	25,998
		735	Kyongkanan	815	26	594,624	24	536,256	17,875
		437	Uto (kyaiklatkalay)	479	15	349,478	14	318,835	10,628
	Sub-total	2,949		3,571	114	2,605,402	94	2,151,590	71,720
29	Hleseikchaunggyi	259	Hmawbi	484	15	353,126	8	188,966	6,299
		356	Hleseikchaunggyi	1,157	37	844,147	11	259,738	8,658
		156	Lay	1,111	36	810,586	5	113,818	3,794
		138	Laik Kyun	1,594	51	1,162,982	4	100,685	3,356
	Sub-total	909		4,346	139	3,170,842	29	663,206	22,107
30	Tamatakaw	1,704	Tamatakaw	2,047	66	1,493,491	55	1,243,238	41,441
		840	Toe	1,069	34	779,942	27	612,864	20,429
		1,122	Tawchaik	1,481	47	1,080,538	36	818,611	27,287
		844	Shankan	1,013	32	739,085	27	615,782	20,526
		835	Mayan Anout	1,324	42	965,990	27	609,216	20,307
			Sub-total	5,345		6,934	222	5,059,046	171
31	Kyonsoat	225	Kawatyaykanchaung	2,149	69	1,567,910	7	164,160	5,472
		15	Toe	1,069	34	779,942	0	10,944	365
		240		3,218	103	2,347,853	8	175,104	5,837

Notes and sources: Same as in Table A12-2.

Table A12-11 Polder-wise Human Damage in Kyaiklatt Township (Financial Terms)

Polder		Village Tract				Polder			
No.	Name	Planned Area (ha)	Name	Area (ha)	Human Damage Value		Human Damage Value		Annual Value
					Victims (No.)	Anticipated Income Earnings (1,000 Kyats)	Victims (No.)	Anticipated Income Earnings (1,000 Kyats)	Anticipated Income Earnings (1,000 Kyats)
32	Maubin Island (North)	1,303	Hlaing Tar	1,518	0	1,477	0	1,267	42
		570	Lay Eain Tan	598	0	582	0	554	18
		1,640	Kywek Ku Khayar Yoe	1,640	0	1,595	0	1,595	53
		748	Sin Tar	776	0	755	0	728	24
		1,058	Kyaung Su	1,099	0	1,069	0	1,029	34
		813	Taung Boae Kyi	828	0	805	0	791	26
		804	Ngwe Inn Su	804	0	782	0	782	26
		1,261	Yone Dount	1,292	0	1,257	0	1,227	41
		594	Kyone Phar Yay Kyaw	593	0	577	0	578	19
		1,225	Eain Yar Kyi	1,225	0	1,192	0	1,192	40
		984	Kyone Kyaik	983	0	956	0	957	32
		Sub-total	11,000		11,356	1	11,046	1	10,700
33	Maubin Island (South)	617	Tar Pat	605	0	588	0	600	20
		348	Phoe San	337	0	328	0	339	11
		779	Latay Kyi	717	0	697	0	758	25
		151	Tharyar Wel	134	0	130	0	147	5
		752	Kyee Chaung	667	0	649	0	731	24
		1,963	Bali Chan Yay Kyaw	1,741	0	1,694	0	1,909	64
		Sub-total	4,610		4,201	0	4,086	0	4,484
34	Thonegwakyun	601	Ah Su Kyi	724	0	704	0	585	19
		357	Me Zali Kone	517	0	503	0	347	12
		332	Ah Huu	434	0	422	0	323	11
		550	Thamet Pyay	718	0	698	0	535	18
		332	Linn Ton	401	0	390	0	323	11
		448	Darna Chaung	629	0	612	0	436	15
		547	Kyon Ma Ngaet	667	0	649	0	532	18
		363	Htayaw Ywar Thit	497	0	483	0	353	12
		497	Tharyar Kone	566	0	551	0	483	16
		706	Myanmar Kayin Su	814	0	792	0	687	23
		423	Lei Lan Pin	468	0	455	0	411	14
		261	Mayan Kyi	278	0	270	0	254	8
		526	Taman Kyi	560	0	545	0	512	17
		834	Ohn Pin Su	889	0	865	0	811	27
		658	Sit Kone	702	0	683	0	640	21
		685	Sar Pho Thiyne Chaung	730	0	710	0	666	22
Sub-total	8,120		9,594	1	9,332	1	7,898	263	

Notes and sources: Same as in Table A12-2.

Table A12-12 Polder-wise Crop Losses in Labutta Township (Financial Terms) (1/2)

No.	Polder		Village Tract														
	Name	Planned Area (ha)	Name	Area (ha)	Cropped Area (Acre)				Production (Baskets)				Crop Loss Value (1,000 Kyats)				
					M. P	S. P	Pulses	Oilseeds	M. P	S. P	Pulses	Oilseeds	M. P.	S. P	Pulses	Oilseeds	Total
1	Alegyun (1)	1,670	That Kal Thuang	3,634	3,815	0	195	195	162,138	0	2,238	3,663	891,756	0	55,941	47,620	995,317
2	Alegyun (2)	1,523	Thingan Kone	3,097	3,456	0	120	120	161,862	0	1,377	2,254	890,240	0	34,425	29,305	953,969
		1,282	Nagone	2,810	2,906	0	138	138	179,329	0	1,584	2,592	986,311	0	39,589	33,700	1,059,600
		803	Gwe Chaung	1,464	1,844	0	0	0	79,937	0	0	0	439,656	0	0	0	439,656
	Sub-total	3,608		7,371	8,206	0	258	258	421,128	0	2,960.6	4,846.5	2,316,206	0	74,014	63,005	2,453,225
5	Thingangyi	699	Thingangyi	4,828	5,383	0	573	137	96,544	0	6,575	2,574	530,993	0	164,379	33,456	728,828
6	Zinywe	616	Tha Pyu Kone	8,876	421	0	1,500	0	14,779	0	17,213	0	81,286	0	430,313	0	511,598
7	Leikkwin	381	Tha Pyu Kone	8,876	265	0	520	0	9,303	0	5,967	0	51,166	0	149,175	0	200,341
8	Labutta (South)	722	Gant Eaik	1,351	2,023	0	929	149	67,234	0	10,660	2,799	369,789	0	266,507	36,387	672,683
		1,502	Sarkyin	5,112	4,217	0	1,023	102	229,405	0	11,739	1,916	1,261,726	0	293,473	24,909	1,580,108
		642	Tha Pyu Kone	8,876	1,839	0	916	159	64,558	0	10,511	2,987	355,070	0	262,778	38,829	656,676
	Sub-total	2,866		15,339	8,079	0	2,868	410	361,197	0	32,910	7,702	1,986,585	0	822,758	100,124	2,909,467
10	U Gaungpu	366	Pvin Sa Lu	4,406	1,283	0	1,169	499	29,990	0	13,414	9,374	164,946	0	335,357	121,858	622,161
11	Bitud Island (1)	1,904	Myit Pauk	14,564	5,067	169	4,520	400	280,382	13,848	51,867	7,514	1,542,103	55,391	1,296,675	97,682	2,991,852
12	Bitud Island (2)	2,784	Bitud	3,725	6,118	0	4,612	361	302,657	0	52,923	6,781	1,664,616	0	1,323,068	88,158	3,075,842
13	Bitud Island (3)	672	Myit Pauk	14,564	1,326	0	2,001	88	73,374	0	22,961	1,653	403,558	0	574,037	21,490	999,085
		2,543	Maung Ngae	4,498	6,757	169	6,034	480	331,971	13,848	69,240	9,017	1,825,843	55,391	1,731,004	117,218	3,729,456
		3,215		19,062	8,083	169	8,035	568	405,346	13,848	92,202	10,670	2,229,401	55,391	2,305,041	138,708	4,728,541
	Sub-total	6,400		38,116	15,146	338	18,569	928	806,693	27,696	86,821	2,632,904	110,772	3,631,082	257,498	7,757,072	
14	Bitud Island (4)	2,303	Nyaung Chaung	3,172	5,029	2,100	1,953	239	246,647	172,074	22,411	4,490	1,356,560	688,296	560,267	58,365	2,663,488
		2,250	Ka Ka Yan	3,100	5,379	1,859	3,232	380	256,498	152,326	37,087	7,138	1,410,737	609,306	927,180	92,798	3,040,021
		1,589	Shaw Chaung	14,685	4,023	1,500	4,238	360	146,357	122,910	48,631	6,763	804,962	491,640	1,215,776	87,914	2,600,292
		1,498	Kyee Chaung	2,229	3,257	1,496	1,070	252	167,214	122,582	12,278	4,734	919,679	490,329	306,956	61,540	1,778,504
	Sub-total	7,640		23,186	17,688	6,955	10,493	1,231	816,716	569,893	120,407	23,124	4,491,938	2,279,571	3,010,179	300,616	10,082,305

Notes: (1) All figures are as of 2009 estimates.

(2) Estimated crop losses have been estimated on the basis of decreased yields by 50% in the first, 25% in the second and 10% in the third year compared to those during a regular pre-project season, respectively.

(3) The occurrence of high tidal wave surges is assumed to have a return period of 30 years.

Source: Township Myanmar Agricultural Services and Township Settlement and Land Records Departments.

Table A12-12 Polder-wise Crop Losses in Labutta Township (Financial Terms) (2/2)

No.	Polder		Village Tract																			
	Planned Area (ha)	Area (ha)	% to Polder Area	Cropped Area (Acre)				Production (Baskets)				Crop Loss Value (1,000 Kyats)					Annual Loss Prevention Value (1,000 Kyats)					
				M. P	S. P	Pulses	Oilseeds	M. P	S. P	Pulses	Oilseeds	M. P.	S. P.	Pulses	Oilseeds	Total	M. P	S. P	Pulses	Oilseeds	Total	
1	1,670	3,634	46	1,753	0	90	90	74,510	0	1,028	1,683	409,805	0	25,707	21,884	457,397	13,660	0	857	729	15,247	
2	1,523	3,097	49	1,700	0	59	59	79,598	0	677	1,109	437,790	0	16,929	14,411	469,130	14,593	0	564	480	15,638	
	1,282	2,810	46	1,326	0	63	63	81,815	0	722	1,183	449,982	0	18,061	15,375	483,419	14,999	0	602	513	16,114	
	803	1,464	55	1,011	0	0	0	43,845	0	0	0	241,150	0	0	0	241,150	8,038	0	0	0	8,038	
	3,608	7,371	49	4,037	0	122	122	205,259	0	1,400	2,291	1,128,922	0	34,991	29,786	1,193,699	37,631	0	1,166	993	39,790	
5	699	4,828	14	779	0	83	20	13,978	0	952	373	76,877	0	23,799	4,844	105,520	2,563	0	793	161	3,517	
6	616	8,876	7	29	0	104	0	1,026	0	1,195	0	5,641	0	29,864	0	35,505	188	0	995	0	1,184	
7	381	8,876	4	11	0	22	0	399	0	256	0	2,196	0	6,403	0	8,600	73	0	213	0	287	
8	722	1,351	53	1,081	0	496	80	35,931	0	5,697	1,496	197,622	0	142,426	19,446	359,494	6,587	0	4,748	648	11,983	
	1,502	5,112	29	1,239	0	301	30	67,403	0	3,449	563	370,719	0	86,228	7,319	464,265	12,357	0	2,874	244	15,476	
	642	8,876	7	133	0	66	12	4,669	0	760	216	25,682	0	19,007	2,808	47,497	856	0	634	94	1,583	
	2,866	15,339	19	2,453	0	863	121	108,004	0	9,906	2,275	594,023	0	247,661	29,573	871,257	19,801	0	8,255	986	29,042	
10	366	4,406	8	107	0	97	41	2,491	0	1,114	779	13,702	0	27,858	10,123	51,682	457	0	929	337	1,723	
11	1,904	14,564	13	662	22	591	52	36,655	1,810	6,781	982	201,604	7,242	169,519	12,770	391,135	6,720	60	5,651	426	12,857	
12	2,784	3,725	75	4,572	0	3,447	270	226,201	0	39,554	5,068	1,244,105	0	988,838	65,888	2,298,830	41,470	0	32,961	2,196	76,628	
13	672	14,564	5	61	0	92	4	3,386	0	1,059	76	18,621	0	26,487	993	46,099	621	0	883	33	1,537	
	2,543	4,498	57	3,820	96	3,411	271	187,684	7,829	39,146	5,098	1,032,263	31,316	978,644	66,271	2,108,494	34,409	261	32,621	2,209	69,500	
	3,215	19,062	17	3,881	96	3,504	275	191,070	7,829	40,205	5,174	1,050,883	31,316	1,005,131	67,262	2,154,593	35,029	261	33,504	2,242	71,037	
	6,400	38,116	23	14,685	11	435	162	459	39	15,837	13,300	5,262	732	87,101	53,198	131,554	9,513	2,903	443	4,385	317	8,049
	1,498	2,229	67	2,189	1,005	719	169	112,376	82,381	8,252	3,181	618,071	329,526	206,290	41,358	1,195,244	20,602	2,746	6,876	1,379	31,603	
	7,640	23,186	33	10,180	4,042	4,941	658	493,457	331,173	56,703	12,354	2,714,011	1,324,693	1,417,573	160,599	5,616,877	90,467	11,039	47,252	5,353	154,112	

Notes and source: Same as in Table A12-7 (1/2).

Table A12-13 Polder-wise Crop Losses in Bogalay Township (Financial Terms) (1/2)

No.	Polder Name	Planned Area (ha)	Village Tract Name	Area (ha)	Village Tract												
					Cropped Area (Acre)				Production (Baskets)				Crop Loss Value (1,000 Kyats)				
					M. P.	S. P.	Pulses	Oilseeds	M. P.	S. P.	Pulses	Oilseeds	M. P.	S. P.	Pulses	Oilseeds	Total
15	Daunggyi	4,388	Set San	12,618	13,376	0	0	228	756,078	0	0	5,116	4,158,431	0	0	66,512	4,224,943
		1,323	Byu Sa Khan	1,596	3,749	0	0	226	215,099	0	0	5,071	1,183,044	0	0	65,929	1,248,973
		4,179	Daunggyi	13,033	16,337	0	0	433	934,558	0	0	9,717	5,140,069	0	0	126,315	5,266,384
		9,890	Sub-total	27,247	33,462	0	0	887	1,905,735	0	0	19,904	10,481,544	0	0	258,756	10,740,300
16	Daunggyi (East)	2,751	Daunggyi	13,033	16,337	0	0	433	934,558	0	0	9,717	5,140,069	0	0	126,315	5,266,384
		1,775	Nga Pyay Ma	2,927	6,842	0	0	112	388,489	0	0	2,513	2,136,688	0	0	32,673	2,169,361
		4,257	Kha Naung	3,779	9,646	0	0	99	546,880	0	0	2,222	3,007,840	0	0	28,880	3,036,720
		147	Paung Tae	1,360	3,201	0	0	207	190,460	0	0	4,645	1,047,527	0	0	60,386	1,107,913
		8,930	Sub-total	21,099	36,026	0	0	851	2,060,386	0	0	19,096	11,332,125	0	0	248,254	11,580,378
17	Daunggyi (West)	1,138	Set San	12,618	13,182	0	0	228	745,113	0	0	5,116	4,098,119	0	0	66,512	4,164,631
		1,788	Pet Pyael	1,485	3,677	0	0	100	206,905	0	0	2,244	1,137,976	0	0	29,172	1,167,148
		1,631	Byu Sa Khan	1,596	3,749	0	0	226	215,099	0	0	5,071	1,183,044	0	0	65,929	1,248,973
		530	Kamakalu	1,011	2,596	0	0	120	147,401	0	0	2,693	810,705	0	0	35,006	845,711
		427	Nga Pyay Ma	2,927	6,842	0	0	112	388,489	0	0	2,513	2,136,688	0	0	32,673	2,169,361
		1,408	Paung Tae	1,360	3,201	0	0	207	190,460	0	0	4,645	1,047,527	0	0	60,386	1,107,913
		18	Thapyaykan	1,430	1,987	0	0	0	111,808	0	0	0	614,947	0	0	0	614,947
		6,940	Sub-total	22,427	35,234	0	0	993	2,005,274	0	0	22,283	11,029,006	0	0	289,678	11,318,684
18	Daunggyi (Upper)	388	Kamakalu	1,011	2,569	0	0	120	145,868	0	0	2,693	802,273	0	0	35,006	837,279
		992	Sa Khan Gyi	1,066	2,013	0	0	0	114,640	0	0	0	630,522	0	0	0	630,522
		1,380	Sub-total	2,077	4,582	0	0	120	260,508	0	0	2,693	1,432,795	0	0	35,006	1,467,801

Notes and source: Same as in Table A12-7 (1/2).

Table A12-13 Polder-wise Crop Losses in Bogalay Township (Financial Terms) (2/2)

No.	Polder	Village Tract	Planned Area (ha)	Area (ha)	% to Polder Area	Polder																	
						Cropped Area (Acre)				Production (Baskets)				Crop Loss Value (1,000 Kyats)					Annual Loss Prevention Value (1,000 Kyats)				
						M. P.	S. P.	Pulses	Oilseeds	M. P.	S. P.	Pulses	Oilseeds	M. P.	S. P.	Pulses	Oilseeds	Total	M. P.	S. P.	Pulses	Oilseeds	Total
15			4,388	12,618	35	4,652	0	0	79	262,932	0	0	1,779	1,446,124	0	0	23,130	1,469,254	48,204	0	0	771	48,975
			1,323	1,596	83	3,108	0	0	187	178,306	0	0	4,204	980,681	0	0	54,651	1,035,332	32,689	0	0	1,822	34,511
			4,179	13,033	32	5,238	0	0	139	299,664	0	0	3,116	1,648,151	0	0	40,503	1,688,653	54,938	0	0	1,350	56,288
			9,890	27,247	36	12,998	0	0	405	740,901	0	0	9,099	4,074,956	0	0	118,284	4,193,240	135,832	0	0	3,943	139,775
16			2,751	13,033	21	3,448	0	0	91	197,266	0	0	2,051	1,084,964	0	0	26,662	1,111,626	36,165	0	0	889	37,054
			1,775	2,927	61	4,149	0	0	68	235,589	0	0	1,524	1,295,737	0	0	19,813	1,315,550	43,191	0	0	660	43,852
			4,257	3,779	113	10,866	0	0	112	616,054	0	0	2,503	3,388,297	0	0	32,533	3,420,830	112,943	0	0	1,084	114,028
			147	1,360	11	346	0	0	22	20,586	0	0	502	113,225	0	0	6,527	119,752	3,774	0	0	218	3,992
			8,930	21,099	42	18,810	0	0	293	1,069,495	0	0	6,580	5,882,223	0	0	85,536	5,967,759	196,074	0	0	2,851	198,925
			6,940	Sub-total	31	15,145	0	0	665	868,674	0	0	14,933	4,777,706	0	0	194,133	4,971,838	159,257	0	0	6,471	165,728
17			1,138	12,618	9	1,189	0	0	21	67,201	0	0	461	369,604	0	0	5,999	375,602	12,320	0	0	200	12,520
			1,788	1,485	120	4,427	0	0	120	249,122	0	0	2,702	1,370,169	0	0	35,124	1,405,294	45,672	0	0	1,171	46,843
			1,631	1,596	102	3,831	0	0	231	219,816	0	0	5,183	1,208,988	0	0	67,375	1,276,362	40,300	0	0	2,246	42,545
			530	1,011	52	1,361	0	0	63	77,272	0	0	1,412	424,999	0	0	18,352	443,350	14,167	0	0	612	14,778
			427	2,927	15	998	0	0	16	56,674	0	0	367	311,707	0	0	4,766	316,473	10,390	0	0	159	10,549
			1,408	1,360	104	3,314	0	0	214	197,182	0	0	4,809	1,084,499	0	0	62,517	1,147,016	36,150	0	0	2,084	38,234
			18	1,430	1	25	0	0	0	1,407	0	0	0	7,741	0	0	0	7,741	258	0	0	0	258
			6,940	22,427	31	15,145	0	0	665	868,674	0	0	14,933	4,777,706	0	0	194,133	4,971,838	159,257	0	0	6,471	165,728
18			388	1,011	38	986	0	0	46	55,981	0	0	1,033	307,895	0	0	13,435	321,330	10,263	0	0	448	10,711
			992	1,066	93	1,873	0	0	0	106,682	0	0	0	586,752	0	0	0	586,752	19,558	0	0	0	19,558
			1,380	2,077	66	2,859	0	0	46	162,663	0	0	1,033	894,647	0	0	13,435	908,082	29,822	0	0	448	30,269

Notes and source: Same as in Table A12-7 (1/2).

Table A12-14 Polder-wise Crop Losses in Phayapon Township (Financial Terms) (1/2)

No.	Polder Name	Planned Area (ha)	Name	Area (ha)	Village Tract														
					Cropped Area (Acre)				Production (Baskets)				Crop Loss Value (1,000 Kyats)						
					M. P.	S. P.	Pulses	Oilseeds	M. P.	S. P.	Pulses	Oilseeds	M. P.	S. P.	Pulses	Oilseeds	Total		
19	Daw Nyein	1,200	Dawnye in	4,674	3,857	0	0	0	236,048	0	0	0	1,298,266	0	0	0	1,298,266		
20	Myokone	1,832	Myokone	4,541	6,242	0	0	0	382,010	0	0	0	2,101,057	0	0	0	2,101,057		
		448	Daydalu	8,941	11,257	0	0	0	680,317	0	0	0	3,741,742	0	0	0	3,741,742		
	Sub-total	2,280		13,482	17,499	0	0	0	1,062,327	0	0	0	5,842,800	0	0	0	5,842,800		
21	Kyethphamwezaung	3,844	Kyethphamwezaung	4,966	10,179	250	2	49	626,416	18,764	20	821	3,445,286	75,055	510	10,667	3,531,518		
		3,015	Kyonekadone	3,556	7,229	0	0	38	479,897	0	0	636	2,639,434	0	0	8,272	2,647,706		
		1,336	Byinekazee	1,463	3,263	0	9	65	196,922	0	92	1,088	1,083,071	0	2,295	14,150	1,099,516		
		705	Okkoba	831	1,622	0	8	98	99,818	0	82	1,641	548,998	0	2,040	21,333	572,348		
		1,854	Daydalu	8,941	11,257	0	0	0	680,317	0	0	0	3,741,742	0	0	0	3,741,742		
		247	Kha Naung	1,011	9,646	0	0	99	546,880	0	0	1,658	3,007,840	0	0	21,551	3,029,391		
		732	Thapyaykan	1,430	1,987	0	0	0	111,808	0	0	0	614,947	0	0	0	614,947		
		837	Nga Pyay Ma	2,927	6,842	0	0	112	388,489	0	0	1,875	2,136,688	0	0	24,381	2,161,069		
			Sub-total	12,570		25,125	52,025	250	19	461	3,130,547	18,764	194	7,719	17,218,007	75,055	4,845	100,353	17,998,260
		22	Banbwezu	960	Banbwezu	1,464	2,777	2,928	0	0	42,932	57,506	0	0	236,128	230,024	0	0	466,152
411	Kyoneduttanyin			1,185	2,230	2,280	0	0	34,431	44,825	0	0	189,372	179,299	0	0	368,671		
542	Kazun			1,973	4,020	4,460	0	0	58,210	86,346	0	0	320,153	345,382	0	0	665,535		
763	Thaeaintaman			1,343	2,593	2,743	0	0	38,480	54,092	0	0	211,641	216,368	0	0	428,009		
839	Phyapontaman			2,024	3,824	4,121	0	0	56,289	80,689	0	0	309,591	322,757	0	0	632,348		
80	Kyoneku			1,869	3,705	3,615	0	0	57,205	71,360	0	0	314,629	285,440	0	0	600,069		
1,007	Cyowawhatalun			1,979	3,048	3,856	0	0	46,839	75,723	0	0	288,166	302,891	0	0	591,057		
101	Kyonekyeik			1,148	1,994	1,994	0	0	30,708	39,362	0	0	168,882	157,446	0	0	326,328		
627	Koeaintan			1,294	2,593	2,500	0	0	40,762	49,000	0	0	224,191	196,000	0	0	420,191		
	Sub-total			5,330		14,279	26,784	28,477	0	0	405,957	558,902	0	0	2,232,761	2,235,607	0	0	4,468,368
23	Daydalu	1,720	Daydalu	8,941	11,257	0	0	0	680,317	0	0	0	3,741,742	0	0	0	3,741,742		
24	Letpanbin	3,058	Lanpan	5,106	10,213	0	0	9	87	587,707	0	92	1,457	3,232,389	0	2,295	18,939	3,253,623	
		66	Kyonekadone	3,556	7,229	0	0	38	479,897	0	0	636	2,639,434	0	0	8,272	2,647,706		
		334	Daydalu	8,941	11,257	0	0	0	680,317	0	0	0	3,741,742	0	0	0	3,741,742		
	Sub-total	3,458		17,603	28,699	0	0	9	125	1,747,921	92	2,093	9,613,566	0	2,295	27,211	9,643,071		
25	Zinbaung	1,331	Zinbaung	2,905	5,660	0	0	92	334,846	0	0	1,541	1,841,651	0	0	20,027	1,861,678		
		18	Theinkone	1,453	2,998	0	3	35	197,238	0	31	586	1,084,811	0	765	7,619	1,093,195		
		278	Kondaing	774	1,681	0	8	41	105,163	0	82	687	578,398	0	2,040	8,925	589,364		
		1,043	Tinpahlwe	1,287	2,719	0	0	51	159,932	0	20	854	879,624	0	510	11,102	891,236		
			Sub-total	2,670		6,419	13,058	0	13	219	797,179	0	133	3,667	4,844,484	0	3,315	47,673	4,435,472

Notes and source: Same as in Table A12-7 (1/2).

Table A12-14 Polder-wise Crop Losses in Phayapon Township (Financial Terms)(2/2)

No.	Polder	Planned Area (ha)	Area (ha)	% to Polder Area	Polder																			
					Cropped Area (Acre)				Production (Baskets)				Crop Loss Value (1,000 Kyats)							Annual Loss Prevention Value (1,000 Kyats)				
					M. P.	S. P.	Pulses	Oilseeds	M. P.	S. P.	Pulses	Oilseeds	M. P.	S. P.	Pulses	Oilseeds	Total	M. P.	S. P.	Pulses	Oilseeds	Total		
19		1,200	4,674	26	990	0	0	0	60,603	0	0	0	333,316	0	0	0	333,316	11,111	0	0	0	11,111		
20		1,832	4,541	40	2,518	0	0	0	154,117	0	0	0	847,641	0	0	0	847,641	28,255	0	0	0	28,255		
		448	8,941	5	564	0	0	0	34,088	0	0	0	187,485	0	0	0	187,485	6,249	0	0	0	6,249		
	Sub-total	2,280	13,482	17	3,082	0	0	0	188,205	0	0	0	1,035,125	0	0	0	1,035,125	34,504	0	0	0	34,504		
21		3,844	4,966	77	7,879	194	2	38	484,886	14,524	16	635	2,666,871	58,097	395	8,257	2,733,619	88,896	484	13	275	89,668		
		3,015	3,556	85	6,129	0	0	32	406,887	0	0	540	2,237,878	0	0	7,014	2,244,892	74,596	0	0	234	74,830		
		1,336	1,463	91	2,980	0	8	59	179,828	0	84	994	989,052	0	2,096	12,921	1,004,069	32,968	0	70	431	33,469		
		705	831	85	1,376	0	7	83	84,683	0	69	1,392	465,757	0	1,731	18,099	485,586	15,525	0	58	603	16,186		
		1,854	8,941	21	2,334	0	0	0	141,070	0	0	0	775,885	0	0	0	775,885	25,863	0	0	0	25,863		
		247	1,011	24	2,357	0	0	24	133,610	0	0	405	734,853	0	0	5,265	740,118	24,495	0	0	176	24,671		
		732	1,430	51	1,017	0	0	0	57,253	0	0	0	314,784	0	0	0	314,784	10,493	0	0	0	10,493		
		837	2,927	29	1,957	0	0	32	111,092	0	0	536	611,004	0	0	6,972	617,976	20,367	0	0	232	20,599		
			Sub-total	12,570	25,125	50	26,029	194	17	269	1,599,288	14,524	169	4,502	8,796,084	58,097	4,221	58,527	8,916,929	293,203	484	141	1,951	295,779
		22		960	1,464	66	1,821	1,920	0	0	28,152	37,709	0	0	154,838	150,835	0	0	305,673	5,161	1,257	0	0	6,418
411	1,185			35	773	791	0	0	11,942	15,547	0	0	65,681	62,187	0	0	127,868	2,189	518	0	0	2,708		
542	1,973			27	1,104	1,225	0	0	15,991	23,720	0	0	87,949	94,880	0	0	182,828	2,932	791	0	0	3,722		
763	1,343			57	1,473	1,558	0	0	21,862	30,731	0	0	120,240	122,925	0	0	243,165	4,008	1,024	0	0	5,032		
839	2,024			41	1,585	1,708	0	0	23,333	33,448	0	0	128,333	133,791	0	0	262,124	4,278	1,115	0	0	5,393		
80	1,869			4	159	155	0	0	2,449	3,054	0	0	13,467	12,218	0	0	25,685	449	102	0	0	551		
1,007	1,979			51	1,551	1,952	0	0	23,885	38,531	0	0	131,366	154,124	0	0	285,489	4,379	1,284	0	0	5,663		
101	1,148			9	175	175	0	0	2,702	3,463	0	0	14,859	13,852	0	0	28,711	495	115	0	0	611		
627	1,294			48	1,256	1,211	0	0	19,751	23,743	0	0	108,630	94,971	0	0	203,601	3,621	791	0	0	4,412		
	Sub-total			5,330	14,279	37	9,898	10,696	0	0	150,066	209,946	0	0	825,363	839,782	0	0	1,665,145	27,512	6,998	0	0	34,510
23	Daydalu	1,720	8,941	19	2,166	0	0	0	130,874	0	0	0	719,807	0	0	0	719,807	23,994	0	0	0	23,994		
24		3,058	5,106	60	6,117	0	5	52	351,980	0	55	872	1,935,888	0	1,374	11,342	1,948,605	64,530	0	46	378	64,954		
		66	3,556	2	134	0	0	1	8,907	0	0	12	48,988	0	0	154	49,142	1,633	0	0	5	1,638		
		334	8,941	4	421	0	0	0	25,414	0	0	0	139,777	0	0	0	139,777	4,659	0	0	0	4,659		
	Sub-total	3,458	17,603	20	6,671	0	5	53	386,301	0	55	884	2,124,633	0	1,374	11,496	2,137,524	70,822	0	46	383	71,251		
25		1,331	2,905																					

Table A12-15 Polder-wise Crop Losses in Daydaye Township (Financial Terms) (1/2)

Polder			Village Tract																
No.	Name	Planned Area (ha)	Name	Area (ha)	Cropped Area (Acre)				Production (Baskets)				Crop Loss Value (1,000 Kyats)						
					M. P.	S. P.	Pulses	Oilseeds	M. P.	S. P.	Pulses	Oilseeds	M. P.	S. P.	Pulses	Oilseeds	Total		
27	Thandi	545	Thayar Gone	1,234	2,200	185	109	104	124,542	15,159	1,242	2,343	653,846	50,024	31,038	30,454	765,361		
		150	Kyondu Darmalain	1,470	817	105	29	176	47,778	8,604	330	3,964	250,835	28,392	8,258	51,537	339,023		
		593	Thandi Thegonelay	1,335	3,076	79	81	104	189,820	6,473	923	2,343	996,555	21,362	23,065	30,454	1,071,435		
		100	Thandi Zeepyugone	1,756	3,437	82	101	130	208,299	6,719	1,150	2,928	1,093,572	22,173	28,760	38,067	1,182,572		
		1,388		5,795	9,530	451	320	514	570,440	36,955	3,645	11,578	2,994,807	121,951	91,120	150,512	3,358,391		
28	Suclubbaluma	708	Nakhoung Chaung	981	1,885	0	94	94	114,561	0	1,071	2,117	601,445	0	26,767	27,526	655,737		
		1,069	Kyatsinpyo	1,296	2,586	0	109	104	153,867	0	1,242	2,343	807,802	0	31,038	30,454	869,293		
		735	Kyonkanan	815	1,684	0	71	138	101,773	0	809	3,108	534,306	0	20,217	40,410	594,933		
		437	Uto (kyaiklatkalay)	479	951	0	36	35	53,836	0	410	788	282,640	0	10,251	10,249	303,139		
		2,949		3,571	7,106	0	310	371	424,037	0	3,531	8,357	2,226,192	0	88,273	108,638	2,423,102		
29	Hleseik chaunggyi	259	Hmawbi	484	1,089	575	48	32	67,572	47,116	547	721	354,755	155,481	13,668	9,370	533,275		
		356	Hleseikchaunggyi	1,157	2,151	0	102	94	133,287	0	1,162	2,117	699,755	0	29,045	27,526	756,325		
		156	Lav	1,111	1,745	601	48	35	108,426	49,246	547	788	569,234	162,512	13,668	10,249	755,663		
		1,122	Laik Kyun	1,594	2,924	0	121	138	197,589	0	1,378	3,108	1,037,344	0	34,455	40,410	1,112,208		
		909		4,346	7,909	1,176	319	299	506,874	96,361	3,633	6,735	2,661,089	317,993	90,835	87,555	3,157,471		
30	Tamatakaw	1,704	Tamatakaw	2,047	4,752	0	109	138	285,975	0	1,242	3,108	1,501,371	0	31,038	40,410	1,572,818		
		840	Toe	1,069	1,159	0	18	35	71,029	0	205	788	372,904	0	5,126	10,249	388,278		
		1,122	Tawchaik	1,481	2,530	0	101	230	155,911	0	1,150	5,181	818,534	0	28,760	67,350	914,644		
		844	Shankan	1,013	2,235	0	47	69	127,272	0	535	1,534	668,179	0	13,383	20,205	701,767		
		835	Mayan Anout	1,324	2,256	0	73	104	127,904	0	831	2,343	671,496	0	20,787	30,454	722,736		
5,345		6,934	12,952	0	348	576	768,092	0	3,964	12,974	4,032,483	0	99,093	168,667	4,300,243				
31	Kyonsoat	225	Kawatvaykanchaung	2,149	3,698	0	94	138	228,518	0	1,071	3,108	1,199,719	0	26,767	40,410	1,266,895		
		15	Toe	1,069	1,159	0	18	35	71,029	0	205	788	372,904	0	5,126	10,249	388,278		
		240		3,218	4,857	0	112	173	299,547	0	1,276	3,897	1,572,623	0	31,892	50,659	1,653,174		

Notes and source: Same as in Table A12-7 (1/2).

Table A12-15 Polder-wise Crop Losses in Daydaye Township (Financial Terms) (2/2)

Polder	Village Tract			Polder																	
	No.	Planned Area (ha)	% to Polder Area	Cropped Area (Acre)				Production (Baskets)				Crop Loss Value (1,000 Kyats)					Annual Loss Prevention Value (1,000 Kyats)				
				M. P.	S. P.	Pulses	Oilseeds	M. P.	S. P.	Pulses	Oilseeds	M. P.	S. P.	Pulses	Oilseeds	Total	M. P.	S. P.	Pulses	Oilseeds	Total
27	545	1,234	44	972	82	48	46	55,004	6,695	548	1,035	288,773	22,093	13,708	13,450	338,024	9,626	736	457	448	11,267
	150	1,470	10	83	11	3	18	4,875	878	34	405	25,595	2,897	843	5,259	34,594	853	97	28	175	1,153
	593	1,335	44	1,366	35	36	46	84,317	2,875	410	1,041	442,664	9,489	10,245	13,527	475,926	14,755	316	342	451	15,864
	100	1,756	6	196	5	6	7	11,862	383	66	167	62,276	1,263	1,638	2,168	67,345	2,076	42	55	72	2,245
	1,388	5,795	24	2,617	132	93	117	156,059	10,831	1,057	2,646	819,309	35,742	26,434	34,404	915,889	27,310	1,191	881	1,147	30,530
28	708	981	72	1,360	0	68	68	82,680	0	773	1,528	434,070	0	19,318	19,866	473,253	14,469	0	644	662	15,775
	1,069	1,296	82	2,133	0	90	86	126,917	0	1,024	1,932	666,312	0	25,601	25,120	717,033	22,210	0	853	837	23,901
	735	815	90	1,519	0	64	124	91,783	0	729	2,803	481,859	0	18,233	36,443	536,535	16,062	0	608	1,215	17,884
	437	479	91	868	0	33	32	49,116	0	374	719	257,857	0	9,352	9,350	276,559	8,595	0	312	312	9,219
	2,949	3,571	83	5,880	0	255	310	350,495	0	2,900	6,983	1,840,098	0	72,504	90,779	2,003,380	61,337	0	2,417	3,026	66,779
29	259	484	54	583	308	26	17	36,160	25,213	293	386	189,838	83,202	7,314	5,014	285,368	6,328	2,773	244	167	9,512
	356	1,157	31	662	0	31	29	41,011	0	357	651	215,309	0	8,937	8,469	232,715	7,177	0	298	282	7,757
	156	1,111	14	245	84	7	5	15,224	6,915	77	111	79,928	22,819	1,439	1,061,06	2,664	761	64	48	3,537	
	138	1,594	9	253	0	10	12	17,106	0	119	269	89,808	0	2,983	3,498	96,289	2,994	0	99	117	3,210
	909	4,346	21	1,743	392	74	63	109,502	32,127	846	1,417	574,884	106,021	21,153	18,421	720,478	19,163	3,534	705	614	24,016
30	1,704	2,047	83	3,956	0	91	115	238,057	0	1,033	2,588	1,249,798	0	25,837	33,639	1,309,273	41,660	0	861	1,121	43,642
	840	1,069	79	911	0	14	28	55,813	0	161	619	293,021	0	4,028	8,053	305,102	9,767	0	134	268	10,170
	1,122	1,481	76	1,917	0	77	174	118,118	0	872	3,925	620,118	0	21,788	51,024	692,931	20,671	0	726	1,701	23,098
	844	1,013	83	1,879	0	39	57	106,039	0	446	1,295	556,706	0	11,151	16,834	584,691	18,557	0	372	561	19,490
	835	1,324	63	1,423	0	46	66	80,664	0	524	1,477	423,489	0	13,109	19,206	455,804	14,116	0	437	640	15,193
5,345	6,934	77	10,085	0	267	440	598,692	0	3,037	9,904	3,143,131	0	75,913	128,756	3,347,800	104,771	0	2,530	4,292	111,593	
31	225	2,149	10	387	0	10	14	23,926	0	112	325	125,610	0	2,802	4,231	132,644	4,187	0	93	141	4,421
	15	1,069	1	16	0	0	0	997	0	3	11	5,233	0	72	144	5,448	174	0	2	5	182
	240	3,218	7	403	0	10	15	24,922	0	115	337	130,843	0	2,874	4,375	138,092	4,361	0	96	146	4,603

Notes and source: Same as in Table A12-7 (1/2).

Table A12-16 Polder-wise Crop Losses in Kyaiklatt Township (Financial Terms) (1/2)

Polder No.	Polder Name	Planned Area (ha)	Village Tract Name	Area (ha)	Cropped Area (Acre)				Production (Baskets)				Crop Loss Value (1,000 Kyats)			
					M. P.	S. P.	Pulses	Oilseeds	M. P.	S. P.	Pulses	Oilseeds	M. P.	S. P.	Pulses	Oilseeds
					32	Maubin Island (North)	1,303	Hlaing Tar	1,518	2,832	121	2,660	744	43,896	2,425	7,980
		570	Lay Eain Tan	598	1,857	341	1,540	443	28,524	6,813	4,626	2,188	115,520	26,571	154,971	28,449
		748	Sin Tar	776	1,971	201	1,737	496	29,920	4,000	5,211	2,450	121,175	15,600	174,569	31,853
		1,058	Kyaung Su	1,099	2,225	526	1,616	608	34,176	10,467	4,848	3,004	138,413	40,823	162,408	39,046
		813	Taung Boae Kyi	828	1,812	508	1,265	452	28,086	10,089	3,795	2,233	113,748	39,347	127,133	29,027
		804	Ngwe Inn Su	804	1,576	1,486	965	31	24,050	29,898	270	153	97,402	116,603	9,045	1,991
		1,261	Yone Dount	1,292	2,441	456	2,026	580	37,494	9,038	6,078	2,865	151,850	35,248	203,613	37,248
		594	Kyone Phar Yay Kyaw	593	1,224	1,224	0	0	18,433	24,602	0	0	74,655	95,949	0	0
		1,225	Eain Yar Kyi	1,225	2,135	1,607	497	174	32,708	32,269	1,491	860	132,468	125,847	49,949	11,174
		984	Kyone Kyaik	983	1,930	864	1,038	359	29,259	17,332	3,114	1,773	118,498	67,594	104,319	23,055
	Sub-total	11,000		11,356	23,411	7,594	15,524	4,724	359,642	152,045	46,572	23,337	1,456,550	592,975	1,560,162	303,375
33	Maubin Island (South)	617	Tar Pat	605	1,178	1,087	90	25	18,094	21,870	270	124	73,281	85,295	9,045	1,606
		348	Phoe San	337	619	461	157	44	9,471	9,266	471	217	38,356	36,138	15,779	2,826
		779	Latar Kyi	717	1,440	1,329	110	37	22,032	26,739	330	183	89,230	104,284	11,055	2,376
		151	Tharyar Wel	134	1,856	278	0	0	28,620	5,588	0	0	115,909	21,792	0	0
		752	Kyoe Chaung	667	1,241	1,241	0	0	18,243	24,894	0	0	73,853	97,088	0	0
		1,963	Bali Chan Yay Kyaw	1,741	3,264	3,745	0	0	46,088	75,724	0	0	186,655	295,323	0	0
	Sub-total	4,610		4,201	9,598	8,141	357	106	142,547	164,082	1,071	524	577,314	639,921	35,879	6,807
34	Thoneg wakyun	601	Ah Su Kyi	724	1,489	1,458	24	6	22,633	29,131	72	30	91,663	113,610	2,412	385
		357	Me Zali Kone	517	898	771	119	37	13,560	15,482	357	183	54,917	60,379	11,960	2,376
		332	Ah Huu	434	864	808	52	15	12,943	16,241	156	74	52,418	63,339	5,226	963
		550	Thamet Pyay	718	1,296	1,296	0	0	19,829	26,101	0	0	80,307	101,796	0	0
		332	Linna Ton	401	800	800	0	0	12,064	16,048	0	0	48,859	62,587	0	0
		448	Darna Chaung	629	1,100	1,100	0	0	16,236	22,132	0	0	65,756	86,315	0	0
		363	Htayaw Ywar Thit	497	879	879	0	0	13,326	17,668	0	0	53,969	68,905	0	0
		497	Tharyar Kone	566	1,159	1,159	0	0	16,968	23,319	0	0	68,719	90,944	0	0
		706	Myanmar Kavin Su	814	1,627	1,627	0	0	23,787	32,735	0	0	96,336	127,667	0	0
		423	Lai Pin	468	927	927	0	0	13,812	18,651	0	0	55,940	72,740	0	0
		526	Taman Kyi	560	1,186	1,186	0	1	17,980	23,839	0	5	72,818	92,971	0	64
		834	Ohn Pin Su	889	1,584	1,584	0	0	24,267	31,870	0	0	98,281	124,293	0	0
		658	Sit Kone	702	1,492	1,492	0	1	22,917	30,019	0	5	92,814	117,074	0	64
		685	Sar Pho Thiyne Chaung	730	1,339	1,339	0	1	20,192	26,914	0	5	81,778	104,964	0	64
	Sub-total	8,120		9,594	18,562	18,348	193	61	279,117	368,794	583	301	1,130,426	1,438,296	19,598	3,917

Notes and source: Same as in Table A12-7 (1/2).

Table A12-16 Polder-wise Crop Losses in Kyaiklatt Township (Financial Terms) (2/2)

Polder No.	Village Tract			Polder																	
	Planned Area (ha)	Area (ha)	% to Polder Area	Cropped Area (Acre)				Production (Baskets)				Crop Loss Value (1,000 Kyats)				Annual Loss Prevention Value (1,000 Kyats)					
	M. P.	S. P.	Pulses	Oilseeds	M. P.	S. P.	Pulses	Oilseeds	M. P.	S. P.	Pulses	Oilseeds	Total	M. P.	S. P.	Pulses	Oilseeds	Total			
32	1,303	1,518	86	2,431	1,04	2,283	639	37,679	2,081	6,850	3,155	152,599	8,117	229,467	41,012	43,196	5,087	271	7,649	1,367	14,373
	570	598	95	1,770	325	1,470	422	27,188	6,494	4,409	2,086	110,111	25,327	147,715	27,117	310,271	3,670	844	4,924	904	10,342
	1,640	1,640	100	3,408	260	3,053	837	53,097	5,112	9,159	4,135	215,041	19,935	306,827	53,752	595,555	7,168	665	10,228	1,792	19,852
	748	776	96	1,900	194	1,674	478	28,840	3,526	5,023	2,362	116,803	15,037	168,270	30,704	330,813	3,893	501	5,609	1,023	11,027
	1,058	1,099	96	2,142	506	1,556	585	32,901	10,077	4,667	2,891	133,249	39,300	156,349	37,589	366,487	4,442	1,310	5,212	1,253	12,216
	813	828	98	1,779	499	1,242	444	27,577	9,906	3,726	2,192	111,688	38,634	124,829	28,502	303,652	3,723	1,288	4,161	950	10,122
	804	804	100	1,576	1,486	90	31	24,050	29,898	270	153	97,402	116,603	9,045	1,991	225,041	3,247	3,887	302	66	7,521
	1,261	1,292	98	2,382	445	1,977	566	36,594	8,821	5,932	2,796	148,206	34,402	198,728	36,354	417,690	4,940	1,147	6,624	1,212	13,923
	594	593	100	1,226	1,226	0	0	18,465	24,644	0	0	74,781	96,111	0	170,892	2,493	3,204	0	0	5,696	
	1,225	1,225	100	2,135	1,607	497	174	32,708	32,269	1,491	860	132,468	125,847	49,949	11,174	319,438	4,416	4,195	1,665	372	10,648
	984	983	100	1,932	865	1,039	359	29,289	17,349	3,117	1,775	118,619	67,663	104,425	23,078	313,785	3,954	2,255	3,481	769	10,460
	11,000	11,356	97	22,361	7,517	14,882	4,536	348,387	150,507	44,645	22,406	1,410,968	586,978	1,495,603	291,274	3,784,822	47,032	19,566	49,853	9,709	126,161
33	617	605	102	1,201	1,109	92	25	18,453	22,304	275	126	74,735	86,987	9,224	1,637	172,583	2,491	2,900	307	55	8,753
	348	337	103	639	476	162	45	9,780	9,569	486	224	39,608	37,317	16,294	2,918	96,137	1,320	1,244	543	97	3,205
	779	717	109	1,565	1,444	120	40	23,937	29,052	359	199	96,945	113,302	12,011	2,582	224,840	3,232	3,777	400	86	7,495
	151	134	113	2,091	313	0	0	32,250	6,297	0	0	130,614	24,557	0	0	155,171	4,354	819	0	0	5,172
	752	667	113	1,399	1,399	0	0	20,567	28,067	0	0	83,298	109,461	0	0	192,759	2,777	3,649	0	0	6,425
	1,963	1,741	113	3,680	4,223	0	0	51,964	85,380	0	0	210,456	332,981	0	0	543,437	7,117	11,049	0	0	18,115
	4,610	4,201	110	10,576	8,963	373	111	156,952	180,668	1,120	549	635,657	704,604	37,529	7,137	1,388,927	21,189	23,487	1,251	238	46,164
34	601	724	83	1,236	1,210	20	5	18,788	24,182	60	25	76,090	94,309	2,002	320	172,721	2,536	3,144	67	11	5,757
	357	517	69	620	532	26	26	9,363	10,690	247	126	37,922	41,693	8,258	1,641	89,513	1,264	1,390	275	55	2,984
	332	434	76	661	618	40	11	9,901	12,424	119	57	40,099	48,453	3,998	737	93,286	1,337	1,615	133	25	3,110
	550	718	77	993	993	0	0	15,189	19,994	0	0	61,516	77,977	0	0	139,493	2,051	2,599	0	0	4,650
	332	401	83	662	662	0	0	9,988	13,287	0	0	40,452	51,818	0	0	92,270	1,348	1,727	0	0	3,076
	448	629	71	783	783	0	0	11,564	15,763	0	0	46,834	61,477	0	0	108,311	1,561	2,049	0	0	3,610
	547	667	82	1,096	1,096	0	0	16,106	22,022	0	0	65,229	85,887	0	0	151,116	2,174	2,863	0	0	5,037
	363	497																			

Table A12-17 Polder-wise Livestock Losses in Labutta Township (Financial Terms) (1/2)

No.	Polder		Name	Area (ha)	Village Tract						
	Name	Planned Area (ha)			Area (ha)	Livestock Loss (dead, lost & ill) (No.)					
						Baffalo	Cattle	Goat	Pig	Poultry	Duck/Goose
1	Alegyun (1)	1,670	That Kal Thuang	3,634	154	97	110	130	955	510	
2	Alegyun (2)	1,523	Thingan Kone	3,097	242	248	105	104	1,920	620	
		1,282	Nagone	2,810	260	264	84	120	1,600	610	
		803	Gwe Chaung	1,464	225	262	0	150	1,700	590	
		3,608	Sub-total	7,371	727	774	189	374	5,220	1,820	
5	Thingangyi	699	Thingangyi	4,828	790	197	0	515	990	498	
6	Zinywe	616	Tha Pyu Kone	8,876	974	593	65	1,337	6,514	1,565	
7	Leikkwin	381	Tha Pyu Kone	8,876	974	593	65	1,337	6,514	1,565	
8	Labutta (South)	722	Gant Eaik	1,351	521	144	20	300	4,820	718	
		1,502	Sarkyin	5,112	546	629	20	381	8,499	1,320	
		642	Tha Pyu Kone	8,876	974	593	65	1,337	6,514	1,565	
		2,866	Sub-total	15,339	2,041	1,366	105	2,018	19,833	3,603	
10	U Gaungpu	366	Pyin Sa Lu	4,406	2,654	715	57	465	1,486	1,485	
11	Bitud Island (1)	1,904	Myit Pauk	14,564	3,421	965	97	658	4,780	4,735	
12	Bitud Island (2)	2,784	Bitud	3,725	1,253	316	22	510	6,914	2,323	
13	Bitud Island (3)	672	Myit Pauk	14,564	3,421	965	97	658	4,780	4,735	
		2,543	Maung Ngae	4,498	678	539	23	97	10,173	1,545	
		3,215	Sub-total	19,062	4,099	1,504	120	755	14,953	6,280	
14	Bitud Island (4)	2,303	Nyaung Chaung	3,172	420	271	102	513	6,570	2,546	
		2,250	Ka Ka Yan	3,100	510	329	102	513	2,477	548	
		1,589	Shaw Chaung	14,685	885	256	33	489	6,570	2,546	
		1,498	Kyee Chaung	2,229	154	97	110	130	955	510	
		7,640	Sub-total	23,186	1,969	953	347	1,645	16,572	6,150	

Notes: (1) Figures are as of 2009 estimates.

(2) The age of affected farm animals is assumed equivalent to the elapse of half of the animal's total full breeding life span.

Source: Township Livestock Breeding and Veterinary Departments.

Table A12-17 Polder-wise Livestock Losses in Labutta Township (Financial Terms) (2/2)

Polder No.	Planned Area (ha)	Area (ha)	% to Polder Area	Polder																			
				Livestock Loss (dead, lost & ill) (No.)						Loss Value (1,000 Kyats)						Annual Loss Prevention Value (1,000 Kyats)							
				Baffalo	Cattle	Goat	Pig	Poultry	Duck/Goose	Baffalo	Cattle	Goat	Pig	Poultry	Duck/Goose	Total	Baffalo	Cattle	Goat	Pig	Poultry	Duck/Goose	Total
1	1,670	3,634	46	71	45	51	60	439	234	9,908	4,903	430	1,105	1,097	820	18,264	44	22	14	37	49	36	202
2	1,523	3,097	49	76	122	52	51	470	251	10,602	13,415	439	946	1,174	878	27,455	47	60	15	32	52	39	244
	1,282	2,810	46	70	113	48	47	436	233	9,836	12,446	407	878	1,089	814	25,471	44	55	14	29	48	36	226
	803	1,464	55	84	136	58	57	524	280	11,826	14,963	490	1,055	1,310	979	30,622	53	67	16	35	58	44	272
	3,608	7,371	49	230	371	157	156	1,429	763	32,264	40,824	1,336	2,879	3,573	2,671	83,548	143	181	45	96	159	119	743
5	699	4,828	14	22	36	15	15	138	74	3,121	3,950	129	279	346	258	8,083	14	18	4	9	15	11	72
6	616	8,876	7	11	17	7	7	66	35	1,496	1,893	62	134	166	124	3,875	7	8	2	4	7	6	34
7	381	8,876	4	7	11	5	4	41	22	925	1,171	38	83	102	77	2,396	4	5	1	3	5	3	21
8	722	1,351	53	82	133	56	56	510	273	11,522	14,579	477	1,028	1,276	954	29,836	51	65	16	34	57	42	265
	1,502	5,112	29	45	73	31	31	281	150	6,335	8,015	262	565	701	524	16,404	28	36	9	19	31	23	146
	642	8,876	7	11	18	8	8	69	37	1,559	1,973	65	139	173	129	4,038	7	9	2	5	8	6	36
	2,866	15,339	19	139	223	95	94	860	459	19,416	24,567	804	1,733	2,150	1,608	50,278	86	109	27	58	96	71	447
10	366	4,406	8	13	21	9	9	79	42	1,791	2,266	74	160	198	148	4,638	8	10	2	5	9	7	41
11	1,904	14,564	13	20	32	14	14	125	67	2,819	3,566	117	252	312	233	7,299	13	16	4	8	14	10	65
12	2,784	3,725	75	115	185	78	78	714	381	16,114	20,389	667	1,438	1,784	1,334	41,726	72	91	22	48	79	59	371
13	672	14,564	5	7	11	5	5	44	24	995	1,259	41	89	110	82	2,576	4	6	1	3	5	4	23
	2,543	4,498	57	87	140	59	59	540	288	12,189	15,423	505	1,088	1,350	1,009	31,564	54	69	17	36	60	45	281
	3,215	19,062	17	94	152	64	64	584	312	13,184	16,682	546	1,177	1,460	1,092	34,140	59	74	18	39	65	49	304
14	2,303	3,172	73	112	180	76	76	693	370	15,653	19,806	648	1,397	1,733	1,296	40,534	70	88	22	47	77	58	360
	2,250	3,100	73	112	180	76	75	693	370	15,648	19,800	648	1,396	1,733	1,296	40,521	70	88	22	47	77	58	360
	1,589	14,685	11	17	27	11	11	103	55	2,333	2,952	97	208	258	193	6,041	10	13	3	7	11	9	54
	1,498	2,229	67	103	167	71	70	642	343	14,489	18,354	600	1,293	1,605	1,200	37,520	64	81	20	43	71	53	334
	7,640	23,186	33	344	554	234	232	2,132	1,138	48,124	60,892	1,992	4,295	5,329	3,984	124,616	214	271	66	143	237	177	1,108

Notes and source: Same as in Table A12-12(1/2).

Table A12-18 Polder-wise Livestock Losses in Bogalay Township (Financial Terms) (1/2)

Polder			Village Tract							
No.	Name	Planned Area (ha)	Name	Area (ha)	Livestock Loss (dead, lost & ill) (No.)					
					Baffalo	Cattle	Goat	Pig	Poultry	Duck/Goose
15	Daunggyi	4,388	Set San	12,618	5,532	980	185	1,248	8,755	6,913
		1,323	Byu Sa Khan	1,596	15	123	0	235	1,476	3,200
		4,179	Daunggyi	13,033	1,015	1,188	42	650	5,058	380
	Sub-total	9,890		27,247	6,562	2,291	227	2,133	15,289	10,493
16	Daunggyi (East)	2,751	Daunggyi	13,033	1,015	1,188	42	650	5,058	380
		1,775	Nga Pyay Ma	2,927	125	185	0	350	2,750	215
		4,257	Kha Naung	3,779	1,683	120	0	220	3,625	1,000
	Sub-total	147	Paung Tae	1,360	295	119	0	150	3,464	2,044
		8,930		21,099	3,118	1,612	42	1,370	14,897	3,639
17	Daunggyi (West)	1,138	Set San	12,618	5,532	753	37	1,048	7,545	6,400
		1,788	Pet Pyael	1,485	391	250	0	250	2,750	300
		1,631	Byu Sa Khan	1,596	15	65	0	150	1,341	1,280
		530	Kamakalu	1,011	195	12	12	190	3,560	4,100
		427	Nga Pyay Ma	2,927	125	185	0	350	2,750	215
		1,408	Paung Tae	1,360	295	119	0	150	3,464	2,044
	18	Thapyaykan	1,430	47	91	12	125	2,496	757	
Sub-total	6,940		22,427	6,600	1,475	61	2,263	23,906	15,096	
18	Daunggyi (Upper)	388	Kamakalu	1,011	195	12	12	190	3,560	4,100
		992	Sa Khan Gyi	1,066	132	20	5	197	3,046	1,130
	Sub-total	1,380		2,077	327	32	17	387	6,606	5,230

Notes and source: Same as in Table A12-12(1/2).

Table A12-18 Polder-wise Livestock Losses in Bogalay Township (Financial Terms) (2/2)

Polder No.	Village Tract			Polder																			
	Planned Area (ha)	Area (ha)	% to Polder Area	Livestock Loss (dead, lost & ill) (No.)						Loss Value (1,000 Kyats)						Annual Loss Prevention Value (1,000 Kyats)							
				Baffalo	Cattle	Goat	Pig	Poultry	Duck/Goose	Baffalo	Cattle	Goat	Pig	Poultry	Duck/Goose	Total	Baffalo	Cattle	Goat	Pig	Poultry	Duck/Goose	Total
15	4,388	12,618	35	669	91	4	127	912	774	75,264	7,968	134	5,703	2,053	774	91,897	335	35	4	190	91	34	690
	1,323	1,596	83	10	45	0	103	921	880	1,160	3,908	0	4,638	2,073	880	12,659	5	17	0	155	92	39	308
	4,179	13,033	32	104	122	4	67	520	39	11,740	10,688	130	3,007	1,170	39	26,774	52	48	4	100	52	2	258
	9,890	27,247	36	784	258	9	297	2,354	1,693	88,164	22,564	264	13,349	5,296	1,693	131,329	392	100	9	445	235	75	1,257
16	2,751	13,033	21	45	53	2	29	225	17	5,088	4,631	56	1,303	507	17	11,602	23	21	2	43	23	1	112
	1,775	2,927	61	46	68	0	129	1,011	79	5,171	5,953	0	5,792	2,275	79	19,271	23	26	0	193	101	4	347
	4,257	3,779	113	2,136	152	0	279	4,600	1,269	240,265	13,324	0	12,563	10,350	1,269	277,771	1,068	59	0	419	460	56	2,062
	147	1,360	11	3	1	0	2	40	24	388	122	0	79	91	24	703	2	1	0	3	4	1	10
	8,930	21,099	42	2,230	275	2	439	5,877	1,389	250,912	24,030	56	19,737	13,224	1,389	309,347	1,115	107	2	658	588	62	2,531
17	1,138	12,618	9	45	6	0	9	61	52	5,062	536	9	384	138	52	6,181	22	2	0	13	6	2	46
	1,788	1,485	120	567	362	0	362	3,987	435	63,769	31,712	0	16,309	8,970	435	121,196	283	141	0	544	399	19	1,386
	1,631	1,596	102	16	68	0	157	1,400	1,337	1,762	5,940	0	7,049	3,151	1,337	19,239	8	26	0	235	140	59	469
	530	1,011	52	54	3	3	52	978	1,127	6,029	289	99	2,350	2,201	1,127	12,094	27	1	3	78	98	50	258
	427	2,927	15	3	4	0	7	59	5	299	345	0	335	132	5	1,115	1	2	0	11	6	0	20
	1,408	1,360	104	316	128	0	161	3,713	2,191	35,571	11,160	0	7,235	8,354	2,191	64,512	158	50	0	241	371	97	918
	18	1,430	1	0	0	0	0	0	0	1	1	0	1	1	0	4	0	0	0	1	1	0	2
	6,940	22,427	31	1,000	571	4	748	10,199	5,146	112,494	49,983	108	33,663	22,947	5,146	224,341	500	222	4	1,123	1,021	229	3,099
18	388	1,011	38	29	2	2	28	524	604	3,231	155	53	1,259	1,180	604	6,482	14	1	2	42	52	27	138
	992	1,066	93	114	17	4	171	2,638	979	12,860	1515	130	7,677	5,935	979	29,096	57	7	4	256	264	43	631
	1,380	2,077	66	143	19	6	199	3,162	1,582	16,091	1,670	183	8,936	7,115	1,582	35,577	72	7	6	298	316	70	769

Notes and source: Same as in Table A12-12(1/2).

Table A12-19 Polder-wise Livestock Losses in Phyapon Township (Financial Terms) (1/2)

No.	Polder		Village Tract							
	Name	Planned Area (ha)	Name	Area (ha)	Livestock Loss (dead, lost & ill) (No.)					Duck/Goose
					Baffalo	Cattle	Goat	Pig	Poultry	
19	Daw Nyein	1,200	Dawnyein	4,674	582	172	4	101	4,289	571
20	Myokone	1,832	Myokone	4,541	593	87	2	109	3,400	602
		448	Daydalu	8,941	479	211	9	114	3,502	538
	Sub-total	2,280		13,482	1,072	298	11	223	6,902	1,140
21	Kyetphamwezaung	3,844	Kyetphamwezaung	4,966	174	117	12	65	2,522	561
		3,015	Kyonekadone	3,556	137	121	39	92	3,329	1,203
		1,336	Byinekazee	1,463	129	133	0	45	2,522	421
		705	Okkoba	831	131	112	25	51	2,325	369
		1,854	Daydalu	8,941	479	211	9	114	3,502	538
		247	Kha Naung	1,011	1,683	120	0	220	3,625	1,000
		732	Thapyaykan	1,430	47	91	12	125	2,496	757
		837	Nga Pyay Ma	2,927	125	185	0	350	2,750	215
			Sub-total	12,570		25,125	2,905	1,090	97	1,062
22	Banbwezu	960	Banbwezu	1,464	145	120	0	93	3,590	545
		411	Kyoneduttanyin	1,185	171	124	0	59	3,873	1,050
		542	Kazaung	1,973	215	129	0	75	4,730	1,070
		763	Thaeaintaman	1,343	183	105	0	90	2,517	731
		839	Phyapontaman	2,024	353	174	75	150	2,189	750
		80	Kyoneku	1,869	315	62	14	170	2,897	1,015
		1,007	Gyowarhtalun	1,979	165	97	0	164	6,750	310
		101	Kyonekyeik	1,148	142	87	0	180	3,750	910
		627	Koeaintan	1,294	165	119	0	95	3,015	595
	Sub-total	5,330		14,279	1,854	1,017	89	1,076	33,311	6,976
23	Daydalu	1,720	Daydalu	8,941	479	211	9	114	3,502	538
24	Letpanbin	3,058	Lanpan	5,106	117	123	0	29	2,497	529
		66	Kyonekadone	3,556	137	121	39	92	3,329	1,203
		334	Daydalu	8,941	479	211	9	114	3,502	538
	Sub-total	3,458		17,603	733	455	48	235	9,328	2,270
25	Zinbaung	1,331	Zinbaung	2,905	135	129	14	93	2,615	390
		18	Theinkone	1,453	124	116	9	36	3,022	936
		278	Kondaing	774	154	129	3	33	2,766	326
		1,043	Tinpahlwe	1,287	123	136	0	49	2,895	429
	Sub-total	2,670		6,419	536	510	26	211	11,298	2,081

Notes and source: Same as in Table A12-12(1/2).

Table A12-19 Polder-wise Livestock Losses in Phyapon Township (Financial Terms) (2/2)

Polder No.	Village Tract			Polder																			
	Planned Area (ha)	Area (ha)	% to Polder Area	Livestock Loss (dead, lost & ill) (No.)						Loss Value (1,000 Kyats)						Annual Loss Presentation Value (1,000 Kyats)							
				Baffalo	Cattle	Goat	Pig	Poultry	Duck/Goose	Baffalo	Cattle	Goat	Pig	Poultry	Duck/Goose	Total	Baffalo	Cattle	Goat	Pig	Poultry	Duck/Goose	Total
19	1,200	4,674	26	149	44	1	26	1,101	147	16,810	3,864	31	1,167	2,478	147	24,496	75	17	1	39	110	7	248
20	1,832	4,541	40	239	35	1	44	1,372	243	26,914	3,071	24	1,979	3,086	243	35,318	120	14	1	66	137	11	348
	448	8,941	5	24	11	0	6	175	27	2,706	925	14	257	395	27	4,318	12	4	0	9	18	1	44
	2,280	13,482	17	263	46	1	50	1,547	270	29,614	3,996	38	2,236	3,481	270	39,635	132	18	1	75	155	12	392
21	3,844	4,966	77	135	91	9	50	1,952	434	15,152	7,924	279	2,264	4,392	434	30,446	67	35	9	75	195	19	402
	3,015	3,556	85	116	103	33	78	2,823	1,020	13,068	8,977	992	3,510	6,351	1,020	33,917	58	40	33	117	282	45	576
	1,336	1,463	91	118	121	0	41	2,303	384	13,253	10,627	0	1,849	5,182	384	31,296	0	62	230	17	415	17	415
	705	831	85	111	95	21	43	1,972	313	12,303	8,314	636	1,947	4,438	313	28,151	56	37	21	65	197	14	390
	1,854	8,941	21	99	44	2	24	726	112	11,174	3,828	56	1,064	1,634	112	17,868	50	17	2	35	73	5	182
	247	1,011	24	411	29	0	54	886	244	46,258	2,565	0	2,419	1,993	244	53,478	206	11	0	81	89	11	397
	732	1,430	51	24	47	6	64	1,278	387	2,707	4,076	184	2,879	2,875	387	13,108	12	18	6	96	128	17	277
	837	2,927	29	36	53	0	100	786	61	4,021	4,629	0	4,504	1,769	61	14,985	18	21	0	150	79	3	270
		12,570	25,125	50	1,050	582	72	454	12,726	2,957	118,135	50,941	2,147	20,436	28,634	2,957	223,250	525	226	72	681	1,273	131
22	960	1,464	66	95	79	0	61	2,354	357	10,697	6,885	0	2,744	5,297	357	25,980	48	31	0	91	235	16	421
	411	1,185	35	59	43	0	20	1,343	364	6,672	3,763	0	921	3,022	364	14,743	30	17	0	31	134	16	228
	542	1,973	27	59	35	0	21	1,299	294	6,645	3,101	0	927	2,924	294	13,890	30	14	0	31	130	13	217
	763	1,343	57	104	60	0	51	1,430	415	11,696	5,220	0	2,301	3,217	415	22,850	52	23	0	77	143	18	313
	839	2,024	41	146	72	31	62	907	311	16,462	6,311	933	2,798	2,042	311	28,856	73	28	31	93	91	14	330
	80	1,869	4	13	3	1	7	124	43	1,517	232	18	327	279	43	2,417	7	1	18	11	12	2	51
	1,007	1,979	51	84	49	0	83	3,435	158	9,445	4,319	0	3,755	7,728	158	25,405	42	19	0	125	343	7	537
	101	1,148	9	12	8	0	16	330	80	1,405	670	0	713	742	80	3,610	6	3	0	24	33	4	70
	627	1,294	48	80	58	0	46	1,461	288	8,994	5,045	0	2,071	3,287	288	19,686	40	22	0	69	146	13	290
	5,330	14,279	37	654	406	32	368	12,684	2,311	73,534	35,546	951	16,558	28,538	2,311	157,438	327	158	49	552	1,268	103	2,457
23	1,720	8,941	19	92	41	2	22	674	103	10,366	3,552	52	987	1,516	103	16,576	46	16	2	33	67	5	168
24	3,058	5,106	60	70	74	0	17	1,495	317	18,883	6,446	0	782	3,365	317	18,792	35	29	0	26	150	14	253
	66	3,556	2	3	2	1	2	62	22	286	197	22	77	139	22	742	1	1	1	3	6	1	13
	334	8,941	4	18	8	0	4	131	20	2,013	690	10	192	294	20	3,279	9	3	0	6	13	1	33
	3,458	17,603	20	91	84	1	23	1,688	359	10,182	7,332	32	1,050	3,798	359	22,753	45	33	1	35	169	16	299
25	1,331	2,905	46	62	59	6	43	1,198	179	6,959	5,172	192	1,917	2,696	179	17,115	31	23	6	64	120	8	252
	18	1,453	1	2	1	0	0	37	12	173	126	3	20	84	12	418	1	1	3	20	4	15	44
	278	774	36	55	46	1	12	993	117	6,223	4,054	32	553	2,235	117	13,195	28	18	1	18	99	5	169
	1,043	1,287	81	100	110	0	40	2,346	348	11,214	9,644	0	1,787	5,279	348	28,271	50	43	0	60	235	15	402
	2,670	6,419	42	218	217	8	95	4,575	655	24,568	18,955	228	4,258	10,294	655	58,999	109	84	11	161	458	44	867

Notes and source: Same as in Table A12-12(1/2).

Table A12-20 Polder-wise Livestock Losses in Daydaye Township (Financial Terms) (1/2)

No.	Polder		Village Tract							
	Name	Planned Area (ha)	Name	Area (ha)	Livestock Loss (dead, lost & ill) (No.)					
					Baffalo	Cattle	Goat	Pig	Poultry	Duck/Goose
27	Thandi	545	Thayar Gone	1,234	40	6	9	100	2,170	38
		150	Kyongdu Darmalain	1,470	8	2	14	107	2,240	46
		593	Thandi Thegonelay	1,335	240	260	22	238	4,200	120
		100	Thandi Zeepu gone	1,756	20	4	18	263	4,450	135
		1,388	Sub-total	5,795	308	272	63	708	13,060	339
28	Suclubbaluma	708	Nakhong Chaung	981	500	100	7	117	2,150	61
		1,069	Kyatsinpyo	1,296	950	50	8	112	2,700	53
		735	Kyonkanan	815	150	25	12	132	2,340	39
		437	Uto(kyaiklatkalay)	479	200	15	3	130	2,290	41
		2,949	Sub-total	3,571	1,800	190	30	491	9,480	194
29	Hleseikchaunggyi	259	Hmawbi	484	180	20	8	110	2,400	55
		356	Hleseikchaunggyi	1,157	450	50	7	109	2,900	71
		156	Lay	1,111	250	120	10	150	2,100	62
		138	Laik Kyun	1,594	100	25	8	106	2,250	39
		909	Sub-total	4,346	980	215	33	475	9,650	227
30	Tamatakaw	1,704	Tamatakaw	2,047	550	50	7	143	1,800	38
		840	Toe	1,069	330	114	13	292	4,650	70
		1,122	Tawchaik	1,481	200	15	13	126	2,370	53
		844	Shankan	1,013	150	34	6	129	2,400	44
		835	Mayan Anout	1,324	250	64	5	119	2,100	54
		5,345	Sub-total	6,934	1,480	277	44	809	13,320	259
31	Kyonsoat	225	Kawataykanchaung	2,149	170	44	7	135	2,300	38
		15	Toe	1,069	330	114	13	292	4,650	70
		240	Sub-total	3,218	500	158	20	427	6,950	108

Notes and source: Same as in Table A12-12(1/2).

Table A12-20 Polder-wise Livestock Losses in Daydaye Township (Financial Terms) (2/2)

Polder No.	Village Tract			Polder																			
	Planned Area (ha)	Area (ha)	% to Polder Area	Livestock Loss (dead, lost & ill) (No.)						Loss Value (1,000 Kyats)						Annual Loss Prevention Value (1,000 Kyats)							
				Baffalo	Cattle	Goat	Pig	Poultry	Duck/Goose	Baffalo	Cattle	Goat	Pig	Poultry	Duck/Goose	Total	Baffalo	Cattle	Goat	Pig	Poultry	Duck/Goose	Total
27	545	1,234	44	18	3	4	44	958	17	2,429	364	70	2,981	2,156	29	8,030	11	2	2	99	96	1	211
	150	1,470	10	1	0	1	11	229	5	112	28	25	737	514	8	1,425	0	0	1	25	23	0	49
	593	1,335	44	107	115	10	106	1,866	53	14,658	15,880	171	7,136	4,198	93	42,136	65	71	6	238	187	4	570
	100	1,756	6	1	0	1	15	253	8	157	31	18	1,011	570	13	1,800	1	0	1	34	25	1	61
	1,388	5,795	24	126	119	16	176	3,306	82	17,356	16,304	284	11,865	7,438	144	53,391	77	72	9	396	331	6	892
28	708	981	72	361	72	5	84	1,552	44	49,618	9,924	88	5,700	3,491	77	68,898	221	44	3	190	155	3	616
	1,069	1,296	82	784	41	7	92	2,227	44	107,745	5,671	115	6,236	5,011	77	124,855	479	25	4	208	223	3	942
	735	815	90	135	23	11	119	2,110	35	18,600	3,100	189	8,035	4,748	62	34,735	83	14	6	268	211	3	584
	437	479	91	182	14	3	119	2,089	37	25,089	1,882	48	8,006	4,701	65	39,790	112	8	2	267	209	3	600
	2,949	3,571	83	1,462	150	25	414	7,978	160	201,052	20,576	441	27,977	17,951	281	268,278	894	91	15	933	798	12	2,743
29	259	484	54	96	11	4	59	1,284	29	13,244	1,472	75	3,973	2,890	52	21,705	59	7	2	132	128	2	331
	356	1,157	31	138	15	2	34	892	22	19,038	2,115	38	2,264	2,008	38	25,501	85	9	1	75	89	2	262
	156	1,111	14	35	17	1	21	295	9	4,827	2,317	25	1,422	663	15	9,269	21	10	1	47	29	1	110
	138	1,594	9	9	2	1	9	195	3	1,190	298	12	619	438	6	2,564	5	1	0	21	19	0	47
	909	4,346	21	279	45	9	123	2,666	63	38,300	6,201	149	8,278	5,999	111	59,039	170	28	5	276	267	5	750
30	1,704	2,047	83	458	42	6	119	1,498	32	62,953	5,723	102	8,035	3,371	55	80,240	280	25	3	268	150	2	729
	840	1,069	79	259	90	10	229	3,654	55	35,655	12,317	179	15,488	8,221	96	71,956	158	55	6	516	365	4	1,105
	1,122	1,481	76	152	11	10	95	1,796	40	20,834	1,563	172	6,443	4,040	70	33,122	93	7	6	215	180	3	503
	844	1,013	83	125	28	5	107	2,000	37	17,184	3,895	87	7,255	4,499	64	32,985	76	17	3	242	200	3	541
	835	1,324	63	158	40	3	75	1,324	34	21,679	5,550	55	5,066	2,980	60	35,389	96	25	2	169	132	3	427
	5,345	6,934	77	1,151	211	34	626	10,272	198	158,305	29,048	596	42,287	23,111	346	253,692	704	129	20	1,410	1,027	15	3,305
31	225	2,149	10	18	5	1	14	241	4	2,447	633	13	954	542	7	4,596	11	3	0	32	24	0	70
	15	1,069	1	5	2	0	4	65	1	637	220	3	277	147	2	1,285	3	1	0	9	7	0	20
	240	3,218	7	22	6	1	18	306	5	3,084	853	16	1,231	689	9	5,881	14	4	1	41	31	0	90

Notes and source: Same as in Table A12-12(1/2).

Table A12-21 Polder-wise Livestock Losses in Kyaiklatt Township (Financial Terms) (1/2)

No.	Polder Name	Planned Area (ha)	Village Tract Name	Area (ha)	Livestock Loss (dead, lost & ill) (No.)							
					Buffalo	Cattle	Goat	Pig	Poultry	Duck/Goose		
32	Maubin Island (North)	1,303	Hlaing Tar	1,518	0	0	6	5	75	200		
		570	Lay Eain Tan	598	0	0	2	5	80	180		
		1,640	Kyweil Ku Khayar Yoe	1,640	0	0	3	5	95	95		
		748	Sin Tar	776	0	0	0	5	125	595		
		1,058	Kyaung Su	1,099	0	0	5	0	395	85		
		813	Taung Boae Kyi	828	0	0	3	10	90	910		
		804	Ngwe Inn Su	804	0	0	0	5	80	150		
		1,261	Yone Dount	1,292	0	0	11	5	55	210		
		594	Kyone Phar Yay Kyaw	593	0	0	13	3	110	95		
		1,225	Eain Yar Kyi	1,225	0	0	15	5	120	150		
		984	Kvone Kvaik	983	0	0	5	10	100	120		
11,000	Sub-total	11,356			63	58	1,325	2,790				
33	Maubin Island (South)	617	Tar Pat	605	3	0	3	6	64	83		
		348	Phoe San	337	2	0	2	4	36	47		
		779	Latar Kyi	717	0	0	15	10	90	95		
		151	Tharyar Wel	134	7	0	10	5	60	580		
		752	Kyee Chaung	667	0	0	0	5	85	140		
		1,963	Bali Chan Yay Kyaw	1,741	0	0	10	10	85	195		
		4,610	Sub-total	4,201			40	38	420	1,140		
34	Thonegwayun	601	Ah Su Kyi	724	0	0	7	5	95	195		
		357	Me Zali Kone	517	0	0	5	5	95	200		
		332	Ah Hnu	434	0	0	1	0	20	20		
		550	Thamet Pyay	718	0	0	0	36	130	265		
		332	Linn Ton	401	2	3	10	5	80	170		
		448	Darna Chaung	629	0	2	0	5	110	140		
		547	Kyon Ma Ngeat	667	0	0	0	0	120	210		
		363	Htayaw Ywar Thit	497	0	0	0	22	74	270		
		497	Tharyar Kone	566	0	0	12	5	1,095	80		
		706	Myanmar Kayin Su	814	0	0	9	5	105	130		
		423	Lei Lan Pin	468	0	1	15	10	60	220		
		261	Mayan Kyi	278	0	0	8	8	85	95		
		526	Taman Kyi	560	0	0	10	5	85	105		
		834	Ohn Pin Su	889	0	0	12	7	95	150		
		658	Sit Kone	702	0	0	5	0	110	150		
		685	Sar Pho Thiyne Chaung	730	0	0	0	5	120	95		
		8,120	Sub-total	9,594			4	7	98	123	2,479	2,405

Notes and source: Same as in Table A12-12(1/2).

Table A12-21 Polder-wise Livestock Losses in Kyaiklatt Township (Financial Terms) (2/2)

Polder No.	Village Tract			Polder																			
	Planned Area (ha)	Area (ha)	% to Polder Area	Livestock Loss (dead, lost & ill) (No.)						Loss Value (1,000 Kyats)						Annual Loss Prevention Value (1,000 Kyats)							
				Buffalo	Cow	Goat	Pig	Poultry	Duck/Goose	Buffalo	Cattle	Goat	Pig	Poultry	Duck/Goose	Total	Buffalo	Cattle	Goat	Pig	Poultry	Duck/Goose	Total
32	1,303	1,518	86	0	0	5	4	64	172	0	0	167	134	113	300	715	0	0	6	4	5	13	28
	570	598	95	0	0	2	5	76	172	0	0	62	149	133	300	645	0	0	2	5	6	13	26
	1,640	1,640	100	0	0	3	5	95	95	0	0	98	156	166	166	586	0	0	3	5	7	7	23
	748	776	96	0	0	0	5	120	574	0	0	151	211	1,004	1,365	0	0	0	5	9	45	59	
	1,058	1,099	96	0	0	5	0	380	82	0	0	156	0	665	143	965	0	0	5	0	30	6	41
	813	828	98	0	0	3	10	88	894	0	0	96	307	155	1,564	2,121	0	0	3	10	7	69	90
	804	804	100	0	0	0	5	80	150	0	0	156	140	263	559	0	0	0	5	6	12	23	
	1,261	1,292	98	0	0	11	5	54	205	0	0	349	153	94	359	954	0	0	12	5	4	16	37
	594	593	100	0	0	13	3	110	95	0	0	423	94	193	167	876	0	0	14	3	9	7	33
	1,225	1,225	100	0	0	15	5	120	150	0	0	488	156	210	263	1,116	0	0	16	5	9	12	42
	984	983	100	0	0	5	10	100	120	0	0	163	313	175	210	861	0	0	5	10	8	9	33
11,000	11,356	97	0	0	62	57	1,289	2,707	0	0	2,001	1,768	2,255	4,738	10,763	0	0	67	59	100	211	436	
33	617	605	102	3	0	3	16	65	85	268	0	99	510	114	148	1,139	1	0	3	17	5	7	33
	348	337	103	2	0	2	4	37	49	181	0	67	129	65	85	527	1	0	2	4	3	4	14
	779	717	109	0	0	16	9	98	103	0	0	530	272	171	181	1,153	0	0	18	9	8	8	42
	151	134	113	8	0	11	6	68	654	690	0	666	176	118	1,144	2,495	3	0	12	6	5	51	77
	752	667	113	0	0	0	6	96	158	0	0	176	168	276	620	0	0	0	6	7	12	26	
	1,963	1,741	113	0	0	11	11	96	220	0	0	366	352	168	385	1,271	0	0	12	12	7	17	49
	4,610	4,201	110	13	0	44	52	460	1,268	1,139	0	1,429	1,615	804	2,218	7,205	5	0	48	54	36	99	241
34	601	724	83	0	0	6	4	79	162	0	0	189	130	138	283	740	0	0	6	4	6	13	29
	357	517	69	0	0	3	3	66	138	0	0	112	108	115	242	577	0	0	4	4	5	11	23
	332	434	76	0	0	1	0	15	15	0	0	25	0	27	78	0	0	1	0	1	1	3	
	550	718	77	0	0	0	28	100	203	0	0	862	174	355	1,391	0	0	0	29	8	16	52	
	332	401	83	2	2	8	4	66	141	145	217	269	129	116	246	1,123	1	1	9	4	5	11	31
	448	629	71	0	1	0	4	78	100	0	125	0	111	137	174	548	0	1	0	4	6	8	18
	547	667	82	2	1	5	0	98	98	144	72	160	0	172	172	720	1	0	5	0	8	8	22
	363	497	73	0	0	0	16	54	197	0	0	502	95	345	942	0	0	0	17	4	15	36	
	497	566	88	0	0	11	4	962	70	0	0	342	137	1,683	123	2,285	0	0	11	5	75	5	96
	706	814	87	0	0	8	4	91	113	0	0	254	136	159	197	746	0	0	8	5	7	9	29
	423	468	90	0	1	12	9	54	199	0	79	382	282	95	348	1,186	0	0	13	9	4	15	42
	261	278	94	0	0	8	8	80	89	0	0	244	235	140	156	775	0	0	8	8	6	7	29
	526	560	94	0	0	9	5	80	99	0	0	305	147	140	173	764	0	0	10	5	6	8	29
	834	889	94	0	0	11	7	89	141	0	0	366	205	156	246	973	0	0	12	7	7	11	37
	658	702	94	0	0	5	0	103	141	0	0	152	0	180	246	579	0	0	5	0	8	11	24
	685	730	94	0	0	0	5	113	89	0	0	147	197	156	500	0	0	0	5	9	7	21	
	8,120	9,594	85	3	6	86	100	2,128	1,994	288	493	2,800	3,131	3,723	3,490	13,926	1	2	93	104	165	155	522

Notes and source: Same as in Table A12-12(1/2).

Table A12-22 Polder-wise Damaged Agricultural Machinery in Labutta Township (Financial Terms)

Polder			Village Tract				Polder		
No.	Name	Planned Area (ha)	Name	Area (ha)	% to Polder Area	Damaged Hand Tractors (No.)	Damaged Hand Tractors (No.)	Damage Value (1,000 Kyats)	Annual Damage Prevention Value (1,000 Kyats)
1	Alegyun (1)	1,670	That Kal Thaung	3,634	46	0	0	0	0
2	Alegyun (2)	1,523	Thingan Kone	3,097	49	0	0	0	0
		1,282	Nagone	2,810	46	0	0	0	0
		803	Gwe Chaung	1,464	55	0	0	0	0
	Sub-total	3,608		7,371	49	0	0	0	0
5	Thingangyi	699	Thingangyi	4,828	14	74	11	3,080	14
6	Zinywe	616	Tha Pyu Kone	8,876	7	178	12	3,552	16
7	Leikkwin	381	Tha Pyu Kone	8,876	4	178	8	2,197	10
8	Labutta (South)	722	Gant Eaik	1,351	53	15	8	2,305	10
		1,502	Sarkyin	5,112	29	82	24	6,927	31
		642	Tha Pyu Kone	8,876	7	178	13	3,701	16
	Sub-total	2,866		15,339	19	275	45	12,933	57
10	U Gaungpu	366	Pyin Sa Lu	4,406	8	121	10	2,890	13
11	Bitud Island (1)	1,904	Myit Pauk	14,564	13	233	30	8,757	39
12	Bitud Island (2)	2,784	Bitud	3,725	75	88	66	18,909	84
13	Bitud Island (3)	672	Myit Pauk	14,564	5	233	11	3,091	14
		2,543	Maung Ngae	4,498	57	95	54	15,441	69
		3,215		19,062	17	328	64	18,532	82
	Sub-total								
14	Bitud Island (4)	2,303	Nyaung Chaung	3,172	73	62	45	12,942	58
		2,250	Ka Ka Yan	3,100	73	48	35	10,016	45
		1,589	Shaw Chaung	14,685	11	290	31	9,022	40
		1,498	Kyee Chaung	2,229	67	31	21	5,990	27
	Sub-total	7,640		23,186	33	431	132	37,969	169

Note: Equipment damages have been calculated in terms of tractor for depreciation period. This is assumed equivalent to elapse of half of the full utility life of the equipment, and therefore the assessed depreciation value is assumed at 50% of the cost for a new tractor.

Source: Township Peace and Development Councils and Township Agricultural Mechanization Departments.

Table A12-23 Polder-wise Damaged Agricultural Machinery in Bogalay Township (Financial Terms)

Polder			Village Tract				Polder		
No.	Name	Planned Area (ha)	Name	Area (ha)	% to Polder Area	Damaged Hand Tractors (No.)	Damaged Hand Tractors (No.)	Damage Value (1,000 Kyats)	Annual Damage Prevention Value (1,000 Kyats)
15	Daunggyi	4,388	Set San	12,618	35	360	125	35,993	160
		1,323	Byu Sa Khan	1,596	83	105	87	25,024	111
		4,179	Daunggyi	13,033	32	448	144	41,299	184
	Sub-total	9,890		27,247	36	913	356	102,316	455
16	Daunggyi (East)	2,751	Daunggyi	13,033	21	448	95	27,187	121
		1,775	Nga Pyay Ma	2,927	61	134	81	23,362	104
		4,257	Kha Naung	3,779	113	82	92	26,557	118
		147	Paung Tae	1,360	11	51	6	1,585	7
	Sub-total	8,930		21,099	42	715	274	78,691	350
17	Daunggyi (West)	1,138	Se San	12,618	9	306	28	7,934	35
		1,788	Pet Pyael	1,485	120	78	94	27,001	120
		1,631	Byu Sa Khan	1,596	102	105	107	30,850	137
		530	Kamakalu	1,011	52	46	24	6,933	31
		427	Nga Pyay Ma	2,927	15	134	20	5,620	25
		1,408	Paung Tae	1,360	104	51	53	15,180	67
		18	Thapyaykan	1,430	1	52	1	188	1
	Sub-total	6,940		22,427	31	772	326	93,706	416
18	Daunggyi (Upper)	388	Kamakalu	1,011	38	46	18	5,075	23
		992	Sa Khan Gyi	1,066	93	46	43	12,307	55
	Sub-total	1,380		2,077	66	92	60	17,382	77

Note and source: Same as in Table A12-17.

Table A12-24 Polder-wise Damaged Agricultural Machinery in Phayapon Township (Financial Terms)

Polder			Village Tract				Polder		
No.	Name	Planned Area (ha)	Name	Area (ha)	% to Polder Area	Damaged Hand Tractors (No.)	Damaged Hand Tractors (No.)	Damage Value (1,000 Kyats)	Annual Damage Prevention Value (1,000 Kyats)
19	Daw Nyein	1,200	Dawnyein	4,674	26	26	7	1,752	8
20	Myokone	1,832	Myokone	4,541	40	48	19	5,083	23
		448	Daydalu	8,941	5	82	4	1,079	5
	Sub-total	2,280		13,482	17	130	23	6,162	27
21	Kyetphamwezaung	3,844	Kyetphamwezaung	4,966	77	130	101	26,415	117
		3,015	Kyonekadone	3,556	85	96	81	21,366	95
		1,336	Byinekezee	1,463	91	55	50	13,184	59
		705	Okkoba	831	85	22	19	4,899	22
		1,854	Daydalu	8,941	21	82	17	4,463	20
		247	Kha Naung	1,011	24	82	20	5,259	23
		732	Thapyaykan	1,430	51	52	27	6,987	31
		837	Nea Pyay Ma	2,927	29	134	38	10,059	45
			Sub-total	12,570		25,125	50	653	353
22	Banbwezu	960	Banbwezu	1,464	66	51	33	8,779	39
		411	Kyoneduttanin	1,185	35	38	13	3,460	15
		542	Kazaung	1,973	27	36	10	2,596	12
		763	Thaeaintaman	1,343	57	23	13	3,430	15
		839	Phyapontaman	2,024	41	61	25	6,638	30
		80	Kyoneku	1,869	4	54	2	607	3
		1,007	Gyowarhtalun	1,979	51	27	14	3,606	16
		101	Kyonekyeik	1,148	9	35	3	808	4
		627	Koeaintan	1,294	48	52	25	6,614	29
			Sub-total	5,330		14,279	37	377	139
23	Daydalu	1,720	Daydalu	8,941	19	82	16	4,141	18
24	Letpanbin	3,058	Lanpan	5,106	60	78	47	12,263	55
		66	Kyonekadone	3,556	2	96	2	468	2
		334	Daydalu	8,941	4	82	3	804	4
	Sub-total	3,458		17,603	20	256	52	13,534	60
25	Zinbaung	1,331	Zinbaung	2,905	46	58	27	6,976	31
		18	Theinkone	1,453	1	36	0	117	1
		278	Kondaing	774	36	25	9	2,357	10
		1,043	Timpahlwe	1,287	81	26	21	5,531	25
	Sub-total	2,670		6,419	42	145	57	14,981	67

Note and source: Same as in Table A12-17.

Table A12-25 Polder-wise Damaged Agricultural Machinery in Daydaye Township (Financial Terms)

Polder			Village Tract				Polder		
No.	Name	Planned Area (ha)	Name	Area (ha)	% to Polder Area	Damaged Hand Tractors (No.)	Damaged Hand Tractors (No.)	Damage Value (1,000 Kyats)	Annual Damage Prevention Value (1,000 Kyats)
27	Thandi	545	Thayar Gone	1,234	44	11	5	1,385	6
		150	Kyondu Darmalain	1,470	10	19	2	553	2
		593	Thandi Thegonelay	1,335	44	0	0	0	0
		100	Thandi Zeepyugone	1,756	6	0	0	0	0
	Sub-total	1,388		5,795	24	30	7	1,937	9
28	Suclubbaluma	708	Nakhoung Chaung	981	72	6	4	1,234	5
		1,069	Kyatsinpyo	1,296	82	12	10	2,821	13
		735	Kyonkanan	815	90	8	7	2,056	9
		437	Uto(kyaiklatkalay)	479	91	4	4	1,040	5
	Sub-total	2,949		3,571	83	30	25	7,151	32
29	Hleseikchaunggyi	259	Hmawbi	484	54	5	3	763	3
		356	Hleseikchaunggyi	1,157	31	17	5	1,491	7
		156	Lay	1,111	14	5	1	200	1
		138	Laik Kyun	1,594	9	18	2	444	2
	Sub-total	909		4,346	21	45	10	2,898	13
30	Tamatakaw	1,704	Tamatakaw	2,047	83	22	18	5,219	23
		840	Toe	1,069	79	7	6	1,568	7
		1,122	Tawchaik	1,481	76	11	8	2,375	11
		844	Shankan	1,013	83	17	14	4,037	18
		835	Mayan Anout	1,324	63	14	9	2,516	11
	Sub-total	5,345		6,934	77	71	35	15,715	70
31	Kyonsoat	225	Kawatyaikkan chaung	2,149	10	0	0	0	0
		15	Toe	1,069	1	0	0	0	0
	Sub-total	240		3,218	7	0	0	0	0

Note and source: Same as in Table A12-17.

Table A12-26 Polder-wise Damaged Agricultural Machinery in Kyaiklatt Township (Financial Terms)

No.	Polder Name	Planned Area (ha)	Village Tract				Polder			Annual Damage Prevention Value (1,000 Kyats)
			Name	Area (ha)	% to Polder Area	Damaged Hand Tractors (No.)	Damaged Hand Tractors (No.)	Damage Value (1,000 Kyats)		
32	Maubin Island (North)	1,303	Hlaing Tar	1,518	86	37	32	9,051	40	
		570	Lay Eain Tan	598	95	36	34	9,780	43	
		1,640	Kywel Ku Khayar Yoe	1,640	100	35	35	9,975	44	
		748	Sin Tar	776	96	50	48	13,736	61	
		1,058	Kyaung Su	1,099	96	36	35	9,877	44	
		813	Taung Boae Kyi	828	98	17	17	4,757	21	
		804	Ngwe Inn Su	804	100	34	34	9,690	43	
		1,261	Yone Dount	1,292	98	64	62	17,802	79	
		594	Kyone Phar Yay Kyaw	593	100	32	32	9,135	41	
		1,225	Eain Yar Kyi	1,225	100	52	52	14,820	66	
		984	Kyone Kyaik	983	100	62	62	17,688	79	
			Sub-total	11,000	11,356	97	455	443	126,312	561
		33	Maubin Island (South)	617	Tar Pat	605	102	18	18	5,232
348	Phoe San			337	103	13	13	3,826	17	
779	Latar Kyi			717	109	23	25	7,122	32	
151	Tharyar Wel			134	113	150	169	48,174	214	
752	Kyee Chaung			667	113	8	9	2,571	11	
1,963	Bali Chan Yay Kyaw			1,741	113	50	56	16,067	71	
	Sub-total			4,610	4,201	110	262	291	82,991	369
34	Thonegwakyun	601	Ah Su Kyi	724	83	20	17	4,732	21	
		357	Me Zali Kone	517	69	12	8	2,362	10	
		332	Ah Hui	434	76	32	24	6,977	31	
		550	Thamet Pyay	718	77	82	63	17,902	80	
		332	Linn Ton	401	83	5	4	1,180	5	
		448	Darna Chaung	629	71	56	40	11,367	51	
		547	Kyon Ma Ngaet	667	82	18	15	4,207	19	
		363	Htayaw Ywar Thit	497	73	15	11	3,122	14	
		497	Tharyar Kone	566	88	2	2	501	2	
		706	Myanmar Kayin Su	814	87	29	25	7,168	32	
		423	Lei Lan Pin	468	90	20	18	5,152	23	
		261	Mayan Kyi	278	94	10	9	2,676	12	
		526	Taman Kyi	560	94	30	28	8,031	36	
		834	Ohn Pin Su	889	94	29	27	7,754	34	
		658	Sit Kone	702	94	35	32	14,693	65	
		685	Sar Pho Thiyne Chaung	730	94	12	11	3,209	14	
			Sub-total	8,120	9,594	85	427	354	101,031	449

Note and source: Same as in Table A12-17.

Table A12-27 Polder-wise Damaged Fishery Equipment in Labutta Township (Financial Terms)

No.	Polder Name	Planned Area (ha)	Village Tract				Polder			Annual Damage Prevention Value (1,000 Kyats)						
			Name	Area (ha)	% to Polder Area	Damaged Fishing Nets (No.)	Damaged Boats (No.)	Damaged Fishing Nets (No.)	Damaged Boats (No.)	Damage Value (1,000 Kyats) - Nets	Damage Value (1,000 Kyats) - Boats	Damage Value (1,000 Kyats) - Total				
1	Alegyun (1)	1,670	That Kal Thauang	3,634	46	191	n.a.	88	n.a.	6,917	n.a.	6,917	92	n.a.	92	
2	Alegyun (2)	1,523	Thingan Kone	3,097	49	n.a.	14	n.a.	7	n.a.	1,377	n.a.	1,377	n.a.	6	6
		803	Gwe Chaung	1,464	55	n.a.	2	n.a.	1	n.a.	219	n.a.	219	n.a.	1	1
	Sub-total	3,608	7,371	49	388	27	0	13	0	2,600	n.a.	2,600	0	12	12	
5	Thingangyi	699	Thingangyi	4,828	14	254	n.a.	37	n.a.	2,895	n.a.	2,895	39	n.a.	39	
6	Zinywe	616	Tha Pyu Kone	8,876	7	467	n.a.	32	n.a.	2,551	n.a.	2,551	34	n.a.	34	
7	Leikkwin	381	Tha Pyu Kone	8,876	4	467	n.a.	20	n.a.	1,578	n.a.	1,578	21	n.a.	21	
8	Labutta (South)	722	Gant Eaik	1,351	53	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
		1,502	Sarkyin	5,112	29	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
		642	Tha Pyu Kone	8,876	7	702	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
	Sub-total	2,866	15,339	19	807	n.a.	151	n.a.	11,871	n.a.	11,871	158	n.a.	158		
10	U Gaungpu	366	Pvin Sa Lu	4,406	8	232	n.a.	19	n.a.	1,516	n.a.	1,516	20	n.a.	20	
11	Bitud Island (1)	1,904	Myit Pauk	14,564	13	766	n.a.	100	n.a.	7,886	n.a.	7,886	105	n.a.	105	
12	Bitud Island (2)	2,784	Bitud	3,725	75	196	n.a.	146	n.a.	11,531	n.a.	11,531	154	n.a.	154	
13	Bitud Island (3)	672	Myit Pauk	14,564	5	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
		2,543	Maung Ngae	4,498	57	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
	Sub-total	3,215	19,062	17	1,003	n.a.	169	n.a.	13,316	n.a.	13,316	178	n.a.	178		
14	Bitud Island (4)	2,303	Nyaung Chaung	3,172	73	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
		2,250	Ka Ka Yan	3,100	73	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
		1,589	Shaw Chaung	14,685	11	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
		1,498	Kyee Chaung	2,229	67	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
	Sub-total	7,640	23,186	33	1,220	n.a.	402	n.a.	31,645	n.a.	31,645	422	n.a.	422		

Note: Equipment damages have been calculated in terms of fishery equipment for depreciation period. This is assumed equivalent to elapse of half of the full utility life of the equipment, and therefore the assessed depreciation value is assumed at 50% of the cost for a new equipment.

Source: Township Fishery Departments and Township Peace and Development Councils.

Table A12-28 Polder-wise Damaged Fishery Equipment in Bogalay Township (Financial Terms)

No.	Polder		Village Tract						Polder			Annual Damage Prevention Value (1,000 Kyats)				
	Name	Planned Area (ha)	Name	Area (ha)	% to Polder Area	Damaged Fishing Nets (No.)	Damaged Boats (No.)	Damaged Fishing Nets (No.)	Damaged Boats (No.)	Damage Value (1,000 Kyats)			Nets	Boats	Total	
										Nets	Boats	Total				
15	Daunggyi	4,388	Set San	12,618	35	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
		1,323	Byu Sa Khan	1,596	83	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
		4,179	Daunggyi	13,033	32	15	20	5	6	379	1,283	1,661	5	14	19	
Sub-total		9,890		27,247	36	15	20	5	6	379	1,283	1,661	5	14	19	
16	Daunggyi (East)	2,751	Daunggyi	13,033	21	15	20	3	4	249	844	1,094	3	9	13	
		1,775	Nga Pyay Ma	2,927	61	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
		4,257	Kha Naung	3,779	113	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
		147	Paung Tae	1,360	11	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
		8,930	Paung Tae	21,099	42	15	20	3	4	249	844	1,094	3	9	13	
Sub-total																
17	Daunggyi (West)	1,138	Set San	12,618	9	106	83	10	7	753	1,497	2,250	10	17	27	
		1,788	Pet Pyael	1,485	120	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
		1,631	Byu Sa Khan	1,596	102	7	6	7	6	563	1,226	1,790	8	14	21	
		530	Kamakalu	1,011	52	7	7	5	4	372	734	1,105	5	8	13	
		427	Nga Pyay Ma	2,927	15	n.a.	2	n.a.	0	n.a.	58	58	n.a.	1	1	
		1,408	Paung Tae	1,360	104	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
		18	Thapaykan	1,430	1	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
		6,940		22,427	31	122	98	21	18	1,688	3,516	5,203	23	39	62	
		Sub-total														
18	Daunggyi (Upper)	388	Kamakalu	1,011	38	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
		992	Sa Khan Gyi	1,066	93	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
		1,380		2,077	66	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
Sub-total																

Note and source: Same as in Table A12-22.

Table A12-29 Polder-wise Damaged Fishery Equipment in Phayapon Township (Financial Terms)

No.	Polder		Village Tract						Polder			Annual Damage Prevention Value (1,000 Kyats)			
	Name	Planned Area (ha)	Name	Area (ha)	% to Polder Area	Damaged Fishing Nets (No.)	Damaged Boats (No.)	Damaged Fishing Nets (No.)	Damaged Boats (No.)	Damage Value (1,000 Kyats)			Nets	Boats	Total
										Nets	Boats	Total			
19	Daw Nyein	1,200	Dawnyein	4,674	26	7	n.a.	2	n.a.	142	n.a.	142	2	n.a.	2
20	Myokone	1,832	Myokone	4,541	40	12	n.a.	5	n.a.	381	n.a.	381	5	n.a.	5
		448	Daydalu	8,941	5	7	n.a.	0	n.a.	28	n.a.	28	0	n.a.	0
Sub-total		2,280		13,482	17	19	n.a.	5	n.a.	409	n.a.	409	5	n.a.	5
21	Kyetphamwezaung	3,844	Kyetphamwezaung	4,966	77	14	n.a.	11	n.a.	853	n.a.	853	11	n.a.	11
		3,015	Kyonekadone	3,556	85	20	n.a.	17	n.a.	1,335	n.a.	1,335	18	n.a.	18
		1,336	Byinekazee	1,463	91	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
		705	Okkoba	831	85	9	n.a.	8	n.a.	601	n.a.	601	8	n.a.	8
		1,854	Daydalu	8,941	21	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
		247	Kha Naung	1,011	24	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
		732	Thapaykan	1,430	51	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
		837	Nga Pyay Ma	2,927	29	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
		Sub-total		12,570		25,125	50	43	n.a.	35	n.a.	2,790	n.a.	2,790	37
22	Banbwezu	960	Banbwezu	1,464	66	4	n.a.	3	n.a.	207	n.a.	207	3	n.a.	3
		411	Kyoneduttanyin	1,185	35	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
		542	Kazaung	1,973	27	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
		763	Thaeaintaman	1,343	57	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
		839	Phyapontaman	2,024	41	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
		80	Kyoneku	1,869	4	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
		1,007	Gyowarhtalun	1,979	51	3	n.a.	2	n.a.	120	n.a.	120	2	n.a.	2
		101	Kyonekyeik	1,148	9	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
		627	Koeaintan	1,294	48	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
		Sub-total		5,330		14,279	37	7	n.a.	4	n.a.	327	n.a.	327	4
23	Daydalu	1,720	Daydalu	8,941	19	14	n.a.	3	n.a.	212	n.a.	212	3	n.a.	3
24	Letpanbin	3,058	Lanpan	5,106	60	2	n.a.	1	n.a.	94	n.a.	94	1	n.a.	1
		66	Kyonekadone	3,556	2	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
		334	Daydalu	8,941	4	2	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Sub-total		3,458		17,603	20	2	n.a.	1	n.a.	94	n.a.	94	1	n.a.	1
25	Zinbaung	1,331	Zinbaung	2,905	46	17	n.a.	8	n.a.	613	n.a.	613	8	n.a.	8
		18	Theinkone	1,453	1	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
		278	Kondaing	774	36	4	n.a.	1	n.a.	113	n.a.	113	2	n.a.	2
		1,043	Tinpahlwe	1,287	81	2	n.a.	2	n.a.	128	n.a.	128	2	n.a.	2
Sub-total		2,670		6,419	42	23	n.a.	11	n.a.	854	n.a.	854	11	n.a.	11

Note and source: Same as in Table A12-22.

Table A12-30 Polder-wise Damaged Fishery Equipment in Daydave Township (Financial Terms)

No.	Polder Name	Planned Area (ha)	Village Tract				Polder						Annual Damage Prevention Value (1,000 Kyats)				
			Name	Area (ha)	% to Polder Area	Damaged Fishing Nets (No.)	Damaged Boats (No.)	Damaged Fishing Nets (No.)	Damaged Boats (No.)	Damage Value (1,000 Kyats)			Nets	Boats	Total		
										Nets	Boats	Total					
27	Thandi	545	Thayar Gone	1,234	44	4	4	2	2	139	353	492	2	2	2	3	
		150	Kyundu Dermalain	1,470	10	1	1	0	0	8	20	28	3	3	3	6	
		593	Thandi Thegonelay	1,335	44	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
		100	Thandi Zeepyugone	1,756	6	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
	Sub-total	1,388		5,795	24	5	5	2	2	147	374	521	5	4	9	9	
28	Succlubbaluma	708	Nakhong Chaung	981	72	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
		1,069	Kyatsinpyo	1,296	82	4	4	3	3	260	660	920	3	3	3	6	
		735	Kyonkanan	815	90	3	3	3	3	213	541	754	3	2	5	5	
		437	Uto(kyaiklatkalay)	479	91	5	5	5	5	359	912	1,272	5	4	9	9	
	Sub-total	2,949		3,571	83	12	12	11	11	832	2,113	2,945	11	9	20	20	
29	Hleseikchaunggy	259	Hmawbi	484	54	2	2	1	1	84	214	298	1	1	1	2	
		356	Hleseikchaungyi	1,157	31	14	14	4	4	339	862	1,201	5	4	8	8	
		156	Lay	1,111	14	20	20	3	3	221	562	783	3	2	5	5	
		10	Lak Kyun	1,594	9	1	1	1	1	68	173	241	1	1	1	2	
	Sub-total	909		4,346	21	46	46	9	9	713	1,810	2,523	10	8	18	18	
30	Tamatakaw	1,704	Tamatakaw	2,047	83	10	10	8	8	656	1,665	2,320	9	7	16	16	
		840	Toe	1,069	79	10	10	8	8	619	1,572	2,190	8	7	15	15	
		1,122	Tawchaik	1,481	76	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
		844	Shankan	1,013	83	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
	Sub-total	835		3,345	63	20	20	16	16	1,274	3,236	4,511	17	14	31	31	
31	Kyonsoat	225	Kawataykanchaung	2,149	10	1	1	0	0	8	21	29	0	0	0	0	
		15	Toe	1,069	1	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
	Sub-total	240		3,218	7	1	1	0	0	8	21	29	0	0	0	0	

Note and source: Same as in Table A12-22.

Table A12-31 Polder-wise Damaged Fishery Equipment in Kyaiklatt Township (Financial Terms)

No.	Polder Name	Planned Area (ha)	Village Tract				Polder						Annual Damage Prevention Value (1,000 Kyats)				
			Name	Area (ha)	% to Polder Area	Damaged Fishing Nets (No.)	Damaged Boats (No.)	Damaged Fishing Nets (No.)	Damaged Boats (No.)	Damage Value (1,000 Kyats)			Nets	Boats	Total		
										Nets	Boats	Total					
32	Maubin Island (North)	1,303	Hlaing Tar	1,518	86	4	4	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
		570	Lay Eain Tan	598	95	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
		1,640	Kyweil Ku Khayar Yoe	1,640	100	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
		748	Sin Tar	776	96	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
		1,058	Kyaung Su	1,099	96	n.a.	n.a.	6	6	n.a.	n.a.	1,155	1,155	n.a.	3	3	3
		813	Taung Boae Kyi	828	98	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
		804	Ngwe Inn Su	804	100	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
		1,261	Yone Dount	1,292	98	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
		594	Kyone Phar Yay Kyaw	593	100	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
		1,225	Eain Yar Kyi	1,225	100	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
		984	Kyone Kvaik	983	100	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
	Sub-total	11,000		11,356	97	4	10	n.a.	n.a.	6	6	1,155	1,155	0	3	3	
33	Maubin Island (South)	617	Tar Pat	605	102	5	5	5	5	402	1,020	1,421	3	2	5	5	
		348	Phoe San	337	103	1	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
		779	Latar Kyi	717	109	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
		151	Tharyar Wei	134	113	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
		752	Kyee Chaung	667	113	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
	Sub-total	1,963		4,610	110	17	17	19	19	1,509	3,834	5,343	10	9	19	19	
34	Thonegwakyun	601	Ah Su Kyi	724	83	1	1	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
		357	Me Zali Kone	517	69	2	1	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
		332	Ah Hnu	434	76	2	2	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
		550	Thamet Pyay	718	77	n.a.	7	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
		332	Linn Ton	401	83	7	4	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
		448	Darna Chaung	629	71	17	17	12	12	954	2,422	3,375	6	5	12	12	
		547	Kyon Ma Nezet	667	82	11	11	9	9	710	1,804	2,515	5	4	9	9	
		363	Htayaw Ywar Thit	497	73	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
		497	Tharyar Kone	566	88	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
		706	Myanmar Kavin Su	814	87	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
		423	Lei Lan Pin	468	90	12	12	11	11	854	2,169	3,023	6	5	11	11	
		261	Mayan Kyi	278	94	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
		526	Taman Kyi	560	94	4	4	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
		834	Ohn Pin Su	889	94	n.a.	9	n.a.	9	8	n.a.	1,689	1,689	n.a.	4	4	4
		658	Sit Kone	702	94	5	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
		685	Sar Pho Thiyne Chaung	730	94	n.a.	7	n.a.	7	n.a.	n.a.	1,314	1,314	n.a.	3	3	3
			Sub-total	8,120		9,594	85	61	75	32	47	2,518	9,397	11,915	17	21	38

Note and source: Same as in Table A12-22.

Table A12-32 Polder-wise Damaged Public Facilities in Labutta Township (Financial Terms) (1/2)

No.	Polder		Village Tract						
	Name	Planned Area (ha)	Name	Area (ha)	Damaged Structures (No.)				
					Library	RHC	School	Pond	Temple
1	Alegyun (1)	1,670	That Kal Thauang	3,634	1	0	7	0	16
2	Alegyun (2)	1,523	Thingan Kone	3,097	1	0	3	5	11
		1,282	Nagone	2,810	1	0	3	2	8
		803	Gwe Chaung	1,464	0	0	1	3	4
		3,608	Sub-total	7,371	3	0	7	10	23
5	Thingangyi	699	Thingangyi	4,828	0	0	6	27	0
6	Zinywe	616	Tha Pyu Kone	8,876	0	0	14	29	0
7	Leikkwin	381	Tha Pyu Kone	8,876	0	0	0	0	0
8	Labutta (South)	722	Gant Eaik	1,351	0	0	3	7	0
		1,502	Sarkyin	5,112	0	0	7	10	0
		642	Tha Pyu Kone	8,876	0	0	0	0	0
	Sub-total	2,866	15,339	0	0	10	17	0	
10	U Gaungpu	366	Pyin Sa Lu	4,406	0	0	11	7	0
11	Bitud Island (1)	1,904	Myit Pauk	14,564	0	0	13	35	0
12	Bitud Island (2)	2,784	Bitud	3,725	0	0	6	17	0
13	Bitud Island (3)	672	Myit Pauk	14,564	0	0	0	0	0
		2,543	Maung Ngae	4,498	0	0	8	8	0
		3,215	Sub-total	19,062	0	0	8	8	0
14	Bitud Island (4)	2,303	Nyaung Chaung	3,172	0	0	5	6	0
		2,250	Ka Ka Yan	3,100	0	0	9	12	0
		1,589	Shaw Chaung	14,685	0	0	5	21	0
		1,498	Kyee Chaung	2,229	0	0	0	4	0
		7,640	Sub-total	23,186	0	0	24	43	0

Note: Structure damages have been calculated in terms of structure for depreciation period. This is assumed equivalent to elapse of half of the full utility life of the structure, and therefore the assessed depreciation value is assumed at 50% of the cost for a new structure.

Source: Township Education Councils, Township Peace and Development Councils and Township Irrigation Departments.

Table A12-32 Polder-wise Damaged Public Facilities in Labutta Township (Financial Terms) (2/2)

No.	Polder		% to Polder Area	Polder																
	Planned Area (ha)	Area (ha)		Damaged Structures (No.)					Damage Value (1,000 Kyats)					Annual Damage Prevention Value (1,000 Kyats)						
				Library	RHC	School	Pond	Temple	Library	RHC	School	Pond	Temple	Total	Library	RHC	School	Pond	Temple	Total
1	1,670	3,634	46	0	0	3	0	7	92	0	17,371	0	551	18,014	2	0	232	0	4	237
2	1,523	3,097	49	0	0	1	2	5	98	0	7,967	105	406	8,575	2	0	106	0	3	112
	1,282	2,810	46	0	0	1	1	4	91	0	7,391	39	274	7,795	2	0	99	0	2	103
	803	1,464	55	1	0	1	2	2	110	0	2,962	70	165	3,306	2	0	39	0	1	43
	3,608	7,371	49	1	0	3	5	11	299	0	18,319	213	844	19,676	5	7	244	1	6	257
5	699	4,828	14	0	0	1	4	0	0	4,691	166	0	4,857	0	0	63	1	0	63	
6	616	8,876	7	0	0	1	2	0	0	5,247	86	0	5,332	0	0	70	0	0	70	
7	381	8,876	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8	722	1,351	53	0	0	2	4	0	0	8,658	159	0	8,817	0	0	115	1	0	116	
	1,502	5,112	29	0	0	2	3	0	0	11,106	125	0	11,231	0	0	148	1	0	149	
	642	8,876	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2,866	15,339	19	0	0	4	7	0	0	19,764	284	0	20,048	0	0	264	1	0	265	
10	366	4,406	8	0	0	1	1	0	0	4,934	25	0	4,959	0	0	66	0	0	66	
11	1,904	14,564	13	0	0	2	5	0	0	9,177	194	0	9,372	0	0	122	1	0	123	
12	2,784	3,725	75	0	0	4	13	0	0	24,215	540	0	24,755	0	0	323	2	0	325	
13	672	14,564	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2,543	4,498	57	0	0	5	5	0	0	24,424	192	0	24,616	0	0	326	1	0	327	
	3,215	19,062	17	0	0	5	5	0	0	24,424	192	0	24,616	0	0	326	1	0	327	
14	2,303	3,172	73	0	0	4	4	0	0	19,603	185	0	19,788	0	0	261	1	0	262	
	2,250	3,100	73	0	0	7	9	0	0	35,274	370	0	35,644	0	0	470	2	0	472	
	1,589	14,685	11	0	0	1	2	0	0	2,922	97	0	3,018	0	0	39	0	0	39	
	1,498	2,229	67	0	0	3	3	0	0	18,145	114	0	18,260	0	0	242	1	0	242	
	7,640	23,186	33	0	0	14	18	0	0	75,944	766	0	76,710	0	0	1,013	3	0	1,016	

Note and source: Same as in Table A12-27(1/2).

Table A12-33 Polder-wise Damaged Public Facilities in Bogalay Township (Financial Terms) (1/2)

Polder			Village Tract						
No.	Name	Planned Area (ha)	Name	Area (ha)	Damaged Structures (No.)				
					Library	RHC	School	Pond	Temple
15	Daunggyi	4,388	Set San	12,618	0	20	21	0	36
		1,323	Byu Sa Khan	1,596	0	4	5	0	1
		4,179	Daunggyi	13,033	0	10	10	0	19
		9,890	Sub-total	27,247	0	34	36	0	56
16	Daunggyi (East)	2,751	Daunggyi	13,033	0	10	10	0	19
		1,775	Nga Pyay Ma	2,927	0	3	4	0	5
		4,257	Kha Naung	3,779	0	6	2	0	5
		147	Paung Tae	1,360	0	6	2	0	1
8,930	Sub-total	21,099	0	25	18	0	30		
17	Daunggyi (West)	1,138	Set San	12,618	0	20	21	0	36
		1,788	Pet Pyael	1,485	0	4	2	0	7
		1,631	Byu Sa Khan	1,596	0	4	5	0	1
		530	Kamakalu	1,011	0	3	2	0	1
		427	Nga Pyay Ma	2,927	0	3	4	0	5
		1,408	Paung Tae	1,360	0	6	1	0	1
		18	Thapyaykan	1,430	0	2	2	0	1
		6,940	Sub-total	22,427	0	42	37	0	52
18	Daunggyi (Upper)	388	Kamakalu	1,011	0	3	2	0	1
		992	Sa Khan Gyi	1,066	0	2	1	0	6
		1,380	Sub-total	2,077	0	5	3	0	7

Note and source: Same as in Table A12-27(1/2).

Table A12-33 Polder-wise Damaged Public Facilities in Bogalay Township (Financial Terms) (2/2)

Polder No.	Village Tract			Polder																
	Planned Area (ha)	Area (ha)	% to Polder Area	Damaged Structures (No.)					Damage Value (1,000 Kyats)					Annual Damage Prevention Value (1,000 Kyats)						
				Library	RHC	School	Pond	Temple	Library	RHC	School	Pond	Temple	Total	Library	RHC	School	Pond	Temple	Total
15	4,388	12,618	35	0	7	7	0	13	0	6,955	39,436	0	939	47,330	0	155	526	0	6	687
	1,323	1,596	83	0	3	4	0	1	0	3,316	22,382	0	62	25,760	0	74	298	0	0	373
	4,179	13,033	32	0	3	3	0	6	0	3,206	17,315	0	457	20,978	0	71	231	0	3	305
	9,890	27,247	36	0	13	15	0	19	0	13,477	79,132	0	1,458	94,068	0	299	1,055	0	10	1,364
16	2,751	13,033	21	0	2	2	0	4	0	2,111	11,398	0	301	13,810	0	47	152	0	2	201
	1,775	2,927	61	0	2	2	0	3	0	1,819	13,099	0	227	15,145	0	40	175	0	2	217
	4,257	3,779	113	0	7	2	0	6	0	6,759	12,166	0	422	19,347	0	150	162	0	3	315
	147	1,360	11	0	1	0	0	0	0	649	1,167	0	8	1,824	0	14	16	0	2	32
	8,930	21,099	42	0	11	7	0	13	0	11,338	37,830	0	959	50,127	0	252	504	0	8	764
17	1,138	12,618	9	0	2	2	0	3	0	1,804	10,227	0	244	12,275	0	40	136	0	2	178
	1,788	1,485	120	0	5	2	0	8	0	4,816	13,004	0	632	18,452	0	107	173	0	4	285
	1,631	1,596	102	0	4	5	0	1	0	4,088	27,592	0	77	31,756	0	91	368	0	1	459
	530	1,011	52	0	2	1	0	1	0	1,573	5,662	0	39	7,274	0	35	75	0	0	111
	427	2,927	15	0	0	1	0	1	0	438	3,151	0	55	3,643	0	10	42	0	0	52
	1,408	1,360	104	0	6	1	0	1	0	6,212	5,591	0	78	11,880	0	138	75	0	1	213
	18	1,430	1	0	0	0	0	0	0	25	136	0	1	162	0	17	54	0	0	71
6,940	22,427	31	0	19	12	0	15	0	18,955	65,362	0	1,125	85,442	0	437	924	0	7	1,369	
18	388	1,011	38	0	1	1	0	0	0	1,151	4,145	0	29	5,325	0	26	55	0	0	81
	992	1,066	93	0	2	1	0	6	0	1,861	5,025	0	419	7,305	0	41	67	0	3	111
	1,380	2,077	66	0	3	2	0	6	0	3,012	9,170	0	448	12,630	0	67	122	0	3	192

Note and source: Same as in Table A12-27(1/2).

Table A12-34 Polder-wise Damaged Public Facilities in Phayapon Township (Financial Terms) (1/2)

Polder No.	Polder Name	Planned Area (ha)	Village Tract								
			Name	Area (ha)	Damaged Structures (No.)						
					Library	RHC	School	Pond	Temple		
19	Daw Nyein	1,200	Dawnye in	4,674	0	7	9	9	0		
20	Myokone	1,832	Myokone	4,541	0	8	7	7	0		
		448	Daydalu	8,941	0	14	8	6	0		
	Sub-total	2,280		13,482	0	22	15	13	0		
21	Kyetphamwe zaung	3,844	Kyetphamwe zaung	4,966	0	4	6	11	0		
		3,015	Kyonekadone	3,556	0	0	0	10	0		
		1,336	Bvinekazee	1,463	0	1	0	9	0		
		705	Okkoba	831	0	5	6	8	0		
		1,854	Daydalu	8,941	0	14	8	6	0		
		247	Kha Naung	1,011	0	6	2	0	5		
		732	Thapyaykan	1,430	0	2	3	0	1		
		837	Nga Pyay Ma	2,927	0	3	4	0	5		
			Sub-total	12,570		25,125	0	35	28	44	11
		22	Banbwezu	960	Banbwezu	1,464	0	3	5	9	0
411	Kyonedattayin			1,185	0	7	6	0	0		
542	Kazaung			1,973	0	3	1	3	0		
763	Thaceaintaman			1,343	0	5	0	0	0		
839	Phyapontaman			2,024	0	1	2	3	0		
80	Kyoneku			1,869	0	4	6	9	0		
1,007	Gvowaritalun			1,979	0	4	2	6	0		
101	Kyonekyeik			1,148	0	5	7	9	0		
627	Koeaintan			1,294	0	4	1	8	0		
	Sub-total			5,330		14,279	0	36	30	57	0
23	Daydalu	1,720	Daydalu	8,941	0	14	8	6	0		
24	Letpanbin	3,058	Lanpan	5,106	0	6	3	11	0		
		66	Kyonekadone	3,556	0	1	1	10	0		
		334	Daydalu	8,941	0	14	8	6	0		
		3,458	Sub-total	17,603	0	21	12	27	0		
25	Zinbaung	1,331	Zinbaung	2,905	0	5	2	9	0		
		18	Theinkone	1,453	0	1	2	7	0		
		278	Kondaing	774	0	1	1	8	0		
		1,043	Thapahwe	1,287	0	2	3	4	0		
		2,670	Sub-total	6,419	0	9	8	28	0		

Note and source: Same as in Table A12-27(1/2).

Table A12-34 Polder-wise Damaged Public Facilities in Phayapon Township (Financial Terms) (2/2)

Polder No.	Polder		% to Polder Area	Damaged Structures (No.)					Damage Value (1,000 Kyats)					Annual Damage Prevention Value (1,000 Kyats)							
	Planned Area (ha)	Area (ha)		Library	RHC	School	Pond	Temple	Library	RHC	School	Pond	Temple	Total	Library	RHC	School	Pond	Temple	Total	
	19	1,200		4,674	26	0	2	2	2	0	0	1,797	12,478	98	0	14,373	0	40	166	0	0
20	1,832	4,541	40	0	3	3	3	0	0	3,227	15,250	120	0	18,597	0	72	203	1	0	276	
	448	8,941	5	0	1	0	0	0	0	701	2,165	13	0	2,879	0	16	29	0	0	45	
	2,280	13,482	17	0	4	3	3	0	0	3,929	17,414	133	0	21,476	0	87	232	1	0	320	
21	3,844	4,966	77	0	3	5	9	0	0	3,096	25,080	362	0	28,538	0	69	334	2	0	405	
	3,015	3,556	85	0	0	0	8	0	0	0	0	360	0	360	0	0	0	2	0	2	
	1,336	1,463	91	0	1	0	8	0	0	913	0	349	0	1,262	0	20	0	2	0	22	
	705	831	85	0	4	5	7	0	0	4,242	27,487	288	0	32,018	0	94	366	1	0	462	
	1,854	8,941	21	0	3	2	1	0	0	2,903	8,958	53	0	11,914	0	65	119	0	0	184	
	247	1,011	24	0	1	0	0	1	0	1,466	2,639	0	92	4,196	0	33	35	0	1	68	
	732	1,430	51	0	1	1	0	1	0	1,024	5,528	0	38	6,591	0	23	74	0	0	97	
	837	2,927	29	0	1	1	0	1	0	858	6,177	0	107	7,142	0	19	82	0	1	102	
		12,570	25,125	50	0	15	14	33	3	0	14,502	75,869	1,413	237	92,021	0	322	1,012	6	2	1,342
	22	960	1,464	66	0	2	3	6	0	0	1,967	17,705	251	0	19,923	0	44	236	1	0	281
411		1,185	35	0	2	2	3	0	0	2,428	11,237	147	0	13,813	0	54	150	1	0	204	
542		1,973	27	0	1	0	1	0	0	824	1,483	35	0	2,343	0	18	20	0	0	38	
763		1,343	57	0	3	0	0	0	0	2,841	0	0	0	2,841	0	63	0	0	0	63	
839		2,024	41	0	0	1	1	0	0	415	4,477	53	0	4,944	0	9	60	0	0	69	
80		1,869	4	0	0	0	0	0	0	171	1,387	16	0	1,574	0	4	18	2	0	24	
1,007		1,979	51	0	2	1	3	0	0	2,035	5,496	130	0	7,661	0	45	73	1	0	119	
101		1,148	9	0	0	1	1	0	0	440	3,326	34	0	3,799	0	10	44	0	0	54	
627		1,294	48	0	2	0	4	0	0	1,938	2,617	165	0	4,719	0	43	35	1	0	79	
		5,330	14,279	37	0	13	9	20	0	0	13,059	47,727	831	0	61,617	0	290	636	6	0	932
23	1,720	8,941	19	0	3	2	1	0	0	2,693	8,310	49	0	11,053	0	60	111	0	0	171	
24	3,058	5,106	60	0	4	2	7	0	0	3,593	9,702	280	0	13,576	0	80	129	1	0	210	
	66	3,556	2	0	0	0	0	0	0	19	100	8	0	127	0	12	1	1	0	15	
	334	8,941	4	0	1	0	0	0	0	523	1,614	10	0	2,146	0	12	22	0	0	33	
	3,458	17,603	20	0	4	2	7	0	0	4,135	11,416	297	0	15,849	0	104	152	2	0	258	
25	1,331	2,905	46	0	2	1	4	0	0	2,291	4,948	175	0	7,414	0	51	66	1	0	118	
	18	1,453	1	0	0	0	0	0	0	12	134	4	0	150	0	8	2	0	0	11	
	278	774	36	0	0	0	3	0	0	359	1,940	122	0	2,421	0	8	26	1	0	34	
	1,043	1,287	81	0	2	2	3	0	0	1,621	13,129	138	0	14,887	0	36	175	1	0	212	
	2,670	6,419	42	0	4	4	10	0	0	4,283	20,150	439	0	24,872	0	103	269	2	0	374	

Note and source: Same as in Table A12-27(1/2).

Table A12-35 Polder-wise Damaged Public Facilities in Daydave Township (Financial Terms) (1/2)

Polder			Village Tract						
No.	Name	Planned Area (ha)	Name	Area (ha)	Damaged Structures (No.)				
					Library	RHC	School	Pond	Temple
27	Thandi	545	Thayar Gone	1,234	1	0	1	0	3
		150	Kyundu Darmalain	1,470	6	0	1	0	5
		593	Thandi The gone lay	1,335	1	0	2	0	2
		100	Thandi Zeepyugone	1,756	2	0	3	0	3
		1,388	Sub-total	5,795	10	0	7	0	13
28	Suclubbaluma	708	Nakhong Chaung	981	0	1	1	0	2
		1,069	Kyatsinpyo	1,296	0	0	4	0	7
		735	Kyonkanan	815	1	1	1	0	5
		437	Uto(kyaiklatkalay)	479	2	0	2	0	3
		2,949	Sub-total	3,571	3	2	8	0	17
29	Hleseikchaunggyi	259	Hmawbi	484	1	0	1	0	3
		356	Hleseikchaunggyi	1,157	1	1	3	0	7
		156	Lay	1,111	3	1	2	0	5
		138	Laik Kyun	1,594	0	0	1	0	4
		909	Sub-total	4,346	5	2	7	0	19
30	Tamatakaw	1,704	Tamatakaw	2,047	3	1	2	0	5
		840	Toe	1,069	1	1	2	0	6
		1,122	Tawchaik	1,481	1	1	2	0	6
		844	Shankan	1,013	2	0	1	0	5
		835	Mayan Anout	1,324	9	1	3	0	9
		5,345	Sub-total	6,934	16	4	10	0	31
31	Kyonsoat	225	Kawataykanchaung	2,149	5	1	2	0	4
		15	Toe	1,069	1	1	2	0	6
		240	Sub-total	3,218	6	2	4	0	10

Note and source: Same as in Table A12-27(1/2).

Table A12-35 Polder-wise Damaged Public Facilities in Daydave Township (Financial Terms) (2/2)

Polder No.	Village Tract			Polder																
	Planned Area (ha)	Area (ha)	% to Polder Area	Damaged Structures (No.)					Damage Value (1,000 Kyats)					Annual Damage Prevention Value (1,000 Kyats)						
				Library	RHC	School	Pond	Temple	Library	RHC	School	Pond	Temple	Total	Library	RHC	School	Pond	Temple	Total
27	545	1,234	44	0	0	0	0	1	88	0	2,385	0	99	2,573	2	0	32	0	1	34
	150	1,470	10	1	0	0	0	1	122	0	551	0	38	712	3	0	7	0	0	10
	593	1,335	44	0	0	1	0	1	89	0	4,797	0	67	4,953	2	0	64	0	0	66
	100	1,756	6	0	0	0	0	0	23	0	923	0	13	958	1	0	12	0	0	13
	1,388	5,795	24	2	0	2	0	3	322	0	8,656	0	217	9,195	7	0	115	0	1	124
28	708	981	72	0	1	1	0	1	0	722	3,897	0	108	4,727	0	16	52	0	1	69
	1,069	1,296	82	0	0	3	0	6	0	17,817	0	433	18,250	0	0	238	0	3	240	
	735	815	90	1	1	1	0	5	180	902	4,870	0	338	6,290	4	20	65	0	2	91
	437	479	91	2	0	2	0	3	365	0	9,853	0	205	10,423	8	0	131	0	1	141
	2,949	3,571	83	3	2	7	0	14	545	1,624	36,437	0	1,085	39,690	12	36	486	0	7	541
29	259	484	54	1	0	1	0	2	107	0	2,890	0	120	3,117	2	0	39	0	1	42
	356	1,157	31	0	0	1	0	2	62	308	4,985	0	162	5,515	1	7	66	0	1	76
	156	1,111	14	0	0	0	0	1	84	140	1,516	0	53	1,794	2	3	20	0	0	26
	138	1,594	9	0	0	0	0	0	0	0	468	0	26	493	0	0	6	0	0	6
	909	4,346	21	1	0	2	0	5	253	448	9,858	0	361	10,920	6	10	131	0	2	149
30	1,704	2,047	83	2	1	2	0	4	499	832	8,990	0	312	10,634	11	18	120	0	2	152
	840	1,069	79	1	1	2	0	5	157	786	8,486	0	354	9,783	3	17	113	0	2	136
	1,122	1,481	76	1	1	2	0	5	152	758	8,182	0	341	9,432	3	17	109	0	2	132
	844	1,013	83	2	0	1	0	4	333	0	4,499	0	312	5,145	7	0	60	0	2	69
	835	1,324	63	6	1	2	0	6	1,135	631	10,217	0	426	12,408	25	14	136	0	3	178
	5,345	6,934	77	11	3	7	0	23	2,277	3,006	40,375	0	1,745	47,403	51	67	538	0	12	667
31	225	2,149	10	1	0	0	0	0	105	105	1,131	0	31	1,372	2	2	15	0	0	20
	15	1,069	1	0	0	0	0	0	3	14	152	0	6	175	0	0	2	0	0	2
	240	3,218	7	1	0	0	0	1	108	119	1,282	0	38	1,546	2	3	17	0	0	22

Note and source: Same as in Table A12-27(1/2).

Table A12-36 Polder-wise Damaged Public Facilities in Kyaiklatt Township (Financial Terms) (1/2)

No.	Polder		Village Tract								
	Name	Planned Area (ha)	Name	Area (ha)	Damaged Structures (No.)						
					Library	RHC	School	Pond	Temple		
32	Maubin Island (North)	1,303	Hlaing Tar	1,518	0	2	4	0	3		
		570	Lay Eain Tan	598	0	2	3	0	4		
		1,640	Kywel Ku Khayar Yoe	1,640	0	7	4	0	2		
		748	Sin Tar	776	0	2	3	0	2		
		1,058	Kvaung Su	1,099	0	3	3	0	3		
		813	Taung Boae Kyi	828	0	2	2	0	0		
		804	Newe Inn Su	804	0	3	2	0	5		
		1,261	Yone Dount	1,292	0	2	1	0	9		
		594	Kyone Phar Yay Kyaw	593	0	4	3	0	5		
		1,225	Eain Yar Kyi	1,225	0	1	3	0	5		
		984	Kyone Kyaik	983	0	4	4	0	7		
			Sub-total	11,000		11,356	0	32	32	0	45
		33	Maubin Island (South)	617	Tar Pat	605	0	2	1	0	1
348	Phoe San			337	0	2	1	0	1		
779	Latar Kyi			717	0	1	2	0	3		
151	Tharyar Wei			134	0	4	3	0	4		
752	Kyee Chaung			667	0	0	0	0	1		
1,963	Bali Chan Yay Kyaw			1,741	0	4	3	0	9		
4,610	Kyone Kyaik			4,201	0	13	11	0	19		
	Sub-total					4,201	0	13	11	0	19
34	Thoneg wakyun	601	Ah Su Kyi	724	0	2	1	0	3		
		357	Me Zali Kone	517	0	1	2	0	2		
		332	Ah Huu	434	0	2	2	0	2		
		550	Thamet Pgyay	718	0	3	4	0	4		
		332	Linn Ton	401	0	1	1	0	3		
		448	Darna Chaung	629	0	1	3	0	3		
		547	Kyon Ma Ngaet	667	0	1	2	0	0		
		363	Htayaw Ywar Thit	497	0	1	3	0	4		
		497	Tharyar Kone	566	0	1	1	0	1		
		706	Myanmar Kay in Su	814	0	3	1	0	3		
		423	Lei Lan Pin	468	0	4	3	0	5		
		261	Mayan Kyi	278	0	1	1	0	1		
		526	Taman Kyi	560	0	4	2	0	2		
		834	Ohn Pin Su	889	0	2	1	0	1		
		658	Sit Kone	702	0	3	2	0	2		
		685	Sar Pho Thvine Chaung	730	0	3	2	0	2		
		8,120	Sub-total	9,594	0	33	31	0	43		

Note and source: Same as in Table A12-27(1/2).

Table A12-36 Polder-wise Damaged Public Facilities in Kyaiklatt Township (Financial Terms) (2/2)

Polder No.	Village Tract			Polder																	
	Planned Area (ha)	Area (ha)	% to Polder Area	Damaged Structures (No.)					Damage Value (1,000 Kyats)					Annual Damage Prevention Value (1,000 Kyats)							
				Library	RHC	School	Pond	Temple	Library	RHC	School	Pond	Temple	Total	Library	RHC	School	Pond	Temple	Total	
32	1,303	1,518	86	0	2	3	0	3	0	1,717	18,541	0	193	20,451	0	38	247	0	1	287	
	570	598	95	0	2	3	0	4	0	1,906	15,441	0	286	17,634	0	42	206	0	2	250	
	1,640	1,640	100	0	7	4	0	2	0	7,000	21,600	0	150	28,750	0	156	288	0	1	445	
	748	776	96	0	2	3	0	2	0	1,928	15,615	0	145	17,688	0	43	208	0	1	252	
	1,058	1,099	96	0	3	3	0	3	0	2,838	15,596	0	217	18,700	0	64	208	0	1	274	
	813	828	98	0	2	2	0	0	0	1,964	10,604	0	0	12,568	0	44	141	0	0	185	
	804	804	100	0	3	2	0	5	0	3,000	10,800	0	375	14,175	0	67	144	0	3	213	
	1,261	1,292	98	0	2	1	0	9	0	1,952	5,270	0	659	7,881	0	43	70	0	4	118	
	594	593	100	0	4	3	0	5	0	4,007	16,227	0	376	20,610	0	89	216	0	3	308	
	1,225	1,225	100	0	1	3	0	5	0	1,000	16,200	0	375	17,575	0	22	216	0	3	241	
	984	983	100	0	4	4	0	7	0	4,004	21,622	0	526	26,152	0	89	288	0	4	381	
	11,000	11,356	97	0	31	31	0	44	0	31,366	167,517	0	3,300	202,183	0	697	2,234	0	22	2,953	
	33	617	605	102	0	2	1	0	1	0	2,040	5,507	0	76	7,623	0	45	73	0	1	119
348		337	103	0	2	1	0	1	0	2,065	5,576	0	77	7,719	0	46	74	0	1	121	
779		717	109	0	1	2	0	3	0	1,086	11,734	0	244	13,065	0	24	156	0	2	182	
151		134	113	0	5	3	0	5	0	4,507	18,255	0	338	23,101	0	100	243	0	2	346	
752		667	113	0	0	0	0	0	0	4,510	18,266	0	761	23,537	0	100	244	0	5	349	
1,963		1,741	113	0	5	3	0	10	0	14,209	65,426	0	1,582	81,217	0	316	872	0	11	1,199	
4,610		4,201	110	0	14	12	0	21	0			0			0			0			
34		601	724	83	0	2	1	0	2	0	1,660	4,483	0	187	6,330	0	37	60	0	1	98
		357	517	69	0	1	1	0	1	0	691	7,458	0	104	8,252	0	15	99	0	1	115
		332	434	76	0	2	2	0	2	0	1,530	8,262	0	115	9,906	0	34	110	0	1	145
		550	718	77	0	2	3	0	3	0	2,298	16,546	0	230	19,074	0	51	221	0	2	273
		332	401	83	0	1	1	0	2	0	828	4,471	0	186	5,485	0	18	60	0	1	79
		448	629	71	0	1	2	0	2	0	712	11,538	0	160	12,411	0	16	154	0	1	171
	547	667	82	0	1	2	0	0	0	820	8,857	0	0	9,677	0	18	118	0	0	136	
	363	497	73	0	1	2	0	3	0	730	11,832	0	219	12,782	0	16	158	0	1	175	
	497	566	88	0	1	1	0	1	0	878	4,742	0	66	5,686	0	20	63	0	0	83	
	706	814	87	0	3	1	0	3	0	2,602	4,684	0	195	7,481	0	58	62	0	1	122	
	423	468	90	0	4	3	0	5	0	3,615	14,642	0	339	18,597	0	80	195	0	2	278	
	261	278	94	0	1	1	0	1	0	939	5,070	0	70	6,079	0	21	68	0	0	89	
	526	560	94	0	4	2	0	2	0	3,757	10,144	0	141	14,042	0	83	135	0	1	220	
834	889	94	0	2	1	0	1	0	1,876	5,066	0	70	7,013	0	42	68	0	0	110		
658	702	94	0	3	2	0	7	0	2,812	10,123	0	492	13,427	0	62	135	0	3	201		
685	730	94	0	3	2	0	2	0	2,815	10,134	0	141	13,090	0	63	135	0	1	199		
8,120	9,594	85	0	29	26	0	36	0	28,564	138,051	0	2,715	169,330	0	635	1,841	0	18	2,494		

Note and source: Same as in Table A12-27(1/2).

Table A12-37 Polder-wise Potable Water Shortage in Labutta Township (Financial Terms)

No.	Polder Name	Planned Area (ha)	Village Tract					Polder			Annual Water Shortage Prevention Value (1,000 Kyats)
			Name	Area (ha)	Water Shortage Value			Water Shortage Value			
					Affected HH (No.)	Water Demand (gallon)	Water Expense (1,000 Kyats)	Affected HH (No.)	Water Demand (gallon)	Water Expense (1,000 Kyats)	
1	Alegyun (1)	1,670	That Kal Thaug	3,634	1,552	488,849	1,539,873	713	224,690	707,772	23,592
2	Alegyun (2)	1,523	Thingan Kone	3,097	1,226	386,096	1,216,201	603	189,851	598,029	19,934
		1,282	Nagone	2,810	740	233,069	734,166	337	106,281	334,785	11,160
		803	Gwe Chaung	1,464	219	69,017	217,402	120	37,926	119,467	3,982
	Sub-total	3,608		7,371	2,185	688,181	2,167,769	1,061	558,747	1,760,053	58,668
5	Thingangyi	699	Thingangyi	4,828	749	235,935	743,195	109	34,178	107,659	3,589
6	Zinywe	616	Tha Pyu Kone	8,876	1,604	505,166	1,591,271	111	35,060	110,437	3,681
7	Leikkwin	381	Tha Pyu Kone	8,876	1,604	505,166	1,591,271	69	21,609	68,068	2,269
8	Labutta (South)	722	Gant Eaik	1,351	522	164,273	517,458	279	87,759	276,441	9,215
		1,502	Sarkyin	5,112	1,161	365,589	1,151,605	341	107,384	338,258	11,275
		642	Tha Pyu Kone	8,876	1,604	505,166	1,591,271	116	36,603	115,299	3,843
	Sub-total	2,866		15,339	3,286	1,035,027	3,260,335	736	231,746	729,998	24,333
10	U Gaungpu	366	Pvin Sa Lu	4,406	425	133,844	421,607	35	11,025	34,729	1,158
11	Bitud Island (1)	1,904	Myit Pauk	14,564	1,777	559,629	1,762,831	232	73,206	230,599	7,687
12	Bitud Island (2)	2,784	Bitud	3,725	1,664	524,129	1,651,005	1,244	391,829	1,234,260	41,142
13	Bitud Island (3)	672	Myit Pauk	14,564	1,777	559,629	1,762,831	82	25,799	81,265	2,709
		2,543	Maung Ngae	4,498	1,054	331,853	1,045,335	596	187,646	591,083	19,703
		3,215		19,062	2,830	891,482	2,808,167	678	213,444	672,349	22,412
14	Bitud Island (4)	2,303	Nyaung Chaung	3,172	751	236,597	745,279	545	171,770	541,074	18,036
		2,250	Ka Ka Yan	3,100	1,133	356,990	1,124,517	823	259,088	816,126	27,204
		1,589	Shaw Chaung	14,685	2,165	682,007	2,148,320	235	73,868	232,683	7,756
		1,498	Kyee Chaung	2,229	653	205,727	648,038	439	138,254	435,499	14,517
		7,640		23,186	4,703	1,481,319	4,666,155	2,041	642,978	2,025,381	67,513

Notes: (1) Water shortage volume for 70% of affected villagers has been calculated in terms of the per capita water consumption of 1.25 gallons for two months immediate after Nargis.

(2) Water cost is estimated at 10 Kyats/gallon which has increased sharply two to three-fold compared to that before Nargis.

Source: Township interviews, 2010.

Table A12-38 Polder-wise Potable Water Shortage in Bogalay Township (Financial Terms)

No.	Polder Name	Planned Area (ha)	Village Tract					Polder			Annual Water Shortage Prevention Value (1,000 Kyats)
			Name	Area (ha)	Water Shortage Value			Water Shortage Value			
					Affected HH (No.)	Water Demand (gallon)	Water Expense (1,000 Kyats)	Affected HH (No.)	Water Demand (gallon)	Water Expense (1,000 Kyats)	
15	Daunggyi	4,388	Set San	12,618	3,236	1,190,885	4,382,456	1,126	414,221	1,524,333	50,811
		1,323	Byu Sa Khan	1,596	242	88,872	327,049	200	73,674	271,119	9,037
		4,179	Daunggyi	13,033	2,293	843,640	3,104,595	735	270,480	995,366	33,179
	Sub-total	9,890		27,247	5,770	2,123,397	7,814,100	2,061	758,374	2,790,818	93,027
16	Daunggyi (East)	2,751	Daunggyi	13,033	2,293	843,640	3,104,595	484	178,002	655,046	21,835
		1,775	Nga Pyay Ma	2,927	384	141,422	520,434	233	85,781	315,673	10,522
		4,257	Kha Naung	3,779	218	80,114	294,818	245	90,160	331,789	11,060
		147	Paung Tae	1,360	202	74,189	273,015	22	7,986	29,387	980
	Sub-total	8,930		21,099	3,096	1,139,365	4,192,862	984	361,928	1,331,895	44,397
17	Daunggyi (West)	1,138	Set San	12,618	3,236	1,190,885	4,382,456	292	107,419	395,303	13,177
		1,788	Pet Pyael	1,485	358	131,891	485,360	431	158,682	583,948	19,465
		1,631	Byu Sa Khan	1,596	242	88,872	327,049	247	90,933	334,633	11,154
		530	Kamakalu	1,011	578	212,520	782,074	302	111,283	409,522	13,651
		427	Nga Pyay Ma	2,927	384	141,422	520,434	56	20,608	75,837	2,528
		1,408	Paung Tae	1,360	202	74,189	273,015	1,471	541,475	1,992,629	66,421
		18	Thapyaykan	1,430	179	65,946	242,680	2	773	2,844	95
	Sub-total	6,940		22,427	5,179	1,905,725	7,013,067	2,802	1,031,173	3,794,716	126,491
18	Daunggyi (Upper)	388	Kamakalu	1,011	578	212,520	782,074	222	81,659	300,506	10,017
		992	Sa Khan Gyi	1,066	242	89,130	327,997	225	82,947	305,246	10,175
	Sub-total	1,380		2,077	820	301,650	1,110,071	447	164,606	605,752	20,192

Notes and source: Same as in Table A12-32.

Table A12-39 Polder-wise Potable Water Shortage in Phayapon Township (Financial Terms)

Polder			Village Tract					Polder			Annual Water Shortage Prevention Value (1,000 Kyats)
No.	Name	Planned Area (ha)	Name	Area (ha)	Affected HH (No.)	Water Demand (gallon)	Water Expense (1,000 Kyats)	Affected HH (No.)	Water Demand (gallon)	Water Expense (1,000 Kyats)	
19	Daw Nyein	1,200	Dawnyein	4,674	3,530	1,246,125	4,398,822	907	319,995	1,129,581	37,653
20	Myokone	1,832	Myokone	4,541	1,281	452,193	1,596,241	517	182,360	643,730	21,458
		448	Daydal	8,941	3,126	1,103,302	3,894,654	157	55,350	195,387	6,513
		2,280		13,482	4,407	1,555,495	5,490,896	673	237,710	839,117	27,971
21	Kyetphamwezaung	3,844	Kyetphamwezaung	4,966	858	302,698	1,068,522	664	234,251	826,905	27,564
		3,015	Kyonekadone	3,556	1,212	427,730	1,509,887	1,028	362,743	1,280,482	42,683
		1,336	Bynekezee	1,463	659	232,768	821,672	602	212,506	750,146	25,005
		705	Okkoba	831	395	139,364	491,956	355	118,114	416,942	13,898
		1,854	Daydal	8,941	3,126	1,103,302	3,894,654	648	228,815	807,716	26,924
		247	Kha Naung	1,011	218	76,848	271,274	53	18,780	66,292	2,210
		732	Thapyaykan	1,430	179	63,258	223,299	92	32,370	114,266	3,809
		837	Nga Pyay Ma	2,927	384	135,658	478,872	110	38,795	136,945	4,565
			Sub-total	12,570	25,125	7,030	2,481,625	8,760,137	3,531	1,246,372	4,399,695
22	Banbwezu	960	Banbwezu	1,464	338	119,349	421,303	222	78,331	276,507	9,217
		411	Kyoneduttanyin	1,185	467	164,816	581,799	162	57,080	201,493	6,716
		542	Kazaung	1,973	305	107,736	380,307	84	29,652	104,672	3,489
		763	Thaeaintaman	1,343	387	136,646	482,361	220	77,589	273,891	9,130
		839	Phyapontaman	2,024	497	175,441	619,307	206	72,647	256,445	8,548
		80	Kyoneku	1,869	1,114	393,383	1,388,643	48	16,803	59,314	1,977
		1,007	Gyowarhtalun	1,979	587	207,317	731,829	299	105,512	372,456	12,415
		101	Kyonekyeik	1,148	634	223,626	789,398	56	19,768	69,781	2,326
		627	Koeaintan	1,294	465	164,074	579,183	225	79,566	280,869	9,362
			Sub-total	5,330	14,279	4,794	1,692,388	5,974,129	1,521	536,948	1,895,427
23	Daydal	1,720	Daydal	8,941	3,126	1,103,302	3,894,654	601	212,259	749,274	24,976
24	Letpanbin	3,058	Lanpan	5,106	750	264,644	934,194	449	158,391	559,121	18,637
		66	Kyonekadone	3,556	1,212	427,730	1,509,887	22	7,907	27,912	930
		334	Daydal	8,941	3,126	1,103,302	3,894,654	117	41,266	145,668	4,856
	Sub-total	3,458	17,603	5,087	1,795,676	6,338,735	588	207,564	732,701	24,423	
25	Zinbaung	1,331	Zinbaung	2,905	384	135,658	478,872	176	62,269	219,810	7,327
		18	Theinkone	1,453	321	113,419	400,369	4	1,483	5,234	174
		278	Kondaing	774	212	74,871	264,296	76	26,934	95,077	3,169
		1,043	Tinphaw	1,287	157	57,172	200,731	35	12,574	43,982	1,479
	Sub-total	2,670	6,419	1,357	479,127	1,691,318	613	216,460	764,102	25,470	

Notes and source: Same as in Table A12-32.

Table A12-40 Polder-wise Potable Water Shortage in Daydaye Township (Financial Terms)

Polder			Village Tract					Polder			Annual Water Shortage Prevention Value (1,000 Kyats)
No.	Name	Planned Area (ha)	Name	Area (ha)	Affected HH (No.)	Water Demand (gallon)	Water Expense (1,000 Kyats)	Affected HH (No.)	Water Demand (gallon)	Water Expense (1,000 Kyats)	
27	Thandi	545	Thayar Gone	1,234	196	60,368	185,933	87	26,734	82,342	2,745
		150	Kyongdu Darmalain	1,470	277	85,162	262,299	28	8,624	26,562	885
		593	Thandi Thegonelay	1,335	258	79,556	245,034	115	35,358	108,904	3,630
		100	Thandi Zeepyugone	1,756	543	167,090	514,637	31	9,486	29,218	974
	Sub-total	1,388	5,795	1,273	392,176	1,207,903	260	80,203	247,026	8,234	
28	Suclubbaluma	708	Nakhong Chaung	981	185	56,918	175,309	134	41,180	126,833	4,228
		1,069	Kyatsinpyo	1,296	405	124,832	384,484	335	103,057	317,415	10,580
		735	Kyongkanan	815	228	70,070	215,816	205	63,171	194,566	6,486
		437	Uto (kyaiklatkalay)	479	202	62,308	191,910	185	56,918	175,309	5,844
	Sub-total	2,949	3,571	1,020	314,129	967,518	858	264,326	814,123	27,137	
29	Hleseikchaunggyi	259	Hmawbi	484	246	75,676	233,081	132	40,533	124,841	4,161
		356	Hleseikchaunggyi	1,157	438	134,966	415,694	135	41,611	128,161	4,272
		156	Lay	1,111	349	107,584	331,360	49	15,092	46,483	1,549
		138	Laik Kyun	1,594	337	103,704	319,407	29	9,055	27,890	930
	Sub-total	909	4,346	1,370	421,929	1,299,542	345	106,291	327,376	10,913	
30	Tamatakaw	1,704	Tamatakaw	2,047	340	104,566	322,063	283	87,102	268,275	8,943
		840	Toe	1,069	634	195,334	601,627	498	153,507	472,802	15,760
		1,122	Tawchaik	1,481	432	133,025	409,718	327	100,685	310,110	10,337
		844	Shankan	1,013	267	82,359	253,666	223	68,561	211,167	7,039
		835	Mayan Anout	1,324	763	235,004	723,812	481	148,117	456,201	15,207
	Sub-total	5,345	6,934	2,436	750,288	2,310,887	1,812	557,973	1,718,556	57,285	
31	Kyonsoat	225	Kawatyaykanchaung	2,149	400	123,108	379,171	42	12,936	39,843	1,328
		15	Toe	1,069	634	195,334	601,627	9	2,803	8,633	288
	Sub-total	240	3,218	1,034	318,441	980,799	51	15,739	48,476	1,616	

Notes and source: Same as in Table A12-32.

Table A12-41 Polder-wise Potable Water Shortage in Kyaiklatt Township (Financial Terms)

No.	Polder Name	Planned Area (ha)	Village Tract					Polder			Annual Water Shortage Prevention Value (No.)
			Name	Area (ha)	Water Shortage Value			Water Shortage Value			
					Affected HH (No.)	Water Demand (gallon)	Water Expense (1,000 Kyats)	Affected HH (No.)	Water Demand (gallon)	Water Expense (1,000 Kyats)	
32	Maubin Island (North)	1,303	Hlaing Tar	1,518	307	105,777	364,931	263	90,804	313,274	10,442
		570	Lay Eain Tan	598	161	55,545	191,630	153	52,889	182,465	6,082
		1,640	Kywel Ku Khayar Yoe	1,640	218	75,227	259,534	218	75,227	259,534	8,651
		748	Sin Tar	776	176	60,737	209,544	170	58,564	202,045	6,735
		1,058	Kyaung Su	1,099	145	50,111	172,884	140	48,300	166,635	5,555
		813	Taung Boae Kyi	828	96	32,965	113,728	94	32,361	111,645	3,722
		804	Ngwe Inn Su	804	116	40,089	138,307	116	40,089	138,307	4,610
		1,261	Yone Dount	1,292	292	100,585	347,017	285	98,170	338,686	11,290
		594	Kyone Phar Yay Kyaw	593	102	35,259	121,644	102	35,259	121,644	4,055
		1,225	Eain Yar Kyi	1,225	320	110,245	380,344	320	110,245	380,344	12,678
		984	Kyone Kyaik	983	156	53,975	186,215	156	53,975	186,215	6,207
		Sub-total	11,000	11,356	2,088	720,515	2,485,778	2,017	695,882	2,400,794	80,026
		33	Maubin Island (South)	617	Tar Pat	605	56	19,320	66,654	57	19,682
348	Phoe San			337	54	18,475	63,738	55	19,079	65,821	2,194
779	Latar Kyi			717	94	32,361	111,645	102	35,138	121,227	4,041
151	Tharyar Wel			134	145	50,111	172,884	164	56,511	194,963	6,499
752	Kyee Chaung			667	80	27,531	94,982	90	31,033	107,063	3,569
1,963	Bali Chan Yay Kyaw			1,741	203	69,914	241,204	229	78,850	272,032	9,068
Sub-total	4,610			4,201	631	217,712	751,107	697	240,293	829,009	27,634
34	Thonegwakyun			601	Ah Su Kyi	724	99	34,052	117,478	82	28,256
		357	Me Zali Kone	517	122	42,021	144,972	84	28,980	99,981	3,333
		332	Ah Huu	434	72	24,875	85,817	55	19,079	65,821	2,194
		550	Thamet Pyay	718	172	59,288	204,544	132	45,402	156,637	5,221
		332	Linn Ton	401	55	18,958	65,404	46	15,698	54,156	1,805
		448	Darna Chaung	629	160	55,304	190,797	114	39,365	135,808	4,527
		547	Kyon Ma Ngaet	667	155	53,372	184,132	127	43,712	150,805	5,027
		363	Htayaw Ywar Thit	497	170	58,564	202,045	124	42,746	147,472	4,916
		497	Tharyar Kone	566	77	26,686	92,066	68	23,426	80,818	2,694
		706	Myanmar Kayin Su	814	121	41,780	144,139	105	36,225	124,976	4,166
		423	Lei Lan Pin	468	136	46,972	162,053	123	42,504	146,639	4,888
		261	Mayan Kyi	278	53	18,113	62,488	49	17,026	58,739	1,958
		526	Taman Kyi	560	99	34,293	118,311	93	32,240	111,229	3,708
		834	Ohn Pin Su	889	179	61,824	213,293	168	57,960	199,962	6,665
		658	Sit Kone	702	106	36,587	126,226	99	34,293	118,311	3,944
		685	Sar Pho Thayne Chaung	730	150	51,802	178,716	141	48,662	167,885	5,596
		Sub-total	8,120	9,594	1,926	664,487	2,292,481	1,610	555,571	1,916,719	63,891

Notes and source: Same as in Table A12-32.

Table A12-42 Financial and Economic Cost-Benefit Analyses for All Polders

Year	Financial Terms					DF (12%)	Economic Terms				
	Costs (1,000 Kyats)		Benefits (1,000 Kyats)		B-C		Costs (1,000 Kyats)		Benefits (1,000 Kyats)		B-C
	RARI	Present worth	RARI	Present worth			RARI	Present worth	RARI	Present worth	
1	7,695,841	6,871,287	3,050,197	2,723,390	-4,147,896	0.8928571	7,541,924	6,733,861	3,786,177	3,380,515	-3,353,346
2	8,167,985	6,511,468	4,659,948	3,714,882	-2,796,586	0.7971939	8,004,625	6,381,238	5,750,685	4,584,411	-1,796,827
3	6,567,324	4,674,492	6,066,637	4,318,112	-356,379	0.7117802	6,435,978	4,581,002	7,406,133	5,271,539	690,538
4	8,181,636	5,199,578	6,761,649	4,297,150	-902,427	0.6355181	8,018,003	5,095,586	8,231,773	5,231,441	135,855
5	8,927,627	5,065,775	7,246,044	4,111,600	-954,175	0.5674269	8,749,074	4,964,460	8,790,885	4,988,184	23,724
6	0	0	7,246,044	3,671,071	3,671,071	0.5066311	0	0	8,790,885	4,453,736	4,453,736
7	0	0	7,246,044	3,277,742	3,277,742	0.4523492	0	0	8,790,885	3,976,550	3,976,550
8	0	0	7,246,044	2,926,556	2,926,556	0.4038832	0	0	8,790,885	3,550,491	3,550,491
9	0	0	7,246,044	2,612,996	2,612,996	0.36061	0	0	8,790,885	3,170,081	3,170,081
10	0	0	7,246,044	2,333,032	2,333,032	0.3219732	0	0	8,790,885	2,830,430	2,830,430
11	0	0	7,246,044	2,083,064	2,083,064	0.2874761	0	0	8,790,885	2,527,169	2,527,169
12	0	0	7,246,044	1,859,879	1,859,879	0.2566751	0	0	8,790,885	2,256,401	2,256,401
13	0	0	7,246,044	1,660,606	1,660,606	0.2291742	0	0	8,790,885	2,014,644	2,014,644
14	0	0	7,246,044	1,482,684	1,482,684	0.2046198	0	0	8,790,885	1,798,789	1,798,789
15	0	0	7,246,044	1,323,825	1,323,825	0.1826963	0	0	8,790,885	1,606,062	1,606,062
16	0	0	7,246,044	1,181,987	1,181,987	0.1631217	0	0	8,790,885	1,433,984	1,433,984
17	0	0	7,246,044	1,055,345	1,055,345	0.1456443	0	0	8,790,885	1,280,343	1,280,343
18	0	0	7,246,044	942,273	942,273	0.1300396	0	0	8,790,885	1,143,163	1,143,163
19	0	0	7,246,044	841,315	841,315	0.1161068	0	0	8,790,885	1,020,681	1,020,681
20	0	0	7,246,044	751,174	751,174	0.1036668	0	0	8,790,885	911,323	911,323
21	0	0	7,246,044	670,691	670,691	0.0925596	0	0	8,790,885	813,681	813,681
22	0	0	7,246,044	598,831	598,831	0.0826425	0	0	8,790,885	726,501	726,501
23	0	0	7,246,044	534,671	534,671	0.073788	0	0	8,790,885	648,661	648,661
24	0	0	7,246,044	477,385	477,385	0.0658821	0	0	8,790,885	579,162	579,162
25	0	0	7,246,044	426,236	426,236	0.0588233	0	0	8,790,885	517,109	517,109
26	603,460	31,694	7,246,044	380,568	348,874	0.0525208	579,322	30,426	8,790,885	461,704	431,278
27	602,560	28,256	7,246,044	339,793	311,537	0.0468936	578,458	27,126	8,790,885	412,236	385,110
28	358,380	15,005	7,246,044	303,387	288,381	0.0418693	344,045	14,405	8,790,885	368,068	353,663
29	406,060	15,180	7,246,044	270,881	255,701	0.0373833	389,818	14,573	8,790,885	328,632	314,059
30	507,200	16,929	7,246,044	241,858	224,929	0.0333779	486,912	16,252	8,790,885	293,421	277,169
31	0	0	7,246,044	215,945	215,945	0.0298017	0	0	8,790,885	261,983	261,983
32	0	0	7,246,044	192,808	192,808	0.0266087	0	0	8,790,885	233,914	233,914
33	0	0	7,246,044	172,150	172,150	0.0237577	0	0	8,790,885	208,852	208,852
34	0	0	7,246,044	153,705	153,705	0.0212123	0	0	8,790,885	186,475	186,475
35	0	0	7,246,044	137,237	137,237	0.0189395	0	0	8,790,885	166,495	166,495
36	0	0	7,246,044	122,533	122,533	0.0169103	0	0	8,790,885	148,656	148,656
37	0	0	7,246,044	109,404	109,404	0.0150985	0	0	8,790,885	132,729	132,729
38	0	0	7,246,044	97,682	97,682	0.0134808	0	0	8,790,885	118,508	118,508
39	0	0	7,246,044	87,216	87,216	0.0120364	0	0	8,790,885	105,811	105,811
40	0	0	7,246,044	77,872	77,872	0.0107468	0	0	8,790,885	94,474	94,474
41	0	0	7,246,044	69,528	69,528	0.0095954	0	0	8,790,885	84,352	84,352
42	0	0	7,246,044	62,079	62,079	0.0085673	0	0	8,790,885	75,314	75,314
43	0	0	7,246,044	55,428	55,428	0.0076494	0	0	8,790,885	67,245	67,245
44	0	0	7,246,044	49,489	49,489	0.0068298	0	0	8,790,885	60,040	60,040
45	0	0	7,246,044	44,187	44,187	0.006098	0	0	8,790,885	53,607	53,607
46	0	0	7,246,044	39,452	39,452	0.0054447	0	0	8,790,885	47,863	47,863
47	0	0	7,246,044	35,225	35,225	0.0048613	0	0	8,790,885	42,735	42,735
48	0	0	7,246,044	31,451	31,451	0.0043405	0	0	8,790,885	38,156	38,156
49	0	0	7,246,044	28,081	28,081	0.0038754	0	0	8,790,885	34,068	34,068
50	0	0	7,246,044	25,073	25,073	0.0034602	0	0	8,790,885	30,418	30,418
51	0	0	4,195,847	12,963	12,963	0.0030894	0	0	5,004,708	15,462	15,462
52	0	0	2,586,096	7,134	7,134	0.0027584	0	0	3,040,200	8,386	8,386
53	0	0	1,179,407	2,905	2,905	0.0024629	0	0	1,384,752	3,410	3,410
54	0	0	484,395	1,065	1,065	0.002199	0	0	559,112	1,229	1,229
Total		28,429,663		53,243,596	24,813,932			27,858,929		64,799,296	36,940,367

Note: RARI: Rehabilitation of agricultural and rural infrastructure.

Net Present Value	B/C	FIRR (%)
24,813,932	1.87	15.3

Net Present Value	B/C	EIRR (%)
36,940,367	2.33	28.1

Table A12-43 Summary of Financial and Economic Viability Indicators

Polder no.	Financial analysis			Economic analysis		
	Net present value (1,000 Kyats)	B/C	IRR (%)	Net present value (1,000 Kyats)	B/C	IRR (%)
1	1,310,437	3.73	49.9	1,731,148	4.68	81.2
2	2,572,557	2.82	28.4	3,505,643	3.53	44.3
5	-116,385	0.74	-3.2	-27,026	0.94	-0.8
6	-96,036	0.76	-2.9	-13,727	0.97	-0.4
7	-102,619	0.78	-2.7	-6,031	0.99	-0.2
8	981,927	1.50	6.4	1,718,484	1.89	12.0
10	-706,920	0.33	too low	-601,149	0.42	too low
11	211,569	1.15	1.9	581,423	1.43	5.5
12	1,476,330	1.81	11.0	2,211,536	2.24	17.8
13	-228,193	0.91	-1.1	306,032	1.12	1.5
14	1,406,957	2.71	26.5	1,875,579	3.32	39.7
15	9,378,648	5.77	137.3	12,140,686	7.30	323.7
16	7,376,201	3.13	34.8	10,115,309	3.98	56.5
17	949,904	3.35	40.5	1,264,185	4.20	64.2
18	722,622	1.68	9.0	1,157,834	2.11	15.5
19	-662,106	0.35	too low	-606,074	0.40	too low
20	-841,125	0.36	too low	-739,119	0.42	too low
21	-532,672	0.89	-1.3	325,054	1.07	0.8
22	-909,967	0.57	too low	-723,528	0.65	too low
23	-635,652	0.33	too low	-568,264	0.39	too low
24	-566,547	0.59	too low	-380,143	0.72	too low
25	-359,679	0.71	too low	-176,973	0.85	-1.8
27	79,645	2.96	31.0	104,242	3.62	46.1
28	815,202	8.15	619.6	1,001,569	9.96	too high
29	273,277	2.31	18.8	365,192	2.79	27.6
30	1,613,951	21.56	too high	1,946,597	26.30	too high
31	-20,412	0.53	too low	-14,665	0.66	too low
32	1,131,460	2.83	28.4	1,295,532	3.14	34.9
33	545,877	7.54	372.2	638,297	8.81	1577.7
34	-327,556	0.78	-2.7	-146,535	0.90	-1.2
All polders	24,813,932	1.87	15.3	36,940,367	2.33	28.1

Table A12-44 Project Costs and Benefits by Polder for 20 Years

(Unit: 1,000 Kyats)

Polder no.	Cost	Benefit	Net Benefit
1	1,921	15,063	13,142
2	4,420	34,658	30,238
3	5,692	44,632	38,940
4	371	2,900	2,529
5	855	6,701	5,846
6	34	266	232
7	14	112	98
8	2,687	21,067	18,380
9	10,763	84,390	73,627
10	117	919	802
11	726	5,690	4,964
12	5,009	39,276	34,267
13	4,250	33,324	29,074
14	11,148	87,415	76,267
15	14,236	111,616	97,380
16	20,600	161,525	140,925
17	16,586	130,054	113,468
18	3,133	24,564	21,431
19	1,084	8,501	7,417
20	3,375	26,461	23,086
21	28,505	223,515	195,010
22	10,841	85,002	74,161
23	2,373	18,601	16,228
24	7,307	57,293	49,986
25	5,955	46,692	40,737
26	10,438	81,846	71,408
27	2,867	22,481	19,614
28	6,441	50,497	44,056
29	1,910	14,978	13,068
30	11,045	86,607	75,562
31	443	3,470	3,027
32	24,839	194,764	169,925
33	11,582	90,815	79,233
34	17,266	135,382	118,116
Total	248,833	1,951,077	1,702,244

Table A12-45 Project Costs and Benefits by Polder for 20 Years

(Unit: Kyat)

Polder no.	Cost			Benefit			Net Benefit		
	Vegetables	Livestock	Total	Vegetables	Livestock	Total	Vegetables	Livestock	Total
1	4,643,880	1,225,231	5,869,111	35,211,678	80,666,880	115,878,558	30,567,798	79,441,649	110,009,447
2	6,934,862	2,450,462	9,385,323	52,817,517	161,333,760	214,151,277	45,882,656	158,883,298	204,765,954
3	3,725,105	1,225,231	4,950,336	28,169,340	80,666,875	108,836,215	24,444,235	79,441,644	103,885,879
4	1,733,716	612,616	2,346,332	12,910,940	40,333,445	53,244,385	11,177,224	39,720,829	50,898,053
5	681,103	612,616	1,293,719	5,281,760	40,333,445	45,615,205	4,600,657	39,720,829	44,321,486
6	743,021	612,616	1,355,637	5,868,620	40,333,445	46,202,065	5,125,599	39,720,829	44,846,428
7	433,429	612,616	1,046,045	3,521,160	40,333,445	43,854,605	3,087,731	39,720,829	42,808,560
8	4,829,635	1,225,231	6,054,866	36,385,400	80,666,875	117,052,275	31,555,765	79,441,644	110,997,409
9	16,779,888	4,900,923	21,680,811	127,348,900	322,667,525	450,016,425	110,569,012	317,766,602	428,335,614
10	247,674	612,616	860,290	1,760,580	40,333,445	42,094,025	1,512,906	39,720,829	41,233,735
11	1,547,960	612,616	2,160,576	11,737,220	40,333,445	52,070,665	10,189,260	39,720,829	49,910,089
12	8,111,311	2,450,461	10,561,772	61,620,440	161,333,755	222,954,195	53,509,129	158,883,294	212,392,423
13	4,458,125	1,225,231	5,683,356	34,037,960	80,666,875	114,704,835	29,579,835	79,441,644	109,021,479
14	13,374,375	4,288,308	17,662,683	101,527,000	282,334,075	383,861,075	88,152,625	278,045,767	366,198,392
15	14,612,744	4,288,308	18,901,052	110,916,780	282,334,075	393,250,855	96,304,036	278,045,767	374,349,803
16	6,934,861	2,450,461	9,385,322	52,817,520	161,333,755	214,151,275	45,882,659	158,883,294	204,765,953
17	19,813,890	6,126,153	25,940,043	150,236,500	403,334,400	553,570,900	130,422,610	397,208,247	527,630,857
18	3,157,839	1,225,231	4,383,070	24,061,320	80,666,875	104,728,195	20,903,481	79,441,644	100,345,125
19	5,758,412	1,837,847	7,596,259	43,427,740	121,000,325	164,428,065	37,669,328	119,162,478	156,831,806
20	4,272,371	1,225,231	5,497,602	32,277,380	80,666,875	112,944,255	28,005,009	79,441,644	107,446,653
21	22,476,381	6,738,769	29,215,150	170,189,780	443,667,845	613,857,625	147,713,399	436,929,076	584,642,475
22	9,659,272	3,063,077	12,722,349	73,357,660	201,667,200	275,024,860	63,698,388	198,604,123	262,302,511
23	3,838,941	1,225,231	5,064,172	29,343,060	80,666,875	110,009,935	25,504,119	79,441,644	104,945,763
24	3,715,105	1,225,231	4,940,336	28,169,340	80,666,875	108,836,215	24,454,235	79,441,644	103,895,879
25	3,900,859	1,225,231	5,126,090	29,343,060	80,666,875	110,009,935	25,442,201	79,441,644	104,883,845
26	11,145,313	3,675,692	14,821,005	84,508,020	242,000,645	326,508,665	73,362,707	238,324,953	311,687,660
27	1,795,633	612,616	2,408,249	13,497,800	40,333,445	53,831,245	11,702,167	39,720,829	51,422,996
28	5,820,330	1,837,847	7,658,177	44,014,600	121,000,325	165,014,925	38,194,270	119,162,478	157,356,748
29	2,352,899	612,616	2,965,515	17,605,840	40,333,445	57,939,285	15,252,941	39,720,829	54,973,770
30	12,321,763	3,675,692	15,997,455	93,310,940	242,000,645	335,311,585	80,989,177	238,324,953	319,314,130
31	371,510	612,616	984,126	2,934,300	40,333,445	43,267,745	2,562,790	39,720,829	42,283,619
32	22,847,892	7,351,384	30,199,276	173,124,080	484,001,275	657,125,355	150,276,188	476,649,891	626,926,079
33	7,863,637	2,450,461	10,314,098	59,859,860	161,333,755	221,193,615	51,996,223	158,883,294	210,879,517
34	18,204,012	5,513,539	23,717,551	137,912,400	363,000,955	500,913,355	119,708,388	357,487,416	477,195,804
Total	249,107,748	79,640,006	328,747,754	1,889,106,495	5,243,347,200	7,132,453,695	1,639,998,747	5,163,707,194	6,803,705,941

Table A12-46 Financial and Economic Cost-Benefit Analyses for All Polders

Year	Financial Terms					DF (12%)	Economic Terms				
	Costs (1,000 Kyats)		Benefits (1,000 Kyats)		B-C		Costs (1,000 Kyats)		Benefits (1,000 Kyats)		B-C
	WMR	Present worth	WMR	Present worth			WMR	Present worth	WMR	Present worth	
1	119,012	106,261	0	0	-106,261	0.8928571	116,632	104,136	0	0	-104,136
2	59,505	47,437	0	0	-47,437	0.7971939	58,315	46,488	0	0	-46,488
3	321,848	229,085	21,563	15,348	-213,737	0.7117802	315,411	224,503	21,994	15,655	-208,849
4	429,474	272,938	32,344	20,555	-252,383	0.6355181	422,209	268,322	32,991	20,966	-247,355
5	140,744	79,862	319,851	181,492	101,630	0.5674269	137,929	78,265	326,248	185,122	106,857
6	0	0	283,066	143,410	143,410	0.5066311	0	0	288,728	146,278	146,278
7	0	0	813,792	368,118	368,118	0.4523492	0	0	830,068	375,480	375,480
8	0	0	1,021,064	412,391	412,391	0.4038832	0	0	1,041,485	420,638	420,638
9	0	0	465,017	167,690	167,690	0.360661	0	0	474,317	171,043	171,043
10	0	0	645,344	207,783	207,783	0.3219732	0	0	658,251	211,939	211,939
11	0	0	419,656	120,641	120,641	0.2874761	0	0	428,049	123,054	123,054
12	0	0	1,414,644	363,104	363,104	0.2566751	0	0	1,442,937	370,366	370,366
13	0	0	1,822,844	417,749	417,749	0.2291742	0	0	1,859,301	426,104	426,104
14	0	0	727,769	148,916	148,916	0.2046198	0	0	742,324	151,894	151,894
15	0	0	1,101,319	201,207	201,207	0.1826963	0	0	1,123,345	205,231	205,231
16	103,546	16,891	647,644	105,645	88,754	0.1631217	101,475	16,553	660,597	107,758	91,205
17	51,773	7,540	2,647,759	385,631	378,091	0.1456443	50,738	7,390	2,700,714	393,344	385,954
18	280,024	36,414	3,468,319	451,019	414,605	0.1300396	274,424	35,686	3,537,685	460,039	424,353
19	373,667	43,385	1,267,009	147,108	103,723	0.1161068	367,346	42,651	1,292,349	150,050	107,399
20	122,454	12,694	1,101,319	114,170	101,476	0.1036668	120,005	12,441	1,123,345	116,454	104,013
21	0	0	647,644	59,946	59,946	0.0925596	0	0	660,597	61,145	61,145
22	0	0	2,647,759	218,817	218,817	0.0826425	0	0	2,700,714	223,194	223,194
23	0	0	3,468,319	255,920	255,920	0.0737888	0	0	3,537,685	261,039	261,039
24	0	0	1,267,009	83,473	83,473	0.0658821	0	0	1,292,349	85,143	85,143
25	0	0	1,101,319	64,783	64,783	0.0582833	0	0	1,123,345	66,079	66,079
26	0	0	647,644	34,015	34,015	0.0525208	0	0	660,597	34,695	34,695
27	0	0	2,647,759	124,163	124,163	0.0468936	0	0	2,700,714	126,646	126,646
28	0	0	3,468,319	145,216	145,216	0.0418693	0	0	3,537,685	148,120	148,120
29	0	0	1,267,009	47,365	47,365	0.0373833	0	0	1,292,349	48,312	48,312
30	0	0	1,101,319	36,760	36,760	0.0333779	0	0	1,123,345	37,495	37,495
31	103,546	3,086	626,081	18,658	15,572	0.0298017	101,475	3,024	638,603	19,031	16,007
32	51,773	1,378	2,615,415	69,593	68,215	0.0266087	50,738	1,350	2,667,723	70,985	69,635
33	280,024	6,653	3,399,225	80,758	74,105	0.0237577	274,424	6,520	3,467,210	82,373	75,853
34	373,667	7,926	1,130,884	23,989	16,062	0.0212123	367,346	7,792	1,153,501	24,468	16,676
35	122,454	2,319	319,851	6,058	3,739	0.0189395	120,005	2,273	326,248	6,179	3,906
36	0	0	283,066	4,787	4,787	0.0169103	0	0	288,728	4,882	4,882
37	0	0	813,792	12,287	12,287	0.0150985	0	0	830,068	12,533	12,533
38	0	0	1,021,064	13,765	13,765	0.0134808	0	0	1,041,485	14,040	14,040
39	0	0	465,017	5,597	5,597	0.0120364	0	0	474,317	5,709	5,709
40	0	0	645,344	6,935	6,935	0.0107468	0	0	658,251	7,074	7,074
41	0	0	419,656	4,027	4,027	0.0095954	0	0	428,049	4,107	4,107
42	0	0	1,414,644	12,120	12,120	0.0085673	0	0	1,442,937	12,362	12,362
43	0	0	1,822,844	13,944	13,944	0.0076494	0	0	1,859,301	14,222	14,222
44	0	0	727,769	4,971	4,971	0.0068298	0	0	742,324	5,070	5,070
45	0	0	1,101,319	6,716	6,716	0.006098	0	0	1,123,345	6,850	6,850
46	103,546	564	647,644	3,526	2,962	0.0054447	101,475	552	660,597	3,597	3,044
47	51,773	252	2,647,759	12,872	12,620	0.0048613	50,738	247	2,700,714	13,129	12,882
48	280,024	1,215	3,468,319	15,054	13,839	0.0043405	274,424	1,191	3,537,685	15,355	14,164
49	373,667	1,448	1,267,009	4,910	3,462	0.0038754	367,346	1,424	1,292,349	5,008	3,585
50	122,454	424	1,101,319	3,811	3,387	0.0034602	120,005	415	1,123,345	3,887	3,472
51	0	0	626,081	1,934	1,934	0.0030894	0	0	638,603	1,973	1,973
52	0	0	2,615,415	7,214	7,214	0.0027584	0	0	2,667,723	7,359	7,359
53	0	0	3,377,663	8,319	8,319	0.0024629	0	0	3,445,216	8,485	8,485
54	0	0	1,098,540	2,416	2,416	0.002199	0	0	1,120,511	2,464	2,464
55	0	0	0	0	0	0.0019634	0	0	0	0	0
Total		877,773		5,386,693	4,508,920			861,222		5,494,427	4,633,205

Note: WMR: Windbreak mangrove rehabilitation.

Net Present Value	B/C	FIRR (%)
4,508,920	6.14	26.8

Net Present Value	B/C	EIRR (%)
4,633,205	6.38	27.7

Table A12-47 Summary of Financial and Economic Viability Indicators

Polder no.	Financial analysis			Economic analysis		
	Net present value (1,000 Kyats)	B/C	FIRR (%)	Net present value (1,000 Kyats)	B/C	EIRR (%)
1	5,664	6.14	26.8	5821.2	6.39	27.8
2	113,277	6.14	26.8	116424.5	6.39	27.8
3	453,109	6.14	26.8	465699.8	6.39	27.8
4	62,302	6.14	26.8	64033.5	6.39	27.8
5	0	0.00	0.0	0.0	0.00	0.0
6	0	0.00	0.0	0.0	0.00	0.0
7	0	0.00	0.0	0.0	0.00	0.0
8	33,984	6.14	26.8	34927.8	6.39	27.8
9	67,966	6.14	26.8	69854.5	6.39	27.8
10	0	0.00	0.0	0.0	0.00	0.0
11	135,933	6.14	26.8	139709.9	6.39	27.8
12	362,487	6.14	26.8	371148.5	6.26	27.3
13	453,109	6.14	26.8	465699.8	6.39	27.8
14	1,155,427	6.14	26.8	1187533.2	6.39	27.8
15	317,177	6.14	26.8	325990.0	6.39	27.8
16	0	0.00	0.0	0.0	0.00	0.0
17	0	0.00	0.0	0.0	0.00	0.0
18	8,496	6.14	26.8	8732.1	6.39	27.8
19	0	0.00	0.0	0.0	0.00	0.0
20	0	0.00	0.0	0.0	0.00	0.0
21	770,285	6.14	26.8	791688.9	6.39	27.8
22	0	0.00	0.0	0.0	0.00	0.0
23	0	0.00	0.0	0.0	0.00	0.0
24	0	0.00	0.0	0.0	0.00	0.0
25	0	0.00	0.0	0.0	0.00	0.0
26	67,966	6.14	26.8	69854.5	6.39	27.8
27	67,966	6.14	26.8	69854.5	6.39	27.8
28	45,311	6.14	26.8	46570.0	6.39	27.8
29	135,933	6.14	26.8	139709.9	6.39	27.8
30	317,177	6.14	26.8	325990.0	6.39	27.8
31	107,613	6.14	26.8	110603.3	6.39	27.8
32	453,109	6.14	26.8	465699.8	6.39	27.8
33	181,244	6.14	26.8	186279.9	6.39	27.8
34	543,731	6.14	26.8	558839.9	6.39	27.8
All polders	4,508,920	6.14	26.8	4633205.1	6.38	27.7

APPENDIX 13

LIST OF COLLECTED DATA

APPENDIX 13

List of Collected Data

	<u>Page</u>
A13-1 List of Collected Data.....	A13-1

A13-1 List of Collected Data

No.	Title	Issued Organization	Book, Copy, Digital Data , etc.	Original Copy	Issued Year
1	Statistical Yearbook	Central Statistical Organization NAY PYITAW, MYANMAR	BOOK	Original	2008
2	Agricultural Statistic	Ministry of Agriculture and Irrigation	Copy	Copy	2008
3	Myanmar Agriculture at a Glance	Ministry of Agriculture and Irrigation	BOOK	Original	2009
4	Myanma Agriculture in Brief	Ministry of Agriculture and Irrigation	BOOK	Original	2009
5	PONJA, PONREPP (Periodic Review I, II, Socail Impact Monitoring , Prioritized Action Plan	Myanmar Information Management Unit(MIMU)	CD	Copy	2010
6	Post- Nargis Periodic Review II	Tripartite Core Group (TCG)	CD	Original	2009
7	Post- Nargis Periodic Review I(English version)	Tripartite Core Group (TCG)	CD	Original	2008
8	Post- Nargis Periodic Review I(Burmese version)	Tripartite Core Group (TCG)	CD	Original	2008
9	MIMU Maps	Myanmar Information Management Unit(MIMU)	CD	Original	2010
10	MIMU Products	Myanmar Information Management Unit(MIMU)	CD	Original	2010
11	POST-NARGIS JOINT ASSESSMENT	Tripartite Core Group (TCG)	CD	Original	2008
12	Post-Nargis Social Impacts Monitoring: November 2008	Tripartite Core Group (ASEAN, Government of Myanmar and United Nations)	Digital data	Copy	2009
13	Post-Nargis Periodic Review I	Tripartite Core Group (ASEAN, Government of Myanmar and United Nations)	BOOK and Digital Data	Original	2008
14	Post-Nargis Periodic Review II	Tripartite Core Group (ASEAN, Government of Myanmar and United Nations)	BOOK and Digital Data	Original	2009
15	Post-Nargis Periodic Review III	Tripartite Core Group (ASEAN, Government of Myanmar and United Nations)	BOOK and Digital Data	Original	2010
16	A3 size Map of Ngapudaw Township (1:110,000)	MIMU (Myanmar Information Management Unit)	Printed Map	Original	—
17	A3 size Map of Middle Island (Labutta Township) (1:224,242)	MIMU (Myanmar Information Management Unit)	Printed Map	Original	—
18	A3 size Map of Kyaiklat Township (1:75,000)	MIMU (Myanmar Information Management Unit)	Printed Map	Original	—
19	A3 size Map of Bogale Township (1:250,000)	MIMU (Myanmar Information Management Unit)	Printed Map	Original	—
20	A3 size Map of Dedaye Township (1:200,000)	MIMU (Myanmar Information Management Unit)	Printed Map	Original	—
21	A3 size Map of Pyapon Township (1:250,000)	MIMU (Myanmar Information Management Unit)	Printed Map	Original	—
22	A1 size Map of Labutta Township (1:150,000)	MIMU (Myanmar Information Management Unit)	Printed Map	Original	—
23	Ex-Post Evaluation Study Report ITC project Phase II and Follow-up in Myanmar (Third Draft)	JICA Myanmar Office	Book	Copy	2008
24	Statistical Yearbook	Central Statistical Organization	Book	Original	2009
25	Statistical Yearbook	Central Statistical Organization	CD	Original	2009
26	Seleted Monthly Economic Indicators	Central Statistical Organization	Book	Original	2010
27	Seleted Monthly Economic Indicators	Central Statistical Organization	Book	Original	2011 January

APPENDIX 14

Result of Route Survey for Three Polders

APPENDIX 14

Result of Route Survey for Three Polders

	<u>Page</u>
A14-1 Report for Survey Works of Polder Dikes.....	A14-1
A14-2 Location Map of Working Area.....	A14-6
A14-3 Location Map of Labutta (South).....	A14-7
A14-4 Location Map of Alegyun (1).....	A14-8
A14-5 Location Map of Alegyun (2).....	A14-9

A14-1 Report for Survey Works of Polder Dikes

1. Introduction

1.1 On 2-3 May, 2008, the Cyclone Nargis had hit Ayeyarwaddy Delta, which is one of the major rice producing Area in Myanmar. The Cyclone Nargis had damaged 770,00 hectare of paddy fields by salt water intrusion and flood, and seriously affected to livelihoods.

Altogether (34) Polder dikes at lower portion of Ayeyarwaddy Delta, including (14) polder dikes in Labutta Township were damaged by the Cyclone Nargis.

1.2 Out of (14) Polder dikes of Labutta Township, Labutta North Polder had been rehabilitated by JICA in December, 2010 to March, 2011, under the Project for Preservation of Farming Area for Urgent Rehabilitation of Agricultural Production and Rural Life in Areas Affected by Cyclone Nargis in the Union of Myanmar.

1.3 According to the assignment given by JICA Project Team, existing conditions of (3) Polder dikes namely, Labutta South Polder, Alegyun-1 Polder and Alegyun-2 Polder in Labutta Township were surveyed by National Engineering & Planning Services (NEPS) .

1.4 The purpose of the survey work is to get the assured dimension and elevation of each existing Polder dike, which could be used in the design and construction of rehabilitation works .

2. Working Period

The survey works were commenced from May, 2011 and completed in August, 2011. The field works were carried out from May up to end of June, 2011, and office works had been done through July and August .

3. Scope of works

3.1 The Approximate length to be surveyed for each polder dike is as follows;

- Labutta South Polder	33.0 km	(Actual 33.328 km)
- Alegyun-1 Polder	22.0 km	(Actual 21.973 km)
- Alegyun-2 Polder	<u>37.0 km</u>	<u>(Actual 36.804 km)</u>
	Total = <u>92.0 km</u>	<u>(Actual 92.105 km)</u>

3.2 Leveling survey was conducted and confirmed the value of existing Temporary Bench Marks (ID-BM) set on in each sluice .T.B.Ms. were established at every 1.0 km along each polder dike.

For longitudinal survey along the existing polder dikes, elevation at every 500 ft were measured .The longitudinal section was plotted with vertical scale 1 inch = 10 ft and horizontal scale 1 inch = 1000 ft . Cross section survey was conducted at every 500 ft interval along each polder dikes covering 100 ft in land side and 50 ft in river side from the center of the existing dike. Cross sections were plotted with 1 inch = 12.0 ft for both horizontal and vertical scales.

4. Technical Specification (Methodology)

4.1 Field Work

4.1.1 Basic Survey (Determination of elevation & Global positioning)

There are two Grand Triangulation Stations already set up in Labutta down-town and Kanbe village (Labutta T/S) by Myanmar Survey Department . Basic survey party of Myanmar Survey Department worked out for the B.M carrying work, using differential G.P.S receivers by ' Real Time Static Relative Positioning method '.

Using 3 sets of (G.P.S) receiver , two base settings were set up at two known B.Ms at Labutta and Kanbe and the other settings at Alegyun-2 NEPS B.M and Alegyun-1 NEPS B.M . Synchronized receiving time was made from 10:03:46 to 15:00:06 hr on June 7, 2011.

Secondly, Two base settings at Labutta and Kanbei known B.Ms were set up and 5th setting at Labutta (south) Polder NEPS B.M was set up by synchronized time of 8:17:06 to 11:31:36 June 8, 2011.

Computer processing works of Myanmar Survey Department and the basic survey results were shown in APPENDIX – 1 .

4.1.2 Establishment of T.B.Ms

Temporary Bench Marks, (T.B.Ms) were established at appropriate location on river side of each polder (about 1 km interval along the polders) . T.B.Ms were made of concrete blocks and embedded 4" Φ PVC pipe. At the center of the concrete block , the nail pin was casted in PVC pipe .TBMs were set up at the side taking care for their stability .

4.1.3 Laid out RD pegs

The location of RD 0 of each polder dike, was asked to ID service men and RD pegs were staked out every 500 ft interval along the polders in clock wise direction by taping method used 100 ft long steel tape.The location of RD stations and positions of T.B.Ms are shown in the location maps of each polder .The location maps of the dikes are attached by Appendices; (APPENDIX-2(A) for Labutta South Polder, APPENDIX-2(B) for Alegyun-1 Polder , APPENDIX – 2(C) for Alegyun-2 Polder) .

4.1.4 Leveling Work (Vertical control)

Using auto level meter, from R.D to R.D and Control Traverse Stations were measured along the polder by ' double instrument setting, three wire staff reading method '. Since the polder embankment was closed itself, the leveling loop was also closed. Because of using double setting method, we got two close leveling loops and chose the most one acceptable loop of them. Measured field data and leveling adjustment sheets within allowable error were attached by APPENDIX-3 and APPENDIX-4 in excel form .

4.1.5 Horizontal control

Fortunately the polders were closed itself, the survey control traverses were also closed type so that we can easily check the measured Northing, Easting values, that represent plan maps, which were correct or not by both polar system (bearing and distance) and rectangular system (N,E).

It determined the accurate length of the polder starting point RD 0 to End point RD . The measured value of N,E and accuracy were as follow for each polder dikes.

For Labutta South Polder,

$$\begin{aligned} \text{closure error } \Delta N &= 3.264 \text{ m} \\ \Delta E &= -7.094 \text{ m} \\ \text{Linear precision} &= \sqrt{\Delta N^2 + \Delta E^2} = \sqrt{3.264^2 + 7.094^2} = 7.809 \text{ m} \\ \Sigma \text{ Traverse length} &= 32235.36 \text{ m} \\ \text{Relative precision} &= 7.809 / 32235.36 = 1/4200 \end{aligned}$$

The relative precision of 1/4200 was within (Specifications for Traversing in class(1) of 1/1000), That means sufficient for horizontal controls of preliminary survey work.

For Alegyun-1 Polder ,

$$\begin{aligned} \text{closure error } \Delta N &= 3.980 \text{ m} \\ \Delta E &= 6.311 \text{ m} \\ \text{Linear precision} &= \sqrt{\Delta N^2 + \Delta E^2} = \sqrt{3.980^2 + 6.311^2} = 7.461 \text{ m} \\ \Sigma \text{ Traverse length} &= 21832.7 \text{ m} \\ \text{Relative precision} &= 7.461 / 21832.7 = 1/3000 \end{aligned}$$

The relative precision of 1/3000 was within (Specifications for Traversing in class(1) of 1/1000), That means sufficient for horizontal controls of preliminary survey work.

For Alegyun-2 Polder ,

$$\begin{aligned} \text{closure error } \Delta N &= 35.756 \text{ m} \\ \Delta E &= -1.985 \text{ m} \\ \text{Linear precision} &= \sqrt{\Delta N^2 + \Delta E^2} = \sqrt{35.756^2 + 1.985^2} = 35.811 \text{ m} \\ \Sigma \text{ Traverse length} &= 36529.291 \text{ m} \\ \text{Relative precision} &= 35.811 / 36529.291 = 1/1100 \end{aligned}$$

The relative precision of 1/1100 was within (Specifications for Traversing in class(1) of 1/1000), That means sufficient for horizontal controls of preliminary survey work, respectively.

{ Reference text book-1: *ELEMENTARY SURVEYING (An Introduction to Geomatics) / Tenth Edition by Paul R.Wolf & CharlesD. Ghilani*

Reference text book-2: *SURVEYING Theory and Practice/ Fifth Edition by Raymond E. Davis, Francis S.Foote, Joe W. Kelly* }.

Traverse Adjustments for 3 polders were shown in APPENDIX-4(D) ,4(E) ,4(F) ,4(G) , 4(H) & 4(I) ,in both Excel form and Graphical form .

4.1.6 Detail Survey (L.S and C.S Survey)

Using traverse control stations (Main Survey Points), detail survey was carried out by electronic total station instruments. Longitudinal Section were taken about 100 ft interval for ordinary condition of the polder and more detail for breach portions of the polders, sluice gates, available significant ID B.M, and village road crossing and so on. For cross sections, covering required length of C.S were measured at every 500 ft apart which previously staked out by taping method .In C.S survey, we also observed more detail features such as village fence, ponds, river banks and so on.

4.2 Office Work

Northing, Easting and absolute elevation were taken from basic survey. Values of N,E were according to Geographic Coordinates of Universal Transverse Mercator system (U.T.M) and Elevations were mean sea level.

At first,' Traverse adjustment ' were applied by ' Bowdich Rule '. The corrected Traverse gave the accurate length of the polder.

After fixing the overall plan, true 500 interval C.S lines that perpendicular to L.S line were produced in plan map. L.S and C.S drawings were used the direct measured data, or not interpolated values, to get real shape and features of the polders.

L.S and C.S were produced in Land Development Survey software and formatting and fine tasks were used in Auto CAD software.

5. Survey Result

The existing conditions of the polder dikes (Labutta South = 33.328 km , Alegyun-1 = 21.973 km & Alegyun-2 = 36.804 km) were surveyed by Basic Survey and Route Survey and also the conditions of the polder dikes were recorded by photo taking at every 5000 ft interval along the Longitudinal of each Polder . T.B.Ms laid by NEPS at about 1 km interval along the Longitudinal were also recorded by photo .These results are attached in the report as follows;

- | | |
|--|-----------------------------|
| - Location map of working area | APPENDIX - 1 |
| - Location map with stationing R.D & T.B.Ms. | APPENDIX - 2(A), 2(B), 2(C) |
| - Leveling field books in Excel form | APPENDIX - 3(A), 3(B), 3(C) |

- Leveling Adjustments in Excel form APPENDIX - 4(A), 4(B), 4(C)

	Labutta South Polder	Alegyun-1 Polder	Alegyun-2 Polder
Average(ECL)	5.45(ft)	11.10(ft)	10.96(ft)

- Traverse Adjustments APPENDIX - 4(D), 4(E), 4(F)
- Traverse Adjustments APPENDIX - 4(G), 4(H), 4(I)
- Leveling for TBMs APPENDIX - 4(J), 4(K), 4(L)
- True Geodetic Coordinates of Traverse
Control Stations APPENDIX - 4(M), 4(N), 4(O)
- Longitudinal and Cross Section in Auto CAD form APPENDIX - 5(A), 5(B), 5(C)
- Photos @ 5000 ft interval along L.S APPENDIX - 6(A), 6(B), 6(C)
- Photos of T.B.Ms @ about every 1 km APPENDIX - 7(A), 7(B), 7(C)

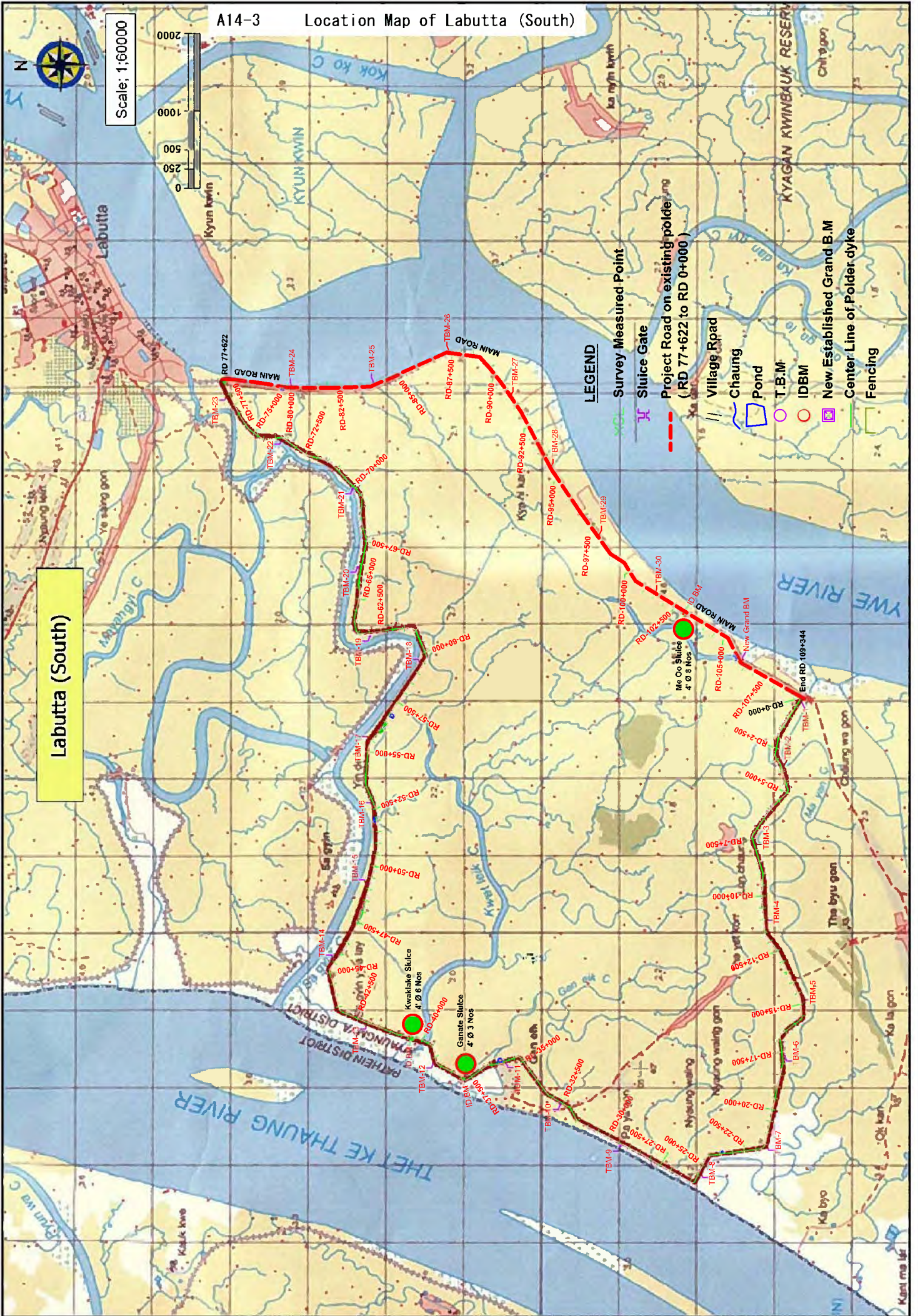
6. **Conclusion and comment**

The survey works of polder dikes had to be conducted in not proper weather condition and field condition. Severe wind pressure and rain stroked the stability of survey instruments. Systematic error such as Temperature error, refraction error, instrument setting error might occur. So surveyors have taken care of themselves and every steps of surveying work.

There were 3 survey teams of NEPS that deployed in each polder and started the works. Determination of R.D location and establishment of TBMs were carried out parallel. And, leveling works and Detail Survey work were also observed parallel. So, strength of surveyor and labor force were assigned additional to original forces. Although we faced with difficulties of accommodation, transport within the field, windy and rainy we could overcome the constraints and accomplish the field survey at all.

Office works took the times for confirmation of field survey data and producing the maps and drawings. In brief, we think that we could implement and accomplish the assignment and assure the accuracy for further design and construction stages.

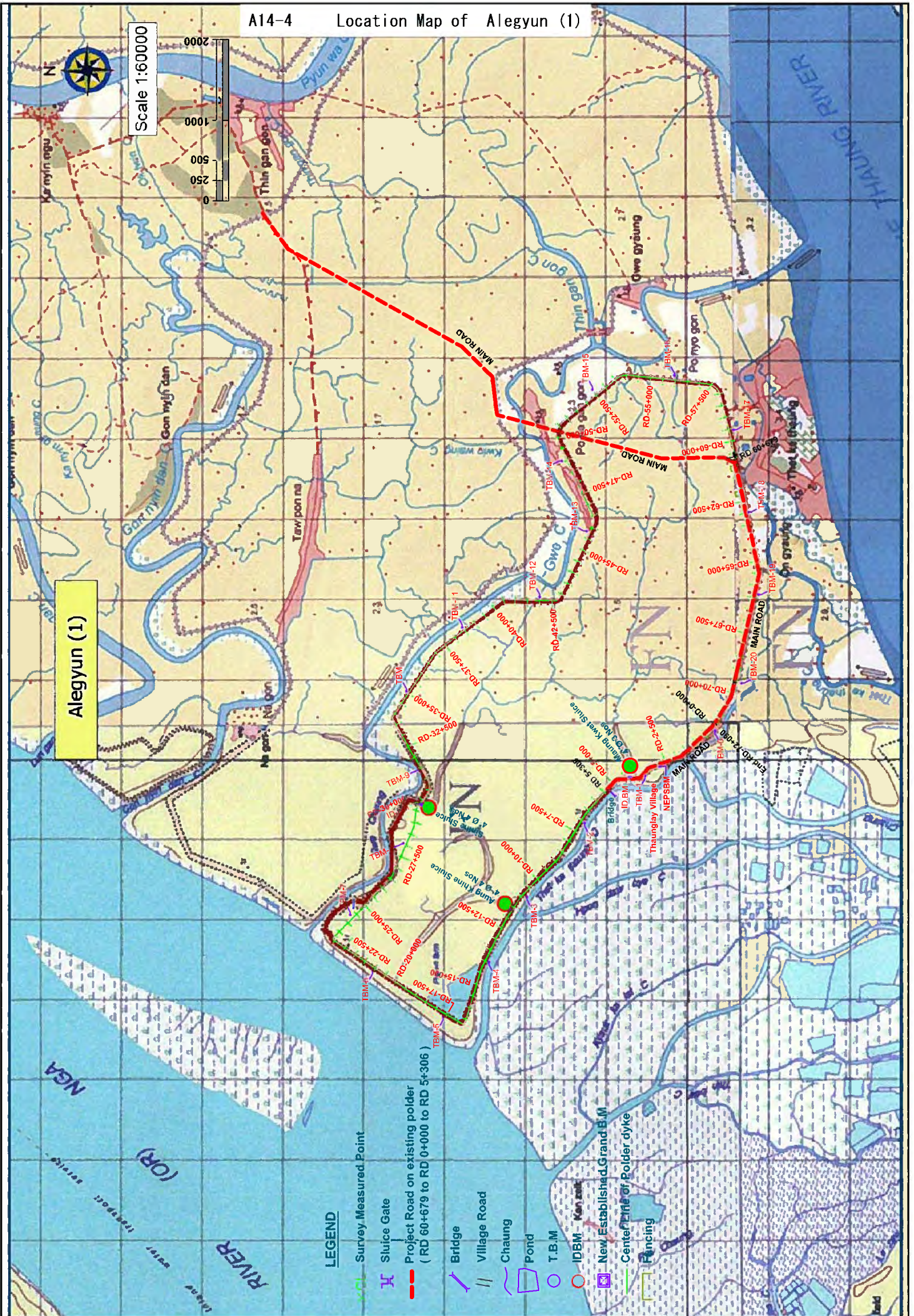
A14-3 Location Map of Labutta (South)



Labutta (South)

- LEGEND**
- Survey Measured Point
 - Sluice Gate
 - Project Road on existing polder dyke (RD 77+622 to RD 0+000)
 - Village Road
 - Chaung Pond
 - T.B.M.
 - IDBM
 - New Established Grand B.M.
 - Center Line of Polder dyke
 - Fencing

A14-4 Location Map of Alegyun (1)



A14-5 Location Map of Alegyun (2)

