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Climate-Induced Migration from Bangladesh to Northeast India

Lopamudra Parashar[1], Prof. (Dr.) Jagdish S. Joshi[2]

[1]Research Scholar, Diaspora and Migration Studies, School of International Studies and Diaspora, Gujarat University
[2]Professor and Director, UGC-Malaviya Mission Teacher Training Center, Gujarat University

Abstract:
The purpose of this study is to investigate the dynamics of climate-induced migration from Bangladesh to Northeast India, focusing on the link between environmental degradation and human displacement. Floods, cyclones, droughts, riverbank erosion, and land degradation have all become significantly severe in Bangladesh as a result of climate change, which has had a significant impact on the stability of settlements and the livelihoods of the people who live in Bangladesh. Due to various socio-economic, political, and environmental factors, millions of people have been forced to migrate, frequently across international borders. By exploring the relationship between climate change and migration, this paper tries to see whether climate change in Bangladesh is one of the major factors in the influx of migrants in the northeastern region of India.

Keywords: Climate Change, Migration, Bangladesh, Northeast India, Environmental Displacement, Human Security, Cross-Border Migration.

Introduction:

Migration has always been an important survival strategy for humankind since ancient times. People move from places to places, either for work, for economic opportunities, or some move to escape conflict, terrorism, human rights violation, but ultimately for survival (United Nations). In the present scenario, environmental degradation has been a major cause of migration. It is observed that growing climate change issues have been a major factor of migration leading to a global crisis of a large number of populations. Climate change issues like tropical cyclones, floods, droughts etc. might influence people to migrate within the boundary or even crossing the boundary (Laczko and Aghazarm, 2009). Though there are no exact figures related to this, but it is estimated that because of natural hazards, over two decades, more than 20 million people were displaced. Rapid movement of population due to environmental degradation, may lead to the humanitarian crisis and also have a negative impact on development which includes economic, cultural, or even social development. Traditionally, migration often focuses on factors like war and conflict, poverty, hunger, standard of living, and so on. But recently climate change has been identified as one of the major drivers of migration. Environmental degradation such as natural hazards, land degradation, lack of water, etc. can contribute to the movement of people. These migrants are mainly described as 'environmental migrants' or 'climate-migrants'. Migration is influenced by many factors, which include economic, socio-cultural, political, environmental, etc.

- **Economic factors:** One of the major factors which motivate people to migrate is economic factors. It

happens because of poor economic conditions. In developing countries, the main economic factors for migration are considered as low agricultural income, unemployment which, pushes people to move to places with better economic opportunities. This is also associated with push and pull factors of migration. 'Push' factors are those, which motivate people to migrate to another place. The common push factors that closely associated with migration are low productivity, low wages, poverty, lack of opportunities, whereas, 'pull' factors basically responsible for attracting people to an area. Amenities of this factor are better opportunities for jobs, higher wages, better working conditions, facilities, etc.

- **Socio-Cultural factors:** Socio-cultural factors also play an important role in migration. Social causes, mainly associated with the quest for personal freedom, spreading of religion, marriage, returning to the family who have previously migrated, closeness of cultural contacts, diversity of cultures, often lead to the movement of people from place to place.
- **Political factors:** Political factors such as war, invasion, political agreements, oppression on the basis of ethnic, religious or political grounds, punishment for a crime committed, etc. are some of the key reasons for which people move from a place to another place of the world (Dutta, 2018).
- **Environmental factors:** Environment also plays a prominent role in migration. It basically includes the outcomes of degradation of the environment in a particular region such as, land degradation, floods, droughts, deforestation, earthquakes, climate change etc. Sometimes development projects like mega-dams also result in disastrous environmental situation (soil erosion, riverbank erosion, deforestation etc.) affecting the people of a particular region which eventually leads to migration (Chari and Gupta, 2003).

This article, however, mainly focuses on migration from Bangladesh to India's northeast region. By exploring the relationship between climate change and migration, it tries to see whether climate change in Bangladesh is one of the major factors in the influx of migrants in the northeastern region of India.

Climate change and Migration:

The relationship between migration and environmental changes has been relevant in the history of mankind. As an important survival strategy, migration has always been a response to various natural or manmade hazards (Hugo, 1996). In recent years, large numbers of the world's population are more prone to migration as global environmental stress and degradation have been increased and posing a serious threat in the globe (ibid). It has estimated that due to climate change, IPCC a large number of people could be displaced from their places of origin resulting in a global crisis. The Intergovernmental Panel on Climate Change (IPCC) has stated the possible reason for migration would be increasing drought affected areas and increasing intense tropical cyclone activities (IPCC, 2007). Climate change, in this case, can be regarded as the major expected source of environmental degradation. In the twentieth century, global warming is very much consistent with the changes that are taking place. The melting of glaciers because of the rising temperature is a fine example of this change. The average global temperature has risen about 0.1°C per decade since the 1950s, the winter snow covers declined about 10%, the thickness of ice fell 40% and the intensity of extreme weather events (IPCC 2001c, 2007). However, the large-scale damages have been exhibited by sea-level rise and the intensity of extreme weather conditions. In this case, the Least Developed Countries (LDCs) are the ones to get affected heavily due to inadequate strategies to adapt to the damages and large dependence on environment to generate livelihoods (Reuveny, 2007). Moreover, due to global warming in the twentieth century, the sea level has risen about 20 cm (USGCRP, 2017). The IPCC report indicates that there is a huge effect of one-meter sea-level rise on the land and

population of countries in Asia. In the South Asian region, Bangladesh is heavily affected by the sea level rise with estimated land loss of 20.7% and over 14.8 million population suffering from it (IPCC, 2001b). All these factors result to migration of people that re often termed as climate migrants or environmental migrants. To understand in a clearer way, climate migrants can be referred to those who migrate to other places due to various climate change events such as droughts, floods, desertification, sea-level rise, etc. Climate migrants are a subcategory of environmental migrants. Environmental migrants are those who are bound to leave their place of origin permanently or temporarily to another place due to changes in the environmental impacts (IOM). The term was first introduced in the 1970s to define the people who migrate to other places for various environmental impacts (Renaud et al, 2008). Environmental migrants are classified into three categories as suggested by Jacobson.

- Displaced temporarily due to local disruption like earthquake or landslide;
- Those who move to other places due to environmental degradation leading to damage of
- livelihoods or obnoxious health risks; and
- Those who move due to land degradation resulting in desertification or other issues posing threat to their existence. (Jacobson, 1988)

These environmental migrants may move to other parts of the country or cross the border for sudden or gradual environmental factors which could often lead to permanent or temporary resettlement. Here, sudden environmental factors refer to storms, floods whereas the gradual environmental factors refer to droughts, soil erosion, desertification, global warming, and so on.

Environmental destruction in Bangladesh:

Climate change impacts have been an emerging issue in Bangladesh and have been facing a large number of damages each year. Bangladesh has been more vulnerable to climate change and has been prone to floods, droughts, soil erosion, cyclones etc. The key environmental issues in Bangladesh that have been discussed in this chapter, are mainly land degradation, floods, droughts, cyclones and storms which affect thousands of people and their properties.

Land Degradation:

In Bangladesh, land is one of the main resources. The majority of the population in Bangladesh are dependent on agriculture for a living. Basically, land degradation occurs in the form of topsoil loss due to erosion and loss of soil quality. The soils of Bangladesh are very fertile and productive. However, the use of high cropping intensity, loss of organic matter, excessive use of chemical fertilizers and pesticides have been a cause of the decline of the productivity or the quality of the soil. (Ullah, 2001). Because of excessive use of chemicals, the loss of soil organic matter has been declining in Bangladesh. It is reported that the Barind tract, Madhupur tract, the floodplain of Tista, Karatoya and Bangali, and northern hilly regions are more vulnerable to soil organic matter deterioration (Karim et al, 1994). In the form of land degradation, soil erosion is another example which is more common in Chittagong and Chittagong hill tracts. It is estimated that about 65% of lands affected due to land degradation ultimately affecting the economy of the country as well as the livelihoods of the people. Over 1200 km of riverbank is eroding actively and more than 500 km is facing problems due to erosion which is affecting about 1 million people annually living on the riverbanks. It has been a severe issue in Bangladesh as it poses significant losses in agricultural land and farms.

Floods:

With a major river system, Bangladesh is severely affected by floods. There are 300 major rivers and channels drain through Bangladesh of which most of them originate from outside the country (Er-Rashid, 1978). About 30 to 35% of the total land surface is flooded every year during monsoon (Milliman et al, 1989). The destructive floods have been highlighted as one of the main barriers of development in the country. Bangladesh is situated on the largest delta plain of the world where the Ganges, Brahmaputra, and Meghna River meets. The country saw two major devastating floods in 1988 and 1998 affecting more than 65% of the total geographical area of Bangladesh. It eventually caused a massive effect on the economy, as well as hardships for people and the livelihoods of urban and rural areas (UNEP, 2001). Flood in Bangladesh causes serious destruction to lives and property. In 2011, floods in Bangladesh cause the death of 10 people (Dutta, 2018). In June 2012, 139 people were died because of floods and landslides in Bangladesh (ibid). About 28,000 families were affected by floods in 2013 which increased to more than 800,000 people in 2014 and among them, 500,000 people were displaced from their homes. Further, it increased to 2.8 million by 1 September. More than 57,000 families were displaced whose homes have been swamped and destroyed. However, in that year, 400,000 more people were affected due to additional flooding in several districts of Bangladesh (Dutta, 2018). In June 2017, 98 people killed in the Rangamati district, 30 in Chittagong district, and 7 in Bandarban district, affecting thousands of families due to floods in Bangladesh (ibid).

Cyclones And Storms:

Cyclones can pose a major threat to life and property during monsoons. The Bay of Bengal is known for the catastrophic cyclones. Being in intertropical convergence zone, which situated near the equator meeting winds from two hemispheres, it plays a key role in the formation of tropical cyclones in the area (UNEP, 2001). In the Bay of Bengal area, cyclones generally are categorized according to the intensity of the wind speeds. The coastal regions of Bangladesh witness severe problems due to cyclones. Heavy rains and tidal waves creating storm surges are generally accompanied by cyclones which often cause most of the damages (ibid). The storm surges and tides in the coastal areas result in severe flooding affecting the lives and properties. In Bangladesh, an average of 1-3 cyclones hit each year. It is also accompanied by storm surges which are as much as 13 meters higher than normal and also it can reach up to 200 km inland (Milliman et al.,1989) resulting in a severe flood in the country.

Droughts:

Lack of sufficient water to meet the normal needs of human use, of agriculture, livestock, etc. is generally known as drought. Apart from the desert climates, droughts can also occur in areas with adequate rainfalls and moistures (ADB, 1991). Drought can be the outcome of insufficient rainfall for a long period resulting in hydrological imbalance. The water shortage leads to reduce in streamflow, groundwater, and soil moisture depletion ultimately leading to crop failure. The agricultural sector is most affected by droughts. Due to insufficiency in rainfall, Bangladesh is affected by drought conditions during monsoon and pre-monsoon periods. Every five years, drought effects Bangladesh widely. The northwestern part of Bangladesh is more prone to droughts which cause more than 40 percent damage to the agricultural production in different seasons (ibid). However, it also has impacts on the livestock population, land degradation, employment etc. Drought in Bangladesh was very severe during 1961-1991. The country was

hit by strong droughts in 1961, 1975, 1981, 1989, 1994, and 2000 which affected about 53 percent of total the population and 47 percent of the country (ibid).

Migration in Response to Climate Change:

The Intergovernmental Panel on Climate Change (IPCC) has indicated that the ultimate impact of climate change would be migration. Millions of people would be displaced from their places of origin due to the impact of climate change like coastal erosion, flooding, and agricultural disruption. It is expected that by 2050, climate-driven migrants would be around 200 million. In twentieth century, climate change has emerged as an important factor of environmental change and natural disasters, which is shaping migration and human mobility (Laczko and Aghazaram, 2009). Mayer (2005) argues, "there could be as many as 200 million people overtaken by disruption of monsoon systems and other rainfall regimes, by droughts of unprecedented severity and duration, and by sea-level rise and coastal flooding". However, this prediction is still unsure that to what extent climate change would impact on human population. But one thing is sure that, climate change will be a root cause of the movements of people by making some parts of the world less viable to live (Brown, 2008). Bangladesh is known as one of the most densely populated countries in the world. Therefore, population pressure is one of the major issues in Bangladesh. The population has grown so quickly that it reached 131 million in 2000 from 86 million in 1980. The per capita income has been constantly low in Bangladesh and most of it comes from the agricultural sector (WDI, 2001, 2002). About 42% of people are from below poverty line and 85% of them are from rural areas (Mayers and Kent, 1995). Therefore, it is clear that the population pressure is one of the major reasons of land scarcity in Bangladesh. With the growing pressure, the lands are overpopulated for which the people often move to other places to make a living, especially to the stepper hillsides and by clearing forests they start farming. These hillsides are also exhausted by the farmers as the structure of farming often leads to greater land erosion (Reuveny, 2007). Most parts of Bangladesh are situated a few meters above sea level and are flooded in the rainy season (ibid). The country has often been hit by various natural calamities. In Bangladesh, about 25 million people were affected by droughts, 270 million by floods, and 41 million people by storms and rain (CRED, 2002). Increasing susceptibility to climate change in Bangladesh has become a major cause of migration. About 80% of land in Bangladesh is floodplain where extreme climatic events often cause damage to life and property of the people (Panda, 2010). The increased rainfall, rapid melting of glaciers in the Himalayas, and rising sea level will increase the probability of flooding in the coming days (World Bank, 2009). These climatic impacts would eventually affect the whole scenario of Bangladesh. As one of the most densely populated countries, it is obvious to have low employment opportunities in Bangladesh and it seems to be a major push factor for their migration to urban areas of their own country or even outside the country. The climate change may severely affect a large group of population in Bangladesh in the form of sea-level rise, heat stress, desertification, floods, and drought. People who are dependent on nature for living such as farmers are more vulnerable to the impacts of climate change. These changes could affect the survival of the deprived communities within the region and this increased vulnerability could initiate large scale displacement and migration mainly from rural to rural or urban areas for employment opportunity or settlement (Reuveny, 2007) The environmental destruction in Bangladesh as discussed above could be a major reason that climate change is going to play a crucial role in encouraging people to move from Bangladesh to India. In the future, the impacts of climate change would induce more people from Bangladesh to India. It is argued that about 12 to 17 million people who migrated to India from Bangladesh over the last 40 years are mainly migrated

because of environmental scarcity (Homer Dixon, 1994). The movement of people from Bangladesh is not a new thing. People have been moving to India since a very long time. Apart from economic opportunities in India, various similarities including cultural, regional, and even lingual similarities between the two countries motivate people to migrate from Bangladesh to India (Alam, 2003). Though the movement of the population from Bangladesh to India has been influenced by various factors like economic opportunities, cultural similarities, and population pressure, but recently, among all these, climate change can be regarded as a major factor of migration. The Indian Farakka Barrage has affected Bangladesh largely. The barrage was made to divert water from the Ganges River to the Indian tributary. It reduced the flow of water in Bangladeshi tributary which resulted in an extreme level of saltwater intrusion from the Indian Ocean into the Bangladeshi channel leading to a decline of land productivity and river fisheries (Reuveny, 2007). Because of this barrage, the lower water flow reduced sediment carrying capacity and raised the riverbed leading to flood and erosion affecting about 35 million people. Khulna division in Bangladesh is highly affected by Farakka barrage (Swain, 1996). Due to riverbank erosion, small towns like Dhulia, Kakchira are near to get extinct. Moreover, in Barguna district of Khulna division, because of riverbank erosion, 50 percent of farmers have lost their land (Swain, 1993b). It has created a permanent ecological disaster in Bangladesh causing forced displacement of poor Bangladeshis to India (Panda, 2010). The competition over land and resources is always present in the rural areas of a country (Alam, 2003). Bangladesh has been one of the most vulnerable countries regarding climate change. The resource scarcities have made the marginalized section of people to move to the vulnerable areas which made these people even more exposed to natural disasters. It shows that millions of people live in the coastal areas that prone to cyclones and storms and flood prone areas. The poor have been severely affected by extreme climatic events in any place and Bangladesh is not an exception. Over 80% of the population depends on agriculture for a living and being poor, they are technologically less advantaged and cannot afford the adaptive strategies to deal with climate change. These poor marginalized sections deprived of employment opportunities and being landless choose to migrate in search of better opportunities. Being a neighbour country of India, with a porous border and easily negotiable border force, these landless deprived people of Bangladesh migrate to India and settle there.

Conclusion:

The discussion in this article tries to link migration to northeast India as a response to the climate change effects in Bangladesh. Bangladesh falls under Least Developed Countries which means this country is not advanced with technology, human resources, or even in terms of GDP. As most of the people live under the below poverty line, they choose to have a better life with employment opportunities. Being in a disaster-prone area, Bangladesh witness severe floods, storms, cyclones, droughts, river erosions, and land degradation effecting the agricultural productivity and loss of life and property. These impacts of climate change often displace people from their places of origin to a new place. Besides, climate change in Bangladesh will pressurize people more to move. The poor displaced people would look for better living opportunities and would migrate illegally to India for an improved life or working conditions and India, more precisely the Northeast region, being the nearest place to Bangladesh has apparently become the appropriate destination for these climate effected people.

References:

1. Alam. S. (2003). "Environmentally induced migration from Bangladesh to India." Strategic Analysis. 27(3): 422-438.
2. Asian Development Bank (1991). Disaster Mitigation in Asia and the Pacific. ADB, Manila, Philippines.
3. Brown, O. (2008). Migration and Climate Change. Geneva: International Organization for Migration.
4. Chari, P.R. and Gupta, S. (2003). Human Security in South Asia: Energy, Gender, Migration and Globalization. New Delhi: Social Science Press.
5. CRED (2002). Center for Research on the Epidemiology of Disasters, University of Louvain, Brussels.
6. Dutta. P. (2018). Socio-economic Status of Bangladeshi migrants in Assam: A study of Dhubri and Nagaon districts. (Unpublished M. Phil thesis). Sikkim University: Gangtok.
7. Er-Rashid, H., (1978) Geography of Bangladesh: Boulder, Westview Press, Colorado, p.579.
8. Homer-Dixon, Thomas (1994): "Environmental Scarcities and Violent Conflict: Evidence from Cases", International Security, 19(1): 5-40.
9. Hugo. G. (1996). "Environmental Concerns and International Migration". International Migration Review, 105-131.
10. Hugo, G. (2012). "Climate Change and Migration: some lessons from Existing Knowledge of Migration in Southeast Asia." In Climate Change, Migration and Human Security in Southeast Asia, by Elliot. L(Ed),45-49. Singapore: S. Rajaratnam School of International Studies.
11. International Organisation for Migration. (2020). World Migration Report 2020. Geneva: Switzerland.
12. Jacobson, J (1988): "Environmental Refugees: A Yardstick of Habitability", World Watch Paper No 86.
13. Karim, Z, Mia, M, M. U and Razia, S (1994). "Fertilizer in the national economy and Sustainable development" Asia Pacific Journal Environment and Development 1(2):48-67.
14. Laczko, F and Aghazarm, C. (2009). Migraton, Environment and Climate change: Assessing the Evidence. Geneva: International Organization for Migration.
15. Mayers. N. (2005). "Environmental Refugees: An emergent security issue." 13th Economic Forum. Prague.
16. Milliman, J.D., Broadus, J.M. and Frank G. (1989). "Environmental and Economic Impact of Rising Sea Level and Subsiding Deltas: The Nile and Bengal Examples". In Bangladesh Quest, Vol: 1, pp 11-12.
17. Myers, N., & Kent, J. (1995). *Environmental Exodus: An Emergent Crisis in the Global Arena.* Climate Institute: Wahington DC.
18. Panda, A. (2010). "Climate Induced Migration from Bangladesh to India: Issues and Challenges." SSRN.
19. Renaud, F, Bogardi, J. J, Dun, O and Warner, K. (2008). "Environmental Degradation and Migration" Berlin Institut fur Bevolkerung und Entwicklung.
20. Reuveny. R. (2007). "Ecomigration and Violent conflict: case studies and Public Policy Implications". Springer.
21. Reuveny. R. (2007). "Ecomigration and Violent conflict: case studies and Public Policy Implications". Springer.
22. Swain, A. (1996). "Displacing the conflict: environmental destruction in Bangladesh and ethnic conflict in India" Journal of Peace Research 33(2): pp. 189-204.

23. Swain. A. (1993b). "Conflicts over Water: The Ganges Water Dispute", Security Dialogue, 24(4): 429-439.
24. The Intergovernmental Panel on Climate Change. (2001b). Climate Change: Impacts, adaptation and vulnerability. International panel on climate change, Geneva.
25. The Intergovernmental Panel on Climate Change. (2001c, 2007). Climate Change: the physical science basis, summary for policymakers. International panel on climate change, Geneva.
26. The Intergovernmental Panel on Climate Change. (2007). Climate Change: The Physical Science Basic, Summary for policymakers. International Panel on Climate Change. Geneva.
27. Ullah, M (2001) "Economy and Environment" in Nishat. A, Ullah. M, Haque. A K E. (eds) Bangladesh environmental outlook. Centre for Sustainable Development: Dhaka, Bangladesh.
28. United Nations Development Programme (2001). Bangladesh: State of Environment. UNEP, Thailand.
29. United Nations on Migration, also available in International migration | United Nations.
30. USGCRP. (2017). Climate Science Special Report, Fourth National Climate Assessment. (US Global Change Research Program).
31. WDI (2001, 2002). World Development Indicators. World Bank. Washington DC.
32. World Bank. (2009). "*South Asia - Shared views on development and climate change (English)*. Washington, DC: World Bank. https://documents.worldbank.org/curated/en/789001468294334973