

How can we best forecast internal displacement and return trends?

Bit(e)-Size Research Question:

Does the inclusion of ethnic and transportation network factors improve an agent-based model's simulation of displacement and return trends?

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MACS 30200
April 4 2018**

Motivation and Background

- Globally, internally displaced people (IDPs) are the most numerous humanitarian population of concern (UNHCR 2018)
- IDP != asylum seeker != refugee != migrant != immigrant
- IDPs need support during displacement and upon return
- Prediction can improve planning, response

Case Study

Republic of Iraq, 2017- Present

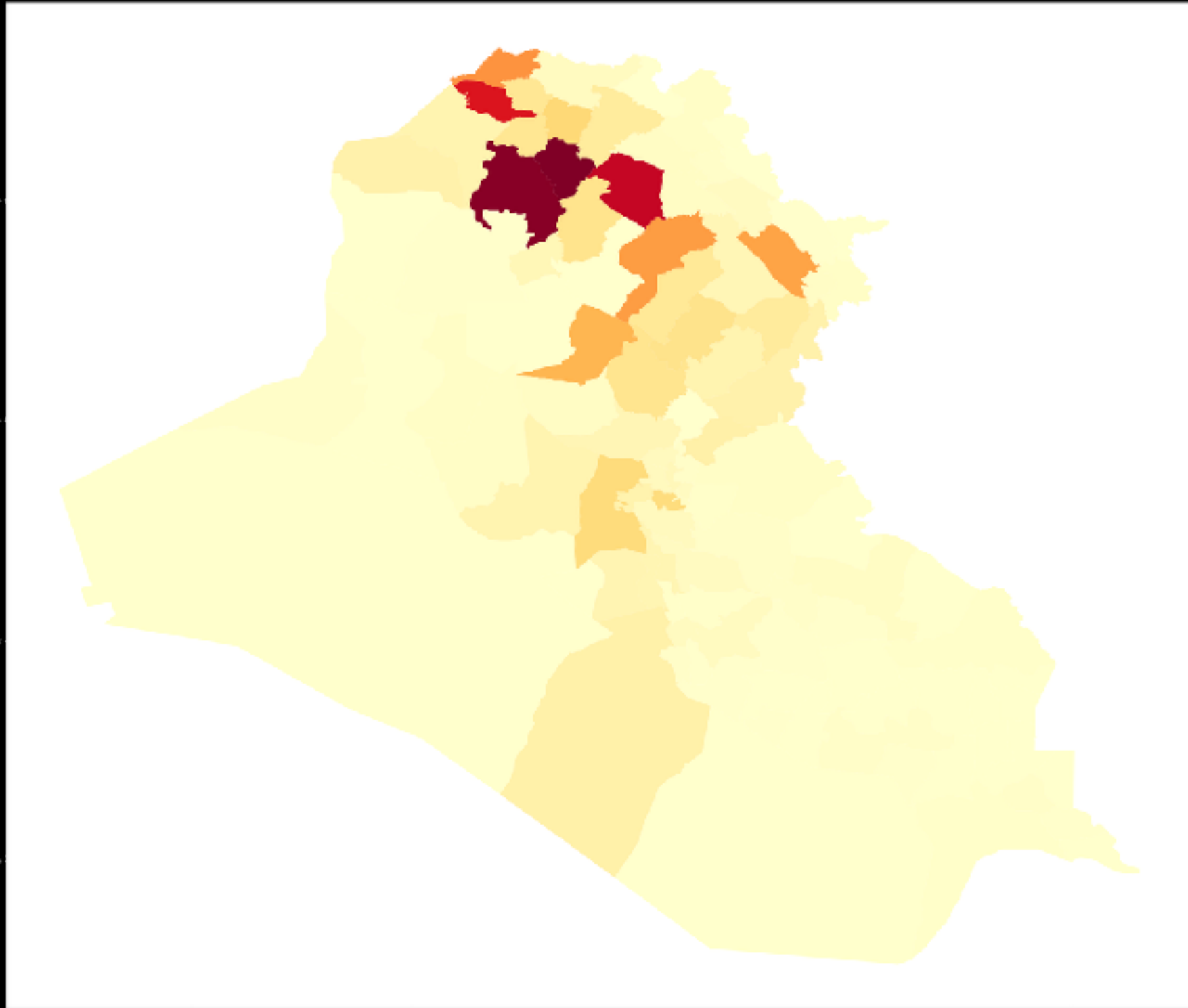
Data

- International Organization for Migration Displacement Tracking Matrix (Iraq)
- Armed Conflict Location and Event Database
- UNOCHA Open Street Map Data dumps

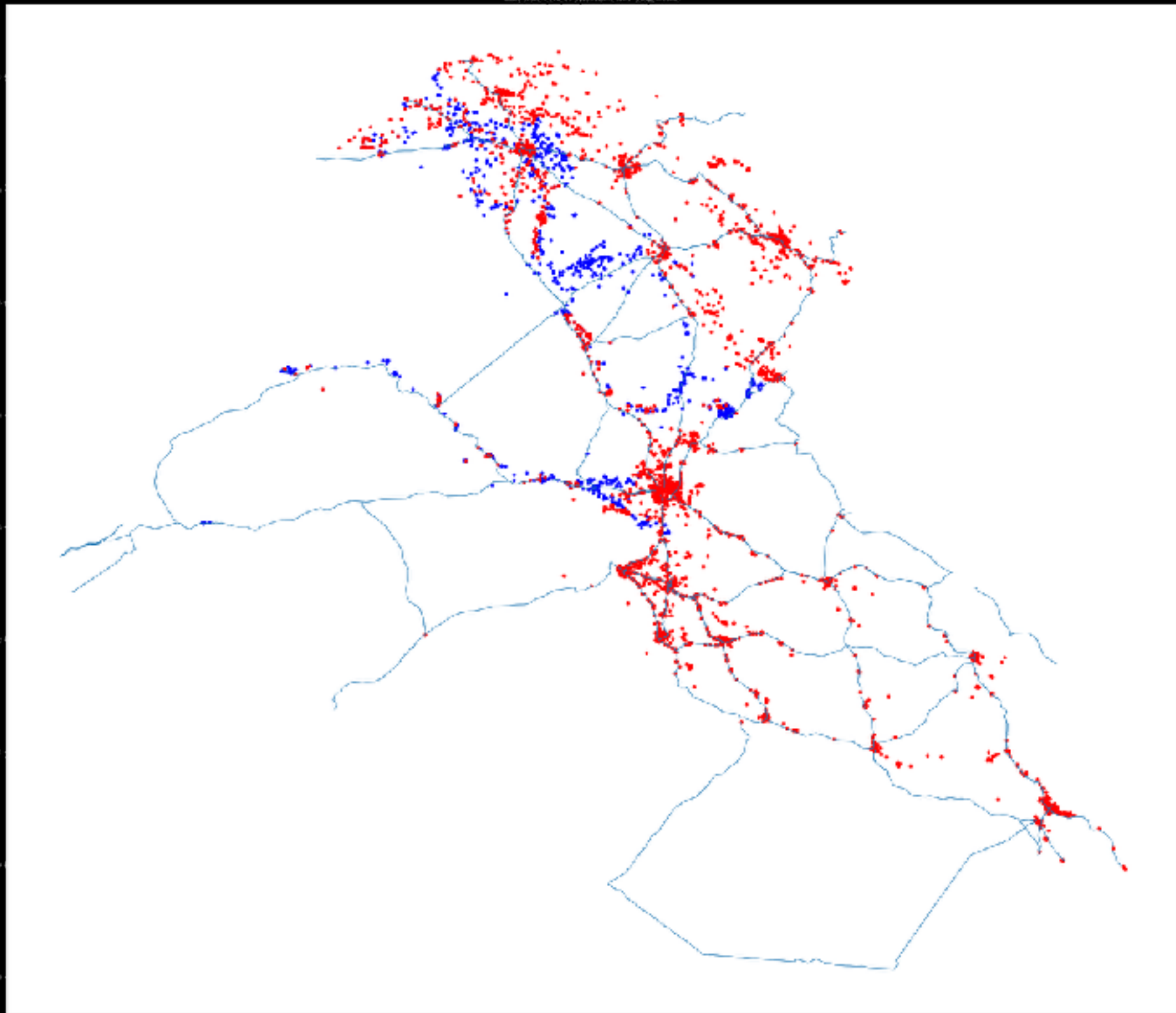
Validation

- Data from 01-2018 - 05-2018

IDP Volume By District



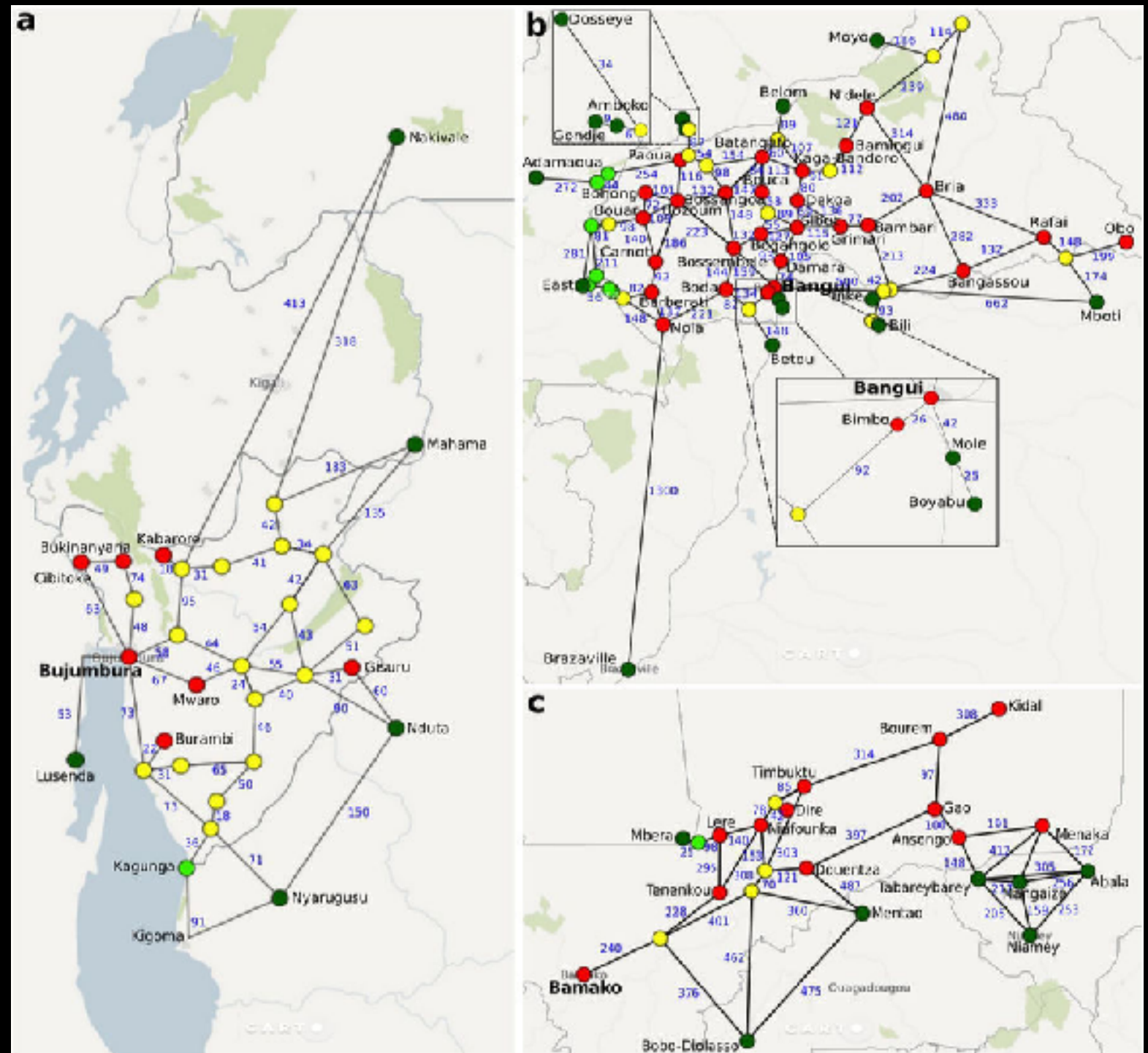
Iraq Main Road Network



Encouraging Progress

Most recently:
Suleimanova, Bell, Groen
(11-2017)

- Cases: CAR, Burundi, Mali
- Claim $> 75\%$ prediction after a few “days”
- Builds on Groen (2016)



Room for Improvement

- Unclear ties to current displacement theory
- Explicitly link results to wider literature
- Comparison to (very) naive alternatives
- Validate against more sophisticated alternatives
- One direction - no returnees
- Incorporate returnee agents | create a return environment

This Contribution is Valuable because...

- There is already a rich qualitative literature on displacement
- Costs of poor prediction are high
- Displacement and return interact with each other

Approach

- A. Enrich Suleimanova et al's simulation with additional factors (e.g., co-ethnicity, transportation network density, checkpoints, returns, information asymmetry)
- B. Validate the simulation against more sophisticated alternatives (e.g., random walks)
- C. Establish stronger links to theory and practice in forced migration