

Water Institutions – Bangladesh Experience

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1.0 Introduction

Bangladesh, a land of about 144,000 sq. km, is one of the largest deltas of the world, formed by the most complex river system of the Ganges, the Brahmaputra and the Meghna, and situated in the tropical zone. The country is crisscrossed by as many as 458 small and big rivers with their innumerable connecting khals (small channels), beels (small depressions) and haors (large depressions on the North-Eastern part). Many of these water bodies including the major and big rivers are perennial, but mostly are seasonal.

Water regulates the social life, economic activities and culture of her people. It facilitates bio-diversity and maintains environmental balance and to a great extent supports poor people to have access to common property resources.

Agriculture is the mainstay of Bangladesh's economy, generates about 60% of the total employment of the country, and shares 36 per cent of the GDP. So in order to meet the food requirement for a faster growing population in Bangladesh and for overall national development, water sector became key-important and the Government attached high priority to flood control, irrigation and drainage Projects (FCDI); and, have completed 454 projects under the Bangladesh Water Development Board (BWDB) – the main agency, to protect about 2,844 million ha of land from upland and tidal flood hazards and bring 192,000 ha under irrigation.

The performance of FCDI systems has often remained below expectations. More than 50% of the completed projects are not performing – some due to inadequate planning, but mostly due to lack of proper operation and maintenance. Moreover, they have several major negative impacts, such as the loss of fisheries, navigation and soil fertility, and the exacerbation of drainage problems. Lack of stakeholders' participation is considered as one of the most important factors for this. The National Water Policy has emphasized the establishment of stakeholders' participation for ensuring direct input

from people at all levels and fruitful participation of stakeholders in water management through establishing water institutions. The Dublin principles (1992) of water management also highlighted the 'participation' issue and concluded - "water development and management should be participatory, involving users, planners and policy makers at all levels". On the backdrop of this scenario, participation of the stakeholders and for that purpose establishment of water institutions has attained importance in Bangladesh.

This paper is an attempt to present the Bangladesh experience and scenario with the water institutions. A brief history of the evolutionary process of the water institutions, the legal framework for water institutions, the institutional arrangements – from case study, have been briefly described in Chapter-2; Chapter-3 presents the challenges to be reckoned in the process of establishment of the water institutions and their sustainability; Chapter-4 winds up this paper with the conclusion that Establishment of water institutions, assumption of their attributed role and their sustainability require a fresh perspective and a paradigm shift towards the role of stakeholders, new role of state agencies and finally putting the stakeholders first.

2.0 The Bangladesh Experience with Water Institutions

The evolutionary process

Water management, particularly irrigation, in Bangladesh is as old as the “Gangetic Civilization”. It is learnt from the Vedic literature and epics of the time that about 3000 years ago, the rulers of Bengal introduced irrigation and handed over the responsibility of distribution of water to the local boards. The local boards worked through the peasantry to ensure that water reaches to every field, although existence of permanent water institutions can not be traced back in history.

In late 1970s, the concept of beneficiaries’ participation and for that purpose formation of water institutions with the beneficiaries first came up in the Land Reclamation Project (LRP, 1978) and the Delta Development Project (DDP, 1981), two projects under the Netherlands Technical Assistance Program. DDP, for example, was a pilot project for rehabilitation, with the introduction of a new component i.e. water management at farm level and establishment of water institutions with the beneficiaries were the focus. Consequently “Inlet Groups” for planning, execution and operation and maintenance of the water infrastructures and the system as a whole.

Unfortunately, these initiatives took place rather in isolation from the mainstream activities in the sector and did not find enough support due to resistance from local elites on social reasons (impact on prevailing patron–client relationship). Both DDP and LRP started dwindling and finally lost their drive by the mid-1980s.

The issue was re-born in the early 1990s when the donor community and the NGOs took it up, which has greatly been influenced by the emergence of peoples' participation in the management of development projects, as a strategy for poverty alleviation. During the last decade, the idea of introducing 'people's participation' has attained priority in the agenda of water resources projects, and lots of efforts are being made to operationalize this concept. A number of Guidelines have been prepared under different projects as well as by the Government itself in the nineties and these are being tried in some Flood Control, Drainage and Irrigation (FCDI) projects.

In 1994, Ministry of Water Resources issued *Guidelines for People's Participation in Water development Projects*. This marked a major advancement in water resources management policies, and envisaged building up of institutions of local people along with officials of departments and agencies. During its implementation, it was realized that provision for people to participate in it is not sufficient to ensure sustainability, unless the rights, duties, and responsibilities of all parties involved are clearly spelled out.

In 1998, a revised Guidelines - *Institutionalizing Local Participation: Proposal for Guidelines for Participatory Water Management*, which in particular addressed the rights, duties and responsibilities of all those involved in the processes for water development and system management rather than only the procedures to involve the people in the processes.

Local Government and Engineering Department (LGED) also prepared *Guidelines and Manual for operation and maintenance of small-scale water resources schemes* (1984) and the *Guidelines for Operation and Maintenance of Small Scale Flood Control and Drainage Scheme* (1996), *Guidelines for Participatory Process of Small Scale Water Resources Development (Revised Draft – 1999)*.

In view of too many guidelines, an Inter-Agency Taskforce Committee reviewed all approaches in this regard and prepared *Guidelines for Participatory Water Management, which has been approved by the Government in November 2000.*

Legal Framework

To start with, the water Institutions were formed under the aegis of BWDB and LGED projects and were only acknowledged by them. Presently, Water Management Associations (WMAs) are registered under the Cooperative Societies Act 1986, and for that purpose the Cooperative Societies Rules have been modified (1987).

Institutional Arrangements

At Agency (BWDB) Level

The institutional arrangement at Agency level is dominated by engineers and supported by engineering supporting staff. They are in charge of the planning, implementation and operation and maintenance of the projects.

There is a Directorate of Land and Water Use (DLWU) in BWDB which is staffed by agricultural graduates, soil science graduates, fishery graduates – all doing agricultural extension related activities. They perform the task of establishment of the water institutions on project basis with the help of NGOs.

At Water Users' Level

The institutional arrangements i.e. the water institutions at the field level have been undergoing trials through evolutionary process. Water Users' Associations, taking the Guidelines for peoples' participation in consideration, are being established in a number of projects – primarily financed by donors like the World Bank, Asian Development Bank and the Netherlands Government. The institutional arrangements and how they are formed have been briefly described in the following paragraphs referring to case studies.

CADP under PIRDP and MDIP

CADP stands for Command Area Development Project, *PIRDP* for Pabna Irrigation and Rural Development Project and *MDIP* for Meghna-Dhonagoda Irrigation Project. The PIRDP and MDIP were constructed for protection against flood and provide irrigation to agricultural land. Unfortunately

only about 10% of the project areas were provided with irrigation systems. So, a new project - CADP has been taken up to realize full potential of the irrigated areas of 18,870 ha in PIRDP and 13,602 ha in MDIP through participatory management of the project. So all emphasis have been put on establishment of water institutions.

The principle stakeholders of the irrigation system are the farmers who use the canal water for irrigation. The other stakeholders for irrigation are the fishermen. For drainage, the stakeholders include the entire population residing within the project area. These stakeholders have been organized in water users' organizations (WUOs) for the purpose of O&M of the irrigation system. The water users' organizations have been established by the NGOs recruited and trained by BWDB. The WUOs have been organized in the following four tiers:

The first tier is called the Water Users' Group (WUG) and is the grassroots level organization of the water users, i.e. the bottom tier. The WUGs are formed one for each turnout area and operate and maintain the *turnout areas*.

The second tier is called the Water Users Committee (WUC), who operates and maintains *minor level canals of the irrigation system*.

The third tier is called the Water Users Associations (WUA), who shares the responsibility with BWDB in operating and maintaining the *main irrigation canals*. Presently there are six WUAs.

The fourth or the top tier is the Federation of water Users Associations (FWUA). The FWUA is to manage the *entire irrigation system*, and, participate in updating the O&M manual, O&M procedure, provide comments on drafts and co-sign an agreed O&M procedure.

A few other committees have been conceptualized to facilitate proper water management maintenance in the project area. These are under process of formation.

Irrigation Committee: The Irrigation Committee (9-members) is a permanent committee of BWDB staff and members of the FWUA. This committee is to meet each month and deal with policy matters, planning, implementation and co-ordination regarding operation and maintenance of the irrigation system.

Water Management Committee (WMC): A second institutional set-up next to the WUOs is required to allow and promote the participation of all stakeholders such as - boatmen, fishermen, traders, LLP

farmers, and urban population etc. in flood control and drainage activities. However, representatives of local elected bodies such as the Union Parishads, which exist inside the PIRDP will form the WMC, and include other representatives of specific stakeholder organizations.

Flood Control and Drainage Committee: The Flood Control and Drainage Committee may be the permanent committee of BWDB staff and members of the WMC. This Committee is supposed to meet every month and will deal with policy matters, planning, implementation and co-ordination regarding O&M of the main flood control and drainage facilities. Collection of a flood control and drainage fee through the Gram and Union Parishads may be an activity-option for this committee in the near future.

Summary on the Water Institutions of the CADP under PIRDP AND MDIP

Water Institutions	Target		Achievement up to 30 June'01	
	PIRDP	MDIP	PIRDP	MDIP
<u>FWUA</u> Formation	1	1	1	1
<u>WUA</u> Formation Registration	6 6	9 9	6 Yet to be done	9 Yet to be done
<u>WUC</u> Formation	51	30	53	30
<u>WUG</u> Formation Registration	368 368	387 387	368 364	387 388
Status of Irrigation	18870 ha	13602 ha	12977 ha	12296 ha
Status of Cost Recovery	1000 ha	3000 ha	Nil	Nil

Procedure for Election to Different Committees may be illustrated from the example of another project - The Compartmentalization Pilot Project (CPP) encompassing a gross area of 13,200 ha (cultivated area of 9,783 ha). This is a pilot project, which started in 1991 and was completed in June 2000. This Project follows a 3-Tier institutional arrangement for the WUOs. Chawk Water Management Committees (ChWMC) is the 1st Tier at Chawk level; Sub-compartment Water

Management Committees (SCWMC) are the 2nd Tier; and, Compartment Water Management Committee / Forum (CWMC) is the 3rd and top Tier.

Chawk Water Management Committees (ChWMCs)- The 1st Tier

1) *Preparation of Stakeholders List:* First the chawk (basic unit area) wise stakeholders (farmers, fishermen, landless/sharecropper) list was prepared.

2) *Chawk Wise Meeting Plan:* To form the ChWMCs 1 - 5 meetings were held depending on the size of chawk(s), geographical situation and numbers of stakeholders etc.

3) *Issuance of the Invitation Letter for Joining the Meeting:* In every family there are male and female members. So, invitation letters (signed by the Team Leader of CPP) were issued to all stakeholders individually (18 years and above) for joining the meeting, mentioning the day, date, time, venue, etc.

4) *Conduct of Meeting(s):* Normally venue of the meeting(s) was the premises of house, school / madrasa building. Usually the discussion issues included - what is CPP, objectives of CPP, role of committee members, eligibility of committee members etc. The forum was open for free and frank discussion.

5) *Nomination/formation of committee:* At the end of the meeting, nominees from among the participants for selecting/electing the ChWMC were elected. If there was plan for more than one nomination meeting then 11-26 nominees (depending on chawk size and stakeholders) were (s)elected by the participants from among farmers, landless, male, female population. In most of the cases the women representatives were (s)elected by the women, but in some cases male participants imposed their decision. Later on, the final formation meetings were arranged with the nominees for that chawk. The nominees (s)elect the ChWMC members by consensus, although sometimes it was decided by an open / secret election. After that, the office bearers (at least one woman) were (s)elected by the ChWMC members. Where there was plan for only one meeting for formation of one ChWMC sometimes it was done by direct election and sometimes it was done after nominees were first chosen from among the participants and then nominees made the final (s)election from among themselves.

Representation of ChWMC (1st Tier) to Sub-compartment Water Management Committee (SCWMC) - 2nd Tier

The SCWMC representatives were elected by the ChWMC. All members of ChWMC are eligible for representation in the SCWMC; there is no special reservation made for the nomination of the President or Secretary of the ChWMC. In general, a total of 3 members (2 male and 1 female) are nominated from each ChWMC; for fishermen - 1 member (male/female) was nominated. Election of the ChWMC representatives for SCWMC was done in the full ChWMC meeting. The decision of the ChWMC are laid down in a resolution and signed by all ChWMC members.

The same procedure was followed for (s)electing Representation from SCWMC to Compartment Water Management Committee (CWMC) – 3rd Tier.

3.0 Challenges to be reckoned

Bottom –up Approach: In many, if not most cases, establishment of water institutions are being agency-administered, highly directed, target oriented, deadline driven to form a pre-determined hierarchy of Water Users' Organizations (WUOs) - with the institutional structure, composition, tasks, and modus operandi - each predetermined. This is essentially "top-down" limiting the scope for participation.

It is important to note that the "participatory approach", which is "bottom-up" is a democratic process, which must follow the democratic principle - "of the people, by the people, for the people". The "bottom-up" approach of the people and by the people is a time consuming process that demands more effort than the "top-down" approach. The most important aspect of such strategies is to encourage and support the spontaneity and creativity of the people, instead of ignoring them. Instead of teaching them, the 'development practitioners' should learn from the stakeholders - their way of thinking, logic, experience and success stories. For this the university graduates who are used to work on the drawing boards and computer screens have to go to the people at the field level when they are young and before they become overtly technocratic. The first initiative to achieve this condition must come from the Government, and be developed as a social movement, instead of a bureaucratic routine job.

Conscientization and acceptance of the new roles: World Bank (1996) has defined participatory water management as "a process through which stakeholders influence and share control over

development initiatives and the decisions and resources which affect them". This implies that the stakeholders are actively involved, following transparent and systematic procedures, in the planning, implementation, operation and maintenance of water management infrastructure and resource utilization processes. By definition, role of the water institutions bring a new dimension in project management. Identification of works and their prioritization, preparation of the investment plans and supervision of works – all will now be done by the water institutions which were previously done by the agency staff. Role of the Government agencies change from controlling position to the position of facilitator, whose main responsibility will be to render technical advice to the water institutions, help in formulating and processing government financing and help in mediating conflicts. The government officials lose their prevailing control, authority and the privileges which they have so long enjoyed. There is great reluctance among the Agency staff to accept this situation.

Sustainability and incentives: Sustainability of the water institutions is a real challenge. Upon completion of a project, sustainability of these institutions becomes the most important concern. In CPP which has been mentioned earlier for the democratic procedure of electing water institutions at various levels, the WUOs stopped functioning after the project was complete and the donors left the region. It is yet to be seen what happens after their completion and withdrawal of the donors to the other three projects. Maloney (September 1998) wrote about the water institutions, “many thousands of WMAs have been formed in developing countries in recent decades which have failed. In Bangladesh, many water user groups/cooperatives were formed on canal irrigation systems, which functioned as long as “loans” were available.” The issue to be noted here is that – there are more factors other than the sense of ownership of the water institutions which is important for sustainability. Those are, in the words of the Project Director of the CPP, “Equally, if not more, crucial two other factors for the sustainability are – guarantee of fund (resource mobilization) for O&M activities and execution of minor works by the water institutions (incentive)”. Reference of the ‘incentive’ issue is available in concerned literatures also. Oakley et al (1994) writes, “Dependable incentives are important in sustaining the participation... Participation evaporates when the incentives fail to materialize”. Buijs (1979) suggested, “...There often have to be substantial incentives to induce people to undertake the responsibilities”.

In another project (3200 ha) where this author worked for three years established water institutions to introduce participatory approach, the issue of incentives for their sustainability came back again and again in discussions and meetings. They suggested timely mobilization of a minimum fund for O&M, effective participation of the water institutions in the selection and management of the investment plan and control over the expenditure. However, the existing rules require necessary modifications.

In CPP, execution of minor physical works up to Tk. 0.15 mln (US\$ 3000) and 25% of the construction works done by the Landless Contracting Societies (LCS) were executed through the water institutions to give them the incentive. Profits from these works may also be utilized resource fund for O&M activities.

Incentives for the concerned Agency staff to compensate for the authority, power and privileges which they lose, is also equally important, as success of the participatory approach is integrally linked with as well as dependent on the attitude and support of the Agency staff. Such incentives often are suggested to be - preference in the event of promotion, better position in the future etc.

Training: Participatory approach is “essentially a method” and its application requires *skill* (Technical, Human, Conceptual, and Design). Training, oriented towards the acquisition of need-based knowledge and skills, is considered to be a tool, rather than a component of the project to make it attractive for selling. Government staff and the leaders of the stakeholders, who are the ‘agents of the change’ have to appreciate the necessity of and possess the motivation to acquire the knowledge and capacity to use the skills.

It is important to note that nowadays training to develop institutional capacity has become a regular component of a development project and a considerable amount of money is being spent. Nevertheless, the quality of performance or attitude is not improving. The reason must be that the trainings are not being effective and efficient. Very little concern has been observed among the sponsors of the projects about the quality of the training and their effectiveness.

The capacity and quality of the trainers – their knowledge, practical experience in the field of lecturing issues and their training skill - are extremely important for the effectiveness to the training program. Trainers’ performance should be regularly reviewed and evaluated. There should be

mechanism for continuous monitoring, evaluation and efforts to improve the training contents, method, outcome and the effectiveness of the programs..

A general conscientization of the stakeholders about expected global water crisis, proper utilization of the scarce irrigation water; general overview of the project; recognition by the stakeholders themselves of the importance and need for their participation and sharing of O&M cost by local resource mobilization; problems they may expect to encounter in performing their tasks, the skill (problem solving, communication etc.) to handle those problems in an effective and efficient manner, should be the focus of the training program.

Cost Recovery and Political Consensus: Cost recovery, cost sharing, sharing of O&M costs by farmers and other stakeholders are being discussed quite often, but very little progress has been achieved. The farmers don't even pay the 'irrigation tax'. Political will and commitment is a key issue for collection of irrigation tax. Important to note that imposition and collection of the irrigation tax is a very sensitive issue and no government should like to take a political risk. So general political consensus among all the political parties at national level, whether in the government or in the opposition is an essential condition for any effective attempt to collect the 'irrigation tax'. "There should be no political interference in irrigation management and irrigation policy implementation" – was an important proposition in the Fifth International Seminar on Participatory Irrigation Management held in India (December 14 – 21, 1999).

4.0 Conclusion

It may be noted that the participatory approach breaks the conventional "top-down" approach and the feudal heritage. Transition from the conventional to the participatory approach is not easy, the concept being new and 'strange' as it is contrary to the conventional education, training, practice and vision of doing things.

To accomplish this challenging task, the government agencies and the facilitating staffs must be willing to do the job, be well oriented to stakeholders, possess problem-solving ability, communication skills and empathy, as well as integrity and honesty.

Establishment of water institutions, assumption of their attributed role and their sustainability require a fresh perspective and a paradigm shift towards the role of stakeholders, new role of state agencies and finally putting the stakeholders first.

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