

India-Bangladesh Riparian Relations: Contextualizing Transboundary Ties

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Rivers are an important resource for nation-states as they provide water for domestic uses, irrigation for agriculture and modes of transport.¹ Rivers also have an emotive component to them as they provide much cultural fodder for the lived experiences of those who live near them. Stress on freshwater has been increasing due to rising population, pollution, urbanization, industrialization and climate change. Competing demands for freshwater have arisen on rivers, especially those which are transboundary in nature. More than 200 water systems are shared by two or more nations and common rivers also form boundaries between nations, making them extremely potent sources of competing demands between countries, especially given the scarcity of freshwater.² Several countries are highly dependent on freshwater that originates in other countries, rendering them acutely vulnerable to any activity on these water systems by the upper riparian nations. There are several historical and ongoing conflicts over such transboundary water systems that have been documented. There is a trend towards an increase in attempts to control rivers by damming and diverting water by countries for energy production and other utilitarian purposes. Plans and implementation of such activities have increased consternation and protest by lower riparian countries. Without international cooperation, the risk of such contention spilling out into conflicts between nations increases.³

India and Bangladesh, two countries with a huge population and high demand for freshwater, share fifty-four rivers. Amicably sharing freshwater of these transboundary rivers has been a recurrent challenge for the two countries. This article examines some of the prominent transboundary river-water issues that plague India-Bangladesh ties. It is found that despite present-day political developments being a major factor in delaying the resolution of

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transboundary-related issues, the latter is a legacy of the partition of British India. It is also found that despite headway being made on several other aspects of India-Bangladesh ties, including the re-opening of inland water routes, that of amicably sharing river waters has not adequately progressed. It is contended that the development of mutually acceptable ways to manage the sharing of the fifty-four transboundary rivers would cinch India's position as a benefactor of Bangladesh and go a long way in fending off China's influential and more powerful advances in Bangladesh.

India-Bangladesh: Water Woes

Several countries are facing the question of equitably sharing waters of transboundary rivers, but there is no binding global international agreement due to the complexity that the issue generates. India and Bangladesh are neighbours and riparian countries with enormous and ever-increasing demands and stress on freshwater, making the transboundary rivers between them a site of contestation.⁴

Both India and Bangladesh face a precarious freshwater-related scenario in contemporary times. India is the second highly populous nation in the world with enormous energy, agriculture and industrialization-related demands. The strain on freshwater in India is compounded by other issues such as lack of adequate water in the South of India and flood-prone rivers in the North and East of the country. Climate change-induced issues and water pollution compounds to freshwater-related complexities for India. India also has several transboundary rivers and has differing riparian statuses depending on the river in question. It is the upper riparian to the fifty-four rivers that enter Bangladesh giving it an advantage in controlling the flow of the rivers. Bangladesh is a coastal country grappling with a host of intertwined problems, including refugees from neighbouring coup-ridden Myanmar and potentially irrevocable climate change, with its basis in anthropogenic factors, related to sea-level rise. These problems are amplified by others, including a large population, (Bangladesh is the eighth most populous country in the world, making it one of the most densely populated in the world) with intense freshwater needs for increasing energy, housing, urbanization, and industrialization, among others.

Despite several advances in their ties, India and Bangladesh have a host of unresolved issues at the diplomatic, economic and political levels. India, shares with Bangladesh its longest international border, at 4096 km, which presents its own share of problems. While the land boundary agreement of

2015 settled the problems of enclaves and adverse territories which were a legacy of the partition, and the maritime boundary issue was settled after a judgement from an international tribunal, other issues continue to plague the situation on the ground. For example, the porous and seemingly surveillance-proof border has been used by anti-national elements to ramp up insurgency efforts against the Indian state and other concerns are related to human, arms and drugs trafficking. It is also increasingly entwined with local and national politics on the Indian side. It was evident in the protests against the Citizenship Amendment Act 2019, which granted expedited citizenship to non-Muslims who came from Bangladesh to India until December 2014, which led to an Internet clampdown and curfew in parts of Assam.

One of the most enduring issues in their ties relates to contentions over sharing water of transboundary rivers. The partition of India earlier in 1947 and the creation of Bangladesh subsequently in 1971 endowed the region with a nation-state countenance of larger region that was once ruled by the British. The root of the water sharing problems in South Asia thus has colonial history. India is the immediate upper riparian country for Bangladesh, which is located in the floodplains of the Ganges, the Brahmaputra and the Meghna rivers. Prior to reaching Bangladesh, they flow through Nepal, Bhutan, China and India. Apart from these, about 50 such transboundary rivers are entering Bangladesh through India. The rivers discharge into the Bay of Bengal after traversing Bangladesh. Since it shares several of its rivers with upper riparian countries, activities of the upper riparians on these rivers, leave the lower riparians susceptible to floods and droughts, which prompts a cascade of other water-related issues for the population and agriculture, energy and industrialization.

Case Studies of Transboundary Concerns

Farakka Barrage and the Ganges Water-Sharing Treaty

A barrage across the Ganga at Farakka was constructed by India in 1975 to divert the flow of water to the Hooghly River to ensure that silting would not threaten the port of Calcutta.⁵ Bangladesh raised concerns about the depletion of the flow of water due to the construction of the barrage on the transboundary river. A Ganges Water-Sharing Treaty was signed between the two nations in 1996 which regulates water distribution from the Farakka Barrage until 2026.⁶ According to the treaty, “India can withdraw upto 40,000 cusecs of flow if the availability exceeds 75,000 cusecs. If availability at Farakka falls below 70,000 cusecs, the flow will be divided equally between

the two countries, while guaranteeing 35,000 cusecs to Bangladesh if the flow is in the range of 70,000-75,000 cusecs⁷ It also ensures that, “During the critical month of April, Bangladesh will get a guaranteed flow of 35,000 cusecs in the first and last ten days of April, and 27,633 cusecs during the period 11-20 April”.⁸ The treaty was a testament to the will shown by both the governments to foreground long-term economic benefits to solve political deadlocks.⁹ The Ganges Water-Sharing treaty espouses the principles of international water law, such as the “do no harm” principle and “reasonable use” despite India not being a signatory to the 1997 *UN Convention on Non-Navigational Uses of International Watercourses*.

Despite the treaty, several unresolved issues relating to water sharing continue to persist. The barrage had been a point of contention for Bangladesh-India transboundary water relations.¹⁰ First, the impact of climate change was not incorporated into the terms of the treaty.¹¹ Second, Bangladesh has often brought up the issue that the barrage has caused adverse environmental and social implications, including the increased chances of floods and the flow of environmental refugees into India.¹² Third, India has been called out for preserving the status quo through the treaty instead of addressing the difference in the level of dependency on the Ganges.¹³ Fourth, studies have shown that despite the treaty, Bangladesh was not allowed its guaranteed share of water during the critical dry periods.¹⁴ Fifth, there has been no attempt by India to address floods, droughts and livelihood impacts, due to the continued use of the barrage.¹⁵ Bangladesh continues to suffer large-scale desertification and flooding despite the Ganges treaty.¹⁶ Due to these consequences, the “agroecological and economic well-being of Bangladesh” is also harmed.¹⁷ Sixth, reduced freshwater flow has also been blamed for threatening the ecology of the wetlands of the Sundarbans and mangrove forests.¹⁸ There is an immediate need for the two countries to explore “a basin-wide agreement to secure the Sunderbans” to prevent further ecological problems.¹⁹ The Memorandum of Understanding (MoU) on Conservation of the Sundarbans between the two signed on 6 September 2011 is based only on conserving the forest and does not relate to the other challenges of the Sundarbans.²⁰ The reductionist “arithmetic hydrology” paradigm on which the treaty was based, concentrated on the flow of water, not on the role of sediments in the broader ecosystem.²¹ Seventh, the treaty does not include Nepal, despite it being the upper riparian nation.²² While Bangladesh backs the inclusion of Nepal, India prefers bilateral negotiations.²³ Eighth, the treaty does not include dispute resolution guidelines, which complicates the resolution of contentions between the countries.²⁴ Ninth,

the barrage has become an issue even for interstate disputes between Bihar and West Bengal with Bihar calling for the dismantling of the barrage as floods in Bihar have been linked to the barrage.²⁵ The renewal of the treaty in 2026 should thus take into consideration these issues to ensure that the concerns on siltation, floods, and droughts are addressed and ecological integrity is maintained.²⁶ A revision of the treaty by considering these issues would go a long way in promoting meaningful cooperation between the two countries.

Teesta River

Another transboundary issue that plagues the bilateral ties between India and Bangladesh is related to the sharing of the Teesta river waters, the fourth largest transboundary river between the two countries. The Teesta is approximately 414 kilometres in length, of which 150 km flow through Sikkim, 123 through West Bengal, and 140 km flow across Bangladesh.²⁷ Both India and Bangladesh have overlapping and contradictory claims to the waters and impacts of their barrages. Such issues are also entwined with federal and domestic politics, making it a durable dispute. An arrangement was made in 1983 on the sharing of the Teesta by Bangladesh and India under which Bangladesh would receive thirty-six percent, of the water and India would receive thirty-nine percent of the water, while the remaining twenty-five percent would be unallocated.²⁸ Another water-sharing agreement was to be signed in 2011, under which Bangladesh would receive 37.5 percent of water in the dry season and India would get 42.5 percent.²⁹ A joint hydrological observation station was also to be set up under the treaty for gathering data for the future.³⁰

The livelihoods of around twenty-one million Bangladeshis depend on the Teesta river, especially for the northern parts of the country's agricultural and irrigation needs.³¹ The river, which covers about fourteen percent of the entire cultivated area in Bangladesh and about 7.3 percent of its total population, is also crucial for the water security of Bangladesh.³² The river is important for West Bengal in India as it helps sustain livelihood activities in the districts of Darjeeling, North and South Dinajpur, Cooch Behar and Jalpaiguri which represent about 12.77 percent of the total population of the state.³³

The Teesta barrage built by Bangladesh in 1990 was to aid irrigation in the North but a bigger barrage was built by India called the Gajoldoba barrage.³⁴ The Gajoldoba barrage on the Teesta, built in the late 1990s for irrigation and power generation in West Bengal, is said to have decreased the supply of water to Bangladesh by 3000-4000 cusecs.³⁵ Due to the Teesta Barrage in

Bangladesh, Barrage at Gojoldoba in West Bengal, and two hydroelectricity dams built in, the water flow has been obstructed leading to heavy siltation, erosion and engulfing the land.³⁶ Although the barrages led to improved agriculture production, environmental consequences increased.³⁷ The lack of adequate availability of water in the dry season in Bangladesh has led it to demand greater water sharing from the river.³⁸ There are allegations of the river turning into chars, preventing irrigation and fomenting drought.³⁹ There have also been reports of increased floods, harming crops, cattle and people.⁴⁰

A treaty to resolve the issue could not be signed in 2011 as it was not acceptable to the West Bengal Chief Minister, Mamata Banerjee of the Trinamool Congress (TMC). The TMC, being an important coalition partner of the central government during that time, Chief Minister Banerjee's approval was required to sign the treaty.⁴¹ Chief Minister Banerjee, demanded a sharing ratio of water as 75:25 between India and Bangladesh.⁴² Signing the treaty has not been prudent for West Bengal as the dominant narrative has been framed in a way that it would seem to be wilfully giving water to Bangladesh, even though the state is faced with water stress. Despite vetoing it in 2011, recent statements from Chief Minister Banerjee shows readiness to share water if suitable alternatives are put in place such as canal-based linking of rivers to supplement any possible water loss for West Bengal.⁴³ Currently, Bangladesh wants a guarantee of 50 percent of the river's water supply, especially between December and May, while 55 percent is claimed by India.⁴⁴

To solve the water situation for the transboundary states of the Teesta, Bangladesh hydrologist Ainun Nishat, states that the construction of reservoirs in northern West Bengal would help in water storage during the monsoons for use in the lean periods.⁴⁵ Kalyan Rudra, a hydrologist from India voiced concerns about siltation and evaporation from such reservoirs.⁴⁶ The continuing impasse on the sharing of the Teesta has ramifications for domestic support for the Awami League as it could be politicised by the opposition that would undermine the diplomatic ties between India and Bangladesh.⁴⁷ Recently, in a reference to all the fifty-four rivers shared by the two countries, India's Minister of External Affairs, Subramaniam Jaishankar noted that "Comprehensive management of our rivers and their conservation, as well as the shared environmental responsibility that we have, especially the Sundarbans (the mangrove forest shared by India and Bangladesh) – are areas that we need to work together as part of our commitment to climate action."⁴⁸ However, the signing of the treaty remains elusive given the concerns of India, especially that of the government of West Bengal.

Indian River-linking Project

Another water-related issue that is of concern for Bangladesh is India's River Linking Project (IRLP). The proposal has been around since colonial times and revived in independent India by different governments. It centres on the premise that the rivers in the east and north have too much water while the south has too little. This project would link all the major rivers of the country, including some transboundary ones, and divert the waters to prevent flooding and divert excess water to the more arid regions. The diversion of water would take place through a series of infrastructures, such as canals, reservoirs and dams.⁴⁹ Under the plan, there would be an interlinking of thirty rivers, including water from the basins of the Brahmaputra and Ganga to the basin of Mahanadi, with 3000 structures for storage and 14900 km of canals.⁵⁰ Out of thirty, the Himalayan component would have fourteen links and the rest would be in the Peninsula.⁵¹ In 2002, the plan to link these rivers through engineering was revived by the Supreme Court of India and it issued an order to implement it in a time-bound manner in 2012. The Court stated that it was in the interest of the nation's benefit and progress to ensure that such a river linking was carried out so as to prevent destruction and to protect people from drought and flood that lead to hunger and poverty.⁵² The project is also supposed to help generate electricity and increase navigation efficiency. More canal networks are it noted would enable more irrigation for agricultural growth and more drinking water supply to urban areas would also be generated by the project which would overcome water shortages for domestic use.⁵³

However, the plan has been questioned by environmentalists who point to possible ecological problems as rivers are far from each other and at different points of elevation. The project may also lead to obstruction in fishing which would lead to the livelihood destruction of many fisherfolk in India and Bangladesh.⁵⁴ It is underlined that social and environmental risk assessments of the planned linking of rivers project have not been shared with citizens of India or Bangladesh.⁵⁵ It has also been met by protests from people at the site of the proposed plan. Most recently, the Ken-Betwa river link has been agreed upon in India to bring water to water-starved regions such as Bundelkhand. This has met with opposition from the communities set to be displaced by the project. Ten villages, located near the proposed Greater Ganga Dam site, that would facilitate the Ken-Betwa Link Project through a canal of 230 km, are expected to be submerged and displacement of over 10,000 people is estimated. In a protest by the people of one of the

ten villages called Daudhan, a memorandum in Hindi was submitted to an expert committee on the Interlinking of Rivers (ILR) programme, constituted by the Union Ministry of Water Resources visiting the region, that read: “The whole village is against displacement to another place. We have clean water, air, forests and land for agriculture, which won’t be available to us in a new place. All of us want basic facilities like electricity, roads, schools and health facilities, so we can enjoy a basic standard of living. So, instead of displacing us, kindly help us get these basic facilities.”⁵⁶

In India, given the federal structure, the project is subject to legal and political challenges by different states, which are often embroiled among themselves in conflict over sharing of river waters.⁵⁷ Additionally, since the rivers such as the Ganges originate in the Himalayas, the concurrence of other riparian states would be required which would not be easy to acquire given the increasing stress over water in the subcontinent.⁵⁸

Bangladesh has repeatedly expressed concern over the adverse consequences for Bangladesh from such a water diversion plan involving a transboundary river. Bangladesh opines that India’s plan to link rivers that are transboundary is against the “spirit of the 2010 Bangladesh–India joint communiqué and the Framework Agreement on Cooperation and Development signed on 6 September 2011” and in conflict with “Article IX of the 1996 Indo-Bangladesh Ganges Water Treaty (1996) and the 1992 UN Convention on Biological Diversity (UNCBD).”⁵⁹ Bangladesh is concerned that the linking of rivers planned by India would result in social and ecological consequences including displacement of people and destruction of habitats in Nepal and Bangladesh.⁶⁰ Involvement of Bangladesh as well as of Nepal and Bhutan would provide a regional approach to the interlinking of the rivers and would alleviate water scarcity for all concerned countries.

Tipaimukh Dam

Another issue which is a problem between India and Bangladesh is the consequences of the proposed Tipaimukh Dam. The plan by India is to build a dam on the Barak River, which is a transboundary river in the Churachandpur district of Manipur near the border of Mizoram. The dam aims to provide flood control and hydroelectric power generation.⁶¹ The Barak river is transboundary, it starts in the Manipur hills.⁶² Within India, the Barak branches into two parts in Assam’s Karimgonj district (India), with the northern branch being called the Surma River and the southern branch the Kushiya River.⁶³ It flows westwards into Bangladesh in Sylhet forming the Sumra basin.⁶⁴ The confluence of the rivers Surma and Kushiya forms the Meghna which joins

the Padma (the combination of the rivers Ganga and Brahmaputra).⁶⁵ It flows a total of 946 km (669 km in Bangladesh), finally discharging into the Bay of Bengal.⁶⁶ The waters of the rivers are important to maintain the requisite salinity in response to sea level rise that is a threat to the coastal country of Bangladesh. The proposed Tipaimukh Dam would regulate the flow of the waters of the Surma and the Kushiara. The region is rich in biodiversity and millions of people in the densely populated country of Bangladesh's northeast reside along the region.

Serious consequences to the people in Manipur and Nagaland have also been flagged.⁶⁷ There have been campaigns in India, especially in Manipur, against the dam given the potentially adverse ecological fallouts for the local people. Memorandums have been submitted draw attention to the submergence of land and consist of demands that include taking people's consent, protecting nature and upholding indigenous rights.⁶⁸

The potential adverse impact of the Tipaimukh given these compulsions have led to concerns about the dam's consequences on the lower riparian areas of Bangladesh.⁶⁹ It is estimated that the dam will cause a great deal of damage to Bangladesh's economy, society and environment.⁷⁰ Bangladesh is concerned about the degradation of the environment, drought, seismic consequences, impact on agriculture and people's displacement due to the controlling of the waters by the proposed dam.⁷¹ Bangladesh has also requested India to share the design information of the project. India has made the Environmental Impact Assessment report public which was met with criticism by water experts of Assam, Mizoram and Manipur from India have raised questions about the scope of the EIA report.⁷² Bangladesh in its impact study of the Tipaimukh Dam estimated that it might reduce average annual monsoon inflow by up to sixteen percent, which may reduce water levels in several locations that would be exacerbated if there is a drier monsoon.⁷³ This would have untold consequences for people and the environment including adverse impacts on fisheries, salinity, erosion and rights. Greater involvement of Bangladesh in the impact study by India would assuage such concerns and provide a stake for both countries in the future fruits of this enterprise.

Multimodal Links

The rivers of Bangladesh are extremely important for Indian connectivity and commerce. Under the Act East policy, India envisages re-opening and reviving the routes through Bangladesh to enable the connectivity of Northeast India with the rest of India and with the ports to promote the movement of people

and goods. The Northeast was well connected through multi-modal links to the rest of India before independence, but these routes were cordoned off after the ties between Pakistan and India deteriorated over time. This left the Northeast connected to the rest of India only via the small 21 km stretch in Siliguri.

To this end the two countries have signed an Indo-Bangladesh Protocol on Inland Water Transit and Trade according to which inland vessels of one country are permitted to transit through specific routes of the other nation.

The existing protocol routes are: Kolkata-Pandu-Kolkata, Kolkata-Karimganj-Kolkata, Rajshahi-Dhulian-Rajshahi and Pandu-Karimganj-Pandu.⁷⁴ The protocol allows 50:50 cargo sharing by vessels of India and Bangladesh for transit and inter-country trade.⁷⁵ Certain ports have also been identified for inter-country trade, in each country. They act as stops for ships allowing it to load and unload cargo, refuelling and refurbishing. The ports in India include Haldia (West Bengal), Kolkata (West Bengal), Pandu (Assam), Karimganj (Assam) and Silghat (Assam). In Bangladesh the ports include Narayanganj, Khulna, Mongla, Sirajganj and Ashuganj.⁷⁶ The Prime Minister of Bangladesh also offered India the use of the Chittagong Port during the recent visit of the External Affairs Minister S. Jaishankar of India stating that it would benefit the states of Meghalaya, Mizoram, Assam and Tripura.⁷⁷

India and Bangladesh have been working towards connectivity through waterways, roadways and railroads. This includes bus services between Agartala and Kolkata via Dhaka, movement of cargo on barges, trial runs and trans-shipments.⁷⁸ Others include the MaitriSetu, a bridge built over the Feni River, reducing the distance between Sabroom in “Tripura and the Chittagong port to just 111 km”; the construction of a “multi-modal transit hub at Sabroom inclusive of road and rail connectivity” to reduce the distance of the Chittagong port; and improvements in road connectivity in “Meghalaya’s Dawki, southern Assam’s Sutarkandi and Tripura’s Akhaura link eastern and south-eastern Bangladesh.”⁷⁹

It is clear that India is in need of reviving and constructing more robust multi-modal transport links in Bangladesh in which rivers will play a significant role. It is also seen that Bangladesh has not impeded such linkages from emerging. Such improvements on the multimodal linkages are examples of cooperative relations between the two countries and they provide a positive framework for the two to collaborate on other river water related issues.

Conclusion

These developments show that there is immense need for greater collaboration in the riparian relationship between India and Bangladesh on international rivers. Some concluding observations can be drawn from the discussion presented above on the transboundary river issues between the two countries.

First, since both countries are considerably dependent on the rivers, it is in their mutual interest to re-establish trade and transit routes and to ensure equitable distribution of water of the transboundary rivers.

Second, India and Bangladesh have made steady progress in sharing such waters as evidenced by the Ganges Treaty which can further be improved by adding clauses on climate change.

Third, given that parts of Bangladesh share similar geomorphology with the Northeast of India, having experts from both countries in impact studies on river-projects in the Northeast would help promote the maintenance of the ecological integrity of the fragile Northeast of India. This will promote an examination of the region as a contiguous geo-ecological terrain instead of a politically ruptured space, the boundaries of which were decided by historical compulsion, which bears no heed to ecological unity.

Fourth, similar to the land boundary agreement of 2015, which brought an end to the enclave and adverse possession issue, which was a legacy of the partition, and in which the federal units were adequately consulted, in the river issues as well, the constituent units in both Bangladesh and India could be consulted and their demands met before planning and implementing the projects.

Fifth, India's actions on the sharing of rivers in an amicable manner could enable it to counter China's presence and its economic and infrastructural investments in countries such as Bangladesh.

Sixth, since the contention of the sharing of international rivers has been a durable issue, the political reasons behind such durability need to be addressed. There may be a need to address the other factors that may be impinging on the settlement of the river issue which may be holding the problem hostage. These may include the lack of regional groupings focusing on the issue; or the absence of an international water tribunal to settle the issue. Moreover, the continuing durability of river water related issues may be due to the absence of a legacy of river -water cooperation in the region given the fact that it was not a necessity in the past when the entire area was not under different political authorities.

Lastly, given the improvement of diplomatic, economic and cultural ties between India and Bangladesh in the recent decades and the advances in the multi-modal cross-country linkages, there is ample scope and ground for the two nations to work towards a more amicable and cooperative framework to solve issues related to transboundary rivers that continue to persist between the two countries.

Notes:

- ¹ Aditya Sood and Bala Krishna Prasad Mathukumalli, “Managing international river basins: reviewing India–Bangladesh transboundary water issues”, *Intl. J. River Basin Management*, 9:1, 2011, pp. 43-52.
- ² Ibid.
- ³ Ibid.
- ⁴ Sumit Vij, Jeroen F. Warner, Robbert Biesbroek and Annemarie Groot, “Non-decisions are also decisions: power interplay between Bangladesh and India over the Brahmaputra River”, *Water International*, 45 (4), 2020, p. 25
- ⁵ Saswati Chanda and Alok Gupta, “The Ganges Water Sharing Treaty: Genesis & Significance”, IPCS, accessed on 29 July 2022, http://www.ipcs.org/comm_select.php?articleNo=310. Aditya Sood and Bala Krishna Prasad Mathukumalli, “Managing international river basins: reviewing India–Bangladesh transboundary water issues”, *Intl. J. River Basin Management*, 9:1, 2011, pp. 43-52.
- ⁶ Saswati Chanda and Alok Gupta, “The Ganges Water Sharing Treaty: Genesis & Significance”, IPCS, accessed on 29 July 2022, http://www.ipcs.org/comm_select.php?articleNo=310. India and Bangladesh Conflict Over the Ganges River, Climate Diplomacy, accessed on 29 July 2022, <https://climate-diplomacy.org/case-studies/india-and-bangladesh-conflict-over-ganges-river>.
- ⁷ Nilanjan Ghosh, Delta Under Siege: Towards the 2026 Ganges Water Sharing Agreement, ORF, 2 June 2020, accessed on 29 July 2022, <https://www.orfonline.org/expert-speak/delta-under-siege-towards-the-2026-ganges-water-sharing-agreement-67212/>.
- ⁸ Saswati Chanda and Alok Gupta, “The Ganges Water Sharing Treaty: Genesis & Significance”, IPCS, accessed on 29 July 2022, http://www.ipcs.org/comm_select.php?articleNo=310.
- ⁹ Ibid.
- ¹⁰ Nilanjan Ghosh, Delta Under Siege: Towards the 2026 Ganges Water Sharing Agreement, ORF, 2 June 2020, accessed on 29 July 2022, <https://www.orfonline.org/expert-speak/delta-under-siege-towards-the-2026-ganges-water-sharing-agreement-67212/>.
- ¹¹ Saswati Chanda and Alok Gupta, “The Ganges Water Sharing Treaty: Genesis & Significance”, IPCS, accessed on 29 July 2022, http://www.ipcs.org/comm_select.php?articleNo=310.

- ¹² Ibid.
- ¹³ Ibid.
- ¹⁴ Ibid.
- ¹⁵ Ibid.
- ¹⁶ Anand Kumar, “Impact of West Bengal Politics on India–Bangladesh Relations, *Strategic Analysis*”, 37:3, 2013, p. 342.
- ¹⁷ Paula Hanasz, “Sharing waters vs. sharing rivers: The 1996 Ganges Treaty”, Global Water Forum, 28 July 2014, accessed on 29 July 2022, <https://globalwaterforum.org/2014/07/28/sharing-waters-vs-sharing-rivers-the-1996-ganges-treaty/>.
- ¹⁸ Abu Siddique, Farakka barrage leads to water crisis in Bangladesh, The Third Pole, 2 June 2015, accessed on 29 July 2022, <https://www.thethirdpole.net/en/uncategorized/farakka-barrage-2/>. Nilanjan Ghosh, Delta Under Siege: Towards the 2026 Ganges Water Sharing Agreement, ORF, 2 June 2020, accessed on 29 July 2022, <https://www.orfonline.org/expert-speak/delta-under-siege-towards-the-2026-ganges-water-sharing-agreement-67212/>.
- ¹⁹ Anamitra Anurag Danda, Flow with the times: The Farakka water treaty, ORF, at <https://www.orfonline.org/research/flow-with-the-times-the-farakka-water-treaty/> accessed on 29 July 2022.
- ²⁰ Nilanjan Ghosh, Delta Under Siege: Towards the 2026 Ganges Water Sharing Agreement, ORF, 2 June 2020, accessed on 29 July 2022, <https://www.orfonline.org/expert-speak/delta-under-siege-towards-the-2026-ganges-water-sharing-agreement-67212/>.
- ²¹ Ibid.
- ²² India and Bangladesh Conflict Over the Ganges River, Climate Diplomacy, accessed on 29 July 2022, <https://climate-diplomacy.org/case-studies/india-and-bangladesh-conflict-over-ganges-river>.
- ²³ Ibid. Paula Hanasz, “Sharing waters vs. sharing rivers: The 1996 Ganges Treaty”, Global Water Forum, 28 July 2014, accessed on 29 July 2022, <https://globalwaterforum.org/2014/07/28/sharing-waters-vs-sharing-rivers-the-1996-ganges-treaty/>.
- ²⁴ India and Bangladesh Conflict Over the Ganges River, Climate Diplomacy, accessed on 29 July 2022, <https://climate-diplomacy.org/case-studies/india-and-bangladesh-conflict-over-ganges-river>.
- ²⁵ Nilanjan Ghosh, Delta Under Siege: Towards the 2026 Ganges Water Sharing Agreement, ORF, 2 June 2020, accessed on 29 July 2022, <https://www.orfonline.org/expert-speak/delta-under-siege-towards-the-2026-ganges-water-sharing-agreement-67212/>.
- ²⁶ Ibid.
- ²⁷ Maya Mirchandani, “The Teesta water dispute: Geopolitics, myth and economics”, ORF Special Report, 2016, accessed on 29 July 2022, <https://www.orfonline.org/research/teesta-water-dispute/>.

- ²⁸ Ranjan, A, Why India and Bangladesh need a resolution on Teesta water sharing. *The Wire*, 29 March 2017, accessed on 29 July 2022, <https://thewire.in/diplomacy/teesta-water-india-bangladesh>.
- ²⁹ Savojit Bagchi, “What is the lowdown on sharing of Teesta waters”, *The Hindu*, 08 April 2017, Available at <https://www.thehindu.com/news/international/the-hindu-explains-teesta-water-sharing/article17894299.ece> accessed on 26 May 2021
- ³⁰ Maya Mirchandani, “The Teesta water dispute: Geopolitics, myth and economics”, ORF Special Report, 2016, accessed on 29 July 2022, <https://www.orfonline.org/research/teesta-water-dispute/>.
- ³¹ Md. Shariful Islam, *Fifty Years of Bangladesh-India Relations*, New Delhi: Pentagon Press, 2022.
- ³² Sagar Prasai and Mandakini Devasher Surie, “Transboundary Water Cooperation Key to Easing South Asia’s Water Woes”, *The Asia Foundation*, 20 March 2013, accessed on 29 July 2022, at <https://asiafoundation.org/2013/03/20/transboundary-water-cooperation-key-to-easing-south-asias-water-woes/>.
- ³³ Akramoy Dutta Majumdar, Why Mamata Banerjee is opposed to sharing Teesta waters, *Livemint*, 11 April 2017, accessed on 29 July 2022, <https://www.livemint.com/Politics/dtlGtxiSUVdJgo7eoBxxDL/Why-Mamata-Banerjee-is-opposed-to-sharing-Teesta-waters.html>.
- ³⁴ Md. Shariful Islam, *Fifty Years Of Bangladesh-India Relations*, New Delhi: Pentagon Press, 2022.
- ³⁵ Akramoy Dutta Majumdar, Why Mamata Banerjee is opposed to sharing Teesta waters, *Livemint*, 11 April 2017, accessed on 29 July 2022, <https://www.livemint.com/Politics/dtlGtxiSUVdJgo7eoBxxDL/Why-Mamata-Banerjee-is-opposed-to-sharing-Teesta-waters.html>.
- ³⁶ Kishor Uprety and Salman M A Salman, “Legal aspects of sharing and management of transboundary waters in South Asia: preventing conflicts and promoting cooperation”, *Hydrological Sciences Journal*, 56(4), 2011, pp. 641-661.
- ³⁷ Mohammed Abdul Baten and Rashed Al Mahmud Titumir, “Environmental challenges of trans-boundary water resources management: the case of Bangladesh”, *Sustainable Water Resources Management*, 2, pp. 13-26, 2016, accessed on 22 July 2022, <https://link.springer.com/article/10.1007/s40899-015-0037-0>.
- ³⁸ Adhikary K. D., Ahmad Q. K., Malla S. K., Pradhan B. B., Rahman K., Rangachari P., Rasheed K. B. S., Verghese B. G., *Cooperation on Eastern Himalayan rivers: opportunities and challenges*, 2000, Dhaka: BUP.
- ³⁹ Md. Shariful Islam, *Fifty Years Of Bangladesh-India Relations*, New Delhi: Pentagon Press, 2022.
- ⁴⁰ Ibid.
- ⁴¹ Maya Mirchandani, “The Teesta water dispute: Geopolitics, myth and economics”,

ORF Special Report, 2016, accessed on 29 July 2022, <https://www.orfonline.org/research/teesta-water-dispute/>.

- ⁴² Mohammed Abdul Baten and Rashed Al Mahmud Titumir, “Environmental challenges of trans-boundary water resources management: the case of Bangladesh”, *Sustainable Water Resources Management*, 2, pp. 13-26, 2016, accessed on 22 July 2022, <https://link.springer.com/article/10.1007/s40899-015-0037-0>.
- ⁴³ Akramoy Dutta Majumdar, Why Mamata Banerjee is opposed to sharing Teesta waters, Livemint, 11 April 2017, accessed on 29 July 2022, <https://www.livemint.com/Politics/dtIGtxiSUVdJgo7eoBxxDL/Why-Mamata-Banerjee-is-opposed-to-sharing-Teesta-waters.html>.
- ⁴⁴ Maya Mirchandani, “The Teesta water dispute: Geopolitics, myth and economics”, ORF Special Report, 2016, accessed on 29 July 2022, <https://www.orfonline.org/research/teesta-water-dispute/>
- ⁴⁵ Savojit Bagchi, “What is the lowdown on sharing of Teesta waters”, The Hindu, 08 April 2017, accessed on 26 May 2021, <https://www.thehindu.com/news/international/the-hindu-explains-teesta-water-sharing/article17894299.ece>.
- ⁴⁶ Jayanta Basu, “Why does the Teesta river run dry in non-monsoon months? Because it has more dams than it needs”, Scroll, 20 June 2017 at <https://scroll.in/article/841068/why-does-the-teesta-river-run-dry-in-non-monsoon-months-because-it-has-more-dams-than-it-needs> accessed on 26 May 2021
- ⁴⁷ Akramoy Dutta Majumdar, Why Mamata Banerjee is opposed to sharing Teesta waters, Livemint, 11 April 2017, accessed on 29 July 2022, <https://www.livemint.com/Politics/dtIGtxiSUVdJgo7eoBxxDL/Why-Mamata-Banerjee-is-opposed-to-sharing-Teesta-waters.html>.
- ⁴⁸ Anirban Bhaumik, “India proposes comprehensive deal with Bangladesh on all 54 common rivers as stalemate continues over deal on Teesta”, Deccan Herald, 20 June 2022, accessed on 29 July 2022, <https://www.deccanherald.com/national/india-proposes-comprehensive-deal-with-bangladesh-on-all-54-common-rivers-as-stalemate-continues-over-deal-on-teesta-1119655.html>.
- ⁴⁹ J. Bandyopadhyay, Perveen S., “The interlinking of Indian rivers: questions on the scientific, economic and environmental dimension of the project”, In: Mirza MMQ, Ahmed AU, Ahmad QK (eds) *Interlinking Rivers in India: Issues and Concern*. Abingdon: Taylor and Francis, 2008, pp 53–76.
- ⁵⁰ Amarasinghe U., Shah T., Malik R., Strategic analyses of the National River Linking Project (NRLP) of India (Series 1). In: *India’s water future: Scenarios and issues*. New Delhi: International Water Management Institute, 2008.
- ⁵¹ Rashid H., “India’s proposed river linking mega project”, The Daily Star, 7 March 2012, at <http://www.thedailystar.net/newDesign/news-details.php?nid=225217> accessed on 29 July 2022
- ⁵² Amarasinghe U., Shah T., Malik R., Strategic analyses of the National River Linking

- Project (NRLP) of India (Series 1). In: India's water future: Scenarios and issues. New Delhi: International Water Management Institute, 2008.
- ⁵³ Maya Mirchandani, "The Teesta water dispute: Geopolitics, myth and economics", ORF Special Report, 2016, accessed on 29 July 2022, <https://www.orfonline.org/research/teesta-water-dispute/>
- ⁵⁴ J. Bandyopadhyay, Himalaya: prospects of and constraints on sustainable development, In: Peter BS (ed) The State of the World's Mountains: A Global Report. London: Zed Books, 1992, pp 93–126.
- ⁵⁵ Mohammed Abdul Baten and Rashed Al Mahmud Titumir, "Environmental challenges of trans-boundary water resources management: the case of Bangladesh", *Sustainable Water Resources Management*, 2, pp. 13-26, 2016, accessed on 22 July 2022, <https://link.springer.com/article/10.1007/s40899-015-0037-0>.
- ⁵⁶ Himashu Thakkar, The Ken-Betwa project reflects the ill-conceived rationale behind river-linking, *The Hindu*, 17 April 2021, at <https://www.thehindu.com/sci-tech/energy-and-environment/the-ken-betwa-project-reflects-the-ill-conceived-rationale-behind-river-linking/article34335304.ece> accessed on 29 Junly 2022
- ⁵⁷ Khalid A. R., "The interlinking of rivers project in India and International water law: an overview", *Chinese J Int Law*, 3(2), 2004, pp. 553–570
- ⁵⁸ Kishor Uprety and Salman M. A. Salman, "Legal aspects of sharing and management of transboundary waters in South Asia: preventing conflicts and promoting cooperation", *Hydrological Sciences Journal*, 56(4), 2011, pp. 641-661.
- ⁵⁹ Mohammed Abdul Baten and Rashed Al Mahmud Titumir, "Environmental challenges of trans-boundary water resources management: the case of Bangladesh", *Sustainable Water Resources Management*, 2, pp. 13-26, 2016, accessed on 22 July 2022, <https://link.springer.com/article/10.1007/s40899-015-0037-0>.
- ⁶⁰ Amarasinghe U., Shah T., Malik R., Strategic analyses of the National River Linking Project (NRLP) of India (Series 1). In: India's water future: Scenarios and issues. New Delhi: International Water Management Institute, 2008.
- ⁶¹ Mohammed Abdul Baten and Rashed Al Mahmud Titumir, "Environmental challenges of trans-boundary water resources management: the case of Bangladesh", *Sustainable Water Resources Management*, 2, pp. 13-26, 2016, accessed on 22 July 2022, <https://link.springer.com/article/10.1007/s40899-015-0037-0>.
- ⁶² Ibid.
- ⁶³ Ibid.
- ⁶⁴ Ibid.
- ⁶⁵ Ibid.
- ⁶⁶ Ibid.
- ⁶⁷ Md Saidul Islam and Md Nazrul Islam, "Environmentalism of the poor: the Tipaimukh

- Dam, ecological disasters and environmental resistance beyond borders”, Bandung: Journal of the Global South, 27, 2016, accessed 29 July 2022, <https://bandungjournal.springeropen.com/articles/10.1186/s40728-016-0030-5>.
- ⁶⁸ Imtiaz Ahmed, Teesta, Tipaimukh and river Linking: Danfer to Bangladesh – India Relations, *Economic and Political Weekly*, 47 (16), 2012, 29 July 2022, <https://www.epw.in/journal/2012/16/river-interlinking-uncategorised/teesta-tipaimukh-and-river-linking-danger>.
- ⁶⁹ Mohammed Abdul Baten and Rashed Al Mahmud Titumir, “Environmental challenges of trans-boundary water resources management: the case of Bangladesh”, *Sustainable Water Resources Management*, 2, pp. 13-26, 2016, accessed on 22 July 2022, <https://link.springer.com/article/10.1007/s40899-015-0037-0>.
- ⁷⁰ Md Saidul Islam and Md Nazrul Islam, “Environmentalism of the poor: the Tipaimukh Dam, ecological disasters and environmental resistance beyond borders”, Bandung: *Journal of the Global South*, 27, 2016, accessed 29 July 2022, <https://bandungjournal.springeropen.com/articles/10.1186/s40728-016-0030-5>.
- ⁷¹ Imtiaz Ahmed, Teesta, Tipaimukh and river Linking: Danfer to Bangladesh – India Relations, *Economic and Political Weekly*, 47 (16), 2012, 29 July 2022, <https://www.epw.in/journal/2012/16/river-interlinking-uncategorised/teesta-tipaimukh-and-river-linking-danger>.
- ⁷² Mohammed Abdul Baten and Rashed Al Mahmud Titumir, “Environmental challenges of trans-boundary water resources management: the case of Bangladesh”, *Sustainable Water Resources Management*, 2, pp. 13-26, 2016, accessed on 22 July 2022, <https://link.springer.com/article/10.1007/s40899-015-0037-0>.
- ⁷³ Ibid.
- ⁷⁴ “Assam Inland Water Transport Development Society”, Indo-Bangladesh Protocol Route, 29 July 2022, <https://www.aiwtdsociety.in/page/special-fetaures/indo-bangladesh-protocol-route7>.
- ⁷⁵ “Inland Waterways Authority of India”, Indo Bangladesh Protocol, accessed on 29 July 2022 <http://iwai.nic.in/indo-bangladesh-protocol>.
- ⁷⁶ “Assam Inland Water Transport Development Society”, Indo-Bangladesh Protocol Route, 29 July 2022, <https://www.aiwtdsociety.in/page/special-fetaures/indo-bangladesh-protocol-route7>.
- ⁷⁷ Rahul Karmakar, “Explained | Will the Northeast benefit from Bangladesh offer of services at Chittagong Port?”, *The Hindu*, 15 May 2022, accessed on 29 July 2022, <https://www.thehindu.com/news/international/explained-will-the-northeast-benefit-from-bangladesh-offer-of-services-at-chittagong-port/article65413604.ece>.
- ⁷⁸ Ibid.
- ⁷⁹ Ibid.

