Natural Hazards and Migration in the Coastal Region of Bangladesh

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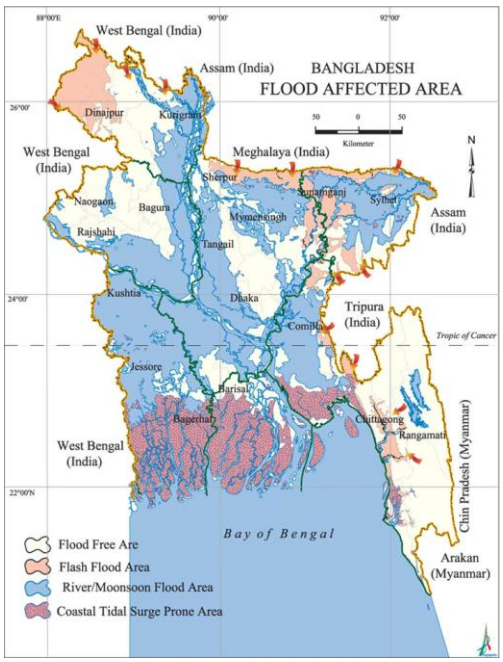
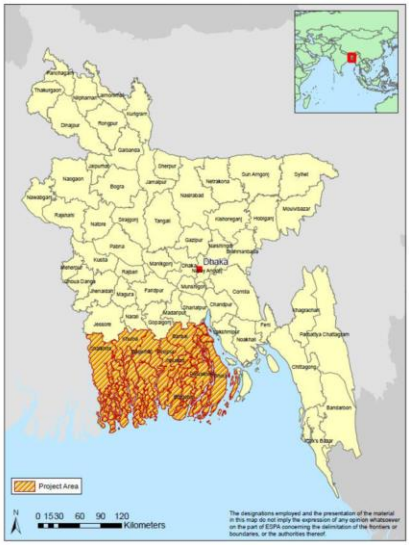


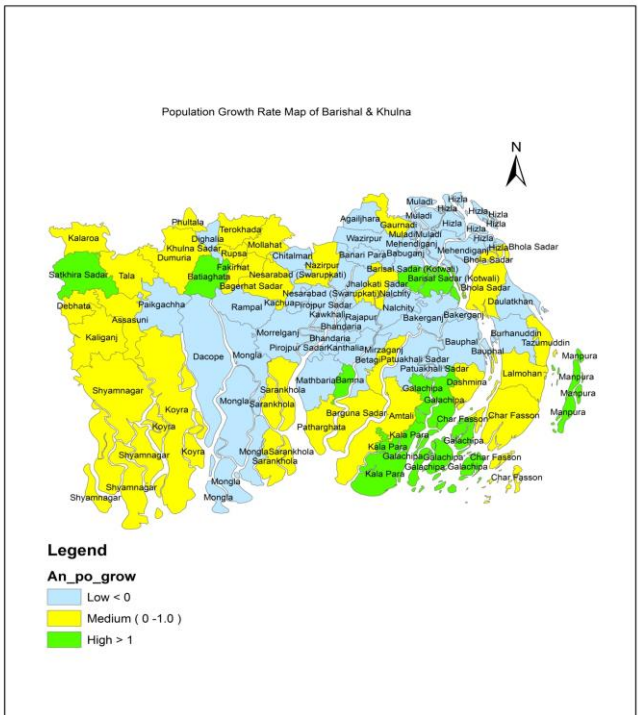
The coastal region – changed landscape

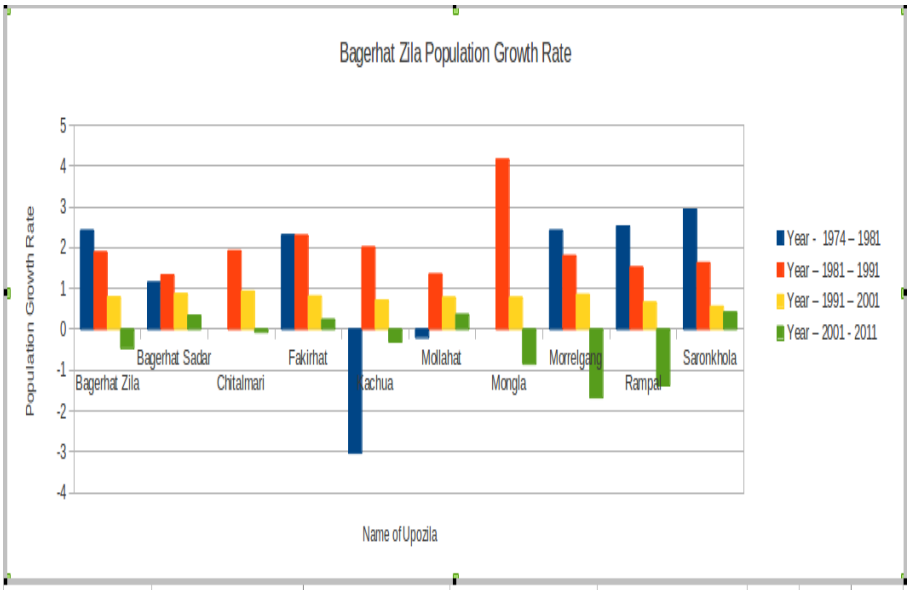
Time line of changes

- Pre-1960s – regular tidal flood - floodplain agriculture
- Polders in 1960s – no salinity intrusion – agricultural boom
- Increase in salinity in river water since1970s – operation of Farakka barrage
- Shrimp cultivation in the1980s – Polders converted for shrimp cultivation
- River siltation – drainage congestion in many polders in the 1980s
- Two consecutive cyclones in 2007 (Sidr) and 2009 (Aila) – difficulties in rehabilitation of polders
- Rising sea level in recent times – water logging and salinity intrusion

ESPA – Deltas study area







Depopulation -Methods of investigation

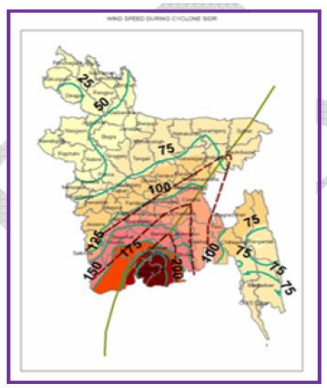
- Field visits 2014
- On-site focus group discussions
- Literature review e.g RMMRU (2013)

Major causes of migration

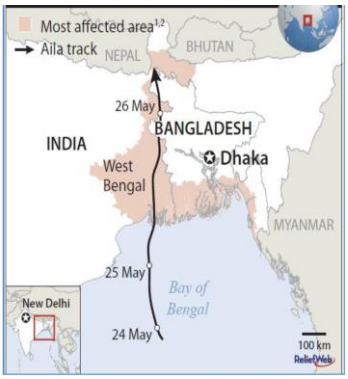
- Environmental degradation
  - Shrimp cultivation
  - Salinity
  - Drainage congestion
- Political situation
- Cyclones (Sidr and Aila)

Cyclone tracks

Sidr (2007)



Aila (2009)



Immediate consequences - Loss and Damages

Cyclone	Sidr (2007)	Aila (2009)
Persons affected	8.9 million	3.9 million
Deaths	3,363	190
Injuries	55,282	7,103
Damaged houses	1.5 million	613,000
Loss of livestock	2,6 million	150,000
Damage to embankment	1,875 km	1,742 km
Total economic damage	$ 1.7 billion	$ 270 million

Intermediate consequences

- Lack of drinking water
- Lack of shelter
- Lack of livelihood opportunities (farming and fishing destroyed)
- Anticipation of more disasters

➢ **Migration**

Long term consequences – difficulties in rehabilitation of polders

- Very old polders
- Morphological changes
  - Silted up and wider channels because of polderization
  - New channels formed to convey storm surge
- Severe labor shortage due to
  - Migration
  - Lack of proper living condition
  - Lack of drinking water

➢ **Loss of system resilience – forced and permanent migration**

Conclusion

- Several causes for depopulation
- Loss of system resilience
- Long term planning is needed to re-establish its habitability especially in the face of climate change

Acknowledgement