

INDIA BANGLADESH RELATIONS : A STUDY OF ENVIRONMENTAL ASPECT

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Abstract : The Ganga Brhamaputra Meghna basin made the geographical area of the eastern part of India and Bangladesh. A river network and the world's largest mangrove forest are the integral part of these two countries. Environmental interdependence shaped by geographical position make a common platform. So environmental issues became integral part of India Bangladesh relations. Impact of barrages on nature, hydro environmental issues, Sundarban as common ecological asset, effect of natural hazards, impact of climate change, losses of lives and livelihood due to natural hazards etc. are the defining features of environmental aspect of India Bangladesh relations.

From the end of 20th Century a new trend of interaction based on environmental issues among these countries and its peoples started. After being bilateral issue this trend added a new paradigm of international as well as neighbourhood relation. Their policy became regional policy on this matter. To face the challenging situation two nations have engaged in to adopt collaborative measures to resolve water-related issues, to find a fair and sustainable solution. Joint efforts have been taken to protect the Sundarban, and its biodiversity. The environmental aspect of India Bangladesh relations became dynamic with contemporary challenges, environmental concerns with broader socio-economic policies and collaborative measures. Environment related MOU's have been signed between the government of two these countries. BI-SRCI support effective bilateral cooperation in the Sundarban Regions. This paper aims to provide an overview on environmental issues and dynamics of India Bangladesh relations.

Key Words : India Bangladesh relations, Environmental issues, Sundarban region, MOU's, BI-SRCI

Introduction :

Prosperity of a region depends upon close economic, political, cultural relations among countries of this region. For India and Bangladesh new trend of relationship coincided to face transboundary environmental challenges. Some opportunities paved the way for mutual cooperation. In this context Joint Action plays a crucial role. Shared or common natural resources make ecological integrity. Having dissimilarity in some cases the relationship of India-Bangladesh became significant since 1971. After 1991 the subjects of bilateral relations enhanced. BIMSTEC, SAFTA led the way of bilateral free trade agreement. Latter provisions of MOU let India and Bangladesh make understanding on environmental issues.

Bilateral relation between India and Bangladesh began after 1971. Though several issues of conflicts yet to be solved, many linkages exist between them. Geo-strategic and environmental interest make India and Bangladesh vital to each other. By facing common environmental challenges the two countries have to work together on climate resilience and adaptation policies.

The Ganga Brahmaputra Meghna basin made the geographical area of eastern part of India and Bangladesh including some other South Asian countries also. A river network and Sundarban make a platform of interdependence. So environmental issues became an element of relationship of these countries. There are various issues to discuss the Environmental aspect of Indo Bangladesh relations.

The main focus of this discussion should be on hydro environmental issues, its impact on nature, Sundarban as common ecological asset, Natural Hazards and Climate Refugee etc.

From the end of 20th century Environmental issues became a part of bilateral issues give birth to a new trend of interaction which added a new paradigm of India Bangladesh neighbourhood policy. Facing and resolving the challenges two nations engaged in collaborative measures. This discussion aims to provide an overview on environmental issues and dynamics of India Bangladesh relations.

Methodology :

I am using case study method for analysis. Main focus of this paper is on India-Bangladesh transboundary relation and Environmental aspect. I also focus on the measures taken by governments of both India and Bangladesh. Two countries have been facing water sharing debates, climate change effect in sundarban, ecological refugee problem etc. which had a significant impact on its relations. However, the two countries experiencing decade long contention of hydrological issues also. For this study, I depend on primary sources like Ministry of External affairs report Govt. of India, Memorandum of Understanding. I mainly rely on secondary sources such as articles on Environmental issues of India-Bangladesh relations, Sundarban related, published by scholars of both India and Bangladesh Government, Seminar proceedings, news etc.

Hydro Environmental Issues :

54 transboundary rivers shared by India and Bangladesh. Rivers are critical to Bangladesh for various reasons, from navigation to ecology, agriculture, fishing. There being absence of binding International Laws water sharing issues have to be decided through mutual understanding. Building of Farakka barrage was a debating issue. A question between two states arose over the sharing of water during lean season. Govt. of Bangladesh felt that decrease in water flow can effect nature as well as agriculture though the Govt. of India had no intention. Latter this issue give birth to 'Up stream Down stream' debate. Teesta stream is the issue of another debate. Building of Tipaimukhi Dam became an issue between India and Bangladesh which effect the water flow of Surma and Kushiara. Human, ecological economic ground frequently overlooked in water policy of both the

countries. Being part of ecological concerns more cooperation needed on hydrological issues.

Teesta is one of the major transboundary rivers of India and Bangladesh. These two countries had taken decision to share the water of it. Joint Teesta Commission was formed and an agreement signed in 1983 to share Teesta water between India and Bangladesh. The construction of Teesta barrages and several dams caused failure of irrigation system in both the countries. A new bilateral treaty was about to sign in 2012 but in vain. This failure effected badly other bilateral agreements and trans boundary water sharing issues. Though Meetings with Joint River Commission, Joint Expert Committee, Joint Technical Group, the bilateral discussion between Bangladesh and India organised but there is little provision for ecological issues. The then Prime Minister DR. Manmohan Singh visited Dhaka in 2011. The two nations interested to promote water management of transboundary rivers, hydropower, protection of ecosystem, Integrated Water Resource Management aiming at multipurpose needs. The international organisations like Global Water Partnership, India Water Partnership, Bangladesh Water Partnership, IUCN works on environmental sustainability, transboundary water sharing, flood management, integrated ecosystem management etc.

Now the time is present aware both countries for building integrated water resource management. While developed countries realised the importance of relation between ecosystem and water, in developing countries this realisation is missing.

Dr. Khanam opined in a seminar that though South Asian countries signed bilateral agreements, basin related information sharing mechanism absent. Regional forum like SAARC gave less priority on environmental issues and also ignored in meetings. He also said- There is decade long contention among the two countries over Tipaimukhi Dam, Teesta water sharing issue, Indian River Linking project. Climate change became new threat for GBM basin. It will further increase the variability including drought, salinity. She stressed on the issue of share of trans boundary water.

Shloka Nath mentioned in her book water salinity level in the Sundarban had increased after construction of Farakka Barrage. Water flow line reduced and salinity increased which effect the ecosystem of Sundarban. She also showed the reduction in downstream discharge affect the fauna of Sundarban. Degradation of Mangroves due to sediment results in extinction of species. The situation paved an opportunity for both the nations for regional co-operation and monitoring water management of Himalayan rivers. The ineffectiveness of traditional hydro technology and poverty in GBM basin can be linked from the ecological perspective.

In the context of transboundary water relations environmental security facing challenges. The hydrology of Himalayan rivers are seriously affected by Global Climatic Changes. There is knowledge gap in ecohydrological issues and in terms of environmental flow. Floods and droughts should be treated as integral component of larger eco hydrological cycle. Water demand and water flow should be prioritised to

promote an integrated and ecosystematic approach to river basin management. The national governments of the basin are committed to MDGs.

Researcher Nilanjan Ghosh in his research linked poverty in GBM basin with absence of ecological perspective due to ignorance of ecosystem-livelihood linkages etc. With the changes in global climate the concept of River Basin Management should be updated. Eco systematic approach for integrated River Basin Management needed by considering the entire river basin as single unit for water resource management to meet the aim of water allocation at various levels. GBM basin an ecosystematic production unit plays a crucial role in socio economic sector.

Sundarban : A Common Ecological Asset :

Many countries of Asian Continent have transborder ecological/biological resource. Sundarban, the largest mangrove forest in the world stretches over Bangladesh (60%) and India (40%) rich in biological sources. Both Bangladesh and India felt need to protect and preserve this ecological tressure and take joint initiatives also. There are some challenges for trans boundary co-operation. The Sundarban in Bangladesh and Indian Sundarban is now World Heritage site. The forest area has a wide range of Flora, Fauna, Royal Bengal Tiger, Crocodile, Gangetic Dolphin etc. Anthropogenic activities, Natural hazards cause some damage to the forest. The geographical boundary of Sundarban would consists of wild life sanctuary, Ramsar wetland site, National Park, Tiger zone, World Heritage site and Human settlement area.

Sundarban forest composed of transboundary ecosystem and natural resources with high floral diversity. Transboundary issues make Sundarban one of the elements of environmental aspect of Indo-Bangladesh relations. The issues, taken measures, joint action plans, MOUs, and challenges are considered for the discussion. Global warming, climate change effect sundarban badly. Due to climate change Sundarban is facing multidimensional challenges like rising of water level of sea, submerging of Islands, increasing water and soil salinity, disastrous threatening to the health of mangrove forest, devastating nature cyclones Due to this, cyclonic activity increased. Cyclone land falls increases the damages in Sundarban. Coupled with the natural hazards, rise of sea level complexed this situation. This could cause coastal flooding, erosion, back water effect, long duration flood. In future sea level rise tendency may destroy Sundarban. In this context India-Bangladesh MOU signed in 2011.

Due to the construction of the Farakka Barrage in 1975, the Ganges waters up-stream diverted by the barrage, and the environment of the Sundarbans effected deeply. Water-salinity increased, degrading the ecosystem and the result is loss of livelihood. The velocity of water in the Hooghly channel increased due to building of this Dam, making it a powerful agent of erosion. After an average rainfall for some days water was released per day from the Panchet dam and Durgapur barrage (on Damodar river) and Maithon dam (on Barakar river), respectively which, drained into the main Ganga-Bhagirathi-Hooghly channel in western Sundarbans, and caused erosion on Sagar, and in other places also. On the other hand in the eastern sector siltation has resulted in the drying

up of distributaries, shallowing the river channels, reducing water bearing capacity. Tidal waves varies in the different parts of Sundarban affects the pattern and nature of erosion also.

India and Bangladesh should take steps jointly to protect the Sundarbans environment. 'Indo-Bangladesh Sundarbans Eco-System Forum' is the product of such joint initiatives. The participation of NGOs, civil society groups and local stakeholders, community engagement from both countries, and joint coordination in mangrove restoration, management, conservation of the Bengal tiger will be needed.

The lowlying coastal areas around the Bay of Bengal are very vulnerable to cyclone. This area of South Asia is the target of storms. High speed of wind, heavy rainfall, long duration rain fall caused reservoir collapse, flood, and effect severely the in habitats the livelihood of Sundarban. In Sundarban region surface water temperature increased at the rate of 0.04 to 0.05degree Celsius/ year. Increasing rate of salinity is a major challenge to the people of Sundarban. Multiple studies shows changing nature of environmental parameters in Sundarban. To protect Sundarban, India and Bangladesh signed MOUs, International Agreements, Conventions like UNFCCC, Kyoto Protocol, CBD. Two nations became party of CITES, Ramsar Convention etc.

IPCC warned the Ganga Brahmaputra delta in Bangladesh and in West Bengal is in most threatening situation due to climate change. Being a barrier The Sundarban region protects Kolkata from direct hit of various natural disasters like cyclone, flood. To protect the ecosystem of Sundarbans Government policies are important to save the region from future disasters and severe impacts. The process of erosion accelerated by global warming through increased water flow from the glaciers and tidal amplitude due to sea level rise in coastal and estuarine zones. As per the opinion of the experts to save the Sundarbans, strong embankment needed. But there are some challenges also.

Climate Refugee :

Climate change is the part of daily battle to the people of Sundarban. Being isolated region the infrastructure of the Sundarban region is fragile. This underdeveloped region has a narrow railway and road network. Electricity supply infrastructure also problematic. Some island blocks are not connected by road to the mainland. Due to weak infrastructure difficulties increased, people became victim when natural calamities hit the area. Even the situation became too difficult to survive. Avijit Mistri of Manipur University is searching the environmental concern of the people of Sundarban, He found and showed the linkages between environmental change and migration from Indian Sundarban. Through detailed survey the factors of migration have been traced out. For example cyclones triggered livelihood hardship caused by soil and salinisation that pushed the people out of their out of their homes and turned them into "Climate Refugee". consequence of climate change Bangladesh is facing the threatening of being partially submerged due to rising of sea levels. This could displace millions of inhabitants of Bangladesh. They became "climate refugees" – a migration issue for both

countries. Some research articles showed how the livelihood of the people of Sundarban affected.

A study in Bangladesh showed two types of migration patterns for environmental factors. 1) immediate migration is seen when a lot of destruction seen after a natural disaster hits the region. 2) when people's income sources affected by environmental factors resulted in people's migration. As rising tides, natural disaster make smaller islands inhabitable, the number of climate refugee increased more.

Almost 3 decades ago IPCC noticed the impact of climate change on human migration. The impact of climate change can be divided into two types – i) Climate process, includes sea level rise, salinisation of agricultural land and water . ii) Climate events includes flooding, storm etc. Some non climatic factors are Govt. policy etc. Norman Myers of Oxford University estimated 200 Million people will be forced to move due to climate change. Now the issue is whether the people displaced by climate change should be defined as “climate refugee” or “ Climate Migrants”. As the effected people are seeking “Refuge”. So this term add urgency to the issue. There is problem to use the term “ Refugee” in companion with the definition of “Refuge” provided by UN. Lack of proper definition.

Under International Law this type of migrants are inconspicuous in the eye of International system. Numerically and geographically South Asia is vulnerable to large scale forced migration. This is because of sea level rise, frequent natural disaster a vast amount of people living in low lying area. Climate migrants are not recognised as a problem in any binding International Law or institution.

Measure should be taken :

- A humanistic approach is needed to meet the need for protection of climate refugee. Climate related migration should be acknowledged as an issue. Need for co-ordinated approach under UNFCCC.
- Proper mitigation strategy and infrastructure building for better coastal management.
- India and Bangladesh should work jointly for the sake of climate refugee.
- Bilateral negotiation should be followed.
- India and Bangladesh should think jointly how to legalize entry of “ Climate Refugee”.
- Joint programme for relocation and emergency evacuation due to sudden climate disasters such as cyclones or flooding, should be started.
- A new Land and Embankment policy is needed to adopt changing climate and to reduce land erosion.

The National govt. of two countries should demarcate specific areas of the Sundarbans, so that the people living in the highrisk zone quickly relocated and rehabilitated.

An Anlysis of Memorendum of Understanding , between India and Bangladesh on Conservation of the Sundarban.

September 06, 2011:

The Govt. of Republic of India and The Govt. of the People's Republic of Bangladesh were the two parties of the Memorendum of Understanding signed in 2011. Both national Govt. were also parties of, Ramsar convention 1971 and Convention on Biological Diversity 1992. Both of them recognised the Sundarbans a common and single ecosystem. The Suhderban recognised as World Heritage site and Ramsar wetland site. The MOU consists of VIII articles.

Article I

Both the parties of MOU need to monitor and protect the Sundarbans, which is rich in biodiversity and protect the habitats from flooding, tides, cyclones.

Article II

For the development of the Sundarban the two countries agreed to adopt collaborative measures and monitoring resources , promote 'mangrove regeneration', habitat restoration and rehabilitation'. To generate revenue both the countries should adopt strategy of ecotourism.

Article III

It is acknowledged by two states that anthropogenic activity deeply affected the ecology of the Sundarban. Management plan needed for better understanding of the 'connection between human settlement and ecosystem' and to deal with livelihood of the habitats, anthropogenic activities, natural / climatic hazards.

Article IV

It is also necessary to conduct a survey including an inventory to gather information of distribution and variation of flora and fauna and of Sundarbans. It will help both the parties to address the dangers and like this, to make strategy to work together.

Article V

The two parties agreed to conduct research to create a common knowledge of changing nature of climate, its effect and adaptation policy to be implemented.

Article VI

For the better management of Sundarban, two governments are interested to work together. Article VI of the Memorandum describes such areas –

1. The concern authorities and officials of both parties will discuss various issues and information.
2. Find outcome of joint research and management programmes.
3. Transaction of Technical experiences for the conservation and management of Biodiversity of Sundarbans.
4. Regular synergic assessment of Tiger.
5. Measures to be taken by the concern officials to prevent illegal activities related to poaching and smuggling.
6. For better understanding, transaction of ideas, officials and problems related to biodiversity management, adaptation policies, sustainable development, ecotourism etc, is needed.
7. Interchange of experts for to train and promote knowledge in forestry, including at the Wildlife Institute of India, Dehradun. The Government of India will give Financial assistance.

As per Memorandum there is provision for setting up a Working Group to define responsibilities and activities.

Article VII

Two parties may change their national policies for the betterment of memorandum. This memorandum does not create any legal obligations for both the parties in any international forum or any treaty.

Article VIII

There is provision of modification of memorandum by mutual consent. After 5 years or at the end of the period the memorandum shall be extended automatically. The Memorandum will be terminated as per mutual assent and shall not effect other agreements.

Development of Mechanism for bilateral relation between two countries:

As a part of Bilateral cooperation important steps already had taken on biodiversity conservation of Sundarban. With the formation of Ecosystem Forum on Sundarban this effort initiated by Govt, of India and Bangladesh. The Forum made a transboundary platform to take joint initiative instead of individual action for conservation of Sundarban. It resulted in improvement of the bilateral mechanism of information sharing, transaction of technical knowledge related to mangrove forest management, joint capacity building etc. Joint research, planning for the protection of Sundarban, joint Tiger estimation protocol should be followed. Bilateral efforts needed to deal prawn seedling collection problem. A similar strategy to be followed for sustainable ecosystem management. In above said MOU both the countries recognised Sundarban as ‘a single ecosystem’. If both the countries follow an integrated policy, the ecosystem of Sundarban would be managed more effectively. Both the India and Bangladesh portion have common problems – poverty, livelihood challenges, similar natural hazards, inadequate knowledge or information. By signing MOU, adopting a longterm bilateral strategy it may possible to reach the goal. In

addition both the countries signed a protocol on conservation of Royal Bengal Tiger of Sundarban. Bilateral coordination in patrolling border, Tiger census, information sharing between the Forest department of both the countries.

Bangladesh-India Sundarbans Region Cooperation Initiative

To make bilateral cooperation effective in Sundarban BI-SRCI want to implement 'knowledge-based advocacy initiative' since June 2015. The organisations included in this initiative are EnGIO, Kolkata; Institute of Defence Studies & Analysis, New Delhi; International Water Association; Observer Researcher Foundation New Delhi; policy Research Institute (Dhaka), The World Bank and The World Wildlife Fund, India.

Within the provision of the MOU 2011 both Bangladesh and India have the object of securing higher quality of life for the habitat as per need. BI-SRCI also aims to implement other related bilateral agreements on Fisheries, Tiger conservation, etc. Other initiatives includes visit of Honble Member of Parliament to West Bengal, Jointly Organised session at Paris CoP in December 2015. The environment Ministers of both countries issued a statement on Sundarban. To boost bilateral cooperation on Sundarban BI-SRCI engaged civil society organisations, community, other organisations. To cover several issues biodiversity management, history, culture, livelihood and natural resource management BISRCI suggested "Joint Landscape Narrative" for sustainable development.

BI-SRCI recommends to form a body which should includes experts, analysts etc. for bilateral initiatives. Researches, analysis of BI-SRCI will be supporting to strengthen the relation of two countries. It is essential to develop a Joint Sundarbans Conservation and management Plan by the Environmental Ministries of both the countries. Development of Haats of Sundarbans are needed as it plays a crucial role in transboundary trade. Initiation of ecotourism also recommended.

Discussion :

Both the governments of India and Bangladesh have taken steps to manage the hydrological disputes, to face environmental challenges. As the region belongs to same ecosystem and the same environmental issues similar and migration problem is also common. Both the countries are working together. More emphasis should be given to the environment of Sundarban, ecological refugee issue, health of the transboundary rivers. There are migration problems which needs a constructive policy. This problem will be even more significant as climate change impacts intensify in the region; so more joint initiatives to protect Sundarbans will benifitted both the countries. In both countries Disaster Management Departments, NGOs, should organise awareness campaign regarding effect of natural calamities.

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