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Introduction

In the nexus between environmental challenges and political tensions in South Asia, the bilateral and multilateral management of transboundary river systems warrants particular attention. The region's rivers are crucial to the livelihoods of hundreds of millions of people, providing economic opportunities, sustaining regional agricultures, and contributing to food security. The Ganges-Brahmaputra-Meghna (GBM) river basin, one of the largest hydrologic regions in the world, is particularly important. The basin stretches across five countries (Bangladesh, Bhutan, China, India, and Nepal), with almost half a billion people being directly or indirectly dependent on the basin (Mirza & Ahmed, 2005). In China, where the Brahmaputra originates, the river occupies an increasingly important socioeconomic role. Despite the significance of the GBM basin, riparian States have thus far struggled to develop cooperative mechanisms to manage the shared use of these waterways. To date, there has been no comprehensive regional mechanism for transboundary water governance, nor is there any multilateral forum involving all five States.

While the lack of cooperation between China and India is linked to historical and ongoing bilateral tensions, the underdeveloped state of cooperation between New Delhi and Dhaka stands out due to the generally positive development of the Bangladesh-India relationship. Bangladesh and India share all three major rivers of the GBM basin, 51 smaller tributaries, and a 4,096-kilometer-long land border. The GBM basin is home to 47% of the Indian population and 80% of the Bangladeshi population, making the basin central to political considerations surrounding food security, water supply, energy, and the environment in both countries (Akter, 2016). Bilateral cooperation in the management of the rivers nevertheless remains limited. While some cooperative mechanisms are in place, serious doubts have been raised about their effectiveness, quality, and degree. Moreover, past agreements on transboundary rivers, including the 1996 Ganges Water Treaty (GWT), have been mostly ad-hoc, volatile, and mired with controversy, resulting in shared policy challenges remaining unresolved. In both Bangladesh and India, these challenges have been framed as national security issues. Although research unequivocally acknowledges the securitization of transboundary rivers in South Asia, the impact of this securitization remains unclear, with research often anecdotally referring to securitization to explain the lack of regional collaboration (Barua et al., 2018; Price et al., 2014; Vij et al., 2020). Other studies focus on how transboundary rivers are securitized in discourse and/or practice (Mirumachi, 2013; Rigi & Warner, 2021). What is missing, however, is an analysis of which exact dimensions of transboundary rivers undergo securitization and what ramifications topic-specific securitization discourses produce. As collaboration on transboundary river management is complex and multifaceted, the assertion that rivers as such are securitized insufficiently contextualizes the implications of the securitization of specific policy domains.

This paper investigates what dimensions of the transboundary river management between Bangladesh and India have been securitized. After outlining the main points of tensions and discussing existing cooperative frameworks, the paper examines the discourse of the national decision-makers on water issues, also known as hydrocracies. This paper identifies two securitized dimensions (hydraulic infrastructure and water scarcity) as well as one non-securitized dimension (the environment). This submission then discusses the consequences of (non-)securitization on the region and on cooperative mechanisms. Finally, the paper highlights

how the desecuritization of large hydraulic infrastructure projects coupled with the securitization of environmental issues could facilitate enhanced bilateral cooperation between Bangladesh and India, ultimately producing better policy outcomes for riparian communities.

Policy challenges and bilateral cooperation

The GBM basin is crucial for water flows in both Bangladesh and India. Over the year, South Asia witnesses a significant discrepancy between flows during the monsoon season (June-September), when floods are common, and the lean season (October-May), when water becomes increasingly scarce. In disputes around water sharing, the region's geography bestows India with key natural advantages. India's status as the upper riparian allows it to unilaterally divert water or construct dams, providing it with leverage over downstream Bangladesh. Bangladesh is thus exposed to the potentially unilateral conduct of both China and India. Although effective water management and cooperation on transboundary rivers would benefit riparian communities on both sides (Akter 2016; Barua, 2018; Baten & Titumir, 2016), bilateral power asymmetries and distrust shape the relations surrounding transboundary water management.

This power imbalance has shaped hydropolitical relations in the past and continues to do so today. In 1975, India completed the Farakka Barrage on the Ganges, located 18 km upstream of the Indo-Bangladesh border. The Farakka Barrage was to maintain the navigability of India's largest inland port in Kolkata and was viewed as paramount to the economic survival of eastern Indian states. This led the Indian government to design the Farakka Barrage alongside a feeder canal, ultimately diverting water from the Ganges towards Kolkata (Rahman et al., 2019). The planned diversion of the Ganges was met with protests, first from Pakistan and after 1971 from a newly independent Bangladesh, with criticism lamenting that the Barrage would detrimentally impact the water inflows to Bangladesh. India dismissed these objections, maintaining that the Barrage was indispensable for its economic development and that the amount of diverted water would produce no significant repercussions for Bangladesh (Kawser & Samad, 2015). Despite these reassurances, changes in water flow have come to adversely impact the riverine environment in Bangladesh and India alike (Rahman et al., 2019). The flow of the Ganges has decreased particularly during the lean season, exacerbating preexisting supply challenges (Rahman et al., 2019). Today, the Barrage embodies the wider bilateral tensions concerning river management, with contestations surrounding the Barrage frequently flaring up in domestic discourses. As such, the 1996 GWT, which governs the diversion of water at Farakka, remains the only agreement currently in place between the two countries.

The conflict over the Teesta River also lacks an agreement on water entitlements. The Teesta is a major tributary of the Brahmaputra and flows from the Himalayas through the Indian states of Sikkim and West Bengal before joining the main arm of the Brahmaputra in Bangladesh. Both riparian countries have built numerous dams to provide irrigation waters and generate hydro energy on the river. While agricultural output has increased as a result, the projects have come at an extensive environmental cost, altering the river's natural course, and significantly reducing water flows during the lean season (Baten & Titumir, 2016). These developments prompted Bangladesh and India to hold bilateral talks. In 2011, negotiators agreed that the two countries would initially share 80% of the water at a pre-set rate. However, the agreement was never signed due to a last-minute intervention from the state government in West Bengal, further discussed below (Baten & Titumir, 2016). Although the Teesta has reemerged as a contentious issue in recent years, progress towards shared management protocols has been minimal. As demands for a more favorable sharing ratio are gaining traction in Bangladesh and

Indian states seek to maximize the water supply within their jurisdictions, bilateral negotiations remain paralyzed.

Lastly, the Indian River Linking Project (IRLP) has further strained bilateral hydropolitical relations. The IRLP proposes to link all of India major rivers through a system of canals, dams, and reservoirs to supply water-scarce parts of India with water from water-rich parts, including the GBM basin (Baten & Titumir, 2016). Although the IRLP has been stalled since 2012, the Indian Supreme Court has since pressed the government to fast-track its implementation, describing it as a matter of national interest and security. Since then, India's feasibility reports have been unanimously completed (Baten & Titumir, 2016). Although the construction of the IRLP seems unlikely to materialize soon, it could emerge as another policy issue related to the lack of water-sharing mechanisms.

Past and contemporary cooperative frameworks have been (and remain) ad-hoc and limited in scope. Before the GWT was signed in 1996, the Joint River Commission (JRC), founded in 1972, and the 1977 Ganges Water Sharing Agreement provided the framework for cooperation. According to the 1977 agreement, water would be shared during the dry season following a schedule based on historical flow data. This agreement included a clause guaranteeing that Bangladesh would receive a minimum of 80% of the scheduled flow, even in case of extraordinarily low water levels (Rahman et al., 2019). However, the 1977 agreement was only laid out as a short-term solution and expired in 1988. Amid rising hydropolitical tensions and unsuccessful Bangladeshi attempts to raise the case at the United Nations, India continued its diversion of water to Kolkata until 1991, citing national interest considerations as a justification (Kawser & Samad, 2015).

The situation changed when Dhaka launched fresh negotiations with New Delhi in the 1990s, eventually leading to the signing of the GWT in 1996. The GWT rules that the water flow is measured at Farakka, with both parties having agreed to share water during the dry season in line with a formula designed to ensure *"equity, fairness and no harm to either party"* (Ganges Water Treaty, 1996). Although the GWT has fostered a regulatory mechanism that prevents unilateral withdrawals by India, the *de facto* water sharing proportions were found to be more unfavorable to Bangladesh than stipulated in the GWT (Lebel et al., 2010). Moreover, the treaty lacks a guarantee clause akin to that of its predecessor. Analyses of water flows suggest that the GWT performed worse than the 1977 agreement during critical periods in the dry season in delivering water to Bangladesh (Rahman et al., 2019). Other studies have contended that neither agreement improved the flow of water to Bangladesh (Nishat & Faisal, 2000). Furthermore, the treaty is exclusively concerned with water flows in the dry season and is not based on data that accounts for the adverse effects of climate change (Baten & Titumir, 2016).

The history and current state of bilateral cooperation is ultimately mired by tensions, varying between quarrels and non-cooperation. To this day, there are no agreements on the Teesta water-sharing issue or consultations concerning the IRLP. Out of the 53 rivers that India and Bangladesh share, only the Ganges is covered by a deal on water sharing procedures. Agreements such as the GWT have come to be seen as exemplifying power asymmetries and continued bilateral distrust. The consistent referencing of national security interests furthermore securitizes the issue.

Securitization and source selection
At its core, securitization describes the elevation of a policy issue to a (national) security issue. In this context, 'security' becomes a social process constructed through discourse (Buzan et

al., 1998). Political actors can use discourses to portray a particular policy domain as under threat, in turn legitimizing political measures to ensure the security of the referent object. The environment can operate as a referent object: climate change, for instance, has become heavily securitized in recent years, invoking growing demands for drastic policy changes (Warner & Boas, 2017). Actors can also securitize the extraction of natural resources (Schlosser, 2006). Water has similarly been securitized in various ways. National administrations can securitize hydropower projects, aspects of flood policy, or river systems linked with nationalist narratives (Mirumachi, 2013). Environmental challenges have thus become increasingly securitized in national, regional, and international discourses.

The securitization discourse on the GBM basin area is shaped by various factors: scarcity concerns, infrastructure/development, the environment, cooperative prospects, and a technical/scientific discourse (Williams, 2020). This paper specifically focuses on the (non-) securitization of hydraulic infrastructure, scarcity, and the environment in the discourses of the hydrocracies of Bangladesh and India. The hydrocracy refers to a group of stakeholders, mainly governmental organizations, bureaucratic agencies, or ministries, that oversee water resource management and constitute the primary actors in transboundary water management in South Asia (Mirumachi, 2013; Williams, 2020). In the case of Bangladesh and India, the hydrocracy comprises government agencies and bureaucracies as transboundary water policies are almost exclusively shaped by government authorities (Williams, 2020). This paper hence analyzes a range of government documents from Bangladesh and India. For India, this includes annual reports, national policies, speech transcripts, media briefings, and official responses from the Ministry of Water Resources, the Ministry of External Affairs, and the Indian Parliament. For Bangladesh, press releases, official statements, and media briefings from the Ministry of Foreign Affairs were studied. The analysis has also included secondary sources, including by the JRC, media outlets, and think tanks. Primary sources were studied in terms of how they frame national security in connection to shared waterways and how they use technical language and cooperative narratives.

Discourse on hydraulic infrastructure projects (HIPs)

HIPs feature prominently in national discourse and are heavily securitized by being framed as the only effective way of remedying challenges connected to water insecurity, food insecurity, and natural calamities such as floodings. In India, the realization of a network of canals, dams, and reservoirs under the IRLP is presented as the solution to guarantee a sufficient supply of water and ensure future food security (Parsai, 2015). On the Bangladeshi side, the Padma-Ganges Barrage featured prominently in deliberations with India and was framed as key in countering the negative effects of the Farakka Barrage on water flows (Ministry of Foreign Affairs Bangladesh, 2019; Ministry of External Affairs India, 2021). While the project was abandoned in 2017, the proposed alternatives also involve the construction of large-scale infrastructure. The most recent example of this phenomenon is the multipurpose Bangladeshi Teesta Project, which involves drastic changes to the riverine environment of the Teesta (Rahaman, 2022). HIPs clearly occupy a central role in governing and exploiting shared waterways.

The portrayal of HIPs as the obvious response to various developmental challenges situates these projects in the hydraulic mission narrative. This narrative describes the conviction that rivers need to be utilized for human use and economic development, with HIPs being of paramount importance in controlling rivers and harnessing their energy potential. This belief was promoted by the World Bank in the 1950s and quickly found resonance among South

Asian elites (Mirumachi, 2013; Williams, 2020). Since then, many contentious HIPs in the region, including the Farakka Barrage and dams on the Teesta, have manifested the hydraulic mission as policymakers have prioritized large-scale HIPs above other alternatives. The hydraulic mission narrative is useful to understand the dynamics of securitization in the discourse on infrastructure and development.

There is strong evidence indicating that the hydraulic mission supports the securitization of water resources. Where it is prevalent, the priority given to HIPs puts those projects beyond political debates by making them a matter of national security (Conker & Hussein, 2019). This link between the hydraulic mission paradigm and securitization is reinforced by the linking of the hydraulic mission with nationalist discourses. In this context, the HIP development is viewed as conducive to processes of nation-building, with dams and barrages becoming embodiments of national power (Conker & Hussein, 2019). This linking with is visible in India, where several HIPs have been described as 'national projects' manifesting a matter of national interest that are crucial *"for the benefit of the people"* (Ministry of Jalshakti, 2008). As HIPs become discursively linked to national well-being and security, they are securitized by relevant hydrocratic authorities.

The use of technical language is notable in this discourse. Joint statements by the Prime Ministers of both countries, as well as various ministry reports and press releases, exhibit technical jargon and often present details about HIPs in scientific terms despite the audience being political elites, the media, or the general public (Ministry of External Affairs India, 2021; Ministry of Foreign Affairs Bangladesh, 2019; Ministry of Foreign Affairs Bangladesh, 2021). Moreover, the technical narrative within the infrastructure discourse is institutionalized, including consistent references to bodies such as the Joint Technical Committee or the Joint Technical Sub-Group (Ministry of Foreign Affairs Bangladesh, 2021; Ministry of Jalshakti, 2021). These bodies are composed of government officials and experts from both countries and are tasked with conducting scientific studies and feasibility reports. The technical narrative intensifies the securitization of HIPs while legitimizing and strengthening the position of the hydrocracies, bolstering their securitizing capabilities.

Discourse on scarcity

The discourse on scarcity is the second relevant discourse on the GBM basin and is omnipresent in interactions between Bangladesh and India. Two elements stand out. Firstly, the securitization of water follows a zero-sum logic that naturally draws limitations on cooperative prospects. Both sides lament that water withdrawal in the other country severely exacerbates domestic scarcity. In India, this is especially true for the government of West Bengal, which has employed a scarcity-focused narrative to justify opposition to a water-sharing treaty for the Teesta River. The Chief Minister of West Bengal, Mamata Banerjee, stated that there was not enough water to share and that an agreement with Bangladesh meant that the people of West Bengal *"would not get a single drop"* (Times of India, 2019). The issue has been raised in the Indian Parliament by state representatives who have called on the government not to negotiate an agreement for the Teesta, further demanding the renegotiation of the GWT (Mukherjee, 2017; Roy, 2017). The Bangladeshi government, in turn, frequently urges India to limit the amount of water it withdraws from upstream rivers or to conclude a water-sharing agreement for the Teesta River. Scarcity therefore emerges as a key component on the discourse on transboundary water management.

This zero-sum logic is visible in India's management approach towards the Brahmaputra. As mentioned above, India's upper riparian location allows India to withdraw water to address domestic demand. India's capability is incentivized further by the securitization of water, with Indian policy documents stating that water sharing should be executed while *"keeping paramount the national interest"* (Ministry of Jalshakti, 2012). Citing national security concerns as a reason, India also considers hydrological data classified information. Similarly, Bangladesh contends that water sharing is an issue of national security (Akter, 2016). As such, national interest and security narratives in both countries further reinforce the securitization of scarcity and understandings of water sharing as a zero-sum game.

Water is further securitized in the scarcity discourse by emphasizing human vulnerabilities. In a joint statement with Indian Prime Minister Narendra Modi, Bangladeshi Prime Minister Sheikh Hasina affirmed that the Teesta was crucial *"to alleviate sufferings and save the livelihoods of millions"* (Ministry of External Affairs India, 2021). Reports of secretary-level meetings often include phrases, underlining that rivers are essential for *"the betterment of millions of people"* (Ministry of Foreign Affairs Bangladesh, 2021). As rivers are constructed as vital to life, scarcity becomes securitized through its framing as an existential threat to the population's well-being.

Respective diplomatic discourses are focused on framing bilateral collaboration as developing positively. Press releases and joint statements following high-level talks generally feature praise and affirmations of amicability, including references to strong historical, cultural, and political ties. The Bangladeshi war of liberation, during which India supported Bangladeshi nationalists, is mentioned as a shared reference point (Ministry of External Affairs India, 2021; Ministry of Foreign Affairs Bangladesh, 2019). Both governments equally mention increased trade, transport connectivity, and cooperation in security-related issues, maintaining that issues of water-sharing and resource scarcity will be addressed in the same *"spirit of friendship and cooperation"* (Ministry of Foreign Affairs Bangladesh, 2022). This officially cooperative narrative is at times in disconnect with the domestic securitization of HIPs and scarcity that actively limits the prospects for collaboration. The disconnect between domestic and diplomatic discourses has been confirmed in interviews with senior hydrocratic officials from both countries, who suggest that mutual distrust regarding water management prevails (Price et al., 2014). Although bilateral cooperation has deepened and continues to deepen in other areas, transboundary waters remain securitized in everyday political practice.

Discourse on environmental issues

Environmental aspects, including the riverine ecology, climate change, and the sustainable use of water resources form a third major political challenge. This discourse is not as pronounced as the discourses on scarcity and infrastructure development. In fact, environmental challenges and potential areas for cooperation are only addressed in some annual reports published by the Indian Ministry of Water Resources and a press release following a secretariat-level meeting of representatives from both countries. Two environmental issues feature in the discourse on environmental challenges, neither of which is securitized. Firstly, pollution caused by human activity in both countries is referenced without being discussed in depth (Ministry of Foreign Affairs Bangladesh, 2021; Ministry of Jalshakti, 2022). Pollution is also not constructed as a threat comparable to HIPs in the other country or water scarcity. Secondly, climate change and its effects are mentioned occasionally, particularly in the context of growing investment in renewables. Linked with the discourse on HIPs, the development of hydro energy is advertised as a sustainable solution to regional energy concerns (Williams, 2020). However, it is HIP

infrastructure rather than climate change that is securitized. Sustainable development is employed as one of the reasons to justify the construction of hydroelectric power plants. The discourse on climate change is susceptible to co-option wherein actors appropriate terms like *"sustainability"* and weave them into their own strategic narratives (Williams, 2020). The way climate change and sustainable development are invoked suggests that this is the case in both Bangladeshi and Indian discourses on environmental issues. The discourse on the environment therefore differs from the discourses on hydraulic infrastructure and scarcity in two crucial respects: it remains peripheral rather than dominant and is not securitized.

Securitization of hydraulic infrastructure and scarcity

As discussed above, the securitization of HIPs produces ecological ripple effects. In India, more than half of all river systems have been significantly reshaped by human-made infrastructure (Talukdar & Pal, 2018). Barrages and dams can substantially reduce downstream water levels, irreversibly altering riverine landscapes. In Bangladesh, the Farakka Barrage has changed seasonal water flows, especially in the south-western part of the country. Reduced water flows during the lean have exacerbated the risk of drought. Increased water discharge during peak monsoon season has simultaneously made left large swaths of Bangladesh more flood prone. The seasonal disparities in water availability are thus aggravated by the Farakka Barrage and similar projects, in turn affecting agriculture, fisheries, navigation, and many other areas of human activity (Mukherjee, 2011). Securitization consequently produces real-life impacts, especially for downstream communities and ecosystems.

The case of the Sundarbans, a large mangrove area located in the GBM basin, exemplifies the ecological impact of upstream damming projects. In recent years, the salinity-induced damage to the Sundarbans has intensified (Islam & Gnauck, 2008), threatening the survival of freshwater fish species that local communities depend on for food and economic activity (World Bank, 2017). The mangrove forests also store significant amounts of greenhouse gases while protecting the area from natural catastrophes such as cyclones. These negative effects have also been observable in West Bengal, indicating the inherently transnational implications of damming projects, including extended drought periods, floodings, decreased soil fertility, and increased salinity (Mukherjee, 2011). A particular concern for riparian communities in both countries is soil erosion. The continuous and unpredictable emergence and submergence of land along the river leaves millions stuck in a cycle of settlement, displacement, re-settlement, and re-displacement (Mukherjee, 2011).

The securitized discourse surrounding water scarcity also carries key implications for bilateral cooperation. As seen above, considerations around water scarcity are securitized by framing the vulnerabilities and dependencies of people in the region as a zero-sum game, leading actors to maximize their water extraction while producing detrimental outcomes for downstream countries (Islam & Susskind, 2012). This has several key implications for cooperation.

In sum, zero-sum logics have seriously undermined the prospects of present and future negotiations. When an agreement is concluded with little trust between the negotiating parties, the implementation of the agreement and future cooperation are rendered increasingly difficult (Islam & Susskind, 2012). The most damaging demonstration is the lack of water-related data sharing among the two neighbors. The exchange of hydrological data is key to facilitate cooperation on transboundary rivers and is crucial for mutual planning and decision-making processes (Gerlak et al., 2011). Nonetheless, data is often classified and used as a political tool in negotiations. Overall, the securitization of scarcity has contributed to a situation that is

overwhelmingly perceived as negative on both sides and characterized by *"frustration and helplessness"* (Price et al., 2014). The securitization of hydraulic infrastructure and scarcity is ultimately detrimental to bilateral cooperation on shared water issues.

The Brahmaputra Dialogue: A pathway towards desecuritization

Given that securitization has intensified rather than alleviated tensions on water-related cooperation, the relegation of HIPs and scarcity to non-security issues may provide an avenue to facilitate future collaboration. Desecuritization, the relegation of securitized issues to matters of 'regular' politics, may act as a catalyst for sustained change (Biba, 2014; Fischhendler, 2013). Desecuritization is broadly linked with the development of strong institutional mechanisms and benefit-sharing procedures to mitigate the prevalence of zero-sum thinking in policymaking processes (Fischhendler, 2013; Sadoff & Grey, 2005). This section discusses the Brahmaputra Dialogue Initiative (BDI) as a potential way to promote the desecuritization of HIPs and scarcity, specifically focusing on (1) the extent to which the BDI and similar campaigns can desecuritize these matters and (2) the prospects of improved bilateral cooperation following the desecuritization of these areas.

The BDI is a multitrack interaction platform for policymakers, academics, non-governmental organizations (NGOs), civil society organizations (CSOs), and other stakeholders from the Brahmaputra basin countries to interact on neutral ground (Barua, 2018). Launched in 2013, the BDI was designed to cultivate mutual understandings regarding water-related concerns through a series of interactive workshops, interviews, closed-door interactions, and informal meetings. The dialogue is conducted in country-level and regional-level workshops to allow stakeholders to identify their priorities, discuss arguments, and formulate their positions with others from the same country and beyond (Barua, 2018). It commenced with bilateral interactions between Indian and Bangladeshi representatives in 2013-2014 before participants from China and Bhutan became involved in the subsequent phases from 2014 to 2017. The set-up of the dialogue as a multitrack process means that actors from various levels of diverse backgrounds participated—from 'people to people' diplomacy by private groups and individuals and 'informal interactions' between academic and lower officials to 'traditional diplomacy' involving high-ranking diplomats and politicians (Barua, 2018). The scope of the BDI makes it a useful platform to promote enhanced understandings between relevant actors.

The framework of the BDI can facilitate the desecuritization of shared water issues in two ways. Firstly, desecuritization is context-dependent, which means that recognizing historical, social, and political backgrounds is key (Balzacq, 2005). This is achieved by bringing together actors from various fields and by fostering a platform focused on interaction and exchange. This is reflected in the BDI's promotion of multi-track diplomacy, accepting that a sudden and direct high-level diplomatic engagement for serious cooperation is unlikely in the regional context. As the emphasis is as much on the process as it is on the outcome, there is room and space to deconstruct misunderstandings and existing reservations (Barua & Vij, 2018). Secondly, effective desecuritization requires a range of desecuritizing actors from the political elite and civil society (Fischhendler, 2013). While diplomats are constrained by what is perceived to be the national interest, CSOs, NGOs, and the scientific community can shape perceptions of national interest in favor of desecuritization by involving local actors and providing new knowledge inputs (Price et al., 2014). Continuous interactions of various stakeholders with diverse backgrounds within and across countries can therefore encourage positive transformations. The multitrack interaction processes consequently have substantial potential to work towards desecuritization. Although the BDI has not resumed since 2017,

Bangladesh and India could and should work towards rekindling such efforts, building on the bilateral basis of the BDI and improved political relations over the past years.

Can the desecuritization of HIPs and scarcity lead to improved cooperation in shared water issues? Regarding HIPs, there are convincing reasons to believe that this is the case. If projects such as the BDI can help to desecuritize large infrastructure by allowing civil society actors, scientists, and others to engage with the hydrocracy and deconstruct the latter's focus on the hydraulic mission, dams and barrages would become less of a policy preference over time. In both countries, infrastructure projects could become subjects of growing domestic debates. These changes would not only benefit the millions suffering the consequences of the intrusive alterations of rivers but also soften uncompromising negotiating positions. Consequently, the desecuritization of hydraulic infrastructure would catalyze deeper cooperation. If the BDI and other initiatives identify infrastructure as one of the key points of conflict and actively incorporate discussions surrounding it, there is a high potential for desecuritization processes to move towards the establishment of improved cooperative mechanisms.

Desecuritizing scarcity, in contrast, is more complicated. Desecuritizing scarcity may placate actors and possibly render the zero-sum thinking on both sides less rigid. However, the desecuritization of the issue may not necessarily be desirable on either side. The desecuritization of scarcity would entail that the scarcity of water resources and the vulnerability of riparian communities are no longer constructed as existential threats and are instead moved to the realm of regular politics. This deprioritization of water scarcity is what makes desecuritization a pitfall rather than a solution in this case.

Removing water scarcity from the priority list would imply a flawed analysis of on-the-ground conditions, with water scarcity remaining an existential threat to millions in the region. As rainfall patterns are shifting due to climate change and groundwater resources are dwindling, per capita water availability has plummeted over the last two decades. During the dry season, Bangladesh and India face growing water shortages affecting communities and ecosystems. This prompts the question as to why the securitization of scarcity has such detrimental consequences on cooperation, in turn exacerbating water scarcity. Interestingly, the discourse on scarcity focuses on scarcity induced by infrastructure projects rather than the impact of climate change and environmental degradation. The securitization of scarcity merely concerns its political dimensions that materialize as zero-sum transboundary disputes. Instead of desecuritizing and deprioritizing water scarcity altogether, policymakers must view scarcity as an essentially environmental rather than geopolitical challenge.

The non-securitization of the environment

Unlike HIPs and scarcity, the environment is not only not securitized but also does not feature enough in transboundary water discourse between Bangladesh and India. This is in notable disconnect with the lived realities of regional communities that suffer the consequences of environmental degradation and for whom climate change poses a genuine threat to their socioeconomic existence. The environmental problems affecting almost all areas of life in riparian communities in contemporary Bangladesh and India include droughts, floods, depleting groundwater levels, and excessive river pollution (Baten & Titumir, 2016; Kaur & Kaur, 2016). The Ganges and the Brahmaputra are severely polluted with industrial and household waste, which inevitably impacts the availability of drinking and irrigation water. As discussed above, large dams and barrages exacerbate the detrimental development of the ecological balance of the river systems.

The impact of climate change aggravates these environmental issues. As the melting of Himalayan glaciers accelerates, temperatures on the subcontinent rise and rainfall patterns change, and floods and droughts will continuously become more frequent and severe (Rasul et al., 2021). With the region being exceedingly vulnerable to natural disasters and dependent on groundwater, water scarcity is expected to intensify, highlighting the need to reframe scarcity as an environmental issue that poses a security risk. These developments signal that climate change mitigation and adaptation policies are going to be crucial going forward (Kaur & Kaur, 2016). Considering that ecological issues naturally transcend national boundaries and could incentivize collective action, the non-securitization of the environment presents a missed opportunity for enhanced cooperation.

Environmental securitization

Can the securitization of environmental issues enhance bilateral cooperation between Bangladesh and India? 'Positive' securitization could provide a useful alternative motivating cooperation between political actors (Floyd, 2007). Existing literature highlights that environmental securitization operates differently compared to other forms of securitization and can positively influence inter-State cooperation. Accordingly, securitization can be a solution to environmental problems and have a transformative quality by promoting cooperation (Trombetta, 2011). This unique character of environmental securitization is based on environmental threats being dispersed and transcending man-made boundaries (Wæver, 1995). The effective securitization of environmental issues would allow policymakers to understand and respond to the existential significance of the environment for riparian communities and ultimately prioritize environmental policies. Securitization would therefore improve the political responses to environmental issues.

In the case of Bangladesh and India, the issue of scarcity demonstrates the usefulness of positive environmental securitization. If scarcity is reframed as an environmental issue rather than a geopolitical one, there is no 'other' to blame for water shortages. Instead, insufficient water flows of the Teesta River, for instance, could be regarded as an inherently shared issue that can only be addressed collectively. Environmental securitization along these lines can overcome zero-sum framings in Bangladesh and India and has the potential to make policymakers prioritize environmental, enhance their policy responses, and pave the way for long-term cooperation.

The BDI offers an insight into what a securitization of environmental issues could look like and under what circumstances its potential could be realized. The BDI's design as a platform and multitrack interaction process has several benefits. Firstly, it allows for transboundary cross-border partnerships to form that directly communicate their concerns to relevant hydrocratic actors. The regional-level workshops facilitate exchange between scientific communities and CSOs that can learn from each other and improve the formulation of their positions. Secondly, the involvement of various groups, including NGOs, boosts the potential to securitize environmental issues. Non-governmental actors are usually excluded from deliberation and decision-making processes but can here advance their concerns in front of policymakers. In regional and national contexts that are characterized by hydrocracies making policies with little input from riparian communities, multitrack interaction processes can expose hydrocratic policymakers to alternative positions.

The design of the BDI nevertheless continues to face challenges. Even when confronted with civil society actors, hydrocratic policymakers might choose to not act on concerns expressed in the BDI. This holds particularly true when CSOs lack the capacity to effectively participate in the formulation, implementation, and evaluation of policies, as is generally the case in other policy domains in especially Bangladesh (Barua, 2018). Moreover, the concerns of marginalized communities and women in particular tend to fall on deaf ears despite them suffering disproportionately from environmental degradation and climate change (Barua, 2018). These structural challenges will be difficult to overcome and require the input from relevant authorities. As marginalized communities have an interest in pushing for environmental securitization, their exclusion is severely detrimental to the development of enhanced environmental responses.

In sum, both the BDI's multitrack character as well as the involvement of a variety of actors can contribute to environmental securitization and to the long-term improvement of cooperative mechanisms. There is a simultaneous need to go beyond providing a platform for civil society groups and NGOs. Projects focused on facilitating interaction processes must actively support CSOs and NGOs in enhancing their capabilities to effectively participate in decision-making processes. This must also entail deliberate and active decisions to include marginalized communities and especially women in the process and expand their representation. These steps would further boost the potential of BDI-type initiatives to securitize environmental issues.

Conclusion

The securitization of transboundary rivers is both boon and bane for the cooperation on water management issues between Bangladesh and India. It is evident that securitizing large-scale HIPs not only fuels hostilities and suspicion among neighboring countries but also neglects the damage inflicted on the environment and riparian communities depending on shared waterways. At the same time, the non-securitization of environmental issues underscores that the very real and imminent dangers of environmental degradation and climate change are relegated to the sidelines in ongoing policy discussions. What is ultimately needed is a parallel shift: desecuritizing and deprioritizing dams and barrages while securitizing ecological issues and the environment.

Environmental securitization would bring policymaking in the GBM basin in line with the lived realities of impacted communities. Framing water scarcity as environmental rather than geopolitical issues would also consolidate the realization that the survival of riparian systems is an inherently shared interest.

Policymakers in Bangladesh and India must work towards more equitable and extensive cooperation to produce mutually beneficial outcomes, for instance through initiatives that focus on cultivating shared trust and understanding. Multitrack processes bringing together diverse stakeholders and promoting various forms of interactions can pave the way for a transformation, desecuritizing large infrastructure projects and securitizing the environment. These programs have a long way to go and require more inclusivity towards groups that are commonly excluded from decision-making processes. Moreover, the desire for change must be driven by both top-down intent and bottom-up inputs. Dialogue-fostering projects can act as catalysts for change that prioritizes the shared environment and deprioritizes ill-fated infrastructure projects. Such initiatives are needed not only in Bangladesh and India, but across South Asia. Water disputes can be resolved if policymakers realize that genuine cooperation is the only way to protect the river systems of the region and the people who depend on them.

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