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#### DIALOGUE SOCIAL SCIENCE REVIEW

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# Climate Change Cooperation Between Bangladesh and India

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#### Abstract

Climate change poses significant challenges to South Asia, particularly to Bangladesh and India, two neighboring countries highly vulnerable to its impacts. This research explores the scope of climate change cooperation between Bangladesh and India, emphasizing shared risks, vulnerabilities, and mutual benefits. Rising sea levels, severe weather conditions, water scarcity, and climateinduced migration are pressing issues threatening the socio-economic stability of both nations. The study investigates how international frameworks like the UNFCCC and regional platforms such as SAARC and BIMSTEC facilitate collaborative efforts in adaptation, mitigation, and resilience-building. Employing liberalism as a theoretical framework, the research underscores the imperative of coordinated strategies and shared resources to address climate challenges effectively. By analyzing existing and potential areas of cooperation, such as biodiversity conservation, disaster risk reduction, and water resource management, the study highlights the need for integrated policies and bilateral efforts to achieve sustainable development goals. The findings aim to contribute to the discourse on regional climate governance and inspire actionable solutions for addressing the environmental crises in South Asia.

Keywords: Climate change cooperation, Bangladesh, India, South Asia, rising sea levels, severe weather, water scarcity, climate migration, UNFCCC, SAARC, BIMSTEC

#### Introduction

Climate change is a very serious global issue that is characterized by rising temperatures and extreme weather conditions. Since the late 19th century, Earth's temperature has increased by 1.7F(0.9C). This increase is because of human activities such as burning fossil fuels (like coal, gas and oil which releases Greenhouse gasses in the atmosphere) and deforestation. The extreme weather conditions like heat waves, heavy rainfall, droughts etc. are all the result of climate change. Moreover, sea levels are also rising because of melting glaciers and ice caps, which then endangers the coastal communities. In short, the whole ecosystem is getting affected, many animals and plants are struggling to adapt to this climate change, which led to shift in their habitats and even extinction for some species. The whole world is feeling the impacts of climate change but it hit the developing countries hardest because they have limited resources for adaptation. To deal with climate change it is important for countries to work together. Taking actions now can help to protect the environment and ensure a sustainable future for generations to come.

Bangladesh is among the most susceptible nations in the world due to the significant effects of climate change. Rising sea levels pose serious challenges to the country; estimates suggest that up to 18 million people may have to relocate

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by 2050 as a result of coastal flooding. If sea levels rise by 50 cm, almost 11% of its land could be lost, making saline intrusion problems that reduce agricultural production worse. Extreme weather includes examples like unpredictable monsoon patterns and powerful cyclones phenomena that have been more common. Frequent droughts, riverbank erosion and flooding are from these changes threatens food security and damages crops. The economic cost is high; From 2000 to 2019, Bangladesh faced over \$3.72 billion losses due to climate related disasters. Climate change also impacts public health, increasing waterborne diseases such as diarrhea and cholera. This leads to more people that are forced to leave the country in search for better living conditions, in climate refugees. Rural populations are especially impacted, as are vulnerable populations, and urban slums. After all, Bangladesh's prosperity and security are acutely threatened by climate change, which requires urgent action and international cooperation.

The same is true for India, which is facing the brunt of climate change with rising temperatures, greater heat waves changing and become more frequent - Approximately half the workforce is employed in agriculture, which is in danger because this population is subject to the extreme flooding and droughts wrought by these changes. Food security is likely to deteriorate as crop yields for staples like wheat and rice are predicted to fall. Rising seas in coastal areas expose millions to the risk of displacement. Unchecked, the economic damage could reach 10% of GDP by 2100. These issues particularly impact on the most vulnerable, especially those who rely on agriculture and natural resources in strict terms, highlighting the urgent need for building resilience and other adaptation approaches.

In light of the harsh environmental challenges Bangladesh and India confront, collaboration on climate change is increasingly becoming all the more critical. . They have significant potential to collaborate on climate as they are neighboring countries with shared hazards, risks and vulnerabilities, and adaptation and mitigation initiatives. The leaders of Bangladesh and India have recently talked about the importance of collaborating on issues such as biodiversity conservation, water resource management, and reducing disaster risks. By pooling their resources and expertise, both nations can enhance their resilience to climate change, tackle common challenges, and work towards sustainable development goals that will benefit their populations and ecosystems alike.

#### **Research Questions**

Q1. How does India-Bangladesh cooperation on climate change emerge from the mutual benefit?

Q2. What role are international institutions such as the UNFCCC and regional groupings such as SAARC and BIMSTEC playing in assisting the two countries to cooperate over climate change?

#### Theories

There is this one big question of the existence of two South Asian neighbors who will have to battle real serious climatic problems that have imperiled the very environmental integrity of these states with their socioeconomically balance in Bangladesh and India. Such challenges of climatic nature require effective

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remedies that come by way of coordinated strategy; there is thus an imperative of shared benefits as cooperation among nations battling similar troublessomething liberalism believes forms the cornerstone.

#### Climate Change Issues Faced by India and Bangladesh Sea level rise

Sea level rise

Rising sea levels are one of the major climate concerns for Bangladesh and India. Bangladesh is particularly vulnerable since nearly two-thirds of its land is below four meters above sea level. Projections indicate that a modest 50 centimeters of sea level rise may submerge around 11% of its land area, forcing millions of people to relocate and worsening food insecurity and poverty. In India, in her coastal areas exists large population in low lie areas that are very prone to flooding as such risk is similar.

#### Severe weather conditions

Both countries are facing the increased frequency and ferocity of cyclones, floods and droughts as extreme weather phenomena. Bangladesh experienced more than 185 extreme weather events (causing \$3.72 billion in economic losses) from 2000 to In that same spirit India has seen deadly floods and cyclones ravaging the country wrecking infrastructure. Apart from being a direct fatal risk, these events also negatively impact agricultural productivity that represents a major part of both economies.

#### Lack of Water

Water scarcity is a common problem in both the countries and climate change has magnified it. Fresh waters are cracking under the hotter, drier conditions and altered precipitation patterns increase evaporation. India: By 2050, Bangladesh expected to face a major water scarcity that will threaten both drinking water supplies and agriculture. The same issues in India, particularly its northern States where river flows are fed by Himalayan glacial melt.

#### **Climate Migration**

With the worsening environmental conditions, climate-related migration is one of the major challenges facing many countries. It is estimated that by 2050, climate change could displace one in seven Bangladeshis. This has increased tensions along the border between India and Bangladesh

#### Cooperative approach between Bangladesh and India Agreements between two parties

India and Bangladesh have signed several agreements to address the problems caused by climate change. The agreement focuses on disaster relief, including sharing water from transitional rivers such as the Ganges and Brahmaputra, as well as climate change mitigation projects. Cooperation in these areas will help improve the adaptive capacity of both countries and ensure sustainable resource management

#### Bangladesh-India Sundarban Region Cooperation Initiative (BISRCI)

The Sundarbans is a major ecosystem for both countries, and its protection is the

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main focus of this project, for which a Memorandum of Understanding (MoU) was signed on 6 September 2011. In this area, BISRCI aims to strengthen cooperation on issues such as disaster risk reduction, sustainable development, and biodiversity conservation. Promoting cooperation to address environmental challenges and ensuring the well-being of local communities.

## **Ganges Water Sharing Agreement**

A treaty from 1996 concerning the dry season sharing of water from the Ganges River. River flows and water availability are being altered by climate change; thus CR plays a key role in managing interstate water resources. The accord enables better water the strategies in conjecture and assists to cope with the effects of droughts and sustanable agricultural practices in both countries.

#### Protocol on Inland Water Transit and Trade

This treaty allows for the crossing of people and goods through the inland rivers of Bangladesh and India. Signed in 1972, it has been amended numerous times since. It promotes economic partnership and trade, establishes the foundation for the rational use of shared water resources in an ecosystem perspective. Given that the rivers are changing in terms of the volume of water, that has direct implications for navigability, because of climate change this treaty is even more important.

#### **Regional Organizations**

International organizations greatly help Bangladesh and India cooperate. Discussion forums on climate issues are provided by organizations such as the Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC) and the South Asian Association for Regional Cooperation (SAARC). SAARC remains a forum for regional climate policies, although its effectiveness is derailed by political wrangling among its member states.

#### **BIMSTEC Initiatives**

#### **Climate Change and Environment Change Sector**

During the 5th BIMSTEC Summit, which convened in Colombo during March 2022, leaders recognized that environmental sustainability and climate change is a topic that calls for cooperation and should be at the heart of most of it. Bhutan was selected to act as the sector's lead country after the restructuring of the sector to focus on cooperative activities to address climate issues. The lead institutional vehicle for promoting dialogue and implementing climate action initiatives among member states, including Bangladesh and India, is the establishment of the Joint Working Group on Environment and Climate Change (JWG-ECC).

#### **Disaster Management Cooperation**

Since Bangladesh and India are prone to natural disasters exacerbated by climate change, BIMSTEC has therefore focused on disaster management. The organization has supported cooperative training and capacity building exercises thereby strengthening the preparedness and response capacities of member governments. The cooperation is important as the region is easy prey to cyclones,

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floods and other kinds of devastating weather incidents.

#### **Cooperation in Energy**

As a means of ensuring energy security through regional cooperation, the BIMSTEC member countries signed a Memorandum of Understanding on Energy Interconnection in 2018. The energy hub in Bangalore will serve as a forum for power trade negotiations and help Bangladesh and India meet their energy needs.

## **SAARC** Contribution

#### The SAARC Climate Change Framework

Although political differences among member states have created some obstacles, SAARC remains an important forum for discussing regional policies. The SAARC Development Fund has initiated several projects to improve resilience to the impacts of climate change. Disaster reduction, water resources management and agriculture. These initiatives foster cooperation between Bangladesh and India in implementing adaptation measures.

#### **Climate Change Regional Action Plan**

The Plan highlights the need for a collaborative approach to address climaterelated issues affecting member countries. The strategy encourages collaboration to address common environmental challenges by providing avenues for information exchange, technology transfer and capacity building between countries like Bangladesh and India.

#### **Addressing Climate Migration**

India and Bangladesh can discuss the causes of climate change-induced climate change in the database provided by BIMSTEC and SAARC. Addressing these challenges requires coordinated efforts across national borders as people are increasingly affected by climate change and rising sea levels.

#### **The Function of BIMSTEC:**

Through discussions on climate migration related to BIMSTEC governance, member countries can share best practices and develop inclusive plans to address the social and economic impacts of migration.

#### The SAARC Framework:

Similarly, SAARC can facilitate discussions on cross-border migration issues arising from the impacts of climate change and foster dialogue that fosters understanding and cooperation between Bangladesh and India.

#### **Joint Research Initiatives:**

#### Ecosystems for Life: A Bangladesh-India Initiative

The main objective of the project is to support integrated environmental and water resource management in the Ganges-Brahmaputra-Meghan basin. The five main areas of focus are food security, water production, environmental health, climate change adaptation and governance. The collaborative research work of the project has generated valuable scientific knowledge and helped to enhance

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capacity and policy dialogue in both countries. Ecosystem-based River management systems have brought environmental planning to life and enhanced relations between Bangladesh and India.

#### **Collective Research on Climate Vulnerability**

There have been a lot of collaborative researches about how much each country is at risk regarding climate change. There are also sociological impact studies of climate change in the institution, for instance, there institution might be one example being the Indian Institute of Defense Studies & Analysis (IDSA) and other researches etc; for example Bangladesh. These provide essential information and guide national policies and adaption plans.

#### **Bangladesh Climate and Development Platform (BCDP)**

The recently launched BCDP aims at mobilizing investments in Bangladesh for climate adaptation and mitigation. To build a robust pipeline of climate projects, this platform fosters collaboration among bilateral donors, international financial institutions, and regional scholars. The BCDP has recently started supporting collaborative research projects focused on the Bangladesh-specific climate challenges, informed by the insights from India's experiences with related problems.

#### **Climate Science Research Efforts**

The government of India financially supports various educational and research institutions that work on climate-related impacts on agricultural production, water systems, coastal lines, and the health of humankind. Such collaborative research involving Bangladeshi and Indian universities helps to enhance the sharing of information and inter-institutional cooperative research ventures addressing mutual climatic problems.

#### **Community-Based Approaches:**

For climate adaptation initiatives to be effective, local communities must be involved. Programs that enable communities to take part in climate resilience decision-making processes have been initiated by both governments. Bangladesh and India can ensure that adaptation

Plans are culturally relevant and effectively meet the needs of disadvantaged groups by promoting grassroots participation.

# Using Coastal Afforestation to Help Communities Adapt to Climate Change (Bangladesh)

This project implemented by Bangladesh Ministry of Environment and Forests (MoEF), under the aegis of this UNDP aims to enhance community adaptive capacity to climate change by enhancing coastal afforestation. The programme has reached so far more than 18,000 households, supporting a range of income sources including Salt-tolerant crops, fish-fruit and forest farm integration.

The program has benefited more than 18,000 households (Figure 1), which is diversified through practices such as salt tolerant crop production and the established salt-resistance capacity combined with fish, fruit and forest farms integrated.

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### **Key Outcomes**

Forming discussions forums with coastal districts that help facilitation for the administration and planning of afforestation besides the participation from site planners. Establishing collaboration on benefit-sharing between the national government and adjacent communities so that these latter have a say in forest resource management. Community participation in the adaptation programs based forestry will increase initiative ownership and sustainability.

#### Integrated Coastal Zone Management (ICZM)

Having locals participate coastal resource management Processions is as per Bangladesh's ICZM framework Bangladesh. This method combines scientific research with local knowledge to create culturally relevant adaptation solutions.

## Participation of the Community

Through participatory evaluations and interviews, local farmers, fishermen, and community leaders have helped define adaptation priorities in districts like as Satkhira and Bhola. This helps to succeed in local demands and enhance adaptability through a grassroots expertise of national programs.

## National Adaptation Program of Action (NAPA)

NAPA provides Bangladesh with a structure where pressing demands concerning climate adaptation can be addressed. NAPA incorporates a community perspective with its planning mechanisms. Stakeholder interaction at multilevels, as is the focus on local communities, is observed during the course.

#### Local Involvement

In seminars and planning sessions, community members participate to find out the vulnerabilities of climate and propose adaptation strategies appropriate for their situation. By using a participatory approach, adaptation plans are sure to consider the reality that vulnerable groups face.

#### **Community-Based Disaster Risk Management (CBDRM)**

Bangladesh and India have adopted community-based disaster risk management programs to enhance the resilience of these communities against climate-related disasters.

Example being how Save the Children empowered local communities in Bangladesh to educate themselves and learn to prepare and respond to, with Save the Children's support, disasters. These programs are meant to educate and train people to manage the risks posed by severe weather. Community members participate in the development of local disaster response plans to help them be more prepared to respond with community-led response mechanisms.

#### **Livelihood Diversification Programs**

Livelihood livelihood diversification programs that are community-based and offer some response to the climate change impacts have been launched in both countries. In India for instance, the State administration like Odisha are pushing farmers towards climate resilient agricultural solutions i.e. drought tolerant varieties of crops and water efficient technologies. The rural farmers are being

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empowered through workshops integrating traditional knowledge and agricultural skills leading to sustainable farming.

#### **Financial Remedies**

Liberalism is in support of solving the problem of climate change through market solutions. This involves finding a way that governments and corporations can work together to create jobs and advance green technologies. Liberalism promotes the application of market-based solutions in dealing with climate change, where governments and corporations must work together to create jobs and push environmentally friendly Technologies. Several examples from Bangladesh and India demonstrate how economic solutions are being applied to deal effectively with climate challenges.

#### Nature-Based Solutions (NbS) in Bangladesh

The country has searched for nature-based solutions as cost-effective means to prevent the impacts of climate change and promote sustainable development. The Bangladeshi government has placed significant emphasis on the conservation and restoration of natural ecosystems: forests, wetlands, and mangroves-cooperating with organizations abroad.

**Economic Benefits**: Mangrove conservation assists local livelihood through tourism and fishery while protecting the coastline from flooding and storms. For instance, the restored Sundarbans' mangrove cover has increased fisheries, which positively impacts local fishing communities' economic well-being and are able to confront the effects of climate change.

#### India's Climate-Resilient Agriculture

Farmers in India are shifting to more resilient farming practices due to climate change. For example, farmers in states such as Punjab and Maharashtra are increasingly adopting climate-resilient crop varieties and sustainable farming practices.

#### **Market Integration**

The Indian government has promoted policies that enable the easy movement of these new commodities to markets to ensure that farmers can sell their produce at fair prices. This approach helps local economies by providing jobs in agriculture and related industries besides enabling farmers to adapt to changes in weather conditions.

#### **Initiatives for Renewable Energy**

Bangladesh and India are also making historic strides within their individual national climate action programs through the development of renewable energy. The SHS program has enabled the construction of millions of solar home systems allowing villages in Bangladesh using kerosene lamps to now be connected to power. This program alongside employing people has also significantly developed the solar energy infrastructure. In a similar vein, green house gases emissions in the country have been lowered by the Bangladesh Builders. However Senior Researchers, Ellis, stated that employment for the solar industry has the potential to grow further as the construction of systems continues. At

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present close to 1.68 million people are employed in the construction and installation of solar energy systems, as well as 690,000 solar water pumping sectors.

#### **India's Solar Mission**

The 100 GW solar energy utilization by 2022 deadline is promised to be met by the ambitious National Solar Mission due to the factories working well within their deadlines. To add to this National Solar promise's potential, strong measures are enforced and there is a combination of private and state enterprises which ensure the demand is successfully catered to. What further supports the political and economic stability is the policy to encourage import substitution. The plethora of ongoing projects guarantee job opportunities and economic growth, as well as induce competition between local factories and top solar panel manufacturers, all the while helping India achieve its energy security goal.

#### Market-Based Strategies for Adapting to Climate Change

Both countries are researching market-based approaches to enhancing climate resilience by developing innovative financial systems.

**Ecosystem Services Payments (PES):** In India, PES schemes aid in the safeguarding of clean water and biodiversity, if we consider the ecosystem services in totality. This is made possible by the provision of income-raising initiatives which generate revenue for the locals, and furthermore provides a return on investment for the conservation of the natural resources which promotes sustainable land management.

#### **Index-Based Insurance**

Index-Based Insurance: To protect farmers from floods and droughts, indexbased insurance products have been launched in Bangladesh and India. The products pay out quickly based on pre-set weather indices for farmers. It recovers rapidly from losses and encourages the farmers to invest in more environmentally friendly farming methods.

#### **Public-Private Partnerships (PPPs)**

One of the most important tools in dealing with climate change through financial solutions is Public Private Partnerships.

**Infrastructure Development:** In India, PPPs are used to build climate resilient infrastructure like irrigation systems and flood walls. This enables local governments to implement adaptation plans more efficiently and provides employment in construction and management by leveraging private sector expertise and capacity.

#### Delta Plan 2100 of Bangladesh

This is a long-term strategic plan focused on managing impacts of climate change in the country's delta regions. The initiatives involve a partnership between organizations in the public and private sectors in implementing interventions that enhance resilience and promote economic growth through sustainable approaches.

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## **Including Individuals**

Involving citizens in decision-making is a fundamental component of liberalism. This means ensuring that local communities, especially those most affected, have a say in how to address the effects of climate change. In liberalism, public inclusion in decision-making is a central part. When climate change is in question, this is particularly crucial. Those affected most by the environmental policy would have a voice in how the effects of climate change are mitigated if the local communities were involved. Bangladesh and India both initiated several frameworks and initiatives for public involvement in environmental decision-making. Here are a few instances from each country.

## **Examples from India**

## National Action Plan on Climate Change (NAPCC)

The NAPCC since its inception in 2008 has focused much attention on public participation in developing national and sub-national climate action plans. This is because for a decision, local needs and expertise must be factored into it. For this reason, the plan recommends that states and local governments invite citizens to design their own climate action plans to help identify risk and prioritize adaption strategies most affecting them.

#### **Transformative Climate Action using Participatory Data-Driven Decision-Making Platforms (T-CAP)**

The T-CAP project uses technology to increase public participation in urban climate action. This will be through the enabling of local communities to work with city authorities on climate-related Concerns, the program uses digital tools to support participatory decision-making processes. In cities throughout India, workshops and training sessions are held to empower individuals and make sure their opinions are addressed while developing and putting into practice climate adaptation plans.

#### Public Participation in Environmental Impact Assessment (EIA)

Public participation must be undertaken while conducting the evaluation of projects which are likely to have an impact on the environment, according to the EIA Notification of 2006. Before implementing development projects, this procedure mandates that proponents of projects have public hearings and receive input from local communities around them. In this way, citizen participation by the EIA process allows the incorporation of the knowledge and viewpoint of the locality into environmental decision-making, making decisions more informed.

#### **Examples from Bangladesh**

#### National Adaptation Programme of Action (NAPA)

The NAPA for Bangladesh focuses on community participation in determining adaptation priorities and requirements. Workshops and consultations are used to involve local populations in order to identify their vulnerabilities and suggest appropriate adaption.

This participatory approach guarantees that the strategies created will be context-specific and address the particular challenges faced by different

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communities in different parts of the country.

### **Community-Based Adaptation (CBA) Projects**

The main strategy of the CBA is to empower local communities to develop their adaptation plans towards the impacts of climate change. Global institutions, such as the UNDP, sponsor programs that make the community understand its risks and act upon the solutions developed at the local level, such as constructing flood-resistant infrastructure or developing sustainable farming techniques.

## **Participatory Water Management Initiatives**

In Bangladesh, community participation is often integrated into the water resource management programs. For example, IWRM advocates for participation in water management decisions by interested local parties; among them are farmers and community leaders. Together, we can ensure that water management policies consider the needs of the most vulnerable people affected by flood and water shortage caused by climate change.

#### **Shared Resources**

Bangladesh and India share resources, like rivers. Liberalism calls for nations to work together in managing such resources so that the environment is protected and both countries benefit. Bangladesh and India share many rivers and other natural resources. Both the countries need to share the rivers and other natural resources between them. Liberalism promotes the cooperative management of resources between countries, which guarantees mutual benefits and the conservation of the environment. Here are a few noteworthy examples of India and Bangladesh cooperating in sharing water resources.

#### **Ganges Water Sharing Treaty (1996)**

Probably, one of the most important treaties signed between India and Bangladesh includes the Ganges Water Sharing Treaty, which is allowed to be shared by India and Bangladesh regarding the dry-season flow of Ganges River waters. The agreement signed in 1996 would be reviewed by 2026. It directs India and Bangladesh to share a particular quantity of water, vital for irrigation purposes as well as in maintaining biological equilibrium in the delta region. Such an agreement stands as one of the ideal instances of cooperation from both the nations to conserve this vital resource with proper attendance of their individual requirements.

#### Kushiyara River Agreement (2022)

Bangladesh and India had agreed to share water from the Kushiyara River, which is a distributary of the Barak River, back in September 2022. This agreement now allows water projects in Assam, India and allows withdrawal of water for agricultural projects in Sylhet.

Bangladesh. Both countries show dedication towards cooperative management of shared resources as they work towards this lesser-known river, thereby increasing agricultural production and ensuring water use sustainability.

#### Feni River Memorandum of Understanding (2019)

India and Bangladesh signed a pact in October 2019 that allows India to draw

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1.82 cu secs of water from the Feni River to be consumed in Sabroom, Tripura. This agreement to provide safe drinking water to over 7,000 people is an example of a humanitarian way of sharing resources. The joint efforts on Feni river is a great example of how both countries may fulfil local requirements by fostering good will by shared resources.

#### **Teesta River Negotiations**

Teesta River has been a contentious issue between the two countries as it is important for both Bangladesh and India's water supplies. Due to political obstacles in India, particularly from the state of West Bengal, a formal treaty has not been signed though an ad hoc agreement was signed in 1983 that divided water shares between the two countries. Despite these obstacles, the continuation of the talks shows that both governments want to find a lasting solution that will benefit the people on both sides.

#### Joint Rivers Commission (JRC)

Both governments get expert advice on trans boundary rivers from the Joint Rivers Commission. It was formed in 1972 and discusses various river management issues like environmental conservation, irrigation and flood control. JRC is key to building cooperation over shared resources and resolving river management issues.

#### **Brahmaputra River Cooperation**

Another area that Bangladesh and India think is important for working together is the Brahmaputra River, which flows through both nations. They talk about plans to work together to manage issues like flooding and sediment buildup. Both countries have gained from this important water source, although formal agreements are still in progress.

#### Conclusion

This has been aided by a sea change in relations between India and Bangladesh over the years especially in addressing pressing issues resulting from climate change. Both countries have to work together to solve environmental problems on the other side of the border because they are very similar geographically and culturally. Both countries also have recognized that since climate change has become an increasingly crucial area of cooperation, it is important to work with one another to build resilience and adaptive capacity in the face of emerging environmental challenges.

Sea-level rise, extreme weather events, water scarcity and climate change-related migration are among the challenges that Bangladesh and India must face. Vulnerable groups in both countries take the brunt of these concerns, so it is all the more important governments involve local people in the decision-making process. By consulting their citizens — especially those who will face the greatest threats from climate change — both countries can ensure their adaptation plans are culturally relevant and effective in addressing local needs.

A battery of bilateral agreements have been drawn up for joint management of cross-boundary shared resources, especially international rivers such as the Ganges, Brahmaputra and Teesta. Examples of such cooperation to use these

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strategic resources, such as the Ganges Water Sharing Treaty between both countries, can benefit both sides while preserving the environment. Cooperative management of shared ecosystems with a focus on conservation and development is also reflected in the Bangladesh-India Sundarban Region Cooperation Initiative.

International organizations are also important in bringing Bangladesh and India together. For example, there are climate discussion forums like Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC) and South Asian Association for Regional Cooperation (SAARC). SAARC has been hindered by political differences among its member states but still it is an important platform for regional climate policy dialogue.

Within the liberal approach, the following economic solutions have also been considered to address climate change issues. The two governments have come up with plans to promote renewable energy, eco-friendly agriculture and naturebased solutions. Such is the case with Solar Home Systems in Bangladesh, an initiative that has created jobs in photovoltaic industry and provided electricity to millions of rural people. Similar to this, India's National Solar Mission aims to create jobs in renewable energy sector and generate significant amount of solar power. Community based approaches are essential for climate adaptation. Both governments have launched initiatives that engage local communities to identify vulnerabilities and develop targeted adaptation strategies. Programs on disaster risk management enable residents to participate in planning for climate related emergencies.

# Analysis of Climate Change Cooperation Between India and Bangladesh

India and Bangladesh work together on climate change, showing a practical approach for mutual gain. The two nations recognize that working together is necessary to address common environmental issues. Their commitment to sharing resources is seen in projects like the Bangladesh-India Sundarban Region Cooperation Initiative and the Ganges Water Sharing Treaty.

Another advantage is involving local communities to ensure adaptation plans fit the specific needs of each area. Economic solutions based on liberalism support market-driven strategies, fostering innovations in sustainable practices and renewable energy.

Even with political disagreements in regional groups like SAARC, both nations aim for better cooperation through platforms like BIMSTEC. To strengthen their relationship and prepare for a sustainable future, India and Bangladesh must navigate the complexities of climate change impacts, including rising sea levels and migration issues this change has caused.

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