Climate Change and Migration

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Outline

- Why climate change and migration?
- Summary of recent reviews
- Global evidence from IPUMS Terra
- Global evidence from DHS

THE GREAT CLIMATE MIGRATION

By Abrahm Lustgarten | Photographs by Meridith Kohut

HOW CLIMATE MIGRATION WILL RESHAPE AMERICA

Millions will be displaced. Where will they go?

HOW RUSSIA WINS THE CLIMATE CRISIS

Climate change and its enormous human migrations will transform agriculture and remake the world order — and no country stands to gain more than Russia.

The impact of climate change on migration: a synthesis of recent empirical insights

David J. Kaczan[1] iD · Jennifer Orgill-Meyer[2] iD

A meta-analysis of country-level studies on environmental change and migration

Roman Hoffmann iD[1,2] ✉, Anna Dimitrova[1,3], Raya Muttarak iD[3,4], Jesus Crespo Cuaresma[1,3,5,6,7] and Jonas Peisker[3]

CEPA DP No. 29

A meta-analysis of climate migration literature

Barbora Šedová
Lucia Čizmaziová
Athene Cook

Summary of recent reviews

- When and where is the climate=>migration signal the strongest?
  - Middle-income & agriculturally-dependent
  - Slow-onset precipitation & temperature shocks
  - Internal moves
- When and where is the climate=>trapping signal the strongest?
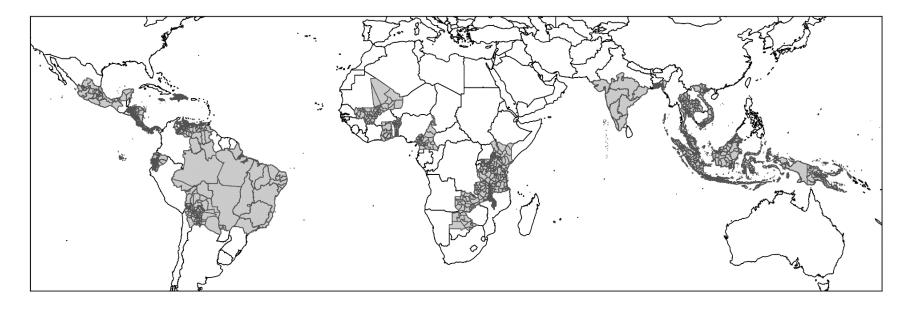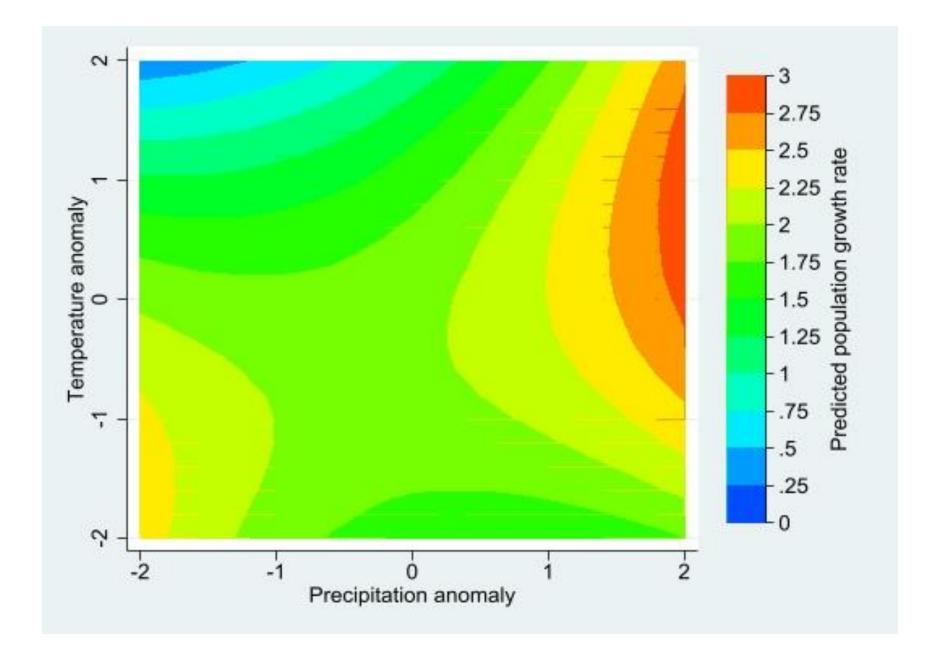 - Low-income countries

IPUMS
TERRA

Adjusted Predictions with 95% CIs
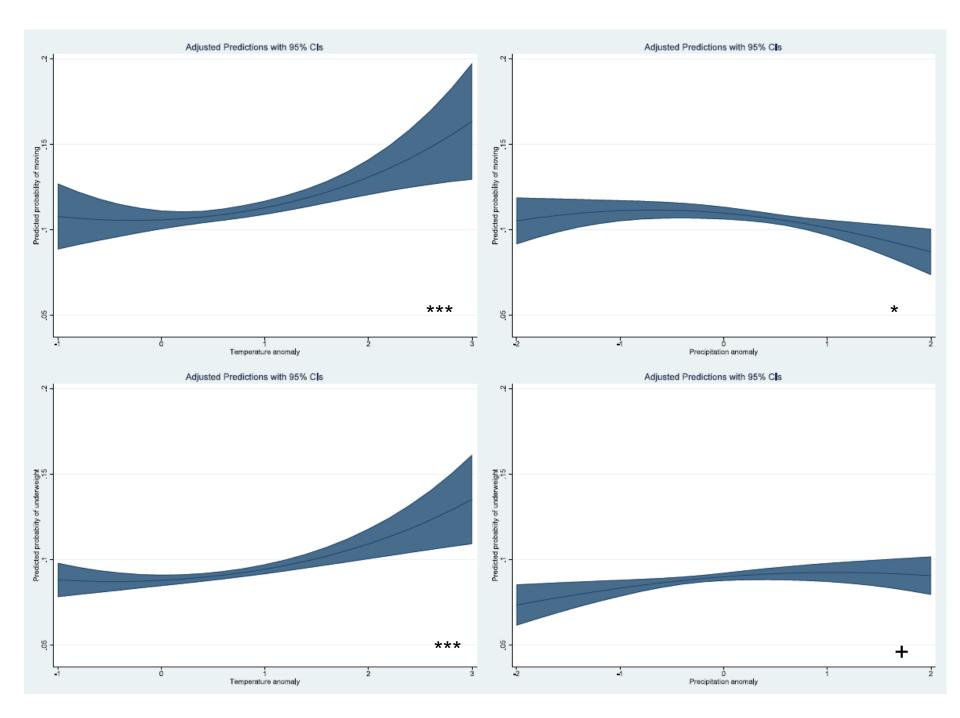
Conclusions

- Climate-induced migration is happening but will not be easily distinguishable from existing population flows.

- A large literature documents that migrants tend to prosper more than stayers => We should be more concerned about trapping than movement.

- These findings have not yet penetrated much beyond the academy = We have work to do.
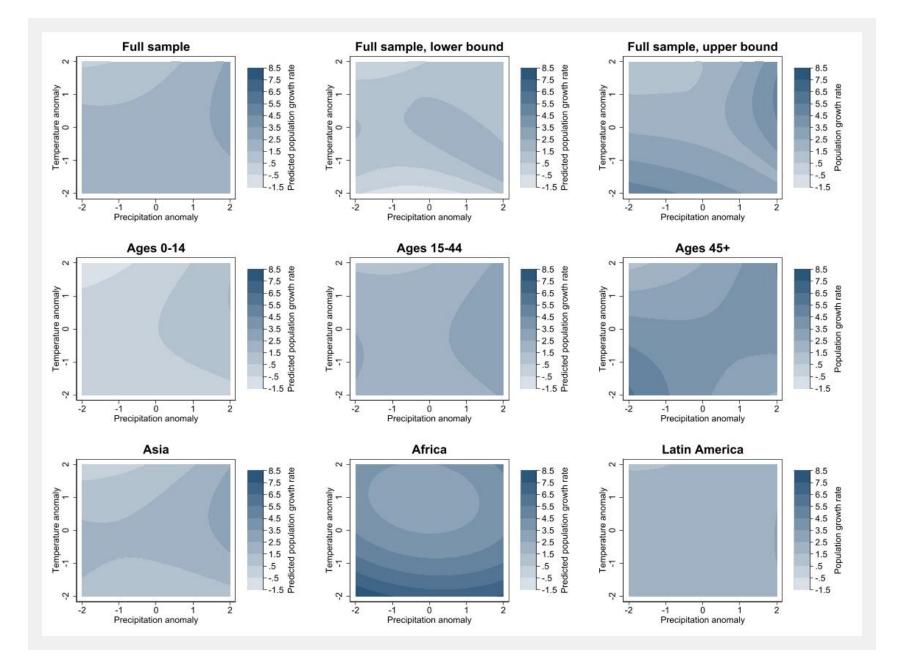
Thanks!

Data and **Methods**

Fixed effects panel data regression

Dependent variable: Annual population growth rate

Independent variables of interest: Linear and quadratic decadal temperature and precipitation z-scores

Also controlling for educational attainment, sex ratio, population density, dependency ratio, and linear time trends

Full sample

Full sample, lower bound

Full sample, upper bound

Ages 0-14

Ages 15-44

Ages 45+

Asia

Africa

Latin America

We use all surveys in the IPUMS-DHS interface where adult anthropometry, temporary migration and time-stable shapefiles are available.

- **26 surveys from 12 countries**
- Temporary migration = absence for at least one month in the past year (n = 36,0776 women)
- Underweight = BMI < 18.5 (n = 24,2330 women)

Using time-stable geographies constructed by the IPUMS-DHS project (right), we link these women to **temperature and precipitation anomalies for the 12 months prior to their interview date** extracted from CRU-TS gridded data.

These steps and the following analyses were implemented by **students working on one country each via a series of lab assignments**.