Journal of Regional Studies Review (JRSR)
Volume 3, Issue 1 (2024) | Pages: 156-167
ISSN (Online): 3006-6646
Digital Object Identifier (DOI): 10.62843/jrsr/2024.3a034
Correspondence should be addressed to Areeb Zahra; F2021188070@umt.edu.pk

RESEARCH ARTICLE

India-China Water Conflict and Its Implications for Bangladesh

Areeb Zahra [a]

Abstract: The ongoing water conflict between India and China over transboundary rivers, particularly the Brahmaputra River, presents profound challenges for Bangladesh's water security and sustainable development. China's expansive dam-building initiatives pose a direct threat to the availability of water downstream, potentially jeopardizing agricultural productivity, exacerbating water scarcity, and disrupting the environmental stability of Bangladesh. In addition to the technical and ecological implications, the broader geopolitical rivalry between India and China further complicates regional cooperation on transboundary water resource management. This dynamic creates a complex web of diplomatic, political, and technical obstacles for Bangladesh as it attempts to navigate the intricacies of water diplomacy in the region. Given the interconnectedness of water resources in South Asia, the study will delve into the impacts of China's water infrastructure on Bangladesh, examine potential strategies for sustainable water usage, and assess the consequences of India-China tensions on the prospects for regional collaboration. By closely analyzing relevant policy measures, diplomatic efforts, and potential technical solutions, the research aims to offer practical and actionable recommendations for Bangladesh. These recommendations will focus on mitigating the risks posed by these geopolitical challenges, ensuring long-term water sustainability, and fostering an environment conducive to regional cooperation in the face of growing transboundary water disputes.

Keywords: India-China Water Conflict, Bangladesh, Transboundary Rivers, Brahmaputra River, Sustainable Development, China

Introduction

China and India are the most populous and largest countries in the world, boasting a rich history and cultural tradition. Both states are situated in the region of South Asia region and are counted as the major and leading powers of the region. India is known for its diversity, especially in religion, languages, and traditions. China holds a deep-rooted history of dynasties and cultural achievements. Both states acquire rapidly emerging economies, thus playing a crucial role in trade and technology and world politics, leaving the concept of a multi-polar world, as it may get enough power to influence global politics and act as a major power of the world besides the United States.

Moreover, both states; India and China are pursuing their strategic objectives to dominate the entire region of South- Asia, with differing approaches, Firstly, India is making economic development through global manufacturing and services and aims to become a $5 trillion economy, whereas, China while pursuing its economic development, not only following the pattern, as India, increasing the global manufacturing and services, but also boosting its economic development through regional connectivity via the mega project of BRI (Belt and Road Initiative), starting from 2013 during the presidential address of Chinese president, Xi Jinping at Kazakhstan (Vision of USD 5 Trillian indian Economy, 2018). China One Belt One Road initiatives seek to link the country with the entire world beginning in China and extending through Southeast Asia,

[a] Department of Political Science and International Relations, University of Management and Technology, Lahore, Punjab, Pakistan. Email: F2021188070@umt.edu.pk

Cite this Article: Zahra, A. (2024). India-China Water Conflict and Its Implications for Bangladesh. *Journal of Regional Studies Review, 3*(1), 156-167. https://doi.org/10.62843/jrsr/2024.3a034

South Asia, Central Asia, Russia, and Europe. Secondly, India is trying to ensure its dominance in the region while, countering China's rise, by becoming the influential member state of SAASRC and BIMSTEC (Bhatia, 2024).

On the other hand, China is boosting its dominance, not only in the region but also at the global level (to neutralize the global dominance of the US) through its mega project Belt and Road Initiative (BRI) which is the source of economic development and global dominance as well. Thirdly, both states are modernizing their military sector, to counter their adversaries, such as, India is making military advancements, to counter any offensive acts incoming from Pakistan and China and China is making a revolution in military affairs, to counter the threats approaching from the United States and other rivals (Senior Defense Official Briefs on 2024 China Military Power Report, 2024). At the same time, if considered Bangladesh, lacks both economic development and regional dominance, leaving it within the space of under-developed nations. Both the states (China and India) to minimize the offensive acts incoming from their rivals, are not only making progress in traditional spaces (land, air, and sea) but also in demanding need of 4th space (Cyberspace) (Choudhary, 2024).

Moreover, both states since the beginning have shared a conflicting trajectory of bilateral relations, starting from a minor clash at Aksai Chin (western sector) in the 1950s, and then in 1959 Tibet and Dalai Lama issue happened and the next clash occurred in 1962 at Arunachal Pradesh (Eastern Sector) and leaving the space for a macro level war between the both (Sino-Indian war of 1962), further this clash raised to the events like, Doklam Standoff of 2017, and Galwan valley clash of 2020 (BANERJEE, 2022).

These events have significantly designed the history and dynamics of China-India relations. Because of these series of incidents, their bilateral ties have remained strained over time, restricting the development of a truly amicable relationship even to this day. Because of these diverging and conflicting interests, both states have never observed a shared norm of cooperation on any of the events that occurred between the both, which is evident from the recent India-China water conundrums, that started in the late 20th and early 21st century. This water conflict between both the states is on the "Brahmaputra River" which covers a distance of 2900 km or 1800 miles, originating from the Tibet region, heading eastward through Tibet and the northern edge of the Himalayas, entering India via Arunachal Pradesh, from there it moves further westwards through the state of Assam, where from it enters Bangladesh and ends at the Bay of Bengal (Transboundary Water Cooperation over the Brahmaputra River, 2017).

Research Questions

1) How do China's dam-building activities near the Brahmaputra River pose a threat to Bangladesh's water security?
2) How can Bangladesh ensure sustainable water usage while countering the challenges arising from the India-China water conflict?
3) How regional cooperation on water resource management in South Asia can be influenced by India-China rivalry?

Theoretical Framework

Environmental Security Theory

This theory examines the link between the environment and security, and how the security of people and societies as a whole can be impacted by environmental factors. Environmental Security emphasizes the idea that environmental challenges, like, water scarcity and resource competition, that can lead to conflicts and pose threats to national and regional stability. In the context of the India-China water conflict, this theory describes how the existing tensions between all three 3 nations (India, China, and Bangladesh) are the result of control and management of transboundary rivers, particularly the Brahmaputra, that have affected

downstream states like Bangladesh (Reuters, 2025). China's project for the construction of dams on the Brahmaputra has raised concerns for India and Bangladesh about receiving lower water flow affecting the ecosystem and water security of these states. This theory focuses on the growing strategic significance of water resources, where its full control or mismanagement could lead to escalation of tensions and result in regional instability.

Realism Theory

This theory, on the other hand, focuses on the pursuit of national interest, power maximization, and ensuring national security in the international arena. In the context of the India-China water conflict, this theory says that both nations (India and China) prioritize their national sovereignty and entire control over water resources as being part of their crucial strategic goals. (Brahmaputra: A Conflict-Prone River Takes a Step Backwards, 2020). Realism describes the distrust and lack of cooperation, as both countries are Largely centered around securing and fulfilling their interests despite engaging in collaborative water management.

Meanwhile, Bangladesh, being downstream, is trapped in the middle of this rivalry between India and China over water resources. According to realists' perspectives, as Bangladesh is vulnerable to being downstream if any changes in the flow of Brahmaputra were made, it could lead a serious damage to the ecosystem and agrarian sector of the state and Bangladesh, for ensuring its national security and fulfilling its national interests, has to try hard to prevent any further changes in the flow of Brahmaputra from either of the sides (may it be from India or China).

Discussion

This conflicting river body across all the nations, linked to this river, has differing titles in all these three states, like in India this river is named "Brahmaputra", in China it's called "Yarlung Tsangpo" and in Bangladesh, this river is entitled as "Jamuna" River. This river originates from the Tibetan plateau in China and follows a certain path reaching towards Arunachal Pradesh in India and from here, it covers its path all the way reaching to Bay of Bengal in Bangladesh. Moreover, the history of the existence of this river dates back to hundreds of years of mankind. Historically, the river has played a vital role, providing a way for various activities (like trade and transportation) over the decades. Moreover, during the colonial era, various infrastructure projects were made, like the establishment of ports and railways near the river, thus, enabling the river to be enabling movement of agricultural goods, like, tea, rice coffee, etc from India, not only to other parts of South Asia, but also to the entire globe (Borgohain, 2023).

Post-Independence India and management of the river

After the independence of India in 1947, the river (Brahmaputra) acted as strategic importance for the Indian society as a whole, as it (the river) acted as a crucial source for agricultural, drinking water, and hydropower production in Assam and the rest of the northeastern states. Indians in the 1950s, made their 1st large-scale "Bhakra Nangal Dam"; one of the mega infrastructure projects, that aimed to generate power and control the course of the river. Moreover the building of "Farakka Barrage Dam," is located in western Bengal, India, closer to the border of Bangladesh (Peopertypistol, 2024). The creation of this dam diverted flow of the water from various transboundary water streams, like Gumti, Khowai, Dharla, Monu, Teesta, etc. In addition, India blocked several mainstream rivers such as Fulchari, Kachu, Muhri, Chagalnaiya, and many others in Tripura towards Bangladesh (Flood situation in Bangladesh not due to release of waters from Indian dam on Gumti River, Tripura, 2024). This series of events generated the environmental conflict starting from the 1970s, between India and Bangladesh, because it significantly, affected the water flow downstream towards Bangladesh. Bangladesh's agrarian sector solely relies on the river Ganges for agricultural activities, drinking

water, and ecology, ones India made this barrage near the Ganges, it reduced the water flow reaching Bangladesh and lowered the ratio of crop yield, environmental degradation and damaging the biodiversity of Bangladesh (Farakka Barrage ActionInitiative and Response, 2017).

India-China Border Distribution and Water Disputes

The central point of this long-lasting rivalry between both the states; China and India lies in the broader territorial border disputes. In 1914, the Simla Convention occurred between British India and Tibet in the city of Simla (currently, known as Himachal Pradesh, India). During this convention, the "McMahon Line" was drawn defining the clear boundary line (Pathaniya, 2024). This line followed the crest of the "Himalayan mountainous range" to ensure that no territorial boundary from India (then British India) would be mixed up by Tibet or China (US Senate resolution for underlining backing india on MacMahon line: What is MacMahon line?, 2025). This boundary line separated Arunachal Pradesh (currently Indian territory) to the southern side of the line and Tibet (recently of Chinese territorial part) to the northern side of the line. This boundary distribution has remained a point of conflict between India and China, especially after the Chinese annexation of the Tibet region in 1950.

These tensions, later on escalated the Sino-Indian War of 1962. China and India both, argue over the legitimacy of the McMahon Line, where India considers it fully legitimate and official while, China declares it illegitimate. India asserts its claim over approximately 43,180 km² of Aksai Chin in Kashmir which is currently controlled by China. This also includes around 5,180 km² of territory handed over to China by Pakistan under the 1963 Pakistan-China boundary agreement. On the other hand, China also claims about 90000 km area of Arunachal Pradesh which is currently under Indian control. There seems no effective progress to reach solutions to these issues, which further escalate to a long-lasting territorial conflict between the both. However, despite the series of conflicts between them, these two states started easing their bilateral ties through "1993 and 1996 border agreements," in which it was decided that we would be adopting peaceful measures on our respective borders and any point of divergence shall not put any effect on their bilateral collaborative efforts that were decided in border agreements of 1993 and 1996 (Agreement between The Government of the Republic of India and The Government of the people,s Republic of China on the Establishment of a Working Mechanism for Consultation and Coordination on India-China Border Affairs, 2013).

Moreover, under these bilateral agreements, it was decided to ensure the Confidence Building Measures (CBMs) on all kinds of border activities that included reducing the armed deployment at the border, all border conflicts would be decided through collaborative ways under the leadership of local army commanders. In addition, in 2003, both states decided to appoint "Special Representatives" to observe and settle border issues. However, despite the collaborative measures, both the states had failed to step back their claims to settle the respective territorial issues. At the same time, the will to dominate and influence world politics, both states, don't reach the point of cooperating or easing border issues. On the one hand, India using its lobby, fulfills the strategic interest United States in the region of South Asia and in return US supports her back in every international matter. On the other hand, China through its mega Belt and Road Initiative (BRI) wants to influence not only the economy tycoons of the world but also planning to replace their political will from the globe.

Disturbance in Water Flow and Implications for Bangladesh

Moreover, Water is an essential need of human life and without it, life on the earth becomes impossible. GBM (Ganges, Brahmaputra, and Meghna) basin is one of the largest river basins in the world flowing into China, India, Bhutan, and Bangladesh. The Brahmaputra, Shiquan or Indus River, Kosi, and Ghaghara rivers are shared water bodies between India, China, and four other states, Bangladesh, Pakistan, Bhutan, and Nepal (Swain, 2019).

In such scenarios, where, the mainstream water bodies are inter-connected, considering the ongoing water conflict between India and China and its implications over Bangladesh, there falls it is necessary to explore a long-lasting solution to the ongoing conflicts in the region, to maintain the peace and stability in the region, but in reality, there seems no better and long-lasting solutions due to the pursuance of the emotion to lead the world and create dominancy. This could lead to escalations and at the same time, any of the escalations among all three states could lead to a change in the behavior of the other 2 states which could result in making changes to river flow going downstream to India and Bangladesh. These concerns made China build dams near the Yarlung Tsangpo River, as it may compel the rest of the other two states (India and Bangladesh) to minimize or neutralize the offensive behaviors of the rest of 2 states during war-like situations towards China.

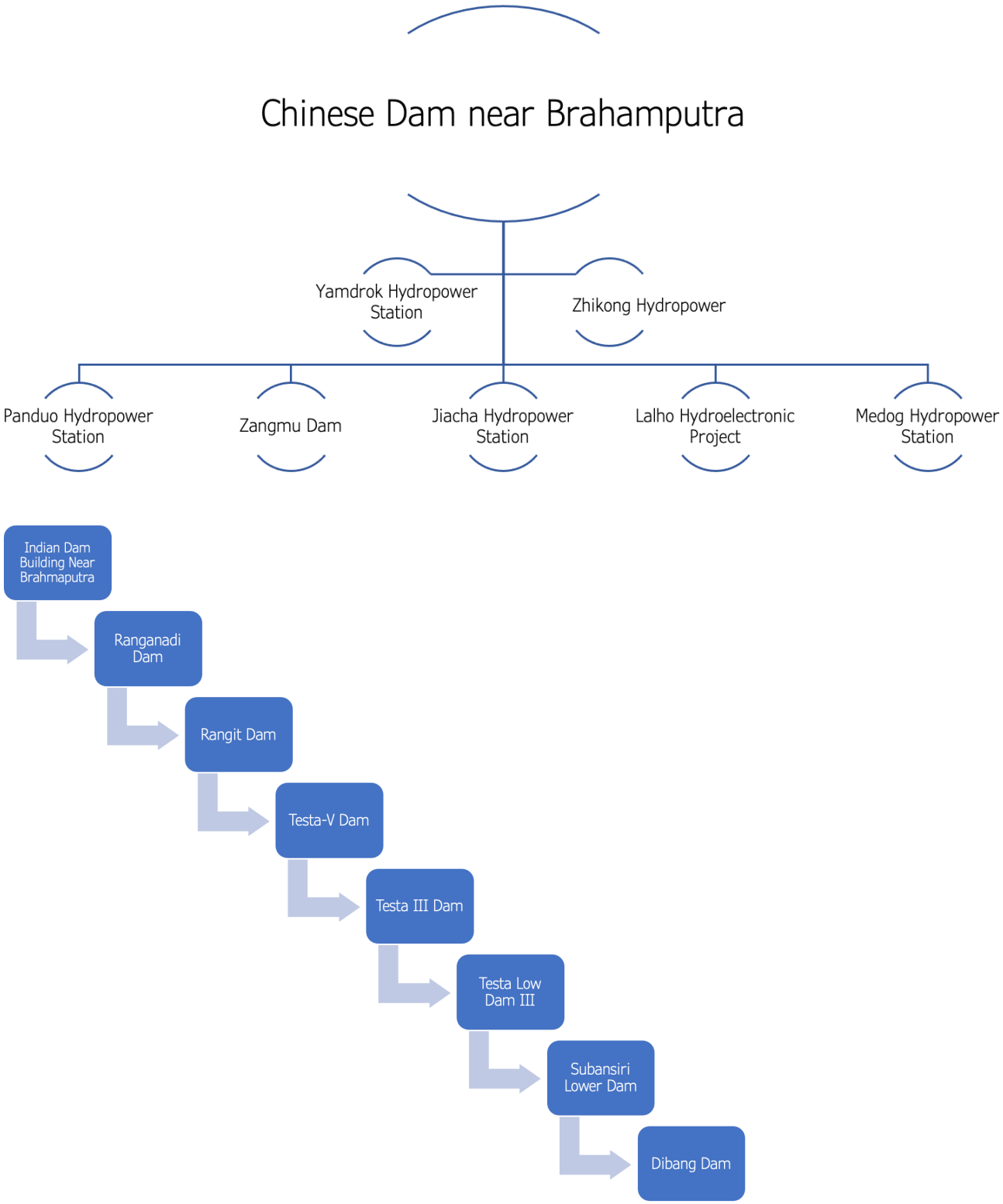
In addition, by the year of 2014, the Chinese government established its largest hydropower dam, called, "Zangmu Dam," near Yarlung Tsangpo (what the Chinese call it, whereas Indians call it Brahmaputra), has raised serious concern from the rest of the two states about the reduced flow of water downstream towards India and Bangladesh. This river "Brahmaputra/Yarlung Tsangpo" is one of the largest rivers in South Asia and covers a vast basin area of about 651335 km^2. The river's annual flow of water is about 165.4 billion cubic meters, making it a significant source of fresh water, especially for Bangladesh (Transboundary River Basin Overview – GangesBrahmaputra-Meghna, 2011). The Zangmu dam a key component of China's Zangmu hydropower project is estimated to generate 510 megawatts of electricity. Moreover, both states had serious matters over the management of the flow through this river, especially after the establishment of this Zangmu dam.

India's Concerning and Strategic Responses

More importantly, India is of the view That China is working on the Grand Western Water Diversion Project which aims to redirect the flow of six rivers in its southern region. This project includes the Salween River, Brahmaputra River, and the Mekong. As part of the larger Zangmu water, it plans to store water in the reservoir and use tunnels to provide water during the dry season. Many International security observers alarmed the event, for bringing the water wars in the region between China and India, adding fire to already tense bilateral ties between the two states. Chinese authorities have such claims by the security observers and have ensured that her actions won't escalate the tensions with downstream states.

However, China wants to meet the energy needs of the Tibet region, through the utilization of hydropower potential near the Brahmaputra River, but at the same time, it has ensured the downstream states, that no change in flow would occur due to this hydropower project. China's actions, not accepting the United Nations adopted the 1997 convention on the law of non-navigational uses of international watercourses (UNWC) during its General Assembly (China, South Asia ignore UN watercourses convention, 2014). such actions of the Chinese non-supportive behavior in the international arena regarding International water management, have raised concerns and produced a sense of fear of a water crisis in all other 2 downstream states if China starts building dams, which it would use for the diversion of water flow from rest of all two downstream states.

Chinese actions don't pose direct threats as compared to other upper riverine countries of the globe, like; Tajikistan and Kyrgyzstan having the upper riverine position of Central Asia, don't care about what amount of water shortages or crises, the downstream states (like Kazakhstan, Turkmenistan and Uzbekistan) while establishing the hydropower project (A Tale of Two Dams: Mega Projects and Water Cooperation in Central Asia, 2023). Interestingly, even India, itself doesn't care about the water needs of downstream states to it, mainly Pakistan and Bangladesh. Despite several water treaties, India has never followed them and has violated the rules and agendas of international water usage.



Impact on Bangladesh's Water Security

Many scholars are of the view that, from the pattern of Chinese and Indian practices, it is far more possible that, the day is not so far when Bangladesh would not be having, even a single cubic meter. Both the states, India and China are aiming to build 200 large-scale and small dams on the Meghna, Yangtze, Ganges, and Brahmaputra water bodies, which are serious indications of leaving Bangladesh to be hit by the severe water crisis, because, if more dams are built, more water would be stored in those dams and leaving a limited amount of water downstream.

Moreover, Bangladesh's water availability is around 90 billion cubic meters (BCM), while the nation's demand is 147 billion cubic meters which means a water crisis of 40 percent especially in the northern part

of the state, contributing to drought-like conditions in the state (The Daily Star, 2011). Almost 67 percent of Bangladesh's water needs are dependent on the Brahmaputra River, while the Ganges supplies 18 percent and Meghna is 15 percent of the water resources, which means main source of water resources and in such scenarios, building bundles of dams near this river, means the resource-based murder of Bangladesh, because the major portion of state's economy is reliant on the agricultural sector, and again this agricultural sector is dependent on water resources for getting crop yields (Impacts and Adaptation Measures of Climate Change on Agriculture in Coastal Bangladesh, 2024).

In addition, changes in the flow of water patterns may lead to flooding during the season of monsoon. Bangladesh is highly at risk of getting surrounded by flooding, with about 80% of the states turning out to be floodplains. While dams are considered the best option for flood control measures, but, if their management is not ensured, it would lead to sudden releases of water, accelerating the downstream flooding. Due to such risks posed by the floods, Bangladesh, usually every year, has to experience economic losses of 1.5 percent of its total GDP. By the year 2020, about 4.7 million people were affected by the floods, causing serious damage to agriculture and infrastructure. Another critical concern for Bangladesh is securing the biodiversity, which is highly impacted by the divergence of water.

Environmental and Socio-Economic Consequences

The Brahmaputra is home to millions of unique and endangered species, like, the Gangetic Dolphin, Bengal Tiger, etc. Building dams near the Brahmaputra River is a clear indication of disturbance of water flow to downstream states, which means changes in the flow occur, and this change in flow would disturb the habitats, and migration pattern of aquatic species, further contributing to the loss of biodiversity (Audley, 2010). Like, water crisis, especially during the dry season, disturbs wetland habitats, critical for fish spawning and nesting of the Bird. Bangladesh's fisheries industry shares 3.6 percent of the state's total GDP and become a source of finance for many individuals, these varying water flows disrupt not only the various species but also make the survival of the individuals vulnerable to financial crisis and life essentialities drought, etc.

Moreover, Bangladesh being a downstream state in the GBM (Ganga-Brahmaputra-Meghna) basin, experiences critical challenges for ensuring the sustainable usage of water, in the face of fluctuations or any changes in the water flow from all the way upstream states (India and China respectively), through Brahmaputra River. Bangladesh's 1st priority, to counter the threats incoming from the upstream positioning states (India and China), is only possible through having strong diplomatic ties with both India and China. There is an urgent need of the time for bilateral and trilateral dialogues to ensure trust and transparency among all three states (India, Bangladesh, and China) (Vishwanath, 2024).

International Cooperation and Technological Innovations

Bangladesh can promote the establishment of binding agreements backed by international water law, such as the United Nations Convention on the Non-Navigational Uses of International Watercourses. This principle focuses more on the equitable and logical use of shared rivers and prevents upstream countries from abiding by any kind of harm to their downstream states. Both the states (India and Bangladesh) had signed a treaty for the water flow and river management of Ganges in the year of 1996. While this treaty failed to bring positive results. On the one hand, where Bangladesh needs to strengthen its diplomatic ties with China and India. On the other hand, it must use the water in a very manageable way to counter all effects made by reduced floods and seasonal variability.

This is needed for the modernization of the irrigation activities that use a significant portion of the water. Bangladesh has to initiate water-saving techniques such as drip and sprinkler irrigation (which reduce water consumption by up to 30 percent), and these (water saving techniques) also reduce the consumption of high amounts of water which was evident from the traditional farming techniques (Drip Irrigation , 2023). Technologically based agrarian activities, like, expanding the use of solar-powered agricultural systems also

contribute high to ensuring the sustainable use of water resources. The rainwater harvesting technique is another effective mechanism for increasing water availability, especially during the hot seasons. Groundwater, in Bangladesh, is used about 80% for irrigation and 97% for drinking purposes. In Bangladesh, the people are highly involved in over-extracting and wasting water, which has led to water shortages during the dry seasons.

Bangladesh must introduce policies for efficiently regulating groundwater practices to avoid the water crisis and to adopt sustainable habits of using groundwater. The states must also have disaster preparedness to tackle the increased risk of critical situations in the state, like flooding, water crisis, etc. Drought management planning, like contingency, and drought-resistant crop varieties can also assist in reducing the effects of water crises during the hot seasons. Strengthening early awareness and warning systems and ensuring food-resistant systems like embankments and shelters can reduce the chances of vulnerabilities. It should have policy measures to tackle the people surrounded by flooding, assisting their economic conditions.

Strategies for Bangladesh to Mitigate Water Challenges

The role international community in ensuring cooperation among all these three states (China, India, Bangladesh) regarding the water flow from Brahmaputra is a need of the time, to reduce any future water wars. International Initiatives like the South Asian Water Initiative (SAWI) can also provide technical expertise and policy dialogues among all three states. In addition, Institutions like the World Bank and, Asian Development Bank, can be used, by Bangladesh, to get funds to manage sustainable developmental projects within the state. More importantly, public awareness and community engagement are far more crucial aspects of success of the fully ensuring sustainable water management efforts.

Bangladesh must go for raising awareness among farmers and women, as they both are highly involved in water practices, farmers use water for harvesting their crops, while women use water in their daily practices in the household. Technological and Innovative transformative roles can be crucial in tackling the water issues. Bangladesh can install satellite-based remote sensing and geographic information systems (GIS) to see the water flows. Advanced technological achievements can help one predict the effects carried out by upstream developments and climate change, enabling better planning before time.

Today, almost the entire globe is facing a shortage of freshwater resources due to the growing climatic changes that have created hazardous situations across the globe. According to a report published in 2019 by "The World Economic Forum" in it was highlighted that the South Asian region has the highest global ratio of the water crisis. In addition, most of the developing states, today are facing water shortages, as is evident in the case of the South Asian region, where we find that, the region has got 1st and 2nd top states of the world facing a high ratio of water crisis across the entire globe. Water is a far more important commodity of the universe not just because all the living creatures' existence on this earth is possible due to the availability of water on the earth, but the water also acts as an essential and mandatory source of economic growth and development. Considering this scenario, it's far clearer that water will act as a cause of contention and collaboration among the nations.

Furthermore, to overcome such potential conflicts, various states, to manage the water resources and to minimize the probabilities of future escalations, have signed several treaties, such as '1960 Indo-Pak Indus River treaty,' 'Indo-Bangladesh treaty of Ganges water resources,' The management of water resources is a critical challenge for the entire region of South Asia, as the entire region is heavily reliant on transboundary rivers for the agricultural, energy generation and drinking water. The Indus River system and Ganges-Brahmaputra-Meghna (BGM) are the critical sources for the millions of people across the region. However, regional cooperation, for managing these curial water bodies faces significant challenges because of inter-state rivalry and geopolitical tensions across the states and the region as a whole. Both states (China

and India) being upstream influence the water flow of these transboundary rivers, often impacting all the downstream states like Bhutan, Bangladesh, and Nepal.

Anarchic Nature of International Relations

China and India's competitive nature to rule the region and to have a say in the world and to supersede their adversaries, have never brought both the states on the grounds of policy dialogues for managing the sustainable use of water flow, while not harming the flow of downstream states. Both states are involved in maximizing their national interests only, not pursuing themselves as the leaders of the region, leaders don't think of themselves, rather their prime duty is to take their subjects along with them. The impacts carried out by the geographic positions of India and China being upstream nations, have left a deep mark of struggling water crisis among all the downstream states. Each downstream state faces unique issues, and understanding these requires a deep look at geopolitical relations and the socio-economic consequences of upstream states.

Bangladesh, which is heavily reliant on transboundary rivers, about 90% of its water resources are reliant on water flow incoming from the upstream states (China and India). Brahmaputra River, shared among India and China and the Ganges shared with Bangladesh and India, are acting as a lifeline for Bangladesh's overall ecosystem, fisheries, agriculture, drinking water, etc. India's barrages and dams like the Farakka Barrage on the Ganges, have diverted the water flow from Bangladesh, especially during the hot season (Impact of the Farakka Dam on Thresholds of the Hydrologic Flow Regime in the Lower Ganges River Basin (Bangladesh), 2014). This further, contributes to the water crisis, affecting the agricultural practices and drinking water supplies. Changing flow patterns from both upstream states contribute to floods during the monsoon season.

Furthermore, when the dams built by India and China over these rivers, get filled during to Monsoon season, they (India and China) send excessive amounts of water to downstream states, enabling the floods in these states (China and India water 'dispute' after border stand-off, 2017). Furthermore, hydrological data sharing among India and China has been consistence, but Bangladesh is not brought into the equation, it is not made aware of such data, which contributes to Bangladesh's inability to prepare for floods or droughts. Moreover, Bhutan is sharing the Manas and Sankosh rivers with India and is heavily reliant on water resources for its hydropower-driven economy. Bhutan's export of hydropower to India constitutes a major portion of its GDP.

In addition, India's control of the water flow of the rivers and investment in Bhutanese hydropower projects further promotes economic reliance and hinders Bhutan's power of bargaining. Bhutan's ecosystem is highly affected by the activities carried out by upstream nations, particularly in border areas where the rivers originate. Same as, in the context of Pakistan, being a downstream state in the Indus River system, and India being upstream and dam and hydropower project building activities on the western rivers like the Indus, Jhelum, and Chenab, has raised concerns for Pakistan about the reduced flow. With it, projects like Kishanganga and Baglihar have raised serious concerns. During the monsoon season, when the water overflows from the dams, India sends it downstream towards Pakistan causing heavy floods in the states, that contribute to people becoming homeless, infrastructure getting damaged and the ecosystem of the state getting disturbed.

Conclusion

Overall, the lack of a formal multilateral framework for the management of the transboundary river creates a variety of challenges, enabling the worsening ties across the states and disturbing the geopolitical situation and water governance of the entire region of South Asia. Changing river flow patterns and enhancing the dam building and hydropower projects near these interconnected water bodies, have left a question mark on

the role of water governance and policy dialogues among the South Asia states, which is evident from the worsening conditions of Bangladesh. On the one hand, all upstream states' political and socio-economic conditions are well-off. On the other hand, downstream states, like Bangladesh have a struggling economy and often face significant socio-economic and environmental consequences from conflicts between India and China, which, while pursuing their national interest harm other inter-connected states.

This happens due to the anarchic nature of the globe, where, all states pursue their national interests. Bangladesh to deal with the water crisis and changing water patterns from upstream states has to strengthen diplomatic participation with the upstream states. Bangladesh should adopt track II diplomacy, where ideas are exchanged from people to people, which can create an environment of trust building that fosters cooperation and reduces the chances of any water wars. Optimizing domestic practices of using the water, through awareness raising and community engagement, is also the need of the time to overcome situations like floods or drought during the hot and dry season.

Moreover, building binding bilateral and multilateral treaties and agreements to foster cooperation and interdependence and reduce the chances of any disastrous situation through data sharing among all the states, which could benefit all the downstream states to become well-prepared and well-aware of every situation. There is no doubt that this creation of treaties and agreements would on some other day, lead to shared water governance, regional cooperation, and community engagement across the entire region.

References

Agreement between The Government of the Republic of India and The Government of the people,s Republic of China on the Establishment of a Working Mechanism for Consultation and Coordination on India-China Border Affairs. (2013, February 27). Ministry of External Affairs: https://www.mea.gov.in/Portal/LegalTreatiesDoc/CH12B0194.pdf

Audley, K. (2010, October 12). *Potential impacts of five large dams on the Endangered Gangetic dolphins in the Brahmaputra River Basin, India. The SOciety for Marine Mammalogy:* https://marinemammalscience.org/letters/potential-impacts-of-five-large-dams-on-the-endangered-gangetic-dolphins-in-the-brahmaputra-river-basin-india/

Banerjee, M. (2022). *Sino-Indian Border Dispute: A Brief Introduction. Asian Territorial and Maritime Disputes, 158.*

Bhatia, R. (2024, Janurary 9). *India and South Asia: what to expect in 2024.* Gateway House: https://www.gatewayhouse.in/india-and-south-asia-what-to-expect-in-2024/

Borgohain, A. (2023). *The Brahmaputra As The Lifeline Of Travel And. International Journal Of Creative Research Thoughts, IJCRT.*

Brahmaputra: A Conflict-Prone River Takes a Step Backwards. (2020, December 23). WAR ON ROCKS: https://warontherocks.com/2020/12/a-conflict-prone-river-takes-a-step-backwards

China and India water 'dispute' after border stand-off. (2017, September 18). BBC : https://www.bbc.com/news/world-asia-41303082

China, South Asia ignore UN watercourses convention. (2014, August 18). DIalogue Earth: https://dialogue.earth/en/water/china-south-asia-ignore-un-watercourses-convention/

Choudhary, D. L. (2024, May 22). *India's Military Modernization Efforts Under Prime Minister Modi.* STIMSON: https://www.stimson.org/2024/indias-military-modernization-efforts-under-prime-minister-modi/

Farakka Barrage ActionInitiative and Response. (2017, April). WRC UDEL: https://www.wrc.udel.edu/wp-content/uploads/2017/07/FREE-Farraka-Barrage-Report-2017.pdf

Flood situation in Bangladesh not due to release of waters from Indian dam on Gumti River, Tripura. (2024, August 22). *Meida of External Affairs Government of India*: https://www.mea.gov.in/press-releases.htm?dtl%2F38197%2FFlood+situation+in+Bangladesh+not+due+to+release+of+waters+from+Indian+dam+on+Gumti+River+Tripura=&

Gyorgy, M. (2001). *A Tale of two dams.* UNESCO. https://unesdoc.unesco.org/ark:/48223/pf0000123753

Impact of the Farakka Dam on Thresholds of the Hydrologic Flow Regime in the Lower Ganges River Basin (Bangladesh). (2014, August 15). MDPI: https://www.mdpi.com/2073-4441/6/8/2501?

Impacts and Adaptation Measures of Climate Change on Agriculture in Coastal Bangladesh. (2024, November 20). Natural Hazard Science: https://oxfordre.com/naturalhazardscience/display/10.1093/acrefore/9780199389407.001.0001/acrefore-9780199389407-e-416

Imtiaz, E. (2023, May 14). *Empowering farmers in Bangladesh through new water-saving technologies: Drip irrigation systems.* Com.Bd. https://dripirrigation.com.bd/empowering-farmers-in-bangladesh

Pathaniya, V. (2024, November 1). *McMahon Line, India-Tibet Border Dispute, Simla Convention.* Pwonlyias: https://pwonlyias.com/mcmahon-line/

Peopertypistol. (2024, september 2). *History about Farakka Barrage.* PROPERTYPISTOL: https://www.propertypistol.com/blog/history-about-the-farakka-barrage/

Reuters. (2025, January 3). India says it conveyed concerns to China over hydropower dam in Tibet. Reuters: https://www.reuters.com/world/india/india-says-conveyed-concerns-china-over-hydropower-dam-tibet-2025-01-03/

Swain, A. (2019, November 30). *Smarter strategies for sharing South Asia's rivers.* East Asia Forum: https://eastasiaforum.org/2019/11/30/smarter-strategies-for-sharing-south-asias-rivers/

The Daily Star. (2011, June 6). Water Scarcity and Conflict: A Bangladesh perspective.

Transboundary River Basin Overview – GangesBrahmaputra-Meghna. (2011). Open Knowledge: https://openknowledge.fao.org/server/api/core/bitstreams/0b663060-87be-4338-9248-58cb9a2bfd8a/content

Unlocking BIMSTEC"s potential: successes, challenges and the road ahead. (2024, February 28). Retrieved from The SAIS review: https://saisreview.sais.jhu.edu/unlocking-bimstecs-potential-successes-challenges-and-the-road-ahead/

US Senate resolution for underlining backing india on MacMahon line: What is MacMahon line? (2025, january 6). The iIndian Express: https://indianexpress.com/article/explained/mcmahon-line-us-senate-8499398/

Vishwanath, A., Saroha, S., & Vishwanath, A. (2024, April 9). *Opinion: Integrating climate diplomacy and water management in South Asia.* Dialogue Earth; 对话地球. https://dialogue.earth/en/climate/integrating-climate-diplomacy-and-water-management-in-south-asia/

Vision of USD 5 Trillian indian Economy. (2018, october 11). *press information bureau government of india ministry of commerce and industry: https://pib.gov.in/Pressreleaseshare.aspx?PRID=1549454*