Modeling and Projecting Forced Migration and Population Displacement

A summary of key points from the NAS May 2019 Workshop

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Modeling Forced Migration Challenging

- Benefits clear: has the potential to help policymakers and service providers anticipate service usage

- Key challenge: modeling exogenous shocks that cause forced displacement
  - Natural disasters
  - Famines
  - War/conflict
  - Other human causes, e.g. crime/trafficking

- How to then model probable scenarios
  - Each type of shocks has different effects distribution
  - Complexity of definitions

An Overview of Modeling in Forced Migration Research

- At the 2019 NAS workshop, Frydenlund summarized how modeling has played a role in forced migration research since the early 2000s
  - Initially used by governments for scenario planning
  - Grew increasingly complex in academic literature
  - Combines multiple paradigms; interdisciplinary
- Benefits of a complex adaptive systems approach
- Currently, three types of models:
  - System dynamics or macro models
  - Discrete event models for specific contexts
  - Agent-based or individualistic models

Benefits of a Demographic Approach to Modeling

- Muttarak (2019) discussed how traditional stocks-flows analysis can be extrapolated to provide indirect estimation

- Possibilities of adding additional big data, such as email, social media, or internet searches – e.g. Zagheni and Weber (2012), especially if geotagged

- Demographic approaches also help with resettlement forecasting

- Advanced approaches include selection equations, Bayesian models, and conditional state probabilities

Summary

- Models are imperfect, but valuable if done well
- Complex models of forced migration and displacement can serve to facilitate discussion, explore policy and response scenarios, and structure thoughts
  - Tend to require an interdisciplinary approach
- New and old approaches can be combined into models to estimate, understand, and forecast forced migration and population displacement
  - These help capture the complexity and interaction of drivers of migration as well as impacts of different scales of analysis

Panel Speakers

- Jean-Christophe Dumont (Organisation for Economic Cooperation and Development)
- Alexander Kjærum (Danish Refugee Council)