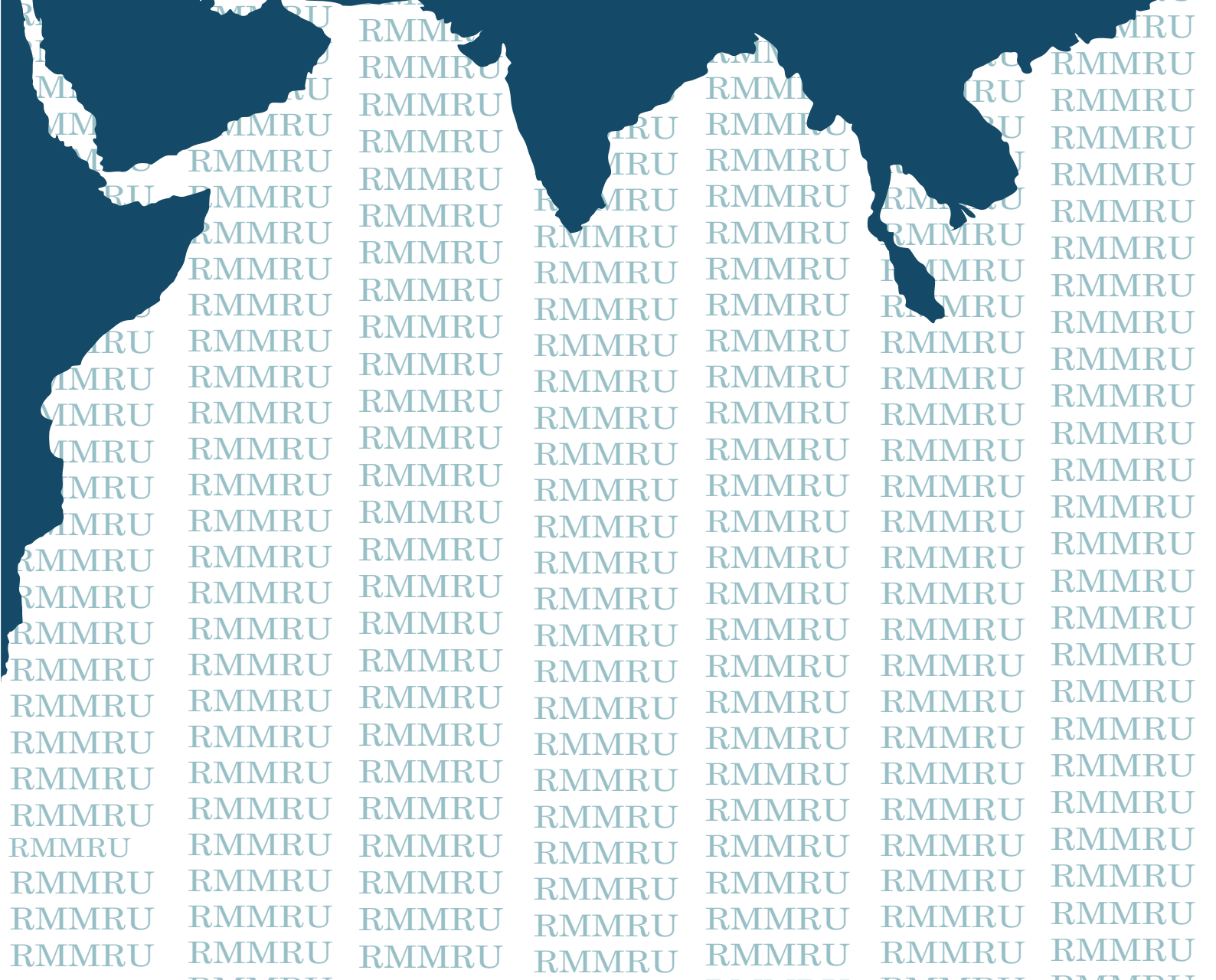




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Climate change and displacement: locating the most vulnerable groups

Tasneem Siddiqui¹

Notions of 'Climate Migration' in general and climate change and disaster induced displacement in particular are becoming one of the core issue areas in the global climate negotiations. The last three reports of the Inter-governmental Panel on Climate Change (IPCC) make extensive references to the impact of climate change on human displacement². In the 2018 COP 24³, the state parties accepted the recommendations prepared by the task force that was created by the Paris Agreement (under Loss and Damage) to avert, minimize and address the adverse impacts of climate change and disaster on displacement. The Cancun Adaptation Framework (2010), the Sendai Framework for Disaster Risk Reduction (2015-2030) and other international instruments have also emphasized the need to tackle this daunting challenge both at the national and international levels.

This paper looks into displacement scenario of Bangladesh. The paper mostly draws from a few recently conducted empirical researches on Bangladesh. Important among them are Climate change related migration in Bangladesh⁴, DECCMA⁵ and Safe and sustainable cities⁶. Lying in the footstep of the three major rivers of South Asia and with only 10 percent of its land area above 1 meter of the mean sea level, Bangladesh is often cited as one of the world's most exposed countries to the impact of climate change. Climate shocks and stresses are predicted to result in increased flooding, drought, riverbank erosion and salinization of water resources in the country. In the aftermath of these events the number of persons displaced will also increase. This paper attempts to understand current nature and extent of climate related displacement in Bangladesh. It tries to locate which group of the

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² The IPCC Oceans and Cryosphere report, the IPCC land report and the IPCC 1.5-degree C special report.

³ Decision 10/CP.24

⁴ A joint research of RMMRU and SCMR on climate change related migration in Bangladesh,(2012- 2014). This study looks into effect of climate change in intensifying vulnerabilities of affected persons of flood, cyclone and drought prone districts. The findings are presented in Siddiqui et al 2018, Martin et al 2014 and 2017.

⁵ DECCMA: Deltas, vulnerabilities and Climate change, (2013-2018). Findings on Bangladesh is available in De Campos et al 2019 and Siddiqui et al 2018.

⁶ Joint research of Exeter University and RMMRU on Safe and Sustainable cities: Securities, Migration and wellbeing, 2017-2019. Findings are available in Siddiqui et al forthcoming.

affected communities will be more vulnerable and what types of services would be required to support them. It would be interesting to see how current policies look at displacement.

The paper is divided in 8 sections. Section 1 briefly deals with concepts and terminologies used in this paper. Section 2 presents recent facts and figures on displacement at the global level and in Bangladesh. Section 3 highlights regional variations of climate vulnerability of Bangladesh. Section 4 concentrates on vulnerability of different groups of population in the origin area during pre-displacement and displacement period. Section 5 identifies the vulnerabilities of the displaced groups during the post displacement period particularly of those who move to cities. Section 6 explores the vulnerability of poor people to irregular migration and trafficking from areas which are facing negative effect of climate change. Section 7 reviews the existing policies. Section 8 draws conclusions and identify some policy agenda for future reforms to protect the rights of those who are getting forcibly displaced.

Section 1: Conceptual framework and Terminologies Used

The paper is based on the understanding that climate change does not displace people directly rather it exacerbates various forms of vulnerability which contributes to displacement (Kolmannskong, 2012). It is also draws from (Jayawardhan, 2017) studies that demonstrate anthropogenic climate change affects most of the habitants of a community, yet socio-economic inequalities make marginalised groups more vulnerable to it. When vulnerability of affected persons reaches a threshold point where life and livelihood in origin areas become unsustainable then the persons concerned are forced to decide to live their habitual residence. Individuals and communities displaced due to effects of climate change or other environmental and natural disasters, not only have to part with their habitual residences, but also succumb to loss of lives and livelihoods. Their social and economic wellbeing gets compromised substantively.

This paper uses the definition of the draft Bangladesh National Strategy on the Management of Disaster and Climate Induced Internal Displacement (NSMDCIID). It defined displaced persons as “Persons, group of persons, households, or an entire community who have been forced or obliged to flee or to leave their homes or places of habitual residence temporarily or permanently or who have been evacuated as a result of disasters caused by sudden and slow-onset climatic events and processes, and who may or may not have crossed an internationally recognized State border.”⁷ IPCC defines vulnerability as “the degree to which a system is susceptible to, and unable to cope with, adverse effects of climate change,

⁷ Draft National Strategy on the Management of Disaster and Climate Induced Internal Displacement in Bangladesh.

including variability and extremes”⁸. This paper follows the UN definition that humanizes vulnerability. It defined vulnerability as “the characteristics and circumstances of a community, system or asset that make it susceptible to the damaging effects of a hazard”⁹. Hazards defined as a potentially damaging physical event, phenomenon or human activity which may cause the loss of life or injury, property damage, social and economic disruption or environmental degradation. This study includes both to weather or climate related hazards such as change of precipitation or rainfall pattern, temperature rise, cyclones, drought, flooding etc. and environmental hazards such as landslides, deforestation, riverbank erosion and so on. Adaptation is defined as adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities¹⁰. The definition includes both autonomous and planned adaptation actions.

Section 2: Facts and Figures

Over the last decade human displacement due to effect of climate change has increased manifolds. The mean average of last 11 years’ displacement data of the Internal Displacement Monitoring Center (IDMC) demonstrates that each year around 23.5 million people are being internally displaced because of extreme weather conditions (IDMC, 2019). In 2017, 18.8 million people were displaced internally due to sudden onset disasters across 135 countries and territories. Of them 8.6 million were displaced due to floods and 7.5 million were displaced due to sudden onset processes i.e, storms mainly tropical cyclone. In 2017, six of the top ten countries which experienced displacement due to disaster were found in Asia: China, Philippines, Cuba, United States, India, Bangladesh, Somalia, Vietnam, Ethiopia and Nepal. In 2018, sudden-onset hazards, particularly storms, created the displacement of 17.2 million persons in 144 countries and territories. No estimate is available on the extent of displacement due to slow-onset disasters worldwide. Therefore, the total number of displaced population all over the world should be much higher than this. The World Bank estimates that 140 million people across the sub Saharan-Africa, South-Asia and Latin America would be forced to move within their countries by 2050.

A recent estimate on the extent of displacement in Bangladesh suggests that by 2050, one in every 7 people in the country¹¹ will be forced to be displaced due to effect of climate change. UNDP (2013) study shows that population growth in environmentally fragile areas,

⁸ IPCC AR4, 2007.

⁹ “Terminology” the United Nations office of Disaster Risk Reduction

¹⁰ IPCC AR5, 2018.

¹¹ CDMP II, 2014

especially coastal, experience low population growth over last 2 decades compared to the national average. Based on state of population movement within the census of 2001 and 2011, RMMRU-SCMR (2013) projects that if the population movement trend even remain the same, from 2011 to 2050, as many as 16 to 26 million people would move out of their places of origin in Bangladesh due to rapid onset climate hazards¹². These flows would include both internal displacement and other forms of labour migration predominantly within the country.

The IDMC data on past displacement in Bangladesh indicate that between the years of 2008 and 2014 more than 4.7 million people had to move from their place of origin due to disasters.¹³ In 2017, in the global count of displaced population Bangladesh's position was 6th among 135 countries. The same organization records that in 2018, about 1.7 million people were evacuated across 23 districts in Bangladesh, most of them were from coastal areas such as Bagerhat, Barguna, Bhola, Chandpur, Chattogram, Cox's Bazar, Gopalgong, Khulna, Laxmipur, Noakhali, Patuakhali, Pirojpur, Satkhira etc.¹⁴

In 2014 CDMP II conducted a nationally representative survey on the extent of displacement due to riverbank erosion, tidal flood, waterlogging, salinity, cyclones and storm surge. The study covered 14 rapid onset climate disaster facing districts. It finds that 12 percent of the population of those districts had experienced permanent displacement, 46 percent experienced temporary displacement, 29 percent swung between temporary and permanent displacement and only 13 percent never experienced any form of displacement.

Section 3: Nature of climate change related vulnerability

Climate change effects are experienced by different parts of Bangladesh differently. Displacement Solutions¹⁵ identifies that the key driver of displacement in the coastal regions of Bangladesh is the increasing tidal water height (leading to tidal flooding), while tropical cyclones and storm surges are found to be secondary causes of displacement in the coastal areas. Sea level rise (SLR) due to climate change is anticipated to worsen many of these processes and to subsume up to 13 percent of Bangladesh's coastal land by 2080. The most critical and foreseeable impact of SLR is the salinity intrusion of cultivable land, soil and water affecting agro-based livelihoods of coastal population. This is therefore, one of the

¹² Kniveton, D. Rowhani, P. Martin, M. (2013). Future Migration in the Context of climate change, Climate Change Related Migration in Bangladesh. Climate Change Related Migration in Bangladesh Briefing Paper No 3, Brighton: Sussex Centre for Migration Research, Refugee and Migratory Movements Research Unit: Dhaka

¹³ IDMC. (2015). *Global Estimates 2015: People Displaced by Disasters*, IDMC: Geneva.

¹⁴ IDMC. (2019). *Mid Years Figures: Internal Displacement from January to June 2019*, IDMC: Geneva

¹⁵ Displacement Solutions. (2012). *Climate Displacement in Bangladesh | The Need for Urgent Housing, Land and Property(1HLP) Rights Solutions*, DS: Geneva

key triggers of displacement in the coastal area. On the other hand, riverbank erosion and river flooding are the key drivers of displacement in the mainland regions. Eighty percent of the land area consists of floodplains of the major rivers including the Ganga, Brahmaputra and Meghna, which are highly prone to flooding. In catastrophic years such as 1988, 1998 and 2004, more than 60 percent of the country or an area of approximately 100,000 square kilometers was inundated for a duration of nearly 3 months (CEGIS, 2013). In many parts of the country, such events led to multiple displacements of the affected people.

Northwestern districts of Bangladesh face severe seasonal drought and it also creates displacement¹⁶. Droughts are expected to be more frequent and severe due to climate change. Many factors are attributed to drought condition. They include long term changes in rainfall patterns, over pumping of ground water, diversion of water upstream etc. Intensity and duration of drought has been increasingly over the years putting major stresses on livelihood of people of this region. Traditionally, people of this region used to depend overwhelmingly on agriculture. A large section of the land cannot be cultivated in all seasons besides the cost of cultivation has also grown as irrigation has become expensive.

Bangladesh is also risk prone to earthquake as it is geographically located amongst several active faults. The country stands on the northeastern corner of the Indian plate¹⁷. Given that the country's seismic risk may be higher than previously recognized, with an active subduction zone and mega-thrust fault placing the region at risk of an earthquake. Earthquake would also create major displacement both in the urban and peri-urban areas.

The following two sections looks into how different socio-economic groups experience the effects of climate change and what type of condition makes some section of the population more vulnerable to displacement than others. Vulnerabilities are assessed in the light of ethnicity,

Section 4: Vulnerable groups in the origin areas

Loss of homestead and arable land are one of the major effects that people faced in all climate stressed areas. People from mainland lose homestead mostly due to riverbank erosion and floods whereas people from coastal areas of Satkhira, Bagerhat lose their homestead during cyclones. People of coastal Chattogram lose their homestead in flash floods. People who are from drought areas such Chapai Nawabganj and from hill areas of Chattogram Hill tracts have not experienced loss of homestead. However, people from these

¹⁶ Habiba U., Hassan A.W.R., Shaw R., 2013.

¹⁷ There are two major structures relative to the plate boundary, namely the Dauki fault and the Indian-Burma plate boundary fault

areas face major difficulty in cultivating their arable land due to water shortage and depletion of ground water. RMMRU and SCMR (2013) finds that economic status has direct bearing on experience of homestead loss. Those who are economically better off have other lands to reinstate their homestead, some could save losing homestead by raising the plinth of their house. It is the relatively poor people who mostly reside in areas close to disaster risk, be it tidal flood or river erosion. They are the ones who became virtually landless due to loss of land as well as home. When responses are divided between men and women, it appears that home and homestead land loss was seen as the major problem by women whereas men highlighted loss of arable land as the most important loss (Martin et al 2014).

Qualitative data of RMMRU and SCMR survey also captured the changes in livelihood of the respondents over the last 40 years. It shows that before 1980 most of the interviewee households were subsistence farmers, share croppers, agricultural labourers, fisherman, boatman, potter, ironsmith, wood cutter, or engaged in other forest based livelihoods such as honey or leaf collectors,. Over the years, many of these professions became extinct. Those who were in relatively better economic condition have diversified their livelihoods and income sources whereas poorer households particularly those who became landless enjoyed less opportunity to diversify their income sources. In water logged areas of Khulna and Satkhira the rich farmers could afford buy seeds of salt tolerant rice variety that poor farmers could not. Again the rich farmers could irrigate their land in drought prone Chapai Nawbabganj by paying higher price, something their poor counterparts could not afford.

Gendered differences of experience in respect to facing the effects of climate change are pronounced in areas of access to potable water and health services. Women across all economic classes identified carrying potable water from distance areas is a problem during and in the aftermath of a disaster. They also identified water borne diseases, skin disease, as a major problem during and after disaster such as flood, cyclone etc. Lack of access to loan during and in the aftermath of a disaster has been identified by men as the major hindrance in their process of rehabilitation whereas women folk identified access to relief and food as their major problem. Perhaps for this reason, Jayawardhan (2017) argued that it is the marginalized group who fail to adjust to effects that climate change brings on their lives. Similarly Siddiqui et al (forthcoming) find that the challenges faced by male and female members of the displaced households are also different.

Section 5: Vulnerability of the Displaced in the Cities

University of Exeter and RMMRU conducted a survey on state of climate induced new migrants in the slum areas of Chattogram city. It shows that vulnerability of new migrants vary on the basis of geographic location, ethnicity, gender and age (Siddiqui et al

forthcoming). Chattogram is the second largest city of Bangladesh and is an important business center of the country. Employment opportunities attract new migrants to this megacity as it hosts a port, garments other manufacturing industries and export processing zones (EPZs). Low-income migrants are concentrated in impoverished slums in low-lying and hill slopes of Chattogram. The survey covered 450 new migrant households in five areas of the city by using serpentine method of household listing. The sample areas represent slums, colony in hill slopes and ghettos of hill ethnic community close to the EPZ. In the urban setting, they are still exposed to environmental hazards, face low access to urban services and endure sub-standard work conditions. The new internal migrants who moved to different parts of Chattogram city both from plains and hill districts identified a number of challenges. These include inadequate and inhumane housing conditions, lack of access to safe drinking water and sanitation, high rent and fear of eviction from illegal settlements. The fragility of livelihoods and income is an overarching threat, which defines the experiences of all migrants, whether it is male or female, or from plain or hill areas. More importantly, all groups of migrants feel powerless and unable to make their voices heard to the municipal authorities.

Lack of privacy while bathing, long queues for using toilets, incidents of sexual harassments are top concerns of female migrants' as well female members of male migrant households. Long working hours is a major concern of female garment workers. Migrant women, particularly working in formal sector, complain about lack of child care facilities. They feel that they have compromised health and safety of their children for work.

Issues related to housing and sanitation were not on the priority list of concern for the male migrants. They talked more on work related anxieties. Men working in the formal sector including factories were concerned about lack of tenure and fluctuating income. Men who work as street hawkers, identified police harassment, demands for bribes and frequent eviction from roadside and footpaths as their major concerns. Those who work in waste collection suffer from skin disease and breathing problem. Primary and secondary education is free in Bangladesh yet children face problem in going to school as the roads are water logged for several months in a year. Children themselves identified, absence of playground, power cut during their study time, getting wet while commuting to school as their regular experience of growing up.

Migrants residing in established slums in low-lying areas of Chattogram experience regular water logging, water borne diseases and low quality of civic services such as safe drinking water, cooking gas and sanitation facilities. Migrants both men and women living in

unauthorised settlements in hill slopes are more worried about landslides during the monsoon season.

There is a distinct difference between migrants who come from the hills and those who are from the plain land. Plain land migrants face no problem in accessing existing religious and spiritual sites in new urban locations, be they Hindu or Muslim. In contrast finding places for religious congregation is a major problem that the Buddhist hill community faces in a new urban location.

Section 6: Vulnerability to Irregular Migration

Bangladesh has a long history of participation in short-term international contract migration to Gulf, other Arab, and South East Asian countries. Majority of Bangladeshi workers are lowly skilled. Up to 2010 people from climate change affected districts hardly participated in this market. This is due to factors such as absence of government institutions and private recruiting agencies that facilitate international migration in the climate affected districts. Lack of resources to bear the high cost of international migration and lack of access to social network also hinder participation of the poor people (Siddiqui, 2017). Based on empirical evidence, a number of studies (CDMP II, 2013; RMMRU and SCMR, 2014; IOM, 2010;) have identified that majority of migration flows from the areas which face the effect of climate change where internal.

Since 2010, a section of persecuted Rohingya population from Myanmar attempted to flee Myanmar to Malaysia through irregular maritime route of Bay of Bengal and Andaman Sea. These informal journeys soon culminated in the development of a syndicate of human smugglers of Thai, Bangladeshi, Malay and Burmese origin. Gradually, the syndicate also targeted the Rohingya refugees residing in Bangladesh. Within a very short span of time, these human smugglers also started luring poor Bangladeshis who aspired to migrate for work but could not do so for reasons of high cost. They targeted adult males from those regions of the country that are not exposed to short-term international contract migration and consequently have little knowledge about the pitfalls of movement through the irregular route. Climate change affected regions fall into one of the major catchment areas. At that point of time, the average migration cost to different Bangladeshi labour market would vary from BDT 200,000 to BDT 400,000 (\$2444 to 4888)¹⁸. The smugglers offered aspirant migrants a cost that was as low as BDT 10,000 to BDT 15,000 (\$122 to 183). The offer enticed many Bangladeshis to fall prey to the human smuggler.

¹⁸ RMMRU, 2013

The discovery of illegal detention centres and mass graves in the Thai-Malaysia border in 2014 brought to fore the worst cases of human trafficking of Bangladeshis and Rohingya refugees. Based on the newspaper reports of districts of the Bangladeshis who returned from the detention camps of smugglers and the dead, RMMRU found that 66 percent of those victims were from the 19 climate hit districts of Bangladesh. This demonstrates that if right kind of adaptation measures are not in place, effects of climate change can create scope for trafficking and irregular migration.

Section 7 Policies and Laws

Major policies that deal with climate change and migration is: National Adaptation Action Plan (NAPA) 2009, Bangladesh Climate Change Strategy and Action Plan (BCCSAP) 2009, Standing Orders on Disaster (SOD) and National Strategy on the Management of Disaster and Climate Induced Internal Displacement (NSMDCIID). The first two policies have not addressed the issue of displacement. SOD provides instructions to different actors at national and sub-national levels on managing displacement. However, the focus is overwhelmingly on the initial emergency shelter during the disaster. The other two phases of displacement, pre-displacement and post displacement is absent in SOD. The Ministry of Disaster Management and Relief (MoDMR) has drafted a National Strategy on the Management on Disaster and Climate Induced Internal Displacement on the basis of UN Sendai Framework, UN Guiding Principles on Internal Displacement as well as the 2030 agenda of Sustainable Development Goals. It is a rights based document which covers all phases of displacement-prevention, protection during displacement and durable solution. The Strategy is going through an inter-ministerial scrutiny process and is expected to be adopted soon.

The majority of the urbanization policies continue to view rural-urban migration as a problem of development and treat it as the cause of widespread urban poverty. Some of these policies even calls for relocation of the displaced back to their origin areas (National Housing Policy 2016). The draft National Urbanization Policy 2014 is more open to rural-urban migration. However, urban experts see very little scope for adoption of the draft policy. The policy makers who deal with climate change are yet to absorb the reality that Bangladesh is rapidly becoming urbanised. By 2030, 44 percent of the population will be living in cities and by 2050 more than half the population will be living in the cities (GED, 2016). This is not only due to push factors such as climate change or poverty in rural areas; it is also due to pull factors such as demand for labour in urban growth centres. Therefore, urbanization policies have to accommodate the need of the new migrants to attain SDG 11- inclusive safe and sustainable cities.

Section 8 Conclusions and policy consideration

Conclusions: The paper amply demonstrates that effects of climate change are already contributing to creation of forced displacement situation in Bangladesh. Relatively better off families can diversify their family income sources and adapt to changes affected by climate change related events. Generally they can also afford relocation to other spaces when need arises. They also have access to credit and social network which help their adaptation process. It is the poorer community who face major hardship to cope with climate induced displacement. The poorer people initially attempt to relocate within the village or close by villages, however when income sources disappear then the full family or income earners of the family migrate to distant places, the ultimate destination is usually the big cities.

Along with economic status, the effect of displacement is experienced differently by men, women and children be it from same economic class or from other. Women from poorer communities who end up in slums are more worried about the situation of housing, access to sanitation, sexual harassment, insecurity of their young children and lack of child care in work place. Men are more concerned about precarity of their job conditions, fear of eviction, drug problem etc. In the context of Bangladesh, the experience of displacement also vary according to ethnicity. Climate stresses that contribute to displacement are different for the people of hill community of Chattogram compared to the people of the mainland. Similarly, their concern in urban setting is also different. Almost all the policies currently in operation, except the SODs, do not deal with displacement. The two policies that integrate rights of displaced are yet to be adopted.

Policy consideration

8.1 General recommendations

- Displaced populations are not a homogenous group; they experience a host of different social economic and environmental risks depending on their gender, ethnicity and place of residence and type of employment. Voices of all groups have to be incorporated in policies.
- Current practice of concentration of climate adaptation programmes only at local levels of rural areas has to be expanded and climate change adaptation fund should be allocated for the well being of the displaced population who are working in cities.
- The current trend of mega city development has to be replaced by decentralization of growth centres to others cities which have potential to enhance national growth by

accommodating new migrants be it displaced due to effect of climate change or otherwise.

8.2 Specific to the Government of Bangladesh

- In future when the existing policies on climate change (NAPA, BCCSAP and Delta plan 2100) will be reformed, those should integrate concerns of displaced population.
- The NSMDCIID and the draft National Urbanisation Policy 2014 should be adopted without any further delay. All other national polices including upcoming 8th Five Year Plan should have specific sections targeted to reduce vulnerability of climate induced displaced population.

8.3 For Bali Process:

- Objective 23 of the Bali Process commits to strengthen international cooperation and global partnerships for safe, orderly and regular migration. In the context of climate change to attain this objective Bali Process can encourage member states to initiate policy reforms that would accommodate rural urban migration as one of the many adaptation tools rather than treating it as failure of local level adaptation.
- Objective 23b commits to increase international and regional cooperation to accelerate the implementation of the 2030 Agenda for Sustainable Development in geographic areas from where irregular migration may occur due to effects of climate change and disasters. It can specifically target encouraging member states to implement SDG 11 at national level to ensure inclusive safe and sustainable cities through development of innovative partnerships while upholding national ownership and shared responsibility.

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