# *Towards a Sustainable Bay of Bengal Region: A Divergence from Regional Security to Human-Environment Sustainability Approach*

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**Abstract**

States have often focused on traditional security issues to preserve regional security. This paper highlights the main causes and consequences of climate change and global warming in the Bay of Bengal region and its littoral states. It also provides evidence of how climate change transcends state boundaries to give rise to insecurities. The objective of this paper is twofold: first, to redefine regional security for the states in this region, and second, to (re)define sustainability in the era of climate change. The study is qualitative, and secondary data has been collected from various sources. Due to climate change, vulnerable communities living in the littoral states will continue to suffer greatly if human security issues are not considered. What is needed today is a shift from economic development that ignores environmental issues and a regional security mechanism that discounts human experiences in favour of a governance structure that explores new sustainable development practices and improves the adaptive capabilities of vulnerable communities. The study concludes by providing policy recommendations particularly the need to develop a regional governance structure founded on normative principles of protecting lives and livelihoods of vulnerable individuals and the environment that sustains them.

**Key Words:** Traditional security, non-traditional security, human security, Bay of Bengal, human-environment nexus, sustainable development

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## *Introduction*

For the purposes of this paper, non-traditional security threats are characterized as those that cannot be tackled through military force only. The term non-traditional security threats encompass a burgeoning number of international issues, such as transnational crimes, environmental degradation, global pandemic, and refugee crises among several others. While each of these issues deserves further investigation, the main concern of this paper is climate change and the national security threats resulting from it.

Even though climate change poses significant national security challenges, states in the Indo-Pacific, especially in the Bay of Bengal region, are concerned more with the improvement of their respective states' military and economic capacities. The Bay of Bengal Initiative for Multisectoral and Technical Cooperation (BIMSTEC) is an initiative that looks at regional integration as an engine of economic growth and means of strengthening the international competitiveness of the member states. We define the Bay of Bengal region as one that includes the member states of BIMSTEC but also states, like China, that have vested economic and military interest in the region. The states in the region focus on economic development but this is too narrow because unsustainable development comes at a detriment to the environment due to the depletion of natural resources, emission of harmful greenhouse gasses, and unplanned urbanization, among others. Not only that, but it is narrow because states look towards domestic solutions for security threats when climate change requires combined regional action (Chaturvedi and Sakhuja). Moreover, a weak regional governance structure and, internal and external political struggles between the countries in the region have resulted in abject neglect of the most vulnerable populations, who are now set to face the full brunt of the impact of climate change. For the purposes of this paper, the states affected by environmental changes in the Bay of Bengal will be the main units of analysis. These include the seven BIMSTEC

member states (Bangladesh, India, Myanmar, Thailand, Bhutan, Nepal and Sri Lanka) and also China given its rich economic and political ties with both South and Southeast Asia.

Climate change is an observable phenomenon in the Bay of Bengal. In the last 45 years, there has been an increase in sea surface temperature from 0.2 degree Celsius to 0.3 degree Celsius with a projected increase from 2 degree Celsius to 3.5 degree Celsius by the end of the 21st century (Rajalakshmi and Achyuthan). A warming of sea surface temperature indicates an increase in sea levels and by 2050 the sea level is expected to rise 37 cm (Rajalakshmi and Achythan). As further evidence in the paper will show, these are not the only climate change-related events posing a risk to the region. Despite several warnings from climate change experts and environmental science scholars, environmental security in the Bay of Bengal region has rarely been on the agenda of the states, particularly how ecological security may be achieved through regional cooperation and governance. Only recently have the countries begun to explore the marine resources needed for development, which caused the advent of the blue water economy, and moved towards regional cooperation to improve maritime security (Pattanaik). Since the end of the Cold War with the collapse of the former Soviet Union, regional security is now beginning to take a different form.

Regional organizations, like the European Union (EU), have brought to the forefront the preservation of the environment as a means to strengthen the European countries' economies and preserve their natural capital. The EU Green Deal, for instance, lays out plans on how to reduce the emission of greenhouse gases by 2050 and to decouple economic growth from resource usage (European Commission). Furthermore, the document lays out the importance of protecting individuals from any harm caused by environmental factors while ensuring the transition is inclusive and just (European Commission). The EU's commitment to sustainable development was legitimised because of the politically and ecologically motivated framing of the EU Green Deal disseminated through the European Commission (EC) and various media channels (Ecket and Kovalevska). As discourse surrounding a particular policy issue grows, it allows the formation of an epistemic community (or

cognitive community) (Rittberger et al.). These communities are characterized by professionals from different backgrounds producing relevant policies and knowledge on complex and technical issues (Haas). Such a legitimate policy initiative regarding the environment has yet to materialize in the case of the Bay of Bengal region and therefore, the region lacks a robust cognitive community. BIMSTEC should be the natural platform for the negotiation and formulation of such a plan to protect the environment and the vulnerable population since one of the 13 sectors under its policy objective is environment and disaster management. However, since its inception in 2018, no such initiative has been taken by the organization. Instead, what has materialized is once again traditional concerns about economic development as signified by the BIMSTEC Free Trade Area Framework Agreement (BFTAFA).

A narrow focus on economic development and military issues is detrimental to the environment and the vulnerable population that inhabits the coastal areas of the Bay of Bengal. Therefore, this paper will highlight the main climate change issues and their impact on the Bay of Bengal and its littoral states. It will also provide evidence of how climate change transcends state boundaries to give rise to insecurities. The main objective of this paper is twofold. First, to redefine what regional security should mean for the states in this region given that we are in an era of climate change. Second, to (re)define sustainability to forge a path where we bring the human-environment synergy into states' security agendas. As such, the study will adopt the security concept as redefined by Sanjay Chaturvedi and Vijay Sakhuja (2015) while also incorporating Mahbub ul Haque's human security concept. The paper also argues that states' conception of national security in terms of their own economic development is outdated and too narrow because climate change requires regional cooperation not only to protect the environment but also to address adverse impacts on the lives of the people. The member countries have yet to materialize the human-environment sustainability approach in the region.

This is a qualitative case study of the Bay of Bengal and its littoral states. It proceeds by first mapping out the Bay of Bengal region, including its ecological aspects. It then outlines the theoretical framework which defines what regional security is in a traditional sense as opposed to how it should be defined. Then we turn to the regional security challenges that are faced by this region and the gaps that exist in the ecological governance structure. Finally, we conclude by providing a solution for improving ecological governance and sustainability by bringing human-environment synergy into mainstream security discourse.

## *Mapping the Bay of Bengal: Geographical, Ecological, and State Relationship*

### *Geographical and Ecological Mapping*

The Bay of Bengal connects important Southeast Asian countries like Myanmar, Indonesia, Thailand to the Andaman Sea, and Malacca Straits. As the Malacca Straits open to the South China Sea, East Asian countries like China and Japan also have vested strategic interests of ensuring of international trade passes smoothly through the region. In the north lies Bangladesh, one the world's largest delta, and the large rivers of Ganges, Brahmaputra, and Meghna all flow out into the Bay. The rivers of Bangladesh form a natural and rare 'mountain to sea' ecosystem because of the connections they create between the Bay and the landlocked states of Nepal and Bhutan, and the North Eastern states of India (Dutta). The Bay of Bengal is the largest bay in the world stretching over almost 2.2 million square kilometres.

Furthermore, it sustains rich aquatic and terrestrial wildlife as well as vegetation in (for example) the Sundarbans mangrove forest which spans part of Bangladesh, India, and Myanmar. Therefore, geographically, the Bay connects the countries along its coastlines and its littorals to form a solid maritime sub-region through both economic activities and ecological importance. As such any climatic and ecological issues arising in the Bay of Bengal will have a widespread and devastating effect on the inhabitants of the littoral states of South Asia and Southeast Asia. During colonial

times, the Bay allowed the nations to foster close relations: cultural cosmopolitanism flourished, and the economic activities and military movement resulted in the nations becoming closely knit. However, as the colonial bonds tying these countries began to break apart, the Asian region was divided into the Eastern half, known as Southeast Asia, and the Western half—South Asia (Agarwala and Saha).

Still, through the years there are various reasons for the Bay of Bengal to have retained its importance. The first is that it sustains 37% of Asia's population (Brewster, 2014). Second, due to the Bay's strategic location, together with the Malacca Strait, it is used for one-third of the global trade and transporting 82% of China's oil imports (Brewster). In 2016, BIMSTEC accounted for $2.7 trillion in GDP; the region sustained a global population of 21%, and contributed to 7% of intra-regional trade (Kelegama). The possible consequence of such a reality is that two of Asia's rising powers—China and India—compete for greater control over the 'energy resources, shipping lanes, and cultural influence in the region' (Agarwala and Saha, 1). Other scholars also agree on how the Bay of Bengal being situated in the Indian Ocean and the rise of India as a major power in South Asia puts the Bay at the epicentre of power struggles and conflicts of the future (Kaplan, 2010). The other reality, more salient in this particular paper, is how climate change is likely to impact the lives of the vast majority of vulnerable individuals living in densely populated coastal areas in and around the Bay (Amrith). The issue of climate change is compounded through developmental and economic activities, and so it has rightfully emerged as a significant concern in world politics and economics along with regional security and stability because of the transboundary nature of the problem. Therefore, it is imperative to look beyond the traditional security concerns that the states in this region have often intensely focused on (primarily stemming from bi-lateral contentious issues) to non-traditional security concerns that are equally important to the states' survival.

*Problematizing States' Relationships*

Realist scholars like John Mearsheimer (2001), Kenneth Waltz (2000), and John Kirshner (2010) have often focused on states like the United States, Russia, and China when discussing great power rivalries and traditional threats to national security. South Asia and Southeast Asia have long been ignored by traditional theories of international relations, like realism because national security threats are not characterized by great power rivalries. Instead, the security issues in these regions are more nuanced and specific to the region itself. Much of the rivalry between the states arose out of the artificial demarcation between states that occurred during colonial times. However, over the years, several other security issues, like territorial disputes which emerged due to colonial decisions, continue to impact adversely bilateral relations. For instance, the constant fighting between India and Pakistan in the Kashmir region often heightens the tension between the two states. Similarly, the 1971 Independence War between Bangladesh, India, and Pakistan is a historical grievance. The massacre of Rohingya refugees in Myanmar, and their subsequent exodus to Bangladesh in 2017, seems to have had an impact on the relations between the two states. Even though the international community has pressured Myanmar to try to solve the Rohingya issue more constructively, the state has not reacted favourably, resulting in a growing distrust between Myanmar and Bangladesh (Banerjee).

Currently, there are also ongoing challenges regarding the natural waterways of Asia. South Asian countries receive most of the water from the Ganges-Brahmaputra-Meghna river basin (Akter, 2016). However, the sharing of the Brahmaputra's water involves not only Bhutan, India, and Bangladesh but also includes China as a part of this river basin.

The main point about these forms of non-traditional security issues is that they directly impact the lives of people. Nearly 451 million people depend on these rivers directly or indirectly as a source of fresh water to survive (Mirza and Ahmed). With the rising demand for water due to climate change pressures (which will be discussed more broadly in subsequent sections), countries tend to divert water for their needs despite bilateral agreements between them (Akter).

Most analyses are focused on the bilateral relations between states and how the rivalries between particular states impact traditional and non-traditional security in South Asia and Southeast Asia (Buzan; Khan; Khan; Rabie & Haasan). This paper attempts to look beyond the South, Southeast, and East Asia dichotomy because states from each of these regions have a vested interest in the Bay of Bengal and the large marine ecosystem that it sustains, as do the vulnerable populations living there. Hence, in talking about state rivalries in the Bay of Bengal region, one also needs to take into consideration the hegemonic tussle between India and China. Ultimately these forms of rivalry make it increasingly difficult to create a governance structure that can bring about sustainable development by responsibly using scarce natural resources.

The reason why the Bay of Bengal is beginning to gain more salience in geopolitics is that China is beginning to look for alternatives to the Malacca Straits (Samaranayake). Recently, China has amped up its economic relations with the littorals of the Bay of Bengal, especially Bangladesh and Myanmar, in the form of infrastructure developments, like the Myanmar-China Gas Pipeline. The China-India rivalry in the Bay of Bengal also manifests itself in Burma because it can grant access to the Bay for both countries to develop their landlocked areas (Samaranayake).

However, in all this geopolitical humdrum and distrust between these states, the effects of climate change on the ecology are greatly ignored.

While the ‘mapping’ of the Bay has generally been concerned with the ‘physical-material-resource geographies,’ what is also of paramount interest today is to explore the ‘details of human-ecological-cultural geographies’ (Chaturvedi and Sakhuja, 21) to determine the kind of challenges climate change poses to the people of this region. However, the trans-border nature of climate change now poses a serious challenge to long-held notions of what security means to the states in the Bay of Bengal region. As Chaturvedi and Sakhuja aptly put it, if nations as described by Benedict Anderson, are just imagined communities, then what is now needed is a ‘different set of imaginations’ which go

beyond the state or national boundaries and aims to alleviate the negative impacts of climate change within the human security paradigm (Chaturvedi and Sakhuja, 19). If left unchecked, human insecurity can threaten national security through protests and civil unrest (Chaturvedi and Sakhuja). As Kanti Bajpai notes, the importance of human security studies is derived from the fact that the mapping done by neo-realist or statist viewpoints is inadequate; hence, "a human security audit, done systematically and rigorously" will allow the mapping of a vast area of human experience that at present remains unmapped (Chaturvedi and Sakhuja, 214-15).

## *Evidence and Impact of Climate Change in the Bay of Bengal*

To understand the importance of sustainable development this section will delve into the evidence of the immediate existential threat climate change poses and its impacts in this region. The United Nations Environment Program (UNEP) identifies climate change as a 'threat multiplier' worsening fragile situations with the potential to cause social friction and violent uprisings. It can potentially aggravate human security brought on by poverty and deficient institutions, increase community hostilities, and reduce access to resources (UN General Assembly). As Zhang et al. (2019) aptly put it, climate change should be considered one of the factors among several others with the potential to cause violence, conflict, and migration.

The Intergovernmental Panel on Climate Change (IPCC) 2015 report stated how the increased emission of greenhouse gasses like carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), and other gasses have caused global warming and extreme weather conditions like droughts, irregular rainfall patterns, floods, including the melting of the Himalayan glaciers, floods, and sea level rise. Even a moderate rise in temperature could adversely affect the environment (Roy and Haider; Stern). An increase in temperatures will tentatively lead to greater stratification thereby reducing the flow of nutrients to the surface of the Bay and reducing its productivity. Climatic disasters not only threaten

to displace people from their homes but can cause fatalities of staggering magnitudes for countries in this region.

The sea-level rise is expected to be from 0.5 meters to 1.7 meters and this will undoubtedly increase the depth, area, and wave height of the floods in coastal areas of Bangladesh (Kay, Caesar, and Janes). Following the intensity of floods in the Bay of Bengal region, particularly in the Ganga-Brahmaputra basin increases, it is projected that almost 125 million people will become homeless, out of which 75 million would be from Bangladesh; another 70-80 million migrants from Bangladesh will become climate refugees in India (Arefin; Sharalaya). This may intensify the bi-lateral relationship between the countries in the region and lead to conflict (Mehta and Kumar). A statistical demonstration of this phenomenon has been shown by Schleussner et al. (2016) through the analysis of the rate of armed conflict and climate-related disasters. The correlation between armed conflict and climate-related disasters are relatively high in societies where tensions between ethnic communities persist and the probability of armed conflicts occurring increases. Both Bangladesh and India have large ethnically diverse communities, conflict-ridden areas, and climate-vulnerable zones, making them high-risk countries for violent uprisings (Mehta, Kumar, and Lal). As Gleditsch, Nordas, and Salehyan (2007) observed, whether or not a violent uprising will occur and the extent of human migration, will both depend on the level of environmental degradation. It will further depend on equity and vulnerability levels and the adaptive capacities of the communities (Chaturvedi and Sakhuja).

Beyond violent extremism and conflicts driven by human migration, people's health will also suffer. This is due to water, air, and land pollution which are the main purveyors of various diseases, and give rise to food and water scarcity, malnutrition, displacement of people and bring changes to their livelihoods (Haque, Yamamoto, Malik and Sauerborn; Kabir, Rahman, Smith, Lusha, and Milton; Nahar et al.). Water scarcity is an issue that can have several different security implications because

at present the bilateral relations between India and Bangladesh suffer due to water availability issues in the Ganges-Brahmaputra-Meghna river basins. Both countries support large agrarian societies and so are heavily reliant on the sufficient flow of water. Climate change pressures threaten to worsen the situation and put people's livelihoods at risk.

At the same time, fisheries that grew in the Bay of Bengal are at risk of being severely depleted; species that were once in abundance have disappeared; and those at the top of the food chain, like sharks, croaker, and rays, have been hit the hardest (Ghosh and Lobo). This will impact the livelihood of fishermen in this region who are some of the poorest in the world. For example, 61% of India's fishermen live below the poverty line, yet the percentage of people dependent on the revenue generated through fishing is likely to go up in the coming years (Ghosh and Lobo). In addition, many of the security problems persisting in the Bay of Bengal region are (a) the freedom to navigate through the Bay and the Malacca Strait; (b) maritime boundary disputes regarding states' access to energy resources; (c) separatist insurgencies in almost all the littoral states; (d) piracy, smuggling, and trafficking; and (d) natural disasters, like tsunamis, cyclones, and anthropogenic problems resulting in sea level rise (Brewster). Most, if not all, of these are human security concerns.

It is not possible for a single state in the region to tackle all of these multi-faceted challenges, hence a concerted effort among them will determine the extent of climate change. Unless environmental security is taken into consideration, states will be unable to protect their national security. Moreover, the movement of climate refugees will threaten different types of human security by giving rise to, for example, increased smuggling, trafficking, and the movement of illegal drugs. In a study of West African states, it was found that the effects of climate change created and exacerbated the issues which allow organized criminal networks to continue operating (Seiyefa). Therefore, it is not farfetched to propose such a result may also become visible in the Bay of Bengal region. If the Bay is able to support and sustain robust economic activity even for large and powerful states like China, its degradation can have more severe devastating impacts on vulnerable populations. For example, when

the earthquake-induced tsunami hit the Indian Ocean in 2004, 300,000 people were killed and almost 5 million were displaced (Chaturvedi and Sakhuja). A vast majority of the lives lost and 12% of economic damage occurred in the coastal regions of Bangladesh, Indonesia, India, Maldives, Myanmar, Sri Lanka, and Thailand.

The responsibility to preserve environmental security and hence human security falls on all the states with a vested interest in the Bay of Bengal. For instance, Bangladesh discovered 17 to 103 trillion cubic feet of ice-like hydrate deposits which contain large amounts of natural gas, an important source of energy for the country, in the Bay of Bengal (Sajid and Siddiqui). The Bay as a source of natural resources is not a new concept given how India and Myanmar have been tapping into them for a couple of decades now. With the growing importance of the Bay and the region, there is now a greater possibility for new infrastructure to be developed in order to make use of these resources. Whether these will be sustainably harvested, is an issue rarely discussed by and between the states.

States need to look forward to new adaptive strategies through coordination with each other to build resilience among vulnerable communities and increase their adaptive capacities (MacPherson). Climate change threats could create an opportunity for the states in the Bay of Bengal region to be able to move beyond the traditional concept of security paradigm and benefit from each other on matters of human security thereby strengthening regional security.

## *Redefining the Concept of Regional Security*

The Regional Security Complex Theory was first proposed by Barry Buzan (1991) and further developed by Buzan and Ole Waever (2003). The theory suggests that regional sub-systems are important objects of security analysis and provide an analytical framework to deal with them (Buzan, 2000). The focus of the theory has solely been on the state, and its political and military sectors, as being the primary source for security relations. One of the main contributions of this theory is that it brings to the forefront the importance of the regional level in international security studies and

offsets the neorealist viewpoints which tend to largely focus on the power structure at the system level (Buzan). Buzan and Waever define regional security complex as: "a set of units whose major processes of securitization, desecuritization, or both, are so interlinked that their security problems cannot reasonably be analyzed or resolved apart from one another" (Buzan and Waever, 44). The fundamental logic of the theory stems from how states in the global system face security interdependence but given how political and military threats tend to travel with relative ease over shorter distances than longer ones, states' insecurity is connected to geographical proximity (Buzan). The regional security dynamics gets more complicated as they are often affected by historical factors, such as colonial legacies, hostilities between states, or common cultural and traditional factors. Often regional security complexes highlight rivalry between states and the struggle for power among the major powers in the region, which are then influenced by external power dynamics (Brewster). Regional security complexes in South Asia, Southeast Asia, Middle East, and in Europe have often been studied separately (Buzan, 1983; Buzan and Rizvi et al; Buzan; Buzan and Waever; Waever et al.). In the case of the Bay of Bengal region, applying the regional security complex theory means taking into account all the states with vested interests in the Bay and moving beyond the regional boundary or identity of South, Southeast, and East Asia. This has begun with the inception of BIMSTEC but needs to become more active in the environmental arena.

Some scholars prefer to place environmental problems within the traditional national security framework whereby the military is seen as the main provider of security to the environment due to its organizational capabilities (Butts). As Chaturvedi and Sakhuja (2015) posit, it will be difficult to completely dispel this dominant narrative or to deny the close linkage between security and a state's armed forces. At the same time, though, the traditional roles of the military can be transformed to address climate-related non-traditional security threats. Nevertheless, other scholars strongly argue that what is needed is to locate environmental security in the wider framework of human security mainly because state-centric approaches to security are inadequate and issues such as equity and

impacts, are not stopped by state lines (Dalby). Indeed, involving the military in such issues tends to blur the lines between geopolitical security and human security which can result in states becoming more hostile and suspicious of each other. Regional cooperation between states tailored towards ameliorating the negative impacts of climate change needs to be further explored.

Geography as a fixed stage upon which a struggle for power between states takes place no longer holds merit in climate change because anthropogenic causes of environmental degradation do not abide by the demarcated state lines (Chaturvedi and Sakhuja). The ecosystem of the Bay of Bengal transcends state boundaries thereby calling for regional and sub-regional cooperation and a shift in an outdated view of 'geography' and 'politics' is much needed (Chaturvedi and Sakhuja). Security discourses focus almost solely on the most traditional national security concerns, particularly how environmental degradation can trigger conflict between states (Homer-Dixon; Myers). But a far more probable outcome of environmental-induced security issues will not be so direct but rather more multifarious (Lowi and Shaw). There is also a lack of understanding of how its effects can cause internal problems. The Syrian War is a prime example of how anthropogenic climate change-induced drought fuelled the unrest in Syria, leading to a full-blown civil war (Selby, Dahi, Frohlich, and Hulme). For a politically volatile region like the Bay of Bengal, its preservation is of utmost importance. However, the more imminent issue is how climate change can devastate the 1.4 billion people who live in the coastline of the Bay of Bengal (Xavier and Baruah).

What has almost always slipped under the radar in terms of non-traditional security discourses are 'considerations of equity, differential vulnerability' and the different 'adaptive capacity' of the various communities in the Bay of Bengal region (Chaturvedi and Sakhuja,15). Undoubtedly, the different climate change-induced challenges will affect different communities to different proportions depending on their adaptive capacities. At the same time, communities or groups may react in different ways to the change, hence the dynamics between them will be negatively affected and complicate the decision-making process on how to adapt to the change (O'Brien and Leichenko).

Moreover, there are great economic differences between the countries and within them as well, which means it will be difficult to maintain equity if the ground reality of these communities is not correctly understood.

As Amartya Sen (2009) posited, 'the impact of the environment on human lives must be among the principal considerations in assessing the value of the environment.' Moreover, in the pursuit of development, human activities may cause destruction to the environment, however, humans are still capable of improving and enhancing their environment (Sen). Other scholars like Timothy Doyle (2005) have argued that the view of the environment as something that is just 'out there' ends up alienating the inhabitants of that area and it is problematic to privilege nature over the communities it sustains. By evolving the term environment also to include human-centric concerns will allow for it to hold more significance to the millions of people who live in this large marine ecosystem (Bavinck and Salagarama). Not bringing communities into the regional security paradigm puts those vulnerable and marginalized communities at a greater risk which can be a reason for further regional conflict as discussed previously.

## *Regional Governance: The Path to Sustainable Development*

This paper argues that sustainable development can mitigate the impacts of climate change and turn it into an economic opportunity only if states are willing to create a governance structure whereupon they discuss and negotiate possible solutions. Rittberger and his colleagues (2006) created a model of three conditions: Problem, Cognitive and Hegemonic conditions (Andreatta and Archibugi) which would be necessary to create an international organization. In an anarchic world system, international organizations appear to be the best platform upon which to negotiate such solutions.

The conditions that Rittberger et al. (2006) have formulated do exist in the Bay of Bengal region, however, there are some caveats to them. To begin, the problem condition is emphasized to be "complex interdependencies among states that lead to further cooperation" (Akter, 8). There is not

only a heavy dependency between the states in the region but also on the Bay itself. So even if larger states like China and India tend to ignore concerns from weaker states in the region, environmental degradation of the coastlines and the Bay itself puts pressure on these countries to react. Even if the people of particular states are not directly impacted, there will be a strain on their economic development. As postulated by Rittberger et al. (2006) when states have a common interest and the expected benefits from regional cooperation far outweigh the potential costs it gives them the incentive to cooperate with each other. In this instance, the states have more to gain from a regional governance structure to mitigate environmental degradation.

The second condition—the presence of a cognitive community—is in line with what this paper has argued thus far. By incorporating environmental security in the broader human security concept and by analysing the impact climate change has on the lives of the people in the Bay of Bengal region, a strong cognitive community can be built up. This cognitive community, Rittberger and his colleagues (2006) argue, can help the states realize the importance of solving a particular issue together and will also lobby for this particular viewpoint. Just like the League of Nations was created out of "a conscious community of nations" that wanted to uphold certain values and norms of a peaceful world, regional cooperation can also be brought about in this particular manner (Akter, 10). However, even though there are other empirical evidences to support the existence of cognitive communities that can and do bring about cooperation between states, such a community has not been able to achieve much in terms of cooperation in the Bay of Bengal region. National and transnational NGOs and climate initiatives have pressurised the governments to be proactive in mitigating climatic disasters and the recent United Nations Climate Change Conference in 2022 also reiterated these issues. A cognitive community of other stakeholders, like policy advocacy groups, think-tanks, NGOs and the grassroots people are of paramount importance to keep the pressure on the pulse of the issue.

The third condition was borrowed from the neo-realist conceptualization of hegemony. Once the hegemon becomes willing to accept the relative gains of other states and absolute gains for itself, cooperation strategies begin to materialize (Akter). If one looks at the South Asian region it is easy to see that India would automatically assume the role of the hegemon. Similarly, for Southeast and East Asia, China emerges as the regional hegemon. However, when one looks at the Bay of Bengal region, the presence of two potential hegemons creates a conflict if one tries to analyse it from the perspective of relative gains and absolute gains. If neo-realist viewpoints are accepted here, then neither of the two states would want to assume the position of the hegemon if there is no absolute gain. It is not surprising, therefore, to conclude why there has been no regional cooperation in the Bay of Bengal region if one is to accept the explanatory model of Rittberger et al. (2006). Moreover, even on a smaller scale, such as sharing the water in the Ganges-Brahmaputra-Meghna river basin, India has shown differential attitudes towards Bangladesh, Bhutan, and Nepal and indicated an unwillingness for a multilateral cooperation, opting instead for bilateral agreements. Nevertheless, this paper will argue that regional governance is still possible in the Bay of Bengal without the presence of a hegemon and in spite of the rivalry that exists between the two largest nations with vested interests in the region.

When talking about global governance, Zurn (2018) suggested that the global governance system has three layers that are interlinked. The first is composed of normative principles; the second is the presence of a vast number of institutions; and the third is composed of the different authorities that are acting in the system and how they lend to the legitimacy of the governance system. Even though Zurn (2018) used the global governance structure for his explanatory purposes, these layers can also be found in the case of regional governance.

To begin with the normative principle, states in a regional governance system would likely have conditional sovereignty, as we see in the case of the European Union for example. Moreover, there are other societal actors or stakeholders who have the ability to address international authorities,

including states themselves. The normative principle is also based on the idea of the common good for the entire region which would inexplicably make it important to states and make it more acceptable for them to make sovereignty more conditional. In the era of climate change, the common good would be to try and mitigate the effects on vulnerable individuals and the economy as a whole. If an international authority could exist with state and non-state actors respecting those obligations that do not align with their specific state's interest, then the global system would not be anarchical (Zurn). Climate change which does not respect state boundaries appears to be the best test case for this normative principle of the common good.

Nevertheless, states need to recognize this real and pre-emptive problem and currently it appears as though there is no strong normative principle in terms of environmental security or human security in the Bay of Bengal region specifically. For regional governance to evolve and flourish, a normative principle based on the common good is of the utmost importance, and beyond that, the an urgent need to understand that the Bay of Bengal requires cooperation from a greater number of states. Rittberger et.al (2006) argument for the presence of a cognitive community are also relevant to push forward this agenda mainly by non-state actors who are the main stakeholders. It is also important for climate activists and scholars to push this agenda as a top priority and allow for this norm of environmental protection and concern for human security to become a reality in the Bay of Bengal region. Currently, economic development by any and all means is the main prerogative even though it is causing the depletion of natural resources and other anthropogenic forms of climate change.

The second layer of regional governance is made up of a vast set of very specific institutions. In the Bay of Bengal region, there is no one regional organization to coordinate the cooperation between all the states specifically for the purposes of mitigating environmental degradation, increasing communities' adaptive capabilities, and protecting those vulnerable individuals' lives and livelihoods. BIMSTEC is currently the only organization with the mandate that can allow it to make environmental policies. However, there is one main problem with this organization: China is not a

party which means any agreements formulated by the institution do not hold any obligations for the state. Other forms of institutions are the International Tribunal of the Law of the Sea, the International Court of Justice, and the Annex VII of the UN Convention on the Law of the Sea which allows for arbitration. None of these institutions, though, make any claims about environmental security.

Another reason why regional institutions are important is that it is the best way to circumvent Rittberger and his colleagues' (2006) requirements of a hegemonic condition to have regional governance. Once institutions are established in the form of multilateral treaties or agreements, it would become binding on the states. Or, at the very least, help to maintain dialogue and cooperation in the area of human security and environmental security. As such, states would then not be concerned with whether they have achieved absolute gains. These forms of regional cooperation are not new for states in this region. The Association of South East Asian Nations (ASEAN) created the ASEAN Defense Ministers' Meeting (ADMM) and expanded it to ADMM Plus 8 with the inclusion of Australia, China, India, Japan, New Zealand, Russia, South Korea, and the United States. These states decided to cooperate practically in humanitarian and disaster relief spheres; to maintain maritime security, counter-terrorism, and peacekeeping among others (Chaturvedi and Sakhuja). Institutions further allow for disaster management and relief, reducing the risks of climatic disasters and their impact on vulnerable populations; the sharing of research, innovation, and technology; and also awareness-raising campaigns. The ASEAN countries have adopted the Declaration of ASEAN Concord I and II and instituted Mutual Assistance on Natural Disasters in the area of sharing knowledge, providing relief, and disaster management to allow ASEAN countries to aid each other in the time of disaster. In the case of the South Asian Association for Regional Cooperation, there exists the South Asian Co-operative Environment Program (SACEP) which has so far been important for creating projects and programs that promote education on the environment; the creation of environmental legislation, biodiversity management, the protection of coastal regions,

and much more. What these indicate is that regional institutions do and can exist but it is the dichotomy of the different regions that need to be overcome for there to be a solid governance structure unique to the Bay of Bengal.

Lastly, Zurn (2018) hypothesized the interplay of different authorities in the global governance structure. In a more regional context, there exists spheres of authority: those states that are in China's sphere of authority and those in India's. Zurn (2018) further asserts that the meta-authorities that exist in global governance like the hegemons or the G7/G20 countries are rather weak and also exclusive causing the governance structure to have legitimation problems. Indeed, if the hegemons in this case, India and China, were able to dominate the climate change forums and negotiations, the regional governance would suffer from a crisis of legitimacy because smaller states would be reluctant to fully participate. In worse cases, the interests of smaller states will be passed over in favour of the interests of the more dominant states which would defeat the purpose of attempting to preserve the lives and livelihoods of vulnerable communities. Therefore, in creating this regional governance structure what is important is to avoid this form of crisis of legitimacy by bringing to the forefront the struggles of the vulnerable communities and forging a path of sustainable development, even if they run counter to state interest.

## *Conclusion*

The littorals of the Bay of Bengal and other states, like China, with a vested interest in the region are currently on the frontline of both climate change and biodiversity crises. The lives and livelihoods of vulnerable communities are at stake as well as future economic development of the region. There are all forms of threats that these countries are exposed to if environmental security is not maintained. The next couple of years, it is imperative to place climate at the centre of any national and regional agendas to combat the growing threats to the lives and livelihoods of millions of people. Human security is inextricably tied to the protection of the environment which is why it is important to

rethink regional security and reconceptualise it to also include human and environmental security from non-traditional security issues.

This paper has argued in the favour of a regional governance structure to promote sustainable development and to ensure that states value its natural assets, become transparent, and meet their obligations. At the same time, regional governance structures can also have problems within them. It is important, therefore, to have a strong normative principle promoted by a regional organization(s) and/or national organization which strives for the common good and is advocated for by a cognitive community of states and non-state actors. Moreover, the governance structure should not suffer from a crisis of legitimacy brought on by the domination of the more powerful states over the weaker ones but rather promote a regional vision for rewilding the environmental resources. There should be a proper platform whereby the concerns of all states can be negotiated, and voiceless vulnerable people's concerns will be accepted when drafting solutions to the climate change problem. It is only through the existence of a proper regional governance structure will it be possible to bring about sustainable development in the Bay of Bengal region.

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