

4th INDIA WATER WEEK 2016

WATER FOR ALL : STRIVING TOGETHER

APRIL 4-8, 2016

AGRO INDUSTRY NEEDS BETTER WATER USE EFFICIENCY; SHOULD PARTNER GOVERNMENT IN WATER MANAGEMENT

India's growing agro industry, regarded as an extended arm of agriculture, is a major employment and income generator. Like agriculture, it is also a large user of water, necessitating water efficiency in production and efforts to strike water balance even at a catchment level.

It is felt that development of the agro industry can help to stabilise and make agriculture more lucrative and create employment opportunities both at the production and marketing stages.

In a seminar on 'Agro industries and water' on April 7, there were presentations from several leading corporate organisations from the sector and experts felt that the industry should partner the Government in water management practices and also contribute by extending scientific knowledge and resources.

In his presentation, ITC Ltd's Sanjib Bezbaroa talked about the impact of water shortages on the food & beverage (F&B) industry and how water insecurity leads to food insecurity through the agro-sector.

The F&B industry faced several challenges in water like impact of climate change on monsoons and depletion in groundwater levels in several parts of the country. By 2015, he said demand was water was expected to shoot up to 1.5X the level of 2000. The water intensive businesses like paper & pulp and food processing could be hit and even the agri-supply chain will become vulnerable. For the company, the issue cannot be looked at it as an ITC challenge only.

There were several water risks for the F&B industry, be it physical, reputational or regulatory. For instance, disruptions or declines in water supply could limit industrial use and prices could increase



for water and water-intensive commodities. Water quality issues can also lead to food contamination, said Bezbaroa.

In terms of reputational risks, companies could face conflicts with local communities over access to water even as concerns about water risks are raised by shareholders and other investors. There was also an issue of industrial wastewater polluting public water resources. All of this could lead to a company losing its license to operate.

The issues needed both demand and supply side interventions. On the demand side, agricultural demand efficiency could come in through irrigation efficiency, use of tensiometers and better farming practices including laser land levelling while raising stakeholders' awareness. All stakeholders need to work together, added Bezbaroa.

JK Paper Limited's Sandeep Bhalla said there were several ways to improve water efficiency in agro industries, particularly in bulk paper manufacture, a water-intensive sector. Industries could get concessional water charges if mills are over-achieving water norms and also treating the effluent as per norms.

Also, water charges should be applicable only on "Net Water Draw" in case mill is supplying treated water for irrigation purpose.

Paper Industry is capital intensive industry, hence there is need for TUFs (Technology Upgradation Fund Scheme) to implement water conservation projects.

Effluent norms which are recently released for Ganga Basin are even stricter than EU & IFC standards. Better that compliance is ensured than going for such high norms, which cannot be achieved economically, said Bhalla in his presentation.

He said currently waste paper writing & printing paper was more costly to manufacture in India than paper from wood or agro, because India did not have proper waste collection mechanism & depends on imports for waste paper. Water consumption of waste paper-based mills was much lower than wood/agro-based mills, he added.

Former CWC Chairman A B Pandya felt that agriculture should be treated as an economic activity and water pricing fixed accordingly.

RIVER BASIN WATER MANAGEMENT LEGAL INITIATIVES, INSTITUTIONAL REFORMS, STAKEHOLDERS PARTICIPATION NEEDED IN PLANNING, FEEL EXPERTS

The river basin or sub-basin is the appropriate natural hydrological unit for undertaking planning activities. But, it is necessary to have participation of all stakeholders in planning activities, along with sound backup of evidence-based approach in modelling with proper legal initiatives and institutional reforms, for undertaking an integrated water resource management (IWRM) approach in basin level planning, said experts at a Case Study session during the ongoing India Water Week 2016.

Following case study presentation by six authors during the session on 'basin level management initiatives' on April 7, the experts said the (draft) River Basin Management Act-2012 emphasises on the need of having River Basin Organisations (RBO) for effective water resource planning initiatives in various river basins in the country.

The River Basin Master Plans are envisaged to be prepared by RBOs while the River Basin Master Plan would be a dynamic document with time. The IWRM-approach on basin scale will help to advance India's social and economic development goals in ways that do not compromise the sustainability of vital ecosystems to the extent desirable and feasible.

Experts have long felt that river basins are the most appropriate unit for planning, developing and managing water resources and for analysing water availability and water use in an integrated manner.

During the session, the experts felt that there was a need to enact National Water Framework Law-2013. Also, water jurists and technocrats must join hands together to manage water properly.

With hydro-meteorological and land-use changes, there is a need to update reservoir operation rules in the reservoirs of the country so that the desired flood moderation and consumptive benefits are



realised. The land acquisition issues are hard to resolve generally, and because of that the planned benefits are not achieved through the WR projects, they said.

The 3-D modelling approach is an effective approach to capture the subsurface complexity of most geologic settings, which can lead, in the context of an integrated approach, to improve the hydro-geologic appraisals.

Chair of the session, former Secretary General of ICID M Gopalakrishnan presented the River Basin Planning initiatives undertaken so far in the country and highlighted the need for appropriate legal reforms in water sector along with institutional mechanisms in context of RBOs.

Session co-chair Dr Robert Carr of eWater Australia presented the issues in Australia's management of water resources and environmental issues.

Carr mentioned about the integrated planning initiatives in Murray Darling basin, water markets, water accounting (water use as credits and debits), water sharing, and focus on water use efficiencies.

He emphasized on the need of initiating basin level planning exercise with whatever little reliable data is available and leaving the unreliable data out of the modelling process. Planning is a continuous process and can be refined with availability of more data and information in the course of time.

Using a sparse, yet reliable data is better option than making using of the dense, yet unreliable data, said Carr.

The session concluded with the recommendation that underground and surface waters constitute a closely inter-related hydrologic system, which should be managed as a single entity in order to prevent uncontrolled pollution and depletion of these resources.

In particular, all quantitative and qualitative aspects and activities of abstraction and discharge are so interdependent that they should be managed in an integrated manner and should not be considered as dissociated.

Also, with spatial and temporal variability in availability of surface water resources, it is difficult to fulfil the needs of the country without storing the monsoon waters in appropriately-sized storages for use in leaner months and even in drier years with carry-over provisions in the live capacity.

Less live storage capacities in India vis-a-vis countries having similar hydro-meteorological conditions reduces the resilience of the system towards hydro-meteorological extreme events such as floods and droughts. The inadequate resilience, due to lesser surface storage capacity, is the main reason that compels the over-extraction of groundwater in the deprived regions and most of the times from very deep aquifers, the experts opined.

SDGs & WATER: INDIVIDUAL ACTIONS AS IMPORTANT AS GOVERNMENT EFFORTS



Management of water resources in India is as much a responsibility for individuals and society as it is for the Centre, States, academia, experts and NGOs. Against a backdrop of water shortages, only conscious changes made by all stakeholders -- be it businesses, communities, or individuals, would help achieve the UN Sustainable Development Goals (SDGs) in the water sector, felt experts at a panel discussion on 'Strategies to achieve UN Sustainable Development Goals in water sector'.

The experts were of the view that actions of each individual were as important as the action by the Government, which can adopt an integrated approach for water resources management on a basin scale.

Future development in the country should be based on sustainable use of available resources and solutions that are sustainable in the long run. At the same time, there should be an appropriate pricing mechanism for cost-recovery, without which, any intervention will not be sustainable in the long run, the experts felt.

At the United Nations Sustainable Development Summit in September 2015, world leaders had adopted the 2030 Agenda for Sustainable Development, which includes a set of 17 Sustainable Development Goals (SDGs) to end poverty, fight inequality and injustice, and tackle climate change by 2030.

The SDGs have replaced the Millennium Development Goals (MDGs) that expired in 2015. Out of the 17 SDGs adopted to transform the world, water

finds a role in ending poverty in all its forms everywhere -- ending hunger, achieving food security and improved nutrition, as well as promoting sustainable agriculture.

The panellists felt that since SDGs have cross-sectoral linkages, access to reliable water and power was the prime concern and when these are achieved, the secondary or tertiary needs are easier to achieve.

Maintaining a 24x7 water supply system is equally important from the health point of view, as discontinuous or intermittent supplies led to breeding of disease-causing bacteria in the pipes.

Appropriate pricing mechanism of water was also needed so as to reduce wastage of water. Conjunctive use of surface and groundwater could help address various water related issues in India, they said.

According to the experts, management of catchment area was of utmost importance as improper catchment management leads to excessive siltation filling up reservoirs and other water bodies. While a holistic approach needs to be undertaken for managing water resources, water harvesting structures should be made mandatory.

During the session, Water Resources Secretary Shashi Shekhar launched a report - 'WATER: The Next Sustainability Frontier'. The per capita water availability is decreasing with the increasing population and is already under the Falkenmark Water Stress indicator of 1700 m³/person/per year. To manage water

resources in India, both demand and supply-side options were needed.

The panel said burden of not having access to clean water or sanitation often falls on women, and young girls often have to leave studies to make arrangements for the same at home, or don't land up in schools that don't have regular water supply. Everyone has a right to have access to clean water and toilet.

There exists huge demand-supply gap in financial resources required to meet the SDG targets. To bridge the gap, Water Credit Loans can be important instruments towards financing needs.

The experts said there was need to have early warning systems in case of an impending disaster -- be it flood or drought -- to ensure preparedness and alleviating the impacts of the climate-related disasters. There is also a need to modify certain indicators in the context of India and the policies and targets under various programmes already launched by the Centre.

In her presentation, Yes Bank Group President Namita Vikas said water has many dimensions, which can be addressed through a multi-stakeholder partnership. Growing water shortage in India and the sanitation needs should be addressed in a focussed manner. Many areas in India are already facing huge water scarcity and setting up of accounting mechanism for water usage, recycle and reuse, rainwater harvesting, and community participation and NGOs (multi-stakeholder approach) can play a major role in achieving the targets under SDGs, she added.



Union Minister for Water Resources, River Development and Ganga Rejuvenation Uma Bharti on April 7 addressed a special session on ‘Community participation in water resources’ at the ongoing India Water Week-2016.

The Water Resources Minister urged the community at large to focus on efficient utilisation of water resources, which had emerged a matter of great importance for the country and required the utmost attention of all stakeholders.

For a country like India, which is facing serious water challenges in the form of drinking water shortages and drought in several parts, managing the available water resources efficiently would ensure optimum economic performance, social equity, environmental sustainability and stability.