Present and future research on environmental migration in Asia

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What the talk is supposed to be about

- Identification of recent theory and research that has significantly **advanced knowledge** concerning the relationship between environmental change and migration relevant to Asia.

- Identification of theory, modelling, and research that is **most needed** for analysis of environment and migration in Asia.

- Consideration of the implications of needed theory, modelling and research for the organization of **social science and training** in Asia.

It is impossible to comprehensively examine the relationship between migration and climate change in Asia, due to the enormity of the issues, especially the considerable uncertainty surrounding climate change impacts. Knowledge of existing patterns, drivers and impacts of population mobility in Asia also remains constrained by the lack of comprehensive and accurate data (ADB 2012a; McAdam 2010; Foresight 2011). What research has been undertaken examining the link between climate

Source: Hugo and Bardsley 2014, pp.37.
Literature on environmental migration in Asia

• Overwhelmingly about Bangladesh
• Displacement vs. migration
• Most forced migrations due to development or government intervention involve rural migration
• Most environmentally induced migration is internal (Hugo and Bardsley 2014)

Source: Fussell 2012. (Figure 2.3)
Relevant theoretical concepts

• Migration is one adaptation strategy

• Translocal social network perspective (Patrick Sakdapolrak)
  - Increasing connectedness of daily life, facilitated by multiple forms of mobility, including everyday movements, and seasonal and long-term migration
  - Translocality highlights the importance of migration-induced feedback processes between areas of origin and destination

• Gender dimension
  - Higher mortality from 2004 Indian Ocean Tsunami for women
  - Boy preference → differential feeding patterns when experiencing climatic shocks (Muttarak and Dimitrova 2019)
Location of areas in South Asia likely to be most impacted by coastal flooding associated with sea level rise riparian flooding, cyclones/typhoons and water stress as a result of climate change.


Where will the people being affected by climate hazards go? Will they actually move?

Alarmist vs. Reductionist
Predicting future environmental-induced migration in Asia?

Migration along the established migration corridors
- **Urbanisation** and **circular migration** between rural and urban areas
- **International diaspora networks**: 1) provide resources for adaptation; and 2) influencing directions of mobility
- Forced migration along the corridors established by **original refugee flows** e.g. Afghani refugees in Iran and Pakistan
Challenging BUT interesting future research areas on environmental migration in Asia

- **Destination of environmentally-induced migrants**
  - Are they likely to move to low-lying mega-cities, disaster-prone areas?
  - Mobility intention in response to heat stress in urban area (Zander et al. 2019)

- **Limits to adaptation**
  - Differential vulnerability and adaptive capacity (Muttarak, Lutz and Jiang 2016)
  - How can we imagine the future? Shared-socioeconomic pathways? (Abel 2018)

- **Modelling the indirect impact of environment on migration**
  - Simultaneous equations with binary endogeneous regressors (Abel, Brottager, Crespo Cuaresma and Muttarak 2019)

Acceptable, tolerable and intolerable risks in relation to adaptation limits

Source: Dow et al. 2013.
Implications for the organisation of social science and training in Asia

- Harmonised measurement of climate and environmental variables
- Identifying secondary data sources
- Need both micro- and macro-level analysis

Distribution of estimated standardized effects by type of environmental hazard. Precipitation and temperature capture effects either related to absolute level changes or changes in the variability (anomalies, deviations from the mean, coefficients of variation). Rapid-onset refers to all short-term disaster events, such as storms, floods, and other calamities.
THANK YOU FOR YOUR ATTENTION!

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A conceptual framework for the drivers of migration as presented by Black et al. (2011b, p. S5)
Example: Estimating the influence of climate on conflict and forced migration

- Climate
  - Drought $\rightarrow$ crop failure
  - Poor natural resource management

- Conflict
  - Conflict over scarce resources
  - Demographic pressures in destination area

- Migration
  - Internally displaced persons
  - Asylum seekers/refugees
  - Economic migrants