

Managing Our Water: Making Best Use of This Precious Resource

The other name of water is life. It is so essential for keeping us alive. But when this precious but apparently abundant resource is mismanaged or not managed on one hand and gets polluted on the other it takes its toll of the economy and navigation, pisciculture and also for keeping it safe for domestic uses.

With a view to seeking expert opinion on better management and best use of this precious resource The Daily Star organised a **ROUNDTABLE** on June 26 participated by a wide range of experts in the field and different stakeholders. They stressed the need for striking a balance between use of ground water and surface water. The abundance of water in monsoon and its scarcity in dry season was identified as the major challenge for management. They opined that there's need for new thinking in National Water Management plan. Following are their deliberations on problems and prospects in managing and augmenting our water resource for its best use.

Mahfuz Anam: Good morning. Some of you may have been with us in our previous roundtables. The format of the discussion is very informal. It is actually a dialogue between experts and you are free to speak at any moment. There are no set speeches. We talk, we argue, we clear our minds. The beauty of this format is that we extend the discussion within these walls to our readers and thereby allowing them to share your wisdom, your expertise and also allowing them to write to us, either in the form of letters, articles or opinions, which actually enlarges the dimension of the dialogue.

The reason that The Daily Star decided to organise this roundtable is from the perception that, Bangladesh in a sense, has an abundance of water at some stages of the year and then suffers from acute shortage of it. This cycle of shortage in some months and abundance in other obviously leads us to think that if we go for water management then perhaps the over and the under supply of water can be somehow managed.

The second thing is because of over abundance of water at certain times. We are perhaps negligent of this natural resource. As we hear the rest of the world say that, it will not be for oil on which future wars would be fought but perhaps for water. We already see the signs of that in the Middle East. We have had a serious international problem with India on our own supply of Ganges water. We now have problem of arsenic in the ground water.

Given these conditions we felt that a serious in-depth discussion on how to manage our water is necessary. We have in a sense a long history of having dealt with this problem. This is not the first time that water has come into focus. There has been studies done by us, by foreign agencies and there is abundance of knowledge on the issue. But where are we with that knowledge, have we made use of it? Do we think that the knowledge is appropriate? Should we go for new studies or should we now focus on utilising that knowledge? These are the questions that we hope to address here.

As a starter we have with us Dr. Rashid Faruque, Principal Economist of the World Bank, a man with long experience in the field. We would like to invite him to start the discussion with an overview of where we are at the moment.

Dr. Rashid Faruque: What I would like to do is bring forth some of the issues and present status of the water resources sector. A year ago the World Bank did a report which actually tried to capture the state of our knowledge after FAP (Flood



Dr. Rashid Faruque: Action Plan) studies and the water resource masterplans done earlier. It also indicated the outstanding issues that can be or should be addressed by the new water resource management plan which is underway.

Basically the purpose of the study was to consolidate knowledge that we have gained through three decades of water management in Bangladesh. The three things that we looked at that time were first: to consolidate knowledge; to fill the gaps in knowledge; and then we tried to provide some guidelines.

We had included the review of the past approaches and then tried to find out the emerging issues for future planning. Issues that are concerning management of water resource in the flood condition which was also looked at by the Flood Action Plan. And then also the management of water in the scarcity conditions. We had two different chapters dealing with those. We also looked at the water sector institutions because that becomes very important. How and who will do the task is important.

The report did outline shortcomings of the past water resource planning. Again one could be defensive on that. But one should understand that things that were known then perhaps more is known now. For example the estimates of ground water availability and all that these are issues still not resolved, but what we knew then we perhaps know more now. We did not at that point do any comprehensive planning by hydrological units that are being done now.

In the past water resource planning, specially for the scarcity season was focused to agriculture. Irrigation was the guiding force. Fisheries, navi-

gation and environment received less attention than required. But now our knowledge base has changed, we have learned more about these issues. The issue of water quality also got less attention at that time partly because this did not become a big topic at that point. Now the arsenic problem has turned into a big issue in Bangladesh and West Bengal.

The water resource management under two different conditions -- scarcity and flood conditions, are very different. This report tried to look at the major issues of water management under flood condition. It did highlight the problems of river embankments and its management. Whatever we did in the past had some good things, it also had some problems. The river embankment was one of those. In the past we mostly looked to structural solution for resolving the problems, which we now know is not the best way. It has to be a combination of structural and non-structural. There are also problems of river sedimentation because of embankments. Not much was known about the effects of controlled structures and their implications to river morphology. Those were problems in the past.

If we look at the FAP studies clearly, one learning will come up that there is now a need for integrating structural and non-structural measures. Structural measures like flood forecasting, warning, flood proofing, flood plain zoning, disaster management, etc., are actually getting much more emphasis now than they got in the past. There is flood protection for urban areas, measures for urban and rural areas had to be somewhat different because of the density of population and so on. The need for flood management through compartmentalisation has been highlighted in the report and I think we should discuss these.

That complete flood control is neither possible nor desirable. But it is important to manage and mitigate floods. This should be a part of integrated resource planning that will involve things like flood forecasting, warning system, providing protection to urban areas, making acceptable level of protection in rural areas, introduction of flood plain zoning and flood proofing. But most important is that people should know more about floods, like experiences from other countries. Operation and maintenance of boulders, embankments is something that we will have to push through in the future and also should address the prob-

lem of sedimentation and drainage. The situation in scarcity condition is very different. Augmenting water supply from different sources and the conjunctive use of it is a way to go. Ground water becomes very important here. There are some issues that need to be addressed and the government has already moved in that direction by formulating a Water Policy. The policy gives the ideas as to how the different users could be having their claim on water resources, principles of inter-sectoral water, allocation of water, water using rights and economic pricing of water, and lastly how to recover cost. On the cost recovery the government hasn't done very well. I was looking at the case study of GK Project. Unbelievable! Only one-eighth of the operation and maintenance cost has been charged and that too has not been collected.

If we look at the scarcity conditions there are few things that need to be done. The government has already done some of these. It has established priorities and is moving from irrigation focus to a multiple use of water. However, the process is rather slow. WARPO has been set up and strengthened to make a more broad view of water use. Ground water reliance is still important and will continue to be so. There are lot of misconceptions about ground water availability which we might discuss around the table today. Then the issue of water management in relation to water development, what kind of water resource investment to take place and how to increase efficiency -- all these needs to be discussed.

The last part of our work was on institutions. Actually when we wrote this report there was no focal organisation for integrated water planning. However, that has now been corrected. WARPO is there. Maybe WARPO's outlook and mandate or its capability may have to be strengthened further. The existing institutions are more like water structured based, like BWDB, and not on management. This is changing. But the thing that we should discuss is whether the change is coming fast enough or not. Conflict, lack of coordination between major water sector organisations is also a hurdle. Hopefully WARPO with all its composition will be able to address that.

With the Water Policy in place, legal and regulatory framework is there but further follow-up may be needed. The local government system may be an important organisational structure that we need for beneficiary participation. So in terms of reforms, again based on these we have to design organisational frame in public sector that can do four things: Research; Development; Policy Planning and Regulation.

Now although we have something in place but if we very objectively look at our capability I think there is still lot to do. Coordination for example is an important factor. All these structures that you do on the ground, roads, embankments -- they have implications on wa-

ter flow. How much have we really done? I for one believe that there is room for much more coordination. From that point of view this Water Council has a big role to play. Private organisations and community organisations are also needed.

The report tries to capture some of the functions that are needed and which function can be done by which organisations. This in my view is very useful. When we wrote this we had basically two things in mind: Policy institutions to be put in place and actual management plan to be prepared.

We have already made quite a bit of progress. We have the National Water Policy, Water Code Rules and Regulations. Perhaps more are needed to follow it up which is in the process. Dr. Shamsul Huda might say that WARPO has already been strengthened, let's also discuss it, what the issues are because we need a focal organisation for the overall coordination and planning. Other public sector institutions must re-orient their objectives. It's already happening. But have we done enough? Have we already reached our goal?

There are some more issues like environment assessment

and people's participation. These are already in the books but how much is being done on the issue. O&M remains a recurring problem.

On the new water management plan, Malcolm Wallace from National Water Management Plan is here and he can tell us what he is doing and what are the issues he is facing.

Let's put on record a sort of guidance that needs to be followed: We have to build on the FAP studies which is already happening. We have to have management strategy, we have to have better and more reliable estimates of ground and optimal use of surface ground water. We have to assess present and future demand of water for different sectors. And then how to balance water, demand supply balance, for each of the hydrological zones. And then identify what structure and non-structure measures are needed, what investments are needed to make this plan successful. This is very quick listing of the things that all management plans are supposed to do. Perhaps management plan is more than that.

This presentation was more to bring everybody to a point where we have an overview, an understanding of what is going on and what is needed to be done. But what we should do is critically evaluate our progress and also see the task ahead and how we meet that task.

Mahfuz Anam: I was wondering if at this stage the Secretary would like to come in and let us know about the Water Policy the government has already formulated and how you think things are going?

Dr. ATM Shamsul Huda: I will begin from where Dr. Faruque has just ended. The report towards a new national water plan actually was prepared about a year and a half back. And in the meantime many developments have taken place. So my task essentially at this point will be to update our colleagues here as to what has happened in the water sector.

Before going on to the actual happenings I would like to highlight couple of issues. One is, and it has already been mentioned, that water is of utmost importance for Bangladesh. Actually water and land are the two resources that we have and must be properly managed. So I like the title very much: "Managing Our Water". We hear in every seminar that we hold on water, that there is abundance of water in one season and there is scarcity in another season. Which means that someone somewhere should manage it properly so that the abundance and the scarcity can be synchronised for getting the best benefit out of it.

In reality it is not that simple, rather very complex. Because for doing that we need a proper understanding of the issue for which there has to be a very sound knowledge base and different options that are available. For doing that kind of knowledge gathering and collection of information and dissemination and also for planning, for programming, for execution we need appropriate institutions. And in-between, of course, there is policy planning and programming. For that also we need lot of activities.

Now it is in these areas, which is basically information generation, that is one sort of activity that relate to water. Secondly the institutions and thirdly the planning and programming activities.

Largely in the past water was taken as a resource given by God and nature. And so there was no conscious effort in those days to see or look at the multiple use of water and the scarcity character of this resource. Secondly, 35 to 40 years back population pressure was not that much. Even at the time of liberation we had seven-and-a-half crore people. And now we have 12 crore people. We had 9.9 million metric tons of food production, now we are having around 22 million metric tons of food production. So in those days as the population was increasing the government's just one dimensional approach to water management was growing more food. That was the principal concern. And all water related activities concentrated on how to increase agriculture and more so crop production. Till 1965 the then EPWAPDA had four major projects. The North Bengal Tubewell Project, the Gokul project, the Dhaka-Narayan-



was a very well taken step in the light of the situation prevailing then in the water sector. And in the meantime the other important thing that has happened is the publication of the document, the National Water Policy, which again has taken help from all that has happened in the sector, all the past studies, reviews, criticism, everything. On the basis of that this small little booklet tries to delineate the basic issues and tries to provide some guidelines as to what the National Water Management Plan should do.

In the process, what has happened is that on certain issues some definitive conclusion have already been arrived here. Like in the National Water Policy it has been mentioned that small scale projects should be executed not by the Water Board but by the local government. This is in reference to the demand for a long time by many people that small projects should be conceptualised, appraised, debated, discussed by the people who are the direct beneficiaries. And we have the past experience of the Comilla minor irrigation project being experimented in those days by Akhtar Hamid Khan and which was very successful. But we lost track of that and after liberation of Bangladesh it was discontinued. Now that the upazila system is being revived by the government and there has been tremendous increase in population, so it is not possible on the part of a highly centralised organisation like BWDB to do small projects.

Mahfuz Anam: Can you give us the main features of the Water Policy just in very brief terms?

Dr. ATM Shamsul Huda: Firstly, the National Water Policy provides guideline. It is not either a law or an executive instruction, it is a guideline as to how we should approach our activities in the water sector.

Secondly, it is not merely confined to the needs and requirements of the Water Ministry. It covers the entire water sector.

Thirdly, it covers the rational and also the international dimension of the water issue. As all the major rivers originate in the upstream, we do not have any control over them. That is why we have delineated our policy with regard to that aspect. So it gives guidance as to how we approach these international aspect of the river system in Bangladesh.

The National Water Policy talks about the different institutions as to who does what and why. It talks about the government's role in the actual management of the water. And it also highlights the necessity of involving the private sector or privatising some of the activi-



Dr. ATM Shamsul Huda: ties that are now being carried out by the government. For example, gradually the management of water sector projects up to five thousand hectares should be given to the beneficiaries. So, this is a major policy departure.

There are 554 completed projects in BWDB. We are saying that projects up to 1000 hectares should be transferred with ownership and management to local government. Those will not be owned by BWDB and in future projects up to 1000 hectares will be done by local government. So that is also a major departure.

Till the promulgation of the policy, Water Board had exclusive control on water projects. But now it's been shared with the local government institutions. The big projects will be with the Water Board but there also, the policy proposes, should be joint management by the beneficiaries and the Water Board officials and the issues to be decided jointly.

This policy also mandates that in the future when people will have to come up with some contribution. Just demand a thing and the government agreeing to it -- that sort of scenario in future will not be there. They will have to generate the fund to show their interest in the project.

About flood control, the National Water Policy states that it is not possible on the part of the government to provide full flood protection for the entire population of Bangladesh. It will provide full protection only to major cities, district towns and upazila towns where there is a huge concentration of people and where valuable infrastructure is located. But the vast paddy fields in the rural

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