

*Sufia Khanom***ENVIRONMENTALLY-DISPLACED MIGRANTS IN BANGLADESH: HUMAN SECURITY PERSPECTIVES****Abstract**

This article has brought a critical perspective to the gendered nature of insecurity as experienced by environmentally-displaced migrants through their everyday experiences of insecurity and its effect on their long-term capability. Both anthropogenic interventions and natural calamities in the coastal zones directly affect one quarter of Bangladesh and the many people living in these regions. Unexpected flows of migration shape both the nature of cities and development processes. Dhaka already has a large influx of migrants and is expected to receive a greater influx of environmentally-displaced migrants due to the better economic opportunities available there compared with other parts of the country. Different development sectors, utility services and infrastructure developments have expanded rapidly but have been unable to keep pace with the demand of the growing population. There is a lack of coordination between different government bodies in terms of implementation of policies, rules and regulations. The gap between service provision and demand is further exacerbated by mismanagement and brings every day to long-term insecurities of its residence. This insecurity also arises not only from 'being a man' or 'being a woman' or 'being a migrant', but is also due to specific practices, processes and power relations within the social institutions at individual, community, national and regional level. Environmental change is a global phenomenon and environmentally-displaced migrants are forced to take the decision to migrate like refugees. Yet, the protection of environmentally-displaced migrants is neither fully a global nor a national responsibility. There remains insufficient attention to protect the rights of environmentally-displaced migrants.

Keywords: Environmentally-Displaced, Security, Migration, Protection, Gender

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Figure 1: Migrants from Bhola Island (top) and Streetscape in Bhola Settlement in Dhaka (below)



Source: PhD Fieldwork, In-depth interview, 11 November 2016.

I am standing here to receive my friend's family members in the Bhola settlement, Dhaka. I know they are entering into the narrow dark lanes with lots of hopes. It reminds me

of the old days while migrating towards Dhaka. There was a famine in Ilisha, Bhola Island, due to the devastating storm surge in 1970 and the nine months long Liberation war in 1971. My family did not have enough food for all of us. My parents died after four days of starvation. I and my two brothers worked in the agricultural fields but could not earn enough to cover our food needs. We survived on rice starch given to us by the neighbours for several months... Households were taken away by the rivers. We had only one plot of land left. We sold it to my neighbour and decided to come to Dhaka. We started working as housemaids in three different houses. We got food if we could work, yet we have to tolerate so much assault and pain... After four to five years, my father's friend selected me as his daughter-in-law before I had even reached puberty. However, I got a family again, they were a blessing to me. My family has been living in this settlement for 30 years and we now have 21 rooms and 6 shops. I am aware of my friends' suffering back in Bhola, due to cyclones, storm surges and salinity. Bholayias [people of Bhola Island] are not scared of such disasters; they just need a piece of land to stand on and for production. But when nature takes away our lands, we have to migrate (Sabera, In-depth interview, PhD Field Work, 11 November 2016).

1. Introduction

This article is about Sabera's¹ family and thousands of other environmentally-displaced migrants' insecurity in Bangladesh. River erosion and other 'natural' disasters such as cyclones, storm surges and salinity force people to migrate from environmentally vulnerable areas to nearby cities.

According to the Bangladesh Bureau of Statistics (BBS), Dhaka remains the major internal migration destination.² Although the total number displaced due to environmental factors has not yet been estimated, several studies have found that significant numbers have migrated due to environmental factors in Bangladesh. For example, 4.4 million people were displaced after cyclone Sidr and consequent flooding in 2007³ and in 2013, about 1.1 million people were displaced because of cyclone Mohasen, 137,000 by tornado and 22,000 by flooding.⁴ Approximately six million people have already been displaced and 9.6 million will migrate due to environmental changes excluding temporary and seasonal migration between 2011 and 2050.⁵ It is estimated that every year, 100,000 people are displaced because of river erosion.⁶

¹Pseudonyms are used in this research in accordance with the Macquarie University Code for the Responsible Conduct of Research, ethics approval reference number: 5201600616

² Bangladesh Bureau of Statistics (BBS), *Population Census Report*, Dhaka: Statistics and Information Division (SID), Ministry of Planning, 2010.

³"Bangladesh: cyclone Sidr OCHA situation Report No. 2", available at: <https://refefweb.int/report/bangladesh/bangladesh-cyclone-sidr-ocha-situation-report-no-2>, accessed on 23 November 2018.

⁴Bishawjit Mallick, "Cyclone-induced Migration in Southwest Coastal Bangladesh", *ASIEN*, Vol. 130, 2014, pp. 60-81.

⁵Ezekiel Simperingham, *Climate Displacement in Bangladesh: The Need for Urgent Housing, Land, and Property (HLP) Rights Solutions*, Dhaka: Displacement Solution, May 2012.

⁶Bishawjit Mallick, op. cit.

Unexpected flows of migration shape both the nature of cities and development processes. Therefore, migration has huge potential to impact on many aspects of urban life in terms of housing, utility services, health care, transportation and other services. Yet, due to the incapacity of the state to meet the increasing demand for basic services, resources, infrastructure and facilities in urban areas, environmentally-displaced migrants are often pushed to the margins of development, often in urban fringe areas or abandoned government land and into situations of insecurity. The aim of this article is to explore the insecurities of environmentally-displaced migrants through their everyday to long-term and gendered experiences.

Everyday insecurities affect the environmentally-displaced migrant's long-term human fulfillment. Amartya Sen, a renowned economist, identified human development as the expansion of capability where capability reflects a person's freedom to choose between different ways of being and living.⁷ In this research, long-term human fulfillment has been considered as immaterial perspectives of human development. It seeks to evaluate the quality of life through understanding freedom at an individual level and proposes alternative ways to view resources and utilitarian-based forms of people's capability rather than poverty. Similarly, people feel secure by protecting their vital core (multidimensional human rights and human freedoms based in practical reason) from direct and indirect threats without impeding long-term human fulfillment.⁸ Insecurity here means lack of protection or the possibility of being open to any threat. Therefore, human security should be consistent with the ongoing human development goals to be sustainable.

Security is context specific. Different societies have their own meaning of security in terms of freedom. The UN Human Security Council Report identified three types of freedoms – freedom from want, freedom from fear and freedom from indignity,⁹ which are also identified as security threats to environmentally-displaced migrants in this research. This study found that people are unable to experience or feel secure due to their lack of freedom and restrictions placed on the potential for a flourishing life. This insecurity also arises not only from 'being a man' or 'being a woman' or 'being a migrant', but is also due to specific practices, processes and power relations within the social institutions.

The article does not investigate the migration process, the decision making behind the process of migration or the vulnerabilities people experience at the starting

⁷ Amartya Sen, "Why Human Security?"; Paper presented at the *International Symposium on Human Security* in Tokyo on 28 July, 2000; and Amartya Sen, "Development as Capacity Extension", in J. De Filipps and S. Saeger (ed.), *The Community Development Reader*, London: Routledge, 1990, pp. 319-327.

⁸ Sabrina Alkire, *A Conceptual Framework for Human Security*, Working Paper, Centre for Research on Inequality, Human Security and Ethnicity (CRISE), Queen Elizabeth House, University of Oxford, 2003, p. 8.

⁹ United nations, *Application of the Human Security Concept and the United Nations Trust Fund for Human Security*, Human security Unit: Human Security Council, 2005.

point of their migration journey. Though concerned with security, this article takes a markedly different approach to contemporary security studies of environmental migration which tend to analyze the state from the top down.¹⁰ Although environmental change is a global phenomenon, it has effects at individual and local scales and generates different experiences and emotional responses.¹¹ This article focuses on every day insecurities and the perspectives of environmentally-displaced migrants themselves. However, the scalar difference between the experiences and the extension of problems needs to be contextualized at individual, community and national level.

In this backdrop, based on the existing literature, this article is an endeavour to explore the theoretical dimensions of environmentally-displaced migration. It also assesses the human security perspectives of environmentally-displaced migrants at different level, i.e., individual, community, national, regional and global. The article is divided into five sections including introduction and conclusion. Section two discusses the complexity of defining environmentally-displaced migration/migrants. How do the environmentally vulnerable areas with special reference to the coastal areas of Bangladesh and other socio-political factors push people to migrate are discussed in section three. Section four explores the insecurity of environmentally-displaced migrants at multiple scales. The article concludes with discussions on the national climate change policies of Bangladesh for ensuring the security of environmentally-displaced migrants. Therefore, this article begins with the question: who are environmentally-displaced migrants?

2. Approaching Environmentally-Displaced Migration

There is no internationally agreed definition of migration as a consequence of environmental factors such as river erosion, salinity intrusion, storm surge, cyclone, etc.¹² El-Hinnawi, who first introduced the term 'environmental refugee', used it to describe people who had been temporarily displaced, those who had been permanently displaced and those who migrated because their home environment could no longer sustain their basic needs.¹³ After that, environmental refugees were defined as people who can no longer gain a secure livelihood in their

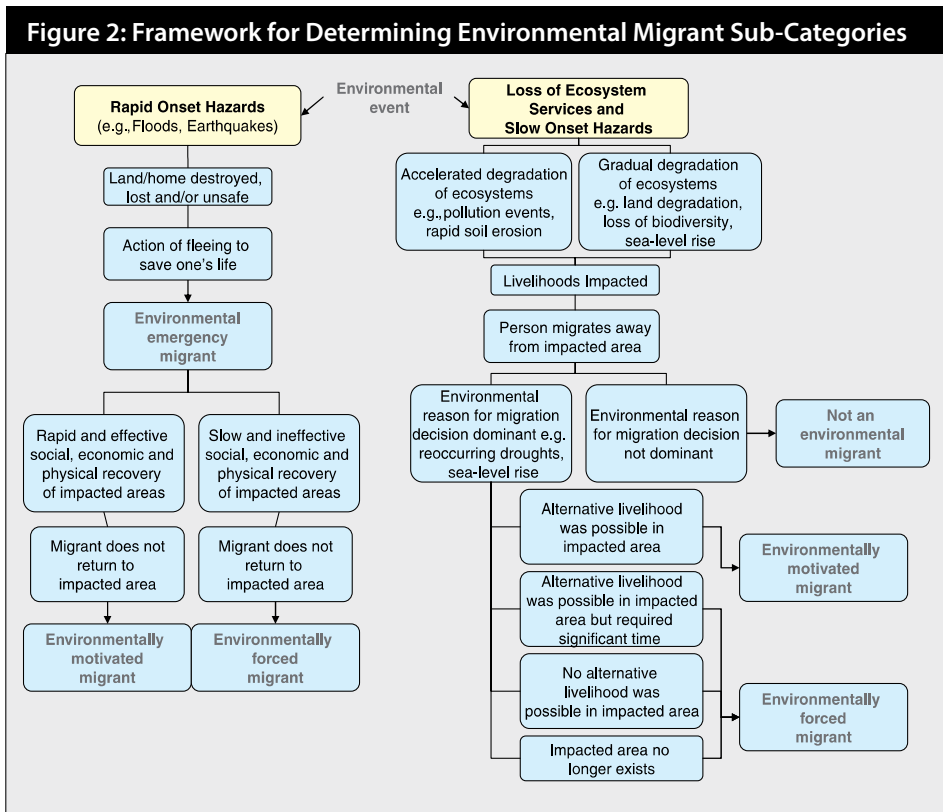
¹⁰ Francois Gemenne, Jon Barnett, W. Neil Adger and Geoffrey D. Dabelko, "Climate and Security: Evidence, Emerging Risks, and a New Agenda", *Climatic Change*, Vol. 123, No. 1, 2014, pp. 1-9; and Ben Saul, "The Security Risk of Climate Change Displacement in Bangladesh", *Journal of Human Security*, Vol. 8, No. 2, 2012, pp. 5-35.

¹¹ K. L. O'Brien and R. M. Leichenko, "Winners and Losers in the Context of Global Change", *Annual Association of American Geographers*, Vol. 93, 2003, pp. 89-103.

¹² Olivia Dun and Francois Gemenne, "Defining Environmental Migration", *Forced Migration Review*, 2011, pp. 10-11; and Francois Gemenne, "Why the Numbers Don't Add Up: A Review of Estimates and Predictions of People Displaced by Environmental Changes", *Global Environmental Change*, Vol. 21, 2011, pp.41-49.

¹³ Essam El-Hinnawi, *Environmental Refugees*, Nairobi: United Nations Environmental Programme (UNEP), UNDP, 1985.

homelands because of drought, soil erosion, desertification, deforestation and other environmental problems, together with the associated problems of population pressures and profound poverty.¹⁴ Renaud and others constructed a typology of environmental migrants that distinguishes between: (1) an environmentally motivated migrant who chooses to leave a steadily deteriorating environment to pre-empt the worst outcome (2) an environmentally forced migrant who must leave to avoid the worst outcome and (3) those who must flee the worst outcome.¹⁵



Source: Fabrice G. Renaud, Olivia V. Dun, Koko Warner and Janos Bogardi, "A Decision Framework for Environmentally Induced Migration", *International Migration*, Vol. 49, No. 1, 2011, p. 7.

The ambiguity over the definition for migration caused in part by environmental change and degradation is linked to two issues. Firstly, scholars point out the challenge of isolating environmental factors from other migration

¹⁴ Norman Myers, "Environmental Refugees: A Growing Phenomenon of the 21st Century", *Philosophical Transactions: Biological Sciences*, Vol. 357, No. 1420, 2002, pp. 609-613.

¹⁵ Fabrice G. Renaud, Olivia V. Dun, Koko Warner and Janos Bogardi, "A Decision Framework for Environmentally Induced Migration", *International Migration*, Vol. 49, No. 1, 2011, pp. 5-29.

drivers,¹⁶ as environmental factors are in most cases not solely responsible for driving migration. Defining the phenomena becomes a complicated task of defining causes and attributing consequences to environmental processes.¹⁷ This is also a reason why quantifying the numbers of environmentally-displaced migration is problematic.¹⁸

Secondly, it has also been difficult to define the range of environment-related migration because of the institutional and governance implications of doing so.¹⁹ Identifying a “problem” requires a response. Thus, the concept and recognition of a problem also strongly influences what institutions bear responsibility for action. This research uses the working definition of environmentally-displaced migrants proposed by the International Organization for Migration (IOM):

Environmental migrants are “persons or groups of persons who, for compelling reasons of sudden or progressive changes in the environment that adversely affect their lives or living conditions, are obliged to leave their habitual homes, or choose to do so, either temporarily or permanently, and who move either within their country or abroad.”²⁰

This working definition is comprehensive and identifies environmental degradation as an important push factor driving or at least triggering migration. Its limitations include that it does not distinguish between temporal or permanent migration, nor does it identify the destination of migrants (within country, or to a new country, to urban centres or other rural areas). This definition does not address the circumstances under which people have migrated (voluntary, forced, decided not to return, were not able to return) and does not indicate how institutions and policies might help environmentally-displaced migrants.²¹ The definition also does not give any indication of how the migration is gendered in terms of decision making, pattern and nature. Migration flows, both because of environmental changes or other forms of labour migration, are predominantly within country.²² Migrants often start their journey towards urban areas with lots of hopes and without proper knowledge of urban life and end up in informal settlements.²³

¹⁶ Richard Black, Dominic Kniveton, Ronald Skeldon, Daniel Coppard, Akira Murarata and Kerstein Schmidt-Verkerk, “Demographics and Climate Change: Future Trends and Their Policy Implications for Migration”, *Globalization and Poverty-Working Paper T-26*, Brighton: Development Research Centre on Migration, University of Sussex, 2008.

¹⁷ Ibid.

¹⁸ Gemeine, 2011, op. cit.

¹⁹ International Organization for Migration (IOM), *Assessing the Evidence: Environment, Climate Change and Migration in Bangladesh*, Dhaka: IOM, 2010.

²⁰ Ibid., p. 4.

²¹ Koko Warner, “Global Environmental Change and Migration: Governance Challenges”, *Global Environmental Change*, Vol. 20, No. 3, 2010, pp. 402-413.

²² Tasneem Siddiqi, Mohammad Towhid Islam and Zohra Akhter, *National Strategy on the Management of Disaster and Climate Induced Internal Displacement (NSMDCIID)*, Dhaka, 2015.

²³ UN-Habitat, *World cities report 2016: Urbanization and Development Emerging Futures*, Nairobi: United Nations Settlements Programme, 2016, pp. 1-276.

Bangladesh is the world's seventh most populated nation, with some 157 million people living in an area of 143,998 square kilometres.²⁴ It is one of the least developed countries (LDC) in the world according to the United Nations Development Programme Human Development Index, with an annual per capita income of US\$ 1,516.²⁵ Around 30 per cent of people live in urban areas.²⁶ This number is growing, with the urban population growth rate estimated at 3.5 per cent, including 1.3 per cent natural growth and 2.2 per cent due to internal migration.²⁷

Dhaka, the capital city of Bangladesh, has a total population of 8.906 million.²⁸ It is estimated that this population will be 20 million by 2020, with about 400,000 new and mostly poor, migrants arriving in Dhaka each year.²⁹ There are approximately 14.6 million acutely poor people living in Dhaka who earn less than US\$1 per day.³⁰ Dhaka is a deeply divided city. Inequality between economically poor and rich people is stark. About 55 per cent and 32 per cent of the population, respectively, are considered to be in absolute poverty. It is estimated that just 2 per cent of rich people occupy some 20 per cent of the total urban area, whereas 50 per cent of poor people occupy 6 per cent.³¹ Internal migration is the main reason for unprecedented urban growth in Bangladesh. Internal migrants tend to live in informal settlements with limited facilities in and around urban areas.

An estimated 70 per cent of urban development of Dhaka is informal in nature.³² Informal settlement dwellers are usually deprived of access to the basic services and infrastructure that most citizens are entitled to receive from the government, such as adequate housing, clean water, sanitation, education, electricity, gas and health care facilities.³³ This reveals not only a lack of prioritization and coordination in urban planning and policy, but sometimes an unlawful abrogation of responsibilities, for example, the High Court of Bangladesh issued a 'show cause' notice to the Ministry of Housing and Public Works for their forced eviction of 100,000

²⁴ Encyclopaedia of Nations, available at: <https://www.Nationsencyclopedia.com/geography/Afghanistan-to-Comoros/Bangladesh.html>, accessed on 11 December 2018.

²⁵ The World Bank, *Bangladesh Development Update: Towards More, Better and Inclusive Jobs*, Dhaka: The World Bank, September 2017.

²⁶ The World Bank, *Bangladesh Development Update*, Dhaka: The World Bank, April 2015.

²⁷ Ibid.

²⁸ Ibid.

²⁹ Bangladesh Bureau of Statistics (BBS), *Population Distribution and Internal Migration in Bangladesh*, Dhaka: Statistics and Information Division, Ministry of Planning, People's Republic of Bangladesh, 2015; The World Bank, *Bangladesh: Climate Change and Development*, Dhaka, 2000.

³⁰ J. A. Pryer, *Poverty and Vulnerability in Dhaka Slums: The Urban Livelihoods Study*, London: Routledge, 2017.

³¹ DFID, "Rural and Urban Development: Case Study-Bangladesh", Rural Development Report for Bangladesh, Department of International Development, Dhaka, 2004.

³² The World Bank, "Dhaka: Improving Living Conditions for the Urban Poor", Paper No. 17, Dhaka: Bangladesh Development Series, 2007, pp. 1-158.

³³ Nasreen Hossain, "History of Commercial Development in Dhaka and the Spatial Significance of Spontaneous Retail Growth", *Journal of Humanities and Social Science (IOSR-JHSS)*, Vol. 19, 2014, pp. 66-73.

residents from Korail informal settlement in 2008.³⁴ The High Court determined that it was an unlawful action by the Ministry and against the fundamental principles of Bangladesh's Constitution, which states that "the government shall provide the basic necessities of life, including food, clothing, shelter, education and medical care" (Art. 15a).

Eviction has not been a solution to informal settlements and is related to the unequal development process. As Banks et al. identified that "a number of overlapping factors underpin this, including national identity and image, the political economy of urban poverty and the structuring of knowledge creation."³⁵ Coordinated efforts between government authorities and private informal development sectors are inadequate. The majority of development assistance, policies and action in Bangladeshis focused on rural areas rather than addressing urban poverty and the privatization of service sectors in urban areas is exacerbating the insecurity of the urban poor.³⁶ In addition, the lack of real long-term commitment to pro-poor policies and the small number of active development agencies (compared to rural areas) further reinforce experiences of urban insecurity.³⁷

With the increasing trend of environmental degradation, including the spectre of worsening climate change,³⁸ contributing to the flow of migration towards urban areas, Bangladesh is likely to continue to confront challenges around meeting the basic welfare, livelihood and infrastructure needs of its environmental migrants. Environmentally-displaced migration is therefore a human security concern for Bangladesh. The following section discusses the vulnerabilities of environmental changes with special references to coastal areas of Bangladesh.

3. Vulnerability to Environmental Change and Nature of Migration in the Coastal Areas of Bangladesh

Vulnerability and exposure of coastal areas to environmental changes are dynamic and vary within spatial and temporal scales.³⁹ Various studies show

³⁴ Ain O Shalish Kendra (ASK), *Bangladesh Legal Aid Services vs. Bangladesh and Other [Korail Basti Eviction Case]*, Writ Petition No. 9763, Dhaka: BLAST, 2008.

³⁵ Nicola Banks, Manoj Roy and David Hulme, "Neglecting the Urban Poor in Bangladesh: Research, Policy and Action in the Context of Climate Change", *Environment and Urbanization*, Vol. 23, No. 2, 2011, pp. 487-502.

³⁶ *Ibid.*

³⁷ *Ibid.*

³⁸ Golam Rabbani, A. A. Rahman and Nazira Islam, "Climate Change Implications for Dhaka City: A Need for Immediate Measures to Reduce Vulnerability", in K. Otto-Zimmermann (ed.), *Resilient Cities: Cities and Adaptation to Climate Change Proceedings of the Global Forum 2010, Local Sustainability 1*, Dordrecht-Heidelberg-London-New York: Springer, 2011, pp. 531-541.

³⁹ Mohammed Fazlul Karim and Nobuo Mimura, "Impacts of Climate Change and Sea-level Rise on Cyclonic Storm Surge Floods in Bangladesh", *Global Environmental Change*, Vol. 18, No. 3, 2008, pp. 490-500.

that for Bangladesh increasing surface air temperature, i.e., a variation in mean annual temperature from 0.4-0.65°C over the past 40 years, leads to changes in the frequency and intensity of extreme rainfall events; prolongs winter and summer seasons; increases riverine and monsoon flooding; riverbank erosion; intrusion of salinity and changes in cyclone and storm surges in terms of their intensity, timing and path.⁴⁰ These phenomena vary from place to place, however, in the coastal areas of Bangladesh, high intensity floods and river erosion have serious humanitarian consequences and cause massive devastation of infrastructure and crops.

Moreover, the coastal areas of Bangladesh are the most ecologically fragile zones compared with other parts of the country. They are vulnerable to cyclonic storm surges and floods due to the funnel shape of the coast and the shallow continental shelf.⁴¹ Tidal fluctuations, tropical cyclones and salinity intrusion are major environmental threats, along with erosion and flooding. Low lying coastal areas and poorly protected lands are occupied by large numbers of poor, vulnerable people who are exclusively dependent on agricultural activities and fisheries. Approximately 154 cyclones hit the coastal areas of Bangladesh between 1877 and 1995 and killed thousands of people.⁴²

Conditions in the region are not uniform nor static, rather it is one of the most variable and dynamic regions in the world due to the presence of the three rivers, the Ganges, Brahmaputra and Meghna.⁴³ Land accretion and erosion are continuous geomorphological processes of the coastal areas of Bangladesh, resulting in large areas of land loss every year. Whilst some new land forms, this land tends to be less suitable for agriculture and settlement.⁴⁴ Such environmental changes and natural hazards push people to decide to migrate after losing their family members and livelihoods.

The land emerging from this process is called *char* (sandbar) and provides fertile alluvium for cultivation, despite punishing circumstances and unceasing

⁴⁰ Susmita Dasgupta, Kamal Akhter, Farhana Hoque Khan, Zahirul Chowdhury, Sharifuzzaman and Ainun Nishat, "River Salinity and Climate Change: Evidence from Coastal Bangladesh", *World Scientific Reference on Asia and the World Economy*, 2015, pp. 205-242; Saleemul Huq, *Mainstreaming Adaptation to Climate Change in Least Developed Countries (LDCs)*, London: IIED, 2003; Saleemul Huq, Sari Kovats, Hannah Reid and David Satterthwaite, "Reducing Risks to Cities from Disasters and Climate Change", *Environment and Urbanization*, Vol. 19, No. 1, 2007, pp. 3-15; Mohammed Fazlul Karim and Nobuo Mimura, "Impacts of Climate Change and Sea-level Rise on Cyclonic Storm Surge Floods in Bangladesh", *Global Environmental Change*, Vol. 18, No. 3, 2008, pp. 490-500; Ainun Nishat and Nandan Mukharjee, "Climate Change Impacts, Scenario and Vulnerability of Bangladesh", *Climate Change Adaptation Action in Bangladesh*, London: Springer, 2013, pp. 15-41.

⁴¹ Ibid.

⁴² Anwar Ali, "Climate Change Impacts and Adaptation Assessment in Bangladesh", *Climate Research*, Vol. 12, 1999, pp. 109-116.

⁴³ Hugh Brammer, "Bangladesh's Dynamic Coastal Regions and Sea-level Rise", *Climate-risk Management*, Vol. 1, 2014, pp. 51-62.

⁴⁴ Ibid.

vulnerability.⁴⁵ Largely, the char inhabitants are the poorest and have been dispossessed of their lands elsewhere in Bangladesh. The land tenure system in the char has been identified as unstable in nature,⁴⁶ for the following reasons:

- The chars are extremely fertile and have access to water. Thus, they are of interest to both precarious peasants and to commercial interests intent on harvesting mangrove forests, inserting commercial crops behind protective polders⁴⁷, or making fortunes in agro-fisheries and shrimp farming.
- The government legally owns char land. This being so, land grabbers must either keep the government at bay or enlist its considerable assistance. As a result, powerful people uproot small producers from their rich alluvial soils with government support and acquiescence. Therefore, poor farmers in coastal areas are displaced through multiple layers of injustice.
- “For poor peasants, sharecroppers and wage labourers, social reproduction itself is being transformed by those who profiteer from the land, water and other natural resources in the area and against which the poor are unable to protect themselves. The region is thus changing as much from these transformations in the social relations of land ownership as from global environmental changes that characterized char lives and livelihoods a generation ago.”⁴⁸

People affected by river erosion are unable to get a share of land after the emergence of char as its fertility attracts profiteers and furthers dispossession. The following section discusses how human intervention influences river erosion.

Human interventions also affect the geomorphological processes of the GBM basins⁴⁹ along with anthropogenic contributions to global climate change. These basins are the second largest in the world and are constantly reshaped. Unlike other deltas, the Ganges, Brahmaputra, Meghna (GBM) basins carry huge amount of sediment ranging from 1.1 to 44 million metric tonnes per year, both temporally

⁴⁵ Shelley Feldman and Charles Gesler, “Land Expropriation and Displacement in Bangladesh”, *The Journal of Peasant Studies*, Vol. 39, No. 3-4, 2012, pp. 971-993.

⁴⁶ *Ibid.*, p. 978.

⁴⁷ Polder is a structure made by dikes parallel to the shoreline. The main purpose of constructing polder is to save the inland agricultural lands from the body of water, mostly often from saline water of sea. There are some regulatory gates are built in polder so that the inland water pass through. Sometimes, polders are also made to reclaim new lands by pumping inland water outside the polder.

⁴⁸ Shelley Feldman and Charles Gesler, *op. cit.*, p. 979.

⁴⁹ Ganges, Brahmaputra and Meghna are three mighty rivers in Bangladesh. Although the basins characteristics of these three rivers are different, they are called together GBM basins.

and spatially.⁵⁰ The GBM basins cover six countries - Bangladesh, Bhutan, China, India, Myanmar and Nepal. They cover 1.7 million square kilometres, with tidal influences extending inland up to 100 kilometres. This means that tidal influences cover up to one quarter of Bangladesh and these areas are also considered as coastal zones.⁵¹ Anthropogenic intervention started predominantly from European influence on Kolkata, India, during the British colonial period (1757-1947) in the 18th century, with dams and embankments constructed to increase agricultural production and communication. The construction of water management structures by the *Zamindars* (landlords), selected by British colonialists, continued until the 19th century and the Basin Management Plan was divided between India and the then East Pakistan in 1948 after independence from the British. The GBM basins cross both India and Bangladesh. They are managed by two different states for their own individual purposes, so the river basins are managed not according to the characteristics of the basin, but the state boundaries.

In 1958, the then East Pakistan government began to implement the Earthen Coastal Embankment Project for the southern part of Bangladesh to protect the agricultural land from saline water and control the river water flow. It included 2,600 miles of embankment with 92 polders to protect 2.7 million acres of agricultural lands from salinity.⁵² The adverse impacts of that mega project began in the 1990s and include drainage congestion inside the polder and heavy siltation outside of the embankment areas.⁵³ The natural flow of inland water bodies is not discharged into the sea as the land levels outside the polders/embankments are higher. This converted agricultural land into water-logged land and enabled salinity intrusion inside the embankment. Another mega project, Farakka dam in India, in the upstream of the Ganges river basin, adversely affected coastal areas of Bangladesh by retaining sediment and increasing river erosion and changing the direction of water movements and tides.⁵⁴ Other small structures are also constructed to retain sediment and convert the waterways into agricultural land throughout the basins. Therefore, both anthropogenic interventions and natural calamities in the coastal zones directly affect one quarter of Bangladesh and the many people living in these regions.

Bangladesh is more vulnerable to environmental changes than other countries due to its geographical characteristics and high population density, the overwhelming dependency of people's livelihoods on natural resources and the

⁵⁰ S. Brown and R. J. Niholls, "Subsidence and Human Influences in Mega Deltas: The Case of the Ganges-Brahmaputra-Meghna", *Science of the Total Environment*, Vol. 527-528, 2015, pp. 362-374.

⁵¹ Md. Golam Sarwar Mahabub and Colin D. Woodroffe, "Rates of Shoreline Change Along the Coast of Bangladesh", *Journal of Coastal Conservation*, Vol. 17, No. 3, 2013, pp. 515-526.

⁵² M. S. Iftekhar and M. R. Islam, "Managing Mangroves in Bangladesh: A Strategy Analysis", *Journal of Coastal Conservation*, Vol. 10, No. 1, 2004, pp. 139-146.

⁵³ Ibid.

⁵⁴ M. M. Q. Mirza, "Diversion of the Ganges Water at Farakka and its Effects on Salinity in Bangladesh", *Environmental Management*, Vol. 22, No. 5, 1998, pp. 711-722.

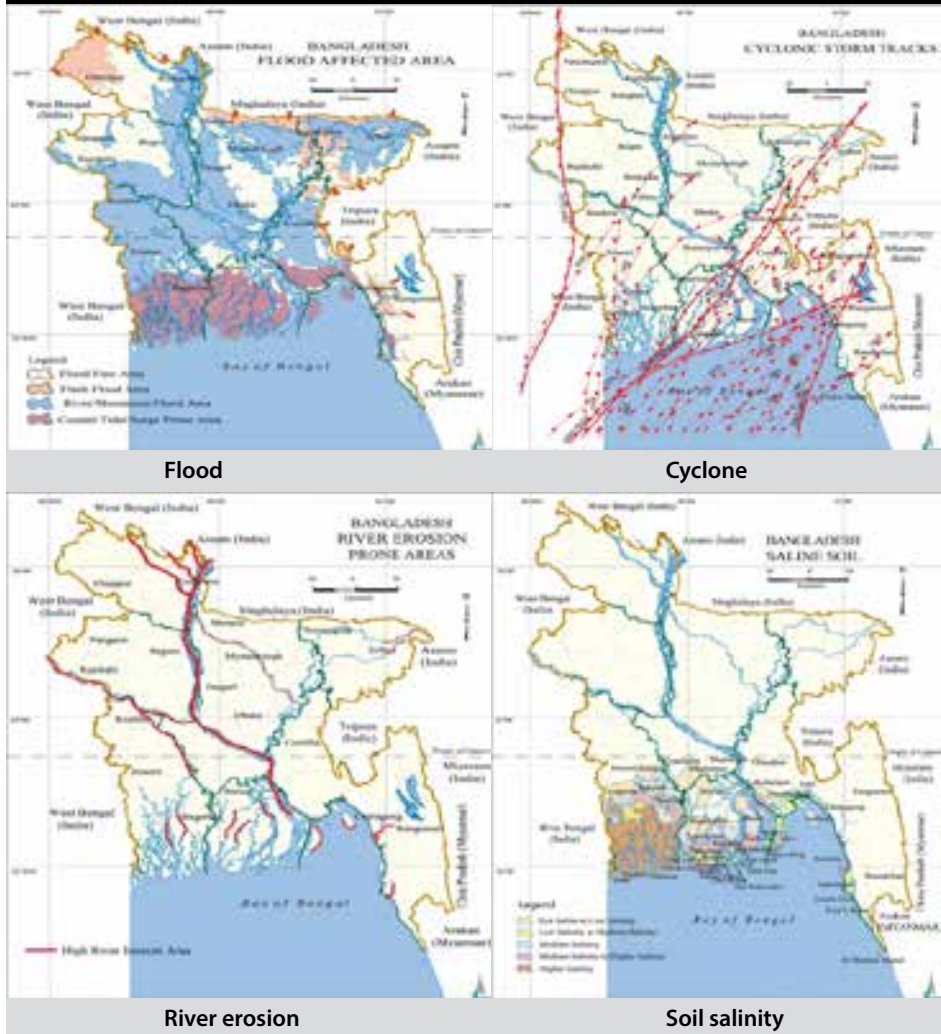
limited capacities of the government to support vulnerable groups. Thus, a minor change in environmental phenomena causes significant impacts on a huge number of people. Bangladesh has been identified as one of the top fifteen 'hotspots' which are largely exposed to natural hazards and environmental changes.⁵⁵

Gradual environmental changes and sudden extreme environmental events influence migration in Bangladesh. The key factors for migration in Bangladesh are flood, cyclone and river bank erosion. Beside these, coastal flooding, storm surges, cyclones and salinity intrusion are the main reasons for migration in the coastal areas of Bangladesh. Approximately 24 districts among Bangladesh's 64 districts contribute to net out-migration flows, with an estimated six million people already migrating away from the coast due to environmental changes.⁵⁶ Figure 3 illustrates how four main environmental changes affect areas from where migration is likely to occur in the future.

⁵⁵ Hugh Brammer, op. cit.

⁵⁶ Ahsan Uddin Ahmed, *Bangladesh Climate Change Impacts and Vulnerability-A Synthesis*, Dhaka: Climate Change Cell, Department of Environment, Comprehensive Disaster Management Programme, Government of the People's Republic of Bangladesh, 2006, pp. 1-50.

Figure 2: Framework for Determining Environmental Migrant Sub-Categories



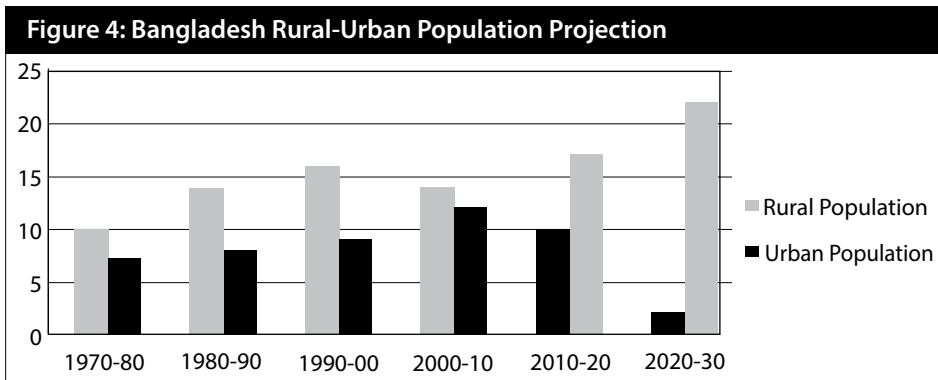
Source: Natural Hazards of Bangladesh, available at: http://en.banglapedia.org/index.php?title=Natural_Hazard, accessed on 15 June 2018.

Various studies of migration suggest that environmentally-displaced migration in Bangladesh is largely localized and internal in nature and rural to urban rather than cross-border.⁵⁷ Cross-border, or international, migration needs some initial wealth in

⁵⁷ Golam Rabbani, Fathimath Shafeeqa and Sanjay Sharma, *Assessing the Climate Change Environmental Degradation and Migration Nexus in South Asia*, Dhaka: International Organization for Migration (IOM), 2016; Rashed Al Mahmud Titumir and Jakir Hossain, "Barriers to Access to Public Services for the Urban Poor: An Enquiry into Dhaka slums", *Journal of the Institute of Bangladesh Studies*, Vol. 27, 2004, p. 28.

order to be able to take the decision to migrate overseas, a decision largely out of the reach of many people in Bangladesh.⁵⁸

The nature of migration observed in Bangladesh ranges from temporary displacement due to sudden on-set disaster, to permanent displacement where people are unable to return to their homes.⁵⁹ It is evident that long term or permanent migration tends to be gradual, due to slow on-set rather than sudden on-set environmental change when people are usually able to find temporary or seasonal relief.⁶⁰ Whether the cause is gradual degradation of environmental conditions, or sudden major disasters that force people to migrate to nearby urban areas or the capital city as a mode of coping or adapting, the result is that the urban population is growing and rural population is decreasing (see Figure 4).



Source: Reazul Ahsan, Sadasivam Karuppanan and Jon Kellett, "Climate Migration and Urban Planning System: A Study of Bangladesh", *Environmental Justice*, Vol. 4, No. 3, 2011, p. 167.

At present, about 50 million people are living in ecologically fragile areas of Bangladesh such as islands (*chars*), areas prone to floods, salinity intrusion and drought and coastal areas vulnerable to natural disasters.⁶¹ The United Nations Environmental Program (UNEP) estimates that sea level rise in Bangladesh would affect 17 million people (15 per cent of the population) and result in the loss of about 22,000 square kilometres of land (16 per cent of the total landmass).⁶² Moreover,

⁵⁸ Ben Saul, "The Security Risk of Climate Change Displacement in Bangladesh", *Journal of Human security*, Vol. 8, No. 2, 2012, pp. 5-35.

⁵⁹ *Ibid.*

⁶⁰ Centre for Environmental and Geographic Information Services (CEGIS), *Trend and Impact Analysis of Internal Displacement Due to the Impacts of Disaster and Climate Change*, Study Report, Comprehensive Disaster Management programme (CDMP II), Dhaka: Ministry of Disaster Management and Relief, 2014.

⁶¹ IOM, *op. cit.*

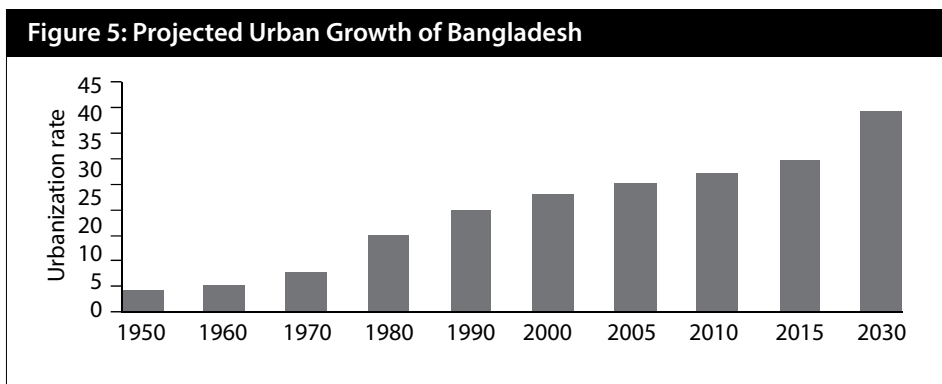
⁶² United Nations Environment Programme (UNEP), *Environmental Problems of the Marine and Coastal Area of Bangladesh*, National Report, UNEP Regional Seas Reports and Studies No. 75, Dhaka: Regional Seas, 1995.

various disasters will further displace three to 10 million people internally over the next 40 years.⁶³

Global environmental change, human intervention in coastal ecology and power plays over *char* land are fueling the displacement of poor inhabitants of coastal areas of Bangladesh. The following section addresses security issues related to environmentally-displaced migration.

4. Environmentally-Displaced Migration and Security

Dhaka already receives a large influx of migrants and is expected to receive a greater influx of environmentally-displaced migrants due to the better economic opportunities available there compared with other parts of the country. Different development sectors, utility services and infrastructure developments have expanded rapidly but have been unable to keep pace with the demand of the growing population. There is a lack of coordination between different government bodies in terms of implementation of policies, rules and regulations.⁶⁴ The gap between service available and demand is further exacerbated by mismanagement.⁶⁵ Figure 6 illustrates the trends of urban population growth of Bangladesh's major cities.



Source: Reazul Ahsan, Sadasivam Karuppannan and Jon Kellett, op. cit., p. 165.

People escape deteriorating environmental conditions in their place of origin when they migrate, however, they confront a new set of environmental hazards in the city. Floods and water logging, in particular, contribute to difficult living conditions for

⁶³ Behrooz Hassani-Mahmooui and Brett W. Parris, "Climate Change and Internal Migration Patterns in Bangladesh: An Agent-based Model", *Environment and Development Economics*, Vol. 17, No. 06, 2012, pp. 763-780.

⁶⁴ Intergovernmental Panel on Climate Change (IPCC), *Climate Change 2014: Impacts, Adaptation, and Vulnerability*, Working Group II to the Fifth Assessment Report, 2014.

⁶⁵ Reazul Ahsan, Sadasivam Karuppannan and Jon Kellett, op. cit., p. 167.

some city residents.⁶⁶ Dhaka is severely affected by floods along with other hazards like air pollution, sewage contamination, ground water depletion and ground and surface water contamination,⁶⁷ leading some to argue it is the most exposed city in the world in terms of the impacts of environmental change.⁶⁸

Urban flooding is one of the most common hazards, becoming more frequent and extensive with climate change, as along with disruption of drainage patterns due to the congestion of the city's waterways. Floods disrupt infrastructure (road, rail, housing, industries and business centres), communication systems, utility services (water supply, sanitation, electricity and gas) and sewage management.⁶⁹ The increase in mosquitoes, water-borne disease and flea infestations due to erratic temperatures, improper management of sewerage and sanitation and air pollution are also causing serious health concerns for city dwellers.⁷⁰ The expansion of informal settlements is another critical concern as they are usually located in high flood risk areas with poor health and economic outcomes. There are 13,938 informal settlements in Bangladesh⁷¹ and these contain 18 per cent of total world urban housing, consisting of 125 million units.⁷² It is clear that Dhaka is neither coping nor prepared for the influx of environmentally-displaced migrants.

The concept of human security is widely used in the field of international relations and political science theories. However, the dynamics of human security are generally viewed from a top-down perspective by security agencies. These endeavours often fail to properly address individual experiences of insecurity.⁷³ Environmental change is increasingly considered as security concern because it undermines human security at individual, community, national, regional and global scales.⁷⁴

⁶⁶ Golam Rabbani, Atiq Rahman and Nazira Islam, op. cit.

⁶⁷ Shahadat Hossain, "Migration, Urbanization and Poverty in Dhaka, Bangladesh", *Journal of the Asiatic Society of Bangladesh*, Vol. 58, No. 2, 2013, pp. 369-382

⁶⁸ Susan Hansen, Robert Nicholls, Nicola Ranger, Stephane Hallegatte, Jan Corfee-Morlot, Celine Herweije and Jean Chateau, "A Global Ranking of Port Cities with High Exposure to Climate Extreme", *Climatic Change*, Vol. 104, No. 1, 2011, pp. 89-111.

⁶⁹ Golam Rabbani, "Climate Change Vulnerabilities for Urban Areas in Bangladesh: Dhaka as a Case", Paper presented in Resilient Cities Conference organized by ICLEI at Bonn, Germany, 2010, available at: <http://resilient-cities.iclei.org/fileadmin/sites/resilientcities/files/docs/B4-Bonn2010-Rabbani.pdf>, accessed on 29 January 2019.

⁷⁰ Mozaharul Alam and MD Golam Rabbani, "Vulnerabilities and Responses to Climate Change for Dhaka", *Environment and Urbanization*, Vol. 19, No. 1, 2007, pp. 81-97.

⁷¹ Bangladesh Bureau of Statistics (BBS), *Preliminary Report on Census of Slum Areas and Floating Population*, Dhaka: Statistics and Informatics Division (SID), Ministry of Planning, Government of the People's Republic of Bangladesh, 2014, pp. 1-58.

⁷² UN-Habitat, *The State of the World's Cities, The Millennium Development Goals and Development Sustainability*, Kenya: United Nations Human Settlement Programme, 2006-2007, pp. 1-2.

⁷³ Thomas F. Homer-Dixon, *Environment, Scarcity and Violent Conflict*, Princeton: Princeton University Press, 1999, p. 253; B. Kavanagh and S. Lonergan, *Environmental Degradation, Population Displacement and Global Security*, Technical Report of Canadian Global Change Programme, 1992; Norman Myers, "Environment and Security", *Foreign Policy*, Vol. 74 (Spring), 1989, pp. 23-41.

⁷⁴ Jon Barnett and W. Neil Adger, "Climate Change, Human Security and Violent Conflict", *Political Geography*, Vol. 26, No. 6, 2007, pp. 639-655.

4.1 *Individual*

At an individual level, livelihood insecurity is an important component of insecurity. Livelihood is defined as the utilization of tangible and non-tangible assets for sustenance.⁷⁵ Bebbington introduced cultural factors, along with the material and economic factors, as critical to livelihood security.⁷⁶ In this way, livelihood insecurity is the combination of “livelihoods (material and intangible assets) + (exposure to) a stress or shock”. When insecure livelihood assets are exposed to a stress, the stress can diminish the asset’s productivity or quality and/or limit access.⁷⁷ The consequences are declining resource flows to households. Assets (mainly land) of people in ecologically fragile areas were exposed and affected by river erosion along with other environmental changes. These made livelihoods vulnerable because of their dependency on land-based agricultural activities and fisheries.

Households have two types of assets such as tangible assets (money, land, ornaments, property, etc.) and non-tangible assets (skill or human capital, social capital, networks, etc.). Households’ livelihood strategies are mediated by social factors or exogenous trends or shocks that influence their capacity to use tangible and non-tangible resources over time. In other words, livelihood strategies are dynamic.⁷⁸ They respond to changing pressures and opportunities and are adapted accordingly. Additionally, livelihood strategies are composed of activities that generate the means of household survival. Households that are exposed to a stress will likely reallocate their assets to cope with the declining quality of life.⁷⁹

Intangible assets, such as kin and friendship networks, are often the most important relationships that households mobilize to pursue their livelihoods and in so doing reduce insecurity. Social networks are central to socio-political processes. They can reduce the level of fear, provide comfort, care and support as well as increase people’s dignity, amongst other things. The asset status of a household and the nature of flexibility of those assets are the main indicators of a household’s security status,⁸⁰ yet rarely does this take into account intangible assets, such as networks. The asset status of a household increases their freedom of choice for functioning of their capabilities.

⁷⁵ Robert Chambers and Gordon R. Conway, “Sustainable Rural Livelihoods: Practical Concepts for 21st Century”, *IDS Discussion Paper 296*, London: Institute of Development Studies (IDS), December 1991.

⁷⁶ Anthony Bebbington, “Capitals and Capabilities: A Framework for Analysing Peasant Viability, Rural Livelihoods and Poverty”, *World Development*, Vol. 27, No. 12, pp. 2021-2044.

⁷⁷ *Ibid.*

⁷⁸ Frank Ellis, *A Framework for Livelihoods Analysis, Rural Livelihoods and Diversity in Developing Countries*, Oxford: Oxford University Press, 2000, pp. 28-51.

⁷⁹ Anthony Bebbington, *op. cit.*

⁸⁰ Frank Ellis, *op. cit.*

Environmentally-displaced migrants confront a number of socio-economic and cultural issues that intensify their insecurity. Migrants who are uprooted from their place of origin suffer almost complete loss. Migrants start to reconstruct their lives in newly settled places with minimum resources. People are often indebted when they move to new places. Therefore, environmentally-displaced migrants are identified as a more vulnerable group than any other migrants.⁸¹ Motivations for migration vary in accordance with the nature of environmental disasters – slow onset or sudden disaster.⁸² Migrants quickly adjust to a new way of life, mostly in informal settlements, characterized by alienation and marginalization in the urban governance system.⁸³ This process of adaptation or recovery has both material and social aspects where material and social losses compound each other in these new destinations.⁸⁴ Even when migrants find a place in the informal settlements of major cities, they are at constant risk of eviction by the authorities. Loss of livelihood and the incapacity to sustain oneself endangers an individual and their social ‘identity’.⁸⁵ These processes can produce a loss of status and result in feelings of marginalization through the fragmentation of social networks. Marginalization, loss of social status and networks and continuous threats of eviction are major sources of insecurity in their destination areas.⁸⁶

4.2 Community

Security can also be understood at a community scale. Migrants face different dynamics within and between communities and these affect their survival and well-being. Migrants who settle in informal settlements face particular threats to their security, particularly in relation to economic opportunities, social identity and networks, discrimination and precarity. Social insecurities reflect the social injustices that arise from structural inequalities and abuses of power over resources. Social insecurity research draws heavily from Sen’s concepts of capability,⁸⁷ insecurity in this perspective is considered a dynamic condition and

⁸¹ Sujan Saha, “Security Implications of Climate Refugees in Urban Slums: A Case Study from Dhaka, Bangladesh”, in J. Scheffran, M. Brzoska, H. G. Brauch, P. M. Link, J. Schilling (eds.), *Climate Change, Human Security and Violent Conflict*, Hexagon Series on Human and Environmental Security and Peace, 2012, pp. 595-611.

⁸² IOM, op. cit.

⁸³ Sujan Saha, op. cit.

⁸⁴ Anthony Oliver-Smith, “Climate Change and Population Displacement: Disasters and Diasporas in the Twenty-first Century”, in Susan A. Crate and Mark Nuttall (eds.), *Climate Change and Population Displacement-From encounters to Actions*, Walnut Creek, US: Left Coast Press, 2009, pp. 116-136.

⁸⁵ Ibid.

⁸⁶ Sarah Dalrymple, Duncan Hiscock, A. Kalam, Neila Husain and Ziaur Rahman, *Climate Change and Human Security in Bangladesh: A Case Study*, Dhaka: Bangladesh Institute of International and Strategic Studies (BISS) and Saferworld, 2009.

⁸⁷ Amartya Sen, *Poverty and Famines: An Essay on Entitlement and Deprivation*, Oxford: Oxford university Press, 1981; Amartya Sen, “Justice: Means versus Freedom”, *Philosophy and Public Affairs*, Vol. 19, No. 2, 1990, pp. 111-121.

embedded in complex relations of power, resource distribution, knowledge and technological development.⁸⁸

Migration to the capital city may create better economic opportunities but at the same time people may be worse off due to cost of living pressures. Income losses may also occur due to environmental hazards, political turmoil, ill health and ageing.⁸⁹ There is also perceived and real competition for employment amongst migrants in informal settlements. The abundant supply of workers also leads to downward pressure on wages which provokes tensions and conflicts.⁹⁰ Landlessness and a lack of social identity and networks constrain migrants' access to jobs and credit.⁹¹

About 80 per cent of informal settlements are located on privately owned land which makes settlement dwellers extremely vulnerable (especially women and children) in terms of extra rent, exploitation by miscreants, hoodlums or muscle-men as the land-owners often have good connections with political parties and criminal control of informal settlements.⁹² Migrants are highly vulnerable to multiple displacements by developers, police and other government authorities. For example, some people have been evicted up to eight times.⁹³ Despite the exploitation people are subject to, it is often migrants who are stigmatized by society. They are often perceived to increase crime rates and violence in Dhaka, even though they themselves are extremely exposed to violence and crime and have limited or no access to the criminal justice system.⁹⁴

Informal settlements are already vulnerable to the impacts of climate change in terms of floods and high exposure to infectious diseases due to overcrowding and poor housing. About 60 per cent of informal settlement residents in Dhaka live in flood-prone and water-logged areas where there are no or poor drainage facilities. Among them, about one third of dwellings are made of tin and bamboo which are very vulnerable to flood damage. Moreover, flooding deteriorates the weak drainage and sewerage in informal settlements, bringing water borne diseases and contaminated water supplies.⁹⁵ All of these aspects bring insecurity for migrants at the community level. The following section discusses why environmentally-displaced migration is also a security issue at the national level.

⁸⁸ Hallie Eakin and Lynd Amy Luers, "Assessing the Vulnerability of Social Environmental Systems", *Annual Review of Environmental Resources*, 2006, Vol. 31, pp. 365-394.

⁸⁹ IOM, op. cit.

⁹⁰ Sarah Dalrymple et al., op. cit.

⁹¹ C. R. Abrar and S. N. Azad, *Coping with Displacement: Riverbank Erosion in North-West Bangladesh*, Dhaka: North Bengal Institute for Alternative Research and Advocacy and Refugee and Migratory Movements Research Unit, 2004.

⁹² The World Bank, op. cit., 2007, p. ixv.

⁹³ Nicola Banks, op. cit. and Sarah Dalrymple et al., op. cit.

⁹⁴ Sujan Saha, op. cit.

⁹⁵ The World Bank, op. cit., 2007.

4.3 National

The main objective of state security is to ensure security for its citizens from both military (traditional) and non-military (non-traditional) threats. Therefore, individual security and state security are linked. Any threat to the nation, such as invasion by another state, is also a threat for individual citizens. Similarly, community security is linked with individual and state security. For example, the state might have a discriminatory policy towards a minority community which affects that group's security. On the other hand, small groups within communities, such as religious fundamentalist groups⁹⁶, may be considered as a security threat for the state. Therefore, state security, community security and individual security are connected with one another and one form of security cannot be achieved without the others.

Bangladesh's vulnerability to natural hazards leads to environmentally-displaced migration of individuals and communities from their homes and lands. This is a result of both 'sudden onset events' such as floods, cyclones and river bank erosion as well as 'slow onset processes' such as coastal erosion, sea-level rise, salt water intrusion, changing rainfall patterns and drought.⁹⁷ Internal migration and dislocation of mass population in a small country creates huge pressure on the existing resources and services of the destination areas within the country. Bangladesh is predicted to lose 10.9 per cent of its territory if the sea level rises 45 centimetres, which will potentially displace about 5.5 million people.⁹⁸ This undermines national sovereignty because of loss of this territory through physical processes. In addition, internally displaced people will potentially pose serious problems for state legitimacy and the internal harmony of the country. It is important not only to find the relationship between sea level rise, the exposed population and the total number of people likely to be displaced, but further analysis is needed to assess the adaptation options at the starting point of migration.

Internal displacement increases competition and the risk of potential conflict over key resources such as land, housing, food, water and employment. There is evidence that this kind of social conflict has already arisen in Bangladesh.⁹⁹ For example, land is a critically scarce resource in this densely populated agrarian country.

⁹⁶ Han Günter Brauch, "Securitization of Space and Referent Object", Han Günter Brauch, Ursula Oswald Spring, John Grin, Pal Dunay, Navnita Chadha Behera, Bechir Chourou, Patricia Kameri-Mbote and P. H. Liotta (eds.), *Hexagon Series on Human and Environmental Security and Peace*, Berlin: Heidelberg, 2008, pp. 323-343.

⁹⁷ IOM, op. cit.

⁹⁸ Intergovernmental Panel on Climate Change (IPCC), *Climate Change 2001: Synthesis Report*, Working Groups I, II, and III, Cambridge: Cambridge University Press, 2001.

⁹⁹ Iftekhar Ahmed and Guy Johnson, "Urban Safety and Poverty in Dhaka, Bangladesh: Understanding the Structural and Institutional Linkages", *Australian Planner*, Vol. 51, No. 3, 2014, pp. 272-280; Nesar Ahmed and James S. Diana, "Threatening "White Gold": Impacts of Climate Change on Shrimp Farming in Coastal Bangladesh", *Ocean and Coastal Management*, Vol. 114, 2015, pp. 42-52 and Sarah Dalrymple et al., op. cit.

Additional pressure on land comes from economic modernization and demands for land from industry, such as shrimp cultivation, which exacerbates rural landlessness. These industries are less labour-intensive than farming, resulting in increased unemployment and migration.¹⁰⁰

Internal movement of people within Bangladesh historically produced tensions and conflict over land in a number of ways. Poorly conceived planned resettlement has resulted in serious violence. The state-sponsored relocation of 400-600,000 Bengali settlers into the Chittagong Hill Tracts by the military regime in the 1970s-80s provoked protracted violence and insurgency.¹⁰¹ This conflict was only settled by a Peace Accord in 1997. The conflict was influenced by competition over land, resources (forest) and political power between Bengali migrants and local inhabitants of the Chittagong Hill Tracts.

Large scale rural-urban migration is resulting in the growth of informal settlements. The population density of informal settlements in Dhaka is 200 times greater than the average population density of the country, with 80 per cent of people in informal settlements living in areas with population densities of 500 to 1,500 per acre.¹⁰² This overcrowding has serious, far reaching human security implications at a national level.

4.4 *Regional and Global*

There is a widespread assumption that the impacts of environmental change will stimulate large-scale cross-border immigration from Bangladesh and consequently generate transnational security threats.¹⁰³ India is the most probable destination for Bangladeshi migrants due to its geographic proximity, porous border area, potential economic opportunities, and similar linguistic, ethnic and cultural heritage. Migration can be transitory or permanent; some migrants use India as a transit point for another destination. Indian authorities, mainly the Border Security Force (BSF), claim that there are up to 20 million illegal Bangladeshi immigrants in India.¹⁰⁴ It is also claimed that people are migrating from the southern part of Bangladesh.¹⁰⁵ However, several

¹⁰⁰ Nesar Ahmed and James S. Diana, op. cit.

¹⁰¹ Dan Smith and Janani Vivekanda, "A Climate of Conflict: The Links Between Climate Change, Peace and War", *Understanding Conflict- Building Peace*, London: International Alert, 2007.

¹⁰² The World Bank, op. cit., 2007.

¹⁰³ Jon Barnett, "Destabilizing the Environment-conflict Thesis", *Review of International Studies*, Vol. 26, No. 02, 2000, pp. 271-288; Jon Barnett, "Security and Climate Change", *Global Environmental Change*, Vol.13, No.1, 2003, pp. 7-17; Dan Smith and Janani Vivekanda, op. cit.

¹⁰⁴ Jane McAdam and Ben Saul, "Displacement with Dignity: International Law and Policy Responses to Climate Change Migration and Security in Bangladesh", Sydney: The University of Sydney, Legal Studies Research Paper No. 10/113, November 2010; and Ben Saul, op. cit., pp. 5-35.

¹⁰⁵ Ashok Swain, "Displacing the Conflict: Environmental Destruction in Bangladesh and Ethnic Conflict in India", *Journal of Peace Research*, Vol. 33, No. 2, 1996, pp. 189-204.

other studies claim that environmentally-displaced migrants become economically marginalized by losing their livelihoods due to slow environmental changes and loss of property (due to river erosion), and that most migration is internal in nature.¹⁰⁶ Yet, there is also immigration into Bangladesh with an estimated 500,000 Indians from West Bengal, Meghalaya, Assam, Tripura and Mizoram states of India working in NGOs and the garment and textile industries.¹⁰⁷ Therefore, migration always remains an issue of immense tension between Bangladesh and India.

The regional and global security dimensions of environmental migration are not properly understood due to the paucity of empirical studies. Traditional approaches to security risks tend to consider conflict over scarce resources, politicized 'anti-foreigner' movements, border securitization from a nationalistic view, and a perceived association between Bangladeshi Islamist groups and regional insurgency groups.¹⁰⁸ Such studies tend to ignore the everyday insecurities migrants experience at individual and community scales.

5. Conclusion

People feel insecure if they find themselves in a compromised situation where they have limited options for ways of living and pursuing a livelihood. The threats to people's security change over the migration journey. At the point of origin, the effects of the complex socio-environmental processes are exacerbated by the power plays of different institutions, contributing to the push of displaced people from ecologically fragile areas to towards Dhaka. At their destination, people find themselves living a differently precarious life in the informal settlements, where they confront a new set of power relations, they must negotiate in order to expand their capabilities to realize security in everyday life.

Although environmental change is a global phenomenon, there remains insufficient attention to protecting the rights of environmentally-displaced migrants. Environmentally-displaced migrants are forced to take the decision to migrate like

¹⁰⁶ Rita Afsar, "Internal Migration and the Development Nexus: the Case of Bangladesh", paper presented at *Regional Conference on Migration, Development, and Pro-poor Policy Choices in Asia*, Jointly organized by Refugee and Migratory Research Unit, Bangladesh and the Department of International Development, UK at Dhaka on 22-23 June 2003; Tahera Akhter, *Climate Change and Flow of Environmental Displacement in Bangladesh*, Dhaka: Unnayan Onneshan, 2009; M. R. Bhuiyan and Tasneem Siddiqui, *Migration in the Ganges-Brahmaputra-Meghna Delta: A Review of the Literature, Deltas, Vulnerability and Climate Change: Migration and Adaptation*, Dhaka: DECCMA Working Paper, IDRC Project Number 107642, 2015, available online at www.deccma.com, accessed on 21 July 2016; Tasneem Siddiqui, *Migration as a Livelihood Strategy of the Poor: the Bangladesh Case*, Dhaka: Refugee and Migratory Movements Research Unit, 2003.

¹⁰⁷ "15 Nations Sending Highest Remittances to India", US: Siliconindia, 21 May 2013, available at: <https://www.siliconindia.com/news/business/15-Nations-Sending-Highest-Remittances-to-India-nid-147515-cid-3.html>, accessed on 18 January 2019.

¹⁰⁸ Ben Saul, op. cit., p. 7.

refugees, but are not considered to be refugees under international law and are not able to claim protection outside their nation state.¹⁰⁹ If they cross national borders due to environmental changes, they are not considered as environmental refugees. Therefore, climate migrants are only entitled to avail the benefits of human rights from their own state. Their rights are principally protected by the normative framework of human rights law and the UN Guiding Principles on Internal Migration.¹¹⁰ Thus, the national legal system continues to have the primary role in ensuring the protection of environmentally-displaced migrants.

The government of Bangladesh has taken many steps to address adaptation to environmental change, post disaster relief and recovery measures, rather than fundamental rights protection. Major initiatives include the establishment of a US\$ 45 million Climate Change Fund, the development of the National Adaptation Programme of Action 2005 (NAPA) and the Climate Change Strategy and Action Plan 2009-18 (BCCSAP).¹¹¹ The response of the government in dealing with storm surges, cyclones, floods and riverbank erosion is limited to engineering solutions such as building embankments, dams or dykes. A more holistic approach is therefore needed to address some of the socio-cultural, demographic, economic and political dimensions of the insecurity affecting vulnerable people and migrants documented in this research. More attention to these complex socio-economic, political and environmental issues may contribute to more successful adaptation measures and initiatives being taken in the rural areas.

At the international level, Bangladesh has been most vocal in pushing for the rights of climate vulnerable developing countries, however, climate migrants are still not recognized nationally as an 'especially affected group' and are thus, deprived of governmental benefits. The rights of environmental migrants remain unrecognized in the legal and constitutional framework. The UN Guiding Principles on Internal Displacement are not fully incorporated into the domestic law of Bangladesh¹¹² and there is no appropriate mechanism to define and protect their rights.

¹⁰⁹ Mathew Walsam, "Assessing the Evidence: Environment, Climate Change and Migration in Bangladesh", Dhaka: International Organization for Migration, 2010.

¹¹⁰ United Nations, "60/1.2005 World Summit Outcome" Resolution Adopted by the General Assembly, available at <http://www.un-documents.net/a60r1.htm>, accessed on 13 October 2018.

¹¹¹ United Nations Development Programme, "Comprehensive Disaster Management Programme-II", Phase-2, Dhaka: Government of the People's Republic of Bangladesh, available at: http://www.bd.undp.org/content/bangladesh/en/home/operations/projects/All_Closed_Projects/Closed_Projects_Crisis_Prevention_and_Recovery/comprehensive-disaster-management-programme/CDMPHome.html, accessed on 23 September 2018.

¹¹² Roger Zetter, *Reframing Displacement Crises as Development Opportunities*, Copenhagen: Copenhagen Development Solutions Initiative, Danish Ministry of Foreign Affairs, 2014, available at www.rsc.ox.ac.uk/files/publications/other/pn-reframing-displacement-crisis-2014.pdf, accessed on 17 September 2018.