

14. The Brahmaputra: Water hotspot in Himalayan Asia

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Analysts around the world increasingly have their eyes on the Brahmaputra River, a transboundary watercourse with headwaters in the Tibetan Plateau of the Himalayan mountain range. The three riparian states sharing the Brahmaputra — China, India and Bangladesh — are the world's first, second and seventh most populous countries. All three face severe problems of water scarcity and steeply rising demand for power generation. The possibility of serious resource conflict involving these demographic giants stems from plans, some already being implemented, to put the river's thus-far relatively unexploited waters to greater use.

The combination of burgeoning populations, rapid economic growth and intensified global competition for energy resources is putting increasing emphasis on hydropower. India, already the world's sixth largest energy consumer, ranks seventh globally (2008) in current hydropower generation. Only about 20 per cent, however, of India's hydropower potential has been developed thus far. With its untapped potential standing at 95 per cent, the importance of the Brahmaputra is clear.

In 2010 China consumed 20 per cent of the world's primary energy supplies, overtaking the United States to become the world's largest energy consumer. With its installed hydropower capacity reportedly having reached 213,000 megawatts by the end of 2010, it was by far the world's leading producer of hydroelectricity. It plans to lift the proportion of non-fossil fuel use in the country's energy sector to 15 per cent by 2020, and half of that is expected to come from hydropower. That means that China aims to have 430,000 megawatts of hydropower capacity hardly a decade hence, the equivalent of one new Three Gorges Dam each year over the current decade. Given the overall vast leap in anticipated energy consumption, this converts to a major surge in hydroelectric dam building.

China is now predictably casting its eyes on the Brahmaputra's hydropower potential on China's side of the border. According to Tibet researcher Tashi Tsering, China has already constructed ten dams on tributaries of the upper Brahmaputra, with three more under construction, seven more under consideration, and yet eight more proposed (Tsering 2010). Those dams already built are small in scale and, since none are on the Brahmaputra itself, have stirred little interest outside China. China's plans, however, apparently include

building five major dams directly on the Brahmaputra mainstream. Completion of construction on the first of them, the US\$1.18 billion 510 megawatt Zangmu hydropower project in the middle reaches of the river, is expected by 2014.

More worrying yet, from the perspective of India, is the possibility that China's aggressive search for promising hydropower dam sites in Tibet might ultimately drive Beijing to focus on the so-called Great Bend in the Brahmaputra, the point in the Himalayas where the river curves south onto India's Assamese plain. It was reported in May 2010 that research had indeed been carried out for a massive project at the bend (Watts 2010). Tsering (2010) predicts that China is likely to construct a 38,000 megawatt hydropower station and large storage dam near Motuo and, if built, 'China will gain significant capacity to control the Brahmaputra's flow. Basically, India will become dependent on China for flow of what is now a free-flowing international river' (*Hindustan Times* 2010; see also Rafferty 2010).

Diversion of the Brahmaputra's waters is another — and much more portentous — potential use. Planned diversion of this river's waters from India's water-surplus north-east to drought-stricken western and southern states, though at least temporarily on hold, is the key to India's River Linking Project (RLP). China's diversion plans, on the other hand, are lodged in the mammoth and already underway South-North Water Diversion Project (SNWDP). If proposals to include the Brahmaputra in an extended version of the still pending western route of the SNWDP were implemented, the consequences for downstream India and, even more so Bangladesh, might be disastrous.

China's southern belt has historically been a water surplus region while its north and north-west have been increasingly water scarce. According to a recent article in the *Economist*, this disparity has become alarming. 'Four-fifths of China's water is in the south', it reports, but 'half the people and two-thirds of the farmland are in the north ...'. At least as alarming, it says, is the problem of water pollution: a recent study of the Yellow River and its tributaries, for instance, concluded that a third of the water, with about 4000 petrochemical plants feeding into it, was unfit even for agriculture. In fact, many of China's rivers are simply disappearing: since the 1950s, overexploitation by farms or factories has driven down the number of rivers by nearly half — from about 50,000 to 23,000 (*Economist* 2013).

A similar pattern of spatial variability in water supply also exists in India, where the north and north-east regions have been water surplus, while large portions of its west and south are water scarce. About 62 per cent of annual freshwater availability in India is found in the river basins of India's north leaving about 67 per cent of the country — mainly its west and south — with water availability of about 38 per cent (Kumar 2005).

Chinese and Indian hydrologists have naturally been giving attention to the prospects for water diversion — for transferring major quantities of river water from south to north in China, from north to south in India. China launched the massive SNWDP in 2001; India gave official sanction to its equally massive RLP in 2002.

It is, of course, where Indian water-diversion plans meet up with China's that transboundary concerns emerge; and it is the distinct possibility that they may meet up on the Brahmaputra that is currently exercising the imaginations of the region's strategic analysts.

Unknown presently is whether India's RLP will ever get off the ground. Also unknown is whether the RLP, if fully implemented, will include the Brahmaputra in its Himalayan component. Clearly, however, India's future diversion of the Brahmaputra's waters remains a live possibility — even a probability should the more threatening projections of the country's coming water scarcity prove correct. Moreover, should China move towards the Brahmaputra in coming years with an eye not just on hydropower but also on diversion, pressure on New Delhi to match Beijing's with an aggressive plan of its own would likely become irresistible.

There is uncertainty with regard to Beijing's plans. Official denials of Chinese plans to divert the Brahmaputra's waters are common. Of late, however, there have been a number of proposals floated indicating China's interest in diverting massive amounts of water to China's arid north-east from the Brahmaputra's middle reaches.

Brahma Chellaney, one of India's foremost strategic thinkers, has argued that it is not a question of if, but when, China will go ahead with the proposed diversion of Brahmaputra waters to its parched north. And such a diversion, he warns, 'would constitute the declaration of a water war on lower-riparian India and Bangladesh' (Chellaney 2011).

The relations between India and China are driven, of course, by much more than water; and even water cannot be confidently said to be driving things relentlessly and unalterably in the direction of violent conflict between them. Still, China's dire water circumstances, combined with its impressive economic strength, military power and uniquely advantageous upper riparian position, give us little reason for optimism when it comes to river-sharing agreements with lower riparian countries. India and China have recently signed an accord, updating earlier agreements, in which the Chinese consented to increase the supply to India of flood data of the Brahmaputra River (*Hindu* 2013). And the joint statement accompanying the accord did promise some greater transparency in regard to dams and water sharing on the Brahmaputra (*Hindustan Times* 2013). Aside from that, however, no major agreements currently exist between China

and India in regard to water sharing of the transboundary Brahmaputra; and one should not expect any grand cooperative interstate scheme to develop soon in regard to that river. On the contrary, mounting tensions and at least verbal skirmishing between China and India over the Brahmaputra's contested waters seem more likely. There will surely be water woes impacting their relationship, in other words, even if water wars never materialise.

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