

Is it a Water War Between India and China?

✉ **Radhakrishna Rao**

A leading Parliamentarian from India's north eastern state of Assam, Gaurav Gogoi, had sometime back highlighted the need for India to expedite the hydropower projects on the mighty Brahmaputra to help the country assert its user rights over the water resources of this mighty river originating in the Tibetan Autonomous Region (TAR) of China. However, Gogoi expressed his regrets saying that the Indian Government led by Narendra Modi is neglecting the Brahmaputra with its focus fully riveted on another major Indian river, the Ganga. What has caused dismay in north east India -- for which Brahmaputra is a veritable lifeline--is a spate of reports revealing Chinese intentions to go ahead with an ambitious river translocation programme. The long term Chinese plan for the massive transfer of south flowing rivers in TAR to the parched north will also involve the transfer of Brahmaputra waters with serious consequences for north east India. A section of hydrologists in India opine that the Chinese plan for constructing a large number of dams and storage facilities for diverting Brahmaputra water will definitely affect India and Bangladesh. Similar Chinese plans for the Mekong river could have cascading negative effects on countries such as Vietnam, Thailand, Laos and Cambodia. What's more, such a mind boggling manipulation of the natural water bodies will ultimately affect the hydrology, geology and environment of the Chinese landmass.

For quite some time now, India has been pressing for negotiations on the exploitation of the water resources of the Brahmaputra even as China has been keen on going ahead with its dam construction plan. The Chinese green signal for the construction of three dams across the mid reaches of the river at Dagu, Jiacha and Jexiu has caused dismay in India. Of course, China claims them to be small scale projects without any negative effects on India. India, which like China is eyeing the enormous hydro power potentials of Brahmaputra, has already made its concern clear to China. China has so far only begun construction of a 510-MW hydropower project at Zangmu in the middle reaches of the river. "Rivers unite us, but dams divide us," says Peter Bosshard of the International River Network. "By engaging in a race to dam the Brahmaputra, as quickly as possible, China and India will cause cumulative environmental impacts beyond the limits of the riverine ecosystem and will threaten the livelihood of more than 100-million people who depend on the river."

Incidentally, China is one of the most water stressed

countries in the world with 80% of its urban centres reeling under severe water scarcity. Significantly, China's perpetually parched northern region possesses only 14.5% of the water resources of the country. China is home to one fifth of the global population but accounts for only 7% of the water resources. On the other hand, most of the rivers that flow in the northern and eastern parts of India have their origin in the Himalayan stretch of TAR. According to the well documented study "Water Wars: The Brahmaputra River and Sino Indian Relations" published by the United States War College in Newport, Rhodes Island, "As China and India struggle to grow and provide for their citizens and expand their respective roles as major players on the world stage, the two countries are increasingly facing water constraints. This challenge is made more complex by its shared nature: much of India's river water originates in China. Of the river that crosses the Sino Indian border, the most important is the Brahmaputra".

Evidently, the ever widening gap in the demand and supply of water resources in China's northern region has been a push factor for the country to transport water from the south. As things stand now, over a period of time China plans to move 50 BCM (Billion Cubic Meters) of the water of the Brahmaputra to the north. Irrespective of whether on the Indian side a significant decline in the river flow takes place or not, a legally binding water sharing agreement between the upper and lower riparian states is considered essential to obviate the possibility of any violation of international norms on the sharing of river waters. With a view to assert its rights over the waters of the Brahmaputra, the Indian Government recently announced an 800-MW hydroelectric project on the river in Arunachal Pradesh which is the first to receive the Brahmaputra into Indian territory. In addition, India has a long term plan to fully well exploit the hydro power potentials of the river through a series of small, large and mega dams. But, unlike China, India will have to reckon with the opposition from the local communities for the Brahmaputra dam projects on a variety of grounds including the ecological fallouts.

Bulk of water resources in China is concentrated in the south while the thickly populated and economically vibrant north continues to run short of water. Experts specializing in international laws say that monopolising the water that normally flows down to the lower riparian countries through trans-border rivers is difficult to justify. China has officially conceded taking away only one per cent of the run off from Brahmaputra. India's view is that given the multitude of dams China is planning, the actual

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depletion of downstream flow may be much larger. It is feared that large parts of Arunachal Pradesh and adjoining Indian state of Assam may consequently turn arid or semi arid. As such, the feeling is that India should press for a comprehensive bilateral or trilateral treaty involving Bangladesh with China on water sharing that is open to international scrutiny and adjudication.

According to Dulal Goswami, an Assam based geomorphologist, when large dams impound water they also trap the silt essential for fertilizing downstream plains. The Brahmaputra, famous for its silt load, keeps the soil of Assam alive. Ecologists on their part stress the point that dams also interfere with the natural rhythm of a river and the aquatic life it sustains, besides changing its erosion patterns. Worried by the huge risk to local ecology and livelihood, an Assamese farmers' organisation has demanded an immediate assessment of the downstream impact of the series of dams that India is planning in the neighbouring Arunachal Pradesh. Eco activists in Assam say that individual dams do not reveal the combined effects of hundreds of dams in the Brahmaputra basin, effects that people in Assam and elsewhere will have to face in the years to come.

Of the eight river basins in Arunachal Pradesh, Subansiri, Lohit and Siang are of strategic importance as they are nearer to the border with China than are other basins. India's desperation to complete the lower Subansiri project comes in the backdrop of China's ambitious US\$62-billion south north water diversion plan on the rivers that feed downstream into the Brahmaputra known in China as Yarlung Tsangpo. New Delhi is also developing the physical infrastructure along the Brahmaputra basin having identified the roads, bridges and air connectivity that need to be built. India is also worried over the possibility of China using water as a weapon. Evidently, China can withhold the waters of the river for power generation and irrigation during the dry season and release water during the rainy season with serious consequences for the north eastern states of India and Bangladesh.

Going a bit back in time, at the height of the Vietnam War, the US defence forces had used weather as a weapon beginning 1967 under a project codenamed Popeye. This project focused on seeding clouds to cause massive showers aimed at inundating and blocking the supply routes along the vital Ho Chi Minh trail. The objective was to halt the movement of Viet-Cong guerrillas, who, under the leadership of the legendary Vietnamese General Vo Nguyen Giap, were fighting for the unification of Vietnam. Though the war came to an end in mid 1970s

with the victory for the Vietnamese people, for the US military it was a learning experience in so far as understanding the techniques of weather war was concerned. And nearer home, Communist China seems to be busy preparing the ground to unleash a water war on India, which like the weather war, has an environmental angle to it. May be the Chinese warfare strategists are considering water as one of the potential weapons to bring its adversaries to the knees.

The overwhelming view in India is that a water deficient China with hegemonistic ambitions could use all the tricks in its armour to exploit the waters of the mighty and magnificent Brahmaputra to the disadvantage of India and Bangladesh, the lower riparian states. This implies that India needs to step up its own intelligence to check what is happening all along the stretch of the Brahmaputra. Of course, the data transmitted by India's IRS earth observation spacecraft 'Constellation' could easily provide clues to the Chinese construction activities across the river in Tibet. As it is, the non-availability of scientifically validated flow chart of the river is one of the biggest hindrances in the way of India and Bangladesh in objecting to Chinese dam construction activities in Tibet to harness the hydropower potentials of Brahmaputra. The controversy surrounding the Zangmu Dam, taken up for construction in 2010 continues to simmer. The purpose of this dam is said to be hydro electric power production using run of the river technology. Incidentally, China was forced into admitting to India about the construction of Zangmu dam only after it was confronted with satellite pictures revealing construction activities at Lokha prefecture in Tibet. China says that Zangmu hydro power project has no adverse effects downstream. But then there is no way to verify the validity of this Chinese claim.

As it is, China has already destroyed the water ecology in its northern region through overexploitation, pollution and unscientific management. And TAR, described as the water tower of Asia, seems to have become an ideal source for quenching the enormous thirst of mainland China, much to the detriment of the lower riparian states. Right now, one third of China's fresh water need is met by rivers in the TAR. The importance of TAR stems from the fact that it is the originating point of rivers that support the livelihood of close to 2-billion people in Afghanistan, Ganga-Brahmaputra-Meghana basin and the Mekong basin countries including Laos, Cambodia, Thailand and Vietnam.

Experience shows that Beijing is neither transparent nor open in so far as sharing data about the river water projects

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in Tibet is concerned. What really complicates the matter is that China is not a signatory to the 1997 UN Convention on the Law of the Non Navigational Uses of International Waterways. Apart from the lack of transparency on the part of China, the absence of a well documented and legally binding water sharing agreement between India and China could add to the confusion. Of course, the international community has already taken cognisance of the fact that by building mega dams and reservoirs in its borderland, China is working to re-engineer the flow of major rivers which happen to be the lifeline of the lower riparian states. By all means, China has made the control, manipulation and re-engineering of natural river flows as the centrepiece of its power generation and economic development strategy.

But then, India is not alone in seeking details about the Chinese plan for exploiting the hydro power potential of the Brahmaputra. Interestingly, many south east Asian countries and even Kazakhstan in Central Asia are keen on China showing “transparency” about its plans to build dams or divert water from trans border rivers. China, which already boasts of more mega dams than the rest of the world put together, does not in any way adhere to the time tested concept of international river water sharing agreement.

However, the worrisome aspect is that in the context of global warming resulting in a decreased inflow into the Himalayan rivers, the volume of water that Brahmaputra would transport to India could stand decreased. A number of studies carried out using satellite resources data reveal that 20% of the Tibetan glaciers have retreated in the past four decades and more than 60% of the existing glaciers could vanish once for all, over the next forty years. A 2010 study by India’s Strategic Foresight Group (SFG) had warned that the four countries in the Himalayan sub region—India, Nepal, China and Bangladesh—will face depletion of almost 275-Billion Cubic Metres (BCM) of annual renewable water. That the parching Chinese mainland would force the Communist giant to exploit all available water resources in TAR is an inescapable reality. As it is, the Chinese Government had revealed that in 2012, water deficient north western parts of China had suffered its worst ever drought in a century, affecting 24-million people and 16-million acres of arable land.

India on its part is planning to set up a river water authority to speed up the exploitation of hydropower in the Subansiri basin of Arunachal Pradesh covered widely by the waters of the Brahmaputra. This authority, which will be on the lines of the Damodar Valley Corporation (DVC) and the Bhakra Beas Management Board

(BBMB), is specifically designed to fast track the construction of hydro power projects. Verily, it will be the centrepiece of the Indian strategy to harness hydropower potentials of the river in Arunachal Pradesh to counter the Chinese threat. But only time will tell how fast it would help implement the hydro power projects now in limbo.

A number of hydel-power projects generating power that China has commissioned in TAR could in the years ahead help it sell the power to energy deficient South East Asian countries in addition to meeting its own requirements. This will give China a sort of clout in the power play of this important part of Asia and help China advance its strategic interests in a big way under the guise of a commercial arrangement. There is also a feeling --and not without a reason --that the Chinese plan to impede the flow of the Brahmaputra into India through water control projects could be a logical extension of China’s widely debated “String of Pearls” strategy.

The Chinese plan to divert the water of Brahmaputra to its vast parched tracts in the north and west including the sandy stretches of the sprawling Gobi desert and also the dying Yellow river which remains dry for most parts of the year could unleash many unforeseen developments. If this vision is given a practical shape, the possibility of the hydrological regime and environmental balance of north eastern India getting compromised cannot be ruled out. Environmentalists also stress the point that the decreased flow of Brahmaputra into north eastern India could also affect neighbouring Bangladesh.

Incidentally, there are reports to suggest that Beijing is under great pressure from a powerful “hydro power” lobby for as many as 28 dams including a massive 38-gigawatt project on the river’s “great bend”, where it enters into India. The widely perceived view in north eastern India is that the Chinese proposal to impound water of the Brahmaputra as part of the diversion project could also adversely affect the plan of Arunachal to exploit the potentials of the river.

For quite some time now, eco activists in Arunachal Pradesh have been saying that the water flow into Siang, as the river is known in the state, has declined consequent to China’s taking up the Zangmu project. Similarly, environmental groups in neighbouring Assam also assert that water level in the river has dropped at Dhubri and Guwahati. For Assam, whose civilization, cultural ethos and spiritual matrix are closely intertwined with the river, the Brahmaputra is both a curse and a blessing. Because the river becomes unstable in its entire reach in the Assam valley, it unleashes massive floods during the rainy season. But the beneficial effects of the river on the people

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of Assam are highlighted by its use for transportation, fishing and irrigation. But then, if China has its way, the fourth largest river of the world could very well be reduced to a seasonal river.

It has been estimated that almost half of the catchment area of Brahmaputra river lies within Indian territory. The river carries more water per unit area of the basin than any other river in the world. Incidentally, the river accounts for nearly 30% of India's total water resources and about 40% of country's hydro electric potential. The river finally joins the Ganga in Bangladesh before flowing into

the Bay of Bengal. These two mighty rivers sustain more people than the combined populations of West Europe and North America. Of the 2880-km long run of the river, 1625-km is in Tibet, 918 in India and 337 km in Bangladesh.

At the end of the day, only a legally binding agreement on sharing waters of the Brahmaputra involving India, China and Bangladesh could lead to the use of the river by all the three countries in hassle free manner, without any rancour and tension. But here again, China could prove to be a hard nut to crack.