

# The Middle Riparian's Quandaries: India and the Brahmaputra River Basin

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## Chapter summary

- Measured by population and territory, India is *physically* implicated in the Brahmaputra basin marginally; certainly compared to the impact of other major river systems in India. Only an estimated 3 percent of India's population resides in the basin (for China, the figure is roughly 1 percent and for Bangladesh an estimated 70 percent). About 6 percent of India's national territory lies within the Brahmaputra basin (for China it is 3 percent and for Bangladesh 27 percent).<sup>128</sup> The region of India through which the river flows is not highly industrialized nor a major area of agricultural productivity, though agriculture is among the main sources of livelihood for the citizens who live there.
- The Brahmaputra River however is of great *political* significance for India because it is a trans-boundary river that originates in China, flows into disputed territory in India's isolated and under-developed northeast, and

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<sup>128</sup> Author's estimate calculated using multiple sources, mainly United Nations Food and Agriculture Organization (FAO), "SECTION III Transboundary River Basins: Ganges-Brahmaputra-Meghna River Basin," in *Irrigation in Southern and Eastern Asia in Figures, AQUASTAT Survey - 2011*, Karen Frenken, ed., Rome: FAO Land and Water Division 2012, 111-113; National Research Council, *Himalayan Glaciers: Climate Change, Water Resources, and Water Security*, Washington, D.C.: The National Academies Press, 2012, 51, doi:10.17226/13449.

continues into Bangladesh, with which India has critical but difficult riparian relations.

- In addition to managing the political implications of a trans-boundary river, three other drivers influence India's policies concerning the Brahmaputra River: China's plans to dam and possibly divert the river; New Delhi's desire to uphold user rights on the river and consolidate its existing hold on disputed territory; and India's need to manage flooding and soil erosion in its northeastern states.
- Two realities complicate India's policy approaches to the Brahmaputra River: First, a contentious domestic debate complicates decision-making. Second, as a middle riparian country, India has starkly different concerns and interests vis-à-vis upper riparian China and lower riparian Bangladesh.
- India's perspectives and policies on the Brahmaputra River are also influenced by northeast India's increasing institutionalization in India's government structure, its higher political profile, and its rising role in India's international relations. Furthermore, India seeks to build dams in order to produce electricity as well as manage the flooding and soil erosion that affect livelihoods and development in its northeastern states. To date, however, India has built very few of its planned dams on the Brahmaputra and its tributaries. The growing weight of the "northeast India subnational factor" has fused with concerns about China's upstream activities and the salience of trans-boundary rivers in India-China relations.
- Over the past decade, India and China have steadily increased their dialogue and water-related information-sharing agreements on the Brahmaputra and other shared rivers. However, a deep political distrust continues to shadow this new area of India-China relations. Unless the border/territorial dispute is resolved, India and China will have difficulty reaching a water-sharing agreement.
- With Bangladesh, relations concerning the Brahmaputra are a subset of wider riparian relations conducted through the Joint Rivers Commission and specific agreements on the Ganges and Teesta Rivers.
- India has opportunities with both China and Bangladesh to further modest cooperation by fully and finally implementing existing agreements and being more transparent about its own dam-building and river-linking project plans. In fact, because of the relatively measured and longer-term physical impacts of the river on India's population, industry and agriculture, there is more space for India to experiment with innovative approaches to cooperation with its upper and lower riparian neighbors.

- India's current emphasis on bilateral approaches regarding the Brahmaputra does not rule out future multilateral cooperation, but India's middle riparian position militates against multilateralism as a means to pursue its interests. India should introduce elements of eco-system management and ecological protection into discussions of cooperation with China along the lines of the efforts between India and Bangladesh. There may also be space for the three countries to develop common research on preserving and monitoring Himalayan glaciers as part of the region's common heritage.

## Introduction

India is the middle riparian country, between China and Bangladesh, on the Brahmaputra River (see Figure 5 below). The river's unruly, braided physical flow through the three countries parallels a tricky political configuration. The river originates in troubled Tibet, a recurring source of India-China discord since the Dalai Lama fled to India in 1959.<sup>129</sup> It flows through land that is still contested by China and India following a 1962 border conflict and is the basis of an evolving competitive-cooperative relationship. The river serves as both a socio-economic resource and occasional threat to livelihoods in India's isolated northeast region, which is increasingly being integrated into "mainland" India. And finally the Brahmaputra becomes a critical lifeline for Bangladesh, whose India-centric historical origins and land, as well as riparian connections, create fraught relations.

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<sup>129</sup> Raja Mohan, a leading Indian analyst, argues that Tibet is a key to overall India-China relations. Cited in Ellen Bork, "Caught in the Middle: India, China and Tibet," <http://worldaffairsjournal.org/article/caught-middle-india-china-and-tibet>.

Figure 5. Map of the Brahmaputra River



Source: Map drawn by Mike Markowitz, CNA, 2016. Composite relying on d-maps, <http://www.d-maps.com>, Library of Congress, <http://www.loc.gov/resource/g7653j.ct000803>, and University of Texas, [http://www.lib.utexas.edu/maps/middle\\_east\\_and\\_asia/china\\_india\\_e\\_border\\_88.jpg](http://www.lib.utexas.edu/maps/middle_east_and_asia/china_india_e_border_88.jpg).

India's middle riparian position provides it with a whole-of-basin perspective. But its discrete, distinct interests and troubled relations with its upper riparian and lower riparian neighbors, combined with the domestic dynamics of center-state relations in northeast India, pull India's concerns, drivers, and cooperative and competitive

activities in complex, inconsistent directions—shaping India’s intense debate and mixed policies regarding the Brahmaputra River.

This chapter first analyzes Sino-Indian relations regarding the Brahmaputra River. It then examines the northeast India subnational dimensions of Brahmaputra River issues. Third, it evaluates India-Bangladesh relations on the Brahmaputra River. This “north-south geographical” analytical approach accurately captures not only the physical flow of the river but also the relative hierarchical primacy of China, India’s northeast, and Bangladesh to India’s Brahmaputra River policies. Finally, it examines India’s perspectives on prospects for multilateral cooperation in the basin.

## **India-China relations regarding the Brahmaputra River: The character of India’s debate**

In India’s open society, freewheeling press, and robust democracy, a divide generally characterizes debates over the “China factor” and the Brahmaputra River. Indian scholars, policy analysts, retired government officials, the media, and some in parliament (mostly representatives from the northeastern states of Arunachal Pradesh and Assam)<sup>130</sup> express the most acute concerns and worse-case assessments about China’s activities—particularly its plans to dam and divert the river.<sup>131</sup> India’s government, however, tends at least publicly to downplay concerns about whether India will have an adequate quantity and quality of water, and focuses on emerging cooperation with China. India’s government and civil society are more closely aligned in expressing worries about China’s transparency on upper riparian activities. In other words, distrust of China is shared broadly in India, even as intense debates persist about China’s activities and intentions as well as their implications for India.

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<sup>130</sup> A search of India’s Ministry of External Affairs (MEA) website on Oct. 27, 2015, returned approximately 100 references to the Brahmaputra River. Except for government statements, articles, and other documents included in these search findings, a high percentage of Lok Sabha (lower house) and Rajya Sabha (upper house) questions come from representatives of the northeastern states of Arunachal Pradesh and Assam.

<sup>131</sup> A small, representative sampling of the voluminous writings that focus on India’s views of China’s potential threats include: Brahma Chellaney, *Water: Asia’s New Battleground*, Washington, D.C.: Georgetown University Press, 2011; Simon Denyer, “Chinese Dams in Tibet Raise Hackles in India,” *Washington Post*, Feb. 7, 2013; Archana Chaudhury, “India Plans Dam on Tsangpo-Brahmaputra to Check Floods and China,” Bloomberg, June 4, 2015; R.N. Bhaskar, “What Chinese Dam Means to India,” Nov. 27, 2014.

The parallel development and current co-existence of India's robust debate about threats from China on the one hand, and incremental and limited but still steady increase in dialogue and hydrological information sharing between the two governments on the other, have led even Indian interlocutors to dispute whether conflict or cooperation is the dominant or counter narrative in India-China relations regarding the Brahmaputra River.

Finally, India's debate about the China factor regarding the Brahmaputra reflects something of a divide between technical experts and international relations or political experts. Technical experts tend to see *both* Indian and Chinese plans for dams and other activities on the Brahmaputra as problematic, whereas India's political experts tend to focus on the problematic features of China's activities for India. This is not surprising, but in the swirling, cacophonous debate within India, the technical versus political divide adds to the complexity of the government's policy challenges towards the Brahmaputra River.

## Poor Sino-Indian relations and contested territory

The poor state of Sino-Indian relations generally and the fact that the Brahmaputra River runs through disputed territory drive India's anxieties. India-China relations, 53 years after a brief October 1962 border war ended in India's defeat, now mix competition and cooperation, but remain mired in historical animosity, distrust, and serious unresolved issues. China claims at least part of the area where the Brahmaputra River enters into what India regards as the state of Arunachal Pradesh but China considers "southern Tibet."<sup>132</sup>

Three additional drivers most influence India's policies regarding the Brahmaputra River: China's plans to dam and possibly divert the river; New Delhi's desire to uphold user rights on the river and consolidate its existing hold on territory; and India's need to manage flooding and soil erosion in its northeastern states.

## China's damming and possible diversion of the Brahmaputra River

By far India's most intensely debated concern is China's damming and possible diversion of the river to meet the needs of northern and western regions of China

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<sup>132</sup> One example is the ongoing controversy over China and India's dueling depictions of the territory in maps and on passports. Other sources are Ellen Bork, "Caught in the Middle: India, China and Tibet" and CNA interviews, Beijing, 2015.

that are more populous, agricultural, industrial, and/or urban than remote, under-populated southern Tibet.<sup>133</sup>

India's debate about China's upper riparian activities took off in 2005 following publication of the book *Tibet's Waters Will Save China*, by Li Ling, an officer of the 2<sup>nd</sup> Artillery Corps. It suggests various options for diversion of river waters in the amount of 200.6 billion cubic meters (BCM), of which the Brahmaputra would account for the overwhelming share at 118.8 BCM.<sup>134</sup> Reportedly, soon after the book was published, India began to undertake numerous cross-ministry and -agency studies to investigate and respond to Chinese activities.<sup>135</sup>

After construction of China's first major dam, Zangmu, began on the upper reaches of the Brahmaputra in 2010 (it became operational in November 2015) India's government issued a key statement in June 2011 reflecting its perspective:

Recent reports about Chinese plans to construct a dam on the Brahmaputra and possibly divert the waters to Northern China are not new but based on previously known facts. It is a fact that China is constructing a dam at Zangmu in the middle reaches of the Yarlung Tsangpo (as the Brahmaputra is called in Tibet). We have *ascertained from our own sources* [presumably a reference to work by India's NRSA and NTRO—emphasis added] that this is a run of the river hydro-electric project, which does not store water and will not adversely impact the downstream areas in India. *Therefore I [External Affairs Minister S. M. Krishna] believe there is no cause for immediate alarm. I would like to share with you the fact that a large proportion*

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<sup>133</sup> For China's perspectives on the Brahmaputra, see the China chapter for this project by Joel Wuthnow.

<sup>134</sup> The contemplated amount of diversion is taken from information provided during CNA interviews, New Delhi, 2015.

<sup>135</sup> Reportedly, the government of India convened the first inter-ministerial Committee of Secretaries, or CoS, meeting in October 2006 to investigate the issue of diversion of water by China. Subsequently, at least two meetings were held, though it seems likely that several were held. India also initiated efforts by the National Remote Sensing Agency (NRSA) and National Technical Research Organization (NTRO) to gauge China's activities. The Central Water Commission also undertook studies around this time "to compute the potential of water generated on the Indian side and updated [an] earlier assessment." A media account of India's approach is by Utpal Bhaskar, "India Firms up Its Strategy on Brahmaputra Water Diversion," *LiveMint*, Nov. 2, 2015.

*of the catchment of the Brahmaputra is within Indian territory*  
[emphasis added].<sup>136</sup>

The Indian government's assertion of adequate water flows has been much debated and contested. A 1996 World Bank report asserts that the Brahmaputra River and its 52 major tributaries have a total catchment area of 580,000 square kilometers: 33.6 percent of that lies within India; 50.5 percent in China; 8.1 percent in Bangladesh; and 7.8 percent in Bhutan.<sup>137</sup> The debate in India focuses on where most of the flow of water comes from. Estimates vary, but at least some in India argue, "Significantly, only 40 percent of the water comes from the Chinese catchment area. Some policymakers in Delhi believe that the precipitation in China contributes only 7 percent to the flow. *It is the Brahmaputra's tributaries in Arunachal Pradesh, along with the rains in India that contribute to the rest of the river's water supply* [emphasis added]. That could explain the absence of any shrill reaction from New Delhi."<sup>138</sup>

Prominent experts such as Brahma Chellaney dismiss the government's assurances and argue that China's dam building is expanding, moving closer to India's border and providing China with "its growing capacity to serve as the upstream controller by re-engineering transboundary flows through dams."<sup>139</sup> Others, such as former secretary of water resources Ramaswamy Iyer, argue that, for technical hydrological reasons, even China's run-of-the-river projects are "a matter of utmost concern to lower riparian countries...."<sup>140</sup>

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<sup>136</sup> Government of India, Ministry of External Affairs, "Reports of Construction of a Dam on Brahmaputra River by China," Jun. 14, 2011.

<sup>137</sup> World Bank, *Development and Growth in Northeast India: The Natural Resources, Water, and Environment Nexus*, 2007, 33.

<sup>138</sup> See Bhaskar, "What Chinese Dam on Brahmaputra Means to India," 2014.

<sup>139</sup> See Brahma Chellaney, "India Must Treat Water as a Strategic Resource, Fight China's Throttlehold," *The Hindustan Times*, Nov. 28, 2015.

<sup>140</sup> Cited in Sudha Ramachandran, "Water Wars: China, India and the Great Dam Rush," *The Diplomat*, Apr. 3, 2015. Mr. Iyer goes on to say that China's run-of-the-river hydroelectric project "spells death for the river" because the turbines operate intermittently in these projects, "which means that the waters are held back in pondage and released when the turbines need to operate, resulting in huge diurnal variations—from 0 percent to 400 percent in a day—in downstream flows. No aquatic life or riparian population can cope with that order of diurnal variation." In Mr. Iyer's final book, released by India's Vice President Ansari, he had a "pox on both houses" critique: "In particular, the most well known of them, the Brahmaputra, is now the victim of project planning by both China and India, with Bangladesh also involved in the controversy as the anxious lower riparian.... *One shudders to think of... the consequences of interventions in this river by the state, whether Chinese or India* [emphasis added]." Cited in R. Umamaheshwari, "A Visionary on Water Issues," *The Hindu*, Sep. 14, 2015.



China's expanding dam construction continues to split Indian assessments between the government and civil society critics and create fissures between Indians who see China's dams as the main problem versus those who see *all* dams on the Brahmaputra River as a problem. Meanwhile, India continues to pursue incremental and limited riverine cooperation with China—even though it is unable to influence China to cease dam construction. India is also faced with considerable constraints to moving forward with its own dam-building plans, and beset by discord with the state governments in Arunachal Pradesh and Assam.

## India's user rights and consolidating its hold on disputed territory

Another priority for India vis-à-vis China has been establishing its riparian rights. A Technical Expert Group (TEG) headed at the joint secretary level in the Ministry of Power reportedly was established in 2008 (based on the recommendations of an earlier Committee of Secretaries, or CoS, meeting held on October 21, 2008) to include representatives of the Ministry of Water Resources, Department of Road Transport and Highways, Ministry of Environment and Forests, Ministry of External Affairs (MEA), and Arunachal Pradesh state government “to *draw up an Action Plan for establishing India's user rights on Brahmaputra and its tributaries* [emphasis added] coming from China.”<sup>141</sup> The TEG's first recommendation was that “[i]n order to establish the *'First User' Rights* [emphasis in original], the first priority would be to complete Lower Subansiri...the Lower Siang...and Demwe Lower [dams]...” A second recommendation “would be for State Government of Arunachal Pradesh to expeditiously allot at least one major project in these basins as close to the international border as possible, and get them implemented promptly, in order to quickly and more firmly establish 'Existing User' rights.”<sup>142</sup>

During the past decade India's officials have repeatedly invoked India's riparian rights vis-à-vis China and linked dam building to asserting these rights. For example, Minister of State for External Affairs E. Ahmad stated in parliament that India “[i]s a lower riparian state with considerable established user rights to the water of the River....”<sup>143</sup> In mid-June 2015, India's Additional Secretary in the Ministry of Water Resources, Amarjit Singh, tied India's dam building directly to establishing India's riparian rights, saying, “Once we have a storage dam, we get the right for that

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<sup>141</sup> Information provided during CNA interviews, New Delhi, 2015.

<sup>142</sup> Ibid.

<sup>143</sup> Government of India, Ministry of External Affairs, “Q.1898 Construction of Dam on Brahmaputra by China,” Mar. 14, 2013.

quantum of water as a riparian state under the international practices. If you have a storage dam in India on an international river, it gives us [the] right for that much water.”<sup>144</sup> Indian media have picked up government statements that dam building is motivated by the desire to establish user rights on the river—not appreciating that India already has user rights as a lower riparian on the transboundary river.<sup>145</sup>

India’s anxiety about asserting its riparian rights on the Brahmaputra River does not appear to stem from a legal or political challenge to these rights by China: there is no evidence that Beijing has challenged these rights, and official statements between the two countries repeatedly reference that China will respect these rights. More likely, its anxiety comes from the objective of *consolidating* India’s rights to the *territory* where the trans-boundary Brahmaputra flows rather than to the waters of the river per se. India believes this is a prudent course of action given the disputed territory through which the river flows and China’s international efforts to challenge India’s claims to the territory. In March 2009 China moved to oppose a nearly \$3 billion Asian Development Bank (ADB) loan to India because it included funding for a \$60 million flood management and hydro program in Arunachal Pradesh.<sup>146</sup> Not surprisingly, some Chinese certainly see India’s goal as consolidating its hold over disputed territory.<sup>147</sup>

But establishing its user rights by dam building has been an extremely slow and limited process in India, largely due to political and civic opposition to dam construction but also because of financial and technical constraints. This stands in contrast to the robust dam building on China’s portion of the upper Brahmaputra River. India has plans to build several dams to consolidate its hold on territory and further establish riparian rights, control flood and soil erosion, develop hydro-electric power, and contribute to the overall development of the northeast region. The precise number of planned dams is not easy to nail down. During interviews in New Delhi, the number cited ranged in the mid one hundreds. However, few believe that even a fraction of these dams will be built. Recently, Himanshu Thakkar of the South Asia Network on Dams, Rivers and People, said:

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<sup>144</sup> Press Trust of India (PTI), “Govt Plans to Build Big Dams Over Brahmaputra: Uma Bharti,” Jun. 4, 2015.

<sup>145</sup> An example is Chaudhury, “India Plans Dam on Tsangpo-Brahmaputra to Check Floods and China,” Bloomberg, 2015.

<sup>146</sup> See National Research Council, *Himalayan Glaciers: Climate Change, Water Resources, and Water Security*, 2012, 89; Girish Shirodkar, “Playing Chinese Checkers with India’s Hydro Sector,” *New Spotlight*, Nov. 1, 2015.

<sup>147</sup> For China’s perspectives on the Brahmaputra, see the China chapter for this project by Joel Wuthnow.

There are close to 200 big hydropower projects planned for the Himalayas in Northeast India. Most of them are yet to be approved. Almost all have generated significant protest from people in the region, and from local government leaders. The big projects are difficult to build, and dangerous to manage in mountains that are on highly silt laden rivers, in a region rich in biodiversity and prone to earthquakes and flooding. The lives and livelihoods of so many millions are dependent on these resources. Most of the dams will never be built.<sup>148</sup>

India's official Water Resources Information System lists only 16 dams for the Brahmaputra Basin and notes that even some of these are under construction.<sup>149</sup> Brahma Chellaney, a leading Indian expert on water issues, has written "Plans for large water projects in India usually run into stiff opposition from influential NGOs, so that it has become virtually impossible to build a large dam, blighting the promise of hydropower."<sup>150</sup>

However, even taking into account China's dams, the United States National Research Council concluded that "the Brahmaputra is the least dammed of the major rivers in the region. In contrast, both the Ganges and the Indus are highly dammed."<sup>151</sup> Figure 6 below provides a perspective on the limited number of dams in the Brahmaputra River basin compared to South Asia's other major river basins.

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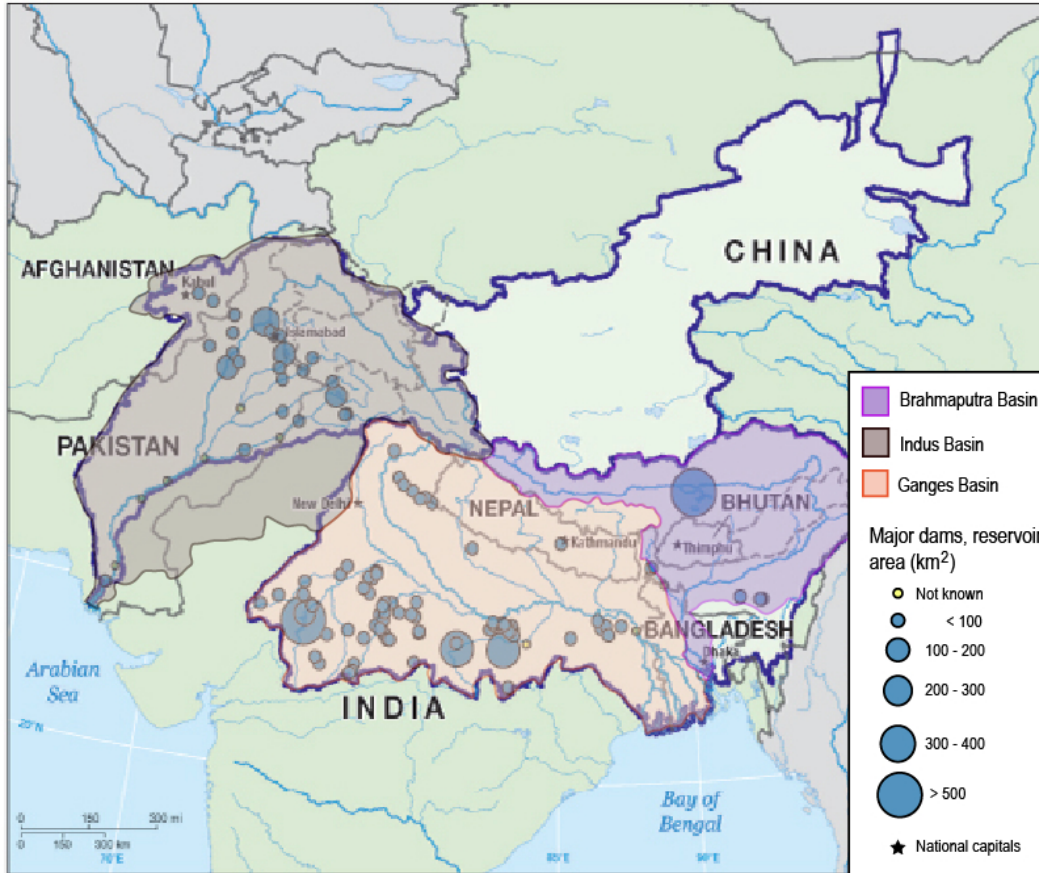
<sup>148</sup> Cited in Keith Schneider, "Big India Dam, Unfinished and Silent, Could be a Tomb for Giant Hydroelectric Projects," *Circle of Blue*, Apr. 6, 2015.

<sup>149</sup> Government of India's Water Resources Information System, "Dams in Brahmaputra Basin," Mar. 27, 2015.

<sup>150</sup> Brahma Chellaney, "South Asia's Growing Water Insecurity," *Defense Dossier*, American Foreign Policy Council, May 2013, Issue 7: 17.

<sup>151</sup> National Research Council, *Himalayan Glaciers: Climate Change, Water Resources, and Water Security*, 2012, 61.

Figure 6. Brahmaputra River basin has fewer dams than other major South Asia river basins



Source: Mike Markowitz, CNA, 2016. This work is a derivative of "Figure 3.5" by National Research Council, *Himalayan Glaciers: Climate Change, Water Resources, and Water Security*, Washington, D.C.: The National Academies Press, 2012, 61, doi:10.17226/13449, [http://www.nap.edu/catalog.php?record\\_id=13449](http://www.nap.edu/catalog.php?record_id=13449). "Figure 3.5" is licensed by CNA Corporation. Basins drawn over original image using the following sources: South Asia Water Initiative, <https://www.southasiawaterinitiative.org/node/3> and <https://www.southasiawaterinitiative.org/indus>; Water Resources Information System of India, <http://india-wris.nrcs.gov.in/wrpinfo/index.php?title=Ganga>.

## Managing flooding and soil erosion

A third driver and activity of India in terms of the Brahmaputra is controlling flooding and soil erosion. Soil erosion is a major feature in the northeast India catchment area. According to the Brahmaputra Board of India's Ministry of Water Resources, "Due to heavy deposition of silt, the river has frequently changed its course. Excessive silt deposition has also given rise to [a] braiding and meandering

pattern in the alignment of the river system.”<sup>152</sup> High siltation arises from many factors, including landslides due to heavy rainfall in the area, earthquake shocks, and manmade actions such as changes in cultivation patterns and exploitation of forest resources in the hills above the valley through which the river runs. Specialists of northeast India whom we interviewed often highlighted the fact that adapting to floods and soil erosion is a major struggle for the residents of the region.

But flooding is the driver that directly initiated India’s cooperative outreach to China, resulting in the current ongoing dialogue and limited hydrological data sharing agreements. India’s concerns about flooding in its northeastern states date from the early 2000s.<sup>153</sup> In 2000, in reply to a parliamentary question, Ajit Kumar Panja, the minister of state for external affairs at the time, replied, “Following the recent flash flood in Arunachal Pradesh in June 2000, the matter was taken up with the Chinese Government. They conveyed that there was no dam on the Chinese side on the river Brahmaputra and attributed the occurrence of floods on the Indian side to natural causes.”<sup>154</sup> India’s government seems to have concurred that the flood was a natural disaster. Information provided during interviews in New Delhi referred to an incident in which NTRC monitoring revealed “some water blockage...at Great Bend in the Brahmaputra river Basin possibly due to a *natural landslide* [emphasis added].”<sup>155</sup>

But the importance of flood management, whether because of China’s activities (intentional or unintentional) or natural causes, is a driver of India’s approach vis-à-vis China and the northeastern states. India-China bilateral discussions on cooperation about the river began in the early 2000s as a result of these flooding concerns—well before any Chinese dams had been constructed on the upper portions of the Brahmaputra and well before debates erupted in India about China’s plans to divert the river waters.

During a press briefing during the January 2002 visit to India of China’s prime minister Zhu Rongji, India’s government reiterated that flood control and disaster prevention were driving efforts at bilateral cooperation and mechanisms with China.

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<sup>152</sup> India’s Ministry of Water Resources, Brahmaputra Board, <http://www.brahmaputraboard.gov.in/NER/Activities/activities.html>.

<sup>153</sup> For a media report at the time, see Nitin Gogoi, “Army Suspects Chinese Hand Behind Flash Floods in N-E,” *Rediff*, <http://www.rediff.com/news/2000/aug/22assam.htm>.

<sup>154</sup> Government of India, Ministry of External Affairs, “Q. 2104—Breach Of Dams Constructed By Chinese Authorities,” Aug. 10, 2000, <http://www.mea.gov.in/rajya-sabha.htm?dtl/8587/Q+2104++Breach+Of+Dams+Constructed+By+Chinese+Authorities>.

<sup>155</sup> CNA interviews, New Delhi, 2015.

The Memorandum of Understanding on the provision of Hydrological Information of the Brahmaputra river is *basically being signed and agreed upon in order to meet the demand of flood control and disaster mitigation* [emphasis added] in the down stream of the Brahmaputra river and the Chinese side agrees through this MOU that China would provide information on water level discharge, rainfall data and also information on water levels not only **during the flood season but also during the non-flood season** [emphasis added].... As far as diversion of the river is concerned, (since you have asked me a question in this regard) I believe that these reports have been denied by the Chinese side. There is a level of mutual confidence inherent to this agreement.<sup>156</sup>

Since this statement, India's government has continued to link hydrological data sharing by China with flood control and disaster mitigation, and has acknowledged publicly that the data provided by China has been helpful to this end.<sup>157</sup> Hydrological data sharing between China and India has gone hand in hand with a more unilateral Indian approach to controlling floods: dam building.<sup>158</sup>

However, the number of dams actually being built still appears to be extremely limited. According to India's Water Resources Information System, as of March 2015, only 16 dams are in the Brahmaputra basin—and some of these have yet to be completed.<sup>159</sup> Given the delays in completing dams already agreed to (such as the dam on the Subansiri River), the depth of anti-dam movements both in the northeast and broadly in India (with considerable support from international anti-dam NGOs), and inadequate financing, it is unclear just how many dams will actually be completed on India's portion of the Brahmaputra River and its tributaries.

Thus, the need to control flooding and soil erosion—along with the threat of China's dams and possible water diversion, and India's need to establish user rights and

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<sup>156</sup> MEA Press Briefing, Jan. 14, 2002, <http://www.mea.gov.in/media-briefings.htm?dtl/2943/Summary+of+Press+Briefing+by+the+Official+Spokesperson>.

<sup>157</sup> See, for example, <http://www.mea.gov.in/media-briefings.htm?dtl/3705/In+response+to+questions+on+a+news+report+on+the+Brahmaputra+river+project+in+China>. The 2006 India-China Joint Declaration noted, "The on-going provision of hydrological data for the Brahmaputra/Yarlung Tsangpo and the Sutlej/Langqen Tsangpo Rivers by the Chinese side to the Indian side has *proved valuable in flood forecasting and mitigation* [emphasis added]." See "Joint Declaration by the Republic of India and the People's Republic of China," Nov. 21, 2006, <http://www.mea.gov.in/bilateral-documents.htm?dtl/6363/Joint+Declaration+by+the+Republic+of+India+and+the+Peoples+Republic+of+China>.

<sup>158</sup> PTI, "Govt Plans to Build Big Dams Over Brahmaputra: Uma Bharti," 2015.

<sup>159</sup> India's Water Resources Information System, "Dams in Brahmaputra Basin," Mar. 27, 2015.

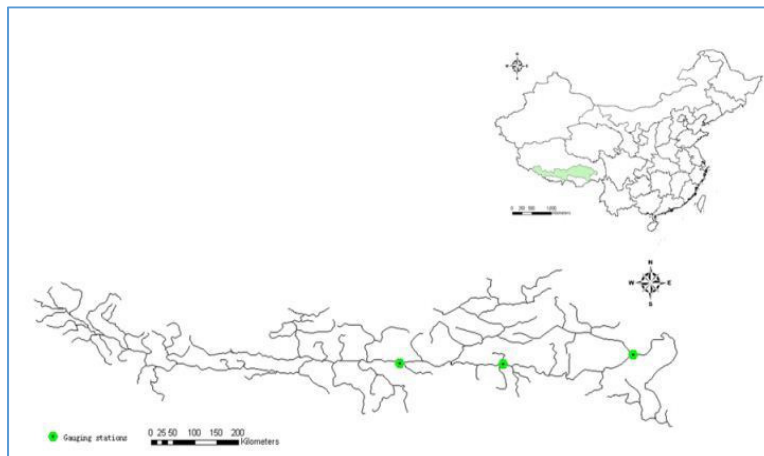
consolidate a hold on territory—appears to be a key driver of the government of India’s activities vis-à-vis China regarding the Brahmaputra River.

## India-China cooperation: Progress and limits

Since the early 2000s, India-China relations concerning the Brahmaputra River have included a new element: dialogue and cooperation.

Following a major flood in India’s northeast in June 2000, the *Memorandum of Understanding (MOU) on Provision of Hydrological Information on Brahmaputra River in Flood Season* was signed in 2002 (and renewed in 2008). China agreed to provide hydrological information, including water level, discharge, and rainfall amount from three stations (see Figure 7 for a map showing the approximate location of the three stations) during the June 1-October 15 monsoon season. India has acknowledged that this information “was utilized in the formulation of flood forecasts by [the] Central Water Commission.”<sup>160</sup> A 2005 MOU (renewed in 2010) expanded the data sharing to include the Sutlej River in India’s northwest.

Figure 7. Map of Chinese monitoring stations on the Yarlung Tsangpo



Source: He Chen, “Assessment of Hydrological Alterations from 1961 to 2000 in the Yarlung Zangbo River, Tibet,” *Ecohydrology & Hydrobiology* 12 (2), 2012, 93-103 (Figure 1, 94), 2012.

Note: Three stations on Yarlung Tsangpo – Nugesha, Yangcun and Nuxia (the green spots in the map represent these stations).

<sup>160</sup> A detailed listing and explanation of the cooperative mechanism as of Sep. 19, 2014, is available at the website of India’s Ministry of Water Resources, River Development and Ganga Rejuvenation, at <http://wrmin.nic.in/forms/list.aspx?lid=349>.

A 2006 Joint Declaration signed during the November visit of President Hu Jintao to India established an expert-level mechanism to discuss “emergency management” as well as “other issues regarding transboundary rivers” but without providing further public details about the specifics of either.<sup>161</sup> This declaration specifically discussed ongoing hydrological data sharing on the Brahmaputra (Yarlung Tsangpo) and Sutlej (Langqen Zangbo) and referenced the need to reach similar agreements on the Yarlung Zangbo and Lohit/Zayu Qu rivers. India’s acknowledgment that the data provided by China has been valuable for flood forecasting and mitigation may be designed as much to reassure India’s domestic skeptics about the utility of this information as to provide reassurance in India-China relations.

Indian critics have dismissed data-sharing cooperation as useless at worst and limited at best. One said “information had been exchanged but is not actionable because the data provides only volume of water figures and not from where or what time.” Others have said “we need regular information, not on annualized basis.” Another said India “[n]eed[s] to know what spots the data comes from.” Some Indians dismissed water data sharing as useless in the absence of a water-sharing agreement.<sup>162</sup>

In any case, further cooperation on hydrological data sharing has been incremental and marginal. During Chinese premier Li Keqiang’s May 2013 visit to India, the two sides agreed that China would provide data twice a day.<sup>163</sup> Prime Minister Manmohan Singh’s visit to China in October 2013 led to the more grandiosely titled *MOU between the Ministry of Water Resources, India and the Ministry of Water Resources, China on Strengthening Cooperation on Trans-border Rivers*. But the only substantively new element was that China agreed to provide data starting on May 15<sup>th</sup> instead of June 1<sup>st</sup> —an extra two weeks of data coverage.<sup>164</sup>

India’s press accounts have emphasized what Prime Minister Singh did *not* achieve in terms of cooperation—i.e., providing at least some insight into what would constitute more substantive cooperation from the perspective of India. Prime Minister Singh reportedly

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<sup>161</sup> Government of India, Ministry of External Affairs, “Joint Declaration by the Republic of India and the People’s Republic of China,” Nov. 21, 2006.

<sup>162</sup> CNA interviews, New Delhi, 2015.

<sup>163</sup> Government of India, Ministry of External Affairs, “List of Documents Signed during the State Visit of Chinese Premier Li Keqiang to India (May 19-22, 2013),” May 20, 2013.

<sup>164</sup> Government of India, Prime Minister’s Office, “MOU between the Ministry of Water Resources, India and the Ministry of Water Resources, China on Strengthening Cooperation on Trans-border Rivers,” Oct. 23, 2013.



sought a joint mechanism with China for better transparency on 39 project sites that Beijing has apparently identified on tributaries of the Yarlung Tsangpo (Brahmaputra), including seven on the main river. New Delhi had pressed for a joint mechanism because in the absence of a river water-sharing treaty between the two countries, such a mechanism will allow India to seek specific information about the upstream projects in China, their construction schedule, the likely impact on people, environment and downstream river flows.<sup>165</sup>

Other media reports claimed that Prime Minister Singh sought a water commission or inter-governmental dialogue to deal with water issues.<sup>166</sup> In the absence of reliable public information on what New Delhi proposed to Beijing through diplomatic channels, what seems clear is that the government of India was keen to advance up the cooperation ladder but did not get very far, suggesting an ongoing gap between India and China on river management.

As evidence of the cooperation eked out between India and China, it was only in 2014, during the visit of India's vice president Hamid Ansari to China, that the two countries signed the *Implementation Plan: Provision of Hydrological Information on the Yarlung Zangbu/Brahmaputra River in Flood Season by China to India*.<sup>167</sup> This document is fascinating in several respects.

First, it lays out in great detail the precise nature of information to be shared (to the decimal points), the mechanisms by which information is to be shared (including specific emails of respective officials), and related details of hydrological information sharing. Second, almost parenthetically, the document states, "The Chinese side also agrees to provide hydrological information if water levels of above-mentioned stations are close to or reach warning water levels in *non-flood season* [emphasis added]." This appears to be the first publicly available mention of *non-flood season* data sharing in an official document of the two countries. And the clause about providing information in the case of stations reaching "warning water levels" also appears to address the vague references in the 2006 Joint Declaration to "emergency management."

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<sup>165</sup> Wasbir Hussain, "MOU on the Brahmaputra River," India article #4149, Institute of Peace and Conflict Studies, 24 Oct. 2013.

<sup>166</sup> See PTI, "China Less Than Enthusiastic to Indian Proposal on Water Issue," *Economic Times*, Aug. 20, 2013.

<sup>167</sup> Embassy of India, Beijing, China, "Implementation Plan: Provision of Hydrological Information of the Yarlung Zangbu/Brahmaputra River in Flood Season by China to India," Jun. 30, 2014.

Third, the document lays out the terms and mode of payment. The cost to India for China's provision of the data is approximately 850,000 Yuan per year—or just under \$134,000 per year at current exchange rates. A fourth interesting element of the implementation plan document is its articulation of *Indian* obligations. Much of India's public and media narrative on river waters issues with China has focused on the need for transparency from Beijing. This document notes that the "Indian side will provide the Chinese side information regarding data utilization in flood forecasting and mitigation" and that the "Indian side will also inform the Chinese side [of] the information of the hydrological station which lies on the mainstream of the Yarlung Zangbu/Brahmaputra River and is close to China's Nuxia station (see Figure 3). The information includes [the] station's name, latitude and longitude, [and] type of data being observed." The *mutual* transparency inherent in this implementation plan adds further nuance to the ongoing narrative on bilateral river relations.

Finally, in an element that has received almost no media or public attention, the implementation plan permits the parties, "after mutual consultation through diplomatic channels," to "dispatch hydrological experts to each other's country to conduct study tour[s] according to the principle of reciprocity." The purpose of this element is "to ensure normal provision of hydrological information..." All in all, the implementation plan suggests a clear and established framework for data sharing on the Brahmaputra River. However, it is not clear how the implementation plan is actually being implemented. For example, it is not clear that the data have in fact been shared per the agreement or that any study tours of hydrological experts have taken place. And, of course, hydrological data sharing does nothing to address transparency on issues such as mutual dam building, alleged Chinese interest in diverting the waters, or water sharing of the Brahmaputra River. These "big-ticket" items of riverine cooperation remain off the table for now, and there is little to suggest that they will be picked up for action any time soon.

Indeed, India-China cooperation on the Brahmaputra River seems to have reached a plateau. Prime Minister Modi's May 2015 visit to China brought no new announcements for cooperation, though he specifically called for "tangible progress" on the issue and described it as an "irritant." One can only speculate as to why no new agreements were signed (in contrast to the preceding decade, when several small steps were taken), but it seems likely that this first visit was seen by China as a "get to know you" event and Prime Minister Modi himself went to China emphasizing economic issues, including attracting investment to bolster his new "Make in India" manufacturing campaign. A broader interpretation is that cooperation on the Brahmaputra River, because it overlaps with the contested territorial issue, will be a painstaking and drawn-out process similar to India-China negotiations on the border and the territorial dispute itself.

We share the assessment of a Chinese specialist on the issue, who said “since China still has border disputes with Bhutan and India, it is understandable that there would not be any substantial negotiations on the use and protection of transboundary waters before more vital and urgent border disputes are resolved.”<sup>168</sup>

## India, northeast India, and the Brahmaputra River: The subnational factor

India’s perspectives and policies on the Brahmaputra River are also influenced by northeast India’s increasing institutionalization in India’s government structure, its higher political profile, and its rising role in India’s international relations. The growing weight of the “northeast India subnational factor” has fused with concerns about China’s upstream activities and the salience of trans-boundary rivers in India-China relations.

Though the Brahmaputra River flows through only two of eight northeast Indian states—one of which is disputed territory with China—its drainage area and catchment affect a wider area of the region.<sup>169</sup> By state, the areas are: Arunachal Pradesh, Assam, Meghalaya, West Bengal, Nagaland, and Sikkim.<sup>170</sup> The Brahmaputra River is thus a socio-economic resource (but occasionally also a source of destructive floods) for an isolated and under-developed Indian region. The region is essentially an “island” separate from India (Indian interlocutors spoke of India as the “mainland” vis-à-vis the northeast) because it is connected to peninsular India only by the narrow “Siliguri Corridor” or “Chicken’s Neck” (25-km wide at its narrowest) and surrounded by Bangladesh and/or Myanmar. Integrating the isolated northeast region into India’s mainland is a state- and nation-building project within India’s larger national project. Even as India’s government has dealt with differences

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<sup>168</sup> Chen Huiping, “The 1997 UNWC and China’s Treaty Practice on Transboundary Waters,” paper presented at the United Nations Watercourses Convention Global Symposium, University of Dundee, Jun. 10-14, 2012, 21. This paper also draws on research from the forthcoming paper (Wouters and Chen), “China’s ‘Soft-Path’ to Transboundary Water Cooperation Examined in the Light of Two UN Global Water Conventions—Exploring the ‘Chinese Way,’” 22 *Journal of Water Law* (2013): 229-247.

<sup>169</sup> The drainage area is spread across Arunachal Pradesh (42%), Assam (33%), Meghalaya (6%), and Nagaland (6%). See Shirodkar, “Playing Chinese Checkers,” <http://www.spotlightnepal.com/News/Article/-Playing-Chinese-checkers-with-Indias-hydro-secto>.

<sup>170</sup> Government of India’s Water Resources Information System, [http://india-wris.nrsc.gov.in/wrpinfo/index.php?title=River\\_Info#Brahmaputra\\_River\\_System](http://india-wris.nrsc.gov.in/wrpinfo/index.php?title=River_Info#Brahmaputra_River_System).

regarding the Brahmaputra River with China, it has kept the northeast dimension of the issue in mind.<sup>171</sup>

The Department of Development of the North Eastern Region (NER) was established in 2001 and upgraded to a full ministry in 2004, “underscoring [India’s] complete commitment to ensure development with equity for the NER to unleash the potential of its human and natural resources.”<sup>172</sup> A part of this development involves the construction of dams as discussed above. Politically, the northeast has received more attention in the past decade because India’s third longest serving prime minister, Manmohan Singh (2004-2014), had his upper house parliamentary constituency in Assam. It was Prime Minister Singh who, in cooperation with the World Bank, initiated an important study on the region’s water resources, which was released in 2007.<sup>173</sup> Furthermore, it was Prime Minister Singh who emphasized the need to make northeast India a key part of the country’s expanded ties to Southeast Asia as part of a “Look East” policy. Prime Minister Modi has continued this emphasis on developing India’s northeast and linking development to ties with Southeast Asia.<sup>174</sup>

A key challenge for the central government of India is balancing the northeast region’s persistent questioning of New Delhi’s attention and response to China’s activities while addressing criticisms about the central government’s dam building and other initiatives for the region.<sup>175</sup> Some Indian and Chinese analysts suggest that northeast Indian state governments exaggerate the dangers posed by China’s plans on the upper Brahmaputra while simultaneously complaining about India’s approaches to handling flooding, drought, and erosion problems in the region, because they seek to manipulate the central government in order to increase their

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<sup>171</sup> In June 2011, India’s external affairs minister, S. M. Krishna, stated, “It is important that the States of Arunachal Pradesh and Assam of India harness and utilize the waters of the Brahmaputra. This is the really important issue.” See <http://www.mea.gov.in/media-briefings.htm?dtl/3145/Reports+of+construction+of+a+Dam+on+Brahmaputra+River+by+China>.

<sup>172</sup> Ministry of Development of Northeast Region, Government of India, <http://mdoner.gov.in/content/why-mo-doner>.

<sup>173</sup> World Bank, *Development and Growth in Northeast India*, 2007.

<sup>174</sup> See, for example, Edmund Downie, “Narendra Modi’s Northeast India Outreach,” *The Diplomat*, Dec. 14, 2014, and Elizabeth Roche, “PM Modi Seeks Singapore’s Investment to Develop the Northeast,” *LiveMint*, Feb. 9, 2015.

<sup>175</sup> For an informed view of northeast Indian perspectives, see Mirza Zulfiqur Rahman, “Dams on the Brahmaputra: Concerns in Northeast India,” Institute of Peace and Conflict Studies (IPCS), Sep. 2010.

leverage for project funding.<sup>176</sup> Last year, Assam's chief minister Tarun Gogoi of the Congress party—a party in opposition to the central government led by the Bharatiya Janata Party (BJP)—complained about India's plans to build a new dam on the middle part of the Siang even as Indian officials explained that the purpose of the dam was to prevent flooding in Arunachal Pradesh and Assam.<sup>177</sup>

Also complicating matters is the lack of consensus between the two main Brahmaputra-bearing states—Arunachal Pradesh and Assam. Indeed, one Indian analyst explained that there is anxiety between Arunachal Pradesh, the upper riparian state, and Assam, the lower riparian state. The latter worries primarily that the contemplated dam construction in Arunachal will interrupt river flow downstream in Assam and that the seismic vulnerability of the state will lead to dam breakage and population displacement, among other dangers. More than one interlocutor in India reported that the water ministries of Arunachal Pradesh and Assam do not share river waters data with each other “so why complain about the PRC not giving data when even state ministries don't talk.” In the mid 2000s, as part of India's policy of increasing the region's political institutionalization, a proposal called for establishing a Northeast Water Resources Authority to overcome state-level resistance to information sharing and cooperation. But, according to one leading Indian water expert and former government official, B.G. Verghese of the Centre for Policy Research, Arunachal Pradesh preferred to deal bilaterally with lower riparian Assam.<sup>178</sup>

Apart from the two key state governments, citizen groups and various local and international NGOs have been highly critical of dam-building projects in the region, for a range of environmental,<sup>179</sup> cultural, and economic reasons. Jabin Jacob, director

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<sup>176</sup> For Chinese perceptions, see “Indian Critics of Tibet's First Dam ‘Exaggerating’ Dangers: Chinese Experts Stress Cooperation Over Competition as Solution to Water Disputes,” *ChinaFile*, Asia Society, Dec. 4, 2014, <http://www.bloomberg.com/news/articles/2015-06-04/india-plans-dam-on-tsangpo-brahmaputra-to-check-floods-and-china>.

<sup>177</sup> Z News, “Assam opposes Centre plan to build mega dam on Siang River,” Jun. 5, 2015.

<sup>178</sup> See B. G. Verghese, *Water Resources in the Northeast: Development Options in a Cooperative Framework*, Centre for Policy Research, Background Paper No. 1, Aug. 2006. This was the first in a series of papers done to support the eventual World Bank study entitled *Development and Growth in Northeast India: The Natural Resources, Water, and Environment Nexus*, 2007.

<sup>179</sup> For example, research scholar Mirza Zulfiqur Rahman writes: “The huge number of big and small dams in Arunachal Pradesh has the potential to damage the rich biodiversity and ecosystem of the state considered to be one of the global biodiversity hotspots, result in huge displacement of people in Arunachal Pradesh and Assam, increase the risks of flash floods and environmental disasters in a particularly active seismic zone, and induce conditions for further conflict situations in the region. Many of these effects have already been seen, with some

of the Institute for Chinese Studies, highlights the inadequate local labor supply, which would require the influx of labor from elsewhere in India and thereby add stress to a region “that is already the site of various forms of political instability, including ethnic insurgencies.”<sup>180</sup>

Despite the dissonance between New Delhi and the northeast states, and their persistent need to work on center-state alignment, there is almost no evidence that northeast India is making new, non-India-centric alignments to influence outcomes. Northeast Indian states are not seeking or cutting deals even with neighboring Bangladesh, much less with China—though interactions between Northeast Indian states and Bangladeshi officials do take place. The absence of such linkages, and the reasons for the absence, means that multilateral cooperation on the Brahmaputra basin must be driven by national capitals rather than regional ones—though at least in the Indian case there must be some mechanism to involve or inform state-level governments about such efforts.

Northeast India’s place in the dynamics of the Brahmaputra River is curiously both central and marginal. Physically, northeast India is where the Brahmaputra River flows. Politically, northeast India is where the Brahmaputra River flows through contested terrain with China. And yet, while Delhi has included the key state governments in shaping its approaches to national policy, the role of the northeastern states is far less significant to driving India’s Brahmaputra River policies than bilateral India-China relations and, to some extent, even India-Bangladesh relations. It is to the latter relationship that this chapter now turns.

## India-Bangladesh relations regarding the Brahmaputra River

The physical, historical, and political interdependence of India and Bangladesh shapes bilateral relations, including those regarding the Brahmaputra River. India’s northeastern states surround Bangladesh for approximately 2,500 miles, broken only by a stretch of roughly 200 miles along the southeast corner where Bangladesh and Burma share a border. If Bangladesh is “encircled” by India, India is “separated” by Bangladesh. India’s northeastern states are essentially separated from peninsular

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projects almost near completion, and the damage done in the past five years is starkly noticeable in the state.” Rahman, “Dams on the Brahmaputra.”

<sup>180</sup> Jabin T. Jacob, “Political Economy of Infrastructure Development in the Sino-Indian Border Areas,” *China-India Brief* 22, Feb. 12-25, 2014, <http://lkyspp.nus.edu.sg/cag/publication/china-india-brief/china-india-brief-22>.

India by Bangladesh—except for the narrow Siliguri Corridor. Historically, Bangladesh actually emerged from what is today India. It was first partitioned from the province of Bengal by the British in 1905 (reunited in 1911) and then split off as East Pakistan in 1947 at the time of British India’s partition into independent India and Pakistan. Finally, East Pakistan became today’s Bangladesh when it was separated through secession from Pakistan and military intervention from India during the India-Pakistan War of 1971/Bangladesh War of Independence.<sup>181</sup>

This intricate linkage carries over into riverine relations. Most of Bangladesh’s 57 major rivers originate in or flow through India. Upon entering Bangladesh, the Brahmaputra, for example, becomes the Jamuna River, which joins with the Ganges River (called Padma in Bangladesh), which in turn joins the Meghna River to flow into the Bay of Bengal.

India-Bangladesh relations concerning the Brahmaputra River focus on three elements: cooperation on the Ganges River, waiting for implementation of an agreement on the Teesta River, and implications of India’s Rivers-Linking Project for Bangladesh. These are discussed below.

## Cooperation on the Ganges River

A 1996 water-sharing agreement on the Ganges River is seen in India as an example of India’s accommodative and cooperative behavior on riverine issues.<sup>182</sup> Bangladeshis see India as less generous, often noting India’s use of the Farakka Barrage to divert water from the Ganges to flush the silt-heavy Hooghly River in Kolkata.<sup>183</sup> The Ganges River Treaty clearly does not solve all of the difficulties faced by lower riparian Bangladesh, but it is one of just three water-sharing agreements on major rivers in South Asia.

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<sup>181</sup> This section is drawn from Nilanthi Samaranayake, Satu Limaye, Dmitry Gorenburg, Catherine Lea, and Thomas Bowditch, *U.S.-India Security Burden-Sharing? The Potential for Coordinated Capacity-Building in the Indian Ocean*, CNA, Apr. 2013, [https://www.cna.org/CNA\\_files/PDF/DRM-2012-U-001121-Final2.pdf](https://www.cna.org/CNA_files/PDF/DRM-2012-U-001121-Final2.pdf).

<sup>182</sup> See Chellaney, “India Must Treat Water as a Strategic Resource,” 2015.

<sup>183</sup> For Bangladesh’s perspectives on the Brahmaputra, see the Bangladesh chapter for this project by Nilanthi Samaranayake.

## Waiting for implementation of an agreement on the Teesta River

A second India-Bangladesh water-sharing agreement, reached in 2011 on the Teesta River, awaits political approval for implementation. India's West Bengal chief minister has held up implementation due to political sensitivities in the state. (India's constitution identifies water as a state-level issue, and therefore a chief minister is able to exercise such a role.) Prime Minister Modi's June 2015 visit to Dhaka did nothing to move forward implementation of the Teesta Agreement. However, both in India and in Bangladesh, there is currently optimism that the Teesta Agreement will go forward in due course—though this might require further political alignment between New Delhi, Dhaka, and Kolkata. Such political alignments, both between the center in New Delhi and the state in Kolkata, West Bengal, and between these two jurisdictions and Dhaka, Bangladesh, are unpredictable and not necessarily decisive. For example, while the Teesta Agreement could not move forward during either Prime Minister Singh's or Prime Minister Modi's visits, final ratification and implementation of an India-Bangladesh land boundary agreement, whose negotiation has been complete for decades, occurred during Prime Minister Modi's June 2015 visit to Bangladesh in the absence of political alignments among the three key jurisdictions.

## Implications of India's river-linking project for Bangladesh

A third issue in India-Bangladesh relations regarding the Brahmaputra River relates to India's plans for a river-linking project (RLP). Variations of this project have been on the drawing board for centuries, since the days of British colonial rule. Two recent factors have brought attention to the project. The first is a 2012 Indian Supreme Court ruling calling for speeding up the plan's implementation, and the second is the return to power in 2014 of a BJP government regarded as favorable to the RLP project's implementation.<sup>184</sup>

While the RLP overwhelmingly deals with inter-linking rivers *within* India, there are implications for trans-boundary flows. The precise impact on trans-boundary water flows appears to be a subject of significant debate and rests in part on the technical as well as political decisions that are made in any implementation of such a project. Figure 8 depicts the RLP as it would affect the Brahmaputra River.

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<sup>184</sup> For a recent overview See G. Seetharaman, "Testing the Waters," *The Economic Times Magazine Special Report*, Oct. 4-10, 2015.



Figure 8. India's river-linking project applicable to Brahmaputra River



Source: Map drawn by Mike Markowitz, CNA, 2016. Composite relying on d-maps, <http://www.d-maps.com>; Indian Ministry of Water Resources, National Water Development Agency, "Manas-Sankosh-Tista-Ganga Link," Mar. 14, 2012, [http://india-wris.nrsc.gov.in/wrpinfo/?title=Manas-Sankosh-Tista-Ganga\\_Link](http://india-wris.nrsc.gov.in/wrpinfo/?title=Manas-Sankosh-Tista-Ganga_Link); International Water Management Institute, "Strategic Analysis of India's National River-Linking Project," <http://nrlp.iwmi.org/main/maps.asp>.

One technical study<sup>185</sup> examines “the scope for linking the existing bilateral agreement between India and Bangladesh on sharing water from the Ganges River to an additional provision allowing for mutually beneficial water transfers from the Brahmaputra River.” Other analysis is highly critical of such a project, saying:

The project will alter the natural flow of rivers, cause water-logging, hamper transportation of silt, affect fisheries, submerge forests and reduce water flow in transboundary rivers in downstream Bangladesh.... By diverting water from the Ganga, India would break its formal promises to Bangladesh under the 1996 Ganga Water Treaty—that no water would be diverted away from the Ganga above the barrage at Farakka, a few kilometres from the India-Bangladesh border.<sup>186</sup>

However, whatever the impacts might be, the prospect for implementing the RLP in the near term in a way that would affect Bangladesh is widely regarded, both in India and in Bangladesh, as unrealistic for a host of technical, financial, and political reasons. Concerns about the RLP in India-Bangladesh relations are trumped by differences over the existing Ganges water-sharing agreement and implementing the completed Teesta Agreement, as well as over managing overall India-Bangladesh riverine relations through the Joint Rivers Commission (JRC).

Beyond these three priorities, India-Bangladesh cooperation is limited. Each recognizes its dependence on the other: India knows that transit rights through Bangladesh will help boost development in India’s northeast, and Bangladesh appreciates India’s upper riparian position. However, such mutual dependence has led to only limited cooperation beyond directly bilateral issues and approaches. Based on interviews in India, interest in multilateralizing cooperation that would include Bangladesh appears very low. There is little evidence from interviews in India or Bangladesh, for example, that India is using cooperation with Bangladesh to pressure China. Bangladesh has its own concerns about China’s planned activities on the upper reaches of the Brahmaputra and is engaged in discussions directly with Beijing on these issues.<sup>187</sup>

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<sup>185</sup> Anik Bhaduri and Edward Barbier, *Linking Rivers in the Ganges-Brahmaputra River Basin: Exploring the Transboundary Effects*, International Water Management Institute, 2008.

<sup>186</sup> Juhi Chaudhury, “India Renews ‘Disastrous’ River-Linking Project,” *The Third Pole.net*, Nov. 20, 2014.

<sup>187</sup> For Bangladesh’s perspectives on the Brahmaputra, see the Bangladesh chapter for this project by Nilanthi Samaranayake.

## Multilateral cooperation in the Brahmaputra basin: India's perspective

India currently takes a bilateral approach to the Brahmaputra River for several reasons. First, India mostly favors bilateral diplomacy with its neighbors—especially on sensitive issues. Second, India's main interlocutor and challenge on the Brahmaputra River, China, also emphasizes bilateral diplomacy. Third, India, as a middle riparian country, has different concerns and interests vis-à-vis upper riparian China and lower riparian Bangladesh that are likely better addressed bilaterally. It is unclear what benefits would accrue to India from “multilateralizing” Brahmaputra River issues. Indeed, some Indians express the view that a multilateral setting would allow Bangladesh to gain China's support for criticisms of India's river policies. Fourth, India already has bilateral water sharing and hydrological information sharing agreements with South Asian riverine neighbors and with China. Indeed, one former Indian government official recounted that India used the example of India-Pakistan riverine cooperation to make the case to China in the early 2000s to share hydrological data regarding the Brahmaputra River.

India's current emphasis on bilateral approaches to Brahmaputra issues does not rule out future multilateral cooperation. First, India is a member of numerous organizations and arrangements that bring together countries with shared river waters, including the widest such organization relevant to the region—the South Asian Association for Regional Cooperation (SAARC). Improved relations across South Asia over time could theoretically create a mechanism along the lines of the Mekong River Commission (MRC). But this seems like a distant prospect indeed, given the current poor state of intra-South Asia relations. An additional constraint is that the membership of these organizations and arrangements are not consistent with the three key Brahmaputra riparian states—China, India, and Bangladesh.

The closest organization in terms of membership and relevance to Brahmaputra River management is the Bangladesh-China-India-Myanmar (BCIM) forum. While Myanmar is not a Brahmaputra riparian, BCIM could theoretically address water issues. However, India remains quite cautious regarding BCIM and appears to want that organization to continue to focus on land transportation connections for now rather than expand its agenda. There was little enthusiasm among Indian interlocutors to bring the Brahmaputra River issue to BCIM. Second, in the absence of a Brahmaputra-specific arrangement, India and other riparians could create a trilateral, Brahmaputra River-only organization. But such a major initiative seems some distance away because India does not seem interested.

Multilateral cooperation on the Brahmaputra River does not elicit much support from India at the current time and is not likely to do so for the foreseeable future.