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BIMSTEC and Climate Change: Setting a Common Agenda

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ABSTRACT The BIMSTEC region is among the most vulnerable in the world from increased threat due to climate change. In the foreseeable future, climate change is projected to affect each BIMSTEC member country with greater severity and frequency, thereby impeding their response capacity significantly. This brief explores the vulnerability of the region from climate change and the BIMSTEC-level initiatives that have taken place to address the issue. Although BIMSTEC countries have made significant progress in their respective national strategies for climate action, the commonalities of climate-related threats in the region coupled with increasing vulnerabilities, demands an integrated and effective cooperation for climate change, natural disaster management, and environment protection. The brief suggests that BIMSTEC should empower a paradigm policy shift from a traditional country-centric, reactive approach to climate change towards a joint, proactive, holistic one that encompasses mitigation, adaptation and preparedness.

INTRODUCTION

Regional cooperation and integration has vast potential for accelerating growth and development within and across member nations.[1] However, the adverse and transboundary impacts of climate change on diverse sectors such as agriculture, water resources, and health, can impede the process of development. The Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC), formed in 2004, is one such subregional initiative where policymakers have recently begun paying more attention to climate change concerns. The BIMSTEC region—comprising 22 percent

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of the global population, recording a combined gross domestic product (GDP) of US$ 2.7 trillion, and accounting for seven percent of intra-regional trade—is getting increasingly exposed to various threats from natural disasters induced by climate change.[2] Global risk advisory firm, Maplecroft, ranks the Bay of Bengal region in "extreme risk" in their Climate Change Vulnerability Index (CCVI).[3] In the foreseeable future, climate change is projected to affect each BIMSTEC member country with greater severity and frequency, thereby impeding their response capacity significantly.[4]

A particularly vulnerable sector is agriculture, which is the key driver in the region in terms of employment, food security, and contribution to GDP. The sector is coming under increasing threat from natural hazards such as droughts, floods, and tropical cyclones due to climate change impacts such as warming, sea-level rise, glacier melting in the Himalayas, and variable rainfall. Indeed, the region—home to a mine of natural resources and one of the world's largest providers of forest products—is under increasing threat due to climate change.[5]

Although BIMSTEC countries have made significant progress in their respective national strategies for climate action, the commonalities of climate-related threats in the region coupled with increasing vulnerabilities, demands an integrated and effective cooperation for climate change, natural disaster management, and environment protection. BIMSTEC, therefore, has a pioneering opportunity to empower a paradigm policy shift from a traditional country-centric, reactive approach to climate change towards a joint, proactive, holistic one. This approach must encompass mitigation, adaptation, risk prevention, and preparedness.

The recently concluded BIMSTEC summit in Nepal points toward the renewed focus of the subcontinent to turn the Bay of Bengal into a productive zone of regional cooperation,[6] with a special focus on climate change. The establishment of the BIMSTEC Centre for Weather and Climate, prioritising Climate Change at the BRICS-BIMSTEC outreach summit in 2016, and conducting the first BIMSTEC Disaster Management Workshop (DMEx) and Ministerial Meetings on Climate Change in 2017, are some of the recent noteworthy initiatives undertaken at the regional level.

THE BAY OF BENGAL AND ITS VULNERABILITY TO CLIMATE CHANGE

The Bay of Bengal is the largest bay in the world, situated in the northeastern basin of the Indian Ocean with an area of about 2,173,000 sq km. The countries bordering the BoB are home to an estimated 450 million people in the catchment areas, making these the most densely populated coastlines on earth.[7] The region's geography shelters varied climate zones and ecosystems, ranging from high altitude mountains, water bodies, to tropical forests and mangroves. Given such diversity, the vulnerability to climate risks in the region also varies from one part to another. Besides recurrent natural disasters, high population density and poverty have compounded the vulnerability of the region.[8]

Climate change has a cascading impact on environment and natural resources in the

region, thereby significantly affecting the development performance of the BoB littorals. Rising temperature and uncertain rainfall create a negative impact on livelihoods and economies;[9] agriculture, freshwater availability and biodiversity are threatened by sea level rise, tropical cyclones and coastal flooding; while warm and humid conditions could lead to the spread of infectious diseases, endangering human health.[10] Growing impact on agriculture, water, health and infrastructure is likely to compound the existing development problems in the BoB littorals and weaken efforts to achieve Sustainable Development Goals (SDGs) in the region.[11]

Climate change phenomena

- *Extreme weather events*

The Bay of Bengal region is prone to extreme weather events such as seasonal storms, tropical cyclones, and heavy rainfall.[12] Over the past two centuries, 20 out of the 23 major cyclone disasters in the world have occurred bordering the Bay of Bengal, particularly in India and Bangladesh.[13] The Myanmar coast (Gulf of Martaban, Irrawaddy estuary) is also exposed to severe cyclones like Nargis that hit Myanmar in 2008 and Sidr that struck the eastern parts of Sunderban in 2007. A study notes that among natural hazards in the region, cyclones may result in the complete disappearance of large proportions of the land area of countries such as Bangladesh and Maldives.[14]

Monsoon rains in the region tend to cause intense flooding, damaging lives and infrastructure as witnessed in 2008, when a breach of Kosi river embankment near the Indo-Nepal border led to massive floods that affected some 2.3 million people in India's northern state of Bihar, and displaced over 60,000 people in Nepal.[15]

- *Sea-Level Rise*

The northern Bay of Bengal experiences the highest sea-level rise at 2.0 mm per year, under the present climate.[16] The large inflow of freshwater from the Ganges and Brahmaputra into the Bay of Bengal forces significant changes in sea level along its coastlines. Besides causing loss of human life, increase in sea level will cause intrusion of seawater and salinisation of groundwater that will challenge freshwater availability and reduce soil fertility which, in turn, will affect agriculture and fisheries.[17]

Sea-level rise is also projected to aggravate storm surge, flooding, erosion and other coastal hazards, resulting in significant losses of coastal ecosystems. The coastal region of Maldives and Sri Lanka and India (Andaman, Nicobar and Lakshadweep Islands) are likely to be worst affected by the phenomena.[18] The interaction of sea-level rise, storm surges and flood risk are projected to cause significant displacement of people from low-lying areas of Bankok.[19] The Ministry of Environment and Forest (MoEF) in 2004 suggested that a one-meter rise in sea level rise could cause displacement of approximately 7.1 million people in India, loss of about 5,764 km2 of land area and 4,200 km of coastal roads.[20]

- *Glacial Lake Outburst Floods*

Effects of climate change like unseasonal rainfall, lake outbursts, rising temperatures, increased flooding, flash floods, rock

avalanches from destabilised slopes leading to road blockages, are already being experienced in several states of North India bordering the Himalayas. According to projections made by the United Nations Environment Programme (UNEP), over 40 glacial lakes in the Himalayas are on the verge of bursting.[21] India, Bhutan and Nepal are prone to recurrent floods, especially induced by (Glacial Lake Outburst Floods) GLOFs. Lack of advanced knowledge databases at the sub-national level hinders the ability to reduce impacts and adapt to the forecasted changes. Knowledge of GLOFs is inadequate and institutional research is imperative to predict and reduce their effects in the region.[22]

Impacts of climate change phenomena in the region

Agriculture constitutes the backbone of the BIMSTEC economies; it is likely to be the worst affected by the impacts of climate change, with concomitant implications for food security in the region.[23] Agriculture is the largest source of employment as well as single largest contributor to the Gross Domestic Product (GDP) in the region. In the event of changes in the intensity of rainfall events, and the break cycles of the monsoon, communities dependant solely on agriculture are worst affected, raising additional concerns on food security. Moreover, variations in the hydrological cycle due to floods and droughts are likely to cause widespread diarrhoeal diseases and increase chances of mortality.[24] Overall, the projected impact of climate change in the BIMSTEC economies is dire: the Asian Development Bank (ADB) estimates that the annual GDP of countries of Bangladesh, Bhutan, India, Nepal, and Sri Lanka will decrease by 2.0 percent, 1.4 percent, 1.8 percent, 2.2 percent, and 1.2 percent, respectively, by 2050.[25]

The coral reefs in the Bay of Bengal form critical marine habitats that are projected to disappear between 2030 and 2060 due to climate warming. Besides supporting fisheries, these coral reefs, found chiefly in the Maldives and Thailand (and to a much more limited degree in St. Martin's Island in Bangladesh), are also important for the tourism industry. Coral reefs are the most diverse marine habitat that supports an estimated one million global species. Given their importance in the marine ecosystem, the loss of coral reefs is likely to have severe consequences.[26]

Habitat loss is also expected to have a severe impact on mangroves. Mangrove habitats in the Bay of Bengal—Gulf of Mannar, the Sundarbans (shared between India and Bangladesh), the Andaman and Nicobar Islands and Myanmar—are under severe stress from climate change. Coastal wetlands and habitats, such as salt marshes and sea grass beds could get further impacted due to flooding and costal erosion. In addition, sea level rise could lead to their migration up the shore.[27]

Communities in the east coast of India and northern Bay of Bengal are dependent on traditional fisheries. A decline in fish resources, whether from coral reef degradation or climate warming is projected to impact the livelihood of fishers and island communities. Moreover, they demonstrate low adaptive capacity, while their exposure and sensitivity to climate change risks are high.[28]

Undoubtedly, the severity of climate change phenomena and their impacts on different sectors has resulted in large-scale migration of coastal communities both within national boundaries and across borders, raising economic and political concerns between bordering states.[29] A Greenpeace report titled, "Blue Alert: Climate Migrants in South Asia- Estimates and Solutions" noted that around 125 million migrants from the coastal regions of Bangladesh and India, will be rendered homeless by 2100.[30] The National Defence University in Washington, in 2008 also suggested that thousands of refugees from Bangladesh may enter India, potentially fomenting social tensions.[31]

Therefore, strengthening inter-governmental coordination, creating synergies and synchronising efforts to institutionalise regional cooperation on climate change among member states is crucial to minimise the projected losses.

CLIMATE CHANGE IN THE CONTEXT OF BIMSTEC COOPERATION

Regional-Level Initiatives

BIMSTEC has the potential to sustain economic growth through the regional deployment of shared human, natural and environmental resources and address issues related to climate change in a comprehensive manner. The constants of geography, climate and maritime contiguity among the BoB littorals provide a sound basis for regional cooperation under BIMSTEC. There are significant complementarities in the lifestyle, culture, religion and language among the littorals that encourage them to cooperate for the conservation and preservation of the climate and environment of the region in an ecologically sustainable manner.[32]

BIMSTEC member states are driven by a common agenda with focus on key issues of trade and investment, technology, energy, transport and connectivity, tourism, fisheries, among others. At the 13th session of the BIMSTEC Senior Officials' meeting in 2009, climate change was added to the grouping's priority agenda.[33] The successive summits then reiterated the need to strengthen and intensify regional cooperation to preserve, protect, and manage the diverse and fragile eco-systems of the region, including the need to address the challenges posed by climate change and natural disasters.

BIMSTEC Ministerial meetings are the key mechanisms to guide and facilitate the agenda of cooperation. In the recently concluded 15th BIMSTEC Ministerial meeting held in Nepal, the Kathmandu declaration stated, "We note with great concern of the increasing threat to our planet and livelihoods of the people from climate change and agree to combat the same at local, national and regional levels. We also commit to implement the Paris Agreement on climate change."[34]

Furthermore, the meeting decided to recognise the high potential of energy sources in the region, particularly renewable and clean energy sources, and agreed to expedite efforts to develop a comprehensive plan for energy cooperation within the region.[35] It decided to conclude the Memorandum of Understanding (MoU) on the Establishment of the BIMSTEC Grid Interconnection at the earliest possible time.[36]

India hosted in early October the First Annual BIMSTEC Disaster Management Exercise (DMEx) 2017 while Bangladesh is scheduled to host a BIMSTEC Ministerial Meeting on Climate Change. BIMSTEC members recognised the need for intensified cooperation in Disaster Management and agreed to establish an Expert Group on Disaster Management. The BIMSTEC Centre on Weather and Climate has also been created to address the diverse aspects of the environment, climate change, and natural disasters in the region.

Indeed, the prospects of regional cooperation on climate change is important in the BoB for multiple reasons. First, the BoB is a semi-enclosed area and most vulnerable to disasters on earth. Second, various disasters in the past such as earthquakes, floods, tsunamis, and droughts have created a massive impact on the growth and development of the region. Third, the littorals are estimated to have lost upto 20 percent of their GDP and 66 percent of potential revenue to disasters, which has further compounded the already fragile ecosystem of the region.[37]

Initiatives at the National Level by BIMSTEC countries

Several BIMSTEC member countries have attempted mainstreaming climate change into their respective development agendas. Given the significant commonalities of climate change-related risks and concerns in regional member countries, various synergies at national level programmes could be identified for coordinated efforts at the regional level.

India's National Action Plan on Climate Change (NAPCC) released in 2008 addresses critical concerns through a directional shift in the development pathway by promoting India's development objectives while also yielding co-benefits for addressing climate change effectively. The plan outlines a number of steps to simultaneously advance India's development and climate change-related objectives of adaptation and mitigation.[38]

In terms of management of natural disasters, India is the first and only country so far to embrace the Sendai Framework for Disaster Risk Reduction 2015-2030 and develop a national action plan with short- and long-term targets. Despite the commonality of disaster threats in the region, the capacities of member countries differ widely. India significantly expanded its capabilities and offers its expertise in DRR to other countries such as the South Asia satellite, GSAT-9 and the Tsunami Early Warning Centre.[39]

Bangladesh initiated the Climate Change Strategy and Action Plan in 2009, wherein six key mitigation measures were identified such as construction of cyclone shelters, embankments, afforestation, early warning systems, awareness building, and communications.[40] After the 1991 cyclone, the Government of Bangladesh launched a large community-based cyclone preparedness programme, which led to a significant reduction in loss of lives from cyclones and is now recognised as a global best practice.[41]

The Comprehensive Disaster Management Programme (CDMP) with focus towards disaster management and prevention, and climate change adaptation, was introduced to reduce the impact of disasters in Bangladesh. In particular, it aimed to increase awareness on practical measures to reduce disaster risks

and losses, strengthen national capacity for disaster management (with emphasis on preparedness), enhance knowledge and skills of key personnel in handling disasters, establish disaster action plans in the most disaster-prone areas, promote local–level risk reduction measures, and improve early warning systems.[42]

Bhutan has been one of the frontrunners in combining development with conservation of environment. For over three decades, the development process of Bhutan has been guided by the philosophy of Gross National Happiness (GNH), which establishes happiness as the ultimate purpose of development. Bhutan's five-year development plans have been directed by the goal of creating social, economic, political and environmental conditions that will enable the Bhutanese to pursue happiness. GNH is a holistic development paradigm emphasising sustainability. Earlier at the SAARC Thimpu Summit, Bhutan introduced the concept of GNH and titled the meeting, "Towards a Green and Happy South Asia."[43]

BIMSTEC AND CLIMATE CHANGE AGENDA: THE WAY FORWARD

In view of the climate threats in the region and the transboundary nature of their impact, BIMSTEC members must embark on an ambitious climate action through regional cooperation. Several risk factors create an impact on pairs, at the least, or even larger combinations of countries in the region, wherein adaptation and mitigation efforts may be rendered unviable if each country follows a purely domestic and insulated approach.[44] Given that BIMSTEC is being revitalised today, two decades since its establishment, this presents an opportunity for BoB countries to apply the lessons learned from the experiences of groupings such as SAARC and ASEAN.

At the global level, the presentation of a BIMSTEC common position at various UNFCCC COPs is an important step forward in raising a regional voice. BIMSTEC must also ensure in a strategic way that the voice of the BoB region as a whole is heard and their genuine concerns are taken on board.[45] While creating a common position, it is important that BIMSTEC member countries include the concerns of various stakeholders, such as the government, private sector, civil society as well as academia.

At the regional level, the principal step would be to devise a comprehensive BIMSTEC climate action plan, reflecting a clear strategy to integrate mitigation and adaptation in all the development programmes of member nations. There is a need to adopt a multi-hazard and multi-sectoral approach and work towards common outcomes through the institutionalisation of partnerships across all levels of governance.

BIMSTEC could initiate the institutional process of addressing regional climate-related issues through cost-effective knowledge solution at the national and local levels, wherein formation of BIMSTEC groups and task forces on ecosystem, biodiversity, migration, extreme weather events and health could be a way forward. In addition, key initiatives such as energy cooperation through trade in green technologies, advanced energy generation through renewable sources, promoting clean energy practices and

benchmarking performances could be a significant step for the evolution of BIMSTEC.[46]

Furthermore, initiatives would need to be reinforced by policy coordination at all levels—regional, national, and local. Considering the complexities involving intra- and inter-governmental coordination involving several governments, states, sub-national departments in various sectors, a task force could be constituted to identify gaps and integrate national action plans of member nations.[47]

The key to the success of BIMSTEC's efforts at mitigating climate-change issues would hinge on devising an impact monitoring mechanism. Member states will also have to agree on measurable targets to assess the achievements in their adopted goals.

Finally, it is crucial for BIMSTEC to transform its approach by recognising and overcoming the differences between member states. India's divergences over transboundary Teesta river water-sharing with Bangladesh, and the recent Rohingya refugee crisis between Myanmar and Bangladesh, are cases in point. However, member nations must recognise that considering their regional setting and geographical proximity, the security of states in the sub-region is contingent upon each other. Climate action would thus need to be prioritised as a common security agenda.ORF

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