

# Climate Change Induced and Environmentally Stressed Migration in Dhaka

Professor Nurul Islam Nazem, Md Rezwan Siddiqui, Md Anwar Hossain

**Urban Studio, University of Dhaka**



Supported by Bangladesh Climate Change Trust Fund



## Bangladesh

is regarded as one of **most vulnerable** countries to climate change

**low** lying land      High **density** of population      **Nature dependent**  
livelihood and etc.

### **Sudden-onset events**

Cyclones  
Flood  
Coastal/ river bank erosion

### **Slow-onset processes**

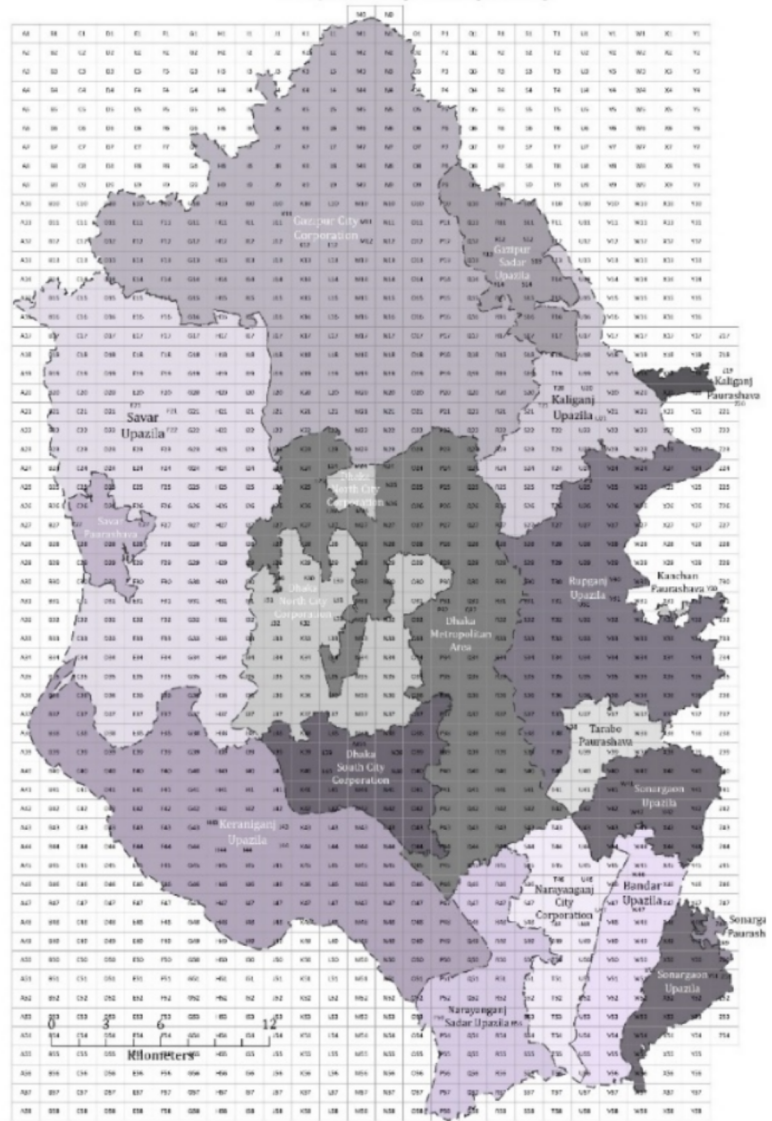
Drought , Salinization, Sea level rise  
Loss of biodiversity, Land and forest  
degradation, Ocean acidification  
~~Glacial retreat and related impacts~~  
Increasing temperatures

## Dhaka

(Greater Dhaka)

- The Capital
- Includes 4 city corporation!
- 17 Million population
- Annual growth rate of population 4.2 %
- Highly vulnerable to natural hazards and climate change effect

### Project Study Area (DMDP)



**NAPA** (National Adaptation Programme of Action, 2009) and **BCCSAP** (Bangladesh Climate Change Strategy and Action Plan, 2009) identified climate displacement as a **potential future event** and **draws direct links** between climate change and displacement in Bangladesh.

# National Strategy on the Management of Disaster and Climate Induced

**Internal Displacement (Draft):** aims to respects, protects and ensures the rights of climate-induced internally displaced persons (CIIDPS) in different stages of displacement and during the search for durable solutions.

- Backed by the key researches done **at the origin of migration/ CC vulnerable areas** (CDMP, 2014; Displacement Solution, 2012; Kniveton, et al., 2013 and etc.)
- To tackle urban climate migration problem it suggested **Decentralization of Urban Growth Centres** and referred to National Urban Sector Policy (2014) **(which doesn't include any special provision/ suggestion for such migrants)** for accommodating CC migrants in urban areas

Aim of this research

Providing evidences on the links between climate change, environmental stresses and migration of the people to urban areas (Dhaka City).

Climate Change

Vulnerability

Scale

Evidence

Origin

Factors

Environmental stresses

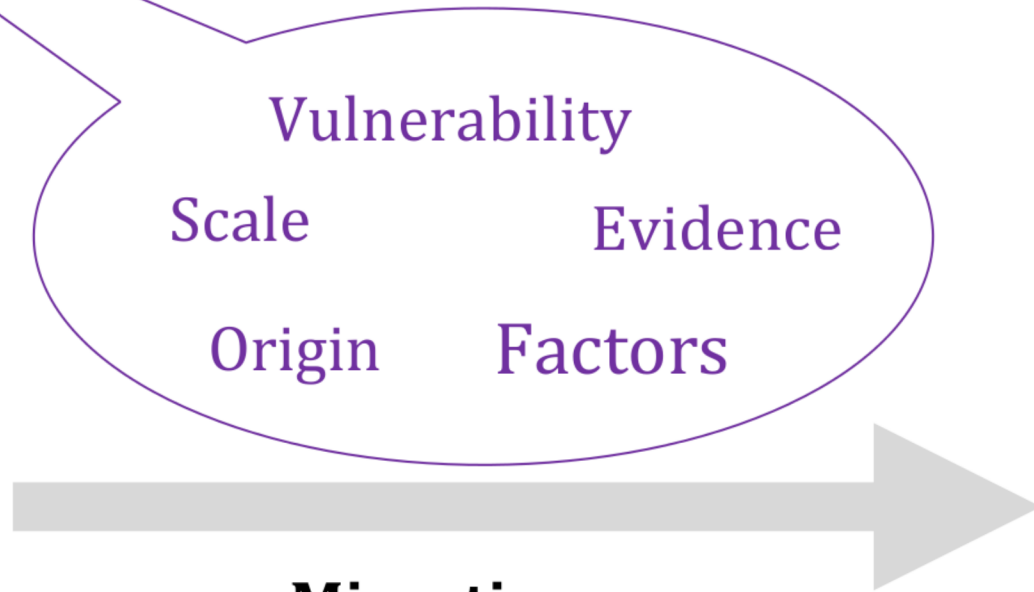
Urban

Natural hazard

**Migration**

Dhaka Metropolitan Region (DMR)

Dhaka



# Methodology

background

- Empirically examine the assumptions and the contexts of the migration, keeping **Urban** at the center of the discourse

Locating

- Identified potentially environmentally vulnerable and habitats of migrants. This facilitated framing of the **Survey**

Census

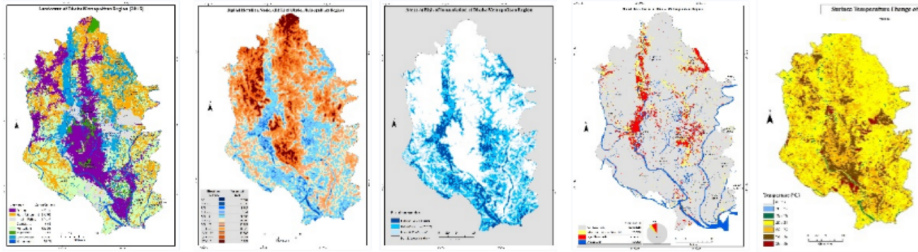
- Collected data through survey of **12,078 migrants' household** and **864 group surveys** around the Greater Dhaka

Result

- Collecting, processing and analyzing the data to explain the contexts and assumptions

# Vulnerable Area and Migrants' Location Identification

Satellite  
Image  
Analysis



Google earth image  
grid



Checklist Survey of  
landuse and  
vulnerability

Grid No.	Area	Land Use	Vulnerability	Remarks

864 Group Surveys

Group Survey Form

Grid No. \_\_\_\_\_

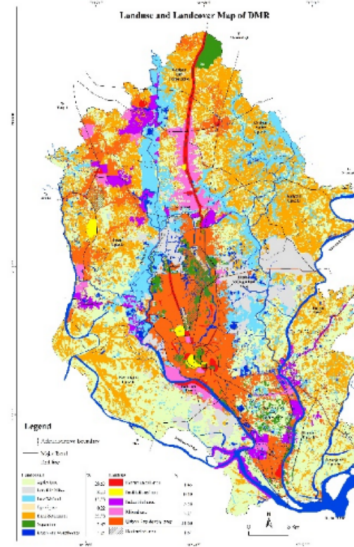
Area \_\_\_\_\_

Land Use \_\_\_\_\_

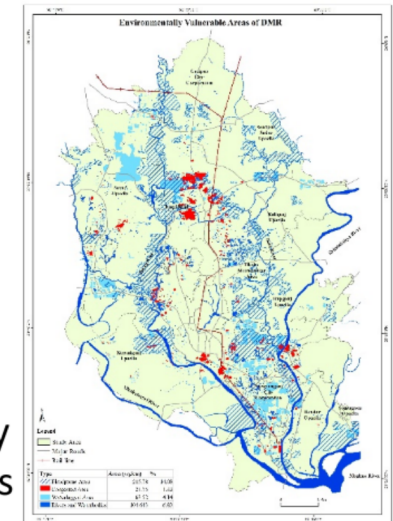
Vulnerability \_\_\_\_\_

Remarks \_\_\_\_\_

Grid No.	Area	Land Use	Vulnerability	Remarks

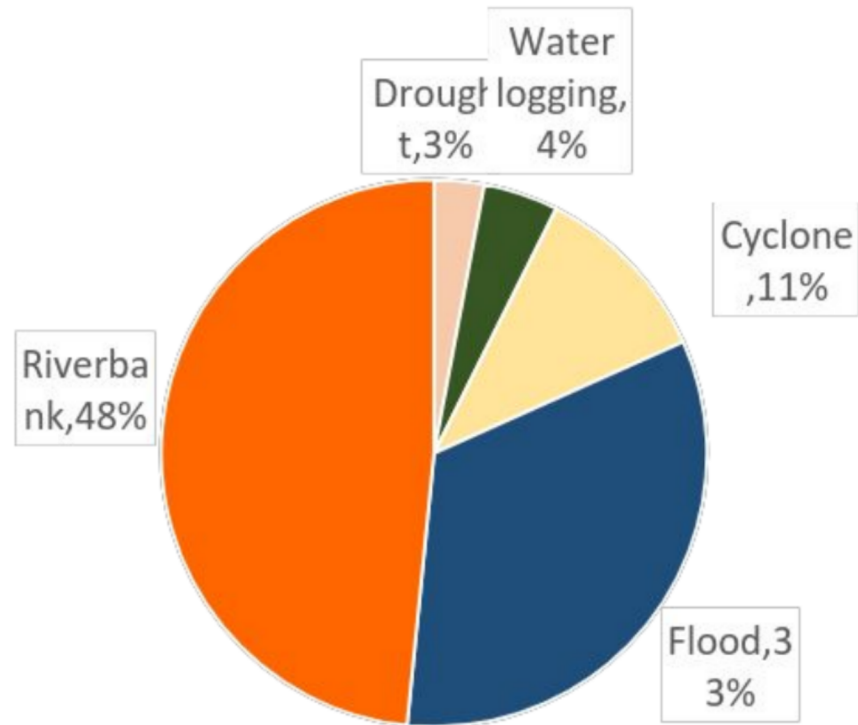


CC and  
Environmentally  
Vulnerable areas  
of DMR



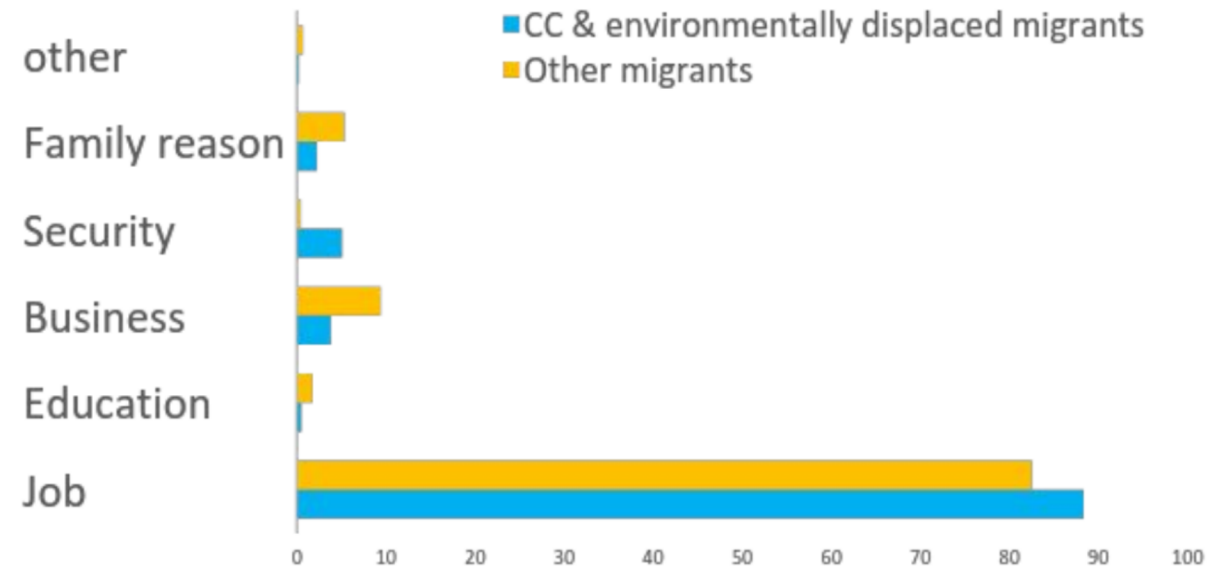


**20.9 %** Migrants in Dhaka Metropolitan Region (DMR) are Climate Change & Environmentally Stressed



**Major CC related factors & environmental stresses of Migration**

## Pull factors of Dhaka for migrants

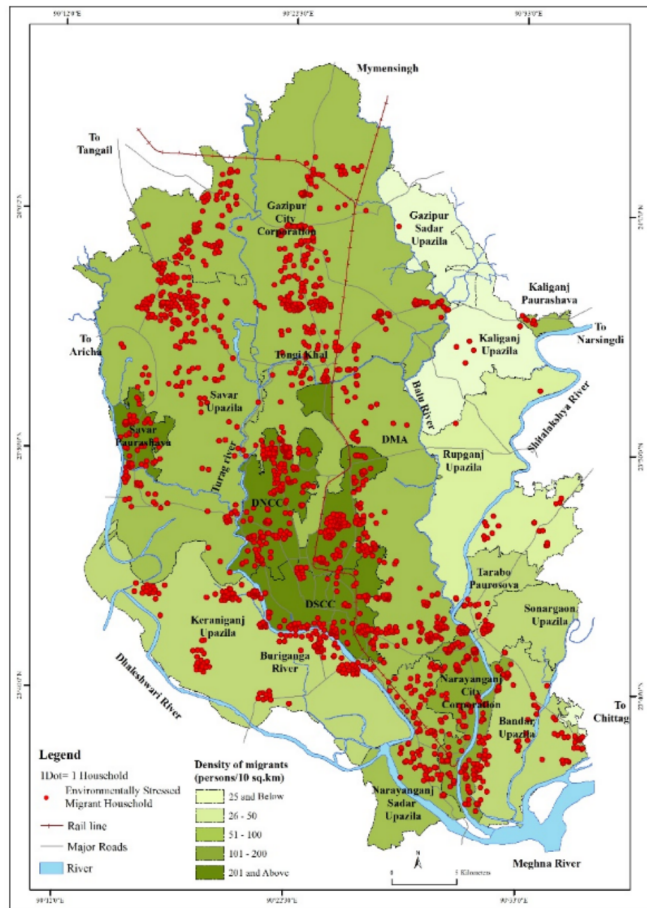


Dhaka attracts migrant by providing better job and business opportunity.

Better security (social and political) sometimes attract CC and environmental migrants

Family reason (e.g. marriage, to live with family) is prominent among other migrants

# Spatiality of CC and Environmentally Stressed Migrants in DMR

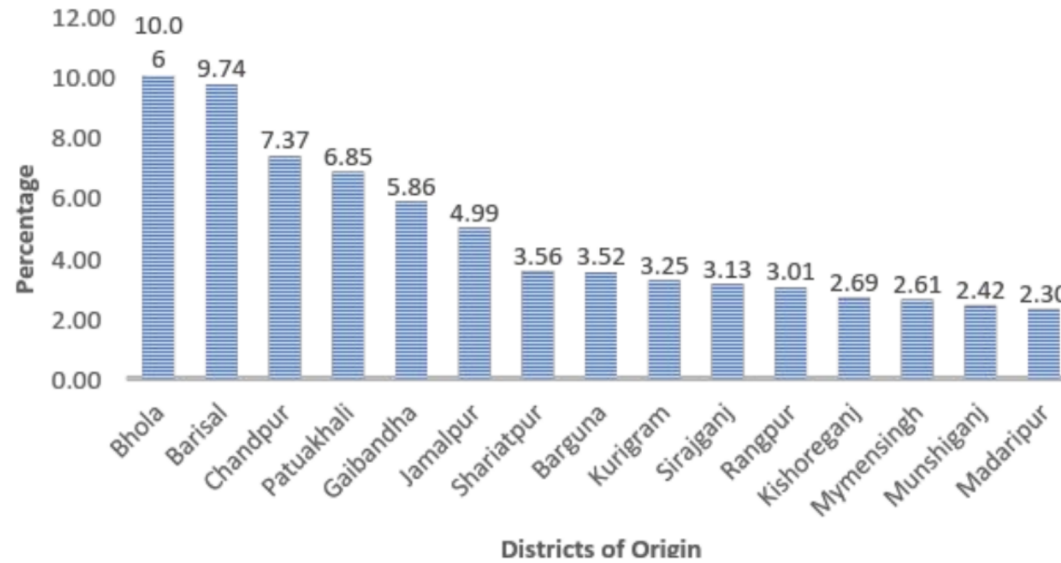
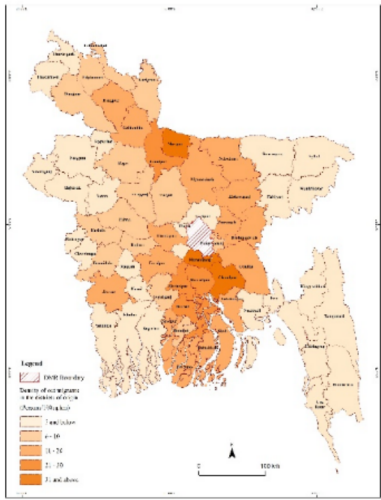


Migrants tend to avoid living near agrarian based occupational locations

Dhaka North City Corporation has the highest concentration (density) of environmental and CC migrants

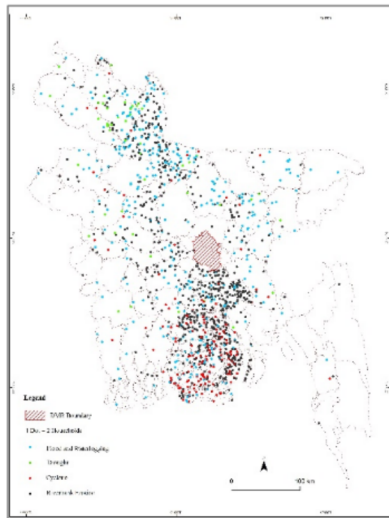
Dhaka Metropolitan, the centre of this megacity, is receiving fewer migrants now (both climatic and non-climatic) than before.

# Origin of the CC and Environmentally Stressed Migrants living in DMR



Highest percentage of CC and Environmentally induced migrants are coming from Bhola (10.06 %), **Barisal (9.74 %)**, Chandpur (7.37 %), Patuakhali (6.85 %), Gaibandha (5.86%);

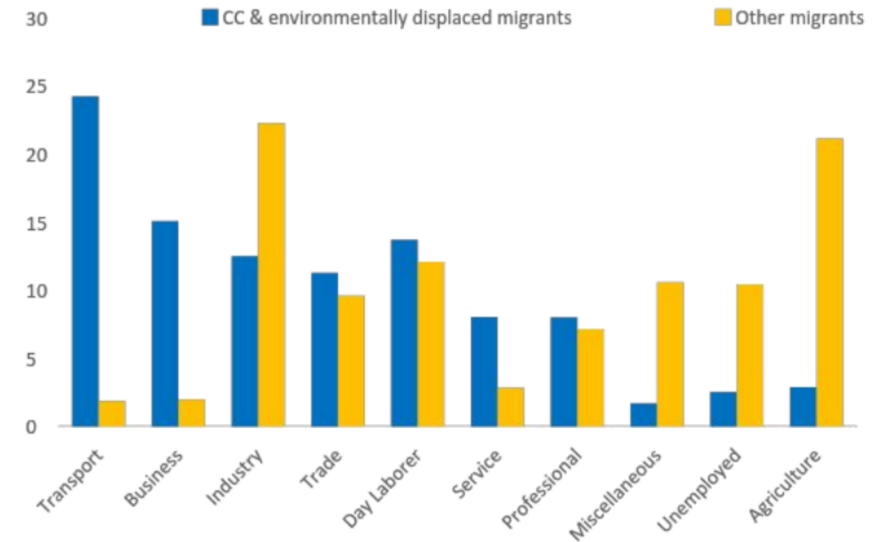
Whereas highest percentage of non-CC migrants are from Mymensingh (8.38 %), Sherpur (4.9 %), **Barisal (4.77 %)** and Comilla (4.7 %), Kishoreganj (4.58 %).



# Economic Characteristics of the migrants

## CC and Environmentally induced migrants

- Work comparatively more in **transport**, **local businesses**, and in **service** sectors
- Less involved in **Industry** and **Agriculture** sectors
- Have **3 times less unemployment**



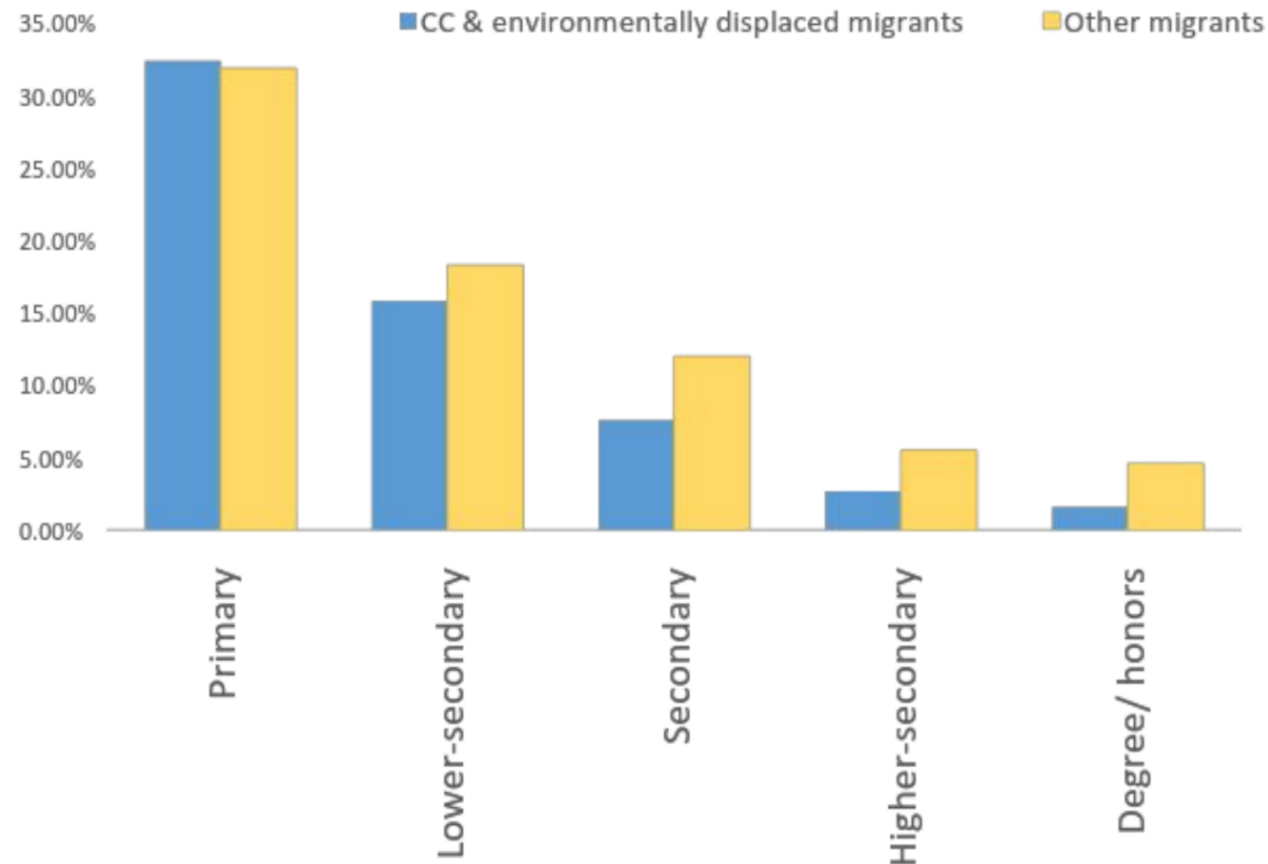
- **Highly desperate to get any job**
- **More likely to work in contractual job sectors/ short term opportunities**

## Education enrolment/ attainment of the migrants

Illiteracy is **13 % higher** among CC and Environmental induced migrants

Enrolment in primary education found same for all (around 32 %)

However, after that **education attainment rate decreases faster** among CC and environmentally induced migrants



## Gender differences among migrants

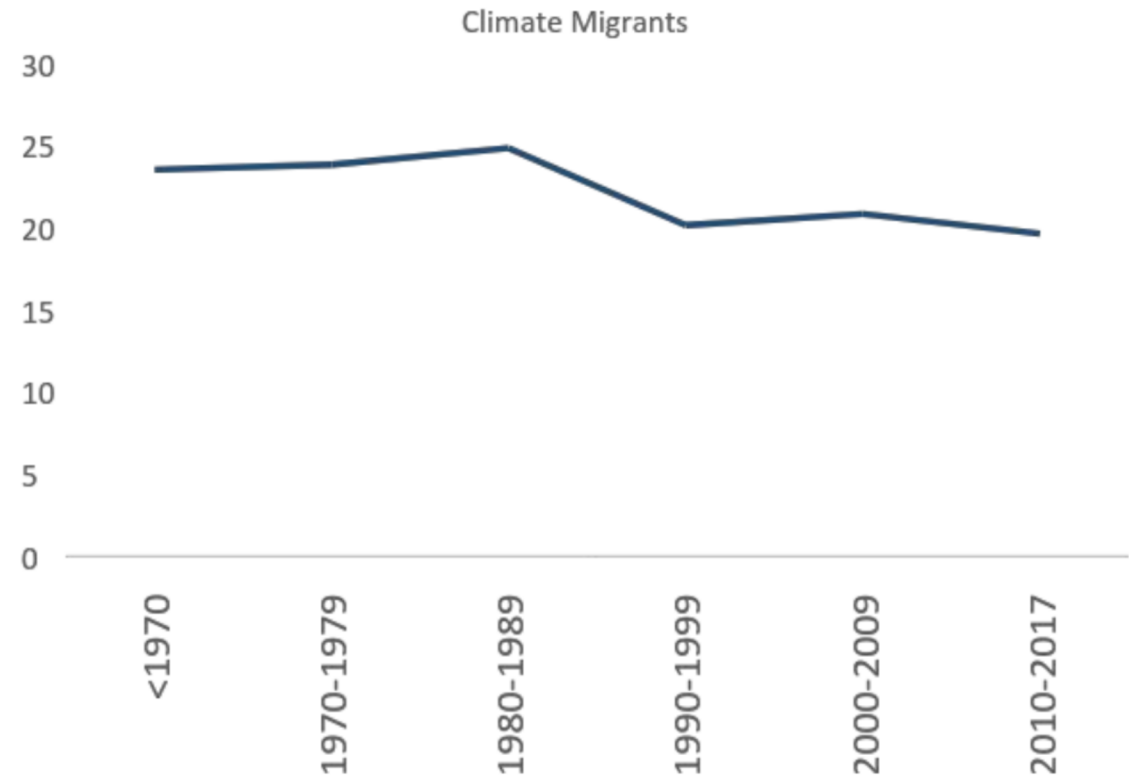
Female migrate **10 % more** due to Climate Change and Environmental reasons than non-climatic reasons



Source: [http://www.thefinancialexpress-bd.com/assets/images/news\\_images/2017/05/03/\\_68988.jpg](http://www.thefinancialexpress-bd.com/assets/images/news_images/2017/05/03/_68988.jpg)

# Temporal characteristics of migration

1950 – 1990 the average CC and Environmentally induced migration toward Dhaka was 26.12 %, which settled at the rate of 20.04 % during 1991- 2017





## Other vulnerabilities

CC and Environmentally induced migrants are **living in poor house condition**: 12.7 % of CC and environmental migrants live in concrete houses compare to the 22.22 % of the non-CC migrants.

3.38 % more cases these migrants live without paying rent (Illegal/ floating/on Khas land)

## Conclusion & Future Research Planning

**In-depth interview** randomly selected **550 HH** is underway

- Detail of migration scenario
- Adaptation strategy
- Challenges

**KII** with the policy makers and key stakeholders

- Suggest necessary modification in the existing policies
- Develop policy action

# Thank You

Professor Nurul Islam Nazem, Md Rezwan Siddiqui, Md Anwar Hossain  
**Urban Studio, University of Dhaka**

