

ANNEX 7

NIS-IA CLASSIFICATION AND NIS-IA SELECTION FOR THE STUDY

**THE STUDY
ON
THE IRRIGATORS ASSOCIATION STRENGTHENING PROJECT
IN
NATIONAL IRRIGATION SYSTEMS**

ANNEX 7

**NIS - IA CLASSIFICATION AND NIS - IA SELECTION FOR
THE STUDY**

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**ANNEX 7 NIS - IA CLASSIFICATION AND NIS - IA SELECTION
FOR THE STUDY**

1. Statistical Analysis for NIS-IA Classification

1.1 Application of Principal Components Analysis (PCA) for NIS-IA Classification

The statistical analysis method is adopted for classifying National Irrigation Systems and Irrigators Associations (NIS-IA) for a reason of retaining objectivity in classification without analysts’ bias. The principal component analysis (PCA), one of multi-variate analysis method, is applied (i) to characterize the NIS-IA based on a number of principal component which are describing the present conditions of NIS-IA using available and relevant numerical data, and (ii) to appropriately group all the NIS-IA through cluster analysis based on the derived principal components.

The procedure of classification of NIS-IA and selection of target NIS-IA is schematically shown in next page.

1.2 Classification of NIS

1.2.1 Data Used

The data used in the PCA is 63 data sets and categorized in the following five fields.

Data Used for Statistical Analysis

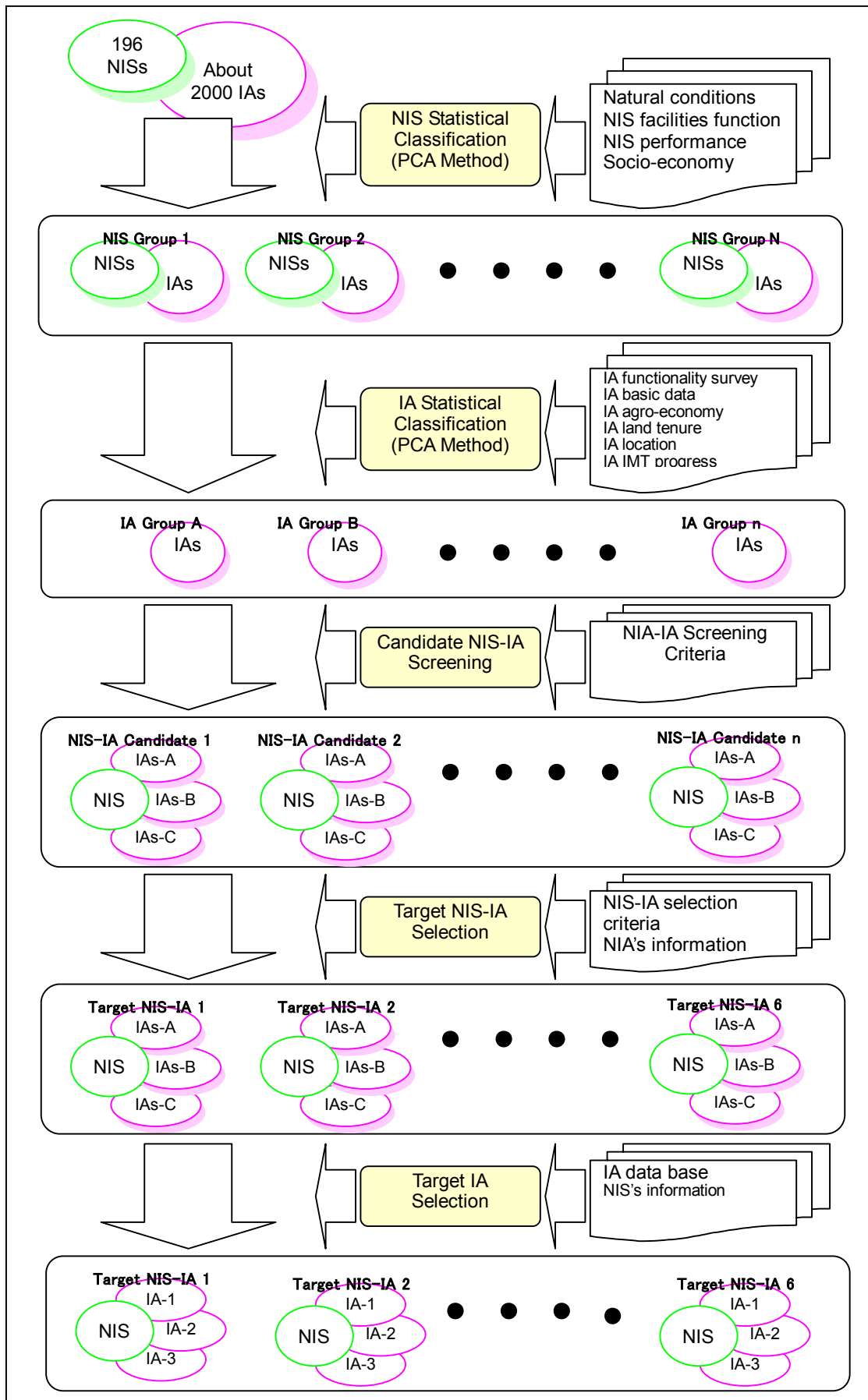
Field	Number of data set	Data source
Climate	3	PAGASA
Water resources	4	NIA, Results of past relevant studies
NIS facilities	21	NIA
NIS performance	16	National Irrigation System Offices (NISO)
Socio-economy	19	NISO, National Statistical Office, DA’s statistics, DAR’s statistics
Total	63	

The indicators of the respective 63 data sets with those data sources are listed in Table 1.1.

1.2.2 Targeting NIS for Analysis

There are 196 NISs at present, however two NISs in the Region 3 named Caulaman and St. Tomas are excluded from the classification analysis because of stoppage of system operation affected by the Mt. Pinatubo eruption. Therefore, the PCA is made to 194 NISs.

Procedure of NIS-IA Classification and Target NIS-IA Selection



1.2.3 Initial PCA and Principal Component Identification

The PCA is conducted by using the multi-variate computational software. As the possible number of PCs should be the total number of variable minus one (1) according to the principle of PCA (in this case 62 PCs can be derived) theoretically, only the meaningful and highly weighted PCs should be extracted. The PCA resulted in extracting thirteen (13) principal components (PCs), that are best explaining the characteristics of all the NISs, are derived consecutively from the highest PC. The “Eigen-values of the top 13 PCs and the contribution rate of information explained (%) are shown below.

Eigen-values and contribution rate of information explained

PC No.	Eigen-value	Information Explained (%)	Rate Cumulative (%)
1	7.25042369	11.51	11.51
2	5.05888155	8.03	19.54
3	4.31767643	6.85	26.39
4	3.30982432	5.25	31.65
5	2.52025401	4.00	35.65
6	2.47628751	3.93	39.58
7	2.37501966	3.77	43.35
8	2.29612915	3.64	46.99
9	2.05180405	3.26	50.25
10	1.86858994	2.97	53.21
11	1.79483665	2.85	56.06
12	1.73021862	2.75	58.81
13	1.59221198	2.53	61.34

Note : PCs until accumulated of 50% to 60% rate are taken in general depending on analyst's interpretation.

A PC is formed by all the variables, all of which are scored with positive and negative values. The meaning what a PC is explaining is interpreted from the combination of variables having both the positively and negatively high scores. The variables of top ten (10) positive and negative scores of the above 13 PCs are shown in Table 1.2. From the combination of these variables, the meaning of each PC can be interpreted and named as shown below.

Naming of PC Interpreted

PC No.	Information explained Cumulative (%)	Naming of PC
1	11.51	Agricultural performance (cropping intensity)
2	19.54	Degree of NIS facilities provided
3	26.39	Degree of water resources available
4	31.65	Agricultural productivity
5	35.65	Functionality of system facilities
6	39.58	Functionality of system facilities
7	43.35	Farmers economic condition
8	46.99	Irrigation water sufficiency
9	50.25	NIS managerial performance
10	53.21	Farmers economic conditions
11	56.06	NIS O&M performance
12	58.81	Functionality of system facilities
13	61.34	Market accessibility

From the interpreted naming of 13 PCs, it can be concluded that all the NISs can be characterized by the following six indices: (i) level of NIS facilities, (ii) agricultural performance; (iii) farmers livelihood; (iv) sufficiency of water resources available; (v) market accessibility; and (vi) NIS O&M performance. Consequently, all the NISs are best classified by a combination of six indices as a result of interpreting 13 PCs derived from the initial PCA. In order to classify the NISs more specifically in the light of six (6) indices extracted from the PCA, the PCA is made for respectively grouped variables, of which data-set are closely relevant to the above mentioned six (6) indices. All the NISs are then to be classified into several groups by the cluster analysis.

1.2.4 PCA for Grouped Variables

All the 63 data-set of variables are grouped into six categories, each of which is relevant to six (6) indices, allowing some overlaps among the categorization. The distribution of data-set of variables to six (6) indices is indicated in Table 1.3, and summarized below.

Distribution of Data-set of Variables

Index	Number of data-set
1) Level of NIS facilities	17
2) Agricultural performance	8
3) Farmers livelihood	18
4) Sufficiency of water resources available	6
5) Market accessibility	6
6) NIS O&M performance	9
Total	64

The PCA for grouped data-set of variables results in extracting ten (10) PCs aggregately in total for six indices, that are best explaining the characteristics of all the NISs in the light of six (6) different characteristics. The highest scored PCs in the respective index categories, the meanings of PCs interpreted and aggregated contribution rate of information explained (%) are shown below.

Result of PCA for grouped data-set of variables

Index	PC	Meaning of PC interpreted	Information explained Cumulative (%)
1) Level of NIS facilities	PC-1	Density of system facilities	45
	PC-2	Functionality of water control structures	
	PC-3	Functionality of canals	
2) Agricultural performance	PC-1	Cropping intensity	44
3) Farmers livelihood	PC-1	Farming efficiency	46
	PC-2	Degree of farm expenditure	
	PC-3	Degree of farm income	
4) Sufficiency of water resources available	PC-1	Sufficiency of water resources available	40
5) Market accessibility	PC-1	Market accessibility	29 (*)
6) NIS O&M performance	PC-1	NIS O&M performance	21 (*)

Note (*) : Although the rate is not sufficiently high, the first PC defines the characteristics of NIS in the light of the index.

1.2.5 Cluster Analysis and NIS Classification

The cluster analysis is made by using the above ten (10) PCs. All the NISs except un-operational two NISs (Caulaman and St. Tomas in the Region 3) are grouped into five (5) Groups based on the scores of ten PCs of each NIS. The result of cluster analysis are tabulated in Table 1.4, followed by the list of NISs that belong to the respective groups (Table 1.5). Interpreting the scale and combination of PC scores, the respective groups of NISs are characterized as shown in the next page and summarized below.

The cluster analysis was subsequently made using the above ten (10) PCs. All 194 NISs were classified into five (5) Groups based on the scores of ten PCs of each NIS. Interpreting the scale and combination of PC scores, the respective groups of NISs are characterized as shown in the succeeding page and summarized below.

Characteristics of Grouped NISs assessed by Statistical Analysis

NIS Group	Characteristics of NIS Assessed
1	Water Constraint Type NIS
2	Potential un-exploited Type NIS
3	Market-away Type NIS
4	Small Scale and Pump Type NIS
5	Urbanization affected Type NIS

The indices, with the exception of the level of NIS facilities, can be indicatively scaled by an element that best represent the data-set used for the PCA as shown below.

Indicative Index Scale

Index	Agri. performance	Farm economy	Water resources	Marketability	O&M Performance
Rep. Element	Cropping intensity (%)	Annual Income (1,000 Peso/H.H.)	Potential annual cropping intensity (%)	Time to terminal market (hour)	ISF collection rate (%)
Group 1	100 (50 ~ 150)	61 (14 ~ 125)	122 (65 ~ 165)	8.2 (1.2 ~ 15.0)	40.3 (8.2 ~ 89)
Group 2	140 (65 ~ 200)	70 (15 ~ 200)	182 (134 ~ 200)	6.7 (1. ~ 17.0)	41.5 (5 ~ 100)
Group 3	165 (95 ~ 200)	43 (11 ~ 121)	197 (162 ~ 200)	7.2 (0.8 ~ 16.0)	45.3 (13 ~ 98)
Group 4	140 (70 ~ 195)	59 (24 ~ 100)	191 (175 ~ 200)	9.9 (2.0 ~ 13.0)	66.4 (41 ~ 100)
Group 5	95 (65 ~ 140)	30 (17 ~ 80)	180 (147 ~ 200)	2.0 (1.2 ~ 3.6)	56.2 (4 ~ 89)
Average	136	51	181	6.5	45.7

Note 1. average /(data range)

2

It should be noted that scale of representative element dose not necessarily match with evaluated index scale (High-Low-Med.) given in next page because evaluated index scale is integrated by multiple data.

An attempt is made to further classify the Group 2 into some sub-groups, because there are no distinct differences in the scale of indices that indicate all as “Medium”. A cluster analysis is made within the Group 2 results in splitting the 73 NIS-IAs into two (2) sub-groups. The differences are seen in the indices of farmers livelihood and market accessibility. The Sub-group 2-1, to which 47 NIS-IAs belong, is characterized as medium level farmer livelihood and lower level market accessibility, while the Sub-group 2-2 having 26 NIS-IAs are characterized as both higher levels, as summarized below.

Characteristics of Group 2 and its Sub-groups

Index	Group 2	Sub-group 2-1	Sub-group 2-2
Level of NIS facilities	High - Med.	High - Med.	High - Med.
Agricultural performance	Med.	Med.	Med.
Farmers livelihood	Med.	Med	High
Sufficiency of water resources available	Med.	Med	Med.
Market accessibility	Med.	Low	High
NIS O&M performance	Med.	Med	Med.

Note : Scaling “High”, “Med.” and “Low” is defined in Table 1.4.

Characteristics Assessment of NIS Groups

NIS Group	Index Evaluated		Characteristics Assessed
	Index	Scale	
1	Level of NIS facilities	Low - Med.	(Water Constraint Type NIS) This is a group of NIS where irrigation water is insufficient. Although the system facilities are relatively provided, O&M performance is in insufficient level. These factor causes low cropping intensity. Farm income is in medium level owing to relatively favorable market accessibility.
	Agricultural performance	Low	
	Farmers livelihood	Med.	
	Sufficiency of water resources available	Low	
	Market accessibility	Med.	
	NIS O&M performance	Low	
2	Level of NIS facilities	High - Med.	(Potential un-exploited NIS Type) This is a group of NIS where majority of the sizes is large to medium scale. This includes all the Districts of UPRIIS and MRIIS. Irrigation water, infrastructure, drainage and marketing facilities are generally not limiting. Cropping intensity is thus in medium level. Market accessibility is fairly favorable, resulting in medium level of farm income. Potential is not fully exploited.
	Agricultural performance	Med.	
	Farmers livelihood	Med.	
	Sufficiency of water resources available	Med.	
	Market accessibility	Med.	
	NIS O&M performance	Med.	
3	Level of NIS facilities	Med.	(Market-away Type NIS) This is a group of NIS where facilities are fairly equipped and supported by ample water resources, resulting in high cropping intensity. The performance of O&M services is generally high. However, the systems are located relatively away from large markets, and this depresses farm incomes.
	Agricultural performance	High	
	Farmers livelihood	Low	
	Sufficiency of water resources available	High	
	Market accessibility	Med.	
	NIS O&M performance	High	
4	Level of NIS facilities	Med. - High	(Small Scale and Pump Type NIS) This is a group of NIS where systems are amply provided with water resources, and high density of system facilities, represented by pump system. However, cropping intensity is in medium level due to insufficient function of canal structure. Marketability is fairly low. NISs in this group are clearly characterized as small-scale systems of less than 1,000 ha, typical of pump irrigation systems. This results in medium farm income.
	Agricultural performance	Med.	
	Farmers livelihood	Med.	
	Sufficiency of water resources available	High	
	Market accessibility	Low	
	NIS O&M performance	High	
5	Level of NIS facilities	Low	(Urbanization affected Type NIS) This is a group of NIS where majority is closely located to large markets, represented by most NISs in Region 4, and agriculture is negatively affected by rapid urbanization and industrialization. Agriculture is constrained by insufficient irrigation water and low level of system facilities coupled with low level of O&M performance, resulting in low cropping intensity.
	Agricultural performance	Low	
	Farmers livelihood	Low	
	Sufficiency of water resources available	Med.	
	Market accessibility	High	
	NIS O&M performance	Low	

Note : Scaling “High”, “Med.” and “Low” is defined in Table 1.4.

The distribution of NISs in the respective five groups are summarized below.

Group Distribution of NISs in number

Geographical Area	Group 1	Group 2	(Group 2-1)	(Group 2-2)	Group 3	Group 4	Group 5	Total
Luzon	14	44	(29)	(15)	34	7	24	123
Visaya	4	9	(8)	(1)	17	1	0	30
Mindanao	3	20	(10)	(10)	15	0	2	41
Total	21	73	(47)	(26)	66	8	26	194
(%)	10.8%	37.7%			34.0%	4.1%	13.4%	100%

Group Distribution of NISs in Service Area (ha)

Geographical Area	Group 1	Group 2	(Group 2-1)	(Group 2-2)	Group 3	Group 4	Group 5	Total
Luzon	45,093	336,393	(198,007)	(138,386)	44,936	3,372	19,034	448,828
Visaya	7,517	37,483	(36,073)	(1,410)	35,285	800	0	81,085
Mindanao	12,907	103,016	(67,006)	(36,010)	37,194	0	2,056	155,173
Total	65,517	476,892	(301,086)	(175,806)	117,415	4,172	21,090	685,086
(%)	9.6%	69.6%			17.1%	0.6%	3.1%	100%
Service area of UPRIS and MRIIS		190,902 (27.9%)	(118,888)	(72,014)				

Group Distribution of NISs in IA Number

Geographical Area	Group 1	Group 2	(Group 2-1)	(Group 2-2)	Group 3	Group 4	Group 5	Total
Luzon	103	1,156	(655)	(501)	155	11	19	1,444
Visaya	15	59	(57)	(2)	93	5	0	172
Mindanao	29	296	(217)	(79)	106	0	7	438
Total	147	1,511	(929)	(582)	354	16	26	2,054
(%)	7.2%	73.5%			17.2%	0.8%	1.3%	100%
IA number in UPRIS and MRIIS		728 (35.4%)	(453)	(275)				

1.3 Classification of IA

1.3.1 Data Used

The data used in the PCA for IAs consists of two categories, (i) results of IA functionality survey conducted by NIA for the three year period of 1999 - 2001 and (ii) results of inventory survey made by the JICA Study Team. The data and indicators adopted for the PCA is listed in Table 1.6 and summarized below.

Data used for PCA of IA

Data Category	Data Field	Nos. of data set	Remarks
IA Functionality Survey by NIA	IA Functionality	1	Overall functionality score
IA Inventory Survey by JICA Study Team	IA profile	7	IA service area, IA membership, Distance from headwork
	Agricultural performance	5	Cropping intensity, Yields
	Land tenure	2	Owner or tenunt
	ISF collection performance	1	Current
	IA financial position	1	Networth
	Farmers livelihood	2	Farm income
	IMT contract	1	
Total		20	

1.3.2 Targeting IAs for Analysis

There are 2,054 IAs at present identified in the Study, however the PCA is made to 1,665 IA. The rest 389 IAs are excluded from the classification analysis because of lack of functionality survey data.

1.3.3 PCA and Principal Component Identification

The PCA is conducted for 19 data set derived from the results of inventory survey made by the JICA Study Team. The IA functionality survey data is not incorporated in the PCA because its overall score is evaluated through integrating various institutional and financial factors having similar nature to those of JICA's inventory survey. Therefore, its overall score is treated as one of the PC score and incorporated in the cluster analysis together with PCs derived from the inventory survey data.

The PCA results in extracting four (4) principal components, that are best explaining the characteristics of IAs. The meaning of each PC can be interpreted and named as shown below.

Naming of PC Interpreted

PC No.	Naming of PC
1	Poverty level
2	Farming scale
3	Degree of IMT development
4	IA location from water source / intake

1.3.4 Cluster Analysis and IA Classification

The cluster analysis is made by using the above four (4) PCs and the overall score

of IA functionality. The analysis gives that 1,665 IAs are statistically grouped into five Groups, i.e. Groups A through E. The following table shows the average IA functionality score and PC scores together with relatively evaluated scales of the respective factors.

Average PC Score by Cluster Analysis

Factor No.	Factor	IA Classification				
		Group A	Group B	Group C	Group D	Group E
-	Overall IA functionality	79.873 (satisfactory)	67.890 (fair)	49.417 (poor)	61.306 (poor)	72.598 (fair)
PC 1	Poverty level	-0.084 (med. pov.)	-0.047 (med. pov.)	0.175 (high pov.)	0.216 (high pov.)	-3.365 (low pov.)
PC 2	Farming scale	-0.251 (small)	-0.029 (med.)	0.368 (large)	0.013 (med)	0.937 (large)
PC 3	Degree of IMT development	-0.193 (med.)	0.024 (med.)	0.277 (low progress)	-1.068 (high progress)	0.958 (low progress)
PC 4	IA location	-0.015 (closer)	-0.064 (med.)	-0.080 (far)	5.649 (very close)	0.602 (closer)

Note : Same scaling (high, med., and low) as the NIS classification is applied.

All the IAs are classified in five groups, however almost all the IAs (99%) are distributed to three (3) groups as shown below. Those distributed to the rest two groups can be excluded from the classification, hence IAs are virtually classified into three (3) groups.

Distribution of Classified IAs

Geographical Area	Group A	Group B	Group C	Group D	Group E	Total
Luzon	563	240	347	9	1	1,160
Visaya	24	25	79	3	0	131
Mindanao	186	68	115	1	4	374
Total	773	333	541	13	5	1,665
(%)	46.4%	20.0%	32.5%	0.8%	0.3%	100%

Interpreting the scale and combination of PC scores as mentioned above, the respective groups of IAs are characterized as shown below.

Characteristics Assessment of NIS Groups

IA Group	Index Evaluated		Level of Farmers Livelihood and IA Performance	
	Index	Scale		
A	Overall score of IA functionality	Med. - High	Farmers livelihood : Relatively higher IA performance : Relatively higher IA location : Upstream	
	Poverty level	Low		
	Farming scale	Low		
	Degree of IMT development	High		
	IA location from water source / intake	Closer		
B	Overall score of IA functionality	Med - Low	Farmers livelihood : Relatively lower IA performance : Relatively lower IA location : Mid stream	
	Poverty level	Med.		
	Farming scale	Med.		
	Degree of IMT development	Low		
	IA location from water source / intake	Med.		
C	Overall score of IA functionality	Low	Farmers livelihood : Low IA performance : Low IA location : Downstream	
	Poverty level	High		
	Farming scale	High		
	Degree of IMT development	High		
	IA location from water source / intake	Far		

The co-relation between IA functionality score (“outstanding” through “poor”) and IA Groups (A to C) by NIS group is assessed as tabulated below.

Co-relation between IA functionality and IA Group

Unit : % for IA number

NIS	IA	Outstanding	Very satisfactory	Satisfactory	Fair	Poor
NIS Group 1	A	0.9%	4.4%	27.4%	16.8%	3.5%
	B				22.1%	1.8%
	C				2.7%	20.4%
NIS Group 2	A	0.4%	7.2%	31.5%	8.1%	0.3%
	B				17.6%	3.2%
	C			0.1%	0.9%	30.7%
NIS Group 3	A	1.4%	7.7%	25.1%	8.4%	1.7%
	B				15.3%	1.7%
	C				0.7%	38.0%
Total	A	0.6%	7.1%	30.0%	8.8%	0.8%
	B				17.5%	2.8%
	C			0.1%	1.0%	31.3%

2. Selection of Target NIS-IA

2.1 Integrated Classification of NIA and IA

Three (3) groups (Groups 1, 2 and 3) of NIS are taken for consideration of target NISs selection because of unique nature of Groups 4 and 5, while IAs are grouped virtually into three (3) groups. Both the classifications are integrated into the following grouping:

Integrated Grouping of NIA and IA

NIS Group	Geological Area	IA Group			Total
		Group A	Group B	Group C	
Group 1	Luzon	44	28	15	87
	Visaya	2	0	7	9
	Mindanao	16	4	5	25
	Sub-total	62	32	27	121
Group 2	Luzon	471	182	272	925
	Visaya	11	14	24	49
	Mindanao	90	49	85	224
	Sub-total	572	245	381	1,198
Group 3	Luzon	39	23	50	112
	Visaya	10	11	43	64
	Mindanao	78	15	18	111
	Sub-total	127	49	111	287
Total		761	326	519	1,606

2.2 NIS-IA Candidates Screening

All the NIS-IAs are to be screened for selection of target NIS-IAs where the detailed field survey and study will be intensively conducted on a participatory basis in the Phase 2 period of the Study. The number of target NIS-IA is appropriated to be six. The basic concepts in selection of target NIS-IA are that:

- (1) target NISs represent the majority of NIS;
- (2) all IAs or selected IAs in a target NIS represent the majority of IAs; and
- (3) Selected NIS-IA has higher potential for improvement in terms of IMT acceleration and enhancement of farmers livelihood through strengthening NIS-IA system and institutional management

Consequently, it is expected that the outcomes obtained from the detailed field survey and study for the target NIS-IAs are able to be universally adopted for the NIS-IAs strengthening over the Philippines. The result of NIS-IA classification gives the basic information for screening NIS-IA candidates, and the following five criteria are adopted for squeezing right candidates from classified NIS-IAs.

- (1) NISs being and recently having been in development and/or rehabilitation projects involving institutional strengthening assisted by international assisting / funding agencies are omitted in principle;
- (2) Non and less responding NISs in submitting results of IA functionality survey

- with less than 50% of IAs are excluded;
- (3) NISs having service area below 1,000 ha;
- (4) NISs located in unfavorable area in terms of security and accessibility are excluded;
- (5) IAs classified in three Groups of A, B and C are uniformly distributed in target NIS.

With the above criteria, all the classified NIS are screened as shown in Table 2.1. Its result shows the squeezing of 27 candidates as summarized in the next page.

2.3 Selection of Target NIS-IAs

From the 27 candidates NIS-IAs, six (6) target NIS-IAs are selected through the following process and finally consultation with NIA.

- (1) NISs are geographically selected at a rate of the number of NIS located in three geographical regions (Luzon, Visaya and Mindanao), and also selected proportionally from three Groups of NIS (Groups 1, 2 and 3) as much as possible. The number of NIS allocated in areas and groups are indicatively given below.

Indicative Number of NIS Allocation

Area - based Allocation		Group - based Allocation	
Luzon	2 to 3	Group 1	1
Visayas	1	Group 2	3 to 4
Mindanao	2 to 3	Group 3	1 to 2

- (2) Two (2) or more target NISs are not selected from one (1) Region.
- (3) NISs having a well balanced distribution of both the IA grouping (A to C) and the IA functionality groups (“outstanding” through “poor”) are preferably selected among 27 candidate NIS-IAs (see Table 2.1).
- (4) A relatively large irrigation system is selected as a representative model of large scale NISs;
- (5) A NIS involving large IA or IAs with an area more than 1,000 ha is selected for assessing possibility of full turnover of NIS to IAs ranging from less than 1,000 ha to 3,000 ha;
- (6) Various scale of IA service area are uniformly distributed among selected NIS; and
- (7) NIA’s recommendation is taken into consideration in the light of NIA’s experience and accumulated information obtained through institutional development activities, in particular adequacy as representative both in current and future conditions.

Candidates of Target NISs

Geo. Area	NIS Group-1	NIS Group-2	NIS Group-3
Luzon	<p>(1) Agno (R-1) (10,093 ha/20 IAs)</p> <p>(2) San Fabian (R-1) (2,288 ha/7 IAs)</p> <p>(3) Sinocalan (R-1) (2,570 ha/7 IAs)</p>	<p>(4) Upper Chico (CAR) (17,551ha/40 IAs)</p> <p>(5) Apayao-Abulug (R-2) (10,048 ha/35 IAs)</p> <p>(6) Angat (R-3) (29,374 ha/89 IAs)</p> <p>(7) Gumain (R-3) (2,209 ha/4 IAs)</p> <p>(8) Massim (R-3) (2,111 ha/6 IAs)</p> <p>(9) St. Cruz (R-4) (3,100 ha/4 IAs)</p> <p>(10) Tigman-Hinagyanan (R-5) (2,244 ha/7 IAs)</p>	<p>(11) Laoag Vintar (R-1) (2,377 ha/5 IAs)</p> <p>(12) Bayto (R-3) (1,148 ha/5 IAs)</p>
Visayas		<p>(13) Aganan (R-6) (4,863 ha/8 IAs)</p> <p>(14) Bago (R-6) (12,700 ha/17 IAs)</p> <p>(15) Sibalom-San Jose (R-6) (5,065 ha/6 IAs)</p> <p>(16) Bohol (R-7) (4,973 ha/13 IAs)</p>	<p>(17) Jalaur-Extension (R-6) (2,616 ha/6 IAs)</p>
Mindanao	<p>(18) Manulali (R-10) (4,395 ha/7 IAs)</p> <p>(19) Padada (R-11) (3,512 ha/6 IAs)</p>	<p>(20) Labangan (R-9) (3,195 ha/2 IAs)</p> <p>(21) Pulangui (R-10) (11,415 ha/17 IAs)</p> <p>(22) Saug (R-11) (3,900 ha/16 IAs)</p> <p>(23) Tago (R-13) (3,716 ha/22 IAs)</p>	<p>(24) Batutu (R-11) (3,269 ha/14 IAs)</p> <p>(25) Kipaliku (R-11) (2,317 ha/3 IAs)</p> <p>(26) Mal (R-11) (2,613 ha/15 IAs)</p> <p>(27) Simulao (R-13) (2,540 ha/16 IAs)</p>

The following matrix presents the selection process of Target NIS-IAs on the basis of the above selection criteria.

Selection Process of Target NIS-IAs

	Luzon			Visayas			Mindanao		
	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3
IA well balanced distribution	San Fabian (R-1)	Gumain (R-3)			Aganan (R-6) Bago (R-6) Bohol (R-7)		Padada (R-11)	Pulangui (R-10) Saug (R-11)	Mal (R-11)
Large Scale NIS		Angat (R-3)							
Large Scale IA								Labangan (R-9)	

From the above selection matrix, the six (6) Target NIS-IAs are selected in the following manner:

- (1) Two (2) NISs of Angat in Region 1 and Labangan in Region 9 are selected following selection criteria;
- (2) From Luzon area, Gumain in Region 3 is omitted, then San Fabian in Region 1 is selected;
- (3) From Group 3, Mal in Region 11 is selected;
- (4) From Mindanao, both Padada and Saug in Region 11 are omitted, then Pulangui in Region 10 is selected; and
- (5) From Visayas, Bago in Region 6 is selected among alternative three (3) NISs based on discussion with NIA.

From the above discussion, the following NIS-IAs are finally selected as the target ones for Phase 2 field survey and study:

Selected of Target NIS-IAs

Geographical Area	Region	NIS Name	NIS Group	Service Area (ha)	Nos. of IA	Aver. IA Area (ha)/(range)	Aver. IA Member (range)
Luzon	1	San Fabian	Group 1	2,288	7	327 (189-540)	262 (120-430)
	3	Angat	Group 2 (Sub Group 2-2)	29,374	89	330 (30-1,400)	190 (30-1,200)
Visaya	6	Bago	Group 2 (Sub Group 2-1)	12,700	17	747 (106-460)	243 (310-920)
Mindanao	9	Lagangan	Group 2 (Sub Group 2-1)	3,195	2	1,597 (1,563-1,632)	769 (768-770)
	10	Pulangui	Group 2 (Sub Group 2-1)	11,415	17	671 (59-1,054)	394 (58-669)
	11	Mal	Group 3	2,613	15	522 (87-327)	107 (70-175)

2.4 Selection of Target IAs

The target IAs are selected from the respective six (6) NISs are selected. The number of target IAs is set at three (3) in each target NIS, consequently 18 target IAs are to be selected. The list of IAs belonging to six (6) NISs is shown in Table 2.2 together with all the IAs' data and information collected by the inventory survey. The target IAs are selected by the following process and criteria:

- (1) A lateral (or secondary) canal, for which the management be transferred to IAs/FIA under IMT, is selected in each NIS on the basis of system layout maps including IA boundaries, data and information of IAs inventory survey (Table 2.2) and suggestion of NIS office particularly in the light of range of issues and potentiality of future improvement;
- (2) Three (3) IAs are selected from those located in upstream, mid-stream and downstream, respectively, in the service area commanded by the selected lateral canal;
- (3) IA that has larger number of IA member, appropriately not less than 100, is selected; and
- (4) IA in which the types of land tenure are uniformly distributed is selected in principle.

The Study Team conducted site reconnaissance in two (2) NISs; Angat (MRIIS) and Bago, for confirming the selection of target IAs. In the large scale Angat commanding 29,374 ha, in particular, the Lateral D is selected for a reason that NIA designated it as the pilot area of IMT as a whole.

The results of IAs selection is tabulated below.

Selected Target IAs

(1) Name of NIS : San Fabian (R-1) / Name of Lateral : MC-J								
Locat.	IA Name	Service Area (ha)	IA Member	Land tenure		IMT	IA Classification	
				Owner	Tenant, etc.		Group	Func.
U/S	Scientific Farming	380	418	13%	87%	Type I&II	C	P
M/S	BGM	200	120	20%	80%	Type I	A	S
D/S	San Juan Babasit	274	150	0%	100%	Type I	B	F
(2) Name of NIS : Angat (R-3) / Name of Lateral : Lateral D								
Locat.	IA Name	Service Area (ha)	IA Member	Land tenure		IMT	IA Classification	
				Owner	Tenant, etc.		Group	Func.
U/S	Picaba	518	354	50%	50%	Type I&II	A	S
M/S	Josephian	369	160	40%	60%	Type I&II	A	S
D/S	Balucoc	506	213	40%	60%	Type I&II	B	S
(3) Name of NIS : Bago (R-6) / Name of Lateral : Lateral E								
Locat.	IA Name	Service Area (ha)	IA Member	Land tenure		IMT	IA Classification	
				Owner	Tenant, etc.		Group	Func.
U/S	Atidu	590	108	51%	49%	Type I&II	C	P
M/S	Amana	720	243	54%	46%	Type I&II	A	P
D/S	Bunsabala	914	460	63%	37%	Type I&II	B	P
(4) Name of NIS : Labangan (R-9) / Name of Lateral : MC and Lateral A								
Locat.	IA Name	Service Area (ha)	IA Member	Land tenure		IMT	IA Classification	
				Owner	Tenant, etc.		Group	Func.
U/S	Munchrist	1,632	770	43%	57%	No Cont.	B	P
D/S	Sandata	1,563	768	47%	53%	No Cont.	A	P
(5) Name of NIS : Pulangui (R-10) / Name of Lateral : Lateral G								
Locat.	IA Name	Service Area (ha)	IA Member	Land tenure		IMT	IA Classification	
				Owner	Tenant, etc.		Group	Func.
U/S	Paradise G5 & G6	443	636	63%	37%	Type I&II	C	P
M/S	Kahugpungan	542	793	60%	40%	Type I&II	C	P
D/S	Mad	557	898	60%	40%	Type I&II	A	P
(6) Name of NIS : Mal (R-11) / Name of Lateral : MC Right								
Locat.	IA Name	Service Area (ha)	IA Member	Land tenure		IMT	IA Classification	
				Owner	Tenant, etc.		Group	Func.
U/S	Weslasufia	161	112	70%	30%	Type I&II	A	F
M/S	Labakafia	308	102	70%	30%	Type I&II	A	F
D/S	Malkaira	89	175	30%	70%	Type I&II	A	VS

Table 1.1 List of Data and Indicators Used for Statistical Analysis of NIS

No.	Indicators	Unit	No.	Indicators	Unit
	1. Climate (normal year)			Productivity	
101	Annual rainfall	mm/year	407	Paddy, Wet season	ton/ha
102	% of dry season rainfall(4months) versus annual rainfall	%	408	Paddy, Dry season	ton/ha
103	%of damaged area by typhoon out of service area	%		O&M of NISO	
	2. Water Resource		409	Annual O&M expenditure	Peso/ha
201	%of Irrigable area byavailable water resources to irrigated area (wet season)	%	410	Ratio of income and expenditure	Ratio
202	%of Irrigable area byavailable water resources to irrigated area (dry season)	%	411	Number of NIS staff per service area	nos./1 000ha
203	%of Irrigable area byavailable water resources to irrigated area (wet and dry season)	%		NIS office facilities/equipment	
204	Ratio of catchment area to the service area	Ratio	412	Computer	nos./1 000ha
	3. NIS Facilities(Present)		413	Transportation equipment	nos./1 000ha
301	Service area	ha		IA profile	
	Density of system facilities		414	Average service area per IA	ha
302	Main canal, total	m/ha	415	Average member per IA	nos.
303	Lateral & sublateral canals, total	m/ha	416	Ratio of IA area to service area	Ratio
304	Lined main canal	m/ha		5. Socio-Economy	
305	Lined lateral+ sublateral canals	m/ha	501	Number of household per service area	nos./ha
306	Drainage canal (main + secondary)	m/ha	502	Number of population per service area	nos./ha
307	Control structure (main canal)	nos./ha		Land holding and tenure	
308	Control structure (lateral+sublateral canal)	nos./ha	503	% of IA owner cultivators to total IA members	%
309	Other conveyance structures (main canal)	nos./ha	504	Average operating size of farm land per IA member	ha/member
310	Other conveyance structures (lateral+sublateral canal)	nos./ha	505	% of IA members operating less than 2 ha of land	%
311	Service road, total	m/ha	506	% of IA members operating 2 to 5 ha of land	%
312	Access road, total	m/ha	507	% of IA members operating more than 5 ha of land	%
313	No. of O&M equipment per service area	nos./ha		Farm gate price of paddy	
	Facility functionality		508	Monthly lowest (Peak harvesting season)	Peso/kg
314	Main canal	Ratio(km/km)	509	Monthly highest (Peak harvesting season)	Peso/kg
315	Lateral & sublateral canals	Ratio(km/km)		Production cost	
316	Drainage canal	Ratio(km/km)	510	Paddy wet season	Peso/ha
317	Structures (main canal)	Ratio(nos./nos.)	511	Paddy dry season	Peso/ha
318	Structures (lateral+sublateral canals)	Ratio(nos./nos.)		Economy	
319	Service road	Ratio(km/km)		Average farmers' income	
320	Access road	Ratio(km/km)	512	Farm income	Peso/house
321	O&M equipment	Ratio(nos./nos.)	513	Non-farm income	Peso/house
	4. NIS Performance(Normal year)		514	Total income	Peso/house
401	History of NIS since first operation	Year	515	Poverty incidence in the concerned province	%
	Cropping intensity			Marketing	
402	Wet season	%	516	Paddy/rice self-sufficiency at province location NIS	%
403	Dry season	%	517	Ratio of population at nearest provincial capital to population in NIS	No.
404	Annual	%	518	Road density	m/km ²
405	Water resources utilization	%	519	Required time for transportation to the terminal market	hours
406	ISF collection efficiency(Annual)	%			

Table 1.2 Variables and PC Scores

PC 1

Positive Side			Negative Side		
No.	Variable	Score	No.	Variable	Score
404	Cropping intensity(annual)	0.7399	506	% of farmers operating 2 to 5 ha of land	-0.5888
403	Cropping intensity(dry)	0.7379	401	History of NIS since first operation	-0.5618
416	Ratio of IA's area to service area	0.7368	508	Farm gate price of paddy(monthly lowest)	-0.4725
406	% of water resource utilization(Annual)	0.6585	504	Average operating size of farm land per farming household(ha)	-0.4344
402	Cropping intensity(wet)	0.6558	518	Road density	-0.3778
505	% of farmers operating less than 2 ha of land	0.5619	501	No. of household per ha of irrigation service area	-0.3292
503	% of owner cultivations to total farming household	0.4991	510	Production cost(paddy, wet)	-0.2851
509	Farm gate price of paddy(monthly highest)	0.4785	315	Functionality of lateral & sub-lat.	-0.2846
519	Required time for transportation to the terminal market	0.4664	314	Functionality of main canal length	-0.223
515	Poverty incidence in the concerned province	0.4406	502	No. of population per ha of irrigation service area	-0.2153

PC 2

Positive Side			Negative Side		
No.	Variable	Score	No.	Variable	Score
302	Density of main canal, total	0.686	301	Service Area	-0.5251
307	Density of control structure (Main)	0.5856	516	Paddy/rice self sufficiency in the concerned province	-0.4642
203	Irrigable area by available water Resources(Annual)	0.5216	509	Farm gate price of paddy(monthly highest)	-0.4105
202	Irrigable area by available water Resources(Dry)	0.4913	514	Total income	-0.3807
304	Density of lined main canal	0.481	513	Non-farm income	-0.3199
303	Density of lateral canal (+sub), total	0.4325	512	Farm income	-0.3151
501	No. of household per ha of irrigation service area	0.4104	414	Average service area per IA	-0.2948
309	Density of conveyance structures (Main)	0.4028	511	Production cost(paddy, dry)	-0.2872
308	Density of control structure (LC+SLC)	0.4023	510	Production cost(paddy, wet)	-0.2762
502	No. of population per ha of irrigation service area	0.3983	321	Functionality of O&M equipment	-0.2353

PC 3

Positive Side			Negative Side		
No.	Variable	Score	No.	Variable	Score
309	Density of conveyance structures (Main)	0.5208	102	% of dry season rainfall versus annual rainfall (rarily dry 4	-0.5768
511	Production cost(paddy, dry)	0.4071	404	Cropping intensity(annual)	-0.4534
518	Road density	0.4026	403	Cropping intensity(dry)	-0.4378
514	Total income	0.3916	402	Cropping intensity(wet)	-0.4181
512	Farm income	0.3735	406	% of water resource utilization(Annual)	-0.332
307	Density of control structure (Main)	0.3668	506	% of farmers operating 2 to 5 ha of land	-0.3257
317	Functionality of canal structures(main)	0.3665	202	Irrigable area by available water Resources(Dry)	-0.3093
510	Production cost(paddy, wet)	0.3607	203	Irrigable area by available water Resources(Annual)	-0.2667
505	% of farmers operating less than 2 ha of land	0.3466	507	% of farmers operating more than 5 ha of land	-0.265
316	Functionality of Drainage Canal Rehabil. / Improve.	0.3189	313	Existing O&M equipment	-0.2497

PC 4

Positive Side			Negative Side		
No.	Variable	Score	No.	Variable	Score
408	Productivity of paddy(dry)	0.487	101	Annual rainfall(mm/year)	-0.452
405	ISF collection efficiency (average)	0.466	511	Production cost(paddy, dry)	-0.4354
407	Productivity of paddy(wet)	0.3916	515	Poverty incidence in the concerned province	-0.3842
409	Annual O&M expenditure	0.3876	510	Production cost(paddy, wet)	-0.3786
202	Irrigable area by available water Resources(Dry)	0.3365	310	Density of conveyance structures (LC+SLC)	-0.3648
203	Irrigable area by available water Resources(Annual)	0.3126	303	Density of lateral canal (+sub), total	-0.3494
301	Service Area	0.2994	308	Density of control structure (LC+SLC)	-0.3392
316	Functionality of Drainage Canal Rehabil. / Improve.	0.2791	517	Ratio of population at provincial capital to population at NIS	-0.3352
514	Total income	0.2717	311	Density of service road, total	-0.2803
304	Density of lined main canal	0.2663	103	% of damaged area by typhoon out of service area	-0.2512

PC 5

Positive Side			Negative Side		
No.	Variable	Score	No.	Variable	Score
315	Functionality of lateral & sub-lat.	0.4043	401	History of NIS since first operation	-0.3465
314	Functionality of main canal length	0.3987	514	Total income	-0.3401
412	NIS office facilities(computer)	0.3982	307	Density of control structure (Main)	-0.3085
204	Ratio of catchment area to the service area	0.3772	518	Road density	-0.2984
304	Density of lined main canal	0.361	512	Farm income	-0.2847
305	Density of lined lateral canal (+sub)	0.3524	513	Non-farm income	-0.2794
413	Transportation equipment	0.2904	402	Cropping intensity(wet)	-0.2523
318	Functionality of canal structures (LC+SLC)	0.2685	501	No. of household per ha of irrigation service area	-0.2351
313	Existing O&M equipment	0.2486	502	No. of population per ha of irrigation service area	-0.2157
317	Functionality of canal structures(main)	0.2383	404	Cropping intensity(annual)	-0.1836

PC 6

Positive Side			Negative Side		
No.	Variable	Score	No.	Variable	Score
319	Functionality of service road	0.5103	415	Average member per IA	-0.3445
314	Functionality of main canal length	0.4446	414	Average service area per IA	-0.3141
315	Functionality of lateral & sub-lat.	0.4355	204	Ratio of catchment area to the service area	-0.3067
406	% of water resource utilization(Annual)	0.3957	509	Farm gate price of paddy(monthly highest)	-0.2611
402	Cropping intensity(wet)	0.3591	516	Paddy/rice self sufficiency in the concerned province	-0.2495
404	Cropping intensity(annual)	0.3319	507	% of farmers operating more than 5 ha of land	-0.2219
316	Functionality of Drainage Canal Rehabil. / Improve.	0.3096	405	ISF collection efficiency (average)	-0.1805
403	Cropping intensity(dry)	0.274	519	Required time for transportation to the terminal market	-0.171
320	Functionality of access road	0.2682	309	Density of conveyance structures (Main)	-0.1682
518	Road density	0.2319	307	Density of control structure (Main)	-0.137

PC 7

Positive Side			Negative Side		
No.	Variable	Score	No.	Variable	Score
507	% of farmers operating more than 5 ha of land	0.4342	505	% of farmers operating less than 2 ha of land	-0.464
506	% of farmers operating 2 to 5 ha of land	0.4198	101	Annual rainfall(mm/year)	-0.2829
313	Existing O&M equipment	0.3899	201	Irrigable area by available water Resources(Wet)	-0.2633
410	Ration of income and expenditure	0.3679	203	Irrigable area by available water Resources(Annual)	-0.2612
514	Total income	0.3503	202	Irrigable area by available water Resources(Dry)	-0.2045
512	Farm income	0.313	503	% of owner cultivations to total farming household	-0.17
311	Density of service road, total	0.2701	315	Functionality of lateral & sub-lat.	-0.1658
513	Non-farm income	0.2481	314	Functionality of main canal length	-0.1653
504	Average operating size of farm land per farming household(ha)	0.2335	519	Required time for transportation to the terminal market	-0.1614
316	Functionality of Drainage Canal Rehabil. / Improve.	0.2271	509	Farm gate price of paddy(monthly highest)	-0.1613

PC 8

Positive Side			Negative Side		
No.	Variable	Score	No.	Variable	Score
201	Irrigable area by available water Resources(Wet)	0.5384	502	No. of population per ha of irrigation service area	-0.368
203	Irrigable area by available water Resources(Annual)	0.4529	501	No. of household per ha of irrigation service area	-0.3424
202	Irrigable area by available water Resources(Dry)	0.32	415	Average member per IA	-0.3095
516	Paddy/rice self sufficiency in the concerned province	0.3046	505	% of farmers operating less than 2 ha of land	-0.2956
506	% of farmers operating 2 to 5 ha of land	0.2904	515	Poverty incidence in the concerned province	-0.2767
301	Service Area	0.2731	414	Average service area per IA	-0.2428
317	Functionality of canal structures(main)	0.2725	512	Farm income	-0.2423
517	Ratio of population at provincial capital to population at NIS	0.2598	101	Annual rainfall(mm/year)	-0.2062
318	Functionality of canal structures (LC+SLC)	0.2397	319	Functionality of service road	-0.1946
310	Density of conveyance structures (LC+SLC)	0.217	413	Transportation equipment	-0.185

PC 9

Positive Side			Negative Side		
No.	Variable	Score	No.	Variable	Score
409	Annual O&M expenditure	0.4121	320	Functionality of access road	-0.5431
321	Functionality of O&M equipment	0.4093	312	Density of access road, total	-0.5075
405	ISF collection efficiency (average)	0.3745	319	Functionality of service road	-0.2468
408	Productivity of paddy(dry)	0.3322	318	Functionality of canal structures (LC+SLC)	-0.2458
305	Density of lined lateral canal (+sub)	0.2286	416	Ratio of IA's area to service area	-0.2093
308	Density of control structure (LC+SLC)	0.2067	413	Transportation equipment	-0.1871
519	Required time for transportation to the terminal market	0.2058	411	No. of NIS staff per service area	-0.1862
402	Cropping intensity(wet)	0.2	103	% of damaged area by typhoon out of service area	-0.1638
401	History of NIS since first operation	0.1963	505	% of farmers operating less than 2 ha of land	-0.1607
406	% of water resource utilization(Annual)	0.1814	306	Density of drainage canal (main+secondary)	-0.1453

PC 10

Positive Side			Negative Side		
No.	Variable	Score	No.	Variable	Score
320	Functionality of access road	0.45	412	NIS office facilities(computer)	-0.5028
415	Average member per IA	0.2694	306	Density of drainage canal (main+secondary)	-0.3633
510	Production cost(paddy, wet)	0.2502	413	Transportation equipment	-0.3403
316	Functionality of Drainage Canal Rehabil. / Improve.	0.2496	508	Farm gate price of paddy(monthly lowest)	-0.3323
312	Density of access road, total	0.2346	513	Non-farm income	-0.3015
506	% of farmers operating 2 to 5 ha of land	0.2328	514	Total income	-0.2559
414	Average service area per IA	0.2322	505	% of farmers operating less than 2 ha of land	-0.2282
319	Functionality of service road	0.2249	301	Service Area	-0.1984
511	Production cost(paddy, dry)	0.1948	512	Farm income	-0.1685
515	Poverty incidence in the concerned province	0.1555	308	Density of control structure (LC+SLC)	-0.1619

PC 11

Positive Side			Negative Side		
No.	Variable	Score	No.	Variable	Score
321	Functionality of O&M equipment	0.4413	312	Density of access road, total	-0.3441
203	Irrigable area by available water Resources(Annual)	0.3132	408	Productivity of paddy(dry)	-0.3423
513	Non-farm income	0.303	413	Transportation equipment	-0.2916
202	Irrigable area by available water Resources(Dry)	0.2978	517	Ratio of population at provincial capital to population at NIS	-0.2825
311	Density of service road, total	0.2756	316	Functionality of Drainage Canal Rehabil. / Improve.	-0.2187
410	Ration of income and expenditure	0.2707	411	No. of NIS staff per service area	-0.1971
318	Functionality of canal structures (LC+SLC)	0.261	507	% of farmers operating more than 5 ha of land	-0.1815
319	Functionality of service road	0.2296	406	% of water resource utilization(Annual)	-0.1627
201	Irrigable area by available water Resources(Wet)	0.195	409	Annual O&M expenditure	-0.1616
510	Production cost(paddy, wet)	0.1908	310	Density of conveyance structures (LC+SLC)	-0.1384

PC 12

Positive Side			Negative Side		
No.	Variable	Score	No.	Variable	Score
306	Density of drainage canal (main+secondary)	0.4456	318	Functionality of canal structures (LC+SLC)	-0.3959
313	Existing O&M equipment	0.3155	317	Functionality of canal structures(main)	-0.3754
320	Functionality of access road	0.2363	502	No. of population per ha of irrigation service area	-0.3706
302	Density of main canal, total	0.2283	501	No. of household per ha of irrigation service area	-0.3563
319	Functionality of service road	0.2174	308	Density of control structure (LC+SLC)	-0.2524
410	Ration of income and expenditure	0.2151	102	% of dry season rainfall versus annual rainfall (ralarively dry 4	-0.2293
201	Irrigable area by available water Resources(Wet)	0.2125	310	Density of conveyance structures (LC+SLC)	-0.2246
101	Annual rainfall(mm/year)	0.1948	204	Ratio of catchment area to the service area	-0.1652
304	Density of lined main canal	0.1832	315	Functionality of lateral & sub-lat.	-0.1618
408	Productivity of paddy(dry)	0.1757	314	Functionality of main canal length	-0.1556

PC 13

Positive Side			Negative Side		
No.	Variable	Score	No.	Variable	Score
411	No. of NIS staff per service area	0.3678	308	Density of control structure (LC+SLC)	-0.2858
511	Production cost(paddy, dry)	0.3591	310	Density of conveyance structures (LC+SLC)	-0.2803
517	Ratio of population at provincial capital to population at NIS	0.3193	410	Ration of income and expenditure	-0.2447
510	Production cost(paddy, wet)	0.3031	318	Functionality of canal structures (LC+SLC)	-0.2401
102	% of dry season rainfall versus annual rainfall (ralarively dry 4	0.2958	103	% of damaged area by typhoon out of service area	-0.2233
302	Density of main canal, total	0.274	305	Density of lined lateral canal (+sub)	-0.1945
321	Functionality of O&M equipment	0.2178	319	Functionality of service road	-0.1885
513	Non-farm income	0.2034	317	Functionality of canal structures(main)	-0.1757
307	Density of control structure (Main)	0.193	415	Average member per IA	-0.1615
315	Functionality of lateral & sub-lat.	0.1898	414	Average service area per IA	-0.1576

Table 1.3 List of Data Used for Grouped PCA (1/2)

No.	Indicators	Unit	NIS Facility	Cropping Intensity	Farm economy	Irrig. Water availability	Marketability	O&M Performance
	1. Climate (normal year)							
101	Annual rainfall	mm/year				0		
102	% of dry season rainfall(4 months) versus annual rainfall	%		0		0		
103	% of damaged area by typhoon out of service area	%		0				
	% of damaged area by drought out of service area	%						
	2. Water Resource							
201	% of Irrigable area by available water resources to irrigated area (wet season)	%		0		0		
202	% of Irrigable area by available water resources to irrigated area (dry season)	%		0		0		
203	% of Irrigable area by available water resources to irrigated area (wet and dry season)	%		0		0		
204	Ratio of catchment area to the service area	Ratio				0		
	3. NIS Facilities(Present)							
301	Service area	ha	0					
	Density of system facilities							
302	Main canal, total	m/ha	0					
303	Lateral & sublateral canals, total	m/ha	0					
304	Lined main canal	m/ha	0					
305	Lined lateral + sublateral canals	m/ha	0					
306	Drainage canal (main + secondary)	m/ha	0					
307	Control structure (main canal)	nos./ha	0					
308	Control structure (lateral+sublateral canal)	nos./ha	0					
309	Other conveyance structures (main canal)	nos./ha	0					
310	Other conveyance structures (lateral+sublateral ca	nos./ha	0					
311	Service road, total	m/ha					0	
312	Access road, total	m/ha					0	
313	No. of O&M equipment per service area	nos./ha						0
	Facility functionality							
314	Main canal	Ratio(km/km)	0					
315	Lateral & sublateral canals	Ratio(km/km)	0					
316	Drainage canal	Ratio(km/km)	0					
317	Structures (main canal)	Ratio(nos./nos.)	0					
318	Structures (lateral+sublateral canals)	Ratio(nos./nos.)	0					
319	Service road	Ratio(km/km)					0	
320	Access road	Ratio(km/km)					0	
321	O&M equipment	Ratio(nos./nos.)						0
	4. NIS Performance(Normal year)							
401	History of NIS since first operation	Year	0					
	Cropping intensity							
402	Wet season	%		0				
403	Dry season	%		0				
404	Annual	%		0				
405	Water resources utilization	%	0					
406	ISF collection efficiency(Annual)	%						0
	Productivity							
407	Paddy, Wet season	ton/ha			0			
408	Paddy, Dry season	ton/ha			0			
	O&M of NISO							
409	Annual O&M expenditure	Peso/ha						0
410	Ratio of income and expenditure	Ratio						0
411	Number of NIS staff per service area	nos./1000ha						0
	NIS office facilities/equipment							
412	Computer	nos./1000ha						0
413	Trasportation equipment	nos./1000ha						0
	IA profile							
414	Average service area per IA	ha						
415	Average member per IA	nos.						
416	Ratio of IA area to service area	Ratio						0

Table 1.3 List of Data Used for Grouped PCA (2/2)

IA functionality(average scoring among IA per NIS)								
	Overall score	Score						
	O&M	Score						
	Organazation	Score						
	Financial performance	Score						
	Origanization Dicipline	Score						
	Add. Indicator	Score						
	5. Socio-Economy							
501	Number of household per service area	nos./ha			0			
502	Number of population per service area	nos./ha			0			
	Land holding and tenure							
503	% of IA owner cultivators to total IA members	%			0			
504	Average operating size of farm land per IA membe	ha/member			0			
505	% of IA members operating less than 2 ha of land	%			0			
506	% of IA members operating 2 to 5 ha of land	%			0			
507	% of IA members operating more than 5 ha of land	%			0			
	Farm gate price of paddy							
508	Monthly lowest(Peak harvesting season)	Peso/kg			0			
509	Monthly highest(Peak harvesting season)	Peso/kg			0			
	Production cost							
510	Paddy wet season	Peso/ha			0			
511	Paddy dry season	Peso/ha			0			
	Economy							
	Average farmers' income							
512	Farm income	Peso/house			0			
513	Non-farm income	Peso/house			0			
614	Total income	Peso/house			0			
515	Poverty incidence in the concerned province	%			0			
	Marketing							
516	Paddy/rice self-sufficiency at province locationg	%			0			
517	Ration of population at nerest provincial capital to poputation in NIS	No.						
518	Road density	m/km2					0	
519	Required time for transportation to the terminal m	hours					0	
Nos. of Data Set			17	8	18	6	6	9

Table 1.4 Result of NIS Cluster Analysis

Character	Factor	Group 1		Group 2		Group 3		Group 4		Group 5	
		PC score average	Evaluation	PC score average	Evaluation	PC score average	Evaluation	PC score average	Evaluation	PC score average	Evaluation
1. Level of NIS Facilities	1.1 Density of facilities	-0.191	Med.	-0.426	Low	0.352	High	2.588	High	-0.346	Low
	1.2 Functionality of Canal Structures	0.358	High	0.452	High	0.043	Med.	-0.222	Med.	-1.584	Low
	1.3 Functionality of Canal	-0.415	Low	0.359	High	-0.571	Low	1.661	High	0.248	Med.
2. Agricultural Performance	2.1 Cropping Intensity (*1)	-1.632	Low	0.04	Med.	0.734	High	-0.049	Med.	-0.707	Low
3. Farmers Livelihood	3.1 Farming efficiency	0.37	High	0.231	Med.	0.149	Med.	0.768	High	-1.558	Low
	3.2 Cost of production	0.589	High	0.403	High	-0.5	Low	-0.361	Low	-0.22	Med.
	3.3 Income (*2)	-0.212	Med.	0.177	Med.	-0.398	Low	0.063	Med.	-0.652	Low
4. Sufficiency of Water Resources Available	4.1 Water resources (*3)	-2.194	Low	0.043	Med.	0.593	High	0.503	High	-0.094	Med.
5. Market Accessibility	5.1 Marketability (*4)	-0.208	Med.	0.088	Med.	-0.212	Med.	-0.268	Low	0.538	High
6. NIS O&M Performance	6.1 O&M Performance (*5)	-0.551	Low	-0.168	Med.	0.465	High	1.086	High	-0.625	Low

Note : High>0.25>Med.>-0.25>Low

Note: (*1) to (*5) Numerical character given a represented index is estimated below.

Character	represted index (Average)	Group 1	Group 2	Group 3	Group 4	Group 5
Cropping intensity	Cropping intensity (%)	100	140	165	140	95
Farm economy	Annual income (Peso/H.H.)	61,000	70,000	43,000	59,000	30,000
Water resources	Potential annual cropping intensity (%)	122	182	197	191	180
Marketability	Hours to terminal market	8.2	6.7	7.2	9.9	2.0
O&M Performance	ISF collection rate (%)	40	41	45	66	56

Table 1.5 List of Grouped NISs (1/4)

Group	Region	NIS Name	Service Area(ha)	IA No.	Other IMT Project
Group 1	Region 1	Agno	10,093	20	
	Region 1	Ambayoan	4,050	8	
	Region 1	Dipalo	2,252	3	
	Region 1	Papa Area	2,822	3	
	Region 1	San Fabian	2,288	7	
	Region 1	Sinocalan	2,570	7	
	Region 1	Solsona Area	1,818	5	
	Region 1	Sta. Lucia-Candon	919	3	
	Region 1	Sta. Maria-Burgos	1,542	2	
	Region 1	Tagudin	1,345	2	
	Region 2	Banurbur Creek	1,087	7	
	Region 2	Baua	2,419	11	WRDP
	Region 3	Camiling	8,580	23	WRDP
	Region 4	Caguray	3,308	2	
	Region 6	Barotac Viejo	1,774	2	
	Region 6	Pangiplan	1,756	2	
	Region 8	Binahaan North	1,801	5	ISIP II
	Region 8	Mainit	2,186	6	ISIP II
	Region 10	Manupali	4,395	7	
	Region 11	Padada	3,512	6	with banana plantation
	Region 13	Andanan	5,000	16	WRDP
	Total		65,517	147	
Group 2 (Sub-group 2-1)	CAR	Upper Chico	17,551	40	
	Region 1	Dumuloc	1,306	5	
	Region 1	Labugaon Area	1,961	8	
	Region 1	Lower Agno	7,500	41	
	Region 1	Madongan Area	3,621	8	
	Region 1	Nueva Era	680	2	
	Region 2	Apayao-Abulug	10,048	35	
	Region 2	Iguig-Alcala-Amulung PIS	2,306	3	IOSP II
	Region 2	Lower Chico	1,856	5	WRDP
	Region 2	Magapit PIS	10,914	13	WRDP
	Region 2	Mallig	2,427	5	
	Region 2	Pamplona	746	1	
	Region 2	Pinacanauan	2,777	2	
	MRIIS	MRIIS District I	21,797	94	IOSP II
	MRIIS	MRIIS District III	23,442	86	IOSP II
	MRIIS	MRIIS District IV	19,890	79	IOSP II
	UPRIIS	UPRIIS District II	23,913	77	JBIC(Pilot)
	UPRIIS	UPRIIS District III	29,846	117	JBIC(Pilot)
	Region 4	Bansud	1,062	1	
	Region 4	Cantingas	256	0	IOSP II
	Region 4	Lumintao	1,504	1	
	Region 4	Mongpong	882	4	
	Region 4	Pagbahan	1,005	1	WRDP/Grain Sector
	Region 4	Pula	2,768	4	Grain Sector
	Region 4	Sta. Maria	801	1	IOSP II
	Region 5	Barit	2,260	3	IOSP II
	Region 5	Hibiga	420	1	
	Region 5	RIDA	2,224	11	
	Region 5	Tigman-Hinagyanan	2,244	7	
	Region 6	Aganan	4,863	8	Austrarian Aid

Table 1.5 List of Grouped NISs (2/4)

Group 2 (Sub-group 2-1)	Region 6	Bago	12,700	17	
	Region 6	Mambusao	1,423	3	
	Region 6	Sibalom-San Jose	5,065	6	
	Region 6	Sibalom-Tigbauan	2,020	3	WRDP
	Region 6	Sta. Barbara	3,399	4	Austrarian Aid / CAP
	Region 7	Bohol	4,973	13	
	Region 8	Tibak	1,630	3	ISIP II
	Region 9	Labangan	3,195	2	
	Region 9	Sibuguey Valley	3,143	8	
	Region 10	Pulangui	11,415	17	
	Region 11	Libuganon-Right	9,000	10	
	Region 11	Lupon	2,450	3	
	Region 12	Allah	12,000	81	
	Region 12	Banga	2,652	19	
	Region 12	Dumaguil	2,300	31	
	Region 12	Lambayong	11,355	31	
	Region 12	Libungan	9,496	15	
Sub-Group	2-1 Total		301,086	929	
Group 2 (Sub-group 2-2)	Region 2	Tumauini	3,615	11	WRDP
	MRIIS	MRIIS District II	23,241	104	WRDP
	UPRIIS	UPRIIS District I	24,962	85	JBIC(Pilot)
	UPRIIS	UPRIIS District IV	23,811	86	JBIC(Pilot)
	Region 3	Angat	29,374	89	No. 9:IMT Pilot
	Region 3	Colo	1,021	2	
	Region 3	Gumain	2,209	4	
	Region 3	Maasim	2,111	6	
	Region 3	Porac	1,795	13	
	Region 3	Tasmoris	13,297	68	
	Region 4	Amnay-Patrick	1,331	4	
	Region 4	Baco Bucayao	6,327	13	WRDP
	Region 4	Mabacan	492	2	
	Region 4	Sta. Cruz	3,100	4	
	Region 4	Mag-Asawang Tubig	1,700	10	
	Region 8	Binahaan South	1,410	2	ISIP II
	Region 9	Dipolo	1,600	3	WRDP
	Region 10	Maranding	4,927	6	IOSP II / Grain Sector
	Region 10	Muleta	4,063	7	Grain Sector
	Region 10	Rugnan	2,500	4	SPISP
	Region 11	Saug	3,900	16	
	Region 12	Talayan	700	4	Grain Sector
	Region 12	Kabulnan	9,465	7	
	Region 12	Mlang	2,981	2	WRDP
	Region 13	Gibong	2,158	8	SPISP
	Region 13	Tago	3,716	22	
	Sub-Group	2-2 Total		175,806	582
Total			476,892	1,511	
Group 3	Region 1	Ambayoan-Extension	100	1	
	Region 1	Amburayan	3,420	11	WRDP silt excluder
	Region 1	Bolo	425	1	
	Region 1	Dingras	1,016	3	
	Region 1	Laoag Vintar	2,377	5	
	Region 1	Masalip	1,453	6	

Table 1.5 List of Grouped NISs (3/4)

Group 3	Region 1	Nmc Pasuquin	729	1	
	Region 2	Bagabag	2,160	10	
	Region 2	Baggao	2,067	2	IOSP II
	Region 2	Dummun	1,802	1	
	Region 2	San Pablo Cabagan	1,273	7	WRDP
	Region 2	Zinundungan	2,045	7	Grain Sector
	Region 3	Bayto	1,148	5	JICA Model
	Region 3	Bucao	1,231	6	
	Region 3	Disalit Creek	485	2	
	Region 3	Nayom	800	8	JICA Model
	Region 4	Agos	1,119	7	IOSP II
	Region 4	Batang-Batang	1,071	7	WRDP
	Region 4	Dumacaa	2,227	1	
	Region 4	Hanagdong	329	1	
	Region 4	Lagnas	753	1	
	Region 4	Malatgao	2,607	15	
	Region 4	Mayor	372	1	IOSP II
	Region 4	Palico	886	3	
	Region 5	Buhi-Lalo	2,724	9	
	Region 5	Cagaycay	1,745	5	Grain Sector
	Region 5	Daet Talisay	2,603	9	Grain Sector
	Region 5	Inarihan	1,298	2	
	Region 5	Libmanan Cabusao PIS	2,195	11	
	Region 5	Mahaba	566	2	
	Region 5	Nasisi	780	2	
	Region 5	Ogsong	180	1	
	Region 5	San Francisco	590	1	
	Region 5	San Ramon	360	1	
	Region 6	Aklan	3,916	9	Grain Sector
	Region 6	Jalaur-Extension	2,616	6	
	Region 6	Jalaur-Proper	8,826	14	WRDP
	Region 6	Panakuyan	900	1	
	Region 6	Suague	2,958	5	
	Region 9	Salug	7,224	12	
	Region 8	Balire North	300	2	
	Region 8	Balire South	396	1	
	Region 8	Bao	1,917	4	ISIP II
	Region 8	Bito	1,411	11	ISIP II
	Region 8	Daguitan	850	5	ISIP II
	Region 8	Das-Ay	386	1	
	Region 8	Gibuga	738	7	
	Region 8	Guinarona	646	4	ISIP II
Region 8	Hindang-Hilongos	720	7		
Region 8	Ibawon	281	1		
Region 8	Lower Binahaan	1,200	3	ISIP II	
Region 10	Roxas-Kuya	823	2	WRDP	
Region 11	Batutu	3,269	14		
Region 11	Kipaliku	2,317	3		
				JICA Study,banaba plantation	
Region 11	Lasang	4,450	1		
Region 11	Mal	2,613	15		
Region 12	Alip	3,000	3		

Table 1.5 List of Grouped NISs (4/4)

Group 3	Region 12	Buayan	710	5	Grain Sector
	Region 12	Kabacan	4,511	6	
	Region 12	Malasila	4,006	4	
	Region 12	Marbel-1	2,002	11	
	Region 12	Marbel-2	1,555	18	
	Region 12	Pagalungan	400	1	
	Region 13	Cabadbaran-Taguibo	3,213	1	SPISP
	Region 13	Cantillan	1,785	6	SPISP
	Region 13	Simulao	2,540	16	
	Total		117,415	354	
Group 4 (Cluster 3)	Region 1	Bonga PIS-1	298	1	IOSP II
	Region 1	Bonga PIS-2	655	2	IOSP II
	Region 1	Bonga PIS-3	201	1	IOSP II
	Region 1	Cura	431	4	IOSP II
	Region 2	Solana PIS	880	1	WRDP
	Region 4	Dambo PIS	600	1	
	Region 5	Matogdon	307	1	IOSP II
	Region 8	Pongso	800	5	IOSP II
	Total		4,172	16	
Group 5 (Cluster 5)	Region 3	NEPIS	1,313	14	
	Region 4	Balanac	1,056	1	WRDP
	Region 4	Balayungan	1,674	0	
	Region 4	Bankud	794	0	
	Region 4	Butas Marcel o	968	0	
	Region 4	Butas-Lawang Bat o	631	0	
	Region 4	Cabuyao PIS	640	0	
	Region 4	Culong-Culong	610	2	
	Region 4	Dezno PIS	852	0	
	Region 4	Embarcadero- Baluotto	974	0	
	Region 4	Luksuhin- Makuling	865	0	
	Region 4	Lunban	102	1	
	Region 4	Macabling	728	0	
	Region 4	Malaunod	227	1	
	Region 4	Matanda	1,967	0	
	Region 4	Molino	442	0	
	Region 4	Navarro	660	0	
	Region 4	Pasong Kastila-Julian	961	0	
	Region 4	Plucena- Bayan	506	0	
	Region 4	Sahing	470	0	
	Region 4	San Agustin- Pasong Bua	692	0	
	Region 4	San Cristobal	603	0	
	Region 4	San Juan	427	0	
	Region 4	Tres Cruses	872	0	
	Region 11	Libuganon-Left	650	2	
	Region 12	Siluyay	1,406	5	
		Total		21,090	26

Table 1.6. List of Indicators for IA Principal Component Analysis

I. IA Functionality Survey, Average of 1999-2001

No.	Indicators	Unit	Remark
	A. OPERATION AND MAINTENANCE, Total	%	Average Score(1999-2001)/Full Score
	1. O&M Planning, Sub-total	%	-do-
	2. O&M Implementation, Sub-total	%	-do-
	3. O&M Performance, Sub-total	%	-do-
	B. ORGANIZATION, Total	%	-do-
	1. Membership	%	-do-
	2. TSA Meeting	%	-do-
	3. BOD Meetings	%	-do-
	4. GA/Members' Meetings	%	-do-
	5. Records/Files, Sub-total	%	-do-
	C. FINANCIAL PERFORMANCE, Total	%	-do-
	1. Financial Plan for the Year	%	-do-
	2. Financial Accomplishment, Sub-total	%	-do-
	3. Current Ratio	%	-do-
	4. Financial Control	%	-do-
	5. Viability Index	%	-do-
	D. ORGANIZATIONAL DISCIPLINE, Total	%	-do-
	1. Holding of Regular Elections	%	-do-
	2. Conflict Resolution	%	-do-
	3. Imposition of membership Discipline/ Sanctions to Policies	%	-do-
	4. Attendance in BOD Meetings (ave.)	%	-do-
	5. Attendance in GA Meetings (ave.)	%	-do-
	6. Attendance in TSA Meetings	%	-do-
	7. Attendance in Group Works	%	-do-
1	Overall Functionality Score	%	-do-

II. IA Inventory Matrix (2001 Data, JICA Survey)

No.	Indicators	Unit	Remark
	1. Service area (ha)		
2	1.1 Total IA service area	ha	
3	1.2 Average area per potential members	ha/nos.	Total IA area(ha) / IA members(nos.)
	2. Membership		
4	2.1 Actual member	nos.	
5	2.2 Coverage of actual members versus potential members	%	Actual member(nos.) / Potential members
6	2.3 Coverage of actual female members versus actual members	%	Female member(nos.) / Actual members
7	3. Cropping Intensity (% of irrigated area versus service area)		
	3.1 Cropping Intensity, Total	%	
	3.2 Cropping Intensity, Dry season	%	
	3.3 Cropping Intensity, Wet season	%	
	4. Tenurial Status		
8	4.1 % of IA owner cultivators (including CLT farmers) versus potential memb	%	Owner cultivators / Potential members
9	4.2 % of tenant and transient members versus potential members	%	Tenant & transient members / Potential membe
	5. Average Yield		
10	5.1 Wet season	ton/ha	
11	5.2 Dry season	ton/ha	
12	6. ISF Collection Efficiency (Current)Annual	%	
13	7. Networth (as of 2001)	Peso	
	8. Average Farm Income		
14	8.1 Wet season	Peso	
15	8.2 Dry season	Peso	
16	9. Type of Contract with NIA	0 to 5	0:No Contract, 1:Type1, 2:Type2, 3:Type1&2, 4:Type3, 5:IMT

Table 2.1 Screening of NIS-IA (1/6)

NIS Group	Region	NIS Name	Service Area (ha)	IA Nos. (nos.)	IA Member (person)	Foreign-assisted Rehab./IMT Project	Function Report Submitted	IA Classification Group					Function Score					Screen-Out Reason
								A	B	C	D	E	Good		Average		Poor	
													OS	VS	S	F	P	
Group 1	Region 1	Agno	10,093	20	7,561		12	2	3	7			1	1	4	6		
	Region 1	Ambayonan	4,050	8	2,149		7	6	1					2	4		IA distribution	
	Region 1	Dipalo	2,252	3	1,647		3	3						2	1		IA distribution	
	Region 1	Papa Area	2,822	3	1,316		3	2	1				1	1	1		IA distribution	
	Region 1	San Fabian	2,288	7	1,833		7	1	5	1				1	4	2		
	Region 1	Sinocalan	2,570	7	2,629		8	2	4	2					6	2		
	Region 1	Solsona Area	1,818	5	706		5	5						4	1		IA distribution	
	Region 1	Sta. Lucia-Candon	919	3	1,458		3		2	1					2	1	Less 1,000 ha	
	Region 1	Sta. Maria-Burgos	1,542	2	663		2	1	1				1		1		IA distribution	
	Region 1	Tagudin	1,345	2	1,432		2			2							IA distribution	
	Region 2	Banurbur Creek	1,087	7	1,198		3	2	1				2		1		IA distribution	
	Region 2	Baua	2,419	11	1,376	WRDP	10	4	5	1		1		1	5		Foreign assisted	
	Region 3	Camiling	8,580	23	4,515	WRDP	23	18	4	1				10	12		Foreign assisted	
	Region 4	Caguray	3,308	2	593		1		1						1		IA distribution	
	Region 6	Barotac Viejo	1,774	2	695		2			2						2	IA distribution	
	Region 6	Pangiplan	1,756	2	948		2	1		1						2	IA distribution	
	Region 8	Binahaan North	1,801	5	530	ISIP II	2			2						2	Foreign assisted	
	Region 8	Mainit	2,186	6	1,733	ISIP II	3	1		2				1		2	Foreign assisted	
	Region 10	Manupali	4,395	7	804		5	3		2				1	2	2		
	Region 11	Padada	3,512	6	1,981	with banana plantati	7	5	1		1			4	2	1		
Region 13	Andanan	5,000	16	1,381	WRDP	16	8	3	3		1		1	6	4	4	Foreign assisted	
Total		65,517	147	37,148														
Group 2 (Group 2-1)	CAR	Upper Chico	17,551	40	6,420		36	4	2	28	2		1	1	5	29		
	Region 1	Dumuloc	1,306	5	779		5	2	2	1				2	1	2		
	Region 1	Labugaon Area	1,961	8	1,863		6	6						5	1		IA distribution	
	Region 1	Lower Agno	7,500	41	6,764		3	3					2	1			IA distribution	
	Region 1	Madongan Area	3,621	8	1,598		6	3	3					2	4		IA distribution	
	Region 1	Nueva Era	680	2	252		2		2						1	1	Less 1,000 ha	
	Region 2	Apayao-Abulug	10,048	35	4,952		18	2	7	9				1	4	13		
	Region 2	Iguig-Alcala-Amulung PIS	2,306	3	2,463	IOSP II	3	2	1						2	1	Foreign assisted	
	Region 2	Lower Chico	1,856	5	3,006	WRDP	7		5	2					5	2	Foreign assisted	
	Region 2	Magapit PIS	10,914	13	6,127	WRDP	0										Foreign assisted	
	Region 2	Mallig	2,427	5	1,079		4		3	1					3	1	IA distribution	
	Region 2	Pamplona	746	1	no data		0										Non response	
	Region 2	Pinacnauan	2,777	2	1,917		0										Non response	
	MRIIS	MRIIS District I	21,797	94	16,113	IOSP II	89	82	5	1	1		12	67	7	3	Foreign assisted	

Table 2.1 Screening of NIS-IA (2/6)

Group 2 (Group 2-1)	MRIIS	MRIIS District III	23,442	86	11,027	IOSP II	78	63	14	2	1	16	37	23	1	Foreign assisted			
	MRIIS	MRIIS District IV	19,890	79	15,504	IOSP II	77	72	2	2	1	1	21	50	3	2	Foreign assisted		
	UPRIIS	UPRIIS District II	23,913	77	15,962	JBIC(Pilot)	77	13	18	46				9	16	52	Foreign assisted		
	UPRIIS	UPRIIS District III	29,846	117	18,623	JBIC(Pilot)	103	8	15	80				7	12	84	Foreign assisted		
	Region 4	Bansud	1,062	1	639		1			1							1	IA distribution	
	Region 4	Cantingas	256	0	no data	IOSP II	0											Non response	
	Region 4	Lumintao	1,504	1	447		1		1							1		IA distribution	
	Region 4	Mongpong	882	4	521		7			7							7	Less 1,000 ha	
	Region 4	Pagbahán	1,005	1	500	WRDP/Grain Sector	1			1							1	Foreign assisted	
	Region 4	Pula	2,768	4	2,000	Grain Sector	1			1							1	Foreign assisted	
	Region 4	Sta. Maria	801	1	727	IOSP II	1			1							1	Foreign assisted	
	Region 5	Barit	2,260	3	2,360	IOSP II	1		1							1		Foreign assisted	
	Region 5	Hibiga	420	1	481		1			1							1	Less 1,000 ha	
	Region 5	RIDA	2,224	11	1,190		3	1		2			1			1	1	Non response	
	Region 5	Tigman-Hinagyanan	2,244	7	1,740		6	2	3	1						5	1		
	Region 6	Aganan	4,863	8	2,055	Austrarian Aid	5	1	1	3					1	1	3		
	Region 6	Bago	12,700	17	4,130		15	2	5	8					1	6	8		
	Region 6	Mambusao	1,423	3	1,214		2			2								2	IA distribution
	Region 6	Sibalom-San Jose	5,065	6	3,080		5	1	2	2						2	3		
	Region 6	Sibalom-Tigbauan	2,020	3	1,731	WRDP	3		1	2						1	2	Foreign assisted	
	Region 7	Bohol	4,973	13	3,174		11	4	4	3					2	6	3		
	Region 8	Tibak	1,630	3	338	ISIP II	3	1		2						2	1	Foreign assisted	
	Region 6	Sta. Barbara	3,399	4	919	Austrarian Aid / CAP	3	1	1	1					1	1	1	Foreign assisted	
	Region 9	Labangan	3,195	2	1,538		2	1	1				1	1					
	Region 9	Sibuguey Valley	3,143	8	1,747		22	5	9	8					1	12	9	Unfavorable area	
	Region 10	Pulangui	11,415	17	6,696		16	5	1	10				1	2	3	10		
Region 11	Libuganon-Right	9,000	10	4,943		8	8						8				IA distribution		
Region 11	Lupon	2,450	3	1,847		1	1					1					Non response		
Region 12	Allah	12,000	81	9,428		53	28	15	10				20	22	11		Unfavorable area		
Region 12	Banga	2,652	19	1,372		17	8	2	5	1	1		2	5	3	7	Unfavorable area		
Region 12	Dumaguil	2,300	31	917		3			3						1	2	Unfavorable area		
Region 12	Lambayong	11,355	31	6,890		30	3	5	22			1	1	4	24		Unfavorable area		
Region 12	Libungan	9,496	15	6,962		13	4	6	3					2	8	3	Unfavorable area		
	Sub-total (Group 2-1)	301,086	929	184,035															

Table 2.1 Screening of NIS-IA (3/6)

Group 2 (Group 2-2)	Region 2	Tumauni	3,615	11	2,455	WRDP	8	3	4				1	7		Foreign assisted		
	MRIIS	MRIIS District II	23,241	104	48,392	WRDP	99	53	30	24	2		5	35	44	15	Foreign assisted	
	Region 3	Angat	29,374	89	16,871	No. 9:IMT Pilot	83	70	9	4			1	8	55	14	5	
	Region 3	Colo	1,021	2	1,353		2	1		1					1	1	IA distribution	
	Region 3	Gumain	2,209	4	2,404		8	2	3	3					1	5	2	
	Region 3	Maasim	2,111	6	1,118		6	6						1	4	1		
	Region 3	Porac	1,795	13	828		5	1	4						1	4	Non response	
	Region 3	Tasmoris	13,297	68	1,336		4	3		1					2	2	Non response	
	UPRIIS	UPRIIS District I	24,962	85	17,084	JBIC(Pilot)	83	40	35	7		1	1	9	22	44	7	Foreign assisted
	UPRIIS	UPRIIS District IV	23,811	86	11,993	JBIC(Pilot)	75	26	10	39				2	20	12	41	Foreign assisted
	Region 4	Amnay-Patrick	1,331	4	555		0										Non response	
	Region 4	Baco Bucayao	6,327	13	3,255	WRDP	13			13							13	Foreign assisted
	Region 4	Mabacan	492	2	459		0										Non response	
	Region 4	Mag-Asawang Tubig	1,700	10	1,161		4			4							4	Non response
	Region 4	Sta. Cruz	3,100	4	2,157		4	1	2	1						2	2	
	Region 8	Binahaan South	1,410	2	304	ISIP II	2			1	1					1	1	Foreign assisted
	Region 9	Dipolo	1,600	3	719	WRDP	1			1							1	Foreign assisted
	Region 10	Maranding	4,927	6	4,096	IOSP II / Grain Sector	6	4	2						1	4	1	Foreign assisted
	Region 10	Muleta	4,063	7	1,075	Grain Sector	7	4	1	1		1		1	3	2	1	Foreign assisted
	Region 10	Rugnan	2,500	4	1,316	SPISP	0											Foreign assisted
	Region 11	Saug	3,900	16	3,192		11	3	4	4				1	1	3	6	
	Region 12	Kabulnan	9,465	7	4,015		1			1							1	Unfavorable area
	Region 12	Mlang	2,981	2	1,670	WRDP	2		1	1						1	1	Unfavorable area
	Region 12	Talayan	700	4	330	Grain Sector	4		1	3						1	3	Unfavorable area
	Region 13	Gibong	2,158	8	982	SPISP	8	4	2	2					3	3	2	Foreign assisted
	Region 13	Tago	3,716	22	2,198		22	10		12			1	4	4	3	10	
	Sub-total (Group 2-2)			175,806	582	131,318												
Total (Group 2)			476,892	1,511	315,353													
Group 3	Region 1	Ambayoan-Extension	100	1	no data		1	1					1				Less 1,000 ha	
	Region 1	Amburayan	3,420	11	9,780	WRDP silt excluder	12	10	1	1			1	6	4	1	Foreign assisted	
	Region 1	Bolo	425	1	513		1		1							1	Less 1,000 ha	
	Region 1	Dingras	1,016	3	893		2	2								2	IA distribution	
	Region 1	Laoag Vintar	2,377	5	2,168		5	4	1						2	3		
	Region 1	Masalip	1,453	6	2,664		6	6					1	5			IA distribution	
	Region 1	Nmc Pasuquin	729	1	700		1	1						1			Less 1,000 ha	
	Region 2	Bagabag	2,160	10	1,904		1	1						1			Non reponse	

Table 2.1 Screening of NIS-IA (4/6)

Group 3	Region 2	Baggao	2,067	2	1,815	IOSP II	1											1	Foreign assisted		
	Region 2	Dummun	1,802	1	1,610		1		1									1	IA distribution		
	Region 2	San Pablo Cabagan	1,273	7	1,663	WRDP	7	3	2	2			1	1				4	1	Foreign assisted	
	Region 2	Zinundungan	2,045	7	2,593	Grain Sector	6	3	1	2								5	2	Foreign assisted	
	Region 3	Bayto	1,148	5	458	JICA Model	5		5									4	1		
	Region 3	Bucao	1,231	6	no data		0													Non reponse	
	Region 3	Disalit Creek	485	2	720		2			2									2	IA distribution	
	Region 3	Nayom	800	8	592	JICA Model	8	1	6	1				1				5	2	Less 1,000 ha	
	Region 4	Agos	1,119	7	1,392	IOSP II	6			6									6	Foreign assisted	
	Region 4	Batang-Batang	1,071	7	534	WRDP	8	1	1	6			1					1	6	Foreign assisted	
	Region 4	Dumacaa	2,227	1	1,620		0													Non reponse	
	Region 4	Hanagdong	329	1	184		1			1									1	IA distribution	
	Region 4	Lagnas	753	1	432		0													Less 1,000 ha	
	Region 4	Malatgao	2,607	15	1,265		14			14									14	IA distribution	
	Region 4	Mayor	372	1	517	IOSP II	1			1									3	Foreign assisted	
	Region 4	Palico	886	3	614		3	1		2				1					2	Less 1,000 ha	
	Region 5	Buhi-Lalo	2,724	9	3,215		4	2		1	1				1				3	Non reponse	
	Region 5	Cagaycay	1,745	5	2,762	Grain Sector	5	1	1	3					1			1	3	Foreign assisted	
	Region 5	Daet Talisay	2,603	9	1,136	Grain Sector	5	1		4			1						4	Foreign assisted	
	Region 5	Inarihan	1,298	2	2,025		0													Non reponse	
	Region 5	Libmanan Cabusao PIS	2,195	11	2,183		0													Non reponse	
	Region 5	Mahaba	566	2	540		2		1	1								1	1	Less 1,000 ha	
	Region 5	Nasisi	780	2	895		2		1	1									2	Less 1,000 ha	
	Region 5	Ogsong	180	1	187		1		1									1		Less 1,000 ha	
	Region 5	San Francisco	590	1	315		1			1									1	Less 1,000 ha	
	Region 5	San Ramon	360	1	255		0													Less 1,000 ha	
	Region 6	Aklan	3,916	9	6,285	Grain Sector	0													Less 1,000 ha	
	Region 6	Jalaur-Extension	2,616	6	951		6		3	3								2	4		
	Region 6	Jalaur-Proper	8,826	14	2,545	WRDP	21	2	1	16	2								3	18	Foreign assisted
	Region 6	Panakuyan	900	1	535		0													Less 1,000 ha	
	Region 6	Suague	2,958	5	1,378		0													Non reponse	
	Region 9	Salug	7,224	12	4,510		0													Non reponse	
	Region 8	Balire North	300	2	85		3	2		1									2	1	Less 1,000 ha
Region 8	Balire South	396	1	30		0													Less 1,000 ha		
Region 8	Bao	1,917	4	927	ISIP II	4			4										4	Foreign assisted	
Region 8	Bito	1,411	11	1,080	ISIP II	10	3	5	2								2	6	2	Foreign assisted	

Table 2.1 Screening of NIS-IA (5/6)

Group 3	Region 8	Daguitan	850	5	415	ISIP II	3	1						1	1	1	Foreign assisted	
	Region 8	Das-Ay	386	1	41		0										Less 1,000 ha	
	Region 8	Gibuga	738	7	298		6	1	1	4				1	1	4	Less 1,000 ha	
	Region 8	Guinarona	646	4	304	ISIP II	5	1		4				1		4	Less 1,000 ha	
	Region 8	Hindang-Hilongos	720	7	188		6		1	5					1	5	Less 1,000 ha	
	Region 8	Ibawon	281	1	27		0										Less 1,000 ha	
	Region 8	Lower Binahaan	1,200	3	338	ISIP II	2			2							Foreign assisted	
	Region 10	Roxas-Kuya	823	2	496	WRDP	2		1	1							2	Less 1,000 ha
	Region 11	Batutu	3,269	14	2,323		13	11	2					1	9	3		
	Region 11	Kipaliku	2,317	3	1,200		3	2	1					1	1	1		
	Region 11	Lasang	4,450	1	2,201	JICA Study,banaba plantation	1	1							1			IA distribution
	Region 11	Mal	2,613	15	1,605		15	12	2	1				4	6	4	1	
	Region 12	Alip	3,000	3	1,760		3	2		1							3	Unfavorable area
	Region 12	Buayan	710	5	483	Grain Sector	5	1		4			1				4	Unfavorable area
	Region 12	Kabacan	4,511	6	2,670		7	2		5				1	1	5	Unfavorable area	
	Region 12	Malasila	4,006	4	2,483		4	2	1	1				1	2	1	Unfavorable area	
	Region 12	Marbel-1	2,002	11	1,546		16	9	5	2			1	3	5	5	2	Unfavorable area
	Region 12	Marbel-2	1,555	18	1,179		11	9	2				3	3	3	2		Unfavorable area
	Region 12	Pagalungan	400	1	336		1			1							1	Unfavorable area
	Region 13	Cabadbaran-Taguibo	3,213	1	2,471	SPISP	11	10		1					7	3	1	Foreign assisted
Region 13	Cantillan	1,785	6	2,048	SPISP	5	3	2						3	2		Foreign assisted	
Region 13	Simulao	2,540	16	1,809		15	14		1				3	10	1	1		
Total		117,415	354	92,691														
Group 4	Region 1	Bonga PIS-1	298	1	296	IOSP II	1	1				1					Out of target group	
	Region 1	Bonga PIS-2	655	2	300	IOSP II	1	1						1			Out of target group	
	Region 1	Bonga PIS-3	201	1	226	IOSP II	1	1				1					Out of target group	
	Region 1	Cura	431	4	334	IOSP II	4	3	1				1	2	1		Out of target group	
	Region 2	Solana PIS	880	1	144	WRDP	0											Out of target group
	Region 4	Dambo PIS	600	1	216		0											Out of target group
	Region 5	Matogdon	307	1	160	IOSP II	1			1							1	Out of target group
	Region 8	Pongso	800	5	580	IOSP II	5	1		4					1		4	Out of target group
Total		4,172	16	2,256														
Group 5	Region 3	NEPIS	1,313	14	678		14	1	5	8				1	3	10	Out of target group	
	Region 4	Balanac	1,056	1	928	WRDP	2	1		1				1		1	Out of target group	
	Region 4	Balayungan	1,674	0	60		2		1	1					1	1	Out of target group	

Selected NIS

Candidate NIS

Table 2.2 List of IAs in Target NISs (1/6)

REG	PROV	NIS	IA NAME	Registration Date		Membership			Service	Average		Tenurial				Average Yield Per Hectares			Type of	ISF	Networth	
				Date	No.	Potential	Actual Male	Female	Area (ha)	Farm Holding (ha)	Owner/Cultivator	Tenant	CLT	Leased	as of last cropping (cevan)	Wet	Dry	3rd	Contract Unity Indication	Collection	When Organized	As of QY 2001
1	Pangasinan	San Fabian	Aramal Careenan	1991/6/16	AN092-002137	430	430	0	506	1.18	35	187	0	208	80	80	0	Type I	77	9000	9000	
1	Pangasinan	San Fabian	Bagong Sinag	1987/5/29	140973	145	145	0	189.45	1.31	55	40	0	50	80	84	0	Type I	100	9000	10000	
1	Pangasinan	San Fabian	Bama	1991/2/21	AN092-187309	320	320	0	540	1.69	40	80	0	200	75	82	0	Type I	78	12500	12000	
1	Pangasinan	San Fabian	Baro Nga Namnama	02/20/91	187240	250	250	0	198.55	0.79	50	90	0	110	80	84	0	Type I	98	11000	11000	
1	Pangasinan	San Fabian	BGM	1987/11/27	148618	120	120	0	200	1.67	25	40	15	40	76	82	0	Type I	100	11000	11000	
1	Pangasinan	San Fabian	San Juan Babasit	1986/11/27	136773	150	150	0	274	1.83	0	63	0	87	76	82	0	Type I	77	10000	10500	
1	Pangasinan	San Fabian	Scientific Farming	1992/4/20	AN092-061512	418	418	0	380	0.91	55	173	35	155	78	80	0	Type I & II	94	14000	15000	
3	Bulacan	Angat	Anbuspa	1986/1/20	130703	1200	1000	200	1400	1.17	375	780	0	40	86	89	0	Stage III	no data	No Data	No Data	
3	Bulacan	Angat	BMTC	1991/8/27	194990	203	198	5	338.39	1.67	168	30	0	5	83	85	0	Modified I & II	36.4	No Data	4000	
3	Bulacan	Angat	Bacao	1995/1/10	AN 09500089	401	240	23	392	0.98	101	152	10	0	85	93	0	Modified I & II	76.5	No Data	9058	
3	Bulacan	Angat	Bagbaguin-Manatal	1991/4/11	189173	192	118	33	272.5	1.42	50	53	38	0	80	95	0	Modified I & II	78.1	No Data	200000	
3	Bulacan	Angat	Bagong Buhay	1985/11/26	129430	82	70	12	236.24	2.88	50	32	0	0	74	132	0	Type I & II	35.25	No Data	No Data	
3	Bulacan	Angat	Bagong Pag-asa	1986/4/21	125865	188	124	14	228.75	1.22	64	0	59	15	68.31	61.86	0	Type II	30.38	150	150	
3	Bulacan	Angat	Bagong Silang	1985/2/20	1292241	110	98	0	246.26	2.24	24	35	39	0	77	83	0	Type I & II	85.0	No Data	11022	
3	Bulacan	Angat	Balotong B	1987/9/14	144332	45	40	5	90	2	35	10	0	0	65	85	0	Modified I & II	38.8	No Data	45000	
3	Bulacan	Angat	Baling Tulay	2001/3/20	A200103878	306	298	8	320	1.07	99	198	9	0	78	90	0	Modified I & II	66.4	No Data	10856	
3	Bulacan	Angat	Balubad	1990/8/29	82990	68	42	0	71.01	1.04	7	25	0	10	68	65	0	Modified I & II	24.2	33114	No Data	
3	Bulacan	Angat	Balucco	1990/8/29	180830	300	213	0	505.51	1.69	85	128	0	0	76	81	0	Type I & II	45.0	No Data	7182	
3	Bulacan	Angat	Bambang SN	1983/1/27	3020247	208	208	0	398.81	1.92	44	55	66	43	76	75	0	Modified I & II	27.6	30343	No Data	
3	Bulacan	Angat	Bapuma	1991/7/23	193586	164	164	0	230.19	1.4	130	34	0	0	85	100	0	No contract	0.0	counterpart.	No Data	
3	Bulacan	Angat	Barit Farmers	1990/7/30	186354	87	83	4	171.33	1.97	70	17	0	0	80	100	0	Modified I & II	100.0	Others.	7000	
3	Bulacan	Angat	Beer-seba	1997/2/14	199702760	30	30	0	30.6	1.02	12	18	0	0	78	82	0	Type I & II	69.0	No Data	3180	
3	Bulacan	Angat	BPB	1990/7/23	179390	81	61	0	128.66	1.59	18	23	20	0	80	60	0	Modified I & II	46.3	No Data	2961.6	
3	Bulacan	Angat	BPT	1991/8/16	194682	189	183	6	254.58	1.35	150	30	0	9	80	86	0	Modified I & II	26.3	No Data	62000	
3	Bulacan	Angat	BSJB	08/17/98	A199812098	384	375	9	402	1.05	180	192	10	0	80	85	0	Modified I & II	35.2	No Data	3127	
3	Bulacan	Angat	BSPi	1990/7/6	178947	190	187	3	265.05	1.4	176	14	0	0	85	86	0	Modified I & II	52.7	No Data	16000	
3	Bulacan	Angat	Buhay At Yaman ng San	1999/9/24	199913703	260	208	0	401.63	1.54	73	135	0	0	78	85	0	Type I & II	no data	No Data	17400	
3	Bulacan	Angat	Buhay Pag-asa	1991/8/27	194994	198	195	3	474.43	2.4	63	135	0	0	80	100	0	Modified I & II	51.8	numeration.	4000	
3	Bulacan	Angat	Buhay Pump	1986/7/16	133792	32	27	5	48.74	1.52	15	17	0	0	No Data	90	0	Stage III	70.2	31508	No Data	
3	Bulacan	Angat	Bulak-guinto	1990/7/24	179440	100	71	0	110	1.1	12	32	12	15	63	75	0	Modified I & II	25.1	33078	No Data	
3	Bulacan	Angat	Bulcot	2000/11/17	A200017019	179	143	2	184	1.03	55	75	15	0	85	70	0	Modified I & II	68.8	No Data	5892	
3	Bulacan	Angat	Bulusan Barkada	2000/8/4	A200011188	617	370	0	715.39	1.16	205	165	0	0	80	70	0	Modified I & II	51.4	No Data	7116	
3	Bulacan	Angat	Buspa	1999/8/23	10806	294	284	10	426.13	1.45	127	167	0	0	70	85	0	Modified I & II	34.4	Others.	10000	
3	Bulacan	Angat	Buspan	1984/3/2	119382	700	590	110	800	1.14	140	490	0	70	85	88	0	Stage III	no data	No Data	No Data	
3	Bulacan	Angat	Buspla	1998/7/12	A199809825	328	201	11	292.74	0.89	86	98	28	0	80	90	0	Modified I & II	75.7	No Data	6570	
3	Bulacan	Angat	Calantipay-Baliuag	1990/7/23	179392	60	55	0	95.05	1.58	30	25	0	0	77	82	0	Type I & II	62.0	No Data	4326.4	
3	Bulacan	Angat	Calcalos	1990/7/23	179393	270	265	5	345	1.28	10	210	50	0	70	80	0	Modified I & II	62.4	32798	9544	
3	Bulacan	Angat	Cambangal Malambot	2000/1/19	100328	40	32	8	100	2.5	40	0	0	0	No Data	90	0	Modified I & II	38.7	Others.	1800	
3	Bulacan	Angat	Cansinala	1989/9/12	168237	59	33	0	108.51	1.84	12	21	0	0	82	88	0	Type I & II	100.0	No Data	1400	
3	Bulacan	Angat	Cantab	2000/10/17	200015670	27	27	0	57	2.11	10	17	0	0	78	85	0	Type I & II	84.0	No Data	2800	
3	Bulacan	Angat	Consanjo	1990/1/10	185587	193	135	0	258.31	1.34	34	101	0	0	77	85	0	Type I & II	74.0	No Data	7749.6	
3	Bulacan	Angat	Dona Turo	1991/5/17	190836	35	35	0	49	1.4	35	0	0	0	No Data	95	0	Pump amort.	no data	ad surfacing	No Data	
3	Bulacan	Angat	Dulong Ilog	1997/2/20	2239	101	96	5	193.5	1.92	50	51	0	0	80	95	0	Modified I & II	31.5	ad surfacing	6000	
3	Bulacan	Angat	Ibanian	2001/10/12	A200115608	75	70	5	93.1	1.24	0	30	45	0	70	75	0	No contract	76.8	37033	No Data	
3	Bulacan	Angat	Iisang Damdamin	1990/7/31	179594	270	227	43	442.43	1.64	216	54	0	0	80	100	0	Modified I & II	75.7	Others.	20000	
3	Bulacan	Angat	Inabama	1997/1/24	199701300	317	190	0	530	1.67	47	143	0	0	75	79	0	Type I & II	33.0	No Data	4782	
3	Bulacan	Angat	Josephian	1990/9/29	180832	202	160	0	368.89	1.83	32	64	32	14	75	81	0	Type I & II	38.0	No Data	5124	
3	Bulacan	Angat	Kadena	2000/12/26	17021	249	219	30	554.18	2.23	249	0	0	0	80	100	0	Modified I & II	61.6	counterpart.	13000	
3	Bulacan	Angat	Kapatiran	1984/3/7	119486	196	161	35	204	1.04	46	150	0	0	No Data	92	0	Stage III	85.0	30595	10000	
3	Bulacan	Angat	Kukulisan	1997/3/6	7000442	Merged to Linaw na Bukal	Merged to Linaw na Bukal	Merged to Linaw na Bukal	Merged to Linaw na Bukal	Merged to Linaw na Bukal	Merged to Linaw na Bukal	Merged to Linaw na Bukal	Merged to Linaw na Bukal	Merged to Linaw na Bukal	Merged to Linaw na Bukal	Merged to Linaw na Bukal	Merged to Linaw na Bukal	No contract		Merged to Linaw na Bukal		

Table 2.2 List of IAs in Target NISs (2/6)

REG	PROV	NIS	IA NAME	Other Activities/Services	Average Family Income			Does IA prepared O&M Plan					Annual							
					Wet	Dry	3rd	Yes		No	Other Plans	Cropping Intensity	W	D	IA GROUP NO.	GRAND Rating	FUNCTIO NALITY #1	NIS GROUP NO.	Select	
								Written	Unwritten											Freq
1	Pangasinan	San Fabian	Aramal Careenan	None	10000	9000	0	Yes		Two times a year	0	None	83.0	48.00	35.00	B	65.6	F	1	
1	Pangasinan	San Fabian	Bagong Sinag	None	10000	8500	0	Yes		Two times a year	0	None	100.0	53.00	47.00	B	70.3	F	1	
1	Pangasinan	San Fabian	Bama	None	14000	9000	0	Yes		Two times a year	0	None	95.0	43.00	52.00	B	66.3	F	1	
1	Pangasinan	San Fabian	Baro Nga Namnama	None	14000	10000	0	Yes		Two times a year	0	None	139.0	69.00	70.00	B	78.9	S	1	
1	Pangasinan	San Fabian	BGM	None	12000	9000	0	Yes		Two times a year	0	None	138.0	92.00	46.00	A	66.1	F	1	⊙
1	Pangasinan	San Fabian	San Juan Babasit	None	12000	9000	0	Yes		Two times a year	0	None	136.0	88.00	48.00	B	57.5	P	1	⊙
1	Pangasinan	San Fabian	Scientific Farming	None	16000	12000	0	Yes		Two times a year	0	None	139.0	88.00	51.00	C	68.5	F	1	⊙
3	Bulacan	Angat	Anbuspa	Irrigation service only.	14000	16000	0		Yes	Two times a year	0	None	0.0	0.0	0.0	A	66.5	F	2	
3	Bulacan	Angat	BMTC	Irrigation service only.	10000	15000	0		Yes	Two times a year	0	None	172.0	87.0	85.0		77.1	S	2	
3	Bulacan	Angat	Bacao	Irrigation service, Canal clearing, Minor rehabilitation	15000	25000	0	Yes		Two times a year	0	Establishment	118.0	59.0	59.0	B	84.9	S	2	
3	Bulacan	Angat	Bagbaguin-Manatal	Coordination to LGU's for intervention on the squatters at the canal embankment.	20000	30000	0	Yes		Two times a year	0	Establishment	197.0	99.0	98.0	A	93.3	VS	2	
3	Bulacan	Angat	Bagong Buhay	None	63936	95904	0	Yes		Two times a year	0	None	165.0	65.0	100.0	A	80.1	S	2	
3	Bulacan	Angat	Bagong Pag-asa	Collection of irrigation service fee	12000	15000	2000		Yes	Two times a year	0	Mobilization of	155.0	77.0	78.0	A	79.8	S	2	
3	Bulacan	Angat	Bagong Silang	Irrigation service only.	11000	14000	0		Yes	Two times a year	None	None	185.0	94.0	91.0	B	85.4	VS	2	
3	Bulacan	Angat	Balatong B	Irrigation service only.	10000	14000	0		Yes	Two times a year	0	None	87.0	0.0	87.0	A	77.1	S	2	
3	Bulacan	Angat	Baling Tulay	Irrigation service, Canal clearing, Minor rehabilitation	20000	25000	0	Yes		Two times a year	0	None	189.0	94.0	95.0	A	83.8	S	2	
3	Bulacan	Angat	Balubad	Irrigation service only.	9000	9000	0		Yes	Two times a year	0	None	141.0	71.0	70.0	A	69.7	F	2	
3	Bulacan	Angat	Balucoc	Irrigation service only.	12000	14000	0		Yes	Two times a year	0	None	91.0	42.0	49.0	B	78.5	S	2	△
3	Bulacan	Angat	Bambang SN	Irrigation service only.	13500	11700	0		Yes	Two times a year	0	None	48.0	0.0	48.0	A	64.6	P	2	
3	Bulacan	Angat	Bapuma	Facility fuel and oil for canal surfacing.	No Data	No Data	0	0	0	0	None	None	0.0	0.0	0.0	B	31.7	P	2	
3	Bulacan	Angat	Barit Farmers	Facility fuel and oil for canal surfacing.	7000	11000	0	Yes		Two times a year	0	None	16.0	0.0	16.0	C	78.6	S	2	
3	Bulacan	Angat	Beer-seba	Irrigation service only.	9000	11000	0		Yes	Two times a year	0	None	169.0	69.0	100.0	A	86.4	VS	2	△
3	Bulacan	Angat	BPB	Irrigation service, Canal clearing, Minor rehabilitation	5000	5000	0		Yes	Two times a year	0	None	130.0	63.0	67.0	A	79.4	S	2	
3	Bulacan	Angat	BPT	Irrigation service only.	10000	13000	0		Yes	Two times a year	0	None	178.0	86.0	92.0	A	75.4	S	2	
3	Bulacan	Angat	BSSJB	Coordination to LGU's for intervention on the squatters at the canal embankment.	20000	30000	0	Yes		Two times a year	0	None	161.0	80.0	81.0	A	79.7	S	2	
3	Bulacan	Angat	BSPI	Irrigation service only.	12000	18000	0		Yes	Two times a year	0	None	100.0	0.0	100.0	A	80.6	S	2	
3	Bulacan	Angat	Buhay At Yaman ng San	Irrigation service only.	11000	14000	0		Yes	Two times a year	0	None	154.0	78.0	76.0	A	82.7	S	2	
3	Bulacan	Angat	Buhay Pag-asa	Canal clearing and maintenance.	7000	10000	0	Yes		Two times a year	0	Implementation	153.0	77.0	76.0	A	75.7	S	2	
3	Bulacan	Angat	Buhay Pump	None	operation	9000	0	Yes		Two times a year	0	None	178.0	86.0	92.0	B	75.1	S	2	
3	Bulacan	Angat	Bulak-guinto	Irrigation service only.	10800	12600	0		Yes	Two times a year	0	None	200.0	100.0	100.0	A	71.9	F	2	
3	Bulacan	Angat	Bulcot	Coordination to LGU's for intervention on the squatters at the canal embankment.	15000	25000	0	Yes		Two times a year	0	None	198.0	99.0	99.0	A	71.0	F	2	
3	Bulacan	Angat	Bulusan Barkada	Coordination to LGU's for intervention on the squatters at the canal embankment.	15000	25000	0	Yes		Two times a year	0	None	159.0	79.0	80.0	B	75.1	S	2	
3	Bulacan	Angat	Buspa	Facility fuel and oil for canal surfacing.	8000	10000	0	Yes		Two times a year	0	None	186.0	93.0	93.0	A	82.6	S	2	
3	Bulacan	Angat	Buspan	Irrigation service only.	13500	15000	0		Yes	Two times a year	0	None	0.0	0.0	0.0	A	71.7	F	2	
3	Bulacan	Angat	Buspla	Irrigation service, Canal clearing, Minor rehabilitation	20000	30000	0	Yes		Two times a year	0	None	190.0	95.0	95.0	B	81.4	S	2	
3	Bulacan	Angat	Calantipay-Baliuag	Irrigation service only.	11000	14000	0		Yes	Two times a year	0	None	198.0	98.0	100.0	A	80.0	S	2	△
3	Bulacan	Angat	Calcalos	None	No Data	No Data	0		Yes	Two times a year	0	None	84.0	15.0	69.0	A	80.8	S	2	
3	Bulacan	Angat	Cambangal Malambot	Facility fuel and oil for canal surfacing.	No Data	10000	0	Yes		Two times a year	0	None	98.0	0.0	98.0	A	77.1	S	2	
3	Bulacan	Angat	Cansinala	Irrigation service only.	8000	14000	0		Yes	Two times a year	0	None	97.0	0.0	97.0	A	89.8	VS	2	△
3	Bulacan	Angat	Cantab	Irrigation service only.	10000	14000	0		Yes	Two times a year	0	None	100.0	0.0	100.0	A	94.6	VS	2	△
3	Bulacan	Angat	Consanjo	Irrigation service only.	9000	12000	0		Yes	Two times a year	0	None	192.0	96.0	96.0	A	78.5	S	2	
3	Bulacan	Angat	Dona Turo	Canal clearing and maintenance.	6000	8000	0	Yes		Two times a year	0	None	0.0	0.0	0.0	A	72.0	F	2	
3	Bulacan	Angat	Dulong Ilog	Canal clearing and maintenance.	No Data	9000	0	Yes		Two times a year	0	None	107.0	10.0	97.0	A	76.3	S	2	
3	Bulacan	Angat	Ibanian	None	No Data	No Data	0		Yes	Two times a year	0	None	91.0	91.0	0.0				2	
3	Bulacan	Angat	Iisang Damdamin	Facility fuel and oil for canal surfacing.	7000	10000	0	Yes		Two times a year	0	None	146.0	52.0	94.0	A	84.1	S	2	
3	Bulacan	Angat	Inabama	Irrigation service only.	10000	13000	0		Yes	Two times a year	0	None	87.0	0.0	87.0	A	78.3	S	2	⊙
3	Bulacan	Angat	Josephian	Irrigation service only.	12000	14000	0		Yes	Two times a year	0	None	152.0	52.0	100.0	A	78.7	S	2	⊙
3	Bulacan	Angat	Kadena	Facility fuel and oil for canal surfacing.	no data	10000	0	Yes		Two times a year	0	None	92.0	10.0	82.0	A	84.7	S	2	
3	Bulacan	Angat	Kapatiran	None	operation	10000	0	Yes		Two times a year	0	None	64.0	0.0	64.0	A	84.5	S	2	
3	Bulacan	Angat	Kukulisan	Merged to Linaw na Bukal	aw na Bukal	No Data	Merged to Linaw na Bukal	Merged to Linaw na Bukal	Merged to Linaw na Bukal	Merged to Linaw na Bukal	Merged to Linaw na Bukal	Merged to Linaw na Bukal	operational	operational	operational		71.9	F	2	

Table 2.2 List of IAs in Target NISs (3/6)

REG	PROV	NIS	IA NAME	Registration Date		Membership			Service		Average		Tenurial			Average Yield Per Hectares			Type of	ISF		Network	
				Date	No.	Potential	Actual Male	Female	Area (ha)	Farm Holding (ha)	Owner/ Cultivator	Tenant	CLT	Leased	as of last cropping (cavan)			Contract Unify Indiation	Collection	When Organized	As of CY 2001		
				Wet	Dry	3rd	0	Modified I & II	41.6	No Data	15000												
3	Bulacan	Angat	LBC	1999/7/16	10807	383	368	15	413.31	1.08	115	268	0	0	75	90	0	Modified I & II	41.6	No Data	15000		
3	Bulacan	Angat	Lagum	1990/7/23	179394	80	73	7	160.5	2.01	11	66	3	0	81	90	0	Modified I & II	40.7	32840	10554		
3	Bulacan	Angat	Lakas Magsasaka	2000/7/26	A200010142	583	367	13	563.68	0.97	143	145	92	0	80	75	0	Modified I & II	63.0	No Data	14994.8		
3	Bulacan	Angat	LATERAL J-1 I-A	1989/10/30	16112	622	488	0	560	0.9	97	198	73	120	85	82	0	Modified I & II	47.9	32811	No Data		
3	Bulacan	Angat	Linaw na Bukal	1999/9/16	A199913705	743	695	39	805	1.08	289	445	0	0	70	80	0	Modified I & II	61.9	No Data	8776		
3	Bulacan	Angat	Lolubal	2000/11/15	A200017020	180	164	16	139	0.77	9	168	3	0	75	81	0	Modified I & II	10.7	36762	18668.98		
3	Bulacan	Angat	Lusidar	1999/8/24	A199910808	224	214	10	373	1.67	101	50	30	43	78	85	0	Modified I & II	23.7	36300	4580		
3	Bulacan	Angat	M & M	2000/2/28	A2000460	73	69	4	100	1.37	58	15	0	0	60	85	0	Modified I & II	68.9	No Data	5000		
3	Bulacan	Angat	Macagatal	1998/2/17	8953	48	47	1	117	2.44	48	0	0	0	No Data	100	0	Modified I & II	100.0	numeration.	5000		
3	Bulacan	Angat	Malpla	1991/7/8	192939	201	190	11	315.47	1.57	100	50	10	41	82	92	0	Modified I & II	48.3	33136	No Data		
3	Bulacan	Angat	Mapitagan	1990/5/31	180981	103	88	0	150.6	1.46	17	46	25	0	76	82	0	Type I & II	55.0	No Data	2599.8		
3	Bulacan	Angat	Masikap	1982/6/27	105114	126	117	9	220	1.75	63	63	0	0	75	90	0	Modified I & II	36.0	numeration.	8000		
3	Bulacan	Angat	Matanglawin	2000/10/1	A200105424	141	137	4	261.6	1.86	95	43	0	0	85	87	0	Modified I & II	68.3	No Data	17000		
3	Bulacan	Angat	Matimbo (Kanluran)	1976/8/31	263	97	97	0	256.38	2.64	17	35	0	45	71	75.92	0	Modified I & II	36.1	28003	No Data		
3	Bulacan	Angat	Matiyaga	1991/5/6	190234	102	99	3	175	1.72	21	11	30	40	76	68	0	Type II	51.24	No Data	No Data		
3	Bulacan	Angat	Mulpa	1990/4/1	189913	142	138	4	215.35	1.52	125	17	0	0	85	87	0	Modified I & II	43.2	no data	15000		
3	Bulacan	Angat	Pacsan	1999/6/30	A199909257	88	79	9	91	1.03	20	28	0	40	89	90.66	0	Modified I & II	43.4	36257	4872		
3	Bulacan	Angat	Pagkakaisa	1986/6/4	133020	489	400	89	471.93	0.97	290	100	50	49	74	85	0	Modified Type	59.7	No Data	10310.18		
3	Bulacan	Angat	Pantubig-Turbine	1985/11/11	129780	17	14	3	16.5	0.97	2	0	0	15	80	90	0	Modified I & II	49.4	31307	7000		
3	Bulacan	Angat	Paraan	1990/7/24	179460	62	60	2	110.75	1.79	50	10	0	2	87	88	0	Modified I & II	25.7	No Data	25000		
3	Bulacan	Angat	Parulan Halang United	1999/8/31	13200	54	54	0	62.54	1.16	8	46	0	0	77	85	0	Modified I & II	100.0	36403	No Data		
3	Bulacan	Angat	Pasulong	1990/4/26	178546	82	59	0	96.37	1.18	19	40	0	0	84	90	0	Type I & II	30.0	no data	9403		
3	Bulacan	Angat	Pataca	1998/7/21	10290	230	228	2	256	1.11	69	161	0	0	No Data	90	0	Modified I & II	64.7	counterpart.	2000		
3	Bulacan	Angat	Picaba	1999/8/2	199913706	442	354	0	518.36	1.17	177	145	0	17	77	82	0	Type I & II	60.0	No Data	11648		
3	Bulacan	Angat	Piel San Jose	1988/12/13	158039	58	50	8	84.29	1.45	28	30	0	0	80	95	0	Modified I & II	63.4	counterpart.	45000		
3	Bulacan	Angat	Pisacamba	1991/7/15	193251	225	194	31	274.82	1.22	15	103	0	107	87	99	0	Modified I & II	55.2	33211	6160		
3	Bulacan	Angat	Pisan	1990/7/31	179598	118	94	0	190	1.61	18	26	30	20	64	55	0	Modified I & II	8.3	33085	No Data		
3	Bulacan	Angat	Plagui	1998/8/21	A199812105	455	435	20	482	1.06	201	199	55	0	80	82	0	Modified I & II	31.8	No Data	14880		
3	Bulacan	Angat	Plaridel-Malolos	2001/6/1	18158	163	150	13	186	1.15	70	47	30	16	78	84	0	Modified I & II	30.2	No Data	No Data		
3	Bulacan	Angat	Pundal	2001/1/19	3879	39	36	3	86	2.21	12	27	0	0	No Data	100	0	Modified I & II	87.4	ad surfacing	2000		
3	Bulacan	Angat	Pusamatadam	1990/8/29	180830	213	190	23	405.01	1.9	150	30	13	20	80	87	0	Modified I & II	37.2	No Data	18187.38		
3	Bulacan	Angat	Sanmicon	1990/12/5	182297	156	120	0	372.3	2.39	55	65	0	0	No Data	80	0	Type I & II	72.0	No Data	13435.2		
3	Bulacan	Angat	SBM (Inabatan)	1998/1/17	A199809824	420	405	15	325	0.77	390	30	0	0	85	85	0	Modified I & II	21.4	No Data	6000		
3	Bulacan	Angat	Sebastisan	2000/9/4	11821	304	156	0	203	0.67	26	73	20	37	82	90.75	0	Modified I & II	51.2	36773	No Data		
3	Bulacan	Angat	SIPPM	2000/1/12	461	61	58	3	136	2.23	19	42	0	0	No Data	100	0	Modified I & II	66.5	Others.	2000		
3	Bulacan	Angat	SISJ	1999/6/30	9261	83	81	2	188.63	2.27	33	50	0	0	No Data	90	0	Modified I & II	74.9	ad surfacing	2000		
3	Bulacan	Angat	South Lower Maasim	1996/9/19	981	56	55	1	110	1.96	56	0	0	0	No Data	95	0	Modified I & II	48.3	counterpart.	4000		
3	Bulacan	Angat	Sulivan Tangos	1990/10/5	182301	90	74	16	94.69	1.05	45	45	0	0	70	95	0	Modified I & II	46.3	ad surfacing	7000		
3	Bulacan	Angat	Talampas San Pedro	1987/4/30	140353	75	68	3	70	0.93	36	20	10	0	83	90	0	Modified I & II	41.6	No Data	No Data		
3	Bulacan	Angat	Teobacu	2001/4/19	5430	100	97	3	194.55	1.95	30	70	0	0	No Data	90	0	Modified I & II	42.9	numeration.	2000		
3	Bulacan	Angat	Timadampol	1990/8/31	180995	290	240	50	298.18	1.03	200	20	30	40	80	86	0	Modified I & II	23.5	No Data	20000		
3	Bulacan	Angat	Timata	1990/2/18	187144	150	125	25	173.2	1.15	70	10	30	40	80	86	0	Modified I & II	35.1	No Data	No Data		
3	Bulacan	Angat	TMBA	1999/10/1	A199915246	71	60	11	93	1.31	31	40	0	0	85	87	0	No contract	0	No Data	No Data		
3	Bulacan	Angat	UPPP	01/17/01	A200017022	463	415	48	486.73	1.05	80	250	0	133	87	99.6	0	Modified I & II	62.2	36423	17470		
3	Bulacan	Angat	V - R	1994/9/20	3635	204	170	7	112.5	0.55	66	100	6	0	90	93	0	Modified I & II	74.6	No Data	2260		
6	Negros Occide	Bago	Abduf IA Inc.	06/11/05	I000926	195	93	13	690	3.54	54	20	5	11	95	83	0	Type I & II	34	No Data	No Data		
6	Negros Occide	Bago	Abudamatip IA Inc.	06/13/05	EN092000017	320	155	45	680	2.13	101	39	9	21	95	83	0	Type I & II	35	No Data	No Data		
6	Negros Occide	Bago	Amana IA Inc.	06/13/05	EN091002015	400	226	17	730	1.83	132	36	22	11	84	82	0	Type I & II	43	No Data	No Data		
6	Negros Occide	Bago	Atidu IA Inc.	06/13/05	EN217	217	70	38	590	2.72	55	21	5	11	82	84	0	Type I & II	33	No Data	No Data		
6	Negros Occide	Bago	Banasala IA Inc.	06/11/05	I001035	500	363	97	914	1.83	290	58	27	45	97	85	0	Type I & II	30	No Data	No Data		

Table 2.2 List of IAs in Target NISs (4/6)

REG	PROV	NIS	IA NAME	Other Activities/Services	Average Family Income			Does IA prepared O&M Plan					Annual			IA GROUP NO.	GRAND Rating	FUNCTIO NALITY #1	NIS GROUP NO.	Select
					Wet	Dry	3rd	Written	Yes	No	Other Plans	Cropping Intensity	W	D						
								Unwritten	Freq											
3	Bulacan	Angat	LBC	Canal clearing and maintenance.	8000	12000	0	Yes		Two times a year	0	None	164.0	75.0	89.0		82.5	S	2	
3	Bulacan	Angat	Lagum	None	No Data	No Data	0		Yes	Two times a year	0	None	169.0	93.0	76.0	A	80.9	S	2	
3	Bulacan	Angat	Lakas Magsasaka	Irrigation service, Canal clearing, Minor rehabilitation	15000	20000	0	Yes		Two times a year	0	None	132.0	66.0	66.0	A	77.2	S	2	
3	Bulacan	Angat	LATERAL J-1 I-A	Irrigation service only.	14040	14940	0		Yes	Two times a year	0	None	115.0	55.0	60.0		75.4	S	2	
3	Bulacan	Angat	Linaw na Bukal	Coordination to LGU's for intervention on the squatters at the canal embankment.	15000	5000	0	Yes		Two times a year	0	None	194.0	98.0	96.0	A	85.5	VS	2	
3	Bulacan	Angat	Lolubal	None	No Data	No Data	0		Yes	Two times a year	0	None	109.0	52.0	57.0	A	82.6	S	2	
3	Bulacan	Angat	Lusidar	None	No Data	No Data	0		Yes	Two times a year	0	None	198.0	99.0	99.0	A	76.7	S	2	
3	Bulacan	Angat	M & M	Irrigation service only.	10000	14000	0		Yes	Two times a year	0	None	99.0	0.0	99.0	A	73.8	F	2	
3	Bulacan	Angat	Macagatal	Canal clearing and maintenance.	No Data	9000	0	Yes		Two times a year	0	None	56.0	0.0	56.0	A	80.6	S	2	
3	Bulacan	Angat	Malpla	None	No Data	No Data	0		Yes	Two times a year	0	None	105.0	48.0	57.0	A	56.0	P	2	
3	Bulacan	Angat	Mapitagan	Irrigation service only.	9000	11000	0		Yes	Two times a year	0	None	180.0	90.0	90.0	C	69.4	F	2	Δ
3	Bulacan	Angat	Masikap	Canal clearing and maintenance.	0	8000	0	Yes		Two times a year	0	None	114.0	36.0	78.0	B	73.6	F	2	
3	Bulacan	Angat	Matanglawin	Irrigation service only.	13000	18000	0		Yes	Two times a year	0	None	99.0	0.0	99.0	A	85.7	VS	2	
3	Bulacan	Angat	Matimbo (Kanluran)	Irrigation service only.	14400	14400	0		Yes	Two times a year	0	None	31.0	17.0	14.0	A	75.3	S	2	
3	Bulacan	Angat	Matiyaga	None	5000	5000	0	0	0	Two times a year	0	None	173.0	86.0	87.0	A	79.9	S	2	Δ
3	Bulacan	Angat	Mulpa	Irrigation service only.	12000	17000	0		Yes	Two times a year	0	None	145.0	55.0	90.0	A	74.2	F	2	
3	Bulacan	Angat	Pacsan	Irrigation service, Canal clearing, Minor rehabilitation	15000	17000	0		Yes	Two times a year	0	Construction	196.0	100.0	96.0	B	79.6	S	2	
3	Bulacan	Angat	Pagkakaisa	Irrigation service only.	No Data	No Data	0	0	0	Two times a year	0	None	126.0	38.0	88.0		73.9	F	2	
3	Bulacan	Angat	Pantubig-Turbine	Irrigation service, Canal clearing, Minor rehabilitation	12000	14000	0		Yes	Two times a year	0	None	47.0	0.0	47.0	A	79.0	S	2	
3	Bulacan	Angat	Paraan	Irrigation service only.	11000	15000	0		Yes	Two times a year	0	None	97.0	0.0	97.0	C	77.7	S	2	
3	Bulacan	Angat	Parulan Halang United	Irrigation service only.	13500	14400	0		Yes	Two times a year	0	None	158.0	85.0	73.0	A	78.4	S	2	
3	Bulacan	Angat	Pasulong	Irrigation service only.	10000	12000	0		Yes	Two times a year	0	None	200.0	100.0	100.0	A	80.5	S	2	
3	Bulacan	Angat	Pataca	Facility fuel and oil for canal surfacing.	No Data	12000	0	Yes		Two times a year	0	None	76.0	0.0	76.0	A	81.0	S	2	
3	Bulacan	Angat	Picaba	Irrigation service only.	11000	13000	0		Yes	Two times a year	0	None	190.0	95.0	95.0	A	80.4	S	2	⊙
3	Bulacan	Angat	Piel San Jose	Facility fuel and oil for canal surfacing.	8000	10000	0	Yes		Two times a year	0	Implementatio	150.0	75.0	75.0	A	85.1	VS	2	
3	Bulacan	Angat	Pisacamba	Irrigation service, Canal clearing, Minor rehabilitation	14000	18000	0		Yes	Two times a year	0	None	175.0	75.0	100.0	A	75.3	S	2	
3	Bulacan	Angat	Pisan	Irrigation service only.	9000	9000	0		Yes	Two times a year	0	None	31.0	9.0	22.0	A	62.8	P	2	
3	Bulacan	Angat	Plagui	Irrigation service, Canal clearing, Minor rehabilitation	20000	30000	0	Yes		Two times a year	0	None	199.0	100.0	99.0	B	80.4	S	2	
3	Bulacan	Angat	Plaridel-Malolos	No data	No data	No data	No data	No data	No data	No data	No data	No data	No data	No data	No data	A	82.2	S	2	
3	Bulacan	Angat	Pundal	Canal clearing and maintenance.	No Data	10000	0	Yes		Two times a year	0	None	100.0	0.0	100.0	A	87.4	VS	2	
3	Bulacan	Angat	Pusamatadam	Irrigation service only.	No Data	No Data	0	0	0	Two times a year	0	None	106.0	10.0	96.0	A	78.5	S	2	
3	Bulacan	Angat	Sanmicon	Irrigation service only.	No Data	14000	0		Yes	Two times a year	0	None	40.0	0.0	40.0	A	79.5	S	2	
3	Bulacan	Angat	SBM (Inabatan)	Irrigation service only.	11000	16000	0		Yes	Two times a year	0	None	113.0	33.0	80.0	A	77.8	S	2	
3	Bulacan	Angat	Sebastisan	Irrigation service only.	12600	13500	0		Yes	Two times a year	0	None	124.0	59.0	65.0	A	70.9	F	2	
3	Bulacan	Angat	SJPPMD	Facility fuel and oil for canal surfacing.	No Data	10000	0	Yes		Two times a year	0	None	50.0	0.0	50.0		77.6	S	2	
3	Bulacan	Angat	SISJ	Canal clearing and maintenance.	No Data	12000	0	Yes		Two times a year	0	None	100.0	0.0	100.0	A	80.2	S	2	
3	Bulacan	Angat	South Lower Maasim	Facility fuel and oil for canal surfacing.	No Data	10000	0	Yes		Two times a year	0	None	91.0	0.0	91.0	A	78.7	S	2	
3	Bulacan	Angat	Suivan Tangos	Canal clearing and maintenance.	5000	7000	0	Yes		Two times a year	0	None	154.0	77.0	77.0		79.1	S	2	
3	Bulacan	Angat	Talampas San Pedro	Coordination to LGU's for intervention on the squatters at the canal embankment.	30000	30000	0		Yes	Two times a year	0	Construction	73.0	37.0	36.0	A	62.9	P	2	
3	Bulacan	Angat	Teobacu	Canal clearing and maintenance.	No Data	10000	0	Yes		Two times a year	0	None	64.0	0.0	64.0	A	73.1	F	2	
3	Bulacan	Angat	Timadampol	Irrigation service only.	No Data	No Data	0	0	0	Two times a year	0	None	123.0	34.0	89.0	A	73.0	F	2	
3	Bulacan	Angat	Timata	Irrigation service only.	No Data	No Data	0	0	0	Two times a year	0	None	171.0	71.0	100.0	A	72.2	F	2	
3	Bulacan	Angat	TMBB	Irrigation service only.	10000	14000	0		Yes	Two times a year	0	None	0.0	0.0	0.0	B	65.8	F	2	
3	Bulacan	Angat	UPPP	Irrigation service, Canal clearing, Minor rehabilitation	13000	14000	0	0	0	Two times a year	0	None	140.0	63.0	77.0	A	82.0	S	2	
3	Bulacan	Angat	V - R	Irrigation service, Canal clearing, Minor rehabilitation	20000	30000	0		Yes	Two times a year	0	None	181.0	88.0	93.0	A	76.1	S	2	
6	Negros Occide	Bago	Abduf IA Inc.	tree planting once ayear at Suague Walk Shed	23000	37825	0	0	0	Two times a year	0	None	134.00	67.00	67.00	A	56.4	P	2	Δ
6	Negros Occide	Bago	Abudamatip IA Inc.	None	23000	37825	0	Yes	Every Cropping Season	0	None	147.00	91.00	56.00	A	56.8	P	2		
6	Negros Occide	Bago	Amana IA Inc.	None	18600	35275	0	Yes	Every Cropping Season	0	None	159.00	81.00	78.00	A	63.0	P	2	⊙	
6	Negros Occide	Bago	Atidu IA Inc.	None	17800	37825	0	Yes	Every Cropping Season	0	None	107.00	53.00	54.00	C	64.5	P	2	⊙	
6	Negros Occide	Bago	Banasala IA Inc.	None	23800	38675	0	Yes	Every Cropping Season	0	None	155.00	75.00	80.00	B	62.2	P	2	⊙	

Table 2.2 List of IAs in Target NISs (5/6)

REG	PROV	NIS	IA NAME	Registration Date		Membership			Service Area (ha)	Average		Tenurial				Average Yield Per Hectares			Type of	ISF	Networth		
				Date	No.	Potential	Actual Male	Female		Farm Holding (ha)	Owner/ Cultivator	Tenant	CLT	Leased	as of last cropping (cavan)			Contract Unify Indiation			Collection	When Organized	As of CY 2001
				Wet	Dry	3rd	0	1		2													
6	Negros Occide	Bago	Busdcaid IA Inc.	06/13/05	EN091001855	330	260	56	916	2.78	160	61	15	33	82	82	0	Type I & II	40	No Data	No Data		
6	Negros Occide	Bago	Casabay IA Inc.	06/11/05	1001035	305	200	45	891	2.92	124	47	11	25	77	85	0	Type I & II	65	No Data	No Data		
6	Negros Occide	Bago	Guinto-Batu IA Inc.	06/13/05	EN091001990	200	94	24	864	4.32	60	22	6	12	74	77	0	Type I & II	33	No Data	No Data		
6	Negros Occide	Bago	Lateral C-1a	06/07/05	130689	300	100	30	310	1.03	65	25	6	14	85	86	0	Type I & II	11	No Data	No Data		
6	Negros Occide	Bago	Man	06/13/05	EN091001990	450	316	52	860	1.91	199	35	17	50	78	81	0	Type I & II	36	No Data	No Data		
6	Negros Occide	Bago	Palaba IA Inc.	06/13/05	EN091001910	227	182	15	810	3.57	100	38	9	20	81	80	0	Type I & II	40	No Data	No Data		
6	Negros Occide	Bago	Pamaoa IA Inc.	06/11/05	10000924	353	290	25	800	2.27	159	62	14	33	77	81	0	Type I & II	20	No Data	No Data		
6	Negros Occide	Bago	Scadlan IA Inc.	06/13/05	EN091001947	400	308	50	860	2.15	181	69	17	37	77	82	0	Type I & II	80	No Data	No Data		
6	Negros Occide	Bago	Sto Pama	06/11/05	1000961	241	173	28	760	3.15	102	39	9	21	77	81	0	Type I & II	34	No Data	No Data		
6	Negros Occide	Bago	Tabunan IA Inc.	06/10/05	1000192	255	92	33	355	1.39	63	24	6	13	81	87	0	Type I & II	24	No Data	No Data		
6	Negros Occide	Bago	Valsen IA Inc.	06/11/05	10001300	316	239	9	750	2.37	125	48	12	26	65	81	0	Type I & II	30	No Data	No Data		
6	Negros Occide	Bago	WMPA	06/11/05	102458	430	322	70	920	2.14	198	76	18	41	84	83	0	Type I & II	59	No Data	No Data		
9	Zamboanga de Labangan		Muchrist IA Inc	09/30/93	93004258	810	757	13	1632	2.01	331	23	61	232	72	80	0	No Contract	72	1200	981		
9	Zamboanga de Labangan		SANDATA IA, INC.	01/12/94	094-000145	798	754	14	1563	1.96	359	2	19	229	74	82	0	No Contract	65	No Data	No Data		
10	Bukidnon	Pulangui	Blamcip IA	05/24/90	3973	669	527	142	1054.33	1.58	423	123	51	31	71.2	84.6	0	Type I & II	54.96	21423.55	29283.9		
10	Bukidnon	Pulangui	Kahaponan IA	07/31/86	134167	334	261	73	463.26	1.39	211	62	25	24	77.2	73.3	0	Type I & II	86.7	14364.95	22366.69		
10	Bukidnon	Pulangui	Kahugpungan IA	08/20/91	5947	542	437	105	792.63	1.46	343	100	41	23	79.3	71.9	0	Type I & II	33.55	5230.49	6720.03		
10	Bukidnon	Pulangui	Kass IA	09/12/96	186	504	408	96	791	1.57	319	93	38	20	74.5	84.1	0	Type I & II	45.98	79910.65	44840		
10	Bukidnon	Pulangui	Katalisayan	01/23/01	H200100012	58	46	12	58.54	1.01	37	11	4	4	68.5	80.1	0	Type I & II	29.53	No Data	4728		
10	Bukidnon	Pulangui	Laligan IA	05/05/90	3970	317	244	73	517.93	1.63	201	58	24	21	68.2	79.8	0	Type I & II	50.6	119520.6	125823		
10	Bukidnon	Pulangui	Mackapima IA	05/24/90	3972	310	237	73	624.49	2.01	197	57	23	15	69.1	79.7	0	Type I & II	47.77	9602	158857.9		
10	Bukidnon	Pulangui	Mad IA	05/24/90	3971	557	471	86	897.8	1.61	352	103	42	40	70.5	72.8	0	Type I & II	46.78	174037.55	133807.13		
10	Bukidnon	Pulangui	Nabag-O IA	07/23/70	41779	471	373	98	682.46	1.45	335	0	86	4	81.3	83.7	0	Type I & II	54.37	18315.3	9773.86		
10	Bukidnon	Pulangui	Paitan IA	08/15/83	115151	298	229	69	438.91	1.47	188	55	23	13	68.3	78.5	0	Type I & II	40.68	179.762	127520		
10	Bukidnon	Pulangui	Paradise G5 and G6 IA	09/24/97	581	443	298	145	635.75	1.44	280	82	33	27	53.9	72.5	0	Type I & II	72.17	No Data	7240.8		
10	Bukidnon	Pulangui	Pintera IA	04/08/98	182	64	58	6	170.6	2.67	40	12	5	6	71	80.1	0	Type I & II	56.61	No Data	4055.04		
10	Bukidnon	Pulangui	Sass IA	09/12/96	187	376	310	66	614.06	1.63	238	70	28	4	89.3	80.7	0	Type I	37.25	48327.43	26683.7		
10	Bukidnon	Pulangui	Sinait Dagat- Kidavao	12/28/83	118345	458	368	90	666.26	1.45	290	84	35	18	63.6	81.5	0	Type I & II	52.41	6721.58	24526.12		
10	Bukidnon	Pulangui	Ssv IA	03/27/90	3718	646	476	170	758.52	1.17	409	119	49	43	77.1	72.4	0	Type I & II	98.74	17423.21	44245.77		
10	Bukidnon	Pulangui	Tongan-Tongan IA	07/19/84	121643	447	372	75	729.45	1.63	282	83	34	16	70.4	82.4	0	Type I & II	65.14	114474.52	143195.01		
10	Bukidnon	Pulangui	Veterans Plain IA	03/27/90	3719	202	158	44	277.35	1.37	128	37	15	10	57.6	82.5	0	Type I & II	40.53	37486.95	112870.39		
11	Davao del Sur	Mal	Burlan	06/28/99	00558	326	124	0	326.61	1	74	50	0	0	71	79	0	Type I & II	86	No Data	15513		
11	Davao del Sur	Mal	Kabula	05/05/97	00457	150	146	0	258	1.72	66	80	0	0	95	84	0	Type I & II	79	No Data	50000		
11	Davao del Sur	Mal	Kamofia	07/05/99	00599	100	90	0	87.47	0.87	63	27	0	0	45	45	0	Type I & II	100	No Data	6000		
11	Davao del Sur	Mal	Kapoc	09/03/96	00346	112	89	2	129.39	1.16	53	38	0	0	95	98	0	Type I & II	92	No Data	7000		
11	Davao del Sur	Mal	Kimia	07/31/98	00843	148	72	0	134.52	0.91	36	36	0	0	98	96	0	Type I & II	91	No Data	14349.35		
11	Davao del Sur	Mal	Labakafia	05/26/00	00421	395	175	0	307.84	0.78	123	52	0	0	75	88	0	Type I & II	86	No Data	500		
11	Davao del Sur	Mal	Lagomia	07/17/01	00680	141	52	0	156.24	1.11	34	18	0	0	72	68	0	Type I & II	82	No Data	2000		
11	Davao del Sur	Mal	Lisa	01/03/90	004930	302	104	0	321.93	1.07	47	57	0	0	98	80	0	Type I & II	90	No Data	900		
11	Davao del Sur	Mal	Lotofia	07/12/99	00631	200	70	0	173.39	0.87	14	56	0	0	90	87	0	Type I & II	83	No Data	50000		
11	Davao del Sur	Mal	Malkaira	08/08/96	00478	105	102	0	89.35	0.85	31	71	0	0	43	No Data	0	Type I & II	100	No Data	100		
11	Davao del Sur	Mal	Mamdabia	02/05/99	00103	144	108	0	180.47	1.25	65	43	0	0	97	96	0	Type I & II	86	No Data	40597.85		
11	Davao del Sur	Mal	Safa	02/23/00	00175	246	160	0	262.45	1.07	64	96	0	0	67	72	0	Type I & II	91	No Data	20000		
11	Davao del Sur	Mal	Samaka	10/29/96	00329	109	103	0	126.15	1.16	31	72	0	0	No Data	No Data	0	Type I & II	0	No Data	1500		
11	Davao del Sur	Mal	Tifia	04/30/97	00440	135	89	7	94	0.7	38	58	0	0	98	90	0	Type I & II	100	No Data	1650		
11	Davao del Sur	Mal	Weslasufia	01/20/98	00064	156	106	6	160.81	1.03	78	34	0	0	95	80	0	Type I & II	74	No Data	10000		

Table 2.2 List of IAs in Target NISs (6/6)

REG	PROV	NIS	IA NAME	Other Activities/Services	Average Family Income			Does IA prepared O&M Plan				Annual									
					Wet	Dry	3rd	Written	Yes	No	Other Plans	Cropping Intensity	W	D	IA GROUP NO.	GRAND Rating	FUNCTIONALITY #1	NIS GROUP NO.	Select		
								Unwritten	Freq												
6	Negros Occide	Bago	Busdcaid IA Inc.	None	17800	34850	0	Yes	Every Cropping Season	0	None	156.00	78.00	78.00	B	65.3	F	2			
6	Negros Occide	Bago	Casabay IA Inc.	None	15800	34425	0	Yes	Every Cropping Season	0	None	88.00	44.00	44.00	B	48.4	P	2			
6	Negros Occide	Bago	Quinto-Batu IA Inc.	None	14600	34425	0	Yes	Every Cropping Season	0	None	79.00	49.00	30.00	C	49.9	P	2			
6	Negros Occide	Bago	Lateral C-1a	None	19000	36550	0	Yes	Every Cropping Season	0	None	122.20	32.00	90.20	C	57.7	P	2	△		
6	Negros Occide	Bago	Man	None	16200	34000	0	Yes	Every Cropping Season	0	None	83.00	52.00	31.00	C	59.8	P	2			
6	Negros Occide	Bago	Palaba IA Inc.	None	17400	33575	0	Yes	Every Cropping Season	0	None	101.00	51.0	50.00	C	58.5	P	2			
6	Negros Occide	Bago	Pamaoa IA Inc.	None	15800	33575	0	Yes	Every Cropping Season	0	None	125.00	64.0	61.00	B	53.5	P	2			
6	Negros Occide	Bago	Scadlan IA Inc.	None	15800	32300	0	Yes	Every Cropping Season	0	None	129.00	69.0	60.00	B	66.5	F	2			
6	Negros Occide	Bago	Sto Pama	None	15800	34000	0	Yes	Every Cropping Season	0	None	66.00	32.0	34.00	C	49.7	P	2			
6	Negros Occide	Bago	Tabunan IA Inc.	None	17400	35700	0	Yes	Every Cropping Season	0	None	111.00	23.0	88.00	B	61.0	P	2	△		
6	Negros Occide	Bago	Valsen IA Inc.	None	11000	34000	0	Yes	Every Cropping Season	0	None	94.00	54.0	40.00	C	55.4	P	2			
6	Negros Occide	Bago	WMPA	None	18600	35700	0	Yes	Every Cropping Season	0	None	124.00	67.0	57.00	C	63.8	P	2	△		
9	Zamboanga de Labangan		Muchrist IA Inc	None	8100	8100	0	Yes	Once a year	0	None	169.00	87	82.00	B	37.8	P	2	⊙		
9	Zamboanga de Labangan		SANDATA IA, INC.	None	8950	53920	0	Yes	Two times a year	0	None	161.00	83	78.00	A	45.2	P	2	⊙		
10	Bukidnon	Pulangui	Blamcip IA	(Cooperative, accept Mortgage, involved in NGO/GO Sustainable Agriculture)	40964	50068	0	Yes	Two times a year	0	Org'l & Fin'l Pl	199.00	100	99.00	A	52.1	P	2	△		
10	Bukidnon	Pulangui	Kahapongan IA	(Cooperative, accept Mortgage, involved in NGO/GO Sustainable Agriculture)	39901	38338	0	Yes	Two times a year	0	Org'l & Fin'l Pl	195.00	99	96.00	A	51.4	P	2			
10	Bukidnon	Pulangui	Kahugpungan IA	(Cooperative, accept Mortgage, involved in NGO/GO Sustainable Agriculture)	43097	39782	0	Yes	Two times a year	0	Org'l & Fin'l Pl	196.00	100	96.00	C	57.3	P	2	⊙		
10	Bukidnon	Pulangui	Kass IA	(Cooperative, accept Mortgage, involved in NGO/GO Sustainable Agriculture)	42723	50154	0	Yes	Two times a year	0	Org'l & Fin'l Pl	184.00	94	90.00	C	61.2	P	2			
10	Bukidnon	Pulangui	Katalisayan	(Cooperative, accept Mortgage, involved in NGO/GO Sustainable Agriculture)	25748	30225	0	Yes	Two times a year	0	Org'l & Fin'l Pl	180.00	90	90.00	C	33.5	P	2	△		
10	Bukidnon	Pulangui	Laligan IA	(Cooperative, accept Mortgage, involved in NGO/GO Sustainable Agriculture)	41818	49090	0	Yes	Two times a year	0	Org'l & Fin'l Pl	174.00	87	87.00	C	78.8	S	2			
10	Bukidnon	Pulangui	Mackapima IA	(Cooperative, accept Mortgage, involved in NGO/GO Sustainable Agriculture)	46256	66564	0	Yes	Two times a year	0	Org'l & Fin'l Pl	186.00	96	90.00	C	73.3	F	2	△		
10	Bukidnon	Pulangui	Mad IA	(Cooperative, accept Mortgage, involved in NGO/GO Sustainable Agriculture)	42323	44050	0	Yes	Two times a year	0	Org'l & Fin'l Pl	181.00	95	86.00	A	44.5	P	2	⊙		
10	Bukidnon	Pulangui	Nabag-O IA	(Cooperative, accept Mortgage, involved in NGO/GO Sustainable Agriculture)	43628	45408	0	Yes	Two times a year	0	Org'l & Fin'l Pl	196.00	98	98.00	B	59.5	P	2			
10	Bukidnon	Pulangui	Paitan IA	(Cooperative, accept Mortgage, involved in NGO/GO Sustainable Agriculture)	37947	44596	0	Yes	Two times a year	0	Org'l & Fin'l Pl	200.00	100	100.00	C	65.2	F	2			
10	Bukidnon	Pulangui	Paradise G5 and G6 IA	(Cooperative, accept Mortgage, involved in NGO/GO Sustainable Agriculture)	28533	39404	0	Yes	Two times a year	0	Org'l & Fin'l Pl	198.00	100	98.00	C	38.1	P	2	⊙		
10	Bukidnon	Pulangui	Pintera IA	(Cooperative, accept Mortgage, involved in NGO/GO Sustainable Agriculture)	71376	80487	0	Yes	Two times a year	0	Org'l & Fin'l Pl	176.00	88	88.00	C	74.4	F	2	△		
10	Bukidnon	Pulangui	Sass IA	(Cooperative, accept Mortgage, involved in NGO/GO Sustainable Agriculture)	50185	46324	0	Yes	Two times a year	0	Org'l & Fin'l Pl	196.00	100	96.00	C	57.0	P	2			
10	Bukidnon	Pulangui	Sinait Dagat- Kidavao	(Cooperative, accept Mortgage, involved in NGO/GO Sustainable Agriculture)	34431	45641	0	Yes	Two times a year	0	Org'l & Fin'l Pl	193.00	100	93.00				2			
10	Bukidnon	Pulangui	Ssv IA	(Cooperative, accept Mortgage, involved in NGO/GO Sustainable Agriculture)	33525	32212	0	Yes	Two times a year	0	Org'l & Fin'l Pl	193.00	100	93.00	A	80.9	S	2			
10	Bukidnon	Pulangui	Tongan-Tongan IA	(Cooperative, accept Mortgage, involved in NGO/GO Sustainable Agriculture)	42633	50047	0	Yes	Two times a year	0	Org'l & Fin'l Pl	192.00	96	96.00	C	53.1	P	2			
10	Bukidnon	Pulangui	Veterans Plain IA	(Cooperative, accept Mortgage, involved in NGO/GO Sustainable Agriculture)	29180	41990	0	Yes	Two times a year	0	Org'l & Fin'l Pl	196.00	98	98.00	A	68.2	F	2			
11	Davao del Sur	Mal	Burlan	Livelihood program	18875	16250	0		Yes Two times a year	0	None	195.00	98	97.00	A	72.9	F	3	⊙		
11	Davao del Sur	Mal	Kabula	Livelihood program	40000	31800	0		Yes Two times a year	0	None	200.00	100	100.00	A	77.7	S	3	⊙		
11	Davao del Sur	Mal	Kamofia	Coop/livelihood program	3371	3371	0		Yes Two times a year	0	None	200.00	100	100.00	A	69.7	F	3	⊙		
11	Davao del Sur	Mal	Kapoc	None	26000	27000	0		Yes Two times a year	0	None	200.00	100	100.00	A	80.5	S	3			
11	Davao del Sur	Mal	Kimia	Livelihood program coop	21350	20700	0		Yes Two times a year	0	None	200.00	100	100.00	B	99.4	OS	3			
11	Davao del Sur	Mal	Labakafia	None	11600	15400	0		Yes Two times a year	0	None	182.00	92	90.00	A	65.0	P	3	⊙		
11	Davao del Sur	Mal	Lagomia	None	15400	13750	0		Yes Two times a year	0	None	184.00	93	91.00	A	76.2	S	3			
11	Davao del Sur	Mal	Lisa	None	27000	18000	0		Yes Two times a year	0	None	200.00	100	100.00		69.9	F	3			
11	Davao del Sur	Mal	Lotofia	None	18000	17000	0		Yes Two times a year	0	None	180.00	91	89.00	C	73.1	F	3	⊙		
11	Davao del Sur	Mal	Malkaira	None	2656	No Data	0		Yes Two times a year	0	None	200.00	100	100.00	A	87.7	VS	3	⊙		
11	Davao del Sur	Mal	Mamdasia	None	29000	28750	0		Yes Two times a year	0	None	199.00	100	99.00	B	93.0	VS	3			
11	Davao del Sur	Mal	Safa	None	12850	14800	0	Yes	Two times a year	0	skills training l	182.00	91	91.00	A	74.9	F	3			
11	Davao del Sur	Mal	Samaka	None	No Data	No Data	0		Yes Two times a year	0	None	no data	no data	no data	A	90.9	VS	3	⊙		
11	Davao del Sur	Mal	Tifa	Cooperative	15000	14000	0		Yes Two times a year	0	None	144.00	73	71.00	A	82.2	S	3			
11	Davao del Sur	Mal	Weslasufia	None	23000	17500	0		Yes Two times a year	0	None	200.00	100	100.00	A	72.4	F	3	⊙		

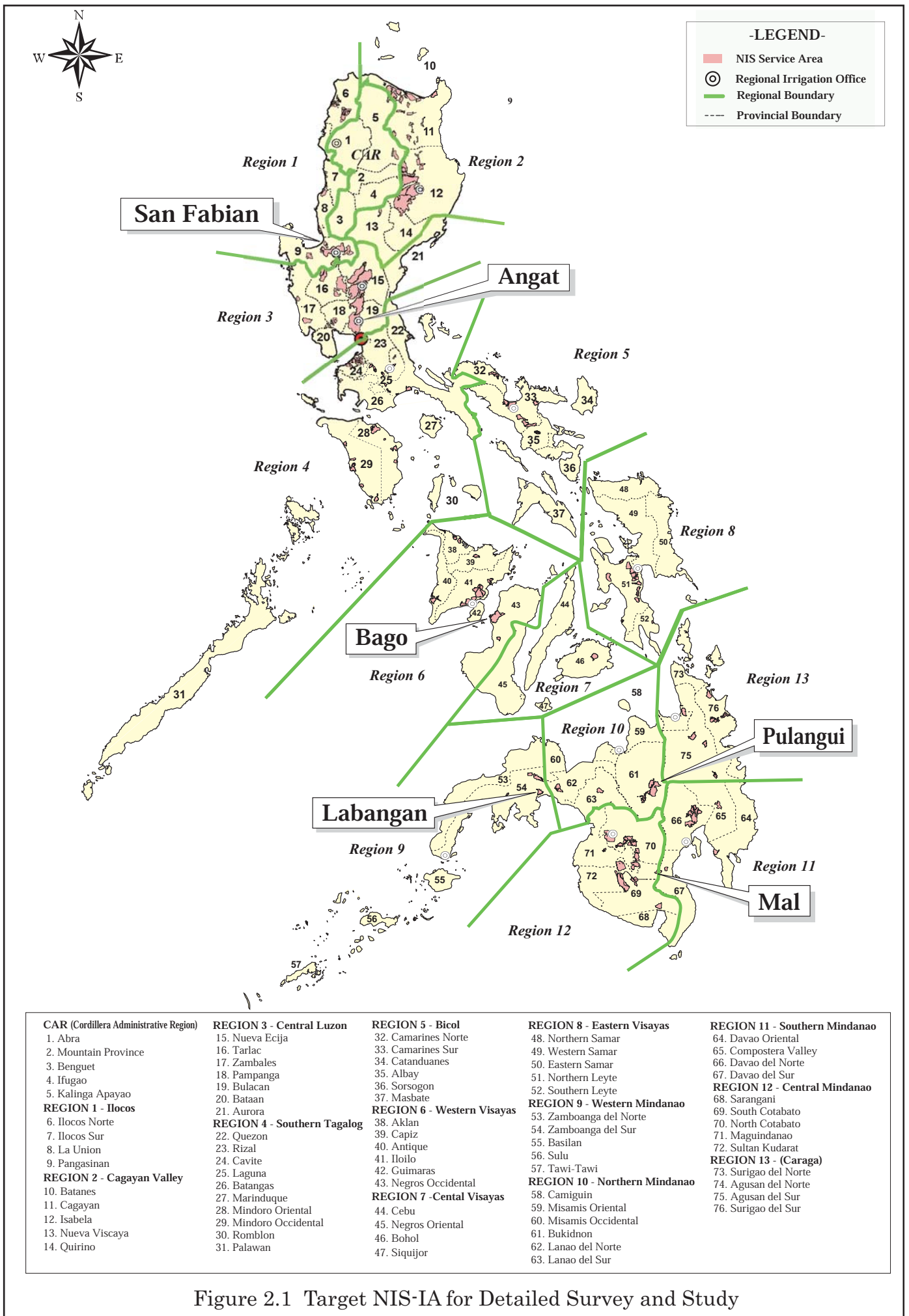


Figure 2.1 Target NIS-IA for Detailed Survey and Study