

Table 3.3.2 Agricultural Production in the Study Area (1/2)

Year Cropping season	1983			1984			1985		
	D.S.	W.S	Annual	D.S.	W.S	Annual	D.S.	W.S	Annual
1. Lowland Rice Production									
Planted Area (ha)	56	461	517	45	461	506	50	642	692
Unit Yield (ton/ha)	2.7	2.1	2.2	2.0	3.8	3.6	3.8	4.3	4.3
Production (ton)	150	968	1,119	90	1,752	1,842	190	2,761	2,951
2. Upland Rice Production									
Planted Area (ha)	0	80	80	0	110	110	0	80	80
Unit Yield (ton/ha)	0.0	1.1	1.1	0.0	2.8	2.8	0.0	3.0	3.0
Production (ton)	0.0	88.0	88.0	0.0	302.5	302.5	0.0	240.0	240.0
3. Corn Production									
Planted Area (ha)	-	60	60	-	70	70	-	80	80
Unit Yield (ton/ha)	-	1.5	1.5	-	2.2	2.2	-	3.0	3.0
Production (ton)	-	90.0	90.0	-	154.0	154.0	-	240.0	240.0
4. Root Crop Production									
Planted Area (ha)	-	50	50	-	50	50	15	60	75
Unit Yield (ton/ha)	-	7.0	7.0	-	6.5	6.5	7.0	6.0	6.2
Production (ton)	-	350.0	350.0	-	325.0	325.0	105.0	360.0	465.0
5. Vegetable Production									
Planted Area (ha)	43	59	102	20	70	90	20	70	90
Unit Yield (ton/ha)	1.2	4.9	3.3	5.8	5.5	5.6	5.5	5.5	5.5
Production (ton)	53.0	288.4	341.4	115.7	385.0	500.7	110.0	385.0	495.0
6. Fruit Production									
Planted Area (ha)	-	22	22	12	15	27	10	25	35
Unit Yield (ton/ha)	-	4.5	4.5	3.6	4.0	3.8	5.5	5.0	5.1
Production (ton)	-	99.0	99.0	43.0	60.0	103.0	55.0	125.0	180.0

Source : Office of the Municipal Agricultural Officer
Población, Jalajala, Rizal, 1983, 1984, 1985, 1986, 1987, 1988

Table 3.3.2. Agricultural Production in the Study Area (2/2)

Year Cropping season	1986			1987			1988		
	D.S.	W.S	Annual	D.S.	W.S	Annual	D.S.	W.S	Annual
1. Lowland Rice Production									
Planted Area (ha)	50	643	693	50	541	591	50	703	753
Unit Yield (ton/ha)	2.0	4.3	4.1	3.0	1.9	2.0	3.2	1.8	1.9
Production (ton)	100	2,765	2,865	150	1,028	1,178	160	1,265	1,425
2. Upland Rice Production									
Planted Area (ha)	0	80	80	0	22	22	0	40	40
Unit Yield (ton/ha)	0.0	2.2	2.2	0.0	1.8	1.8	0.0	2.8	2.8
Production (ton)	0.0	174.0	174.0	0.0	38.5	38.5	0.0	112	112
3. Corn Production									
Planted Area (ha)	-	57	57	-	-	-	-	40	40
Unit Yield (ton/ha)	-	2.4	2.4	-	-	-	-	2.8	2.8
Production (ton)	-	138.8	138.8	-	-	-	-	112	112
4. Root Crop Production									
Planted Area (ha)	8	84	92	15	50	65	15	89	104
Unit Yield (ton/ha)	10.5	7.9	8.2	-	19.2	-	-	7.6	-
Production (ton)	84.0	666.5	750.5	-	960.0	-	-	676	-
5. Vegetable Production									
Planted Area (ha)	20	50	70	37	-	-	37	72	109
Unit Yield (ton/ha)	3.2	6.2	5.3	-	-	-	-	6.5	-
Production (ton)	64.0	309.0	373.0	-	-	-	-	468	-
6. Fruit Production									
Planted Area (ha)	15	26	41	-	42	42	-	-	-
Unit Yield (ton/ha)	-	-	-	-	3.6	3.6	-	-	-
Production (ton)	-	-	-	-	151.0	151.0	-	-	-

Source : Office of the Municipal Agricultural Officer

Poblacion, Jalajala, Rizal, 1983, 1984, 1985, 1986, 1987, 1988

Table 5.1.1 Land Classification

Land Classes	Mountainous Slope Land	Lower Terrace	Alluvial Fans	Total
Arable Land:				
Class I	0	0	270	270
Class II	0	0	270	270
Class III	0	500	170	670
Class IV	1,130	460	30	1,620
(Sub-Total)	(1,130)	(960)	(740)	(2,830)
Non-Arable Land				
Class VI	1,540	230	0	1,770
(Total)	(2,670)	(1,190)	(740)	4,600
Other Land:				
Homestead/village yard	10	110	170	290
Other Land	0	40**	0	40
(Grand Total)	(2,680)	(1,340)	(910)	(4,930)

Note: -40 ha remarked with** mark in low terrace area is the yard for MFI Agric-Aquatic Development Center.

Land Categories	Arable Land				Non-Arable Land		Total
	I	II	III	IV	VI		
Agricultural Land							
- Irrigated Paddy Field;	270	90	90	0	0		450
- Rainfed Paddy Field;	0	0	310	10	0		320
Upland Field;	0	90	40	30	0		160
1 Fruit Garden	0	60	20	240	30		350
- Coconut;	0	30	0	0	70		100
- Others;	0	0	0	0	60		60
(Sub-Total)	(270)	(270)	(460)	(280)	(160)		(1,440)
Non-Agricultural Land:							
- Forest	0	0	0	0	280		280
- Shrub/Bush	0	0	30	520	970		1,520
- Grass Land	0	0	180	820	360		1,360
(Sub-Total)	0	0	210	1,340	1,610		3,160
Other Land:							
- Homestead/ Village Yard	-	-	-	-	-		290
- Others	-	-	-	-	-		40
Total	270	270	670	1,620	1,770		4,930

Table 6.1.1 Land Use Plan (Whole Area) (1/3)

(Unit : ha)

	Mountainous/ Hilly Land		Lower Terraces		Alluvial Fans		Total	
	Present	Proposed	Present	Proposed	Present	Proposed	Present	Proposed
1 Agricultural Land	310	960	450	1,000	680	730	1,440	2,690
1) Paddy land								
- Irrigated	0	0	0	450 *1	450	500 *2	450	950
- Rainfed	0	0	270	30	50	0	320	30
Sub-total for 1)	0	0	270	480	500	500	770	980
2) Upland field								
- Intensification	0	0	0	10 *3	0	120 *4	0	130
- Rainfed	10	10	50	100 *5	100	20 *6	160	130
Sub-total for 2)	10	10	50	110	100	140	160	260
3) Plantation								
Orchard								
- Intensification	0	0	0	5 *7	0	75 *8	0	80
- Rainfed	170	260 *9	130	185 *10	50	15	350	460
Sub-total	170	260	130	190	50	90	350	540
Coconut	70	0	0	0	30	0	100	0
Others *17	60	60	0	0	0	0	60	60
Sub-total for 3)	300	320	130	190	80	90	510	600
4) Agro-forest	0	630 *11	0	220 *12	0	0	0	850
2 Non-agricultural Land	2,360	1,710	740	190 *14	60	10	3,160	1,910
1) Forest	200	1,710 *13	80	190	0	10 *15	280	1,910
2) Bush	1,150	0	340	0	30	0	1,520	0
3) Grass	1,010	0	320	0	30	0	1,360	0
3 Residential and others	10	10	150	150 *16	170	170	330	330
Total	2,680	2,680	1,340	1,340	910	910	4,930	4,930

Remarks)

- *1 : Irrigation development to 240 ha of existing rainfed and 210 ha to be suitable for the paddy field out of 320 ha of grass land
- *2 : Rehabilitation for 450 ha of existing irrigated field and irrigation development of 50 ha of existing paddy field
- *3 : Irrigation development of 10 ha out of 50 ha existing rainfed upland field
- *4 : Irrigation development of 100 ha of existing rainfed upland field and 20 ha of grass land
- *5 : Rainfed development of 60 ha out of 320 ha of existing grass land
- *6 : Rainfed development of 5 ha of existing grass land and 15 ha of bush land
- *7 : Intensified orchard development to 5 ha out of 130 ha of existing orchard
- *8 : Intensified orchard development to 35 ha out of 50 ha of existing orchard, 30 ha of coconut and 20 ha of bush land
- *9 : Orchard development of 70 ha of coconut, 20 ha of bush land and 170 ha of existing orchard
- *10 : Orchard development to 50 ha of bush land, 10 ha of forest and 125 ha of existing orchard
- *11 : Agro-forest development to 350 ha of bush land and 280 ha of grass land
- *12 : Agro-forest development to 220 ha of bush land
- *13 : Reforestation to 730 ha of grass land and 200 ha of existing forest
- *14 : Reforestation to 110 ha of existing bush land and 80 ha of existing forest
- *15 : Reforestation to 1190 ha of bush land and 80 ha of existing forest
- *16 : 37 ha out of 150 ha is included in the land of Agro-aquatic Development Centre managed by MERALCO FOUNDATION INC.
- *17 : Including coffee, cocoa, cashewnut, ipil-ipil, etc.

Table 6.1.1 Land Use Plan (Distributed Area) (2/3)

	(Unit : ha)							
	Mountainous/ Hilly Land		Lower Terraces		Alluvial Fans		Total	
	Present	Proposed	Present	Proposed	Present	Proposed	Present	Proposed
1 Agricultural Land	20	40	310	545	590	640	920	1,225
1) Paddy land								
- Irrigated	0	0	0	415 *1	450	480 *2	450	895
- Rainfed	0	0	240	0	30	0	270	0
Sub-total for 1)	0	0	240	415	480	480	720	895
2) Upland field								
- Intensification	0	0	0	10 *3	0	90 *4	0	100
- Rainfed	0	0	50	50 *5	70	20 *6	120	70
Sub-total for 2)	0	0	50	60	70	110	120	170
3) Plantation								
Orchard								
- Intensification	0	0	0	5 *7	0	35 *8	0	40
- Rainfed	20	40 *9	20	65 *10	30	15	70	120
Sub-total	20	40	20	70	30	50	70	160
Coconut	0	0	0	0	10	0	10	0
Others *14	0	0	0	0	0	0	0	0
Sub-total for 3)	20	40	20	70	40	50	80	160
4) Agro-forest	0	0	0	0	0	0	0	0
2 Non-agricultural Land	130	110	290	55	60	10	480	175
1) Forest	70	110 *11	40	55 *12	0	10 *13	110	175
2) Bush	40	0	90	0	30	0	160	0
3) Grass	20	0	160	0	30	0	210	0
3 Residential and others	10	10	100	100	140	140	250	250
Total	160	160	700	700	790	790	1,650	1,650

Remarks)

- *1 : Irrigation development to 240 ha of existing rainfed and 160 ha of grass land 15 ha of bush land
- *2 : Rehabilitation for 450 ha of existing irrigated field and irrigation development of 50 ha of existing paddy field
- *3 : Irrigation development to 10 ha out of 50 ha existing rainfed upland field
- *4 : Irrigation development to 70 ha of existing rainfed upland field and 20 ha of grass land
- *5 : Rainfed development of 10 ha of bush land as well as 40 ha out of 50 ha of existing upland field
- *6 : Rainfed development to 5 ha of existing grass land and 15 ha of existing bush land
- *7 : Intensified orchard development to 5 ha out of 20 ha of existing orchard
- *8 : Intensified orchard development to 15 ha out of 30 ha of existing orchard, 10 ha of coconut and 10 ha of bush land
- *9 : Orchard development of 20 ha of bush land and 20 ha of existing orchard
- *10 : Orchard development to 50 ha of bush land 15 ha of existing orchard
- *11 : Agro-forest development to 40 ha of bush land as well as 70 ha of the forest
- *12 : Agro-forest development to 15 ha of bush land as well as 40 ha of existing forest
- *13 : Reforestation to each 5 ha of existing riverine forest and bush land
- *14 : Including coffee, cocoa, cashewnut, ipif-ipif, etc.

Table 6.1.1 Land Use Plan (Undistributed Area) (3/3)

(Unit : ha)

	Mountainous/ Hilly Land		Lower Terraces		Alluvial Fans		Total	
	Present	Proposed	Present	Proposed	Present	Proposed	Present	Proposed
1 Agricultural Land	290	920	140	455	90	90	520	1,465
1) Paddy land								
- Irrigated	0	0	0	35 *1	0	20 *2	0	55
- Rainfed	0	0	30	30 *3	20	0	50	30
Sub-total for 1)	0	0	30	65	20	20	50	85
2) Upland field								
- Intensification	0	0	0	0	0	30 *4	0	30
- Rainfed	10	10	0	50 *5	30	0	40	60
Sub-total for 2)	10	10	0	50	30	30	40	90
3) Plantation Orchard								
- Intensification	0	0	0	0	0	40 *6	0	40
- Rainfed	150	220 *7	110	120 *8	20	0	280	340
Sub-total	150	220	110	120	20	40	280	380
Coconut	70	0	0	0	20	0	90	0
Others *14	60	60	0	0	0	0	60	60
Sub-total for 3)	280	280	110	120	40	40	430	440
4) Agro-forest	0	630 *9	0	220 *10	0	0	0	850
2 Non-agricultural Land	2,230	1,600	450	135	0	0	2,680	1,735
1) Forest	130	1,600 *11	40	135 *12	0	0	170	1,735
2) Bush	1,110	0	250	0	0	0	1,360	0
3) Grass	990	0	160	0	0	0	1,150	0
3 Residential and others	0	0	50	50 *13	30	30	80	80
Total	2,520	2,520	640	640	120	120	3,280	3,280

Remarks)

- *1 : Irrigation development to 30 ha of existing rainfed and 5 ha out of 160 ha of grass land (Barangay Punta)
- *2 : Irrigation Development to 20 ha of existing rainfed paddy field in Bagumbong
- *3 : Irrigation development to 30 ha out of 160 ha of grass land
- *4 : Irrigation development to 30 ha of existing rainfed upland field
- *5 : Rainfed development to 50 ha out of 160 ha of existing grass land
- *6 : Intensified orchard development to 20 ha out of existing orchard, 20 ha out of existing coconut field
- *7 : Orchard development of 70 ha of coconut as well as 150 ha of existing orchard
- *8 : Orchard development to 10 ha of bush land and 110 ha out of existing forest
- *9 : Agro-forest development to 350 ha of bush land and 280 ha of grass land
- *10 : Agro-forest development to 220 ha of bush land
- *11 : Reforestation to 760 ha out of existing bush land and 70 ha out of 990 ha of bush land as well as 130 ha of existing forest
- *12 : Reforestation to 95 ha of bush land and 40 ha of existing forest
- *13 : 37 ha out of 50 ha is included in the land of Agro-aquatic Development Centre managed by MERALCO FOUNDATION INC.
- *14 : Including coffee, cocoa, cashewnut, ipil-ipil, etc.

Table 6.2.1 Unit Yield of Paddy in Progressive Area in Rizal

Municipality		Major Seeding Season			
		Jan-Feb	Apr-Jun	Jul-Sep	Oct-Dec
Cardona <1	Cropping Area (ha)	8.0	2.0	19.0	-
	Production (ton)	36.8	11.0	85.5	-
	Average Yield (ton/ha)	4.6	5.5	4.5	-
Montarban <1	Cropping Area (ha)	5.0	-	-	-
	Production (ton)	27.5	-	-	-
	Average Yield (ton/ha)	5.5	-	-	-
Morong <1	Cropping Area (ha)	834.0	132.0	240.0	40.0
	Production (ton)	3753.0	699.6	1320.0	180.0
	Average Yield (ton/ha)	4.5	5.3	5.5	4.5
Tay-Tay <1	Cropping Area (ha)	20.0	10.0	-	-
	Production (ton)	100.0	58.0	-	-
	Average Yield (ton/ha)	5.0	5.8	-	-
Jala-Jala (Meralco Center)<2	Cropping Area (ha)	-	8.0	-	4.0
	Production (ton)	-	40.0	-	24.0
	Average Yield (ton/ha)	-	5.0	-	6.0

Note;

<1:1980 Census of Agriculture, Rizal

<2:Production Record (cropping year=1987) provided by Meralco Foundation Inc., 1988
Variety;IR-66,70,72,74

Fertilizer Requirement;Urea=250kg, 14-14-14=100kg, 16-20-0=50kg

Table 6.2.2 Crop Production under Crop Production Programme

Crops	Unit Yield (ton/ha)	Unit Price (peso/ton)	Production Value per ha (Peso/ha)	Planted Area (ha)	Total Production (ton)	Gross Production Value (,000 Peso)
1. Rice						
-Irrigated	/_1	/_2	/_3		/_4	
Wet Season	5.0	8,000	26,000	950	3,088	24,700
Dry Season	5.0	8,000	26,000	880	2,860	22,880
sub-total				1,830	5,948	47,580
-Rainfed	2.5	8,000	13,000	30	49	390
Total (Rice)				1,860	5,997	47,970
2. Upland Crop						
-Irrigated Paddy Field (Dry season/3rd Crop)						
Cowpea	1.5	12,000	18,000	265	398	4,770
Mongo bean	2.0	13,000	26,000	35	70	910
Watermelon	17.0	3,200	54,400	35	595	1,904
sub-total				335	1,063	7,584
-Irrigated Upland Field						
Wet Season						
Corn	2.8	5,300	14,840	32	90	475
Tomato	15.0	3,500	52,500	30	450	1,575
Eggplant	12.0	12,000	144,000	30	360	4,320
Soy bean	1.0	20,000	20,000	30	30	600
String bean	8.0	5,150	41,200	30	240	1,236
sub-total				152	1,170	8,206
Dry Season						
Bitter gourd	14.0	10,000	140,000	30	420	4,200
Corn	2.8	5,300	14,840	98	274	1,454
Soy bean	1.0	20,000	20,000	70	70	1,400
sub-total				198	764	7,054
Total (Upland Crops)				685	2,997	22,844
3. Plantation						
-Irrigated Upland Field						
Citrus	15.0	5,000	75,000	85	1,275	6,375
4. Total (1+2+3)						
				2,630	10,269	77,189

Note: /_1: Unit Yield of Paddy.
 /_2: Unit Price of Rice; 5% of Broken Rice.
 /_3: Milling Rate=0.65 (3.5 ton/hour scale Rice Mill Unit)
 /_4: Production of Milled Rice.

Table 7.1.1 Implementation of The Project

Overall Development Plan				Phase-I Implementation Work			
1. Rural Development Center : Office, Warehouse, Workshop, Garage, Dormitory				1. Rural Development Center : Office, Warehouse, Workshop, Garage, Dormitory			
2. Rice Mill Center : Capacity = 3.5 ton/hour				2. Rice Mill Center : Capacity = 3.5 ton/hour			
3. Irrigation and Drainage				3. Irrigation and Drainage			
			Unit:ha				Unit:ha
	Paddy	Upland	Total	Paddy	Upland	Total	
Sipsipin	170	0	170	Sipsipin	170	0	170
Mapakla	100	30	130	Mapakla	100	30	130
Manggahan	45	10	55	Manggahan	45	10	55
Bayugo	50	0	50	Bayugo	50	0	50
Llano	65	0	65	Llano	65	0	65
Punta	35	0	35	Punta	-	-	-
Palay-Palay	140	0	140	Palay-Palay	140	0	140
Pagkalinawan	45	10	55	Pagkalinawan	45	10	55
Ik-Ik	45	0	45	Ik-Ik	45	0	45
Lubo	30	15	45	Lubo	30	15	45
Lumang Nayon	95	0	95	Lumang Nayon	95	0	95
Pulong Ligaya	45	0	45	Pulong Ligaya	45	0	45
Bagumbong No.1	65	55	120	Bagumbong No.1	65	55	120
Bagumbong No.2	20	90	110	Bagumbong No.2	-	-	-
Total	950	210	1,160	Total	895	120	1,015
4. Road Net Works				4. Road Net Works			
Trunk Road : 18.1 km				Trunk Road : 18.1 km			
Feeder Road			Unit:m	Feeder Road			Unit:m
Sipsipin			4,650	Sipsipin			4,650
District I			4,280	District I			4,280
District II			1,300	District II			1,300
District III			2,350	District III			2,350
Bayugo			8,140	Bayugo			8,140
Punta			2,540	Punta			-
Palay-Palay			5,350	Palay-Palay			5,350
Pagkalinawan			3,620	Pagkalinawan			3,620
Lubo			4,280	Lubo			4,280
Bagumbong			10,220	Bagumbong			7,460
Total			46,730	Total			41,430
5. Rural Water Supply				5. Rural Water Supply			
	Level-I	Level-II			Level-I	Level-II	
Sipsipin	3	0		Sipsipin	3	0	
Bayugo	3	1		Bayugo	3	1	
Punta	1	1		Punta	-	-	
Palay-Palay	3	0		Palay-Palay	3	0	
Pagkalinawan	2	0		Pagkalinawan	2	0	
Lubo	2	0		Lubo	2	0	
Bagumbong	2	2		Bagumbong	2	1	
Paalaman	2	0		Paalaman	-	-	
Total	18	4		Total	15	2	
6. Power Supply System				6. Power Supply System			
			Unit:km				Unit:km
Power Transmission Line			23.00	Power Transmission Line			23.00
Distribution Line				Distribution Line			
-Irrigation			4.20	-Irrigation			3.65
-Rural Water Supply			0.85	-Rural Water Supply			0.55
Tertiary Distribution Line			3.50	Tertiary Distribution Line			-
7. Fish Port				7. Fish Port			
			Unit:nos.				Unit:nos.
Bayugo			1	Bayugo			1
Punta			1	Punta			-
Pagkalinawan			1	Pagkalinawan			1
Lubo			1	Lubo			1
Bagumbong			1	Bagumbong			1
Total			5	Total			4
8. Equipment				8. Equipment			
: Tractor, Sound System, Micro-Computer, Others				: Tractor, Sound System, Micro-Computer, Others			
9. Land Acquisition 51.8 ha				9. Land Acquisition 31.8 ha			

Table 7.4.1 Construction Cost Estimate

Cost Items	Total	Unit : 1,000 Peso	
		Foreign Currency	Local Currency
1. Rural Development Center	31,513	17,777	13,736
2. Rice Mill Center	17,885	15,887	1,998
3. Irrigation and Drainage			
1) Irrigation System			
- Intake	11,468	6,149	5,319
- Pump Station	120,783	91,668	29,115
- Impound	18,017	10,447	7,570
- Irrigation Canals	36,060	18,643	17,417
- Related Structures	12,298	7,068	5,230
2) Drainage System			
- Drainage Canals	4,922	2,296	2,626
- Related Structures	3,736	1,940	1,796
3) Farm Roads			
- Farm road	3,513	1,670	1,843
4. Road Networks			
1) Trunk Road	84,086	44,642	39,444
2) Feeder Road	27,104	14,143	12,961
5. Rural Water Supply			
1) Level-I	5,896	3,947	1,949
2) Level-II	9,198	6,149	3,049
6. Power Supply System			
1) Power Transmission Line	22,309	7,808	14,501
2) Power Distribution Line	7,135	2,498	4,637
7. Fish port	2,367	1,072	1,295
8. On-farm Development	3,057	0	3,057
Sub-total (1 to 8)	421,347	253,804	167,543
9. Equipment	6,454	5,088	1,366
10. Land acquisition	1,664	0	1,664
11. Administration	11,424	0	11,424
12. Engineering Services	61,000	55,600	5,400
13. Contingencies			
1) Physical Contingency	50,190	31,449	18,741
2) Price Contingency	79,127	33,145	45,982
Grand Total	631,206	379,086	252,120

Table 7.4.2 Annual Disbursement Schedule

Item	1991			1992			1993			1994			1995		
	F/C	L/C	Total	F/C	L/C	Total	F/C	L/C	Total	F/C	L/C	Total	F/C	L/C	Total
I. Construction works															
1. Rural development center															
Office and residence	17,777	13,736	31,513	17,777	13,736	31,513									
2. Rice mill center															
Building	5,852	1,998	7,850				585	200	785	5,267	1,798	7,065			
Rice mill equipment	10,035	0	10,035				0	0	0	10,035	0	10,035			
Sub-total	15,887	1,998	17,885				585	200	785	15,302	1,798	17,100			
3. Irrigation and drainage															
Intake	6,149	5,319	11,468	3,075	2,660	5,735	2,521	2,181	4,702	553	478	1,031	0	0	0
Pump station	91,658	29,115	120,773	0	0	0	38,706	12,095	50,801	38,705	12,094	50,799	14,257	4,926	19,183
Impound	10,447	7,570	18,017	6,268	4,542	10,810	4,179	3,028	7,207		0	0			0
Irrigation canal	25,711	22,647	48,358	11,065	10,095	21,160	6,639	6,057	12,696	4,426	4,037	8,463	3,581	2,458	6,039
Drainage system	4,236	4,422	8,658	1,994	2,077	4,071	1,196	1,246	2,442	798	830	1,628	248	269	517
Farm road	1,670	1,843	3,513	718	792	1,510	431	475	906	286	317	603	235	259	494
On-farm works	0	3,057	3,057	0	1,343	1,343	0	806	806		0	537	0	371	371
Sub-total	139,881	73,973	213,854	23,120	21,509	44,629	53,672	25,888	79,560	44,768	18,293	63,061	18,321	8,283	26,604
4. Road networks															
Trunk road	44,642	39,444	84,086	17,857	15,778	33,635	17,857	15,778	33,635	8,928	7,888	16,816			
Feeder roads	14,143	12,961	27,104	1,249	1,144	2,393	4,995	4,577	9,572	6,243	5,722	11,965	1,656	1,518	3,174
Sub-total	58,785	52,405	111,190	19,106	16,922	36,028	22,852	20,355	43,207	15,171	13,610	28,781	1,656	1,518	3,174
5. Rural waters supply															
Level-I	3,947	1,949	5,896	742	367	1,109	2,970	1,466	4,436	0	0	0	235	116	351
Level-II	6,149	3,049	9,198	0	0	0	726	356	1,082	2,902	1,422	4,324	2,521	1,271	3,792
Sub-total	10,096	4,998	15,094	742	367	1,109	3,696	1,822	5,518	2,902	1,422	4,324	2,756	1,387	4,143
6. Power supply system															
Power transmission line	7,808	14,501	22,309	6,246	11,601	17,847	1,562	2,900	4,462	0	0	0	0	0	0
Power distribution line	2,498	4,637	7,135	0	0	0	441	818	1,259	1,762	3,272	5,034	295	547	842
Sub-total	10,306	19,138	29,444	6,246	11,601	17,847	2,003	3,718	5,721	1,762	3,272	5,034	295	547	842
7. Fish port	1,072	1,295	2,367							878	1,069	1,947	194	226	420
II. Procurement	5,088	1,366	6,454							5,088	1,366	6,454			
Sub-total (I to II)	258,892	168,909	427,801	66,991	64,135	131,126	82,808	51,983	134,791	85,871	40,830	126,701	23,222	11,961	35,183
III. Engineering services and administration															
Engineering services	55,600	5,400	61,000	16,800	2,800	19,600	16,944	1,020	17,964	6,242	575	6,817	900	100	1,000
Administration	0	11,424	11,424	0	914	914	0	4,570	3,656	0	2,284	2,284	0	0	0
Sub-total	55,600	16,824	72,424	16,800	3,714	20,514	16,944	4,676	21,620	6,242	2,859	9,101	900	100	1,000
IV. Land Acquisition	0	1,664	1,664	0	151	151			1,355				0	158	158
V. Physical Contingency	31,449	18,741	50,190							9,975	5,666	15,641			
Sub-total (I to V)	345,941	206,138	552,079	18,480	4,252	22,732	89,876	79,062	167,938	109,727	62,335	172,052	101,324	48,058	149,582
VI. Price contingency	33,145	45,982	79,127	554	298	852	5,473	11,311	16,784	10,175	14,026	24,201	12,717	14,936	27,653
Total	379,086	252,120	631,206	19,034	4,550	23,584	95,349	89,373	184,722	119,902	76,351	196,253	114,041	62,994	177,035
Sub-total (I to VI)	725,027	458,258	1,183,285	209,914	18,802	226,716	205,224	196,339	478,933	325,744	203,712	570,836	326,669	165,952	504,268

Table 8.1.1 Component of the Project Benefit

Benefit item	Component	Related beneficiaries/benefited area	Tangible benefit for the project	Intangible Benefit for the project
1. Agricultural development	- Irrigation - Crop diversification - Mechanization - others	- Integrated rural development area 4,930 ha	- Increment of production value - Increment of unit yield - Execution of double cropping - Increment of harvested area - Qualitative increment in the rice milling	- Advancement of living standard - Promotion of willingness to work - Advancement of farming techniques
			- Saving amount in the transportation cost - Vehicle operation cost saving - Increment of transportation efficiency	- Reduction of the labour requirement of the farming practices - Reduction of the transportation loss - Reduction of the operation and maintenance cost - Improvement of social condition - Enhancement of the farmers' organization - Improvement of the support services
2. Road construction	- Trunk road	- Integrated rural development area 4,930 ha	- Saving amount in the transportation cost - Vehicle operation cost saving - Increment of transportation efficiency	
	- Barangay road	- Integrated rural development area 4,930 ha	- Saving amount in the transportation cost - Vehicle operation cost saving - Increment of transportation efficiency	
3. Electric supply	- Residential consumers	- Barangay Paalaman No. of household = 102	- Willingness to pay - Increment of tariff revenue - Consumer's surplus	- Improvement of social infra. - Advancement of the rural industry - Improvement of social condition.
	- For irrigation pump	- Irrigated area	- This benefit is comprised in the irrigation benefit.	
4. Well construction	- Residential consumers	- Residential consumers No. of household = 850 (for level II) No. of household = 900 (for level I)	- Amount of the water charge for O&M cost of well constructed, as a surrogate of tariff	- Improvement of sanitary condition - Reduction of the morbidity of the water-borne disease
5. Fish port	- Fish port	Bayugo Punta Pagkalinawan Ik-Ik Bagumbong		- Improvement of the loading and unloading work in dry season - Improvement of the marketability - Price increment - Qualitative stabilization

Table 8.1.2 Annual Incremental Benefit

(Unit : Pesos 1,000)

No.	Year	Agricultural development	Road network	Rural electrification	Water supply system	Total
1	1991					0
2	1992	15,266	18,820			34,086
3	1993	27,348	25,177			52,525
4	1994	35,529	31,535	19	49	67,132
5	1995	39,192	31,661	37	97	70,987
6	1996	40,906	31,788	37	97	72,828
7	1997	40,906	31,788	37	97	72,828
8	1998	40,906	31,788	37	97	72,828
9	1999	40,906	31,788	37	97	72,828
10	2000	40,906	31,788	37	97	72,828
11	2001	40,906	31,788	37	97	72,828
12	2002	40,906	31,788	37	97	72,828
13	2003	40,906	31,788	37	97	72,828
14	2004	40,906	31,788	37	97	72,828
15	2005	40,906	31,788	37	97	72,828
16	2006	40,906	31,788	37	97	72,828
17	2007	40,906	31,788	37	97	72,828
18	2008	40,906	31,788	37	97	72,828
19	2009	40,906	31,788	37	97	72,828
20	2010	40,906	31,788	37	97	72,828
21	2011	40,906	31,788	37	97	72,828
22	2012	40,906	31,788	37	97	72,828
23	2013	40,906	31,788	37	97	72,828
24	2014	40,906	31,788	37	97	72,828
25	2015	40,906	31,788	37	97	72,828
26	2016	40,906	31,788	37	97	72,828
27	2017	40,906	31,788	37	97	72,828
28	2018	40,906	31,788	37	97	72,828
29	2019	40,906	31,788	37	97	72,828
30	2019	40,906	31,788	37	97	72,828
31	2019	40,906	31,788	37	97	72,828
32	2019	40,906	31,788	37	97	72,828
33	2019	40,906	31,788	37	97	72,828
34	2019	40,906	31,788	37	97	72,828
35	2019	40,906	31,788	37	97	72,828

Note)

- 1) Agricultural benefit consists of the irrigation benefit and the livestock benefit.
- 2) The economic benefit of the road network is derived from the effect of the reduction of the transportation cost for agricultural products.
- 3) The economic benefit of the rural electrification consist of the tariff revenue and consumers' surplus.
- 4) The economic benefit of the water supply system is derived from the tariff revenue for the operation and maintenance cost.

Table 8.1.3 Agricultural Benefit

Crops	Unit Yield (ton/ha)	Unit Price (peso/ton)	Production Value per ha (Peso/ha)	Production Cost per ha (Peso/ha)	Net Production Value per ha (Peso/ha)	Planted Area (ha)	Net Production Value (,000 Peso)
I. Without Project Condition							(2,876)
1. Rice							(1,780)
-Irrigated	L ₁	L ₂	L ₃				
Wet Season	2.1	6,210	7,825	4,120	3,705	350	1,297
Dry Season	3.8	6,210	14,159	4,509	9,650	50	483
-Rainfed	1.9	6,210	7,079	4,120	2,959	370	1,096
2. Upland Crop							(1,409)
-Irrigated Paddy Field (Dry season)							(31)
Corn	1.0	4,150	4,150	2,596	1,554	20	31
-Rainfed							(1,378)
Corn	1.0	4,150	4,150	2,596	1,554	44	68
Tomato	6.4	3,500	22,400	6,140	16,260	16	260
Eggplant	5.8	12,000	69,600	6,390	63,210	5	316
String bean	6.2	5,150	31,930	10,178	21,752	10	218
Bitter gourd	6.9	10,000	69,000	21,204	47,796	5	239
Taro	3.0	2,850	8,550	3,013	5,537	50	277
3. Plantation							(1,525)
Citrus	7.0	5,000	35,000	8,082	26,918	55	1,480
Coconuts	1.0	3,000	3,000	1,500	1,500	30	45
4. Livestock							(457)
5. Total (1+2+3+4)							(6,267)
II. With Project Condition							(21,286)
1. Rice							(21,286)
-Irrigated	L ₁	L ₂	L ₄				
Wet Season	5.0	7,500	24,375	12,743	11,632	950	11,050
Dry Season	5.0	7,500	24,375	12,743	11,632	880	10,236
2. Upland Crop							(15,339)
-Irrigated Paddy Field (Dry season/3rd Crop)							(4,532)
Cowpea	1.5	12,000	18,000	8,746	9,254	265	2,452
Mongo bean	2.0	13,000	26,000	7,954	18,046	35	632
Watermelon	17.0	3,200	54,400	13,019	41,381	35	1,448
-Irrigated Upland Field							(10,807)
Wet Season							(6,394)
Corn	2.8	4,150	11,620	7,887	3,733	32	119
Tomato	15.0	3,500	52,500	12,395	40,105	30	1,203
Eggplant	12.0	12,000	144,000	12,293	131,707	30	3,951
Soy bean	1.0	20,000	20,000	10,140	9,860	30	296
String bean	8.0	5,150	41,200	13,693	27,507	30	825
Dry Season							(4,413)
Bitter gourd	14.0	10,000	140,000	28,101	111,899	30	3,357
Corn	2.8	4,150	11,620	7,887	3,733	98	366
Soy bean	1.0	20,000	20,000	10,140	9,860	70	690
3. Plantation							(5,688)
-Irrigated Upland Field							
Citrus	15.0	5,000	75,000	8,082	66,918	85	5,688
4. Livestock							(4,860)
5. Total (1+2+3+4)							(47,173)
III. Incremental Benefit (II-I)							(40,906)

Note: L₁: Unit Yield of Paddy.

L₂: Unit Price of Rice; "Without" includes 10% of Broken Rice, "With" includes 5% of Broken Rice.

L₃: Milling Rate=0.6 (Without Project, Kiskisan Type Rice Mill Unit)

L₄: Milling Rate=0.65 (With Project, 3.5 ton/hour scale Rice Mill Unit)

Table 8.1.4 Road Benefit (Transportation Cost Saving for the Agricultural Products)

Crop	Component	Project condition	Carabao			Jeepny			Total Cost Saving (P 1,000)	Benefit (P 1,000)				
			Traffic Amount (ton)	Required Transport (Nos)	Road Length (Km)	Total Length (1,000 Km)	Saving Amount (P 1,000)	Traffic Amount (ton)			Required Transport (Nos)	Road Length (Km)	Total Length (1,000 Km)	
Paddy Upland crop	Barangay Road	Without	12,237					12,237	24,474	43.0	1,052	8,293		
		With	12,237					12,237	24,474	43.0	1,052	2,399		5,893
	Trunk Road	Without-Wet season - Improved - New provided	3,392 2,623					3,392	6,784	6.1	41	156		
Plantation	Trunk Road	Without-Dry season - Improved - New provided	3,762 2,460			420		3,762 2,460	7,524 4,920	6.1 12.0	46 59	173 223		
		With	12,237					12,237	24,474	18.1	443	890		25,262
	Barangay Road	Without	1,275					1,275	2,550	43.0	110	864		
Paddy / Upland crop Plantation	Trunk Road	Without-Wet season - Improved - New provided	0 0					0	0	6.1	0	0		
		With	1,275					1,275	2,550	43.0	110	250		614
	Trunk Road	Without-Dry season - Improved - New provided	75 1,200					75 1,200	150 2,400	6.1 12.0	1 29	3 109		
Total benefit		With	1,275					1,275	2,550	18.1	46	93		19
														31,155
														633

(Note)

1. Project condition for the road benefit is the condition after the road construction.
2. Total traffic amount means the total amount of proposed production under with project condition.
3. Condition of trunk road by season under without project condition

length (km)	Road condition	Transport mean	Future condition
12.0	Impassible	Carabao	New provided
6.1	Passible	Jeepny	Improved
12.0	Passible	Jeepny	Improved
6.1	Passible	Jeepny	Improved

4. Saving amount = Total length (km) x Individual traffic cost (Peso/km)
5. Jeepny is proposed as a transport mean under with project condition.

Table 8.1.5 Economic Construction Cost Estimate

	(Unit : Pesos 1,000)					
	Financial Price			Economic Price		
	F/C	L/C	Total	F/C	L/C	Total
I. Construction works						
1. Rural development center (Office and residence)	17,777	13,736	31,513	18,132	10,851	28,983
2. Rice mill center	15,887	1,998	17,885	16,204	1,578	17,782
3. Irrigation and drainage	139,881	73,973	213,854	142,679	53,409	196,088
4. Road networks	58,785	52,405	111,190	59,961	43,078	103,039
5. Rural water supply	10,096	4,998	15,094	10,299	3,629	13,928
6. Power supply system	10,306	19,138	29,444	10,514	15,195	25,709
7. Fish port	1,072	1,295	2,367	1,093	966	2,059
II. Procurement	5,088	1,366	6,454	5,190	1,161	6,351
Sub-total(I to II)	258,892	168,909	427,801	264,072	129,867	393,939
III. Engineering services	55,600	16,824	72,424	56,711	14,301	71,012
IV. Land Acquisition	0	1,664	1,664	0	1,414	1,414
V. Physical Contingency	31,449	18,741	50,190	32,080	14,559	46,639
Sub-total(I to V)	345,941	206,138	552,079	352,863	160,141	513,004
VI Price contingency	33,145	45,982	79,127	0	0	0
Total	379,086	252,120	631,206	352,863	160,141	513,004

Table 8.1.6 Economic Cost and Benefit Stream

(Unit : Pesos 1,000)

No	Year	Costs			Total (C)	Gross Benefit (B)	Balance (B-C)
		Capital	O&M	Replacement			
1	1991	22,464	0		22,464	0	-22,464
2	1992	152,803	0		152,803	34,086	-118,717
3	1993	160,136	3,627		163,763	52,525	-111,238
4	1994	140,571	6,505		147,076	67,132	-79,944
5	1995	37,030	8,549		45,579	70,987	25,408
6	1996		8,549		8,549	72,828	64,279
7	1997		8,549		8,549	72,828	64,279
8	1998		8,549		8,549	72,828	64,279
9	1999		8,549		8,549	72,828	64,279
10	2000		8,549		8,549	72,828	64,279
11	2001		8,549		8,549	72,828	64,279
12	2002		8,549	6,587	15,136	72,828	57,692
13	2003		8,549		8,549	72,828	64,279
14	2004		8,549		8,549	72,828	64,279
15	2005		8,549		8,549	72,828	64,279
16	2006		8,549		8,549	72,828	64,279
17	2007		8,549		8,549	72,828	64,279
18	2008		8,549		8,549	72,828	64,279
19	2009		8,549		8,549	72,828	64,279
20	2010		8,549		8,549	72,828	64,279
21	2011		8,549		8,549	72,828	64,279
22	2012		8,549	6,587	15,136	72,828	57,692
23	2013		8,549		8,549	72,828	64,279
24	2014		8,549	88,144	96,693	72,828	-23,865
25	2015		8,549		8,549	72,828	64,279
26	2016		8,549		8,549	72,828	64,279
27	2017		8,549		8,549	72,828	64,279
28	2018		8,549		8,549	72,828	64,279
29	2019		8,549		8,549	72,828	64,279
30	2020		8,549		8,549	72,828	64,279
31	2021		8,549		8,549	72,828	64,279
32	2022		8,549	6,587	15,136	72,828	57,692
33	2023		8,549		8,549	72,828	64,279
34	2024		8,549		8,549	72,828	64,279
35	2025		8,549		8,549	72,828	64,279

NPV of Cost (14 %) = 389,754 B-C(15 %) = -10,372
 NPV of Benefit (14 %) = 389,754 B/C(15 %) = 0.97

Sensitivity data:

ITEM	(%)	Cost up (%)	Benefit Down (%)				
			-20	-10	0	10	20
Cost UP	0	-20	26%	23%	20%	17%	14%
		-10	22%	19%	17%	14%	12%
		0	19%	16%	14%	12%	10%
Benefit DOWN	0	10	16%	14%	12%	11%	9%
		20	14%	13%	11%	9%	7%
EIRR	14.4%						

Table 8.2.1 Farm Budget Analysis

Items	Paddy Farm		Paddy/Upland		Upland Farm		Plantation	
	Without	With	Without	With	Without	With	Without	With
Farm Field (ha)								
Paddy Field	1.0	1.0	0.4	0.4	0.0	0.0	0.0	0.0
Upland Field	0.0	0.0	0.3	0.3	0.4	0.4	0.0	0.0
Plantation	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5
sub-total	1.0	1.0	0.7	0.7	0.4	0.4	0.5	0.5
I. Gross Income (peso)								
On-Farm	12,960	57,400	8,624	50,388	4,300	36,570	4,800	25,000
Off-Farm	2,500	4,860	3,000	4,860	4,900	4,900	4,900	4,900
Non-Farm	13,600	0	13,600	0	13,600	0	13,600	0
Total	29,060	62,260	25,224	55,248	22,800	41,470	23,300	29,900
II. Gross Out-Go (peso)								
Production Cost	2,100	9,597	1,600	11,558	1,100	10,293	1,200	5,072
Living Expenses	18,800	18,800	18,800	18,800	18,800	18,800	18,800	18,800
Total	20,900	28,397	20,400	30,358	19,900	29,093	20,000	23,872
III. Capacity to Pay (I-II, peso/annual)	8,160	33,863	4,824	24,889	2,900	12,377	3,300	6,028
IV. Duties and Amortization (peso/annual)								
1. Land Amortization<1	4,405	4,405	3,084	3,084	1,762	1,762	2,203	2,203
2. Irrigation Fee<2	743	3,585	297	2,510	0	1,434	0	0
3. Water Charge<3	0	66	0	66	0	66	0	66
4. Milling Charge	324	1,200	130	480	0	0	0	0
Total	5,472	9,256	3,511	6,140	1,762	3,262	2,203	2,269
V. Debt Repayment (peso/annual)								
1. Rice Mill<4	0	2,760	0	2,760	0	0	0	0
2. Machinery<5	0	2,484	0	2,484	0	1,551	0	375
Total	0	5,244	0	5,244	0	1,551	0	375
VI. Annual Net Profit (peso/annual)	2,688	19,363	1,313	13,505	1,138	7,564	1,097	3,384

<1: Land Amortization Cost for Land Reform, 30,000 peso/ha, Annual Interest=12%, Repayment Period=15 years.

<2: Based on the total O&M cost of 4,159,000 peso for Irrigation facilities including pump.

<3: Based on total O&M cost of 115,000 peso for deep well.

<4: Annual Repayment for Rice Mill Center/Facility.

<5: Annual Repayment for Machinery.

FIGURES

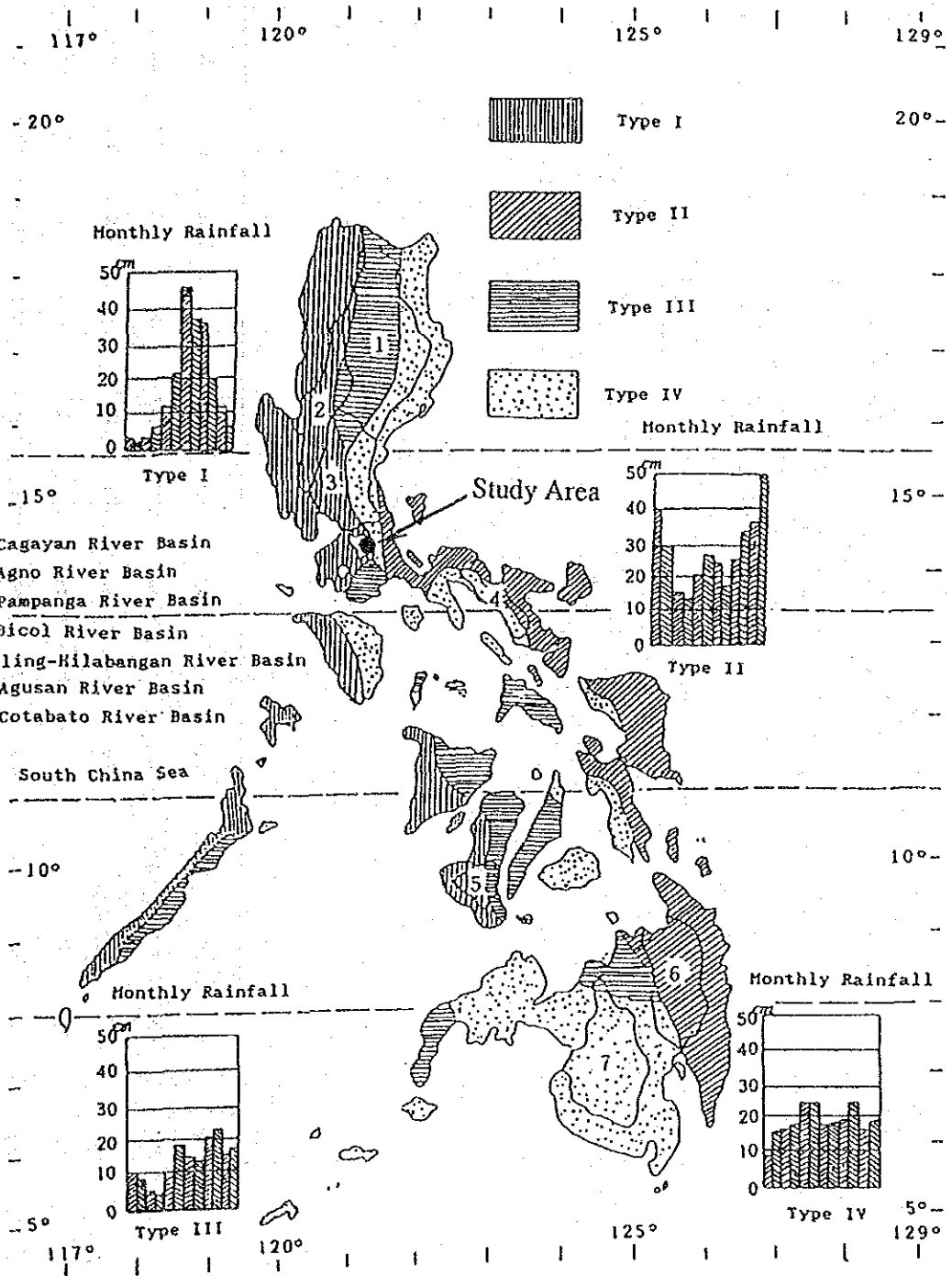


Fig. 3.1.1 Philippines Meteorological Classification

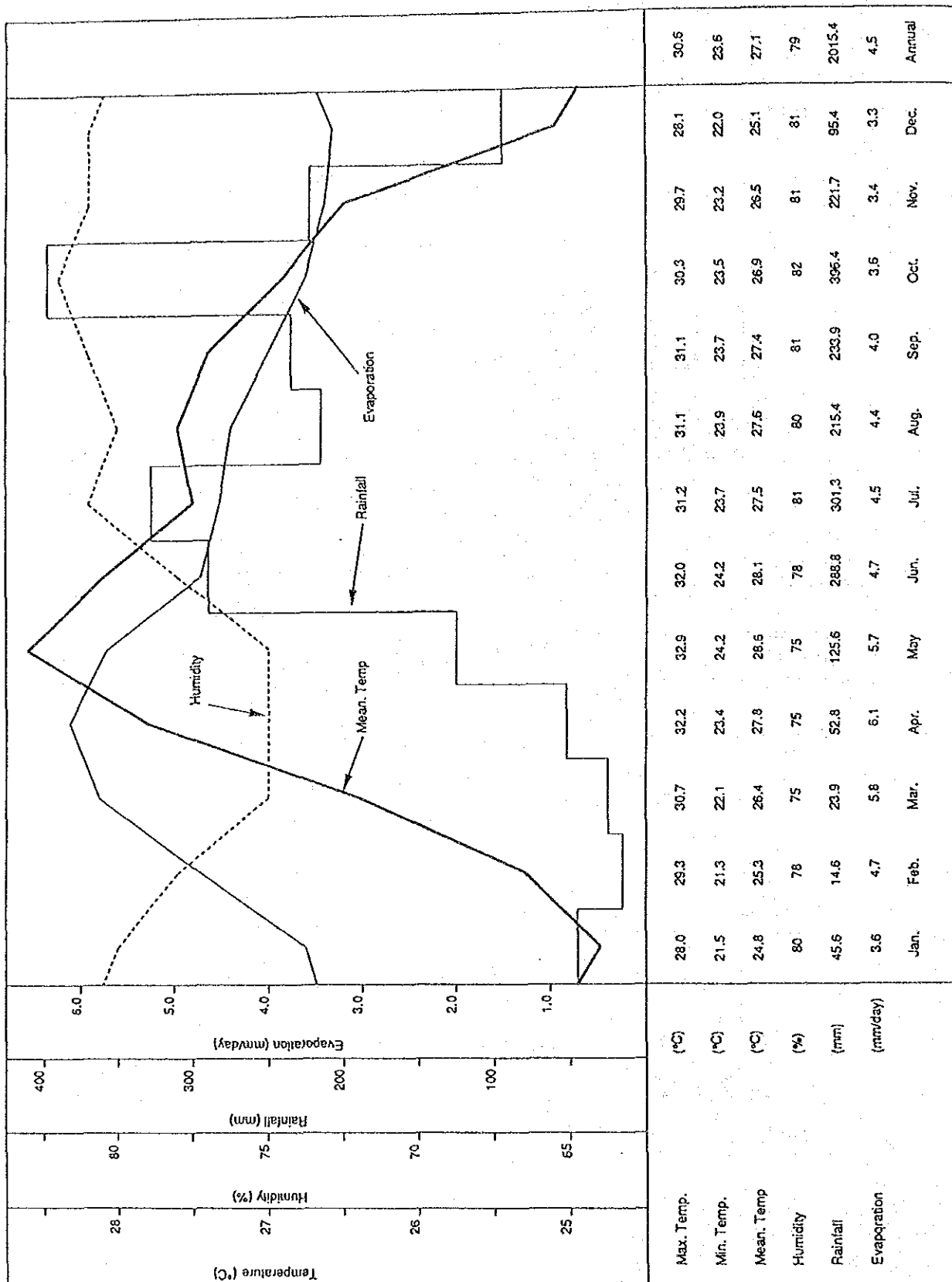







Fig. 3.1.2 Climate at Los Baños

LEGEND

-  - RECENT - Alluvium: Unconsolidated sand, gravel and boulders
-  - PLIO-PLEISTOCENE - Basaltic to andesitic volcanic flow.
-  - PLIO-PLEISTOCENE - Tuff or tuffaceous sandstone

-  - FAULT
-  - GEOLOGIC CONTACT

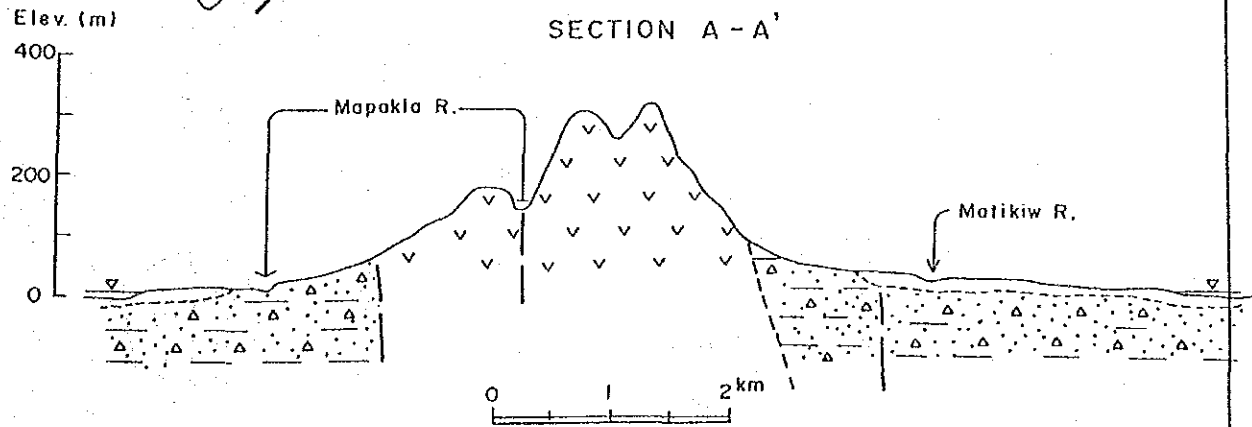
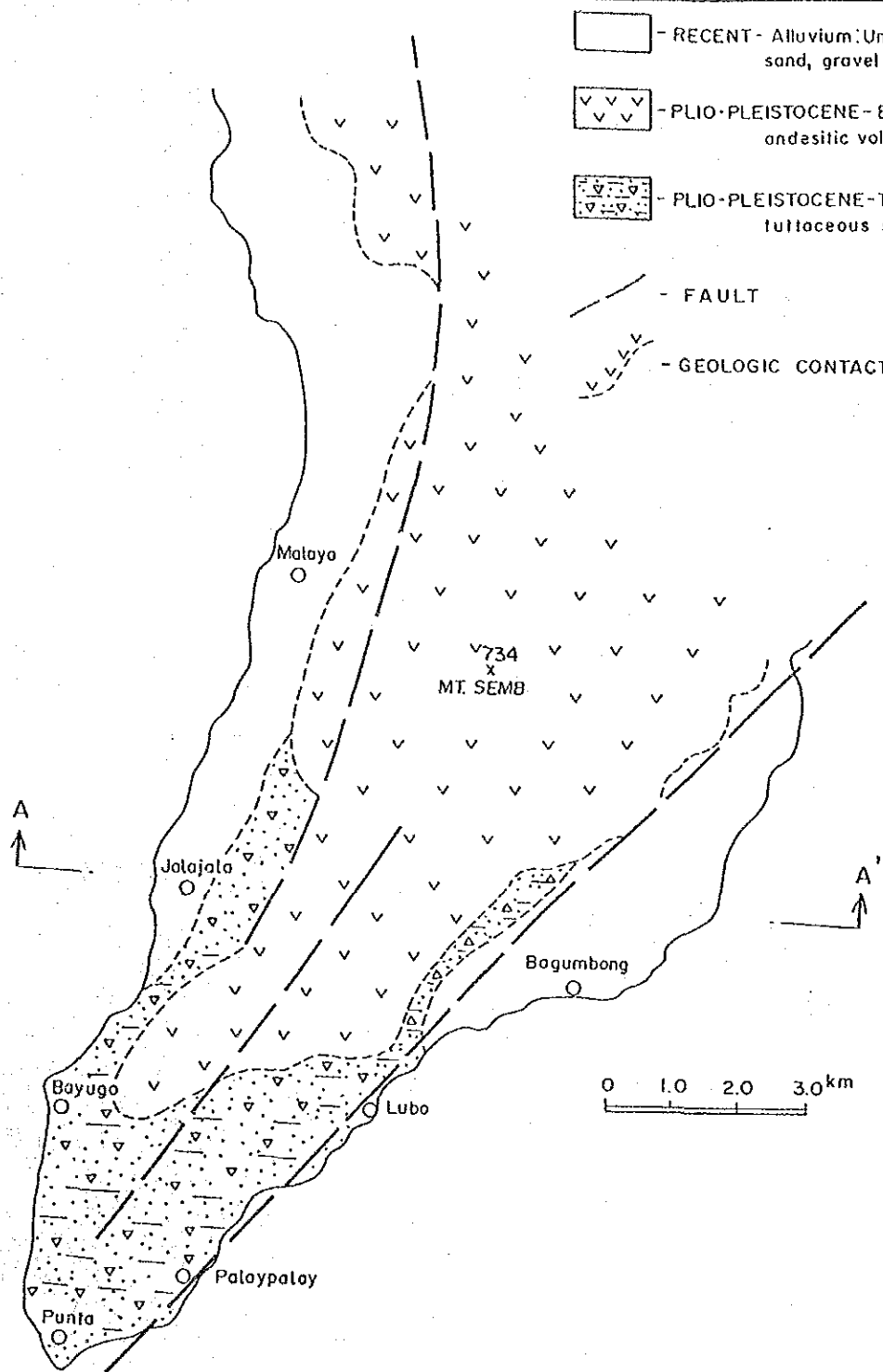
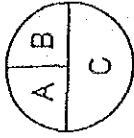


Fig. 3.1.3 Geological Area for Groundwater

LEGEND



A - Development Potential for Irrigation

- 1 - Very Good
- 2 - Good
- 3 - Fair
- 4 - Poor

B - Development Potential for Domestic Water Supply

- 1 - Good
- 2 - Fair
- 3 - Poor
- 4 - Infeasible

C - Potential Safe Yield, q, in lps

NOTE:

Ratings in A and B are based on Table 2,
U.S. Bureau of Reclamation, Groundwater Manual, U.S.
Department of Interior, Washington, 1977

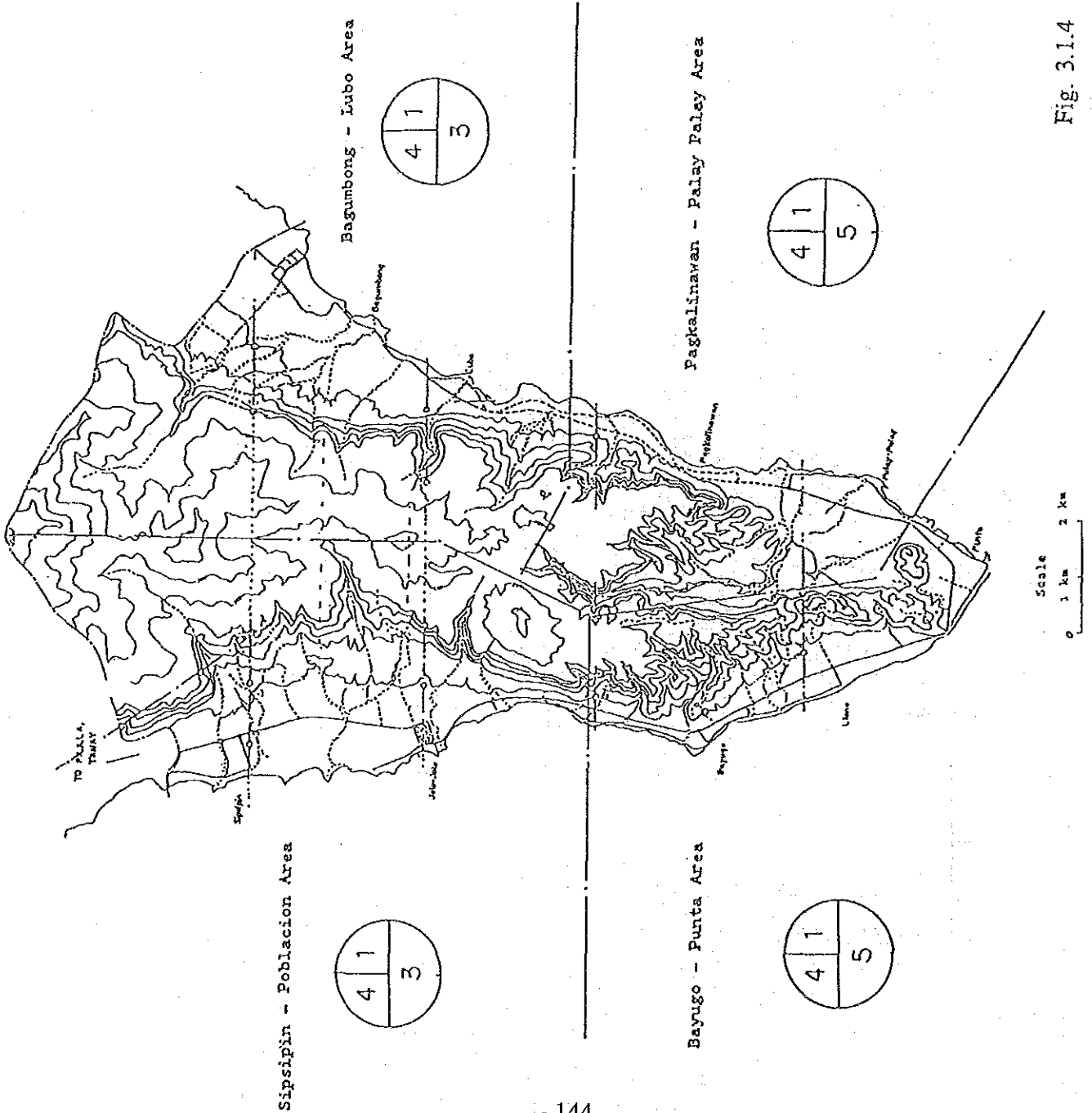


Fig. 3.1.4 Potential Area for Groundwater

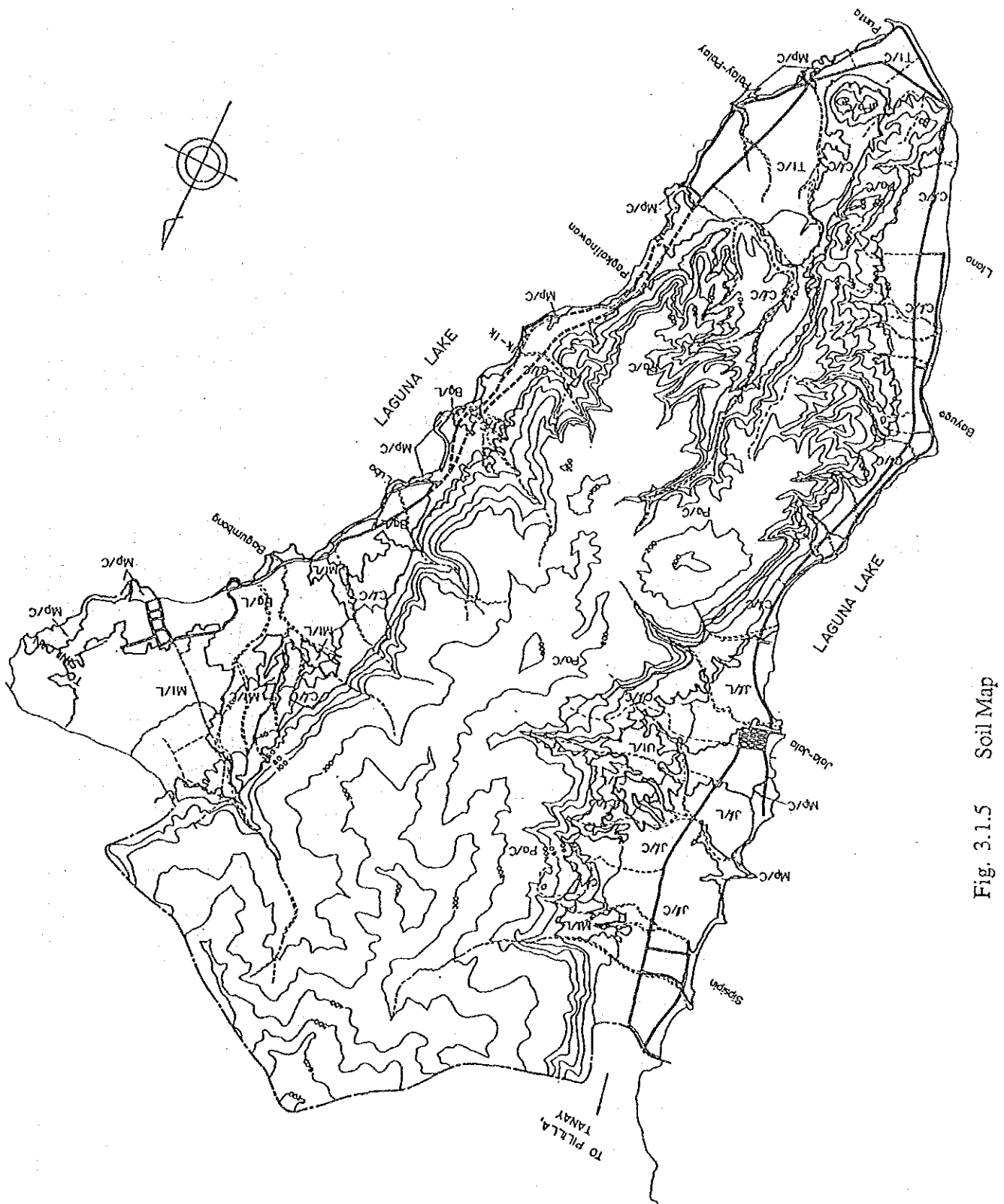


Fig. 3.1.5 Soil Map

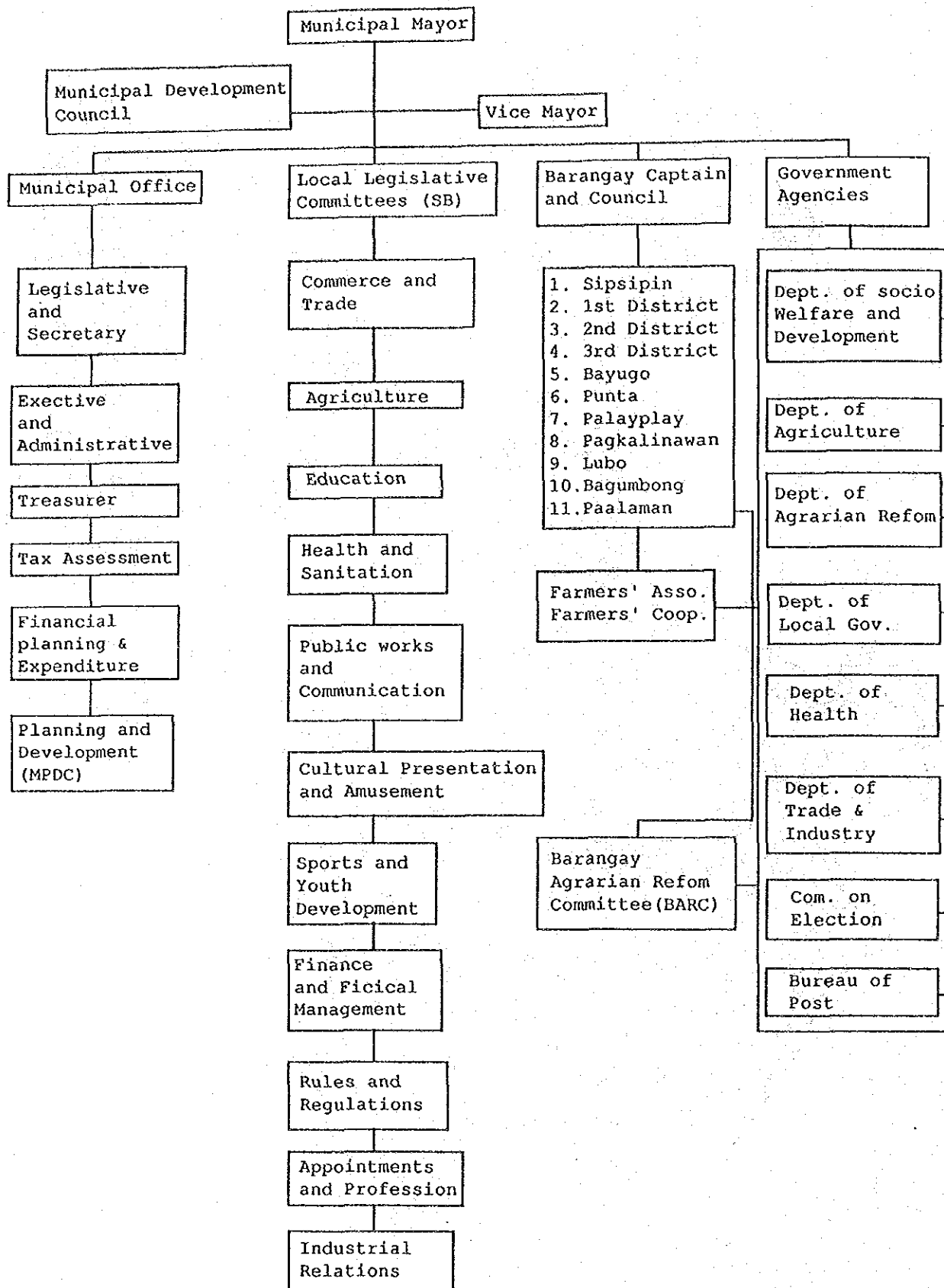


Fig. 3.2.1 Municipal Administration Organizational Structure

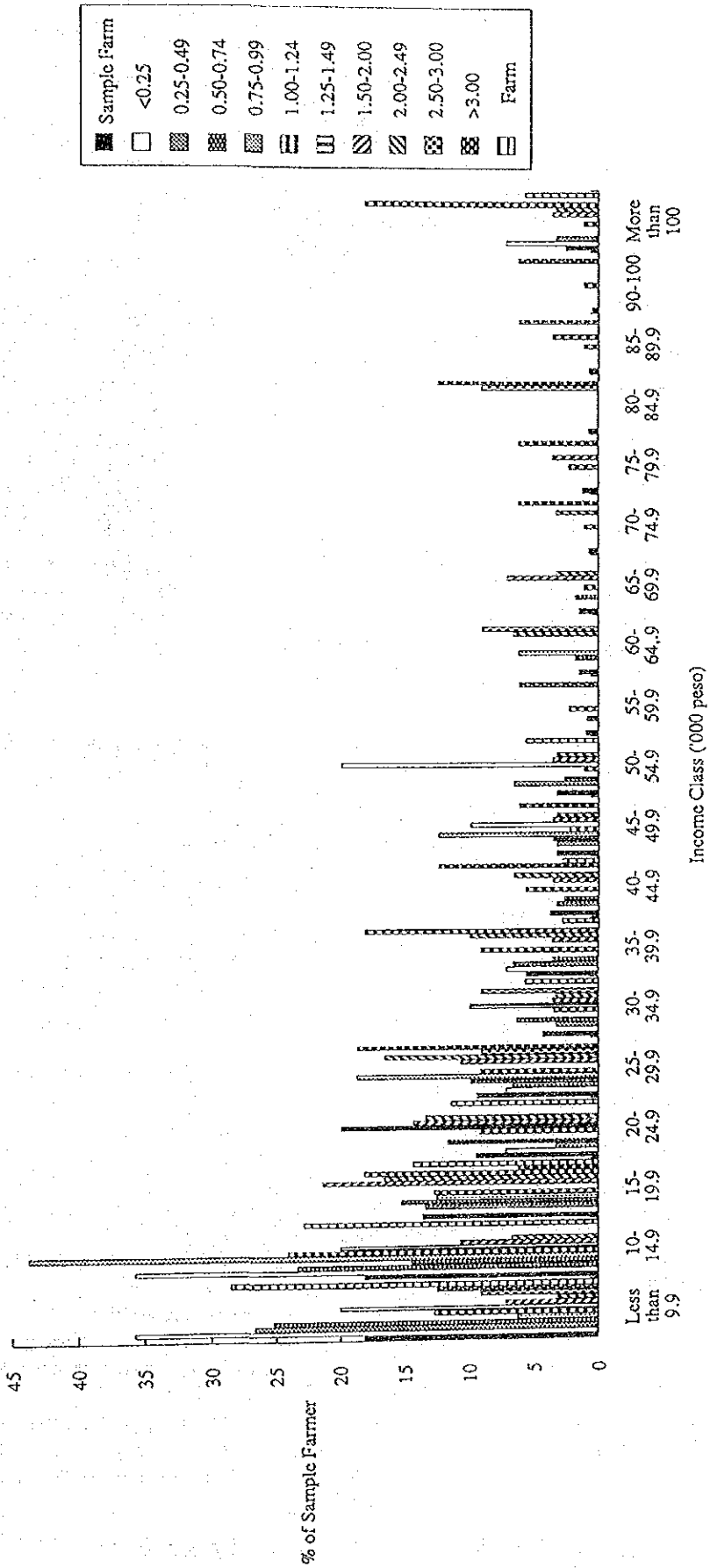
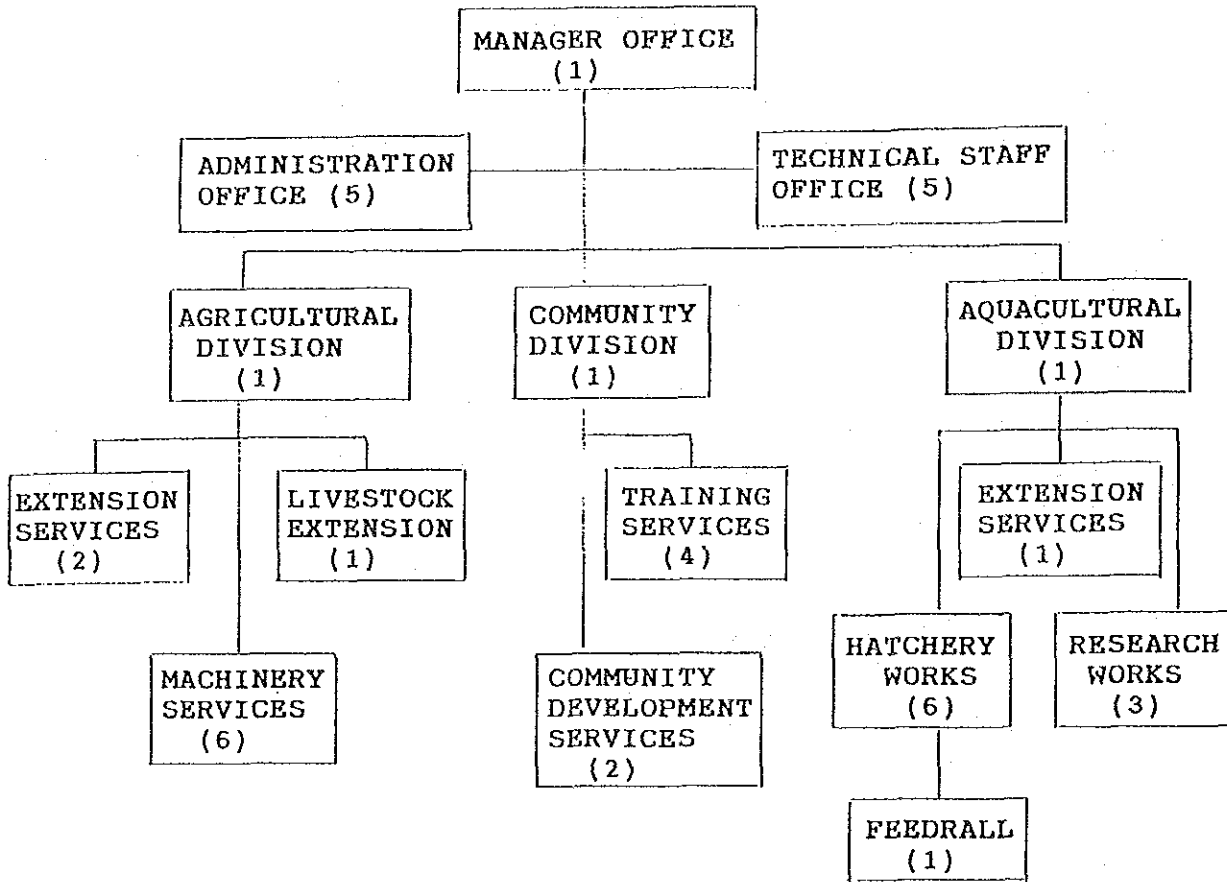


Fig. 3.2.2 Farm Income Distribution By Land Holding Size

ORGANIZATION CHART



REMARKS:

- Figures in parenthesis in the above show the present staffing of the Center.
- The breakdown of staffing by speciality and/or designation is as follows:

- | | |
|---|---|
| - Head of Center | - 5- Technical staff |
| - 5-Administration staff | - Aquaculturist(head of Fishery Division) |
| - Agronomist(head of Agric. Division) | - Technician(Fishery Extension) |
| - Horticulturist(Extension) | - Sr. Research Officer |
| - Agronomist(Extension Assistant) | - 2-Research Assistant |
| - Livestock Specialist | - Technician(Hatchery work) |
| - 5-Farm Attendants | - 5-Fishery Aid(Hatchery work) |
| - Tractor Operator | - Feedrall Operator |
| - Sociologist(Community Development Division) | - Technician(Training Service) |
| | - 3-trainer(Training Service) |
| | - 2-Community Development Worker |

Fig. 3.2.3 Organization Chart of Meralco Center

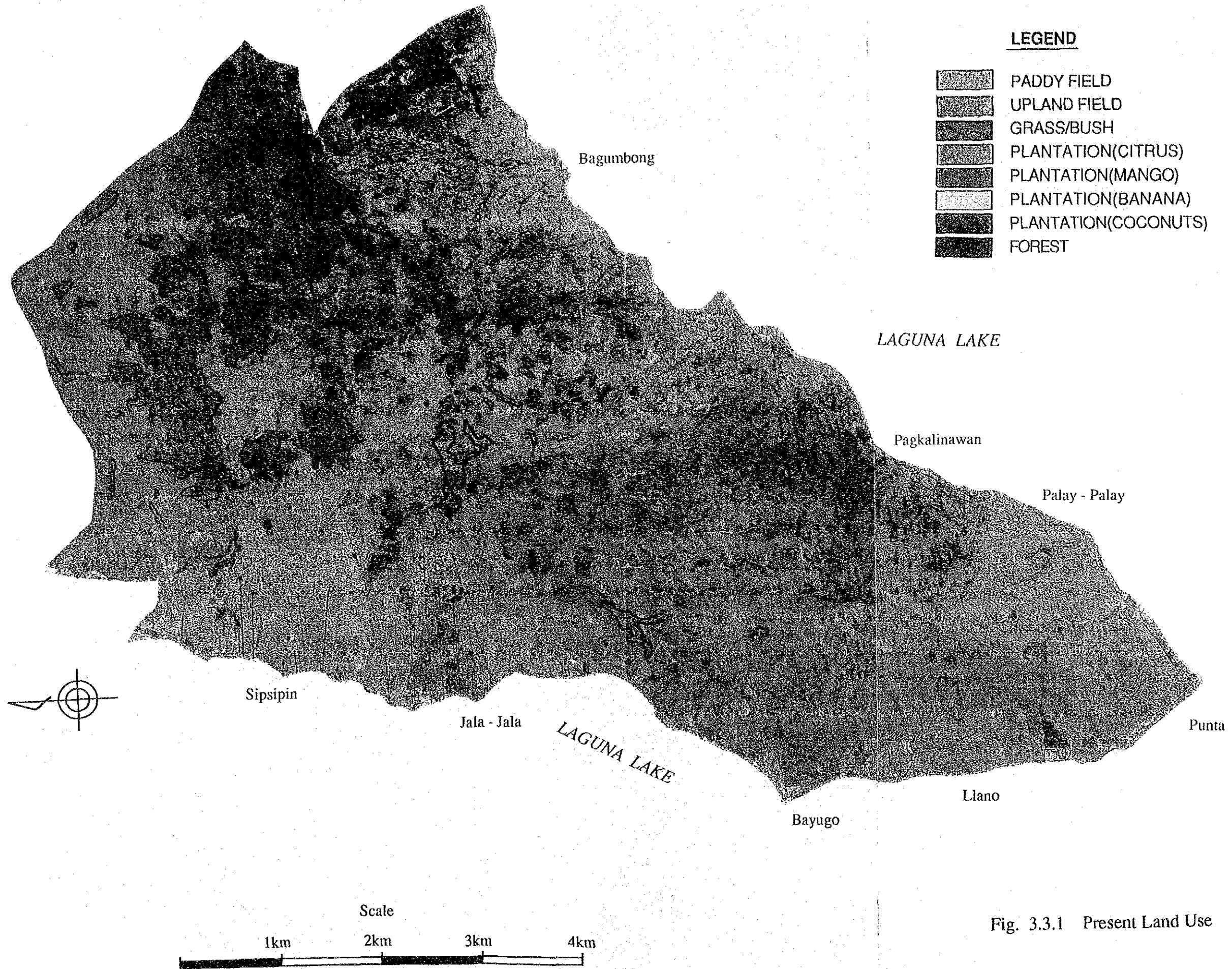


Fig. 3.3.1 Present Land Use

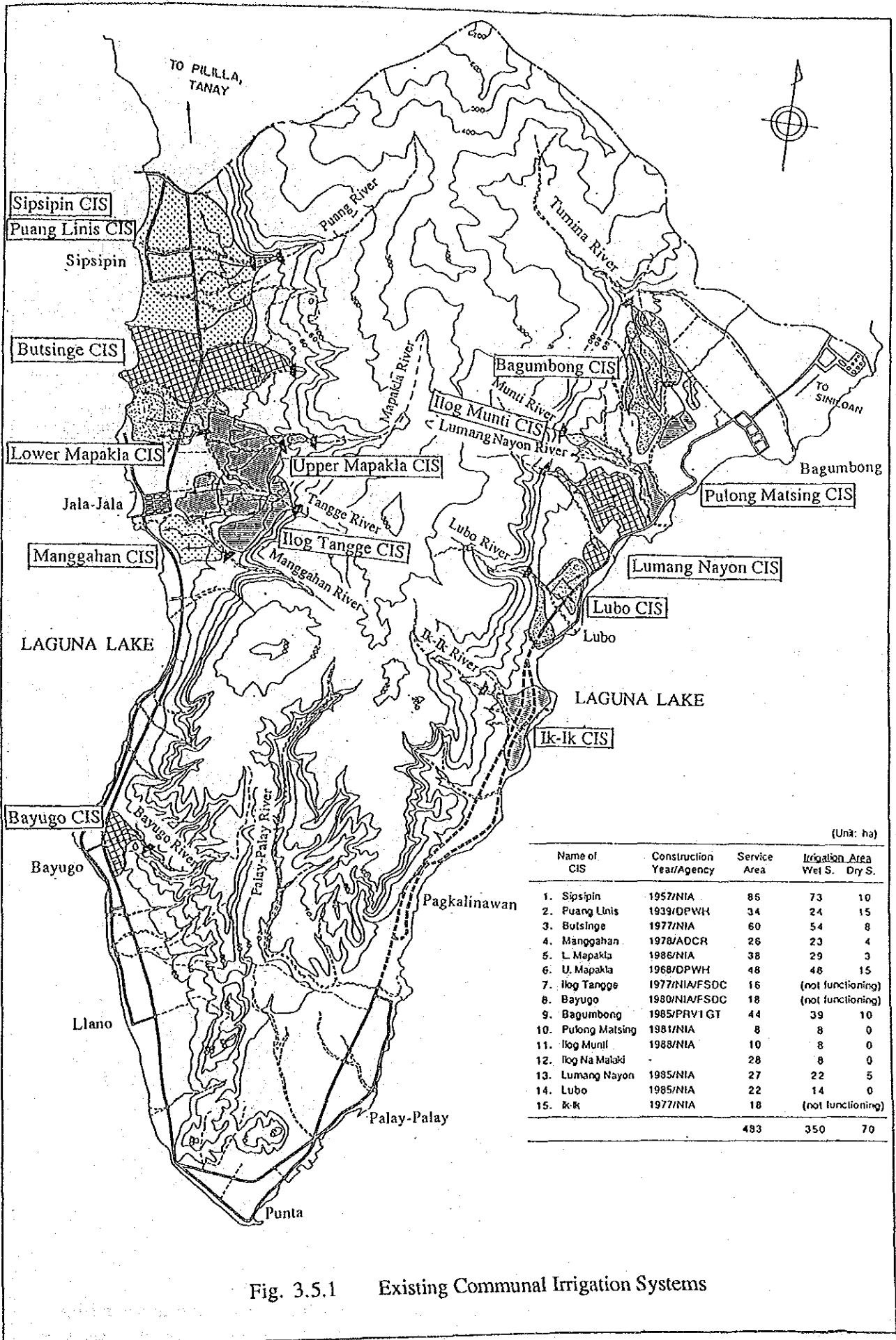


Fig. 3.5.1 Existing Communal Irrigation Systems

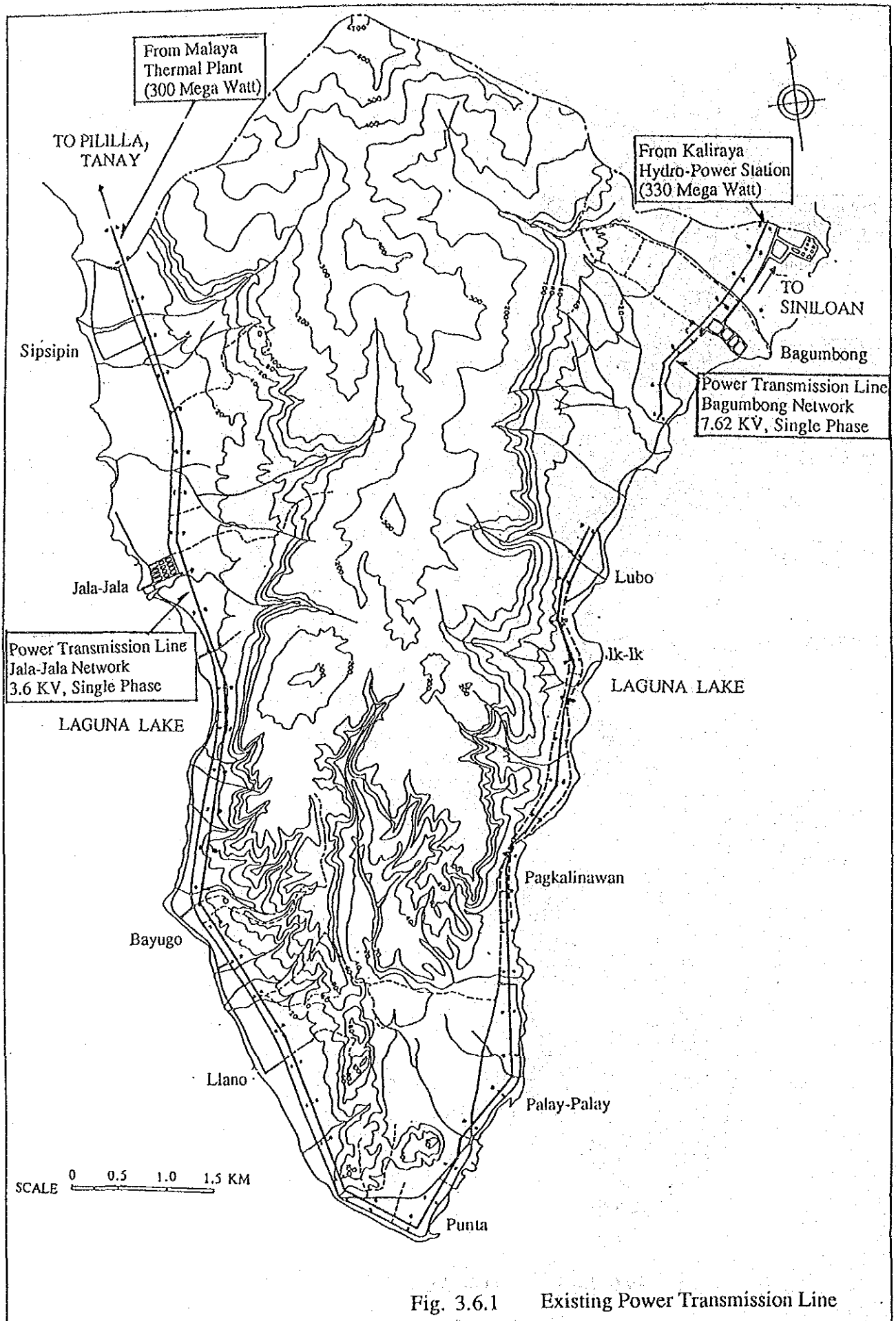


Fig. 3.6.1 Existing Power Transmission Line

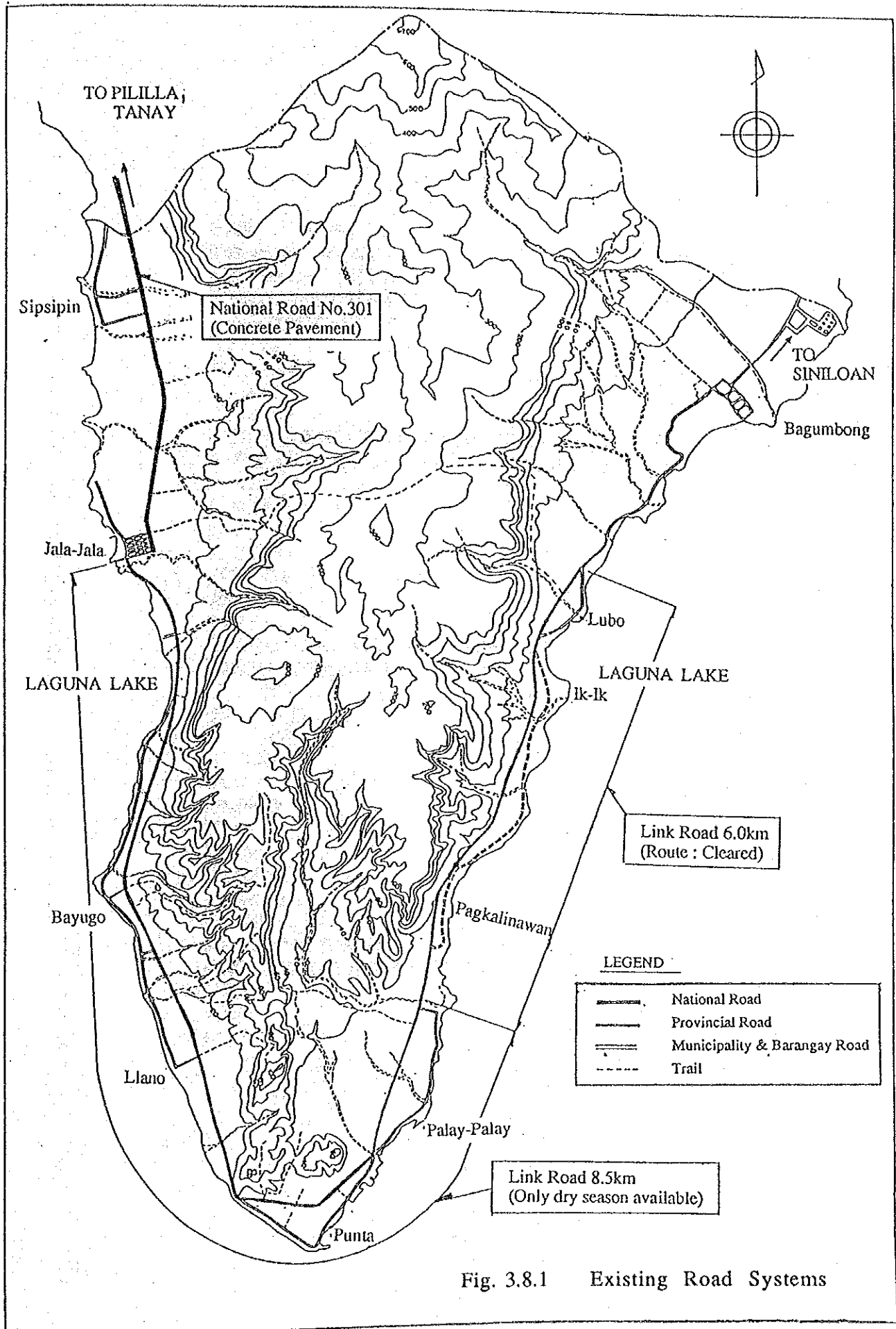


Fig. 3.8.1 Existing Road Systems

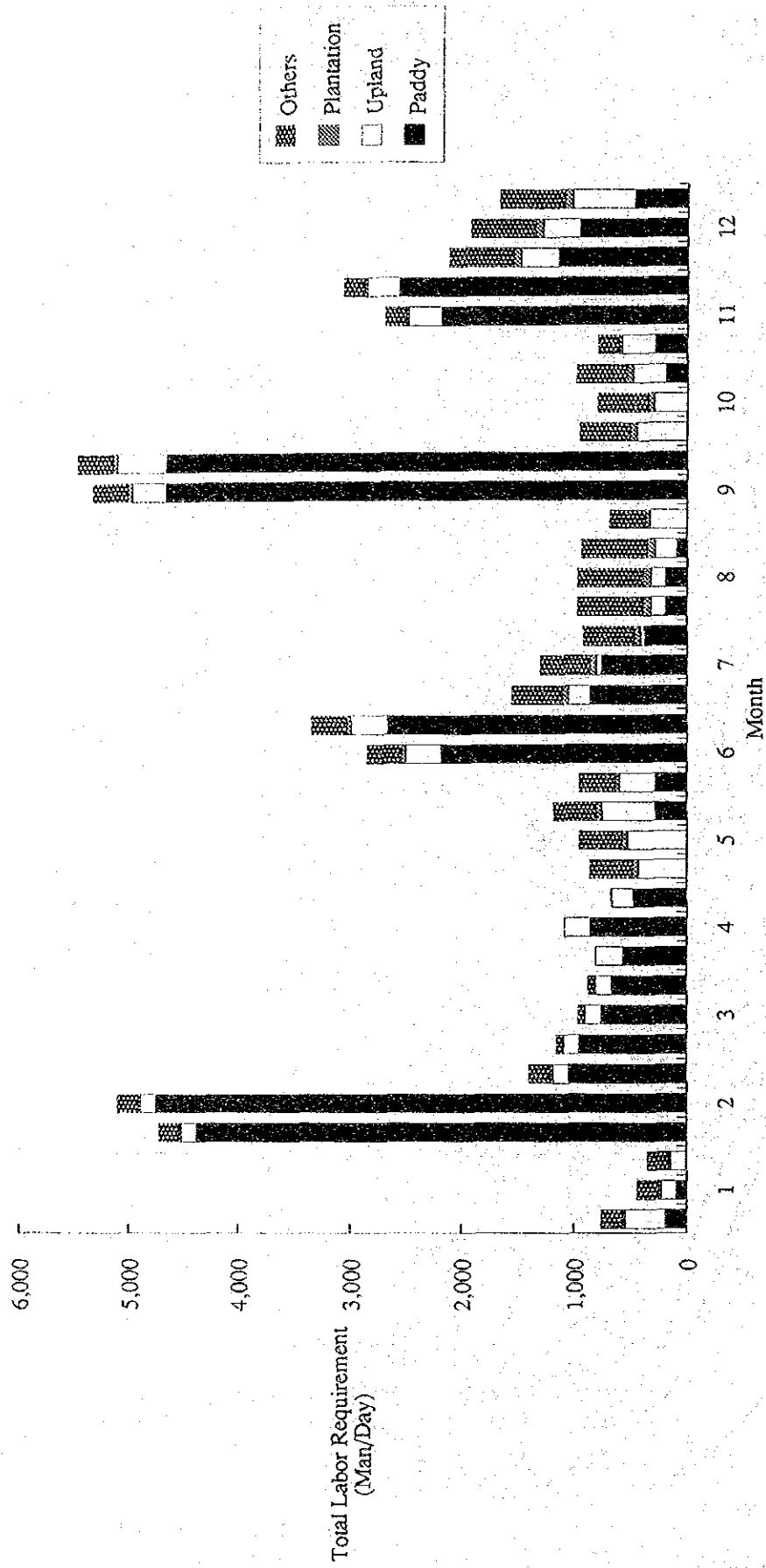


Fig. 5.2.1 Agricultural Labor Requirement by Month Under With Project Condition

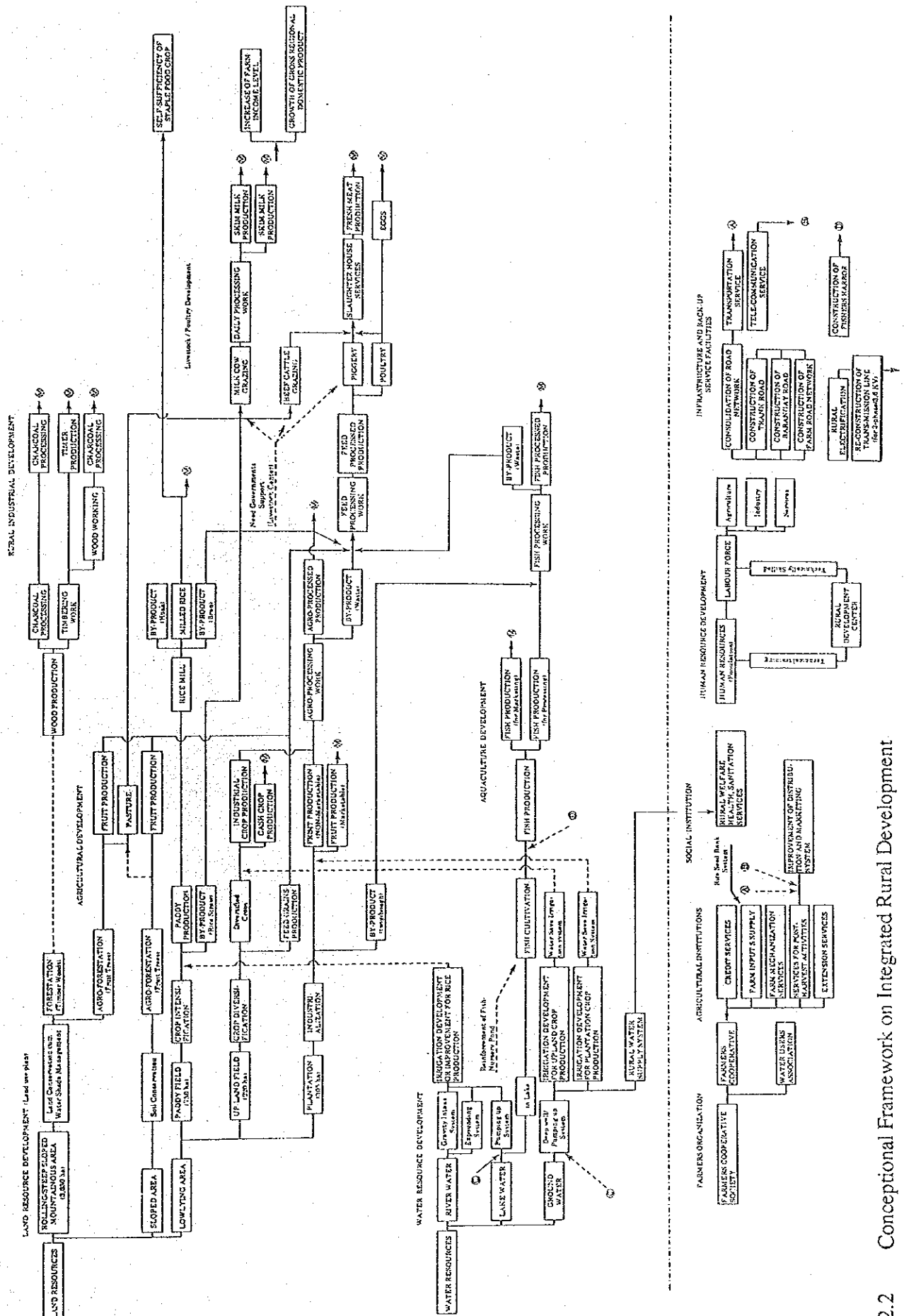
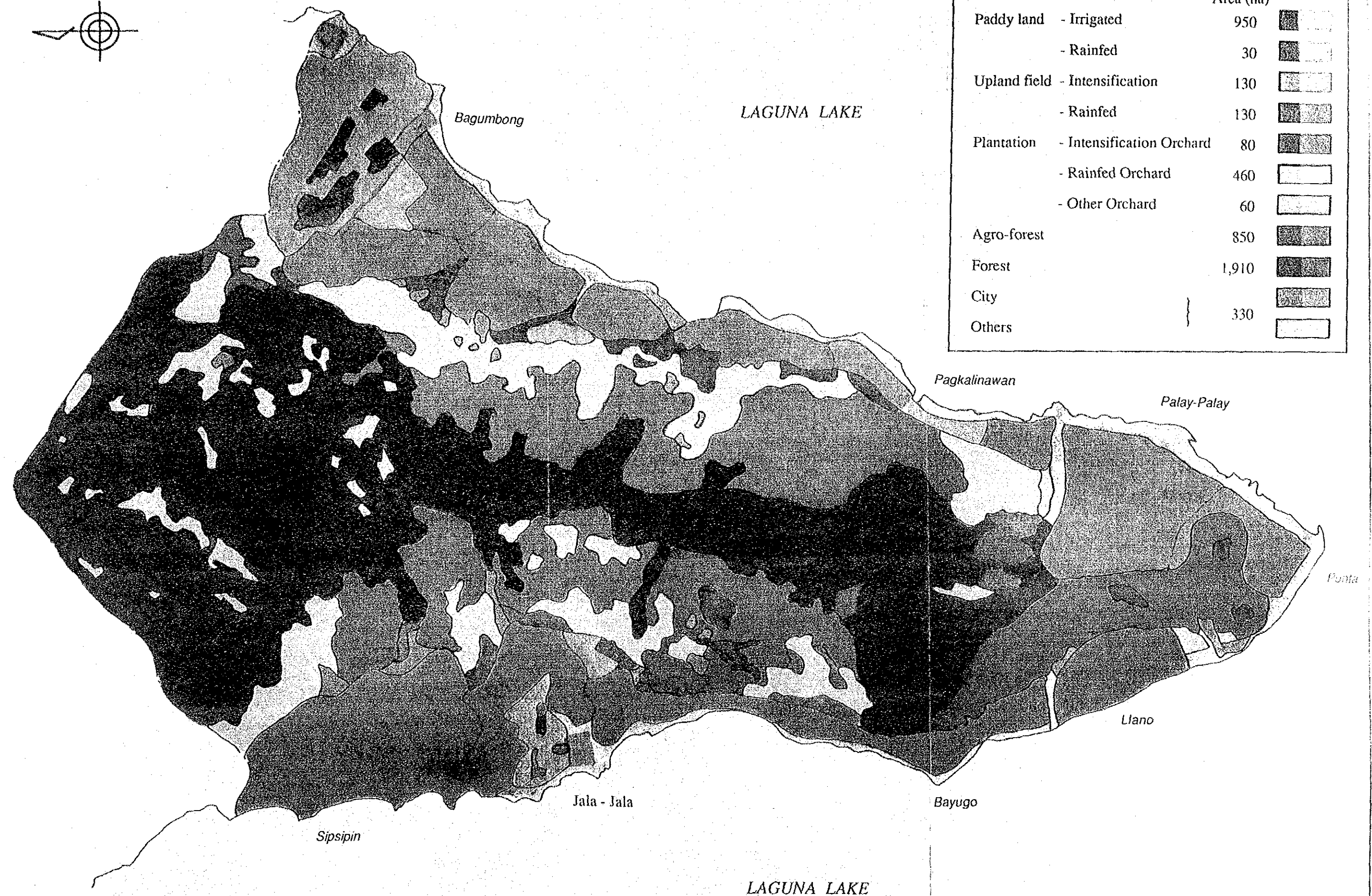
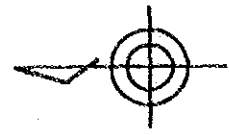


Fig. 5.2.2 Conceptual Framework on Integrated Rural Development



SCALE 0 0.5 1.0 1.5 km

Fig. 6.1.1 Proposed Land Use Map

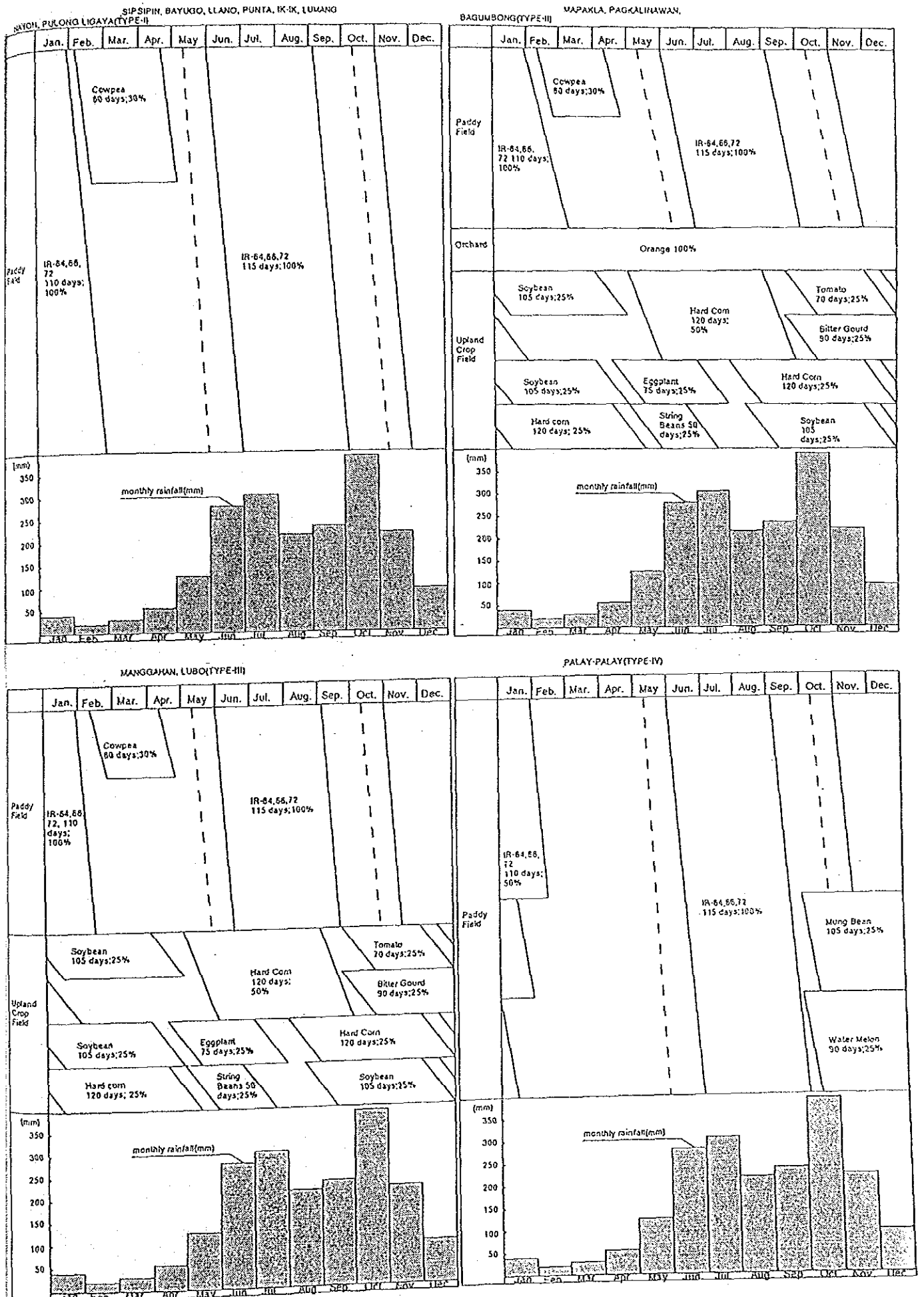


Fig. 6.2.1 Proposed Cropping Pattern

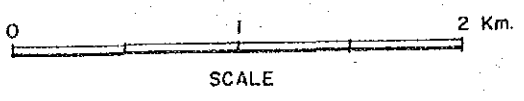
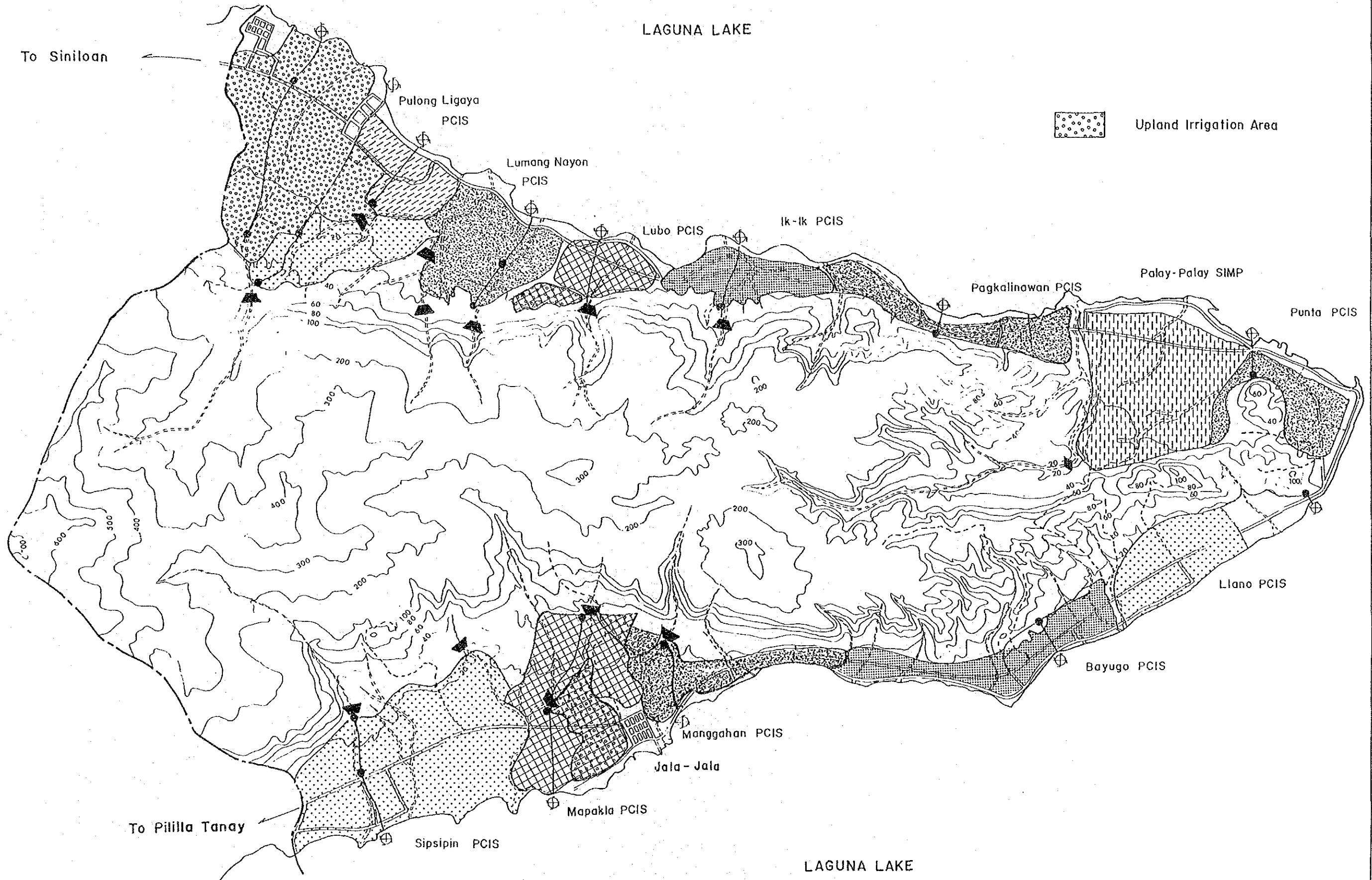


Fig. 6.5.1 Irrigation Development Plan

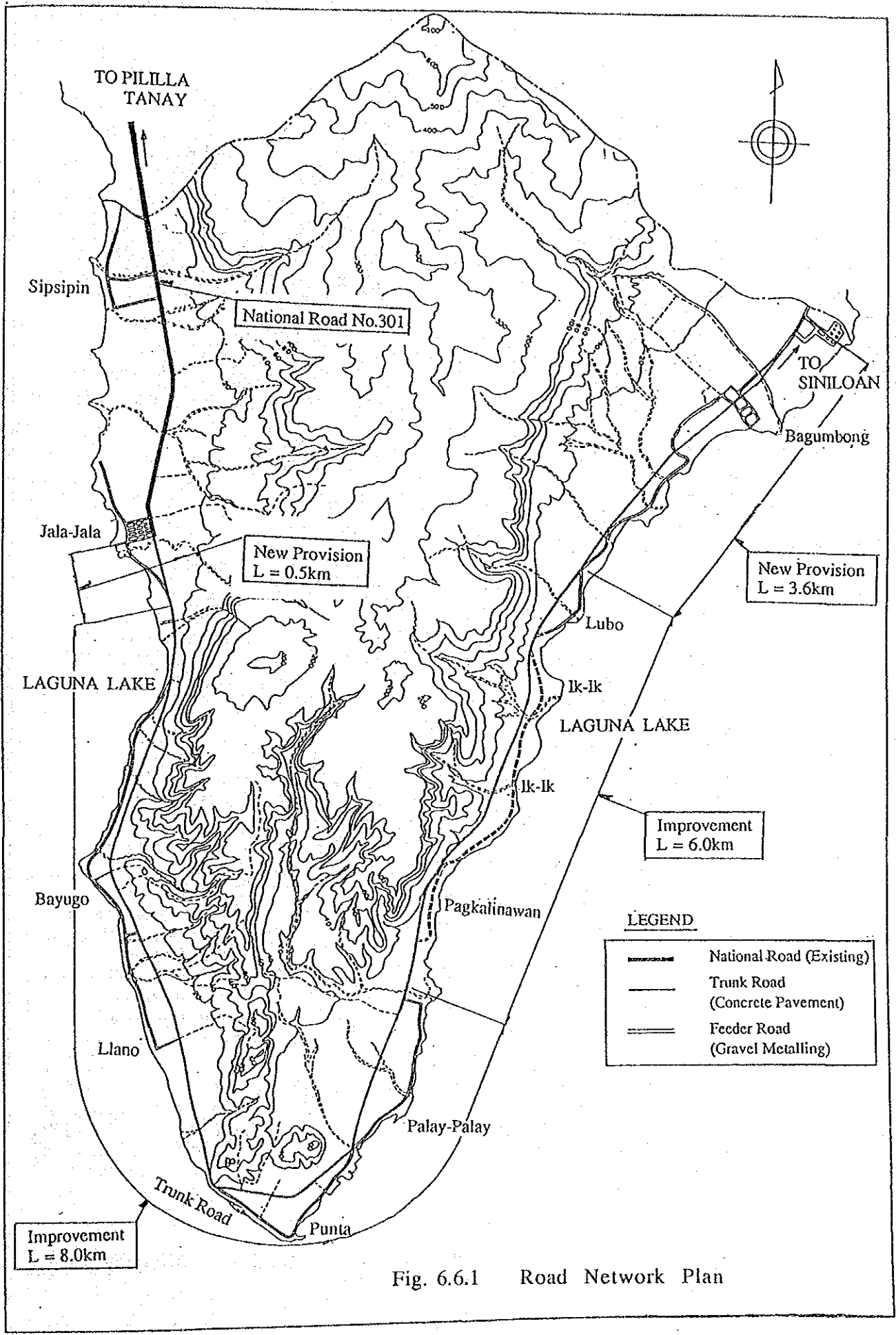


Fig. 6.6.1 Road Network Plan

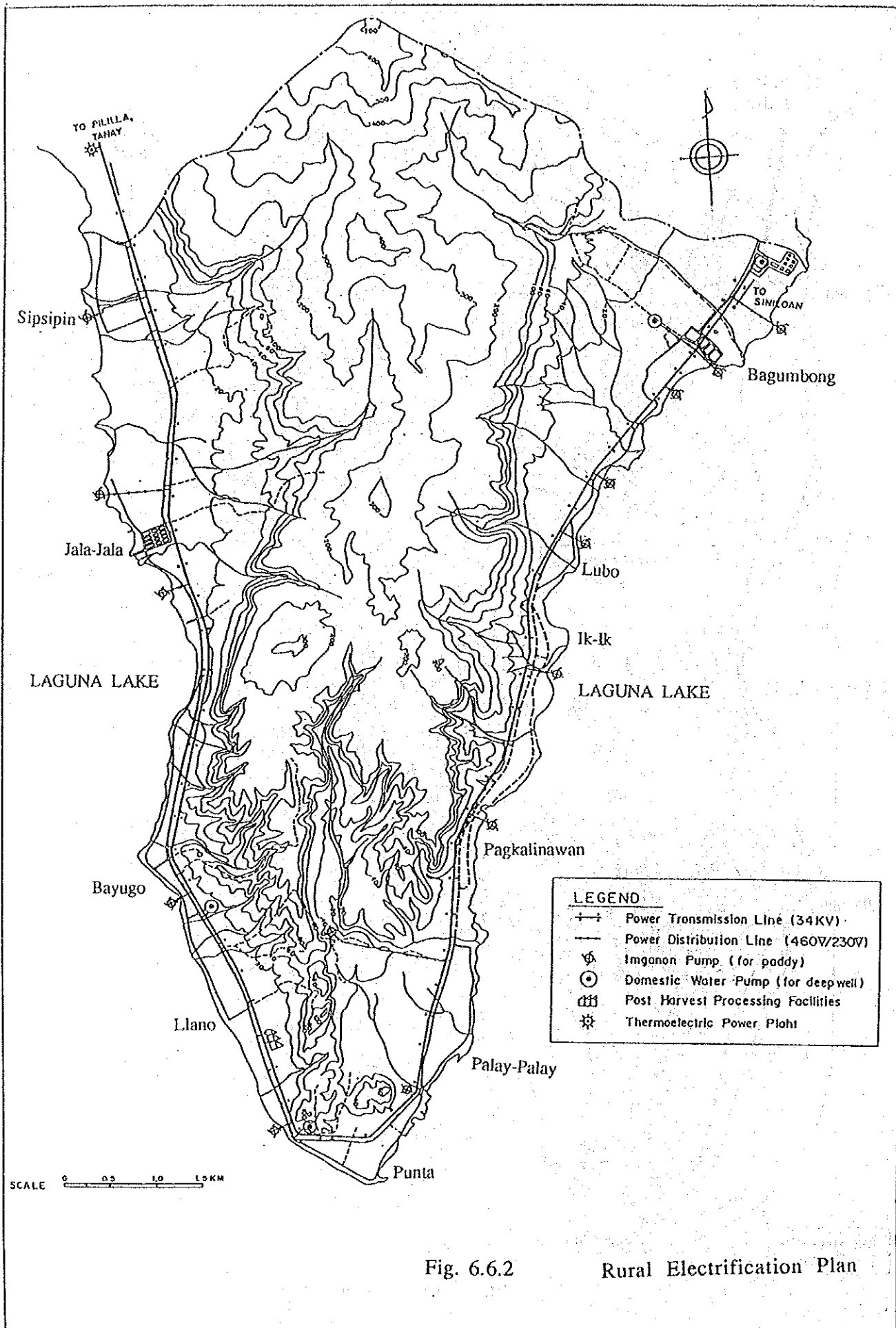


Fig. 6.6.2

Rural Electrification Plan

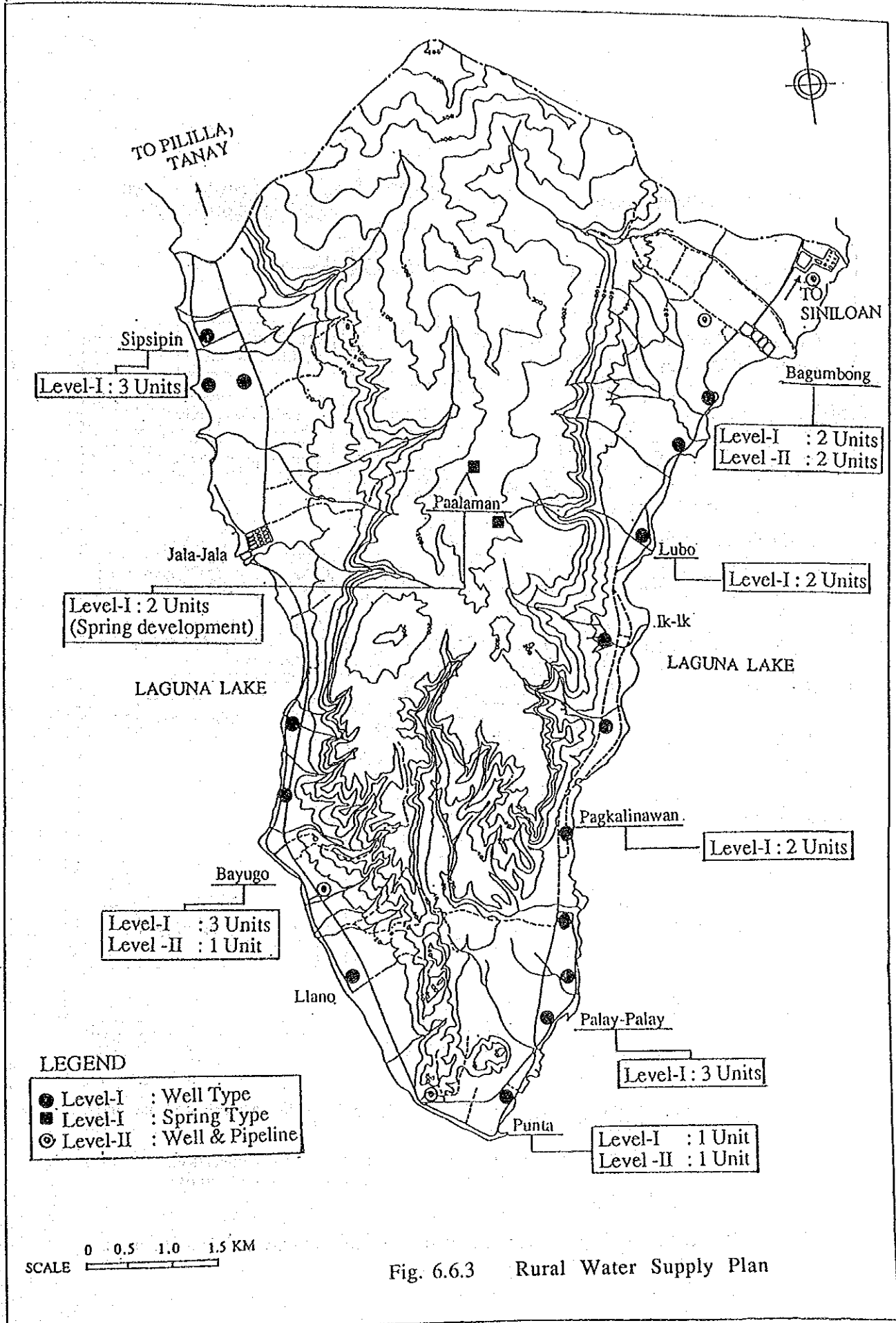
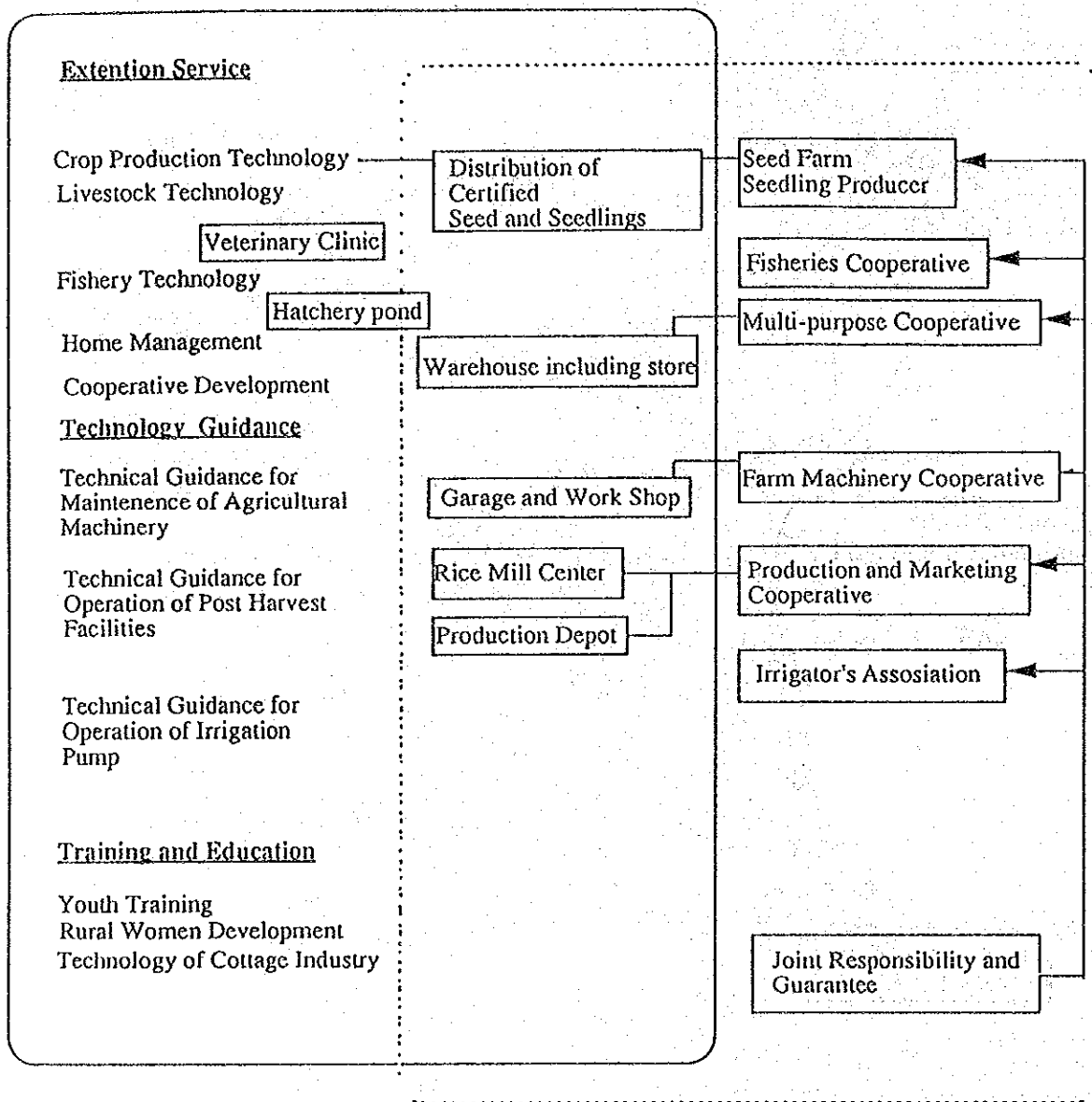


Fig. 6.6.3 Rural Water Supply Plan

Function of Rural Development Center

Main Facilities

Activities of Jala-Jala Farmers
Multi-Purpose Cooperative




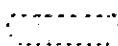
-  Management System during primary stage (Extention activity of Center and Cooperative activities)
-  Management System after establishment of Jala-Jala Cooperative (Extention activity of Center and Jala-Jala Farmers Multi-purpose Cooperative)

Fig. 6.7.1 Supporting Function of RDC and Activity of Jala-Jala Farmers Multi-Purpose Cooperative

STRUCTURAL ORGANIZATION

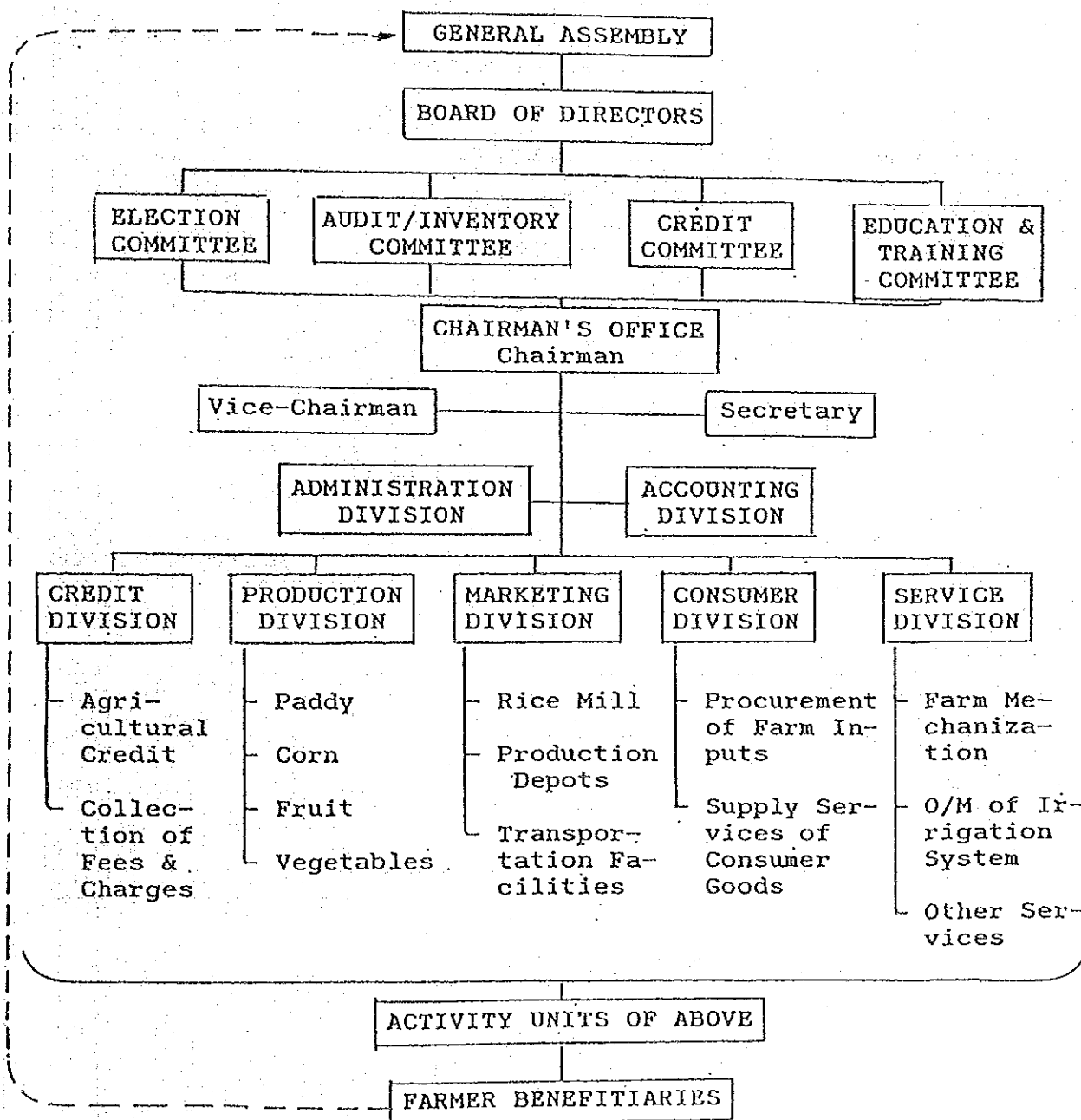


Fig. 6.8.1 Organization Structure of Jala-Jala Farmers Multi-Purpose Cooperative

WORKS	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000										
1. CARP Oriented Project																				
(1) 1st Stage																				
- Rural Development Center		■	■	■																
- Irrigation Component		■	■	■																
- Road Component		■	■	■																
- Power Supply Component		■	■	■																
- Rural Water Supply Component		■	■	■																
(2) 2nd Stage																				
- Irrigation Component					▨	▨														
- Road Component					▨	▨														
- Rural Water Supply Component					▨	▨														
- Power Supply Component					▨	▨														
(3) 3rd Stage																				
- Land Conservation							▨	▨	▨	▨	▨	▨	▨	▨	▨	▨	▨	▨	▨	▨
2. Ordinary Development Program																				
- Transportation facility	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□
- Communication facility	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□
- Market facilities	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□
- Barangay hall	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□
- Sports center	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□

Note : — : Preparatory work
 ■ : Construction work

Fig. 7.1.1 Overall Implementation Schedule of the Project

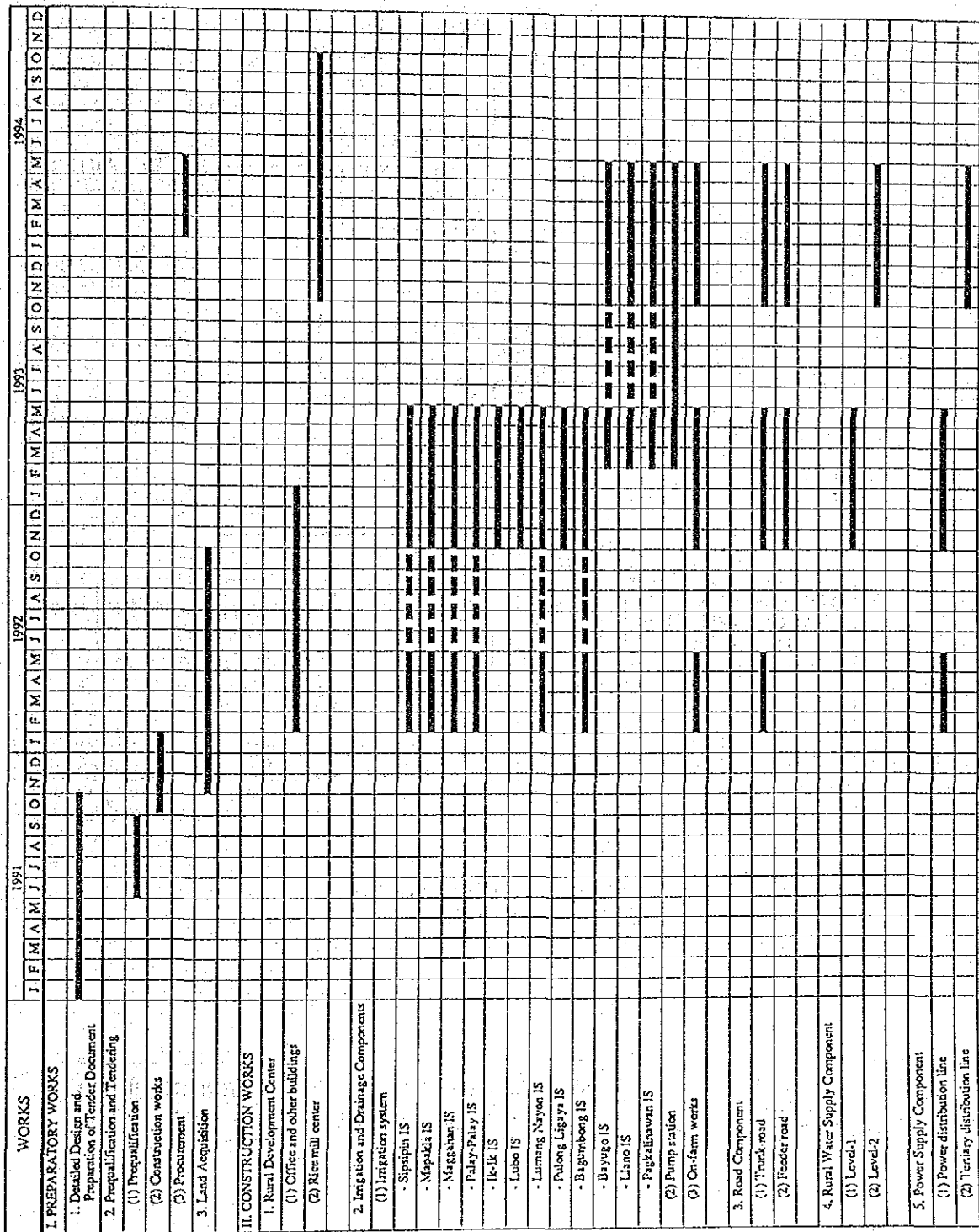


Fig. 7.2.1 Implementation Schedule of First Stage of the Project

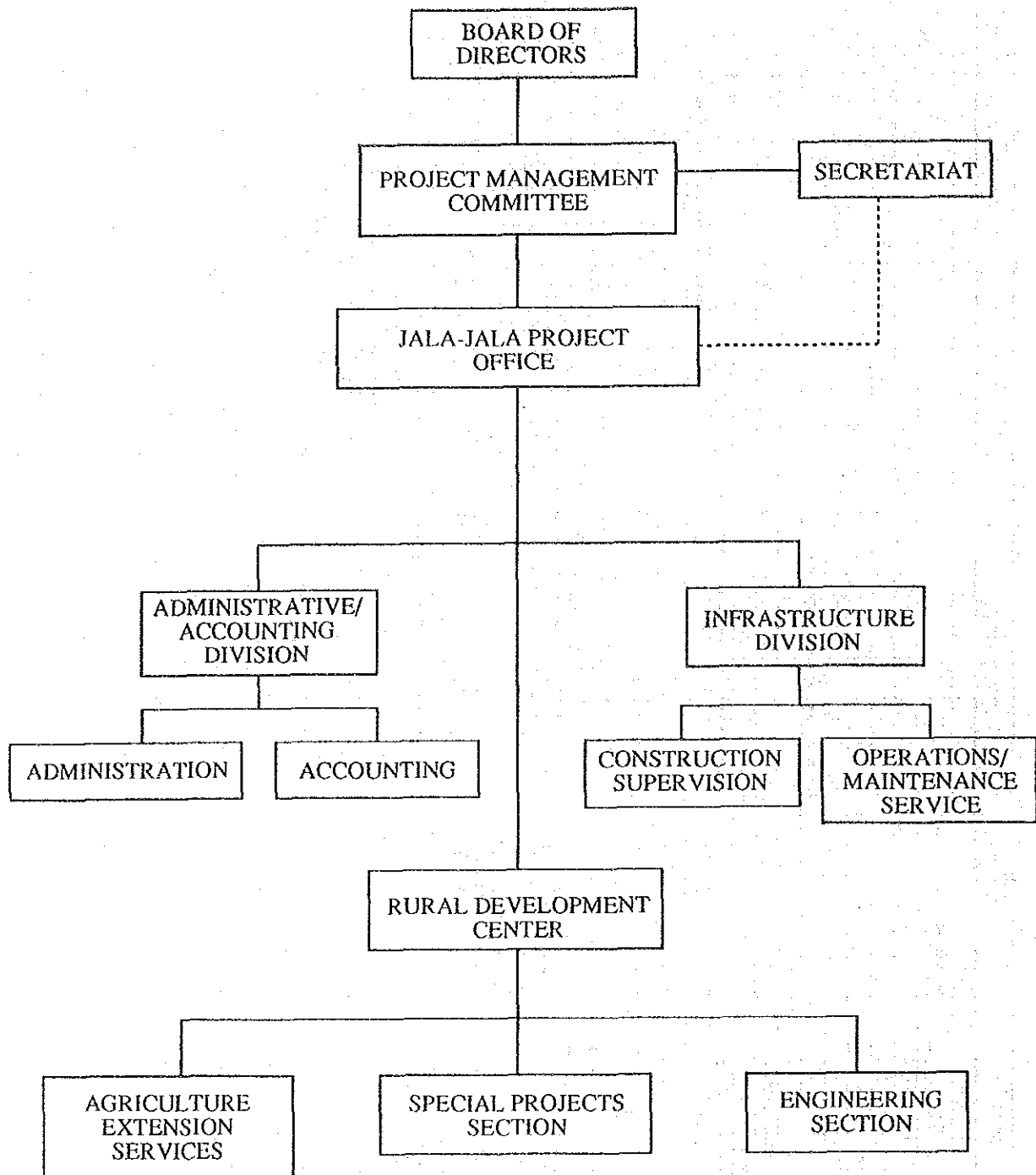


Fig. 7.3.1 Project Organization

MAJOR DEVELOPMENT COMPONENTS	CARP COORDINATING AGENCIES										
	DAR	DA	DENR	DPWH	NIA	DTI	DOLE	LRA	LBP	LLDA	LGU
= Rural Development Center	***	***	***	***	***	*	*	*	*	***	*
= Const. Trank Road	-	-	-	***	-	-	-	-	-	-	-
= Improve. Baran-gay Road	-	-	-	**	-	-	-	-	-	-	***
= Const. Farm Road	-	-	-	-	***	-	-	-	-	-	**
= Const. Fish Ports	-	-	-	***	-	-	-	-	-	**	-
= Const. Public Building	-	-	-	***	-	-	-	-	-	-	***
- Install. Deep Well	-	-	-	***	***	-	-	-	-	-	-
= Up-Grad. Trans-mission Line	-	-	-	-	-	-	-	-	-	-	**
= Agric. Insti-tution	**	***	**	**	**	-	-	-	***	**	**
= Farmers' Organi-zation	***	***	-	-	**	-	-	-	-	-	*

Remarks: ***: Main force expected for implementation of work,
 ** : Assistance in implementation of work, and
 * : Coordination in implementation of work

Fig. 7.3.2 Supporting System of Project Organization

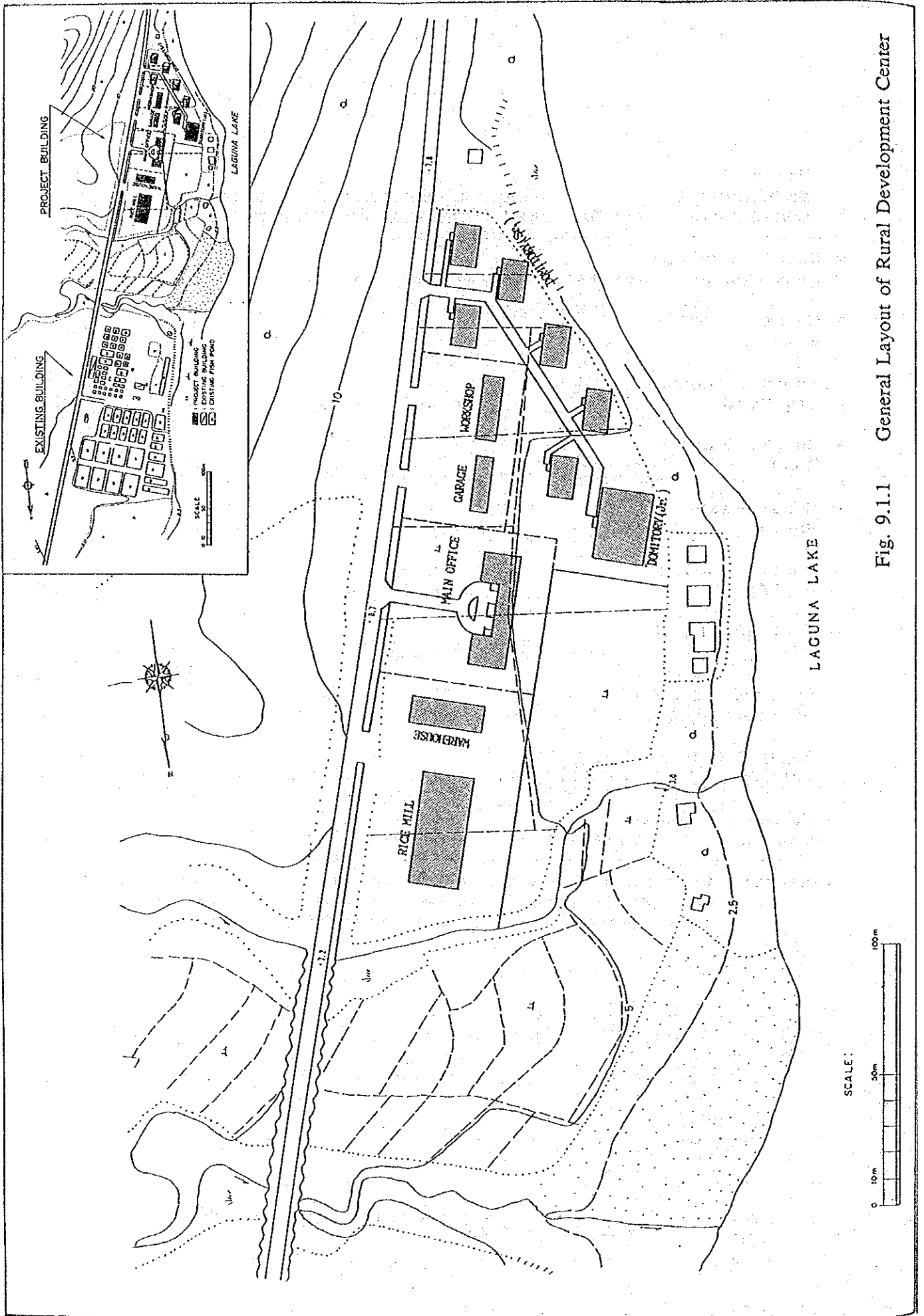


Fig. 9.1.1 General Layout of Rural Development Center