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Irrigation Management by Participatory Approach in the Philippine: Lessons for Bangladesh

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Abstract

Despite the fact that irrigation development and management under the participatory Irrigation management (PIM) approach has a long history in Philippine. However, the initiative of PIM has been experimented in Philippine since the late 1964's. The PIM Approach has ever-since been implemented to adjust with small land holding condition. The results have been varying in the level of successes. There have been a number of irrigation schemes proved to be successful in the PIM implementation. Whatever, intervening from the top down approach always involved difficulties – too many implementing agencies; long delays caused by bureaucratic procurement procedures, compounding these administrative problems were more focus on irrigation infrastructure rather than on the participants. Further, the establishments of WUAs have been formally carried out in many irrigation schemes. In an effort to optimize the capacity of the WUAs to pursue the sustainable operation and management of irrigation schemes through PIM approach, this paper has been prepared based on secondary sources of various schemes of Philippine that has been successfully conducted by WUAs. It is expected that some of the PIM successful experiences presented in this papers are worth for comparative features in Bangladesh for various irrigation schemes that are having the similar characteristics.

Keywords: PIM Model, WUA, IAs.

Introduction

Participatory irrigation management (PIM) is a process through which stakeholders in irrigation influence and share control of development initiatives and of decisions and resources that affect them. Farmers are the principal decision-makers in all or most of irrigation project/system activities. Participatory irrigation management approach first introduced in the Philippines in early '70s in communal irrigation systems also known as "participatory approach program" (PAP) where stakeholders are involved in

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practically all phases of irrigation development and management. PIM was institutionalized in the mid-80's including national irrigation systems. It was an assignment of Institutional Development Officers (IDO) and Engineers to work with the farmers in the formation of WUAs or Irrigators Associations (lAs) and training of the lAs on: Basic leadership and management, financial management, irrigation system management and other capacity building. Subsequently, lAs are registered with the Securities and Exchange Commission (SEC) to attain legal personality and participate in national irrigation systems (NIS). Finally the system turnover in communal irrigation systems (CIS) and encouraged to PISs with direct government patronization. In the Philippines, three categories of farming exist for instant National Irrigation Systems (NIS) —1,000 ha or more, constructed, owned by the government but jointly managed with farmers/Irrigators Associations (lAs), Communal Irrigation Systems (CISs) —less than 1,000 ha; jointly constructed by National Irrigation Administration (NIA) and IA, but handed for 0 & M to the IA and Private Irrigation Systems (PISs) —owned by private individuals or firms constructed with or without government assistance.

PIM of the Philippines comes to mature through a lot of experiences from various schemes. The term PIM in the toolbox of current approaches to improve the efficiency and performance of irrigation management to cope with the issue of water scarcity, or problems associated with global and climate change in the foreseeable future (Regner et al., 2006). PIM refers to the participation of users – the farmers in all aspects and levels of irrigation management. All aspects include planning, design, construction, operation and maintenance (O&M), financing, decision rules and the monitoring and evaluation of irrigation system. In Bangladesh irrigation stands on are similar to the Philippines. Accordingly, Bangladesh has a great learning on participatory approaches to establish sustainable participatory irrigation management.

Importance and Objectives of the Study

The paradigms for rural development pursued and practiced in developing countries have transformed greatly since the 1950s. Failure to achieve intended result through transfer of technology policies caused shift towards a more user participation centered approach to development and people first development model based on popular participation gained popularity in the 1980s and 1990s (Bukey, 1993; Chambers, 1997; Cernea, 1991; Khanal, 2003). Accordingly, the focus of participatory irrigation management has also shifted from technology transfer towards decentralized and user participation centered approaches emphasizing participation and local organizational development (Clyma, 1986; Uphoff, 1986; Khanal, 2003). Several countries of South and South East Asia including the Philippines adopted policies to encourage greater management participation by water

users since the mid-1980s. These experiences witness demonstrable improvements in economic water use efficiency, sustainability and a more responsible handling of water resources and public funded installations (World Bank, 2002). These PIM schemes generate an uprising and sustainability in irrigation management system of Philippines. Conversely, Bangladesh has no irrigation management scheme or even before. No amalgamation within farmers as well as between Government and farmers regarding Participatory irrigation Management or policy. Here farmer has no systematic knowledge on irrigation. Farmer's performance depends on their individual policy. So, Bangladesh can shift the policy in experience from Philippines towards participatory water management so as to improve communal integrity and better uses of resources.

The following steadfast objectives in these regards are:

- The objective of the study is to find out the actual implementation of irrigation policy, instrument, and empowerment of WUAs in implementing the PIM with the necessary terms of implementation of obligations and of detailed procedures of WUAs/WUAF on the management of irrigation by virtue of PIM approach in context of Philippines experiences.
- The ultimate goal of the study is to assess the economic and social impact of the implemented schemes of Philippines under the framework of participatory irrigation management approach and collect strategically information and share experiences so as to take same kind of initiative in Bangladesh for the improvement and sustainability of irrigation management in Bangladesh.
- Find out Schemes toward a more powerful and independent water users' association in managing their irrigation infrastructures on the basis of sustainable PIM, in the Schemes of Philippines and expected to be replicated in Bangladesh.

Methodology

The methodology used in this study basically secondary sources. Secondary information were collected mainly by reviewing official publications both national and international, published and unpublished papers, working papers, seminar and conference proceedings, online resources as well as ethnographic observations of the researchers. Then, the findings were classified thematically to get a picture of Participatory Irrigation Management (PIM) in Philippines and present irrigation management in Bangladesh.

Learning from the Participatory Approaches in Phillipines

Participation as the centerpiece of any water service endeavors excluding people who consume water nonparticipation has tended to make solutions to sustainability elusive. The following components improve through participation for sustainable irrigation management in Philippines:

Policies Promote Participation

Many countries have aimed to establish appropriate and requisite policy frameworks for enhancing agricultural productivity through participatory irrigation management. In this regards, Philippines is ahead than others. Philippines have established national water policies adopting the same or similar principles that outcome makes Philippines role model in south and south East Asia as well as helps to follow others. (Asian Development Bank-2012).

Participation is Central to Good Governance

Good governance of community organizations is important in ensuring the participation of beneficiaries and affected groups and in preventing any dominant authority from taking control of water resources. In Philippines, have ethnic group diversity but they established good governance in all levels so as to effective the programme for all people not for someone which have found in south Asia. (Asian Development Bank-2012).

Stakeholder Identification and Assessment are a Key Foundation for Participation

Stakeholder analysis is fundamental to participation work at any level and provides an understanding of the interests of individuals, groups, and institutions that have something to win or lose from a project. When stakeholder interests are not addressed before making a commitment to a development project, problematic issues can surface during implementation, compromising implementation and operation. In Philippines, Central Region Water Resources Sector Project, stakeholder analysis was done using a participatory rural appraisal method. It covered identification of all social groups (included or excluded) from planning, implementation, and maintenance of water resources management projects. (Asian Development Bank-2012).

Participation Enhances Careful and Appropriate Planning

Stakeholders have to be involved as early as possible, rather than in a residual activity after physical facilities are completed. The expected outputs of each stakeholder should be clearly identified and linked to the outputs of other stakeholders, which will facilitate participatory monitoring and meeting project targets. In the irrigation component of the Earthquake and Tsunami Emergency Support Project in Philippines, joint walkthroughs

and field inspections with the affected communities formed the basis for identification and selection of the main rehabilitation and reconstruction options. (Asian Development Bank-2012).

Participation Promotes Ownership and Responsibility

Stakeholder ownership is one of the factors that spell the difference between project success and failure. During implementation, ownership is enhanced when farmers provide in-kind and voluntary labor support and co-share the cost of irrigation improvements. Key lessons from the Farmers Managed Irrigation Systems Project in Philippines identified that, as a matter of principle, farmers should be required to contribute to construction costs and that this requirement should be clearly stated at the outset and applied as a precondition for the selection of subprojects. (Asian Development Bank-2012).

The Participatory Process Takes Time

Irrigation development through farmers' participation is demanding and time consuming. Yet implementation delays are sometimes attributed to a lack of participation, as in the Decentralized Irrigation Development and Management Sector Project in the Lao PDR, Philippines. In the Community Managed Irrigation Project, in the Lao PDR, although detailed design of the project was participatory, the level of participation was constrained by farmers' low education and inability to read plans (Asian Development Bank-2012).

The Participatory Approach to Operations and Maintenance (O&M) is a Viable and Effective Option for Sustaining Irrigation Projects

With the recent emphasis on small- and medium-scale irrigation systems approach to O&M through farmer-managed irrigation schemes has been considered a viable and effective option in country like Philippines. Farmer managed: irrigation schemes are considered more sustainable because they are generally small and they can have cohesive links with farmer beneficiaries. (Asian Development Bank-2012).

WUAs Can Play a Significant Role in the Effective Project Implementation and Sustainability of Irrigation Projects

Aside from collecting water user fees for routine O&M, WUA roles can be broadened for social mobilization, repair and maintenance, and village-level agriculture extension services. In Philippines national body has fully responsible for maintenance of the project with local community. (Asian Development Bank-2012).

Before WUAS Take Over Responsibility for O&M, Systems Should be Functional and Able to Deliver Irrigation Water to Farmer's Fields, With Key Structures Rehabilitated And The Canal Network Intact

This would also ensure the collection of irrigation service fees and the undertaking of routine O&M through local resource mobilization. Irrigation

leaders and ordinary farmers both need training on the O&M of newly built structures, but improving the skills and awareness of ordinary farmers are even more important because they are directly involved in O&M of the canal systems. In Philippines the system is very effective and people are respected in this regards (Asian Development Bank-2012).

Private Sector Participation Can Help Improve Water Delivery

One alternative to participatory irrigation management is to involve the private sector in publicly managed irrigation and drainage schemes. Often called public-private partnerships (PPP), these involve funding a viable 'third party' between farmers and governments. PPPs could also be useful in mobilizing financing, implementing investment programs, and improving the water delivery service. Philippines has practiced the idea that the private sector an efficiently manage irrigation systems and collect water charges, even in the sense of formal WUAs (Asian Development Bank-2012).

Neccesities for Success of Pim Approaches

For PIM approaches to be efficient, necessary preconditions should be provided that practices in the Philippines are as follows:

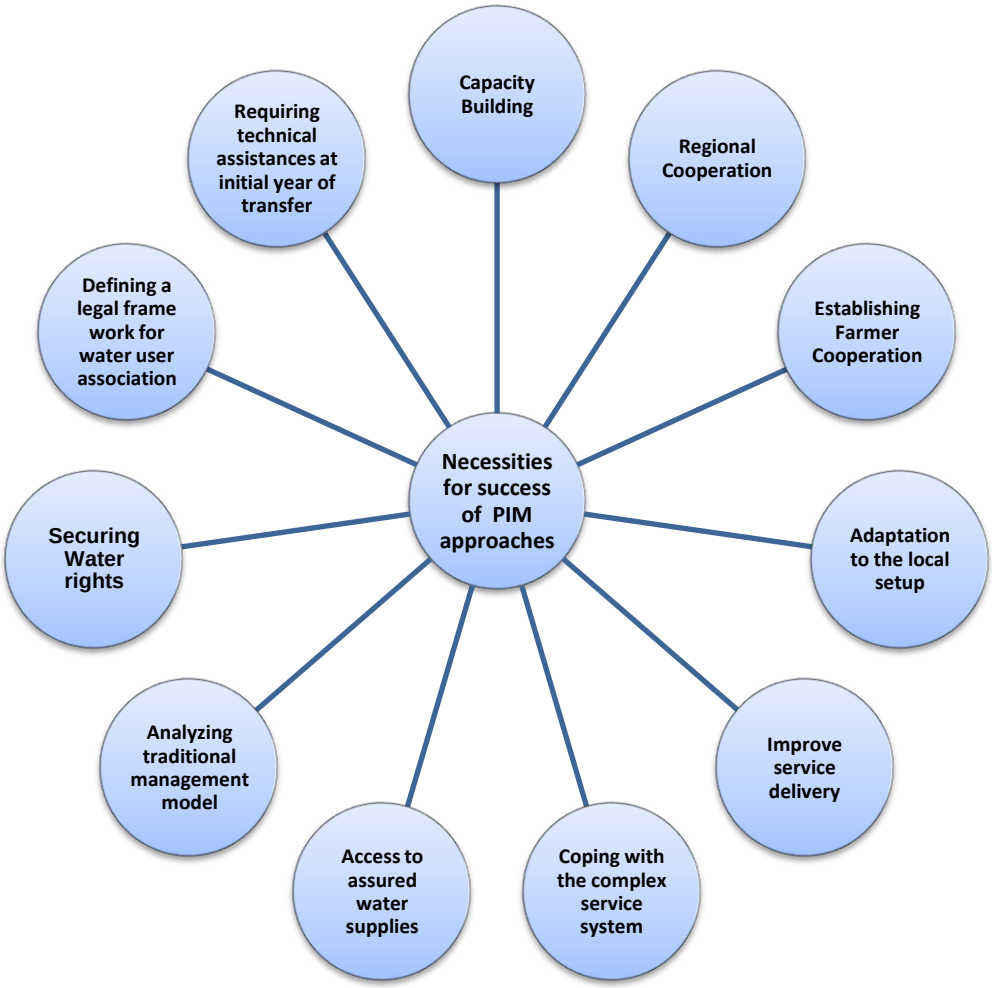

Figure: 2 (Necessities for success of PIM Approaches)

Capacity Building

Supporting WUAs through participatory design process to build up the capacity to manage water and provide better working conditions through more compatible technologies and water management practices is highly important. It should not be merely viewed as a training program aimed at bridging gaps in knowledge and skills among farmers and agencies but also as facilitating the change process (Peter, 2003; Bryan and Helmi, 1996; Khanal, 2003).

Regional Cooperation

Since most Asian countries have a similar context in irrigation, regional cooperation by sharing of experiences and study tours could prove invaluable. A powerful mechanism by which this could be achieved is the creation of farmer networks at the national level or through PIM chapters. (Peter, 2004).

Establishing Farmer Networks

Farmer networks and federations could provide a platform for debate on water sector and irrigation reform issues, so that farmers get an opportunity to take part in policy formation and receive intense consultation (Peter, 2004).

Adaptation to the Local Setup

Experiences from several countries indicate that introducing participatory elements in the relationship between mostly governmental decision makers on water resources and end users of water is an essential. The successful implementation of PIM in a specific case crucially depends on its sensible adaptation to the local situation (Regner et al., 2006).

Improved Service Delivery

The sustainability and efficiency of a WUA depend to large extent on its services to the members. Most of the irrigation systems are quite old and require rehabilitation and modernization in order to be capable of providing easy-access, reliable and equitable services to their users (Peter, 2004).

Coping With the Complex Incentive

One of basic needs of efforts towards an improved utilization of water by introducing participatory elements in water resources management is to cope with the complex incentive structures of individuals on the levels of farmer's communities and within the administration (Regner et al., 2006).

Access to Assured Water

In order for farmers to participate in the process of irrigation management they should be provided with water entitlement as well asefficient input and output markets (Ward et al., 2005)

Analyzing Traditional Management Model

In order to come out with an efficient PIM, the first attempt is to analyze traditional management models within irrigation communities and to identify informal management approaches of country to acquire basic knowledge on more suitable starting points. This proved to be a successful measure in Jordan (Ghneim et al., 2005).

Securing Water Rights

For WUAs to be successful, they need to be vested with a clear water right to give the right incentives for improvement of the irrigation system. Secure water right also protects the WUAs from infringements of its allocation and share of water to other powerful interest such as industries and municipalities (Peter, 2004; Bryan and Helmi, 1996).

Defining a Legal Framework for Water User Associations

WUAs should be empowered through well defined legal frameworks that specify clear roles and responsibilities among agencies, WUAs and governments. This legal framework gives WUAs a fair degree of freedom and power to exercise its authority (Peter, 2004; Bryan and Helmi, 1996; Burak, 1999).

Requiring Technical Assistances at Initial Years of the Transfer

WUAs need technical assistance by central government to repair and maintain water structures with equipment. This support can be gradually decreased over the years. This is a crucial issue in the case of small WUAs which are weak and face challenges to fulfill their tasks properly (Burak, 1999).

Challenges for Pim Approaches

In investigating challenges faced by PIM approaches in Philippines Khanal (2003) found that irrigation administrations face constraints to perform their responsibilities in some extend primarily. These constraints include: accelerated deterioration of irrigation infrastructure, lack of production capital, lack of knowledge on water resources, lack of financial sustainability stringent bank lending procedures and directive political interventions, hierarchical organizational structure, lack of organizational learning, shorter time frames, and failure to link the project while the broader development objectives all pose barriers in maintaining participatory processes for irrigation management. (Peter, 2004). To remove these constraints Philippines have considered that irrigation systems are socio, economic & technical systems and technology of the system is shaped by ecology and society. Hence, it has both human and physical dimensions (Khanal, 2003).

Recommendations

For Successful Implementation of PIM Approach in Bangladesh following recommendations & suggestions are proposed in the light of Philippines success history.

1. PIM concept should be implemented by adopting a programme approach instead of a project approach through integration of Engineering, Legal, Financial, Social and Agricultural components.
2. To ensure Farmers' participation in irrigation management needs Government patronization through new and separate department.
3. PIM Programme needs to implement through a gradual and phased process, it would appear to be more realistic and implementable in Bangladesh's social set-up and system constraints.
4. There should be a continuous process of monitoring & evaluation through all the phased of PIM implementation programme. This has been revised each year as lessons learned are fed back into the process for refinement through continuous monitoring & evaluation.
5. It will be beneficial if PIM programme is implemented through irrigation department like Philippines so as to their experience as expertise is effectively utilized.

Conclusion

In Bangladesh taking experience from Philippines we can apply and share the success story of participatory irrigation management in our own ground. Successful irrigation and drainage projects require participation by all stakeholders in planning, implementation and O&M to create a sense of ownership of and consequent commitment to the project. A successful PIM approach should be based on complete involvement and cooperation of various stakeholders at different levels and from different sectors ranging from top governmental body to the end users like Philippines. Particularly, the role of water users is crucial because they can help in establishing realistic water price and implementing water protection and distribution measures. For improving the role of WUAs, it is essential to take constituent factors into considerations which are: laws and policies of the country and its irrigation agencies, size and complexity of the irrigation systems, physical condition of the irrigation systems, size of irrigated farm holdings, farmers net income, capability and Organizational arrangements of WUAs, local politics, local social customs and practices, frequency of natural disasters and environmental problems.

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