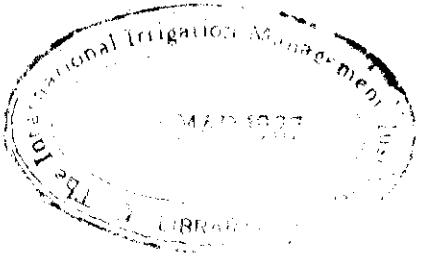
IIMI CASE STUDY NO. 1.

Experiences With Organizing Irrigators Associations: A Case Study from the Magat River Irrigation Project in The Philippines

Honorio B. Bautista



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Summary: The National Irrigation Administration has become well known in recent years for its innnovative experimental programs for promoting farmer participation through strong farmer organizations. IIMI's first case study documents the experience of an irrigation management official, the author of this report, in an effort to organize irrigators associations on the nearly half of the Magat River Multi-purpose Project area in a few short years. Most of these IAs are now effective and active organizations. This experience is a valuable source of lessons and ideas for agency officials concerned with developing water-user associations on other systems.

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Finally, to my beloved wife, Norma and to all our children and two granddaughters (Daphne and Denise), my heartfelt gratitude and thanks for their unlimited support.

FOREWORD

The Magat River Irrigation System is one of the two largest systems in The Philippines, the other being the Upper Pampanga River Integrated Irrigation System. Both irrigate approximately 100,000 ha. Mr Honorio Bautista, the author of this report, and his colleagues on the Magat River Multipurpose Project (MRMP) organized Irrigators Associations (IA) on nearly half the Project area in a few short years. Most of these IAs are effective and active organizations, so the MRMP achievement is indeed remarkable. This experience, through this detailed report, is a valuable source of lessons and ideas for agency officials concerned with developing water users associations on other systems.

The National Irrigation Administration (NIA) of the Philippines is charged with developing both large and small irrigation systems, and with operating and maintaining large "national" systems. NIA has become well known in recent years for its innovative experimental programs for promoting farmer participation through strong farmer organizations. NIA began experimenting with participatory methods for building and improving smaller farmer-owned irrigation systems--called "communals"--in the late 1970s. This program has been well-described by the former Assistant Administrator for Operations in NIA who was largely responsible for its planning and implementation, Benjamin U Bagadion, and his colleague from the Ford Foundation, Frances F. Korten (Bagadion 1985; Bagadion and Korten 1985; Korten 1982).

In recent years NIA has given increasing attention to organizing farmers on the larger systems that it manages, the "national systems." Generally, there are three types of farmer involvement in national systems. In the first type, farmer organizations contract with NIA to take responsibility for maintaining agreed lengths of canal. In the second type, the irrigation association takes over responsibility for operation as well as maintenance of agreed sectors of the system and also collects irrigation fees to be remitted to NIA. In the third type, the objective is to have the association take over the entire operation and maintenance of systems--in effect to convert them from national to communal systems (Bagadion 1985). Most of these efforts to involve farmer organizations in management of national systems are at an early stage of development.

In the communals and on the national systems the method used for developing strong farmers' associations that has been reported to date is through the use of specially trained "catalysts" called Community Organizers (CO). COs have proven quite effective at assisting farmers to develop strong associations--so much so that at least two other countries, Sri Lanka and Indonesia, have borrowed and adapted the idea. In this report, Mr Bautista reports on a similar but less intensive methodology that makes use of graduates in agriculture, called Irrigators Associations Advisors, (IAA) to promote farmers' associations. These Advisors are not called COs, and their job is defined to include providing considerable agricultural advice as well as assisting farmers to organize.

Despite the difference in intensity of organizational effort, and different terminology (CO versus Irrigation Advisor), both share a number of key characteristics that explain their relative success. These factors have been identified by Uphoff et al. (1985) and others, and the present case study provides further independent confirmation. A few key factors are:

1. Strong support from top levels of the government and agency. NIA Administrators have provided consistent and strong support for farmer participation through organizations. Undoubtedly a key reason for this is that NIA must recover O & M costs, and over the long term, capital costs, of irrigation systems from the users. Improving irrigation service, and developing strong associations that could work in partnership with NIA were seen as essential in order to improve the rate of fee collection.

2. Experimentation, phasing, and flexibility, rather than rigid "blueprint" approaches, are essential. There must be a conscious process of learning from the project over time, and a capacity for making changes as lessons are learned (Uphoff et al. 1985). As Bagadion (1985) notes, too, NIA itself had to make changes in order to develop its capacity to respond to farmers. A participatory mode of operation within the agency is also important, as Mr Bautista's discussion of the Agricultural Development Coordinating Council confirms.

3. Building from below, using base-level groups, existing ones if possible, to build upward rather than following the conventional strategy of simply calling large meetings to select officers and ratify a constitution. On this point, Bagadion (1985) notes that farmers' participation must be *organized* to make it effective and sustainable. Such organizations should follow hydrological lines. Having legal authorization is important as long as the legislation supports entities having their own reality; legal support is no substitute for or guarantee of legitimacy and status.

Mr Bautista's report on his experiences in MRMP is quite concrete and sometimes frank in its details on problems faced, and solutions attempted. These kinds of details are often absent from reports written by researchers (which tend to be more analytical and abstract). This report should be very useful to irrigation management practitioners, his primary audience, but it also provides important data for researchers interested in doing comparative analyses. To my knowledge, Mr Bautista did not derive the design of the program from books and researchers' reports, but rather from his own experiences and understandings of what might work under the circumstances. Yet his experience tends to confirm many of the conclusions researchers have also reached, while adding new insights.

Mr Bautista is the first recipient of an IIMI *Special Award.* Under the Special Awards program, IIMI seeks to identify irrigation professionals who have tried innovative approaches for improving the performance of irrigation systems. The program is designed to provide an opportunity for such professionals to document their innovations for enhanced system performance and to publish these as a case study. IIMI provides award recipients with substantive and editorial support required to accomplish these ends. I am sure Mr Bautista has gotton IIMI's special Awards Program off to an excellent start.

Mr Bautista is a man who has had years of experience in promoting agricultural development in The Philippines. It is significant that he began his career as a teacher of vocational agriculture, and moved up to being principal, and later held responsible positions in several special programs to promote food grain production. He has been Manager of the Agricultural Development Division of MRMP since 1976, with responsibility for promoting agricultural production in the second largest irrigation project in the Philippines.

To keep the cost and size of this publication within bounds, IIMI has chosen not to include a number of key documents as Appendices. These are copies of the types of contracts between NIA and Irrigators Associations, constitutions of Associations, membership agreements signed by members of Farmers Irrigators Groups, etc. IIMI has these on file in its library, and will be glad to send copies to persons who believe they could make good use of them.

Douglas J Merrey
Digana Village, Sri Lanka
22 November 1986

EXECUTIVE SUMMARY

Most water users associations organized in large systems are found only at the turnout level. Few irrigation system managers have ventured to organize water users associations above the turnout level. As a result, farmers are seldom given the opportunity to participate in the preparation of water delivery schedules, cropping calendars, collection of service fees and in the operation and maintenance of irrigation facilities in the sub-lateral and lateral canals.

At the Magat River Multipurpose Project (MRMP), the Agricultural Development Division started organizing Rotational Unit Groups and Farmers Irrigators Groups at the turnout in 1976 to ensure farmers' participation in the equitable distribution of water and maintenance of irrigation facilities. In 1980, 23 Irrigators Associations (IAs) were organized in the sub-lateral and lateral canals to see if formal farmers' groups can assist in the cleaning and minor maintenance work of larger irrigation canals and in collection of irrigation service fees. What happened in the succeeding years was beyond expectations. The number of IAs grew from 23 in 1980 to 240 in 1986 with 20,198 members cultivating 40,766 ha of rice land. Nearly 60% of these IAs now maintain about 600 km of irrigation canals and assist the National Irrigation Administration officials in the collection of irrigation service fees.

With this initial success, the ADD, with the cooperation of the Operation and Maintenance personnel, organized IA Irrigation Committees on large lateral canals and Federations of Irrigators Associations in each of the four irrigation districts so the IAs could also participate in the preparation of irrigation delivery schedules and cropping calendars. The Presidents of the four federations were invited to sit as regular members of the Agricultural Development Coordinating Council to represent the interests of the farmers in the formulation of solutions to existing problems.

The success in organizing water users associations in the MRMP service area can be attributed to any or all of the following:

1. *The strong determination and dedication of the ADD personnel to demonstrate exceptional accomplishments.*

   NIA started hiring agriculturalists during the early part of the 1970s in compliance with the loan agreements to strengthen its operation and maintenance staff. While the ADD personnel in other large irrigation projects confined themselves to organizing water users associations on the farm level, the ADD personnel of MRMP went on to organize formal water users associations in sub-lateral and lateral canals up to the district level. They demonstrated a capability to organize farmers' groups that would participate in the allocation and distribution of water, maintenance of irrigation canals, collection of irrigation service fees, and the preparation of irrigation delivery schedules and cropping calendar;

2. *Farmers' problems regarding the timely delivery of water during Project construction.*

   Farmers' problems during project construction were numerous. Those that followed the cropping calendar had their crops flowering during the cold months of December and January, while those that delayed their planting time suffered from water shortage. Both resulted in low yields. Coupled with low farmgate prices during the harvest season and reduced cropping intensity, most of them were not able to pay their loans in full, thus depriving them of getting succeeding loans. The farmers and the members of the ADCC realized that the best solution to this problem was the organization of formal Water Users Associations; and

3. *The strong support for the program by the Project Manager and other top officials of the agency, particularly, the NIA Administrators.*

In compliance with the new policy on irrigation by the Government of the Philippines, NIA launched a *"System Viability Program"* in 1979. The program stipulated that each irrigation system must be able to earn its cost of operation and maintenance and to also save some amount to pay back the cost of construction within a period of 50 years from project completion. The new program prompted the Project Manager and other NIA top officials to give full support to the IA Organization and Development Program of MRMP.

Today, MRMP has had ten years of experience in organizing water users associations at the turnout and more than five years in organizing IAs in lateral and sub-lateral canals. From this experience we can conclude the following:

1. Continuing education is indispensable to develop or maintain these associations until the IAs can stand on their own.

2. Additional duties and responsibilities with corresponding authority and incentives will facilitate the development of the associations and the organization of more IAs at MRMP.

3. Group exercises are indispensable for IA organizational development. These exercises must give immediate and tangible benefits to the members. One of the most effective group exercises at MRMP is the Lateral Turnover Program where the participating IAs are paid for monthly cleaning and maintenance of lateral canals. Through this program MRMP is saving about ₱900,000 (US$ 45,000) annually in maintenance costs. IAs also receive collection incentive fees of 2.5% for 75% payment of irrigation service fees and 3% for 100% payment. Other group activities include the negotiation of production loans, group purchase of farm inputs, and marketing of farm produce.

4. Proper management of funds, regardless of the amount, is important to a strong IA. To do this, all IAs are required to deposit their earnings in a bank before spending any amount. All expenditure must be based on an approved budget and the annual budget must be approved at a general assembly meeting to safeguard IA funds.

5. Active members are indispensable. The conventional practice of many farmer organizations where officers are the only ones participating in the discussion of issues is wrong and must be corrected in order to erase the notion that the members know nothing and are inactive.

6. Village chiefs often do not perform well as IA Presidents. In places where a canal serves more than one village, village chiefs who act as IA Presidents are often suspected of favoring members from their villages. Hence it should be avoided.

7. Inter-agency coordination is easier with strong IAs. Once the IA representatives are allowed to sit as members of the council or committee to represent the interests of the farmers, the work of the coordinator becomes easier because communication between the different agencies and the farmers is direct.

8. Understanding and full support of the IAs by operation and maintenance personnel is indispensable during and after the organizational phases because the key that holds people together in this association is *water*.

INTRODUCTION

Formally organized water users' associations can play an important role in improving the efficiency of irrigation systems, and even in the construction of small irrigation projects. In places where irrigation project management has strong support from other private and government agencies, formally organized water users' associations can also play an important role in increasing production and income of the farmers by policing their ranks for the proper management of production loans and marketing of farm products.

In 1977, a new general policy on irrigation was promulgated in the Philippines. The policy stipulated that the Government would bear the interest on the cost of construction of national and communal irrigation systems that it constructs and improves, and the water users would bear the cost of operation and maintenance and pay back the cost of construction and improvement within 50 years (Bagadion 1985). To comply with the new policy, NIA launched a program in 1979 to organize Irrigators Associations (IAs) in small national and communal irrigation systems to enhance farmers' participation in the design, construction, operation and maintenance of these systems. However, NIA did not attempt to implement similar programs in large systems above the turnout level like the Upper Pampanga River Project (UPRP) and Magat River Multipurpose Project (MRMP), until the Agricultural Development Division of MRMP, started organizing 21 pilot IAs in the last quarter of 1980.

The number of IAs in this project increased every year and in April 1986, a total of 240 IAs had been organized with 20,198 members cultivating 40,766 ha. The area these IAs now cover represents about 42% of the project service area of 97,400 ha. One hundred and thirty eight of these participate in the clearing and maintenance of 564 km of irrigation canals through "Lateral Turnover Program Agreements" with the NIA. Under this program, the participating IAs carry out normal channel maintenance and are reimbursed by NIA for their labor at a standard rate of ₱600.00[1] per 3.5 km Ditchtender Section, per month. The IAs also assist in the collection of irrigation service fees from their members whereby a collection incentive fee of 2.5% is given to an IA that pays 75% or more of the total owed to NIA, and 3% to those that pay 100%. All of the 240 IAs also participate with four agro-chemical companies in the establishment of Demonstration Farms in their respective areas. Some have special links with farm-input dealers for the group-purchase of fertilizers and pesticides, while others have links with agencies for production loans and marketing of farm produce.

The experience and observations of people involved in the organization and development of the IAs at MRMP are discussed in this report. The author spearheaded the preparation and implementation of the program for IA organization in MRMP. This report describes the problems that prompted the members of the Agricultural Development Coordinating Council of the project to propose the organization of IAs in every lateral canal, the series of group exercises that were introduced to enhance the development of group discipline for water management and procurement of other services, and the problems met and solutions developed by the implementing agency during the process of organizing and developing IAs. It also discusses the impact of ambiguous policies on the organization of IAs in large systems, and a proposal for rectifying some of the remaining problems. It is hoped that this report will be helpful to those who are considering organizing IAs in large systems.

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[1] The exchange rate of the peso has varied from about ₱9.00 - US$ 1.00 in 1980, to about ₱20.00 - US$ 1.00 in 1985-86.

BACKGROUND

The Magat River Multipurpose Project (MRMP) feasibility report proposed a storage dam on the river to provide year-round irrigation to 104,000 ha and installation of a hydroelectric plant with a capacity of 300 MW. The irrigation component consisted of expansion and upgrading of the existing Magat (MARIS) and Siffu River Irrigation System (SIFRIS). In 1973, NIA initiated work on the Angat-Magat Integrated Agricultural Development Project (AMIADP), which included provision for the rehabilitation and expansion of the existing MARIS to a total of 40,000 ha. The project is located in the province of Isabela in Cagayan Valley of Northern Luzon which now exports 65% of its produce to Metro-Manila, Central Luzon, Southern Luzon, and some Northern Luzon towns and cities. (See Map 1.)

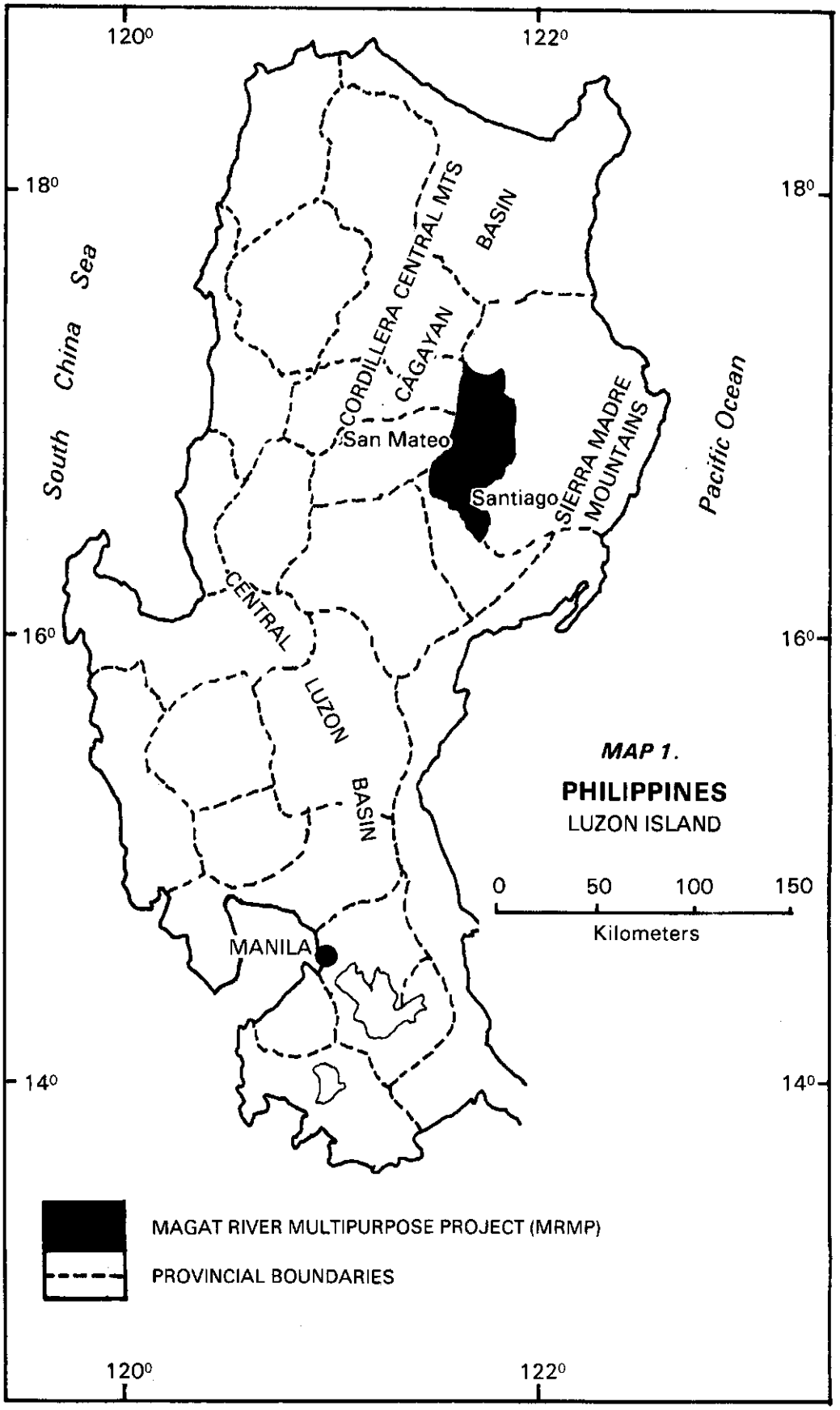
The climate in the project area is tropical and monsoonal. Warm temperatures throughout the year allow a twelve-month growing season for irrigated rice. About 75% of the average rainfall of 1,900 mm falls in the six-month period from July to December, with the peak in November. Over a 23 year period between 1948 to 1970, the area was hit by an annual average of 3.2 typhoons, with the highest frequency between July and November. The adverse effect of these typhoons on the rice crop must be considered in preparing the cropping calendar for the project. It is also necessary to involve the Farmers' Groups in the preparation and implementation of this calendar.

Surveys during the project planning phase showed that approximately 32,000 farm families (nearly 200,000 people) resided in the project area. The mean farm size was 3.1 ha in Stage I, and 3.4 ha in Stage II. However, there was a high degree of variation from the mean, especially in the Stage II area, which was less developed, largely rainfed, and of lower population density. In the early years, about half the farmers were owners and the rest tenants: However, implementation of land reform and further subdivision of land due to population growth have reduced the disparities in holding size and between owners and tenants. The pattern of land ownership did not appear to have a significant impact on the program to organize farmers, though no detailed investigation has been made on this question.

In view of the large physical size, high estimated cost, and long construction period for the project, a 10-year implementation schedule (1976-1985) was proposed. Stage I consisted of the rehabilitation of the existing systems and construction of new facilities to include a total of 75,000 ha that could be served by the run-of-the-river diversion during the wet season. This stage took five years (1976-1980) and was subdivided into two stages. Stage IA covered 40,000 ha of MARIS that was rehabilitated and upgraded with ADB assistance, and stage IB consisted of 35,000 ha that was rehabilitated and expanded with World Bank assistance. Stage II took seven years (1979-1985) and was also subdivided into two stages. Stage IIA included construction of additional irrigation facilities to increase the service area to 104,000 ha and the construction of a storage dam. Stage IIB consisted of the provision and installation of generating facilities, power lines, and substations.

Construction was scheduled during the dry season, to permit the farmers to plant rice during the wet season using the run-of-the-river diversion. Before the project, farmers generally transplanted their crops in December to avoid the adverse effect of cool temperatures in December and January. But during the project the farmers had to transplant their rice seedlings on or before the first week of November to conform with the construction schedules. Full cooperation of strong Farmers Groups was needed to implement this schedule.

Several intensified rural and agricultural development programs, the Rice Production Program, Land Reform Program, and Cooperative Development Program, were launched by the Government of the Philippines to attain self-sufficiency in rice production and to improve the living conditions of the rural poor. Each of these programs attempted to organize farmers' groups/associations to enhance farmers' participation in implementation, there-by ensuring success.


120°
122°
18°
16°
14°
South China Sea
Pacific Ocean
CORDILLERA CENTRAL MTS
CAGAYAN BASIN
SIERRA MADRE MOUNTAINS
San Mateo
Santiago
CENTRAL LUZON BASIN
MANILA
MAP 1.
PHILIPPINES
LUZON ISLAND
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Kilometers
MAGAT RIVER MULTIPURPOSE PROJECT (MRMP)
PROVINCIAL BOUNDARIES

When the International Rice Research Institute (IRRI) at Los Banos, Laguna, Philippines released the first non-seasonal variety of rice (IR-8) in 1967, the Government launched its intensified Rice Production Program (locally known as the Masagana 99) in 1968. The Ministry of Agriculture began organizing a type of farmers' group called *"M-99 SELDA."* The Selda is a group of farmers with 5-15 members that is used as a channel for the release of supervised production credit to bonafide farmers without collateral. The group is responsible for the proper utilization of the loan and its repayment. The failure of any member to pay his obligation on time is sufficient ground for a bank to disapprove the applications for loans of all other members for the succeeding crop season. But due to poor discipline within the farmer groups, non-farmers were able to borrow loans, borrowers inflated the price of their farms to get bigger loans, and others sold their fertilizers and pesticides at prices much lower than the prevailing price instead of applying them to their farms. This resulted in non-payment of production loans and eventual closure of most of the banks that entered the Masagana 99 Program. Farmers were then forced to borrow money from informal sources (private money lenders) at usurious interest rates (30-40 % per crop season).

The Government of the Philippines, through the Agricultural Credit Administration, also launched a Farmers Cooperative Development Program in the 1960s to solve the farmers' problems in marketing farm produce. Fourteen Farmers Cooperative Marketing Associations were established in the province of Isabela. Today none of these is operating. The facilities were all sold to private operators.

This was followed by another intensive program for cooperative development in 1973 through the Ministry of Local Government and Community Development in support of the 1972 Land Reform Program. The strategy was to organize pre-cooperative organizations (Samahang Nayan) in the villages and then to organize a farmers' cooperative (Kilusang Bayan) in the towns. This program also failed to accomplish its mission, because of funding and management problems.

To ensure the success of the Land Reform Program, the Ministry of Agrarian Reforms established the Agrarian Reform Beneficiary Associations (ARBA) in 1972. ARBAs were organized to facilitate the extension of production credit and technical assistance from the Land Bank of the Philippines (LBP) to land reform beneficiaries and to ensure the prompt payment of land amortizations. But these associations also did not work satisfactorily. Few paid their production loans and payments for land amortization remained low.

In 1973, NIA initiated work on the Angat-Magat Integrated Agricultural Development Project which included provision for the rehabilitation and up-grading of the existing MARIS to 40,000 ha. When MRMP started its construction work in January 1976, a total of 678 Compact Farms Associations (CFA) at the turnout level had already been established in 24,666 ha of the newly rehabilitated area (Table 1). Most of the CFAs were actively involved in the equitable distribution of irrigation water and maintenance of irrigation facilities at the farm level. Some of them had developed access to production credit. Since 1977, CPAs have been called Farmers Irrigators Groups (FIG), but their functions remain the same.

MRMP started hiring the key personnel for its Agricultural Development Division in the last quarter of 1975 to prepare the programs for the organization of Farmers Irrigators Groups, water management studies, monitoring and evaluation, and training of Water Management Technicians and farmer-leaders. Those hired held senior positions with different government agencies in Cagayan Valley. They transferred to MRMP because of attractive salaries and other benefits.

Table 1,**STATUS OF FIG ORGANIZATION AT MRMP SERVICE AREA 1974 TO 1986**

Year	No. of FIG Cumulative	No. of Members Cumulative	Area Covered Cumulative (ha)
1974*	214	3,275	6,772
75*	671	12,086	24,666
76*	954	16,608	34,110
77	1,053	17,823	36,945
78	1,189	20,665	41,831
79	1,501	24,410	48,668
80	1,589	33,539	51,982
81	1,672	35,298	54,873
82	1,828	36,851	60,143
83	2,028	38,451	66,148
84	2,286	40,773	74,869
85	2,580	32,125	83,204
86	2,631	43,978	85,694

Note: 1974 and 1975 are accomplishments of AMIADP.

*During 1974-76 these groups were called CFA.

The project established an Agricultural Development Coordinating Council (ADCC) in 1976 to satisfy the loan requirements. This is composed of provincial chiefs of departments and organizations (public and private) that render service for the development of agriculture. The ADCC is both a policy-making and an implementing body. Since 1976, it has met every second Tuesday of each month to discuss problems encountered by the farmers and its members in delivering agricultural support services. Problems that cannot be solved at the project level are elevated to the National ADCC. This council is chaired by the Project Manager, with the Provincial Governor of Isabela as Honorary Chairman. The Manager of the ADD was designated as its Executive Secretary.

PROJECT GOALS AND OBJECTIVES

The Philippine Government intensified the implementation of its irrigation development program in the 1970s, to attain self-sufficiency in rice. To support the program, the Government borrowed money from international financing institutions such as the World Bank, Asian Development Bank, and International Fund for Agricultural Development. It was also borrowing funds from other countries. To ensure success NIA was authorized to hire graduates holding a Bachelor of Science in Agriculture to organize informal Farmer Irrigators' Groups (FIGs) and train their leaders. It was also authorized to employ one agriculturalist as Water Management Technician (WMT) for every 500 ha to improve the capability of its water management staff.

MRMP is one of the projects that was included in the intensified irrigation development program. To justify its huge cost, the irrigation aspect of the project was required to attain a 200% rice cropping intensity within five years after project completion; to increase the average yield from 2.7 tons of paddy per ha to 4.2 tons per ha per crop season; and to increase the net income of the farmer beneficiaries during the same period. To date land development is incomplete. The project has achieved 164% cropping intensity, and an average of 3.7 tons of paddy per ha per season. Although income in pesos has improved, after inflation there is little improvement in real income.

The original objective of the project in regard to farmers' groups was only to organize and develop FIGs that would manage the equitable distribution of water on the farm level and maintain the farmer level irrigation facilities. To use the FIGs as channels for production loans without collateral, technical assistance and marketing assistance was not considered because there were other farmers' organizations designed for this purpose. However, this limited objective was revised when the members of the ADCC discovered that the other farmers' associations were not functioning well, principally due to lack of cooperative or group discipline. The revised objective called for the organization of a larger type of multipurpose irrigation-based farmers' association.

ORGANIZATION OF FARMERS' IRRIGATORS GROUPS (FIGs)

Within the MRMP management structure, one of the support divisions is called the Agricultural Development Division (ADD) (See Figure 1). This is the only staff division having direct implementation responsibilities. Under it are three sections namely: 1) the Land Use and Water Management Section (LUWMS),2) the Evaluation and Statistics Section, and 3) the Farmers Assistance and Training Section (FATS).

The Land Use and Water Management Section is responsible for conducting water management studies to establish the water management parameters of the service area and conducting fertilizer trails in cooperation with selected FIGs. It also provides resource speakers for training sessions of Water Management Technicians and FIG Officers.

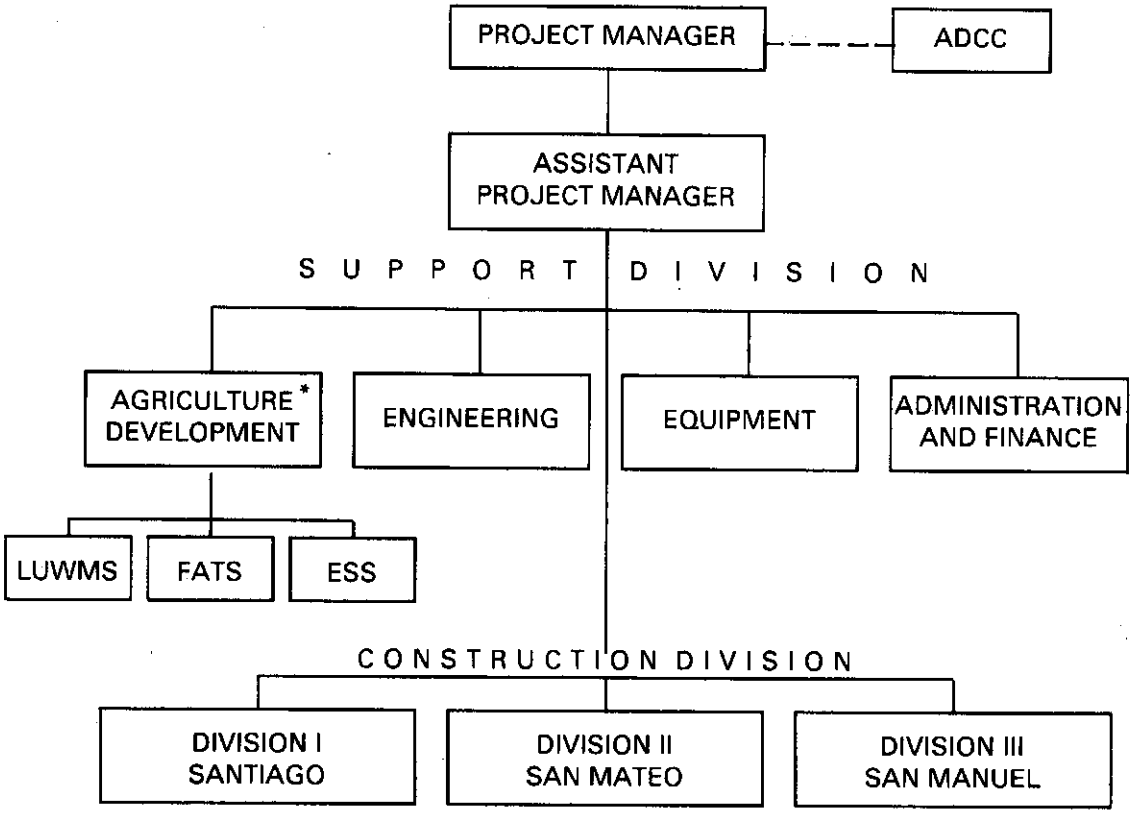
Agricultural development information must be collected periodically through farmer and institutional surveys. These must be compiled, analyzed and interpreted. Results of the analysis must be distributed to the members of the Agricultural Development Coordinating Council (ADCC) so it can be discussed during monthly meetings. These responsibilities belong to the Evaluation and Statistics Section (ESS).

On the other land, the Farmers Assistance and Training Section (FATS) is mainly responsible for organizing Rotational Unit Groups (RUGs), FIGs and training of the officers and members. FATs is also responsible for the preparation and implementation of training programs for Water Management Technicians to develop their capabilities in allocating and delivering water to the FIGs. They also answer technical questions in rice production when asked by farmer-cooperators during FIG meetings whenever representatives of the concerned agencies are not available.

The irrigation facilities of MRMP were designed for rotational irrigation (See Figure 2). Farm level turnouts are double-gated and serve as measuring devices for irrigation water. Cross sections of the Main Farm Ditch (MFD) and Supplementary Farm Ditches (SFD) are the same. These are provided with division boxes and end checks. The service area of the turnouts (rotational area) ranges from 30 to 50 ha. The rotational areas are subdivided into rotational units of about 7 to 10 ha each. Farmers in the small rotational units are organized into informal associations called RUGs. The larger rotational areas are organized into FIGs. The members of the RUG elect a unit leader. The unit leader allocates and distributes water to the members and supervises the maintenance of their supplementary farm ditch. The FIG includes a chairman, all RUG leaders, and a common irrigator. The chairman is selected from among the rotational unit leaders in the FIG, while the common irrigator is usually appointed by the chairman. Water is allocated and distributed by the common irrigator to the rotational units under the supervision of the chairman. The FIG chairman also supervises the repair and maintenance of farm level irrigation facilities with the assistance of the RUG leaders.

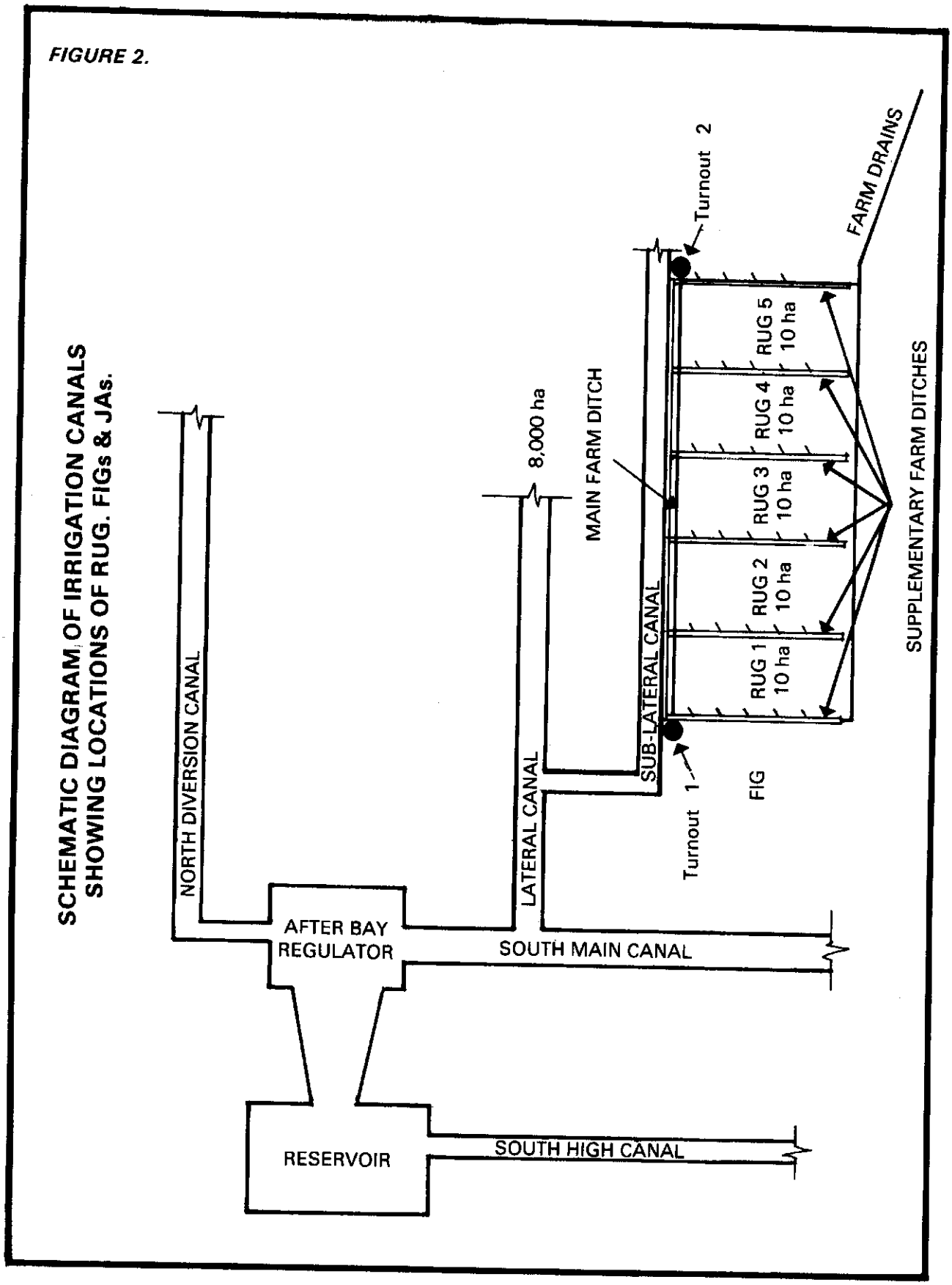
FIGURE 1

MRMP
ORGANIZATION CHART FOR PROJECT CONSTRUCTION
1976 - 1985



* The only support division with line function.

FIGURE 2.


SCHEMATIC DIAGRAM OF IRRIGATION CANALS
SHOWING LOCATIONS OF RUG. FIGs & JAs.
NORTH DIVERSION CANAL
AFTER BAY
REGULATOR
LATERAL CANAL
8,000 ha
MAIN FARM DITCH
SUB-LATERAL CANAL
Turnout 2
FARM DRAINS
RUG 5
10 ha
RUG 4
10 ha
RUG 3
10 ha
RUG 2
10 ha
RUG 1
10 ha
SUPPLEMENTARY FARM DITCHES
Turnout 1
FIG
SOUTH MAIN CANAL
RESERVOIR
SOUTH HIGH CANAL

By 1977, a total of 1,053 CPAs/FIGs had been organized. To determine how many of these associations were active and viable, an evaluation on a sample basis was conducted by the Evaluation and Statistics Section of the ADD. Only 50% passed, in the sense of fulfilling all their functions adequately. These functions include:

1. Major

a) proper repair and maintenance of irrigation facilities, b) equitable distribution of water, c) attendance at meetings is not less than 75%, d) convene regular meetings (officers and General Assembly), and e) payment of irrigation service fees.

2. Minor

a) adequate record keeping, b) group marketing of produce, c) group purchase of farm inputs, d) 100% use of high yielding varieties, and e) correct maintenance of paddy dike spillways/openings.

Another evaluation survey was conducted in 1979 of the 1,501 FIGs which had been formed by that time. The percentage of viable FIGs had decreased further to 46%. Repayment of Masagana 99 production loans was very low. The majority of the 16 banks that catered to Masagana 99 borrowers had closed their windows due to heavy past dues. A majority (75%) of the farmer-beneficiaries were complaining of the usurious interest rates (30 to 40% per crop season) that the informal money lenders were charging them. On the other hand, the bank managers were complaining of borrowers that were not bonafide farmers; of inflated areas; of borrowers reselling the farm inputs that they purchased through the use of chits due to lack of supervision of borrowers; and of the ineffectiveness of the Masagana 99 "Selda" as a channel of supervised farm credit. Some farmers were complaining of water shortage during the dry season while the others complained about harvesting, threshing and drying during the wet season. Most were also complaining about the poor marketing support of the Government to the farmers. These problems were presented to the members of the Agricultural Development Coordinating Council during one of its regular monthly meetings. As a result, the Chairman announced a special meeting to further discuss and analyze the prevailing situation.

THE SPECIAL MEETING OF THE ADCC IN 1980

As noted above, one of the provisions in the loan agreement called for organizing an Agricultural Development Coordinating Council (ADCC) to promote inter-agency coordination in the timely delivery of the necessary agricultural support services to farmer-beneficiaries. The ADCC of MRMP was organized in 1976 with 15 chief provincial officers of different agencies (public and private) engaged in the rice production program as members. In 1985, the membership was increased to 19 to include the 4 Presidents of the District Federations of Irrigators Associations (see below, section VII) as regular members to represent the farmers of MRMP. Although the registered members are only 19, an average of more than 30 people always attend the monthly meetings to listen to the discussions of important issues on rice production. According to those interviewed, the ADCC is the only council in the province and in the region where members discuss issues intensively and intelligently, where members can argue during discussions of critical issues and always end with a common agreement in solving their problems.

The council maintains the Project Manager and the Manager of the Agricultural Development Division as its permanent Chairman and Executive Secretary respectively. It meets regularly every second Tuesday of each month from 10.00 am to 4.00 pm, to discuss problems confronting both farmers and council members in the implementation of the rice production program and other

agricultural crop production programs. If time does not permit the formulation of recommendations that will solve the current problems, a special meeting is usually called by the chairman. In cases such as these however, the chairman always sees to it that a committee of at least three members is created to prepare and submit proposals to solve the problem or problems. The project pays each ADCC member an honorarium of 50 pesos per meeting, and provides lunch and snacks.

Periodic monitoring and evaluation reports of the different programs are a regular feature on the agenda. The Evaluation and Statistics Section of the ADD is mandated to submit these reports once a week before every meeting. These reports, together with the minutes of the previous meetings, are distributed to members at least three days before the meeting to provide enough time to go over it and verify the monitoring and evaluation findings if necessary.

Every effort is made to ensure the Council reaches a consensus in important issues, and to avoid divisive conflict. For example, the Executive Secretary always consults with council members planning to speak before the meeting to discuss with him the background of the subject or issue, including results of monitoring surveys on the topic at hand. Through this, speakers are not caught flat-footed and harmonious discussions prevail during monthly meetings.

Every foreign assisted irrigation project in the Philippines is required to establish similar councils during project construction, but many have failed to carry out their purpose. Our experience at MRMP seems to show that the life of any council for irrigation development depends largely on the ability of the coordinator to understand the programs that are being implemented by its members. With this in mind, the coordinator will be in a better position to develop a comprehensive approach that the members can accept. The coordinator must maintain a low profile at all times, must be humble, must not be credit conscious, and should act as a shock absorber of the body.

The members of the Council recognized the handicaps of the Production Technicians of the Bureau of Agricultural Extension of the Ministry of Agriculture and Food in providing close supervision to borrowers of the Masagana 99 Program. They lacked the necessary logistical support for mobility and the number of farmers had significantly increased due to subdivision of farms. The Council members felt that the solution would be to create or strengthen well-disciplined farmers' groups whose members can police their own ranks, so the Production Technician would only contact the leaders and the leaders would be responsible for the behavior of their members. But this type of farmers' group could not be easily identified, so the Council created an ad-hoc committee to study the matter with the provincial chiefs of the Ministry of Local Government and Community Development, National Grains Authority, Philippine National Bank, Land Bank of the Philippines, Ministry of Agrarian Reform, Development Bank of the Philippines, Isabela Seed Growers Associations, Manila Electric Company Corporate Farming, Bayer Philippines, and NIA as members. This ad-hoc committee was given one week to develop and submit a proposal.

Several days before the ad-hoc committee members met, the Executive Secretary of the ADCC prepared the agenda for the meeting and discussed it with the members in their respective offices. After that he prepared a series of questions that would guide discussion during the meeting. He also prepared a set of criteria that could be used in judging the existing farmer organizations to find which among them would be most useful in solving water management and credit problems, facilitating supervision and technical assistance, and enhancing the development of group discipline.

The committee examined the characteristics of the following farmers' groups and associations: Samahang Nayon (SN), Masagana 99 Selda (M-99 Selda), Agrarian Reform Beneficiary

Associations (ARBA), Barangay Irrigation Service Associations (BISA), Barangay Farmers Associations (BFA), Compact Farms Associations (CFA), and FIGs, (CFAs and FIGs have the same functions and scopes) using the criteria stated in the previous paragraph.

The attention of the committee was focused on debt recovery because it posed a serious problem to Government agencies at that time. Farming activities were often delayed or improperly done because of problems with production loans. Because of this, the proper management of irrigation water was also neglected by the farmers. From among the seven types of groups, the FIG was chosen for further strengthening because of the following characteristics:

1. Every FIG is supported with a parcellary map or a turnout irrigation layout where the names of landowners, actual tillers, and size of farms are recorded;

2. The parcellary map also contains the locations and status of farm-level irrigation facilities;

3. The farms of the FIG members are adjacent to each other making supervision and inspection comparatively easy; and

4. The average size of any FIG service area ranges from 30-50 ha which would ease monitoring of farmers' activities.

However, the FIGs had two strong drawbacks. These were their small size and the absence of any legal basis. The committee therefore resolved to federate all the FIGs that draw water from the same lateral or sub-lateral canal and suggested that these be registered with the Philippine Securities and Exchange Commission (SEC) as Irrigators Associations (IA). Thus it should be noted that the program emphasizes building on existing farmers' organizations (FIGs) by federating them into larger groups.

THE TWENTY-ONE PILOT IAs

Another special meeting of the ADCC was called in April 1980 to discuss the output of the committee. All of the recommendations of the committee were unanimously approved. The Council agreed that the ADD of MRMP would organize 21 pilot IAs in 1980, none in 1981, and an unspecified number in 1982 depending on the capability of the organizers and the willingness of the farmer-beneficiaries. It was also emphasized that membership in the associations must be voluntary in nature. In this regard, the Manager of the ADD was requested to prepare the corresponding program of work and training programs for both organizers and farmer-leaders. He was also requested to prepare a Memorandum of Agreement which all members of the ADCC would sign to show their commitment to the program.

A core of seven agriculturalists were selected from the existing FIG organizers. Three were assigned to Division I and two each to Divisions II and III (See Figure 1). Those chosen were all graduates having a B.Sc. in Agriculture with varied major subjects. They were all sons or daughters of farmers. They all participated in preparation of the Program of Work and in preparation of the Training Program for farmer-leaders.

The Program of Work was approved by the ADCC with only minor corrections. All the members of the Council signed the Memorandum of Agreement. Training of IA organizations was initiated immediately to catch up with the schedule of the next crop season which was then fast approaching.

A five day workshop was held to train the organizers. In the first days, the importance of FIGs' participation in the preparation of the water delivery schedule, cropping calendar, and the allocation and distribution of water through the IAs were discussed in great detail. The organizers were also told that strong IAs can be used as a good foundation in organizing or revitalizing farmers' cooperatives in the future. Most of the trainers were experienced staff from the ADD. Some resource speakers were also provided by the Philippine National Bank, National Grains Authority, Isabela State University and agro-chemical companies. Besides water management, irrigated rice production, management of production credit, marketing of farm produce, organizational development, and systematic collection of irrigation service fees, the following were emphasized:

1. Selection of sites where water is a major problem and all FIGs are active;

2. Updating the parcellary maps;

3. Updating the master list of farmers;

4. Inventory of farm level facilities;

5. Identification of FIG Chairmen and rotational unit leaders;

6. Procedures on how to conduct the orientation class for prospective members;

7. Signing of the membership agreement by FIG members; and

8. Procedures for selecting the members of the Board of Directors and IA officers.

The original plan was to organize the IAs on lateral canals or sub-lateral canals where all the FIGs were found to be active. But this was not strictly followed because the organizers could not find laterals such that all laterals had active FIGs. Therefore, they went on to organize IAs on laterals even if only four adjacent FIGs were found active in a lateral of 10 to 15 FIGs. In most cases the active FIGs were located at the tail-end and midsections of irrigation canals.

With the assistance of the Operation and Maintenance personnel, the organizers updated the parcellary maps and farmer lists, and conducted inventories of the farm-level irrigation facilities. The officers of all concerned FIGs were later called to attend a four-day training program in the Special Project Integrated Training at the NIA, Echaque, Isabela, free of charge.They were even fetched by NIA vehicles from their homes and returned to their homes after the training session. At the end of the training period, the officers were asked to submit their schedules for general assembly meetings of prospective IA members, to enable follow-up by MRMP management.

Irrigation water management is the most basic function of the IA. Therefore, it was felt that each FIG should be well represented in the organization. All chairmen of the active FIGs were therefore made mandatory members of the IA Board of Directors. The members of the Board then elected from among themselves the President, Vice President, Secretary, Treasurer and Auditor of the IA.

It was felt that the Board of Directors should include at least seven persons to develop more farmer-leaders. In cases where the number of FIGs in a prospective IA is less than seven, additional Board Members are elected from among the different *Rotational Unit Leaders.* It was however always emphasized that additional members must come from FIGs to which it is difficult to deliver water. The number of members of the Board of Directors should correspond with the number of FIGs that are active in the IA.

Ratification of the By-Laws and Articles of Incorporation is always done at a general assembly meeting where every item is fully explained. After collecting the necessary membership fees of five pesos from each member, the papers are submitted by the IA President or his representative to the SEC in Manila, as a non-profit and non-stock Corporation.

MRMP Management recognized that the procedures for registering the IAs with the SEC is time consuming and expensive, but also realized that it could be suspected of wrong doing if it took the work from the farmers. So, in registering the first five IAs, the project provided a vehicle and a guide. It took them four days to finish the job. This simple exercise made the five Presidents realize that the project office was really honest in helping them. Since then, the work of registering the succeeding IAs has been delegated to the project and the ADD has assigned one of its personnel to do the work. Each of the concerned IAs gave an extra amount of ₱50.00 to the ADD personnel assigned to register the IAs with the SEC for pocket money to cover miscellaneous expenses.

In the original plan, only 21 Pilot IAs were to be organized in 1980 and none in 1981, so the organizers would have enough time to observe what they have done and learn from their mistakes. But the pressures were so great that they were forced to accommodate two more IAs in 1980 and another nine in 1981.

The organizer, called an IA Advisor, is a multidisciplinary generalist, not a specialist. He attends all meetings of the Board of Directors of his IAs and also attends the general assembly meetings which are often held every other month. In most cases, these meetings are held on Saturdays and Sundays. Some are even called in the evening. His assistance is not limited to the organizational development of the IAs. He answers questions of farmer-members pertaining to water management, plant pests, and disease control, production loans, marketing of farm produce, etc., if the responsible officials are not around. If he did not do these things, he would lose the trust and confidence of his cooperators.

At the end of the first crop season in 1981, all IA advisors and IA officers were called to attend a 3-day Seminar/Workshop at the Special Project Integrated Training Center of MRMP. They presented their accomplishments, problems and how those were solved, and their recommendtions to improve the program. Some of the most important results of the workshop follow.

Production credit. More than 75% of the members had been borrowing production loans from informal sources at 30 to 40% interest per crop season due to unsettled accounts with the banks of the Masagana 99 Program. Officers of at least 10 IAs were reported to have contacted the managers of the banks and promised to settle some of their accounts in preparation for the next rice crop. Aside from this, they also told the other participants that the bank managers and the Production Technicians of the Bureau of Agricultural Extension had agreed to their suggestion for strengthening the Masagana 99 selda by ensuring that the future members of the selda are FIG members whose farms are adjacent to each other, to facilitate monitoring and supervision by IA officers and Government technicians. Other participants reported that the lists of IA members with outstanding Masagana 99 loans were about to be completed and would be ready before the next crop season. They included suggestions for revising the membership in the Masagana Selda.

Marketing of farm produce. During that time the farmgate price of paddy was low. Only NGA and the itinerant traders from Central and Southern Luzon provinces were giving fair prices. The seminar participants therefore requested MRMP to prepare a proposal for a marketing link-up between the IAs and NGA to be discussed with the NGA local representatives in their respective municipalities. They also agreed to pool all their marketable surplus in groups of 200 cavans every

harvesting season to take advantage of the good price offered by the itinerant traders. This proposal was implemented.

To assure 100% collection of Irrigation Service Fees (ISF) and production loans, some participants suggested that the collection process be tied to the release of irrigation water to the turnout and to the procurement scheme of paddy by the National Grains Authority. This would entitle the participating IAs to an ISF collection incentive of 3% from NIA and a Cooperative Incentive Fee of one cent per kilo or ₱0.50 per cavan of paddy from NGA.[2] To facilitate implementation, the officers of the IAs volunteered to use their own Inspectors/Collectors in assembling the payment in-kind in pre-arranged places so that NIA or NGA personnel could bring a vehicle to haul it away. It was also agreed that the whole procedure would be managed by the Finance and Development Committee of the concerned IAs.

Collection of irrigation service fees. The participants also proposed to pay their ISF obligations to MRMP by selling their produce to NGA. NGA would then pay NIA its ISF, together with the payment for production loans so they could save the cost of hauling. To pursue this course, the Operation and Maintenance Division of MRMP promised to distribute the bills at least one week before the start of harvesting in the concerned IA. However, this suggestion was not implemented because the procedures involved proved difficult to implement.

Exchange labor. The costs of labor for land preparation, transplanting, and harvesting were rising very fast and reducing the net income of the farmers. To remedy the situation, the participants agreed to promote the return of the traditional practice of *exchange labor.* They also felt the that the practice would help most of them keep abreast of the cropping calendar. No data are available on the impact of this agreement.

Procurement of farm inputs. The cost of fertilizers and pesticides was continuously going up during that time due to inflation and devaluation of the Philippine Peso, while the price of paddy remained the same because of Government price controls. To reduce the cost of farm inputs, the participants agreed to try to buy these through canvass-bidding. They planned to request the winning bidder to provide free delivery of the inputs to pre-arranged places. Five IAs with sufficient capital were able to implement this plan. In about 20 other IAs, small informal groups of members bought inputs together and obtained free delivery. Increased competition in recent years has led to reduced mark-ups on prices by local dealers.

Maintenance of irrigation facilities. Maintenance of farm-level irrigation facilities was not a great problem in the participating IAs because the officers were closely supervising the rotational unit leaders. In addition, their activities and accomplishments were monitored and evaluated by the members of the IA Board periodically. Some even practiced rotations of evaluators to avoid favoritism.

Capital build up. All of them favored the idea of raising funds for the association because they were convinced that an IA without funds could not last. The participants therefore promised to create income generating programs and the following were proposed: a) every member must deposit an amount equivalent to 13 kg of paddy every crop season; b) rebates from group purchase of farm inputs, land preparation done by contractors, threshing, and selling of paddy in groups must be divided into two parts -- one part would go to the association while the other would be kept by the concerned members; c) to collect fines from erring members, and from owners of water buffaloes caught wallowing in irrigation canals; d) incentives from the collection of irrigation service fees; and e) intensify marketing of paddy to NGA to get Cooperative Incentive Fees.

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[2] One Cavan=50 kilos

The majority of these suggestions were implemented by the pilot IAs except for the proposal that each member should deposit the amount equivalent to 13 kgs of paddy every season, as shown in the reports of the monitoring and evaluation unit.

EXPANSION

In 1982, an extensive campaign was launched in which a total of 16 IA Advisors were involved. They were assisted by several selected and interested personnel of the O & M Division in the three field Divisions. The campaign was very successful. A total of 83 IAs was organized in 1982, 87 in 1983 and 58 in 1984, resulting in a total of 228 IAs organized from 1980 to 1984. To date (1986) a total of 240 IAs have been organized. They have 20,198 members cultivating 40,766 ha which is roughly equivalent to 42% of the MRMP service area (See Table 2).

***Table 2.*FIGs AND IAs ORGANIZED BY YEAR**

Year	FIGs		IAs	
	No: Cumulative	Area (ha.) Cumulative	No: Cumulative	Area (ha.) Cumulative
1974	214	3,275	-	-
1975	678	12,086	-	-
1976	954	16,608	-	-
1977	1,053	17,823	-	-
1978	1,189	20,665	-	-
1979	1,501	29,410	-	-
1980	1,589	33,539	23	3,100
1981	1,672	35,298	32	4,551
1982	1,828	26,851	83	12,614
1983	2,028	38,451	170	26,995
1984	2,286	40,773	228	37,785
1985	2,580	43,125	235	39,853
1986	2,631	43,978	240	40,766

NIA normally assigns one Ditchtender for every 3.5 km length of irigation canal. His duties are to maintain the cleanliness of the canal embankments, operate and maintain turnout gates, and collect irrigation service fees. MRMP has not hired additional Ditchtenders to clean canals in the expansion areas and has not hired replacements for those who retired. Instead, the project employs deserving IAs to do most of the work assigned to the ditchtender through lateral turnover contracts signed by the Presidents of the IAs and the NIA Project Manager. Nearly 58% (138) of the 240 IAs are now participating in the maintenance of about 564 km of irrigation canals through this "Lateral Turnover Program" with the NIA. Through this program, the IAs are given a source of income to generate funds and above all, a cooperative exercise ensues that can lead to the development of "Group Discipline."

Next >>