Supporting Farmers' Organization for Irrigation Management, From O&M toward a Business Orientation: A View From Indonesia

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ABSTRACT

THIS IS A discussion paper which focuses on the strategy of supporting water users' associations (WUAs) for irrigation management. The general orientation in the past has been for farmers to be organized into WUAs, in most cases by using a participatory approach, in order to share the O&M burden with the government. Little attention has been given to support the WUAs' ability to respond to business opportunities available, given the environment where the systems operated. The experiences tended to suggest that the O&M-biased orientation produced unsatisfactory results in keeping the WUAs viable in the long term.

Referring to the Indonesian case, this paper suggests a three-stage model in supporting WUAs in irrigation management. The three stages focused on supporting WUAs to be effective and efficient in the following: (1) in operation and maintenance (O&M); (2) in water-related businesses; and (3) in other more general businesses.

INTRODUCTION

Having strong WUAs which could take part in the O&M of irrigation facilities has been a long concern of the Government of Indonesia (GOI). The GOI started in 1978 to give attention to the development of WUAs through a tertiary development program[2] which requires the farmers to be organized in order to make use of tertiary facilities which have been developed by the government. Since then various efforts have been undertaken including introducing the participatory approach in tertiary and small-scale irrigation development,[3] producing legal regulations regarding WUAs and joint research between the government agency, universities and NGOs.[4] In 1984, a Presidential Instruction was issued to provide a legal basis for WUAs to exist.

Despite these tremendous efforts for WUA development, it seems that the result has been unsatisfactory. A small proportion of the WUAs that have been set up are functioning effectively in O&M, while the bulk remain inactive. The government estimates that only about 10 percent out of 21,000 WUAs which were set up by 1989 are actively performing their management tasks.[5] Although to date the results have not satisfactorily achieved the expected goals the government still continues giving attention to the development of WUAs. The main motives for this is the limited financial capacity of the government to perform O&M tasks down to the tertiary level. Besides, the government started a new program of O&M from 1988 with two components of the program directly related to the role of WUAs in irrigation management: (1) the turnover of small-scale irrigation systems, and (2) the collection of an irrigation service fee (ISF) for large irrigation systems[6] which requires more efforts in organizing the farmers. In 1992, the government released a Home Affairs Ministerial Ordinance which recognized WUAs as a legal entity.

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[2] For a complete explanation on the importance of the role of WUAs in irrigation management at tertiary level see DITJEN PENGAIRAN 1978, Program Pembangunan Tertier.

[3] The participatory approach was introduced in 1982 in small-scale irrigation systems through High Performance Sederhana Irrigation System (HPSIS). This was later followed in large-scale irrigation systems through the Tertiary Development Project of Madiun Irrigation System in Java.

[4] The cooperation in research has been done between 1982 and 1987 which mainly focused on small-scale irrigation systems with the result, later, of contributing to the formulation of policy to turn over the management of small-scale systems to the farmers through WUAs.

[5] see Munawir (1991: 157). *Organisasi dan Kelembagaan Pengembangan Air Usahatani Jangka Panjang di Indonesia. In* BAPPENAS (National Development Planning Body). Proceeding of a National Seminar on *Pengkajian Kebijaksanaan Strategi Pengembangan Sumberdaya Air Jangka Panjang di Indonesia.*

[6]For a complete explanation of the new government policy on O&M, see Soenarno (1988: 2-1; 2-28). *Masalah Pengairan dan Proyek Subsektor Irigasi. In* DGWRD and BAPPENAS. Risalah Pertemuan Pembahasan Irrigation Subsector Project (ISSP).

The limited success achieved in the development of WUAs raised questions about the orientation adopted by the government in supporting farmers through the WUAs to play more major role in their irrigated agriculture endeavor to reach a better life. This paper attempts to discuss the current government orientation on WUAs development and suggests possible future orientation in supporting WUAs in irrigation management. The development of WUAs in the future needs to be oriented toward business opportunities in a given environment where the WUAs exist. A three-stage model is proposed as a basic strategy to develop strong WUAs with a business opportunity orientation. The three stages are directed toward strengthening and supporting WUAs: (1) to be effective and efficient in O&M, (2) to be effective and efficient in water-related business, and (3) to be effective and efficient in other more general business.

CURRENT GOVERNMENT ORIENTATION TO WUA DEVELOPMENT: SETTING UP WUAs FOR EFFECTIVE AND EFFICIENT O&M

Overall, the GOI orientation to irrigation and WUA development in the past can be divided into two approaches. First, neglecting farmers' involvement in a direct investment approach[7] (1969-1982). Second, organizing farmers into WUAs and strengthening them by involving the farmers in planning, construction and providing further guidance to make them effective and efficient for O&M in a participatory (engineering bias) approach (since 1982). The issue of approach to WUAs arises when there is an interface between the farmers and the government both in rehabilitation and O&M of irrigation systems. These two approaches are differentiated by the assumption of farmers' capacity and their involvement in irrigation development endeavor. In the first approach the government simply assumed that the farmers did not have the capacity so that their involvement in irrigation development was neglected. In other words, they were only seen as beneficiaries. This approach applied in the period between 1969/70 and 1988.[8] The main reasons for this approach were: (1) the urgency to bring more land under irrigation in order to increase rice production, and (2) the engineering bias perspective which considered irrigation system development as only associated with building irrigation facilities. Beside that, until the late 1970s there were no lessons from other parts of the world which had shown that farmer involvement was worthwhile.

With respect to the participatory (engineering bias) approach, there were three reasons underlying the application of this approach:

First, the heavy investment in irrigation development starting from the period 1969/70 increased the financial burden to the government for O&M and rehabilitation costs.[9] Evidence from small-scale systems showed that government intervention even created negative impacts on system performance, e.g., shrinking of the service area because the irrigation structures were not constructed appropriately in terms of location and design, conflicts among the farmers regarding water distribution because the new irrigation structures change the water right structures, poor O&M by the farmers, etc.[10] This became the concern of the policy makers and they started to find an alternative strategy to improve irrigation quality and to share the O&M burden with the farmers.

Second, the success of NIA in the Philippines in sharing the irrigation development burden with the farmers in communal irrigation development had inspired the official Department of Public Works (DPW) to apply a similar approach.

Third, there was evidence that farmers' organizations in the assisted systems were ceasing to function after construction was completed.

This approach tried to overcome the weakness in the first approach. The direct investment approach used by the government to improve irrigation facilities in the past which did not involve the farmers in the planning and construction of the system was seen as the factor responsible for the inactive farmers' organization. Therefore, the basic proposition in organizing the farmers is that if the farmers were involved in the planning and construction of the system then the WUA would sustain its O&M activities in the long term.

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[7]The term "direct investment approach" was used by Coward to label the government approach which used its own budget and staff (without involving the farmers) in rehabilitating small-scale irrigation systems previously managed by the farmers. See Coward (1984). Improving policies and programs for the development of small-scale irrigation system. WMS Report No. 27.

[8]Even though, in 1982, the government started to apply a participatory approach, i.e, through HPSIS Project, irrigation systems which were not involved in the project continued to be operated and rehabilitated by using the direct investment approach.

[9]For more discussion on the increased O&M cost see Varley (1989). Irrigation issues and policy in Indonesia: 1968-1988. Harvard Institute for International Development: Development Discussion Paper No. 322.

[10]These indications appeared in the research results undertaken in three provinces: West Sumatra, South Sumatra and Bali. The researches were undertaken as a cooperation among the Department of Public Works, universities in the three provinces, and an NGO, in the period between 1982 and 1987.

This proposition has been used in different projects in Indonesia: HPSIS (High Performance of Sederhana Irrigation System), Tertiary Development Project of Madiun Irrigation System in Java, Turnover of Small-Scale Irrigation Systems Projects, SSIMP, Village Irrigation Systems Development Project (to be implemented by DPW), and other projects at the provincial level.

An evaluation of the HPSIS, observations of the turnover systems and of large-scale irrigation systems which applied the participatory approach showed that even though the farmers organized to participate in the planning and construction stages, after the construction was completed the WUAs have not been sustainable.[11] This situation raised questions: How could WUAs not just be set up to share the O&M burden with the government, but also to be meaningful for the farmers as the vehicle to increase their income and, hence, their livelihood? Under what circumstances will the WUAs be sustainable? etc.

There is an argument that what the farmers need is just enough organization to perform O&M activities. But it is assumed that the farmers only concentrated on planting rice. In a number of cases improvement of irrigation facilities especially those weir/dam development and canal lining/retaining wall construction in the small-scale system or at the tertiary level of larger systems seems to reduce management intensity of the system to the level which does not require complicated organizational arrangement for resource mobilization. If the farmers just concentrated on planting rice the level of resource mobilization required to provide water for rice is much less compared to before the main structures (dam/canal lining, etc.,) were built. This, in turn, made the existence of formal and sophisticated WUA organization less relevant.[12] This meant that the extensive improvements of irrigation physical facilities and changes in the broader environment of system operation has shifted the irrigation development question from the first, that is, how to provide enough water for the crops (what physical facilities need to be built); toward the second generation question, that is, how to enable the farmers to respond to the business opportunities they have, given the environment where the system operate, in order to increase their income.

The participatory (engineering bias) has successfully helped in improving design and construction of the system but seems less successful in sustaining WUA in the long term. It raised the following question: [What missing element(s) were meaning that the WUAs were not sustained after project completion?] This question is directly related to the farmers' priority and concerns involved in system management. It is pretty clear that the main concern of the farmers is to gain more income. This is not to say that organizing farmers into WUAs and involving them in planning/design and construction in order to strengthen their organization for O&M is not important. In fact better design and construction, and O&M of the system is a necessary condition to open an opportunity for the farmers to gain more financially from irrigated agriculture activities. Given that the farmers from different systems have different business opportunities, the focus to organize the farmers for better O&M per se is not sufficient to increase farmers' income. Farmers' capacity through their organization should also be supported to respond to the relative business opportunities that each system has. The question now becomes the following: What kind of framework and strategy could open the opportunity for the farmers to gain more financially from better O&M?

GOING BEYOND O&M: TOWARD A BUSINESS ORIENTATION

The future approach in developing WUAs needs to be focused on how this organization can be part of farmers' efforts to obtain higher income. It is necessary that the farmers have the capacity to perform O&M tasks but it is not sufficient for them to get higher income. To get higher income implies that the WUAs should also have an organizational capacity to open opportunities for the members to do business related to the irrigated agriculture activities.

The business opportunity-oriented approach is directed towards creating room for the WUAs to decide on how they are going to respond to the opportunities that any particular system has. It does not say that the farmers did not respond creatively in the past. There are cases which have shown--as far as the resources they have--the farmers respond creatively to the opportunities available. But, their efforts were not being supported systematically by the government.

Given the environment where the systems operated, a group of irrigation systems might have different business opportunities than other groups. This environment includes: access to markets, water availability and access to various other productive resources (credit, inputs, information, etc.). There is a group of irrigation systems which have greater

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[11]For the evaluation of HPSIS see Aziz et al. (1991). Privatization and Sustainability of Small-scale Irrigation in Indonesia: A Reassessment of Sederhana and HPSIS Systems, Arlington, Virginia: ISPAN; observations in the turnover systems done through my fieldwork of which the data are being processed for thesis writing. Personal communication with Richard Hutapea who was previously the Sociologist for Tertiary Development of Madiun Irrigation Project indicated that the WUAs in larger system which developed through the participatory project also remain inactive.

[12] There is a tendency for WUAs to be inactive after the completion of the project even though the project was applying a participatory approach. For an example of a larger system see Byrnes (1992). Water users assosciations in World Bank-assisted projects in Pakistan, Washington: World Bank.

access and there is a group of systems which have little access to the market. There is a group of systems with limited water availability relative to the irrigated area and there is a group of systems with relatively abundant water supply relative to the irrigated area, etc. These differences would create different business opportunities for WUAs to respond to.

Assuming that the WUAs already fulfill the necessary condition that is becoming effective and efficient in O&M, at this point the question is what kind of business will enable the WUAs to share the O&M burden as well as becoming a vehicle for the farmers to increase their income. There are two types of businesses which the WUAs could enter into: (1) water-related business, and (2) other general business. Becoming effective and efficient in the water-related business is a pre-requisite to enter other more general businesses.

Water-Related Businesses

Among the types of activities included in water-related business are: (1) fish culture in the rice field as well as in the canal and possibly in the weir/dam area by using fish-cages; (2) a clean and/or drinking water supply service for the community; (3) micro-hydro electricity; and (4) other possible water-related business depending on the local conditions and needs. One important thing regarding water-related business is the requirement of effective and efficient O&M. Therefore, it will prevent WUAs from neglecting O&M. These businesses will help generate income for the farmers as well as for WUAs as organizations which will make them more effective in performing O&M tasks to serve their members.

Other More General Businesses

Included in this category are: (1) providing inputs for agricultural production; (2) marketing agricultural products; (3) renting equipment; and (4) becoming a contractor for relevant works. These business activities will not only generate income for the WUAs as organizations but will also help the farmers in the process of increasing their income.

SUPPORTING A BUSINESS-ORIENTED FARMERS' ORGANIZATION: SOME IMPLICATIONS

The question now is how [they] can respond creatively to the business opportunities which any particular system has. In answering the question there are two factors which need to be taken into account: state interest[13] and farmers' interest--how these two can be reconciled in practice so that farmers' interest or both interests can be accommodated. As has been mentioned earlier the basic requirement of this approach is that there should be room for farmers to decide on how they are going to respond to the opportunities available. This implies that the mode of interaction between the farmers and government agencies related need to be modified since the current modes of interaction do not provide room for the farmers to influence the way the support services are provided for them and, therefore, to be able to respond to the opportunities creatively.

The basic changes in the mode of interaction include at least the following factors: First, support services should be provided so that there is a dialogue between the farmers and the related government agencies. This means that the government agencies could not decide on their own what types of services they are going to provide for the farmers and how they are going to do that.[14]

Second, the effort to organize WUAs should also strengthen their capacity to respond to the opportunities they have. In this relation organizing and strengthening WUA for better O&M is a necessary but not sufficient condition. The sufficient condition is that they should also be organized and supported to respond to the business opportunities. This, in turn, is expected to increase WUA capacity to reinvest for system rehabilitation and to support O&M as well as to provide the farmers with a better chance to increase their income.

Third, policy support at the macro level to minimize the risk in case the farmers decide to go for high-value crops, water-related business or other business related to irrigated agriculture. The lessons from the rice intensification

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[13]In Indonesia, state interest is clear. To be self-sufficient in rice the government provides systematic support for the farmers through rice intensification programs to produce rice. Since the price of rice is relatively low (in terms of its terms of trade) growing rice is becoming less attractive to the farmers. But, poor farmers could not turn to high-value crops since the risk is also high and there is no systematic support from the government yet. There is also no systematic support yet for WUAs to do water-related business as well as other more general business.

[14]In Indonesia, the irrigation committees both at the provincial and district levels play a coordinating role among agencies related with irrigated agriculture. To date, farmers' representatives have not been members of the committee. Moreover, the decisions taken in the committe meeting have little influence on individual agency operation in dealing with the farmers. In other words, each agency works to pursue its own priorities. There is a possibility to transform the role of the irrigation committee to that of a facilatator in the dialogue. In doing so, farmer representatives need to become members of the committes and it needs to be empowered so that the agreement reached in the dialog would influence the way government agencies interact with the farmers in supporting farmers' business.

program may be a good example in this case. In the earlier period of the green revolution the farmers were reluctant to use modern inputs because they did not like to take the risk. The government reduced the risk by subsidizing the price of fertilizer, pesticides and other modern inputs as well as providing the farmers with information and skills through the extension service. Once they get used to them, the price subsidies for inputs are gradually reduced. It does not mean that the design of the program should be similar to the rice intensification program. But the point is that if the government would like to increase farmers' income by supporting them to take any business opportunity available, it can help to bear the risk in the earlier stages of this effort. Once the farmers get used to the dynamics of irrigated agriculture-related business then the government can lift the supports.

This mode of interaction needs to be supported by relevant research and information systems to which the farmers have greater access. This, in turn, is expected to strengthen farmers' capacity to respond to the business opportunities in any particular environment where their system operates.

As the new approach requires changes both at the policy and implementation levels, research to support these changes needs to be done. Among them are the following:

1. Inventory and information systems which enable categorization of irrigation systems based on O&M problems (water availability and irrigation management intensity) and potential for economic activities.

2. Research to identify policies and bureaucratic procedures which become impediments in supporting the farmers to respond creatively to the business opportunities they have in a given environment where their system operates.

3. Research on high-value crops.

4. Action research on a business opportunity-oriented WUA development approach.

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