

PN-AAW-856

49656

**Proceedings of the Review and Planning Workshop for the
Thailand Irrigation Organization Project**



WATER MANAGEMENT SYNTHESIS PROJECT

**PROCEEDINGS OF THE REVIEW AND PLANNING WORKSHOP
FOR THE THAILAND IRRIGATION ORGANIZATION PROJECT**

Prepared by

Robby Laitos, Kanda Paranakian, Alan Early

Prepared in cooperation with the United States Agency for International Development, Contract DAN-4127-C-00-2086-00. All reported opinions, conclusions or recommendations are those of the author (contractor) and not those of the funding agency or the United States Government. Mention of commercial products in this publication is solely to provide information. It does not constitute endorsement by USAID over other products not mentioned.



WATER MANAGEMENT SYNTHESIS II PROJECT

University Services Center
Colorado State University
Fort Collins, Colorado

in cooperation with the
Royal Irrigation Department
the Northeast Small-Scale Irrigation Project
and the Consortium for International Development

April 1987

TABLE OF CONTENTS

<u>Section</u>	<u>Page</u>
PREFACE.....	iv
I. INTRODUCTION.....	1
II. CHRONOLOGY OF THAILAND IRRIGATION PARTICIPATION PROJECT.....	2
III. SUMMARY OF PARTICIPANTS' REVIEW OF 1986 ACTIVITIES.....	5
IV. SUMMARY OF PARTICIPANTS' WORKPLAN FOR 1987 ACTIVITIES..	6
V. SUMMARY OF SENIOR OFFICIALS WORKSHOP.....	7
VI. PROPOSED WINTER WORKSHOP 1987-88.....	8
VII. PROBLEMS AND OPPORTUNITIES FOR FIPP IMPLEMENTATION.....	8
VIII. SUMMARY.....	10
IX. ANNEXES.....	11
A. A Short History and Overview of the Farmer Irrigation Participation Project at Lam Chamuak.....	13
B. Review and Planning Workshop: Review of 1986 Activities and Recommendations for 1987.....	19
C. Lessons Learned from the Lam Chamuak Experience....	25
D. Signs of Success in the ICO Approach.....	29
E. ICO, Farmer and Researcher Workplans.....	31
F. List of Participants: Senior Officials Workshop...	37
G. Schedule for FIPP Review and Planning Workshop and Senior Officials Workshop.....	39

PREFACE

The Thailand Royal Irrigation Department's (RID) experience indicates that the success or failure of any irrigation project (large, medium or small-scale) largely depends on water users. No matter how good the system is, if the farmers do not know how to apply water or maximize water use, the irrigation system is of no use.

RID first initiated water user groups in 1953 in Udorn, a province in northeast Thailand. Water user groups, later called water user associations (WUAs), were designed as a coordinating mechanism between the farmers and RID officials in operation and maintenance. They are to create a better understanding of water application, promote irrigated agriculture on both major and rotation crops, take care of farmers' benefits on investment and market, and solve conflicts over water.

The number of WUAs increased rapidly. Currently, there are about 200 WUAs all over the country. Nevertheless, these WUAs are not functioning properly and some are not functioning at all. This is probably due to the farmers' lack of sense of ownership. WUAs in the past were established after construction, which did not satisfy the farmers. Nonparticipation of the farmers during pre-construction, construction, and O&M leads to non-response of the WUAs to RID expectations.

At the present time, RID considers Lam Chamuak tank irrigation to be a pilot project. Farmers will be involved during preconstruction, construction, and after construction, especially in O&M. This would create the feeling of belonging, which will be good for O&M in the long run.

Alternative organizational strategies depend on a learning process to find out the best means to organize farmers in rehabilitation.

We hope that RID can replicate the same strategy at other tank irrigation systems where the farmers have not yet maximized water use.

Nukool Thongtawee
Director/O&M
Royal Irrigation Department
THAILAND

I. INTRODUCTION

From December 8-18, 1986, the Thailand Royal Irrigation Department (RID), the Northeast Small-Scale Irrigation (NESSI) Project, and the Water Management Synthesis II Project (WMSII) conducted a review and planning workshop for the Thailand Irrigation Organization Project. WMSII personnel have been working with RID and NESSI personnel since 1985 to implement this project at the Lam Chamuak Irrigation Project in northeast Thailand.

The objectives of the Thailand Irrigation Organization Project are the following:

1. In a preliminary trial, apply and test an alternative strategy for organizing water users' groups for farmers on a tank scheduled for rehabilitation.
2. Document the process of organization and participation.
3. Institutionalize a "learning process" within RID.
4. Describe and analyze the preliminary experience.

Eight irrigation community organizers (ICOs) were recruited and trained in November-December 1985 and posted at Lam Chamuak in December 1985. The ICOs were to encourage farmers to form their own irrigation organizations. These farmers' groups would then work with RID and NESSI in rehabilitating and improving Lam Chamuak.

In the fall of 1986, RID and USAID/Thailand officials met with WMSII personnel to discuss the possibility of reviewing the ICOs' work and planning 1987 activities. The ICOs had been at Lam Chamuak for a year, and all felt that it would be beneficial to bring ICOs, farmers, project researchers, and government officials together to discuss problems, recommendations, and lessons learned. Therefore, it was agreed to hold a review and planning workshop in Thailand in December 1986.

The objectives of the Review and Planning Workshop were as follows:

1. Review the first year of ICO activities, process documentation, technical documentation, and farmer activities in Lam Chamuak.
2. Plan the second year of project activities based on lessons learned from the first year.
3. Present the project objectives, activities, and results to senior Royal Thai Government and USAID officials to and gain their input and support for farmer participation in irrigation system rehabilitation and improvement.

II. CHRONOLOGY OF THAILAND IRRIGATION PARTICIPATION PROJECT

The Thailand Irrigation Participation Project (also known as the Farmers' Irrigation Participation Project (FIPP)) has a history marked by a series of two-year periods (Table 1). The Water Management Synthesis I Project conducted a sector review in Thailand in 1981. In 1983, the WMSII team was invited to help RID develop a workplan under the NESSI Project. The 1983 general workplan resulted in the initiation of FIPP in 1985. (See Annex A for a more complete overview and history of FIPP.)

The project initiation workshop was held in October 1985, and the first ICOs were recruited and trained in November and December. ICOs were assigned to Lam Chamuak in December 1985. ICOs were expected to integrate themselves into the community and encourage farmer leaders to become involved in ongoing and coming irrigation activities. During preconstruction meetings, farmers and ICOs discussed the following concerns regarding NESSI's rehabilitation of Lam Chamuak: 1) the amount and kind of farmer participation, 2) the alignment of the main ditch and farm ditches, 3) the turnout locations, and 4) the construction schedule. Compared to RID's past approach to rehabilitation and improvement, these meetings were very different. RID and the ICOs actively encouraged farmers to become involved in the pre-construction, construction, and O&M stages.

FIPP's first year concluded with the Review and Planning Workshop. There was extraordinary participation by Lam Chamuak farmer leaders in the review and the planning activities during the workshop.

A Senior Officials Workshop followed the Review and Planning Workshop. At this workshop, the RID Deputy Director General for O&M expressed a high level of commitment to the Lam Chamuak effort. He also asked for USAID support during the pre-construction, construction, and O&M phases of the project.

The year 1987 concludes the third two-year block, with the construction and O&M phases still incomplete. The project requires at least four more years for completion.

Since WMSII funding coming to an end, WMSII activities in 1987 will be limited to continuing to organize farmers, documenting the process, and preparing technical documentation in blocks A, B and C on the right main canal.

A workshop for Thai professionals and agencies on alternative approaches for organizing farmers is a proposed final activity under WMSII. Budgetary support from the USAID mission has been sought.

Table 1. Chronology of Farmer Irrigation Participation Project

FIRST TWO-YEAR PERIOD: ENTRY

1981 WMSI irrigation sector review team in Thailand

SECOND TWO-YEAR PERIOD: CONSOLIDATION

Sep 1983 WMSII team produced "Proposed Activities for Developing an Integrated Strategy for Improving Irrigated Agriculture in Northeast Thailand."
Feb 1984 WMSII/CSU team with RID visited NESSI sites and refined proposal. Project delayed over budget concerns.
Jan 1985 WMSII/CSU revised research proposal with Kasetsart University.
Mar 1985 WMSII/CSU with RID help revise implementation proposal using ICOs.
Aug 1985 Workplan and project approval received by RTG, USAID, WMSII and CSU.

THIRD TWO-YEAR PERIOD: IMPLEMENTATION AND RESEARCH

Sep 1985 Project initiated with site selection, personnel assignment and refined workplan during TDY of Alan Early.
Oct 1985 Project initiation workshop held in Lam Chamuak with rapid irrigation appraisal and search for solutions session during TDY of Robby Laitos and Alan Early.
Nov 1985 Irrigation community organizers recruited, selected and trained at Lam Chamuak by RID, Dr. Kanda Paranakian of Kasetsart University (Thailand), and Ms. Victoria Pineda from the Philippines' National Irrigation Administration.
Dec 1985 ICOs assigned to Lam Chamuak.
Jan 1986 Site visit by WMSII associate project director, Dan Lattimore.
Mar 1986 Site visit by Robby Laitos working on process documentation.
Jun 1986 Site visit by Alan Early working on technical documentation.
Sep 1986 ICOs' contracts ended; ICOs moved to other NESSI sites and RID ICOs returned to regular duties.

Table 1. (continued)

Dec 1986 First annual FIPP review and planning workshop held during TDY of Robby Laitos and Alan Early. "Refresher" course for ICOs completed; review of 1986 activities and accomplishments completed; workplan for NESSI implementation, ICO activities and technical and process documentation completed and presented at Senior Officials Workshop.

PLANNED ACTIVITIES

Spring 1987 ICOs reassigned to Lam Chamuak to prepare WUA* and TOGs* for construction phase of rehabilitation.

Spring 1987 Process and technical documentation continue.

Spring 1987 NESSI construction schedule begins for blocks A, B and C on Lam Chamuak right main canal with farmer involvement in decision-making, construction of on-farm facilities, and grassing of canal banks.

Jul 1987 Dry season construction completed.

Aug 1987 First release of reservoir water for 1987 wet season crop.

Winter 1987-1988 WMSII/USAID workshop in Thailand to share experience in broad cross-section of participation projects.

Aug 1988 NESSI Project formally completed.

* WUA = water users' association
TOG = turnout group

III. SUMMARY OF PARTICIPANTS' REVIEW OF 1986 ACTIVITIES

During the Review and Planning Workshop, participants were asked to review their 1986 work, list their major problems, and recommend how to improve the participation activities in 1987. (See Annexes B, C, and D for a more complete review of 1986 activities.)

The ICOs listed four major categories of problems. First, the ICOs felt that the workplan schedule was sometimes inappropriate. As this was RID's first attempt to use ICOs, some ICO activities were given too much time, and some were given too little. For instance, the ICOs felt that at the beginning of their work at Lam Chamuak, they spent too little time integrating themselves into the local community, and too much time collecting population data.

Second, the ICOs felt that their activities were not always sufficiently coordinated with NESSI and RID activities. The ICOs said that NESSI's new design for the system and the construction schedule were, at times, confusing to both ICOs and farmers. Additionally, sometimes there was not a RID official at Lam Chamuak who could make needed decisions affecting the ICOs' work.

Third, the ICOs were somewhat confused about the theory and practice of "farmer participation." To what extent, for instance, should farmers participate in Lam Chamuak's rehabilitation and improvement? The ICOs also said that they lacked some basic technical irrigation knowledge that could help their work with farmers.

Fourth, the ICOs complained of many administrative problems: vehicles were not always available, there were cumbersome bureaucratic procedures for obtaining gasoline and motorcycle repair, and salaries were sometimes late.

Eight farmer leaders from Lam Chamuak attended the workshop. They listed three major categories of problems. First, they felt there was a lack of continuous coordination and consultation with NESSI and RID. The farmers were confused about the construction schedule. Also, they did not completely understand the proposed canal alignment when the new design was explained to them using maps.

Second, the farmers did not know if their suggestions for rehabilitation and improvement would be incorporated in NESSI's new design. For instance, the farmers wanted improved feeder roads, bridges over the canals, and structures to prevent siltation. Additionally, they wanted to know if they will be compensated when NESSI constructs main ditches through their land and how much land they will have to give to construct the main ditches.

Third, the farmers stated that when the ICOs first moved to Lam Chamuak, they had difficulty helping the ICOs find adequate housing and food.

The ICOs and the farmers had similar recommendations for improving their work in 1987. They suggested that the ICO program be continued through 1987 and beyond to include not only the pre-construction phase, but also the construction and O&M stages. Farmers also recommended that coordination with NESSI and RID be improved, particularly concerning NESSI's construction schedule.

The social science and technical researchers at Lam Chamuak also reviewed their 1986 activities. The field research engineer complained that he often did not have the time to complete all his work and then translate it from Thai into English.

The social science process documentors said that their work was misunderstood by some RID personnel, who perceived, mistakenly, that the social science researchers were evaluating the ICO and RID work. The social science process documentors have often explained their role at Lam Chamuak: to document the successes and problems of farmer participation at Lam Chamuak so that the experience will not be lost and the process can be transferred to other Thai systems.

IV. SUMMARY OF PARTICIPANTS' WORKPLAN FOR 1987 ACTIVITIES

During the Review and Planning Workshop, NESSI personnel presented their construction plan for Lam Chamuak. With this plan in mind, the participants were then asked to develop tentative workplans for 1987. (See Annex E for a more complete description of the 1987 workplan.)

There was a general consensus to continue the ICO and farmer participation effort at Lam Chamuak, particularly during the construction phase. The workplans all stressed that ICOs should be posted at the site again (in September 1986, the ICOs were transferred to other NESSI sites), and all participants agreed that the participation effort would be revitalized at Lam Chamuak.

In the NESSI construction plan, the physical rehabilitation will take place in phases. In one area of Lam Chamuak, for instance, NESSI will be constructing new canals and structures, while other areas will still be using old canals and structures. This means that there must be multiple workplans for the system to accommodate the different stages of rehabilitation and improvement: pre-construction, construction, and O&M.

Since different activities will be taking place at different times throughout the system, the workplan must remain flexible. Rather than producing a strict timeline, therefore, the workplans simply detail the sequence of ICO activities, not the time required to complete them.

The workplans also call for closer coordination between ICOs, farmers, turnout groups, NESSI, and the construction contractor. Improved coordination between the farmers and the contractor is particularly important, as the contractor will be doing the actual

construction work. This work needs to be carried out in conjunction with the farmers' wishes.

The workplans also call for the creation of farmers' working committees based on specific construction activities. The farmers will decide what committees should be formed. The committees suggested in the workplans are based on the wishes expressed by the farmers at the Review and Planning Workshop. For instance, at the workshop, the farmers had many questions about land compensation and rights-of-way for ditches. As these are important issues to the farmers, the ICOs could help the farmers form a land compensation committee. That committee would be responsible for working with NESSI and the contractor to resolve that issue. Establishing such committees would give more Lam Chamuak farmers an opportunity to participate in decision-making.

V. SUMMARY OF SENIOR OFFICIALS WORKSHOP

During the Review and Planning Workshop, high officials from RID, the Department of Economic and Technical Cooperation (DETEC), NESSI, and USAID/Thailand attended a one-day Senior Officials Workshop at Lam Chamuak. (See Annex F for a list of participants at the Senior Officials Workshop.) During this workshop, the officials were briefed on the history and results of the Lam Chamuak participation project and then taken to the field to discuss the project with Lam Chamuak farmers. Time was allotted for the officials to discuss the project, and at the end of the day, ICOs and other RID field staff were awarded certificates.

The most important conclusion of this workshop was that there have been notable signs of success in the farmer participation activities. These successes have come about despite problems with funding and manpower constraints.

The project's achievements have been documented. The ICOs have been able to stimulate farmer participation in turnout group activities, and farmers have established their own rules and regulations for water use. There is improved communication between farmers and RID officials, and conflict among farmers and between farmers and RID officials has decreased. In general, farmers, ICOs, and RID officials have been satisfied with the results of the new organizational strategy during the pre-construction stage.

One major concern expressed at the workshop, however, was that WMS II will terminate on September 30, 1987. It is very important to continue farmer participation activities after September 1987 during construction and O&M. RID representatives at the Senior Officials Workshop stated that they want to replicate the Lam Chamuak participatory approach at many other existing tank irrigation projects in Thailand. Officials said they felt that in the long run, the participatory approach will reduce RID budgeting and administrative burdens for improved management of irrigation systems.

These officials wanted to know how the effort could be extended after WMS II terminates in 1987. USAID/Thailand officials also expressed hope that the Lam Chamuak project could continue. They stated that they would examine whether or not the USAID/Thailand Mission could help support the effort.

At the end of the workshop, Deputy Director General Lek Chindasanguewn said that he would make Lam Chamuak a RID pilot project. He expressed the desire that the project should continue and the lessons learned be transferred to other sites.

VI. PROPOSED WINTER WORKSHOP (1987-1988)

A major concluding activity of FIPP is to conduct a workshop for Thai social scientists and executives who have experience in the participatory approach to rural development. The purpose of this workshop is threefold:

1. to present the FIPP experience and other agency experiences.
2. to compare inputs, activities and results of the various Thai initiatives in farmer organization.
3. to draw lessons for implementation projects where farmer participation is needed, encouraged and expected.

The USAID Mission in Bangkok has been approached for support for this workshop. The output would be comparative information on strategies and approaches that appear to work with varying circumstances and objectives in Thailand.

VII. PROBLEMS AND OPPORTUNITIES FOR FIPP IMPLEMENTATION

A chronic problem affecting the FIPP has been the lack of funding to support the project at normal or expected levels of operation. Below, the various activities are discussed in terms of problems and opportunities.

A. OBSERVATIONS ON THE NESSI WORKPLAN

The NESSI workplan has three desirable attributes:

- 1) It provides a staged development over two years from the source toward the tail end.
- 2) It starts out slowly in the first year (1987) with rapid development expected in the second year.
- 3) It focuses on the right main canal, where ultimately most of the work is to be done and most of the newly generated irrigation area is to be developed.

However, the NESSI workplan doesn't address the issues and training needs of farmers and RID staff in O&M. This significant shortcoming needs attention from RID managers.

B. OBSERVATIONS ON FARMER PARTICIPATION

The farmer participation component has progressed well, but there is still some confusion concerning farmer participation. The ICOs, who have the most experience regarding effective farmer participation, still ask WMSII and Kasetsart University social scientists what is farmer participation. The farmers also stated that they are confused about how much they are to participate in rehabilitation and improvement activities.

The actual implementation of farmer participation during the pre-construction phase has gone well, however. All parties involved in Lam Chamuak -- RID, NESSI, the ICOs, and the farmers -- are still eager to participate, though they complain that they sometimes lack adequate direction.

C. OBSERVATIONS ON ICO ACTIVITIES

The ICO activities have proceeded quite well, but with growing pains. Eight ICOs have been recruited, trained, and posted at Lam Chamuak. They have lived and worked there for nine months and helped farmers organize effective turnout groups. They have been accepted into the community and they are still enthused about their work.

During this same time, however, the ICOs have complained that they haven't been able to coordinate enough with NESSI officials regarding the construction plan. At times, RID officials and the ICOs have felt that they have not received enough guidance or advice regarding ICO workplans.

D. OBSERVATIONS ON PROCESS DOCUMENTATION

The social science process documentation at Lam Chamuak has been one of the most successful components of the project. From the beginning of the project, a half-time social science professor from Kasetsart University has helped a full-time process documentor at Lam Chamuak. This documentor has gathered valuable qualitative data about project implementation during the pre-construction phase. He has also interviewed 117 Lam Chamuak farmers, and all these data will be used to write a final research report on the participation process at Lam Chamuak.

Much of these data have been directly beneficial to the RID and NESSI project implementors. For instance, the process documentor discovered that many farmers from outside the command area have been using Lam Chamuak water. NESSI engineers have used these data to redesign the system.

A major problem with the social science process documentation has been that the project implementors have often viewed the documentation

as evaluation. This has caused reluctance in some RID implementors to allow the process documentor to participate in some activities.

E. OBSERVATIONS ON TECHNICAL DOCUMENTATION

The technical documentation has suffered due to the many other duties of the field research engineer. He has capable, young engineers working for him at the site, but they require more supervision.

Some reports in Thai language have been produced. The remaining are needed and English language reports are required. Full use of the microcomputer for report writing and data management has not yet been achieved.

VIII. SUMMARY

The Thailand FIPP has the greatest potential for grassroots irrigation improvement of any project that either author has ever experienced. The growth in capability of the Royal Irrigation Department, the improvement of irrigation performance, and making irrigation systems responsive to farmers needs make this project very worthwhile. It is sincerely hoped that the work can continue such that the results can speak for themselves.

IX. ANNEXES

ANNEX A

A SHORT HISTORY AND OVERVIEW OF THE FARMER IRRIGATION PARTICIPATION PROJECT AT LAM CHAMUAK

1. BACKGROUND

Farmer participation can be an effective way to improve irrigation system performance. However, involving farmers in irrigation projects is not an event that can be easily measured or seen. Farmer participation is an approach, a process, that should be emphasized throughout the life of the irrigation project. It is best defined by asking, are things being done to and for farmers, or by them?

There are some examples of effective farmer participation in irrigated agriculture in Asia. Farmers have been involved in irrigation projects in the Philippines, Sri Lanka, and Indonesia. Also, USAID's Command Water Management Project in Pakistan and Irrigation Management Project in Nepal are beginning to create effective water users' associations for improved irrigation system performance.

Participation is not a new strategy for development projects in Thailand. Small farmers were effectively involved in the development of the silkworm industry in Thailand, and participation has been a key element in Thai family planning. Khon Kaen University's Small-Scale Irrigation System Team is attempting to implement a participatory approach to small-scale water resource projects in Northeast Thailand, and RID (Royal Irrigation Department) attempted to introduce effective farmer participation in the Nong Wai Irrigation Project. Of course, "people's irrigation" is practiced in northern Thailand.

While the Royal Thai Government and RID are committed to an ideology of participation, their experience with effective farmer involvement in RID irrigation systems has not always been successful. There have been problems in putting into practice a participatory approach to irrigated agriculture.

In 1983, the USAID mission in Thailand requested that the Water Management Synthesis II Project (WMSII) come to Thailand and develop strategies for improved irrigation system management and rehabilitation. Among other findings, the WMSII team concluded that a participatory approach could benefit Thai irrigation. Discussions in 1984 and 1985 with Director of O&M Nukool Thongtawee and Dr. Kanda Paranakian (Kasetsart University) resulted in agreement between RID and WMSII/Colorado State University to begin the Thailand Irrigation Organization Project (also referred to as the Farmer Irrigation Participation Project) with related research and implementation subprojects. The objectives of this project are the following:

1. In a preliminary trial, apply and test an alternative strategy for organizing water users' groups for farmers on a tank scheduled for rehabilitation.
2. Document the process of organization and participation.
3. Institutionalize a "learning process" in RID.
4. Describe and analyze the preliminary experience.

In September 1985, Dr. Alan Early of WMSII/CSU came to Thailand to select an appropriate site. In consultation with RID and NESSI (North-east Small-Scale Irrigation Project) personnel, Lam Chamuak was chosen.

2. LAM CHAMUAK

Construction of the Lam Chamuak tank began in 1961 and was completed in 1963. A 13.3-kilometer right main canal and a 7.4-kilometer left main canal command approximately 5,400 rai (900 ha), though the original design of the command area was 13,500 rai. Wet season water delivery begins in June and continues through November. The amount of wet season water delivery is approximately 2.0 mcm/month. Most of this water is for paddy production. Water is also delivered during the dry season (January to April), averaging about 0.6 mcm/month. The soils at Lam Chamuak are generally sandy loam with a gray unconsolidated sub-horizon at varying depths that is semi-permeable to water.

There are approximately 1,200 farm families at Lam Chamuak, made up of both Thai Korat and Thai Esan. Many of the Thai Korat are located in the Land Settlement Scheme of the Department of Public Welfare. There are no conflicts reported between these two ethnic groups. The average size of farm family holdings is about 30 rai (5 ha). Land tenancy is very rare.

RID established a water users' association in Lam Chamuak in 1968. This association, however, has not performed satisfactorily. It had form (officers, meeting places), but no function (water distribution, system maintenance, conflict management).

Lam Chamuak is the last of the seven NESSI sites. It was the least influenced by the improvement promises made by NESSI. Except for a preliminary design, there had not been any NESSI activities at Lam Chamuak by September 1985.

3. OCTOBER 1985 LAM CHAMUAK WORKSHOP

In October 1985, Dr. Alan Early and Dr. Robby Laitos of WMSII/CSU went to Lam Chamuak to conduct a two-week workshop with personnel from RID, NESSI, and Kasetsart University. During this workshop, interdisciplinary teams conducted a rapid appraisal of Lam Chamuak. The teams concluded that there were deteriorated structures and canals and an organizational breakdown of the present irrigation associations, which contributed to unreliable and inequitable water distribution. The teams

also discovered, however, the presence of irrigation organizations which could be improved, as well as an expressed willingness by Lam Chamuak farmers to participate in system improvements.

Based on these findings, the workshop participants developed a farmer participation strategy for Lam Chamuak. A key element in this strategy was to develop a cadre of ICOs (irrigation community organizers). These "catalyst agents" would be young men and women trained in basic organizational and water management techniques, who would live in Lam Chamuak villages and help farmers build their own effective irrigation organizations. The ICOs would not become leaders of these organizations. They would simply encourage farmers to develop their own associations and rules.

Finally, the workshop participants developed a general "implementation" and research workplan. This general workplan would help guide the more specific ICO workplan developed in November-December of 1985.

4. ICO RECRUITMENT, TRAINING, AND WORKPLAN

In November of 1985, the provincial irrigation engineer published announcements of ICO employment opportunities. Sixty-three candidates submitted applications. Final selection was made of eight ICOS: four young RID employees (all graduates of vocational schools) were asked to join the ICO program and four young college graduates with no RID background were selected from applicants. The non-RID ICOs were all females.

From November 26 to December 7, 1985, ICO training was conducted at Lam Chamuak by RID with the assistance of Ms. Victoria Pineda of NIACONSULT in the Philippines. Ms. Pineda also helped to develop the training course curriculum. Ms. Pineda was one of the original COs (community organizers) in the Philippines and has years of experience in the participatory approach to irrigated agriculture. The training staff included personnel from RID and NESSI and Dr. Kanda from Kasetsart University. The training program covered basic community organization concepts, principles, and processes; fundamental ICO skills required; key issues in developing water users' associations, roles and responsibilities of ICOs; and guidelines for field exposure.

One of the most important activities of the training workshop was the development of a nine-month ICO workplan for Lam Chamuak. This workplan was a group effort, with much input from ICOs and Dr. Kanda. The workplan included activities to be undertaken, people to be involved, timeframes, and expected outputs. The general thrust of the ICO workplan was to post ICOs at the site, have them discuss with farmers the proposed NESSI improvements at Lam Chamuak, and have them encourage farmers to form effective organizations so that they (the farmers) could become involved in improvement efforts.

5. ICO ACTIVITIES IN 1986

In December 1985, the eight ICOs were posted at Lam Chamuak. Initially, each ICO lived with a farm family. This arrangement, however, caused some difficulties for both the ICOs and the farm families, and

after six months, the ICOs rented separate houses and rooms in Lam Chamuak villages.

The first activity of the ICOs was to conduct a complete survey, or enumeration, of Lam Chamuak farmers. The ICOs needed to know who was farming in the command area for their future organizational efforts. Additionally, the survey helped the farmers and the ICOs to meet and become acquainted with one another.

At times, these initial efforts were confusing and difficult for the ICOs and farmers. The ICOs' role was new and not yet sharply defined. Local village leaders often had to take the ICOs to meet other farmers and explain the ICOs' presence in the village. Ultimately, their presence was understood and accepted.

The ICOs first major irrigation activity was to help farmers revitalize or form new turnout groups (TOGs). These TOGs were to be the basis of farmer participation at Lam Chamuak. The ICOs' strategy was to first meet the farmers along each turnout. The ICOs asked the farmers along each turnout to identify potential leaders for TOGs. The ICOs then asked these potential leaders to organize meetings with the other farmers along the turnout. In 1986, there were 51 turnouts along the left and right main canals, and ICOs contacted farmers along all 51 turnouts.

In general, the initial TOG meetings were successful. Most meetings had at least 90 percent of the farmers on the turnout attending. The ICOs would talk with the farmers about NESSI's proposed improvement plan and urge farmers to use their TOGs as a link to RID and NESSI.

Often using their own initiative, farmers in TOGs formulated rules and regulations for water distribution and maintenance. Fines were also agreed upon for those breaking the rules.

Each TOG developed its own rules. One TOG set a 30 baht (\$1 = 25 baht) fine for punishment, another demanded 50 baht. Some TOGs developed rules for membership, requiring everyone who uses canal water, whether a farmer or not, to join the TOG. One TOG along the right main canal developed a rule that vegetables could no longer be grown along canal banks since the banks were being damaged.

Farmers monitored compliance with the rules. ICOs reported many instances in Lam Chamuak where TOG rules were enforced.

While the new ICOs were not responsible for all of the farmers' motivation for TOGs, the ICOs' work definitely helped guide the farmers' own motivation. Lam Chamuak farmers already had many of their own organizational ideas.

In the spring of 1986, design changes by NESSI increased the number of TOGs from 51 to 128. The ICOs had to go back to the farmers, explain the changes, and build new TOGs based on the new design. By this time, the ICOs work was generally accepted, and, for the most part, farmers willingly formed new TOGs.

NESSI technicians asked the ICOs to help involve farmers in locating the new turnouts and ditches. In the summer of 1986, farmers were asked to provide bamboo stakes and accompany NESSI technicians during the survey, placing stakes in the new turnout locations. Technicians would then discuss with farmers the advantages and disadvantages of a particular canal alignment. Farmers would sometimes voice disagreement to an alignment and suggest alternatives. As of yet, nothing has been formalized regarding farmers' suggested changes, but a dialogue between farmers and RID/NESSI was begun.

There were some problems with laying the stakes. NESSI technicians would tell ICOs that they would be at a certain place at a certain time to lay the stakes, and the ICOs would inform the farmers. Sometimes, however, the NESSI technicians arrived late, and the farmers and the ICOs would be left waiting. ICOs have also organized TOGs at the extreme tail of the system, and farmers there have prepared stakes and waited for technicians to arrive. Later, however, they found out that there was no new design for their areas. Budgetary problems may mean that the system cannot be improved all the way to the extreme tail. Therefore, the tail farmers have become frustrated with the ICOs' organizational effort.

By September 1986, the ICO first-year workplan developed with Victoria Pineda was finished. At this time, one of the eight ICOs left the program to take another job. The four RID ICOs also left Lam Chamuak to return to their RID jobs. The remaining three female ICOs were asked by NESSI to become part of a "mobile team" of ICOs that would travel to other NESSI sites to help organizational efforts.

Throughout 1986, the Lam Chamuak work was documented. Dr. Kanda supervised a full-time process documentor at Lam Chamuak. This documentor interviewed sample farmers and key informants and kept a field diary of his observations. Dr. Kanda provided the minutes of the monthly site coordinating meeting and monthly reports of ICO and researchers' activities to RID and USAID/Thailand. Engineering and agronomic data were also systematically collected by part-time field staff.

6. CONCLUSIONS

Farmer participation activities in 1986 were just part of the first of three "improvement" stages at Lam Chamuak: preconstruction, construction, operations and maintenance. Construction activities will begin in 1987. Though there have been some disappointments and problems in the participatory approach at Lam Chamuak, the first phase has generally been a success. The project is headed in the right direction and, in general, RID/NESSI, farmers, and ICOs are pleased with the results.

There have been some notable successes during 1986. Most importantly, the participatory process has started successfully. ICOs have acted as a bridge between farmers and RID as the TOGs have been established. Farmers have often proved to be "ahead" of ICOs in their organizational work. ICOs say that this has stimulated them to work even harder with the farmers. Additionally, the strategy tested at Lam Chamuak is evolving into a uniquely Thai farmer organizational strategy.

Effective TOGs have been formed at Lam Chamuak. The TOGs have established their own rules and regulations. These rules have been enforced by the farmers themselves.

The interaction between farmers and local RID personnel has also improved. The site engineer at Lam Chamuak says that his project site is easier to manage than other NESSI projects because of the organizational work. Even the water-master at Lam Chamuak says that last year the farmers would never greet him when he came to the village. Now, he reports, they do.

Some significant problems, however, have also become apparent. There are several administrative problems with the ICO program. Per diem, salaries, motorcycle repairs, and the like are all nagging problems to the ICOs that have not been resolved. There are also more general problems with administering the program. The ICOs do not know if their participatory strategy will be extended through the construction and O&M activities. They wish to know if there is a future for them as ICOs within RID.

There have also been problems with the ICOs' workplan. The workplan needs adjustment, and coordination with NESSI activities needs to be improved. Determining how fast or how slowly organizational activities can be done is part of the learning process to develop a Thai farmer organizational strategy.

There does seem to be great potential for improved system performance at Lam Chamuak, particularly if farmers are actively involved in all stages of improvement. With some degree of continuity in the program, both farmers and RID officials can benefit from this participatory approach.

ANNEX B

REVIEW AND PLANNING WORKSHOP: REVIEW OF 1986 ACTIVITIES AND RECOMMENDATIONS FOR 1987

During the Review and Planning Workshop, participants were divided into five groups: ICOs, farmers, WMSII/CSU social science documentors, WMSII/CSU engineering documentors, and NESSI/RID implementors. Each group was asked to review their work in 1986 and list their major problems along with recommendations for improving activities in 1987. Each group presented their comments to the other participants, and group discussion was held. Since ICOs and farmers are the heart of this program, their problems and recommendations are listed below.

1. ICOs

a. Problems in 1986

1. Lack of consistent decision-making at ICO monthly meetings. Sometimes there was confusion at the monthly coordinating committee meetings when different chairpersons made different decisions month to month.
2. Services and facilities for the ICOs. There were persistent problems regarding money for the ICOs, including delayed per diem, salaries and overtime -- as well as cumbersome procedures to obtain motorcycle repairs and gasoline.
3. Too many responsibilities for the ICO supervisor. The ICO supervisor must spend too much of his time on money, vehicle, and administrative issues, as well as on other RID training programs elsewhere in Thailand. This limits the time he can devote to Lam Chamuak ICO activities.
4. Lack of coordination with NESSI. Sometimes, activities which NESSI arranged with farmers did not take place, leaving the farmers confused and frustrated.
5. Confusing information about the construction schedule. There was confusion regarding when the construction is to begin and to what extent the farmers are to be involved.
6. ICO housing. ICOs were first asked to live with farm families, but this caused stress for both the ICOs and the farm families. ICOs now rent houses in the project area.
7. Inappropriate ICO workplan schedule. Some activities were given too much time, and other activities were not given

enough. For example, there was too much time between placing the stakes in the farmers' field and actually constructing the new channels.

8. Duration of activities should be adjusted.
 9. Change in NESSI design for turnouts. When NESSI changed its design from 51 to 128 turnouts, the ICOs had to re-form many turnout groups. The ICO should have received the new design when they were first posted. However, the new design was only given to them after they had revitalized the TOGs based on the old design.
 10. The ICOs lack basic irrigation knowledge. As a result of this problem, a day for basic water management training was set aside for the ICOs during the Review and Planning Workshop.
 11. Future of the ICO program with RID. In particular, the four ICOs who are also RID employees want to know if there is a future for them within RID as ICOs. Two of the RID ICOs want to continue as ICOs, but the other two prefer to live with their families, outside of Lam Chamuak.
- b. Recommendations for 1987
1. Membership of the water users' association should be reviewed. A decision should be made whether or not to include farmers from outside the command area who farm in the catchment area and tenant farmers as members. Also, should only landowners and heads of families be members.
 2. The ICO program should be continued through 1987. If it is not continued, the 1986 work will be wasted.
 3. The ICOs should begin their work before the construction team moves in.
 4. During the construction stage in 1987, the ICOs should be under the supervision of the NESSI site engineer at Lam Chamuak. This should improve coordination between ICOs and NESSI.
 5. A workshop should be held to inform relevant government officials about the ICO work at Lam Chamuak. (As a part of the Review and Planning Workshop, a Senior Officials' Workshop was held at Lam Chamuak on December 18, 1986.)
 6. NESSI should have a definite construction workplan. This workplan should specifically address farmer participation, particularly during each of the three improvement stages.

7. In 1987, NESSI officials should accompany ICOs to the Lam Chamuak villages and clearly explain the construction schedule.
8. Before ICOs inform farmers about activities, they should make sure the message is correct.
9. Ensure better coordination with the construction team.
If the construction team makes an appointment with farmers, they should keep that appointment.
10. After construction is finished, the farmers should judge whether the system performs satisfactorily. If they judge that it is performing adequately, the farmers should receive some formal "authority" over the system. This means that the system would be turned over to the farmers to manage.
11. After construction is completed, have another workshop to evaluate and develop another workplan for O&M activities.
12. During the operations and maintenance stage, the ICOs should remain at Lam Chamuak for at least one cropping season, for continuity in their program.
13. The ICOs work assignments should be very logical and step-wise. To avoid confusion, reduce the number of ICO "bosses."
14. ICOs should be careful of behavior that could damage the ICO program.

2. FARMERS IRRIGATION PROBLEMS IN 1986 AND ACCOMPANYING RECOMMENDATIONS

Seven Lam Chamuak farmers were present at the Review and Planning Workshop. They worked as a group to identify the following problems, and then presented recommendations immediately after each problem.

- a. ICOs can be a logistical burden on local leaders. Before the ICOs were well known in the area, local leaders had to help the ICOs a great deal and had to explain the ICOs' role to other farmers.

Recommendation 1: The ICOs should coordinate more with the administrator at the district level.

Recommendation 2: The ICOs should coordinate their activities more with the advisor of the tambon (local administrative unit) council.

- b. Farmers did not completely understand how canals would look in their fields when it was explained to them only using maps.

Once they saw the proposed canals staked out in their fields, farmers sometimes felt that canals were misaligned or too short.

Recommendation 1: Officials and farmers should consult more with one another.

Recommendation 2: If a field channel is too short, farmers should be permitted to lengthen it with their own labor.

- c. Farmers do not know if there will be compensation for constructing main ditches through their land.

Recommendation: The officials should talk with the farmers about compensation and whether or not farmers will be paid if they participate in construction.

- d. There are no feeder roads. Feeder roads need to be constructed.

Recommendation: Construct one feeder road along the right main canal. Construct feeder roads on both sides of the left main canal, which will also help prevent siltation in the left main canal.

- e. There is a lack of bridges over the canals. Improving old bridges and building new ones would help communication and transportation.

Recommendation: If RID will not build new bridges, the farmers themselves would like to construct free-standing bridges over the canals.

- f. Farmers are not sure how much land they will have to give up to construct the main ditches.

Recommendation: RID should work more with the farmers when they put in stakes outlining the main ditches and tell farmers if they will receive compensation for their land.

- g. Who, how, and when should farmers approach to request a change in a main ditch when ICOs are not at the site. When will construction begin along the main canals, and how far along the canals will improvements be made?

Recommendation: Work with ICOs to inform farmers of construction stages. Farmers' requests should be seriously considered.

- h. There is conflict over water use because the water is not sufficient for all agriculture.

Recommendation 1: Continue to provide information to farmers about organizations. Have farmer groups establish their own rules and regulations.

Recommendation 2: Farmers should grow crops that need less water. Paddy should not be grown on the uplands.

- i. There is siltation in the main canals, especially on the right main canal.

Recommendation: Structures should be built along the canals to prevent siltation.

ANNEX C

LESSONS LEARNED FROM THE LAM CHAMUAK EXPERIENCE

The learning process at Lam Chamuak provided the ICOs and other workshop participants with an opportunity to reflect on what strategies have worked well and what strategies have not been successful. Below are eight categories of the most important lessons learned, particularly regarding the ICOs' work.

1. APPROPRIATE CHARACTERISTICS FOR ICO WORK

- a. ICOs should have a genuine commitment to rural development. This helps the ICO remember what he or she stands for and gives them added morale and support when they face problems and obstacles.
- b. ICOs should be:
 - * Single.
 - * Adaptable to farmers' lifestyles, especially in living arrangements, food, language, customs, tradition, and culture.
 - * Cheerful.
 - * Patient.
 - * Responsible.
 - * Willing to devote time, labor, and money.
 - * Open-minded and willing to listen to other ideas.
 - * Polite and sincere to the farmers.
 - * Modest.
 - * Able to work with both RID and the farmers.
 - * Able to adjust to and work with other ICOs.

They should also:

- * Enjoy rural development work.
- * Have basic knowledge in social science, agriculture, and community development.
- * If possible, have a farm background or knowledge of irrigated agriculture.

2. ROLE OF THE ICOS

- a. The ICOs should link RID and the farmers.
- b. The ICOs should create understanding with and among the farmers by:
 - * Providing farmers with information.
 - * Stimulating them to participate in group activities.
 - * Providing useful suggestions when farmers ask for advice.

* Explaining why and how farmer involvement is important in rehabilitation and improvement.

3. ICO APPROACH

- a. It is more important to have a commitment to rural development than to always exactly follow bureaucratic rules and regulations.
- b. The ICOs should consider farmers as their teachers, but also realize that farmers can have limitations in their knowledge.
- c. The ICOs should emphasize the equity of benefits resulting from the project; i.e., head farmers and tail farmers should receive equal benefits.
- d. The ICOs should help farmers create group activities that will continue after the ICOs leave.

4. STRATEGIES FOR INVOLVING FARMERS

- a. During pre-construction, a ratio of one ICO to 130 farm families was successful. The ICOs said that all RID rehabilitation and improvement projects should use ICOs as "stimulators" of the participatory process. It is important that the ICOs are involved in pre-construction, construction, and O&M.
- b. The ICOs should live in the local community and try to move their residence frequently. This way the ICOs could become familiar with many different farmers.
- c. The ICOs should introduce themselves to the farmers and explain the objectives of their work.
- d. The ICOs should be familiar with the families they live with and with all the families in the area.
- e. When talking with the farmers, the ICOs should be respectful and sincere.
- f. The ICOs should memorize as many of the farmers' names as possible.
- g. The ICOs should use every opportunity to meet with the farmers and exchange opinions and information.
- h. The ICOs should visit the farmers at their homes and fields as much as possible.
- i. The ICOs should participate in community activities as opportunities arise.

- j. If an ICO lives with a farm family, the ICO should pay for his or her expenses and help in household work. The ICO could also buy small household items for the family.
- k. The ICO should respect the farmers' traditions, culture, food, and statements.
- l. The ICOs should behave modestly and never should act as the farmers' supervisor.
- m. The ICOs should build trust and faith with the farmers by expressing their sincerity to the farmers.

5. PARTICIPATION IN TURNOUT GROUPS

- a. Successful farmer participation in TOGs is not entirely due to ICO work. ICOs work to stimulate the TOG leaders. The cooperation and willingness of farmers to participate contributes to meaningful participation.
- b. The ICOs should look for potential leaders who are active and willing to devote their time to group activities.
- c. The ICOs should continually stimulate the TOG leaders to effectively work with the other farmers.
- d. The ICOs should coordinate their activities with the farmers, provide them with needed information about rehabilitation and improvement, and help them understand the why and how of participation in TOGs.
- e. TOG leaders should distribute information, schedule meetings, and enforce rules and regulations.
- f. The turnout groups and water users' association should have rules and regulations.

6. MORALE, INCENTIVES, AND SUPPORT

- a. ICOs need guidance from an ICO supervisor. The supervisor should follow the ICOs' work in the villages and further explain the rehabilitation and improvement schedule to the farmers. This would increase the ICOs' morale and help them to solve problems promptly.
- b. RID superiors should consider financial and other incentives for ICO work and pay more attention to ICO work.
- c. There should be an adequate ICO budget for transportation expenses, including maintenance and repair. The budget should sufficiently cover expenses for an extended time.

- d. To ensure that ICOs are active and serious, RID should select good people with appropriate characteristics.
- e. The ICOs need a workplan that is clear, systematic, and continuous. The ICO supervisor should guide their work closely.

7. ICOS' PROBLEMS

- a. Often, the ICOs could not easily find farmers in the daytime. They had to make an appointment with the farmer, or try to catch him in the early morning or evening.
- b. Some farmers seek employment outside of Lam Chamuak in the dry season. Therefore, the ICOs could not work with these farmers until they returned to Lam Chamuak.
- c. Some farmers do not come to turnout group meetings on time, either because they are not prompt or they live far away. The ICOs, therefore, sometimes postpone group meetings.
- d. Some farmers did not try to "understand" the ICOs and tried to "fool" them, because the ICOs are relatively young; i.e., most are in their early 20s.
- e. Tenant farmers hesitate to participate in group activities.
- f. Some owner-operators promised that they would participate in group activities, but didn't.
- g. Farmers do not understand the ICOs' activities, and they are confused about the ICOs' role.
- h. During the rainy season, it is difficult to move around Lam Chamuak as many roads are extremely muddy or flooded.

8. ICOS' PROPOSED SOLUTIONS TO PROBLEMS

- a. More planning is needed.
- b. Administrative problems should be solved, including allocating money for hiring personnel, buying office supplies, and ensuring that ICO salaries arrive on time.
- c. The ICO supervisor should have his own plan, including giving advice to the ICOs, doing a follow-up evaluation of ICO work, and meeting often with farmers.
- d. The ICO workplan should be clear about how much time is involved and how the activities are to be carried out.
- e. The project administrator should show interest in the ICO work and give his support.

ANNEX D

SIGNS OF SUCCESS IN THE ICO APPROACH

During the workshop, participants often asked if there are any signs of success in the ICO approach. The data gathered from the ICOs and some of the farmers were clear: positive change has occurred regarding farmers' participation in irrigation.

The ICOs' observations can be summarized as follows:

1. When the ICOS first moved to Lam Chamuak, the farmers were not enthusiastic about solving their own problems and they had no guidance. Later, most farmers began to understand the reasons for participation in irrigation activities. Their creative thinking was expressed in many activities.
2. The farmers are satisfied with the participatory approach. It is very different from what they have experienced in the past. Instead of asking or ordering the farmers to participate in activities that "belonged" to RID, the ICOs stimulated the farmers to participate in decision-making and in managing their own activities.
3. The farmers know how to cooperate with one another to solve group problems, such as allocating water by rotation and setting rules and regulations on water use.
4. The farmers know how to coordinate their activities with the ICOs. They invited ICOs to participate in their activities and consulted with the ICOs to solve problems such as salinity and acidity. The farmers also know how to coordinate activities among themselves and to arrange meetings for problem-solving.
5. TOG members participated heavily in irrigation activities. Approximately 80-90 percent of the farmers cooperated in cleaning and maintaining the canals and farm ditches. Since farmers think that their participation pays, more than 90 percent of them attended the TOG meetings.
6. The farmers know how to cooperate systematically and rationally. The TOG leaders asked the ICOs for a map to accurately locate TOG members' farms.

Farmer leaders also expressed their opinions of the ICO approach. These key farmer informants included the existing WUA committee president, the chairmen of both the RMC and the LMC sub-committees, the TOG leaders, the village headman, and other local leaders. Their opinions can be summarized as follow.

1. Since the ICOs began their work, it is easier to mobilize labor. Farmers cooperate more in cleaning and maintaining the canals. The president of the WUA reported that previously the Thai Korat (the tail-end farmers) never helped the Thai Esan (the head-end farmers) in any irrigation activities. Now they do help one another.
2. The ICOs helped the farmers in each TOG to establish rules and regulations for water use. In the past, though the farmers realized that rules and regulations are necessary for equitably sharing irrigation water, no one initiated the activity for fear of gossip about the initiator's motives. The ICOs have acted as linkages between the farmers so that the farmers could establish rules. Some of the TOG leaders already enforce rules and regulations. Some of them said that rules and regulations over water use will be the basis for developing active TOGs or WUA.
3. The ICOs helped improve communication between the WUA president, the TOG leaders, and the TOG members.
4. The tail-end farmers who have never received water were more interested in irrigation activities after the ICOs explained the rehabilitation and improvement plan.
5. Conflict over water has decreased because the ICOs helped to establish common understanding and stimulated group action for solving problems.
6. The relationship between the farmers and the canal caretakers has been indirectly improved through canal cleaning and maintenance. In the past, the two groups often quarreled. The farmers, for example, complained that the canal caretakers did not do a good job, while the canal caretakers accused the farmers of not cooperating and complained of their own heavy workload. After the ICOs stimulated the farmers to join irrigation activities, the farmers had an opportunity to work with the canal caretakers. This helped create mutual understanding and strengthened the relationship between farmers and the canal caretakers.
7. A few farmers, particularly at the tail-end of the canal, noted that after the ICOs arrived, water was more available than in the past.

ANNEX E

ICO, FARMER, AND RESEARCHER WORKPLANS

During the first week of the December 8-18 Review and Planning Workshop, all participants reviewed their 1986 work and made recommendations for 1987. ICOs, farmers, RID/NESSI personnel, and researchers then discussed their problems, successes, and recommendations. (The ICO Workplan appears in Table E.1.)

In the second week of the workshop, NESSI personnel presented their construction plan for Lam Chamuak for 1987-88. Based on the first week's discussions and the NESSI construction schedule, the participants were asked to develop tentative workplans for FY1987. Below are the key elements of the ICOs', farmers, and researchers' workplans.

1. ICOs' WORKPLAN

- a. Revitalize and refine the participatory process for Lam Chamuak farmers' organizations.

There has been little ICO work at Lam Chamuak since September 1986. The ICOs need to bring new energy into the area, and the process and organizations need to be refined to make them more relevant to Thailand. For instance, this should include reconsideration of the lead time before ICO posting, and the intensity of effort.

- b. Re-post the ICOs at Lam Chamuak, particularly during construction.

Though the ICOs' "mobile team" has proved valuable to the other NESSI sites, the ICOs should live in Lam Chamuak villages in 1987.

- c. The ICOs should continue to act as bridges, or a link, between farmers and RID/NESSI.

In their role as catalyst agents, the ICOs should keep lines of communication open between farmers and RID/NESSI. The ICOs should continue building effective farmer organizations to provide the structure for this linkage.

- d. ICO 1987 workplans must remain flexible.

Since the construction contractor has not yet been chosen, the ICOs should remain flexible. They should be able to perform their work regardless of any changes in the contractor's schedule.

Table E.1 ICOs 1987 Workplan.

<p>WORKPLAN 3 ICOs ON LHC AND TAIL (BLOCKS D-I)</p>						<p>ICOs and TOGs Review 1986 and "Lessons --- Learned"</p>
<p>WORKPLAN 1 ALL B ICOS AT LAM CHAMUAK</p>	<p>ICOs Return to Lam Chamuak</p>	<p>ICOs Meet NESSI/ Contractors to Arrange Farmer Meeting</p>	<p>ICOs Meet With Leaders of TOGs/WUA to Reinte- grate and Arrange Meet- ing with NESSI/Contractor</p>	<p>ICOs Meet With Tambon/Village Leaders to Inform About the Project and Arrange NESSI/ Contractor Meeting</p>	<p>ICOs-TOGs/WUA Members-Tambon/ Village Leaders- NESSI/Contractor Meeting to Ex- plain Construc- tion Schedule and Workplan</p>	
<p>WORKPLAN 2 ICOs ON RMC WITH CONSTRUCTION (BLOCKS A-C)</p>						<p>ICOs-TOGs-NESSI/ Contractor Con- --- duct "Walk- Through" on Blocks A-C; Observe Place- ment of Stakes</p>

Table E.1 (continued)

ICOs and TOGs Discuss How to Improve Farmer Participation in 1987	- ICOs Help TOGs Develop an O&M Workplan for 1987	ICOs-TOGs Meet and Discuss 1987 O&M Workplan With Local RID Officials	- ICOs Help TOGs Schedule Water Delivery; Adjust Cropping Patterns	- Implement TOG O&M Workplan	
		ICOs and TOGs Meet and Discuss TOGs/WUA Membership and Leadership; ICOs and TOGs/WUA Develop Contingency Plans for Drought	ICO Help Develop Simplified O&M, Farm Management & Marketing Training and Curriculum for TOGs/WUA Members	- Old ICOs Help Develop Training Plan and Curriculum for New ICOs	
ICOs-TOGs-NESSI/ Contractor Meet to Discuss and Clarify Stakes and New Design	- ICOs-TOGs/WUA-NESSI/Contractor Establish Construction Working Committees (For example: -Right of Way -Design -Structures -Employment)	- ICOs and Committees Meet to Define Tasks and Develop Timetable (for example: -Land Problems a. Right-of-Way b. Canal Alignment -Land Compensation -Feeder Road -Bridges -Length of Field Channels -Structures -Grass Sodding)	- ICOs and Committees Discuss and Work with NESSI/Contractors; Develop Matrix of Farmer Participation	- Finalization and Presentation of Construction Workplan and Schedule; How TOGs Are Involved	- Construction; TOGs/WUA-Construction Working Committees Participate

Table E.1 (continued)

Old ICOs Help Train
New ICOs

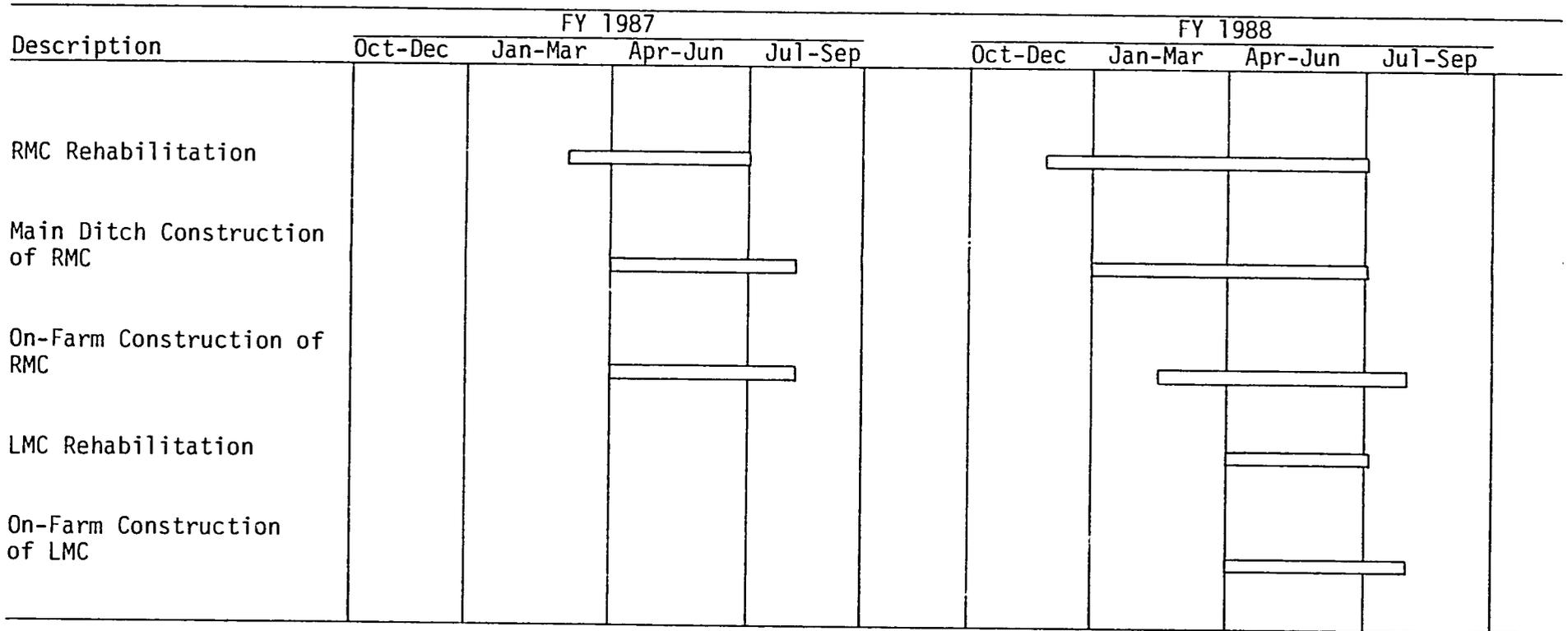
Test New Structures;
TOGs Approve

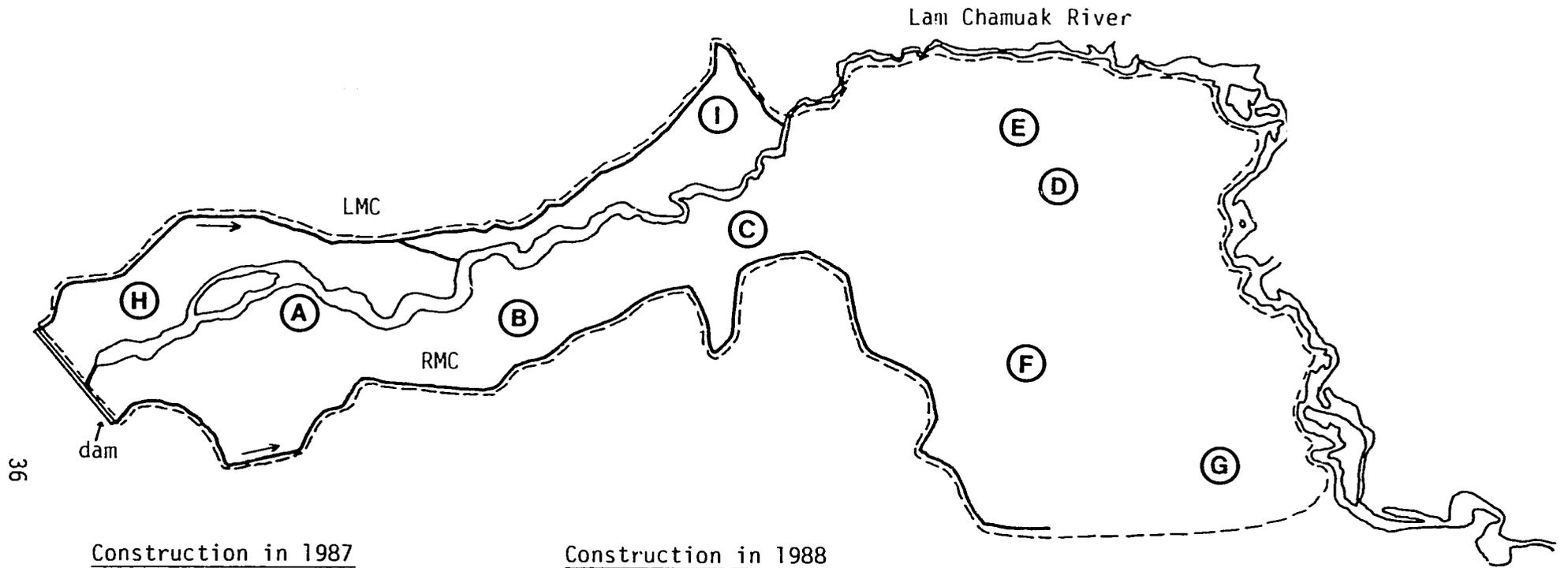
Feedback From TOGs;
Improvements Made by
NESSI/Contractor

ICOs-TOGs/WUA-
NESSI/Contractor
Discuss Turning
Over New Structures
to TOGs/WUA for
Management.

Figure E.1

CONSTRUCTION PLAN FOR LAM CHAMUAK SUBPROJECT





36

Construction in 1987

Block A - 953 rai
 Block B - 591 rai
 Block C - 908 rai

Total Area = 2,452 rai

Construction in 1988

Block D - 1,803 rai
 Block E - 1,776 rai
 Block F - 911 rai
 Block G -
 Block H - 1,297 rai
 Block I -

Total Area = 5,787 rai

--- Proposed command area
 RMC Right main canal
 LMC Left main canal

Figure E.2 Lam Chamuak Irrigation System.

ANNEX F

LIST OF PARTICIPANTS SENIOR OFFICIALS WORKSHOP

December 18, 1986

Lam Chamuak Tank Irrigation Project
Nakorn Ratchasina

Mr. Lek Chindasanguewn	Deputy Director for O&M of RID, chairperson
Mr. Pichet Soontornpipit	Deputy Director General, DETEC
Mr. David A. Delgado	Director, Agricultural and Natural Resources Development Division, USAID
Mr. Kamol Chantanumate	Project officer, USAID
Mr. Wanchai Jaisin	Engineer, USAID
Mr. Thana Thongton	Director, Project Division, Office of Permanent Secretary, Ministry of Agriculture and Cooperatives
Dr. Robert A. Ralston	Consultant, Projects Division, Office of Permanent Secretary, Ministry of Agriculture and Cooperatives
Mr. Nukool Thongtawee	Director of O&M, RID
Mr. Nikom Israngool na Ayuthaya	Director of Regional 6, RID
Mr. Mongkol Kalyaruen	Deputy Director of Regional 6 for O&M, RID
Mr. Prasert Singhnoi	Provincial engineer of Nakhon Ratchasima
Mr. Veera Wongsangnak	NESSI project field manager
Dr. Pradit Nopmongkol	Consultant, NESSI Project
Mr. Paitoun Rodvinich	Consultant, NESSI Project

Dr. Thanasarn Khuayjarernpanishk	Consultant, NESSI Project
Mr. Suchart Payaknan	Provincial agriculture officer, Nakhon Rathasima
Dr. Alan C. Early	WMSII coordinator, FIPP
Dr. W. Robert Laitos	WMSII senior social scientist, FIPP
Kanda Paranakian	WMSII research associate, Kasetsart University

ANNEX G

SCHEDULE FOR FIPP REVIEW AND PLANNING WORKSHOP AND SENIOR OFFICIALS WORKSHOP

<u>December 8, Monday</u>	(Review of 1986 Activities)
10:00-10:15	Introduction to workshop (Director Nukool)
10:15-10:45	Objectives of workshop and structure of workshop (Dr. Robby Laitos)
10:45-11:15	Group assignments for review sessions (Dr. Kanda)
11:15-12:00	Groups work on assignments
12:00-1:00	Lunch
1:00-5:00	Groups continue work on assignments
<u>December 9, Tuesday</u>	(Review of 1986 Activities)
Moderator:	Dr. Kanda
8:30-11:00	ICOs: Present review and recommendations
11:00-12:00	WMSII social science researchers: Present review and recommendations
12:00-1:00	Lunch
Moderator:	Director Nukool
1:00-2:00	RID engineering research: Present review and recommendations
2:00-3:00	Lam Chamuak farmers: Present review and recommendations
3:00-3:30	Break
Moderator:	Manager Veera
3:30-5:00	NESSI/RID officials: Present review and recommendations

December 10, Wednesday (Refresher)

8:30-9:00	RID's experience and history with farmer participation (Director Nukool)
9:00-10:30	What is farmer participation? Why farmer participation is necessary? (Dr. Kanda)
10:30-11:00	Break
11:00-12:00	Case study of farmer participation: Thailand (Manager Veera, Director Nukool)
12:00-1:30	Lunch
1:30-3:00	Case study of farmer participation: Philippines (Dr. Kanda/Dr. Laitos)
3:00-3:30	Break
3:30-4:30	Case study of farmer participation: Sri Lanka (Dr. Kanda/Dr. Laitos)

December 11, Thursday (Refresher)

Moderator: Dr. Kanda

8:30-10:00	ICO: Lessons from and experience with farmer participation at Lam Chamuak Discussion
10:00-10:30	Break
10:30-12:00	ICO: Lessons and experience with farmer participation at Lam Chamuak Discussion (continued)
12:00-1:30	Lunch
1:30-3:00	ICO water management training (Engr. Wichit Hongkanchanaku/Dr. Early)
3:00-3:30	Break
3:30-4:30	ICO water management training (continued) (Engr. Wichit Hongkanchanaku/Dr. Early)

December 12, Friday

8:30-4:30	Field trip to Lam Chamuak
-----------	---------------------------

December 15, Monday (Planning for 1987)

Moderator: Prasert Kanoksingh

- 8:30-9:30 Presentation of general construction plan and schedule for Lam Chamuak (Engr. Wichit Hongkanchanaku)
- 9:30-11:45 Farmers/ICOs reaction to construction plan and schedule
- 11:45-12:00 Group assignments for planning sessions
- 12:00-1:00 Lunch
- 1:00-5:00 Group work on assignments

December 16, Tuesday (Planning for 1987)

Moderator: Region 6 Director Nikom

- 8:30-12:00 All workshop participants meet to present and develop modified 1987 construction, research, and organizational workplan
- 12:00-1:30 Lunch

Moderator: Director Nukool

- 1:30-4:30 All workshop participants meet to present and develop modified 1987 construction, research, and organizational workplan (continued)
- 4:30-5:00 General discussion about construction plan and schedule

December 17, Wednesday

Preparation for Senior Officials Workshop

FARMER IRRIGATION PARTICIPATION PROJECT
REVIEW AND PLANNING WORKSHOP
SENIOR OFFICIALS BRIEFING AND
CERTIFICATE CEREMONY

December 18, 1986
Lam Chamuak

6:30	Trip to Lam Chamuak	
	MODERATOR:	Mr. Nukool Thongtawee
9:30-9:45	Welcome & background	Mr. Nukool Thongtawee
9:45-10:15	History of WMSII/RID inter- action in northeast Thailand	Dr. Alan Early
10:15-10:45	Results of 1986 activities	Dr. Kanda Paranakian
10:45-11:00	Workplan for 1987	Dr. Robby Laitos
11:00-12:30	Question and answer session on farmer participation	Mr. Nukool Thongtawee
12:30-1:30	LUNCH	
1:30-2:30	Field trip to Lam Chamuak site	ICOs
	BREAK	
2:30-3:00	Ceremony and remarks	Deputy Director General Lek Chindasanguewn
3:30	Closure	
