International Journal for Multidisciplinary Research (IJFMR)
E-ISSN: 2582-2160 ● Website: www.ijfmr.com ● Email: editor@ijfmr.com

Hydro-Diplomacy and Regional Security: A Study of Ganga Water Sharing between India and Bangladesh

Archana Jyoti

Research Scholar, Centre for South Asian Studies, Pondicherry University

Abstract

This paper examines the role of hydro-diplomacy in shaping Ganga water sharing between India and Bangladesh and analyzes its implications for regional security in South Asia. The study focuses on the evolution of the Ganga water dispute from the construction of the Farakka Barrage to the signing of the Ganga Water Treaty in 1996 and evaluates how institutionalized water-sharing mechanisms have contributed to bilateral cooperation. The paper argues that although the treaty has successfully reduced direct political confrontation and established a framework for negotiation through the Joint Rivers Commission, several challenges continue to affect the sustainability of hydro-diplomacy. These challenges include declining dry-season flow, climate-induced hydrological variability, ecological degradation, population pressure, and asymmetrical upper–lower riparian relations. The study further examines how Ganga water sharing influences environmental security, human security, and political stability in the region. By incorporating contemporary debates on climate change, ecological sustainability, and basin-wide governance, the paper highlights the need for adaptive and cooperative river management. It concludes that the future of India–Bangladesh hydro-diplomacy will depend on integrated basin management, ecological cooperation, data transparency, and climate-sensitive water governance capable of addressing emerging regional and environmental challenges.

Keywords: Hydro-Diplomacy, Ganga Water Treaty, India–Bangladesh Relations, Regional Security, Transboundary Water Governance.

Introduction

Transboundary water politics has emerged as an important issue in contemporary international relations because more than 260 river basins are shared by two or more countries across the world. Increasing water scarcity, climate change, population growth, and developmental demands have intensified competition over shared river systems, particularly in South Asia. Transboundary Rivers can become both sources of conflict and instruments of cooperation depending upon the political relations and institutional mechanisms among riparian states. In this context, hydro-diplomacy has gained significance as a framework for negotiation, cooperation, and conflict management over shared water resources. (Arian & Mahmood, 2025). In South Asia, the Ganga River is the most prominent transboundary river, sustaining millions of people in India and Bangladesh across fisheries, ecology, navigation, agriculture, and livelihood activities. Originating in the Himalayas and flowing through northern India into Bangladesh. The Ganga, when it enters Bangladesh, is called the Padma, and it is important for food security,

agriculture, fisheries, culture, and ecological development. Bangladesh, as a downstream state, strongly relies on the Ganga's dry-season flow for food production, freshwater supply, ecological balance, and irrigation. During the lean season, when the downstream flow reduces, it adversely affects agricultural productivity, riverbank erosion, and salinity intrusion (Karim, 2021). In bilateral relations between India and Bangladesh, water cooperation has become more prominent, as the two countries share 54 transboundary rivers. On the other hand, in the 1970s, the construction of the Farakka Barrage heightened tensions between India and Bangladesh, as there was disagreement over diverting dry-season water from the Ganga to the Hooghly River to maintain the navigability at Kolkata Port. To resolve this tension, both countries primarily signed a tentative agreement in April 1975, which permitted India to construct the barrage for 41 days during the dry season. On 5 November 1977, both countries concluded the first major Ganga Water Sharing Agreement for 5 years. This agreement set a formula for sharing dry–season water at Farakka and guaranteed a minimum flow to Bangladesh, reflecting an important initiative towards regional hydro–diplomacy (Kawser & Samad, 2016). After the 1977 agreement expired, both countries signed a memorandum of Understanding (MoU) in 1982, followed by another MoU signed in 1985, from 1986 to 1988, but the disagreement over dry-season flow and equitable water distribution persisted. After all these unsuccessful agreements, India and Bangladesh came up with a good initiative while signing the Ganga Water Treaty on 12 December 1996 for 30 years. The treaty guaranteed water-sharing agreements through a detailed allocation mechanism and bolstered the Joint Rivers Commission's (JRC) role in data sharing and bilateral relations. Some scholars, such as Asit K. Biswas and Muhammad Mizanur Rahaman, analyzed this treaty as a key example of peaceful conflict management and hydro-diplomacy in South Asia. However, ecological degradation and decreasing dry-season flows remain major concerns (Rahman, 2006).

Over the years, hydro-diplomacy between India and Bangladesh has become a major concern for environmental and regional security. Climate change, high demand for irrigation, glacier melt in the Himalayas, urban consumption, and water scarcity intensify stress on shared river water. At the same time, the Ganga Water Treaty 1996 is going to expire in December 2026, underscoring the ongoing strategic importance of water diplomacy in bilateral relations. The 2024 bilateral discussion between India and Bangladesh identified new mechanisms, including long-term basin management strategies, hydrological data sharing, technical negotiations, and climate adaptation to renew the treaty. On the other hand, climate vulnerability, ecological sustainability, and the high demand for water make hydro-diplomacy more vital to regional security and bilateral cooperation (Ranjan, 2025). The Indian government also highlighted river conservation and basin management through programs such as the National Mission for Clean Ganga under the Namami Gange Program, which allocates financial resources for pollution control and river rejuvenation. The 2024-2025 report by the Central Pollution Control Board and Parliamentary discussions highlighted improvements in several monitored water quality indicators of the Ganga. Hence, the Ganga water sharing is not only concerned with resource allocation but also with regional stability, ecological sustainability, and environmental security between the two countries (Sultana, 2025). The research problem of the study focuses on the extent to which hydro-diplomacy between India and Bangladesh has been successful in ensuring equitable and sustainable water-sharing amid changing geopolitical and environmental conditions. Moreover, the dispute over water availability and treaty implementation persists, particularly during the lean season, although the government has initiated the Joint Rivers Commission (JRC) and periodic bilateral negotiations. However, increasing population, climate vulnerability, and domestic water demand are intensifying stress on the Ganga basin, thereby raising major

concerns about regional and environmental security. Several studies mainly focus on the historical background of the treaty negotiations, water distribution, and the Farakka disputes. There are very few studies that have focused on regional security and the broader relationship between hydro-diplomacy in the contemporary context of ecological tensions and climate change. Thus, this paper bridges the research gap by linking hydro-diplomacy to regional stability /security, environmental conservation, and ecological sustainability.

Research Methodology

This study has used qualitative and analytical research methodology to examine hydro-diplomacy and Ganga water sharing between India and Bangladesh. This paper is based on secondary sources, including scholarly books, peer-reviewed journal articles, policy papers, treaty documents, hydrological studies, and reports published by recognized academic institutions and international organizations. Important academic contributions by scholars such as Asit K. Biswas, Aaron T. Wolf, Kalyan Rudra, and Muhammad Mizanur Rahaman have been used to analyze the historical and contemporary dimensions of transboundary water governance in South Asia. The study follows a descriptive-analytical approach to evaluate the evolution of the Ganga water dispute, the institutional framework of the Ganga Water Treaty of 1996, and the role of hydro-diplomacy in promoting bilateral cooperation. Historical analysis has been used to trace the development of India–Bangladesh water relations from the colonial period and the Farakka Barrage construction to recent treaty negotiations and ecological challenges. The paper also applies the theoretical perspectives of Hydro-Diplomacy, Environmental Security, and Complex Interdependence to understand how water sharing influences regional stability, environmental sustainability, and interstate relations. In addition, contemporary environmental and hydrological concerns such as climate change, declining dry-season flow, salinity intrusion, and ecological degradation have been examined through recent academic studies and basin-management literature. The methodology therefore combines historical interpretation, policy analysis, and theoretical examination to provide a comprehensive understanding of Ganga hydro-diplomacy and regional security dynamics between India and Bangladesh.

Conceptual Framework

The conceptual framework is categorized into three parts: the Hydro-diplomacy framework, the Environmental security theory, and the complex interdependence theory. The hydro-diplomacy framework stresses cooperation among riparian states through negotiations, trust-building, and institutional arrangements to manage Transboundary Rivers. In India and Bangladesh, hydro-diplomacy has grown through several initiatives, including the formation of the Joint Rivers Commission (JRC) in 1972, the signing of the Ganga Water Treaty (1996), and the bilateral relations. Scholars such as Asit K. Biswas and Aaron T. Wolf argued that a proper water-sharing arrangement reduces the conflict and strengthens longstanding cooperation among the riparian states. The Ganga Water Treaty (GWT) highlights how hydro-diplomacy, or water negotiations, contribute to regional stability and peace-building when asymmetric power persists. The Environmental Security Theory illustrates how environmental degradation and resource scarcity are linked with human and political security. The Ganga has been transformed from a mere developmental resource to a strategic environmental concern due to increased water demand, reduced dry-season flow, pollution, climate vulnerability, and salinity intrusion. Bangladesh, as a lower riparian state, is ecologically affected by reduced upstream flows during the lean season. According to Arun P. Elhance, environmental concern may turn out as livelihood uncertainty,

political pressure, and migration issues in transboundary regions. Some recent reports from the National Mission for Clean Ganga and the Central Pollution Control Board highlight the government's concern towards sewage discharge, sustainable flow management, and river pollution across the Ganga River basin. Under the Namami Gange Program, more than 500 projects were sanctioned, including river surface cleaning, afforestation, biodiversity conservation, and sewage treatment. This shows the environmental sustainability and the development of river governance securitization. The Complex Interdependence theory holds that there is mutual dependence between India and Bangladesh, even when their relations are asymmetrically power-balanced. Scholars such as Joseph Nye and Robert Keohane argue that interdependent states tend to favor cooperation over conflict as they are connected through many channels, such as political, economic, and environmental interests. Water diplomacy between India and Bangladesh has become more prominent, as they share 54 transboundary rivers that promote regional security, border connectivity, energy cooperation, and trade relations. Recent bilateral discussions on the renewal of the Ganga Water Treaty, which is going to expire in 2026, further underscore the continued importance of cooperative river governance in maintaining regional stability.

Historical Background of Ganga Water Sharing

The historical background of India–Bangladesh water relations over the Ganga River is deeply rooted in colonial-era river governance and post-colonial state formation. During British rule, river management in the Bengal delta was primarily designed to serve navigation, irrigation, and revenue interests rather than integrated basin-wide governance. Colonial hydraulic interventions, including embankments and canal systems, laid the foundation for later interstate disputes by prioritizing administrative control over ecological sustainability and equitable distribution. Scholars such as Madhumita Bandyopadhyay and Kalyan Rudra note that colonial river policies institutionalized a fragmented approach to river governance, the consequences of which continued after partition in 1947 (Paney, 2012). The first formal attempt to manage the dispute came through the 1977 Ganges Water Agreement, signed for five years, which introduced a formula for dry-season water sharing and incorporated a minimum guarantee clause for Bangladesh. After its expiry, two temporary Memoranda of Understanding (MoUs) were signed in 1982 and 1985, but these lacked strong enforcement mechanisms and reflected continuing disagreement over long-term augmentation of Ganga flows. As Muhammad Mizanur Rahaman argues, these interim arrangements demonstrated both the limits and necessity of hydro-diplomatic engagement in asymmetrical river relations (Rahman, 2006).

A major diplomatic breakthrough occurred with the signing of the Ganga Water Treaty on 12 December 1996, valid for thirty years. The treaty established a detailed 10-day water allocation formula at the Farakka during the lean season (1 January–31 May) and strengthened institutional cooperation through the Joint Rivers Commission. It has often been described as one of South Asia's most successful examples of peaceful transboundary water negotiation. Recent empirical analysis by Rahul M. Lad and Ravindra G. Jaybhaye using 2012–2021 Farakka flow data demonstrates that treaty implementation has largely followed the agreed allocation formula, although seasonal shortages remain a structural challenge (Lad & Jaybhaye, 2024). In the contemporary period, the treaty's impending 2026 expiry has renewed strategic attention on Ganga hydro-diplomacy. Government-level discussions have increasingly linked treaty renewal with climate resilience, basin-level management, and data transparency. Under the projects such as the National Mission for Clean Ganga and the Namami Gange Programme has expanded basin restoration, sewage treatment, and ecological monitoring, while Bangladesh has continued to emphasize

guaranteed lean-season flows and environmental sustainability. Thus, the historical evolution of the Ganga dispute reveals a shift from confrontation toward institutionalized hydro-diplomacy, though unresolved ecological and political asymmetries continue to shape India–Bangladesh relation (Lad & Jaybhaye, 2024).

Hydro-Diplomacy and the Ganga Water Treaty: An Analysis

The Ganga Water Treaty has been signed between India and Bangladesh on 12 December 1996 represents one of the most significant examples of hydro-diplomacy in South Asia. The treaty emerged after decades of political tension surrounding the operation of the Farakka Barrage and disputes over dry-season water diversion from the Ganga River. Unlike earlier temporary agreements, the 1996 treaty institutionalized a long-term framework for water sharing and transformed the issue from a purely bilateral dispute into a structured process of diplomatic engagement and cooperative river governance (Pandey, 2012). Scholars such as Muhammad Mizanur Rahaman and Asit K. Biswas consider the treaty an important model of transboundary water cooperation because it incorporated internationally recognized principles such as equitable utilization, information exchange, consultation, and peaceful dispute settlement. One of the major features of the treaty is the establishment of a detailed formula for sharing dry-season flows at Farakka during the period from 1 January to 31 May each year. The agreement introduced a 10-day allocation schedule determining how water would be distributed between the two countries during lean-season conditions. It also strengthened the institutional role of the Joint Rivers Commission in monitoring river flow, sharing hydrological data, and facilitating consultations between both governments. The treaty further emphasized cooperation in times of reduced flow and encouraged both sides to seek long-term solutions for augmenting Ganga waters. These provisions reflected a shift from confrontational hydro-politics toward institutionalized hydro-diplomacy (Pandey, 2012). The treaty has achieved several important diplomatic and political outcomes over the past three decades. First, it significantly reduced the intensity of water-related tensions between India and Bangladesh and created a stable mechanism for regular dialogue. Unlike the earlier arrangements of 1977, 1982, and 1985, the 1996 treaty provided continuity and predictability in bilateral engagement. Scholars argue that the treaty strengthened mutual trust and prevented the Ganga issue from escalating into a major interstate conflict. Punam Pandey notes that the success of the treaty was closely linked with political willingness and diplomatic flexibility shown by both countries during the negotiation process.

Recent empirical studies also indicate that treaty implementation has generally followed the agreed allocation formula. A 2024 study by Rahul M. Lad and Ravindra G. Jaybhaye based on Farakka flow data from 2012–2021 concluded that water distribution largely remained consistent with treaty provisions. The study nevertheless observed that declining river flow during several lean-season intervals created pressure on both countries and exposed the limitations of the existing allocation framework. Another significant achievement of hydro-diplomacy has been the expansion of broader India–Bangladesh cooperation beyond water-sharing alone. The treaty improved bilateral confidence and contributed positively to trade, connectivity, border management, and regional engagement. Recent bilateral discussions regarding the renewal of the treaty before its expiry in 2026 further indicate the continuing importance of cooperative water governance in maintaining regional stability. Technical-level discussions between the two governments have increasingly focused on climate resilience, hydrological monitoring, and basin-level management (Siddiqui & Malik, 2025). Despite these achievements, the treaty continues to face several limitations and challenges. One major criticism concerns its dependence on historical flow averages

recorded between 1949 and 1988. Scholars argue that the treaty did not adequately anticipate climate variability, declining dry-season flow, increasing upstream water extraction, and changing ecological conditions. A critical review by Kazi Saidur Rahman and colleagues observed that the treaty's projected water availability assumptions have become increasingly unrealistic under conditions of climate change and rising demand. Environmental degradation also remains a major challenge. Bangladesh continues to express concerns regarding salinity intrusion, reduced agricultural productivity, fisheries decline, and ecological stress resulting from insufficient downstream flow during the lean season. At the same time, India faces increasing domestic demand for irrigation, urban consumption, electricity generation, and maintenance of the Kolkata Port through Farakka diversion. These competing developmental priorities complicate future negotiations and reveal the asymmetrical nature of upper and lower riparian relations (Pandey, 2012). Thus, the Ganga Water Treaty reflects both the achievements and limitations of hydro-diplomacy in South Asia. While the treaty successfully institutionalized cooperation and prevented prolonged political confrontation, emerging environmental pressures, climate uncertainty, and increasing water demand continue to challenge the sustainability of India–Bangladesh water relations. The future of hydro-diplomacy in the region will therefore depend on adaptive governance, ecological cooperation, and the development of a more comprehensive basin-wide management framework.

Ganga Water Sharing and Regional Security

The issue of Ganga water sharing between India and Bangladesh has increasingly evolved from a bilateral resource dispute into a broader question of regional security in South Asia. Contemporary scholarship on hydro-politics argues that transboundary rivers are no longer viewed merely as economic resources but as strategic assets connected with environmental sustainability, human livelihood, political stability, and interstate relations. In the case of the Ganga basin, seasonal water scarcity, climate variability, ecological degradation, and increasing demand for freshwater have intensified the security dimensions of hydro-diplomacy between the two countries. Scholars such as Arun P. Elhance and Aaron T. Wolf argue that water insecurity can influence not only interstate relations but also domestic political stability and regional governance structures. One of the most significant dimensions of Ganga water sharing is environmental security. Bangladesh, as a lower riparian state, remains particularly vulnerable to declining dry-season flow, salinity intrusion, riverbank erosion, and ecological degradation in the southwestern region of the country. Several hydrological studies indicate that reduced freshwater flow during the lean season affects wetlands, fisheries, groundwater recharge, and biodiversity in the deltaic ecosystem. Climate change has further intensified these concerns through irregular monsoon patterns, glacier retreat in the Himalayas, and increasing frequency of floods and droughts. The Intergovernmental Panel on Climate Change (IPCC) and regional environmental assessments have repeatedly highlighted the vulnerability of South Asian river basins to climate-induced hydrological stress. Environmental insecurity associated with the Ganga also has direct implications for human security. Millions of people in both India and Bangladesh depend on the river for agriculture, fisheries, drinking water, navigation, and livelihood activities. In Bangladesh, inadequate dry-season flow has contributed to reduced agricultural productivity and increased salinity in coastal districts, affecting food security and public health. Kalyan Rudra notes that ecological stress in the Ganga basin has transformed water-sharing from a technical issue into a human development concern. Recent reports of the Central Pollution Control Board and the National Mission for Clean Ganga indicate continuing challenges related to sewage discharge, industrial pollution, and ecological restoration despite improvements in water-quality monitoring and sewage treatment capacity under the Namami Gange

Programme. Government data released during 2024–2025 reported expansion of sewage treatment infrastructure and biodiversity conservation initiatives across major stretches of the Ganga basin, reflecting growing policy attention toward ecological and human security concerns.

The political and strategic dimensions of Ganga water sharing are equally important. Water-sharing disputes between upper and lower riparian states often reflect broader asymmetries in geographical position, political influence, and developmental priorities. India's upstream control through the Farakka Barrage has historically generated apprehension in Bangladesh regarding equitable water allocation and long-term ecological sustainability. However, the 1996 Ganga Water Treaty transformed the issue from confrontational hydro-politics into institutionalized hydro-diplomacy by creating mechanisms for negotiation, hydrological data exchange, and regular bilateral consultations. Scholars such as Muhammad Mizanur Rahaman argue that the treaty has prevented the escalation of conflict while simultaneously strengthening regional cooperation and political engagement. At the same time, emerging geopolitical and environmental pressures continue to challenge regional stability. The approaching expiry of the Ganga Water Treaty in 2026 has renewed debates regarding treaty revision, climate adaptation, and basin-wide management. Recent bilateral meetings between India and Bangladesh have increasingly emphasized hydrological monitoring, information sharing, and climate resilience as essential components of future hydro-diplomacy. The inclusion of river conservation under India's Namami Gange Programme and Bangladesh's emphasis on ecological sustainability demonstrate a gradual shift toward integrated river governance rather than narrow water allocation politics. Thus, Ganga water sharing remains closely linked with environmental sustainability, human livelihood security, and regional political stability. While hydro-diplomacy has reduced the possibility of open conflict between India and Bangladesh, increasing ecological stress, climate uncertainty, and competing developmental demands continue to shape the security discourse surrounding the Ganga basin in South Asia.

Contemporary Challenges and Future Prospects

Despite the relative success of the Ganga Water Treaty in institutionalizing cooperation between India and Bangladesh, several contemporary challenges continue to affect the sustainability of hydro-diplomacy in the Ganga basin. One of the most critical concerns is climate-induced hydrological variability. Studies by scholars such as Shafiqul Islam and Kazi Saidur Rahman argue that the treaty framework was largely based on historical flow patterns and did not sufficiently anticipate changing climatic conditions, glacier retreat, erratic monsoon rainfall, and increasing dry-season scarcity. These developments have reduced the predictability of river flow and intensified pressure on existing allocation mechanisms (Rahman, Islam, Navera, & Ludwig, 2019). Another major challenge is the growing demand for freshwater due to population growth, urbanization, industrialization, and agricultural expansion in both countries. India's increasing domestic water requirements for irrigation and urban consumption, combined with Bangladesh's dependence on downstream flow for agriculture and ecological stability, have complicated the question of equitable distribution. Scholars such as Kalyan Rudra emphasize that water scarcity in the Ganga basin is no longer only a technical issue of allocation but also a broader ecological and developmental concern linked with food security, migration, and livelihood vulnerability. A further limitation lies in the absence of integrated basin-wide governance. Although India and Bangladesh share 54 transboundary rivers, cooperation remains fragmented and heavily centered on Farakka-based water allocation rather than comprehensive river basin management. Contemporary scholarship increasingly advocates Integrated River Basin Management (IRBM), emphasizing ecological restoration, flood

management, sediment control, and joint climate adaptation strategies. Aaron T. Wolf argues that sustainable hydro-diplomacy requires adaptive institutions capable of responding to environmental uncertainty and political asymmetry (Tanzeema & Faisal, 2001). Future prospects, however, remain promising. The approaching expiry of the treaty in 2026 provides an opportunity for both countries to renegotiate a more climate-sensitive and ecologically sustainable framework. Recent academic discussions increasingly support data transparency, joint hydrological monitoring, technological cooperation, and basin-level ecological governance as pathways toward long-term regional stability. Thus, the future of India–Bangladesh hydro-diplomacy will depend not only on water-sharing formulas but also on the ability of both states to develop cooperative and adaptive river governance in response to emerging environmental and geopolitical challenges.

Conclusion

The issue of Ganga water sharing between India and Bangladesh demonstrates the complex relationship between transboundary water governance, hydro-diplomacy, and regional security in South Asia. The signing of the Ganga Water Treaty marked a significant diplomatic achievement by transforming a prolonged water dispute into an institutionalized framework of cooperation and negotiation. Through mechanisms such as the Joint Rivers Commission and regular bilateral consultations, the treaty contributed to reducing political tensions and strengthening bilateral engagement between the two countries. However, the study finds that several structural challenges continue to affect the sustainability of hydro-diplomacy in the Ganga basin. Declining dry-season flow, climate-induced hydrological variability, ecological degradation, population pressure, and asymmetrical upper–lower riparian relations remain major concerns for both India and Bangladesh. These challenges have expanded the issue beyond water allocation and linked it with environmental security, human livelihood, food security, and regional political stability. The paper argues that future cooperation cannot rely solely on traditional water-sharing formulas. Instead, sustainable hydro-diplomacy will require integrated basin-wide governance, ecological restoration, climate-sensitive policies, technological cooperation, and greater transparency in hydrological data-sharing. Ultimately, the future of India–Bangladesh relations in the Ganga basin will depend on the ability of both countries to strengthen cooperative river governance and develop adaptive strategies capable of addressing emerging environmental and geopolitical challenges in South Asia.

Reference

1. Aktar, F. & Shahjalal University of Science and Technology. (2021). Water Diplomacy and Water sharing problem between Bangladesh and India: a Quest for Solution. *International Journal of Research and Scientific Innovation (IJRSI)*, *VIII*(I), 223. https://ssrn.com/abstract=3837515
2. *Bangladesh Institute of International and Strategic Studies*. (n.d.). Bangladesh Institute of International and Strategic Studies. https://www.biiss.org/public/index.php/article/ganges-water-agreements-comparative-study
3. *CURRENT PROGRESS OF THE NATIONAL MISSION FOR CLEAN GANGA*. (n.d.). https://www.pib.gov.in/PressReleaseIframePage.aspx?PRID=2200353&utm
4. Iyer, R. & Centre for Policy Research. (n.d.). *THE INDO-BANGLADESH GANGA WATERS DISPUTE*.
5. Kawser, M. A., & Samad, M. A. (2016). Political history of Farakka Barrage and its effects on environment in Bangladesh. *Bandung*, *3*(1), 1–14. https://doi.org/10.1186/s40728-015-0027-5

6. Kumar, D. (2017). River Ganges – Historical, cultural and socioeconomic attributes. In *Aquatic Ecosystem Health & Management* (Vols. 20–1–2, pp. 8–20) [Journal-article]. http://dx.doi.org/10.1080/14634988.2017.1304129
7. Lad, R. M., & Jaybhaye, R. G. (2024). India and the Ganga Waters Treaty: Analysis of the water sharing Mechanism. *International Studies*, *61*(2), 185–202. https://doi.org/10.1177/00208817241285256
8. Mahmud Arian, T., Mahmood, T. U., Department of Political Science, University of Chittagong, Chittagong, Bangladesh, & Department of Business Analytics and Systems, University of Bridgeport, Connecticut, USA. (2025a). Negotiating the Flow: A critical appraisal of water diplomacy between India and Bangladesh. *International Journal of Environmental Sciences*, 869. https://theaspd.com/index.php
9. Mahmud Arian, T., Mahmood, T. U., Department of Political Science, University of Chittagong, Chittagong, Bangladesh, & Department of Business Analytics and Systems, University of Bridgeport, Connecticut, USA. (2025b). Negotiating the Flow: A critical appraisal of water diplomacy between India and Bangladesh. *International Journal of Environmental Sciences*, 869. https://theaspd.com/index.php
10. Pandey, P. (2012a). Revisiting the Politics of the Ganga Water Dispute between India and Bangladesh. *India Quarterly a Journal of International Affairs*, *68*(3), 267–281. https://doi.org/10.1177/0974928412454605
11. Pandey, P. (2012b). Revisiting the Politics of the Ganga Water Dispute between India and Bangladesh. *India Quarterly a Journal of International Affairs*, *68*(3), 267–281. https://doi.org/10.1177/0974928412454605
12. Pandey, P. (2016). *India Bangladesh domestic politics*. https://doi.org/10.1007/978-981-10-2371-2
13. Rahman, K. S., Islam, Z., Navera, U. K., & Ludwig, F. (2019). A critical review of the Ganges Water Sharing arrangement. *Water Policy*, *21*(2), 259–276. https://doi.org/10.2166/wp.2019.164
14. Ranjan, A. (2025). A TWO-LEVEL GAME OVER THE GANGES: THE FATE OF GANGA/GANGES WATERS TREATY BETWEEN INDIA AND BANGLADESH. *Asian Affairs*, *56*(3), 516–537. https://doi.org/10.1080/03068374.2025.2519631
15. Siddiqui, N., & Malik, K. (2025). Reassessing the Ganges Water Treaty in the Age of Climate Change: A Systematic Review of legal, hydrological, and governance dimensions. *International Journal of Environmental Sciences*, 2297–2308. https://doi.org/10.64252/5we0rp47
16. Sultana, F. (2025). From hydro-hegemony to hydro-coercion: Politics of precarity in India–Bangladesh transboundary water conflicts. *Human Geography*. https://doi.org/10.1177/19427786251400314
17. Tanzeema, S. (2001). Sharing the Ganges: a critical analysis of the water sharing treaties. *Water Policy*, *3*(1), 13–28. https://doi.org/10.1016/s1366-7017(01)00004-6
18. The Ganges water conflict. (2006). In *Asteriskos* (Vols. 1–2, pp. 195–208) [Journal-article].
19. TRANSBOUNDARY WATER COOPERATION AND WATER SECURITY IN THE GANGES RIVER BASIN: AN ASSESSMENT FROM BANGLADESH PERSPECTIVE. (2021a). In *Journal of the Asiatic Society of Bangladesh (Hum.)* (pp. 83–105).
20. TRANSBOUNDARY WATER COOPERATION AND WATER SECURITY IN THE GANGES RIVER BASIN: AN ASSESSMENT FROM BANGLADESH PERSPECTIVE. (2021b). In *Journal of the Asiatic Society of Bangladesh (Hum.)* (pp. 83–105).