

### NATIONAL DIALOGUE ON IWRM- 2007

#### Introduction

The highly seasonal and spatial pattern of rainfall in India influenced not only the regional cropping pattern but also the evolution of the methods of harvesting of rainwater in tanks and underground storage. While the latter aspect gave birth to the theme on ‘water and culture’, the former has been closely associated with the issue of utilization of surface and groundwater for irrigation, the activity consuming more than 85 percent of fresh water supply. The large inefficiency in the utilization of surface (canal) water is a matter of concern to the policy maker and also to the farming community who is directly and adversely affected by it. Further, the falling groundwater table resulting in contamination of water and high cost of pumping is leading to unsustainable use of this natural resource. The over exploitation of ground water is so much that 15 percent of aquifers are in critical condition. It is not merely a coincidence that most of such aquifers happen to be in the area of high agricultural productivity and relative economic prosperity<sup>1</sup>. It has been argued that this is the result of a combination of inappropriate input price policy ( including that of water), and absence of regulatory measures for the use of ground water. Given the present status of unregulated exploitation of ground water, the number of aquifers that will reach the critical level in the next 25 years may go up to 60 percent<sup>2</sup>. Another aspect that needs urgent attention of policy makers is the unequal distribution of canal water between tail enders and the head reach farmers. The issue of conflict on the inter state sharing of water also keeps on propping up time and again. Thus, the issues of equity efficiency, sustainability, and conflict resolution are paramount in planning and management of water resources in India which has been explicitly recognized in the National Water Policy (GoI, 2002).

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<sup>1</sup> Briscoe and Malik (2006), *India's Water Economy*, World Bank and Oxford University Press.

<sup>2</sup> *ibid*

This report is based on the Dialogues undertaken by IWP in the first half of 2007. The report is divided into the following sections:

- Gaps identified in the GWP-IWRM survey
- Proposed Activities
- Appropriateness of activities.
- Major Dialogue Activities Undertaken
- Outcome of Dialogues
- Future Plans

## **II . Gaps identified in the GWP survey**

According to the GWP IWRM survey, India falls in ‘category 2’ i.e. India is in the process of preparing national strategies/plans to promote and implement IWRM approach (GWP-2006)<sup>3</sup>. As far as the planning part is concerned, India does have a National Water Policy prepared by the Government of India (GoI). However, the management and implementation aspect leaves much to be desired with respect to the following specific steps: (i) *legal framework*: several states have laws on ground water and surface water; others do not have any. The latter have not even started the process of discussion on this approach; (ii) *catalyzing change*: only few states have organized public debate on IWRM aspect to affect change in respect of practices and governance of water related institutions, (iii) *change areas*: GWP IWRM lists several areas of change of which the attention may be drawn to the following in particular: generation of information for proper multi sector and basin level planning, promoting participation by the private sector in water projects in respect of investment and governance, and mobilizing political opinion for evolving conflict resolution mechanism, and pricing and cost recovery for sustainability of water resources.

It may be pointed out that in the Indian case, while the central (federal) government has taken several initiatives in planning and implementation of IWRM, the state governments seem to be moving slow on some of these aspects. Of course, the progress differs widely across states.

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<sup>3</sup> [www.gwpforum.org/gwp/library/IWRMSurvey-final.pdf](http://www.gwpforum.org/gwp/library/IWRMSurvey-final.pdf)

### **III. Proposed Activities**

The activities to be proposed need to be consistent with the short term and medium term requirements emerging from the priorities of IWP and the gaps identified in the GWP-IWRM survey. A common factor that emerges from the IWP priorities is that no matter what themes and sub-themes are taken up, the feasibility of implementing certain decisions regarding IWRM projects should be judged in the context of regional diversity and the governance in a federal structure where the responsibility of implementation rests primarily with the state governments. In certain cases (e.g. making laws on extraction and use of ground water), the initiative depends entirely on the state government. IWP, perhaps could play the role of a catalyst focusing on the urgency of the problem and the basic ingredients of a model regulatory act. Similarly, IWP could highlight the differences in the response of community in different states to the unequal access to canal water, and how in the historical and cultural context, community and the then rulers/administrators devised to cope with the scarcity of water and harnessing of rain water, etc.

In terms of the activities which are doable in the short run, IWP proposed to undertake the following:

- Focus on the nature of conflicts arising due to unequal distribution of canal water and community's response to it in different states.
- Highlight the strength and relevance of the traditional methods of rainwater harvesting and their relevance to the present situation.
- Demonstrate the water saving technology in selected crops to farmers, particularly the marginal and small ones.
- Train and involve grass root level organizations in formation of Area Water Partnerships.
- Train and involve women in managing the Area Water Partnership.
- Discuss with NGOs, research institutions and government officers about inter state dialogue on water sharing.

### **IV. Appropriateness of activities.**

Appropriateness of activities must be seen in terms of their relevance and direct link with IWP priorities and the gaps identified in the GWP-IWRM survey as outlined in sections II and III above. The proposed activities do address the IWP concern and the gaps identified by GWP-IWRM survey which may be briefly listed as below:

- Whether canal water is equitably distributed. How different communities in different regions respond to unequal distribution of water.

- Given the scarcity of water, is there any relevance and merit of traditional practices in storing and harnessing of rain water?
- Whether water saving techniques in different crops reach small and marginal farmers? If yes, what is the learning process?
- Whether community is aware of the consequences of unregulated use of over-exploitation of ground water and what can be done about it ?
- Given the vastness and diversity of India's water resources and their use, how do you involve people/community in addressing the major concerns such as outlined above, particularly the women members?
- How could IWP play the role of a catalyst in creating awareness about the issues raised above and take the urgent message on water use efficiency and conflict resolution to the ground level through a dialogue in different regions?

The activities under taken by IWP address the above questions, with varying degree of success in different location/zones.

## **V. Major Dialogue Activities Undertaken:**

### **V.1 Conflict Resolution**

#### *Agenda*

Three field studies were carried out to (i) examine whether access to canal water was unequal at different locations/reaches; and (ii) study the effectiveness of the institutions, if any, in tackling with the unequal access to water.

#### *Location*

The field studies were conducted in April –June, 2007 in three states, viz. Bihar, Punjab and Rajasthan through rapid rural appraisal and focus group discussions whereby information was gathered involving not less than 10 to 15 cultivators and four main village (Panchayat) functionaries, community leaders and government officials.

#### *Participants*

The findings of the field work were discussed at Dialogue held at the eastern zone (Ranchi, June 23, 2007) and the northern zone (Jaipur, June 27, 2007) where at least 50 to 55 IWP partners attended the meetings.

### *Findings*

Results of case studies conducted in three states (Bihar, Punjab and Rajasthan) on the unequal access to canal water at different reaches (locations) brought out certain key findings:

- In most cases, head reach farmers have better access than tail enders except in a typical case arising due to undulating level in command area.
- In the eastern zone (Bihar), the state machinery is ineffective in bringing discipline and justice in distribution of canal water.
- In north (Punjab), after decades of indifference, the community has taken initiative to find solutions to resolve local conflicts by laying down pipes from outlet to fields cutting across plots owned by different group of farmers, each farmer contributing to his/her share of cost of pipes.
- Regulatory measures are absent to prevent over extraction of ground water in northern states.
- Water Users' Associations (WUAs) are non-existent. Thus, involvement of stakeholders in maintenance and operation of canal system and regulation of ground water use is totally absent.

## **V.2 Traditional practices of water management**

### *Agenda*

Meeting of NGOs, researchers, media and civil society was organized at Hampi (Karnataka state), June 25-27, 2007 to explain the utility of integrating traditional practices of water management in tanks and river diversion system evolved in south India during the Vijayanagar empire (13th to 16th century ) and modern techniques of water management.

### *Findings*

The detailed discussions highlighted that the traditional practices of underground water storage and rain water harvesting are relevant even today in water scarce areas. Their utility can be enhanced considerably if traditional practices of water management could be integrated with modern techniques comprising of volumetric control and distribution through installation of measuring devices at various strategic points of regulation control on the flow of water.

### **V.3 Gender Equity Concern**

#### *Agenda*

Dialogue was held in Pune on 14<sup>th</sup> June, 2007 to discuss the gender equity concerns (membership for women in water related institutions, entitlements to water for women and representation for women in decision making bodies) in the water policy of three states, viz. Gujarat, Orissa and Maharashtra. Twenty active women members from these states participated.

#### *Findings*

Review of water policy brings out the following points: (i) in the case of Orissa water policy, the gender equity concerns have been marginalized i.e. such concerns are given low priority in the water policy; and (ii) recent reform in Maharashtra gives entitlements around land ownership in command areas but it is silent on equity and the rights of landless women.

### **V. 4 Low cost technology of water conservation.**

The dialogue involved farmers from three states, viz.; UP, Haryana and Punjab:

- low cost technology for water conservation for pulse crop was introduced and demonstrated.
- effort was made to disseminate this technology among farmers of three states.
- Liaison was maintained with farmers, NGOs, state department of agriculture and IWP members.
- Self Help Group (SHG) were formed.

#### *Findings*

The use of rain gun reduce water requirement by 50 percent in comparison with the method of flood irrigation. It also enables farmers to practice trash mulching successfully. In Meerut 41 marginal and small farmers agreed to adopt rain gun method of irrigation and found it beneficial as indicated above. In the inter state dialogue, 70 farmers came from U.P., Haryana, Punjab, Uttarakhand and Himachal Pradesh to whom the benefit from above experiment were explained. A farmer from Punjab narrated his experience to fellow farmers that he was able to save considerable water by using drum instead of drum drawn water for bathing cattle.

## **V. 5 Forming Area Water Partnership**

A dialogue was held at Nagpur (June 29-30, 2007) for exposure of new NGOs and institutions to :

- the concept of Area Water Partnership (AWP) and the procedure for its formation.
- issues of water governance, water vision, framework and program for action.
- feedback to the existing AWP's on the difficulties in running the AWP's.
- About 63 stakeholders NGOs, Command Area Authority from Government department, irrigation experts, farmers, etc. participated.

### *Findings*

The participants were told about the basic concepts, ideas and the working of AWP's. It was also explained how AWP is a powerful tool at sub-basin level to provide multidisciplinary, multi stakeholder common platform to implement IWRM at the ground level. This also proved to be a good capacity building exercise with sharing of experience of some of the existing AWP's such as Kshipra AWP (Madhya Pradesh), Purna AWP, and Patalganga AWP (Maharashtra). An interesting development was that Water and Land Management Institute (WALMI), Bhopal (Madhya Pradesh) showed keen interest in establishment of AWP's at sub-basin level in the state and wanted to start work in Betawa sub-basin. It is expected that 10 to 14 new AWP's would come up in Maharashtra, Madhya Pradesh, Tamil Nadu, Gujarat and Rajasthan.

## **V.6 Establishment of Yashoda AWP and IWRM**

Yashoda AWP (Maharashtra state) brought all the stakeholders from different departments and disciplines on one platform to discuss the issues relating to poverty, debt and farmers' suicide. Particular attention was paid to the participation by women stakeholders. About 53 participants from different walks of life (Government, NGO, educational institutions, social workers, scientist from agricultural universities) attended the dialogue. The meeting was held at Wardha (Maharashtra) on 19th June, 2007.

### *Findings*

The initiative was taken by the Women's Water Forum (WWF), Nagpur. The major achievement was the formation of Yashoda Area Water Partnership to be hosted by WWF with an enthusiastic participation by women in this endeavour. This AWP would

draw up on the experience of Purna AWP. The latter has encouraged Yashoda AWP to work with it closely.

### **V.7 Inter State Sharing of Water:**

A multi stakeholder National Dialogue was held at National Institute of Advanced Studies (NIAS) in Bangalore, June 26-27, 2007 on inter state water sharing and conflict resolution. The focus was on

- identification of common set of parameters covering the areas of climate and hydrological processes on which information is to be collected.
- collection, validation and standardization of data across basins.
- Writing of analytical and conceptual papers (10 in number) on trans boundary water sharing opportunities, challenges, legal aspects and mechanism of water sharing with a perspective of history and IWRM.

A core group of ten experts was set up from four southern states (Karnataka, Kerala, TamilNadu and Pondicherry) comprising the Cauvery river basin to prioritize the issues for the agenda of the dialogue.

#### *Findings*

The formation of a core group of six experts has facilitated the process of consultation on different aspects of this projects such as review of conceptual papers, data and validation on relevant variables to enter the decision making process on water sharing. This has streamlined the work and exercised quality control at various levels (through change in work schedule and planning ) which would not have been possible in the absence of a formal Dialogue.

### **VI. Outcome of Dialogues**

Two points may be highlighted at the very outset. :

(a) There is no mention of *impact* of the dialogue as all the activities under taken were entirely of short term nature. Since impact can be observed only as a long term effect, we do not even know whether there could be (or would be) any significant effect to indicate the impact of dialogues.

(b) In activities of short term nature, a concrete ‘outcome’ may not materialize. In fact, several activities may yield only ‘*potential outcome*’ in terms of generating ‘curiosity’ and/or raising ‘awareness’ of a phenomenon.

The success/failure of the Dialogues undertaken may be judged in the light of above comments.

- **Conflict Resolution**

The dialogue has been able to raise the awareness and trigger the curiosity of farmers and IWP partners. During the course of discussion, they persistently raised the questions:

- What is the nature of local (village level) institutions which allow perpetuation of inequality in distribution of water?
- Why is it that the government of Punjab is able to enforce discipline in distribution of water which is conspicuously missing in Bihar?
- What has prompted farmers in Punjab to contribute to laying down of pipes from outlet to fields (Village Khanpur, District Jalundar) and lining of damaged water courses (Village Mullah Bediyan District Nawanshahar) to improve distribution of water? Why is it that such an initiative is missing in Bihar?

The potential outcome is reflected only in terms of raising awareness and triggering curiosity as manifested in their concern/questions referred to above.

The outcome *per se* is yet to be realized in the form of change in behavior of farmers and/or government functionaries.

- **Traditional practices of water management**

Awareness created among NGOs, researchers and members of civil society about the merit of integrating traditional practices with modern techniques of water management comprising of volumetric control and distribution, using measurement devices at various strategic points of regulation controls on the flow of water. This is reflected in the resolution made by the participants that (i) such seminars/dialogues should be organized in other historic locations also to make the general public aware of the utility of traditional techniques of water management; and (ii) the relevant literature be published in both English and local language for the benefit of general public.

- **Gender Equity Concern**

Concrete outcomes in terms of suitable amendment to water policy of three states have not yet come. However, the Dialogue did make the participant aware of gender equity concerns in the context of state level water policy as reflected in their joint decision to take these issues up with state level authorities.

- **Low cost technology of water conservation.**

The major achievement of efforts to take water saving technologies to the farmers in the north Indian states is that not only they appreciated the importance of techniques *per se* but also the significance of forming a Self Help Group (SHG) to enable them to have access to credit on group (collective) basis. This change was particularly welcome in the light of the fact that the spirit of cooperative behavior and collective responsibility is not common among the North Indian states as compared to that observed in the western states such as Maharashtra and Rajasthan.

About 70 persons of which 41 were farmers, from three states participated in the dialogue. More than half of the farmers (23) used water saving technology (sprinklers) and more than three-fourths used other improved practices (land preparation, mulching, etc.). One SHG consisting of about 21 farmers, has been formed in Meerut (U.P.) who have come together to avail of bank loan facility.

- **Forming Area Water Partnership**

How the new NGOs adapt themselves to AWP is yet to materialize. One achievement can be mentioned here that WALMI of Maharashtra has agreed to form AWP in this state.

- **Establishment of Yashoda AWP and IWRM**

The participants expressed satisfaction at what they discussed and learnt. How they are going to adapt to the lessons of the dialogue is yet to be observed. However, one concrete outcome was the formation of Yashoda AWP and agreement on working in close collaboration with Purna AWP.

- **Inter State Sharing of Water**

The formation of a core group of six experts has facilitated the process of consultation on different aspects of this projects such as review of conceptual papers, data and validation on relevant variables to enter the decision making process on water sharing. This has streamlined the work and exercised quality control at various levels (through change in work schedule and planning) which would not have been possible in the absence of a formal Dialogue.

*The actual outcome can be observed/measured only if, as a result of dialogue, social actors/boundary partners start doing things **differently**. However, if*

*'awareness'/curiosity' is created about certain things among the partners, it may be counted as 'potential' outcome only. IWP has been able to achieve 'potential' outcome in several areas, be it unequal access to water, gender mainstreaming and/or concern on water laws/rights, formation of SHGs and AWP, and sharing of water between states.*

## **VII. Future Plans**

IWP's future plans need to be derived from the unfinished agenda of Dialogue held in 2007. The fundamental issue is how to convert '*potential*' outcome into '*actual*' or '*realized*' outcome. A logical corollary of the dialogue already undertaken is that IWP should prioritize the activities on the basis of the following criteria: (a) a greater probability of 'success' in the short and/or medium term (the long run horizon is being kept out of the view in the present context); and (b) activities with important policy implications affecting large number of partners; and (c) feasibility of implementation of policies emerging from prioritized activities. The prioritization of activities may be done on the basis of a combination of above criteria. Assuming that the probability of success is positively associated with the degree of '*awareness*' created on certain issues involving large number of partners (over a large area), the following may be listed as priority items.

### **1. Minimizing conflicts and raising the efficiency of canal irrigation system.**

A huge public investment has gone into the canal irrigation system where low efficiency has reduced the system to be financially unsustainable. It has led to numerous conflicts among the farming community in the canal command area. How to resolve these conflicts? What kind of institutional changes are needed? Is formation of WUAs an answer to this problem? Can the 'success' stories be repeated in areas of 'failure'? Such issues need to be discussed with large number of partners and attempt should be made to have suitable changes at the ground level to achieve 'actual' outcome or at least, to come closer to achieving actual outcome. The just concluded dialogue may be extended to achieve concrete results.

## **2. Achieving consensus on the regulation of exploitation of ground water:**

Over-exploitation of ground water in both canal and non-canal areas is a well known phenomenon. Its adverse environmental effects are also well documented. What is important from practical point of view is (i) to create consensus about the ground water rights, (ii) the nature of institutions required to help expedite this process; and (iii) involvement of farming community in agreeing on raising tariff on ground water to halt unsustainable use and to devise mechanism to implement it.

*The approach to implementing above activities should preferably be consistent (and complement too) with the activity of Zonal Water Partnership (ZWP). This would require to initiate these activities through the ZWP. This can also be taken up at a smaller level, subject to the constraint of financial resources. This view matches with the priority of IWP and GWP-SAS as well.*