

Recommendations

The key Brahmaputra River basin stakeholders—China, India, and Bangladesh—do not appear ready to sign a trilateral water-sharing and basin development accord for the foreseeable future. This is not a pessimistic finding. The fact that neither interstate relations nor the water security situation in the basin is in crisis allows China, India, and Bangladesh to proceed with cooperation at a measured rather than crisis management pace. Indeed, seen from a structural vantage point, the intensity of implications for population, territory, and industrial and agricultural development increase the further south one moves from the origins of the Brahmaputra River in southern Tibet to its exit in the Bay of Bengal. The portions of the Brahmaputra that run through China and India are among the least populated, least developed, least industrialized and least farmed areas of their vast countries. It is really only in Bangladesh that the combination of population density and industrial as well as agricultural activity faces the most dependence upon the Brahmaputra; and even in Bangladesh's case the implications of river management on the Ganges and Teesta may be more immediately relevant than what is happening regarding the Brahmaputra. If the *physical* relevance of the river is greatest for Bangladesh, the *political* relevance is sharpest for China and India.

These conditions do not make cooperation on the Brahmaputra less significant. In fact they make the need for cooperation and good behavior by China and India even more important because of the downstream humanitarian impacts on Bangladesh and for China-India bilateral political relations in particular. In fact, incremental and limited steps are being taken in the respective bilateral relationships among the Brahmaputra riparians as noted earlier in this study. But the current situation offers strong possibilities for win-win cooperation multilaterally. Advocating cooperation solely for the narrow aims of water-sharing rights does not appeal to upper riparians. More promising is an appeal to the shared interests of these countries for the development of the river basin and greater regional economic integration. This connectivity would facilitate the expansion of transport and infrastructure options such as through river navigation networks and joint hydropower projects.

Fostering water security is a long-game effort. Over time, there are steps that India, China, and Bangladesh could take at the subnational, bilateral, and multilateral levels to lay the groundwork for the three countries to work together toward bilateral accords, trilateral consultations, and even a multilateral MOU, if not eventually a formal accord, over the next decade to advance security in the Brahmaputra River

basin. This final chapter presents recommendations for how all three countries can begin to work together bilaterally and multilaterally, as well as improve their domestic management of Brahmaputra resources.

Domestic recommendations

China

China should expand access to information regarding its dam construction plans on the Brahmaputra. There are a number of steps that China can take, both on its own and in cooperation with India and Bangladesh, to improve trust and help to address common challenges related to the Brahmaputra. Despite China's assurances that its planned hydroelectric dams on the Brahmaputra will pose no risks to downstream countries, the Chinese have placed relatively little information about these facilities in the public domain. The data that are available are somewhat difficult to locate and are often not published in English.²⁶⁹ China should consider ways in which it can further reduce misperceptions about the goals behind its dam-building activities, such as releasing more detailed information about the planned dams or inviting specialists from downstream countries to visit the sites. It is also reasonable for China to expect that its co-riparians will similarly offer increased public access to data on their own development plans.

India

The government of India should continue efforts to enhance coordinated hydrological data sharing between the center and northeast India state governments. It should also do this between the state governments in order to monitor upstream and downstream impacts on the Brahmaputra River.

The Indian government should consider how to improve consultation with northeast India state governments on the implementation of major dam construction projects in the region. This would be important given center-state and civil society differences that constrain completion of projects.

²⁶⁹ For instance, China's 12th five-year energy plan merely states the names of planned hydroelectric dams, without providing timelines, technical details, or other relevant information. *12th Five Year Plan Energy Development Plan*, 2013.

India's central government and northeast Indian state governments should also cooperate on the production of a clear, updated, and comprehensive report on India-China relations regarding the Brahmaputra River. This report could incorporate northeast Indian views of concerns posed by China's actions as well as how recent dialogue and hydrological information sharing addresses these concerns.

The Indian government and the state governments of the northeast should consider how they may better cooperate on eco-system management and ecological protection initiatives. These initiatives could also be developed with China and Bangladesh.

Bangladesh

Bangladesh should include more stakeholders in its national water management policies as they apply to the Brahmaputra basin, yet aim for coordination. First, Dhaka should make a greater attempt to bring in all relevant domestic stakeholders—such as those living along the banks of the Brahmaputra—when making policies for this basin. Seeking community-based participation will be key to improving the effectiveness of water management policy subnationally.²⁷⁰ Dhaka recognizes that Bangladesh needs to encourage greater adaptation to agriculture that uses less water resources; policymakers should create more incentives for farmers to achieve this outcome. Dhaka should also explore more options for the storage of monsoon rains and more sustainable use of groundwater in the dry season. Finally, Dhaka should increase coordination of stakeholders, especially between all Brahmaputra-relevant government organs such as the Ministries of Water Resources, Agriculture, Environment and Forests, and Shipping; the Inland Water Transport Authority; the Ministry of Local Government, Rural Development and Co-operatives; the Local Government Engineering Department; and the Power Division. The various issues relating to the Brahmaputra are cross-cutting and beyond the ambit of a single ministry. Connecting all interagency stakeholders will be an important step in beginning to think strategically about the Brahmaputra and the potential crises that could emerge if Dhaka continues to give most of its attention to the Ganges basin and focus on the day-to-day problems of the Brahmaputra basin rather than its big picture.

Bangladesh should seek assistance from the international community to conduct evidence-based assessments of human security impacts in the Brahmaputra basin. For example, there is much conjecture about the estimates of how many Bangladeshi citizens are forced to migrate due to Brahmaputra erosion or about the projections

²⁷⁰ CNA discussion, Dhaka, 2015.

that millions of citizens will be affected by sea level rise impacts in the country. Yet, there is insufficient scientific data on these impacts or data that specifically link these impacts to the Brahmaputra basin. The International Organization for Migration concluded that insufficient data collection efforts have prevented a complete, evidence-based assessment of permanent and cross-border migration in Bangladesh, especially as a result of climate change.²⁷¹

Bangladesh is already heavily investing in tools that will directly help improve its ability to address water issues such as flood forecasting capabilities. Yet, Dhaka could use assistance with the collection of evidence that systematically documents the human security problems that Bangladesh faces on the Brahmaputra, including how they may be exacerbated by climate change. Extraregional countries that have previously funded efforts covering the Brahmaputra basin (e.g., the United Kingdom and the Netherlands) or international financial institutions would be ideal sponsors of these important studies. Dhaka would find the results of this analysis useful for more informed domestic planning in this basin as well as for making a more convincing argument to upper riparians India and China about the importance of sustainable, basin-wide practices in the Brahmaputra.

Bilateral recommendations

China

China should consider hydropower as a potential area of cooperation with India. China and India are both considering plans to expand hydropower development along the Brahmaputra. Although this has become a source of tension on both sides, there may also be ways in which such development can be mutually beneficial. At a minimum, the two sides should exchange information on how hydropower supports their respective development strategies, and what their long-term intentions are with regard to development of the Brahmaputra. China and India should also explore the feasibility of cooperative activities, such as joint hydropower development and cross-border electricity trade.²⁷² These discussions could occur on an ad hoc basis or on the sidelines of existing development forums, such as the BCIM or the Trans-Himalayan Development Forum, which is a Track 2 initiative sponsored by the China Institutes

²⁷¹ International Organization for Migration, *Assessing the Evidence: Environment, Climate Change and Migration in Bangladesh*, 2010, 19, 29.

²⁷² Michael Pollitt, "Power Pools: How Cross-Border Trade in Electricity Can Help Meet Development Goals," The World Bank blog, Oct. 1, 2014.

for Contemporary International Relations and partner institutions from Bangladesh, India, and other South Asian countries.²⁷³

China should consider ways to enhance sharing of hydrological data with India. China currently provides India with hydrological data on the Brahmaputra during the flood season. In order to improve flood forecasting, China should consider offering real-time, year-round river flow data to India. Meanwhile, as a gesture of goodwill, India should consider offering reciprocal hydrological data to China.

China should expand humanitarian and ecological cooperation related to the Brahmaputra with India. There appears to be room for China and India to expand cooperation in the management of humanitarian and ecological issues related to the Brahmaputra. While such cooperation will not eliminate underlying tensions, it might help improve trust at a low level while addressing practical challenges. To this end, the Chinese and Indian water resource ministries should hold a regular dialogue on river management. This might include working groups on topics such as pollution control, biodiversity protection, dam safety, flood prevention, and emergency response.²⁷⁴ These discussions might also cover “lessons learned” from other river basins, which could involve contributions from third-country specialists. Where possible, these working groups should make recommendations to their respective governments on steps that can be taken unilaterally or bilaterally to reduce risks and improve safety.

India

India should move ahead with China on the exchange of hydrological information sharing for the Yarlung Tsangpo and Lohit/Zayu Qu Rivers as called for in the 2006 Joint Declaration between the two countries. To date, exchange of hydrological information on these two additional rivers does not appear to have taken place.

India’s government should consider issuing a clear, updated, and comprehensive report on India-China relations regarding the Brahmaputra River. Such a report could dispel misunderstanding, incomplete information, and speculation on the current state of India-China riverine relations.

India should clarify its plan for the construction of dams on the Brahmaputra River and its tributaries. When asked how many dams it plans to build, India gives

²⁷³ Li Xinyi, “Conference Opens on Himalayan Issues,” *China Daily*, August 24, 2015.

²⁷⁴ China and India have already agreed to conduct working-level groups on hydrological data and emergency measures, but it is unclear whether or how often these groups actually meet.

only a range of figures. As it seeks clarification on China's plans for dam construction and their potential impacts, India should be willing to provide the same information about its own plans.

India should move expeditiously to provide China with information as called for under the bilateral *Implementation Plan: Provision of Hydrological Information on the Yarlung Tsangpo/Brahmaputra River in Flood Season by China to India*. India should provide China with information about its monitoring site on the Brahmaputra River as called for under the agreement.

India's central government should continue to try and implement the Teesta River Agreement with Bangladesh as quickly as possible by working closely with the West Bengal state government. While the alignment of central and state governments must result from elections and not from political engineering, pressing for implementation of Teesta would go a considerable way towards building on recent progress in India-Bangladesh relations.

India's government should clarify plans for the river-linking project as they apply to impacts on Bangladesh. Though there is little prospect for the RLP being implemented in the near term, India should consider providing further information to Bangladesh on plans for this initiative in light of the recent Supreme Court ruling and the intentions of the new BJP-led government.

Bangladesh

Bangladesh should seek water flow and rainfall data from India and China year-round, not only in monsoon season, and request site visits to dams and barrages in both upper riparians. The current purpose of the data sharing is to enable flood forecasting in order to avert disasters downstream. However, Bangladesh would benefit from dry season and historical data from India and China as well, because this information would help enhance Dhaka's planning and forecasting ability in general. Dhaka should request site visits to dams and barrages upstream on the Brahmaputra and its tributaries to encourage transparency as well as increase technical capacity for scientists in Bangladesh who seek to expand their understanding of sedimentation and its effects. They also want to better understand the positive use of dams and barrages to control sedimentation. Given the sensitivities of water data and infrastructure, agreeing to such requests for data sharing and site visits would be a gesture of goodwill by India and China, which they can then highlight to enhance their own international reputations.

Bangladesh should seek greater cooperation with India on river navigation in the Brahmaputra. Due to their shared interest in increasing regional integration and connectivity, Bangladesh and India signed on to the goal of basin-wide management and development in their 2011 Framework Agreement. Dhaka could elevate requests

relating to the Brahmaputra basin—regarding its development and navigability in particular—from the Joint Rivers Commission to the foreign minister level, given that the Framework Agreement was signed by both heads of government.²⁷⁵

Bangladesh should continue to seek to finalize the Teesta water-sharing accord with India. Many expect that the chances for the accord’s conclusion will improve in the coming year, after the election in West Bengal. Nevertheless, assuming that the Modi administration does eventually sign the accord, disputes may emerge as they have over the Ganges treaty. Dhaka and New Delhi should work to ensure that these disputes do not fester and potentially damage the wider bilateral relationship. Including a dispute resolution mechanism would be helpful.

Bangladesh should formalize its 2015 MOU with China to ensure the consistent provision of water data and encourage Beijing to improve transparency with India for the benefit of other multilateral issues. From time to time, Bangladesh gets water flow and rainfall data from China, but not as consistently as was agreed to in the March 2015 MOU. In addition to formalizing the MOU, Dhaka should encourage Beijing to participate in multilateral dialogues with India. At present, China assures Bangladesh of its goodwill regarding water security, but Bangladesh could impress upon China that BCIM—an idea that began in China and is still actively resourced by Beijing—will have a greater chance of success when India gains more confidence in China’s intentions in the region.

Basin-wide recommendations

China

China should convene a Track 2 dialogue with India and Bangladesh to discuss shared water challenges. Despite the lack of institutionalized cooperation at a basin-wide level, there may be avenues for increased engagement among all three riparians. A starting point would be the establishment of an annual Track 2 dialogue with participation from university and think tank scholars from China, India, and Bangladesh. While there are many promising topics for discussion, one possibility would be to limit the focus initially to technical and scientific subjects, such as the

²⁷⁵ India’s Ministry of External Affairs (i.e., foreign ministry) has also displayed interest in river transit through its funding of the Kaladan multi-modal transport project, which ironically began as a way to avoid Bangladeshi territory when connecting the Indian mainland to the northeast. Under this project, people and goods could transit between Kolkata in West Bengal state across the Bay of Bengal to Sittwe, Myanmar, and then use Kaladan River transit into India’s state of Mizoram.

effects of climate change on river flow and potential mitigation strategies. Such talks could also involve input from international specialists on a case-by-case basis. Over time, these Track 2 interactions might form the basis for cooperation at the Track 1 level.

India

India should introduce the elements of eco-system management and ecological protection into discussions of cooperation with China, along the lines of the efforts between India and Bangladesh. Over time, India, China and Bangladesh could consider how these efforts could be linked across the basin.

India should also consider how existing basin-wide mechanisms such as the BCIM grouping could facilitate development of common research and action on preserving and monitoring Himalayan glaciers as part of the region's common heritage. India apparently has been successful in citing India-Pakistan and India-Bangladesh riparian cooperation in pursuing dialogue and data sharing with China. As confidence and habits of cooperation are developed, opportunities for multilateral discussions should be explored, including through official and unofficial dialogues.

Bangladesh

Bangladesh should encourage dialogue with India and China on basin-wide management of the Brahmaputra. Bangladesh understands that a paradigm shift will be needed regarding perceptions of water resources in the Brahmaputra basin. The traditional, zero-sum view of water as a scarce resource that nations consume internally—and should therefore withhold from neighbors—is gradually losing credibility in other basins such as the Danube and Rhine. Instead, “non-consumptive views” are emerging where water is seen as a shared resource that is worth investment for developmental and connectivity benefits to the entire region.²⁷⁶ Dhaka wants to promote this line of thinking in the Brahmaputra basin and to encourage discussion of non-consumptive uses of water resources such as the potential for greater river navigation and downriver trade in a region that is not well integrated.²⁷⁷ Furthermore, discussion that emphasizes shared interests such as biodiversity of the

²⁷⁶ CNA discussion, Dhaka, 2015.

²⁷⁷ South Asia is among the least integrated regions in the world. The World Bank estimates that only 5% of trade in South Asia is within the region, with most trade flowing externally. This stands in contrast to the 25% of intraregional trade that flows within ASEAN. World Bank Group, “South Asia Regional Integration: Program Brief,” Apr. 2015.

river will help minimize the current mindset focused on solely consumptive uses of Brahmaputra resources.

Bangladesh should assemble representatives from India and China on the sidelines of meetings of the Track 2 BCIM Forum for Regional Cooperation and the Joint Study Group (JSG) of the Track 1 BCIM Economic Corridor to discuss Brahmaputra cooperation.²⁷⁸ Because BCIM's focus is improving connectivity and regional economic relations, the subject of Brahmaputra water resources is a natural topic for BCIM to address formally or informally at meetings.

Dhaka should utilize the capabilities of its active think tank community to analyze specific aspects of basin-wide management of the Brahmaputra with upper riparian counterparts. Bangladesh could expand dialogues on the Brahmaputra by relying on its think tanks to arrange meetings with counterparts in China and India. Think tanks in Dhaka include the Bangladesh Enterprise Institute (BEI)—which is CNA's partner in Dhaka for this research—as well as the Bangladesh Institute of Peace and Security Studies (BIPSS) and the Centre for Policy Dialogue (CPD). These organizations can organize confidence-building dialogues and technical meetings that focus on pollution, erosion, sedimentation, flood prevention, and flood forecasting ability. Bangladesh should seek participation by subnational stakeholders in each of the three countries. Assam in India, for example, is also concerned about sedimentation and riverbank erosion on the Brahmaputra.

In addition to technical analysis, Dhaka's think tanks can work with counterparts in India and China to study the lessons learned from other river basins that could be applied to the Brahmaputra. For example, water experts in Bangladesh view the International Commission for the Protection of the Rhine as a positive model of the type of organization to which Brahmaputra stakeholders should aspire.

These kinds of regular interactions with focused discussions will lay the foundation for a new entity—a Brahmaputra Basin Commission—through which a water management accord could be implemented in the coming decades.

²⁷⁸ Myanmar is the other member of BCIM and shares three rivers with Bangladesh. Including Myanmar in these meetings could therefore be an option to help its neighbors resolve water resource tensions, even if its inclusion would be outside the scope of Brahmaputra basin cooperation.

For the international community

The international community should be alert to the long-term security implications of discord between Brahmaputra riparians and, alternatively, to the potential cooperation that could advance economic integration in the region. International financial institutions (IFIs), such as the World Bank and Asian Development Bank, and extraregional countries with capacity-building arms, such as the United Kingdom, the United States, and the Netherlands, have an important role to play. They can encourage China, India, and Bangladesh to work together in the Brahmaputra in order to promote economic development on water issues as well as political-military stability in how water-related disagreements are addressed in the basin. For example, the World Bank was critical to achieving the Indus Waters Treaty between India and Pakistan in 1961, because it recognized the importance of such an accord to promoting stability and interactions between governments that are often hostile to each other. Furthermore, such efforts by the international community also can help promote the economic integration that South Asia so badly needs, as well as connectivity between subregions such as the BCIM Economic Corridor linking China and Myanmar to India and Bangladesh.

First, multilateral development banks such as the World Bank, Asian Development Bank, and Asian Infrastructure Investment Bank, should take advantage of opportunities to advance the physical and economic connectivity that is evident in the Brahmaputra basin, such as efforts to reinvigorate river navigation networks.

Second, IFIs and extraregional countries should invest more in both technical dialogues between scientists and regional capacity-building on Brahmaputra hydrology, to help develop norms of information sharing, especially when focusing on the improvement of flood forecasting capabilities.²⁷⁹ Whereas think tanks in Bangladesh, India, and China can serve as effective conveners for policymakers through Track 1.5 or 2 confidence-building dialogues about diplomatic challenges in the Brahmaputra basin, IFIs and extraregional countries can help make progress on scientific capabilities in the Brahmaputra.²⁸⁰ For example, the U.S. Army Corps of Engineers is an important provider of technical assistance on water security around

²⁷⁹ For example, the joint World Bank-UK-Australia-Norway partnership called the South Asia Water Initiative (SAWI) and its predecessor, the Abu Dhabi Dialogue, have been useful in catalyzing discussion between Brahmaputra stakeholders, especially for the development of a hydrological database and modeling platforms to inform scientists in the region.

²⁸⁰ While not limited to the Brahmaputra, the International Union for Conservation of Nature (IUCN) launched a Track 3 dialogue called “Ecosystems for Life” which brought together Bangladeshi and Indian experts from civil society to workshops in Bangkok. The initiative was funded by the Netherlands government.

the world and could give greater attention to the Brahmaputra basin. Multilateral development banks and extraregional countries may be able to suggest creative solutions to the pressing problem of ensuring sufficient access to river flow in the dry season, possibly through storage of monsoon rains throughout the basin.

Finally, the most important recommendation for IFIs and extraregional countries is to conduct scientific studies on projections for future dry and wet season flows in the Brahmaputra and the impacts of stressors to the basin such as climate change and sedimentation. Experts writing about the region have noted the difficulty in coming to clear, evidence-based conclusions about the full impacts of trends in the Brahmaputra, given the dearth of scientific assessments. Forging progress from all Brahmaputra countries on basin management will require consensus on basic hydrological facts, compared to the current situation of claims by each riparian and little transparency on how countries come to their conclusions.

These recommendations will be quite costly to implement, but IFIs and extraregional countries with capacity-building arms are well positioned to conduct such efforts in the Brahmaputra. They can help advance stability in a highly populated region that is often characterized by bilateral disputes and internal challenges.