

**ANNEX B**

*Participatory Rural Appraisal  
and  
Public Consultation Seminar*



**THE STUDY ON JALOUR IRRIGATION SYSTEMS  
AND RURAL AREA DEVELOPMENT**

**ANNEX - B**

**Participatory Rural Appraisal and Public Consultation Seminar**

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## **I. INTRODUCTION**

The participatory rural appraisal (PRA) and public consultation seminar (Seminar) were contracted to Small Economic Enterprises Development, Inc. (SEED) having its principal office at Unit 906 Horizon Condominium, Meralco Avenue, Ortigas Center, Pasig City, Philippines. The work of SEED started immediately after signing the contract on September 30, 1997.

The PRA session for the 19 IAs commenced in mid-October and was completed at the end of October. After the PRA session, the Seminar was held at both the RIS scheme and municipal levels in mid-November. Reports on the PRA and Seminar were submitted by SEED at the end of November, and contained in the Final Report on PRA and Public Consultation Seminar (SEED Final Report) dated December 1997.

## **2. PARTICIPATORY RURAL APPRAISAL**

### **2.1 Objectives of PRA**

The objectives of PRA were to facilitate irrigators' association (IA)-level planning based on the needs of IA members and non-IA members, and formulate IA-level operation and management plan for irrigation and drainage facilities. To achieve these objectives, the PRA was carried out through the following five (5) steps:

- i) Identification of the present social condition, land use condition, physical infrastructure, agricultural activities, and environment,
- ii) Identification of constraints and problems on the agricultural activities,
- iii) Identification of the causes and effects of the above constraints and problems,
- iv) Identification and ranking of potential solutions for the above constraints and problems, and
- v) Preliminary preparation of appropriate plans and projects for agricultural development, and operation and management of irrigation and drainage facilities.

### **2.2 Plan of PRA Operation**

The RIS division areas of both the Jalaur proper and Suague RISs were used as the reference for the delineation of the PRA survey (session) area, since most IAs occupy one RIS division each. For the 4 division areas with two (2) IAs, the PRA was conducted at the same time for the 2 IAs concerned.

Each PRA session was composed of IA members and non-IA members including the disadvantaged groups such as the women. Among the farmers, priority was given to small owner cultivators (with less than 1 ha), landless tenants and landless farm workers in the selection of the PRA participants. A total of 40 participants was targeted for each PRA session, about 60% of whom were IA members and 40% non-IA members. The PRA participants were selected at equal proportion from the different barangays comprising the IA concerned for the three types of farmers identified above. The sex composition of the PRA participants was also almost equally divided among male and female. In this way, the small farmers and women were able to freely express their opinions and enable them to actively participate in group workshops and plenary discussions.

The participation of big landowners and medium-scale owner cultivators was not included to ensure that they would not dominate the group workshops and plenary discussions in the PRA. However, the scheduled consultation meeting with the officers of the 20 IAs has also served as a venue to obtain the opinions of big landowners and medium-scale owner cultivators on the problems in agricultural activities and O&M of irrigation facilities, since many of the IA officers are medium-scale owner cultivators and a few big landowners.

The PRA participants from the IA members were selected from the list of IA members available at the Jalaur-Suague RIS (JSRIS) office based on the random sampling method prescribed by the Study Team. Actual selection of PRA participants was done by SEED in coordination with the IA presidents and NIA's Institutional Development Officers (IDOs).

The PRA participants from non-IA members were essentially selected through a referral system as mentioned in the Specifications for the PRA and Seminar. SBED has coordinated with the Barangay Councils of the barangays concerned in the project area for the proper selection and verification of non-IA members.

The Study Team organized a briefing session with the PRA team (facilitators, documentors and interviewers) of SBED prior to the PRA sessions to discuss the PRA objectives, plan of operations, and reports to be submitted by SBED at the end of the PRA work.

The PRA sessions were generally conducted following these steps:

- i) The PRA team explained the PRA objectives and contents, and provided the participants with the overview of the day's activities.
- ii) The participants were divided into small groups with the following factors considered in forming the groups: each barangay will be represented, at least equal representation of IA and non-IA members and tenurial status. Using the present land use map (1/4,000), the PRA team guided the participants in reviewing the correctness, accuracy and completeness of the maps and reflected the needed information in the maps using the suggested markings and symbols.

Four (4) groups were formed during this workshop to tackle the following concerns: irrigation and water management, agricultural production, land use and natural resources, and socio-economic-political aspects.

- iii) During the workshop, the participants were guided by the PRA team in identifying the present constraints and problems covering these five (5) areas:
  - a) agricultural production,
  - b) irrigation structures,
  - c) water management and O&M,
  - d) institutions, and
  - e) environment.
- iv) In the plenary, the participants undertook the problem tree formulation by establishing the core problem and identifying the causes and its effects.
- v) Based on the results of (iv), the PRA team guided the participants in identifying the proposed solutions to the core problem and its causes through means-ends diagramming. The proposed solutions were meant to remove or reduce the problems and constraints identified earlier by the participants. The PRA team then assisted the participants to prioritize the solutions based on their perceived needs.
- vi) The participants were also assisted by the PRA team in identifying the proposed measures to implement the prioritized solutions.
- vii) Finally, the PRA team presented the proposed prospective plans prepared by the JICA Study Team, and matched these plans with the prioritized solutions of the PRA participants. This has enabled the participants to be informed of the possible Project which could assist them in implementing their proposed solutions. On the other hand, the Study Team was able to validate its findings of the analysis of existing situation and to confirm the relevance of the proposed Project with the needs of the target beneficiaries.

### 2.3 Location of PRA Sessions

The PRA sessions covered the seven (7) municipalities and 78 barangays which are occupied by the IAs in the Jalaur proper and Suague RISs. The specific venues of the PRA sessions conducted from October 17 to 29, 1997 are shown in Table B.2.1.

### 2.4 Participants of the PRA

As mentioned above, the PRA participants were composed of the small farmers with farming area of less than 1.0 ha and farm workers. These include the owner-cultivators, leaseholders, tenants and farm workers. A total of 753 farmers have participated to the PRA sessions, 671 of whom were interviewed for the PRA participants profile. The salient socio-economic data of the 671 participants interviewed are shown in the SEED Final Report (Enclosure 5) and summarized below.

- IA members: 306 (46%), non-IA members: 365 (54%)
- Male: 388 (58%), female: 283 (42%),
- Owner cultivators: 194 (29%), leaseholders: 323 (48%), tenant farmers: 37 (5%), farm workers, 117 (18%),
- Age group 15-30: 65 (10%), 31-50: 308 (46%), 51-65: 220 (33%), over 65: 78 (11%),
- Most of the participants (466 persons) have been living in their barangays for more than 30 years (69%) and only 0.8% (5 persons) have been in their place of residences for 3 years or less,
- Married: 542 (81%), and Catholics: 621 (93%),
- Number of children 3-4: 174 (30%), 5-6: 153 (27%), 7-9: 137 (24%), and
- Education level primary: 298 (44%), secondary: 244 (36%), college: 53 (8%), college graduate: 68, no school education: 8 (2%).

Although the PRA team targeted to have at least 40 participants per session, there were instances that it was difficult to reach that number since the duration of the PRA sessions coincided with the harvesting of first crop and the initial stage of land preparation for the second crop. However, the average number of participants was almost 40 persons per session.

### 2.5 Main Problems Identified by the PRA Sessions

The main problems identified by the participants in each of the 19 PRA sessions are presented in the SEED Final Report, and summarized in Table B.2.2 in comparison with the problems identified by the JICA Study Team relative to five key concerns: (i) agricultural production, (ii) irrigation structures, (iii) water management and O&M, (iv) institutions and (v) environment. These problems are shown below:

<u>Key Concerns</u>	<u>PRA Sessions</u>	<u>JICA Study Team</u>
1. Agricultural production	low agricultural production	low agricultural productivity, and financial weakness of farmers
2. Irrigation structures	poor irrigation facilities	low irrigation efficiency
3. Water management and O&M	poor management of system	poor water management and practices, and low collection of ISF
4. Institutions	inactive IA	institutional and technical weakness of IA and NIA
5. Environment	depletion of natural resources	watershed degradation



There is a general conformity between the main problems identified by the PRA sessions and the JICA Study Team. The causes of these problems were identified through the PRA, as follows:

- (a) low agricultural production caused by (i) high cost of farm inputs, (ii) low prices of paddy (controlled by traders), (iii) lack of post-harvest facilities, (iv) pests and diseases, (v) absence of financial institution, (vi) lack of farm to market roads, (vii) poor loan repayment, (viii) insufficient farmers' cooperatives, and (ix) lack of technical support (DA).
- (b) poor irrigation facilities caused by (i) damaged canal gates and turnouts, (ii) presence of illegal turnouts, checks and pumps, (iii) siltation on canals, (iv) narrow canals, (v) clogged and uncleaned canals, and (vi) insufficient drainage canals and insufficient capacity of drainage outlets.
- (c) poor management of system caused by (i) absence of WRF Tender who is responsible for water distribution, (ii) no proper scheduling of water supply, (iii) low irrigation service fee (ISF) collection, (iv) limited technical competence of NIA staff, and (v) no monitoring from NIA.
- (d) inactive IA caused by (i) lack of cooperation among members, (ii) limited role of members for O&M activities, (iii) conflict on water distribution among members, and (iv) lack of awareness of members on IA activities.
- (e) depletion of natural resources caused by (i) illegal logging, (ii) slash and burn farming, and (iii) accumulation of silt and other wastes in the creeks.

## 2.6 Prioritized Solutions Identified by the PRA Sessions

In order to solve the aforementioned main problems, the PRA sessions identified the priority solutions for each problem as shown in Table B.2.3. The proposed solutions identified in the prospective plans prepared by the JICA Study Team conform well with the prioritized solutions of the PRA sessions as compared in the same table and are summarized below:

<u>Key Concerns</u>	<u>PRA Sessions</u>	<u>JICA Study Team</u>
Agricultural production	increase of agricultural production	irrigated agriculture development, strengthening and improvement of agricultural support services
Irrigation	improvement of irrigation system	rehabilitation and improvement of existing irrigation facilities
Water management and O&M	improvement of O&M practices	improvement and strengthening of present water management and O&M practices
Institutions	strengthening of the IA	institutional development of IA and NIA
Environment	protection of environment	watershed management

The specific measures to implement the prioritized solutions are identified by the PRA participants as shown in Table B.2.4 and are summarized below:

- (a) increase of agricultural production through (i) organization of cooperatives for market and credit assistance and provision of post-harvest facilities, (ii) government subsidy especially on farm inputs, (iii) eradication of pests,

- (iv) use of organic fertilizer, (v) strengthening of agricultural extension services including new farming technology, and (vi) conduct of soil analysis.
- (b) improvement of irrigation system through (i) repair of damaged canal gates and turnouts, (ii) removal of illegal turnouts and construction of new legal turnouts, (iii) construction of water impounding dams, and (vi) canal lining.
- (c) improvement of O&M practices through (i) sufficient water distribution, (ii) training of system management personnel (NIA) and IA, (iii) establishment of monitoring system, (iv) development of IA management capabilities, and (v) entrust ISF collection to IA.
- (d) strengthening of the IA through (i) training on value formation, (ii) reorganize the IA, (iii) continuous reminder to farmers of their obligation, (iv) continue education to strengthen and improve IA, (v) capital build-up, (vi) sustain cooperation and (vii) organize farm workers as members and transformation of IA into a cooperative (specific proposal in one PRA session).
- (e) protection of environment through (i) planting of trees in the watershed area, (ii) adoption of organic farming, and (iii) prevention of slash and burn farming.

During the PRA sessions, the above solutions were compared with the measures proposed in the prospective plans prepared by the JICA Study Team. All the participants have acknowledged that the identified solutions by the PRA sessions were mostly the same with the measures proposed in the prospective plans.

## **2.7 Household Interview Survey**

To obtain a more deeper understanding of the farmers' problems concerning their communities, agricultural activities, agricultural support services, and water management and O&M practices, household interview survey was conducted by SEED for 100 farm households (both IA and non-IA members) in the project area. The survey has targeted the sampled farm households to be consisted of 50% IA members and 50% non-IA members. The area distribution of the sampled households was determined on the basis of the irrigation service area of the IAs. The sampled households were selected randomly from the list of the PRA participants. Due to the busy schedule of some non-IA members on their farming activities, the composition of the final sampled households was 56% IA members and 44% non-IA members.

The result of the household interview survey is summarized in Table B.2.5. The main points of the household interview survey for the IA and non-IA members are as follows:

	IA members		non-IA members	
Main occupation	farming	(89%)	farming	(50%)
Second occupation	farm labor	(32%)	farm labor	(39%)
Ave. annual farm (cash) income	30,070 pesos		29,060 pesos	
Two priority development needs in the barangay	irrigation water	(61%)	irrigation water	(49%)
	road	(14%)	road	(17%)
Households owning land	yes	(50%)	yes	(34%)
Membership in farmers' cooperatives	15 households	(27%)	7 households	(16%)
Two main factors affecting agricultural production	insect and pests	(34%)	insects and pests	(33%)
	low product price	(22%)	low product price	(26%)
Main source of certified seed planted by farmers	from previous harvest (62%)		from previous harvest (56%)	
Main problem in obtaining fertilizers & agrochemicals	lack of financial resources (92%)		lack of financial resources (83%)	
Awareness of presence of irrigation water delivery & distribution schedule	yes	(70%)	yes	(48%)
Knowledge of rotational irrigation system	yes	(87%)	yes	(84%)
Acceptance of rotational irrigation	yes	(87%)	yes	(93%)
Satisfactory of irrigation water supply (1996)	yes	(16%)	yes	(25%)
Awareness of presence of authorized cropping calendar	dry season: yes	(36%)	dry season: yes	(7%)
	wet season: yes	(34%)	wet season: yes	(8%)
Have followed the authorized cropping calendar	dry season: yes	(50%)	dry season: yes	(0%)
	wet season: yes	(60%)	wet season: yes	(0%)
Awareness of presence of O&M contract between IA & NIA	yes	(27%)	yes	(7%)
Participation in O&M work under contract between IA & NIA	yes	(25%)	yes	(5%)
Satisfactory of present condition of irrigation and drainage facilities	yes	(14%)	yes	(88%)
Two most important reasons for non-payment of ISF	dry season: (a) insufficient water received last year (46%) (b) lower paddy production than expected (25%) wet season: (a) insufficient water received last year (42%) (b) lower paddy production than expected (22%)		dry season: (a) insufficient water received last year (46%) (b) lower paddy production than expected wet season: (a) insufficient water received last year (35%) (b) lower paddy production than expected (25%)	

### **3. PUBLIC CONSULTATION SEMINAR**

#### **3.1 Objectives of the Seminar**

Following the PRA sessions, the RIS scheme and municipal level Seminars were conducted to achieve the following objectives:

- i) to get consensus among stakeholders such as the national government agencies (DA, NIA, NFA, CDA, DAR, DENR, NEDA, LBP etc.), local government units (LGUs), non-government organizations (NGOs), the IAs and other farmer groups on the findings (such as constraints and problems, identified solutions and measures) and the proposed solutions based on the results of the PRA sessions, and
- ii) to validate the prospective plans proposed by the JICA Study Team.

#### **3.2 Plan of Operation of the Seminar**

##### **3.2.1 Sites of the Seminar**

The Seminar was carried out at both the RIS scheme and municipal levels. Two (2) RIS scheme-level seminars were conducted as follows:

- (a) Jalaur proper RIS scheme: Sacred Heart Academy,  
Zarraga, November 11, 1997
- (b) Suague RIS scheme: Colegio dela Inmaculada Concepcion,  
Pototan, November 13, 1997

The municipal-level Seminar was conducted on November 18 at the National Food Authority Training Center, Tacas, Jaro.

##### **3.2.2 Seminar Participants**

The RIS scheme-level Seminars were participated in by the farmers (IA members, non-IA members, women), the officers of the IAs and farmers' cooperatives, barangay officials, and the Municipal Agricultural Officers (MAOs). Some NIA personnel and the JICA Study Team members also attended these seminars.

At the Jalaur proper RIS scheme-level Seminar, there were 82 participants consisting of the following: 25 farmers, 28 barangay officials, 15 IA officers, 2 MAOs, 5 NIA staff and the JICA Study Team members.

At the Suague RIS scheme-level Seminar, there were 62 participants consisting of the following: 18 farmers, 20 barangay officials; 5 IA officers, 2 cooperatives officials, 2 MAOs, 8 NIA staff and the JICA Study Team members.

The municipal-level Seminar was attended by 43 participants with the following breakdown: 15 representatives from national government agencies (DA, NIA, NFA, CDA, DAR, DENR, NEDA, LBP, etc.), 6 LGU executives and 12 LGU staff, 2 NGO representatives, 2 representatives from farmers' organizations and the JICA Study Team members.

The list of participants to the RIS scheme and municipal-level Seminars is attached as Enclosure 9 to SEED Final Report.

### **3.2.3 Contents of the Seminar**

The topics covered by the Seminar are as follows: (i) overview of the PRA and the Seminar, (ii) the highlights of results of the PRA sessions, and (iii) objectives and components of the Jalaur Irrigation Systems and Rural Area Development Project. After the presentation of these topics by SEED facilitator, an open forum followed to enable the participants to seek clarification and give their recommendations to the Study Team.

The materials used for the Seminar are attached as Enclosure 6 (the summary of the PRA highlights for the 19 sessions) and Enclosure 8 (Public Consultation Seminar's presentation materials) to SEED Final Report.

### **3.2.4 Steps Followed by the Seminar**

The SEED facilitator organized the RIS scheme and municipal-level Seminars based on the following steps:

- i) The Seminar objectives and overview of the topics noted above were presented to the participants by SEED facilitator,
- ii) The objectives, contents and results of the PRA were then discussed. The main constraints/problems identified by the PRA participants on irrigation structures, water management and O&M works, institutional, agricultural production, and environment aspects were shared to the Seminar participants. The proposed prioritized solutions and measures to address the identified main constraints/ problems were also presented.
- iii) The objectives and components of the proposed prospective plans of the JICA Study Team were the last topic presented by the facilitator. The presentation included the constraints and problems identified by the Study Team and validated during the PRA sessions and the salient features of the prospective plans (irrigated agriculture development plan, improvement plan of irrigation and drainage facilities and road network, improvement plan of water management and O&M practice, institutional development plan, improvement plan of agricultural support services, and watershed management plan).
- iv) After the presentation, an open forum followed to give the participants the time to raise questions, clarify issues and make recommendations to the JICA Study Team. A general consensus on the acceptability or non-acceptability of the proposed prospective plans of the Study Team based on the PRA results was obtained by the facilitator.

## **3.3 Highlights of the Proceedings of the Seminar**

The proceedings of the RIS scheme and community-level Seminars are discussed in detail in the SEED Final Report. The following sections present mainly the highlights of the two (2) RIS scheme-level Seminars and the municipal-level Seminar.

### **3.3.1 RIS scheme-level Seminars**

At the RIS scheme-level Seminars, the main problems and priority solutions identified by the PRA sessions and the proposed prospective plans prepared by the JICA Study Team were presented to the participants by SEED facilitator. The proposed plans were generally accepted by all participants with the following comments:

(a) irrigated agricultural development plan

The proposed crop rotation for the Suague RIS was generally accepted if the following support services will be provided to the farmers:

- (i) extension services for proper diversified cropping practices,
- (ii) marketing support, and
- (iii) availability of certified seeds.

(b) rehabilitation and improvement plan of existing irrigation facilities

The plan was generally accepted especially the following specific measures:

- (i) Jalaur proper RIS to supply excess water to 200 ha of irrigated land in the Suague RIS,
- (ii) construction of settling basins in the Jalaur proper and Suague RISs, and
- (iii) general repair and rehabilitation of the system.

(c) improvement and strengthening plan of present water management and O&M practices

The plan was generally accepted with emphasis on the following measures:

- (i) identification of measures to effect higher ISF collection,
- (ii) importance of monitoring system on water intake and output,
- (iii) need of upgrading the technical competence of NIA staff and IA,
- (iv) importance of discipline for both the water users and the water management staff, and
- (v) acceptance of rotational irrigation in the Suague RIS provided that support systems (alternative diversified crops, etc.) will be made available to farmers.

(d) institutional development plan of IA and NIA

The plan was generally accepted with specific focus on the following measures:

- (i) acceptance of farm workers in the IA (to be piloted),
- (ii) formation and development of women service cooperatives in areas where farmers' cooperatives and IAs are non-existent,
- (iii) formation of federation in the long-term,
- (iv) federation to undertake two (2) basic functions: service and business functions,
- (v) importance of management and value formation training for the officers and members, and
- (vi) undertaking precautionary measures to prevent failures.

### **3.3.2 Municipal-level Seminar**

At the municipal-level Seminar, the highlights of results of the PRA sessions, the proposed prospective plans prepared by the JICA Study Team and the highlights of the RIS scheme-level Seminars were presented to the participants by SEED facilitator. The proposed prospective plans by the JICA Study Team were generally accepted by the participants with the following specific comment:

The feasibility study shall make presentation of a very strong justification in its recommendation for maximum utilization of existing water in terms of increasing the cropping intensity and yields in the project area.

The highlights of the municipal-level Seminar are shown in Table 3.1.

## Tables



Table B.2.1 List of Venues of the PRA Sessions

PRA Session / IA Area	Venue	Session Date
<u>Jalaur proper RIS</u>		
1. SISADA	Sinaba-an Elementary School, Sinaba-an, Dingle	Oct. 22
2. BAPZAT	White Elementary School, Pandan, Dingle	Oct. 22
3. JP-2	NIA Training Center, Pototan	Oct. 17
4. JP-3	San Juan Elementary School, Tumcon Ilaud, Pototan	Oct. 25
5. JADD	Dongsol Elementary School, Dongsol, Pototan	Oct. 26
6. J-JIN	Zarraga National High School, Bante, Zarraga	Oct. 24
7. POZA*1	Jalaur Elementary School, Jalaur Norte, Zarraga	Oct. 29
8. JABAFA*1		
9. CIDD	Dawis Elementary School, Dawis, Zarraga	Oct. 24
10. LOJAPRO	Zarraga National High School, Bante, Zarraga	Oct. 25
11. CAMP	Planters Products Farmers Center, Pagdugue, Dumangas	Oct. 22
12. BAMAPA	Balabag Elementary School, Balabag, Dumangas	Oct. 28
13. MACAPA	Cayos Elementary School, Cayos, Dumangas	Oct. 25
14. CANROSCA	Rosario Elementary School, Rosario, Dumangas	Oct. 28
15. PAGCAPUSO	Sulangan Elementary School, Sulangan, Dumangas	Oct. 28
<u>Suague RIS</u>		
16. SMEWBAT	Mina National High School, Poblacion, Mina	Oct. 27
17. JEBADA	Badiang Elementary School, Badiang, New Lucena	Oct. 27
18. AGDABASICA	Mina National High School, Poblacion, Mina	Oct. 26
19. SUAGUE 3	Agmanaphao Elementary School, Agmanaphao, Mina	Oct. 26
20. DIV. 4 SUAGUE	Agmanaphao Elementary School, Agmanaphao, Mina	Oct. 27

Note: \*1 Combined PRA session.

Table B.2.2 Main Problems Identified By the PRA Sessions and the JICA Study Team

River Irrigation System	Name of IA	Irrigation Structure	Water Management and O&M	Institutions	Agricultural Production	Environment
PRA Sessions Jalur proper	SISADA	poor irrigation facilities	poor management practices	inactive IA	low production yield	depleting natural resources
	BAPZAT	lack of water supply	inefficient water supply management	inactive IA	low production yield	depletion of natural resources
	JP-2	lack of water	insufficient water supply management	inactive IA	low production yield	depleting natural resources
	JP-3	insufficient supply of water	poor water management	inactive IA	low production yield	pollution
	JADD	insufficient water supply	poor management of the irrigation system	weak cooperative and IA	low production yield	eroding creek
	J-JIN	lack of water	poor maintenance of water system	weak IA	low production yield	denuded watershed
	POZA & JABABA	insufficient water supply	insufficient water management	weak IA	low production yield	denuded forests
	CIDD	lack of water supply	poor maintenance of irrigation system	weak IA	low production yield	increasing damage to environment
	LOJAPRO	lack of water supply	inefficient water management	weak IA	low production yield	depletion of natural resources
	CAMP	lack of water supply	poor management of the system	weak IA	low production yield	denudation of forests
	BAMAPA	lack of water	inefficient water management	inactive IA	low production yield	depleting natural resources
	MACAPA	lack of water supply	poor water management	inactive IA	low production yield	depletion of natural resources
	CANROSCA	lack of water supply	poor water management	inactive IA	low production yield	denudation of forests
	PAGCAPUSO	lack of water	poor maintenance	inactive IA	low production yield	depleting natural resources
Suaguc	SMEWBAT	water supply scarcity	lack of maintenance	weak IA	low production yield	abuse of natural resources
	JEBADA	insufficient supply of water	lack of maintenance & management of system	inactive IA and cooperative	low production yield	pollution
	AGDABASICA	poor irrigation facilities	poor water management	inactive IA	low production yield	depleting natural resources
	SUAGUE 3	lack of water supply for irrigation	inefficient water supply management	inactive IA	low production yield	depleting natural resources
	DIV. 4 SUAGUE	insufficient water supply	poor maintenance of irrigation system	inactive IA	low production yield	degradation of environment
		poor irrigation facilities	poor management system	inactive IA	low production yield	depleting natural resources
JICA Study Team		low irrigation efficiency	poor water management and O&M practices and low collection of ISE	institutional and technical weakness of IA and N/A	low agricultural productivity financial weakness of farmers	watershed degradation

Table B.2.3 Priority Solutions Identified By the PRA Sessions and the JICA Study Team

River Irrigation System	Name of IA	Irrigation Structure	Water Management and O&M	Institutions	Agricultural Production	Environment
PRA Sessions Jahaur proper	SISADA	improvement of the irrigation system	improvement of O&M practices	strengthening of the IA	increase production yield	improve environment
	BAPZAT	rehabilitation of the irrigation system	improvement of water system management	revitalize IA	increase production yield	conservation of natural resources
	JP-2	increase water supply	improve water supply management	strengthen IA	increase production yield	watershed rehabilitation
	JP-3	rehabilitation of water system	improve O&M	strengthening of farmers' organization	increase production yield	minimize/eradicate pollution
	JADD	rehabilitation of irrigation facilities	improvement of water management	strengthen IA	improve agricultural yield	prevent erosion
	J-JIN	sufficient water	improve water system management	strengthen IA	increase production yield	watershed rehabilitation
	POZA & JABAFI	improve water supply	improve water management	reorganize IA	increase production yield	reforestation
	CIDD	improve irrigation system	improve maintenance of water service	revitalize IA	increase production yield	protection of the environment
	LOJAPRO	improve water supply	improve water management	strengthen IA	increase production yield	conservation of natural resources
	CAMP	rehabilitation of irrigation system	enhancement of irrigation efficiency	strengthen IA	increase production yield	reforestation
	BAMAPA	increase water supply	improve water management	strengthen IA	increase production yield	conservation of natural resources
	MACAPA	improve water supply	improve O&M	reorganization of IA	increase production yield	protection of the environment
	CANROSCA	increase water supply	enhance water management and O&M	strengthen IA	increase production yield	reforestation
	PAGCAPUSO	improve water	improvement of water management efficiency	reactivate the IA	increase production yield	protection of environment
	SMEWBAT	improvement of irrigation facilities	improve water management	strengthen IA	increase production yield	conservation of natural resources
	JEBADA	improve water supply	improvement of water management	revitalize organization	increase production yield	minimize pollution
	Suague	AGDABASICA	improvement of irrigation facilities	improvement of water management	strengthening of IA	increase production yield
SUAGUE 3		increase water supply	improve irrigation system management	revitalize IA	improve support services	conserve natural resources
DIV. 4 SUAGUE		improve irrigation system	improve maintenance of water supply	reorganize IA	increase production yield	improve environmental situation
JICA Study irrigation facilities		improvement of the irrigation system rehabilitation and improvement of existing irrigation facilities	improvement of O&M practices improvement and strengthening of present water management and O&M practices	strengthening of the IA institutional development of IA and	increase production yield promoted agriculture development strengthening and improvement of support services	protection of environment watershed management

Table B.2.4 Proposed Measures to Implement the Prioritized Solutions by the PRA Sessions and the JICA Study Team

PRA Sessions	Irrigation Structure	Water Management and O&M	Institutions	Agricultural Production	Environment
<ol style="list-style-type: none"> <li>1. repair and rehabilitation of damaged canal gates and turnouts</li> <li>2. remove illegal turnouts and construct legal structures</li> <li>3. construct water impounding dams</li> <li>4. concrete lining</li> </ol>	<ol style="list-style-type: none"> <li>1. sufficient water distribution</li> <li>2. training of water system management personnel (NIA &amp; IA)</li> <li>3. establishment of monitoring system</li> <li>4. development of IA management capabilities</li> <li>5. ensure ISF collection to the IA</li> </ol>	<ol style="list-style-type: none"> <li>1. provide proper and sufficient budget for water management and O&amp;M works by improving ISF collection through the following:               <ol style="list-style-type: none"> <li>(a) proper turn-over of ISF collection function to the IAs</li> <li>(b) improvement of ISF evaluation policy for accurate and fair estimation of benefited area</li> <li>(c) establishment of proper database management for ISF billing and collection</li> <li>(d) streamlining of legal procedure for non-payment of ISF</li> <li>(e) increase of incentives to the IAs for ISF collection</li> </ol> </li> <li>2. improve and strengthen water management and O&amp;M practices' skills of NIA staff and IAs through sufficient training by using practical O&amp;M manual, establishment of computerized system and communication systems, and Type I &amp; II contact implementation by the IAs</li> <li>3. establish monitoring system on the basis of computerized system and communication system to be installed</li> <li>4. strengthen the Jalisco-Saguao RIS office through restructuring of its O&amp;M sections, proper work load assignment for O&amp;M staff and recruitment of additional O&amp;M staff for improved Type I &amp; II contact</li> </ol>	<ol style="list-style-type: none"> <li>1. recognize the IA</li> <li>3. continuous reminder to farmers of their obligations as IA officers and members</li> <li>4. continue education in strengthening and improve IA</li> <li>5. capital build-up</li> <li>6. sustain cooperation</li> <li>7. organize farm workers as members</li> </ol> <p><b>IAAs</b></p> <ol style="list-style-type: none"> <li>1. strengthen the institutional capability of IAs through sufficient and continuing training program, development of functional committees, establishment of IA office setting up of records management system and business tie-ups with operators of post-harvest facilities</li> <li>2. rehabilitate existing farmers' cooperatives</li> <li>3. develop women service cooperatives in areas with no existing farmers' coops</li> <li>4. convert IAs into irrigation service cooperatives (ISCs) and merge other existing cooperatives with ISC</li> <li>5. provide training and assistance to the IAs/ISCs to undertake rural system management</li> <li>6. federate the ISCs at the RIS level</li> </ol> <p><b>NIA</b></p> <ol style="list-style-type: none"> <li>1. strengthen IDOs' capability for inter-agency collaboration through provision of training and establishment of inter-agency project steering and technical committees</li> <li>2. renovate the NIA Regional Training Center</li> <li>3. provide communication and transport equipment and training equipment/furniture</li> <li>4. improve database management on the basis of computerized system</li> </ol>	<p><b>Agricultural Production</b></p> <ol style="list-style-type: none"> <li>1. organization of cooperative for market and credit assistance, and provision of post-harvest facilities</li> <li>2. government subsidy especially on farm inputs</li> <li>3. eradication of pests</li> <li>4. use organic fertilizer</li> <li>5. strengthening of agricultural extension services including new farming technology</li> </ol> <p><b>Agribusiness Development</b></p> <ol style="list-style-type: none"> <li>1. establish the economic pattern in conformity with effective and maximum use of available water</li> <li>2. increase paddy yields through improvement of farming technology such as fertilizer application, agro-technical applications, pest control, seeding method and low use of certified seed</li> <li>3. optimum utilization of irrigation service area through rotational irrigation in the Saguao RIS during the dry season</li> <li>4. promote crop diversification in the Saguao RIS during the dry season to minimize risk of paddy failure from drought and pest infestation</li> </ol> <p><b>Agribusiness Support Services</b></p> <p><b>Agribusiness Extension</b></p> <ol style="list-style-type: none"> <li>1. field training and extension of new farming techniques to existing farmers through development of demonstration plots</li> <li>2. farmer-to-farmer technology extension by contact farmers' groups</li> <li>3. training of extension staff of the Municipal Agricultural Office (MAO)</li> <li>4. documentation and dissemination of new farming technologies</li> </ol> <p><b>Agribusiness Land</b></p> <ol style="list-style-type: none"> <li>1. loan restructuring of the existing farmers' cooperatives</li> <li>2. institutional strengthening of cooperatives</li> <li>3. development of expanded financial intermediation</li> <li>4. introduction of irrigators' association development fund (IADF)</li> </ol> <p><b>Marketing and Post-harvest Facilities</b></p> <ol style="list-style-type: none"> <li>1. access to existing post-harvest facilities and trucking fleet through establishment of business tie-ups with operators of such facilities</li> <li>2. provision of working capital</li> <li>3. intensive capacity building on agricultural marketing</li> </ol> <p><b>Infrastructure Road Network</b></p> <ol style="list-style-type: none"> <li>1. linkage of the existing NIA's service roads with the rural/homologous road after improvement</li> <li>2. minor repair of the existing rural roads</li> <li>3. provision of additional rural roads, bridge and crossway structures</li> </ol>	<ol style="list-style-type: none"> <li>1. planting of trees in the watershed area</li> <li>2. adoption of organic farming</li> <li>3. prevention of slash and burn farming</li> </ol> <ol style="list-style-type: none"> <li>1. strengthen coordination among concerned agencies (DENR, NIA, LGUs, DA, DAR and NGOs)</li> <li>2. community organization</li> <li>3. provide training and extension for staff of the concerned agencies on community organizing, watershed management and appropriate upland farming technologies</li> <li>4. develop improved soil conservation measures</li> <li>5. develop agro-forestry system such as randomly-mixed and row-intercrop agro-forestry</li> <li>6. develop alternative energy source</li> <li>7. social development through the adoption of participatory approach to planning and implementation</li> <li>8. develop model project for sub-watershed rehabilitation and management</li> </ol>
<p><b>JICA Study Team</b></p>	<ol style="list-style-type: none"> <li>1. rehabilitate and improve the existing diversion dams</li> <li>2. renew the turnouts and provide feeder canal and measuring devices</li> <li>3. improve canal systems through canal lining and embankment upgrading</li> <li>4. provide settling basin and farm pond</li> <li>5. improve the un-form canal systems</li> </ol>				

Note: \*1. Specific proposal in our PRA session.



Table B.2.5 Result of Farm Household Interview Survey for IA Members (2/24)

Question Items	District/No. of sample																					
	SIS	BAP	IP-2	IPA	IAI	JH	POZ	IAB	CID	IGI	CAM	BAS	MAC	CAN	PAG	SMP	HJB	AGO	SUA	INA	WAK	
<b>11. Source of Fuel for Cooking of Households</b>																						
(1) Wood	(%)	62	75	50	33	100	75		67	100	67	100	100	100	67	100	100	100	100	100	80	
(2) Coconut husk/charcoal	(%)																					
(3) Liquefied petroleum gas	(%)	100	15	25	50	67	33	100	33		33				17						20	
(4) Biogas	(%)																					
<b>12. Ever Had Problem of Health</b>																						
(No. of respondents)		4	3	4	2	3	2	0	1	3	3	2	2	4	6	1	2	3	3	3	55	
(1) Influenza	(%)		100	50	100	33	50	50	100	100	67	33			75	67			67	33	33	
(2) Typhoid	(%)																					
(3) Diarrhea	(%)																					
(4) Asthma	(%)	100			33																	
(5) Gastric problem	(%)														25							
(6) Tuberculosis	(%)																					
(7) Hypertension	(%)							25								100	50				33	
(8) Leprosy	(%)																					
(9) Skin disease	(%)																					
(10) Other health problem	(%)			50		33	50			33	67	100	100					50		33	33	
<b>13. Condition of Road Network in the Village</b>																						
(1) Degree of existing road network																						
(a) None	(%)	100	100	25	50	67	50	75		100	33	33	100	50	50	50	50	50	33	67	50	
(b) Fair	(%)				50				100		33	33		50	25	50	50	50			33	
(c) Good	(%)																					
(d) Very Good	(%)			25							33	33									33	
(2) Present condition of the road																						
(a) Very good	(%)	100			33	50				67	33		100								17	
(b) Good	(%)			50		33	50														17	
(c) Fair	(%)		33	25	50		50	25						50							17	
(d) Bad	(%)		67	25	50	33	25	100		67	100				25	66			50	67	33	
(e) Very bad	(%)			25											25						33	
(3) Maintenance of the road																						
(a) Very good	(%)	100			33	50				33	33			50							17	
(b) Good	(%)			50		33	50	75		67	33		50	50							17	
(c) Fair	(%)		33	25	50		50	25													17	
(d) Bad	(%)		67	25	50	33	25	100		67	100				25	66			50	67	33	
(e) Very bad	(%)			25											25						33	
<b>14. Post Priority Development Need in the Village</b>																						
(1) Drinking water	(%)									33				50							17	
(2) Road	(%)			25				25													17	
(3) Irrigation water	(%)		67	25	100	100	100	50	100	67	67	33	50	100	33	100	50		67	67	100	
(4) Flood control facilities	(%)																					
(5) Drainage/Levee	(%)	100																				
(6) Educational facilities	(%)		33																		17	
(7) Electricity supply	(%)												50	50								
(8) Food storage	(%)							25														
(9) Other	(%)											33										
<b>15. Land Tenure</b>																						
Household Owning Land by IA Coverage Area																						
(Yes)	(%)	100	67	50	100	33	50	50	100	33	33	67	50	50	50	33	50	100	67		33	50
(No)	(%)		33	50		67	50	50		67	67	33	50	50	50	67	50		33	100	67	50
<b>16. Total Working Area of Households (in ha/ha/hold)</b>																						
(1) Owned land	(%)	0.02	0.25	0.25	0.55	0.25	0.40	0.25	0.50	0.12	0.24	0.42	0.34	0.50	0.34	0.25	0.35	0.25	0.43	0.65	0.33	0.63
(2) Leased land	(%)	0.63	0.25	0.43	0.18	0.17	0.25	0.25	0.30	0.30	0.47	0.30	0.35	0.45	0.53	0.45						
(3) Accessing land	(%)																					
(4) Shifting land	(%)			0.15		0.30			0.30												0.47	
(5) Borrowed land	(%)																				0.02	
<b>17. Participation in Farmers' Organization</b>																						
Membership in Other Farmers' Organization																						
(1) Farmers' multi-purpose cooperative	(%)	100	33	75		67	50								25					50	67	33
(2) Credit cooperative	(%)																					
(3) Other	(%)																					
<b>18. Perceived Benefits by Joining Farmers' Organization</b>																						
(1) Irrigators' association (IA)																						
(No. of respondents)		1	2	4	2	2	1	3	1	2	3	3	1	2	4	6	2	2	3	3	1	46
(a) Help in marketing	(%)																					
(b) Better government services	(%)																					
(c) Lower input cost	(%)																				33	
(d) Availability	(%)																					
(e) Technical assistance	(%)		50	67		50		33	100	50		33		50	67	50	50					
(f) Others (supply of irrigation water)	(%)	100	50	33	100	50	100	67		50	100	67	100	100	50	33	50	50	100	67	100	
(2) Farmers' multi-purpose cooperative																						
(No. of respondents)		1	2	4	0	3	2	0	0	0	2	0	0	0	2	0	0	0	0	0	1	24
(a) Help in marketing	(%)		50	25		33																
(b) Better government services	(%)			25																		
(c) Lower input cost	(%)																					
(d) Availability	(%)																				67	
(e) Technical assistance	(%)		100	50	25		33	50													100	
(f) Other	(%)			25			33	50														
<b>19. Years in Operation of Active Farmers' Organization</b>																						
(1) Irrigators' association (IA)																						
(No. of respondents)		1	3	2	2	1	1	2	1	0	1	3	0	2	6	2	2	1	2	1	33	
1-2 years	(%)		33																			
3-4	(%)			50	50																50	
5-6	(%)	100			50		100															
7-9	(%)			50						100											50	
10 or more years	(%)											33										
(2) Farmers' multi-purpose cooperative																						
(No. of respondents)		1	3	3	0	2	1	0	0	0	1	0	0	0	0	0	0	0	0	1	1	
1-2 years	(%)																					
3-4	(%)		100			100															100	
5-6	(%)																					
7-9	(%)	100																			100	
10 or more years	(%)																					

Note: \*1 Based on total 56 IA respondents

Table B.2.5 Result of Farm Household Interview Survey for IA Members (3/24)

Question Items	IA as a % of Sample	SIS 4	BAP 3	JP 2 4	JP 3 2	IND 3	FH 2	POZ 4	IAB 1	CFD 3	LOI 3	CAM 3	BAM 2	MAC 2	CAN 4	PAG 6	SME 2	HB 2	AGO 3	SEA 3	OLA 3	WS 4 56	
20. Assessment of the Coordination Among Members of Farmers Organizations																							
(1) Very good	(%)																					7	
(2) Good	(%)		33	50		35	100	33	100	33	33			50			50	50		33	50	26	
(3) Weak/deficient	(%)	100	67	50	100	67		67		67	67	50	50	100	100	100	50	50	100	33	50	65	
(4) None	(%)									33												2	
21. Assessment of the Leadership Quality of Their Organizations																							
(1) Very good	(%)																				33	33	4
(2) Good	(%)		33	25		67	100	33			33	67	50				50	50			33	27	
(3) Weak/deficient	(%)		33	50	100	33		67	100	67	67	33	50	100	25	100		50	50	100	67	67	
(4) No leaders	(%)									33												33	2
(5) Non-democratic	(%)	100																					2
22. Assessment of the Effectiveness of Working Committees																							
(1) Very good	(%)																					50	4
(2) Good	(%)		33	25			50	33			33	50					50					33	13
(3) Weak/deficient	(%)	100	33	75	100	100		67	100	67	100	50	50		100	100	100	100	100	67	67	50	69
(4) No committees	(%)		33				50			33		33			100					33	33		13
A. Agricultural Credit																							
23. Farmers Organizations Managing Credit																							
(1) Irrigators' association (IA)																							
[Yes]	(%)								100														2
[No]	(%)	100	100	100	100	100	100	100		100	100	100	100	100	100	100	100	100	100	100	100	100	98
(2) Farmers multi-purpose cooperative																							
[Yes]	(%)	100	100	67		100	100			100					100			100	100	100	100		94
[No]	(%)			33																			6
24. Main Use of Credit by Farmers Organization																							
(1) Crop production	(%)	100	100	100		100	100				100									100	100	100	93
(2) Livestock production	(%)																						
(3) Marketing of produce	(%)																						
(4) Handicraft making	(%)																						
(5) Consumer store	(%)																						
(6) Other	(%)											100											6
25. Formal Institutions Providing Credit to Farmers Organization																							
(1) Irrigators' association (IA)																							
(a) Land Bank of the Philippines	(%)																						
(b) Rural Bank	(%)																						100
(c) Other (Rural Improvement Clubs)	(%)																						
(2) Farmers multi-purpose cooperative																							
(a) Land Bank of the Philippines	(%)	100	100	100		100	100				100				100						100	100	93
(b) Rural Bank	(%)																						2
(c) Other	(%)																						
26. Payment of Borrowed Money by Members of Farmers Organization																							
[Yes]	(%)	100	100			100	100					50			100					100	100		33
[No]	(%)											50	100										27
B. Post-Harvest Facilities																							
27. Farmers Organization Managing/Operating Post-Harvest Facility																							
(1) Irrigators' association (IA) (No. of respondents: 48)																							
[Yes]	(%)																						100
[No]	(%)																						
(2) Farmers multi-purpose cooperative (No. of respondents: 5)																							
[Yes]	(%)											100											100
[No]	(%)																						
28. Post-Harvest Facilities Managed/Owned by Farmers' Cooperative (Plural answer)																							
(1) Warehouse	(no. Coop)											1											2
(2) Mechanical dryer	(no. Coop)											1											3
(3) Solar dryer	(no. Coop)											1											2
(4) Rice mill	(no. Coop)											1											1
(5) Transport truck	(no. Coop)											1											1
(6) Other	(no. Coop)											1											1
29. Capacity of Post-Harvest Facilities																							
(1) Warehouse	( sacks )																					150	150
(2) Mechanical dryer	( sacks )																					24	24
(3) Solar dryer	( no )																					0	0
(4) Rice mill	( sacks )																					0	0
(5) Transport truck	( ton )																						0
(6) Other	( ton )																						0
30. Farmers' Awareness on the Presence of Policies/Guidelines on the Utilization and Maintenance of Facilities																							
[Yes]	(%)											100										100	86
[No]	(%)																						20
A. Farming Activities																							
31. Frequency of Planting Paddy																							
(1) Once a year	(%)																						
(2) Twice a year	(%)	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	96
(3) Three times a year	(%)																						4
(2) Planted and Harvested Area (ha) (Plural answer)																							
(1) First cropping season																							
(a) Planted area		0.69	0.37	0.50	0.50	0.73	0.65	0.35	0.50	0.77	0.73	0.77	0.82	0.60	0.60	0.78	0.53	0.65	0.53	0.63	0.83	0.65	0.65
(b) Harvested area		0.69	0.37	0.50	0.50	0.73	0.65	0.35	0.50	0.77	0.73	0.77	0.82	0.60	0.60	0.72	0.53	0.65	0.53	0.63	0.83	0.65	
(2) Second cropping season																							
(a) Planted area		0.69	0.37	0.50	0.50	0.73	0.65	0.35	0.50	0.77	0.47	0.47	0.82	0.60	0.58	0.78	0.59	0.65	0.53	0.19	0.83	0.58	
(b) Harvested area		0.69	0.37	0.50	0.50	0.73	0.65	0.35	0.50	0.77	0.47	0.47	0.82	0.60	0.58	0.78	0.59	0.65	0.53	0.19	0.83	0.58	
(3) Third cropping season																							
(a) Planted area													0.45			0.16							0.23
(b) Harvested area													0.45			0.16							0.23
32. Total Paddy Production Past Year (in sacks/ha) (Plural answer)																							
(1) First cropping																							
(a) First cropping		38	25	24	46	49	54	45	28	37	65	54	34	46	25	59	48	30	40	34	47	46	46
(b) Second cropping		24	29	21	44	47	32	52	18	34	43	23	36	40	40	11	30	38	34	5	9	29	29
(c) Third cropping													1.5			2							0.8
(2) Main Source of Certified Seeds Planted by Farmers (Plural answer)																							
(1) From previous harvest	(%)				100	67	100	100	50		25	50	100	50	100	100	100	100	100	100	100	100	62
(2) Supplied by landowner	(%)			25						33	25												3
(3) Subsidy from government	(%)																						2
(4) Bought from dealer	(%)			25																			3
(5) Bought from seed grower	(%)			40			33					25				14							14
(6) Other (from other farmers)	(%)	100	40	35					50	67		25			50	20							19

Table B.2.5 Result of Farm Household Interview Survey for IA Members (4/24)

Question Item	Area I (No. of samples)	SIS	BWP	IP2	IP3	IAD	IH	IOV	IAB	ICB	ICV	CAS1	BAM	MAC	CAN	PAG	SME	IIB	AGD	SDA	IDA	WWR
A. Factors Affecting Fertilizer and Agrochemicals																						
(1) Fertilizer	(%)	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
(2) Agrochemicals	(%)	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
B. Main Source of Fertilizer and Agrochemicals on Farms																						
(1) Fertilizer	(%)	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
(a) Bought from dealer	(%)	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
(b) Supplied by bank loan	(%)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(c) Subsidy from government program	(%)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(d) Other (non-private) source	(%)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(2) Agrochemicals	(%)	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
(a) Bought from dealer	(%)	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
(b) Supplied by bank loan	(%)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(c) Subsidy from government program	(%)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(d) Other	(%)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C. Factors Affecting the Availability of Fertilizer and Agrochemicals																						
(1) Difficult to obtain	(%)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(2) Not difficult to obtain	(%)	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
D. Main Problem in Obtaining Fertilizer and Agrochemicals																						
(1) Not available in the market	(%)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(2) Lack of financial resources to buy	(%)	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
(3) Unavailability from government program	(%)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(4) Other (limited) non-private facilities	(%)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
E. Kind of Tractor Used by Farmers in Land Preparation																						
(1) Combustion	(%)	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
(2) Hand tractor	(%)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(3) Both combustion and hand tractor	(%)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Main Factors Affecting Agricultural Production (Production)																						
(1) Lack of good seeds/seedlings	(%)	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
(2) Lack of labor on appropriate farming practices	(%)	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
(3) Lack of fertilizer and agrochemicals	(%)	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
(4) Lack of irrigation facilities	(%)	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
(5) Lack of capital	(%)	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
(6) Lack of equipment for land preparation	(%)	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
(7) Low productivity	(%)	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
(8) Other	(%)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
G. Most Important Source of Information on Agricultural Technology																						
(1) Parents	(%)	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
(2) Neighboring farmers	(%)	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
(3) Cooperative	(%)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(4) NGOs	(%)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(5) Radio/Television	(%)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(6) Government extension workers	(%)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(7) Private dealers for farm inputs	(%)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(8) Other	(%)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H. Quantity and Cost of Inputs Used by Farmers in 1996 and Cropping on Paddy Production																						
(1) Fertilizer	(%)	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
(a) Total quantity (kg/ha)		100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
(b) Unit cost (Rp/ha)		100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
(2) Pesticides	(%)	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
(a) Total quantity (kg/ha)		100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
(b) Unit cost (Rp/ha)		100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
(3) Hand tractor	(%)	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
(a) Total quantity (man days)		100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
(b) Unit cost (Rp/man day)		100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
(4) Hand tractors (animal day)	(%)	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
(a) Total quantity (animal day)		100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
(b) Unit cost (Rp/animal day)		100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
(5) Hand tractor (machine day)	(%)	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
(a) Total quantity (machine day)		100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
(b) Unit cost (Rp/machine day)		100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
(6) Seeds	(%)	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
(a) Total quantity (kg/ha)		100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
(b) Unit cost (Rp/ha)		100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
I. Main Source of Farm Labor for Paddy Production																						
(1) Family labor (man days/farmer)		100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
(2) Hired labor (man days/farmer)		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(3) Organization (man days/farmer)		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(4) Other (man days/farmer)		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
J. Farm Equipment, Machinery and Animals Used by Farmers in Paddy Production																						
(1) Carabao (no. farmer)		100																				



Table B.2.5 Result of Farm Household Interview Survey for IA Members (5/24)

Question No.	Unit/Type of Output	Sample No.																					
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20		
<b>6. Other Crops Produced by Farmers Last Year</b>																							
(1) Mung bean	(kg)	0.17	0.25	2.0																1.50	1.75	2.80	47.32
Area planted	(ha)	1.75	1.33	4.00																1.50	4.50	6.75	91.98
Yield	(kg/ha)																						0.52
(2) Cowpea	(kg)		0.50																				10.8
Area planted	(ha)		10.3																				0.62
Yield	(kg/ha)																						7.24
(3) Eggplant	(kg)	0.12	0.50																				0.26
Area planted	(ha)	2.00	8.3																				7.24
Yield	(kg/ha)																						0.26
(4) String bean	(kg)		0.50																				0.81
Area planted	(ha)		0.50																				0.10
Yield	(kg/ha)																						2.00
<b>7. Location of Area for Planting of Diversified Crops</b>																							
(1) In rotation with main crop (paddy)	(%)	50	50	10																100	100	100	75
(2) Inter-crop with main crop	(%)									10											100	100	10
(3) In separate area separate from main crop	(%)	50	50																				14
<b>8. Main Reason for Adopting Crop Diversification</b>																							
(1) Main crop has low quality after storage	(%)																						26
(2) Increase cash income	(%)	50	60	50	100	50	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
(3) Increase productivity of labor in dry season	(%)																						2
(4) Other (not in response)	(%)	50																					5
<b>9. Livestock Production</b>																							
<b>9.1. Farmers Raising Livestock Last Year</b>																							
(1) Cow	(%)	100	87	75	100	100	100	100	100	87	100	87	87	100	100	100	100	100	100	100	100	100	74
(2) Pig	(%)	50	33	25						50	50	50	50	50	50	50	50	50	50	50	50	50	26
<b>9.2. Number of Livestock and Poultry Raised by Farmers Last Year</b>																							
(1) Cow	(No.)		0.50																	0.25			0.26
(2) Pig	(No.)		0.25																				0.15
(3) Poultry	(No.)		1.00	4.50						0.50	0.25	1.00	2.00	0.50						1.25	0.20	0.15	1.13
(4) Goat	(No.)																						0.31
(5) Chicken	(No.)	5.00	1.00	5.25						10.00	10.50	5.25	6.25	5.00	4.50	3.50	3.00	4.00	16.00	4.50	6.50	5.50	6.47
(6) Duck	(No.)																						
<b>9.3. Farmers' Income from Livestock and Poultry Production</b>																							
Total gross income	(US\$ per household)	3.17	0.28	14.64						4.54	10.30	3.75	5.69						9.25	4.13	4.95	5.93	
<b>10. Marketing of Agricultural Products</b>																							
<b>10.1. Main Market for Agricultural Products (Paddy)</b>																							
(1) Cooperative	(%)																						1
(2) Private enterprise (includes both public and private)	(%)		10	30	60					40	50	20	50	40	20	20	20	20	20	20	20	20	41
(3) Government agency (NIA)	(%)																						40
(4) Local market	(%)																						15
(5) Wholesale (includes both)	(%)																						23
(6) Other (includes both)	(%)	67	20	10	14	23	100	100	100	20													3
<b>10.2. Quantity and Price of Paddy Sold in the Farm Topping Last Year</b>																							
Total quantity	(No. of kg)	47	42	78	30	55	82	10	41	10	112	9	30	219	178	10	36	85	64	70	64	8.330	
Unit price	(US\$/kg)	4.50	6.50	7.00	6.47	7.00	3.20	7.40	7.40	6.50	6.80	6.80	7.50	6.90	5.90	7.10	7.00	6.50	6.50	7.40	7.40	7.36	
<b>10.3. Quantity and Price of Livestock and Poultry Sold Last Year</b>																							
(1) Cow	(No.)																						
Total quantity	(No.)																						
Unit price	(US\$/No.)																						
(2) Pig	(No.)																						
Total quantity	(No.)																						
Unit price	(US\$/kg)																						
(3) Goat	(No.)																						
Total quantity	(No.)																						
Unit price	(US\$/No.)																						
(4) Poultry	(No.)																						
Total quantity	(No.)																						
Unit price	(US\$/kg)																						
<b>10.4. Application of Support Services</b>																							
<b>10.4.1. Access to Market Support in Farm</b>																							
(1) Yes	(%)																						
(2) No	(%)	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
<b>10.4.2. Institutions Providing Marketing Support</b>																							
(1) Own organization	(%)																						
(2) Other private	(%)																						
(3) National government (NIA)	(%)																						
(4) Local government (MGR)	(%)																						
(5) Non-government organization (NGO)	(%)																						
(6) Other	(%)																						
<b>10.4.3. Kind of Marketing Support Available by Farmers</b>																							
(1) Transportation	(%)																						
(2) Price information	(%)																						
(3) Market place	(%)																						
(4) Market channel	(%)																						
(5) Other	(%)																						
<b>10.4.4. Price-Marketing Problems of Farmers (Multiple)</b>																							
(1) Low price of product when sold at harvest time	(%)																						
(2) Low quality of product	(%)																						
(3) Poor road condition	(%)																						
(4) Lack of market place	(%)																						
(5) Lack of transport vehicles	(%)																						
(6) Other (please specify)	(%)																						

Note: (1) Total respondents included both IA members and non-IA members.

Table B.2.5 Result of Farm Household Interview Survey for IA Members (6/24)

Question Item	Districts of Samples																					
	SIS	BAP	IP-2	IP-3	IAD	JH	IP-4	ISB	UD	IFD	CAB	BAM	MAC	CAN	PAG	SMB	JIB	AGO	SUA	IDA	WNA	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
19. Family Post-Harvest and Marketing Support Services Provided by Farmers' (1) Plant Production																						
(1) Warehouse (2)																						
(2) Drying facility (3)	100	20	20	22	14	15	15	20		17	14		20	20	16	50	25	80	14	20	14	13
(3) Rice mill (4)																						
(4) Transport vehicle (5)		40	30	33	14	1	17	20		17	14		20	33	32	25	25	14	14	14	14	14
(5) Farm road (6)	20	20	3	26	15	14	20		17	14		33	33	33	21	25	25	20	14	7	17	17
(6) Market place (7)																						
(7) Price information (8)	20	20	0	26	33		17	45	100	17	33	47	40	14	16		25	20	43	26	26	26
(8) Other (9)																						
20. Presence of Agency Providing Agricultural Support Services																						
(Yes) (1)	100	100	25			50	100		100	33					17			33	67	33	40	40
(No) (2)			25	100	100	50	100		100	67	67	67	67	67	67	100	100	67	67	67	67	67
21. Institutions Providing Agricultural Support Services*																						
(1) DA Regional Office (2)	50	17	67				100												100	100		50
(2) LGU-DAO (3)																						
(3) LGU-MAG (4)	33	17						100														11
(4) CPA (5)																						
(5) NFA (6)																						
(6) TNSR (7)																						
(7) DARR (8)																						
(8) CRP (9)	50																					
(9) Other (10)		33	17																			
22. Kinds of Agricultural Support Services Provided by the Institutions (Plural Answer)																						
(1) Seeds/seedling supply (2)		67	33				25															25
(2) Fertilizer/pesticide supply (3)	50	20	33				25															19
(3) Credit (4)	50						25															41
(4) Marketing support (5)																						1
(5) Technical guidance (6)	20	33					25		100		100	100			100							40
(6) Other (7)																						
23. Manner of Providing Agricultural Support Services*																						
(1) Individually (2)		33	25																			100
(2) In a group of farmers (3)	100	67							100	50		100			50	100			100	67	50	50
(3) Through the organization (4)																						
24. Farmers' Complaints Against Agricultural Support Services from Government Agencies*																						
(1) Delay of delivery of services (2)																						
(2) Very infrequent services (3)	100	25	100				20			50												14
(3) Technical lack of knowledge (4)																						
(4) Lack of interest of technicians in providing services (5)																						
25. Main Reason of Farmers for Not Using Agricultural Support Services																						
(1) Services are provided but not complete (2)																						
(2) No time to participate in extension services (3)			100																			100
(3) Not interested in the kind of services provided (4)																						
(4) Needed services not provided to me (5)																						
(5) Other (6)																						
26. Presence of NGO Providing Services to Farmers*																						
(Yes) (1)																						
(No) (2)	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
27. Farmers Who Have Received Agricultural Loans Last Year																						
(Yes) (1)		33	50			50	100		100	67	100	67	100	100	50	40		50	50	67	33	47
(No) (2)	100	67	50	100	67		100		100	33		33		50	60	100		50	67	67	67	53
28. Main Source of Loan Last Year*																						
(1) Formal Source																						
(a) Commercial bank (2)																						
(b) Rural bank (3)																						
(c) Cooperative (4)	100																					
(d) NGO (5)																						
(e) Other (6)																						
(2) Informal Source																						
(a) Money lender (7)																						
(b) Friends/relatives (8)																						
(c) Teachers (9)																						
(d) Other (10)																						
29. Main Purpose of Credit*																						
(1) Family needs																						
(a) Seeds/fertilizer/pesticides (2)	100	50																				
(b) Farm inputs/other equipment (3)																						
(c) Animals (4)																						
(d) Food (5)																						
(e) Children's education (6)																						
(f) Debt payment (7)																						
(g) Land purchase (8)																						
(h) Trade (9)																						
(i) Other (10)																						
(2) Informal credit																						
(a) Seeds/fertilizer/pesticides (11)																						
(b) Farm inputs/other equipment (12)																						
(c) Animals (13)																						
(d) Food (14)																						
(e) Children's education (15)																						
(f) Debt payment (16)																						
(g) Land purchase (17)																						
(h) Trade (18)																						
(i) Other (19)																						
30. Most Important Reason for Not Availing from Informal Sources*																						
(1) Complicated procedure (2)																						
(2) Distance of source for loan (3)																						
(3) High interest (4)	25																					
(4) Cannot meet requirement (5)	25	20																				
(5) Not available on time (6)																						
(6) Other (7)																						
(7) Others not needed, bank loan is possible input (8)	100	50	50	17																		

Note: \* If no respondents included in IA members and in IA members.





Table B.2.5 Result of Farm Household Interview Survey for IA Members (9/24)

Question/Topic	No. of samples	Districts																							
		SIS	BAP	IP 2	IPA	IND	JH	POW	INB	IOO	LOF	GAM	BAM	MAR	CAN	PAG	SMB	ORB	SCD	STK	LOH	WKA			
96. Satisfaction of Income for BE Collection	(Yes)	22			10	57										100	100	100							
	(No)			100	33																		69		
97. Willingness and Readiness of IA to Buy Brand Type B or Type B1 Contract	(Yes)	50	50	50	50	100	75	100				100			25	25		50	100	100	100		80		
	(No)	100	50	50	50	50	25	0		100	100	100	100	100	75	75	100	50	0	0	0	0	20		
98. Necessary Institutional and Technical Support for Implementation of Type B or Type B1 Contract	(1) Strengthening of IA (including of IA of various sub-district)	100		100		100		100				50		100	100	100	50	100	100	100	100	50	25		
	(2) Training on labor formation	100										50											2		
	(3) Training on water management system	100										50											15		
	(4) Financial support	100																					4		
	(5) Extension services	100																					2		
99. Satisfaction of Present Condition of Irrigation and Drainage Facilities	(Yes)	37																					44		
	(No)	100	67	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	56		
100. Kind of Facilities Needs (1) (Partial Answer)	(1) Improvement																								
	- Irrigation	14		11		7		4		5	24	13	25	13				15	33	41	29		10		
	- Check structure	14		11		14	13	4		11	6	9						12	17				6		
	- Turnout	15		4		14	13	11		6	9	25	33		7			19	17				7		
	- Main canal	25	15	11	7	33	17	17	21	12		27	13	25	20			13	17	22	20		16		
	- Lateral canal	25	15	11	10	13	12	11	12	11	12	13	15	15	13			17	13	21	21		15		
	- Main farm ditch	11		11		11		11		12	16		13	20	21					11	7		11		
	- Service road	16		15	22	14	25	13	11	16	10	13	25	15	7			17			3		14		
	- Drainage inlet	14	50	7	23	14	13	13	17	9	18	13	13	13	7	9		12		11	7		12		
	- Farm drain	14		24	22	14	13	8	17	17	8	6			10	2	50	25					10		
	- Other	14																							
	(2) Replacement	33	25	17		15		14		25	25	9			5								10		
	- Irrigation	14		11		7		4		5	24	13	25	13				15	33	41	29		10		
	- Check structure	14		11		14	13	4		11	6	9						12	17				6		
	- Turnout	15		4		14	13	11		6	9	25	33		7			19	17				7		
	- Main canal	25	15	11	7	33	17	17	21	12		27	13	25	20			13	17	22	20		16		
	- Lateral canal	25	15	11	10	13	12	11	12	11	12	13	15	15	13			17	13	21	21		15		
	- Main farm ditch	11		11		11		11		12	16		13	20	21					11	7		11		
	- Service road	16		15	22	14	25	13	11	16	10	13	25	15	7			17			3		14		
	- Drainage inlet	14	50	7	23	14	13	13	17	9	18	13	13	13	7	9		12		11	7		12		
	- Farm drain	14		24	22	14	13	8	17	17	8	6			10	2	50	25					10		
	- Other	14																							
	(3) Replacement	33	25	17		15		14		25	25	9			5								10		
	- Irrigation	14		11		7		4		5	24	13	25	13				15	33	41	29		10		
	- Check structure	14		11		14	13	4		11	6	9						12	17				6		
	- Turnout	15		4		14	13	11		6	9	25	33		7			19	17				7		
	- Main canal	25	15	11	7	33	17	17	21	12		27	13	25	20			13	17	22	20		16		
	- Lateral canal	25	15	11	10	13	12	11	12	11	12	13	15	15	13			17	13	21	21		15		
	- Main farm ditch	11		11		11		11		12	16		13	20	21					11	7		11		
	- Service road	16		15	22	14	25	13	11	16	10	13	25	15	7			17			3		14		
	- Drainage inlet	14	50	7	23	14	13	13	17	9	18	13	13	13	7	9		12		11	7		12		
	- Farm drain	14		24	22	14	13	8	17	17	8	6			10	2	50	25					10		
	- Other	14																							
	(4) Replacement	33	25	17		15		14		25	25	9			5								10		
	- Irrigation	14		11		7		4		5	24	13	25	13				15	33	41	29		10		
	- Check structure	14		11		14	13	4		11	6	9						12	17				6		
	- Turnout	15		4		14	13	11		6	9	25	33		7			19	17				7		
	- Main canal	25	15	11	7	33	17	17	21	12		27	13	25	20			13	17	22	20		16		
	- Lateral canal	25	15	11	10	13	12	11	12	11	12	13	15	15	13			17	13	21	21		15		
	- Main farm ditch	11		11		11		11		12	16		13	20	21					11	7		11		
	- Service road	16		15	22	14	25	13	11	16	10	13	25	15	7			17			3		14		
	- Drainage inlet	14	50	7	23	14	13	13	17	9	18	13	13	13	7	9		12		11	7		12		
	- Farm drain	14		24	22	14	13	8	17	17	8	6			10	2	50	25					10		
	- Other	14																							
	(5) Replacement	33	25	17		15		14		25	25	9			5								10		
	- Irrigation	14		11		7		4		5	24	13	25	13				15	33	41	29		10		
	- Check structure	14		11		14	13	4		11	6	9						12	17				6		
	- Turnout	15		4		14	13	11		6	9	25	33		7			19	17				7		
	- Main canal	25	15	11	7	33	17	17	21	12		27	13	25	20			13	17	22	20		16		
	- Lateral canal	25	15	11	10	13	12	11	12	11	12	13	15	15	13			17	13	21	21		15		
	- Main farm ditch	11		11		11		11		12	16		13	20	21					11	7		11		
	- Service road	16		15	22	14	25	13	11	16	10	13	25	15	7			17			3		14		
	- Drainage inlet	14	50	7	23	14	13	13	17	9	18	13	13	13	7	9		12		11	7		12		
	- Farm drain	14		24	22	14	13	8	17	17	8	6			10	2	50	25					10		
	- Other	14																							
	(6) Replacement	33	25	17		15		14		25	25	9			5								10		
	- Irrigation	14		11		7		4		5	24	13	25	13				15	33	41	29		10		
	- Check structure	14		11		14	13	4		11	6	9						12	17				6		
	- Turnout	15		4		14	13	11		6	9	25	33		7			19	17				7		
	- Main canal	25	15	11	7	33	17	17	21	12		27	13	25	20			13	17	22	20		16		
	- Lateral canal	25	15	11	10	13	12	11	12	11	12	13	15	15	13			17	13	21					



Table B.2.5 Result of Farm Household Interview Survey for FA Members (11/24)

Question No.	Question	From NIA	From FA
1	Infants support Improve irrigation system		Cooperation in consultation with members
2	Delivery of water must be synchronized Repair main farm ditch Install irrigation structure Additional expenses for clearing	Assist NIA	Information of water status Provide materials to repair work
3	Repair canal without water with a float farm Repair damaged canal Maintain canal and service road Cover farm out	Assist NIA in repairing irrigation system Support farmers' activities Cooperation in the maintenance of canal	Maintain canal Follow proper schedule on water delivery Cooperate in the maintenance of canal
4	Provide deep canals and improve furrows Eliminate illegal checks	Technical assistance from NIA Help NIA personnel	Adequate water supply
5	Repair irrigation structures Subsidize the amount of canal Repair the headgate Distribute water as scheduled	Financial assistance to substitute facilities Follow up the maintenance of water supply Assistance in water distribution	Cooperation and support in to avoid illegal water distribution Cooperation of the BMD members
6	Repair/inhabilitate the system Improve canals	Support in the substitution and maintenance of system	Assign permanent caretaker
7	Provide sufficient water when needed Clearing of canal Improve canal direct operation & regular scheduling of water distribution Maintain house of canals	Support NIA in the substitution of system Financial support Road maintenance	Cooperation and active participation of all members Active participation Cooperation Training of new set of officers
8	Clearing of canal Repair and widen canals Ensure supply of water, rehabilitate and improve canals	Financial support Police check assistance in water delivery Help in the improvement of irrigation facilities	Active participation of officers and members Assist NIA to repair and clean canals Maintain water system Activate the FA
9	Repair the irrigation system Improve main irrigation facilities Assign personnel to coordinate water distribution	Provide funds to NIA	Repair cleaning of canal
10	Provide pump Organize administration to ensure sufficient operation of the canals and development Addition of reservoir People in the upstream should be disciplined Construct canals	Assistance in water delivery Security assistance in water delivery Cooperate with NIA in water system substitution	Operate structure to deliver water Cooperate with the farmers Aid support to members
11	Maintain water supply Construct more canals	Facilitate solution to water problem Improve and construct more drainage pond	Cooperate to improve water delivery Support in water distribution
12	Follow water delivery schedule Improve the irrigation facilities Provide service fee incentives for water master/ditch tender A water master must be assigned in every division/area	Assistance from police to maintain water delivery Municipal Mayor to support the farmers Financial assistance for water master and ditch master	Help maintain canal
13	Improvement of services Rehabilitate canals and improve irrigation services Provide farm ditch	Technical assistance	Strengthen the FA
14	Improve irrigation system and provide adequate water supply Sufficient water supply Construct more canals Provide furrow	Technical assistance	Strengthen the FA Cleaning of canals
<b>Organ FA</b>			
15	Sufficient water supply Equal distribution of water		
16	Subsides and train the people on water distribution Clearing of canals	Coordinate with NIA personnel	Cooperation among others
17	Assign personnel to follow up water distribution Improvement of irrigation facilities Supervision of water distribution to avoid waste of water	Financial aid Help NIA personnel to their jobs properly	Activate the association Assistance to improve distribution Recognize the FA and financial aid from LDC
18	Rehabilitation of tunnel Repair of canals and main gate Eliminate illegal checks, particularly in furrow Repair the system	Check if NIA personnel are doing their jobs properly Avoid disturbing the people in furrow Protect pumps	Follow water delivery schedule Active participation Good leader
19	Discipline the personnel Repair and rehabilitate canal Train the FA to work workers	Municipal Mayor which follow up if NIA is doing their jobs properly Support NIA through financial aid Assist in the improvement of facilities	Activate the FA Track for good leader Cooperation

Table B.2.5 Result of Farm Household Interview Survey for IA Members (12/24)

Cluster / No. of samples	Question	III. Report on Implementation of OEM Work		
		From MA	From ICGU	From IA
SIWATA	1	Repair IA facilities	Support projects	Cooperate in doing members coordination
BADWAT	3	Build, regulate and maintain irrigation structure Provide services needed by farmers like clearing of canal Maintenance of main canal, inspect clearing line Appropriate MA officers	Help in irrigation maintenance Support MA to improve irrigation facilities Support MA and IA	Better use of ration among members strengthen the IA Do a minute irrigation information Active members and officers
IP 2	4	Improve water supply Repair canal and other facilities Maintenance of all canals and farm ditches Additional facilities, improvement of irrigation and incentives to staff	Support water delivery activities Improve farming yields Cooperation	Units to improve water delivery system Support proper water delivery activities Cooperation
IP 1	2	Maintenance of irrigation facilities Cleaning and improvement of canals	Assistance in the establishment of system Technical assistance	Regular sharing work
JADO	3	Equal distribution of water, check the canal Rehabilitate the canal and dam	Assistance in road maintenance Transport facilities	Avoid illegal water diversion Rehabilitation of dam
JHS	2	Improve irrigation facilities	Improve road	Help in the operation and maintenance Do the irrigation things activities
OSWA	4	Maintain and improve canals and irrigation facilities Maintenance and proper scheduling of water delivery Rehabilitation of irrigation system & proper scheduling of water delivery New organization to help the MA Maintenance of canals	Active participation & support to MA Support MA in rehabilitation of system Road maintenance Coordinate with MA on rehabilitation of facilities	Cooperate in road construction Active participation of officers and members Cooperation among members Training of new members
LABAFA	1	Rehabilitation of irrigation system & proper scheduling of water delivery	Support MA in rehabilitation program	Active participation of officers and members
CHDO	3	Add on structure for water storage, MA employees should be active Rehabilitation of canals Confidence of distribution of water, clearing & maintenance	Support in water delivery	Members must unite to improve operations Cooperation in the implementation of water distribution Officials to conduct meeting to inform the members Agree on obligations to farmers
LOMRO	3	Build pump operation Maintain the main canal More personnel to check the area	Financial assistance Support MA	Cooperation Provide sufficient water
CAMP	1	Water delivery should be fair Water supply should be delivered on the regular time MA should support IA on times that IA has problems	Security guard & on fire assistance	Cooperation of members Fair distribution of water IA should be active, need to be fair to which do so inactive Operate the irrigation properly Unite and strengthen the organization Repair service ready
BAMAPA	2	Improve/rehabilitate irrigation canals Repair irrigation facilities	Help MA improve operation of irrigation system	Cooperate to improve O&M Cooperation of members
MACAPA	2	Officials need to solve water supply need be coordination Fair water distribution	Assistance from ISP to monitor water delivery schedule Assist in repairing the canal	Unite and organize Regular water distribution Help in clearing & cleaning of canals Monitor in water distribution
CANRUSA	4	Rehabilitation of canals & improvement of services Assistance in the clearing & clearing of canals Provide sufficient amount of water Rehabilitation of irrigation services first	Technical assistance Financial support	Cooperation
PAGCAPUNO	6	Improve irrigation system Immediate water supply if needed From the main canals to a well irrigated irrigation facilities	Technical assistance Technical assistance and financial support	Strong IA Technical assistance
Segea, Raj				
SMWBAT	2	Sufficient water supply Equal distribution of water		
BBSEA	2	Improvement of drainage system On time delivery of water	Road maintenance	Maintenance and construction of drainage Cooperation
AGDARANUA	3	More personnel to check the structure Provide necessary equipment		Active the coordination Coordinate with MA the project on irrigation Training of members Cooperate with MA and members
MAUCU 1	3	Check canals regularly from staff Rehabilitate the system		
DEMBANANACU	3	Regularly maintain the structure & distribute enough water Improve & repair construction of canal Check the main canals	Financial aid Assist in repairing the irrigation structure in part roads Act on these complaints of farmers	Improve canals and other structures Support the distribution of water Unite and cooperate Train the staff in school



Table B.2.5 Result of Farm Household Interview Survey for Non-FA Members (1/24)

Question No.	Area	No. of samples	SIN	BUP	JP 1	JP 2	JAD	JH	INW	JAB	CID	COO	CAM	BAM	MAC	CAN	PAG	SME	JEB	AGD	SUA	IRA	WNA	
A. The Family																								
1. Main Occupation of Household Head																								
(1) Farming	(%)		100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
(2) Farm labor	(%)																							
(3) Trader	(%)																							
(4) Government employee	(%)																							
(5) Fishing	(%)																							
(6) Private employee	(%)																							
(7) Other (retail trading, construction, work, vending)	(%)		100								33													
2. Second Occupation of Household Head																								
(1) Farming	(%)		100			25	50				20										50			
(2) Farm labor	(%)				100	25				100	50	67	100									100	60	
(3) Trader	(%)			100		25																		
(4) Government employee	(%)																							
(5) Fishing	(%)																							
(6) Private employee	(%)																							
(7) Other (retail trading, construction, work, vending)	(%)					25	50	100			33		100	50	50				50	100	50			
(8) None	(%)																							
3. Annual Cash Income of Household																								
(1) < 10,000 pesos	(%)					17																		
(2) 10,000 - 15,000	(%)					17																		
(3) 15,001 - 20,000	(%)																							
(4) 20,001 - 25,000	(%)		100								33	25	33											
(5) 25,001 - 30,000	(%)				50	17																		
(6) 30,001 - 35,000	(%)					17																		
(7) 35,001 - 40,000	(%)			100																				
(8) 40,001 - 50,000	(%)				50	33		100		100	33	50									33	50		
(9) 50,001 - 75,000	(%)					17	100		100		33											67	50	
(10) 75,001 - 100,000	(%)																							
(11) > 100,000	(%)																							
4. Average Annual Income of Household by Source (P00 pesos)																								
(1) Self-crops			11.6		11.8	42.1				0.0	15.4	17.6	15.2	20.9	7.5	16.0	27.0	7.6		10.1	20.0	13.6	6.8	
(2) Self of household			4.1		0.8	4.9		2.8			3.9				6.7	5.0					4.5		3.5	
(3) Farm labor				20.0	11.0	2.0	2.0			15.0	7.0	2.7	8.3	5.0	4.0	7.5		6.0	12.5	20.0	42.0	3.1	2.7	
(4) Merchant																								
(5) Retirement					5.0	8.3				25.0	9.0	11.0	28.3		4.5	20.0						8.0	18.8	
(6) Government employee						24.0		35.0			12.0		7.7	30.0	15.0								37.0	
(7) Pension																								
(8) Trading (merch. profit)			21.5	21.0	15.0	15.0					15.0			20.0							25.0		20.0	
(9) Pledge											12.0													
(10) Other bank					24.0						32.0	30.0	12.0								40.0	20.0	2.4	
(11) Private employee						24.0		34.0	12.0				8.3							25.0		2.4	24.1	
(12) Loan					0.2	8.3	42.0	1.0	25.0		1.0			21.0	18.0	2.0					2.5	8.0	8.5	
5. Total Borrowed Money of Household by Loan Source Last Year (P00 pesos)																								
(No. of respondents)			0	0	1	4	0	1	1	0	2	0	3	1	1	1	0	0	0	0	0	1	3	
(1) Loan from bank									25.0													4.0	14.5	
(2) Loan from villagers						2.0		1.0			1.0												2.0	
(3) Loan from merchant											1.0											10.0	5.0	
(4) Loan from other sources (relative)					0.2	6.6							1.0			18.0	2.0				2.5	10.0	5.8	
Total					0.2	8.8		1.0	25.0		2.0		13.0	31.0	18.0	2.0					2.5	34.0	28.3	
6. Average Annual Household Cash Expenditure and Loan Repayment (P00 pesos/year)																								
(1) Food			14.3	25.2	35.3	50.9	55.2	23.8	50.2	35.1	31.6	31.2	26.7	35.2	18.5	42.6	54.2	30.2	30.2	30.2	30.2	29.2	21.3	
Rice			2.6	3.7	10.8	11.8	12.7	7.1	21.9	13.1	5.9	9.2	4.4	12.8	5.6	14.9	16.4	15.1	12.0	12.1	10.9	7.5	12.0	
Fish/seafood			10.4	12.8	12.8	13.4	16.4	7.8	18.5	11.0	19.8	14.1	16.4	24.1	4.2	19.5	25.5	13.8	18.7	17.0	14.6	7.8	14.6	
Vegetables			3.6	3.6	3.7	2.3			0.7	3.7		2.7	1.0			3.7	2.3	3.7				3.0	2.4	
Other (liquor, etc.)			1.3	5.1	2.5	2.0	11.0	10.9	9.1	2.3	7.9	5.3	4.9	7.9	8.2	4.5	5.5	9.1	5.5	7.3	3.7	3.7	6.3	
(2) Clothing			1.5	1.0	1.0	0.6	4.2	4.0	4.5	2.0	1.8	1.1	2.0	6.0	5.3	1.5	2.0	1.0	1.0	1.0	1.0	1.0	1.0	
(3) Medicine			0.3	0.1	0.3	1.8	4.5	4.0	4.0	1.0	0.4	0.8	4.0	2.0	0.2	0.7	1.0	1.0	0.8	1.0	0.8	0.8	1.0	
(4) Education			4.0	1.0	3.5	4.0	22.9	10.0	3.0	5.0	5.0	8.7	12.1	11.8	5.0	8.0	3.0	4.4	1.0	7.1	1.5	2.8	6.5	
(5) Loan repayment					0.2	3.0	12.0	1.0	12.5		1.2	0.2	3.8	1.0	16.1						2.5	4.0	3.0	
(6) Other (school, health, etc.)					2.8	7.3	1.5	2.4	0.9	1.3	2.0	5.0	1.8	1.1	1.1	1.1				0.8	1.0	3.9	1.0	
Total			20.7	36.3	47.2	9.2	108.1	46.9	70.6	44.0	41.3	42.4	50.3	112.8	46.7	54.8	62.2	47.8	54.8	50.1	36.6	30.2	50.2	
7. Household Assets (monthly household)																								
(1) House			1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
(2) Shop/lot																								
(3) Land																								
Barangay						0.17	0.50		1.00	1.00	0.33	0.25	0.33		0.50	0.25	1.00			0.25		1.00	0.50	
Farm lot						0.17	0.50		1.00	1.00		0.25	0.33		0.50	0.25	1.00			0.25		1.00	0.50	
(4) Motor																								
(5) Refrigerator																								
(6) Cottage industry																								
8. Supply of Electricity and Water Supply																								
(1) Supply of Electricity																								
(Yes)	(%)		100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
(No)	(%)																							
(2) Supply of Water Supply																								
(Yes)	(%)		100	50		100					25							100	50		100			
(No)	(%)																							
9. Source of Drinking Water																								
(1) Surface water	(%)		100	100	100					100	100	100	100	100	100	100	100	100	100	100	100	100	100	
(2) River	(%)																							
(3) Spring	(%)																							
(4) Other	(%)																							
10. Household Appliances (monthly household)																								
(																								



Table B.2.5 Result of Farm Household Interview Survey for Non-IA Members (15/24)

Question Items	IA area (No. of samples)	SIS 1	BAP 1	JP 2	JP 3	IAO 2	JR 1	PRV 1	IAB 3	CHO 3	LDI 4	CAM 3	BAM 1	MAC 2	CAN 3	PAG 4	SNR 2	IBB 2	AGD 3	SCA 2	IOA 3	WNA 4	
<b>20. Assessment of the Coordination Among Members of Farmers' Organizations</b>																							
(1) Very good	(%)			100										100							100	33	
(2) Good	(%)				67				100													33	
(3) Weak/Deficient	(%)		100		33						100											33	
(4) None	(%)																						
<b>21. Assessment of the Leadership Quality of Their Organizations</b>																							
(1) Very good	(%)			100																	100	18	
(2) Good	(%)				67					50	50											30	
(3) Weak/Deficient	(%)				33					50	50			100								30	
(4) No leadership	(%)		100																			0	
(5) Not democratic	(%)																					0	
<b>22. Assessment of the Effectiveness of Working Committees</b>																							
(1) Very good	(%)			100																	100	22	
(2) Good	(%)				67					100	100											44	
(3) Weak/Deficient	(%)		100		33									100								33	
(4) No committees	(%)																						
<b>4. Agricultural Credit</b>																							
<b>23. Farmers' Organizations Managing Credit</b>																							
(1) Farmers' multi-purpose cooperative																							
[Yes]	(%)		100	100	100					100	100										100	80	
[No]	(%)													100								12	
(2) Credit cooperative																							
[Yes]	(%)																						
[No]	(%)																						
<b>24. Main Use of Credit for Farmers' Organization</b>																							
(1) Crop production	(%)		100	100	100					100	100											100	100
(2) Livestock production	(%)																						
(3) Marketing of produce	(%)																						
(4) Handcraft making	(%)																						
(5) Consumer stores	(%)																						
(6) Other	(%)																						
<b>25. Formal Institutions Providing Credit to Farmers' Organization</b>																							
(1) Farmers' multi-purpose cooperative																							
(a) Land Bank of the Philippines	(%)				67					100	100										100	67	
(b) Rural Bank	(%)				33																	12	
(c) Other financial entity	(%)		100	100																		25	
(2) Credit cooperative																							
(a) Land Bank of the Philippines	(%)																						
(b) Rural Bank	(%)																						
(c) Other	(%)																						
<b>26. Payment of Borrowed Money by Members of Farmers' Organization</b>																							
[Yes]	(%)		100	100	100						100										100	85	
[No]	(%)									100												15	
<b>5. Post-Harvest Facilities</b>																							
<b>27. Farmers' Organizations Managing/Operating Post-Harvest Facility</b>																							
(1) Farmers' multi-purpose cooperative (No. of respondents: 9)																							
[Yes]	(%)		100								100											22	
[No]	(%)			100	100					100				100								100	78
(2) Credit cooperative																							
[Yes]	(%)																						
[No]	(%)																						
<b>28. Post-Harvest Facilities Managed/Owned by Farmers' Cooperative (Final answer)</b>																							
(1) Warehouse (tack/asp)																							1
(2) Mechanical dryer (tack/asp)																							
(3) Solar dryer (tack/asp)																							
(4) Rice mill (tack/asp)																							1
(5) Transport truck (tack/asp)																							
(6) Other (tack/asp)																							
<b>29. Capacity of Post-Harvest Facilities</b>																							
(1) Warehouse (tack/)			100																				100
(2) Mechanical dryer (tack/wh)																							
(3) Solar dryer (tack/)																							
(4) Rice mill (tack/wh)																							150
(5) Transport truck (ton)																							150
(6) Other																							
<b>30. Farmers' Assessment on the Presence of Public's Guidelines on the Utilization and Maintenance of Facilities</b>																							
[Yes]	(%)		100																				100
[No]	(%)																						
<b>6. Farming Activities</b>																							
<b>B. Frequency of Planting Paddy</b>																							
(1) Once a year	(%)		100																				2
(2) Twice a year	(%)			100	100			100	100	100	67	100	100	100	67	100	100			100	100	100	86
(3) Three times a year	(%)																						2
<b>C. Planted and Harvested Area Last Year (final answer)</b>																							
(1) First cropping season																							
(a) Planted area		0.30	0.25	0.30	0.30	0.30		0.30	0.20	0.63	0.42	0.75	0.75	0.50	0.34	0.30	0.50			0.55	0.50	0.55	0.50
(b) Harvested area		0.30	0.25	0.30	0.30	0.30		0.30	0.20	0.63	0.42	0.75	0.75	0.50	0.34	0.30	0.50			0.55	0.50	0.55	0.50
(2) Second cropping season																							
(a) Planted area			0.25	0.30	0.70	0.90			0.20	0.63	0.16	0.75	0.75	0.50	0.34	0.30	0.50			0.40	0.55	0.50	0.50
(b) Harvested area			0.25	0.30	0.70	0.90			0.20	0.63	0.29	0.75	0.75	0.50	0.34	0.30	0.50			0.40	0.55	0.50	0.50
(3) Third cropping season																							
(a) Planted area						0.30																	0.21
(b) Harvested area						0.30																	0.18
<b>31. Total Paddy Production Last Year (tack of farmer, 42 kg)</b>																							
(1) First cropping			40	110	51	76		28	16	39	17	20	45	35	20	58	30			45	50	30	42
(2) Second cropping			30	93	51	80			15	32	18	23	36	28	32						40	35	33
(3) Third cropping						76																	31
<b>34. Main Source of Certified Seeds Planted by Farmers (Final answer)</b>																							
(1) From previous harvest	(%)		100	50	100					100	50			100	100	100	100			50	100	50	
(2) Supplied by landowner	(%)																						
(3) Subsidy from government	(%)											25									25		6
(4) Bought from dealer	(%)											25									25		6
(5) Bought from seed grower	(%)					100		100													100	13	
(6) Other (from other farmers)	(%)	100		50						100				100									19



Table B.2.5 Result of Farm Household Interview Survey for Non-FA Members (17/24)

Question/Item	District No. of samples																						
	NA	BAP	IP 2	IP 3	IP 4	IP 5	19/7	JAB	9/10	CO	4	4	BAM	MAC	CAN	PAG	SMF	10/8	AGD	SA	14	WNR	
46. Characteristics of Farm (Last Year)																							
(1) Maize																							
Area planted (ha)		0.17	0.25		2.26			0.50	0.50		1.40				0.50	0.50	1.70			1.50	1.70	2.50	17.10
Yield (kg/ha)		1.70	1.70		47.30			0.20	0.20		11.00				6.00	7.50	11.00			1.50	4.50	6.00	91.00
(2) Corn																							
Area planted (ha)					0.50																		0.50
Yield (kg/ha)					10.00																		10.00
(3) Pigeon																							
Area planted (ha)			0.10	0.50																			0.50
Yield (kg/ha)			2.00	5.00																			7.00
(4) Mung beans														0.20									0.20
Area planted (ha)					0.20								0.50										0.50
Yield (kg/ha)					0.20								0.50										0.50
(5) Rice																							
Area planted (ha)								0.10															0.10
Yield (kg/ha)								2.00															2.00
47. Location of Annual Planting of Different Crops																							
(1) In own field (ha)	(%)			1.00	1.00			100							100	100	100			100	100	100	90
(2) In own field (kg/ha)	(%)																						
(3) In own field (kg/ha)	(%)												100										0
48. Main Reasons for Adopting Crop Diversification																							
(1) Maximizing land use during wet season	(%)							50					20			100	100			75		50	20
(2) To increase income	(%)			50	100	50	100	100	100	100	100	100	100	100	100	100	100			100	100	50	80
(3) To improve soil fertility	(%)					50																	0
(4) Other (specify)	(%)			50																25			0
49. Livestock Production																							
(1) Cattle	(%)			100	50	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	70
(2) Pig	(%)			100	50	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	70
(3) Chicken	(%)			100	50	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	70
(4) Duck	(%)			100	50	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	70
50. Number of Livestock and Poultry Raised by Farmer (Last Year)																							
(1) Cattle															0.50	0.50				0.25			0.20
(2) Pig															0.75	0.75							0.05
(3) Chicken															3.00	4.50							1.10
(4) Duck															10.00	10.00							0.30
(5) Other															4.50	1.50	7.00	9.00	16.00		6.00	8.50	8.60
(6) Total				5.00	8.00	5.25		10.25	10.50	5.25	8.20	5.50	4.50	1.50	7.00	9.00	16.00		6.00	8.50	8.60	6.40	
51. Sources of Income from Livestock and Poultry Production																							
Total income (TZP) (TZP) (TZP)				3.175	0.800	14.744		4.950	10.200	1.750	5.000		9.625	4.715	4.950				8.415	7.415		5.560	
52. Main Market for Agricultural Products (Publicly)																							
(1) Cooperative	(%)																						
(2) Private market (other than public)	(%)																						
(3) Government agency (NA)	(%)																						
(4) Local market	(%)																						
(5) Wholesale market	(%)																						
(6) Other (specify)	(%)																						
(7) Other (specify)	(%)																						
53. Quantity and Price of Publicly Sold Last Year																							
Total quantity (kg)				1	15	20	10	70						35	40	20	20			25	30	15	470
Total price (TZP) (TZP)				5.20	6.20	4.20	7.00	5.60						6.50	6.60	7.00	7.10			7.00	6.40	7.40	6.00
54. Quantity and Price of Livestock and Poultry Sold Last Year																							
(1) Cattle																							
Total quantity (kg)																							
Total price (TZP) (TZP)																							
(2) Pig																							
Total quantity (kg)																							
Total price (TZP) (TZP)																							
(3) Chicken																							
Total quantity (kg)																							
Total price (TZP) (TZP)																							
(4) Duck																							
Total quantity (kg)																							
Total price (TZP) (TZP)																							
(5) Poultry																							
Total quantity (kg)																							
Total price (TZP) (TZP)																							
55. Agricultural Support Services																							
56. Sources of Marketing Support to Farmer																							
(1) Self	(%)																						
(2) Self	(%)																						
(3) Other (specify)	(%)																						
(4) National government (NA)	(%)																						
(5) Local government (LA)	(%)																						
(6) National government organization (NGO)	(%)																						
(7) Other	(%)																						
57. Kind of Marketing Support Available to Farmer																							
(1) Transportation	(%)																						
(2) Price information	(%)																						
(3) Market place	(%)																						
(4) Market channel	(%)																						
(5) Other	(%)																						
58. The Main Marketing Problems of Farmer (Last Year)																							
(1) Low price of agricultural products	(%)																						
(2) Low quality of products	(%)																						
(3) Poor market information	(%)																						
(4) Lack of market place	(%)																						
(5) Lack of market channel	(%)																						
(6) Other (specify)	(%)																						
59. Other Marketing Problems of Farmer (Last Year)																							
(1) Lack of marketing information	(%)																						
(2) Lack of marketing information	(%)																						
(3) Lack of marketing information	(%)																						
(4) Lack of marketing information	(%)																						
(5) Lack of marketing information	(%)																						
(6) Other (specify)	(%)																						

Note: \*1 Total sample includes both FA members and non-FA members





Table B.2.5 Result of Farm Household Interview Survey for Non-IA Members (2024)

Ques. No.	District/No. of agents																WSS
	NS	BP	BP-1	BP-2	BP-3	BP-4	BP-5	BP-6	BP-7	BP-8	BP-9	BP-10	BP-11	BP-12	BP-13	BP-14	
Q1. Access to Drinking Water (2024)																	
(a) Access to drinking water through public supply	(%)																
(b) Access to drinking water through private supply	(%)																
(c) Access to drinking water through other sources	(%)																
(d) Access to drinking water through other sources	(%)																
(e) Access to drinking water through other sources	(%)																
(f) Access to drinking water through other sources	(%)																
(g) Access to drinking water through other sources	(%)																
(h) Access to drinking water through other sources	(%)																
(i) Access to drinking water through other sources	(%)																
(j) Access to drinking water through other sources	(%)																
(k) Access to drinking water through other sources	(%)																
(l) Access to drinking water through other sources	(%)																
(m) Access to drinking water through other sources	(%)																
(n) Access to drinking water through other sources	(%)																
(o) Access to drinking water through other sources	(%)																
(p) Access to drinking water through other sources	(%)																
(q) Access to drinking water through other sources	(%)																
(r) Access to drinking water through other sources	(%)																
(s) Access to drinking water through other sources	(%)																
(t) Access to drinking water through other sources	(%)																
(u) Access to drinking water through other sources	(%)																
(v) Access to drinking water through other sources	(%)																
(w) Access to drinking water through other sources	(%)																
(x) Access to drinking water through other sources	(%)																
(y) Access to drinking water through other sources	(%)																
(z) Access to drinking water through other sources	(%)																

Note: \* Total respondents included in the IA members and non-IA members.  
 \*\* Refer to page 25 of the Table.





Table B.2.5 Result of Farm Household Interview Survey for Non-FA Members (22/24)

Ques/No. of samples	[Area/No. of samples]																					
	NIS	BAP	IPJ	IP3	ISD	TH	POZ	JAB	CRD	LOU	CAM	BAM	MAC	CAN	PAG	SMS	HRO	AGD	SMA	DIH	WKA	
04. Knowledge of the Change in the Process Management of the Farm																						
(1) Healthy																						
- NIA (1)		100	100	100	100					100					100	100	100		100			100
- Farmer (1)																						
- Other (1)																						
(2) Unwell																						
- NIA (1)			100		100					100					100	100	100					100
- Farmer (1)																						
- Other (1)																						
(3) Check status																						
- NIA (1)			100	100					100	100					100				100			100
- Farmer (1)																						
- Other (1)																						
05. Concession and Exemption Scheme for Payment of BEF																						
(1) NIA affected (1)		100		67	100				100	100	50	100			67		100		100	100		100
(2) Farmer affected (1)				0							50				100	100					100	100
(3) Other (1)																						
06. Awareness of General BEF per House																						
(1) Dry cropping (1)																						
- <1.200 (1)										100	100				100				100	100	100	100
- 1.200 (1)					50										100							100
- >1.200 (1)					50																	100
(2) Wet cropping (1)																						
- <1.000 (1)										100	100				100				100	100	100	100
- 1.000 (1)																						
- >1.000 (1)					100																	100
07. Actual BEF Payment (per year)																						
(1) Dry cropping (1)																						
- <1.200 (1)	100		100	100	100	100	100	100			50					50	50	100	67	100		100
- 1.200 (1)										100	50					100	50		100	100	100	100
- >1.200 (1)					67																	100
(2) Wet cropping (1)																						
- <1.000 (1)	100		100	100	100	100	100	100			50					50	50	100	50	100		100
- 1.000 (1)																						
- >1.000 (1)					67			100		100	50											100
08. Willingness to Pay in case of Increase in BEF to OUM																						
(1) Yes (1)										100	100				100				100	100		100
(2) No (1)																						100
09. Most Important Reason for Not Payment of BEF (Perd Area)																						
(1) Dry cropping reason (1)																						
- Insufficient budget for the next operating (1)					50																	100
- I did not know how to pay BEF (1)																						
- No information about BEF payment schedule (1)																						
- Not transparent in being paid to NIA in case of BEF at land (1)																						
- Not transparent in being paid to NIA in case of BEF in cash (1)																						
- Not time to pay BEF (1)																						
- I did not pay due to insufficient water for next harvest (1)					50					100	100				100	100					100	100
- Lower production of paddy than I expected (1)					50	50											100					100
- BEF payment is not my priority (1)															100	100						100
- I did not pay intentionally (1)																						
- I did not find the process of BEF (1)																						
- Other (including no water) (1)									100	50					100							100
(2) Wet cropping reason (1)																						
- Insufficient budget for the next operating (1)					50																	100
- I did not know how to pay BEF (1)																						
- No information about BEF payment schedule (1)																						
- Not transparent in being paid to NIA in case of BEF at land (1)																						
- Not transparent in being paid to NIA in case of BEF in cash (1)																						
- Not time to pay BEF (1)																						
- I did not pay due to insufficient water for next harvest (1)										100	100				100	100					100	100
- Lower production of paddy than I expected (1)					50	50											100					100
- BEF payment is not my priority (1)															100	100						100
- I did not pay intentionally (1)																						
- I did not find the process of BEF (1)																						
- Other (including no water) (1)									100	50					100							100
10. Effectiveness of Payment for Not Payment of BEF																						
(1) Yes (1)										100	100				100				100	100		100
(2) No (1)																						100
11. Request to NIA for BEF and NIA Improvement of OUM to FA																						
(1) Yes (1)										100	100				100				100	100		100
(2) No (1)																						100

Note: (1) Total response is not 100% due to rounding and non-response.  
 (2) Refer to page 24 of this Table.

Table B.2.5 Result of Farm Household Interview Survey for Non-IA Members (23/24)

Question Item	92. Request for Improvement of Water Management		
	From NIA	From LGUs	From IA
<b>Below Proper RIS</b>			
SISAFIA	1	Sufficient water in my area	
BAPZAT	1	Frequent clearing and deepening of canal	Improve organization
JP-2	2	Ensure equal distribution of water	Cooperation Putting up of canals
JP-3	6	Improvement and maintenance of irrigation facilities	Help NIA personnel
		Provide adequate water supply	Farm technician
		Clean the canals regularly, replace small cut-offs with bigger ones Improvement of irrigation system	
JAARD	2	Water distribution as scheduled	Coordinate with NIA to improve irrigation facilities
JJIN	1	Improvement of canals	Additional allowance for ditch tender
PNZA	1		
JABAPA	1	Maintenance of irrigation facilities	
CUBO	3	Repair and widen canals	Help in the improvement of irrigation facilities
		Assign officials who can perform well	
		Maintain canal to improve water delivery	Follow-up water delivery schedule Help maintain canal and help NIA officers
LOBAPRO	4	Repair the irrigation system	Request NIA to do their job regularly
		Improvement of irrigation facilities	Assist in the rehabilitation of irrigation facilities
		Follow schedule of water distribution	Assign personnel to supervise water distribution
CAMP	3	People in the upstream should be disciplined Construct canals	Assist in repairing canals Construct more canals
BAMAPA	1	Construct more canals	Extend support for improvement of water facilities
MACAPA	2	Reasonable service fee and incentive for water master and ditch tender A water master must be assigned in every division area	Active participation and cooperation
CANDUSCA	3	Improvement of services	Technical assistance
PAGCAPUSI	1	Improvement of the system	Technical assistance
<b>Support RIS</b>			
SNEWBAT	2		
IBADA	2		
AGIABASICA	3	Good water management	Get involve in water distribution
		Improve facilities	Improve roads Provide pumps
			Even distribution of water
SUAGUE 3	2	Repair the system	Provide pumps
EYIVISION 4 SUAGUE	3	Conduct the irrigation canals	Support NIA through financial aid
		Personnel should do their job Rehabilitate irrigation facilities	Assist in the improvement of facilities Follow water delivery schedule Observe schedule of water

Table B.2.5 Result of Farm Household Interview Survey for Non-IA Members (24/24)

District/No. of samples	Question	III. Request for Improvement of O&M Work		
		From NIA	From IGD	From IA
<b>Subtotal RIS</b>				
SIVAGA	4	Repair NIA facilities		
BAGLAT	2	Provide services/work day for members using the canal	Support the NIA and IA	Strengthen organization
IP 1	1	Repair canal and other facilities Additional facilities: improvement of irrigation and in canals to staff		Cooperative
IP 3	6	Maintenance of irrigation facilities Equipment for maintenance Rehabilitation of irrigation	Assistance in the rehabilitation of the system Technical assistance	Clear and maintain facilities
JAMP	2	Financial support	Road maintenance	Cooperative
JEN	4	Additional personnel		
INMA	1		Support on getting harvesting among farmers, such as seeds, water machine	
JARMA	4	Contract service		
OFD	3	Rehabilitation of canals Conduct of meeting to explain the importance of irrigation	Encourage officials to cooperate to improve management Support NIA to improve irrigation	Officials to attend meetings to introduce themselves Active of irrigation farmers
CHABRO	4	AM pumping machine Improve irrigation facilities	Help improve service roads	
CAMP	1	Improve canal Improve the drainage Contract service road	Support in clearing and cleaning Help improve service roads	
BANMFA	4	Staff to do their duties	Security and fence	Cooperate to improve O&M
MACAPA	1	Fair water distribution		Help in clearing/cleaning of canals Mediate in water distribution
CANRUSA	3	Rehabilitate/improve service first	Technical assistance	
JACCAPUSO	1	Improve irrigation system	Technical and financial support	Cooperative and support
<b>Subtotal RIS</b>				
SMBEBAT	2	Sufficient water supply		
PRADA	2			
MAHABASKA	3	Campaign to clean regularly the main and lateral canals	Cooperate with NIA	Cooperate with NIA and members
SENGAT 1	2	Rehabilitate system	Support NIA in rehabilitation of the system	Training of members
DIVISOR 4 SENGAT	3	Hire cooperative personnel AM personnel and equipment	Financial assistance	Train those involved

**Table B.3.1 Highlights of the Municipal-Level Public Consultation Seminar (1/2)**

Prospective Plan	Issues/Concerns	Comments/Suggestions Made	Reponses Made by the Study Team
Rehabilitation and improvement of existing structures	a) non-inclusion of most facilities of Barotac Nuevo in the plan	a) possibility to include these facilities in the plan	a) the Team developed master plan for 5 RISs in Iloilo and in the process, proposed short- and long-term development plans. Based on the criteria developed, Jalaur proper and Suague RISs were recommended as priority areas for the short-term development plan. The extension areas which also involve Barotac Nuevo were included in the proposed long-term development plan by the Team.
	b) inclusion of the non-functioning lateral canal in Brgy. Cali	b) NIA has submitted a 17 M pesos proposal to develop a pump area in Jalaur which will supply irrigation water to Capaliz and Cali areas. The proposal will complement the study of JICA	b) Brgy. Cali is definitely included in the plan.
	c) implication of the proposed project to the land conversion proposals of the LGUs		c) irrigation facilities which are covered by the proposed land conversion were not included in the rehabilitation plan. The authority to convert land belongs to DAR. The LGUs can only reclassify the land. If the land will be considered as agriculturally productive by DAR, then the land will not be converted for industrial, commercial or residential purposes.
	d) other alternative sources of water	d) the Study Team should make a very strong justification for the recommendation of maximum utilization of existing water supply instead of increasing the supply of irrigation water in the target areas.	d) there are no other possible sources of water. The construction of impounding dam is not feasible due to high sedimentation rate and the groundwater supply during dry season at the initial stage of paddy cultivation. Recommendations of the Team: augmenting water supply in Suague RIS through excess water from Jalaur proper RIS, rotational irrigation in the second cropping also in Suague RIS area, and increasing efficiency in the use of existing water supply.
Water management and O&M plan		a) equally important and will ensure the sustainability of the project b) will entail intensive capability program for NIA personnel and IA	a) the focus is more on facilitating the efficient use of available water supply.
Institutional development plan	a) the need to have an analysis of community organizing activities in the municipalities to be covered by the project	a) an assessment of the extent of community organizing activities and its impact to the beneficiaries be conducted	a) the objective is to make the juridically organized IAs to be entrepreneurs, managing its own affairs; a long term process which will require a lot of organizing inputs
	b) roles of LGUs and NGOs in the implementation of the institutional development plan	b) people empowerment in partnership with GOs and NGOs should be integrated in the plan	b) it is also envisioned for the LGUs, GOs and NGOs to work closely in the project implementation with the GOs responsible for the technical aspects (water management, extension services) and harnessing the distinctive competence of NGOs in institutional development with LGUs providing the needed support to the project
	c) the need for a lead organization to oversee the implementation of the plan	c) NIA to take the lead role in partnership with GOs and NGOs. Assuming the lead role will mean shift in NIA's approach to project development and implementation	c) NIA is definitely the lead implementing agency for this project. Provision in terms of budget and technical expertise will be included in the institutional development plan. A project management office will be organized to handle the implementation. The Team is recommending for the organization of a project management office to be responsible for the overall project implementation, supervision and evaluation.

**Table B.3.1 Highlights of the Municipal-Level Public Consultation Seminar (2/2)**

Prospective Plan	Issues/Concerns	Comments/Suggestions Made	Responses Made by the Study Team
Watershed management plan	a) extent and area coverage of the plan	a) this is in relation to the existing DENR project in the upper portion of the Jalaur watershed in Calinog. DENR is also proposing for an additional 2,000 ha for funding by OECF  b) it is good that aspect of sustaining the water supply through the watershed management plan has been considered in the study.	a) watershed management is a long-term objective of the project; the Team will only focus on preparing a watershed management plan for submission to NIA and DENR for their future reference. The Team will dovetail the Maasin watershed management plan with the DENR project submitted for funding by OECF.
Other concerns	a) implication of the project to the proposed development plan of making the Zarraga, Leganes, Barotac Nuevo and Dumangas as satellite areas of Iloilo city  b) target time frame of project implementation  c) cost recovery  d) need to integrate the proposed project in the development plans of the concerned municipalities  e) need for the LGUs, GOs and NGOs for a copy of the final report	c) clarification on the proposed project cost and the possible source of fund  d) need to assess if the cost could be an additional burden to the farmers (particularly if it will be funded by a loan) The NEDA representative noted that since the project will not be able to increase the irrigable area but will focus more on increased efficiency in using irrigation water, the cost recover aspect must be studied.  e) possibility to get information in time for the plan formulation of the MPDCs	a) LGUs should strike a balance between agricultural and industrial development. A priority objective of the national government is also to sustain increased agricultural production. In addition, the project will also sustain the efforts of maintaining Panay island as one of the major granary areas in the Visayas.  b) the study will be completed EO February; the draft final report in the middle of March and final report middle of May. If the Philippine government will make it as a priority project it could be implemented in the year 2000. The LGUs, GOs and NGOs find the plan acceptable, can recommend for the approval of the project to the Regional Development Council. The Council will then endorse the proposal to the Investment Coordination Committee of NEDA.  c) estimated project cost is at US\$3,000-3,500 per ha. Due to the configuration, the project might be financed through loan.  d) the financial analysis will determine if given project cost, the beneficiaries will still be able to shoulder the corresponding ISF.  e) a presentation of the progress report will be made on 09 December and the MPDCs are enjoined to participate in this forum.  f) the presentation of the draft final report will be in the middle of March and the Team will provide copies of the report to the concerned agencies.
<b>General comment</b>	The proposed plan and its components (proposed prospective plans prepared by the Study Team) were generally accepted by the participants with the following comment:  a) presentation of a very strong justification in its recommendation for maximum utilization of existing water in terms of increasing the cropping intensity and yields in the project area.		