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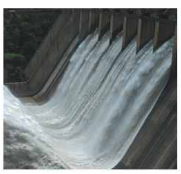
August 20-21 2014, New Delhi

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Water Security: An urgent challenge, today and in the future

A pressing issue worldwide, water security is rising on the political agenda, particularly in India and Asia generally, which will account for 61% of the world population by 2025 (European Commission, 2009). Cities, farmers, industries, energy suppliers, and ecosystems are increasingly competing for their daily water needs, with increased risks of water shortage, excess, pollution and pressure on freshwater systems.

India is facing a serious and persistent water resource crisis owing to a growing imbalance of supply and demand. India has 16% of the world's population but only 4% of freshwater resources, resulting in severe stress (Government of India, 1999). Irrigation accounts for 89% of freshwater use, followed by industrial and domestic consumption at 6% and 5% respectively (Perveen S. Sen R. Ghosh M., 2012). As estimated, 15% of all aquifers are already in a critical condition (WWF India, n.d). Discharge of untreated sewage into both surface and groundwater is the most important source of water pollution in India, with 80% of the sewage generated in India flows untreated into its rivers, lakes and ponds. Generation of sewage outstrips wastewater treatment capacity 3-fold (Central Pollution Control Board, 2010). This deterioration of water bodies makes them too polluted to meet the needs of water users.

While assessments of India's water budget vary considerably, overall trends are sobering. For example, a recent assessment cited in the Mid-term Appraisal of the 11th Five year plan, suggests that current water availability is only slightly more than half of official estimates (Planning Commission, Government of India, 2011). With total water demand expected to rise over 70% by 2025 (from 634 billion cubic metres to 1093 bcm), a huge demand-supply gap could arise, if considering more conservative estimates of water availability (Planning Commission, Government of India, 2011).

India's diverse water resources and substantial variability in the availability of water within the country poses a challenging task in addressing the demands of intra and interstate water sharing and regional disparities. Rapid economic growth and urbanisation is putting unprecedented pressure on demand for water as industry continues to underestimate the risks related to unsustainable resource use.

In light of the present situation, the newly-elected Prime Minister Narendra Modi's government has ambitious plans for India's development and is highlighting water security as a priority. These plans draw attention to the systemic problems such as the economic viability of industries, communities' dependency on water, irrigation needs, and the drastic effects on environment due to over-exploitation of water resources, associated with water risks of "too much", "too little", and "too polluted" water. The private sector too, has increasingly realised the need to invest in projects to reduce their impact on water. A recent Joint FICCI-Columbia Water Center survey of 27 industrial sectors revealed that 60% of the respondents agreed that availability of water is negatively impacting their business.

With renewed attention on water issues, this Seminar on Water Risk and Water Stewardship endeavours to bring visibility to and draw lessons from ongoing efforts to improve water security undertaken by central and state government, industry, civil society organisations (CSOs), and international organisations. The Organisation for Economic Co-operation and Development (OECD), Federation of Indian Chambers of Commerce and Industry (FICCI), Asian Development Bank (ADB) and the 2030 Water Resources Group (WRG) have joined forces to provide a timely platform to facilitate knowledge sharing, engage in policy discussions, and explore ways to better manage water risks and improve water stewardship. This multi-stakeholder approach to advance the shared goal of water security in the long-term, demonstrates that collective actions can count more than stand alone efforts.

Building a common understanding of water risks and risk sharing (Session 2)

Today's water risks are significant and growing in India. They are also more complex due to the interconnected environmental, economic, social and political factors, thus requiring urgent action differing in scope and magnitude than in the past. As urbanisation increases rapidly, there is more pressure on food, energy and ecosystems, which exacerbates water risks. Rising levels of pollution, increasing population, aging or insufficient infrastructure, and climate change are other major drivers of water risks. These water risks can lead to a loss of economic opportunities, and political and business instability.

Although industry is the largest contributor to GDP in India, irrigation agriculture accounts for 89% of water use (Ernst and Young, 2011), reflecting the significant dependency of agricultural labour on water. A striking 92% of agricultural water needs and approximately 85% of industrial water needs are met using groundwater (Perveen S. Sen R. Ghosh M., 2012), a fast depleting resource, in a country where food security is a major challenge. By 2050, water usage is expected to rise dramatically: up to 260% for domestic water, upto 130%for irrigation and upto 220% for industrial water demand (The 2030 Water Resources Group, 2013). Current planning and management have proven insufficient to address the challenges of the society's diverse needs required to feed an increasing population and support a growing economy. This calls for a better balancing of water use among agriculture, industry and urban users, along with ensuring sufficient water for the environment.

Individuals, governments and businesses share water risks, even if they are conceptualised differently. OECD's work on water security proposes a policy framework to address four water related risks: water shortage, water excess, inadequate water quality, and disruptions to the resilience of freshwater systems. It proposes a risk-based approach to "knowing", "targeting" and "managing" these risks (OECD, 2013).

Building a common understanding of water risks is a key step towards "knowing" the water risks that are faced, the main drivers of water risk, and how they might evolve in the

future. This requires a robust risk assessment, as well as an understanding of risk perceptions. A number of organisations have been developing the evidence base to inform the understanding of water risks in India.

For example, ADB's Asian World Development Outlook (AWDO) 2013 provides a comprehensive and practical framework to assess the status of water security across Asia and the Pacific (AWDO, 2013).The AWDO 2013 assessed India's level of national water security as "hazardous", reflecting that while there is some legislation and policy on water and environment, levels of public investment, regulations and enforcement are inadequate. The 2030 Water Resources Group in India engages with key players from government, private sector and civil society to leverage existing data and create a fact-based hydro-economic analysis with broad agreement. It does so by undertaking cost, benefit and risk based analysis (or any combination of these). The World Business Council for Sustainable Development (WBCSD) has launched the India Water Tool for making data on groundwater accessible for fourteen water-dependent companies in India in order to better manage water risks and water use efficiency.

Recent surveys of risk perceptions reflect a growing awareness of water risks that can influence action. The risk of water shortage and inadequate water quality are perceived as one of the five top global risks, both in terms of likelihood and impact (World Economic Forum, 2014). A recent survey of Indian businesses indicated that 83% of those surveyed in the industrial sector cited inadequate water availability as a major risk affecting their businesses (Perveen S. Sen R. Ghosh M., 2012).

In general, agreement on "acceptable" levels of water risks will be more likely if there is a common understanding of the problem at hand, the causes, and the impacts (over the short and long term) on lives, livelihoods, the economy and the environment. Water risks may be deemed acceptable if the likelihood of a given hazard is low and the impact of that hazard is low (OECD, 2013). Acceptability depends on the balance between the economic, social and environmental consequences and the cost of amelioration (OECD, 2013). This can help to define realistic targets for risk management and guide prioritising actions.

Issues for discussion

- What are the most pressing water risks affecting India today: "too little", "too much", "too polluted" water, or disruption to the resilience of ecosystems?
- What are the main drivers of water risks that should be the focus of attention in the near term?
- How can the potential impacts of water risks be better understood by governments, the private sector and civil society in order to strengthen the case for improved water security?

Water Stewardship Strategies (Session 3)

Water is the ultimate shared resource affected by lack of co-ordinated response among governments, industry, water utilities, and irrigators leading to extensive environmental degradation and resource depletion. The diversity of stakeholders affected by water issues demands a collaborative approach for managing water risks. Water stewardship recognises that effectively managing water risks requires a broad response. As diverse stakeholders compete for the common resource, each one plays an important role in both contributing to as well as sharing the impacts of the water risks.

A collective risk calls for collective action. Collaborative, cross-sectoral efforts to reduce shared water risks that can emerge though a common understanding, strategies, solutions and well-aligned incentives are often the most effective way towards sustainable water management. A lack of water security and multi-stakeholder and cross-sector interdependencies become most obvious and pressing at sub-basin level. However, collaborative efforts at sub-basin level are not yet common practice in India. In practice, water risks are not equitable shared to efficiently tackle the water crisis. Although there is growing awareness about water risks, these risks are vastly undermined by the water users.

Stewardship first requires taking voluntary action to go beyond compliance. Several industries and CSOs are paving the way. Stewardship also emphasises engaging with other stakeholders and water users in order to improve the social, environmental and financial sustainability of water use. WWF points out that stewardship is more than just being an efficient user, defining stewardship as "a commitment to the sustainable management of shared water resources in the public interest through collective action with other businesses, governments, NGOs and communities" (WWF India, 2013). It calls for a more concerted response urging public and private sector to look outside of their own operations and beyond reducing the impact of individual water users. This, in turn, would encourage more efficient and innovative water management by reducing exploitation of the resource.

Positive examples of such collaborative action are emerging in India. For instance, the Government of Karnataka, in collaboration with 2030 WRG, is working to bring together stakeholders at various levels of government to help identify interventions and priorities for the state to move towards a more sustainable water future (The 2030 Water Resources Group, 2013). In addition, given Karnataka Government's increasing awareness of its competing water demands, ADB recently negotiated a loan for Integrated Water Resources Management (IWRM), which provides for investment in capacity building, the development of modernised water infrastructure, and support to guide the strengthening of institutional and policy frameworks (ADB, 2014).

A recent study carried out by the Centre for Energy, Environment and Water (CEEW) in co-operation with the 2030 Water Resources Group identifies success and failure factors for collective action for water security and sustainability based on literature research and case

study analysis. The study highlights triggers and attributes instrumental in bringing stakeholder groups together such as the severity of the common threat, the presence of stringent incentives and penalty structures, and social ties and networks in combination with strong leadership (CEEW, 2014).

Issues for discussion

- What do different stakeholders understand by the concept of water stewardship?
- What is the role of government in providing a framework for water stewardship at the basin level?
- What incentives can be put into place to promote collective action, considering the existence of significant information asymmetries as well as the typical focus of stakeholders on individual rather than collective action?

Industries initiatives in water stewardship – achieving water use efficiency (Session 4)

Water is critical for ecosystems, cities, and farmers as well as an indispensable raw material for industry. Industrial water consumption in India is expected to quadruple between 2000 and 2050 (Ernst and Young, 2011), yet the biggest consumer of water to date remains agriculture. Increasingly, business leaders realise that their profitability, brand reputation and supply chains are dependent on water availability. The effects of an uncertain water future reach far beyond the traditional water-intensive industries such as pulp and paper, textile and sugar and thus, businesses have the responsibility to make water resource management a priority.

According to data from Global Water intelligence, since 2011, companies have spent more than USD 84 billion worldwide to improve the way water is obtained, conserved and managed (Financial Times, 2014). Nestle, a water-intensive company achieved an overall 33% reduction in water withdrawals per tonne of product since 2005 (Nestle S. A., 2014). Coca-Cola Company conducts Local Source Vulnerability Assessment to mitigate water risks in order to take actions to preserve the sustainability of communities they serve and protect water resources (Coca-Cola, 2012). Companies all over the world are investing in India in various water initiatives to ensure sustainability of their business and reduce water-related impacts on local communities and the environment. A preliminary study on risk perceptions of Indian industries illustrates that nearly 80% of the industries surveyed have undertaken water related initiatives to achieve water efficiency (Perveen S. Sen R. Ghosh M., 2012).

Although Indian industry is making substantial progress, improving water security requires co-ordinated and collective engagement with several stakeholders and water users. WWF has developed numerous partnerships with business to support efforts to manage water risks. For example, WWF and Coca-Cola are working together to conserve freshwater

resources and are committed to tackling the forces that impact fresh water. WWF's partnership with HSBC is developing a framework for sustainable water and energy management in critical parts of the Ganges basin (WWF, n.d).

The private sector's interaction with local communities and the government to encourage water conservation recharge and wastewater treatment can have impacts well beyond companies' own operations. Nearly 80 per cent of industries surveyed for the FICCI-Columbia Joint study have undertaken wastewater treatment and reuse due to the declining availability of freshwater (Perveen S. Sen R. Ghosh M., 2012). These industries have also expressed the need to undertake well-monitored interventions to document efforts on water harvesting, recharge and treatment in the industrial sector.

Given industries' ability to respond to water risks and the scope of their operations, their stewardship efforts can encompass endeavours that contribute to the development of the entire river basin and not merely focusing on the individual efforts of water users to improve water management.

Issues for discussion

- How can governments and industry more closely align their objectives related to water security and build sustainable partnerships to achieve long term goals?
- How can the best examples of business stewardship efforts be further diffused and scaled-up? What are the key barriers and opportunities?
- While efficiency improvements are positive steps forward, what is the business case for going beyond their own operational improvements and contributing to broader water stewardship efforts? How can this business case be strengthened?

Policy framework and incentives for improved water stewardship (Session 5)

In comparison with other developing countries, India's national policies on water management are reasonably well-developed, although monitoring and enforcement mechanisms are not always in place or functional. Indian policy makers have been promoting the concept of Integrated Water Resources Management (IWRM) for holistic solutions to water challenges in addressing food security, rural livelihood security, ecological sustainability, and industrial growth and urbanisation. The 12th Five-year Plan proposes a paradigm shift in the policies, approaches and strategies for water sector development in India proposing reforms in the areas such as irrigation, ground water recharge and industrial water management (Shah, 2013). Water users receive financial incentives and technical support via policies such as the National Irrigation Management and Integrated Watershed Programme to promote sustainable use. The National Water Policy 2012 encourages water resource projects for diverse uses by treating water as an economic good, thus providing incentives to use less water, and increase the value

obtained from water resources. The National Water Mission, targets an increase in water use efficiency by 20% across all water users (National Action Plan on Climate Change, 2008).

While acknowledging the progress made through policy initiatives and water projects in India, much more remains to be done. A robust policy framework along with multi-stakeholder engagement can inspire practical action required to improve water stewardship. Although the water management challenges are complex, solutions can be within reach though interventions of various scales at the local, state and national level. Government can play a crucial role in improving water security by providing well-designed incentives.

Water is, by law, a state subject in India. While the Ministry of Water Resources is the planning and policy making body at the federal level, the administrative power to manage water rests with state government. Some progressive state governments, in collaboration with international organisations and CSOs, are aligning state policies and stewardship initiatives with the overarching national policy goal of water security. For example, the Government of Maharashtra is introducing surveys, GIS mapping, computerised billing and collection under the Maharashtra Sujal Nirman Abhiyan (MSNA), an incentive based reform system to address the inefficiencies in the delivery of water supply and sanitation (World Bank, 2012). It also recently engaged with the 2030 Water Resources Group by establishing an informal Maharashtra Agri-Water Partnership with members from government, private and financial sector as well as CSOs. The aim of this initiative is to support the Government of Maharashtra's objective of 4% annual GDP growth in agricultural sector, with the aim of using the same or less amount of water, through public-private-community-partnership (PPCP) solutions (The 2030 Water Resources Group, n.d).

As some private sector leaders move ahead with water stewardship initiatives, a robust policy setting, adequate guidelines, and toolkits can help to translate government's policy vision into tangible goals. For example, the 2030 WRG is in close consultation with Tata Group, Hindustan Unilever and several others, is exploring the potential formation of a National Water Platform to collectively address water issues from a business perspective (The 2030 Water Resources Group, 2013). OECD's work on water security highlights a range of policy instruments – from direct regulatory measures, to market-based instruments and public financial support that can provide incentives to improve the management of water risks. Explicitly considering the equity dimension of water risks can help to ensure an equitable distribution of risks amongst stakeholders (OECD, 2013). Similarly, ADB highlights the need to connect policy and management regimes to economic vitality, biodiversity and well-being of people (Asian Development Bank, 2013).

Although, misaligned incentives, a lack of adequate financing and weak governance arrangements may present formidable barriers for development, recent water reform efforts can provide lessons learned and inspiration to future efforts to meet the challenge of improving water security.

Issues for discussion

- Which examples of water policy reforms have proven to be the most effective in improving the management of water risks? What can be learned from international experience?
- How can lessons from India and international experience relating to water risk management and stewardship support the overarching national policy objectives?
- In discussions relating to the appropriate scale of water governance, how can the focus be shifted more towards the hydrological context, such as river basins and watersheds?

The way forward

Managing the competing demands for water among agriculture, industry, cities and ecosystems in the context of population and economic growth, along with rapid urbanisation, pose major challenges for water security in India. Recognising that water is a multifaceted resource, efforts to improve the management of water risks and stewardship require diverse perspectives and participation from a wide range of stakeholders. As insufficient access to freshwater of adequate quality emerges as a potential limiting factor for development and economic growth, water management should continue to attract ground-breaking ideas, formulated with inputs from experts and stakeholders, to make the best use of existing water resources. Innovation and interconnectedness can bring cost-effective solutions to the forefront which can benefit communities, basins and regions.

While managing water risks and encouraging stewardship initiatives are challenging tasks at hand, cross-sectoral initiatives, technical progress, water accounting and concerted efforts from water userscan be of prime significance for sharing risks and responsibilities. A shift in perspective and path breaking policy changes can chart the way forward as the new National Government makes water security a priority. For example, the Ganga Rejuvenation Programme is a positive step in the direction of water security, with a budget of INR 2,037 crores (USD 20.37 billion) for the fiscal year 2014-15 (Sharma S.N., 2014). If undertaken as a collective action including all relevant stakeholders in the Ganga basin, this initiative will help to address the shared water risks and massive challenges in a decisive and integrated manner.

The joint Seminar on Water Risks and Stewardship in India provides a unique opportunity to draw on the experience of government, the private sector, and CSOs to share challenges and consider solutions. It is an opportunity to draw lessons from international experiences and better align water stewardship initiatives to the policy objectives of the government. It is a platform for stakeholder engagement, knowledge sharing and policy dialogue with a forward looking perspective. The outcomes of the seminar will contribute to advancing broad policy responses to confront water risks and support a long term vision for improving water security in India.

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