

## INDO-BANGLADESH WATER DISPUTES: A STUDY ON THE SHARING OF GANGES RIVER AS A SOURCE OF CONFLICT

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### **Abstract**

*This paper examines two agreements between Bangladesh and India to share the waters of the Ganges and increase flow during the lean season. Since the construction of the Farakka Barrage in India, the water of the Ganges has become a key source of conflict between the two countries. To resolve this conflict, over the past three decades, the two countries have signed two agreements and two memorandums of understanding, namely the 1977 agreement, the 1982 MOU, the 1985 MOU, and the latest 1996 treaty for sharing Ganges waters. After describing the historical evolution of water conflict and cooperation between the two countries, this paper reviewed the terms of the Water Sharing and Management Agreement of the 1977 Agreement and the 1996 Agreement. This paper explores the water disputes in between India and Bangladesh and the water agreement between India and Bangladesh.*

**Keywords:** *Ganges basin, water sharing, agreement, conflict, cooperation, integrated water resources management.*

### **Introduction**

India and Bangladesh are part of the South Asian subcontinent and have had a long common cultural, economic and political history. They both have common heritage, linguistic and cultural ties, and racial affinities, common economic and political history. The population of Bangladesh and India's states such as West Bengal and Tripura speak common language. Both the state's share common history of freedom struggle against British rule and have fraternal and familial feelings that leading towards wide ranging people to people contacts and interactions. After independence, Indian policy for Bangladesh was very friendly and it tried to give full support. Bangladesh got recognition from many countries at international

level just because of India's support. The foreign policy of a country seeks to promote and protect its core national interest, even though priorities may vary from government to governments. It has argued that India's preference for a bilateral framework in its neighbourhood policy is seen as a means to dominate the weaker country

The role of India in the creation of Bangladesh shaped its foreign policy in the initial years. In 1972, India and Bangladesh had signed the 1972 Treaty of Peace and Friendship. However, this treaty could not achieve its full potential because of tumultuous internal political developments. After Sheikh-Mujib-Ur Rahman's assassination, the relationship between India and Bangladesh suffered a setback. In the subsequent years, there had been a marked difference in the approaches of the two leading political parties towards India and Pakistan and coloured by their respective vision of Bangladeshi nation-state.

India and Bangladesh have mutual significance for myriad interests. As the largest democracy and regional super power, India can contribute too much to the strengthening of Indo- Bangladesh relations. India has great ability to create an environment of goodwill and friendship between the two countries. The rise of Bangladesh as a nation state is a development of great significance for the whole subcontinent. It is essential for each country to develop international friendship with other country.

India and Bangladesh are both trying pursuing this policy. Both the states are neither close nor free from disputes and confrontations. It has been observed that Bangladesh has often indulged in anti- India activities. This stagnation in relations is held because of variety of reasons; border problems, as well as a general feeling on both sides that several important issues are not being given the importance they deserve. In bilateral relations between two states, the most important issues for India are security-related issues, such as arms trafficking, movement of people, transit, and the tripartite gas pipeline, whereas the most important issues for Bangladeshi are sharing of the waters of the joint rivers and the river linking project, trade, and a variety of border-related concerns, including.

Bangladesh's importance for India's security and prosperity cannot be overestimated. The challenge before the two countries is how to make bilateral relations irrevocably friendly. Both sides are conscious that visible progress will be necessary to end deep rooted cynicism that exists in bilateral relations between two. The cynicism may have been reduced but it has not entirely gone away. Both the states have mistrust and have grievances against each other for their respective national interests and the most importantly both are concerned for the security. India's dominating behavior and Bangladesh's indulging in anti-India activities has put both the sates in face to face skirmishes.

**Literature Review:**

- 1. Paula Hanasz (2015)** the study found that water governance politics in the Ganga-Brahmaputra-Meghana basin and border water politics in the Ganga-Brahmaputra-Meghana basin are affected only by the relations between the governments of India, Nepal, Bhutan and Bangladesh. Through dynamics on various scales, including hydropolitics, between Indian states within the basin. This study examines the state-level political dynamics that affect India's water interactions with Nepal, Bhutan and Bangladesh. The purpose of this study is to provide insights into the neglected aspect of regional hydropolitics (e.g., the World Bank-led South Asia Water Initiative) with Indian hierarchies as well as international organizations engaged in water resource policy design in the region. This poses a procedural challenge to those in and outside the area working to build the River Basin Organization in the Ganga-Brahmaputra-Meghna Basin. Furthermore, existing legal structures do not allow the participation of non-state political actors in the judgment of interstate water disputes. This analysis means that the influence of Indian states in border water negotiations cannot be ignored. Second, Nepal, Bhutan and Bangladesh all have to deal with Indian states along with central government funds. Finally, zero-sum attitudes are deeply rooted in both the transboundary and state scales, and policymakers need to focus on a water justice approach that is positive and initiates negotiations.
- 2. Mohhamed Anwar Hossen (2015)** this study explores the environmental impacts of Top down Ganga Basin Water Management Systems in Chapra, Bangladesh based on my ethnographic fieldwork. An example of this top-down system is the Farakka Barrage in India, which poses major ecosystem failures and challenges to community livelihoods. Reducing the flow of Ganga river basin water in Bangladesh based on comparisons before and after Fangakka will help in understanding these failures and their impact on community livelihood. This empowerment study is based on the argument and is divided into the following main sections: the importance of basin ecosystems to protect community livelihoods, the limitations of current basin management practices and the challenges of community survival and proposed water governance for community empowerment. Resolving the Farakka Barrage dispute between India and Bangladesh is a major challenge of the JRC. This partnership perspective includes discussions and compromises between countries on water issues,

standards and coordination. The affected people are currently campaigning their voices against hydro politics to protect their environmental resources and livelihoods. These voices can steer the basin management towards the goal of community empowerment. The Government of India should recognize the importance of this empowerment for ecosystem resilience and human security

3. **Naresh Kumar Bhari (2015)** the study focuses on Indo-Bangladesh bilateral relations, which have political, economic, cultural and strategic dimensions in Bangladesh. The result is that Bangladesh suffers from water scarcity in the summer and floods in the monsoon season, causing floods and widespread destruction, and the population ratio on both sides of the border is 70 for Bangladesh and 30 for India, so the equation of the Teesta water dispute is a key political agenda for successive governments in Bangladesh.
4. **P. Saikia & B. Sharma (2015)** this study describes the interactions of Indo-Bangladesh Ganges waters: from water sharing to collective water management. Current challenges facing the downstream areas during the dry season such as increased sedimentation in the Gangetic plains, salinity intrusion, dying river flows, salinity intrusion and navigational channels and improper freshwater flow during the dry season. Qualitative and quantitative research methods used in the study. Data analysis and interviews with key staff involved in decision making about transboundary flows. The study also revealed several inefficiencies in the institutional arrangements between India and Bangladesh on the distribution of Ganga river water and provides potential ways to enhance cooperation between the two countries to address the problem of improper dry season freshwater flow. The study suggested policy options and recommendations for consideration of national policy makers in India and Bangladesh. However, future programs, activities and Farraka Barrage upstream projects will also have a key impact on lower dry season flows.
5. **Animesh K. Gain & Carlo Giupponi (2014)** the study revealed that the Farakka Dam had an impact on the hydrologic flow regime in the Lower Ganga River Basin (Bangladesh). Even after the adoption of the water partnership agreement between Bangladesh and India, the analysis revealed that the RVA entry standards had been exceeded for many years in the post-Farakka period. The RVA approach was used in this study. The study is mainly based on statistics and to investigate the mixed impact of climate change and human-induced unrest, future studies are needed, aimed at a more in-depth understanding of the system. The next study aims at a more in-depth

understanding of the system and the physical impact of the hydrologic flow regime on ecosystems. The study focused only on the effect of the dam on river flow limits. However, in reality, climate change and human-induced disturbances (e.g., development of river infrastructure such as dams) occur simultaneously and as interactions.

### **Significance of the Study**

This study deals with water issues in both India and Bangladesh, followed by brief accounts of convergence, conflicts and international relations. In this study the term "India 'Bangladesh'" was used to refer only to the mainland and the country on the subcontinent. Located in the northern part of the subcontinent, the country is connected by the Himalayan rivers and is one of the most naturally rich water bodies in the world. Water is high Important natural resources for these countries and the main reason for the conflict between these countries. Food security, irrigation, hydropower and food production are other factors that increase water conflicts and irritations. River water plays a major role in meeting the water demands of these countries and it naturally plays an effective role in India's foreign relations with Bangladesh. Concerns about food security and future water scarcity are relevant to all countries. Response to these concerns at the administrative, technical and planning levels The government has led to a serious expression of the interests of these countries. Since the partition of India and Bangladesh, water has been the focal point between the two countries, especially for Bangladesh, for greater reliance on water. Bangladesh as a lower riparian country is more sensitive on water issues.

### **Objectives of the Study**

1. To study the Ganges water dispute in between India and Bangladesh
2. To analyse the Ganges water agreement between India and Bangladesh

**Type of Research:** Exploratory Research

**Data Sources:** The research is based on secondary data and the data is collected from various websites, Journals, Magazines, Articles and Research Papers.

**Analysis:**

The Ganges, originating from the glaciers of the Himalayas at a height of about 7000 metres, flows 2550 km down through the Indian states of Uttar Pradesh, Bihar and West Bengal before joining the Jamuna (Brahmaputra) at Goalandaghat in Bangladesh. Its length in Bangladesh is 260 km. It flushes a total area of 10,87,001 sq km of which 8,60,000 sq km falls in India, 1,47,181 sq km in Nepal, 33,520 sq km in China and 46,300 sq km in Bangladesh. The Indian plan of building a barrage at Farakka was first revealed in 1951, and since then Pakistan government began to point out its likely adverse effects on East Pakistan.

The construction of the Farakka Barrage in India along the Ganges has created water pressure by intensifying the dry season and increasing the likelihood of floods in Bangladesh. The two countries have been engaged in talks at various levels, but have not yet agreed on a solution to raise the Ganges to meet the needs of the both states, especially in the face of changing weather conditions.

#### **Farakka Barrage Dispute:**

- In 1996, the sharing of the Ganges waters between the two countries was successfully agreed upon, but there is a long-pending dispute over India's construction and maintenance of the Farakka Barrage, built to increase the water supply on the Hooghly River.
- Bangladesh complains that it did not get its proper share of water when India released excess water during monsoon and some parts of it would be submerged.
- Since, water is a state subject in India, there is no consensus between the states of Bengal and India to review the dam of the dam and give some concessions to Bangladesh.

#### **History**

In 1961, India released plans to build the Farakka Barrage, seventeen kilometers upstream from the Bangladesh border. The purpose of the barrage was to divert water from the Ganges to reduce siltation in the port of Calcutta. Diversion of water from the Ganges has serious implications for downstream water availability in Bangladesh. Changing rainfall and water use policies in the upstream in Nepal have exacerbated water pressure in the Ganges, leading to unequal distribution of water based on the requirements of the 1996 agreement. Diplomatic relations regarding water cooperation are controversial.

After the independence of Bangladesh in 1971, India and Bangladesh formed the Joint River Commission in 1972 (Wolf & Newton, 2014). In 1974, during a period of low flow, it was realized that there would not be enough water in Bangladesh to divert the Ganges through the barrage without having a severe impact on water access. Both sides agreed to raise the Ganges to meet the needs of the two states, but the decision should be handed over to the Joint Rivers Commission.

During the negotiations in 1975, India activated the barrage at full capacity (Wolf & Newton, 2014). Adverse effects of reduced river flow in Bangladesh: surface and groundwater depletion, depleted fisheries, increased salinity and contaminated / depleted water supply, which began to affect public health (Wolf, 1998).

### **Water distribution**

In 1977, the Ganges Waters Treaty was negotiated, which regulated the distribution of water for five years. It was not until 1996 that the official agreement was signed. This agreement is known as the Ganges Water Sharing Agreement and regulates the distribution of water from the Farakka Barrage over a period of thirty years (Thomas, 2012). However, the basis of this agreement is the average water flow at the Farakka site between 1949 and 1988 (Wolf & Newton, 2014). Since the agreement, the impact of climate change on rainfall, combined with water use for agriculture and hydro-power in the Upper Ganges in Nepal, has changed water levels and, therefore, affected water distribution in line with the requirements of the 1996 agreement.

### **Ganges water agreement between India and Bangladesh**

- The agreement was signed on the basis of improper projection of future flow and the obligation to allocate guaranteed flow to lower seas Bangladesh, which water experts consider to be an endless water sharing dispute.
- The two neighbors share the waters of the Ganges, what water experts think, and inaccurate statistics about water availability in the Farrakka Bridge in India and the Hardinge Bridge in Bangladesh. Providing a low minimum flow as an alternative to India and Bangladesh at critical times often leads to low flow disputes.
- The agreement underestimated the impact of climate change on Bangladesh, a lower riverine region, due to increased water withdrawals from upstream through India.

- When reviewing the partnership of the Ganges river water from 1997 to 2016, water experts found that Bangladesh had not received its share of the critical period agreed upon under the Ganga Treaty. Experts called for the conservation of the Bangladesh ecosystem and the finding of reliable water availability using modeling and better monitoring of river flows to ensure Bangladesh's mere share for food and energy production, flood mitigation and pollution control. They said Bangladesh did not ignore the need for fresh water to address the negative impact of climate change.
- The dispute between Bangladesh and India over the Ganges-Brahmaputra-Meghna provides an example of a lack of a fair and acceptable institutional arrangement on sharing the world's third-largest freshwater outlet to the ocean.
- Water experts called for a qualitative and quantitative analysis of the 1996 agreement by examining its performance on water sharing issues in the shortest possible time. It is necessary to assess its effectiveness and failure by identifying the relevant features of the contract and to find obstacles to its proper execution
- In the post-agreement period (1997-2016) the 1996 Ganges identified major weaknesses in the performance of the water partnership agreement and the clearly identifiable features of the agreement. One of the main limitations of this agreement is to unfairly predict future water availability at Farakka based on 40-year average flows. It predicts the impact of climate change, the frequency of low flow events and increased water extraction in the upstream, thereby increasing the expected currents unusually high — especially during the most critical periods. Furthermore, future climate change and high upstream water demand will lead to more frequent years with very low flow at Farakka. Therefore, we recommend that future water availability at Farakka be estimated by hydrological models; Such model streams will form the reliable capacity of the Farakka streams to meet future water needs and will be based on the future water allocation formula between the riverside countries.
- In many cases, neither Bangladesh nor India were able to receive their shares as stipulated in the agreement. Indicated that the condition of allocating guaranteed flow in alternate 10-day cycles was unnecessary and should therefore be eliminated from the current Treaty. Furthermore, statistical analysis of recent flow data at Farakka and Hardinge Bridge has shown that Bangladesh did not receive a (fair) share during the most critical period of the dry season when water demand was relatively high in both



countries. Therefore, we suggest providing a guarantee clause to safeguard Bangladesh's fair share in the event of extreme low flow events.

- The present term of the agreement expires in 2026 after the completion of a 30-year operation of establishing a water partnership between India and Bangladesh. The results shows that the implementation of the Treaty has failed to provide significant assistance in improving dry season water availability in Bangladesh. However, without Treaty, the situation could get worse, which would upset the ecological balance at the bottom. However, this Treaty can still overcome water scarcity issues and, if amended with our recommended adjustments to its terms and conditions, will improve cooperation between countries. Further extension and implementation of the amended agreement beyond 2026 could promote a peaceful solution to many unresolved issues and improve the current border water governance in the region.

## Conclusion

Due to Bangladesh's interests and the limited potential of the Ganges water agreement, there is growing concern about the future viability of the agreement and the allocation of water at Farakka Barrage. Both India and Bangladesh are under intense pressure to secure some form of food and water security, especially as demand-side pressures increase. Bangladesh will improve the management of its water resources by digging up its rivers and watersheds and using better water management practices. Bilateral cooperation can also be enhanced by developing early warning systems for floods and droughts. Alternative methods of cooperation should be used to achieve the interests of both countries while minimizing the potential for conflict.

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