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Ananya Gupta *Oberlin College*

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The Politicization of Water: Transboundary Water-Conflict in the Indian Subcontinent

Ananya Gupta

Table of Content

Introduction	3-7
Literature Review	8-22
- The Relationship between Climate Change and Water	8-12
- The Relationship between Climate Change and Conflict	12-15
- The Relationship Between Water and Conflict	15-17
- The Relationship Between Rhetoric and Conflict	17-22
Methodology	23-24
Case Study 1 India-Pakistan	
- Background	25-28
- Results and Discussion	29-36
Case Study 2 India-Bangladesh	
- Background	37-45
- Results and Discussion	46-50
Comparing Results	51-56
Conclusions	57-58
Appendix I	59-63
Appendix II	64-70
Bibliography	70-89

Introduction

Climate change-related events like floods and drought, exacerbate the rhetoric of conflict between nations that share natural resources. This paper explores the relationship between climate change and resource sharing conflict in three South Asian nations: India, Pakistan, and Bangladesh.

Poverty, ideology, and religion, alongside a whole slew of other reasons, all contribute to natural resource conflicts across borders. One particular natural resource that has created several interstate conflicts in the past and is known as the resource which will lead to future world wars is water. The Himalaya-Hindu Kush mountain range and the Tibetan Plateau birth ten of Asia's most prominent rivers (thethirdpole.net,) providing irrigation, energy, and drinking water to over two billion people across several countries today.

Therefore, transboundary water sharing is a constant source of conflict for several South Asian countries that rely on rivers to support their primarily agrarian economies. Specifically, because of the power dynamics between upper riparian nations — that have larger control over the flow of the river — and lower riparian nations that depend on their upper riparian neighbors for water — water sharing and management is a point of constant dispute.

This paper considers two cases in the Indian subcontinent: India's relationship with Pakistan regarding the Indus river system and India's relationship with Bangladesh regarding the Ganga-Brahmaputra-Meghna river system. In both cases, India is the upper riparian nation compared to its neighbors, and in both cases, India is dubbed the aggressor that takes advantage of its geographically advantageous position.

While these three nations have been engaging in conflict and cooperation regarding the control and use of their respective river systems for decades, the last five years have been

particularly significant for natural resources like water. According to the 2018 IPCC special report on global warming of 1.5 degrees celsius, there is a high probability that Asian countries will be subject to more frequent flooding and drought events than other nations (IPCC, 2018) due to global warming and climate change. With rapid industrialization and an increase in the population in the Indian subcontinent, South Asian river systems have come under great stress. However, the increasing pace of climate change has had one of the most significant impacts on these river systems, making them even more valuable for the survival of these nations and their economies. Experts from all three nations as well as international communities have expressed grave concerns regarding issues of inaccessibility to freshwater and the devastating drought and flood events that are already occurring, and are expected to increase in frequency and magnitude in the next decade — particularly for glacier-fed rivers like the Brahmaputra and Ganga (Baten and Titumir, 2015).

Furthermore, the past five years have been an extremely important time frame for India politically speaking. In 2014 the Bhartiya [Indian] Janata Party headed by Prime Minister Narendra Modi won the first landslide victory in Indian elections since 1984 — securing a clear majority across the nation (Thakur, 2019). It was also the first time a non-Indian National Congress — one of India's first national political parties that formed the government post-independence from British colonialism — administration won a simple majority election in India in 67 years since independence (Thakur, 2019). This alone was a historic feat. However, despite an alarming rightwing swing in Indian policies and culture during his tenure, in 2019, Modi secured another sweeping victory in the nation. Coupled with the increasingly tangible effects of climate change on rivers in the Indian subcontinent, The BJP government's right-wing, nationalist, Hindutva inclinations in the past five years are important factors that play a role in creating the narrative of Indo-Pak and Indo-Bangladesh water conflicts.

It is precisely to address such disputes over water, that institutions like the United Nations and the International Law Association created guidelines for good faith negotiations through the Convention on the Law of the Non-navigational Uses of International Watercourses 1997 and The Berlin Rules on Water Resources 2004 respectively. Significantly, the Convention on International Watercourses clearly states that "Watercourse States shall in their respective territories utilize an international watercourse in an equitable and reasonable manner" (Article 5, 1997).

While certainly true that global warming and the effects of climate change have become more acute and visible in the last few years, the Convention on International Watercourses, the Helsinki rules of 1966, and subsequently the Berlin Rules of 2004 have all stressed the importance of considering environmental harm and sustainability in transboundary water negotiations much before climate change became an inevitable reality. For example, Article 8 of the Berlin Rules states, "States shall take all appropriate measures to prevent or minimize environmental harm" (Article 8, 2004) and part four of the Convention on International Watercourses is dedicated to the protection, preservation, and management of environmental ecosystems.

It is therefore greatly alarming that despite the fact that international communities had a great deal of knowledge regarding the importance of sustainable use and sharing of resources, not to mention their fair and equitable use, none of the three countries — India, Pakistan, or Bangladesh are signatories of the Convention.

The Watercourse Convention, as well as the series of water-sharing negotiations and treaties between these nations, make clear that transboundary water issues existed long before climate change became a visible and tangible threat. Issues of unpredictable monsoon and dry

seasons occur annually and are recurring. In contrast, climate change has been a slow variable that has gradually exacerbated pre-existing environmental issues.

Today, climate change has started to increase the severity of pre-existing water issues around the world, especially in India, Pakistan, and Bangladesh. Therefore, this research acknowledges the fact that the annual flood and drought issues and their poor management have been issues for far longer than the advent of climate change. However, climate change has since exacerbated these problems to an unavoidable magnitude that must be recognized when analyzing the rhetoric of conflict regarding water sharing between these nations. More data about this change in recent years is included in the literature review section of this research.

As flood and drought events on both sides of the borders become more common and more intense due to climate change, political parties and their leadership and extremist groups from all three countries seem to be using these disasters as an opportunity to incite conflict between the ever-rivalrous nations. Rather than addressing the effects of climate change, all three nations seem to be playing a blame game for the destruction incurred by irregular, unpredictable, and polluted water availability in their respective countries.

This thesis posits that climate change and related events have exacerbated the rhetoric of conflict in already sensitive and conflict-prone nations, visible in the pieces published in nationally circulated, daily newspapers, between 2014 to 2019 — years that showcase the consequences of climate change — when compared to 2013 and previous years.

Literature Review

The Relationship Between Climate Change and Water

There is an overwhelming consensus in the scientific community that climate change is causing an increase in global temperatures. This increase has caused glaciers to melt at an unprecedentedly rapid pace, resulting in an increase in sea levels on a global scale. According to National Oceanic and Atmospheric Administration Climate.gov, "Sea level has risen 8–9 inches (21–24 centimeters) since 1880" (Lindsey, 2019,) hitting an all-time high in 2018 at 3.2 inches above 1993 levels. Further, the article cites that:

The rate of sea level rise is accelerating: it has more than doubled from 0.06 inches (1.4 millimeters) per year throughout most of the twentieth century to 0.14 inches (3.6 millimeters) per year from 2006–2015 (Lindsey, 2019).

Additionally, The World Resources Institute recently published a map showcasing the areas that will be most prone to coastal flooding in 2030 as a result of climate change and consequent sealevel rise.



This map clearly delineates that the Indian Subcontinent hosts a large number of nations that will be most severely impacted by sea-level rise.

However, this risk is not just because of the fact that the Subcontinent and the three countries pertinent to this research, India, Bangladesh, and Pakistan are partially coastal. Sea level rise has an adverse effect on floods and droughts in riverine areas as well, particularly near river deltas.

Civilizations dating back to the Roman Empire (Britannica, 2013) have been built around rivers to support life, agriculture, transportation, and industry. As a result, areas around rivers support high densities of the population. For example, in India, 400 million (Briney, 2019) people live in the Ganga basin. In Pakistan, nearly 180 million (Pappas, 2011) people rely on the Indus river for their lives and livelihoods, and the Ganga-Brahmaputra-Meghna delta alone is home to 160 million people in Bangladesh (Harris, 2014).

While river systems are known to be unpredictable and influenced by a number of geographical factors including seasons, wind patterns, rainfall, and temperature, in the last decade, climate change has had devastating effects on river systems and the communities that depend on them.

According to the WRI, flood risk increase is a result of heavier rainfall and storms that are fueled by climate change, population growth, increased development around coastal and riverine areas, and over-extraction of groundwater (Kuzma and Luo, 2020). While increased flood risk is a result of a convergence of all of these issues, climate change is a significant factor that exacerbates it.

Similar to WRIs report, the Natural Resources Defense Council recently reported that, "river flooding can result from heavy rainfall, rapidly melting snow, or ice jams" (Denchak, 2019). Furthermore, the special IPCC report on "Changes in Climate Extremes and their Impacts on the Natural Physical Environment" reported a medium to high level of confidence in the claim that climate change has "detectably influenced several components of the hydrological cycle such as precipitation and snowmelt, which may impact flood trends" (IPCC, 2012, p.178) These three institutions are the leading researchers on climate change, and all agree that climate change has played a significant role in increased riverine flooding. Furthermore, regions that are home to river deltas are particularly vulnerable to both riverine and coastal flooding. In an article for *PhysicsWorld* author Sam Jarman reported that "between 1980 and 2016, flooding caused an estimated \$1 trillion in damage and 215,000 deaths worldwide, with populations centred around river deltas and estuaries suffering particularly heavy losses" (Jarman, 2018). The article further cites the research conducted by Professor Philip Ward, Head of the Global Water and Climate Risk section of the Department of Water and Climate Risk in the Netherlands. Ward's research argues that deltas are particularly vulnerable to disastrous floods due to the combination of coastal floods and riverine floods that can occur in tandem. These floods are known as "compound events." (Jarman, 2018). Additionally, the article states that "with climate change set to bring higher sea levels and heavier rainfall, the threat of flooding is likely to increase in the coming decades" (Jarman, 2018).

According to WRI data that measures flood risks "the number of people affected by riverine floods will rise from 65 million in 2010 to 132 million in 2030" (Kuzma and Luo, 2020). This map showcases the distribution of the 132 million people who will be at risk of riverine flooding by 2030.



ANNUAL POPULATION AT RISK OF RIVERINE FLOODING BY 2030

Once again, this map makes clear that the Indian Subcontinent is a region that will be adversely affected by riverine flooding with between 5 million to 50 million people at risk. Furthermore, the report breaks down how much of this risk is because of climate change and how much of it is due to other socio-economic causes. According to the WRI, 50 percent of the riverine flood risk in India is due to climate change. For Bangladesh, this number is 61 percent, and for Pakistan, it is 47 percent. The study acknowledges other socio-economic failures including infrastructure and political will that contribute to the risk of flooding. Despite this almost half of the riverine flooding in 2030 is expected to be a result of climate change.

However, glacial melt does not mean that the subcontinent's only water problem is excess water flow and flooding. According to the Global Sustainable Development Report of 2019, "it is expected that by 2025, 1.8 billion people will experience absolute water scarcity, and two thirds

of the world's population will be living in water-stressed conditions" (UN, 2019, xxx). Furthermore, the report cites climate change as a driving factor in creating extreme weather events like floods and droughts, though the two occurring simultaneously seem paradoxical at first blush. The report states, "Climate change, for example, disrupts the supporting, regulating and provisioning services of ecosystems while increasing the intensity of hazards such as extreme heat, intense rainfall, floods, landslides, rise in sea level and drought" (UN, 2019, xxix)

While floods are a perpetual concern in the Indian subcontinent, drought and accessibility to freshwater is a parallel issue particularly relevant during summer months.

Recently, the *New York Times* reported brutal heat waves that have scoured the South Asian landscape affecting 800 million people (Schultz and Sharma, 2019). Climate change continues to be a factor exacerbating these extreme weather events.

Furthermore, rising temperatures are adversely affecting the glaciers and snow-capped mountains in the Himalayas creating a vicious cycle of extreme drought and flood events. According to the Hindu Kush Himalaya Assessment, the Himalayas are expected to face a 4.4-degree increase in temperature which will result in the mountain ranges losing two-thirds of their glaciers by 2100. Furthermore, with increasing temperature resulting in the aforementioned glacial melt, food systems, agriculture, water-dependent industries, and access to drinking water are all expected to be in jeopardy (Schultz and Sharma, 2019).

The Relationship Between Climate Change and Conflict

As outlined in "Climate and Conflict," a paper by the National Bureau of Economic Research, climate is defined as the observation of climatic variables such as "temperature, rainfall, and water availability, as well as climate indices that proxy for these measures, such as the El Niño-Southern

Oscillation index or the Palmer Drought Severity Index." Additionally, the paper defines the word "conflict" as "events where regular patterns of dispute resolution fail. These events are usually violent in nature (although they need not be in all cases), they may involve individuals or groups, they may be organized or disorganized, and they may be personally, politically or otherwise motivated" (NBER, 2014). In the India and Pakistan case — discussed in detail in upcoming parts of this research — the conflict that matches the NBER paper's definition is that of Kashmir and the persisting violent and unresolvable issue regarding control over the Kashmir valley and its resources. In the India Bangladesh case, the conflict that matches the NBER paper's definition is most visible in the conflicts regarding the Farakka Barrage on the Ganges river and the Teesta Treaty — a water-sharing conflict regarding a tributary of the Brahmaputra river. While in the India Pakistan case, violence and terrorism play a pivotal role in their water sharing conflicts, the India and Bangladesh case is more centered around failed dispute resolution.

NBER's paper considers 55 studies that determine that changes in moderate temperatures and rainfall patterns showcase an increased risk of conflict. The paper found that "contemporaneous temperature has the largest average effect by far, with each $1\sigma^1$ increase toward warmer temperatures increasing the frequency of contemporaneous interpersonal conflict by 2.4% and of intergroup conflict by 11.3%, but that the 2-period cumulative effect of rainfall on intergroup conflict is also substantial (3.5%/ σ)"(NBER, 2014). While acknowledging that climate is not the sole or primary driver of conflict, The American Association for the Advancement of Science conducted a similar study as the NBER in 2013, which determined that:

The median effect of a 1σ change in climate variables generates a 14% change in the risk of intergroup conflict and a 4% change in interpersonal violence, across the studies that we review where it is possible to calculate standardized effects. If future populations respond similarly to past populations, then anthropogenic climate change has the potential to

¹ This symbol represents degrees celsius σ .

substantially increase conflict around the world, relative to a world without climate change (Hsiang et al.). AAAS's study, similar to NBER's, reviewed a significant number of case studies and believe there is a causal link between climate change and the role it plays in causing conflict, though they have not been able to prove all the mechanisms of it, as yet.

Certainly, there is research that disagrees with the argument that climate change points "toward the existence of at least one causal pathway" (Hsiang et al) to creating conflict. A paper published by the Swedish International Development Cooperation Agency in 2018 titled, "The Relationship between Climate Change and Violent Conflict" argues that there is no evidence that climate change directly causes conflict, and that there are "no examples of violent interstate conflicts with such a major cause" (SIDA, 2018). However, even this research agrees that climate change increases the risk of other factors that affect conflict. The paper further clarifies that "the risks are particularly large in contexts with a history of conflict, where institutions that can manage and resolve conflicts are absent, e g because of new migration into the area, and where societies that directly depend on natural resources for their livelihoods live with small margins and little resilience" (SIDA, 2018).

There are many examples where nations already in precarious situations, Syria's civil war, for example, are right at the tipping point between peace and conflict. "The question is in what circumstances environmental stresses can tip a precarious peace into violence, and how to respond" the author of "How climate change can fuel wars" said (*The Economist*, 2019). For example, both Bangladesh and the Netherlands face similar environmental threats due to low-lying coastlines that are vulnerable to floods due to sea-level rise. "The Netherlands has the political, technological, and financial means to cope; much poorer, Bangladesh may not. No sensible person

expects a Dutch civil war because of climate change; in Bangladesh, the risk of such a conflict is not trivial" (*The Economist*, 2019).

In India, agriculture employs 59% of the workforce, 82% of which are "small or marginal farmers" (FAO, 2016) and in Pakistan it employs half the labor force (Pakistan Bureau of Statistics). Many agricultural communities in India, Pakistan, and Bangladesh rely on major river systems like the Indus, Ganges, and Brahmaputra for their livelihoods and live with small margins and little resilience. With increasingly unpredictable or polluted access to water — either excessive rain, drought, or depleted groundwater — these communities are already seeing unprecedented levels of farmer suicides (Karve and Ghosh, 2019) and are further vulnerable to falling into potentially violent conflicts. These examples prove that even if one cannot show the causal link between conflict and climate change, in the Indo-Pak context, and the India-Bangladesh context, climate change plays a vital role in increasing the risk of conflict.

The Relationship Between Water and Conflict

According to Homer-Dixon's paper titled "Environmental Scarcities and Violent Conflict" there are three core reasons why resource-sharing endeavors lead to conflicts between nations. First, the paper argues that degradation and scarcity of essential environmental resources such as agricultural land, forests, water, and fish will cause the highest degree of social turmoil than any other phenomenon. Second, Homer-Dixon asserts that population growth is an equally significant reason for resource-sharing conflicts beyond the degradation of the resource itself. Third, the paper argues that large populations, coupled with the deteriorating quantity and quality of resources like water, create power hierarchies that allow powerful groups to "resource capture" or disproportionately

keep resources for themselves, leaving less powerful communities at a severe disadvantage. This disparity, he demonstrates, has the potential to create conflict. Further, the paper posits that:

Unequal resource access can combine with population growth to cause migrations to regions that are ecologically fragile, such as steep upland slopes, areas at risk of desertification, and tropical rain forests. High population densities in these areas, combined with a lack of knowledge and capital to protect local resources, causes severe environmental damage and chronic poverty. This process is often called "ecological marginalization" (Homer-Dixon, 1994, 10-11)

According to Homer-Dixon, environmental scarcity, a burgeoning population, and consequent ecological marginalization results in violent conflict in communities over resources like water. However, he considers climate change as a separate entity from resource scarcity and degradation. Unlike the data presented in previous sections of this literature review, Homer-Dixon posits that the connection between resource scarcity and climate change is not a matter of current concern. Homer-Dixon concludes that the scarcity of cropland, water, forests, and fish are "of immediate concern" (Homer-Dixon, 1994, 39). In contrast, he believes that "atmospheric changes such as global warming will probably not have a major effect for several decades, and then mainly by interacting with already existing scarcities" (Homer-Dixon, 1994, 39-40). However, it is important to remember that this paper was published in 1994. Almost two decades later, climate change has become a primary concern both in its interaction with natural resources and its independent atmospheric impact.

While there are certainly examples of both violent and non-violent conflict regarding natural resource sharing, research regarding the relationship between water and conflict also cites a number of historical cases that demonstrate several instances in which water-sharing issues have led to interstate conflict, but only rarely violent conflict. Be it the "destruction of the Aral Sea from overuse of the Amu Dar'ya and Syr Dar'ya rivers," (Gleick, 1992) the Egyptian and Sudanese

16

conflict over the Aswan High Dam or India and Bangladesh over the Farakka Barrage — Gleick's paper argues that nations use water as a weapon against one another and that climate change will only exacerbate such behavior. The paper states that "water-related disputes are more likely to lead to political confrontations and negotiations than to violent conflict" (Gleick, 1992). It also warns that with growing disparities courtesy of climate change, conflict prevention through mediation is a must.

Furthermore, some critics believe that hydro-politics plays an important role in ensuring national security as well as provides an opportunity for either war or cooperation between nations. "Rejecting hydropolitics from the security field also risks neglecting the importance of a natural resource that has the potential to either divide states or bring them together. Because international freshwater is shared, unequally divided, scarce, and has the potential of being mismanaged, nations have two choices: conflict or cooperation" (Dinar, 2002).

Details about the specific relationship between water and conflict in the context of India, Pakistan, and Bangladesh are presented in the case studies section of this paper.

The Relationship Between Rhetoric and Conflict

The Merriam Webster Dictionary defines rhetoric as the "art of speaking or writing effectively." Rhetoric is the art of persuasion, one that uses symbols, imagery, metaphors, and emotions among several other techniques to build a narrative chosen by the author or orator. Media groups such as the newspapers used in this research use rhetorical devices to build narratives about public interest issues, particularly transboundary conflicts regarding river water.

To understand the rhetorical devices used in a text, Norman Fairclough considers two methodologies. The first is called Systemic Functional Linguistics, which is a qualitative assessment of rhetorical choices made in a given text. According to Fairclough:

"SFL is profoundly concerned with the relationship between language and other elements and aspects of social life, and its approach to the linguistic analysis of texts is always oriented to the social character of texts" (Fairclough, 2003, pg 5).

Fairclough creates a narrative on the topic "new capitalism" to demonstrate SFL techniques. To employ SFL, Fairclough assigned other elements of social life to his explanation of new capitalism. He described historical events like World War II and post-WWII economic concepts like "Fordism" to describe the journey that created a particular narrative of new capitalism.

The second method described by Fairclough to decipher the rhetorical devices employed in texts is called "Corpus Linguistics." Corpus Linguistics is a quantitative method to find rhetorical patterns in texts in order to understand how a particular narrative has been built by the author. Fairclough explains that:

The packages available [for Corpus Linguistics] ... allow one, for instance, to identify the 'keywords' in a corpus texts, and to investigate the distinctive patterns of co-occurrence or collocation between keywords and other words. Such findings are of value, though their value is limited, and they need to be complemented by more intensive and detailed qualitative textual analysis (Fairclough, 2003, pg 6).

Fairclough argues that Corpus Linguistics or the investigation of linguistic and rhetorical patterns in texts is not a sufficient method to determine the path of narrative building in texts. According to him, Corpus Linguistics is an addition, or supplement, to the qualitative analysis of context or the "social character of texts." (Fairclough, 2003, 5).

Overall, Fairclough's approach to analyzing texts as elements of social events is rooted in understanding how an author builds the narrative on a given topic using context and rhetorical devices. He calls this "meaning-making."

Furthermore, Fairclough considers "meaning-making" an interactive process that includes the reader and listener or interpreter. He stresses the importance of reception in his explanation regarding how one must analyze rhetoric in texts by stating:

We need to distinguish construction' from 'construal', which social constructivists do not: we may textually construe (represent, imagine, etc.) the social world in particular ways, but whether our representations or construals have the effect of changing its construction depends upon various contextual factors, including the way social reality already is, who is construing it, and so forth. (Fairclough, 2003, pg 8).

In other words, Fairclough explains that the analysis of texts must include the context and unspoken assumptions of the way the world actually is, not just how it is represented in a particular text.

Additionally, he argues that one must include how the reader or audience would perceive the text. While the intentions of the producer are important, different audiences interpret a text in different social contexts, which is equally important.

In summary, Fairclough argues that "texts have causal effects upon, and contribute to changes in, people (beliefs, attitudes, etc.), actions, social relations, and the material world." This paper uses Fairclough's theory of meaning-making to understand how daily newspapers in the Indian subcontinent build the narrative of water-sharing conflicts, using both SFL and Corpus Linguistics methodologies.

However, a chief part of understanding the rhetoric employed in a text is accounting for the secondary rhetoric involved in texts. Several texts quote powerful institutions and national leaders who employ rhetorical devices of their own to influence the narrative of conflict in the media.

In an article titled, "The Rhetoric of War: Words, Conflict, and Categorization Post 9/11," Gross and Aoláin discuss the theory of framing, why it appeals to audiences, and how in moments of emergency, such as war, national leaders are able to use rhetoric to shape laws and policies. Framing seems to be a combination of SFL and Corpus Linguistic techniques. It is both a narrative built from a social understanding of a topic that is repeated in patterns that strengthen or solidify the narrative for audiences. Gross and Aoláin's paper states that audiences use frames provided in the media as shortcuts to make sense of complicated situations, especially situations that do not provide enough time to evaluate the right way to respond adequately. Specifically, the paper posits that "in framing a given situation and affixing the label of "crisis," "emergency," or "war" to it, the President is the nation's chief "choice architect" (Gross and Aoláin, 2014). While the topic of the paper is more focused on U.S. politics and framing, the same is true of any nation — in a state of emergency or crisis, the president or prime minister and their staff are considered the appointed people to take the time-sensitive actions required.

Most importantly, the paper sheds light on how governments may use the framing of emergencies to claim actions that are not necessarily legal but may be overlooked due to the declared status of war or crisis. The article states, "One core concern in this analysis has been the extent to which "saying" becomes the stand-in for formal and informal understandings of applicable legal regimes and facilitates slippage in oversight and accountability for the exercise of exceptional powers in situations that are rhetorically identified as crises" (Gross and Aoláin, 2014). This is a pivotal piece of analysis when looking at the kind of responses governmental leaders in the Indian subcontinent have made in the last five years compared to the previous five years. Recently elected governments in the subcontinent have demonstrated a more aggressive tendency to engage in military action and have linked the issues of water management with national security issues. Framing water conflicts as an issue that may result in military action, I posit, creates a frame of war or emergency, one that this paper will explore more deeply in the case studies below.

Aside from what citizens hear from their national leadership, the only other source of information for everyday people is journalism. For example, experts on Bangladesh and India negotiations claim that "negotiations ... for water sharing in this region are mostly based on

20

anecdotal rather than scientific evidences" (Banten and Titumir, 2015). Media and journalism play an important role in keeping governments accountable, understanding citizens' opinions, and influencing audiences on issues and decisions made on the audience's behalf.

According to Hussain, "this dependency of news arises because citizens have not any other source of information or the capability to attain first-hand information about remote events and conflicts; they have to rely on media coverage" (Hussain, 2015).

Fortunately, in the age of social media and the internet, traditional media outlets and governments can be held responsible for the information they disseminate to a certain extent. For the purpose of this paper, I will focus only on the rhetoric and narratives created by newspapers, often with the help of governmental rhetoric and narrative-building. Despite the freedom and accountability that social media creates, traditional media — particularly in developing nations — is still a good measure to gather the stances of national leaders and the prevailing narratives that circulate to more remote parts of a country, of which there are many in India, Pakistan, and Bangladesh.

Methodology

In the India-Pakistan case, this research found 95 articles between 2001-2020 from two significant daily newspapers — 64 from *Dawn* representing Pakistani media and 31 from *The Times of India* representing the Indian media. Similarly, in the India-Bangladesh case, this research found 219 articles between 2002-2020 from two nation-wide daily newspapers — 154 from *The Daily Star* representing Bangladeshi media and 65 from *The Times of India* representing the Indian media.

In both cases, every article mentioning water sharing, conflict, and management between India and Pakistan and India and Bangladesh, respectively, is included. Additionally, all three newspapers are written entirely in English and are daily newspapers that are widely circulated and reputable in their respective countries, demonstrating that they are comparable newspapers for this research.

The first aspect of this research is the temporality of media rhetoric between the two sets of newspapers regarding water sharing of the rivers and their tributaries. The research will document and discuss how often and in what year the newspapers mentioned water sharing conflicts between the two countries in each case study. I hypothesize that between 2001 and 2020, as climate stresses have increased, the aggressive rhetoric regarding water sharing has also simultaneously increased.

The second aspect of this research is that of framing. The research will suss out what the different frames of water-sharing conflict are, which are discussed in the articles of each newspaper, what is the frequency of these frames, and what is the common language that is used to create these frames. The research will then analyze how each newspaper builds its narrative about the water-sharing conflicts in the two case studies. The way I went about searching for these frames is through keyword searches of the words — "India," "Pakistan," "Bangladesh," and

"water" in the digital newspaper archives of each newspaper. Upon finding articles about these keywords, I collected and sorted the different topics the articles spoke about in as objective a way as possible in full awareness of the fact that I may have some personal biases being an Indian citizen. In the articles, I further highlighted words that I deemed conflict-related. Though not an exhaustive list, some of the words I kept an eye out for and which appeared most commonly were — "aggressive," "war," "tactical," "treaty violation," "belligerent," and "threat."

Additionally, following the SFL methods described by Fairclough, this research aims to use the historical context of military conflict between India, Bangladesh, and Pakistan to decipher how newspapers built the narratives of water sharing in their respective nations.

Case Study 1 India and Pakistan

Background

One of the most significant and persisting points of contention between India and Pakistan — two countries with a long history of conflict — has been transboundary water sharing of the Indus River and its tributaries that emerge from the Himalayas.



India has a geographical advantage of being the upper riparian and has greater control over the release and use of river water. Furthermore, while India has a number of other large river systems

across the country to support agriculture, industries, and potable water needs, the Indus is the most, if not the only, significant source of water for Pakistan. Specifically, the Indus supports "90 percent of the agricultural sector in Pakistan — a particular problem for a country that, like others in the sub-tropical regions of the world, is arid and dry to begin with" (Nesbit, 2018). To ensure that there is an equitable distribution of Indus river water between the two countries, with the help of the World Bank, India and Pakistan signed the Indus Water Treaty in 1960. Under the treaty, waters from the Indus, Jhelum, and Chenab belong to Pakistan, and those of the Ravi, Beas, and Sutlej belong to India. The treaty also helped fund dams, link canals, barrages, and tube wells to ensure that Pakistan received the same quantity of water it did before its separation from India in 1947-48 (Indus Treaty, 1960).

The Indus and its eastern tributaries are glacier-fed rivers. In recent years — alongside the damage caused by overexploitation and pollution — the river system is also facing the consequences of rapidly melting glaciers because of climate change.

The IPCC, as well as many authors, have written about this fact for the past several years. As early as 2014, *BBC News* covered the annual floods in India and Pakistan, citing expert warnings that such events are becoming more common: "The signs are that these extreme weather events are becoming more common and more unpredictable - which many scientists believe is because of climate change" (North, 2014). While there are increasing events of the Indus and its tributaries overflowing, causing mass floods some months of the year, at other times, the two nations are facing water scarcity. In *This Is The Way The World Ends*, Nesbit writes, "the Indus is 'dribbling to a meager end. Its once-fertile delta of rice paddies and fisheries has shriveled up'" (Nesbit, 2018). This, alongside reports of farmer suicides, agricultural crisis due to water scarcity.

and dangerously low groundwater in India and Pakistan, illustrates serious water stress in the two countries.

Furthermore, looking more specifically at the relationship of water and conflict in the Indian and Pakistani context, Roic et al. argue that "water conflicts in India are largely selfcontained and have no bearing on its water relations with Pakistan" (Roic et al, 2016). While the chapter states that Pakistan's dependence on the Indus river tends to frame its local water stresses as transboundary issues, the chief result of this framing is "a strong tendency to blame India for its internal water problems, with militant groups like the LAT [*Lakshar-e-Taiba*] retooling its public relations efforts around the water crisis to recruit young people and incite hatred against India" (Roic, et al). The paper also mentions other experts and their views that India is building smaller dams as a result of its poor water relations with Pakistan, but the authors of the paper refute this claim as anecdotal, in need of further proof. However, it does agree that the use of the rhetoric of water-conflict, particularly that used by terrorist organizations, is used to spread discord and the possibility of future instability.

As flood and drought events on both sides of the border become more common and more intense due to climate change, many right-wing and extremist groups from both India and Pakistan seem to be using them as an opportunity to incite conflict between the ever-rivalrous nations. Rather than addressing the effects of climate change, both nations seem to be playing a blame game for the destruction incurred by irregular, unpredictable, and polluted water availability in their respective countries.

This section will illustrate how climate change-related events affect the rhetoric of conflict in the Indus case by considering the power dynamics that accompany upper and lower riparian nations, as well as other socio-economic factors that affect transboundary conflict rhetoric. The

26

paper posits that climate change and related events have exacerbated the rhetoric of conflict in already sensitive and conflict-prone nations India and Pakistan, visible in the news and opinion pieces published between 2014 to 2019 — years that showcase the consequences of climate change — when compared to 2013 and previous years.

Results and Discussion *Temporality*

The frequency of articles regarding water conflict in both the Indian and Pakistani media has increased post-2013, peaking in 2019 for India so far², but remaining consistent in the last five years in Pakistan.





Overall, *Dawn* has published more articles regarding the Indo-Pak water-sharing conflict than the *Times of India*. The paper showcases that *Dawn* has more articles regarding water sharing conflicts with India, which have been printed over a larger time frame. In contrast, the *Times of India* has fewer articles published mostly in 2019. These statistics reflect the fact that Pakistan is the lower riparian between the two with relatively lower power over controlling water flow. Therefore, the national media demonstrates a consistent concern about the nation's water availability. As mentioned in the background of this paper, Pakistan has a dependency on the Indus River system that is not mirrored in India and thus, water is a consistent concern reflected in the media. However, the increase in articles in the last five years reflects the magnification of concerns in the face of increasing scarcity and flooding. This is true for *The Times of India* as well. The sudden surge of

² Please note data for 2020 is incomplete since it is still April.

articles regarding water sharing in the face of arbitration over the *Kishenganga* dam and several other reports that allege fast track dam-building demonstrate the fact that the Indian government is noticing the scarcity of water and has been building infrastructure in the past five years.

The data that particularly stands out for India, however, is the 20 articles that were published regarding water conflict with Pakistan in 2019. India and Pakistan came very close to the brink of war in 2019, with India retaliating to militant attacks conducted in the sensitive Kashmir region the previous year. In February 2019, India conducted airstrikes against a terrorist group called *Jaish-e-Mohammad* across the Line of Control that divides Kashmir between India and Pakistan. This resulted in several days of uncertainty regarding military escalation and sent major cities in both nations on high alert. Further, for several months after, *The Times of India* and governmental officials in India linked the issues of terrorism with water and leveraged India's upper-riparian advantage over the Indus river as a form of retaliation against Pakistan.

For example, an article spoke on behalf of the nation saying, "India has maintained that 'terror and talks cannot go together'" (*Times of India*, 2019), indicating that the country considers Pakistan a pro-terrorist state and refuses to discuss water sharing issues for this reason.

2019 was also the year India revoked Kashmir's special status that allowed the state special autonomy due to its sensitive position as a territorial bone of contention between India and Pakistan. While Pakistan attempted to internationalize the issue of Kashmir's revoked status, it also "downgraded diplomatic ties with New Delhi and expelled the Indian High Commissioner" (TOI, 2019) as a result of India's decision. India retaliated once more but this time the issue linkage between political issues and water came directly from Prime Minister Modi, who spoke at a rally in Haryana promising to "stop water flowing to Pakistan and divert it to Haryana as it rightfully belongs to the country and the farmers of the state" (TOI, 2019).

A similar surge in TOI articles is visible in the graph above in 2016. Just like in 2019, in 2016, India and Pakistan came close to military escalation as a result of terrorist attacks on an army base in Uri, India, to which India retaliated with surgical strikes in Pakistan. Once more, Indian leadership linked the issues of terrorism and war with water with PM Modi's infamous line "Blood and water can't flow together" (Bagchi and Mohan, 2016). The Indian media followed suit, with words claiming that India's decision to suspend the Indus Water Commission which was designed to negotiate dam building on the river and its tributaries "to make Pakistan pay for the terrorist attack" (Bagchi and Mohan, 2016).

The prevailing narrative in the Indian media then becomes a patriotic one. In it, both national leaders and media narratives work together to paint Pakistan as a terrorist state and India as an aggressive country unafraid to strong arm Pakistan using Indus river water to protect its borders from militants.

For the full timeline of military conflicts between India and Pakistan in the last decade, please see Appendix I.

Framing

Using the headline — which, as the first line of an article that draws in a reader, demonstrates the key narrative of a news piece — repetitive keywords that occurred in the body of the article, and the main argument in the piece, I deduced the following narratives created in *Dawn* and *Times of India* respectively. The full list is available in Appendix II.

As I mentioned before, there are two kinds of rhetoric that are pertinent to this research paper. The first is the rhetoric and framing used by traditional media sources such as newspapers, and the second is the rhetoric that emerges within these newspapers as quotes from government officials and leadership. It is one thing for media outlets to use certain words and frame certain issues using one lens or another, but quite a different ball game when journalists are outright quoting the rhetoric spouted by the decision-makers of a nation.

For example, in 2008, India saw one of its most extensive terror attacks in Mumbai on the 26th of November that resulted in over 160 deaths and many more injured, to which Pakistan officials admitted that part of the planning did take place on Pakistani soil. In response, though the *Times of India* did publish several articles regarding the attack, they published only four articles mentioning water as a factor in the conflict. Of the four, only one mentioned the possibility of war - "India is also constructing dam on Kabul river which will further add to Pakistan's water woes. So in future there is going to be war between India and Pakistan" (Times of India, 2008) and the other three all mention water diversion in a far softer light — mentioning compensation and arbitration rather than war. Compared to articles published in 2019 that quote the minister of state Uttar Pradesh Prakash Rajbar saying, "all water flowing into Pakistan from rivers in India should be stopped immediately and released all at once after four months to ensure that all our enemies are drowned" (Times of India, 2019,) articles published in the last five years take on far more aggressive rhetorical tactics, which are even more alarming, considering they are state-sponsored. While articles mentioned in *Dawn* quote members of terrorist groups like the LAT spreading water conflict rhetoric in the face of other military attacks, the *Times of India* quotes national leaders, further demonstrating that the current national government is supportive of war rhetoric, rather than peace-building with Pakistan.

Similarly, there has been an equally significant change in leadership in the Pakistani government as well. In 2017 Pakistan's elected Prime Minister Nawaz Sharif had to step down from office due to a corruption scandal, and in 2018 a new prime minister, Imran Khan was elected.

31

Sharif's peace-building inclinations towards India are well-documented. Several research papers and articles state his interest in solving the Kashmir issue peacefully and maintaining good trade relations with India, evidenced by the fact that he was present for Modi's swearing-in ceremony in 2014 (Joshi and Kotasthane, 2017). However, many sources state that the Pakistani army did not share Sharif's views on India and the two entities — government and military — constantly butted heads (Grare, 2013). It is further true that terrorist attacks between the two nations in 2016 in Gurdaspur and Pathankot that escalated into military tension at Uri all occurred during Sharif's tenure as prime minister of Pakistan, making peace-building seem unlikely.

With the transition in leadership from Sharif to the current Prime Minister Imran Khan, neither civil nor military leadership seems interested in peace-building initiatives any longer. Initially, Khan was just as interested in improving ties with India: "When asked about relations with India, most political leaders, including Sharif and Khan, expressed their desire for improvement" (Grare, 2013). However, in light of India revoking Kashmir's special status under Article 370 of the India constitution that allowed the unique state several autonomous privileges, Indo-Pak relations seem to have reached a "new low" (Al Jazeera, 2019). In an interview conducted by *Al Jazeera* earlier this year, Khan is quoted as saying that "There is no question of talking to the India government right now after they revoked this article 370 of their own constitution and they annexed Kashmir illegally against the UN Security Council resolution which had guaranteed the people that they would be able to hold a referendum, a plebiscite, to decide their destiny" (Al Jazeera, 2019). Khan further mentions in the article that he believes war is "absolutely" a possibility, and even invokes the possibility of the two nuclear-armed nations reaching a point of no return if they were to go to war.

These conflicts around Kashmir and terrorism have bled into water politics between the two nations such that the Indus is an additional weapon that the two countries wield against one another. Modi has made several threats to stop water flow to Pakistan in 2016 (RT, Feb. 2019) following floods in Pakistan and a terrorist attack in Uri, India, as well as earlier this year amidst drought in north India (RT, Oct. 2019). According to Pakistan's Foreign Office spokesperson, such claims, if acted upon, would be considered acts of aggression if not war (Dawn, 2019). While no action has been taken regarding such threats yet, and certainly conflict rhetoric between the two nations has predated water stress, there is evidence that climate-change-related water stress has caused an escalation in conflict rhetoric between the two countries in recent years. There are some examples in *Dawn* that acknowledge the role that climate change plays in creating water stress in both countries and urge them to pursue policy redressal including re-evaluation of the IWT. No articles in the TOI mention climate change as a factor that influences unprecedented water issues. For example, in an article titled "Climate Risks" the author, Yusuf states, "... the government should initiate transborder water-sharing agreements that go beyond Pakistan-India ties to include other Indus Basin countries" (Yusuf, 2019).

It is further clear that terrorist and extremist groups are able to take advantage of national rhetoric available in newspapers and further propagate conflict rhetoric. For example, since 2010 — reportedly the worst floods Pakistan has ever seen with 20 million people affected (Singapore Red Cross, 2010) — extremist groups across borders have speculated that India is to blame for the water-related disasters occurring in Pakistan. A BBC article mentions accusations of India's "water jihad" in Pakistani media. Similarly, during floods across India and Pakistan in 2014, The New York Times wrote, "Hafiz Muhammad Saeed, the leader of the militant group Lashkar-e-Taiba, accused India of committing 'water aggression,' local news media reported" (Najar &

Masood, 2014) against Pakistan. While there has been no evidence proving these claims to be true, such propaganda is a cause of worry from a terror and national security standpoint.

In light of the recent Citizenship Amendment Act, there have been several reports of terror attacks, riots, protests, and violence across college campuses and other locations in India. While there is no indication of issue linkage with water as of right now, there is a historical pattern, as demonstrated above, of extremist groups and political parties on both sides using political conflict to affect water sharing negotiations rather than considering the adverse effects of climate change on these disputes.

Overall, while *Dawn* voices concerns regarding India's aggressive threats, to pull out of the Indus Water Treaty and unilaterally stop the flow of water into Pakistan, India takes on the narrative of a patriotic nation actively defending its borders from terrorists through whatever means necessary. Both national media outlets create a narrative of war and emergency in order to push political agendas. Even though both newspapers speak to the symptoms of climate change, agricultural drought for example, only *Dawn* spends any time discussing climate change and more sustainable pathways to preserving water.

Case Study 2 India and Bangladesh

Background

India shares a border with Bangladesh spanning 4096.7 kilometers (Rashid, 1977) as well as 54 rivers, including two major river systems — The Ganges and the Brahmaputra that converge in Bangladesh to form the second-largest hydrological region in the world (Banten and Titumir, 2015).



Photo Courtesy of The Tibet Sun.

The Ganges originates in Uttarakhand, India, near its border with Tibet (Britannica). The river flows through several states in India, supporting 44 million acres worth of agriculture (Shibusawa, 1987). Further, the river is part of a river system known as the Ganga-Brahmaputra-Meghna that serves the daily water needs of over 650 million people (Whitehead et al, 2015). The river enters Bangladesh — where it is known as the Padma river — at a controversial dam known as the
Farakka barrage, a huge point of contention between the two nations. In Bangladesh, the Ganges is joined by the Brahmaputra forming the third largest average discharge amongst the rivers of the world (Britannica).

Unlike the Ganges, the Brahmaputra originates in the Chinese-administered region of Tibet, where it is known as the Tsang Po river, flows through India as the Brahmaputra, and enters Bangladesh where it is known as the Jamuna river. Henceforth referred to as the Brahmaputra and Ganga, these rivers, both individually and combined, are notorious for causing devastating floods during monsoon months (Britannica).

While both nations pose a united front against China as lower-riparian nations to the Brahmaputra river, Bangladesh continues to face worse consequences as the lowest riparian in terms of both the Ganges and the Brahmaputra in relation to India.

India and Bangladesh's river conflict dates back to 1951, four years after the partition of India and Pakistan. What is now the nation of Bangladesh was at that time the eastern part of Pakistan, known as East Pakistan. During this time, India expressed interest in constructing a dam at Farakka (shown in the map below) in order to control the flow of water both within India and that flowing out of India.



Photo Courtesy of Professor Dr. Md.Sultan -Ul- Islam

Conversations regarding India and Pakistan's concerns regarding total control and total sovereignty over this significant water source continued, spanning two decades. "The July 1970 meeting was significant in one sense - for the first time India recognised the Ganga as an international river and therefore, accepted the principle of sharing of its water. Thus, it took almost 20 years for an upstream nation to shift from the notion of territorial sovereignty to gradually accommodate restricted sovereignty" (Tiwary, 2006). While this shift from total to restricted sovereignty was groundbreaking progress for the two nations, the countries were unable to settle the details of water-sharing because of East Pakistan's independence struggle that led to the creation of Bangladesh.

India supported Bangladesh during the Independence War of 1971, which resulted in much smoother relations between the two nations — compared to Pakistan — after Bangladesh became an independent nation in December 1971. The new political reality was more conducive towards the development of bilateral agreements, including those regarding water sharing. However, "the

phase of bonhomie was ... shortlived as India and Bangladesh had diverging interest[s] and strategies for the development of the Ganga water resource" (Tiwary, 2006). In 1972 the two nations built a Joint River Commission. However, the commission struggled for years to come up with a plan to resolve the dispute over river water augmentation. While Bangladesh wanted to build reservoirs in Nepal to store excess water during monsoon months to prevent flooding, India wanted to keep the Ganga-Brahmaputra conflict a bilateral issue, rather than a multilateral one. This idea makes it clear that India wanted to retain its privilege as an upper riparian country rather than risk depending on Nepal for water during times of distress. On the other hand, India proposed "an alternative scheme of augmentation of the Ganga flow by constructing a Brahmaputra-Ganga link canal, to divert the water from the Brahmaputra to Ganga. This suggestion was unacceptable to Bangladesh on grounds that the link canal excavation will cause loss of fertile land as well as displacement of population in the country" (Tiwary, 2006). Finally, in 1977 India and Bangladesh made an agreement regarding water sharing at Farakka, but the agreement was considered a poor one from both ends. While Bangladesh was unable to internationalize the issue of the barrage and was condemned internally for the temporary nature of the agreement — one that required review after five years — India was condemned for agreeing to provide Bangladesh with a much larger portion of the available water than they kept for itself. The agreement expired after five years in 1982, was not renewed, and a new agreement was not proposed since the two nations could not agree on flow augmentation methods that allow for release of water from reservoirs. Instead, India and Bangladesh signed a Memorandum of Understanding in 1982 lasting 18-months to survive the dry months of 1983-1984 and another in 1985 lasting three years on similar temporary agreements of water-sharing. During the MOU time periods, India and Bangladeshi representatives once again entered talks with Nepal on trilateral agreements, and India once again refused third-party

involvement in its interaction with Bangladesh. Talks between the two nations continued without progress until 1996 when both nations had a change in governance and signed a 30-year agreement in December enforced in 1997. The agreement called to find a solution to augment the Ganges river water during dry months and a plan to share all common rivers (Nishat and Faisal, 2000).

Unlike the direct, more violent form of conflict demonstrated in the Indo-Pak case, India and Bangladesh showcase a more subtle relationship between water and conflict. With Bangladesh's heavy reliance on India to supply water for agriculture and everyday purposes, human security is the biggest source of contention between the two nations. Ullman (1983) defines the concept of human security as "'(any) action or sequence of events that (1) threatens drastically and over a relatively brief span of time to degrade the quality of life for the inhabitants of a state, or (2) threatens significantly to narrow the policy choices available to the government of a state or to private, nongovernmental entities (persons, groups, corporations) within the state.' The definition essentially indicates environment as a source of conflict" (Baten and Titumir, 2015). In the India-Bangladesh case this threat to human security is evident particularly in the Farakka Barrage conflict.

In the Farakka barrage matter, there is tangible scientific evidence of the environmental harm caused to water flow as a result of the construction of the barrage. "Analyzing pre-Farakka (1949–1970) and post-Farakka (1975–1995) data of inflow of water at the Hardinge point (Bangladesh part), Tanzeema and Faisal (2001) found that the average inflow during dry season of the Ganges reduced to 51 % during the period. Such a drastic drop in the flow of the Ganges water in the dry season resulted in significant ecological and economic damages for Bangladesh" (Baten and Titumir, 2015). As a result, the meagre and diminishing supply of water in Bangladesh

and India, particularly in the dry season, "has become one of the key contested issues between the two countries" (Baten and Titumir, 2015).

Similarly, in the conflict regarding the Teesta — a tributary of the Brahmaputra river and, by extension, the Ganga-Brahmaputra-Meghna river basin — climate change has resulted in a severe dwindling of this river's supply. While both countries suffer from the reduced flow, Bangladesh is in a far more critical condition as 80 percent of the nation's annual freshwater supply is sourced through transboundary inflows from India (Nishat and Faisal, 2000).

One of the chief ways nations can assess their own water needs compared to their neighbors during dry and flood months is collecting and sharing hydrological data. However, some critics believe that "both Bangladesh and India often classify river flow data as 'secret' and use the lack of mutually acceptable data as a tactic to promote [their] own national interests" (Baten and Titumir, 2015,) resulting in increased ecological complexity regarding river management. Without adequate knowledge of river flow during different times, it would be impossible to ensure the fair and equitable use of river water or sustainable water-use. Furthermore, in light of climate change, "Snow and glacial melt are important hydrologic processes in the origin of these GBM rivers. Climate change has added a new dimension to glacial melting and subsequent hydrological characteristics of these rivers" (Baten and Titumir, 2015).

Bangladesh further claims that the Farakka barrage has resulted in irreversible environmental damage to Ganga-Brahmaputra river water as well as the river basin since construction. Their complaints include an overall reduction in discharge, a reduction in groundwater availability, and an "increase in salinity. Bangladesh claimed that since the late 1970s, the south-west region had been facing the critical problem of salinity intrusion from the Bay of Bengal as a result of the

40

drastic reduction of freshwater flows in the Gorai river - the major distributary of the Ganga" (Tiwary, 2006). Furthermore, Bangladesh claims this salinity has intruded into irrigation practices affecting the agricultural activity in the nation. While Bangladesh claims these are all results of the Farakka Barrage, climate change and sustained pollution are being ignored as significant factors exacerbating these issues.

In recent years, with rapidly increasing glacier-melt, flooding from the banks of these rivers has gotten more intense, raising concerns across both India and Bangladesh. Credible journals and institutions like The Scientific American and the Natural Resources Defence Council, respectively, have rung the alarm regarding the impending inundation of the 17 percent of the nation of Bangladesh if the status quo persists (Harris, 2017). For example, in 2017, an article in *The Scientific American* stated, "Sea surface temperatures in the shallow Bay of Bengal have significantly increased, which, scientists believe, has caused Bangladesh to suffer some of the fastest recorded sea-level rises in the world. Storm surges from more frequent and stronger cyclones push walls of water 50 to 60 miles up the Delta's rivers" (Glennon, 2017).

Similarly, the NRDC dubs Bangladesh to be "ground zero for climate change," ranking sixth in the list Climate Risk Index 2018. Furthermore, the claims that the Bangladeshi government made regarding the negative impact of the Farakka barrage on soil quality seem equally, if not less, important compared to the effects of climate change. "Not only do the intensifying storms destroy homes and livelihoods, but they also contribute to higher water and soil salinity. This saltwater incursion leaves millions with little to drink or eat" (NRDC, 2018).

Furthermore, According to the WRI, "India, Bangladesh and Indonesia, for example, have some of the largest populations affected by riverine and coastal floods each year. By 2030, these

41

three countries will account for 44% of the world's population annually affected by riverine floods, and 58% of population affected by coastal floods."(Kuzma and Luo, 2020)



The Center for International Earth Science Information Network, Columbia University.

According to this map, 46 percent of the Bangladeshi population lives within 10 meters of the average sea level indicated in red. This region is clearly delineated not just near the delta of the GBM rivers, but also through the course of the river (Greenfieldboyce, 2007). With increased sea level rise since 2007, far more of the land cover on the map would likely be at risk.

Political rivalries caused by riparian disadvantages and struggles of sovereignty are overshadowing the pressing existential threat that countries like Bangladesh are facing due to climate change. Countries like India seem to be ignoring multilateral solutions to the climatechange exacerbated extreme weather events like floods and droughts, simply in order to maintain upper-riparian national advantages. This section will explore the skewed political focus of media groups in India and Bangladesh on water sharing conflicts and negotiation, which prevents climate change from finding the urgent policy and executive window it deserves in the context of this issue.

Results and Discussion

Temporality

The frequency of articles regarding water conflict in both the Indian and Bangladeshi media has increased post-2013, peaking in 2019 for India so far³, but remaining reasonably consistent in the last five years in Bangladesh.

Frequency of Articles Published in The Daily Star and The Times of India From 2002-2020





Year

These statistics reflect the fact that Bangladesh is the lower riparian between the two with relatively lower power over controlling water flow, and therefore the national media demonstrates a consistent concern about the nation's water availability. As mentioned in the background of this paper, Bangladesh has a dependency on the GBM River system that is not mirrored in India and therefore, water is a consistent concern reflected in the media. However, the increase in articles in the last five years reflects the magnification of concerns in the face of increasing scarcity and flooding. This is true for *The Times of India* as well. The sudden surge of articles regarding water sharing in the face of arbitration over the Teesta river and several other reports that allege fast

³ Please note data for 2020 is incomplete as it is still April.

track dam-building demonstrate the fact that the Indian government is noticing the scarcity of water and has been building infrastructure in the past five years. While it is certainly true that India is less reliant on the GBM river basin for it's water needs and so perhaps gives it less importance than the Bangladeshi media, climate change seems to be a significant role in causing India's sudden surge in attention in recent years, particularly 2019.

Framing

Using the headline — which, as the first line of an article that draws in a reader, demonstrates the key narrative of a news piece — repetitive keywords that occurred in the body of the article, and the main argument in the piece, I deduced the following narratives created in *The Daily Star* and *Times of India* respectively. For the full list and frequency, please see Appendix II.

As mentioned in the previous case study on India-Pakistan relations, despite an alarming right-wing swing in Indian policies and culture during his tenure, in May 2019, Narendra Modi secured another sweeping victory in the nation.

It is important to note, first, that in the last two decades, Bangladesh has not seen a major shift in leadership. Prime Minister Sheikh Hasina served her first term as prime minister from 1996 to 2001. While she continued to work in office after losing the next two elections, she was reelected in 2009, 2014, and was recently re-elected for a fourth term in 2019, all as the leader of the Bangladesh Awami League.

It is certainly true that there have almost always been cordial relations between the leaderships of the two nations dating back to 1971 when India aided the independence of Bangladesh. Experts in Indo-Bangla relations have stated that the Indian National Congress party since 1971 has understandably had good relations with the Bangladeshi government stating,

"Looking at the diplomatic relations between these two countries, it is commonly observed that the Indian Congress Government shows a positive attitude when Bangladesh Awami League is in power" (Baten and Titumir, 2015).

Despite the Awami League's good relations with India's Congress government — further evidenced by India's role in helping Prime Minister Hasina side-step a coup in 2012 — her government's relationship with Prime Minister Modi's is much stronger than with Congress leadership.

There seem to be a number of reasons for this stronger relationship. For starters, almost immediately after Modi's first landslide victory into power, the Indian government helped Hasina side-step an assassination attempt alongside another attempted coup at the hands of banned militant group Jamaat-ul-Mujahideen in 2014 (Nair, 2014).

After brief border skirmishes in the next two years, the two nations signed the historic Land Boundary Agreement in 2015 exchanging smaller island territories at the India-Bangladesh border. More importantly, however, 2015 onwards, both the Indian and the Bangladeshi government implemented strong crackdown measures against terrorism, particularly targeted at Islamic terrorists. The two nations seemed to demonstrate a united front against Islamic terrorists, while simultaneously conflating Islamic terrorism as an issue emerging largely out of Pakistan. In 2016, infamous for the Uri attack against India, the home minister of Bangladesh, Asaduzzaman Khan Kamal, characterized Pakistan as a country that is "harbouring terrorists and supporting terror attacks" (Daily Star, 2016). Furthermore, he added — "Both India and Bangladesh have the same stand on the issue of terrorism. We have noticed in recent past, how Pakistan's involvement in various terror attacks has come out into the open. This has to stop" (Daily Star, 2016). This united front against Pakistan seems to have greatly won favor with current Indian leadership as well as fits well with the TOI's media strategy regarding terrorism mentioned in the previous case study. The Bangladeshi media's stance on terrorism mirrors India's, and this public image seems to allow for less hostile water negotiations than those between India and Pakistan. See the full timeline of the Indo-Bangla conflict in Appendix I.

The important thing to realize about these articles that mention Islamic terrorism and Pakistan in the *Daily Star* is that these articles are not titled, or essentially even about terrorism at all. The article quoting Minister Kamal, for example, is titled "Teesta water treaty in future" (Daily Star, 2016). These articles are about the Teesta Treaty between India and Bangladesh and the various meetings about negotiating that water sharing agreement of the Teesta, a tributary of the Brahmaputra river. While some of these articles briefly mention the urgency behind Bangladesh's desire to come to an agreement regarding the Teesta — "desertification" and "scarcity" (Ahmed, 2015) for instance — the Bangladeshi media seems to be interlinking these their water needs with other common conflicts most importantly — terrorism. The Daily Star has published 63 articles about the Teesta Treaty in the last 20 years — a higher frequency than any other water-related topic amongst the three national newspapers studied in the paper. A majority of these 63 articles target the Farakka barrage, international treaties, the rights of Bangladesh, terrorism, the tenuous relationship between the Modi government and Mamata Banerjee — the chief minister of West Bengal who is opposed to the treaty — and most recently, the two nations' similar stances on asylum for Rohingya refugees from Myanmar.

While each of these articles briefly mention the symptoms of climate change that are motivating the need for the Teesta treaty — namely drying up rivers, scarcity, excessive flooding during monsoon months etc. — only a handful of them acknowledge the role of climate change in causing conflicts around water sharing and negotiations.

Comparing Results *Frequency*

Considering the number of articles published in each of the publications, it is clear that the Bangladeshi media — and by extension, the nation — is more concerned than India or Pakistan about climate change. This is not surprising. It is understandable that the Bangladeshi media places its environmental risks regarding water as a high priority in the news cycle as the lowest riparian nation of the three and internationally known to be at a high risk of inundation. Comparably, India, the most upper riparian in both cases, and most water-secure of the two publishes the least frequently on this topic.

Framing

The more intriguing result of this research, however, is the framing of environmental issues in each of these publications and how Indian coverage of water issues differs in terms of its political relationships with Pakistan and Bangladesh.

Unlike Pakistan's relationship with India that seems to always end with the two countries at each other's throats, India and Bangladesh have much more diplomatic relations that center around negotiation rather than confrontation.

In *Dawn*, authors cite aggressive comments made by Indian national leaders. For example, "Blood and water can't flow together,' declared a belligerent Indian Prime Minister Narendra Modi" (Zaman and Abubakar, 2016). In another example, *Dawn* authors wrote, "In case India tries to interrupt the flow of water into Pakistan as an upper riparian, it would serve as precedence to others" (Bokhari, 2016). This example demonstrates the narrative about the geographical disadvantage Pakistan has compared to India to paint Pakistan as a victim in water negotiations. Further, India is showcased as a rule-flouting, treaty violating country. For example, the lede of

this 2014 article read, "Pakistan expressed serious concerns on Sunday over construction of [the] Kishanganga Dam and termed it a clear violation by India of the Indus Water Treaty (IWT)" (Dawn, 2014). In earlier years, Dawn emphasizes that India uses stall tactics to continue building aggressive and harmful dams and storage facilities while drawing out the arbitration process so as to appear compliant with the Indus Water Treaty (Kiani, 2017). However, in more recent years, as India has made more aggressive statements like "Dam to cut water flowing into Pakistan," (Rana, 2019) in tandem with the hottest years in human history (National Geographic, 2019), Dawn's narrative of India has changed. Now, the newspaper considers India as a treaty violator wreaking intentional water crises in Pakistan, threatening to pull out of treaties entirely, threatening to "turn off the tap," (Sashikumar, 2016) and postponing data sharing resulting in huge over or underestimation of resources for Pakistan. Pakistan's concerns regarding water sharing are clearly reflected in this example, "Without this data Pakistan will not be able to prove the need for water for our country in international courts if India ever starts stealing our share of water from the Indus water treaty" (Dawn, 2020). Dawn's characterization of India today, is of a tyrannical upper riparian, ruthlessly preying on an innocent, vulnerable, Pakistan.

The Daily Star, on the other hand, undoubtedly paints India in a far more flattering light. For instance, the headline "Dhaka, Delhi on same page over water-sharing: foreign minister" (*The Daily Star*, 2019) demonstrates a more collaborative nature to their relationship than visible in the Pakistani narrative regarding water negotiations with India. However, Bangladesh does not fail to acknowledge its disadvantages as a lower riparian nation, at the mercy of a much larger and more powerful nation. For example, an author for *The Daily Star* wrote, "Bangladesh being the most downstream country in the Ganges-Brahmaputra-Meghna basins is faced with the double whammy of too much water flowing in transboundary rivers in the rainy season (causing deluge) and too little flow during the lean season." (Khalequzzaman, 2019).

However, unlike *Dawn*, authors at *The Daily Star* characterize India, particularly under Modi's leadership, as a good faith negotiator, who is interested in fair and equitable water sharing. For example, in a recent article regarding the Teesta river water treaty, Bangladesh's Water Resources Minister was quoted saying, "The present government of India has goodwill to accomplish the agreement and they are trying to go for a resolution" (Star Online Report, 2017). Similarly, in another article published in the *Daily Star*, shortly after Modi's second landslide win, Awami League General Secretary Obaidul Quader is quoted saying, "We expect that the process of solving our unresolved issues including Teesta water sharing will be accelerated" (Star Report Online, 2019). Due to the long history of the two nations as friendly neighbors, and similar political agendas regarding terrorism and immigration, the *Daily Star* paint India in a far more sympathetic light than *Dawn* does, though both national newspapers — *Dawn* and *Daily Star* — never fail to characterize Pakistan and Bangladesh respectively as vulnerable.

In the Pakistan case, *The Times of India*, illustrates that Indus water sharing is a tool in the hands of the government that can be used to make a misbehaving Pakistan "heel" (Chaidanand, 2019). While several national leaders in India have openly expressed their desire to divert "unused tributaries," pull out of the IWT, and engage in several other types of hostile water-sharing behavior, the media narrative also staunchly protects India's innocence in the matter. For example, the headline "Water treaty signed out of love, but Pakistan gave us terror" (Singh, 2019) clearly showcases India's narrative as an innocent neighbor and Pakistan as a pro-terrorist state. Through the constant rhetoric that blames Pakistan for terrorist attacks occurring in India, national leaders justify their aggressive water strategies in public. The narrative thus goes, that Pakistan is simply

being punished for its militant actions and that Modi's India does not take terrorism lying down anymore. In the same article, the lede reads "Union minister Nitin Gadkari said on Monday that water from Indian rivers flowing into Pakistan would be completely stopped and India would walk out of the Indus Water Treaty if it did not stop sponsoring terrorism" (Singh, 2019).

Articles in the TOI thus create this dual narrative — powerful and innocent. In times when terrorist attacks or other military skirmishes are not directly in the news cycle, the articles in the TOI then switch to farmer rights and protecting the vulnerable, rural communities of India by providing them with their rightfully deserved water. For example, an article quoted PM Modi recently saying, "The water over which Haryana farmers have the right will not be allowed to flow to Pakistan now" (*Times of India*, 2019).

Finally, the most common word in the Indian media is the word "legal." All articles regarding the water conflict with Pakistan vehemently protect the narrative that the Indian government is well within its rights to conduct any and all tactics against Pakistan and that no rules have been broken. It is important to remember, however, that no such actions have been taken. Even though national leaders and leading newspapers have devoted space and validation to claims of reneging on agreements or unilaterally stopping water flow, there is no evidence that such extreme actions will be pursued in reality. For example, a paper by the Indo-Pak Dialogue on Conflict Resolution and Peace Building wrote, "Pakistan has been threatening to use even nuclear weapons to secure their water rights. It is a political rhetoric aimed at a local audience. Pakistan is unlikely to do anything like that, except objecting to any and every project relating to the western rivers, and perhaps give more support to the movement of militants" (Chandran, 2009). Not only does the paper mention Pakistan's threats to engage in nuclear warfare, but it also mentions that,

in light of receding glaciers and escalating water-sharing conflict, one of the options available to the nation would be to aid militant groups.

Furthermore, the paper states, "it is neither in India's interests to unilaterally abrogate the IWT, nor in Pakistan's interests to wage a water war. The extremists on both sides, in worst case scenario may pressurize for such an option, which could be undertaken, but with no positive results" (Chandran, 2009). This statement illustrates that climate change events — in the case of Indo-Pak water sharing, melting glaciers — allow extremist groups to spread conflict rhetoric, thus escalating tensions that may lead to more permanent consequences such as treaty abrogation or nuclear war.

In the Bangladesh case, the *Times of India* is far less aggressive in its approach. While recognizing Bangladesh as an ally — especially when it comes to terrorism or refugee treatment — Indian media focuses less on creating a narrative for Bangladesh and more on demonstrating India's own vulnerability. Referring to a state in East India, "Yes, Farakka adds to Bihar's flood woes" (Bhatia, 2016) this headline speaks to India suffering from the very dam that was built to benefit the country.

Unlike in the Pakistan case, where both the Indian media, as well as national leadership, actively treat water as a tool in conflict, in the Bangladesh case, the TOI simply discusses the impact of flooding, drought, and other grievances on their own nation. A majority of the TOI articles in the Bangladesh case are focused on farmers, and other vulnerable communities in India who have been victims of river floods, droughts, and general water stress as evidenced by the aforementioned examples of farmers in Haryana and floods in Bihar, as well as the headline "Farakka barrage construction dries up hilsa, jumbo prawns supply in state" (TOI, 2016).

53

Ultimately, all three newspapers paint their respective nations as victims and ignore the far more pressing narrative of climate change that has created the urgency — through extreme weather events — leading up to claims of treaty-revocation, proxy war, and emergency.

Conclusion

Climate change has drastically increased global temperatures in the last five years than ever before. Among several other consequences in terms of environmental degradation and scarcity, one of the most significant effects of climate change on the Indian subcontinent is the rise of glacial melt and consequent sea level.

Due to the major glacier-fed river systems in the Indian subcontinent, their enormous drainage basins, and the two billion lives that depend on them, countries in the subcontinent are some of the most vulnerable communities when it comes to flood and drought events.

It is, therefore, more important now than ever that national leadership in these countries, and the media that hold them accountable, allow climate change and its devastating impacts into the national conversations and transboundary resource agreements.

From the over 300 articles surveyed for this research in the *Times of India*, *Dawn*, and *The Daily Star*, only about 31 articles mentioned climate change and the need for multilateral, sustainable water management solutions to the constant cycle of flood and drought events in the subcontinent.

Contrastingly, almost every academic source regarding transboundary water sharing touched upon the issue of climate change and its effects on water availability in India, Pakistan, and Bangladesh, as well as several other parts of the world.

Ultimately, even though all three media groups acknowledge the weather-related climate stress they are experiencing — rivers drying up, inconsistent monsoons, floods, droughts etc — only a handful of articles each truly touch upon the main factor that is creating water stress — climate change and poor, unsustainable water management practices. These flood and drought events affect poor and vulnerable communities more adversely than other communities around the

world. However, the knowledge of climate change change and its effects currently only reaches academic audiences and is not accessible through mainstream media.

Furthermore, linking all water issues to issues of terrorism, military, and national security is another way of excluding everyday people from thinking about environmental issues that are affecting them. By reducing water sharing to a frame related to patriotism and war against neighboring countries, national leaders and the media that abet them, are creating that "emergency" framework mentioned in Gross and Aoláin's research that prioritizes national security over human security.

By building a nationalist framework around water management, rather than an all-inclusive global one, media groups are allowing a few powerful people to advance their political agendas while sacrificing millions of lives that will be upended in the next two decades due to climate change.

While some authors recognize the effects of climate change in exacerbating conflict rhetoric between persisting rivalrous nations, many more media outlets and national leaders on both sides of the border blame aggressive politics for their water problems over climate change. If this rhetoric is allowed to persist, rather than improving unsustainable practices that are exacerbating their water woes, these three nations have the potential to provoke unnecessary conflict that will threaten not just the existence of the three nations, but the entire subcontinent.

Limitations

One of the most significant limitations of this research is that it solely focuses on national newspapers and does not include coverage from local newspapers. While local newspapers likely covered flood, drought, and other river-sharing issues and conflicts extensively, many of them are published in regional languages that created a language barrier for me. While I could have translated some newspapers that were written in Hindi, I could not have covered other regional languages without using translation software that is often riddled with flaws. Furthermore, according to 2009 data from Euromonitor International, 18 percent of Bangladeshis and 49 percent of Pakistanis speak English (Euromonitor International, 2010). Approximately 10 percent of Indians speak English. (Masani, 2012). Therefore, even though the *Times of India* is India's most widely circulated, daily, national newspaper, and the *Daily Star* has an enormous readership, they both still only reach minority privileged audiences. Therefore, the voices of smaller, local newspapers that likely included the voices of residents directly affected by climate change and resulting trans-boundary water conflict, were not included in this research.

In terms of data collection, this research used river names, the word "water," and the names of nations to find articles pertaining to transboundary conflict. For example, if I were looking for articles on Indus river water sharing in *Dawn*, a Pakistani newspaper, the keywords I looked for were "India+water." However, another language barrier I recognized at the start of my research was that some regional, as well as national newspapers, discuss the effects of climate change using terminology that may not necessarily have come up in keyword searches. Just because climate change and its effects are described in words that don't use the exact words "climate change" does not mean communities are not discussing those issues.

Finally, the other significant limitations in this research are the questions I did not get to ask because, while they were related, they were outside the scope of the thesis. This paper looks

57

extensively at how climate change is portrayed in national media and discusses the implications of conflict that are a consequence of this aggressive representation. However, it does not look at why aggressive rhetorical choices are made by national media outlets that pull transboundary water-sharing outside of scientific, environmental conversations and into the scope of national security and military intervention. I believe part of the reason may be economic. I think it is highly likely that political leaders, and the media that gives their political rhetoric a platform, would rather focus on nationalist rhetoric and link issues of transboundary water sharing with nationalist narratives than actually invest in the sustainable infrastructure required to efficiently use the highly endangered resource: Water. However, this research is only able to provide evidence for how water-sharing is portrayed in national media in India, Pakistan, and Bangladesh, not why. Attempting to answer the "why" question would take this research a step further. For example, conducting a cost-benefit analysis of the benefits of climate action compared to the costs would be an interesting study that would determine some of the major motivations of national governments and the kind of rhetoric they lean into.

Nevertheless, it is more important now than ever due to the unprecedented levels of climate change, to include climate and poor water management issues into more accessible and digestible narratives of transboundary water conflicts.

Climate change has exacerbated the aggressive military and nationalist rhetoric of water sharing. If writers don't challenge this narrative, we risk prioritizing national security over human security, and nationalist ideologies over global environmental water crises.

Appendix I Conflict Timeline

Timeline of Military and Political Conflict Between India and Pakistan

Year	Conflict Timeline
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2001	High tensions persist around the Line of Control between India and Pakistan in Kashmir, with 38 people killed in an attack on the Kashmir assembly in Srinagar. "Following that attack, Farooq Abdullah, the chief minister of Indian-administered Kashmir, calls on the Indian government to launch a full- scale military operation against alleged training camps in Pakistan" (Hashim, 2019).
July	Pakistani President Pervez Musharraf and Indian Prime Minister Atal Behari Vajpayee meet for a summit in Agra, India to solve the Kashmir issue but fail (Hashim, 2019).
Dec	Armed attack on the Indian Parliament in New Delhi leaves 14 dead, India blames terrorist groups: <i>Lashkar-e-Taiba</i> and <i>Jaish-e-Muhammad</i> . Both India and Pakistan increase armed forces along the LOC (Hashim, 2019).
2002	Standoff ends in October. "President Musharraf pledges that Pakistan will combat extremism on its own soil, but affirms that the country has a right to Kashmir" (Hashim, 2019).
2003	Musharraf calls for a ceasefire in September (Hashim, 2019).
2004	Bilateral Meetings (Hashim, 2019).
2005	-
2006	Agreements continue, unable to agree to withdraw troops from the Siachen glacier (Hashim, 2019).
2007	In February the "train service between India and Pakistan (the Samjhauta Express) is bombed near Panipat, north of New Delhi. Sixty-eight people are killed, and dozens injured" (Hashim, 2019).
2008 July	"In July, India blames Pakistan's Inter-Services Intelligence (ISI) directorate for a bomb attack on the Indian embassy in Kabul, which kills 58 and injures another 141" (Hashim, 2019).
November	"Armed gunmen open fire on civilians at several sites in Mumbai, India" (Hashim, 2019) resulting in 160 killed. "Ajmal Kasab, the only attacker captured alive, says the attackers were members of <i>Lashkar-e-Taiba</i> " (Hashim, 2019).
2009	Pakistani government admits that part of the planning of the 26/11 attacks in Mumbai was done on Pakistani soil but deny any involvement of Pakistani intelligence agencies (Hashim, 2019).
2010	"In January, Pakistani and Indian forces exchange fire across the LoC in Kashmir" (Hashim, 2019).

2011	-
2012	-
2013	In January, India and Pakistan accuse each other of violating the ceasefire in Kashmir, with shelling and raids on either side (Hashim, 2019).
2014	Bhartiya Janata Party, landslide victory in India
2015	-
2016 September	Attack on army base in India leaves 19 dead, resulting in Indian retaliation with surgical strikes on "terrorist units" in Pakistan occupied Kashmir. Pakistan denies the surgical strike (Hashim, 2019).
November	"seven Indian soldiers are killed after rebels disguised as policemen storm a major army base near the frontier with Pakistan" (Hashim, 2019).
2017	Militant groups launched attacks against Indian paramilitary camp near Srinagar in October. Additionally, there were 3000 reports of violations of the LOC in 2017 (Council on Foreign Relations, 2019). Nawaz Sharif steps down from the post of prime minister.
2018	February militant groups attack "Indian army base in the Jammu region, which killed five soldiers and a civilian" as well as 1000 reports of violations of the LOC in 2018 (Council on Foreign Relations, 2019). Imran Khan elected as prime minister.
2019 Feb	"In the early hours of February 26, India conducts air attacks against what it calls Pakistan-based rebel group <i>Jaish-e-Mohammad</i> (JeM)'s "biggest training camp," killing "a very large number of terrorists"" (Hashim, 2019).
August	India strips Kashmir of Article 370 that granted it special status and a high degree of sovereignty. Resulting in protests across Kashmir, India, Pakistan, and in the broader international community as well. Amidst "79 terror incidents"(Marwat, 2020) and several riots, India closed down all internet and phone lines in the region (Dixit, 2020).
December	India passes the Citizenship Amendment Bill that requires immigrants to provide proof that they have lived in India for 11 years in order to apply for citizenship. The bill further provides " an exception for members of six religious minority communities - Hindu, Sikh, Buddhist, Jain, Parsi and Christian - if they can prove that they are from Pakistan, Afghanistan or Bangladesh. They will only have to live or work in India for six years to be eligible for citizenship." While framed as a bill to provide refuge to religious minorities from Pakistan, Afghanistan, and Bangladesh, the bill is actively critcised for unconstitutionally discriminating against muslim immigrants as

	well as vulnerable muslim communities currently living in India (BBC News, 2019).
2020	Internet and phone lines access have only recently been returned to residents of Kashmir in limited capacity (Dixit, 2020).

Timeline of Military and Political Conflict Between India and Bangladesh

Year		Conflict Timeline
2001		April, India Bangladesh border fighting leaves 16 Indian and 2 Bangladeshi soldiers dead (Ratnikas, 2020).
2002		
2003		Nov 11 Hindus killed in Chittagong near Bangladesh alleged an act of intimidation (Ratnikas, 2020).
2004	Sept	India and Bangladesh don't arrive at any conclusion over water talks Indian officials say they fenced 40% of the porous border between India and Bangladesh and planned to fence the entire border by March 2006 to prevent movement of insurgents, illegal immigrants, and smuggling.
	Dec	Dec 11 India Border Security Force asked Bangladeshi officials to release 126 Indian insurgents including top leaders of guerilla groups it says are based in Bangladesh (Ratnikas, 2020).
2005		April 13 Top border officials of India and Bangladesh meet in Dhaka to discuss issues of Delhi's plan for fencing the border and Dhaka's claim that India harbors Bangladeshi militants. April 19 Weekend border clash that killed an Indian military officer and two villagers. April 23 Two Bangladeshi farmers shot dead by Indian border forces in a border spat.
	July	Indian Supreme Court scraps controversial immigration law making it easier for authorities to crack down on illegal aliens a move considered likely to curb Bangladeshi migrants in the country's northeast
Au	igust	Bangladeshi and Indian border guards negotiate a cease-fire halting a gun battle that flared over disputed construction work along the frontier. Bangladeshi and Indian officials resolve a dispute over embankment building on a river cutting across their frontier that led to heavy firing by border troops.

	Sept	Sept 9 Indian border guards killed 3 villagers who strayed across the border (Ratnikas, 2020).
2006		March India Bangladesh trying to rebuild trust June Indian border guards shoot 4 Bangladeshi villagers in two separate shootings. (Ratnikas, 2020).
2007		-
2008		India Bangladesh train hiatus ends after 43 days Smuggling leads to border clash 2 Bangladeshi dead and one Indian seriously injured. (Ratnikas, 2020).
2009		
2010		Human Rights Watch said India's security forces routinely gun down cattle smugglers and other civilians crossing borders with Bangladesh despite scant evidence of any crime. (Ratnikas, 2020).
2011		Jul 14, Bangladesh and India launched a census of "enclaves" areas where one country's territory is surrounded by the other in an effort to end complex border disputes.
	Sept	Sep 6, Indian PM Manmohan Singh arrived in the Bangladeshi capital Dhaka on an official visit aimed at boosting the sometimes fraught relations between India and its smaller Muslim-majority neighbor. Sep 7, Indian PM Manmohan Singh said he would "intensify efforts" towards a deal to share water from the Teesta river after failing to sign the key agreement during a visit to Dhaka. A deal to share water from the river fell through after opposition from the chief minister of India's West Bengal.
	Nov	Nov 19, In Bhutan a Climate Summit for a Living Himalayas was held in Bhutan's capital Thimphu. India, Nepal, Bangladesh and Bhutan agreed to cooperate on energy, water, food and biodiversity issues. (Ratnikas, 2020).
2012		Delhi warns PM Sheikh Hasina government of coup (Chaudhury, 2012).
2013		
2014		Jul 8, Bangladesh was awarded nearly four-fifths of an area sprawling over 25,000 sq km (9,700 sq miles) in the Bay of Bengal by a UN tribunal, ending a dispute over a sea border with India that has ruffled ties between the neighbors for more than three decades. (Ratnikas, 2020).

2015	Jan - 2015 May, Indian forces killed 20 Bangladeshis trying to cross the border illegally. Jun 6, Bangladesh and India sealed a historic land pact to swap territories in the presence of visiting Indian PM Narendra Modi and Bangladeshi premier Sheikh Hasina. This will finally allow tens of thousands of people living in border enclaves to choose their nationality after decades of stateless limbo. India announced a "US\$2 billion line of credit" to Bangladesh in an effort to deepen bilateral ties. (Ratnikas, 2020).
2016	Bangladesh court jailed five militants of the banned Jamaat-ul-Mujahideen Islamist group regarding a series of bombings from 2005. Over 85 other arrests as part of a crackdown on Islamic terrorists. (Ratnikas, 2020).
2017	Extreme crackdown on terrorist groups. Sep 22, Indian officials said security along the largely porous eastern border with Bangladesh has been stepped up and that "chilli and stun grenades" were being used to block the entry of Rohingya Muslims fleeing from violence in Myanmar. India offers a \$4.5 billion line of credit to help Bangladesh implement energy sector projects, and a separate \$500 million credit line to support defense related procurements. Devastating floods across Nepal, India, and Bangladesh in August. Rohingya refugees see extreme violence and flee. (Ratnikas, 2020).
2018	Mass protests regarding providing safe asylum for Rohingya refugees and against Sheikh Hasina's decade in power. (Ratnikas, 2020).
2019	-

Appendix II Frames

Dawn

Frame	Frequency	Keywords describing India	Keywords describing Pakistan
India's Dam and Storage Construction	20	Turning off the tap, treaty violation, aggressive, tactical	Choked-river, victim
Water Diversion	16	Bilateral failing, anti-terrorism justification, aggressive, uncompromising, anti-arbitration	Receive reduced water, scarcity, treaty violation, peace-seeking, injustice
Data Sharing	6	Belligerent PM, dam expediting, lack of	Indus-lifeline, vulnerable, danger,

		data sharing, stalling, tactics, pressure, thieves, irresponsible, treaty violating	request, diplomacy, at risk of theft due to old water measuring systems
Withhold or Release Water	1	Lack of warning, intentional	Unprepared, at risk
Trustbuilding and Compromise	5	Rule-flouter, permission, disagreement	Goodwill, cooperation, World Bank, neutral party
Revoking IWT	5	Terrorism narrative, Uri 2016, short-changed, greedy, Kashmir agriculture, violations	Abrogation, economy, and water vulnerable
Re-evaluating IWT in light of climate change	9	Unsustainable practices, compromise, ambitious	Threatened, risk

The Times of India for Pakistan

Frame	Frequency	keywords Indian perspective	keywords Pakistani perspective
Stop Water from Flowing into Pakistan	9	Drown enemies, blood and water can't flow together, scarcity, farmers, dam, blocking water	Terrorism, a disproportionate share, act of war against Pakistan
Stop Water +Walk out of IWT	7	Strike back, tap, terror export, explore options, re- evaluate, walk out, legal	Weak, concession- seeking,
Water Diversion	6	Legal, rightful farmers	Unused water, compensation

Data Sharing	2	Postpone, terrorism	Dam inspection
Withhold or Release Water	5	Preventative, Pakistan releases water, terrorism, scarcity, farmers	Survival risk, violated, compensation
Refuting Treaty Violation	2	Legal, no broken laws	-

The Daily Star

Frame	Frequency	Keywords describing India	Keywords describing Bangladesh
India's unilateral Diversion+Call for Multilateral Treaty	15	Deteriorating cooperation, causing riverbank erosion, causing floods due to various barrages like Farakka	Pleading, victim, facing environmental challenges like desertification
Call to Destroy Farakka Barrage + compensation for environmental damage	2	Congress party members criticizing Farakka, cursed barrage.	Demanding demolition, facing harmed economy and ecology
India's River Interlinking Project	8	Lack of transparency, flexing upper riparian advantages alongside China, making unilateral diversions	Apprehensive, "in the dark," facing disaster and desertification
Flouting International Conventions	10	Unfair, unjust, unilateral, breaching obligations of Helsinki Rules	Ineffective Joint River Convention, lack of inclusion of international conventions in legal systems, infringement of rights, scarcity,

			vulnerable
Lack of Data Sharing	5	Hydro-hegemony, unilateral upstream diversion, conflict and confrontation prone	Seeking peace and prosperity, lack of confidence, lacking information
Cooperation	15	Mutual benefit instead of using water as a political tool, "on same page" as Bangladesh, diplomacy	Concerned about China diverting water, establishing water rights, working with India
Poor Ganges Treaty	3	West Bengal suffering from Ganges Treaty, Mamata Banerjee chief minister of West Bengal condemns treaty claiming Bangladesh getting more water than fair	Ganga barrage a mistake, not in control of flow, lack data
Farakka Environmental Disaster + Solutions including Replacement with Ganges Barrage	7	Building 16 dams to deplete more Bangladesh water, turning Bangladesh into a wasteland	Facing heavy siltation due to Farakka barrage, requires India's support for Ganges barrage to rejuvenate dying rivers, facing severe losses in crop production, fisheries, aquatics, as well as salinity
India avoids multilateral treaty	4	Validating two nation theory, abjuring secularism,	Crying need for collaborative management of water
Bangladesh polluting	11	Ill-conceived Farakka barrage, lack of agreement	Vulnerable to unilateral diversion, experiencing climate

		and cooperation, disturbed natural river flow	change more adversely due to poor water sharing by India
India and China exert upper riparian power	5	Aggressive dam building	Disastrously affected by dams, unable to show the adverse effects of upstream water withdrawal
Blame China for floods	3	Equally vulnerable to floods due to Chinese hydropower production and water diversion	Equally vulnerable to floods due to Chinese hydropower production and water diversion
Flood reports/warnings	3	Mutual floods due to rivers reaching danger levels due to regular monsoon but exacerbated by poor infrastructure	Mutual floods due to rivers reaching danger levels due to regular monsoon but exacerbated by poor infrastructure
Conflict/Cooperatio n Teesta Treaty	63	Mamata Banerjee chief reason that prevents India from agreeing to share Teesta river water, claims not enough water in the Teesta to share and farmers in West Bengal will suffer if water is shared	Terrorism, proxy war, Claiming Teesta river water as their right under international water conventions, believe Narendra Modi's BJP government can expedite process, aware of Mamata Banerjee as the chief barrier to their needs
Total	154		

The Times of India for Bangladesh

Frame Frequenc	Keywords describing India	Keywords describing Bangladesh
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Brahmaputra/Gang a Floods in India	19	Overflowing Brahmaputra and Ganges resulted in severe floods all over India harming agriculture and thousands of lives	While Bangladesh not explicitly mentioned, disputes the claim that India is immune to the effects of climate change and river overflow
Internal River Linkage	7	Feels Bangladesh is being unfair to West Bengal, reducing water scarcity in Indian states	Agitated, worried the project could interfere with rivers, delta and ecology
India Against Farakka	13	Nitesh Kumar and several other Congress leaders as well as water experts cite the Farakka barrage as harmful to Indian states leading to intense flooding especially in states like Bihar. Need more flood data to make embankments accordingly. Several disadvantages of the barrage for India.	Expect that demolishing Farakka would result in floods in Bangladesh
Defense for Farakka Barrage	1	Central Water Commission Report states river can only effect upto 42km area away from its banks and Bihar, for example, is 400km away so floods are not the barrage's fault.	None of the articles published regarding this topic in the Daily Star or in academic arenas agree with this assessment.
China playing Bangladesh against India	2	Exploitative, upper hand in making deals with China	Encouraged to protest against India, economically

		regarding hydrological data and dam technology	dependent on India, no bargaining power
Cooperation	5	Prioritized navigation particularly through dredging silt from river basins, waiting for study to prove effectiveness, agree that Farakka should be re-evaluated	Interested in dredging rivers for economic benefits, and call strongly for Farakka to be re- evaluated.
Prioritizing Indian Water Needs in Teesta Treaty	9	Teesta drying up, interested in cooperation with Bangladesh but Teesta is not the river, Mamata Banerjee a big state barrier, willingness to share other rivers, local farmers a priority	Vulnerable, begging, pleading, flexible enough to agree to give Feni water despite lack of Teesta treaty, awaiting for Teesta to pass for decades.
China upper riparian exploitation and calling for multilateral treaty	3	water war, angry at China for blocking a tributary, overreacting to Chinese dam building, water a weapon	Concerned about water diversion
China data sharing restarts	2	China data sharing with India	Not Bangladesh, and India's communication poor as well
India Ganga Clean Up	3	Prioritizing keeping river banks pollution free, undo years of neglect to rivers, proactive in protecting	_
Bangladesh to	1	Mamata Banerjee,	

Blame for Drying Up River		river as lifeline, pioneering work to store water	
Total	65		

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