

Table B2-24

## YEARS AFTER COMPLETION OF CONSTRUCTION FOR ALL CISS

(Unit: Nos.)

Region	Province	Nos. of CISSs											Designed Irrigable Area		
		1 yr	2 yr	3 yr	4 yr	5 yr	6 yr	7 yr	8 yr	9 yr	Over 10 yr	Unknown	Total	(ha)	
I	1 ILOCOS NORTE	2	0	7	1	1	1	0	1	1	3	102	119	13,630	
	2 ABRA	1	1	0	0	0	2	1	2	1	2	27	37	5,266	
	3 ILOCOS SUR	1	1	2	0	0	3	0	0	0	4	59	70	8,183	
	4 MOUNTAIN PROVINCE	3	0	0	1	0	0	0	0	0	0	4	8	914	
	5 LA UNION	1	1	0	0	0	0	1	0	0	32	4	39	5,071	
	6 BENGUET	0	2	1	0	0	0	0	0	1	2	3	9	617	
	7 PANGASINAN	3	1	2	0	1	3	7	3	2	102	54	178	27,409	
	Sub-total	11	6	12	2	2	9	9	6	5	145	253	460	61,090	
II	8 BATANES	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9 CAGAYAN	0	3	7	0	0	0	3	3	4	33	52	105	14,511	
	10 KALINGA APAYAO	3	0	1	0	0	3	1	2	0	2	52	64	5,602	
	11 ISABELA	0	0	4	1	0	2	0	6	2	17	15	47	9,775	
	12 IFUGAO	4	0	1	1	1	0	0	0	0	23	5	35	3,279	
	13 NUEVA VISCAYA	0	1	0	0	3	1	2	4	5	28	87	131	18,118	
	14 QUIRINO	0	0	1	1	1	3	1	3	3	12	4	29	3,460	
	sub-total	7	4	14	3	5	9	7	18	14	115	215	411	54,745	
	III	15 NUEVA ECJA	2	1	1	0	0	1	1	1	0	3	33	43	7,746
		16 TARLAC	8	1	2	0	0	0	0	0	0	3	22	36	7,975
		17 ZAMBALES	0	1	1	0	2	0	1	0	2	1	2	10	1,563
		18 PAMPANGA	5	3	0	0	0	0	1	0	1	3	60	73	11,521
		19 BULACAN	1	0	1	1	0	0	0	0	0	4	11	18	2,568
		20 BATAAN	2	0	0	0	1	2	0	1	1	5	18	30	3,932
sub-total	18	6	5	1	3	3	3	2	4	19	146	210	35,305		
IV	21 AURORA	1	0	1	1	0	0	1	2	2	0	31	39	6,190	
	22 QUEZON	1	1	1	1	0	1	0	2	1	2	28	38	3,875	
	23 RIZAL	0	0	0	0	0	1	0	0	0	18	0	19	1,769	
	24 CAVITE	0	1	0	0	0	0	0	0	0	1	3	5	596	
	25 LAGUNA	3	1	0	0	0	1	0	0	2	2	16	25	2,474	
	26 BATANGAS	0	1	0	0	0	0	0	0	0	0	21	22	2,032	
	27 MARINDUQUE	0	1	1	0	1	0	0	0	1	0	1	5	545	
	28 MINDORO ORIENTAL	1	0	0	0	1	3	6	1	3	0	33	48	8,290	
	29 MINDORO OCCIDENTAL	0	2	3	1	0	0	0	0	0	1	47	54	10,328	
	30 ROMBLON	0	0	0	0	0	0	0	0	2	0	0	2	145	
	31 PALAWAN	0	1	1	1	0	1	2	2	6	13	14	41	7,222	
	sub-total	6	8	7	4	2	7	9	7	17	37	194	298	43,466	
	V	32 CAMARINES NORTE	0	0	3	0	1	2	0	1	1	4	6	18	1,469
		33 CAMARINES SUR	0	3	1	1	0	1	0	3	0	30	57	96	13,012
34 CATANDUANES		1	0	0	0	0	0	0	1	0	0	7	9	1,049	
35 ALBAY		3	1	1	2	1	1	1	1	0	1	66	78	11,835	
36 SORSOGON		0	1	2	0	1	1	4	2	0	17	6	34	4,404	
37 MASBATE		0	0	0	0	0	0	2	2	2	6	9	19	1,854	
sub-total		4	5	7	3	3	5	5	9	4	58	151	254	33,623	
VI	38 AKLAN	1	2	0	0	0	1	0	2	1	6	1	14	1,805	
	39 CAPEZ	0	0	1	0	1	0	1	1	0	6	2	12	1,108	
	40 ANTIQUE	1	0	0	0	1	1	2	1	3	19	13	41	4,649	
	41 ILOILO	1	0	0	2	1	0	2	1	0	21	6	34	4,790	
	42 NEGROS OCCIDENTAL	0	1	0	1	0	0	0	0	0	2	13	17	2,326	
	43 NEGROS DEL NORTE	0	0	0	0	0	0	0	0	0	0	0	0	0	
	sub-total	3	3	1	3	3	2	5	5	4	54	35	118	14,678	
VII	44 CEBU	0	0	1	0	1	3	0	1	3	0	2	11	1,855	
	45 NEGROS ORIENTAL	1	1	0	0	2	0	6	0	1	10	5	26	4,885	
	46 BOHOL	0	0	0	0	2	0	2	8	4	22	1	39	4,657	
	47 SIKUJOR	0	0	0	0	0	0	0	0	0	0	0	0	0	
	sub-total	1	1	1	0	5	3	8	9	8	32	8	76	11,397	
VIII	48 NORTHERN SAMAR	0	1	0	1	1	0	0	0	0	10	0	13	1,255	
	49 SAMAR	0	0	1	1	0	2	0	1	0	2	3	10	1,099	
	50 EASTERN SAMAR	0	0	0	0	0	0	0	0	0	0	2	2	252	
	51 NORTHERN LEYTE	1	1	3	1	2	2	1	1	2	40	47	101	16,226	
	52 SOUTHERN LEYTE	0	0	1	0	2	0	0	0	0	11	6	20	2,231	
	sub-total	1	2	5	3	5	4	1	2	2	63	58	146	21,063	
IX	53 ZAMBOANGA DEL NORTE	0	1	1	1	0	2	1	0	0	8	1	15	2,223	
	54 ZAMBOANGA DEL SUR	0	0	1	2	1	0	2	2	1	8	34	51	7,867	
	55 BASILAN	0	0	0	0	0	0	0	0	0	0	2	2	155	
	56 SULU	0	0	0	0	0	0	0	0	0	0	0	0	0	
	57 TAWI-TAWI	0	0	0	0	0	0	0	0	0	0	0	0	0	
	sub-total	0	1	2	3	1	2	3	2	1	16	37	68	10,245	
X	58 SURIGAO DEL NORTE	0	0	1	1	1	0	4	2	0	4	9	22	2,410	
	59 CAMIGUIN	0	1	0	0	0	0	0	1	0	1	0	3	540	
	60 AGUSAN DEL NORTE	4	0	2	0	0	0	4	1	4	12	16	43	6,007	
	61 MISAMIS ORIENTAL	0	1	0	1	1	2	0	3	1	3	4	16	2,490	
	62 MISAMIS OCCIDENTAL	1	3	1	1	0	0	0	1	0	7	6	20	2,710	
	63 BUKIDNON	1	2	0	2	0	3	3	5	3	9	3	31	5,217	
	64 AGUSAN DEL SUR	1	1	0	0	0	0	0	0	3	8	3	16	3,025	
sub-total	7	8	4	5	2	5	11	13	11	44	41	151	22,399		
XI	65 SURIGAO DEL SUR	0	3	0	1	4	1	0	0	0	8	5	22	3,619	
	66 DAVAO ORIENTAL	0	0	0	1	0	1	2	2	1	3	2	12	1,740	
	67 DAVAO DEL NORTE	0	0	1	0	0	2	1	1	0	1	9	15	3,260	
	68 DAVAO DEL SUR	0	1	1	0	2	3	3	4	5	13	0	32	5,726	
	69 SOUTH COTABATO	0	0	0	2	0	0	1	2	2	17	7	31	5,935	
	sub-total	0	4	2	4	6	7	7	9	8	42	23	112	20,280	
XII	70 LANAO DEL NORTE	1	0	1	0	0	0	2	2	1	6	7	20	3,258	
	71 LANAO DEL SUR	0	0	0	1	1	0	0	1	1	1	5	10	2,190	
	72 NORTH COTABATO	0	0	0	0	1	0	0	0	2	13	8	24	4,897	
	73 MAGUINDANAO	0	0	0	0	0	0	0	3	5	22	13	43	8,255	
	74 SULTAN KUDARAT	0	0	1	0	1	0	0	0	0	11	9	22	4,878	
sub-total	1	0	2	1	3	0	2	6	9	53	42	119	23,478		
Total	59	48	62	32	40	56	70	88	87	678	1,203	2,423	351,769		



YEARS AFTER COMPLETION OF CONSTRUCTION FOR CISS  
REQUIRING REHABILITATION/IMPROVEMENT WORKS

Table B2-26

(Unit: Nos.)

Region	Province	Nos. of CISSs Requiring Rehabilitation / Improvement										Total	Designed Irigable Area (ha)	
		1 yr	2 yr	3 yr	4 yr	5 yr	6 yr	7 yr	8 yr	9 yr	Over 10 yr			Unknown
I	1 ILOCOS NORTE	1	0	3	0	1	0	0	1	1	1	79	87	9,778
	2 ABRA	1	0	0	0	0	2	1	1	1	1	25	32	4,241
	3 ILOCOS SUR	0	1	1	0	0	2	0	0	0	2	51	57	6,573
	4 MOUNTAIN PROVINCE	3	0	0	1	0	0	0	0	0	0	2	6	750
	5 LA UNION	1	1	0	0	0	0	1	0	0	15	8	26	3,348
	6 BRNGUET	0	2	1	0	0	0	0	0	1	2	1	7	449
	7 PANGASINAN	2	1	1	0	1	3	5	1	2	72	47	135	20,572
	Sub-total	8	5	6	1	2	7	7	3	5	93	213	350	45,711
II	8 BATANES	0	0	0	0	0	0	0	0	0	0	0	0	0
	9 CAGAYAN	0	0	0	0	0	0	1	3	4	18	25	51	7,706
	10 KALINGA APAYAO	2	0	0	0	0	1	1	1	0	0	4	9	1,198
	11 ISABELA	0	0	2	0	0	1	0	4	1	7	0	15	2,730
	12 IFUGAO	1	0	0	1	1	0	0	0	0	23	4	30	2,509
	13 NUEVA VISCAYA	0	0	0	0	0	1	1	3	3	8	27	43	5,468
	14 QUIRINO	0	0	0	0	1	2	1	3	3	7	2	19	2,380
	sub-total	3	0	2	1	2	5	4	14	11	63	62	167	22,011
III	15 NUEVA ECJA	0	0	0	0	0	0	0	0	0	1	5	6	1,609
	16 TARLAC	7	1	1	0	0	0	0	0	0	2	19	30	6,861
	17 ZAMBALES	0	0	0	0	0	0	0	0	1	1	1	3	659
	18 PAMPANGA	1	1	0	0	0	0	1	0	0	0	12	15	2,240
	19 BULACAN	0	0	1	1	0	0	0	0	0	0	1	3	350
	20 BATAAN	0	0	0	0	0	0	0	1	0	2	8	11	895
	sub-total	8	2	2	1	0	0	1	1	1	6	46	68	12,614
IV	21 AURORA	1	0	1	1	0	0	0	2	2	0	9	16	3,006
	22 QUEZON	1	0	1	1	0	1	0	1	0	1	1	7	667
	23 RIZAL	0	0	0	0	0	1	0	0	0	11	5	17	1,650
	24 CAVITE	0	1	0	0	0	0	0	0	0	0	1	2	158
	25 LAGUNA	1	1	0	0	0	1	0	0	1	0	11	15	1,511
	26 BATANGAS	0	0	0	0	0	0	0	0	0	0	0	0	0
	27 MARINDUQUE	0	1	1	0	1	0	0	0	1	0	0	4	370
	28 MINDORO ORIENTAL	1	0	0	0	1	3	4	1	2	0	28	40	7,220
	29 MINDORO OCCIDENTAL	0	1	2	1	0	0	0	0	0	0	8	12	2,121
	30 ROMBLON	0	0	0	0	0	0	0	0	2	0	0	2	145
	31 PALAWAN	0	1	0	1	0	1	1	1	4	9	1	19	3,457
		sub-total	4	5	5	4	2	7	5	5	12	21	64	134
V	32 CAMARINES NORTE	0	0	3	0	1	2	0	1	1	4	1	13	1,051
	33 CAMARINES SUR	0	1	1	1	0	1	0	1	0	22	15	42	6,739
	34 CATANDUANES	1	0	0	0	0	0	0	0	0	0	5	6	876
	35 ALBAY	2	0	1	2	1	1	1	1	0	1	21	31	4,923
	36 SORSOGON	0	1	2	0	0	1	3	2	0	14	4	27	3,694
	37 MASBATE	0	0	0	0	0	0	0	2	1	3	2	8	731
		sub-total	3	2	7	3	2	5	4	7	2	44	48	127
VI	38 ARLAN	0	1	0	0	0	0	0	2	1	4	0	8	1,151
	39 CAPIZ	0	0	1	0	1	0	1	1	0	5	2	11	1,048
	40 ANTIQUE	1	0	0	0	1	1	2	1	3	19	11	39	4,399
	41 ILOILO	1	0	0	2	0	0	1	0	0	14	2	20	2,760
	42 NEGROS OCCIDENTAL	0	0	0	0	0	0	0	0	0	0	0	0	0
	43 NEGROS DEL NORTE	0	0	0	0	0	0	0	0	0	0	0	0	0
	sub-total	2	1	1	2	2	1	4	4	4	42	15	78	9,358
VII	44 CEBU	0	0	0	0	1	1	0	1	2	0	1	6	992
	45 NEGROS ORIENTAL	1	1	0	0	1	0	6	0	1	5	2	17	3,045
	46 BOHOL	0	0	0	0	0	0	1	8	2	17	1	29	3,444
	47 SIQUIJOR	0	0	0	0	0	0	0	0	0	0	0	0	0
	sub-total	1	1	0	0	2	1	7	9	5	22	4	52	7,881
VIII	48 NORTHERN SAMAR	0	0	0	0	0	0	0	0	0	9	0	9	910
	49 SAMAR	0	0	1	1	0	2	0	1	0	2	2	9	1,049
	50 EASTERN SAMAR	0	0	0	0	0	0	0	0	0	0	1	1	167
	51 NORTHERN LEYTE	1	1	3	1	2	2	0	1	2	38	41	92	14,475
	52 SOUTHERN LEYTE	0	0	1	0	2	0	0	0	0	10	1	14	1,501
	sub-total	1	1	5	2	4	4	0	2	2	59	45	125	18,102
IX	53 ZAMBOANGA DEL NORTE	0	1	0	1	0	1	1	0	0	8	0	12	1,968
	54 ZAMBOANGA DEL SUR	0	0	0	2	0	0	1	0	0	3	13	19	3,177
	55 BASILAN	0	0	0	0	0	0	0	0	0	0	1	1	80
	56 SULU	0	0	0	0	0	0	0	0	0	0	0	0	0
	57 TAWI-TAWI	0	0	0	0	0	0	0	0	0	0	0	0	0
	sub-total	0	1	0	3	0	1	2	0	0	11	14	32	5,225
X	58 SURIGAO DEL NORTE	0	0	0	0	0	0	1	1	0	2	0	4	260
	59 CAMIGUIN	0	0	0	0	0	0	0	1	0	1	0	2	160
	60 AGUSAN DEL NORTE	4	0	1	0	0	0	4	1	4	12	5	31	4,317
	61 MISAMIS ORIENTAL	0	1	0	1	1	2	0	3	1	3	1	13	1,725
	62 MISAMIS OCCIDENTAL	1	3	1	1	0	0	0	1	0	7	3	17	2,474
	63 BUKIDNON	0	2	0	0	0	2	3	4	3	7	0	21	3,967
	64 AGUSAN DEL SUR	0	0	0	0	0	0	0	0	3	8	0	11	1,975
	sub-total	5	6	2	2	1	4	8	11	11	40	9	99	14,878
XI	65 SURIGAO DEL SUR	0	3	0	1	4	0	0	0	0	7	3	18	2,759
	66 DAVAO ORIENTAL	0	0	0	1	0	1	1	2	1	3	0	9	1,360
	67 DAVAO DEL NORTE	0	0	0	0	0	1	0	0	0	0	2	3	620
	68 DAVAO DEL SUR	0	1	1	0	0	1	0	1	1	8	1	14	1,996
	69 SOUTH COTABATO	0	0	0	2	0	0	1	2	2	16	0	23	3,935
	sub-total	0	4	1	4	4	3	2	5	4	34	6	67	10,670
XII	70 LANA O DEL NORTE	1	0	1	0	0	0	2	2	1	4	0	11	1,466
	71 LANA O DEL SUR	0	0	0	0	1	0	0	1	1	1	0	4	730
	72 NORTH COTABATO	0	0	0	0	1	0	0	0	2	11	3	17	3,497
	73 MAGUINDANAO	0	0	0	0	0	0	0	2	4	10	3	19	3,455
	74 SULTAN KUDARAT	0	0	1	0	1	0	0	0	0	10	3	15	3,357
	sub-total	1	0	2	0	3	0	2	5	8	36	9	66	12,563
	Total	36	28	33	23	24	38	46	66	65	471	535	1,365	197,274



**ANNEX B-3**  
**CROSS-CHECKING OF DESIGNED IRRIGABLE AREAS**

Table of Contents

	<u>Page</u>
1. General .....	B3-1
2. Estimation of River Discharge .....	B3-2
3. Estimation of Diversion Water Requirement .....	B3-3
4. Water Balance .....	B3-6
5. Sub-Projects with Adequate Designed Irrigable Areas .....	B3-7

LIST OF TABLES

Table B3-01	Basic Data for Water Balance .....	B3-8
Table B3-02	Specific Discharge .....	B3-9
Table B3-03	Unit Diversion Water Requirement .....	B3-10

LIST OF FIGURES

Fig. B3-01	Work Flow for Cross-Checking of Designed Irrigable Areas .....	B3-11
Fig. B3-02	Climate Type of the Philippines .....	B3-12
Fig. B3-03	Specific Discharge .....	B3-13
Fig. B3-04	Proposed Cropping Patterns .....	B3-14
Fig. B3-05	Effective Rainfall Curve .....	B3-15



## ANNEX B-3 CROSS-CHECKING OF DESIGNED IRRIGABLE AREAS

### General

- B.01 Designed irrigable areas (wet/dry seasons) were answered in the questionnaires. Although these data were most important and basic for the master plan study, inadequate or unreliable data were found in answers. These designed irrigable areas were, therefore, cross-checked for the master plan study by balancing estimated available river discharge and diversion water requirement of these areas.
- B.02 The river discharge was estimated, multiplying specific discharge computed from collected gauged discharge by catchment area. The diversion water requirement was estimated from pan-evaporation data by assuming relationship of pan-evaporation and consumptive water use. The cross-checking was made for sub-projects with catchment area data (CISs: 1,229 nos., CIPs: 845 nos.). The sub-projects without catchment area were not be cross-checked (CISs: 1,194, CIPs: 621).
- B.03 General procedures for estimation of river discharge and diversion water requirement were as follows:

#### Estimation of river discharge

- (1) Determination of climate type for each province
- (2) Determination of representative annual rainfall for each province
- (3) Calculation of specific discharge for each climate type
- (4) Calculation of specific discharge for each province
- (5) Calculation of specific discharge for each sub-project

#### Estimation of diversion water requirement

- (1) Determination of cropping pattern for each province
  - (2) Determination of pan-evaporation for each province
  - (3) Calculation of unit diversion water requirement for each province
  - (4) Calculation of diversion water requirement for each sub-project
- B.04 The explanation of the above procedures are given hereinunder and a work flow for the cross-checking is shown in Fig. B3-01.

## Estimation of River Discharge

### B.05 Climate Types

The Philippines climate is generally divided into the following four types mainly according to rainfall distribution pattern.

Type I: Two pronounced seasons. Dry from November to April, wet during the rest of the year. The maximum rain occurs from June to October. The dry season lasts from three to six months. Annual rainfall is generally from 1,500 to 2,000 mm.

Type II: No dry season. Very pronounced maximum rain period from November to January. Annual rainfall is generally from 2,500 to 4,200 mm.

Type III: Seasons are not very pronounced. Relatively dry from November to April and wet during the rest of the year. Annual rainfall is generally from 2,000 to 3,500 mm.

Type IV: Rainfall is more or less evenly distributed throughout year.

A climate type of each province is shown in Fig. B3-02 and Table B3-01.

### B.06 Representative Annual Rainfall for Each Province

Considering the above climate type, isohyetal map, and topography, representative annual rainfall for each province was determined from rainfall data of 75 rainfall stations collected during Phase-I field investigation stage. When rainfall data were not available in a province, neighbouring province's rainfall was adopted as rainfall data for the province, considering isohyetal map and climate type.

The representative annual rainfall for each province determined in the above manners is shown in Table B3-01, and each monthly rainfall is shown in PART-C of DATABOOK.

### B.07 Specific Discharge for Each Climate Type

On an assumption that river discharge is proportional to catchment area and rainfall, the following monthly specific discharge for each climate type was calculated using discharge data of 198 gauging stations and the representative rainfall for each province.



$$Q_{sm} = Q_o / (A_o \times R_o / 1,000)$$

Q<sub>sm</sub>: Monthly specific discharge for annual rainfall of 1,000 mm (lit/sec/km<sup>2</sup>/1,000 mm)

Q<sub>o</sub>: Monthly average river discharge (lit/sec)

A<sub>o</sub>: Catchment area at gauging station (km<sup>2</sup>)

R<sub>o</sub>: Annual rainfall (mm)

Monthly specific discharges for four types of climate are shown in Fig. B3-03.

#### B.08 Monthly Specific Discharge for Each Province

Fig. B3-03 indicate relationship between river discharge and catchment area by climate type although there are some ranges in the specific discharges. Monthly specific discharge for each province (Q<sub>s</sub>) was estimated multiplying Q<sub>sm</sub> by 1/1000 of representative annual rainfall of each province and the results are shown in Table B3-02.

#### B.09 Monthly River Discharge for Each Sub-Project

Monthly river discharge for each sub-project was estimated using the following formula.

$$Q = Q_s \times A \times R_m$$

Q: Monthly river discharge for each sub-project (lit/sec)

Q<sub>s</sub>: Monthly specific discharge for each climate type (lit/sec/km<sup>2</sup>)

A: Catchment area at diversion site for each sub-project (km<sup>2</sup>)

R<sub>m</sub>: Monthly rainfall for each province (mm)

### Estimation of Diversion Water Requirement

#### B.10 Diversion Water Requirement

Since there were no measured consumption water use data and available meteorological data required for use of Penman method were very limited, consumptive water use for wet/dry season paddys was estimated on a monthly basis from pan-evaporation on an assumption that the consumptive water use be proportional to pan-evaporation. Unit diversion water requirement for each province was estimated by using the following formula.

$$DWR_o = (LSIR + LPIR + CU + P - Re) \div EF \div 8.64$$

- DWR<sub>o</sub>: Unit diversion water requirement (lit/sec/ha)  
LSIR: Land soaking irrigation requirement (mm/day)  
LPIR: Land preparation irrigation requirement (mm/day)  
CU: Consumptive water use (mm/day)  
P: Percolation (mm/day)  
Re: Effective rainfall (mm/day)  
EF: Overall irrigation efficiency

#### B.11 Proposed Cropping Pattern

Major crops for SSIDP are wet season paddy and dry season paddy, and diversified crops are at present very minor. Therefore, proposed cropping pattern for SSIDP was assumed to be a double cropping of paddy a year. The proposed cropping pattern for each province was prepared based on those of NIA (PDD). When there was no proposed cropping pattern for a province, present cropping pattern obtained from NIA (PDD) was adopted as proposed pattern for the province. As a result, nine proposed cropping patterns were prepared as shown in Fig. B3-04.

#### B.12 Criteria in preparing the cropping pattern were as follows:

- (1) A staggering period is one month.
- (2) A land soaking period is one week.
- (3) A growing period is four months.
- (4) A fallow period is one month.
- (5) Drainage starts two weeks before harvest.

The above criteria were judged generally adequate by using the computerized database.

#### B.13 Representative Pan-Evaporation for Each Province

Representative pan-evaporation for each province was selected from collected pan-evaporation data of 30 meteorological observation stations. When there were no data for a province, data of neighbouring province were adopted as pan-evaporation data for the province. The selected pan-evaporation for each province is shown in Table B3-01.

B.14 Land Soaking Irrigation Requirement

Land soaking irrigation requirement (LSIR) was assumed as follows:

$$LSIR = \frac{S_n}{t} + E_p \times 0.80 + P - R_e$$

S<sub>n</sub>: Soil saturation requirement (150 mm)

t: Land soaking period (7.5 days or 1/4 month)

E<sub>p</sub>: Pan-evaporation (mm/day)

B.15 Land Preparation irrigation Requirement

Land preparation irrigation requirement (LPIR) was assumed as follows:

$$LPIR = E_p \times 0.80 + P - R_e$$

E<sub>p</sub>: Pan-evaporation (mm/day)

P: Percolation (2.5 mm/day)

R<sub>e</sub>: Effective rainfall (mm/day)

B.16 Consumptive Water Use

Consumptive water use (CU) was estimated by the following formula and coefficient (K) was empirically assumed.

$$CU = E_p \times K$$

E<sub>p</sub>: Pan-evaporation (mm/day)

K: Consumptive use coefficients of paddy as shown below.

Percentage of Crop Growing Stage

0	10	20	30	40	50	60	70	80	90	100
0.80	0.95	1.05	1.15	1.20	1.30	1.30	1.20	1.10	0.90	0.50

B.17 Percolation

Since about 90% of sub-projects are located in silt and loam area, percolation was assumed at 2.5 mm/day.

B.18 Effective Rainfall

Effective rainfall was estimated on a monthly basis for each province, multiplying monthly rainfall by monthly effective rainfall coefficient obtained from "monthly

effective rainfall curve" which was empirically determined. The curve is shown in Fig. B3-05.

**B.19 Overall Irrigation Efficiency**

Averaged overall irrigation efficiency for CISs/CIPs was about 70% which was judged considerably high. In the estimation of diversion water requirement, overall irrigation efficiency of 58% was adopted with the following assumptions.

Conveyance efficiency	:	90%
Operation efficiency	:	80%
On-farm efficiency	:	80%

**B.20 Calculation of Unit Diversion Water Requirement for Each Province**

The unit diversion water requirement for each province was estimated in the above-mentioned manners and the results are shown in Fig. B3-03.

**Water Balance**

B.21 In order to check adequacy of designed irrigable areas (wet and dry seasons), replace inadequate areas by adequate areas and fill unknown designed irrigable areas of dry season by adequate areas, a water balance between the estimated river discharge and diversion water requirement was made on a monthly basis for each sub-project using the following formula.

$$q = Q_s \times A \times 1,000 - DWR_o \times IA$$

q: Balanced discharge (lit/sec)

Q<sub>s</sub>: Monthly specific discharge of each province (lit/sec/km<sup>2</sup>)

A: Catchment area at a diversion site of respective sub-project (km<sup>2</sup>)

DWR<sub>o</sub>: Unit diversion water requirement of respective sub-project (lit/sec/ha)

IA: Designed irrigable area of respective sub-project (wet or dry season) (ha)

B.22 The above water balance was made for sub-projects with catchment area data (1,229 CISs, 845 CIPs), while the water balance could not be made for those without catchment area data (1,194 CISs, 624 CIPs) and those were deemed as sub-projects requiring re-study or investigation (feasibility study).

Sub-Projects	CISs (no.)	CIPs (no.)
With Catchment Area Data	1,229 (50.7%)	845 (57.6%)
Without Catchment Area Data	1,194 (49.3%)	621 (42.4%)
Total	2,423 (100%)	1,466 (100%)

B.23 The results of the water balance were used as follows:

- $q \geq 0$  : Designed irrigable area (wet season) of sub-project was judged adequate.  
 $q < 0$  : Designed irrigable area (wet season) of sub-project was judged inadequate. In case that designed irrigable area (dry season) was unknown, calculated irrigable area was adopted as it.

#### Sub-Projects with Adequate Designed Irrigable Areas

B.24 As a result of the water balance, designed irrigable areas (wet season) of 1,153 CISs and 762 CIPs were judged adequate. The designed irrigable areas of 76 CISs and 80 CIPs were judged inadequate. These sub-projects were deemed as sub-projects requiring re-study or investigation. The remaining sub-projects of 1,194 CISs and 621 CIPs were deemed as sub-projects without catchment area (designed irrigable area of which could not be cross-checked) as shown in the following table.

Sub-Projects	CISs (no.)	CIPs (no.)	Total (no.)
With Adequate Designed Irri. Area	1,153	762	1,915
With Inadequate Designed Irri. Area Requiring Re-Study or Investigation	76	83	159
Without Catchment Area Data	1,194	621	1,815
Total	2,423	1,466	3,889

## BASIC DATA FOR WATER BALANCE

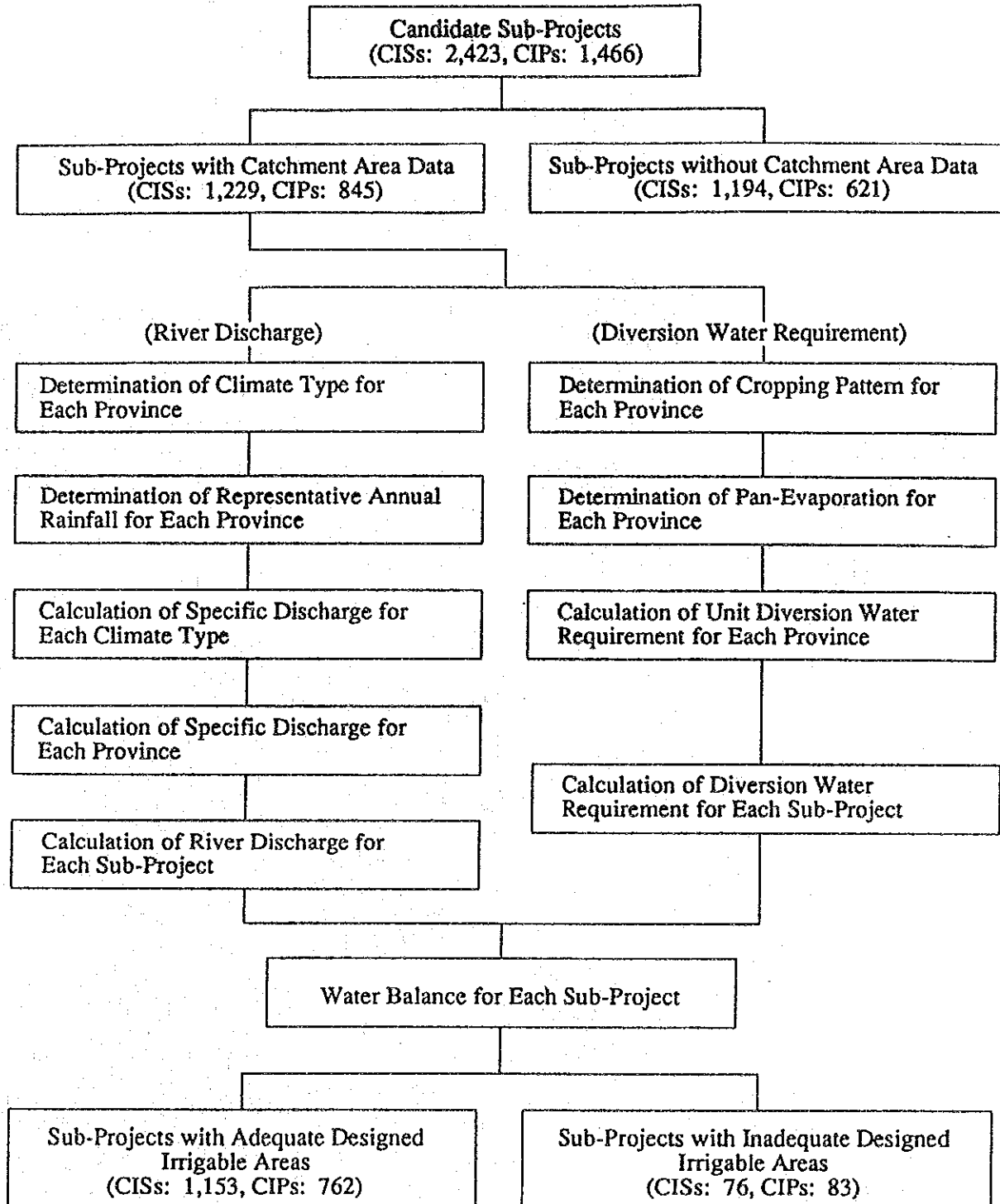
Region	Province	Climate Type	Cropping Pattern	Annual Rainfall for Irrigation Plan (mm)	Pan-evaporation (mm)
I	1 ILOCOS NORTE	1	7	2,308	2,242
I	2 ABRA	1	7	3,205	2,242
I	3 ILOCOS SUR	1	7	2,330	1,999
I	4 MOUNTAIN PROVINCE	1	5	2,330	1,999
I		3	5	4,134	1,786
I	5 LA UNION	1	8	2,386	1,797
I	6 BENGUET	1	8	3,452	1,051
I	7 PANGASINAN	1	8	2,305	2,106
II	8 BATANES	3	8	2,867	2,189
II	9 CAGAYAN	3	8	1,723	2,189
II		4	8	3,271	1,524
II	10 KALINGA-APAYAO	3,(1)	4	2,692	2,189
II	11 ISABELA	3	5	1,752	1,786
II		4	5	3,271	1,524
II	12 IFUGAO	3,(1)	4	4,134	1,786
II	13 NUEVA VISCAYA	3,(1)	4	2,194	1,786
II	14 QUIRINO	3	4	2,194	1,786
II	15 NUEVA ECJA	1,(4)	8	1,900	1,624
III		3	8	2,194	1,786
III	16 TARLAC	1	4	1,965	1,767
III	17 ZAMBALES	1	8	3,424	1,767
III	18 PAMPANGA	1	6	1,986	1,740
III	19 BULACAN	1,(4)	7	2,060	1,977
III	20 BATAAN	1	7	2,625	1,740
IV	21 AURORA	4	1	3,271	1,524
IV	22 QUEZON	2	4	3,347	1,518
IV		3	4	2,357	1,885
IV		4	4	3,271	1,524
IV	23 RIZAL	1,(4)	8	2,310	1,885
IV	24 CAVITE	1	7	1,820	1,885
IV	25 LAGUNA	1	8	1,920	1,885
IV	26 BATANGAS	1	8	1,820	1,885
IV		3	8	2,357	1,885
IV	27 MARINDUQUE	4	7	1,726	1,392
IV	28 ORIENTAL MINDORO	4,(1)	6	1,961	1,392
IV	29 OCCIDENTAL MINDORO	1,(4)	9	2,302	2,388
IV	30 ROMBLON	3	8	2,079	1,937
IV	31 PALAWAN	1	7	1,578	2,388
V	32 CAMARINES NORTE	2	5	2,079	1,937
V	33 CAMARINES SUR	2	4	3,567	1,684
V		4	4	2,388	1,684
V		4	4	1,726	1,392
V	34 CATANDUANES	2	4	2,974	1,684
V	35 ALBAY	2	4	2,590	1,684
V		4	4	1,726	1,392
V	36 SORSOGON	2	4	2,561	1,684
V	37 MASBATE	3	7	1,858	1,937
VI	38 AKLAN	3	4	3,004	1,937
VI	39 CAPIZ	3	5	2,598	1,937
VI	40 ANTIQUE	1	5	3,685	1,851
VI	41 ILOILO	1	5	2,004	1,851
VI		3	5	2,233	1,937
VI	42 NEGROS OCCIDENTAL	1,(3)	4	2,566	1,851
VI	43 NEGROS DER NORTE	3	8	1,622	1,994
VII	44 CEBU	3	3	1,622	1,994
VII	45 NEGROS ORIENTAL	1	5	3,511	1,851
VII		3	5	1,300	1,994
VII	46 BOHOL	4	8	1,772	1,485
VII	47 SIQUJOR	3	8	1,622	1,994
VIII	48 NORTHERN SAMAR	2,(4)	5	3,304	1,462
VIII	49 SAMAR	2,(4)	3	2,596	1,589
VIII	50 EASTERN SAMAR	2	5	3,407	1,718
VIII	51 NORTHERN LEYTE	2	8	2,149	1,589
VIII		4	8	2,108	1,485
VIII	52 SOUTHERN LEYTE	2	8	3,498	1,589
IX		4	8	2,492	1,485
IX	53 ZAMBOANGA DEL NORTE	3	4	2,939	1,994
IX		4	4	2,345	1,485
IX	54 ZAMBOANGA DEL SUR	3	5	1,206	1,994
IX		4	5	2,863	1,485
IX	55 BASHLAN	4	2	1,858	2,489
IX	56 SULU	4	2	2,090	2,489
IX	57 TAWI TAWI	4	2	2,090	2,489
X	58 SURIGAO DEL NORTE	2	5	3,817	1,341
X	59 CAMIGUIN	2	5	2,219	1,341
X	60 AGUSAN DER NORTE	2	7	2,219	1,341
X	61 MISAMIS ORIENTAL	2	8	2,219	1,341
X		3	8	1,677	1,971
X	62 MISAMIS OCCIDENTAL	4	5	3,775	1,485
X	63 BUKIDNON	3	4	2,753	1,971
X		4	4	3,291	1,414
X	64 AGUSAN DEL SUR	2,(3)	8	4,168	1,341
XI	65 SURIGAO DEL SUR	2	5	4,384	1,071
XI	66 DAVAO ORIENTAL	2	7	1,461	1,341
XI	67 DAVAO DEL NORTE	2	4	2,117	1,341
XI		4	4	1,992	1,414
XI	68 DAVAO DEL SUR	4	5	1,992	1,414
XI	69 SOUTH COTABATO	4	5	1,992	2,489
XII	70 LANA DEL NORTE	4	5	2,044	1,845
XII	71 LANA DEL SUR	4	5	2,044	1,845
XII	72 NORTH COTABATO	4	5	1,942	1,845
XII	73 MAGUINDANAO	4	4	2,220	1,845
XII	74 SULTAN KDALAT	4	5	1,667	1,845



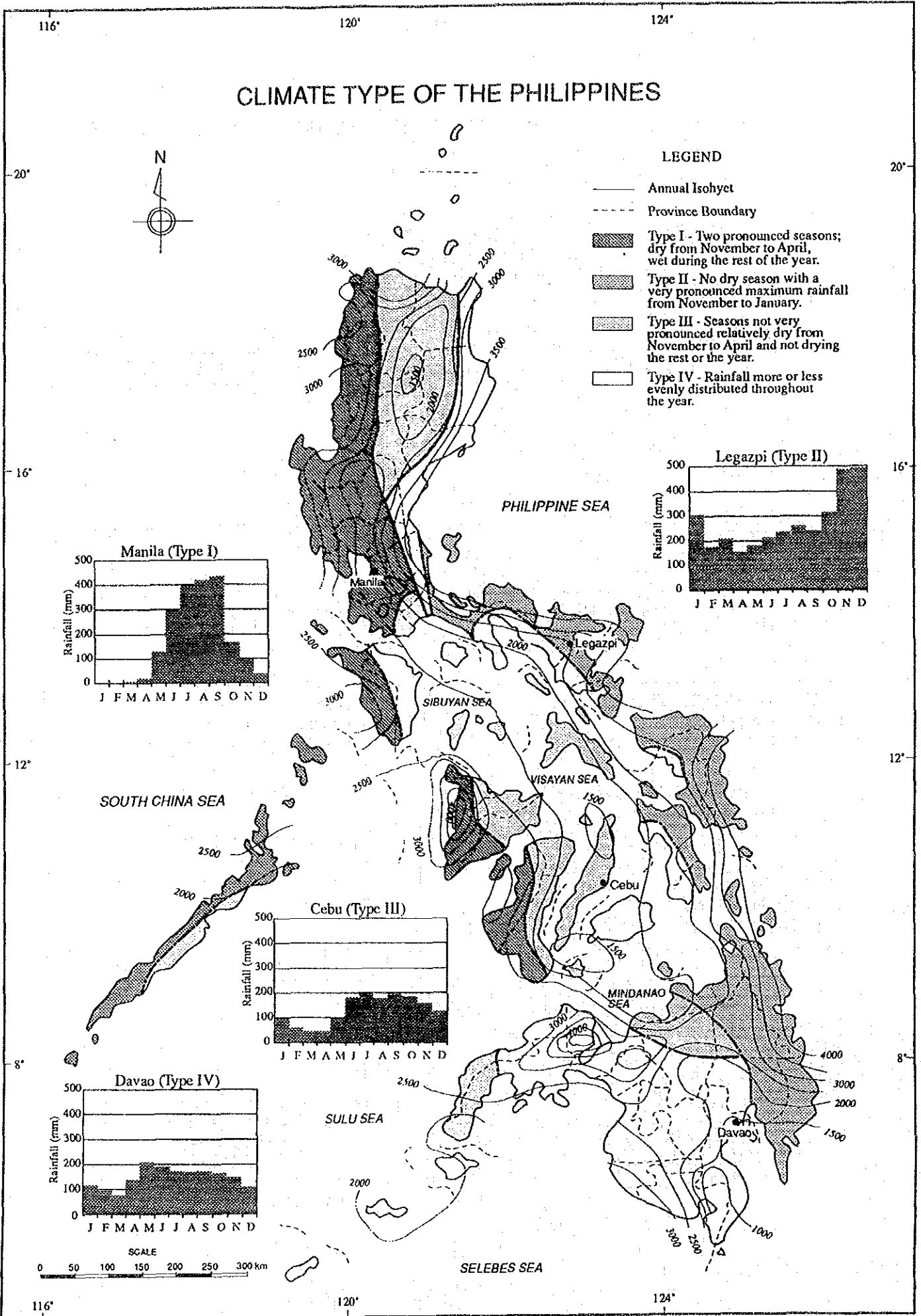




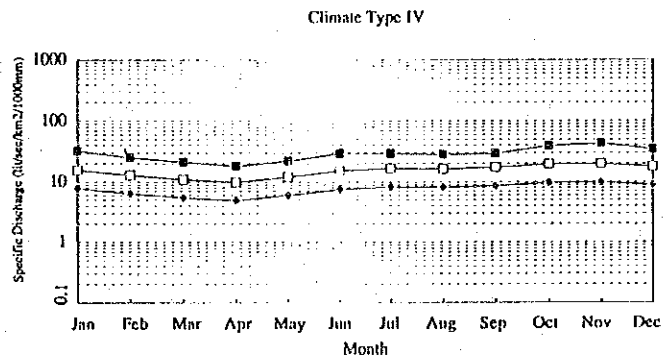
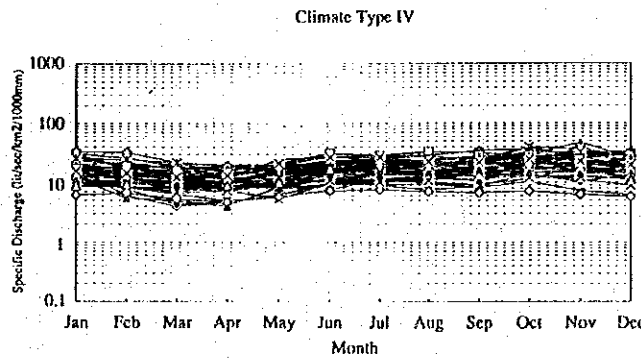
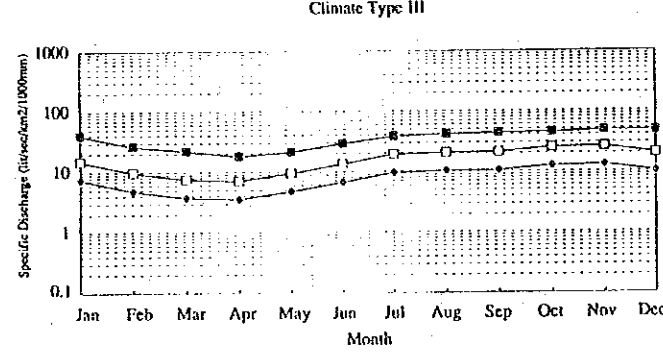
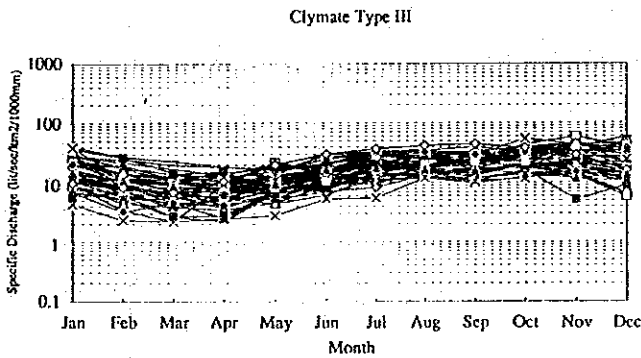
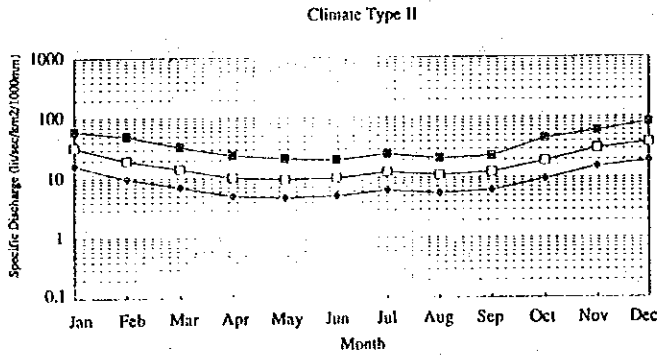
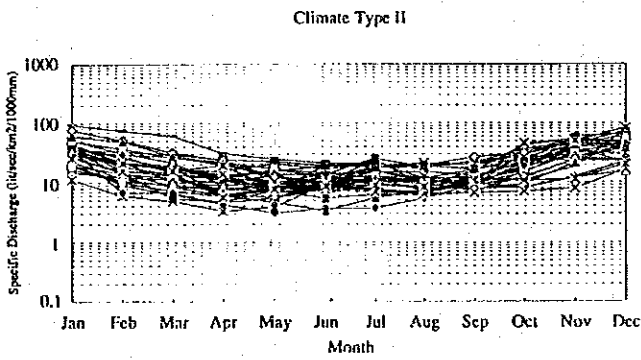
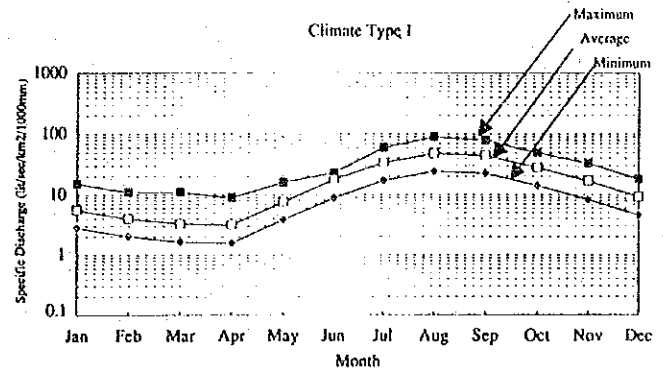
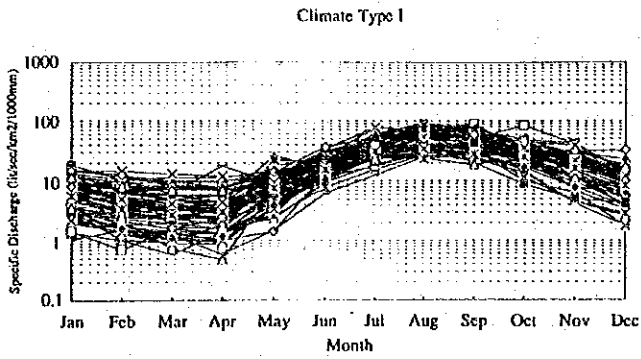
WORK FLOW FOR CROSS-CHECKING OF DESIGNED IRRIGABLE AREAS



# CLIMATE TYPE OF THE PHILIPPINES



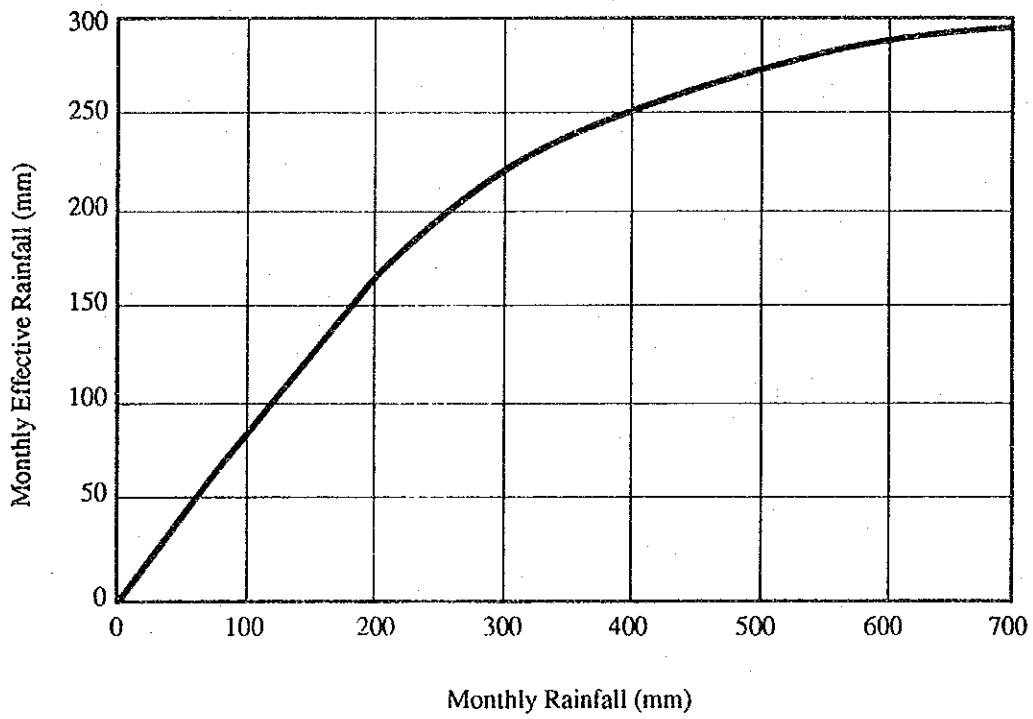
SPECIFIC DISCHARGE



PROPOSED PADDY CROPPING PATTERN

TYPE	M O N T H											
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEPT	OCT	NOV	DEC
1			LS LP	NI		HV		LS LP	NI			HV
2	NI HV		LS LP		NI	HV		LS LP	NI			HV
3	NI HV		LS LP		NI	HV		LS LP	NI			HV
4	NI	HV		LS LP		NI		LS LP	NI			NI
5	NI	HV		LS LP		NI		LS LP	HV			NI
6	NI		HV		LS LP		NI		LS LP	HV		NI
7	NI		HV		LS LP		NI		LS LP	HV		NI
8		NI	HV		LS LP		NI		LS LP	HV		NI
9	LP	NI		HV		LS LP		NI		HV		LS LP

LS: Land Soaking  
 LP: Land Preparation  
 NI: Normal Irrigation  
 HV: Harvesting



EFFECTIVE RAINFALL CURVE



*ANNEX C*

*ADDITIONAL INVENTORY  
SURVEY*





**ANNEX C-1**  
**QUESTIONNAIRES FOR ADDITIONAL INVENTORY SURVEY**

Table of Contents

	<u>Page</u>
1. Instruction for Answering Questionnaire for Additional Inventory Survey ..	C1-1
2. Additional Questionnaire for Inventory Survey (Existing Project).....	C1-5
3. Additional Questionnaire for Inventory Survey (New Project).....	C1-9
4. Questionnaire on Average Prices of Major Works (Pacquiao Contract Base) .....	C1-12
5. Questionnaire on Average Prices of Materials and Labour Wages (Pacquiao Contract Base) .....	C1-13



JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)  
THE MASTER PLAN STUDY  
ON  
THE SMALL-SCALE IRRIGATION DEVELOPMENT PROJECT (SSIDP)  
  
INSTRUCTION FOR ANSWERING  
QUESTIONNAIRE FOR ADDITIONAL INVENTORY SURVEY

I. Objectives

Questionnaires distributed to PIOs in the middle of August, 1990 were finally returned from all the PIOs on December 3, 1990. The JICA Study Team conducted various analyses of the collected data during three months from December 1990 to February 1991, and found that basic data required for formulation of 10-year development plan are lacking in answers of the filled-out questionnaires although they are supposed to be available at PIOs.

The JICA Study Team and NIA discussed the above problem on February 25, 1991 and have agreed that an additional inventory survey will be conducted by NIA from March to May in 1991 on the basis of the questionnaires to be prepared by the JICA Study Team. There are the following three kinds of questionnaires:

- (1) Additional questionnaires for CISs requiring rehabilitation/improvement works.
- (2) Additional questionnaires for CIPs which have feasibility studies.
- (3) Questionnaires on (i) prices of materials and labour wages and (ii) unit prices of major works. (Each one set for every PIO)

II. Sub-Projects for Additional Inventory Survey

The number of sub-projects for the master plan study is 3,889 in total (CISs: 2,423, CIPs: 1,466). Out of these sub-projects, 967 sub-projects (CISs: 763, CIPs: 204) are selected for additional inventory survey, considering adequacy of designed irrigable area, necessity of rehabilitation/improvement works for CISs and availability of feasibility study for CIPs. The number of sub-projects in each PIO for additional inventory survey is shown in Table 1 and the sub-project names of each province are shown in the attached lists.

### III. Work Schedule for Additional Inventory Survey

All the PIEs are kindly requested to fill the questionnaires and submit the filled-out questionnaires to NIA Central Office through NIA Regional Office with the following address and schedule.

(1) Address:

TO: The Administrator  
National Irrigation Administration  
EDSA, Diliman, Quezon City

Attention: Mr. Calixto P. Timonera  
NIA Counterpart Team Leader for SSIDP

(2) Schedule:

Filled-out questionnaires: to the Regional Office  
not later than April 30, 1991

to the Central office  
not later than May 10, 1991

### IV. Additional Questionnaires and Appurtenant Documents

Before answering additional questionnaires, all the PIEs are requested to check availability of documents for additional inventory survey and to read instructions for answering additional questionnaires. A list of distributed documents is shown below and the instructions for answering are given in the following clause.

#### List of Documents for Additional Inventory Survey

- |   |   |                         |
|---|---|-------------------------|
| (1) Instruction for answering questionnaires                        | : | 1 set                   |
| (2) List of sub-projects (CISs) for additional inventory survey     | : | 1 set                   |
| (3) List of sub-projects (CIPs) for additional inventory survey     | : | 1 set                   |
| (4) Additional questionnaires for CISs                              | : | As specified in Table 1 |
| (5) Additional questionnaires for CIPs                              | : | As specified in Table 1 |
| (6) Questionnaires for average prices of materials and labour wages | : | 1 sheet                 |
| (7) Questionnaires for average unit prices of major works           | : | 1 sheet                 |
| (8) Sample answers of (4), (5), (6) and (7)                         | : | 1 set                   |

V. General Instructions

- (1) Kindly answer all the questions in accordance with the instruction and sample answers.
- (2) Where the question has parenthesis, please fill the appropriate spaces with check mark "√".
- (3) On descriptive questions, please write legibly in block letters and briefly within 30 letters.
- (4) Where the answer is in number, please confirm necessity of a decimal point according to the sample answer. If decimal point is used in the sample answer, write the numbers (figures) using decimal point. (Whenever decimal point is used in the answer, two decimal digits are required. For example: 2.00, 3.92 and 45.32)
- (5) Where the answer is in peso, please remove centavos except for unit prices of major works and prices of materials and labour wages.

(good)	(bad)
-----	-----
₱4530	₱4530.21
₱65	₱65.00

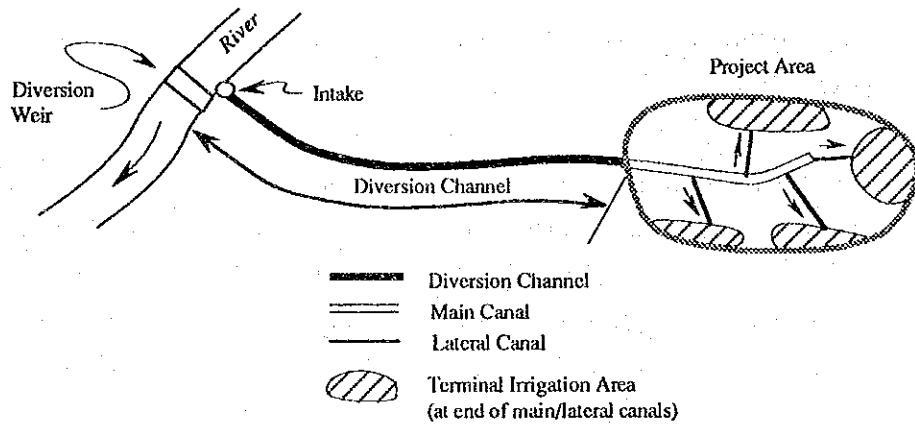
- (6) Where the answer is in number or in peso, please don't use comma (,) in every three digits.

(good)	(bad)
-----	-----
5897490	5,897,490
₱58265400	₱8,265,400

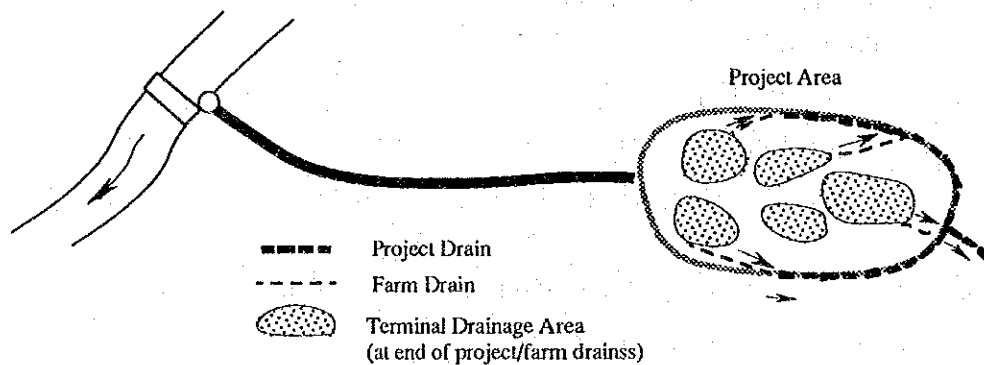
- (7) Where the question is inappropriate, please write "NA" which means "not applicable" in the answer space.
- (8) Where answers are not available, please write "NDA" which means "no data are available" in the answer space.

VI. Specific Instructions

- (1) Firstly fill name and scheme no. of sub-projects as shown in the attached lists.
- (2) "Diversion channel" used in the questionnaires means irrigation canal conveying irrigation water from a diversion weir to an entrance of the project area as shown below



- (3) "Terminal Irrigation Area" means irrigation area at the end of main/lateral canals as shown above.
- (4) "Terminal Drainage Area" means drainage area at the end of project/farm drains as shown below.



JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)  
THE MASTER PLAN STUDY  
ON  
THE SMALL-SCALE IRRIGATION DEVELOPMENT PROJECT

## Additional Questionnaire for Inventory Survey (Existing Project)

Notes:

1. Where the question has parenthesis, write the number or fill the appropriate spaces with "√".
2. For doubtful points, if any, please see the attached answer sample.

Name of Project: \_\_\_\_\_  
Name of Responsible PIO: \_\_\_\_\_  
Filled by: \_\_\_\_\_

1. Project History

- (a) The existing facilities of the project were constructed in 19\_\_\_\_.
- (b) Were these facilities rehabilitated after the completion?  
( ) Yes; (c) The latest rehabilitation was made in 19\_\_\_\_.  
( ) No

2. Irrigated Area of the Project

Actually Irrigated Area at Present (without Rehabilitation):

- (a) Wet season paddy: \_\_\_\_\_ ha
- (b) Dry season paddy: \_\_\_\_\_ ha

Expected Irrigated Area (with Rehabilitation):

- (c) Wet season paddy: \_\_\_\_\_ ha
- (d) Dry season paddy: \_\_\_\_\_ ha

3. Irrigators' Association (IA)

- (a) Is there the existing IA?:  
( ) Yes  
( ) No

- (b) Did the IA repay the loan in the past 5 years?:  
 Yes  
 No
- (c) Did the IA collect the O/M fee other than amortizing fee in the past 5 years?:  
 Yes  
 No
- (d) Did the O/M fee annually increase in the past 5 years?:  
 Yes  
 No

4. CARP

- (a) What is an area eligible for distribution under CARP?: \_\_\_\_\_ ha
- (b) What is a status of issuance of emancipation patents?: \_\_\_\_\_ %

5. Existing Facilities of the Project

(If there are the following facilities in the project area, please fill the relevant space.)

- (a) Diversion weir; River width at diversion weir: \_\_\_\_\_ m  
 Material of the weir:  Concrete  
 Masonry  
 Others  
 Total length of the weir: \_\_\_\_\_ m
- (b) Diversion channel; Total length: \_\_\_\_\_ m = (1) + (2)  
 (Diversion channel is an irrigation canal conveying irrigation water from diversion weir to an entrance of the project area.)  
 Earth canal: \_\_\_\_\_ m = (1)  
 (excluding lined canal)  
 Lined canal: \_\_\_\_\_ m = (2)
- (c) Main/lateral canals; Total length: \_\_\_\_\_ m = (3) + (4)  
 (excluding diversion channel) Earth canal: \_\_\_\_\_ m = (3)  
 (excluding lined canal)  
 Lined canal: \_\_\_\_\_ m = (4)
- (d) Field ditches; Total length: \_\_\_\_\_ m
- (e) Project/farm drains; Total length: \_\_\_\_\_ m
- (f) Drainage ditches; Total length: \_\_\_\_\_ m
- (g) Farm road; Total length: \_\_\_\_\_ m
- (h) Access road; Total length: \_\_\_\_\_ m
- (i) Flood protection dike; Total length: \_\_\_\_\_ m



**6. Necessity of the Rehabilitation**

- (a) Does this project require the rehabilitation now?:
- Yes
- No
- (b) What is the project preparation stage for the rehabilitation?:
- No feasibility study for the rehabilitation was made.
- Feasibility study for the rehabilitation was completed in 19\_\_\_\_.
- Design for the rehabilitation was completed in 19\_\_\_\_. (Ready for construction)
- (c) How is the endorsement of the rehabilitation by IA members?:
- 100 - 80%
- 80 - 60%
- 60 - 40%
- Below 40%

**7. Damage by Natural Disasters**

- (a) Were the existing facilities damaged by natural disasters ( typhoon, flood, earthquake, etc.) in the past 5 years?:
- Yes
- No
- (b) Do the facilities damaged by natural disasters require the rehabilitation?:
- Yes
- No

**8. Facilities to be Rehabilitated and the Rehabilitation Costs**

What facilities require the rehabilitation work and how much is the rehabilitation costs? (Please put the check mark "√" in the parenthesis of the relevant facilities requiring the rehabilitation, and write length and number of facilities to be rehabilitated and rehabilitation costs in the space.)

Facilities	Length & No. of Facilities to be Rehabilitated (m)	Rehabilitation Costs (Peso)
(a) ( ) Diversion weir; Materials of the weir to be rehabilitated ( ) Concrete ( ) Masonry ( ) Others	_____ m	₱ _____
(b) ( ) Intake		₱ _____
(c) Diversion channel with structures (Diversion channel is an irrigation canal conveying irrigation water from diversion weir to an entrance of the project area.)		
( ) Earth canal;	_____ m, _____ nos.	₱ _____
( ) Lined canal;	_____ m, _____ nos.	₱ _____
(d) Main/lateral canals with structures excluding diversion channel		
( ) Earth canal;	_____ m, _____ nos.	₱ _____
( ) Lined canal;	_____ m, _____ nos.	₱ _____
(e) ( ) Field ditches with structures;	_____ m, _____ nos.	₱ _____
(f) ( ) Project/farm drains with structures;	_____ m, _____ nos.	₱ _____
(g) ( ) Drainage ditches with structures;	_____ m, _____ nos.	₱ _____
(h) ( ) Farm road with structures;	_____ m, _____ nos.	₱ _____
(i) ( ) Access road with structures;	_____ m, _____ nos.	₱ _____
(j) ( ) Flood protection dike with structures;	_____ m, _____ nos.	₱ _____
(k) Overhead		₱ _____
(l) Project cost (a + b + c + ..... + k)		₱ _____
(m) The above costs were estimated in 19_____.		

9. Crop Yields

Present (without the rehabilitation)

(a) Wet season paddy: \_\_\_\_\_ ton/ha

(b) Dry season paddy: \_\_\_\_\_ ton/ha

Proposed (with the rehabilitation)

(c) Wet season paddy: \_\_\_\_\_ ton/ha

(d) Dry season paddy: \_\_\_\_\_ ton/ha

10. EIRR for the Rehabilitation

(a) EIRR: \_\_\_\_\_ % estimated in 19\_\_\_\_\_.

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)  
THE MASTER PLAN STUDY  
ON  
THE SMALL-SCALE IRRIGATION DEVELOPMENT PROJECT

## Additional Questionnaire for Inventory Survey (New Project)

Notes:

1. Where the question has parenthesis, write the number or fill the appropriate spaces with "√".
2. For doubtful points, if any, please see the attached answer sample.

Name of Project: \_\_\_\_\_  
Name of Responsible PIO: \_\_\_\_\_  
Filled by: \_\_\_\_\_

1. Project Preparation Stage

- No feasibility study or planning was made.  
 Feasibility study was made in 19\_\_\_\_.  
 Design was made in 19\_\_\_\_. (Ready for construction.)

2. Irrigators' Association (IA)

- (a) Is there the existing IA?:  
 Yes  
 No
- (b) How is the endorsement of the project?:  
 100 - 80%  
 80 - 60%  
 60 - 40%  
 Below 40%

3. CARP

- (a) What is an area eligible for distribution under CARP?: \_\_\_\_\_ ha  
(b) What is a status of issuance of emancipation patents?: \_\_\_\_\_ %

4. Proposed Facilities to be Newly Constructed Under the Project and the Project Costs

(Please fill the space relevant.)

- (a) Diversion weir with intake: Construction Cost: ₱ \_\_\_\_\_  
 River width at diversion weir: \_\_\_\_\_ m  
 Material of the weir: ( ) Concrete  
 ( ) Masonry  
 ( ) Others  
 Total length of the weir: \_\_\_\_\_ m
- (b) Diversion channel with structures  
 (Diversion channel is an irrigation canal from diversion weir to an entrance of the project area.)  
 Total length of earth canal: \_\_\_\_\_ m, Construction Cost: ₱ \_\_\_\_\_  
 (excluding lined canal)  
 Total length of lined canal: \_\_\_\_\_ m, Construction Cost: ₱ \_\_\_\_\_
- (c) Main/lateral canals with structures  
 (excluding diversion channel)  
 Total length of earth canal: \_\_\_\_\_ m, Construction Cost: ₱ \_\_\_\_\_  
 (excluding lined canal)  
 Total length of lined canal: \_\_\_\_\_ m, Construction Cost: ₱ \_\_\_\_\_
- (d) Field ditches with structures  
 Total length: \_\_\_\_\_ m, Construction Cost: ₱ \_\_\_\_\_
- (e) Project/farm drains with structures  
 Total length: \_\_\_\_\_ m, Construction Cost: ₱ \_\_\_\_\_
- (f) Drainage ditches with structures  
 Total length: \_\_\_\_\_ m, Construction Cost: ₱ \_\_\_\_\_
- (g) Farm road with structures  
 Total length: \_\_\_\_\_ m, Construction Cost: ₱ \_\_\_\_\_
- (h) Access road with structures  
 Total length: \_\_\_\_\_ m, Construction Cost: ₱ \_\_\_\_\_
- (i) Flood protection dike with structures  
 Total length: \_\_\_\_\_ m, Construction Cost: ₱ \_\_\_\_\_
- (j) Overhead: ₱ \_\_\_\_\_
- (k) Project Cost (a + b + c + ..... + j): ₱ \_\_\_\_\_
- (l) The above costs were estimated in 19\_\_.

5. Terminal Irrigation/Drainage Areas (See VI Specific Instructions (2) & (4))
- (a) What is the minimum terminal irrigation area at the end of main/lateral canals?:  
\_\_\_\_\_ ha
- (b) What is the minimum terminal drainage area at the end of project/farm drains?:  
\_\_\_\_\_ ha
6. Farm Road
- (a) Is main canal provided with farm road?  
( ) Yes; Width of the road: \_\_\_\_\_ m  
( ) No
- (b) Is project drain provided with farm road?  
( ) Yes; Width of the road: \_\_\_\_\_ m  
( ) No
7. Crop Yields
- Present
- (a) Wet season paddy: \_\_\_\_\_ ton/ha
- (b) Dry season paddy: \_\_\_\_\_ ton/ha
- Proposed
- (c) Wet season paddy: \_\_\_\_\_ ton/ha
- (d) Dry season paddy: \_\_\_\_\_ ton/ha
8. Economic Internal Rate of Return (EIRR) for the Project
- (a) EIRR: \_\_\_\_\_ % estimated in 19\_\_\_\_\_.

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)  
 THE MASTER PLAN STUDY  
 ON  
 THE SMALL SCALE IRRIGATION DEVELOPMENT PROJECT

**Questionnaire on Average Prices of Major Works  
 (Pacquiao Contract Base)**

Note : Please answer this questionnaire by every PIO, using the latest provincial average rate at construction site.

Name of PIO : \_\_\_\_\_

Filled by : \_\_\_\_\_

(As of (month) \_\_\_\_\_, (year) \_\_\_\_\_)

		(Unit : Peso)
Items	Unit	Unit Price
1. Excavation for common soil (excluding disposal)		
- Excavation by man-power	m <sup>3</sup>	_____
- Excavation by construction equipment	m <sup>3</sup>	_____
2. Embankment for common soil (excluding hauling)		
- Embankment with excavated materials by man-power	m <sup>3</sup>	_____
- Embankment with excavated materials by Construction equipment	m <sup>3</sup>	_____
3. Concrete work by portable mixer		
- Concrete (1:2:4)/Class A	m <sup>3</sup>	_____
- Concrete (1:3:6)/Class B	m <sup>3</sup>	_____
- Concrete (1:4:8)/Class C	m <sup>3</sup>	_____
4. Wooden form work	m <sup>3</sup>	_____
5. Reinforcement bar work	ton	_____
6. Concrete pipe work		
- Dia. 300 mm	m	_____
- Dia. 450 mm	m	_____
- Dia. 600 mm	m	_____
- Dia. 800 mm	m	_____
- Dia. 1,000 mm	m	_____
- Dia. 1,200 mm	m	_____

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)  
 THE MASTER PLAN STUDY  
 ON  
 THE SMALL SCALE IRRIGATION DEVELOPMENT PROJECT

**Questionnaire on Average Prices of Materials and Labour Wages**

Note : Please answer this questionnaire by every PIO, using the latest provincial average rate at construction site.

Name of PIO : \_\_\_\_\_

Filled by : \_\_\_\_\_

(As of (month) \_\_\_\_\_, (year) \_\_\_\_\_)

		(Unit : Peso)
Items	Unit	Price
<b>1. Materials</b>		
- Gravel	m <sup>3</sup>	_____
- Sand	m <sup>3</sup>	_____
- Ordinary Portland sement	ton	_____
	or bag	_____
- Timber for form	m <sup>3</sup>	_____
	or bd.ft	_____
- Reinforcement bar	ton	_____
<b>2. Fuel</b>		
- Gasoline	lit	_____
- Lubricating oil	lit	_____
- Diesel engine oil	lit	_____
- Grease	lit	_____
<b>3. Labour</b>		
- Foreman	Man-day	_____
- Common Labour	Man-day	_____
- Concrete worker/Mason	Man-day	_____
- Carpenter	Man-day	_____
- Welder	Man-day	_____
- Equipment operator	Man-day	_____
- Driver	Man-day	_____





**ANNEX C-2**  
**OVERVIEW OF SURVEY RESULTS**

LIST OF TABLES

		<u>Page</u>
Table C2-01	Numbers of Sub-Projects for Additional Inventory Survey .....	C2-1
Table C2-02	Year after Completion of Construction for All CISs .....	C2-2
Table C2-03	Years from Completion of Construction to Completion of Rehabilitation/Improvement Works for Rehabilitated/Improved CISs .....	C2-3
Table C2-04	Were the Existing Facilities Damaged by National Disasters in the Past 5 Years ? : CIS.....	C2-4
Table C2-05	Necessity of Rehabilitation by National Disaster : CIS .....	C2-5
Table C2-06	Necessity of the Rehabilitation : CIS .....	C2-6
Table C2-07	Facilities Requiring Rehabilitation/Improvement Works : CIS ...	C2-7
Table C2-08	Candidate Sub-Projects for Rehabilitation : CIS .....	C2-8
Table C2-09	Candidate Sub-Projects for Construction : CIP .....	C2-9
Table C2-10	Minimum Terminal Irrigation Area at the End of Main/Lateral Canals : CIP .....	C2-10
Table C2-11	Minimum Terminal Irrigation Area at the End of Project/Farm Drains : CIP .....	C2-11
Table C2-12	Farm Roads with Main/Lateral Canals .....	C2-12
Table C2-13	Farm Roads with Project Drains .....	C2-13
Table C2-14	Irrigation Development Cost per Ha : CIS .....	C2-14
Table C2-15	Irrigation Development Cost per Ha : CIP .....	C2-15
Table C2-16	Unit Yield of Paddy : CIS .....	C2-16
Table C2-17	Unit Yield of Paddy : CIP .....	C2-17
Table C2-18	Economic Internal Rate of Return : CIS .....	C2-18
Table C2-19	Economic Internal Rate of Return : CIP .....	C2-19
Table C2-20	Organization Status of IAs : CIS .....	C2-20
Table C2-21	Organization Status of IAs : CIP .....	C2-21

Table C2-22	Endorsement of the Rehabilitation by IA Members : CIS .....	C2-22
Table C2-23	Endorsement of the Construction by IA Members : CIP .....	C2-23
Table C2-24	Status of Issuance of Emancipation Patents : CIS .....	C2-24
Table C2-25	Status of Issuance of Emancipation Patents : CIP .....	C2-25
Table C2-26	Area Eligible for Distribution under CARP : CIS .....	C2-26
Table C2-27	Area Eligible for Distribution under CARP : CIP .....	C2-27
Table C2-28	Prices of Major Works .....	C2-28
Table C2-29	Prices of Materials and Labour Wages .....	C2-30

## NUMBERS OF SUB-PROJECTS FOR ADDITIONAL INVENTORY SURVEY

Region	Province	Candidate Sub-Projects for SSIDP			Sub-Projects for Additional Inventory Survey			Sub-Projects with Returned as of June 15, 1991		
		CISs (1)	CIPs (2)	Total (3) = (1) + (2)	CISs (4)	CIPs (5)	Total (6) = (4) + (5)	CISs (7)	CIPs (8)	Total (9) = (7) + (8)
I	1 ILOCOS NORTE	119	0	119	43	0	43	43	-	43
	2 ABRA	37	17	54	7	1	8	7	1	8
	3 ILOCOS SUR	70	51	121	5	11	16	5	11	16
	4 MOUNTAIN PROVINCE	8	44	52	6	6	12	6	6	12
	5 LA UNION	39	27	66	26	1	27	26	1	27
	6 BENGUBT	9	42	51	6	6	12	6	6	12
	7 PANGASINAN	178	3	181	2	1	3	2	1	3
	sub-total	460	184	644	95	26	121	95	26	121
II	8 BATANES	0	0	0	0	0	0	-	-	-
	9 CAGAYAN	105	66	171	48	1	49	48	1	49
	10 KALINGA APAYAO	64	43	107	0	3	3	-	3	3
	11 ISABELA	47	44	91	1	2	3	1	2	3
	12 IFUGAO	35	46	81	25	3	28	23	3	26
	13 NUEVA VISCAAYA	131	13	144	42	0	42	42	-	42
	14 QUIRINO	29	41	70	18	2	20	18	2	20
	sub-total	411	253	664	134	11	145	133	11	143
III	15 NUEVA ECUA	43	1	44	4	0	4	4	-	4
	16 TARLAC	36	3	39	12	0	12	-	-	0
	17 ZAMBALES	10	0	10	0	0	0	-	-	-
	18 PAMPANGA	73	20	93	0	0	0	-	-	-
	19 BULACAN	18	4	22	0	0	0	-	-	-
	20 BATAAN	30	0	30	0	0	0	-	-	-
	sub-total	210	28	238	16	0	16	4	0	4
	IV	21 AURORA	39	10	49	13	1	14	13	1
22 QUEZON		38	16	54	3	4	7	3	3	6
23 RIZAL		19	1	20	1	0	1	-	-	-
24 CAVITE		5	6	11	0	3	3	-	3	3
25 LAGUNA		25	2	27	0	0	0	-	-	-
26 BATANGAS		22	21	43	0	0	0	-	-	-
27 MARINDUQUE		5	0	5	4	0	4	4	-	4
28 MINDORO ORIENTAL		48	18	66	13	1	14	0	0	0
29 MINDORO OCCIDENTAL		54	15	69	0	0	0	-	-	-
30 ROMBLON		2	2	4	2	1	3	2	1	3
31 PALAWAN		41	96	137	9	13	22	9	13	22
sub-total		296	187	485	45	23	68	31	21	52
V	32 CAMARINES NORTE	18	63	81	12	10	22	12	10	22
	33 CAMARINES SUR	96	30	126	22	10	32	0	0	0
	34 CATANDUANES	9	1	10	1	0	1	1	-	1
	35 ALBAY	78	48	126	1	3	4	0	3	3
	36 SORSOGON	34	7	41	27	5	32	27	5	32
	37 MASBATE	19	8	27	4	1	5	4	1	5
	sub-total	254	157	411	67	29	96	44	19	63
	VI	38 AKLAN	14	2	16	11	2	13	0	0
39 CAPIZ		12	10	22	0	0	0	-	-	-
40 ANTIQUE		41	19	60	31	4	35	30	4	34
41 ILOILO		34	3	37	16	1	17	16	1	17
42 NEGROS OCCIDENTAL		17	34	51	2	10	12	2	10	12
43 NEGROS DEL NORTE		0	0	0	0	0	0	-	-	-
sub-total	118	68	186	60	17	77	48	15	63	
VII	44 CEBU	11	5	16	4	1	5	4	1	5
	45 NEGROS ORIENTAL	26	14	40	15	13	28	15	13	28
	46 BOHOL	39	0	39	11	0	11	0	-	0
	47 SIQUOR	0	4	4	0	2	2	-	2	2
	sub-total	76	23	99	30	16	46	19	16	35
VIII	48 NORTHERN SAMAR	13	40	53	3	3	6	3	3	6
	49 SAMAR	10	19	29	9	3	12	0	0	0
	50 EASTERN SAMAR	2	12	14	1	3	4	1	3	4
	51 NORTHERN LEYTE	101	43	144	88	3	91	88	3	91
	52 SOUTHERN LEYTE	20	4	24	15	3	18	15	3	18
	sub-total	146	118	264	116	15	131	107	12	119
IX	53 ZAMBOANGA DEL NORTE	15	13	28	12	4	16	12	4	16
	54 ZAMBOANGA DEL SUR	51	19	70	1	0	1	1	-	1
	55 BASILAN	2	0	2	0	0	0	-	-	-
	56 SULU	0	4	4	0	0	0	-	-	-
	57 TAWI-TAWI	0	4	4	0	0	0	-	-	-
	sub-total	68	40	108	13	4	17	13	4	17
X	58 SURIGAO DEL NORTE	22	19	41	6	2	8	6	2	8
	59 CAMIGUIN	3	0	3	3	0	3	3	-	3
	60 AGUSAN DEL NORTE	43	24	67	25	6	31	23	6	29
	61 MISAMIS ORIENTAL	16	13	29	5	5	10	5	5	10
	62 MISAMIS OCCIDENTAL	20	3	23	16	0	16	16	-	16
	63 BUKIDNON	31	41	72	17	11	28	17	10	27
	64 AGUSAN DEL SUR	16	26	42	9	7	16	9	7	16
	sub-total	151	126	277	81	31	112	79	30	109
XI	65 SURIGAO DEL SUR	22	17	39	22	3	25	22	3	25
	66 DAVAO ORIENTAL	12	14	26	3	2	5	3	2	5
	67 DAVAO DEL NORTE	15	9	24	3	2	5	3	2	5
	68 DAVAO DEL SUR	32	7	39	5	3	8	5	3	8
	69 SOUTH COTABATO	31	25	56	24	3	27	24	3	27
sub-total	112	72	184	57	13	70	57	13	70	
XII	70 LANA O DEL NORTE	20	22	42	1	4	5	-	-	-
	71 LANA O DEL SUR	10	29	39	1	3	4	-	-	-
	72 NORTH COTABATO	24	77	101	12	0	12	-	-	12
	73 MAGUINDANAO	43	58	101	21	3	24	21	3	24
	74 SULTAN KUDARAT	22	24	46	14	9	23	13	9	22
	sub-total	119	210	329	49	19	68	46	12	58
Total	2423	1466	3889	763	204	967	675	179	854	

Table C2-02

YEAR AFTER COMPLETION OF CONSTRUCTION FOR ALL CISS

Region	Province	Nos. of CISS												(Unit : Nos.)	
														Designed Irrigable	Area (ha)
		1 yr.	2 yr.	3 yr.	4 yr.	5 yr.	6 yr.	7 yr.	8 yr.	9 yr.	Over 10 yr.	Unknown	Total		
I	1 ILOCOS NORTE	0	0	0	0	0	0	0	0	1	42	0	43	5,661	
	2 ABRA	1	1	0	0	0	0	2	0	2	1	0	7	1,088	
	3 ILOCOS SUR	0	0	0	0	0	0	0	0	0	5	0	5	541	
	4 MOUNTAIN PROVINCE	1	4	0	1	0	0	0	0	0	0	0	6	750	
	5 LA UNION	0	0	0	3	1	2	2	0	0	18	0	26	3,348	
	6 BENGUET	1	0	1	1	0	0	0	1	0	2	0	6	390	
	7 PANGASINAN	0	0	0	0	0	0	0	0	0	2	0	2	214	
	Sub-total	3	5	1	5	1	2	4	1	3	70	0	95	11,992	
II	8 BATANES	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9 CAGAYAN	0	0	0	0	0	0	0	1	0	47	0	48	6,921	
	10 KALINGA APAYAO	0	0	0	0	0	0	0	0	0	0	0	0	0	
	11 ISABELA	0	0	0	0	0	0	0	0	1	0	0	1	160	
	12 IFUGAO	0	0	0	0	3	0	0	0	4	16	0	23	1,829	
	13 NUEVA VISCAAYA	0	0	0	0	0	0	0	1	3	38	0	42	5,408	
	14 QUIRINO	0	0	0	0	0	1	1	1	2	13	0	18	2,280	
	sub-total	0	0	0	0	3	1	1	3	10	114	0	132	16,598	
III	15 NUEVA ECJA	0	0	0	0	0	0	0	0	0	4	0	4	1,023	
	16 TARLAC	0	0	0	0	0	0	0	0	0	0	0	0	0	
	17 ZAMBALES	0	0	0	0	0	0	0	0	0	0	0	0	0	
	18 PAMPANGA	0	0	0	0	0	0	0	0	0	0	0	0	0	
	19 BULACAN	0	0	0	0	0	0	0	0	0	0	0	0	0	
	20 BATAAN	0	0	0	0	0	0	0	0	0	0	0	0	0	
	sub-total	0	0	0	0	0	0	0	0	4	0	4	1,023		
IV	21 AURORA	0	0	0	2	1	0	0	1	0	9	0	13	2,461	
	22 QUEZON	0	1	0	0	1	0	0	0	0	1	0	3	348	
	23 RIZAL	0	0	0	0	0	0	0	0	0	0	0	0	0	
	24 CAVITE	0	0	0	0	0	0	0	0	0	0	0	0	0	
	25 LAGUNA	0	0	0	0	0	0	0	0	0	0	0	0	0	
	26 BATANGAS	0	0	0	0	0	0	0	0	0	0	0	0	0	
	27 MARINDUQUE	0	0	0	1	0	0	0	0	0	3	0	4	370	
	28 MINDORO ORIENTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	
	29 MINDORO OCCIDENTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	
	30 ROMBLON	0	0	0	0	0	0	0	0	0	2	0	2	145	
	31 PALAWAN	0	0	0	0	1	1	0	2	2	3	0	9	1,635	
	sub-total	0	1	0	3	3	1	3	2	18	0	31	4,959		
V	32 CAMARINES NORTE	1	0	0	1	0	0	2	0	0	7	0	12	976	
	33 CAMARINES SUR	0	0	0	0	0	0	0	0	0	0	0	0	0	
	34 CATANDUANES	0	0	0	0	0	0	0	0	0	1	0	1	200	
	35 ALBAY	0	0	0	0	0	0	0	0	0	0	0	0	0	
	36 SORSOGON	0	1	1	1	0	0	1	2	3	18	0	27	3,694	
	37 MASBATE	0	0	0	0	0	0	0	0	1	3	0	4	419	
		sub-total	1	1	1	2	0	1	3	2	29	0	44	5,289	
VI	38 AKLAN	0	0	0	0	0	0	0	0	0	0	0	0	0	
	39 CAPEZ	0	0	0	0	0	0	0	0	0	0	0	0	0	
	40 ANTIQUE	0	1	0	0	3	1	1	0	1	23	0	30	3,783	
	41 ILOILO	0	0	1	1	1	0	0	0	0	13	0	16	2,260	
	42 NEGROS OCCIDENTAL	1	0	0	0	0	0	0	0	0	1	0	2	185	
	43 NEGROS DEL NORTE	0	0	0	0	0	0	0	0	0	0	0	0	0	
	sub-total	1	1	1	1	4	1	1	0	37	0	48	6,228		
VII	44 CEBU	0	0	0	0	0	0	0	0	2	2	0	4	811	
	45 NEGROS ORIENTAL	1	2	1	0	0	1	0	4	0	6	0	15	2,265	
	46 BOHOL	0	0	0	0	0	0	0	0	0	0	0	0	0	
	47 SIQUJOR	0	0	0	0	0	0	0	0	0	0	0	0	0	
	sub-total	1	2	1	0	0	1	0	4	2	8	0	19	3,076	
VIII	48 NORTHERN SAMAR	0	0	0	0	0	0	0	0	0	3	0	3	235	
	49 SAMAR	0	0	0	0	0	0	0	0	0	0	0	0	0	
	50 EASTERN SAMAR	0	0	1	0	0	0	0	0	0	0	0	1	167	
	51 NORTHERN LEYTE	2	0	0	3	1	1	2	1	2	76	0	88	13,711	
	52 SOUTHERN LEYTE	0	0	0	0	1	0	2	0	0	12	0	15	1,617	
	sub-total	2	0	1	3	2	1	1	2	91	0	107	15,730		
IX	53 ZAMBOANGA DEL NORTE	0	0	0	0	0	0	0	1	0	11	0	12	1,968	
	54 ZAMBOANGA DEL SUR	0	0	0	0	0	0	0	0	0	1	0	1	350	
	55 BASHLAN	0	0	9	0	0	0	0	0	0	0	0	0	0	
	56 SULU	0	0	0	0	0	0	0	0	0	0	0	0	0	
	57 TAWI-TAWI	0	0	0	0	0	0	0	0	0	0	0	0	0	
	sub-total	0	0	9	0	0	0	0	1	0	12	0	13	2,318	
X	58 SURIGAO DEL NORTE	0	0	0	0	0	0	0	2	0	4	0	6	520	
	59 CAMIGUIN	0	0	1	0	0	0	0	0	0	2	0	3	540	
	60 AGUSAN DEL NORTE	0	1	4	0	0	0	0	0	0	18	0	23	3,240	
	61 MISAMIS ORIENTAL	0	0	0	0	0	1	1	0	1	2	0	5	520	
	62 MISAMIS OCCIDENTAL	1	1	4	0	0	0	0	1	9	9	0	16	2,423	
	63 BUKIDNON	0	0	1	0	0	0	0	3	4	9	0	17	3,130	
	sub-total	1	2	10	0	0	1	1	5	6	53	0	79	11,848	
XI	65 SURIGAO DEL SUR	1	1	5	0	0	2	1	0	1	11	0	22	3,619	
	66 DAVAO ORIENTAL	0	0	0	0	0	0	1	0	1	1	0	3	490	
	67 DAVAO DEL NORTE	0	0	0	0	0	0	0	0	0	3	0	3	620	
	68 DAVAO DEL SUR	0	0	0	0	1	0	0	0	0	4	0	5	716	
	69 SOUTH COTABATO	0	1	2	0	0	0	0	2	1	18	0	24	3,280	
	sub-total	1	2	7	0	1	2	2	2	3	37	0	57	9,225	
XII	70 LANA O DEL NORTE	0	0	0	0	0	0	0	0	0	0	0	0	0	
	71 LANA O DEL SUR	0	0	0	0	0	0	0	0	0	0	0	0	0	
	72 NORTH COTABATO	0	0	0	0	0	0	0	1	0	11	0	12	2,307	
	73 MAGUINDANAO	0	1	2	0	1	0	0	0	2	15	0	21	3,475	
	sub-total	0	1	2	0	1	0	0	1	2	13	0	13	2,335	
	sub-total	0	1	2	0	1	0	0	1	2	39	0	46	8,517	
	Total	10	15	24	14	15	11	16	23	35	512	0	675	96,803	

# YEAR FROM COMPLETION OF CONSTRUCTION TO COMPLETION OF REHABILITATION/IMPROVEMENT WORKS FOR REHABILITATED/IMPROVED CISS

Region	Province	Nos. of CISSs Rehabilitated / Improved After Completion of Construction										(Unit : Nos.)		
		1 yr.	2 yr.	3 yr.	4 yr.	5 yr.	6 yr.	7 yr.	8 yr.	9 yr.	Over 10 yr.	Unknown	Total	Designed Irrigable Area (ha)
I	1 ILOCOS NORTE	3	0	1	1	0	0	0	1	0	18	1	25	3,613
	2 ABRA	5	1	0	0	0	0	0	0	0	0	0	6	898
	3 ILOCOS SUR	1	0	0	1	0	0	0	0	0	0	0	2	311
	4 MOUNTAIN PROVINCE	1	0	0	0	0	0	0	0	0	0	0	1	308
	5 LA UNION	0	0	1	1	1	0	0	0	0	0	0	3	514
	6 BENGUET	0	0	1	0	0	0	0	0	0	0	0	1	51
	7 PANASINAN	0	0	0	0	0	0	0	0	0	0	1	1	119
	sub-total	10	1	3	3	1	0	0	1	0	19	1	39	5,814
II	8 BATANES	0	0	0	0	0	0	0	0	0	0	0	0	0
	9 CAGAYAN	3	2	0	2	0	0	3	0	0	3	0	13	2,414
	10 KALINGA APAYAO	0	0	0	0	0	0	0	0	0	0	0	0	0
	11 ISABELA	0	0	0	0	0	0	0	0	0	0	0	0	0
	12 IFUGAO	0	1	0	0	0	0	0	0	0	0	0	1	100
	13 NUEVA VISCAYA	0	0	0	1	0	0	1	0	0	2	1	5	703
	14 QUIRINO	1	0	0	1	0	0	1	0	0	1	0	4	500
	sub-total	4	3	0	4	0	0	5	0	0	6	1	23	3,717
III	15 NUEVA ECUIA	1	1	0	0	0	0	0	0	0	0	0	2	660
	16 TARLAC	0	0	0	0	0	0	0	0	0	0	0	0	0
	17 ZAMBALES	0	0	0	0	0	0	0	0	0	0	0	0	0
	18 PAMPANGA	0	0	0	0	0	0	0	0	0	0	0	0	0
	19 BULACAN	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 BATAAN	0	0	0	0	0	0	0	0	0	0	0	0	0
	sub-total	1	1	0	0	0	0	0	0	0	0	0	2	660
	IV	21 AURORA	3	1	0	1	0	0	0	0	0	0	0	5
22 QUEZON		1	0	1	1	0	0	0	0	0	0	0	3	348
23 RIZAL		0	0	0	0	0	0	0	0	0	0	0	0	0
24 CAVITE		0	0	0	0	0	0	0	0	0	0	0	0	0
25 LAGUNA		0	0	0	0	0	0	0	0	0	0	0	0	0
26 BATANGAS		0	0	0	0	0	0	0	0	0	0	0	0	0
27 MARINDUQUE		0	1	2	0	0	0	0	0	0	0	0	3	320
28 MINDORO ORIENTAL		0	0	0	0	0	0	0	0	0	0	0	0	0
29 MINDORO OCCIDENTAL		0	0	0	0	0	0	0	0	0	0	0	0	0
30 ROMBLON		0	0	0	1	0	0	0	0	0	0	0	1	145
31 PALAWAN		1	0	1	0	1	0	1	0	0	0	0	4	800
sub-total		5	2	4	3	1	0	1	0	0	0	0	16	2,627
V		32 CAMARINES NORTE	0	0	4	3	1	0	0	0	0	1	0	9
	33 CAMARINES SUR	0	0	0	0	0	0	0	0	0	0	0	0	0
	34 CATANDUANES	0	0	0	0	0	0	0	0	0	0	0	0	0
	35 ALBAY	0	0	0	0	0	0	0	0	0	0	0	0	0
	36 SORSOGON	1	1	2	1	1	2	2	0	0	0	0	10	1,167
	37 MASARATE	2	1	0	0	0	0	0	0	0	0	0	3	219
	sub-total	3	2	6	4	2	2	2	0	0	1	0	22	2,146
VI	38 AKLAN	0	0	0	0	0	0	0	0	0	0	0	0	0
	39 CAPIZ	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ANTIQUE	11	6	3	0	0	2	1	0	0	1	1	25	2,921
	41 B.OLO	3	1	2	0	1	1	0	0	0	0	0	8	1,362
	42 NEGROS OCCIDENTAL	0	0	0	0	0	0	0	0	0	0	0	0	0
	43 NEGROS DEL NORTE	0	0	0	0	0	0	0	0	0	0	0	0	0
	sub-total	14	7	5	0	1	3	1	0	0	1	1	33	4,283
VII	44 CEBU	3	0	1	0	0	0	0	0	0	0	0	4	811
	45 NEGROS ORIENTAL	0	1	1	2	1	0	0	0	0	0	0	5	1,015
	46 BOHOL	0	0	0	0	0	0	0	0	0	0	0	0	0
	47 SIQUJOR	0	0	0	0	0	0	0	0	0	0	0	0	0
	sub-total	3	1	2	2	1	0	0	0	0	0	0	9	1,826
VIII	48 NORTHERN SAMAR	0	1	0	0	0	0	0	0	0	0	0	1	85
	49 SAMAR	0	0	0	0	0	0	0	0	0	0	0	0	0
	50 EASTERN SAMAR	0	0	0	0	0	0	0	0	0	0	0	0	0
	51 NORTHERN LEYTE	4	3	2	3	0	0	0	0	0	10	0	22	3,873
	52 SOUTHERN LEYTE	0	2	0	2	1	0	1	0	0	1	0	7	1,041
	sub-total	4	6	2	5	1	0	1	0	0	11	0	30	4,999
IX	53 ZAMBOANGA DEL NORT	1	0	1	1	0	1	1	3	1	0	0	9	1,700
	54 ZAMBOANGA DEL SUR	0	0	0	0	0	0	0	0	0	0	0	0	0
	55 BASILAN	0	0	0	0	0	0	0	0	0	0	0	0	0
	56 SULU	0	0	0	0	0	0	0	0	0	0	0	0	0
	57 TAWI-TAWI	0	0	0	0	0	0	0	0	0	0	0	0	0
	sub-total	1	0	1	1	0	1	1	3	1	0	0	9	1,700
	X	58 SURIGAO DEL NORTE	0	0	0	1	0	0	0	0	1	1	0	3
59 CAMIGUIN		1	2	0	0	0	0	0	0	0	0	0	3	510
60 AGUSAN DEL NORTE		6	3	0	0	0	1	0	0	0	0	0	10	1,415
61 MISAMIS ORIENTAL		1	3	0	0	0	0	0	0	0	0	0	4	470
62 MISAMIS OCCIDENTAL		2	0	1	2	0	0	0	0	0	0	0	5	890
63 BUKIDNON		2	2	5	1	1	1	0	0	0	1	1	14	2,880
64 AGUSAN DEL SUR		3	0	5	0	0	0	0	0	0	1	0	9	1,475
sub-total		15	10	11	4	1	2	0	0	1	3	1	48	7,980
XI	65 SURIGAO DEL SUR	3	4	3	1	0	0	1	0	0	2	0	14	2,444
	66 DAVAO ORIENTAL	0	1	0	0	0	0	0	0	0	0	0	1	300
	67 DAVAO DEL NORTE	0	0	1	1	0	0	0	0	0	0	0	2	520
	68 DAVAO DEL SUR	0	1	1	0	1	0	0	0	0	0	0	3	566
	69 SOUTH COTABATO	2	2	5	0	1	1	2	1	1	1	0	16	2,643
	sub-total	5	8	10	2	2	1	3	1	1	3	0	36	6,473
XII	70 LANA O DEL NORTE	0	0	0	0	0	0	0	0	0	0	0	0	0
	71 LANA O DEL SUR	0	0	0	0	0	0	0	0	0	0	0	0	0
	72 NORTH COTABATO	6	2	1	0	1	1	0	0	0	0	0	11	2,187
	73 MAGUINDANAO	4	3	1	2	1	0	0	1	0	0	0	12	2,015
	74 SULTAN KUDARAT	0	2	0	4	1	0	0	0	0	3	0	10	2,265
	sub-total	10	7	2	6	3	1	0	1	0	3	0	33	6,447
Total		75	48	46	34	13	10	14	6	3	47	4	300	48,672

Table C2-04

WERE THE EXISTING FACILITIES DAMAGED BY NATIONAL DISASTERS IN THE PAST 5 YEARS ? : CIS

(Unit : Nos)						
Region	Province	Yes	No	Unknown	Total	Ratio (%)
I	1 ILOCOS NORTE	40	3	0	43	93
	2 ABRA	7	0	0	7	100
	3 ILOCOS SUR	4	1	0	5	80
	4 MOUNTAIN PROVINCE	6	0	0	6	100
	5 LA UNION	26	0	0	26	100
	6 BENGUET	6	0	0	6	100
	7 PANGASINAN	2	0	0	2	100
	Sub-total	91	4	0	95	95
II	8 BATANES	0	0	0	0	0
	9 CAGAYAN	4	6	38	48	8
	10 KALINGA APAYAO	0	0	0	0	0
	11 ISABELA	0	1	0	1	0
	12 IFUGAO	22	1	0	23	96
	13 NUEVA VISAYA	26	16	0	42	62
	14 QUIRINO	15	3	0	18	83
	sub-total	67	27	38	132	51
III	15 NUEVA ECDA	4	0	0	4	100
	16 TARLAC	0	0	0	0	0
	17 ZAMBALES	0	0	0	0	0
	18 PAMPANGA	0	0	0	0	0
	19 BULACAN	0	0	0	0	0
	20 BATAAN	0	0	0	0	0
	sub-total	4	0	0	4	100
IV	21 AURORA	8	4	1	13	62
	22 QUEZON	1	2	0	3	33
	23 RIZAL	0	0	0	0	0
	24 CAVITE	0	0	0	0	0
	25 LAGUNA	0	0	0	0	0
	26 BATANGAS	0	0	0	0	0
	27 MARINDUQUE	4	0	0	4	100
	28 MINDORO ORIENTAL	0	0	0	0	0
	29 MINDORO OCCIDENTAL	0	0	0	0	0
	30 ROMBLON	1	0	1	2	50
	31 PALAWAN	8	0	1	9	89
	sub-total	22	6	3	31	71
V	32 CAMARINES NORTE	11	1	0	12	92
	33 CAMARINES SUR	0	0	0	0	0
	34 CATANDUANES	1	0	0	1	100
	35 ALBAY	0	0	0	0	0
	36 SORSOGON	26	1	0	27	96
	37 MASBATE	4	0	0	4	100
	sub-total	42	2	0	44	95
VI	38 AKLAN	0	0	0	0	0
	39 CAPIZ	0	0	0	0	0
	40 ANTIQUE	27	1	2	30	90
	41 ILOILO	9	6	1	16	56
	42 NEGROS OCCIDENTAL	0	2	0	2	0
43 NEGROS DEL NORTE	0	0	0	0	0	
	sub-total	36	9	3	48	75
VII	44 CEBU	4	0	0	4	100
	45 NEGROS ORIENTAL	11	4	0	15	73
	46 BOHOL	0	0	0	0	0
	47 SIQUIOR	0	0	0	0	0
	sub-total	15	4	0	19	79
VIII	48 NORTHERN SAMAR	2	0	1	3	67
	49 SAMAR	0	0	0	0	0
	50 EASTERN SAMAR	1	0	0	1	100
	51 NORTHERN LEYTE	82	4	2	88	93
	52 SOUTHERN LEYTE	14	0	1	15	93
	sub-total	99	4	4	107	93
IX	53 ZAMBOANGA DEL NORTE	12	0	0	12	100
	54 ZAMBOANGA DEL SUR	1	0	0	1	100
	55 BASILAN	0	0	0	0	0
	56 SULU	0	0	0	0	0
	57 TAWI-TAWI	0	0	0	0	0
	sub-total	13	0	0	13	100
X	58 SURIGAO DEL NORTE	5	0	1	6	83
	59 CAMIGUIN	3	0	0	3	100
	60 AGUSAN DEL NORTE	13	5	5	23	57
	61 MISAMIS ORIENTAL	2	2	1	5	40
	62 MISAMIS OCCIDENTAL	9	7	0	16	56
	63 BUKIDNON	4	13	0	17	24
	64 AGUSAN DEL SUR	2	2	0	4	78
	sub-total	43	29	7	79	54
XI	65 SURIGAO DEL SUR	15	7	0	22	68
	66 DAVAO ORIENTAL	2	1	0	3	67
	67 DAVAO DEL NORTE	0	3	0	3	0
	68 DAVAO DEL SUR	2	3	0	5	40
	69 SOUTH COTABATO	20	2	2	24	83
	sub-total	39	16	2	57	65
XII	70 LANA O DEL NORTE	0	0	0	0	0
	71 LANA O DEL SUR	0	0	0	0	0
	72 NORTH COTABATO	9	1	2	12	75
	73 MAGUINDANAO	2	19	0	21	10
	74 SULTAN KUDARAT	1	6	6	13	9
	sub-total	12	26	8	46	26
	Total	483	127	65	675	72

## NECESSITY OF REHABILITATION BY NATIONAL DISASTER : CIS

(Unit : Nos.)						
Region	Province	Yes	No	Unknown	Total	Ratio (%)
I	1 ILOCOS NORTE	41	1	1	43	95
	2 ABRA	7	0	0	7	100
	3 ILOCOS SUR	4	1	0	5	80
	4 MOUNTAIN PROVINCE	6	0	0	6	100
	5 LA UNION	26	0	0	26	100
	6 BENGUET	6	0	0	6	100
	7 PANGASINAN	2	0	0	2	100
Sub-total		92	2	1	95	97
II	8 BATANES	0	0	0	0	0
	9 CAGAYAN	3	5	40	48	6
	10 KALINGA APAYAO	0	0	0	0	0
	11 ISABELA	0	1	0	1	0
	12 IFUGAO	22	1	0	23	96
	13 NUEVA VISCAYA	23	19	0	42	55
	14 QUIRINO	13	5	0	18	72
sub-total		61	31	40	132	46
III	15 NUEVA ECUA	3	1	0	4	75
	16 TARLAC	0	0	0	0	0
	17 ZAMBALES	0	0	0	0	0
	18 PAMPANGA	0	0	0	0	0
	19 BULACAN	0	0	0	0	0
	20 BATAAN	0	0	0	0	0
sub-total		3	1	0	4	75
IV	21 AURORA	8	2	3	13	62
	22 QUEZON	1	2	0	3	33
	23 RIZAL	0	0	0	0	0
	24 CAVITE	0	0	0	0	0
	25 LAGUNA	0	0	0	0	0
	26 BATANGAS	0	0	0	0	0
	27 MARINDUQUE	4	0	0	4	100
	28 MINDORO ORIENTAL	0	0	0	0	0
	29 MINDORO OCCIDENTAL	0	0	0	0	0
	30 ROMBLON	1	0	1	2	50
	31 PALAWAN	7	0	2	9	78
sub-total		21	4	6	31	68
V	32 CAMARINES NORTE	11	1	0	12	92
	33 CAMARINES SUR	0	0	0	0	0
	34 CATANDUANES	1	0	0	1	100
	35 ALBAY	0	0	0	0	0
	36 SORSOGON	26	1	0	27	96
	37 MASHAPE	4	0	0	4	100
sub-total		42	2	0	44	95
VI	38 AKLAN	0	0	0	0	0
	39 CAPEZ	0	0	0	0	0
	40 ANTIQUE	27	1	2	30	90
	41 ILOILO	5	10	1	16	31
	42 NEGROS OCCIDENTAL	0	2	0	2	0
	43 NEGROS DEL NORTE	0	0	0	0	0
sub-total		32	13	3	48	67
VII	44 CEBU	4	0	0	4	100
	45 NEGROS ORIENTAL	10	5	0	15	67
	46 BOHOL	0	0	0	0	0
	47 SIBUJON	0	0	0	0	0
sub-total		14	5	0	19	74
VIII	48 NORTHERN SAMAR	2	0	1	3	67
	49 SAMAR	0	0	0	0	0
	50 EASTERN SAMAR	1	0	0	1	100
	51 NORTHERN LEYTE	77	9	2	88	88
	52 SOUTHERN LEYTE	14	0	1	15	93
sub-total		94	9	4	107	88
IX	53 ZAMBOANGA DEL NORTE	12	0	0	12	100
	54 ZAMBOANGA DEL SUR	1	0	0	1	100
	55 BASHAN	0	0	0	0	0
	56 SULU	0	0	0	0	0
	57 TAWI-TAWI	0	0	0	0	0
	sub-total		13	0	0	13
X	58 SURIGAO DEL NORTE	6	0	0	6	100
	59 CAMIGUIN	3	0	0	3	100
	60 AGUSAN DEL NORTE	7	8	8	23	30
	61 MISAMIS ORIENTAL	2	0	3	5	40
	62 MISAMIS OCCIDENTAL	10	6	0	16	63
	63 BUKIDNON	4	11	2	17	24
	64 AGUSAN DEL SUR	7	2	0	9	78
	sub-total		39	27	13	79
XI	65 SURIGAO DEL SUR	15	7	0	22	68
	66 DAVAO ORIENTAL	2	1	0	3	67
	67 DAVAO DEL NORTE	0	3	0	3	0
	68 DAVAO DEL SUR	1	4	0	5	20
	69 SOUTH COTABATO	20	2	2	24	83
	sub-total		38	17	2	57
XII	70 LANA O DEL NORTE	0	0	0	0	0
	71 LANA O DEL SUR	0	0	0	0	0
	72 NORTH COTABATO	6	4	2	12	50
	73 MAGUINDANAO	2	19	0	21	10
	74 SULTAN KUDARAT	2	1	10	13	15
sub-total		10	24	12	46	22
Total		459	135	81	675	68

Table C2-06

## NECESSITY OF THE REHABILITATION : CIS

(Unit : Nos.)

Region	Province	Necessary	Not Necessary	Unknown	Total	Ratio (%)
I	1 ILOCOS NORTE	37	6	0	43	86
	2 ABRA	7	0	0	7	100
	3 ILOCOS SUR	5	0	0	5	100
	4 MOUNTAIN PROVINCE	4	2	0	6	67
	5 LA UNION	26	0	0	26	100
	6 BENGUET	5	1	0	6	83
	7 PANGASINAN	2	0	0	2	100
	sub-total	86	9	0	95	91
II	8 BATANES	0	0	0	0	0
	9 CAGAYAN	6	4	38	48	13
	10 KALINGA APAYAO	0	0	0	0	0
	11 ISABELA	1	0	0	1	100
	12 IFUGAO	17	5	1	23	74
	13 NUEVA VISCAYA	18	23	1	42	43
	14 QUIRINO	11	7	0	18	61
	sub-total	53	39	40	132	40
III	15 NUEVA ECDA	3	1	0	4	75
	16 TARLAC	0	0	0	0	0
	17 ZAMBALES	0	0	0	0	0
	18 PAMPANGA	0	0	0	0	0
	19 BULACAN	0	0	0	0	0
	20 BATAAN	0	0	0	0	0
	sub-total	3	1	0	4	75
IV	21 AURORA	8	4	1	13	62
	22 QUEZON	1	2	0	3	33
	23 RIZAL	0	0	0	0	0
	24 CAVITE	0	0	0	0	0
	25 LAGUNA	0	0	0	0	0
	26 BATANGAS	0	0	0	0	0
	27 MARINDUQUE	4	0	0	4	100
	28 MINDORO ORIENTAL	0	0	0	0	0
	29 MINDORO OCCIDENTAL	0	0	0	0	0
	30 ROMBLON	2	0	0	2	100
	31 PALAWAN	5	3	1	9	56
	sub-total	20	9	2	31	65
V	32 CAMARINES NORTE	12	0	0	12	100
	33 CAMARINES SUR	0	0	0	0	0
	34 CATANDUANES	1	0	0	1	100
	35 ALBAY	0	0	0	0	0
	36 SORSOGON	27	0	0	27	100
	37 MASBATE	4	0	0	4	100
	sub-total	44	0	0	44	100
VI	38 AKLAN	0	0	0	0	0
	39 CAPEZ	0	0	0	0	0
	40 ANTIQUE	24	4	2	30	80
	41 ILOILO	6	10	0	16	38
	42 NEGROS OCCIDENTAL	0	2	0	2	0
	43 NEGROS DEL NORTE	0	0	0	0	0
	sub-total	30	16	2	48	63
VII	44 CEBU	3	1	0	4	75
	45 NEGROS ORIENTAL	12	3	0	15	80
	46 BOHOL	0	0	0	0	0
	47 SIQUODOR	0	0	0	0	0
		sub-total	15	4	0	19
VIII	48 NORTHERN SAMAR	2	1	0	3	67
	49 SAMAR	0	0	0	0	0
	50 EASTERN SAMAR	1	0	0	1	100
	51 NORTHERN LEYTE	75	12	1	88	85
	52 SOUTHERN LEYTE	13	2	0	15	87
	sub-total	91	15	1	107	85
IX	53 ZAMBOANGA DEL NORTE	11	0	1	12	92
	54 ZAMBOANGA DEL SUR	1	0	0	1	100
	55 BASILAN	0	0	0	0	0
	56 SULU	0	0	0	0	0
	57 TAWI-TAWI	0	0	0	0	0
	sub-total	12	0	1	13	92
X	58 SURIGAO DEL NORTE	6	0	0	6	100
	59 CAMIGUIN	3	0	0	3	100
	60 AGUSAN DEL NORTE	13	6	4	23	57
	61 MISAMIS ORIENTAL	4	1	0	5	80
	62 MISAMIS OCCIDENTAL	15	1	0	16	94
	63 BUKIDNON	14	3	0	17	82
	64 AGUSAN DEL SUR	9	0	0	9	100
	sub-total	64	11	4	79	81
XI	65 SURIGAO DEL SUR	18	4	0	22	82
	66 DAVAO ORIENTAL	3	0	0	3	100
	67 DAVAO DEL NORTE	2	1	0	3	67
	68 DAVAO DEL SUR	3	2	0	5	60
	69 SOUTH COTABATO	20	4	0	24	83
	sub-total	46	11	0	57	81
XII	70 LANA O DEL NORTE	0	0	0	0	0
	71 LANA O DEL SUR	0	0	0	0	0
	72 NORTH COTABATO	6	6	0	12	50
	73 MAGUINDANAO	18	3	0	21	86
	74 SULTAN KUDARAT	4	8	1	13	31
	sub-total	28	17	1	46	61
	Total	492	132	51	675	73



## FACILITIES REQUIRING REHABILITATION/IMPROVEMENT WORKS : CIS

Region	Province	Nos. of CISs Requiring Rehabilitation / Improvement						Average of Rehabilitation / Improvement Cost / ha (Pesos)					
		Diversion weir Intake	Irrigation Canal & Structures	Drainage Canal & Structures	Flood Protection	Service Roads	Access Roads	Diversion weir Intake	Irrigation Canal & Structures	Drainage Canal & Structures	Flood Protection	Service Roads	Access Roads
I	1 ILOCOS NORTE	38	39	6	30	3	14	39,358	9,229	341	2,903	142	823
	2 ABRA	5	7	0	0	0	0	4,031	6,997	0	0	0	0
	3 ILOCOS SUR	5	5	0	1	0	1	16,475	5,069	0	556	0	581
	4 MOUNTAIN PROVINCE	6	5	1	1	0	1	1,310	6,109	2,206	0	0	1,361
	5 LA UNION	25	25	0	9	0	0	2,574	2,888	0	993	0	0
	6 BENGUET	6	6	0	0	0	0	52	21,279	0	0	0	0
	7 PANGASINAN	1	2	0	0	0	0	26,765	3,224	0	0	0	0
	Sub-total	86	89	7	41	3	16	19,455	6,408	507	2,250	142	858
II	8 BATANES	0	0	0	0	0	0	0	0	0	0	0	0
	9 CAGAYAN	8	7	5	1	1	3	14,087	23,737	551	610	0	2,059
	10 KALINGA APAYAO	0	0	0	0	0	0	0	0	0	0	0	0
	11 ISABELA	0	1	1	0	1	0	0	607	337	0	465	0
	12 IPUJAO	5	10	11	0	1	1	3,901	11,442	1,103	0	214	832
	13 NUEVA VISCAAYA	22	21	7	18	1	4	13,449	3,937	766	4,047	237	193
	14 QUEBONO	4	12	1	0	1	2	14,642	4,148	0	0	83	286
	sub-total	39	51	25	19	5	10	13,287	9,303	675	3,905	268	1,067
III	15 NUEVA ECIJA	2	3	3	0	0	1	18,982	4,460	147	0	0	28
	16 TARLAC	0	0	0	0	0	0	0	0	0	0	0	0
	17 ZAMBALES	0	0	0	0	0	0	0	0	0	0	0	0
	18 PAMPANGA	0	0	0	0	0	0	0	0	0	0	0	0
	19 BULACAN	0	0	0	0	0	0	0	0	0	0	0	0
	20 BATAAN	0	0	0	0	0	0	0	0	0	0	0	0
		sub-total	2	3	3	0	0	1	18,982	4,460	147	0	0
IV	21 AURORA	6	6	0	0	0	3	11,739	10,601	0	0	0	109
	22 QUEZON	1	1	1	0	1	0	79,602	8,354	1,957	0	1,304	0
	23 REZAL	0	0	0	0	0	0	0	0	0	0	0	0
	24 CAVITE	0	0	0	0	0	0	0	0	0	0	0	0
	25 LAGUNA	0	0	0	0	0	0	0	0	0	0	0	0
	26 BATANGAS	0	0	0	0	0	0	0	0	0	0	0	0
	27 MARINDUQUE	0	4	1	0	0	0	0	8,121	0	0	0	0
	28 MINDORO ORIENTAL	0	0	0	0	0	0	0	0	0	0	0	0
	29 MINDORO OCCIDENTAL	0	0	0	0	0	0	0	0	0	0	0	0
	30 ROMBLON	1	2	0	2	0	0	49,933	10,138	0	4,034	0	0
	31 PALAWAN	3	6	5	2	1	5	1,721	10,682	1,053	1,013	2,609	2,620
	sub-total	11	19	7	4	2	8	14,651	10,415	1,147	2,666	2,113	1,164
V	32 CAMARINES NORTE	11	12	0	2	0	2	2,558	8,342	0	5,284	0	2,957
	33 CAMARINES SUR	0	0	0	0	0	0	0	0	0	0	0	0
	34 CATANDUANES	1	1	0	0	0	0	21,792	9,855	0	0	0	0
	35 ALBAY	0	0	0	0	0	0	0	0	0	0	0	0
	36 SORSOGON	27	27	21	1	2	9	4,569	8,524	500	1,323	359	1,797
	37 MABATE	4	4	0	0	0	0	12,291	5,137	0	0	0	0
		sub-total	43	44	21	3	2	11	5,504	8,272	500	4,017	359
VI	38 AKLAN	0	0	0	0	0	0	0	0	0	0	0	0
	39 CAPIZ	0	0	0	0	0	0	0	0	0	0	0	0
	40 ANTIQUE	16	21	5	3	0	1	6,330	6,873	345	1,276	0	1,046
	41 ILOILO	6	3	2	0	0	0	340	8,556	1,078	0	0	0
	42 NEGROS OCCIDENTAL	1	1	1	0	0	1	10,615	3,397	354	0	0	442
	43 NEGROS DEL NORTH	0	0	0	0	0	0	0	0	0	0	0	0
	sub-total	23	25	8	3	0	2	5,113	7,054	508	1,276	0	776
VII	44 CEBU	2	4	1	1	0	0	2,866	1,818	0	0	0	0
	45 NEGROS ORIENTAL	11	12	2	2	1	4	2,517	2,985	536	312	462	277
	46 BOHOL	0	0	0	0	0	0	0	0	0	0	0	0
	47 SIQUODOR	0	0	0	0	0	0	0	0	0	0	0	0
	sub-total	13	16	3	3	1	4	2,548	2,811	526	312	462	277
VIII	48 NORTHERN SAMAR	0	0	0	0	0	0	0	0	0	0	0	0
	49 SAMAR	0	0	0	0	0	0	0	0	0	0	0	0
	50 EASTERN SAMAR	0	1	1	1	0	1	0	4,149	109	724	0	1,671
	51 NORTHERN LEYTE	75	79	7	11	7	21	9,182	9,490	567	808	403	1,250
	52 SOUTHERN LEYTE	15	15	11	0	0	6	17,346	12,351	707	0	0	854
	sub-total	90	95	19	12	7	28	11,091	9,998	624	795	403	1,190
IX	53 ZAMBOANGA DEL NORI	8	12	1	1	0	1	21,720	5,934	1,304	1,910	0	4,889
	54 ZAMBOANGA DEL SUR	1	1	0	1	0	0	25,230	18,008	0	8,221	0	0
	55 BASILAN	0	0	0	0	0	0	0	0	0	0	0	0
	56 SULU	0	0	0	0	0	0	0	0	0	0	0	0
	57 TAWI-TAWI	0	0	0	0	0	0	0	0	0	0	0	0
		sub-total	9	13	1	2	0	1	22,827	7,757	1,304	6,023	0
X	58 SURIGAO DEL NORTE	5	6	1	0	0	0	10,715	8,812	581	0	0	0
	59 CAMIGUEN	3	2	0	0	0	0	269	71	0	0	0	0
	60 AGUSAN DEL NORTE	4	14	3	1	2	1	6,643	3,066	133	133	100	133
	61 MISAMIS ORIENTAL	2	4	0	1	0	0	196	4,877	0	1,002	0	0
	62 MISAMIS OCCIDENTAL	10	16	8	7	0	0	3,960	7,801	1,746	1,698	0	0
	63 BUKIDNON	6	12	2	0	1	1	4,230	2,480	489	0	1,468	15,408
	64 AGUSAN DEL SUR	8	9	7	1	3	5	907	1,311	393	1,000	400	266
	sub-total	38	63	21	10	6	7	3,267	4,107	990	1,490	639	1,023
XI	65 SURIGAO DEL SUR	15	22	4	3	1	1	4,720	10,871	1,983	3,198	581	556
	66 DAVAO ORIENTAL	3	3	2	0	1	1	5,100	7,730	4,645	0	7,804	3,728
	67 DAVAO DEL NORTE	1	2	0	0	0	0	0	4,551	0	0	0	0
	68 DAVAO DEL SUR	3	4	0	0	0	2	835	2,157	0	0	0	67
	69 SOUTH COTABATO	8	21	2	0	0	1	4,581	12,881	2,343	0	0	5,348
	sub-total	30	52	8	3	2	5	4,376	10,600	2,535	3,198	4,337	2,266
XII	70 LANAO DEL NORTE	0	0	0	0	0	0	0	0	0	0	0	0
	71 LANAO DEL SUR	0	0	0	0	0	0	0	0	0	0	0	0
	72 NORTH COTABATO	1	2	0	0	0	0	2,914	7,265	0	0	0	0
	73 MAGUINDANAO	6	21	20	3	5	20	3,725	21,045	1,925	5,306	2,511	872
	74 SULTAN KUDARAT	13	13	11	12	11	13	0	0	0	0	0	0
	sub-total	20	36	31	15	16	33	3,654	19,949	1,925	5,306	2,511	872
Total		404	506	154	115	44	126	10,359	8,542	1,010	2,638	1,070	1,196

CANDIDATE SUB-PROJECTS FOR REHABILITATION : CIS

Region	Province	Present Status of Preparation (nos.)					Designed Irrigable Area (ha)					Average of Designed Irrigable Area (ha)		
		No	F/S	D/D	Unknown	Total	No	F/S	D/D	Unknown	Total	No	F/S	D/D
		Planning	Finished	Finished			Planning	Finished	Finished			Planning	Finished	Finished
I	1 ILOCOS NORTE	20	2	19	2	43	2,289	125	2,728	519	5,661	114	63	144
	2 ABRA	0	0	6	1	7	0	0	1,026	62	1,088	0	0	171
	3 ILOCOS SUR	1	3	1	0	5	251	200	90	0	541	251	67	90
	4 MOUNTAIN PROVINCE	3	1	2	0	6	215	147	358	0	750	82	147	179
	5 LA UNION	21	5	0	0	26	2,424	924	0	0	3,348	115	185	0
	6 BENGUET	5	0	1	0	6	323	0	67	0	390	65	0	67
	7 PANGASINAN	1	0	1	0	2	95	0	119	0	214	95	0	119
	sub-total	51	11	30	3	95	5,627	1,396	4,388	581	11,992	110	127	146
II	8 BATANES	0	0	0	0	0	0	0	0	0	0	0	0	0
	9 CAGAYAN	0	2	0	46	48	0	650	0	6,271	6,921	0	325	0
	10 KALINGA APAYAO	0	0	0	0	0	0	0	0	0	0	0	0	0
	11 ISABELA	1	0	0	0	1	160	0	0	0	160	160	0	0
	12 IFUGAO	20	1	2	0	23	1,439	140	250	0	1,829	72	140	125
	13 NUEVA VISCAYA	38	4	0	0	42	4,688	720	0	0	5,408	123	180	0
	14 QUIRINO	14	1	3	0	18	1,910	50	320	0	2,280	136	50	107
	sub-total	73	8	5	46	132	8,197	1,560	570	6,271	16,598	112	195	114
III	15 NUEVA ECUIA	1	0	3	0	4	410	0	613	0	1,023	410	0	204
	16 TARLAC	0	0	0	0	0	0	0	0	0	0	0	0	0
	17 ZAMBALES	0	0	0	0	0	0	0	0	0	0	0	0	0
	18 PAMPANGA	0	0	0	0	0	0	0	0	0	0	0	0	0
	19 BULACAN	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 BATAAN	0	0	0	0	0	0	0	0	0	0	0	0	0
	sub-total	1	0	3	0	4	410	0	613	0	1,023	410	0	204
IV	21 AURORA	5	2	5	1	13	650	650	984	177	2,461	130	325	197
	22 QUEZON	2	0	1	0	3	256	0	92	0	348	128	0	92
	23 RIZAL	0	0	0	0	0	0	0	0	0	0	0	0	0
	24 CAVITE	0	0	0	0	0	0	0	0	0	0	0	0	0
	25 LAGUNA	0	0	0	0	0	0	0	0	0	0	0	0	0
	26 BATANGAS	0	0	0	0	0	0	0	0	0	0	0	0	0
	27 MARINDUQUE	0	2	1	1	4	0	190	50	130	370	0	95	50
	28 MINDORO ORIENTAL	0	0	0	0	0	0	0	0	0	0	0	0	0
	29 MINDORO OCCIDENTAL	0	0	0	0	0	0	0	0	0	0	0	0	0
	30 ROMBLON	0	1	1	0	2	0	70	75	0	145	0	70	75
	31 PALAWAN	4	2	1	2	9	790	400	120	325	1,635	198	200	120
	sub-total	11	7	9	4	31	1,696	1,310	1,321	632	4,959	154	187	147
V	32 CAMARINES NORTE	6	6	0	0	12	519	437	0	0	976	90	73	0
	33 CAMARINES SUR	0	0	0	0	0	0	0	0	0	0	0	0	0
	34 CATANDUANES	0	0	1	0	1	0	0	200	0	200	0	0	200
	35 ALBAY	0	0	0	0	0	0	0	0	0	0	0	0	0
	36 SORSOGON	9	16	2	0	27	891	2,408	335	0	3,694	99	154	168
	37 MASBATE	3	1	0	0	4	369	50	0	0	419	123	50	0
	sub-total	18	23	3	0	44	1,799	2,955	535	0	5,289	100	128	178
VI	38 AKLAN	0	0	0	0	0	0	0	0	0	0	0	0	0
	39 CAPIZ	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ANTIQUE	14	10	6	0	30	1,510	1,506	737	0	3,783	110	151	123
	41 ILOILO	5	4	0	7	16	551	583	0	1,123	2,260	111	146	0
	42 NEGROS OCCIDENTAL	0	1	0	1	2	0	65	0	120	185	0	65	0
	43 NEGROS DEL NORTE	0	0	0	0	0	0	0	0	0	0	0	0	0
	sub-total	19	15	6	8	48	2,094	2,151	737	1,243	6,228	110	144	123
VII	44 CEBU	3	0	1	0	4	701	0	110	0	811	234	0	110
	45 NEGROS ORIENTAL	11	0	2	2	15	1,305	0	630	330	2,265	119	0	315
	46 BOHOL	0	0	0	0	0	0	0	0	0	0	0	0	0
	47 SIKUJOR	0	0	0	0	0	0	0	0	0	0	0	0	0
	sub-total	14	0	3	2	19	2,006	0	740	330	3,076	143	0	247
VIII	48 NORTHERN SAMAR	2	0	0	1	3	150	0	0	85	235	75	0	0
	49 SAMAR	0	0	0	0	0	0	0	0	0	0	0	0	0
	50 EASTERN SAMAR	1	0	0	0	1	167	0	0	0	167	167	0	0
	51 NORTHERN LEYTE	66	8	2	12	88	10,238	1,191	820	1,459	13,711	155	149	410
	52 SOUTHERN LEYTE	7	5	1	2	15	619	482	50	466	1,617	88	96	50
	sub-total	76	13	3	15	107	11,174	1,676	870	2,010	15,730	147	129	290
IX	53 ZAMBOANGA DEL NORTE	1	9	2	0	12	187	1,061	780	0	1,968	187	111	390
	54 ZAMBOANGA DEL SUR	0	0	1	0	1	0	0	350	0	350	0	0	350
	55 BASILAN	0	0	0	0	0	0	0	0	0	0	0	0	0
	56 SULU	0	0	0	0	0	0	0	0	0	0	0	0	0
	57 TAWI-TAWI	0	0	0	0	0	0	0	0	0	0	0	0	0
	sub-total	1	9	3	0	13	187	1,061	1,130	0	2,318	187	111	377
X	58 SURIGAO DEL NORTE	3	2	0	1	6	310	160	0	50	520	103	80	0
	59 CAMKIJIN	0	3	0	0	3	0	540	0	0	540	0	180	0
	60 AGUSAN DEL NORTE	16	1	0	6	23	2,495	120	0	625	3,240	156	120	0
	61 MISAMIS ORIENTAL	2	1	0	2	5	300	70	0	150	520	150	70	0
	62 MISAMIS OCCIDENTAL	16	0	0	0	16	2,423	0	0	0	2,423	151	0	0
	63 BUKIDNON	13	1	0	3	17	2,390	50	0	690	3,130	184	50	0
	64 AGUSAN DEL SUR	6	1	1	1	9	875	200	200	200	1,475	146	200	200
	sub-total	56	9	1	13	79	8,793	1,140	200	1,715	11,818	157	127	200
XI	65 SURIGAO DEL SUR	18	0	4	0	22	2,794	0	825	0	3,619	155	0	206
	66 DAVAO ORIENTAL	2	0	1	0	3	425	0	65	0	490	213	0	65
	67 DAVAO DEL NORTE	2	0	1	0	3	500	0	120	0	620	290	0	120
	68 DAVAO DEL SUR	2	2	0	1	5	266	350	0	100	716	133	175	0
	69 SOUTH COTABATO	10	7	5	2	24	1,702	1,037	856	185	3,780	170	148	171
	sub-total	34	9	11	3	57	5,687	1,397	1,666	285	9,225	167	154	170
XII	70 LANA DEL NORTE	0	0	0	0	0	0	0	0	0	0	0	0	0
	71 LANA DEL SUR	0	0	0	0	0	0	0	0	0	0	0	0	0
	72 NORTH COTABATO	4	0	5	3	12	517	0	1,390	400	2,307	129	0	278
	73 MAGUINDANAO	20	0	1	0	21	3,305	0	170	0	3,475	165	0	170
	74 SULTAN KUDARAT	2	0	0	11	13	210	0	0	2,495	2,735	120	0	0
	sub-total	26	0	6	14	46	4,052	0	1,560	2,895	8,517	156	0	260
	<b>Total</b>	<b>380</b>	<b>104</b>	<b>83</b>	<b>108</b>	<b>675</b>	<b>51,732</b>	<b>14,579</b>	<b>14,330</b>	<b>15,962</b>	<b>96,803</b>	<b>136</b>	<b>140</b>	<b>175</b>

## CANDIDATE SUB-PROJECTS FOR CONSTRUCTION : CIP

Region	Province	Present Status of Preparation (nos.)					Designed Irrigable Area (ha)					Average of Designed Irrigable Area (ha)		
		No Planning	I/S Finished	D/D Finished	Unknown	Total	No Planning	I/S Finished	D/D Finished	Unknown	Total	No Planning	I/S Finished	D/D Finished
I	1 ILOCOS NORTH	0	0	0	0	0	0	0	0	0	0	0	0	0
	2 ABRA	0	0	1	0	1	0	0	350	0	350	0	0	350
	3 ILOCOS SUR	0	6	5	0	11	0	517	574	0	1,091	0	86	115
	4 MOUNTAIN PROVINCE	0	0	6	0	6	0	0	595	0	595	0	0	99
	5 LA UNION	0	1	0	0	1	0	280	0	0	280	0	280	0
	6 BENGUET	2	1	3	0	6	116	77	257	0	450	58	77	86
	7 PANGASINAN	0	1	0	0	1	0	55	0	0	55	0	55	0
Sub-total		2	9	15	0	26	116	929	1,276	0	2,821	58	103	118
II	8 BATANES	0	0	0	0	0	0	0	0	0	0	0	0	0
	9 CAGAYAN	0	1	0	0	1	0	392	0	0	392	0	392	0
	10 KALINGA APAYAO	0	1	2	0	3	0	250	456	0	706	0	250	228
	11 ISABELA	0	1	1	0	2	0	80	100	0	180	0	80	100
	12 IFUGAO	0	2	1	0	3	0	310	215	0	525	0	155	215
	13 NUEVA VISCAYA	0	0	0	0	0	0	0	0	0	0	0	0	0
	14 QUIRINO	0	2	0	0	2	0	125	0	0	125	0	63	0
sub-total		0	7	4	0	11	0	1,157	771	0	1,928	0	165	193
III	15 NUEVA ECUJA	0	0	0	0	0	0	0	0	0	0	0	0	0
	16 TARLAC	0	0	0	0	0	0	0	0	0	0	0	0	0
	17 ZAMBALES	0	0	0	0	0	0	0	0	0	0	0	0	0
	18 PAMPANGA	0	0	0	0	0	0	0	0	0	0	0	0	0
	19 BULACAN	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 BATAAN	0	0	0	0	0	0	0	0	0	0	0	0	0
sub-total		0	0	0	0	0	0	0	0	0	0	0	0	0
IV	21 AURORA	0	1	0	0	1	0	200	0	0	200	0	200	0
	22 QUEZON	0	2	1	0	3	0	200	147	0	347	0	100	147
	23 RIZAL	0	0	0	0	0	0	0	0	0	0	0	0	0
	24 CAVITE	0	1	2	0	3	0	60	250	0	310	0	60	125
	25 LAGUNA	0	0	0	0	0	0	0	0	0	0	0	0	0
	26 BATANGAS	0	0	0	0	0	0	0	0	0	0	0	0	0
	27 MARIQUETE	0	0	0	0	0	0	0	0	0	0	0	0	0
	28 MINDORO ORIENTAL	0	0	0	0	0	0	0	0	0	0	0	0	0
	29 MINDORO OCCIDENTAL	0	0	0	0	0	0	0	0	0	0	0	0	0
	30 ROMBLON	0	0	1	0	1	0	0	70	0	70	0	0	70
	31 PALAWAN	5	1	4	3	13	800	150	1,170	325	2,445	160	150	293
sub-total		5	5	8	3	21	800	610	1,617	325	3,372	160	122	295
V	32 CAMARINES NORTE	4	4	2	0	10	380	280	155	0	815	95	70	78
	33 CAMARINES SUR	0	0	0	0	0	0	0	0	0	0	0	0	0
	34 CATANDUANES	0	0	0	0	0	0	0	0	0	0	0	0	0
	35 ALBAY	0	2	1	0	3	0	255	125	0	380	0	128	125
	36 SORSOGON	0	2	3	0	5	0	137	315	0	452	0	69	105
	37 MASBATE	0	1	0	0	1	0	376	0	0	376	0	376	0
sub-total		4	9	6	0	19	380	1,018	595	0	2,023	95	116	99
VI	38 Aklan	0	0	0	0	0	0	0	0	0	0	0	0	0
	39 CAPIZ	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ANTIQUE	0	3	1	0	4	0	240	450	0	690	0	80	450
	41 ILOILO	0	1	0	0	1	0	64	0	0	64	0	64	0
	42 NEGROS OCCIDENTAL	0	5	5	0	10	0	590	590	0	1,180	0	118	118
	43 NEGROS DEL NORTE	0	0	0	0	0	0	0	0	0	0	0	0	0
sub-total		0	9	6	0	15	0	894	1,040	0	1,934	0	99	173
VII	44 CEBU	0	1	0	0	1	0	200	0	0	200	0	200	0
	45 NEGROS ORIENTAL	5	5	3	0	13	510	1,310	610	0	2,430	102	262	213
	46 BOHOL	0	0	0	0	0	0	0	0	0	0	0	0	0
	47 SIQUIOR	1	0	1	0	2	150	0	200	0	350	150	0	200
sub-total		6	6	4	0	16	660	1,510	810	0	3,010	110	252	210
VIII	48 NORTHERN SAMAR	0	1	2	0	3	0	50	345	0	395	0	50	173
	49 SAMAR	0	0	0	0	0	0	0	0	0	0	0	0	0
	50 EASTERN SAMAR	0	3	0	0	3	0	195	0	0	195	0	65	0
	51 NORTHERN LEYTE	0	1	1	1	3	0	120	400	100	620	0	120	400
	52 SOUTHERN LEYTE	0	2	1	0	3	0	153	55	0	208	0	77	55
	sub-total		0	7	4	1	12	0	518	800	100	1,418	0	74
IX	53 ZAMBOANGA DEL NORTE	0	0	4	0	4	0	0	475	0	475	0	0	119
	54 ZAMBOANGA DEL SUR	0	0	0	0	0	0	0	0	0	0	0	0	0
	55 BASILAN	0	0	0	0	0	0	0	0	0	0	0	0	0
	56 SULU	0	0	0	0	0	0	0	0	0	0	0	0	0
	57 TAWI-TAWI	0	0	0	0	0	0	0	0	0	0	0	0	0
	sub-total		0	0	4	0	4	0	0	475	0	475	0	0
X	58 SURIGAO DEL NORTE	0	1	1	0	2	0	210	110	0	320	0	210	110
	59 CAGUIN	0	0	0	0	0	0	0	0	0	0	0	0	0
	60 AGUSAN DEL NORTE	0	3	3	0	6	0	302	400	0	702	0	101	133
	61 MISAMIS ORIENTAL	0	0	5	0	5	0	0	395	0	395	0	0	79
	62 MISAMIS OCCIDENTAL	0	0	0	0	0	0	0	0	0	0	0	0	0
	63 BUKIDNON	0	8	2	0	10	0	1,165	600	0	1,765	0	146	300
	64 AGUSAN DEL SUR	0	6	1	0	7	0	1,220	500	0	1,720	0	203	500
sub-total		0	18	12	0	30	0	2,897	2,005	0	4,902	0	161	167
XI	65 SURIGAO DEL SUR	0	0	3	0	3	0	0	670	0	670	0	0	223
	66 DAVAO ORIENTAL	2	0	0	0	2	200	0	0	200	100	0	0	0
	67 DAVAO DEL NORTE	0	1	1	0	2	0	370	460	0	830	0	370	460
	68 DAVAO DEL SUR	0	1	2	0	3	0	50	310	0	360	0	50	170
	69 SOUTH COTABATO	0	0	3	0	3	0	0	510	0	510	0	0	180
sub-total		2	2	9	0	13	200	420	2,010	0	2,630	100	210	223
XII	70 LANA DEL NORTE	0	0	0	0	0	0	0	0	0	0	0	0	0
	71 LANA DEL SUR	0	0	0	0	0	0	0	0	0	0	0	0	0
	72 NORTH COTABATO	0	0	0	0	0	0	0	0	0	0	0	0	0
	73 MAGUINDANAO	0	0	3	0	3	0	0	687	0	687	0	0	229
	74 SULTAN KUDARAT	1	4	1	3	9	100	550	360	480	1,490	100	138	300
sub-total		1	4	4	3	12	100	550	960	480	2,117	100	138	247
Total		20	76	76	7	179	2,256	10,533	12,936	905	26,630	113	139	170

Table C2-10

MINIMUM TERMINAL IRRIGATION AREA AT THE END OF MAIN/LATERAL  
CANALS : CIP

		AREA (ha)						(Unit : Nos.)	
Region	Province	0 - 25	25 - 50	50 - 75	75 - 100	Over 100	Unknown	Total	Average
I	1 ILOCOS NORTE	0	0	0	0	0	0	0	
	2 ABRA	1	0	0	0	0	0	1	20.00
	3 ILOCOS SUR	11	0	0	0	0	0	11	1.82
	4 MOUNTAIN PROVINCE	5	1	0	0	0	0	6	6.33
	5 LA UNION	0	1	0	0	0	0	1	40.00
	6 BENGUET	6	0	0	0	0	0	6	2.67
	7 PANGASINAN	0	0	0	0	0	0	1	
	Sub-total	23	2	0	0	0	1	26	5.36
II	8 BATANES	0	0	0	0	0	0	0	
	9 CAGAYAN	0	0	0	0	0	1	1	
	10 KALINGA APAYAO	3	0	0	0	0	0	3	10.00
	11 ISABELA	0	0	0	0	0	2	2	
	12 IFUGAO	2	0	0	0	0	1	3	4.50
	13 NUBVA VISCAYA	0	0	0	0	0	0	0	
	14 QUIRINO	2	0	0	0	0	0	2	3.50
	sub-total	7	0	0	0	0	4	11	6.57
III	15 NUEVA ECIJA	0	0	0	0	0	0	0	
	16 TARLAC	0	0	0	0	0	0	0	
	17 ZAMBALES	0	0	0	0	0	0	0	
	18 PAMPANGA	0	0	0	0	0	0	0	
	19 BULACAN	0	0	0	0	0	0	0	
	20 BATAAN	0	0	0	0	0	0	0	
		sub-total	0	0	0	0	0	0	0
IV	21 AURORA	1	0	0	0	0	0	1	2.00
	22 QUEZON	2	0	0	0	0	1	3	7.00
	23 RIZAL	0	0	0	0	0	0	0	
	24 CAVITE	2	1	0	0	0	0	3	15.00
	25 LAGUNA	0	0	0	0	0	0	0	
	26 BATANGAS	0	0	0	0	0	0	0	
	27 MARINDUQUE	0	0	0	0	0	0	0	
	28 MINDORO ORIENTAL	0	0	0	0	0	0	0	
	29 MINDORO OCCIDENTAL	0	0	0	0	0	0	0	
	30 ROMBLON	1	0	0	0	0	0	1	9.00
	31 PALAWAN	2	1	0	0	0	10	13	26.00
	sub-total	8	2	0	0	0	11	21	14.80
V	32 CAMARINES NORTE	6	1	1	0	0	0	11	23.90
	33 CAMARINES SUR	0	0	0	0	0	0	0	
	34 CATANDUANES	0	0	0	0	0	0	0	
	35 ALBAY	0	1	1	0	0	0	2	53.33
	36 SORSOGON	3	2	0	0	0	0	5	23.00
	37 MASBATE	0	0	0	0	0	1	1	
		sub-total	9	4	2	0	0	1	19
VI	38 AKLAN	0	0	0	0	0	0	0	
	39 CAPIZ	0	0	0	0	0	0	0	
	40 ANTIQUE	0	0	1	2	1	0	4	247.00
	41 ILOILO	0	0	0	0	0	1	1	
	42 NEGROS OCCIDENTAL	3	4	2	0	0	1	10	35.22
	43 NEGROS DEL NORTE	0	0	0	0	0	0	0	
	sub-total	3	4	3	2	1	2	15	100.38
VII	44 CEBU	0	0	0	0	0	1	1	
	45 NEGROS ORIENTAL	11	2	0	0	0	0	13	13.08
	46 BOHOL	0	0	0	0	0	0	0	
	47 SIQUOR	2	0	0	0	0	0	2	7.50
	sub-total	13	2	0	0	0	1	16	12.33
VIII	48 NORTHERN SAMAR	2	0	0	0	0	1	3	14.00
	49 SAMAR	0	0	0	0	0	0	0	
	50 EASTERN SAMAR	3	0	0	0	0	0	3	2.33
	51 NORTHERN LEYTE	0	0	0	0	1	2	3	120.00
	52 SOUTHERN LEYTE	1	1	0	0	0	1	3	30.00
	sub-total	6	1	0	0	1	4	12	26.88
IX	53 ZAMBOANGA DEL NORTE	1	2	1	0	0	0	4	36.75
	54 ZAMBOANGA DEL SUR	0	0	0	0	0	0	0	
	55 BASILAN	0	0	0	0	0	0	0	
	56 SULU	0	0	0	0	0	0	0	
	57 TAWI-TAWI	0	0	0	0	0	0	0	
		sub-total	1	2	1	0	0	0	4
X	58 SURIGAO DEL NORTE	0	0	0	1	1	0	2	105.00
	59 CAMIGUIN	0	0	0	0	0	0	0	
	60 AGUSAN DEL NORTE	0	0	1	3	2	0	6	117.00
	61 MISAMIS ORIENTAL	0	0	2	3	0	0	5	79.00
	62 MISAMIS OCCIDENTAL	0	0	0	0	0	0	0	
	63 BUKIDNON	0	0	2	1	6	1	10	173.89
	64 AGUSAN DEL SUR	7	0	0	0	0	0	7	12.86
	sub-total	7	0	5	8	9	1	30	102.14
XI	65 SURIGAO DEL SUR	1	0	0	1	1	0	3	65.00
	66 DAVAO ORIENTAL	0	1	0	0	1	0	2	100.00
	67 DAVAO DEL NORTE	0	0	0	0	2	0	2	385.00
	68 DAVAO DEL SUR	0	2	0	0	0	1	3	32.50
	69 SOUTH COTABATO	0	0	0	0	0	3	3	
		sub-total	1	3	0	1	4	4	13
XII	70 LANA O DEL NORTH	0	0	0	0	0	0	0	
	71 LANA O DEL SUR	0	0	0	0	0	0	0	
	72 NORTH COTABATO	0	0	0	0	0	0	0	
	73 MAGUINDANAO	1	1	0	0	1	0	3	62.67
	74 SULTAN KUDARAT	0	9	0	0	0	0	9	46.67
	sub-total	1	10	0	0	1	0	12	50.67
	Total	79	33	11	11	16	29	179	49.96

Table C2-11

MINIMUM TERMINAL IRRIGATION AREA AT THE END OF PROJECT/FARM  
DRAINS : CIP

		AREA (ha)						(Unit : Nos.)	
Region	Province	0 - 25	25 - 50	50 - 75	75 - 100	Over 100	Unknown	Total	Average
I	1 ILOCOS NORTE	0	0	0	0	0	0	0	
	2 ABRA	1	0	0	0	0	0	1	15.00
	3 ILOCOS SUR	1	0	0	0	0	10	11	1.00
	4 MOUNTAIN PROVINCE	6	0	0	0	0	0	6	3.33
	5 LA UNION	1	0	0	0	0	0	1	15.00
	6 BENGUET	6	0	0	0	0	0	6	1.67
	7 PANGLASINAN	0	0	0	0	0	1	1	
	Sub-total	15	0	0	0	0	11	26	4.07
II	8 BATANES	0	0	0	0	0	0	0	
	9 CAGAYAN	0	0	0	0	0	1	1	
	10 KALINGA APAYAO	3	0	0	0	0	0	3	15.00
	11 ISABELA	0	0	0	0	0	2	2	
	12 IPUGAO	2	0	0	0	0	1	3	3.00
	13 NUEVA VISCAAYA	0	0	0	0	0	0	0	
	14 QUIRINO	2	0	0	0	0	0	2	1.50
	sub-total	7	0	0	0	0	4	11	7.71
III	15 NUEVA ECUIA	0	0	0	0	0	0	0	
	16 TARLAC	0	0	0	0	0	0	0	
	17 ZAMBALES	0	0	0	0	0	0	0	
	18 PAMPANGA	0	0	0	0	0	0	0	
	19 BULACAN	0	0	0	0	0	0	0	
	20 BATAAN	0	0	0	0	0	0	0	
		sub-total	0	0	0	0	0	0	0
IV	21 AURORA	1	0	0	0	0	0	1	5.00
	22 QUEZON	0	0	0	0	0	3	3	
	23 RIZAL	0	0	0	0	0	0	0	
	24 CAVITE	1	0	0	0	0	2	3	5.00
	25 LAGUNA	0	0	0	0	0	0	0	
	26 BATANGAS	0	0	0	0	0	0	0	
	27 MARINDUQUE	0	0	0	0	0	0	0	
	28 MINDORO ORIENTAL	0	0	0	0	0	0	0	
	29 MINDORO OCCIDENTAL	0	0	0	0	0	0	0	
	30 ROMBLON	0	0	0	0	0	1	1	
	31 PALAWAN	3	0	0	0	0	10	13	6.33
	sub-total	5	0	0	0	0	16	21	5.80
V	32 CAMARINES NORTE	7	3	0	0	0	0	10	22.40
	33 CAMARINES SUR	0	0	0	0	0	0	0	
	34 CATANDUANES	0	0	0	0	0	0	0	
	35 ALBAY	0	1	2	0	0	0	3	53.33
	36 SORSOGON	3	2	0	0	0	0	5	23.00
	37 MASBATE	0	0	0	0	0	1	1	
		sub-total	10	6	2	0	0	1	19
VI	38 AKLAN	0	0	0	0	0	0	0	
	39 CAPEZ	0	0	0	0	0	0	0	
	40 ANTIQUE	0	0	1	2	1	0	4	247.00
	41 ILOILO	0	0	0	0	0	1	1	
	42 NEGROS OCCIDENTAL	0	0	0	0	0	10	10	
	43 NEGROS DEL NORTE	0	0	0	0	0	0	0	
		sub-total	0	0	1	2	1	11	15
VII	44 CEBU	0	0	0	0	0	1	1	
	45 NEGROS ORIENTAL	11	2	0	0	0	0	13	13.08
	46 BOHOL	0	0	0	0	0	0	0	
	47 SIQUJOR	2	0	0	0	0	0	2	7.50
		sub-total	13	2	0	0	0	1	16
VIII	48 NORTHERN SAMAR	2	0	0	0	0	1	3	14.00
	49 SAMAR	0	0	0	0	0	0	0	
	50 EASTERN SAMAR	3	0	0	0	0	0	3	2.00
	51 NORTHERN LEYTE	0	0	0	0	0	3	3	
	52 SOUTHERN LEYTE	1	1	0	0	0	1	3	30.00
	sub-total	6	1	0	0	0	5	12	13.43
IX	53 ZAMBOANGA DEL NORTE	1	2	0	0	0	1	4	27.67
	54 ZAMBOANGA DEL SUR	0	0	0	0	0	0	0	
	55 BASILAN	0	0	0	0	0	0	0	
	56 SULU	0	0	0	0	0	0	0	
	57 TAWI-TAWI	0	0	0	0	0	0	0	
	sub-total	1	2	0	0	0	1	4	27.67
X	58 SURIGAO DEL NORTE	1	1	0	0	0	0	2	30.00
	59 CAGUIN	0	0	0	0	0	0	0	
	60 AGUSAN DEL NORTE	0	0	0	0	0	6	6	
	61 MISAMIS ORIENTAL	2	1	0	0	0	2	5	23.33
	62 MISAMIS OCCIDENTAL	0	0	0	0	0	0	0	
	63 BUKIDNON	0	0	0	0	0	10	10	
	64 AGUSAN DEL SUR	7	0	0	0	0	0	7	12.86
	sub-total	10	2	0	0	0	18	30	18.33
XI	65 SURIGAO DEL SUR	0	0	0	0	0	3	3	
	66 DAVAO ORIENTAL	0	1	0	0	1	0	2	100.00
	67 DAVAO DEL NORTE	0	0	0	0	0	2	2	
	68 DAVAO DEL SUR	2	0	0	0	0	1	3	12.50
	69 SOUTH COTABATO	0	0	0	0	0	3	3	
		sub-total	2	1	0	0	1	9	13
XII	70 LANA O DEL NORTE	0	0	0	0	0	0	0	
	71 LANA O DEL SUR	0	0	0	0	0	0	0	
	72 NORTH COTABATO	0	0	0	0	0	0	0	
	73 MAGUINDANAO	0	0	0	0	0	3	3	
	74 SULTAN KUDARAT	9	0	0	0	0	0	9	9.33
	sub-total	9	0	0	0	0	3	12	9.33
	Total	78	14	3	2	2	80	179	25.47

Table C2-12

## FARM ROADS WITH MAIN/LATERAL CANALS

(Unit : Nos.)

Region	Province	Provided	Not - Provided	Unknown	Total	Ratio (%)	Average Width (m)
I	1 ILOCOS NORTE	0	0	0	0	0	0.00
	2 ADRA	0	1	0	1	0	0.00
	3 ILOCOS SUR	0	11	0	11	0	0.00
	4 MOUNTAIN PROVINCE	0	6	0	6	0	0.00
	5 LA UNION	0	1	0	1	0	0.00
	6 BENGUET	2	4	0	6	33	2.75
	7 PANGASINAN	0	1	0	1	0	0.00
	Sub-total	2	24	0	26	8	2.75
II	8 BATANES	0	0	0	0	0	0.00
	9 CAGAYAN	1	0	0	1	100	3.50
	10 KALINGA APAYAO	0	3	0	3	0	0.00
	11 ISABELA	0	1	1	2	0	0.00
	12 IFUGAO	3	0	0	3	100	4.00
	13 NUEVA VISCAYA	0	0	0	0	0	0.00
	14 QUIRINO	0	2	0	2	0	0.00
	sub-total	4	6	1	11	36	3.88
III	15 NUEVA ECJA	0	0	0	0	0	0.00
	16 TARLAC	0	0	0	0	0	0.00
	17 ZAMBALES	0	0	0	0	0	0.00
	18 PAMPANGA	0	0	0	0	0	0.00
	19 BULACAN	0	0	0	0	0	0.00
	20 BATAAN	0	0	0	0	0	0.00
	sub-total	0	0	0	0	0	0.00
IV	21 AURORA	0	1	0	1	0	0.00
	22 QUEZON	0	3	0	3	0	0.00
	23 RIZAL	0	0	0	0	0	0.00
	24 CAVITE	0	3	0	3	0	0.00
	25 LAGUNA	0	0	0	0	0	0.00
	26 BATANGAS	0	0	0	0	0	0.00
	27 MARINDUQUE	0	0	0	0	0	0.00
	28 MINDORO ORIENTAL	0	0	0	0	0	0.00
	29 MINDORO OCCIDENTAL	0	0	0	0	0	0.00
	30 ROMBLON	0	1	0	1	0	0.00
	31 PALAWAN	4	0	9	13	31	4.00
	sub-total	4	8	9	21	19	4.00
V	32 CAMARINES NORTE	1	9	0	10	0	3.50
	33 CAMARINES SUR	0	0	0	0	0	0.00
	34 CATANDUANES	0	0	0	0	0	0.00
	35 ALBAY	0	3	0	3	0	0.00
	36 SORSOGON	0	5	0	5	0	0.00
	37 MASBATE	1	0	0	1	100	4.00
	sub-total	2	17	0	19	11	3.75
VI	38 AKLAN	0	0	0	0	0	0.00
	39 CAPIZ	0	0	0	0	0	0.00
	40 ANTIQUE	0	4	0	4	0	0.00
	41 ILOILO	0	0	1	1	0	0.00
	42 NEGROS OCCIDENTAL	0	0	0	0	0	0.00
	43 NEGROS DEL NORTE	10	0	0	10	0	0.00
	sub-total	10	4	1	15	67	6.00
VII	44 CEBU	0	0	1	1	0	0.00
	45 NEGROS ORIENTAL	0	13	0	13	0	0.00
	46 BOHOL	0	0	0	0	0	0.00
	47 SIQUOR	0	2	0	2	0	0.00
	sub-total	0	15	1	16	0	0.00
VIII	48 NORTHERN SAMAR	0	2	1	3	0	0.00
	49 SAMAR	0	0	0	0	0	0.00
	50 EASTERN SAMAR	0	3	0	3	0	0.00
	51 NORTHERN LEYTE	2	1	0	3	67	2.00
	52 SOUTHERN LEYTE	0	2	1	3	0	0.00
	sub-total	2	8	2	12	17	2.00
IX	53 ZAMBOANGA DEL NORTE	0	4	0	4	0	0.00
	54 ZAMBOANGA DEL SUR	0	0	0	0	0	0.00
	55 BASILAN	0	0	0	0	0	0.00
	56 SULU	0	0	0	0	0	0.00
	57 TAWI-TAWI	0	0	0	0	0	0.00
	sub-total	0	4	0	4	0	0.00
X	58 SURIGAO DEL NORTE	0	2	0	2	0	0.00
	59 CAMIGUIN	0	0	0	0	0	0.00
	60 AGUSAN DEL NORTE	0	6	0	6	0	0.00
	61 MISAMIS ORIENTAL	1	4	0	5	20	4.00
	62 MISAMIS OCCIDENTAL	0	0	0	0	0	0.00
	63 BUKIDNON	0	9	1	10	0	0.00
	64 AGUSAN DEL SUR	0	7	0	7	0	0.00
	sub-total	1	28	1	30	3	4.00
XI	65 SURIGAO DEL SUR	0	3	0	3	0	0.00
	66 DAVAO ORIENTAL	0	2	0	2	0	0.00
	67 DAVAO DEL NORTE	2	0	0	2	100	4.00
	68 DAVAO DEL SUR	0	2	1	3	0	0.00
	69 SOUTH COTABATO	0	3	0	3	0	0.00
	sub-total	2	10	1	13	15	4.00
XII	70 LANA DEL NORTE	0	0	0	0	0	0.00
	71 LANA DEL SUR	0	0	0	0	0	0.00
	72 NORTH COTABATO	0	0	0	0	0	0.00
	73 MAGUINDANAO	2	1	0	3	67	3.50
	74 SULTAN KUDARAT	9	0	0	9	100	3.44
	sub-total	11	1	0	12	92	3.45
	Total	38	125	16	179	21	4.23

## FARM ROADS WITH PROJECT DRAINS

(Unit : Nos.)

Region	Province	Provided	Not - Provided	Unknown	Total	Ratio (%)	Average Width (m)
I	1 ILOCOS NORTE	0	0	0	0	0	0.00
	2 ABRA	0	1	0	1	0	0.00
	3 ILOCOS SUR	0	11	0	11	0	0.00
	4 MOUNTAIN PROVINCE	0	6	0	6	0	0.00
	5 LA UNION	0	1	0	1	0	0.00
	6 BENGUET	2	4	0	6	33	2.75
	7 PANGASINAN	0	1	0	1	0	0.00
	Sub-total	2	24	0	26	8	2.75
II	8 BATANES	0	0	0	0	0	0.00
	9 CAGAYAN	0	1	0	1	0	0.00
	10 KALINGA APAYAO	0	3	0	3	0	0.00
	11 ISABELA	0	1	1	2	0	0.00
	12 IFUGAO	0	3	0	3	0	0.00
	13 NUEVA VISCAYA	0	0	0	0	0	0.00
	14 QUIRINO	0	2	0	2	0	0.00
	sub-total	0	10	1	11	0	0.00
III	15 NUEVA ECUA	0	0	0	0	0	0.00
	16 TARLAC	0	0	0	0	0	0.00
	17 ZAMBALES	0	0	0	0	0	0.00
	18 PAMPANGA	0	0	0	0	0	0.00
	19 BULACAN	0	0	0	0	0	0.00
	20 BATAAN	0	0	0	0	0	0.00
	sub-total	0	0	0	0	0	0.00
IV	21 AURORA	0	1	0	1	0	0.00
	22 QUEZON	0	3	0	3	0	0.00
	23 RIZAL	0	0	0	0	0	0.00
	24 CAVITE	0	2	1	3	0	0.00
	25 LAGUNA	0	0	0	0	0	0.00
	26 BATANGAS	0	0	0	0	0	0.00
	27 MARINDUQUE	0	0	0	0	0	0.00
	28 MENDO RO ORIENTAL	0	0	0	0	0	0.00
	29 MENDO RO OCCIDENTAL	0	0	0	0	0	0.00
	30 ROMBLON	0	1	0	1	0	0.00
	31 PALAWAN	2	3	8	13	15	4.00
	sub-total	2	10	9	21	10	4.00
V	32 CAMARINES NORTE	0	9	1	10	0	0.00
	33 CAMARINES SUR	0	0	0	0	0	0.00
	34 CATANDUANES	0	0	0	0	0	0.00
	35 ALBAY	0	3	0	3	0	0.00
	36 SORSOGON	0	5	0	5	0	0.00
	37 MASHATE	0	1	0	1	0	0.00
	sub-total	0	18	1	19	0	0.00
VI	38 AKLAN	0	0	0	0	0	0.00
	39 CAPIZ	0	0	0	0	0	0.00
	40 ANTIQUE	0	4	0	4	0	0.00
	41 ILOILO	0	0	1	1	0	0.00
	42 NEGROS OCCIDENTAL	0	10	0	10	0	0.00
	43 NEGROS DEL NORTH	0	0	0	0	0	0.00
	sub-total	0	14	1	15	0	0.00
VII	44 CEBU	0	0	1	1	0	0.00
	45 NEGROS ORIENTAL	0	13	0	13	0	0.00
	46 BOHOL	0	0	0	0	0	0.00
	47 SIQUOR	0	2	0	2	0	0.00
	sub-total	0	15	1	16	0	0.00
VIII	48 NORTHERN SAMAR	0	2	1	3	0	0.00
	49 SAMAR	0	0	0	0	0	0.00
	50 EASTERN SAMAR	0	3	0	3	0	0.00
	51 NORTHERN LEYTE	0	2	1	3	0	0.00
	52 SOUTHERN LEYTE	0	2	1	3	0	0.00
	sub-total	0	9	3	12	0	0.00
IX	53 ZAMBOANGA DEL NORTE	0	4	0	4	0	0.00
	54 ZAMBOANGA DEL SUR	0	0	0	0	0	0.00
	55 BASILAN	0	0	0	0	0	0.00
	56 SULU	0	0	0	0	0	0.00
	57 TAWI-TAWI	0	0	0	0	0	0.00
	sub-total	0	4	0	4	0	0.00
X	58 SURIGAO DEL NORTE	0	2	0	2	0	0.00
	59 CAMIGUIN	0	0	0	0	0	0.00
	60 AGUSAN DEL NORTE	0	6	0	6	0	0.00
	61 MISAMIS ORIENTAL	0	5	0	5	0	0.00
	62 MISAMIS OCCIDENTAL	0	0	0	0	0	0.00
	63 BUKIDNON	0	9	1	10	0	0.00
64 ACUSAN DEL SUR	0	7	0	7	0	0.00	
	sub-total	0	29	1	30	0	0.00
XI	65 SURIGAO DEL SUR	0	3	0	3	0	0.00
	66 DAVAO ORIENTAL	0	2	0	2	0	0.00
	67 DAVAO DEL NORTE	0	2	0	2	0	0.00
	68 DAVAO DEL SUR	1	2	0	3	33	0.00
	69 SOUTH COTABATO	0	3	0	3	0	0.00
	sub-total	1	12	0	13	8	0.00
XII	70 LANA O DEL NORTE	0	0	0	0	0	0.00
	71 LANA O DEL SUR	0	0	0	0	0	0.00
	72 NORTH COTABATO	0	0	0	0	0	0.00
	73 MAGUINDANAO	0	3	0	3	0	0.00
	74 SULTAN KUDARAT	0	7	2	9	0	0.00
	sub-total	0	10	2	12	0	0.00
	Total	5	155	19	179	3	3.38

Table C2-14

## IRRIGATION DEVELOPMENT COST PER HA : CIS

(AT A 1990 PRICE LEVEL)

(Unit : Nos.)

Region	Province	Irrigation Development Cost per ha (Peso / ha)						Unknown	Total	Average (Peso / ha)	
		0 - 18,000	18,000 - 35,000	35,000 - 55,000	55,000 - 70,000	70,000 - 100,000	Over 100,000				
I	1 ILOCOS NORTE	7	5	7	2	6	6	10	43	63,518	
	2 ABRA	6	1	0	0	0	0	0	7	12,544	
	3 ILOCOS SUR	1	2	2	0	0	0	0	5	33,806	
	4 MOUNTAIN PROVINCE	4	0	1	0	0	0	1	6	15,131	
	5 LA UNION	24	1	0	0	0	0	1	26	7,953	
	6 BENGUET	0	1	0	0	0	0	5	6	23,890	
	7 PANGASINAN	1	0	1	0	0	0	0	2	18,338	
	Sub-total	43	10	11	2	6	6	17	95	34,461	
II	8 BATANES	0	0	0	0	0	0	0	0		
	9 CAGAYAN	0	2	1	0	2	0	43	48	48,551	
	10 KALINGA APAYAO	0	0	0	0	0	0	0	0		
	11 ISABELA	1	0	0	0	0	0	0	1	1,422	
	12 IFUGAO	3	2	0	0	0	0	18	23	12,130	
	13 NUVA VISCAYA	13	7	2	3	1	0	16	42	22,926	
	14 QUIRINO	9	2	0	0	0	0	7	18	9,714	
	sub-total	26	13	3	3	3	0	84	132	20,992	
III	15 NUEVA ECUA	2	0	1	0	0	0	1	4	19,267	
	16 TARLAC	0	0	0	0	0	0	0	0		
	17 ZAMBALES	0	0	0	0	0	0	0	0		
	18 PAMPANGA	0	0	0	0	0	0	0	0		
	19 BULACAN	0	0	0	0	0	0	0	0		
	20 BATAAN	0	0	0	0	0	0	0	0		
		sub-total	2	0	1	0	0	0	1	4	19,267
IV	21 AURORA	2	3	1	1	0	0	6	13	28,152	
	22 QUEZON	0	0	0	0	0	1	2	3	111,285	
	23 REZAL	0	0	0	0	0	0	0	0		
	24 CAVITE	0	0	0	0	0	0	0	0		
	25 LAGUNA	0	0	0	0	0	0	0	0		
	26 BATANGAS	0	0	0	0	0	0	0	0		
	27 MARINDUQUE	2	0	0	0	0	0	2	4	10,532	
	28 MINDORO ORIENTAL	0	0	0	0	0	0	0	0		
	29 MINDORO OCCIDENTAL	0	0	0	0	0	0	0	0		
	30 ROMBLON	1	0	0	0	1	0	0	2	42,533	
	31 PALAWAN	4	0	1	0	0	0	4	9	14,649	
	sub-total	9	3	2	1	1	1	14	31	28,681	
V	32 CAMARINES NORTE	10	1	1	0	0	0	0	12	14,264	
	33 CAMARINES SUR	0	0	0	0	0	0	0	0		
	34 CATANDUANES	0	0	1	0	0	0	0	1	35,444	
	35 ALBAY	0	0	0	0	0	0	0	0		
	36 SORSOGON	10	15	2	0	0	0	0	27	20,058	
	37 MASBATE	3	0	1	0	0	0	0	4	14,625	
		sub-total	23	16	5	0	0	0	44	18,334	
VI	38 AKLAN	0	0	0	0	0	0	0	0		
	39 CAMR	0	0	0	0	0	0	0	0		
	40 ANTIQUE	14	6	0	1	0	0	9	30	17,181	
	41 ILOILO	4	1	0	0	0	0	11	16	9,373	
	42 NEGROS OCCIDENTAL	1	0	0	0	0	0	1	2	17,770	
	43 NEGROS DEL NORTE	0	0	0	0	0	0	0	0		
		sub-total	19	7	0	1	0	0	21	48	15,757
VII	44 CEBU	3	0	0	0	0	0	1	4	3,928	
	45 NEGROS ORIENTAL	12	1	0	0	0	0	2	15	7,248	
	46 BOHOL	0	0	0	0	0	0	0	0		
	47 SIKIQUIOR	0	0	0	0	0	0	0	0		
		sub-total	15	1	0	0	0	0	3	19	6,626
VIII	48 NORTHERN SAMAR	0	0	0	0	0	0	3	3		
	49 SAMAR	0	0	0	0	0	0	0	0		
	50 EASTERN SAMAR	1	0	0	0	0	0	0	1	8,248	
	51 NORTHERN LEYTE	8	19	2	4	0	0	55	88	28,370	
	52 SOUTHERN LEYTE	0	6	3	2	4	0	0	15	47,855	
	sub-total	9	25	5	6	4	0	58	107	33,924	
IX	53 ZAMBOANGA DEL NORTE	6	1	4	1	0	0	0	12	28,243	
	54 ZAMBOANGA DEL SUR	0	0	0	1	0	0	0	1	55,950	
	55 BASLAN	0	0	0	0	0	0	0	0		
	56 SULU	0	0	0	0	0	0	0	0		
	57 TAWI-TAWI	0	0	0	0	0	0	0	0		
		sub-total	6	1	4	2	0	0	0	13	30,374
	X	58 SURIGAO DEL NORTE	3	2	1	0	0	0	0	6	25,857
59 CAMIGUIN		3	0	0	0	0	0	0	3	622	
60 AGUSAN DEL NORTE		5	0	0	0	0	0	18	23	4,300	
61 MISAMIS ORIENTAL		4	0	0	0	0	0	1	5	1,369	
62 MISAMIS OCCIDENTAL		11	3	1	0	0	0	1	16	11,929	
63 BUKIDNON		10	0	0	1	1	0	5	17	13,272	
64 AGUSAN DEL SUR		8	0	0	0	0	0	1	9	3,679	
	sub-total	44	5	2	1	1	0	26	79	10,408	
XI	65 SURIGAO DEL SUR	15	4	0	0	0	1	2	22	24,577	
	66 DAVAO ORIENTAL	1	1	1	0	0	0	0	3	25,537	
	67 DAVAO DEL NORTE	1	0	0	0	0	0	2	3	6,548	
	68 DAVAO DEL SUR	3	0	0	0	0	0	2	5	3,255	
	69 SOUTH COTABATO	9	6	2	0	0	0	7	24	18,816	
	sub-total	29	11	3	0	0	1	13	57	20,533	
XII	70 LANA O DEL NORTE	0	0	0	0	0	0	0	0		
	71 LANA O DEL SUR	0	0	0	0	0	0	0	0		
	72 NORTH COTABATO	3	0	0	0	0	0	9	12	7,111	
	73 MAGUINDANAO	1	15	5	0	0	0	0	21	29,773	
	74 SULTAN KUDARAT	0	0	0	0	0	0	13	13		
	sub-total	4	15	5	0	0	0	22	46	26,941	
	Total	229	107	41	16	15	8	259	675	23,411	



Table C2-15

**IRRIGATION DEVELOPMENT COST PER HA : CIP**  
(AT A 1990 PRICE LEVEL)

		Irrigation Development Cost per ha (Peso / ha)							(Unit : Nos.)	
Region	Province	0 - 18,000	18,000 - 35,000	35,000 - 55,000	55,000 - 70,000	70,000 - 100,000	Over 100,000	Unknown	Total	Average (Peso / ha)
I	1 ILOCOS NORTE	0	0	0	0	0	0	0	0	
	2 ABRA	0	1	0	0	0	0	0	1	30,571
	3 ILOCOS SUR	1	4	4	0	2	0	0	11	41,229
	4 MOUNTAIN PROVINCE	0	3	3	0	0	0	0	6	33,196
	5 LA UNION	0	0	1	0	0	0	0	1	42,679
	6 BENGUET	1	1	0	0	2	1	1	6	66,321
	7 PANGASINAN	0	1	0	0	0	0	0	1	18,182
	Sub-total	2	10	8	0	4	1	1	26	43,029
II	8 BATANES	0	0	0	0	0	0	0	0	
	9 CAGAYAN	0	0	0	1	0	0	0	1	63,265
	10 KALINGA APAYAO	0	0	1	2	0	0	0	3	56,215
	11 ISABELA	0	0	1	0	0	0	1	2	45,171
	12 IFUGAO	1	0	1	0	0	0	1	3	24,826
	13 NUEVA VISCAAYA	0	0	0	0	0	0	0	0	
	14 QUIRINO	0	1	1	0	0	0	0	2	33,239
	sub-total	1	1	4	3	0	0	2	11	43,690
III	15 NUEVA ECUIA	0	0	0	0	0	0	0	0	0
	16 TARLAC	0	0	0	0	0	0	0	0	
	17 ZAMBALES	0	0	0	0	0	0	0	0	
	18 PAMPANGA	0	0	0	0	0	0	0	0	
	19 BULACAN	0	0	0	0	0	0	0	0	
	20 BATAAN	0	0	0	0	0	0	0	0	
		sub-total	0	0	0	0	0	0	0	0
IV	21 AURORA	0	1	0	0	0	0	0	1	34,500
	22 QUEZON	0	0	1	1	1	0	0	3	64,661
	23 RIZAL	0	0	0	0	0	0	0	0	
	24 CAVITE	0	1	0	0	2	0	0	3	71,979
	25 LAGUNA	0	0	0	0	0	0	0	0	
	26 BATANGAS	0	0	0	0	0	0	0	0	
	27 MARINDUQUE	0	0	0	0	0	0	0	0	
	28 MINDORO ORIENTAL	0	0	0	0	0	0	0	0	
	29 MINDORO OCCIDENTAL	0	0	0	0	0	0	0	0	
	30 ROMBLON	0	0	1	0	0	0	0	1	49,997
	31 PALAWAN	1	0	0	1	1	1	9	13	71,960
	sub-total	1	2	2	2	4	1	9	21	65,188
V	32 CAMARINES NORTE	1	4	2	1	2	0	0	10	44,447
	33 CAMARINES SUR	0	0	0	0	0	0	0	0	
	34 CATANDUANES	0	0	0	0	0	0	0	0	
	35 ALBAY	0	2	1	0	0	0	0	3	31,568
	36 SORSOGON	2	2	1	0	0	0	0	5	21,313
	37 MASBATE	0	1	0	0	0	0	0	1	28,156
		sub-total	3	9	4	1	2	0	19	35,468
VI	38 AKLAN	0	0	0	0	0	0	0	0	
	39 CAPEZ	0	0	0	0	0	0	0	0	
	40 ANTIQUE	1	1	0	2	0	0	0	4	42,356
	41 ILOILO	0	0	0	0	0	0	1	1	
	42 NEGROS OCCIDENTAL	2	5	2	1	0	0	0	10	31,526
	43 NEGROS DEL NORTE	0	0	0	0	0	0	0	0	
		sub-total	3	6	2	3	0	0	15	34,623
VII	44 CEBU	0	0	0	0	0	0	1	1	
	45 NEGROS ORIENTAL	0	5	6	2	0	0	0	13	42,046
	46 BOHOL	0	0	0	0	0	0	0	0	
	47 SIQUJOR	0	0	0	0	1	0	1	2	75,000
		sub-total	0	5	6	2	1	0	16	44,400
VIII	48 NORTHERN SAMAR	0	0	0	1	1	0	1	3	65,118
	49 SAMAR	0	0	0	0	0	0	0	0	
	50 EASTERN SAMAR	0	0	0	0	2	1	0	3	102,404
	51 NORTHERN LEYTE	0	1	0	0	0	0	2	3	27,899
	52 SOUTHERN LEYTE	0	0	0	0	3	0	0	3	77,034
		sub-total	0	1	0	1	6	1	12	17,383
IX	53 ZAMBOANGA DEL NORTE	0	2	1	0	1	0	0	4	41,382
	54 ZAMBOANGA DEL SUR	0	0	0	0	0	0	0	0	
	55 BASILAN	0	0	0	0	0	0	0	0	
	56 SULU	0	0	0	0	0	0	0	0	
	57 TAWI-TAWI	0	0	0	0	0	0	0	0	
		sub-total	0	2	1	0	1	0	4	41,382
	X	58 SURIGAO DEL NORTE	0	0	2	0	0	0	0	2
59 CAMEIGUEN		0	0	0	0	0	0	0	0	
60 AGUSAN DEL NORTE		0	3	0	2	1	0	0	6	49,457
61 MISAMIS ORIENTAL		2	2	0	0	1	0	0	5	31,058
62 MISAMIS OCCIDENTAL		0	0	0	0	0	0	0	0	
63 BUKIDNON		1	6	1	0	0	0	2	10	25,495
64 AGUSAN DEL SUR		0	5	1	1	0	0	0	7	32,917
	sub-total	3	16	4	3	2	0	30	34,292	
XI	65 SURIGAO DEL SUR	0	2	0	1	0	0	0	3	38,320
	66 DAVAO ORIENTAL	0	1	1	0	0	0	0	2	31,167
	67 DAVAO DEL NORTE	0	1	1	0	0	0	0	2	40,162
	68 DAVAO DEL SUR	1	0	1	0	0	0	1	3	34,966
	69 SOUTH COTABATO	1	2	0	0	0	0	0	3	20,046
		sub-total	2	6	3	1	0	0	13	32,107
XII	70 LANA O DEL NORTE	0	0	0	0	0	0	0	0	
	71 LANA O DEL SUR	0	0	0	0	0	0	0	0	
	72 NORTH COTABATO	0	0	0	0	0	0	0	0	
	73 MAGUINDANAO	0	0	1	2	0	0	0	3	55,030
	74 SULTAN KUDARAT	0	1	2	2	0	0	4	9	46,211
		sub-total	0	1	3	4	0	0	12	49,519
	Total	15	59	37	20	20	3	25	179	43,100

Table C2-16

## UNIT YIELD OF PADDY : CIS

(Unit : ton / ha)

Region	Province	PRESENT		PROPOSED	
		Wet Season	Dry Season	Wet Season	Dry Season
I	1 ILOCOS NORTE	2.79	2.62	3.10	2.94
	2 ABRA	2.34	2.35	3.78	3.80
	3 ILOCOS SUR	2.93	3.33	3.50	3.73
	4 MOUNTAIN PROVINCE	2.63	2.71	4.08	4.13
	5 LA UNION	3.69	3.95	4.00	4.27
	6 BENGUET	3.10	3.90	2.95	3.90
	7 PANGASINAN	4.00	4.00	4.50	4.50
	Sub-total	3.05	3.19	3.53	3.61
II	8 BATANES	0.00	0.00	0.00	0.00
	9 CAGAYAN	1.57	1.66	1.98	2.10
	10 KALINGA APAYAO	0.00	0.00	0.00	0.00
	11 ISABELA	3.45	3.91	4.37	5.06
	12 IFUGAO	1.90	2.01	2.38	2.55
	13 NUEVA VISCAYA	3.48	3.93	3.70	4.11
14 QUEBINO	3.46	3.61	4.09	4.20	
	sub-total	2.62	2.84	3.32	3.57
III	15 NUEVA ECJA	2.63	2.94	3.44	3.92
	16 TARLAC	0.00	0.00	0.00	0.00
	17 ZAMBALES	0.00	0.00	0.00	0.00
	18 PAMPANGA	0.00	0.00	0.00	0.00
	19 BULACAN	0.00	0.00	0.00	0.00
	20 BATAAN	0.00	0.00	0.00	0.00
	sub-total	2.63	2.94	3.44	3.92
IV	21 AURORA	2.38	2.97	3.69	4.06
	22 QUEZON	3.33	3.47	4.00	4.50
	23 RIZAL	0.00	0.00	0.00	0.00
	24 CAVITE	0.00	0.00	0.00	0.00
	25 LAGUNA	0.00	0.00	0.00	0.00
	26 BATAANGAS	0.00	0.00	0.00	0.00
	27 MARINDUQUE	2.60	2.79	3.94	4.19
	28 MINDORO ORIENTAL	0.00	0.00	0.00	0.00
	29 MINDORO OCCIDENTAL	0.00	0.00	0.00	0.00
	30 ROMBLON	4.00	3.75	5.00	5.50
	31 PALAWAN	3.31	2.81	5.21	4.64
	sub-total	2.88	2.97	4.33	4.40
V	32 CAMARINES NORTE	2.95	2.91	4.21	4.23
	33 CAMARINES SUR	0.00	0.00	0.00	0.00
	34 CATANDUANES	2.00	1.50	3.50	3.00
	35 ALBAY	0.00	0.00	0.00	0.00
	36 SORSOGON	3.71	3.40	4.60	4.58
	37 MASBATE	2.19	1.50	3.38	3.50
		sub-total	3.32	3.00	4.36
VI	38 AKLAN	0.00	0.00	0.00	0.00
	39 CAPIZ	0.00	0.00	0.00	0.00
	40 ANTIQUE	3.20	3.28	3.89	4.08
	41 ILOILO	3.56	3.27	4.42	4.13
	42 NEGROS OCCIDENTAL	2.88	3.25	4.00	4.25
	43 NEGROS DEL NORTE	0.00	0.00	0.00	0.00
	sub-total	3.31	3.28	3.98	4.10
VII	44 CEBU	2.88	3.15	6.00	5.56
	45 NEGROS ORIENTAL	2.90	2.76	2.83	2.72
	46 BOHOL	0.00	0.00	0.00	0.00
	47 SIQUJOR	0.00	0.00	0.00	0.00
	sub-total	2.89	2.85	3.68	2.94
VIII	48 NORTHERN SAMAR	2.50	3.00	4.00	4.00
	49 SAMAR	0.00	0.00	0.00	0.00
	50 EASTERN SAMAR	1.50	2.00	3.00	3.20
	51 NORTHERN LEYTE	3.29	2.93	4.10	4.05
	52 SOUTHERN LEYTE	3.86	3.72	4.43	4.57
	sub-total	3.35	3.04	4.11	4.08
IX	53 ZAMBOANGA DEL NORTE	3.63	3.98	4.50	5.05
	54 ZAMBOANGA DEL SUR	3.90	3.90	3.90	3.90
	55 BASILAN	0.00	0.00	0.00	0.00
	56 SULU	0.00	0.00	0.00	0.00
	57 TAWI-TAWI	0.00	0.00	0.00	0.00
		sub-total	3.65	3.97	4.45
X	58 SURIGAO DEL NORTE	4.00	3.89	5.25	5.33
	59 CAMIGUIN	4.42	4.58	4.42	4.58
	60 AGUSAN DEL NORTE	3.48	3.63	4.25	4.52
	61 MISAMIS ORIENTAL	4.15	3.95	4.44	4.31
	62 MISAMIS OCCIDENTAL	4.04	4.25	4.15	4.43
	63 BUKIDNON	3.81	3.56	4.29	4.36
	64 AGUSAN DEL SUR	3.01	2.66	3.96	3.68
	sub-total	3.75	3.66	4.32	4.42
XI	65 SURIGAO DEL SUR	3.54	3.93	4.24	4.24
	66 DAVAO ORIENTAL	3.00	3.00	3.83	3.83
	67 DAVAO DEL NORTE	3.83	3.42	4.50	4.25
	68 DAVAO DEL SUR	3.95	3.55	4.55	4.25
	69 SOUTH COTABATO	3.77	3.50	4.53	4.21
	sub-total	3.71	3.59	4.37	4.21
XII	70 LANA O DEL NORTE	0.00	0.00	0.00	0.00
	71 LANA O DEL SUR	0.00	0.00	0.00	0.00
	72 NORTH COTABATO	4.29	3.60	4.39	3.95
	73 MAGUINDANAO	3.22	3.17	3.99	3.99
	74 SULTAN KUDARAT	3.85	3.30	4.75	4.17
	sub-total	3.62	3.32	4.28	4.04
	Total	3.22	3.18	3.97	4.00

Table C2-17

## UNIT YIELD OF PADDY : CIP

(Unit : ton/ha)

Region	Province	PRESENT		PROPOSED	
		Wet Season	Dry Season	Wet Season	Dry Season
I	1 ILOCOS NORTE	0.00	0.90	0.00	0.00
	2 ABRA	1.80	1.80	3.50	3.50
	3 ILOCOS SUR	2.73	1.13	3.70	2.44
	4 MOUNTAIN PROVINCE	2.54	2.83	4.33	4.63
	5 LA UNION	2.75	0.00	3.50	4.00
	6 BENGUET	8.63	7.15	9.55	7.95
	7 PANGASINAN	2.00	0.00	4.00	4.50
	Sub-total	3.60	2.88	4.83	4.10
II	8 BATANES	0.00	0.00	0.00	0.00
	9 CAGAYAN	1.25	0.00	2.00	2.25
	10 KALINGA APAYAO	3.17	3.50	4.17	4.67
	11 ISABELA	3.00	3.00	4.00	4.00
	12 IFUGAO	2.75	2.75	3.38	3.38
	13 NUEVA VISAYA	0.00	0.00	0.00	0.00
	14 QUIRINO	3.75	0.00	4.38	4.38
	sub-total	2.97	3.00	3.78	3.97
III	15 NUEVA ECJA	0.00	0.00	0.00	0.00
	16 TARLAC	0.00	0.00	0.00	0.00
	17 ZAMBALES	0.00	0.00	0.00	0.00
	18 PAMPANGA	0.00	0.00	0.00	0.00
	19 BULACAN	0.00	0.00	0.00	0.00
	20 BATAAN	0.00	0.00	0.00	0.00
	sub-total	0.00	0.00	0.00	0.00
IV	21 AURORA	2.00	2.00	3.50	3.75
	22 QUEZON	1.45	0.95	4.00	4.33
	23 RIZAL	0.00	0.00	0.00	0.00
	24 CAVITE	2.00	0.00	3.50	4.00
	25 LAGUNA	0.00	0.00	0.00	0.00
	26 BATANGAS	0.00	0.00	0.00	0.00
	27 MARINDUQUE	0.00	0.00	0.00	0.00
	28 MINDORO ORIENTAL	0.00	0.00	0.00	0.00
	29 MINDORO OCCIDENTAL	0.00	0.00	0.00	0.00
	30 ROMBLON	3.00	2.00	5.00	5.50
	31 PALAWAN	2.27	2.61	3.92	4.27
	sub-total	2.13	2.12	3.90	4.27
V	32 CAMARINES NORTE	2.65	2.61	4.08	3.85
	33 CAMARINES SUR	0.00	0.00	0.00	0.00
	34 CATANDUANES	0.00	0.00	0.00	0.00
	35 ALBAY	2.68	2.48	3.43	3.43
	36 SORSOGON	3.39	3.18	4.55	4.61
	37 MASBATE	2.00	0.00	3.50	3.50
		sub-total	2.81	2.85	4.07
VI	38 ARLAN	0.00	0.00	0.00	0.00
	39 CAPIZ	0.00	0.00	0.00	0.00
	40 ANTIQUE	3.02	2.79	3.95	4.14
	41 ILOILO	2.35	2.15	3.25	3.50
	42 NEGROS OCCIDENTAL	2.07	1.89	4.05	4.25
	43 NEGROS DEL NORTE	0.00	0.00	0.00	0.00
	sub-total	2.34	2.10	3.97	4.17
VII	44 CEBU	0.00	0.00	0.00	0.00
	45 NEGROS ORIENTAL	2.39	2.68	3.41	3.20
	46 BOHOL	0.00	0.00	0.00	0.00
	47 SIQUOR	1.26	0.00	3.00	2.80
	sub-total	2.24	2.68	3.38	3.14
VIII	48 NORTHERN SAMAR	2.15	0.00	3.75	3.75
	49 SAMAR	0.00	0.00	0.00	0.00
	50 EASTERN SAMAR	1.88	0.00	2.92	3.42
	51 NORTHERN LEYTE	3.71	4.00	5.13	4.69
	52 SOUTHERN LEYTE	3.25	2.70	4.30	4.60
		sub-total	2.76	3.35	4.03
IX	53 ZAMBOANGA DEL NORTE	2.90	2.00	4.66	3.84
	54 ZAMBOANGA DEL SUR	0.00	0.00	0.00	0.00
	55 BASILAN	0.00	0.00	0.00	0.00
	56 SULU	0.00	0.00	0.00	0.00
	57 TAWI-TAWI	0.00	0.00	0.00	0.00
	sub-total	2.90	2.00	4.06	3.84
X	58 SURIGAO DEL NORTE	2.00	1.88	3.13	3.00
	59 CAMIGUIN	0.00	0.00	0.00	0.00
	60 AGUSAN DEL NORTE	3.03	2.16	3.95	3.69
	61 MISAMIS ORIENTAL	3.50	3.38	4.27	4.12
	62 MISAMIS OCCIDENTAL	0.00	0.00	0.00	0.00
	63 BUKIDNON	2.18	1.70	3.89	3.67
	64 AGUSAN DEL SUR	2.27	2.20	3.87	3.82
	sub-total	2.54	2.17	3.91	3.74
XI	65 SURIGAO DEL SUR	2.35	2.50	4.17	4.08
	66 DAVAO ORIENTAL	2.25	2.50	3.65	3.65
	67 DAVAO DEL NORTE	3.88	3.25	4.75	4.38
	68 DAVAO DEL SUR	3.25	3.25	4.25	4.00
	69 SOUTH COTABATO	2.25	2.00	4.08	4.00
	sub-total	2.71	2.66	4.17	4.03
XII	70 LANA O DEL NORTE	0.00	0.00	0.00	0.00
	71 LANA O DEL SUR	0.00	0.00	0.00	0.00
	72 NORTH COTABATO	0.00	0.00	0.00	0.00
	73 MAGUINDANAO	3.15	2.80	4.07	4.17
	74 SULTAN KUPARAT	1.64	1.26	2.51	1.98
	sub-total	1.94	1.43	2.90	2.53
	Total	2.65	2.46	3.97	3.84

Table C2-18

## ECONOMIC INTERNAL RATE OF RETURN : CIS

Region	Province	EIRR (%)								Total	Average (%)	(Unit : Nos.)
		0 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	Over 30	Unknown			
I	1 ILOCOS NORTE	0	0	0	0	0	0	1	42	43	46.00	
	2 ABRA	0	0	0	0	0	0	7	0	7	32.18	
	3 ILOCOS SUR	0	0	1	2	1	0	0	1	5	17.60	
	4 MOUNTAIN PROVINCE	0	0	6	0	0	0	0	0	6	13.50	
	5 LA UNION	0	0	1	0	1	0	2	22	26	34.58	
	6 BENGUET	0	0	0	0	0	0	2	4	6	33.00	
	7 PANGLASINAN	0	0	0	0	0	0	1	1	2	37.17	
	Sub-total	0	0	8	2	2	0	13	70	95	26.57	
II	8 BATANES	0	0	0	0	0	0	0	0	0		
	9 CAGAYAN	0	0	2	1	0	1	4	40	48	27.79	
	10 KALINGA APAYAO	0	0	0	0	0	0	0	0	0		
	11 ISABELA	0	0	0	0	0	0	0	1	1		
	12 IFUGAO	0	0	0	1	0	0	1	21	23	25.65	
	13 NUEVA VISCAYA	0	0	1	2	0	0	0	39	42	16.00	
	14 QUIRINO	0	0	0	0	0	2	0	16	18	27.50	
	sub-total	0	0	3	4	0	3	5	117	132	25.11	
III	15 NUEVA ECJA	0	0	1	0	1	0	2	0	4	28.50	
	16 TARLAC	0	0	0	0	0	0	0	0	0		
	17 ZAMBALES	0	0	0	0	0	0	0	0	0		
	18 PAMPANGA	0	0	0	0	0	0	0	0	0		
	19 BULACAN	0	0	0	0	0	0	0	0	0		
	20 BATAAN	0	0	0	0	0	0	0	0	0		
	sub-total	0	0	1	0	1	0	2	0	4	28.50	
	IV	21 AURORA	0	0	1	0	2	0	4	6	13	29.71
22 QUEZON		0	1	0	0	0	0	0	2	3	10.00	
23 RIZAL		0	0	0	0	0	0	0	0	0		
24 CAVITE		0	0	0	0	0	0	0	0	0		
25 LAGUNA		0	0	0	0	0	0	0	0	0		
26 BATANGAS		0	0	0	0	0	0	0	1	1		
27 MARINDUQUE		0	0	0	0	0	0	3	0	3	57.51	
28 MINDORO ORIENTAL		0	0	0	0	0	0	0	0	0		
29 MINDORO OCCIDENTAL		0	0	0	0	0	0	0	0	0		
30 ROMBLON		0	0	1	1	0	0	0	0	2	15.15	
31 PALAWAN		0	0	2	1	0	0	0	6	9	16.52	
sub-total		0	1	4	2	2	0	7	15	31	29.40	
V	32 CAMARINES NORTE	0	0	2	1	1	0	2	6	12	32.41	
	33 CAMARINES SUR	0	0	0	0	0	0	0	0	0		
	34 CATANDUANES	0	0	0	0	0	0	1	0	1	45.82	
	35 ALBAY	0	0	0	0	0	0	0	0	0		
	36 SORSOGON	0	0	5	3	2	4	3	10	27	24.21	
	37 MASHATE	0	1	0	0	0	0	0	3	4	10.00	
	sub-total	0	1	7	4	3	4	6	19	44	26.49	
VI	38 AKLAN	0	0	0	0	0	0	0	0	0		
	39 CAPEZ	0	0	0	0	0	0	0	0	0		
	40 ANTIQUE	0	0	0	1	5	2	2	20	30	25.87	
	41 B.OLO	0	0	1	2	5	0	3	5	16	27.36	
	42 NEGROS OCCIDENTAL	0	0	0	0	1	0	0	1	2	21.55	
	43 NEGROS DEL NORTE	0	0	0	0	0	0	0	0	0		
sub-total	0	0	1	3	11	2	5	26	48	26.42		
VII	44 CEBU	0	0	0	2	2	0	0	0	4	20.42	
	45 NEGROS ORIENTAL	0	0	1	2	0	0	0	12	15	17.03	
	46 BOHOL	0	0	0	0	0	0	0	0	0		
	47 SIKHJOR	0	0	0	0	0	0	0	0	0		
sub-total	0	0	1	4	2	0	0	12	19	18.97		
VIII	48 NORTHERN SAMAR	0	0	0	0	0	0	0	3	3		
	49 SAMAR	0	0	0	0	0	0	0	0	0		
	50 EASTERN SAMAR	0	0	0	0	1	0	0	0	1	23.00	
	51 NORTHERN LEYTE	0	0	0	0	0	2	2	84	88	30.57	
	52 SOUTHERN LEYTE	0	0	2	1	2	1	0	9	15	19.33	
sub-total	0	0	2	1	3	3	2	96	107	23.75		
IX	53 ZAMBOANGA DEL NORTE	0	0	0	0	0	0	0	12	12		
	54 ZAMBOANGA DEL SUR	0	0	0	0	1	0	0	0	1	21.00	
	55 BASILAN	0	0	0	0	0	0	0	0	0		
	56 SULU	0	0	0	0	0	0	0	0	0		
	57 TAWI-TAWI	0	0	0	0	0	0	0	0	0		
	sub-total	0	0	0	0	1	0	0	12	13	21.00	
X	58 SURIGAO DEL NORTE	0	0	0	0	0	0	0	6	6		
	59 CAMIGUIN	0	0	0	0	0	1	1	1	3	47.12	
	60 AGUSAN DEL NORTE	0	0	1	1	3	0	0	18	23	22.00	
	61 MISAMIS ORIENTAL	0	0	0	0	0	0	0	5	5		
	62 MISAMIS OCCIDENTAL	0	0	0	0	0	0	0	16	16		
	63 BUKIDNON	0	0	0	0	0	0	1	16	17	34.21	
	64 AGUSAN DEL SUR	0	0	0	0	0	0	0	9	9		
sub-total	0	0	1	1	3	1	2	71	79	29.81		
XI	65 SURIGAO DEL SUR	0	0	0	1	0	1	0	20	22	21.61	
	66 DAVAO ORIENTAL	0	0	0	0	0	0	0	3	3		
	67 DAVAO DEL NORTE	0	0	0	1	0	0	0	2	3	19.55	
	68 DAVAO DEL SUR	0	0	1	1	0	0	0	3	5	15.00	
	69 SOUTH COTABATO	0	0	4	5	0	0	4	11	24	22.00	
	sub-total	0	0	5	8	0	1	4	39	57	21.04	
XII	70 LANA O DEL NORTE	0	0	0	0	0	0	0	0	0		
	71 LANA O DEL SUR	0	0	0	0	0	0	0	0	0		
	72 NORTH COTABATO	0	0	1	0	0	0	3	8	12	39.13	
	73 MAGUINDANAO	0	0	1	1	0	0	0	19	21	14.83	
	74 SULTAN KUDARAT	0	0	0	0	0	0	0	13	13		
	sub-total	0	0	2	1	0	0	3	40	46	31.03	
Total	0	2	35	30	28	14	49	517	675	25.97		

Table C2-19

## ECONOMIC INTERNAL RATE OF RETURN : CIP

Region	Province	EIRR (%)								Total	Average (%)
		0 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	Over 30	Unknown		
I	1 ILOCOS NORTE	0	0	0	0	0	0	0	0	0	
	2 ABRA	0	0	1	0	0	0	0	0	1	12.11
	3 ILOCOS SUR	0	0	3	3	2	1	1	0	11	21.28
	4 MOUNTAIN PROVINCE	0	0	0	3	1	1	1	0	6	23.17
	5 LA UNION	0	0	0	1	0	0	0	0	1	17.27
	6 BENGUET	0	0	0	0	0	4	0	2	6	28.00
	7 PANGASINAN	0	0	0	0	0	0	1	0	1	48.07
	Sub-total	0	0	4	7	3	6	4	2	26	23.44
II	8 BATANES	0	0	0	0	0	0	0	0	0	
	9 CAOAYAN	0	0	0	0	1	0	0	0	1	23.30
	10 KALINGA APAYAO	0	0	0	1	0	1	1	0	3	24.67
	11 ISABELA	0	0	0	0	1	0	0	1	2	24.00
	12 IFUGAO	0	0	2	0	0	0	0	1	3	13.04
	13 NUEVA VISCAYA	0	0	0	0	0	0	0	0	0	
	14 QUIRINO	0	0	0	2	0	0	0	0	2	17.79
	sub-total	0	0	2	3	2	1	1	2	11	20.33
III	15 NUEVA ECUA	0	0	0	0	0	0	0	0	0	
	16 TARLAC	0	0	0	0	0	0	0	0	0	
	17 ZAMBALES	0	0	0	0	0	0	0	0	0	
	18 PAMPANGA	0	0	0	0	0	0	0	0	0	
	19 BULACAN	0	0	0	0	0	0	0	0	0	
	20 BATAAN	0	0	0	0	0	0	0	0	0	
	sub-total	0	0	0	0	0	0	0	0	0	
IV	21 AURORA	0	0	0	1	0	0	0	0	1	19.00
	22 QUEZON	0	0	2	0	1	0	0	0	3	15.15
	23 RIZAL	0	0	0	0	0	0	0	0	0	
	24 CAVITE	0	0	2	0	1	0	0	0	3	16.68
	25 LAGUNA	0	0	0	0	0	0	0	0	0	
	26 BATANGAS	0	0	0	0	0	0	0	0	0	
	27 MARINDUQUE	0	0	0	0	0	0	0	0	0	
	28 MINDORO ORIENTAL	0	0	0	0	0	0	0	0	0	
	29 MINDORO OCCIDENTAL	0	0	0	0	0	0	0	0	0	
	30 ROMBLON	0	0	0	0	0	0	0	1	1	
	31 PALAWAN	0	0	4	2	4	3	0	0	13	19.92
	sub-total	0	0	8	3	6	3	0	1	21	18.63
V	32 CAMARINES NORTE	0	0	1	0	1	0	4	4	10	46.04
	33 CAMARINES SUR	0	0	0	0	0	0	0	0	0	
	34 CATANDUANES	0	0	0	0	0	0	0	0	0	
	35 ALBAY	0	0	0	0	2	1	0	0	3	24.35
	36 SORSOGON	0	0	1	1	0	2	0	1	5	22.75
	37 MASRATE	0	1	0	0	0	0	0	0	1	5.50
		sub-total	0	1	2	1	3	3	4	5	19
VI	38 AKLAN	0	0	0	0	0	0	0	0	0	
	39 CAPIZ	0	0	0	0	0	0	0	0	0	
	40 ANTIQUE	0	0	2	0	0	1	0	1	4	18.84
	41 ILOILO	0	0	0	1	0	0	0	0	1	18.00
	42 NEGROS OCCIDENTAL	0	0	3	3	3	1	0	0	10	18.36
	43 NEGROS DEL NORTE	0	0	0	0	0	0	0	0	0	
	sub-total	0	0	5	4	3	2	0	1	15	18.44
VII	44 CEBU	0	0	0	0	0	0	0	1	1	
	45 NEGROS ORIENTAL	0	0	0	4	1	3	0	5	13	22.78
	46 BOHOL	0	0	0	0	0	0	0	0	0	
	47 SIOUJOR	0	1	0	0	0	0	0	1	2	10.00
		sub-total	0	1	0	4	1	3	0	7	16
VIII	48 NORTHERN SAMAR	0	0	0	1	1	0	0	1	3	19.75
	49 SAMAR	0	0	0	0	0	0	0	0	0	
	50 EASTERN SAMAR	1	0	1	1	0	0	0	0	3	11.26
	51 NORTHERN LEYTE	0	0	0	1	0	0	0	2	3	15.30
	52 SOUTHERN LEYTE	0	0	1	0	0	0	1	1	3	25.50
		sub-total	1	0	2	3	1	0	1	4	12
IX	53 ZAMBOANGA DEL NORTE	0	0	1	0	1	1	1	0	4	26.60
	54 ZAMBOANGA DEL SUR	0	0	0	0	0	0	0	0	0	
	55 BASILAN	0	0	0	0	0	0	0	0	0	
	56 SULU	0	0	0	0	0	0	0	0	0	
	57 TAWI-TAWI	0	0	0	0	0	0	0	0	0	
		sub-total	0	0	1	0	1	1	1	0	4
X	58 SURIGAO DEL NORTE	0	0	0	0	2	0	0	0	2	22.51
	59 CAMIGUIN	0	0	0	0	0	0	0	0	0	
	60 AGUSAN DEL NORTE	0	0	1	0	1	2	2	0	6	25.94
	61 MISAMIS ORIENTAL	0	0	0	1	0	0	3	1	5	40.47
	62 MISAMIS OCCIDENTAL	0	0	0	0	0	0	0	0	0	
	63 BUKIDNON	0	0	3	2	0	1	3	1	10	25.36
	64 AGUSAN DEL SUR	0	0	1	1	0	2	3	0	7	27.91
	sub-total	0	0	5	4	3	5	11	2	30	28.08
XI	65 SURIGAO DEL SUR	0	0	0	2	1	0	0	0	3	18.27
	66 DAVAO ORIENTAL	0	0	0	0	0	0	0	2	2	
	67 DAVAO DEL NORTE	0	0	0	2	0	0	0	0	2	17.54
	68 DAVAO DEL SUR	0	0	0	1	0	0	1	1	3	27.48
	69 SOUTH COTABATO	0	0	0	2	0	0	1	0	3	23.67
		sub-total	0	0	0	7	1	0	2	3	13
XII	70 LANA DEL NORTE	0	0	0	0	0	0	0	0	0	
	71 LANA DEL SUR	0	0	0	0	0	0	0	0	0	
	72 NORTH COTABATO	0	0	0	0	0	0	0	0	0	
	73 MAGUINDANAO	0	0	0	1	2	0	0	0	3	20.61
	74 SULTAN KUDARAT	0	0	0	0	0	0	0	0	0	
	sub-total	0	0	0	1	2	0	0	0	3	20.61
	Total	1	2	29	37	26	24	24	36	179	23.25

Table C2-20

## ORGANIZATION STATUS OF IAS : CIS

		IA's Status				(Unit : Nos.)
Region	Province	IA's Status			Total	IA Organization Ratio (%)
		Non - Existence of IA	IA organized	Unknown		
I	1 ILOCOS NORTE	0	43	0	43	100
	2 ABRA	0	7	0	7	100
	3 ILOCOS SUR	2	3	0	5	60
	4 MOUNTAIN PROVINCE	0	6	0	6	100
	5 LA UNION	2	24	0	26	92
	6 BENGUET	0	6	0	6	100
	7 PANGASINAN	0	2	0	2	100
	Sub-total	4	91	0	95	95
II	8 BATANES	0	0	0	0	0
	9 CAGAYAN	15	33	0	48	69
	10 KALINGA APAYAO	0	0	0	0	0
	11 ISABELA	0	1	0	1	100
	12 IFUGAO	1	22	0	23	96
	13 NUEVA VISCAYA	1	41	0	42	98
	14 QUIRINO	5	13	0	18	72
	sub-total	22	110	0	132	83
III	15 NUEVA ECIDA	0	4	0	4	100
	16 TARLAC	0	0	0	0	0
	17 ZAMBALES	0	0	0	0	0
	18 PAMPANGA	0	0	0	0	0
	19 BULACAN	0	0	0	0	0
	20 BATAAN	0	0	0	0	0
	sub-total	0	4	0	4	100
IV	21 AURORA	0	13	0	13	100
	22 QUEZON	0	3	0	3	100
	23 RIZAL	0	0	0	0	0
	24 CAVITE	0	0	0	0	0
	25 LAGUNA	0	0	0	0	0
	26 BATANGAS	0	0	0	0	0
	27 MARINDUQUE	0	4	0	4	100
	28 MINDORO ORIENTAL	0	0	0	0	0
	29 MINDORO OCCIDENTAL	0	0	0	0	0
	30 ROMBLON	0	2	0	2	100
	31 PALAWAN	0	9	0	9	100
	sub-total	0	31	0	31	100
V	32 CAMARINES NORTE	0	12	0	12	100
	33 CAMARINES SUR	0	0	0	0	0
	34 CATANDUANES	0	1	0	1	100
	35 ALBAY	0	0	0	0	0
	36 SORSOGON	1	26	0	27	96
	37 MASBATE	0	4	0	4	100
	sub-total	1	43	0	44	98
VI	38 AKLAN	0	0	0	0	0
	39 CAPEZ	0	0	0	0	0
	40 ANTIQUE	1	29	0	30	97
	41 ILOILO	0	16	0	16	100
	42 NEGROS OCCIDENTAL	0	2	0	2	100
43 NEGROS DEL NORTE	0	0	0	0	0	
	sub-total	1	47	0	48	98
VII	44 CEBU	0	4	0	4	100
	45 NEGROS ORIENTAL	3	12	0	15	80
	46 BOHOL	0	0	0	0	0
	47 SIKUJOR	0	0	0	0	0
	sub-total	3	16	0	19	84
VIII	48 NORTHERN SAMAR	2	1	0	3	33
	49 SAMAR	0	0	0	0	0
	50 EASTERN SAMAR	0	1	0	1	100
	51 NORTHERN LEYTE	43	45	0	88	51
	52 SOUTHERN LEYTE	3	12	0	15	80
	sub-total	48	59	0	107	55
IX	53 ZAMBOANGA DEL NORTE	1	11	0	12	92
	54 ZAMBOANGA DEL SUR	0	1	0	1	100
	55 BASILAN	0	0	0	0	0
	56 SULU	0	0	0	0	0
	57 TAWI-TAWI	0	0	0	0	0
		sub-total	1	12	0	13
X	58 SURIGAO DEL NORTE	0	6	0	6	100
	59 CAMIGUIN	0	3	0	3	100
	60 AGUSAN DEL NORTE	4	16	3	23	70
	61 MISAMIS ORIENTAL	1	4	0	5	80
	62 MISAMIS OCCIDENTAL	0	16	0	16	100
	63 BUKIDNON	0	17	0	17	100
	64 AGUSAN DEL SUR	0	9	0	9	100
	sub-total	5	71	3	79	90
XI	65 SURIGAO DEL SUR	1	21	0	22	95
	66 DAVAO ORIENTAL	0	3	0	3	100
	67 DAVAO DEL NORTE	0	3	0	3	100
	68 DAVAO DEL SUR	0	5	0	5	100
	69 SOUTH COTABATO	0	21	0	21	100
	sub-total	1	56	0	57	98
XII	70 LANA O DEL NORTE	0	0	0	0	0
	71 LANA O DEL SUR	0	0	0	0	0
	72 NORTH COTABATO	0	12	0	12	100
	73 MAGUINDANAO	2	19	0	21	90
	74 SULTAN KUDARAT	0	13	0	13	100
	sub-total	2	44	0	46	95
	Total	68	584	3	655	87

Table C2-21

## ORGANIZATION STATUS OF IAS : CIP

		IA's Status				(Unit : Nos.)	
Region	Province	Non - Existence of IA	IA organized	Unknown	Total	IA Organization Ratio (%)	
I	1 ILOCOS NORTE	0	0	0	0	0	
	2 ABRA	1	0	0	1	100	
	3 ILOCOS SUR	7	4	0	11	64	
	4 MOUNTAIN PROVINCE	3	2	1	6	50	
	5 LA UNION	1	0	0	1	100	
	6 BENGUET	1	4	1	6	17	
	7 PANGASINAN	1	0	0	1	100	
	Sub-total	14	10	2	26	54	
II	8 BATANES	0	0	0	0	0	
	9 CAGAYAN	1	0	0	1	100	
	10 KALINGA APAYAO	1	2	0	3	33	
	11 ISABELA	1	1	0	2	50	
	12 IPIGAO	0	3	0	3	0	
	13 NUBVA VISAYA	0	0	0	0	0	
	14 QUIRINO	2	0	0	2	100	
		sub-total	5	6	0	11	45
	III	15 NUBVA ECJA	0	0	0	0	0
		16 TARLAC	0	0	0	0	0
		17 ZAMBALES	0	0	0	0	0
		18 PAMPANGA	0	0	0	0	0
		19 BULACAN	0	0	0	0	0
		20 BATAAN	0	0	0	0	0
	sub-total	0	0	0	0	0	
IV	21 AURORA	0	1	0	1	0	
	22 QUEZON	0	3	0	3	0	
	23 RIZAL	0	0	0	0	0	
	24 CAVITE	0	3	0	3	0	
	25 LAGUNA	0	0	0	0	0	
	26 BATANGAS	0	0	0	0	0	
	27 MARINDUQUE	0	0	0	0	0	
	28 MINDORO ORIENTAL	0	0	0	0	0	
	29 MINDORO OCCIDENTAL	0	0	0	0	0	
	30 ROMBLON	0	1	0	1	0	
	31 PALAWAN	1	9	3	13	8	
		sub-total	1	17	3	21	5
	V	32 CAMARINES NORTE	8	2	0	10	80
		33 CAMARINES SUR	0	0	0	0	0
34 CATANDUANES		0	0	0	0	0	
35 ALBAY		3	0	0	3	100	
36 SORSOGON		3	2	0	5	60	
37 MASBATE		1	0	0	1	100	
		sub-total	15	4	0	19	79
VI	38 AKLAN	0	0	0	0	0	
	39 CAPEZ	0	0	0	0	0	
	40 ANTIQUE	2	2	0	4	50	
	41 IILOILO	1	0	0	1	100	
	42 NEGROS OCCIDENTAL	8	2	0	10	80	
	43 NEGROS DEL NORTE	0	0	0	0	0	
	sub-total	11	4	0	15	73	
VII	44 CEBU	1	0	0	1	100	
	45 NEGROS ORIENTAL	12	1	0	13	92	
	46 BOHOL	0	0	0	0	0	
	47 SIKHJOR	1	1	0	2	50	
	sub-total	14	2	0	16	88	
VIII	48 NORTHERN SAMAR	1	2	0	3	33	
	49 SAMAR	0	0	0	0	0	
	50 EASTERN SAMAR	3	0	0	3	100	
	51 NORTHERN LEYTE	2	1	0	3	67	
	52 SOUTHERN LEYTE	2	1	0	3	67	
	sub-total	8	4	0	12	67	
IX	53 ZAMBOANGA DEL NORTE	0	4	0	4	0	
	54 ZAMBOANGA DEL SUR	0	0	0	0	0	
	55 BASILAN	0	0	0	0	0	
	56 SULU	0	0	0	0	0	
	57 TAWI-TAWI	0	0	0	0	0	
		sub-total	0	4	0	4	0
X	58 SURIGAO DEL NORTE	0	2	0	2	0	
	59 CAMIGUIN	0	0	0	0	0	
	60 AGUSAN DEL NORTE	2	4	0	6	33	
	61 MISAMIS ORIENTAL	1	4	0	5	20	
	62 MISAMIS OCCIDENTAL	0	0	0	0	0	
	63 BUKIDNON	8	2	0	10	80	
	64 AGUSAN DEL SUR	4	3	0	7	57	
	sub-total	15	15	0	30	50	
XI	65 SURIGAO DEL SUR	3	0	0	3	100	
	66 DAVAO ORIENTAL	2	0	0	2	100	
	67 DAVAO DEL NORTE	0	2	0	2	0	
	68 DAVAO DEL SUR	2	1	0	3	67	
	69 SOUTH COTABATO	0	3	0	3	0	
		sub-total	7	6	0	13	54
XII	70 LANA DEL NORTE	0	0	0	0	0	
	71 LANA DEL SUR	0	0	0	0	0	
	72 NORTH COTABATO	0	0	0	0	0	
	73 MAGUINDANAO	2	1	0	3	67	
	74 SULTAN KUDARAT	6	2	1	9	67	
	sub-total	8	3	1	12	67	
	Total	98	75	6	179	55	

## ENDORSEMENT OF THE REHABILITATION BY IA MEMBERS : CIS

							(Unit : Nos)
Region	Province	100% - 80%	80% - 60%	60% - 40%	Below 40%	Unknown	Total
I	1 ILOCOS NORTE	9	8	18	6	2	43
	2 ABRA	7	0	0	0	0	7
	3 ILOCOS SUR	2	1	0	2	0	5
	4 MOUNTAIN PROVINCE	6	0	0	0	0	6
	5 LA UNION	5	11	9	1	0	26
	6 BENGUET	3	1	2	0	0	6
	7 PANGASINAN	2	0	0	0	0	2
	sub-total	34	21	29	9	2	95
II	8 BATANES	0	0	0	0	0	0
	9 CAGAYAN	3	3	1	0	41	48
	10 KALINGA APAYAO	0	0	0	0	0	0
	11 ISABELA	0	1	0	0	0	1
	12 IFUGAO	5	10	3	5	0	23
	13 NUEVA VISCAYA	6	7	5	24	0	42
	14 QUIRINO	7	0	1	10	0	18
	sub-total	21	21	10	39	41	132
III	15 NUEVA ECUA	3	0	0	0	1	4
	16 TARLAC	0	0	0	0	0	0
	17 ZAMBALES	0	0	0	0	0	0
	18 PAMPANGA	0	0	0	0	0	0
	19 BULACAN	0	0	0	0	0	0
	20 BATAAN	0	0	0	0	0	0
		sub-total	3	0	0	0	1
IV	21 AURORA	8	0	0	1	4	13
	22 QUEZON	0	1	0	0	2	3
	23 RIZAL	0	0	0	0	0	0
	24 CAVITE	0	0	0	0	0	0
	25 LAGUNA	0	0	0	0	0	0
	26 BATANGAS	0	0	0	0	0	0
	27 MARINDUQUE	3	1	0	0	0	4
	28 MINDORO ORIENTAL	0	0	0	0	0	0
	29 MINDORO OCCIDENTAL	0	0	0	0	0	0
	30 ROMBLON	2	0	0	0	0	2
	31 PALAWAN	1	5	0	1	2	9
	sub-total	14	7	0	2	8	31
V	32 CAMARINES NORTE	11	1	0	0	0	12
	33 CAMARINES SUR	0	0	0	0	0	0
	34 CATANDUANES	1	0	0	0	0	1
	35 ALBAY	0	0	0	0	0	0
	36 SORSOGON	27	0	0	0	0	27
	37 MASBATE	4	0	0	0	0	4
		sub-total	43	1	0	0	0
VI	38 AKLAN	0	0	0	0	0	0
	39 CAPEZ	0	0	0	0	0	0
	40 ANTIQUE	24	0	0	0	6	30
	41 ILOILO	3	2	0	0	11	16
	42 NEGROS OCCIDENTAL	1	0	0	0	1	2
	43 NEGROS DEL NORTE	0	0	0	0	0	0
	sub-total	28	2	0	0	18	48
VII	44 CEBU	1	1	0	0	2	4
	45 NEGROS ORIENTAL	3	6	4	0	2	15
	46 BOHOL	0	0	0	0	0	0
	47 SIKIQUIOR	0	0	0	0	0	0
		sub-total	4	7	4	0	4
VIII	48 NORTHERN SAMAR	1	0	0	0	2	3
	49 SAMAR	0	0	0	0	0	0
	50 EASTERN SAMAR	1	0	0	0	0	1
	51 NORTHERN LEYTE	63	12	4	8	1	88
	52 SOUTHERN LEYTE	10	2	0	0	3	15
		sub-total	75	14	4	8	6
IX	53 ZAMBOANGA DEL NORTE	3	9	0	0	0	12
	54 ZAMBOANGA DEL SUR	1	0	0	0	0	1
	55 BASILAN	0	0	0	0	0	0
	56 SULU	0	0	0	0	0	0
	57 TAWI-TAWI	0	0	0	0	0	0
		sub-total	4	9	0	0	0
X	58 SURIGAO DEL NORTE	5	0	0	0	1	6
	59 CAMIGUIN	3	0	0	0	0	3
	60 AGUSAN DEL NORTE	7	5	1	2	8	23
	61 MISAMIS ORIENTAL	2	1	0	0	2	5
	62 MISAMIS OCCIDENTAL	0	15	0	0	1	16
	63 BUKIDNON	11	3	0	0	3	17
	64 AGUSAN DEL SUR	7	2	0	0	0	9
	sub-total	35	26	1	2	15	79
XI	65 SURIGAO DEL SUR	13	6	2	1	0	22
	66 DAVAO ORIENTAL	0	3	0	0	0	3
	67 DAVAO DEL NORTE	2	0	0	0	1	3
	68 DAVAO DEL SUR	2	1	1	1	0	5
	69 SOUTH COTABATO	14	7	1	0	2	24
	sub-total	31	17	4	2	3	57
XII	70 LANA DEL NORTE	0	0	0	0	0	0
	71 LANA DEL SUR	0	0	0	0	0	0
	72 NORTH COTABATO	5	0	0	0	7	12
	73 MAGUINDANAO	9	10	2	0	0	21
	74 SULTAN KUDARAT	9	2	0	0	2	13
	sub-total	23	12	2	0	9	46
	Total	315	137	54	62	107	675



Table C2-23

## ENDORSEMENT OF THE CONSTRUCTION BY IA MEMBERS : CIP

(Unit : Nos.)

Region	Province	100% - 80%	80% - 60%	60% - 40%	Below 40%	Unknown	Total
I	1 ILOCOS NORTE	0	0	0	0	0	0
	2 ABRA	0	1	0	0	0	1
	3 ILOCOS SUR	2	6	2	0	1	11
	4 MOUNTAIN PROVINCE	6	0	0	0	0	6
	5 LA UNION	1	0	0	0	0	1
	6 BENGUET	2	3	0	0	1	6
	7 PANGASINAN	1	0	0	0	0	1
	Sub-total	12	10	2	0	2	26
II	8 BATANES	0	0	0	0	0	0
	9 CAGAYAN	0	0	1	0	0	1
	10 KALINGA APAYAO	2	1	0	0	0	3
	11 ISABELA	1	1	0	0	0	2
	12 IFUGAO	2	1	0	0	0	3
	13 NUEVA VISAYA	0	0	0	0	0	0
	14 QUIRINO	2	0	0	0	0	2
	sub-total	7	3	1	0	0	11
III	15 NUEVA ECJA	0	0	0	0	0	0
	16 TARLAC	0	0	0	0	0	0
	17 ZAMBALES	0	0	0	0	0	0
	18 PAMPANGA	0	0	0	0	0	0
	19 BULACAN	0	0	0	0	0	0
	20 BATAAN	0	0	0	0	0	0
	sub-total	0	0	0	0	0	0
IV	21 AURORA	1	0	0	0	0	1
	22 QUEZON	0	3	0	0	0	3
	23 RIZAL	0	0	0	0	0	0
	24 CAVITE	0	2	1	0	0	3
	25 LAGUNA	0	0	0	0	0	0
	26 BATANGAS	0	0	0	0	0	0
	27 MARDUQUE	0	0	0	0	0	0
	28 MINDORO ORIENTAL	0	0	0	0	0	0
	29 MINDORO OCCIDENTAL	0	0	0	0	0	0
	30 ROMBLON	1	0	0	0	0	1
	31 PALAWAN	3	6	0	0	4	13
	sub-total	5	11	1	0	4	21
V	32 CAMARINES NORTE	2	8	0	0	0	10
	33 CAMARINES SUR	0	0	0	0	0	0
	34 CATANDUANES	0	0	0	0	0	0
	35 ALBAY	3	0	0	0	0	3
	36 SORSOGON	2	2	1	0	0	5
	37 MASBATE	1	0	0	0	0	1
		sub-total	8	10	1	0	0
VI	38 AKLAN	0	0	0	0	0	0
	39 CAPIZ	0	0	0	0	0	0
	40 ANTIQUE	3	1	0	0	0	4
	41 ILOILO	0	1	0	0	0	1
	42 NEGROS OCCIDENTAL	2	7	0	0	1	10
	43 NEGROS DEL NORTE	0	0	0	0	0	0
	sub-total	5	9	0	0	1	15
VII	44 CEBU	0	0	0	0	1	1
	45 NEGROS ORIENTAL	5	8	0	0	0	13
	46 BOHOL	0	0	0	0	0	0
	47 SIQUIJOR	1	0	0	1	0	2
	sub-total	6	8	0	1	1	16
VIII	48 NORTHERN SAMAR	2	0	0	1	0	3
	49 SAMAR	0	0	0	0	0	0
	50 EASTERN SAMAR	3	0	0	0	0	3
	51 NORTHERN LEYTE	3	0	0	0	0	3
	52 SOUTHERN LEYTE	1	2	0	0	0	3
	sub-total	9	2	0	1	0	12
IX	53 ZAMBOANGA DEL NORTE	4	0	0	0	0	4
	54 ZAMBOANGA DEL SUR	0	0	0	0	0	0
	55 BASILAN	0	0	0	0	0	0
	56 SULU	0	0	0	0	0	0
	57 TAWI-TAWI	0	0	0	0	0	0
		sub-total	4	0	0	0	0
X	58 SURIGAO DEL NORTE	2	0	0	0	0	2
	59 CAMIGUIN	0	0	0	0	0	0
	60 AGUSAN DEL NORTE	0	6	0	0	0	6
	61 MISAMIS ORIENTAL	4	1	0	0	0	5
	62 MISAMIS OCCIDENTAL	0	0	0	0	0	0
	63 BUKIDNON	7	1	1	1	0	10
	64 AGUSAN DEL SUR	1	5	0	0	1	7
	sub-total	14	13	1	1	1	30
XI	65 SURIGAO DEL SUR	2	1	0	0	0	3
	66 DAVAO ORIENTAL	0	2	0	0	0	2
	67 DAVAO DEL NORTE	2	0	0	0	0	2
	68 DAVAO DEL SUR	2	1	0	0	0	3
	69 SOUTH COTABATO	3	0	0	0	0	3
	sub-total	9	4	0	0	0	13
XII	70 LANA O DEL NORTH	0	0	0	0	0	0
	71 LANA O DEL SUR	0	0	0	0	0	0
	72 NORTH COTABATO	0	0	0	0	0	0
	73 MAGUINDANAO	0	3	0	0	0	3
	74 SULTAN KUDARAT	0	8	0	0	1	9
	sub-total	0	11	0	0	1	12
	Total	79	81	6	3	10	179

## STATUS OF ISSUANCE OF EMANCIPATION PATENTS : CIS

Region	Province	Nos. of Answer	Percentage (%)
I	1 ILOCOS NORTE	1	50
	2 ABRA	0	0
	3 ILOCOS SUR	0	0
	4 MOUNTAIN PROVINCE	6	15
	5 LA UNION	1	80
	6 BENGUET	0	0
	7 PANGASINAN	0	0
	Sub-total	8	26
II	8 BATANES	0	0
	9 CAGAYAN	0	0
	10 KALINGA APAYAO	0	0
	11 ISABELA	0	0
	12 IFUGAO	0	0
	13 NUEVA VISCAAYA	22	86
	14 QUIRINO	0	0
	sub-total	22	86
III	15 NUEVA ECJA	0	0
	16 TARLAC	0	0
	17 ZAMBALES	0	0
	18 PAMPANGA	0	0
	19 BULACAN	0	0
	20 BATAAN	0	0
	sub-total	0	0
IV	21 AURORA	4	26
	22 QUEZON	0	0
	23 RIZAL	0	0
	24 CAVITE	0	0
	25 LAGUNA	0	0
	26 BATANGAS	0	0
	27 MARINDUQUE	0	0
	28 MINDOKO ORIENTAL	0	0
	29 MINDORO OCCIDENTAL	0	0
	30 ROMBLON	0	0
	31 PALAWAN	1	50
		sub-total	5
V	32 CAMARINES NORTE	0	0
	33 CAMARINES SUR	0	0
	34 CATANDUANES	0	0
	35 ALBAY	0	0
	36 SORSOGON	0	0
	37 MASBATE	1	90
	sub-total	1	90
VI	38 AKLAN	0	0
	39 CAPIZ	0	0
	40 ANTIQUE	3	7
	41 ILOILO	1	15
	42 NEGROS OCCIDENTAL	0	0
	43 NEGROS DEL NORTE	0	0
	sub-total	4	9
VII	44 CEBU	0	0
	45 NEGROS ORIENTAL	4	84
	46 BOHOL	0	0
	47 SIQUIOR	0	0
		sub-total	4
VIII	48 NORTHERN SAMAR	0	0
	49 SAMAR	0	0
	50 EASTERN SAMAR	0	0
	51 NORTHERN LEYTE	24	43
	52 SOUTHERN LEYTE	10	57
	sub-total	34	47
IX	53 ZAMBOANGA DEL NORTE	0	0
	54 ZAMBOANGA DEL SUR	1	69
	55 BASILAN	0	0
	56 SULU	0	0
	57 TAWI-TAWI	0	0
		sub-total	1
X	58 SURIGAO DEL NORTE	0	0
	59 CAMIGUIN	0	0
	60 AGUSAN DEL NORTE	5	66
	61 MISAMIS ORIENTAL	2	63
	62 MISAMIS OCCIDENTAL	7	95
	63 BUKIDNON	7	63
	64 AGUSAN DEL SUR	8	42
	sub-total	29	65
XI	65 SURIGAO DEL SUR	10	86
	66 DAYAO ORIENTAL	1	100
	67 DAYAO DEL NORTE	0	0
	68 DAYAO DEL SUR	0	0
	69 SOUTH COTABATO	7	56
		sub-total	18
XII	70 LANA DEL NORTE	0	0
	71 LANA DEL SUR	0	0
	72 NORTH COTABATO	0	0
	73 MAGUINDANAO	0	0
	74 SULTAN KUDARAT	0	0
	sub-total	0	0
	Total	126	61

## STATUS OF ISSUANCE OF EMANCIPATION PATENTS : CIP

Region	Province	Nos. of Answer	Percentage (%)
I	1 ILOCOS NORTE	0	0
	2 ABRA	0	0
	3 ILOCOS SUR	3	100
	4 MOUNTAIN PROVINCE	6	15
	5 LA UNION	0	0
	6 BENGUET	1	58
	7 PANGASINAN	0	0
	Sub-total	10	45
II	8 BATANES	0	0
	9 CAGAYAN	0	0
	10 KALINGA APAYAO	0	0
	11 ISABELA	0	0
	12 IFUGAO	0	0
	13 NUEVA VISAYA	0	0
	14 QUIRINO	0	0
	sub-total	0	0
III	15 NUEVA ECUA	0	0
	16 TARLAC	0	0
	17 ZAMBALES	0	0
	18 PAMPANGA	0	0
	19 BULACAN	0	0
	20 BATAAN	0	0
	sub-total	0	0
IV	21 AURORA	0	0
	22 QUEZON	1	80
	23 RIZAL	0	0
	24 CAVITE	3	73
	25 LAGUNA	0	0
	26 BATANGAS	0	0
	27 MARINDUQUE	0	0
	28 MINDORO ORIENTAL	0	0
	29 MINDORO OCCIDENTAL	0	0
	30 ROMBLON	0	0
	31 PALAWAN	2	88
	sub-total	6	79
V	32 CAMARINES NORTE	1	10
	33 CAMARINES SUR	0	0
	34 CATANDUANES	0	0
	35 ALBAY	0	0
	36 SORSOGON	0	0
	37 MASBATE	0	0
	sub-total	1	10
VI	38 AKLAN	0	0
	39 CAPEZ	0	0
	40 ANTIQUE	0	0
	41 ILOILO	0	0
	42 NEGROS OCCIDENTAL	0	0
	43 NEGROS DEL NORTE	0	0
	sub-total	0	0
VII	44 CEBU	1	2
	45 NEGROS ORIENTAL	7	52
	46 BOHOL	0	0
	47 SIKUOR	0	0
	sub-total	8	46
VIII	48 NORTHERN SAMAR	0	0
	49 SAMAR	0	0
	50 EASTERN SAMAR	0	0
	51 NORTHERN LEYTE	1	60
	52 SOUTHERN LEYTE	1	91
	sub-total	2	76
IX	53 ZAMBOANGA DEL NORTE	0	0
	54 ZAMBOANGA DEL SUR	0	0
	55 BASILAN	0	0
	56 SULU	0	0
	57 TAWI-TAWI	0	0
	sub-total	0	0
X	58 SURIGAO DEL NORTE	0	0
	59 CAMIGUIN	0	0
	60 AGUSAN DEL NORTE	0	0
	61 MISAMIS ORIENTAL	0	0
	62 MISAMIS OCCIDENTAL	0	0
	63 BUKIDNON	2	22
	64 AGUSAN DEL SUR	6	90
	sub-total	8	73
XI	65 SURIGAO DEL SUR	2	83
	66 DAVAO ORIENTAL	0	0
	67 DAVAO DEL NORTE	0	0
	68 DAVAO DEL SUR	0	0
	69 SOUTH COTABATO	1	80
	sub-total	3	82
XII	70 LANA DEL NORTE	0	0
	71 LANA DEL SUR	0	0
	72 NORTH COTABATO	0	0
	73 MAGUINDANAO	0	0
	74 SULTAN KUDARAT	0	0
	sub-total	0	0
	Total	38	60

Table C2-26

## AREA ELIGIBLE FOR DISTRIBUTION UNDER CARP : CIS

					(Unit : ha)
Region	Province	Area Eligible for Distribution under CARP	Designed Irrigable Area in Wet Season	Ratio (%)	
I	1 ILOCOS NORTE	26	590	4	
	2 ABRA	0	0	0	
	3 ILOCOS SUR	0	0	0	
	4 MOUNTAIN PROVINCE	750	750	100	
	5 LA UNION	50	340	15	
	6 BENGUET	0	0	0	
	7 PANGASINAN	0	0	0	
	sub-total	826	1,690	49	
II	8 BATANES	0	0	0	
	9 CAGAYAN	131	721	18	
	10 KALINGA APAYAO	0	0	0	
	11 ISABELA	0	0	0	
	12 IFUGAO	0	0	0	
	13 NUEVA VISCAYA	830	3,621	23	
	14 QUEBINO	0	0	0	
	sub-total	961	4,345	22	
III	15 NUEVA ECJA	0	0	0	
	16 TARLAC	0	0	0	
	17 ZAMBALES	0	0	0	
	18 PAMPANGA	0	0	0	
	19 BULACAN	0	0	0	
	20 BATAAN	0	0	0	
	sub-total	0	0	0	
IV	21 AURORA	1,180	2,161	55	
	22 QUEZON	0	0	0	
	23 RIZAL	0	0	0	
	24 CAVITE	0	0	0	
	25 LAGUNA	0	0	0	
	26 BATANGAS	0	0	0	
	27 MARINDUQUE	12	240	5	
	28 MINDORO ORIENTAL	0	0	0	
	29 MINDORO OCCIDENTAL	0	0	0	
	30 ROMBLON	0	0	0	
	31 PALAWAN	200	200	100	
	sub-total	1,392	2,601	54	
V	32 CAMARINES NORTE	41	53	77	
	33 CAMARINES SUR	0	0	0	
	34 CATANDUANES	0	0	0	
	35 ALBAY	0	0	0	
	36 SORSOGON	0	0	0	
	37 MASBATE	42	50	84	
	sub-total	83	103	81	
VI	38 AKLAN	0	0	0	
	39 CAPIZ	0	0	0	
	40 ANTIQUE	367	1,278	29	
	41 ILOILO	100	450	22	
	42 NEGROS OCCIDENTAL	0	0	0	
	43 NEGROS DEL NORTE	0	0	0	
	sub-total	467	1,728	27	
VII	44 CEBU	30	650	5	
	45 NEGROS ORIENTAL	321	815	38	
	46 BOHOL	0	0	0	
	47 SIQUOR	0	0	0	
	sub-total	351	1,495	23	
VIII	48 NORTHERN SAMAR	0	0	0	
	49 SAMAR	0	0	0	
	50 EASTERN SAMAR	0	0	0	
	51 NORTHERN LEYTE	1,240	4,452	28	
	52 SOUTHERN LEYTE	111	1,056	11	
	sub-total	1,351	5,508	25	
IX	53 ZAMBOANGA DEL NORTE	774	1,302	59	
	54 ZAMBOANGA DEL SUR	287	350	82	
	55 BAKLAN	0	0	0	
	56 SULU	0	0	0	
	57 TAWI-TAWI	0	0	0	
	sub-total	1,061	1,652	64	
X	58 SURIGAO DEL NORTE	0	0	0	
	59 CANGUIN	0	0	0	
	60 AGUSAN DEL NORTE	57	660	9	
	61 MISAMIS ORIENTAL	48	370	13	
	62 MISAMIS OCCIDENTAL	124	1,072	12	
	63 BUKIDNON	769	1,820	42	
	64 AGUSAN DEL SUR	2,126	775	276	
	sub-total	3,134	4,697	67	
XI	65 SURIGAO DEL SUR	462	2,699	17	
	66 DAVAO ORIENTAL	50	300	17	
	67 DAVAO DEL NORTE	0	0	0	
	68 DAVAO DEL SUR	0	0	0	
	69 SOUTH COTABATO	321	1,088	30	
	sub-total	833	4,087	20	
XII	70 LANA DEL NORTE	0	0	0	
	71 LANA DEL SUR	0	0	0	
	72 NORTH COTABATO	0	0	0	
	73 MAGUINDANAO	0	0	0	
	74 SULTAN KUDARAT	0	0	0	
	sub-total	0	0	0	
	Total	10,459	27,896	37	

Table C2-27

## AREA ELIGIBLE FOR DISTRIBUTION UNDER CARP : CIP

(Unit : ha)

Region	Province	Area Eligible for Distribution under CARP	Designed Irrigable Area In Wet Season	Ratio (%)
I	1 ILOCOS NORTE	0	0	0
	2 ABRA	0	0	0
	3 ILOCOS SUR	153	562	27
	4 MOUNTAIN PROVINCE	595	595	100
	5 LA UNION	0	0	0
	6 BENGUET	20	75	27
	7 PANGASINAN	0	0	0
	Sub-total	768	1,232	62
II	8 BATANES	0	0	0
	9 CAGAYAN	0	0	0
	10 KALINGA APAYAO	180	280	64
	11 ISABELA	0	0	0
	12 IFUGAO	0	0	0
	13 NUEVA VISCAYA	0	0	0
	14 QUIRINO	0	0	0
	sub-total	180	280	64
III	15 NUEVA ECUA	0	0	0
	16 TARLAC	0	0	0
	17 ZAMBALES	0	0	0
	18 PAMPANGA	0	0	0
	19 BULACAN	0	0	0
	20 BATAAN	0	0	0
	sub-total	0	0	0
IV	21 AURORA	0	0	0
	22 QUEZON	152	247	62
	23 RIZAL	0	0	0
	24 CAVITE	350	310	113
	25 LAGUNA	0	0	0
	26 BATANGAS	0	0	0
	27 MARINDUQUE	0	0	0
	28 MINDORO ORIENTAL	0	0	0
	29 MINDORO OCCIDENTAL	0	0	0
	30 ROMBLON	0	0	0
	31 PALAWAN	500	650	77
	sub-total	1,002	1,207	83
V	32 CAMARINES NORTE	200	265	75
	33 CAMARINES SUR	0	0	0
	34 CATANDUANES	0	0	0
	35 ALBAY	0	0	0
	36 SORSOGON	0	0	0
	37 MASBATE	357	376	95
		sub-total	557	641
VI	38 AKLAN	0	0	0
	39 CAPIZ	0	0	0
	40 ANTIQUE	0	0	0
	41 ILOILO	0	0	0
	42 NEGROS OCCIDENTAL	172	205	84
	43 NEGROS DEL NORTE	0	0	0
	sub-total	172	205	84
VII	44 CEBU	25	200	13
	45 NEGROS ORIENTAL	830	2,350	35
	46 BOHOL	0	0	0
	47 SIQUOR	10	200	5
		sub-total	865	2,750
VIII	48 NORTHERN SAMAR	0	0	0
	49 SAMAR	0	0	0
	50 EASTERN SAMAR	0	0	0
	51 NORTHERN LEYTE	110	100	110
	52 SOUTHERN LEYTE	91	208	44
		sub-total	201	308
IX	53 ZAMBOANGA DEL NORTE	127	185	69
	54 ZAMBOANGA DEL SUR	0	0	0
	55 BASILAN	0	0	0
	56 SULU	0	0	0
	57 TAWI-TAWI	0	0	0
		sub-total	127	185
X	58 SURIGAO DEL NORTE	0	0	0
	59 CAMIGUIN	0	0	0
	60 AGUSAN DEL NORTE	0	0	0
	61 MISAMIS ORIENTAL	9	80	11
	62 MISAMIS OCCIDENTAL	0	0	0
	63 BUKIDNON	114	350	33
	64 AGUSAN DEL SUR	651	900	72
	sub-total	774	1,330	58
XI	65 SURIGAO DEL SUR	200	670	30
	66 DAVAO ORIENTAL	0	0	0
	67 DAVAO DEL NORTE	220	370	59
	68 DAVAO DEL SUR	100	150	67
	69 SOUTH COTABATO	70	400	18
	sub-total	590	1,590	37
XII	70 LANA DEL NORTE	0	0	0
	71 LANA DEL SUR	0	0	0
	72 NORTH COTABATO	0	0	0
	73 MAGUINDANAO	0	0	0
	74 SULTAN KUDARAT	0	0	0
	sub-total	0	0	0
	Total	5,236	9,728	54

## PRICES OF MAJOR WORKS

NO.	PROVINCE	EXCAVATION			EMBANKMENT			CONCRETE WORKS			REINFORCEMENT			CONCRETE PIPE WORK (m)											
		MANPOWER EQUIPMENT			MANPOWER EQUIPMENT			CLASS A CLASS B CLASS C			BAR WORKS			DIA. 300 MM		DIA. 450 MM		DIA. 600 MM		DIA. 800 MM		DIA. 1,000 MM		DIA. 1,200 MM	
		/m <sup>3</sup>	/m <sup>3</sup>	/m <sup>3</sup>	/m <sup>3</sup>	/m <sup>3</sup>	/m <sup>3</sup>	/m <sup>3</sup>	/m <sup>3</sup>	/m <sup>3</sup>	/m <sup>3</sup>	/m <sup>3</sup>	/ton												
1	ILOCOS NORTE	59.80	42.60	44.30	59.30	2,520.00	2,210.00	2,010.00	21,220.00	530.00	740.00	980.00	1,530.00	2,150.00	2,790.00										
2	ABRA	35.00	19.50	22.60	28.10	2,835.00	2,135.00	1,585.00	-	470.00	615.00	765.00	1,065.00	1,890.00	2,115.00										
3	ILOCOS SUR	76.00	94.00	83.00	55.00	-	-	-	-	122.00	166.00	203.00	304.00	365.00	607.00										
4	MOUNTAIN	55.00	25.00	45.00	-	NA	-	NA	-	NA	NA	1,400.00	NA	NA	NA										
5	LA UNION	46.00	35.00	46.00	55.00	2,000.00	2,000.00	1,800.00	20,000.00	290.00	580.00	680.00	900.00	1,200.00	2,000.00										
6	BENGUET	60.61	-	-	-	6,200.00	-	-	-	525.00	595.00	675.00	775.00	-	-										
7	PANGASINAN	42.70	23.20	47.00	36.10	-	-	-	-	-	-	-	-	-	-										
8	BATANES	-	-	-	-	-	-	-	-	-	-	-	-	-	-										
9	CAGAYAN	30.00	24.70	37.50	28.50	-	-	-	-	218.65	282.35	318.70	493.00	NDA	NDA										
10	KALINGA APAYAO	43.65	23.90	47.15	17.90	4,249.25	NDA	NDA	-	NDA	350.26	483.24	604.46	630.86	NDA										
11	ISABELA	36.35	22.70	30.30	NDA	3,034.70	1,970.30	1,575.20	18,140.00	414.00	690.35	935.50	1,243.35	1,745.50	NDA										
12	IFUGAO	43.40	22.40	-	-	3,066.00	-	-	-	-	861.90	1,184.00	1,437.60	-	-										
13	NUOVA VISCAIA	28.00	20.50	54.20	27.10	3,000.00	2,500.00	2,200.00	-	350.00	500.00	750.00	950.00	1,200.00	1,460.00										
14	QUIRINO	35.30	26.80	44.10	32.95	4,012.00	3,274.00	2,885.00	19,160.00	521.00	886.00	1,200.00	1,809.00	2,751.00	3,260.00										
15	NUOVA ECIJA	34.55	17.70	28.80	23.20	2,371.00	2,014.00	1,936.00	23,100.00	550.00	840.00	1,160.00	1,470.00	1,950.00	2,250.00										
16	TARLAC	-	-	-	-	-	-	-	-	-	-	-	-	-	-										
17	ZAMBALES	-	-	-	-	-	-	-	-	-	-	-	-	-	-										
18	PAMPANGA	-	-	-	-	-	-	-	-	-	-	-	-	-	-										
19	BULACAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-										
20	BATAAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-										
21	AURORA	31.45	18.00	26.70	35.20	3,050.00	2,130.00	1,585.00	20,000.00	780.00	930.00	1,470.00	1,870.00	3,050.00	3,350.00										
22	QUEZON	55.15	21.40	55.15	21.40	5,295.00	4,548.00	4,492.00	-	1,205.00	1,557.00	2,342.00	-	-	-										
23	RIZAL	-	-	-	-	-	-	-	-	-	-	-	-	-	-										
24	CAVITE	33.90	-	28.25	-	3,890.55	3,750.45	-	10,900.00	485.00	620.00	755.00	889.00	1,125.00	1,200.00										
25	LAGUNA	-	-	-	-	-	-	-	-	-	-	-	-	-	-										
26	BATANGAS	-	-	-	-	-	-	-	-	-	-	-	-	-	-										
27	MARINDUQUE	-	-	-	-	-	-	-	-	-	-	-	-	-	-										
28	MINDORO OR.	-	-	-	-	-	-	-	-	-	-	-	-	-	-										
29	MINDORO OCC.	-	-	-	-	-	-	-	-	-	-	-	-	-	-										
30	ROMBLON	33.90	25.50	33.90	25.50	4,200.00	3,950.00	3,825.00	17,220.00	550.00	838.00	1,565.00	1,695.00	1,950.00	2,150.00										
31	PALAWAN	42.80	23.35	42.80	14.75	3,873.00	2,923.00	2,815.00	25,075.00	420.00	583.00	778.00	1,321.00	1,818.00	2,602.00										
32	CAMARINES N.	66.46	31.10	73.75	31.90	3,145.00	-	-	-	-	550.00	786.00	-	-	-										
33	CAMARINES S.	-	-	-	-	-	-	-	-	-	-	-	-	-	-										
34	CATANDUANES	53.20	24.30	53.20	27.00	4,370.00	3,800.00	2,830.00	23,000.00	NA	966.00	1,300.00	2,800.00	NA	NA										
35	ALBAY	59.30	23.30	59.30	45.80	2,570.00	1,870.00	1,370.00	-	470.00	670.00	865.00	1,340.00	2,440.00	2,740.00										
36	SORSOGON	55.00	25.00	60.00	25.00	4,260.00	-	-	-	550.00	760.00	1,100.00	-	-	-										
37	MASBATE	67.00	38.00	54.00	38.00	5,171.00	4,900.00	4,500.00	21,000.00	810.00	1,715.00	1,620.00	2,160.00	2,700.00	3,240.00										

## PRICES OF MAJOR WORKS

NO. PROVINCE	Unit: Peso															
	EXCAVATION			EMBANKMENT			CONCRETE WORKS			REINFORCEMENT			CONCRETE PIPE WORK (/m)			
	MANPOWER EQUIPMENT /m <sup>3</sup>	MANPOWER EQUIPMENT /m <sup>3</sup>	MANPOWER EQUIPMENT /m <sup>3</sup>	MANPOWER EQUIPMENT /m <sup>3</sup>	MANPOWER EQUIPMENT /m <sup>3</sup>	MANPOWER EQUIPMENT /m <sup>3</sup>	CLASS A /m <sup>3</sup>	CLASS B /m <sup>3</sup>	CLASS C /m <sup>3</sup>	BAR WORKS /ton	DIA. 300 MM	DIA. 450 MM	DIA. 600 MM	DIA. 800 MM	DIA. 1,000 MM	DIA. 1,200 MM
38 AKLAN																
39 CAPIZ																
40 ANTIQUE																
41 ILOILO	66.00	39.00	44.00	15.00	4,071.00	3,071.00	2,285.00		NDA		NDA	1,036.00	1,333.00	NDA	NDA	NDA
42 NEGROS OCC.	54.00	27.00	54.00	18.00	2,558.00	2,023.00			22,175.00		670.00	1,085.00	1,462.00	2,127.00	3,050.00	
43 NEGROS DEL N.																
44 CEBU	36.25	15.25	39.40	17.55	3,758.00	2,773.00	N/A		23,900.00		462.00	746.00	1,094.00	1,601.00	N/A	N/A
45 NEGROS ORIENTAL	59.00	24.00	51.00	60.00	3,926.00	2,962.00	2,204.00		30,940.00		620.00	800.00	1,060.00	1,580.00	2,300.00	3,380.00
46 BOHOL																
47 SIQUIJOR																
48 NORTHERN SAMAR	40.00	24.00	56.00	30.00	4,284.00	3,857.00	2,923.00				732.00	1,098.00	1,465.00	1,830.00	2,200.00	2,720.00
49 SAMAR																
50 EASTERN SAMAR	32.95	26.60	36.00	27.20	2,334.25	2,065.70	2,018.55				544.95	981.75	1,325.60	2,077.65	3,292.50	4,118.95
51 NORTHERN LEYTE	43.30	42.55	37.40	20.80	4,406.60						695.15	949.52	1,109.85	1,249.65	1,555.25	
52 SOUTHERN LEYTE																
53 ZAMBOANGA DEL N.	52.30	20.00	43.50	25.00	5,805.00	NDA	NDA		21,800.00		1,210.00	1,465.00	1,870.00	2,154.00	NDA	NDA
54 ZAMBOANGA DEL S.	28.00	41.00	28.00	67.00	3,728.00	1,283.00							1,253.00	1,886.00		
55 BASILAN																
56 SULU																
57 TAWI TAWI																
58 SURIGAO DEL N.	41.00	31.15	47.00	117.20	4,744.00		1,992.00		20,450.00		612.00	899.00	1,146.00	1,774.00	2,985.00	3,278.00
59 CAMIGUN																
60 AGUSAN DEL NORTE	49.00	21.00	63.00	29.00	4,000.00	3,401.00	3,320.00		24,150.00		673.00	976.00	1,269.00	1,930.00	2,835.00	3,735.00
61 MISAMIS ORIENTAL	64.40	24.10	94.50		2,972.00	NDA	1,948.00				575.00	1,201.00	1,785.00	2,626.00	NDA	NDA
62 MISAMIS OCC.	36.40	25.20	42.45	35.20	3,420.00	2,962.00	2,502.00				400.00	500.00	600.00	850.00	950.00	1,050.00
63 BUKIDNON	45.10	23.20	75.20	26.20	5,356.00	3,560.00	2,832.00		NDA		940.00	NDA	NDA	NDA	NDA	NDA
64 AGUSAN DEL SUR	48.50	21.40	48.50	58.20	3,725.00	2,810.00	2,100.00		27,000.00		695.00	960.00	1,265.00	1,895.00	3,920.00	4,100.00
65 SURIGAO DEL SUR	37.00	33.00	40.00	31.00	5,030.00	2,300.00	1,800.00				572.00	1,052.00	1,348.00	2,308.00	2,880.00	3,890.00
66 DAVAO ORIENTAL	54.70	19.40	54.70	19.40					16,340.00			680.00	1,004.00	2,072.00		
67 DAVAO DEL NORTE	48.55	30.35	36.75	35.85	4,456.00	1,801.65	NDA		NDA		541.80	964.70	1,223.40	1,633.15	NDA	NDA
68 DAVAO DEL SUR	30.30	42.30	50.90	62.45	4,297.10	1,977.05			15,283.45		625.55	1,233.75	1,333.65	2,229.70	3,424.00	
69 SOUTH COTABATO			38.00	38.00	3,523.50						448.40	833.00	1,230.00	1,875.00	2,306.00	2,950.00
70 LANA O DEL NORTE																
71 LANA O DEL SUR																
72 NORTH COTABATO	35.00	17.50	23.35	19.85	2,319.00	2,148.00	N/A		21,670.00		415.00	525.00	740.00	805.00	1,130.00	
73 MAGUINDANAO	35.00	33.55			5,130.25	2,427.10	2,132.05		95,454.00		724.30	1,078.10	1,349.80	1,818.84	2,229.25	2,698.29
74 SULTAN KUDARAT	45.81	28.22	46.81	34.89	3,828.20	2,754.72	2,440.95		24,453.52		561.44	833.52	1,109.02	1,583.01	2,138.70	2,678.01
AVERAGE																

PRICES OF MATERIALS AND LABOUR WAGES

NO. PROVINCE	MATERIALS										FUEL										LABOUR (man-day)										Unit/Peso				
	GRAVEL		SAND		CEMENT		TIMBER		REINFORCE- MENT		GASOLINE		L. OIL		D.E. OIL		GREASE		COMMON		FOREMAN		LABOUR		MASON		CARPENTER		WELDER			OPERATOR		DRIVER	
	/m <sup>3</sup>	/m <sup>3</sup>	/ton	/40 kg	/bd.ft.	/bd.ft.	/ton	/ton	/lit.	/lit.	/lit.	/lit.	/kg	/lit.	/lit.	/lit.	/kg	/lit.	/lit.	/lit.	/lit.	/lit.	/lit.	/lit.	/lit.	/lit.	/lit.	/lit.	/lit.	/lit.		/lit.	/lit.		
1	160.00	120.00	2,875.00	115.00	17.50	16,100.00	16.00	62.00	8.59	73.00	195.00	133.00	153.00	160.00	153.00	175.00	167.00																		
2	218.00	212.00	3,000.00	136.00	18.00	16,700.00	16.55	55.00	8.57	50.50	120.00	70.00	100.00	100.00	100.00	100.00	100.00																		
3	250.00	220.00		150.00	8.00	13,600.00	15.20	40.00		50.00	141.00	90.90	125.10	125.10	132.60	164.65																			
4	950.00	900.00		150.00	8.00	13,600.00	18.00	45.00	10.00	20.00	150.00	100.00	130.00	130.00	130.00	120.00	120.00																		
5	350.00	280.00		105.00	18.00	15,500.00	15.00	42.00	8.00	50.00	150.00	90.00	120.00	120.00	120.00	120.00	100.00																		
6	600.00	600.00		110.00	16.00						141.00	90.91	107.05	112.41	125.09	118.36																			
7	225.00	220.00		110.00	20.00	13,470.00	15.25	42.00	42.00	45.00	120.00	70.00	100.00	100.00	90.00	118.00																			
8																																			
9	289.25	279.00		172.80	15.00	24,100.00	16.40	44.00	9.27	40.25	155.00	75.00	110.00	110.00	110.00	90.00																			
10	324.00	316.30		141.63	12.00	20,930.00	17.35	48.00	46.00	46.00	173.30	130.96	150.94	150.94	150.94	182.60																			
11	357.74	343.17		110.00	13.00	18,140.00	16.03	42.00	8.79	68.75	141.00	90.90	112.40	112.40	132.59	118.36																			
12	292.75	286.90		125.00		11,500.00	17.00	50.00	8.50	80.00	158.54	108.44	124.59	142.63	124.59	150.13																			
13	244.00	228.00	2,625.00	105.00	12.50	16,570.00	15.70	50.00	8.50	100.00	143.00	109.00	125.00	125.00	125.00	150.00																			
14	288.00	245.00	3,000.00	120.00	15.00	17,550.00	17.20	48.00	10.00	32.00	120.00	70.00	100.00	100.00	80.00	100.00																			
15	315.00	285.00	3,300.00	132.00	15.60	16,380.00	15.30	45.00	8.05	40.00	273.10	90.90	107.05	107.05	107.05	250.45																			
16																																			
17																																			
18																																			
19																																			
20																																			
21	215.00	210.00	NDA	140.00	8.00	20,000.00	16.45	21.20	9.05	18.70	190.00	129.00	155.00	170.00	129.00	180.00																			
22	450.00	220.00		125.00	18.50	19,060.00	16.00	40.00		35.00	141.00	90.90	112.40	125.09	112.40	138.95																			
23																																			
24	672.85	322.85	2,737.50	109.50	18.00	11,100.00	15.50	44.00	7.80	125.00	195.35	132.23	159.35	175.48	175.48	184.85																			
25																																			
26																																			
27	200.00	200.00		120.00	20.00	18,000.00	16.00	41.00	7.79	45.00	189.47	128.44	154.67	170.26	179.33	161.86																			
28																																			
29																																			
30	335.00	305.00	2,950.00	118.00	18.50	17,220.00	15.55	40.00	8.50	75.00	120.00	70.00	100.00	100.00	100.00	118.00																			
31	235.00	224.00	3,227.00	129.00	13.20	22,400.00	16.50		7.90	69.50	189.00	128.00	154.00	170.00	179.00	161.00																			
32	200.00	150.00	2,625.00	105.00	12.50		15.25	50.00	7.91	45.00	195.00	133.00	153.00	175.00	175.00	167.00																			
33																																			
34	200.00	200.00		99.50	14.00	23,000.00	17.00	45.00	9.50	30.00	195.00	133.00	153.00	176.00	133.00	176.00																			
35	200.00	150.00	2,625.00	105.00	15.00	18,000.00	15.09	45.00	7.85	60.00	220.00	150.00	195.00	195.00	195.00	187.00																			
36	180.00	160.00		104.00	11.00		16.00	45.00		55.00	195.00	133.00	176.00	176.00	167.00	185.00																			
37	420.00	350.00		130.00	15.00	15,000.00	16.00	32.00	8.00	16.00	195.00	133.00	153.00	176.00	176.00	185.00																			



Table C2-29 (2/2)

## PRICES OF MATERIALS AND LABOUR WAGES

NO. PROVINCE	MATERIALS										FUEL				LABOUR (/man-day)				Unit: Peso	
	GRAVEL /m <sup>3</sup>	SAND /m <sup>3</sup>	CEMENT /ton	CEMENT /40 kg	TIMBER /bd.ft	REINFORCEMENT /ton	GASOLINE /lit.	L. OIL /lit.	D.E. /lit.	GREASE /kg	COMMON		FOREMAN		CARPENTER	WELDER	OPERATOR	DRIVER		
											LABOUR	LABOUR	LABOUR	LABOUR						
38 AKLAN																				
39 CAPIZ																				
40 ANTIQUE																				
41 ILOILO	188.00	163.00	3,150.00	126.00	20.55	21,000.00	16.03	10.00	NDA		195.00	132.93	152.93	175.29	159.57	184.46	166.96			
42 NEGROS OCC.	494.00	479.00	-	147.00	21.00	18,230.00	15.07	7.83	70.45		195.00	132.94	152.93	175.59	159.57	184.57	166.96			
43 NEGROS DEL NORTE																				
44 CEBU	341.00	331.00	-	111.00	19.00	18,550.00	16.11	49.70	-	74.00	195.00	133.00	153.00	175.00	NA	184.00	167.00			
45 NEGROS ORIENTAL	300.00	258.00	2,550.00	102.00	17.00	20,420.00	16.04	46.96	7.94	106.67	141.00	91.00	108.00	126.00	126.00	133.00	119.00			
46 BOHOL																				
47 SIQUIJOR																				
48 NORTHERN SAMAR	400.00	350.00	3,575.00	143.00	14.00	23,000.00	15.50	46.00	8.25	76.00	200.00	101.00	119.00	179.00	119.00	188.00	179.00			
49 SAMAR																				
50 EASTERN SAMAR	350.00	608.00	-	135.00	8.00	27,750.00	11.00	40.00	9.00	40.00	120.00	70.00	100.00	100.00	100.00	100.00	80.00			
51 NORTHERN LEYTE	307.25	293.10	-	123.07	16.23	23,990.00	16.12	50.00	6.41	37.00	173.32	90.91	150.97	150.97	157.61	157.60	164.97			
52 SOUTHERN LEYTE																				
53 ZAMBOANGA DEL N.	310.00	470.00	3,000.00	120.00	20.00	21,800.00	16.00	40.00	-	82.50	192.00	131.00	150.00	157.00	157.00	181.00	164.00			
54 ZAMBOANGA DEL S.	252.00	252.00	-	90.00	10.00	5,424.00	16.00	45.00	8.00		190.00	130.00	150.00	170.00	-	180.00	161.00			
55 BASILAN																				
56 SULU																				
57 TAWI TAWI																				
58 SURIGAO DEL N.	375.00	367.00	-	90.00	10.00	20,450.00	15.54	47.50	8.34	33.50	207.35	90.90	186.93	186.93	196.56	178.28				
59 CAMIGUN																				
60 AGUSAN DEL N.	555.00	522.00	-	103.00	10.00	20,250.00	16.16	50.00	7.96	80.00	196.76	135.00	178.00	178.00	187.00	169.00				
61 MISAMIS ORIENTAL	192.00	77.00	-	93.00	10.45	17,294.00	17.70	46.70	8.70	50.80	190.00	99.00	149.00	171.00	NDA	180.00	163.00			
62 MISAMIS OCC.																				
63 BUKIDNON			2,250.00	90.00	6.50	17,949.00	16.44	39.55	8.25	46.55	225.19	112.69	183.12	205.48	197.14	209.92	197.14			
64 AGUSAN DEL SUR	210.00	170.00	3,087.50	123.50	8.00	28,150.00	16.50	34.30	-	25.50	216.00	110.00	152.00	152.00	152.00	182.00	165.00			
65 SURIGAO DEL SUR	40.00	40.00	-	129.75	7.50	25,750.00	-	39.85	-	55.60	191.35	90.90	171.80	171.80	171.80	181.02	163.54			
66 DAVAO ORIENTAL	197.90	188.80	-	156.00	13.40	20,582.40	17.50	40.00	9.25	149.64	191.85	90.90	149.64	149.64	181.02	163.54				
67 DAVAO DEL NORTE	318.05	310.55	2,577.50	103.10	9.10	25,400.00	15.26	44.50	-	47.50	191.35	90.90	149.64	171.80	171.80	181.02	163.54			
68 DAVAO DEL SUR	303.75	296.15	-	127.95	9.10	15,283.45	16.30	47.00	8.10	67.00	191.35	90.91	171.80	171.80	156.23	163.54				
69 SOUTH COTABATO	262.00	239.00	-	85.00	14.00	18,180.00	16.20	46.25	8.01	46.25	191.00	91.00	149.00	149.00	163.00	163.00				
70 LANAO DEL NORTE																				
71 LANAO DEL SUR																				
72 NORTH COTABATO	900.00	820.00	-	100.00	8.50	20,000.00	11.60	46.00	7.16	70.00	158.00	102.00	120.00	140.00	126.00	149.00	133.00			
73 MAGUINDANAO	250.00	120.00	-	92.00	8.00	31,000.00	9.60	47.00	8.30	90.00	171.00	90.90	107.04	107.04	112.40	132.59	118.56			
74 SULTAN KUDARAT	325.28	297.37	2,891.44	118.00	13.86	19,087.74	15.75	44.41	9.33	56.41	175.61	106.27	139.90	149.30	140.18	159.86	150.79			
AVERAGE																				



***ANNEX D***

***IMPLEMENTATION PROCEDURES  
OF CISs/CIPs***



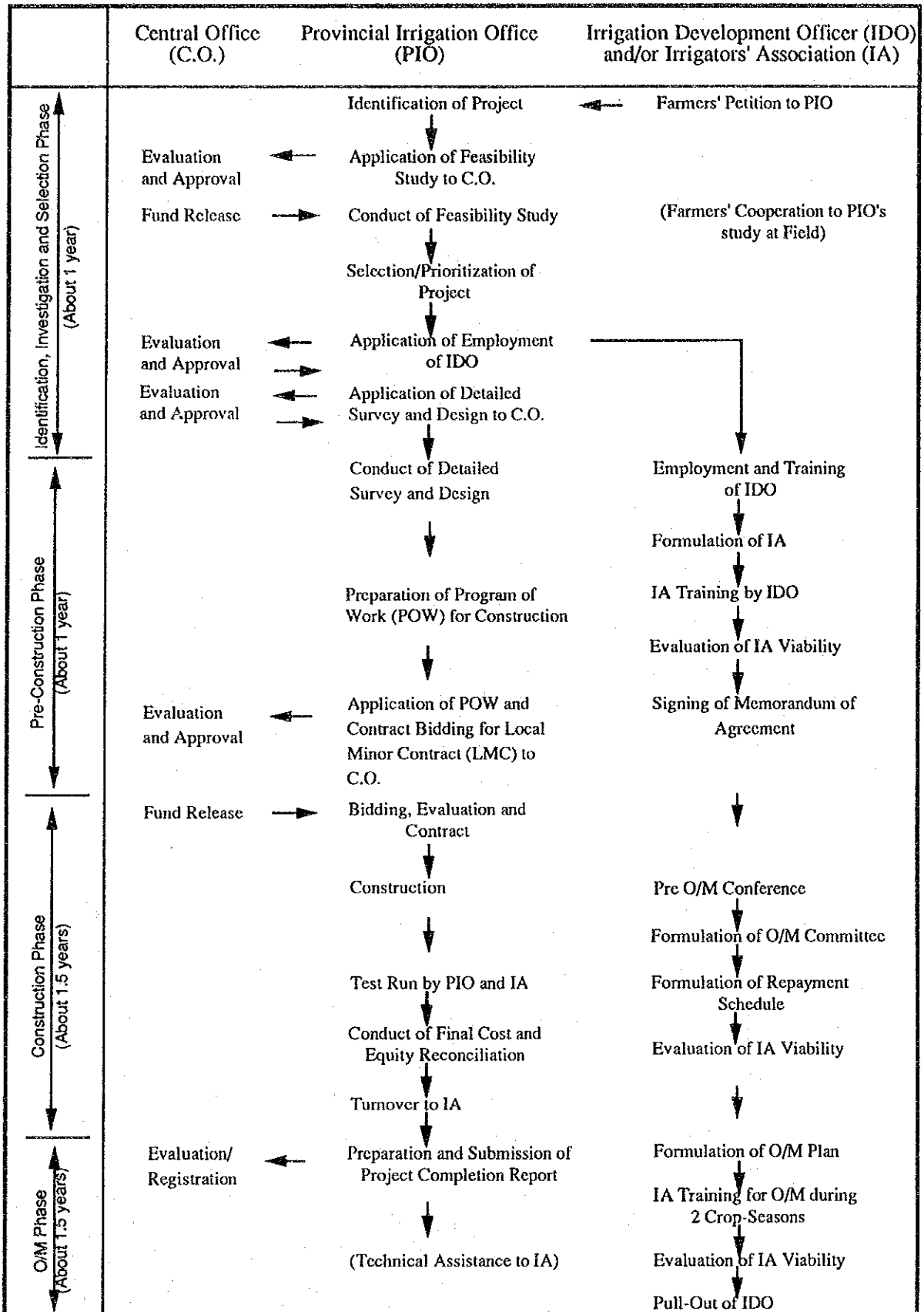
**ANNEX D**  
**IMPLEMENTATION PROCEDURES OF CISs/CIPs**

Table of Contents

	<u>Page</u>
1. Major Work Flow of Communal Irrigation Project Implementation .....	D-1
2. Implementation Procedures of CISs/CIPs .....	D-2
3. Preliminary Investigation Report for Communal Project/System (NIA-CIP Form I-2) .....	D-3
4. Communal Project Institutional Profile (NIA-CIP Form I-3B) .....	D-7
5. Initial Project Feasibility Report (NIA-CIP Form I-3C) .....	D-20
6. Final Project Feasibility Report (NIA-CIP Form I-3) .....	D-24
7. Sample Memorandum of Agreement by and between and Farmers Irrigators Association, INC. ....	D-30
8. Turnover Document, Final Statement of Chargeable Cost (FSCC) .....	D-36
9. Financial Turnover Agreement (NIA-CIP Form III-3B) .....	D-38
10. Amortization Schedule (NIA-CIP Form III-3C) .....	D-39



## MAJOR WORK FLOW OF COMMUNAL IRRIGATION PROJECT IMPLEMENTATION



Note : Application and Submission from PIO to C.O. are made through Regional Irrigation Office.

**IMPLEMENTATION PROCEDURES OF CISS/CIPs**

ACTIVITIES OF PIOs/RIOs (Activities of RIO are shown in brackets.)	Related Activities of IDO/IAs	Activities of Central Office
<b>I. Identification, Investigation and Selection Phase (About 1 year)</b>  I-1 Identification of Projects (2 weeks) I-2 Preparation and Submission of Program-of-Work (POW) for Investigation and Data Gathering to CO through RIO (1 week) I-4 Conduct of Preliminary Investigation (see Form I-2) and Submission of Results to C.O. through RIO (1 week) I-6 Investigation and Data Gathering • Soil Survey and Analysis (1 week) • Discharge Measurement • Agro-Economic Survey (1 week) • Institutional Profile Preparation (see Form I-3B) I-7 Preparation of Initial Project Feasibility Report (see Form I-3C) (1 week) I-9 Conduct of Topo. Survey (4 weeks) I-10 Preparation of Technical Report (1 week) I-11 Preparation of Final Project Feasibility Report (see Form I-3) (1 week) I-12 Project Evaluation, Selection & Prioritization at PIO (1 week) and at RIO (1 week) I-13 (Preparation and Submission of the Following to C.O.) • List of Project for Implementation (2 weeks) • Regional Annual Program (2 weeks) • POW of Detailed Survey and Design (2 weeks)	• Farmers' Petition of CIP/CIS to PIO  • Farmers' Cooperation to PIO's Investigation and Data Gathering at Field  1. Request to hire IDO to CO through RIO (6 weeks)	I-3 Evaluation of POW and Fund Release for Preliminary Investigation  I-5 Evaluation of Results and Fund Release for Investigation and Data Gathering  I-8 Evaluation of Report and Fund Release for Topo. Survey  I-14 Evaluation of the List I-15 Evaluation of the Program I-16 Evaluation of POW and Fund Release for Detailed Survey (1 week)  2. Evaluation and Approval of Request
<b>II. Pre-Construction Phase (About 1 year)</b>  II-1 Conduct of Detailed Survey (12 weeks)  II-2 Conduct of Design (10 weeks)  II-3 Preparation and Submission of Construction POW to RIO (4 weeks)  II-4 (Evaluation of Construction POW by RIO and Submission to C.O.) (3 weeks)  II-6 (Request of Contract Bidding for Local Minor Contract (LMC) to C.O.) (4 weeks)	3. Hire and Training of IDO at PIO/RIO (4 weeks) 4. Orientation to IDO at PIO (2 days) 5. Commencement of IDO's Integration with Farmers Community or IA (4 weeks) 6. Reactivation or Formulation of Committee for Pre-Construction (2 weeks) 7. Firming-up of IA Membership (8 weeks) 8. Formulation of IA and Ratification of By-Laws (2 weeks) 9. Commencement of Negotiation of Right-of-Way 10. IA Training Needs Analysis (1 week) and Conduct of IA Training 11. Preparation and Submission of IA Registration Paper to Securities and Exchange Commission (SEC), (4 weeks) 12. Application of Water Permit to National Water Resources Board (NWRB), (4 weeks) 13. IDOs Training for Construction Phase (2 weeks) 14. First Pre-Construction Conference (2 days) 15. Reactivation or Formulation of Working Committee for Construction (2 weeks) 16. Formulation of NIA-IA Policies and System for Construction Phase (4 weeks) 17. Final Pre-Construction Conference (2 days) 18. Evaluation of IA Viability (1 week) 19. Signing of Memorandum of Agreement (MOA) (1 week)	II-5 Evaluation of POW and Fund Release for Construction (4 weeks)  II-7 Evaluation of Contract Bidding and Approval for LMC

ACTIVITIES OF PIOs/RIOs (Activities of RIO are shown in brackets.)	Related Activities of IDO/IAs	Activities of Central Office
<b>III. Construction Phase (About 1.5 years)</b>  III-1 Bidding for LMC III-2 Evaluation of Bid and Contract Award (4 weeks) III-3 (Approval of Contract by RIO) and Issuance of Notice to Proceed (2 weeks) III-4 Construction (52 weeks)  III-5 Inventory of Completed Facilities by PIO and IA (1 week) III-6 Test Run by PIO and IA (2 weeks)  III-7 Repair of Defect of Facilities (6 weeks) III-8 Conduct of Final Cost and Equity Reconciliation (2 weeks) III-9 Turnover of Facilities to IA (see form III-3B and 3C) (2 weeks)	20. Orientation of Planning of On-Farm Facilities and Conduct of Maintenance Works on Completed Structures 21. Pre O&M Conference (1 week) 22. Reactivation or Formulation of O&M Committee (1 week) and Appointment of O&M Personnel (1 week) 23. Formulation of Repayment Scheme (1 week) 24. Evaluation of IA Viability (1 week)	
<b>IV. Operation &amp; Maintenance Phase (About 1.5 years)</b>  IV-1 Preparation and Submission of Project Completion Report (5 weeks)  • Technical Assistance to IA	25. Conduct of IA Workshops (3 weeks) • Financial Management • System Management • Monitoring and Evaluation (M&E) 26. Firming up of O&M Plans and M&E System through Board of Directors (BOD) of IA and General Assembly (2 weeks) 27. Conduct of Regular IA Meetings and the Following Activities (20 weeks)  • Implementation of System Management Plan • Implementation of Financial Management Plan • Education and Training • Implementation of Complaint Management Mechanism • Issuance of Water Service Bill • In-Season Monitoring and Evaluation 28. Post-Season Evaluation through BOD and General Assembly (2 weeks) 29. Conduct of Regular IA Meetings and the Following Activities (20 weeks) • Implementation/Updating of System Management Plan • Implementation/Updating of Financial Management Plan • Education and Training • Implementation/Updating of Conflict Management Mechanism • Issuance of Water Service Bill • In-Season Monitoring and Evaluation 30. Annual Post Evaluation through BOD and General Assembly (2 weeks) 31. Revision/Amendment of By-Laws (2 weeks) 32. Evaluation of IA Viability (1 week) 33. Pull-out of IDOs	IV-2 Evaluation/Registration

Note: PIO: Provincial Irrigation Office, RIO: Regional Irrigation Office, IDO: Irrigation Development Officer, IA: Irrigator's Association, CO: Central Office of NIA





**PRELIMINARY INVESTIGATION REPORT  
FOR COMMUNAL PROJECT/SYSTEM  
(NIA-CIP Form I-2)**

**PROJECT DESCRIPTION**

1. Name of Project/system \_\_\_\_\_
2. Project/System category : New \_\_\_\_\_ Rehab \_\_\_\_\_  
Rehab Extention \_\_\_\_\_
3. Type of Diversion Works : Existing \_\_\_\_\_  
Proposed \_\_\_\_\_
4. Location existing area (Barangays and Towns) : if rehab \_\_\_\_\_  
\_\_\_\_\_
5. a. Water Source(s) of existing system(s) :  
Main source : \_\_\_\_\_  
Supplementary/source : \_\_\_\_\_  
b. Proposed water source(s) of project :  
Main source : \_\_\_\_\_  
Supplementary source : \_\_\_\_\_
6. Estimated potential area :

		<u>Season</u>	
		WET	DRY
A.	Presently irrigated area	_____	_____
B.	Area to be rehabilitated	_____	_____
C.	New area to be generated	_____	_____
TOTAL		_____	_____
7. Project Proponents  
Farmers in the project area \_\_\_\_\_ local Officials \_\_\_\_\_  
others (specify) \_\_\_\_\_

- II. 1. River discharge at the time of investigation \_\_\_\_\_ lps  
 2. Coordinates of Diversion Point : Latitude \_\_\_\_\_ Longitude \_\_\_\_\_  
 3. Existing Water Rights :

**T O T A L**  
 Amount Allocated

	<u>Nos.</u>	<u>Wet</u>	<u>Dry</u>
a. Upstream	_____	_____	_____
b. Downstream	_____	_____	_____
c. Proposed project	_____	_____	_____

III. PRELIMINARY ENGINEERING DATA

Data used : True elevation \_\_\_\_\_ : assumed elevation \_\_\_\_\_

1. Sketch layout showing :
  - a) limits of potential irrigable area
  - b) site of existing and proposed diversion works
  - c) location of existing canals and structures
  - d) roads and barrio/town sites
  - e) other landmarks such as cemetery, school buildings
  
2. Elevation of potential irrigable area :
  - a) highest : \_\_\_\_\_ meters
  - b) lowest : \_\_\_\_\_ meters
  - c) River bed elevation at point of diversion \_\_\_\_\_ meters
  - d) Average slope of potential area \_\_\_\_\_ percent

IV. ADDITIONAL INFORMATION

1. Special structures: (indicate in layout)
 

a. Kind of structures :	No.	Approx.	Length
- Tunnel	_____	_____	_____
- Flume	_____	_____	_____
- Si-flume	_____	_____	_____

2. Are there access roads to the diversion site?

Yes \_\_\_\_\_ No \_\_\_\_\_

a. If yes, describe conditions of these roads. If improvement is needed, state estimated cost of repairs/construction

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

b. If no, estimate length and cost of temporary access road to be constructed.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

3. Special problems expected (e.g. reclamation, siltation seepages, salinity, quarrying, etc.)

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

4. Construction materials available within the project area:

Sand	_____	In small quantity	_____	Sufficient
Gravel	_____	In small quantity	_____	Sufficient
Boulders	_____	In small quantity	_____	Sufficient
Others - (specify)				
	_____	In small quantity	_____	Sufficient _____
	_____	In small quantity	_____	Sufficient _____

5. Are there existing irrigation associations in the area?

\_\_\_\_\_

NOTE: Sufficient means enough for project requirement.

## V. SCHEME OF DEVELOPMENT

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**VI. ADVERSE EFFECT OF PROJECT IF ANY :**

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**VII. COMMENTS AND/OR RECOMMENDATIONS :**

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Date Investigated : \_\_\_\_\_

Submitted By :

\_\_\_\_\_

**P I E**

**Enclosure:**

1. Sketch layout

**COMMUNAL PROJECT INSTITUTIONAL PROFILE  
(NIA-CIP Form I-3B)**

**I. PROJECT DESCRIPTION (To be collected at provincial office)**

1. Name of Project/System \_\_\_\_\_

2. Project/System Category : New \_\_\_\_\_ Rehab \_\_\_\_\_  
Rehab Extention \_\_\_\_\_

3. Location (Barangays and towns) of existing area (if rehab.)  
\_\_\_\_\_  
\_\_\_\_\_

4. Estimated potential area and number of farmers per barangays

<u>Name of Barangay</u>	<u>Area</u>		<u>Farmers</u>	
	<u>Wet</u>	<u>Dry</u>	<u>Wet</u>	<u>Dry</u>
a. _____	_____	_____	_____	_____
b. _____	_____	_____	_____	_____
c. _____	_____	_____	_____	_____

**II. HISTORY AND ASSISTANCE RECEIVED. (For Rehab. projects with profile, these could be collected at provincial office)**

1. Discuss briefly data gathered regarding first construction of the system.  
\_\_\_\_\_  
\_\_\_\_\_
2. For projects with semi-permanent/permanent dam. Discuss briefly data gathered. \_\_\_\_\_  
\_\_\_\_\_
3. Major repair of canal and other structures. Use the table below in presenting data gathered.

\* Note : The space provided for each item should not limit the data or information that should be reflected in the report. In preparing the report additional spaces should be provided to accomodate all the necessary data/information.

\*\* Revised as of February, 1988

Structure	Number/ Length	Who Provided Fund	Date Construction Repair	Farmers' Contribution
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
<b>Canals</b>				
Main Canals	_____	_____	_____	_____
Secondary Canals	_____	_____	_____	_____
Tertiary Canals	_____	_____	_____	_____

4. Discuss other forms of assistance received by the farmers for repair and maintenance of the irrigation system \_\_\_\_\_
- \_\_\_\_\_

### III. FARMERS PERCEIVED NEEDS

1. Discuss benefits derived by farmers from past government work on the irrigation system and problems encountered in such works \_\_\_\_\_
- \_\_\_\_\_
2. Enumerate specific facilities to be repaired for the rehabilitation of the irrigation system.

<u>Structures/canal</u>	<u>Number/Length</u>	<u>Location</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____

3. Enumerate irrigation facilities that should be constructed.

<u>Irrigation Facilities</u>	<u>Number/Length</u>	<u>Location</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____

4. Discuss whether there is still a possibility of expending work on the existing irrigation system using the table below :

a. Area to be benefited by expansion Location

<u>Area to be benefited by expansion</u>	<u>Location</u>
_____	_____
_____	_____
_____	_____

b. Structures to be repaired for expansion areas

<u>Structures/canal</u>	<u>Number/Length</u>	<u>Location</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____

c. Structures to be constructed for expansion areas

<u>Structures/canal</u>	<u>Number/Length</u>	<u>Location</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____

5. a. Discuss other forms of assistance needed by the downstream farmers. \_\_\_\_\_

\_\_\_\_\_

b. Discuss other forms of assistance needed by the upstream farmers. \_\_\_\_\_

\_\_\_\_\_

6. Discuss briefly data gathered if farmers want to be involved in the determination of the location and type of irrigation facilities to be constructed. Indicate percentage of willing farmers out of total samples.

\_\_\_\_\_

\_\_\_\_\_



7. Discuss briefly data gathered if farmers want to be involved in the actual construction of irrigation facilities. Indicate percentage of willing farmers out of samples and how do they want to be involved.

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8. a. Specify percentage of farmers who are willing to give equity and discuss reasons of those who are not willing.

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- b. Specify percentage of farmers who are willing to repay construction cost and discuss the reasons of those who are not willing.

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9. Discuss briefly other kinds of assistance (non-construction) desired by farmers.

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#### IV. VIABILITY OF THE ASSOCIATION

##### A. Organization

##### a. FOR ASSOCIATION-MANAGED SYSTEM

1. Indicate, if there is already an existing association .

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2. If there is an existing association, specify following :

a. Name of Association : \_\_\_\_\_

b. Date of Organization : \_\_\_\_\_

c. Entity/Agency which initiated the organization : \_\_\_\_\_

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d. Reasons/Objectives of the organization :

\_\_\_\_\_

\_\_\_\_\_

e. SEC Registered? (Yes or No) \_\_\_\_\_

f. Date of Registration \_\_\_\_\_ Reg. No. \_\_\_\_\_

3. Association leaders and employees (use table below)

Name of leaders & employees	Position	Manner of Acquiring the Position	No. of Years in the Position	Remuneration/ Benefits/ Privileges
:	:	:	:	:
:	:	:	:	:
:	:	:	:	:
:	:	:	:	:
:	:	:	:	:
:	:	:	:	:

4. Specify number of beneficiaries, IA members and percentage of membership. Discuss also other data gathered on membership (i.e. who can become a member, categories of members, etc.) \_\_\_\_\_

\_\_\_\_\_

5. Discuss briefly data gathered on association By-laws.

\_\_\_\_\_

\_\_\_\_\_

6. Present data gathered on officers & general membership meetings using table below :

Types of Meeting	No. of Meetings held for the last two years	% of Attendance	Sanctions/Penalties for Non-Attendance of Meeting
:	:	:	:
:	:	:	:
:	:	:	:
:	:	:	:
:	:	:	:

7. Present data gathered on association records using table below :

Type of Records	Year(s) Record Available	Records (complete or incomplete)
:	:	:
:	:	:
:	:	:
:	:	:
:	:	:

8. Discuss briefly data gathered on barrio/municipal officials involved in the management of the system.

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9. Discuss briefly data gathered on leaders (non-member of the association) who greatly influence the association management

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**b. FOR NON-ASSOCIATION MANAGED SYSTEM**

1. Discuss briefly recognized leaders who are currently involved in the management of the system using the table below :

Name of Recognized Leader	Position	Duties & Responsibilities	Manner of Acquiring Position	No. of Yrs, in the Position	Remuneration	Other Position in the community or other organization
:	:	:	:	:	:	:
:	:	:	:	:	:	:
:	:	:	:	:	:	:
:	:	:	:	:	:	:
:	:	:	:	:	:	:

2. Discuss briefly barrio/municipal/provincial officials who are involved in the management of the system.

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3. Discuss briefly if farmers are interested in forming the association (indicate percentage of farmer samples)

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**B. Cropping Calendar**

1. Discuss briefly how the cropping calendar of the system was formulated \_\_\_\_\_

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2. Describe briefly the cropping calendar plan of the association \_\_\_\_\_

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3. Discuss briefly the people responsible in the cropping calendar plan implementation & supervision using the table below :

Name of People Involved	Position	No. of Years in the Position	Duties and Responsibilities	Remuneration/ Benefits/Privileges
:	:	:	:	:
:	:	:	:	:
:	:	:	:	:
:	:	:	:	:
:	:	:	:	:
:	:	:	:	:

4. Discuss briefly the problems encountered by the farmers in following the cropping calendar plan. \_\_\_\_\_

C. Water Distribution

1. System Level

- a. Water distribution plan formulation. Discuss briefly data gathered \_\_\_\_\_

For data gathered on the people involved in the formulation of water distribution plan use the table below :

Name of People Involved	Position	Remuneration/Benefits/ Privileges
:	:	:
:	:	:
:	:	:
:	:	:
:	:	:
:	:	:

- b. Discuss briefly the people responsible in water allocation & distribution in the system using the table below :

Name of People Involved	Position	Area/Portion of the System Covered	Duties & Responsibilities	Remuneration Benefits/Privileges
:	:	:	:	:
:	:	:	:	:
:	:	:	:	:
:	:	:	:	:
:	:	:	:	:

c. Discuss briefly data gathered on the schemes and rules on water allocation & distribution in the system.

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d. Discuss briefly data gathered on the system of water distribution during wet and dry season.

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e. Discuss briefly data gathered on priorities for water distribution

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2. Sectoral Level

a. Discuss briefly data gathered on schemes and rules of water allocation & distribution at the sectoral level.

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b. Discuss briefly the people responsible in the allocation & distribution of water at sectoral level using the table below :

Name of People Involved	Position	Area Covered	No. of Farmers Served	Duties & Responsibilities	Remuneration Benefits/ Privileges
:	:	:	:	:	:
:	:	:	:	:	:
:	:	:	:	:	:
:	:	:	:	:	:

3. Water related conflicts

a. Discuss briefly data gathered on water related conflict \_\_\_\_

\_\_\_\_\_  
 \_\_\_\_\_

b. Discuss briefly data gathered on offenses/illegal acts related to water use and the actions done about these \_\_\_\_

\_\_\_\_\_  
 \_\_\_\_\_

c. Discuss briefly on how a farmer seeks help in solving his problem on obtaining water \_\_\_\_\_

\_\_\_\_\_

D. Maintenance

1. Discuss briefly how the maintenance plan of the system is developed. \_\_\_\_\_

\_\_\_\_\_

2. Describe the maintenance plan of the system using table below :

Portion of the System	Activities	Frequency
	:	:
	:	:
	:	:
	:	:
	:	:
	:	:

3. Discuss briefly the people responsible in the maintenance of the system using the table below :

Portion of the System	People Responsible	Duties and Responsibilities
a. System level	:	:
	:	:
b. Sectoral level	:	:
	:	:
	:	:
	:	:

4. Describe the problems encountered by farmers in the maintenance of their system \_\_\_\_\_

**E. Other Conflicts**

1. Discuss briefly data gathered on other conflicts besides water related conflicts \_\_\_\_\_
2. Discuss briefly data gathered on recognized local leader involved in the management of the system \_\_\_\_\_



3. Discuss briefly data gathered on local leaders who are in conflict in the management/operation of the system \_\_\_\_\_  
 \_\_\_\_\_

4. Discuss briefly data gathered on factions among farmers currently using the system \_\_\_\_\_  
 \_\_\_\_\_

F. Fees

1. Discuss briefly fees paid by farmers using table below :

a. Amortization Payment

a.1 Who collects \_\_\_\_\_

a.2 Yearly amortization collection (since turnover)

Years	Payment Rate	Collection	% Collection	Reasons for non-payment
:		:	:	:
:		:	:	:
:		:	:	:
:		:	:	:

b. Other Fees

Type of Fees	Mode of Payment	Amt/Qty. to be paid	Who Collects	Coll'n. for the last 2 years Year 1 Year 2	% Coll'n. for the last 2 years Year 1 Year 2	Reasons for not Paying
:	:	:		:	:	:
:	:	:		:	:	:
:	:	:		:	:	:
:	:	:		:	:	:
:	:	:		:	:	:

2. Discuss briefly data gathered on association budget for operation & maintenance \_\_\_\_\_  
 \_\_\_\_\_

3. Discuss briefly data gathered on actions taken against farmers non-payment of fees \_\_\_\_\_  
\_\_\_\_\_
4. Discuss briefly data gathered on association misuse of funds \_\_\_\_\_  
\_\_\_\_\_
5. Discuss briefly data gathered on how the association safeguard its funds \_\_\_\_\_  
\_\_\_\_\_

Prepared by :

Name of Profile Writer :

\_\_\_\_\_  
\_\_\_\_\_

Reviewed by :

Name & Position of Reviewer(s)

\_\_\_\_\_  
\_\_\_\_\_

**INITIAL PROJECT FEASIBILITY REPORT \***  
**(NIA-CIP Form I-3C)**

Name of Project/System \_\_\_\_\_  
 Location (Barangay, Town, Province): \_\_\_\_\_  
 Project/System Category (New/REhab./Rehab-Extn.): \_\_\_\_\_  
 Potential Irrigable Area : \_\_\_\_\_

**I. Soil Data (Source : Simplified Soil Texture Determination and Soil Nutrient Analysis)**

- a. Soil Type Area, Has.
- |                 |       |
|-----------------|-------|
| Fine textured   | _____ |
| Medium textured | _____ |
| Coarse textured | _____ |
- b. Salinity Problem
- None \_\_\_\_\_
- With Problem \_\_\_\_\_ Area \_\_\_\_\_ has.

**II. Agro-Economic Data (Source : Agro-Economic Survey)**

- a) Preset Land Use
- |              |                   |
|--------------|-------------------|
| <u>Crops</u> | <u>Area, has.</u> |
| _____        | _____             |
| _____        | _____             |
| _____        | _____             |
- b) Cropping Pattern
- |    |                     |
|----|---------------------|
|    | <u>Months</u>       |
| WS | From _____ to _____ |
| DS | From _____ to _____ |
- c) Average Farm Size \_\_\_\_\_ ha. per farmer

\* To be used as basis in determining projects that will be included for topographic survey.

- d) Accessibility of site  
Accessible \_\_\_\_\_  
Not Accessible \_\_\_\_\_

III. Institutional Data (Source : NIA CIP Form I-3B)

- a. With IA (Yes/No?) \_\_\_\_\_ % of actual IA members \_\_\_\_\_  
With no IA (Yes/No?) \_\_\_\_\_ % of farmers willing to be  
organized as IA \_\_\_\_\_
- b. % of farmers willing to contribute equity \_\_\_\_\_
- c. % of farmers willing to give ROW \_\_\_\_\_
- d. % of famrrers willing to amortize project cost \_\_\_\_\_
- e. Institutional problem that will affect project implmentation.  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

IV. Hydrologic Data (Source : Hydrologic Data Report)

- a. Average Discharge WS \_\_\_\_\_ lps  
DS \_\_\_\_\_ lps
- b. Estimate area that could be irrigated based on available water supply  
WS \_\_\_\_\_ has.  
DW \_\_\_\_\_ has.
- c. Projected cropping intensity \_\_\_\_\_
- d. Problem on quarrying within 1 km upstream and downstream of  
proposed diversion point \_\_\_\_\_ (Yes/No)
- e. Problem on water supply pollution (specify)  
\_\_\_\_\_

Prepared and Submitted by :

\_\_\_\_\_  
Provincial Irrig. Engineer

## HYDROLOGIC DATA REPORT\*

I. Discharge Measurements : Based on a minimum of one-year record

a. Main Source : \_\_\_\_\_ coordinates of point where readings were taken

Wet Season (WS)		:	Dry Season (DS)	
Months	:	Ave. Q lps	:	Months
:	:	:	:	:
:	:	:	:	:
:	:	:	:	:
:	:	:	:	:
WS Average Q:		:	DS Average Q	

b. Secondary Source(s) \*\* : \_\_\_\_\_ coordinates of point where reading were taken

Wet Season (WS)		:	Dry Season (DS)	
Months	:	Ave. Q lps	:	Months
:	:	:	:	:
:	:	:	:	:
:	:	:	:	:
:	:	:	:	:
WS Average Q:		:	DS Average Q	

\* Abstracted from NIA-CIP Form I-3A

\*\* All data on discharge for secondary source(s) if any should be reported.

II. Average Monthly Rainfall, mm: Based on a 5-10 year record of weather station nearest to the project site.

Station : \_\_\_\_\_ Location : \_\_\_\_\_

Month	:	Average Rainfall, mm
January	:	
February	:	
March	:	
April	:	
May	:	
June	:	
July	:	
August	:	
September	:	
October	:	
November	:	
December	:	
Annual rainfall, mm		:

III. Existing Water Rights

Source/Location	:	Q Allocated, Ips
	:	
	:	
	:	
	:	
	:	
	:	
	:	
	:	
	:	
	:	
	:	
	:	