

The Ganges Treaty at a Crossroads: What Lies Ahead for India-Bangladesh Water Sharing

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The management of transboundary rivers remains one of the most complex challenges in international relations. It requires a delicate balance between safeguarding national interests and strengthening regional cooperation². This dilemma is particularly pronounced in South Asia, where the Ganges River, an essential lifeline for millions flows from India into Bangladesh. The 1996 Ganges Water Sharing Treaty (GWT) marked a significant milestone in bilateral relations that aimed to resolve the long-standing dispute over dry-season water flows. It emerged following India's construction of the Farakka Barrage in 1975. For nearly three decades, the Treaty has provided a framework for water allocation between the two riparian states. However, its implementation has encountered persistent challenges. It revealed structural weaknesses and limitations in ensuring equitable distribution.

As the Treaty approaches the end of its 30-year term in 2026, it stands at a critical juncture. Recent diplomatic engagements, including meetings of the India-Bangladesh Joint River Commission (JRC) highlights the divergence in priorities between the two sides. Bangladesh has formally proposed an extension of the Treaty's duration and sought a more predictable and equitable water share. The country suggests an average flow of 40,000 cusecs. India, conversely, has adopted a cautious stance. It emphasizes the need to account for its domestic water demands and to build consensus among key riparian states such as West Bengal and Bihar³.

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² Kazi Saidur Rahman, Zahidul Islam, Umme Kulsum Navera, and Fulco Ludwig, "A Critical Review of the Ganges Water Sharing Arrangement," *Water Policy* 21, no. 2 (2019): 259–276.

³ TBS Report, "Bangladesh, India to Hold Talks in Delhi on Ganges Water-Sharing Treaty on Tuesday," *The Business Standard*, September 7, 2025, 5:00 p.m.



Source: Dhaka Tribune

Evolving political dynamics in both countries further complicate the prospects of renewal. In India, growing state-level pressures and increasing internal water stress are likely to influence national decision-making. In Bangladesh, the approach of national elections and intensifying public concern over water scarcity have amplified the urgency of securing a more favorable and dependable arrangement. Consequently, water sharing has become not merely a technical or hydrological issue but a politically sensitive matter intertwined with questions of regional trust, intergovernmental coordination, and long-term diplomatic engagement.

As the Ganges Treaty stands at this crossroads, its renewal will serve as a crucial test of political commitment and regional cooperation determining whether India and Bangladesh can transcend competing national interests to establish a more adaptive, equitable, and climate-resilient framework for transboundary water governance.

History of the Ganges Water Sharing Treaty

The first major water-sharing arrangement between India and Bangladesh was the Ganges Agreement of 1977, signed in November 1977 following India's unilateral withdrawal of water from June 1975 to November 1977⁴. This five-year agreement outlined the division of dry-season flow (January–May) into 10-day periods, based on 75% availability of flow at Farakka calculated

⁴ Ishtiaq Hossain, "Bangladesh-India Relations: The Ganges Water-Sharing Treaty and Beyond," *Asian Affairs: An American Review* 25, no. 3 (1998): 131–150.

from historical data (1948–1973). A key feature of the 1977 Agreement was the guarantee clause, ensuring Bangladesh received at least 80% of its scheduled share if actual flows fell below the expected level⁵.

After the agreement expired in 1982, two Memoranda of Understanding (MoUs) were signed in 1983 and 1988 with only minor adjustments to the 1977 arrangement. While the total share between the two countries remained unchanged, the crucial guarantee clause was removed⁶. Between 1989 and 1996, no formal mechanism existed for sharing Ganges waters.



Figure 1: Ganges-Brahmaputra-Meghna Basin

The signing of the Ganges Water Sharing Treaty (GWT) on 12 December 1996 marked a major milestone in resolving the long-standing dispute. The 30-year Treaty introduced a new sharing formula based on the average historic flow at Farakka from 1949 to 1988, dividing the dry-season period into fifteen 10-day cycles. One of its most distinctive features was the provision

⁵ Salman MA Salman and Kishor Uprety, "Hydro-Politics in South Asia: A Comparative Analysis of the Mahakali and the Ganges Treaties," *Natural Resources Journal* (1999): 295–343.

⁶ Muhammad Mizanur Rahaman, "Integrated Ganges Basin Management: Conflict and Hope for Regional Development," *Water Policy* 11, no. 2 (2009): 168–190.

guaranteeing each country 35,000 cusecs of water in alternate 10-day cycles during the critical low-flow months of March to May⁷.

Both the 1977 Agreement and the 1996 Treaty applied to the same dry-season period; however, they differed significantly in terms of flow estimation, share distribution, and the inclusion of a guarantee clause features that continue to influence water-sharing debates between the two countries today.

South Asia's Water Conflict, Geopolitics, and India's Hydro-Hegemony

The transboundary river systems of South Asia are not merely hydrological networks but geopolitical fault lines where national security, economic ambition, and sovereignty intersect. Water in this region has evolved from a developmental concern into a strategic issue that shapes the diplomatic behavior and power dynamics of states. South Asia's hydro-diplomacy remains dominated by unilateral projects, nationalistic rhetoric, and distrust. These hinder the emergence of cooperative water governance⁸. At the center of this hydropolitical landscape lies India, whose upper riparian position across major basins has enabled it to act as a hydro-hegemon⁹. India's geographic advantage allows it to exercise control over shared waters and influence the political and developmental trajectories of its smaller neighbors Bangladesh, Nepal, and Pakistan.

The Architecture of Hydro-Hegemony: Control, Bilateralism, and Developmentalism

India's dominance in regional water politics is maintained not through overt coercion but through institutionalized mechanisms such as bilateral treaties and developmental narratives. Its persistent preference for bilateralism has entrenched asymmetric control. India under Indira Gandhi viewed bilateralism as a vital strategic mechanism for regional security, whereas neighboring countries perceived it as a tool of dominance. This approach isolates smaller states, and prevents them from

⁷ Farakka Treaty, *Treaty between the Government of the People's Republic of Bangladesh and the Government of the Republic of India on Sharing of the Ganga/Ganges Water at Farakka* (1996).

⁸ Amit Ranjan, "Disputed Waters: India, Pakistan and the Transboundary Rivers," *Studies in Indian Politics* 4, no. 2 (2016): 191–205.

⁹ Muhammad Imran, Kamran Mustafa, Ghulam Mustafa, and Muhammad Usman Khan, "Hydropolitics and Conundrum of Transboundary Water Issues: A Case Study of South Asia," *Journal of Politics and International Studies* 7, no. 1 (2023)

forming a unified front or pursuing multilateral solutions¹⁰. The unresolved Teesta River dispute exemplifies India's insistence on bilateral negotiations and its aversion to third-party mediation.

India further legitimizes its control through the discourse of basin developmentalism, portraying upstream projects as apolitical and technocratic initiatives for regional prosperity. This framing, rooted in the Indus Waters Treaty, disguises the geopolitical motives embedded within India's hydraulic interventions¹¹. Conversely, downstream states emphasize "downstream territorialism," asserting that river management is a matter of ecological survival and national sovereignty rather than mere development planning.

The Downstream Dilemma: Vulnerability and Resistance

For downstream countries, India's hydro-hegemony translates into acute vulnerability. Pakistan's dependence on the Indus and Bangladesh's reliance on the Ganges-Brahmaputra-Meghna (GBM) basin illustrate the fragility of their water security. Historical warnings, such as Pakistan's 1953 statement about potential "starvation of 76 million" due to water deprivation, highlight the existential stakes. Similarly, Bangladesh's southwest region has endured severe ecological degradation from India's Farakka Barrage, with reduced dry-season flow at Hardinge Bridge since 1975¹².

In response, Pakistan has resorted to international arbitration, as seen in the Kishenganga Dam case, invoking treaty-based legal mechanisms to challenge India's dominance. Bangladesh has pursued diplomatic channels, notably spearheading the creation of SAARC to promote regional cooperation. Yet, SAARC's effectiveness has been undermined by India's resistance to multilateral frameworks and its preference for managing water disputes bilaterally preserving the asymmetrical order that defines South Asia's hydropolitics¹³.

¹⁰ Stephen Brichieri-Colombi and Robert W. Bradnock, "Geopolitics, Water and Development in South Asia: Cooperative Development in the Ganges–Brahmaputra Delta," *Geographical Journal* 169, no. 1 (2003): 43–64.

¹¹ Majed Akhter, "Adjudicating Infrastructure: Treaties, Territories, Hydropolitics," *Environment and Planning E: Nature and Space* 2, no. 4 (2019): 831–49.

¹² Kazi Saidur Rahman, Zahidul Islam, Umme Kulsum Navera, and Fulco Ludwig, "A Critical Review of the Ganges Water Sharing Arrangement," *Water Policy* 21, no. 2 (2019): 259–276.

¹³ Stephen Brichieri-Colombi and Robert W. Bradnock, "Geopolitics, Water and Development in South Asia: Cooperative Development in the Ganges–Brahmaputra Delta," *Geographical Journal* 169, no. 1 (2003): 43–64.

The Reality and limitations of the Ganges Water Sharing Treaty

The Ganges Water Sharing Treaty (GWT) of 1996 between India and Bangladesh is frequently hailed as a landmark diplomatic achievement. Yet beneath this success story lies a far more complicated reality; one marked by persistent inequities, structural weaknesses, and an overall failure to ensure water security for Bangladesh. The Treaty's endurance on paper contrasts sharply with its inability to deliver fair, reliable, and sustainable outcomes in practice.

Inadequate Water Allocation for Bangladesh

The Treaty's formula for water sharing, applied between January 1 and May 31 each year, was intended to ensure fairness during the dry season. However, in practice, the allocation mechanism disproportionately disadvantages Bangladesh during periods of low flow. The Treaty guarantees Bangladesh a minimum of 35,000 cusecs in alternating ten-day cycles during April and May which are the the driest months. Yet when total discharge at Farakka falls below 50,000 cusecs, the formula becomes heavily skewed toward India. In several years, Bangladesh received less than the agreed share for prolonged periods. This shortfall set a worrying precedent that has persisted throughout the Treaty's duration¹⁴.

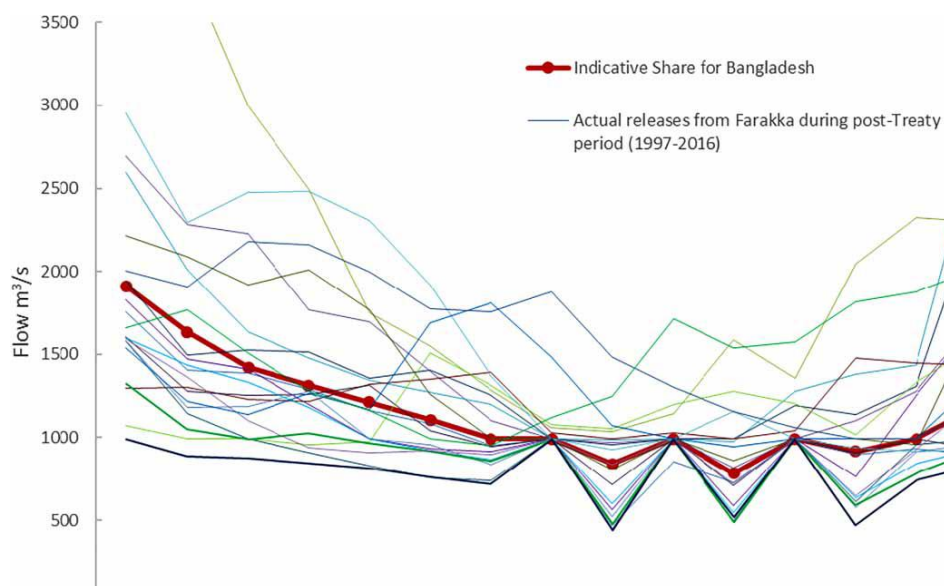


Figure 2: A comparison of Bangladesh's actual annual post-Treaty flows (1997–2016) with the Treaty's indicative release levels from Farakka. Source: Rahman et al. 2019.

¹⁴ Kazi Saidur Rahman, Zahidul Islam, Umme Kulsum Navera, and Fulco Ludwig, "A Critical Review of the Ganges Water Sharing Arrangement," *Water Policy* 21, no. 2 (2019): 259–76

Flawed Assumption of Average Flow

At the heart of the Treaty lies an outdated assumption that the average flow at Farakka, based on historical data from 1949–1988, would remain roughly constant at 75,000 cusecs. This assumption is now invalid. Increased irrigation withdrawals from upstream Indian states such as Uttar Pradesh and Bihar have reduced the volume reaching the barrage. At the same time climate change through altered rainfall patterns and glacial retreat has further diminished dry-season flows. Consequently, the Treaty is attempting to divide an ever-shrinking pie, resulting in shortfalls for both sides but disproportionately affecting Bangladesh. Hydrological studies confirm that dry-season flows have consistently fallen below the 75,000-cusec benchmark. It undermines the Treaty's viability¹⁵.

Environmental Strain from Inadequate Downstream Flow Provisions

Perhaps the most serious design flaw of the Treaty lies in its narrow, bilateral scope. It is confined to dividing water at a single point Farakka without ensuring a minimum environmental flow downstream to Bangladesh. Since the commissioning of the Farakka Barrage in 1975, this limitation has triggered significant hydrological and ecological changes. Studies show that even after the 1996 Treaty, dry-season flows between 1997 and 2015 declined by about 23%, 43%, and 65% for maximum, average, and minimum discharges, respectively¹⁶.

¹⁵ M. Monirul Qader Mirza, "The Ganges Water-Sharing Treaty: Risk Analysis of the Negotiated Discharge," *International Journal of Water* 2, no. 1 (2002): 57–74.

¹⁶ Md Mahbubur Rahman and Muhammad Mizanur Rahaman, "Impacts of Farakka Barrage on Hydrological Flow of Ganges River and Environment in Bangladesh," *Sustainable Water Resources Management* 4, no. 4 (2018): 767–80.

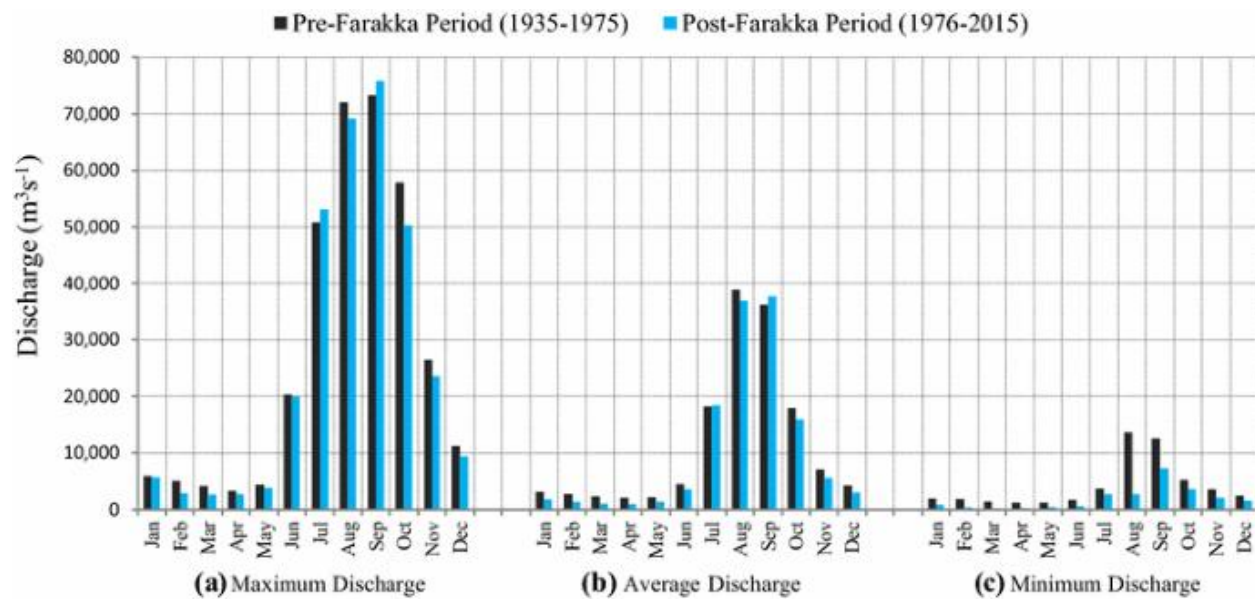


Figure 3: Changes in monthly Ganges discharge at Hardinge Bridge before and after the construction of the Farakka Barrage. Source: Rahman & Rahman, 2018

The resulting reduction in freshwater inflows has heightened salinity intrusion, accelerated riverbank erosion, and reduced soil fertility across southwestern Bangladesh. These effects have harmed agriculture, fisheries, and drinking water sources. It has also threatened livelihoods and food security. In essence, the Treaty remains reactive rather than proactive addressing short-term political pressures instead of pursuing a basin-wide, sustainable water management approach.

Absence of a Dispute Resolution Mechanism

The GWT created a Joint River Commission (JRC) to monitor implementation, but it lacks a binding arbitration mechanism. When disputes arise, they must be escalated to the government level, turning technical disagreements into political standoffs. Bangladesh has repeatedly raised concerns over India's non-compliance in releasing agreed amounts, yet these discussions often end in stalemates rather than actionable outcomes. This institutional weakness is not unique to the Ganges Treaty but reflects a broader governance problem in South Asian water diplomacy¹⁷. Without an independent enforcement body, commitments remain subject to political goodwill rather than legal obligation.

¹⁷ Crow, Ben, and Nirvikar Singh. "Impediments and innovation in international rivers: The waters of South Asia." *World Development* 28, no. 11 (2000): 1907-1925.

The Way Forward: Navigating the Future of the Ganges Water Sharing

As the 1996 Ganges Water Sharing Treaty (GWT) nears its expiration in 2026, Bangladesh faces a decisive moment in its pursuit of equitable access to transboundary water. The renewal of the Treaty will not only shape the country's dry-season water security but also reflect the broader dynamics of India-Bangladesh relations amid climate change, political transitions, and shifting regional geopolitics. To secure a more balanced and resilient arrangement, Bangladesh must adopt a strategic, pragmatic, and forward-looking approach that blends technical expertise with diplomatic finesse.

Bangladesh should move beyond a narrow demand for more water and reframe the negotiation around shared river basin management and climate resilience. The next treaty must emphasize a minimum guaranteed environmental flow to sustain the Ganges-dependent ecosystems, particularly the Sundarbans. It should also replace outdated hydrological assumptions with contemporary flow data and include a climate-adjustment clause that allows periodic review of allocations in response to changing rainfall and flow patterns. Strengthening the technical and scientific capacity of the Joint River Commission (JRC) will be essential to ensure evidence-based decision-making rather than political bargaining. At the same time, Bangladesh raising transboundary water concerns within global forums like the UN Water Conference, BIMSTEC without directly inviting third-party mediation, which India resists. Engaging think tanks, research collaborations, and civil society initiatives can build mutual trust and expand the space for cooperative problem-solving.

India's federal water politics will be a determining factor in the renewal process. West Bengal and Bihar directly depend on the Ganges basin. It makes their consent vital. Bangladesh should recognize this and engage with these states. It should highlight the shared economic benefits of a sustainable river regime. The growing water stress in northern India caused by over-extraction and erratic monsoons may make New Delhi cautious about fixed allocations. In this case, Bangladesh can offer cooperation in joint conservation and climate-adaptation projects to offset those concerns. Current strains in bilateral relations over trade, border management, and migration rhetoric also risk spilling into water diplomacy. To prevent this, Bangladesh should practice issue-based compartmentalization and keep water negotiations insulated from other disputes.

The approach of national elections adds complexity to Dhaka's water diplomacy. Public frustration over water shortages may push political actors to adopt populist positions, but Bangladesh must treat water as a non-partisan national priority to ensure policy continuity beyond electoral cycles. A stable post-election government will have the legitimacy and political capital to pursue sustained negotiations with India.

Ultimately, the renewal of the Ganges Treaty is not just a technical exercise but a test of political will and regional trust. For Bangladesh, the path forward lies in combining scientific rigor, diplomatic agility, and regional partnership to secure a future where transboundary water cooperation becomes a cornerstone of resilience, not rivalry.