



Cover Page



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REGIONAL COOPERATION ON CLIMATE CHANGE (ADAPTATION) IN SOUTH ASIA: A STUDY OF SUNDARBANS REGION

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Abstract

South Asia, one of the major regions in global politics, faces a number of climate change-induced catastrophic environmental challenges. Climate change occurred through conventional and non-conventional activities of various governmental policies. The increase of extreme weather, flooding, landslides, and heatwave, sea-level rise makes lives much more vulnerable. The transnational, multidimensional, and cross-sectoral nature of climate change asks for regional cooperation to adapt it. Adaptation is the process of adjustment to actual or expected climate and its effects (IPCC-2014). Regional cooperation policies have been strengthened to minimise climate issues through effective policies. This paper analyses existing policies that have been made for adaptation on climate change. It emphasises that regional cooperation will be effective to minimise rapid climate change in south Asia. The first part of this paper deals with regional cooperation on climate adaptation. The second part of this paper elaborates existing policies in south Asia. The third part of this paper examines the role of India and Bangladesh on climate adaptation. Final part of this paper deals with the future perspective of climate adaptation in south Asia.

“The 2015 Paris Agreement explicitly defined adaptation as ‘a global challenge faced by all with local, sub-national, national, regional and international dimensions’ (Art. 7.2)”

Keywords: South Asia, Regional Cooperation, Adaptation, Policies, Conventional, Non-Conventional, Climate.

Introduction

Environmental issues were first discussed at global level in the United Nations conference on the human environment which was held at Stockholm in 1972 and the main objective was “to serve as a practical means to encourage, and to provide guidelines ... to protect and improve the human environment and to remedy and prevent its impairment” (Handl, G. 2012). Climate change is one of the major environmental issues in developed as well as underdeveloped countries. The 2015 Lancet commission on health and climate change observed that climate change was the most public health threat in the 21st century.

The 2016 Paris agreement argued for countries to implement mitigation and adaptation policies and strategies. “Adaptation policies are techniques which are used to reduce the impact of climate change through institutional flexibility, reflexivity, adaptive nature” (Vij, S Moors,2017). South Asia as vulnerable and injurious regions because of climate change and natural disasters. Adaptation strategies include public health measures to manage the risks already present or expected from climate change (Sen, B.,2017). Adaptation policy is a response to climate change and consists of improving the resilience of people’s behaviour and the country’s infrastructure to the consequences of climate change. Adapting to climate change takes many forms. In addition to making physical infrastructure more resilient to climate shocks, adaptation involves improving policy-making processes to be more pragmatic in the face of climate shocks, internalising climate risk in areas such as land use laws and procurement, educating households and firms on their role in adapting to climate change and providing support in the effort (Global Commission on Adaptation, 2019).

The climatic problem has no specific boundary rather has transboundary nature and affects every country and this regional collective action is needed that would involve cooperation among national, regional and international institutions. Adaptation is a technique to resolve climate change problems. Bilateral treaty is more effective than a multilateral treaty because a bilateral treaty serves specific political and economic objectives as well as more decentralised governance and a serious approach both parties take resolving problems. Various studies have observed that Climate problems reduce through regional cooperation. South Asian countries adopted environment-related policies since the 1990s but some governments have not revised or updated them despite so much serious thinking and discussion on sustainable development taking place in recent times (Zafarullah, H., & Huque, A. S. 2018). This paper emphasises on climate change adaptation in South Asian countries such as India and Bangladesh. Both countries share common historical and geographical characteristics as well as share water, forests, natural habitats, and biodiversity.

Objective to the Study

In the 21st century climatic change and environmental degradation pose major threats at the global as well as regional level. South Asia is one the regions that has shown vulnerable experience in terms of climate issues. Objective of this paper (i) Regional



Cover Page



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cooperation can be instrumental in dealing with the problem of climate change. (ii) In this paper we analysed the prospect and challenges of India- Bangladesh bilateral climate initiative in Sundarbans region.

Climate Adaptation and Regional Cooperation

Regional cooperation is one of the major techniques to reduce climate problems of any region through negotiation policies. Regional cooperation between India and Bangladesh may lead to reduced climate problems in south Asia. Adaptation is a pathway to solve a local problem. At regional level local authorities have a significant role towards climate change adaptation and local authorities play an important role in the success of adaptation policies through proper negotiation. In 21st century we cannot deny the role of local actor's role in reducing climate issues. Local authorities play an important role in creating cooperation among countries to reduce climate issues through negotiation policies. At regional level compromise among nations would be effective (De Pryck, K. (2021). National policy may help to reduce climate issues and transboundary policies to help climate adaptation (Okpara, U. T.,2018). At international level various organisations, NGOs, multinational corporations working for climate change adaptation.

In theory, adaptation is defined as an inclination of impact from reactive to proactive measures of response to climatic conditions and its socioeconomic reflection (Huq, S.,2018). Climate adaptation day by day increases at global level and regional level and increases adaptive capacity of regions (Termeer, C.,2011). Climate adaptation ensures adequate consideration of climate change through policies and planning. Planning has the ability to collective concern of particular regions (Storbjörk, S., & Hjerpe, M. 2014). Regional cooperation may lead to effective ways to reduce climate issues of regions and global areas through good national policies.

The South Asian region has been identified as one the most climate vulnerable regions in the world by various reports. The World bank posits that half of its population has been affected by climate change in the last decade. The IPCC report predicts hotter weather, longer monsoon seasons and increased drought if the total global warming touches around 1.5-degree Celsius increase in coming decades. Another report projects a compulsion of 13 percent of GDP to be spent in dealing with climate change. An exceptional increase of 40 million people in Climate induced migration is also predicted by 2050. (Foreign policy weekly in South Asia 2021).

Regional cooperation can be instrumental in dealing with the problem of climate change. Countries within the region can effectively cope with the challenges of climate change and disasters with collaborative effort, rational planning and ensured implementation. It can help in building institutional capacity, research and dissemination of outcomes, and exchanging knowledge and best practice. In the absence of collaborative efforts among the states the complex problem of climate change is distant to be addressed.

Being the least integrated region in the world, cooperation among south Asian countries has become difficult. The power dynamics and geopolitics has made the possibilities of multilateral cooperation more challenging. In this scenario bilateralism can work as the best available option to deal with climate change. Unlike multilateralism, bilateralism involves two serious countries mutually committed towards climate adaptation and mitigation where coordination and commitment become very much easy.

In this paper we analysed the prospect and challenges of India- Bangladesh bilateral climate initiative in Sundarbans region. The region transcends the national boundary and spreads in both the country. Sundarbans irrespective of countries face the challenges of climate change and both the countries have common interest in protecting it. In this paper, making inferences from the past experiences, we will try to draw a model cooperation in Sundarbans. In the next section we discussed the importance of the region and climate challenges faced by the region.

Biodiversity of Sundarbans Region

The Sundarbans region is the largest contiguous mangrove forest in the world. Which includes approximately 9630 square kilometres of which 5363 square kilometres are reclaimed area and 4267 square kilometres protected mangrove forest (Mahadevia Ghimire, K., & Vikas, M. 2012). The Sundarbans Region covers approximately 10,200 sq. km including land & water area and more than 60 percent area cover Bangladesh (around 6,017 sq. km) and rest (4200 sq. km) in India (World Bank, 2014). This region includes the lower part of deltaic plain of Ganges, Brahmaputra and Meghna basin. The Sundarbans region has been designated as UNESCO world heritage for India and Bangladesh due to rich biodiversity (Danda, A. A. 2019). In 1989, the Indian government declared Sundarbans as a protected biosphere reserve. In this region found more than 300 species of flora and 425 species of wildlife. The Sundarbans regions consist of more than 85 percent of all mangrove found in India. Also, royal Bengal tigers' habitats are found in this region making it the only mangrove tiger habitat in the world.

The Sundarbans regions are also important for local people for their survival. Their socio-economic lifestyle depends on Sundarbans natural resources and they collect resources such as fuel wood, fish honey, medicine for their daily life. The Sundarbans



Cover Page



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region is also important for the tourism industry for both India and Bangladesh. Besides, this region is very important for nutrition, proteins for human beings such as honey, medicine (Mahadevia Ghimire, K., & Vikas, M. 2012).

The Sundarbans region face various challenges due to climate change such as increased temperature, rising sea level, continues cyclone, deforestation, pollution, erosion etc. These challenges have negative impact on the natural as well as built environment and habitat of the region leaving the rich flora and fauna vulnerable to the imperials of climate change.

Existing policies of climate adaptation in South Asia

This paper also analyses the existing policies on climate adaptation and the questions of future policies for adaptation on climate change. Various initiative have been taken for climate adaptation such as the SAARC environment action plan in 1997, the Dhaka declaration on climate change in 2008, the comprehensive framework on disaster management in 2006-2015, the SAARC action plan on climate change in 2009-2011, the SAARC convention on cooperation on environment in 2010, the Thimphu statement on climate change in 2010 (Das, K., & Bandyopadhyay, K. R. 2015). The United nations framework convention on climate change in 1992, National Adaptation Plans of Actions in 2001(Lwasa, S. 2015). The assessment reports of IPCC in 1990,1996,2001 that have recognized the south Asian region for its capacity to incorporate climate adaptation (Dhyani, S.,2021). In South Asia, the Indo-Gangetic Plain (IGP), Indus delta and Bangladesh flood plains are historically unique systems of global importance that have cultural and economic development in the region and efforts to formulating climate policies, strategies, and action plans and implementing numerous adaptation (Wang, S. W.,2017). Adaptation policies to minimise climate problems through initiatives taken by the national governments need to be effective at regional level also.

(i)India’s Role on climate adaptation: India established a National Action Plan on Climate Change (NAPCC) in 2008 which consists of eight missions (Byravan, S., & Rajan, S. C. 2013) such as (1) National Mission for Sustainable Agriculture (NMSA), (2) National mission for enhanced energy efficiency (NMEEE), (3) National Mission for a Green India (GIM), (4) National Mission on Sustainable Habitat (NMSH),(5) National Mission for Sustaining the Himalayan Ecosystem (NMSHE), (6) National Mission on Strategic Knowledge for Climate Change (NMSKCC), (7)National Solar Mission (NSM) and (8) National Water Mission (NWM).

Six out of the eight focus on adaptation policies such as Mission on sustainable agriculture, National water mission, Mission on Himalayan Ecosystems, the green India mission and the mission on strategic knowledge on climate change (Vij, S., Moors 2017). In 2015 he established the National Adaptation Fund for Climate Change (NAFCC) to support adaptation activities in the States and Union Territories (UTs) of India that are vulnerable to the adverse effects of climate change. NAFCC is implemented in project mode and till date, 30 projects are sanctioned in 27 States and UTs (Ministry of Environment, Forest & Climate Change,2022). The NAPCC focuses on the need for adaptation policies and actions specifically in the Himalayan regions of the country; very few studies have concerns for urban localities climate change adaptation in the Indian city of Indore (Chu, E. K. 2018).

(ii)Bangladesh’s Role on climate Adaptation: Bangladesh adopted its first holistic climate change strategy and action plan in 2009, in connection to the UNDP’s NAPCC. Apart from these the Ministry of Environment and Forests, Ministry of Planning, and the Ministry of Finance, other sectoral ministries such as Ministry of Water Resources and Ministry of Agriculture are actively involved in planning and implementation of adaptation initiatives, reflecting high institutional flexibility (Vij, S Moors,2017).Bangladesh is one of the most vulnerable country to climate change and also took lead among vulnerable developing country to invest 10 billion US dollar in the last 35 years to reduce its vulnerability (Haque, M. M.,2017). Local indigenous adaptation techniques and knowledge practices (ITKPs) are key components for climate change adaptation in the world’s developing countries (Amin, M. N.,2021).

Conclusion

Climate issues are one of the major challenges at the global level as well regional level. Immediate solutions are less likely but long-term policies would be effective in reducing climate change vulnerability. First, the long-term policy should be made through negotiation among nations. The need is to establish stronger institutions such as regional environment governance, transboundary environmental governance, bi lateral agreement at regional as well as global level (Zafarullah, H., & Huque, A. S. 2018). Second, implementation of policies has to be checked and promoted through proper budgeting and proper culmination. Third is to sustain different cross border adaptation initiatives, cross border cooperation and administrative flexibility should be established among nations for exchange of information regarding climate adaptation.

In this article we examined regional cooperation on climate change adaptation and we propose that regional cooperation in --- of climate change would lead to more effective climate change governance. Through local government policies and would help minimise climate issues in South Asia. Cooperative approach on adaptation among nations in South Asia is needed to sustain the livelihoods of billions of people and ecosystems. This paper established that regional cooperation is one of the most important strategies



Cover Page



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to reduce climate problems if the local government takes necessary action towards climate change, making the governance decentralised, focused and category to the needs of local communities in the flora and fauna of the regions.

Furthermore, both India and Bangladesh can improve people to people contracts across the border in the Sundarbans region, deliberate eco- sensitive zones, and joint management of resources. The focus should be on making the adaptation policies and strategies people centric, Participatory and resource oriented ensuring the fair treatment and the meaningful improvement of the local communities. It would need the strengthening of institutional and legal framework, improve diplomatic relations, to help Sundarbans its ecological landscape and accurate climate change adaptive.

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