

Water Security in India's Neighbourhood*

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Introduction

It is almost uncanny that having sprung up thousands of years apart, in different geographical locations and completely unconnected with each other at the time; the Chinese, the Hindus, the Greeks and the Japanese all identified water, air and earth as primary elements essential for creation and sustenance of all life. All along history, bitter battles have been fought over earth, and continue to do so today, but air and water are more of modern day anxieties. Air, which had been freely available, has been contaminated equally freely. But it can be regenerated and the environment recharged, if determined steps are taken on a global basis. Water, however, is unique in that it has always had to be searched for because its global distribution is uneven and it directly shapes the lifestyle on a local basis.

The following underlying issues distinguish water from the other life critical elements:

- (a) Firstly, the UN Development Programme Human Development Report 2006 has brought out that “..scarcity at the heart of the global water crisis is rooted in power, poverty and inequality, not in physical availability..”.¹ To this extent, the issue is not really of how much water is available, but more of how we manage whatever quantities are available.
- (b) Secondly, unlike other resources of the world, sharing of water resources has a unique feature of geographical connectivity inherent to it. Two human settlements a few hundred kilometers apart can evolve, mature and flourish with completely different languages, cultures and ideologies. On the other hand, the same two settlements will have their destinies scripted together, if there is a water body connecting them.
- (c) Thirdly, nations need to be sensitive to water-anxieties of their neighbours because of the immense potential for conflict on account of its economic, social, environmental and political impact on communities.

Global Statistics

More than three quarters of our planet is covered with water but 97 per cent of the water on this earth is saline. Of the remaining 3 per cent, which is fresh water; 79 per cent is stored in polar ice caps or high mountain glaciers, 20 per cent is in ground waters, and barely 1 per cent is in the form of easily accessible surface freshwater.² All life on our good planet is sustained by this accessible surface freshwater, i.e. by less than .03 per cent of the total, and even of that only a fraction can be managed.

There is tremendous inequity in access to safe water. Today, more than 1.1 billion people have inadequate access to potable water (roughly one sixth of the world's population) and 2.6 billion people lack basic sanitation services (about one third of the world's population).³ And, most of these people live in less developed and more populous countries. In order to meet the basic needs, every individual needs 50 liters of water per day, free from harmful contaminants. Just to compare, in the USA the average water use is 400 ltrs per person per day, in Europe it is 200 ltrs⁴ and in the UK it is 148 ltrs per person per day with a high of 170 liters in south east of England and the government target is 130.5 And, it is estimated that 1.1 billion people worldwide get to use only about 5 ltrs of water per person per day.

Indian Statistics

India has 2.4 per cent of the world's land area, 17.2 per cent of the world population and 4 per cent of the world's water resources potential. Average annual precipitation provides 4,000 BCM of fresh water to India. The natural cycle of seasons releases 75 per cent of the rain water during monsoons and 25 per cent during rest of the year resulting in floods and droughts all the year round. Impact of this needs to be viewed in the light that for the 183 million hectares of cultivable land in India, there is ultimate irrigation potential of 140 million hectares and out of 141 million hectares net sown area in 2003-04, net irrigated area was only 55.1 million hectares.

Most urban areas are serviced by a municipal water distribution system, usually originating from local reservoirs or canals. But in some cases water is imported through inter-basin transfer. Although the major cities in India enjoy access to central water supply systems, these schemes often do not adequately cover the entire urban population and are often inefficient and unreliable. In rural areas, access to water is even more precarious. Over 80 per cent of the rural domestic water comes from groundwater sources but in areas where water is scarce, rural women need to travel long distances to wells or streams to fetch water for their daily needs.

Domestic Challenges

Modern India is a union of 35 states and territories whose population of 1.03 billion in 2001 had 28 per cent urban residents and 72 per cent rural dwellers in approximately 650,000 villages.

The management of India's water resources falls under the jurisdiction of a number of government agencies, although the primary responsibility for the development of water belongs to individual States. The Central government oversees implementation of national policy on resource development and exploitation, as well as manages inter-state and international rivers and river valleys. It also provides technical advice to individual

States on development, flood control, navigation, coastal erosion, dam safety, navigation and hydropower, if required.

Since the majority of rivers in India are shared between neighbouring States, the Parliament enacted Interstate Water Disputes Act in 1956 to adjudicate any disputes regarding the distribution or control of the rivers or the river valleys. The Act gives Central Government, the power to constitute Tribunals to serve as intermediaries in the disputes that can, and often do arise, because in a democratic set up there are divergent pulls based on public perceptions. The Tamil Nadu-Karnataka dispute about sharing of Cauvery waters is a case in point. In our set up, even considered decisions sometimes need to be reviewed in the light of popular sentiment. Some of these can delay or even derail reservoir creation projects such as Narmada Sagar dam.

India and Her Neighbours

In 1960, Prime Ministers of India and Pakistan, signed the Indus Water Treaty after nearly a decade of negotiations. History records that the basic framework of the treaty has withstood the test of nearly half a century including armed conflicts between the two countries. Leadership of both countries demonstrated immense maturity in not inflicting permanent or even temporary hardships on hapless civilian populations of each other. In peacetime, however, there has been a lot of back and forth on the utilisation of rivers – mainly in the form of objections from Pakistan. Some illustrative examples are :

- (a) Tulbul Navigation Project.** This was designed to retard the Jhelum flood within banks of the Wulur Lake through which the river passes, for the twin purpose of augmenting power output of Uri and Mangla projects in India and Pakistan and keeping the Jhelum navigable for longer stretch to provide cheap transport for fruit growers. This purely economic dividend was seen by Pakistan as a means to control the flow of the river to be used as a geo-strategic weapon – arguing that Tulbul would be a storage dam which is barred by the Treaty. Work on the project was started by the Jammu and Kashmir State Government in 1984 but was stopped at the request of Pakistan Prime Minister Benazir Bhutto.
- (b) Salal Project.** Due to silting earth and boulders, the bed level has risen upto three fourths of the dam height reducing the power generation to the order of 50 per cent. Desilting is possible by opening the gates of the dam but Pakistan is apprehensive that her low lying areas could be devastated.
- (c) Baglihar Dam Controversy.** The Chenab river originating in Himachal Pradesh, collects most of its water as it drops 4,000 ft in elevation and the remainder as it drops another 7,000 ft elevation before entering Pakistan near Akhnur. India has planned no less than twenty small and large projects to tap the energy reserves, of which Baglihar is designed to produce 900 mw power. Though Baglihar is a run-of-the-river project fully provided for in the Indus Water Treaty, Pakistan has sought to scuttle it by creating a controversy over its design, pondage, dam height and spillways. The project was referred to the Neutral Expert, Professor Raymond Lafill, who has endorsed that the project is not an infringement of the Treaty but said that freeboard height of the dam should be brought down from 4.5 to 3 mtrs, to which India has agreed. A Pakistani delegation visited the dam site on 01 Aug 2008 to satisfy themselves that India has abided with the Neutral Expert's decision.
- (d) Kishanganga Project.** This appertains to a tributary of the Jhelum on which India envisaged a concrete dam and diversion of some flows through a tunnel into the Madmati Nala, which empties into the Wulur Lake through which the Jhelum flows. Pakistan has one each of technical objection, apprehension and objection to certain design features. As a major concession to Islamabad, India has dropped the proposed dam and reconfigured the entire project.

India and Bangladesh share 54 common rivers between them and had set-up Indo - Bangladesh Joint River Commission in Nov 1972. In Dec 1996, the two countries signed the Ganges Water Sharing Treaty which addresses the heart of the conflict viz. water allocation during the five months of the dry season (Jan-May). Admittedly, there are factions in Bangladesh that believe India should not be drawing off any water at the Farakka barrage 18 km upstream from Bangladesh, just as there are factions in India that do not want Bangladesh to get any water at all. While this agreement does help reduce regional tensions, issues such as extreme events and upstream uses are not covered in detail. Nepal, China, and Bhutan who are not party to this Treaty, have their own development plans which could impact the agreement. In addition, the Treaty does not contain any arbitration clause to ensure that the parties uphold its provisions.

India also has treaties of 1954 and 1996 regarding Kosi and Mahakali rivers' water sharing with Nepal. Despite all the treaties being in place, there is a great divergence in perceptions on the ground and there is need for continuous dialogue and mutual accommodation in matters of sharing river waters. The arrangements entered into by India with her neighbours may not be perfect, but these provide a legal framework for mutual consultation and accommodation which is a whole lot better than no framework at all.

Looking north, Tibet's vast glaciers are the source of the world's greatest river system. Its river waters are a lifeline to the world's two most-populous states — China and India — as well as to Bangladesh, Myanmar, Bhutan, Nepal, Cambodia, Pakistan, Laos, Thailand and Vietnam. These countries make up 47 per cent of the global population. Control over the 2.5 million km Tibetan plateau gives China tremendous leverage, besides access to vast natural resources. The Chinese plans to dam or redirect the southward flow of river waters from the Tibetan plateau, where major rivers originate, including the Indus, the Mekong, the Yangtze, the Yellow, the Salween, the Brahmaputra, the Karnali and the Sutlej; can be worrisome for the lower riparian states particularly if there is inadequate information sharing.

North China has 64 per cent of the cultivable land and 47 per cent of the country's population but only about 19 per cent of the fresh water resources.¹⁰ Right from the days of Chairman Mao Zedong, northward diversion of the south flowing waters has been under consideration. Accordingly, a very ambitious, multi-billion dollar project has been drawn up. The first phase of China's South-North Project calls for building 300 km of tunnels and

channels to draw waters from the Jinsha, Yalong and Dadu rivers, on the eastern rim of the Tibetan plateau. Further, as per Beijing's assessment, large untapped reserves of water and energy exist at the bend where the Brahmaputra (Yarlung Tsangpo to Tibetans) forms the world's longest and deepest canyon just before entering India. In the second phase, the Brahmaputra waters would be directed northward. Such a move by China may generate 40,000 MW of hydroelectric power for China, but will put a full one third of India's hydel potential in trouble. India has hydro potential of 1, 50,000 MW, of which 50,000 MW is in the North-East.¹¹ Mr Wang Shucheng, China's former Minister for Water Resources, publicly asserted at "Water Security: China and the World" symposium hosted in Beijing by the China International Institute for Strategic Studies 25-26 May 2009 that "China does not need to divert Brahmaputra waters, it was not feasible, it was not scientific and it would take 600 years". But the Director of the Yellow River Water Conservancy Committee is also on public record as having stated that the mega-plan enjoys official sanction and may begin by 2010. An approved project can start anytime in the future and that is worrisome. In this time and age, very little can be done surreptitiously. Every activity even deep inside national boundaries is visible globally. And, even developmental work is closely scrutinised by the directly affected parties for downstream consequences as well as by the global community for larger issues such as ecology, human rights etc. Presently, authentic information coming out from Beijing in respect of the massive inter-basin and inter-river water-transfer projects has been scanty. Likewise it is for other projects bearing on river water flows to India, Bangladesh, Vietnam, Laos, Cambodia and Thailand. But the internet has volumes of data, details, photographs, imageries, analyses and apprehensions about a whole lot of activities that are going on. Put together, these have immense potential for interstate conflict because every society is concerned, first and foremost, about its own survival and will push its government as far as is necessary to ensure this.

In year 2000, Himachal Pradesh experienced devastating flash floods in the Sutlej river. Sometime in 2004 China informed India that approximately 35 km upstream from the border, an artificial lake measuring about 230 hectares had been formed on the Pareechu river which is a tributary of Sutlej. The lake had formed due to landslides, causes of which remained mysterious, thereby causing much anxiety. After prolonged parleys, China agreed in 2005 to provide data on any abnormal rise or fall in the upstream level of the Sutlej. In year 2002, the two countries had drawn up an MOU for sharing hydrological information on the Brahmaputra. Accordingly, information relating to water level, discharge and rainfall at three stations, namely Nugesha, Yangcun and Nuxia from 1st June to 15th October every year; is being forwarded by Chinese authorities to the Central Water Commission. However, all attempts to get similar data for Lohit and Parlun Zangbo, which are Brahmaputra tributaries; have so far been in vain. This is a cause of concern to India as the larger economic, social, environmental and therefore political impact on communities which are dependent on this river system; has not been fully assessed. The sum total of all above is that China, the common upper riparian, has neither any commitment nor any legal obligation towards any of the lower riparians in the entire south and south east asian land mass.

Conclusion

Water is a scarce resource that today needs to be managed much better than ever before. Whereas there is a lot to be said for conserving, recycling, harvesting, redistributing etc for each society, there is also a need to work out river water sharing between nations. Experience has shown that the principles of transparency, consultation, dialogue, agreement, management, monitoring and complaint redressal which are applicable between regions/states within a federal state, are equally applicable between different nation states.

Admittedly, India's treaties with Pakistan, Bangladesh and Nepal were all concluded before the 1997 UN Convention on Non-navigational Uses of the International Watercourses came into being. The time has now come to find ways to broaden the existing framework of India's treaties with her neighbours and include all co-riparians, including China, in their ambit. Pakistan and Bangladesh should also seek China's commitment towards transparency and cooperation because all Chinese actions, being further upstream, affect them in exactly the same way as do Indian actions. Nepal and Bhutan should seek it for the same reasons as should India - all are directly affected parties with additional responsibilities towards own lower riparians. Co-riparians of the Mekong river viz. Myanmar, Thailand, Laos, Cambodia and Vietnam should be watching these developments with keen interest as the Mekong is the lifeline of these nations. And the Mekong River Commission, as it is constituted today, is really incomplete without China.

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