

Thailand

Cambodia

Vietnam

Data disaggregation for mapping and monitoring the SDGs

world
pop



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Professor Andy Tatem

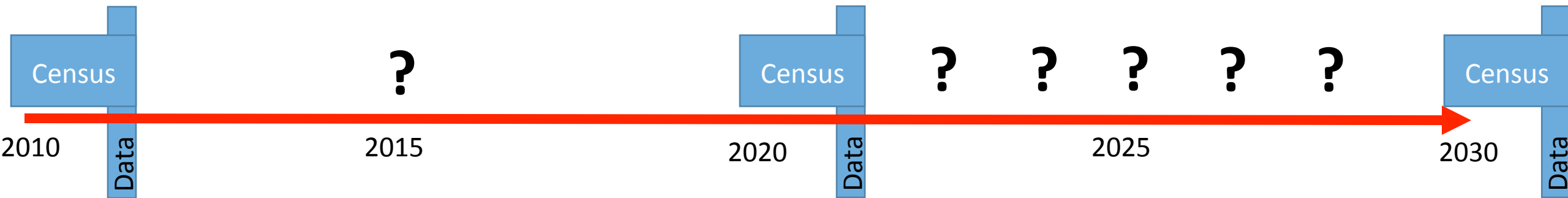
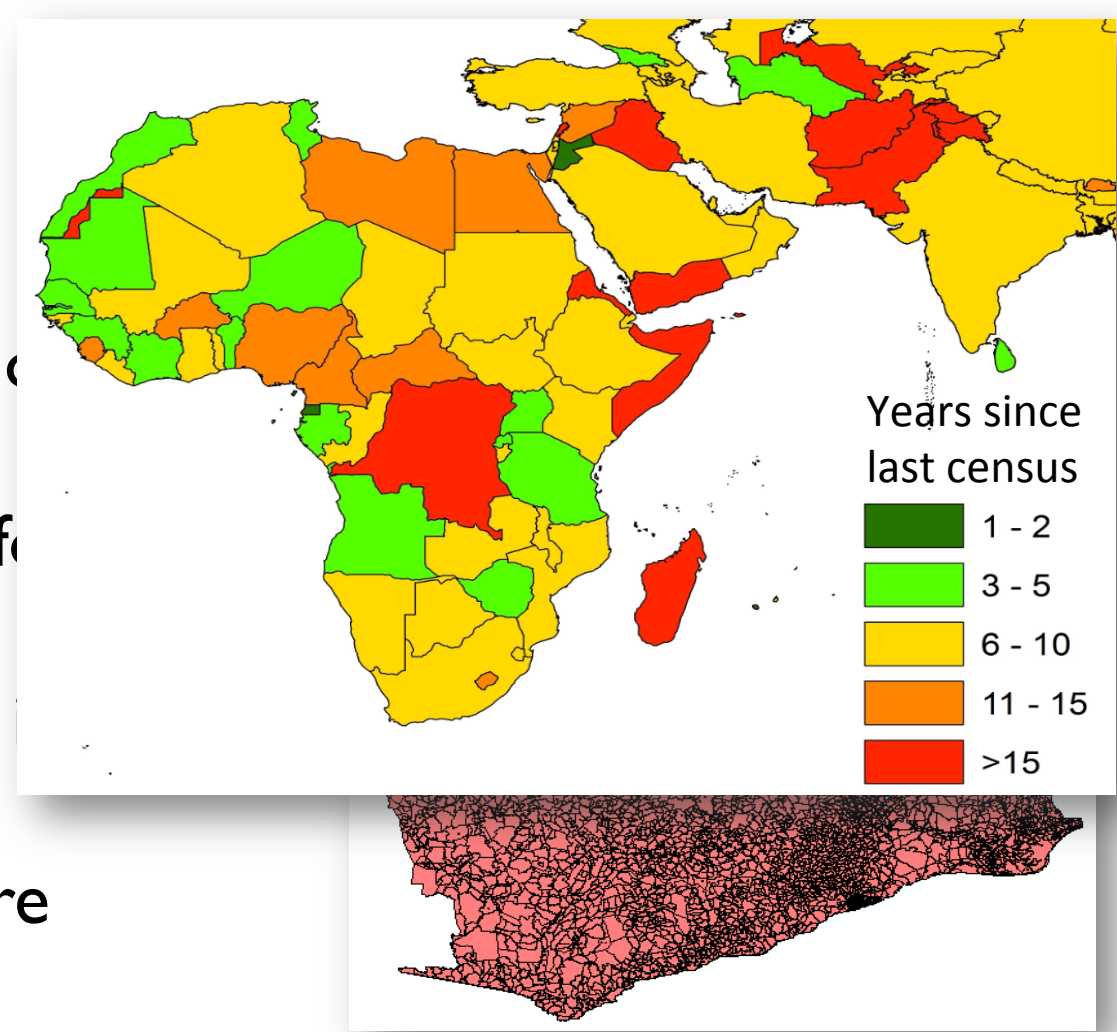
Development goal denominators

- All MDGs and SDGs are based on ensuring a certain percentage of the population has access to specific services or resources, or achieves a certain level of social, economic, or physical health
- SDG focus on achieving x,y,z *everywhere* = geography is important
- Requires a consistent, comparable and regularly updated understanding of not only how many people live in a country, but where the people are, and who they are
- Creates challenges.....smaller sample sizes....data sparseness



The challenge

- National census data will continue to be the most important data source
- Provides denominators and numerators for SDGs, and requisite subnational detail
- But, the 2015-2030 SDG period typically has just one census datapoint
- And in some settings the situation is more challenging



What do we have to help us?



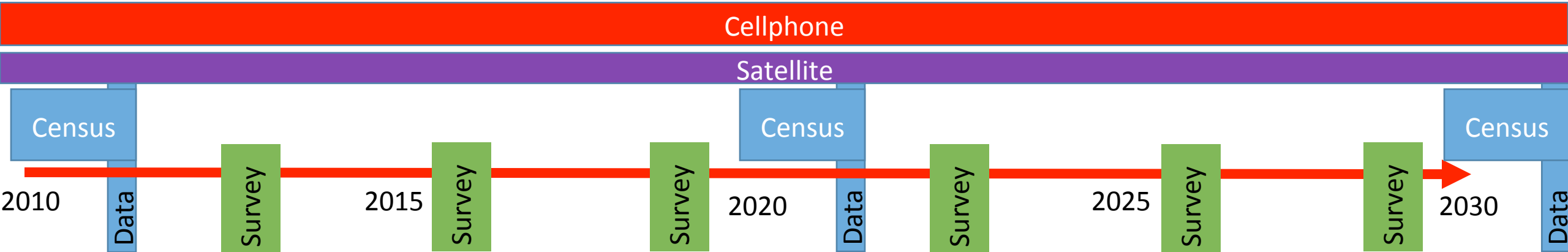
Geolocated household surveys



Satellite and GIS data



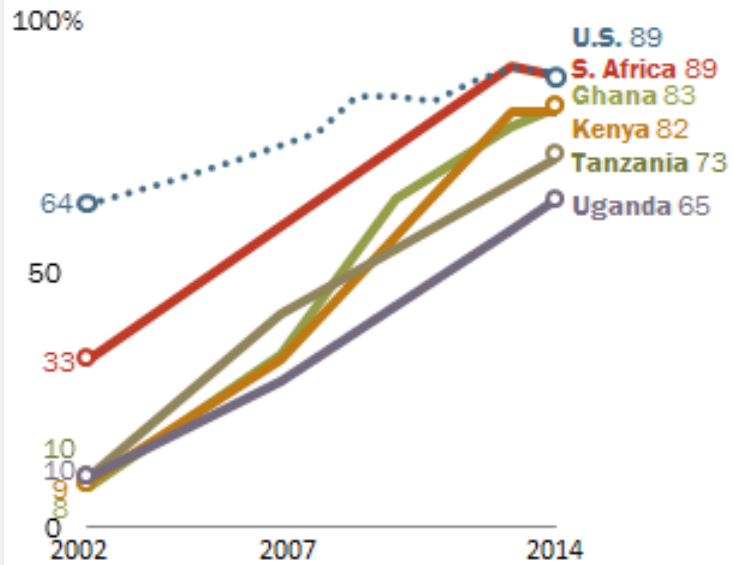
Cellphone data



Cellphone call detail records

Cell Phone Ownership Surges in Africa

Adults who own a cell phone



Note: U.S. data from Pew Research Center surveys.

Source: Spring 2014 Global Attitudes survey, Q68.

PEW RESEARCH CENTER

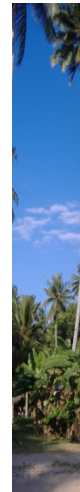


User makes a call from location X



User travels to Y and makes a call

Call near



Mobility: Changing densities, flows, seasonal/permanent migration

Social networks: Number of contacts, calling patterns

Consumption: Credit purchase frequencies, top-up amounts

Collaboration opportunities

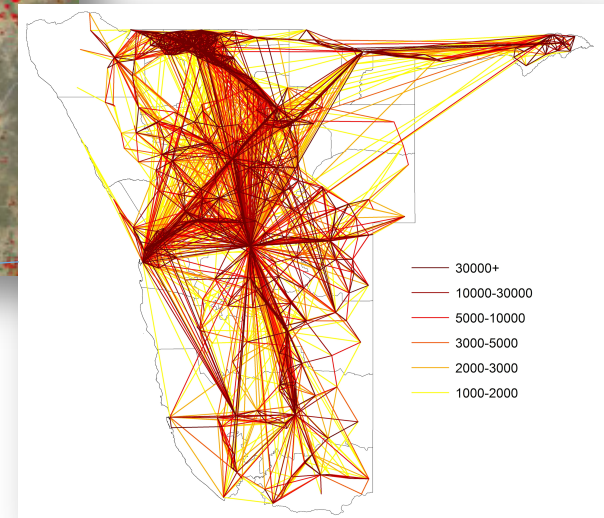
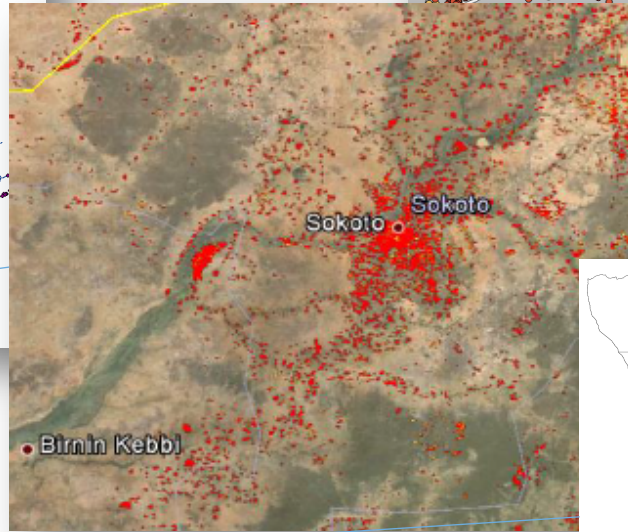
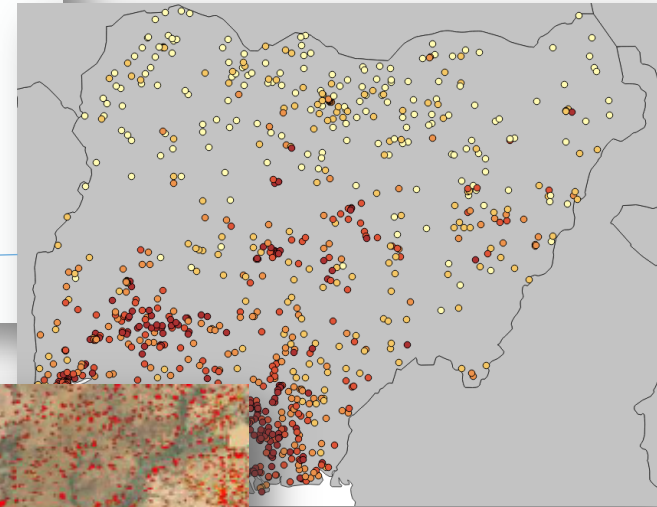
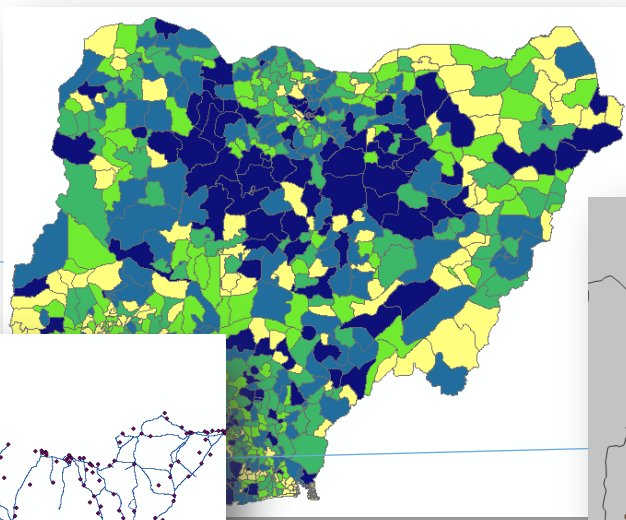
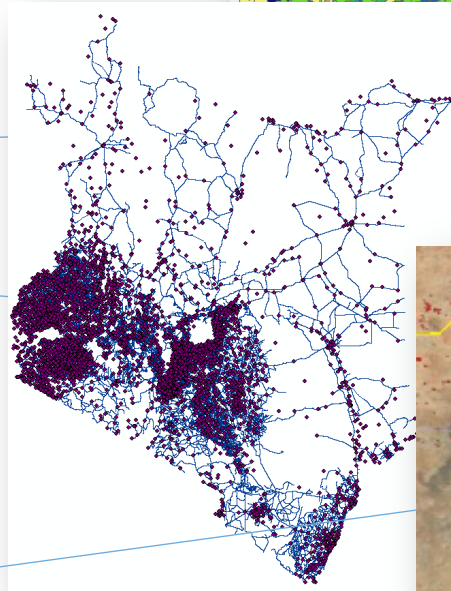
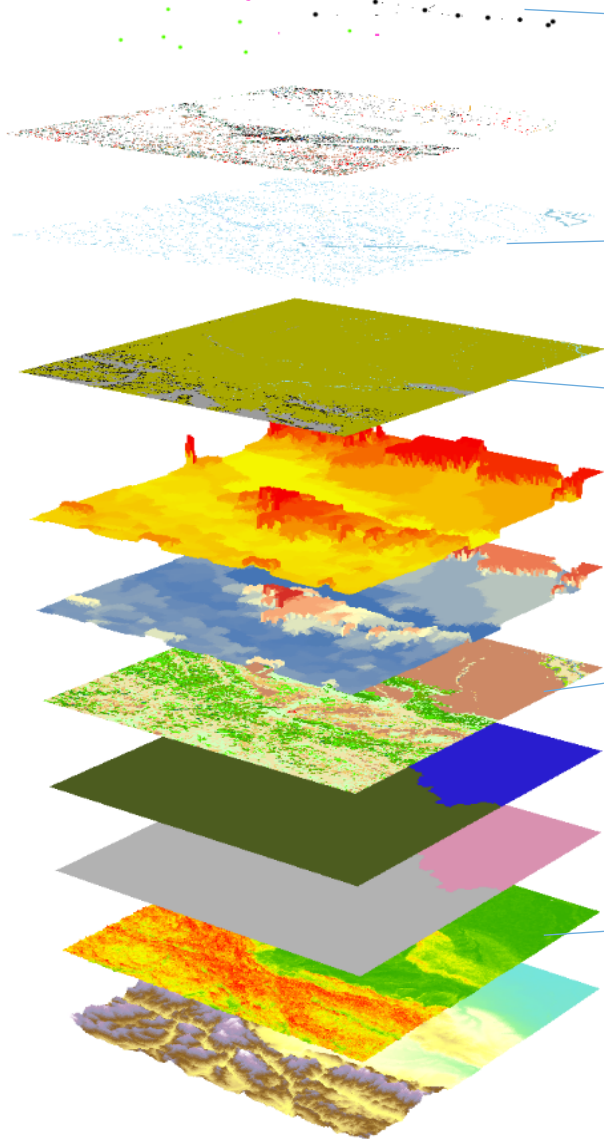
Vodafone Foundation is keen to find collaborators in Ghana to make use of mobile network data for public good



Vodafone Foundation

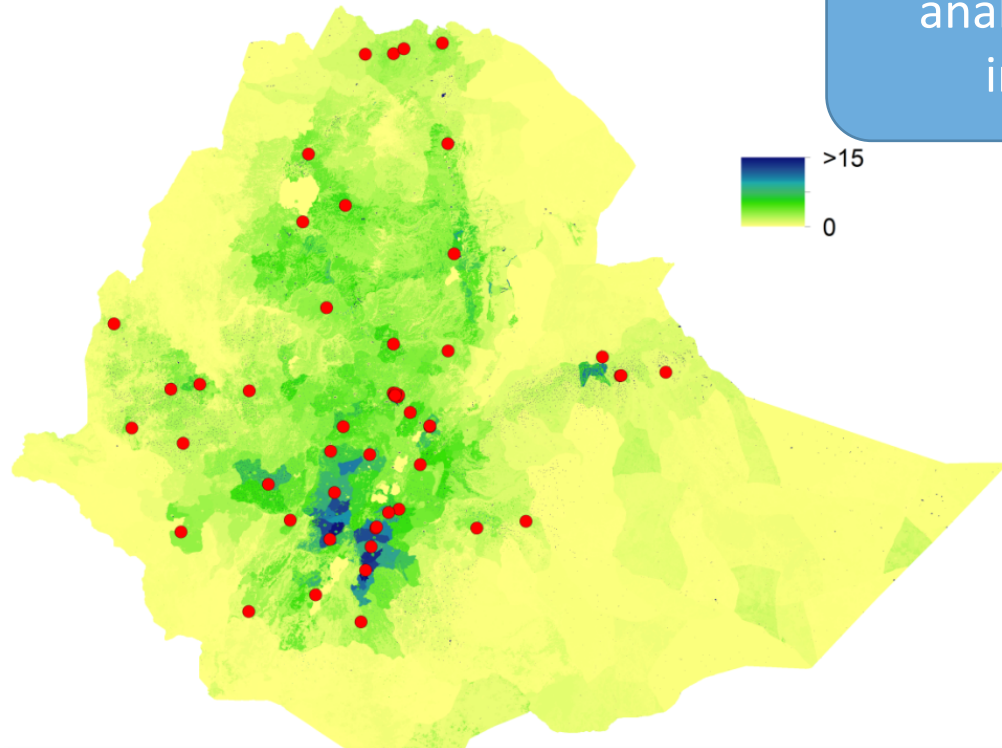
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Data integration

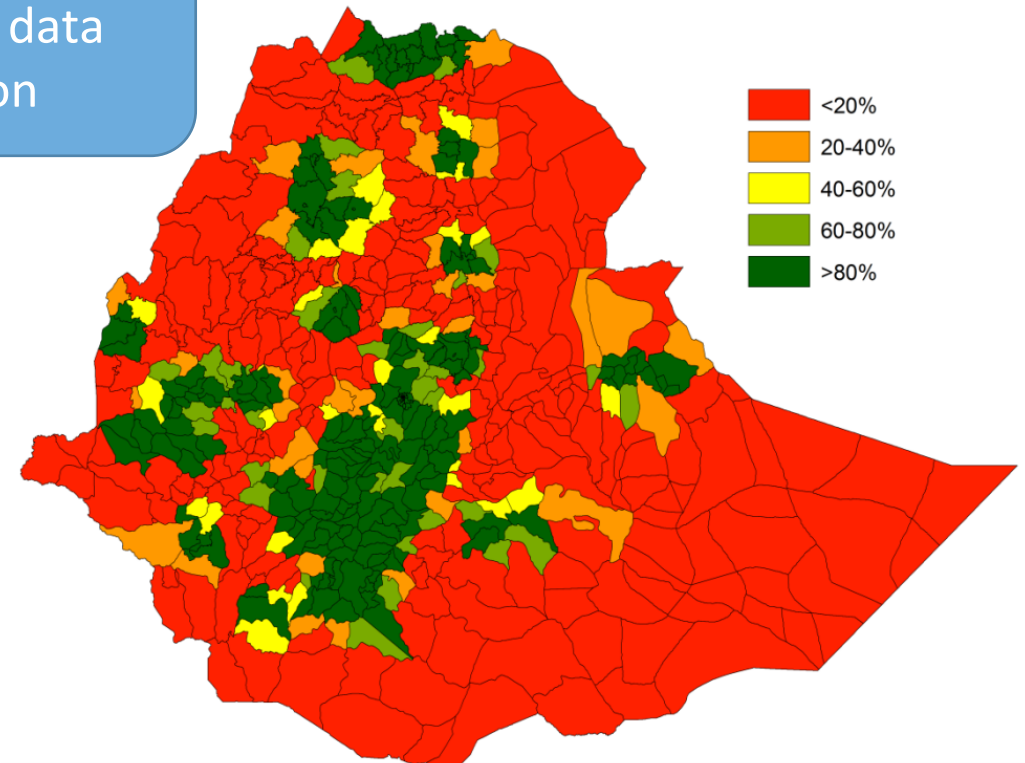


Benefits of 'gridded' demographic data

Grids: flexibility in analysis and data integration



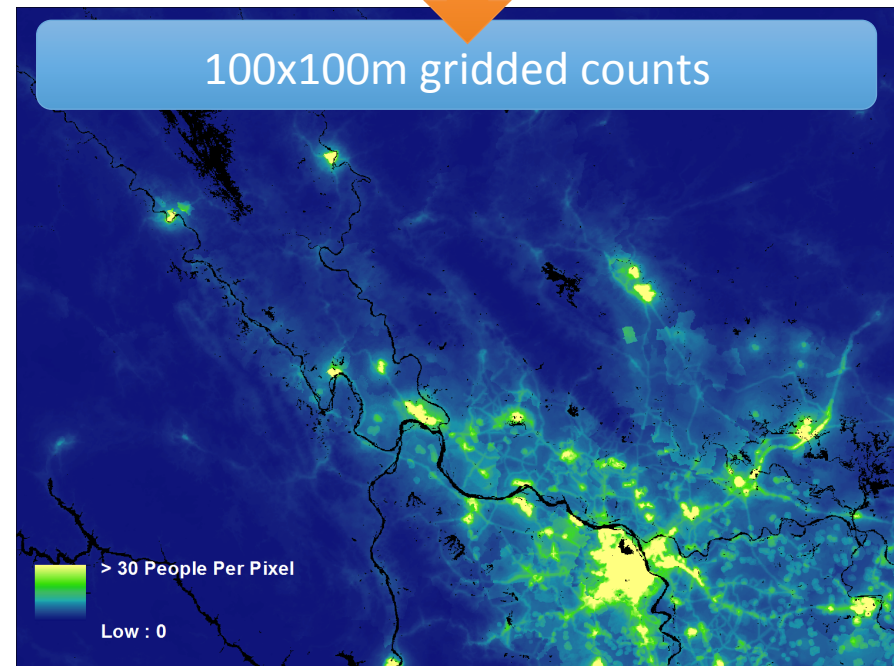
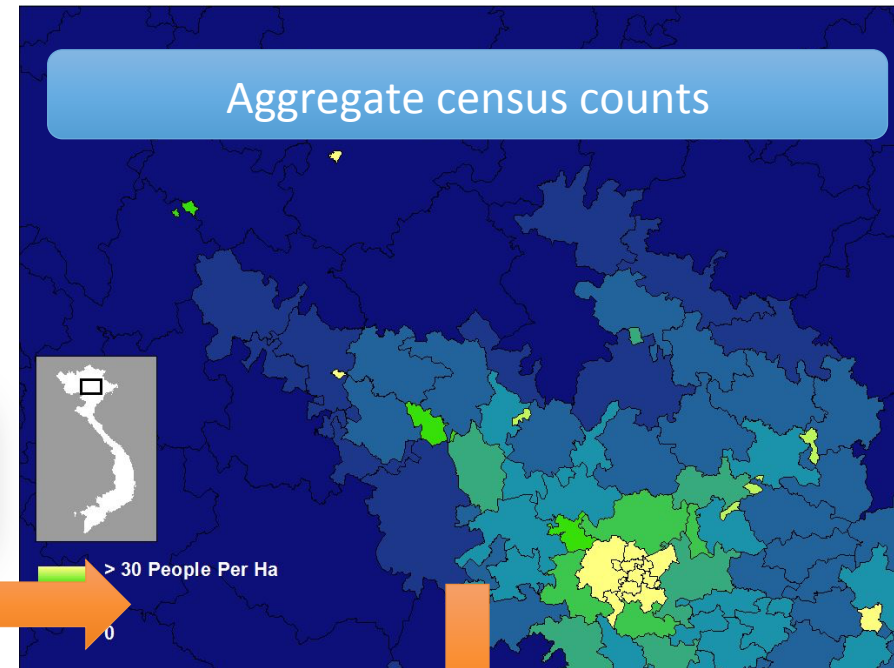
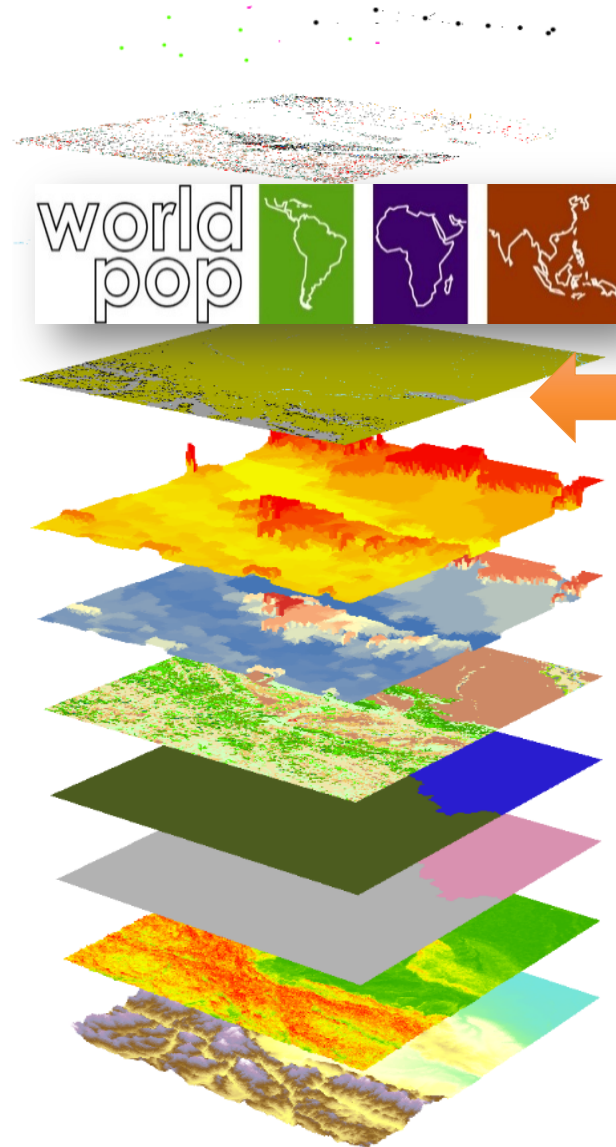
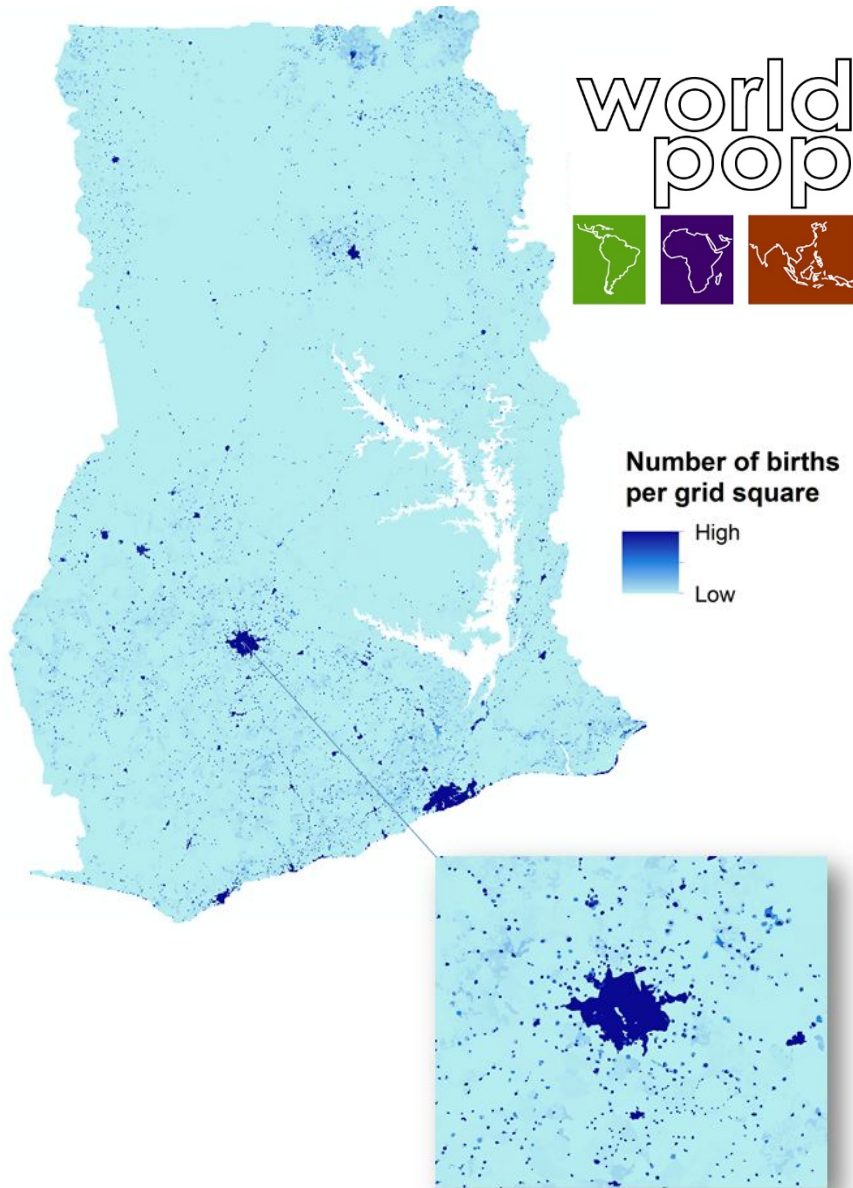
Comprehensive Emergency Obstetric and Neonatal Care (CEmONC) Facilities overlaid on grid of women of childbearing age



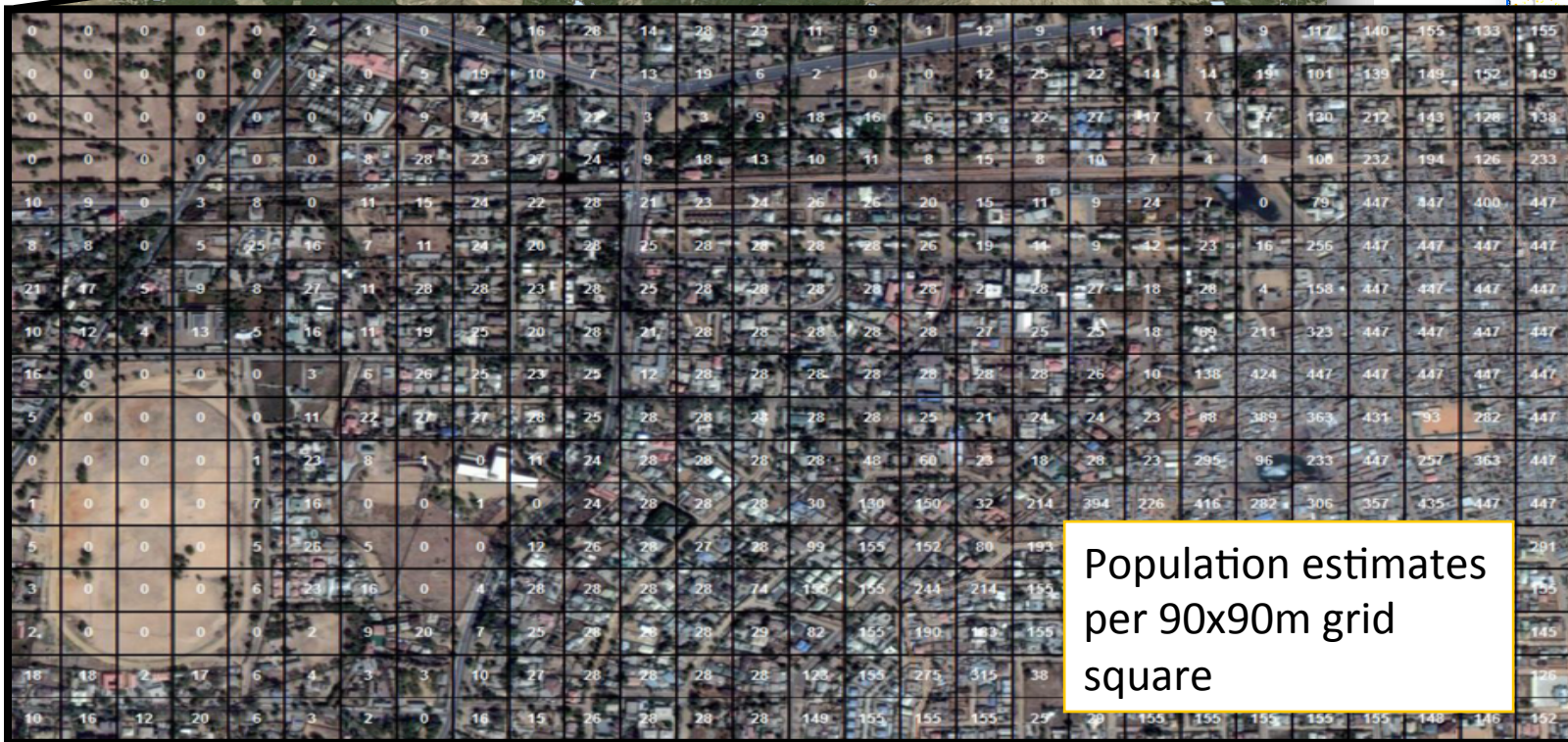
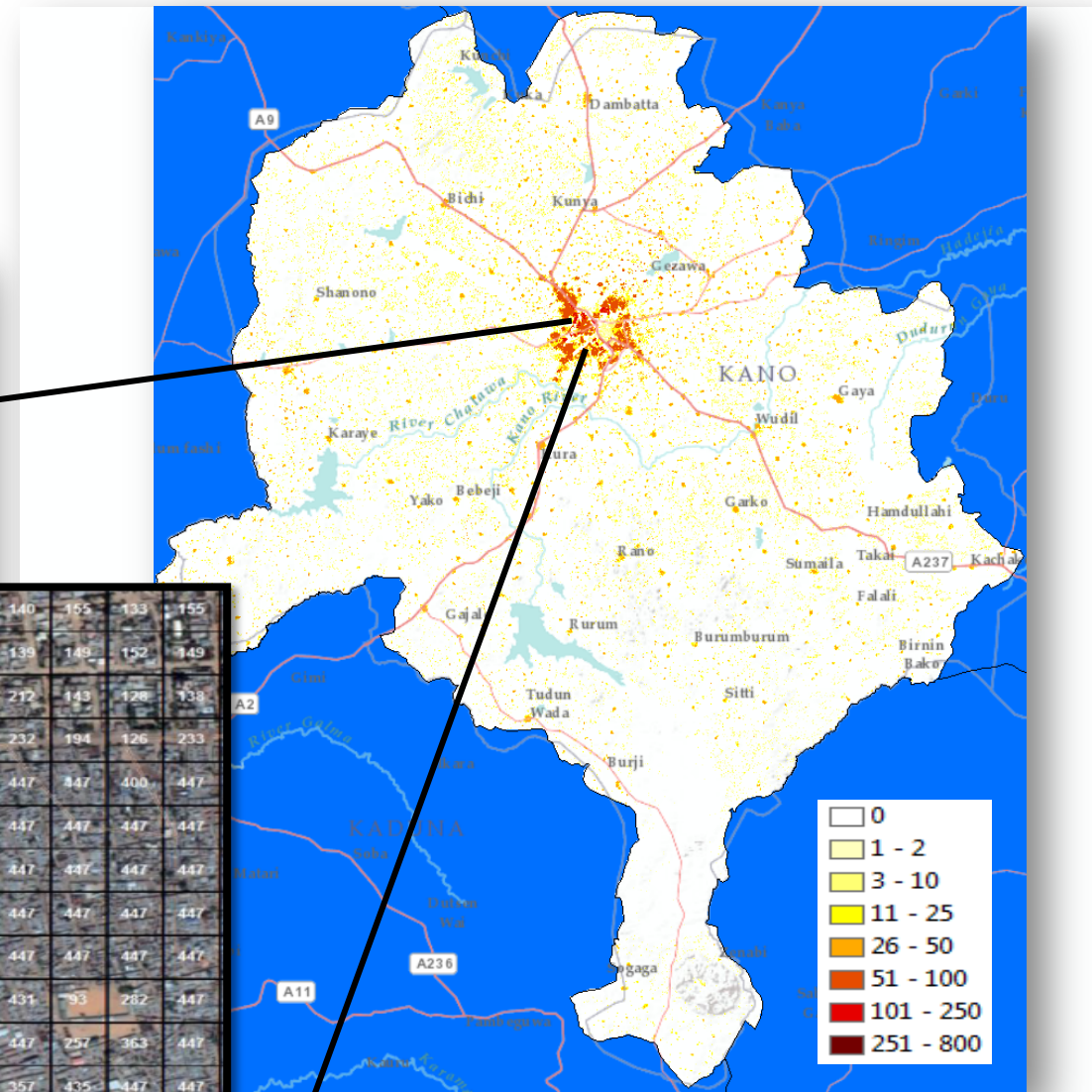
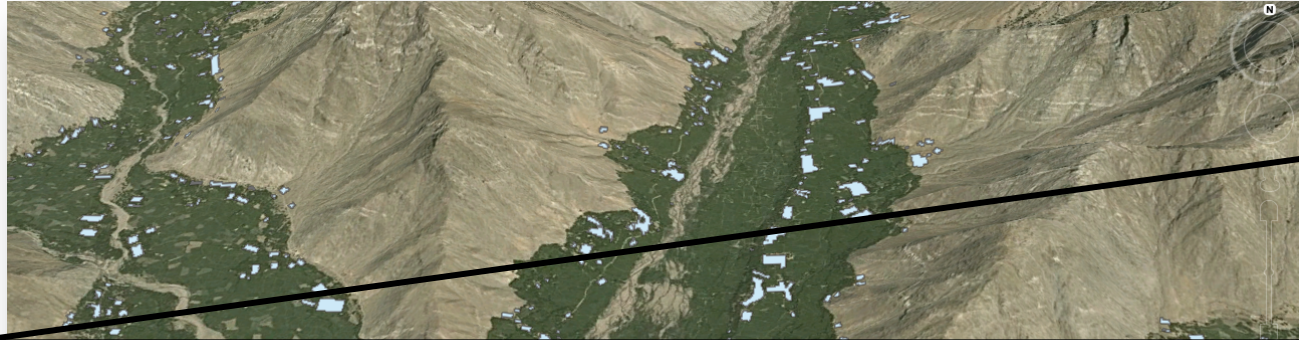
Percentage of women of childbearing age per woreda within 50km of a CEmONC

population totals

Census data disaggregation



Population estimation in the absence of national census



Population estimates per 90x90m grid square

ELINDA
RES foundation

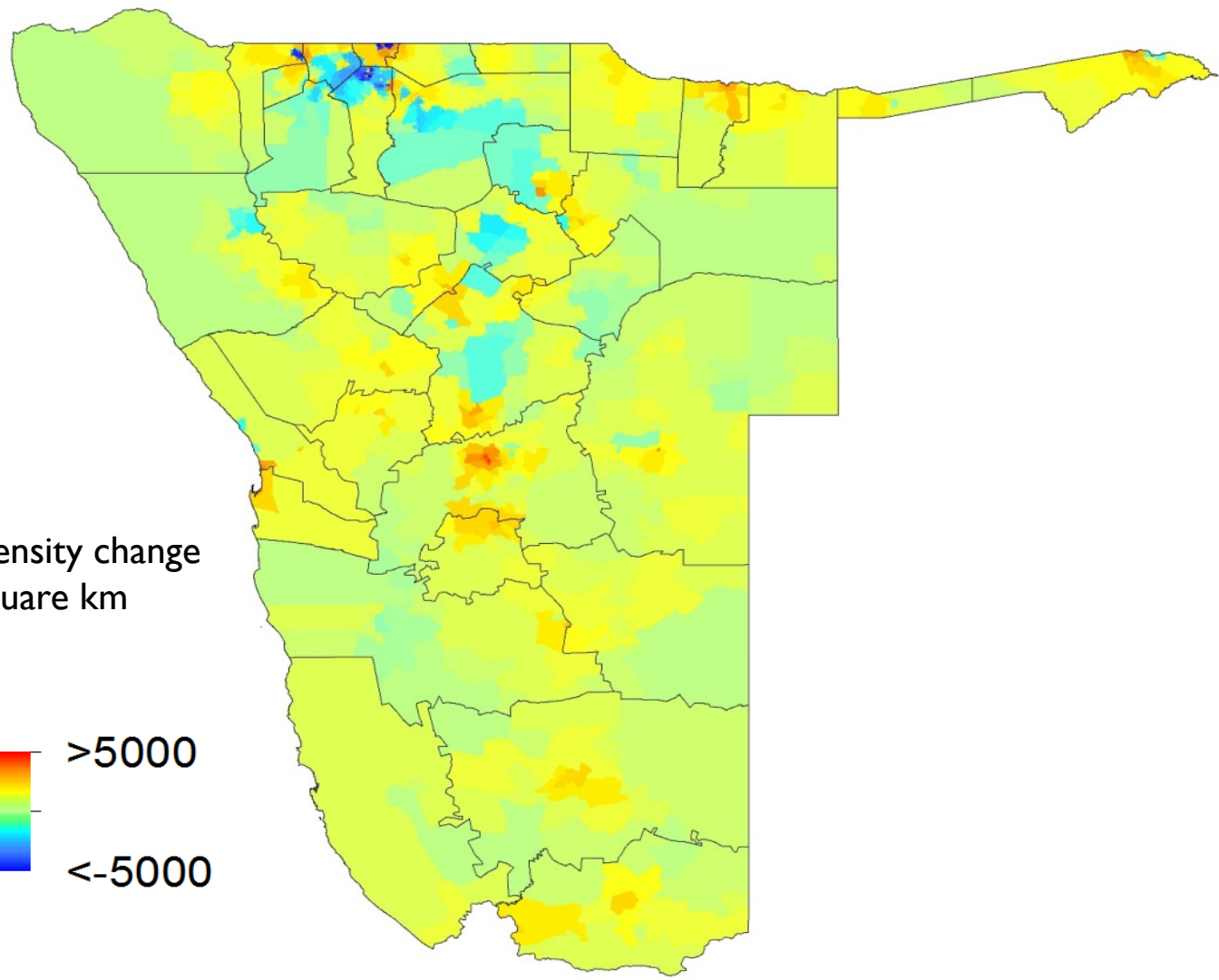
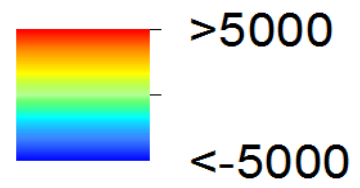


People don't stay still....





Pop density change
per square km

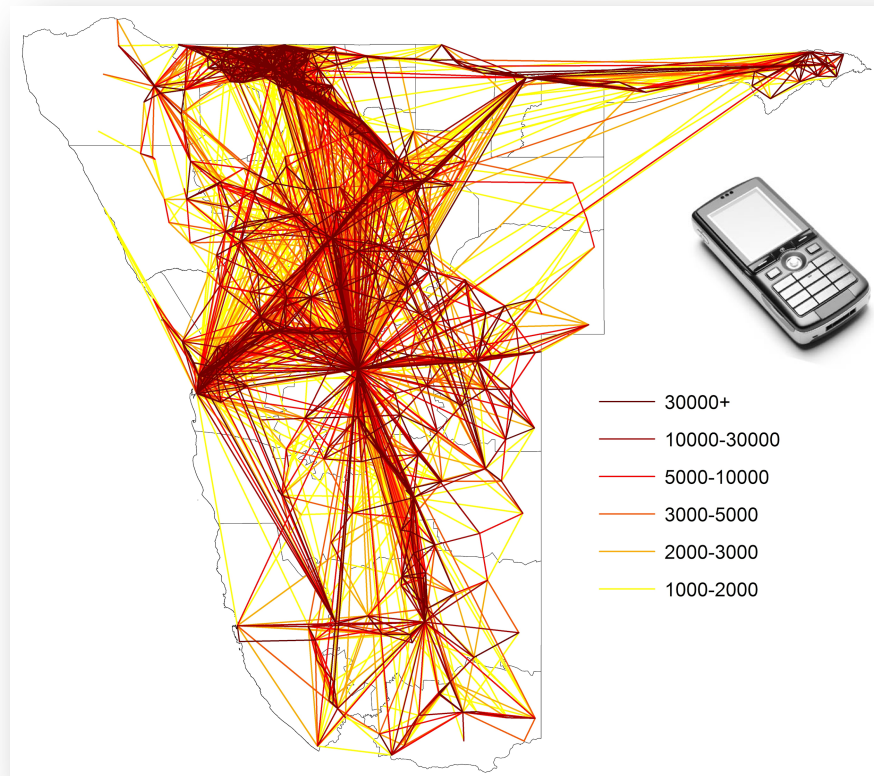
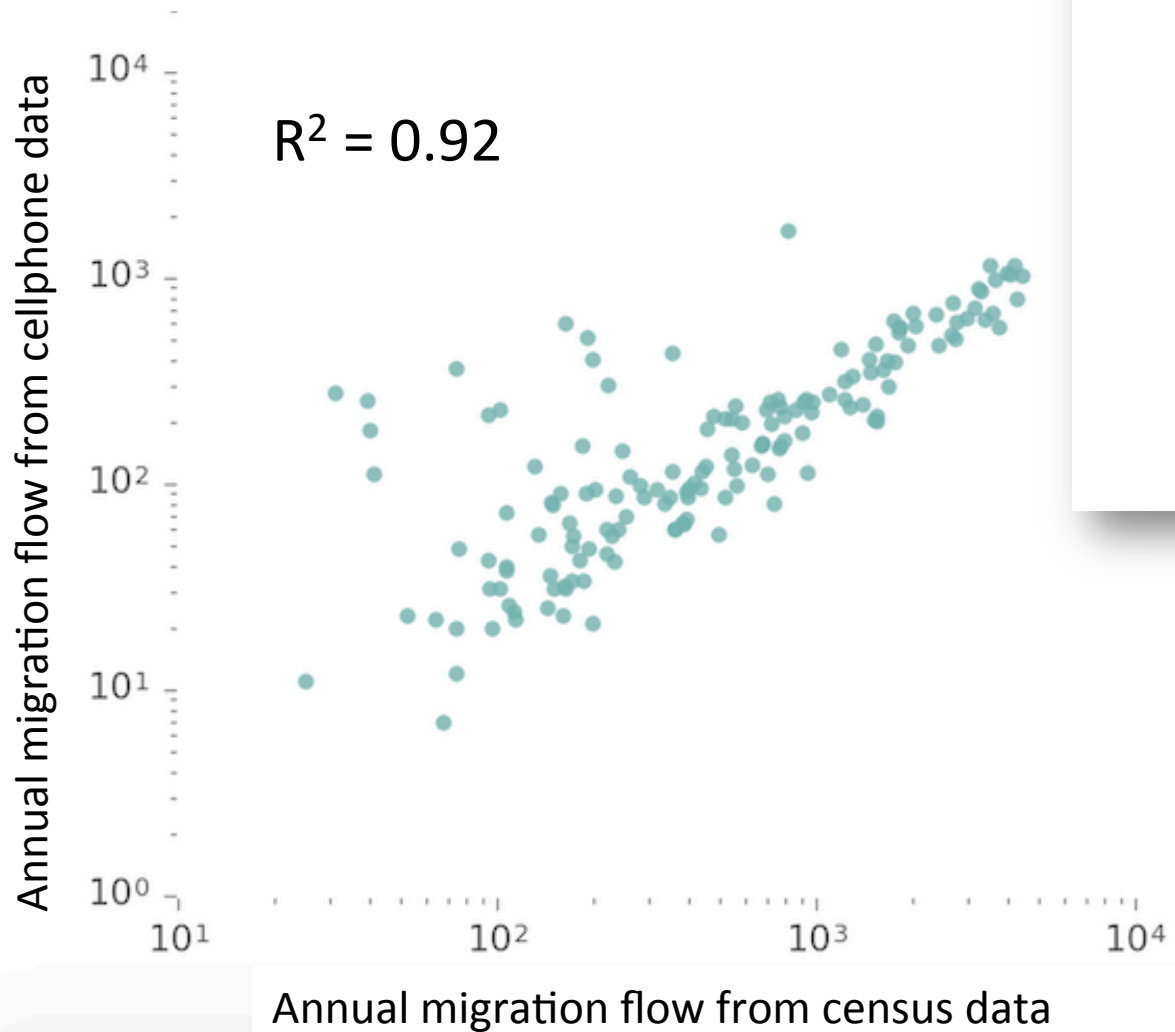


Namibia Pop: 2.3 mill
MTC active
subscriptions: 2.1 mill

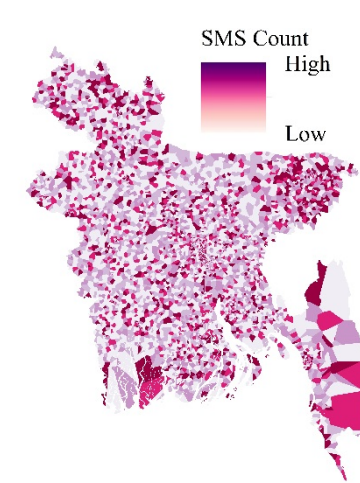
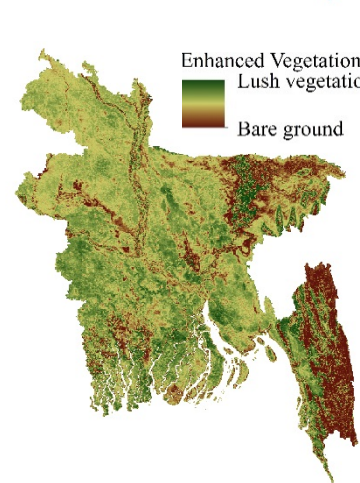
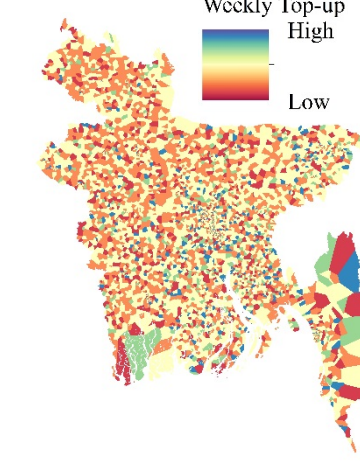
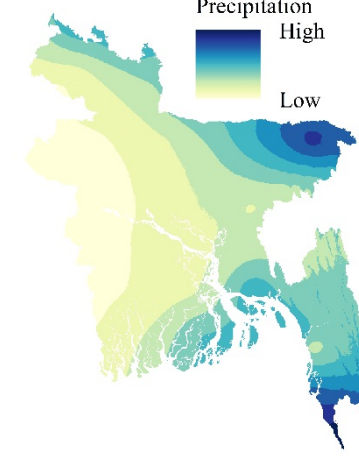
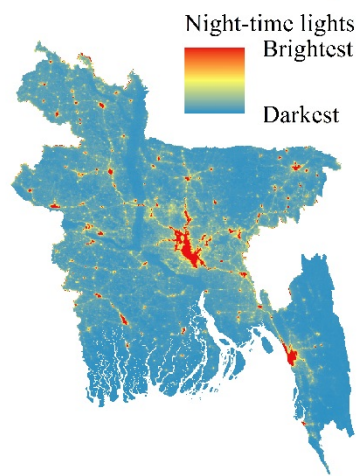
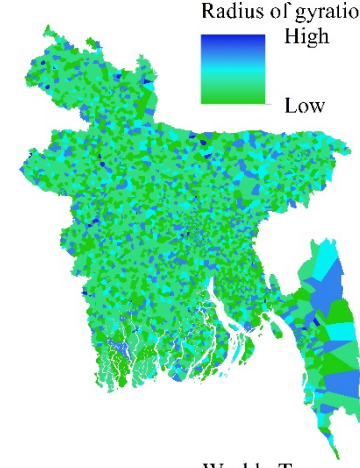
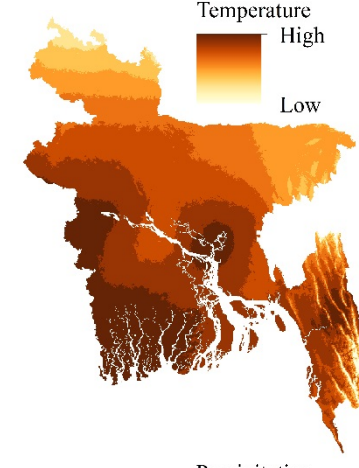
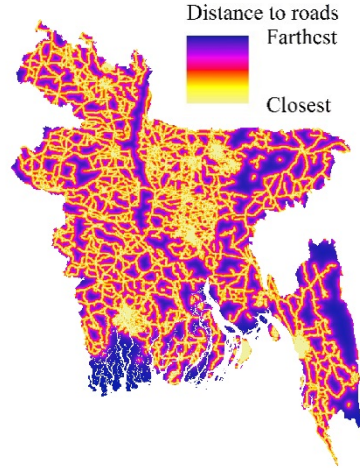
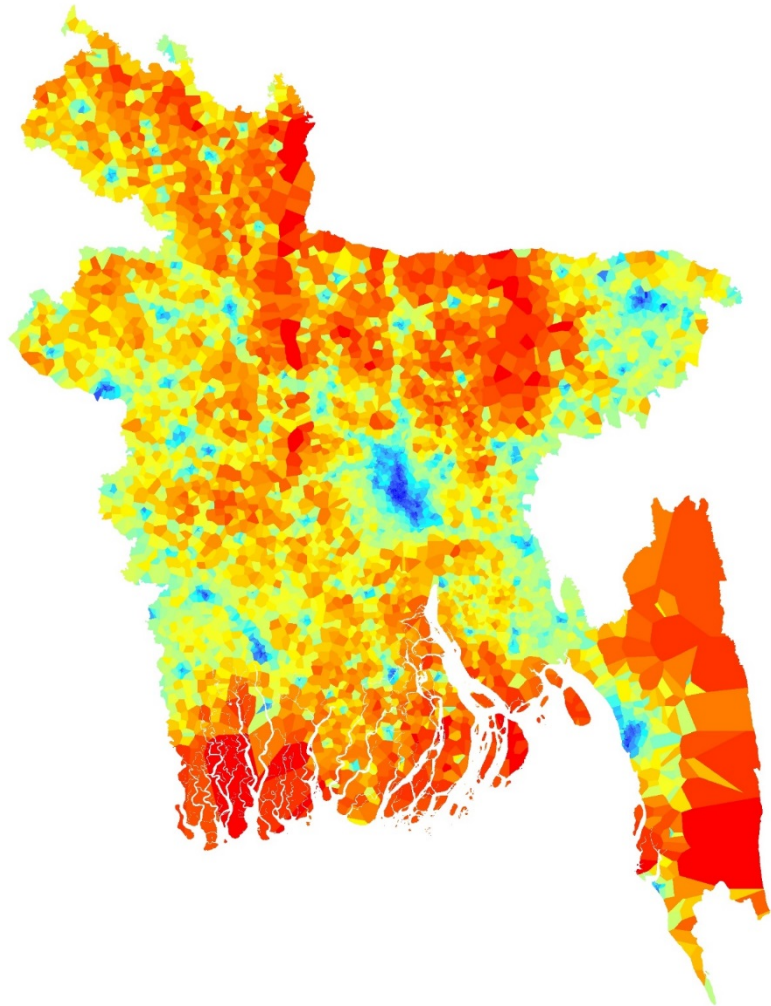


NOV_12
DEC_12
JAN_13
FEB_13
MAR_13
APR_13
MAY_13
JUN_13
JUL_13
AUG_13
SEP_13

Measuring migration



Improving mapping of socioeconomic indicators

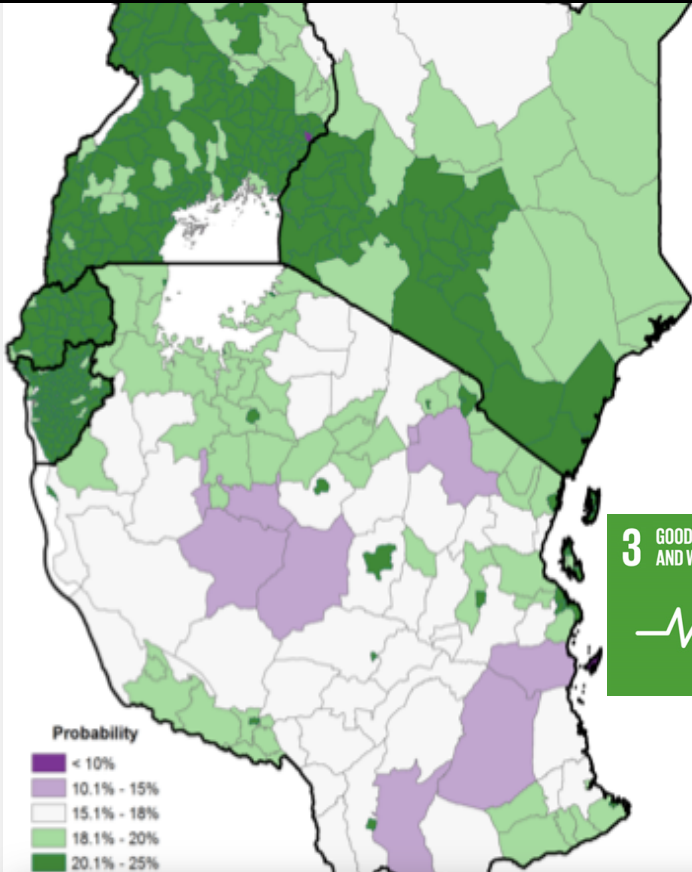


Mapping SDG indicators

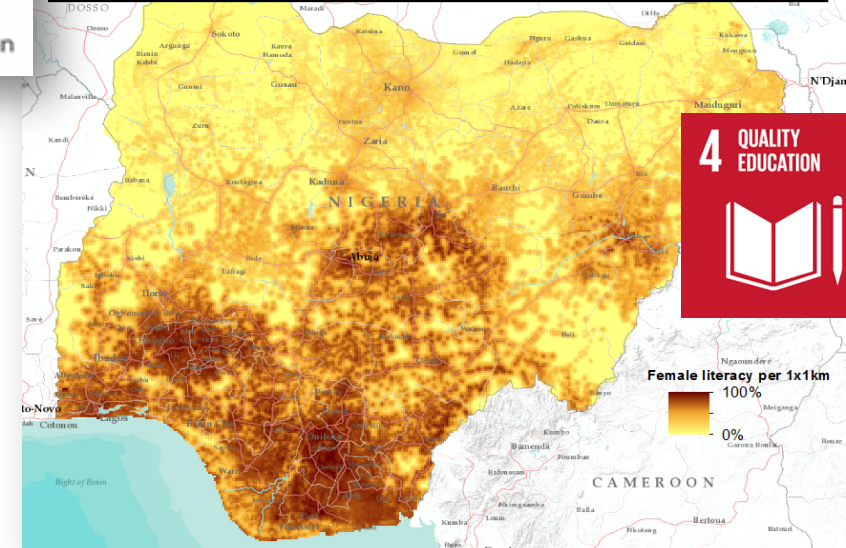
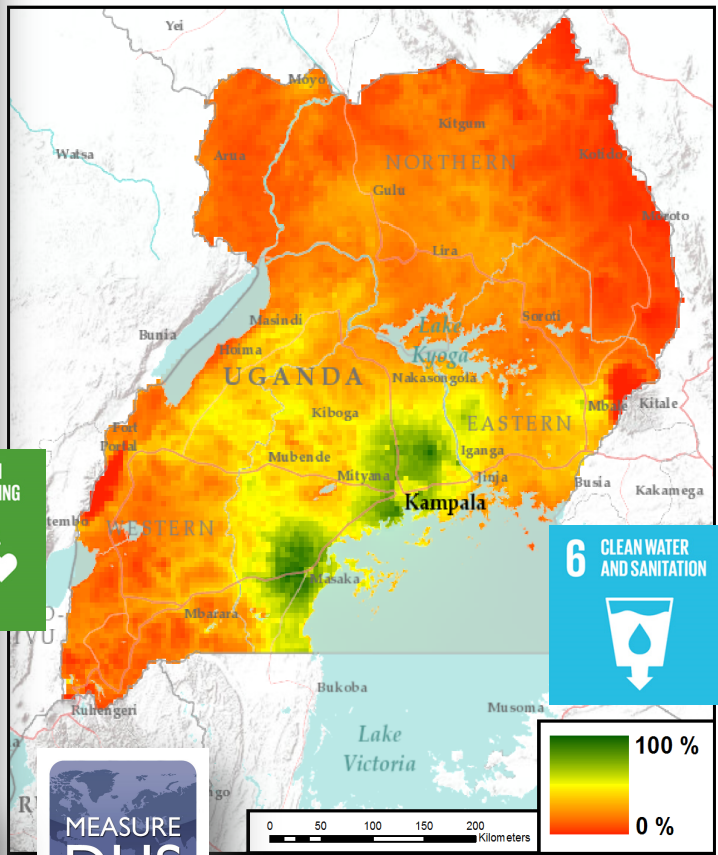


Percentage of women who are literate per 1x1km grid cell

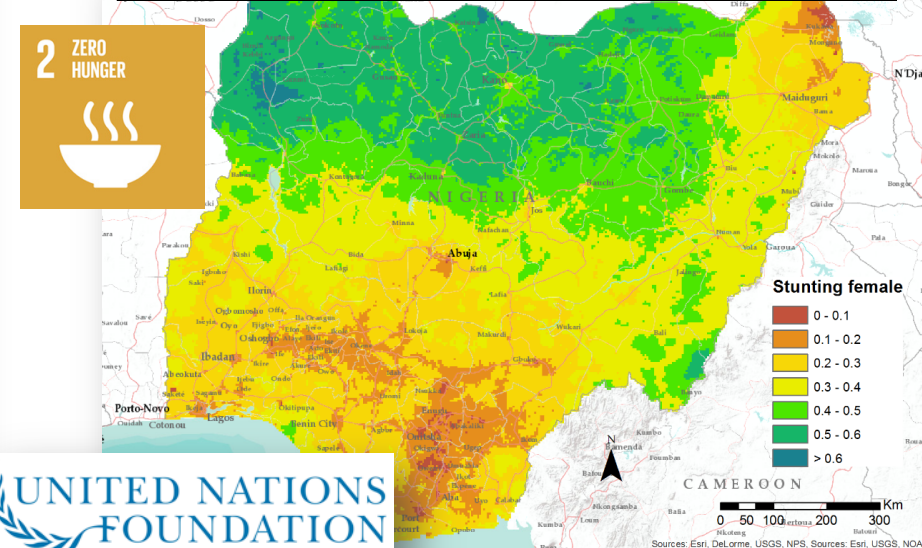
Probability of receiving postnatal care within 48 hours of delivery per district



Percentage of population with access to sanitation per 1x1km grid cell



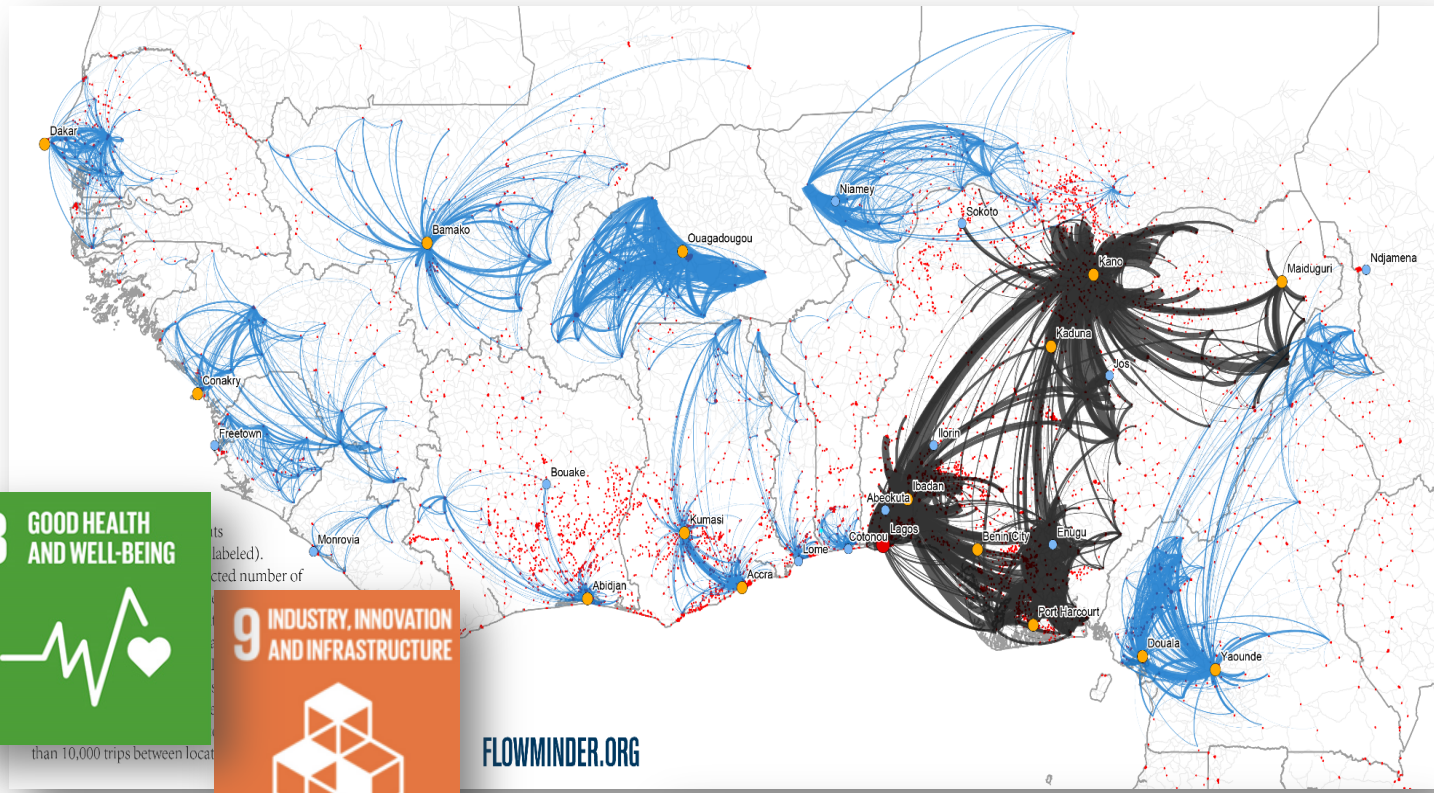
Percentage of girls who are stunted per 1x1km grid cell



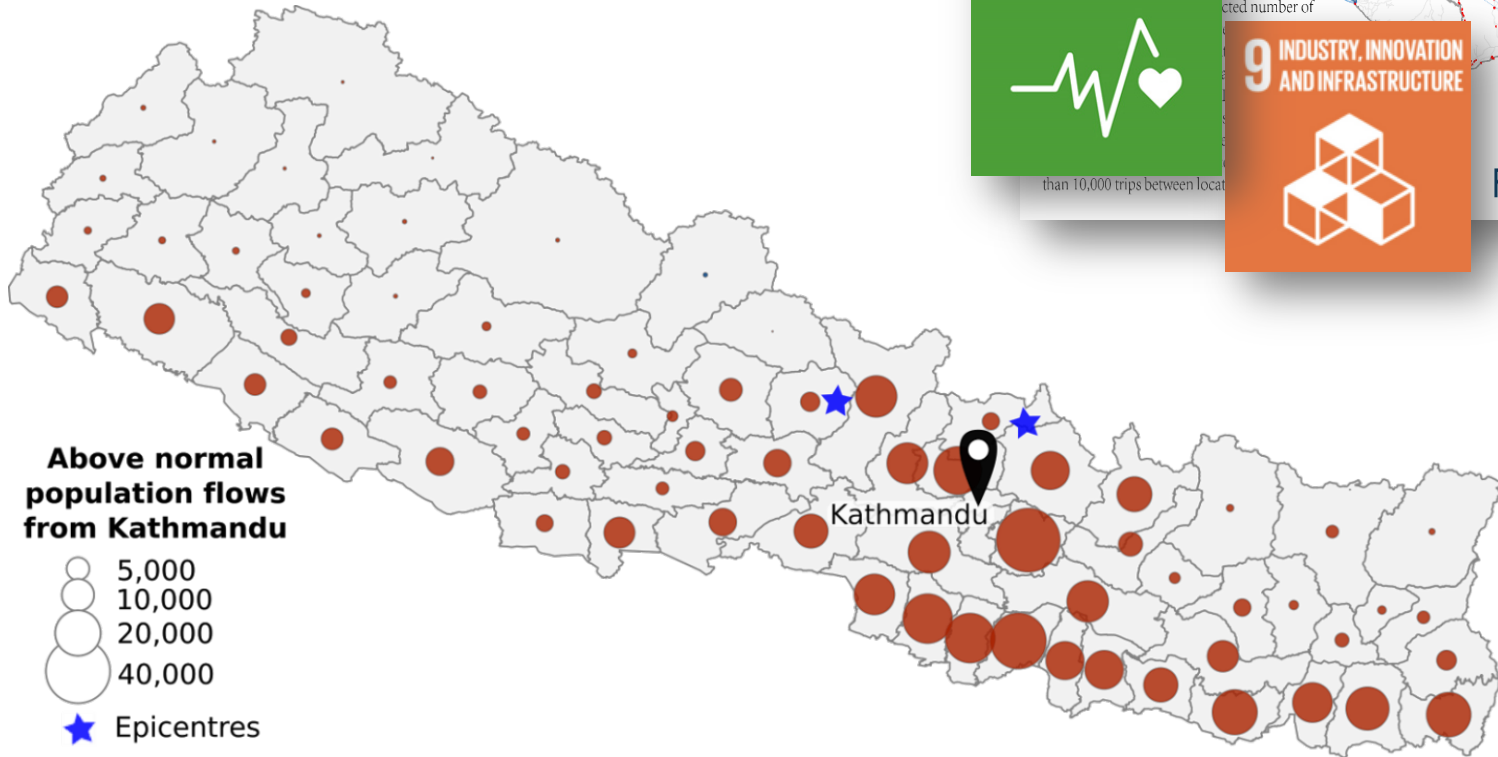
Open Health Initiative



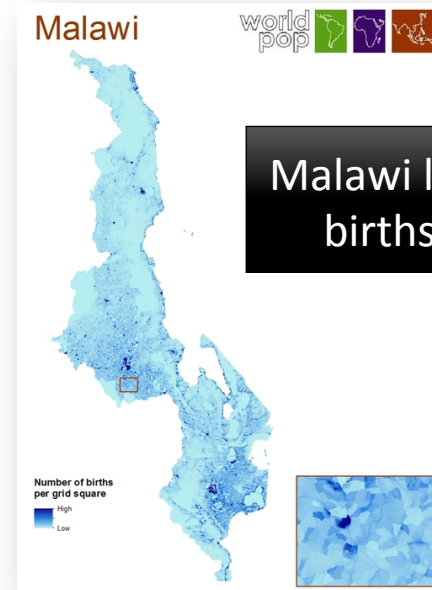
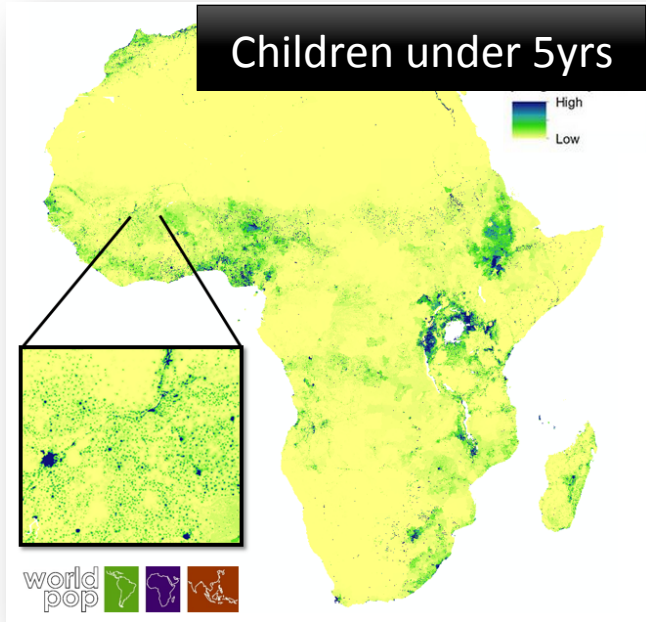
Mapping connectivity and displacements



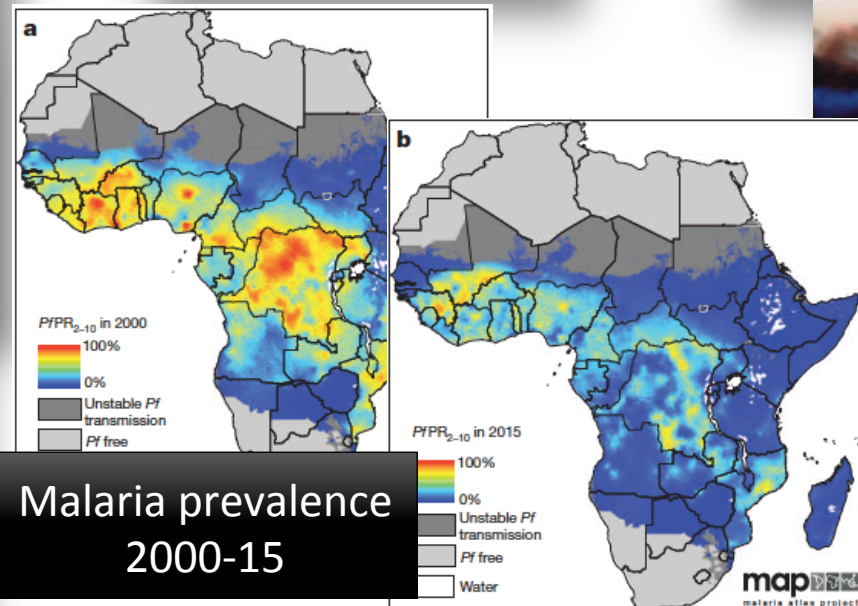
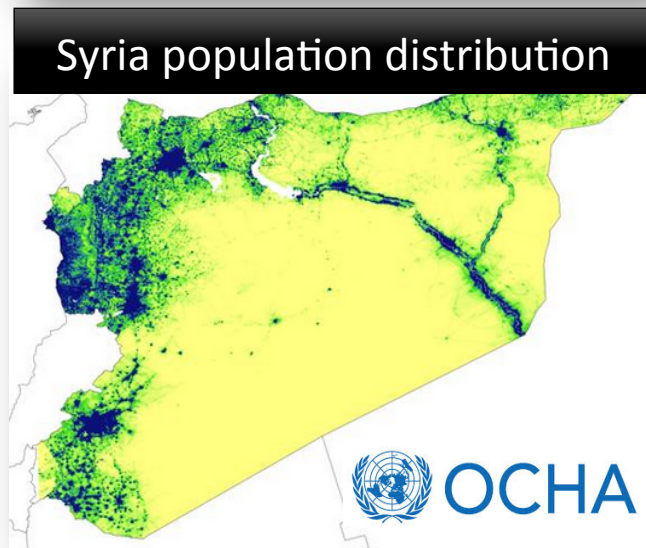
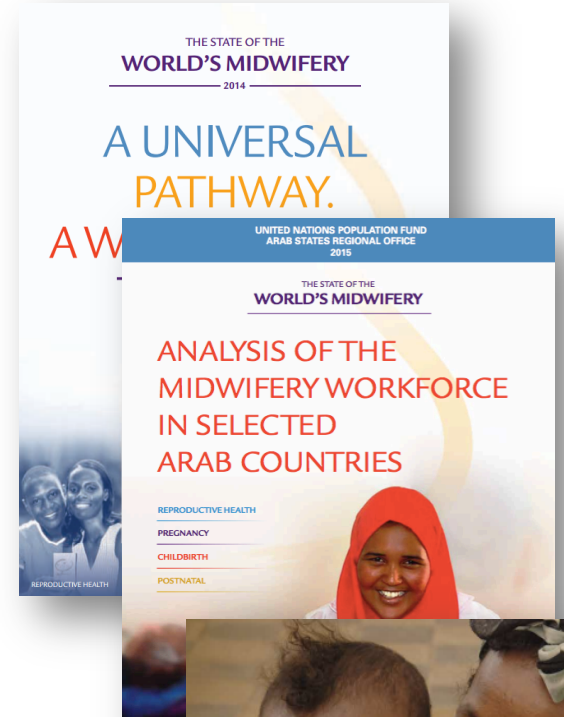
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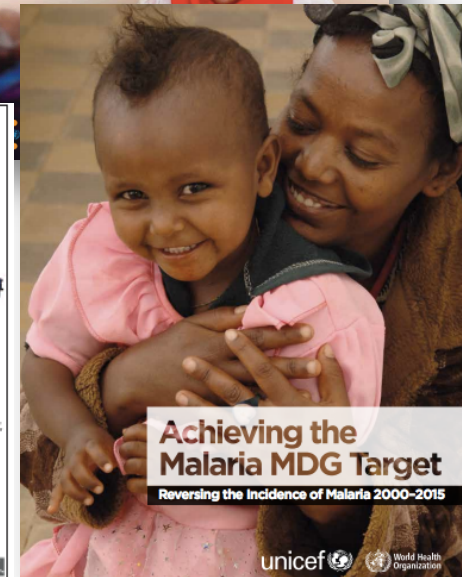
Datasets, methods already in use operationally



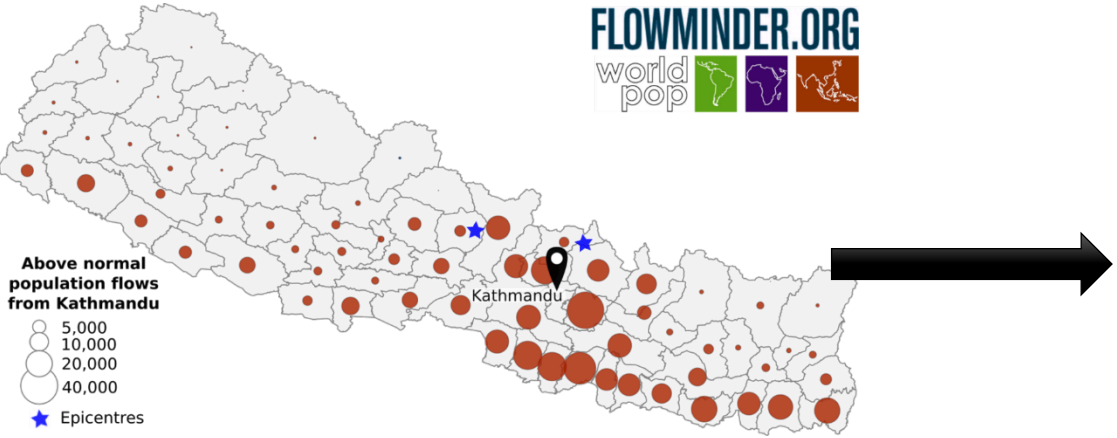
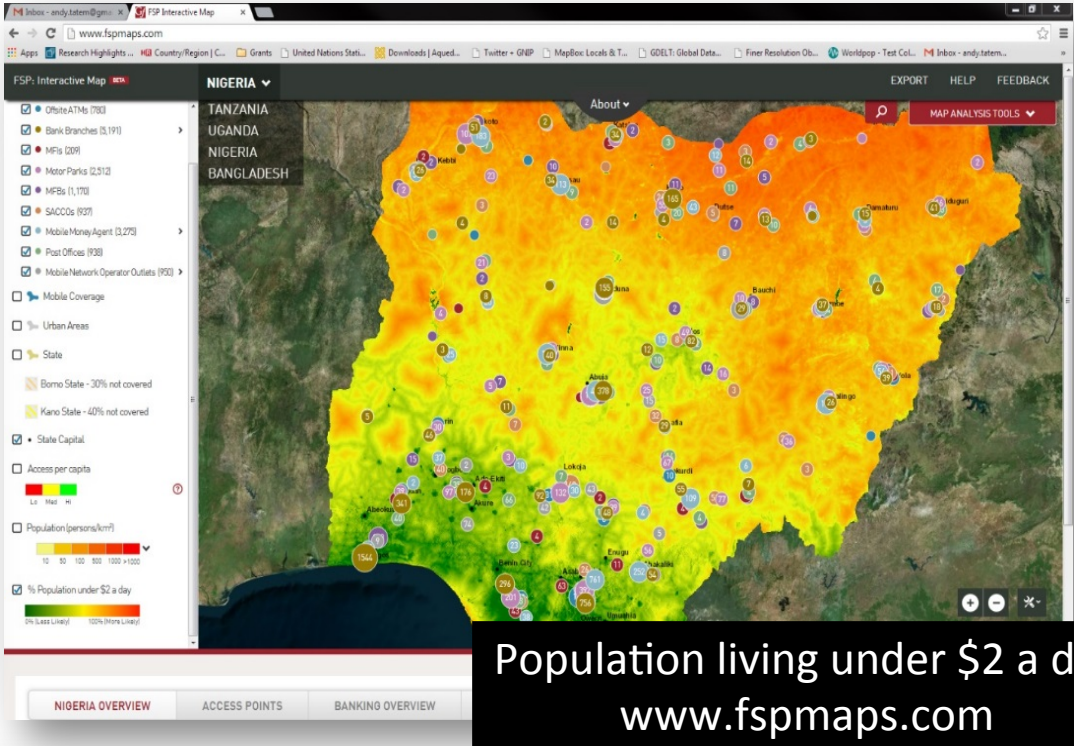
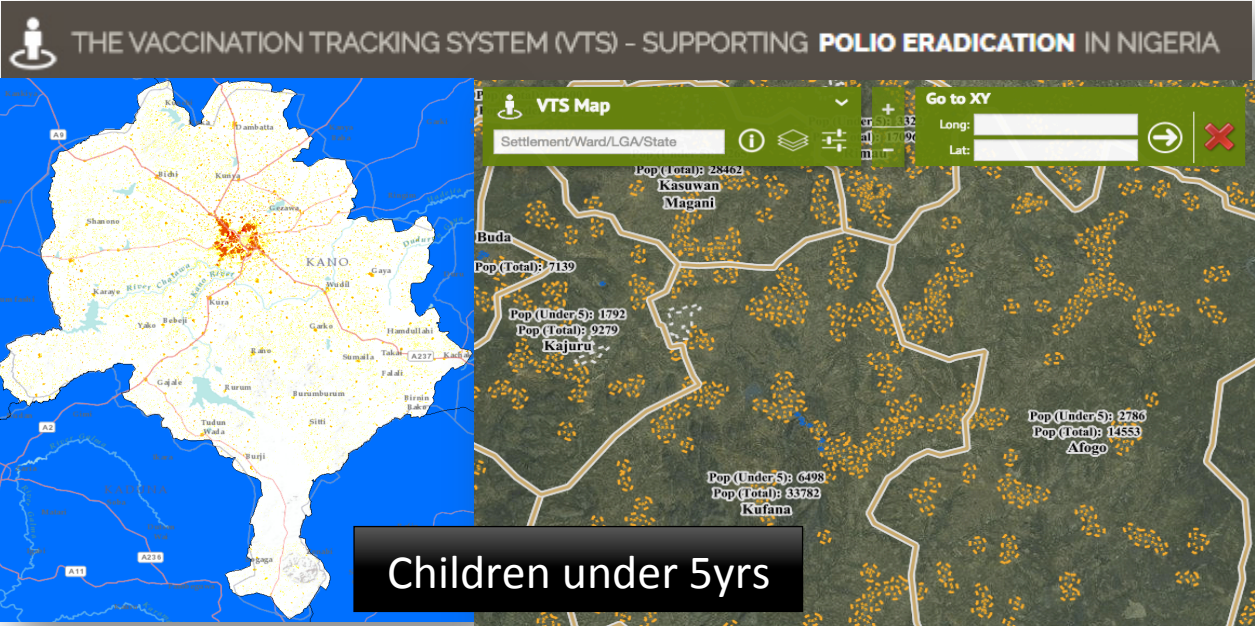
Malawi live births



Malaria prevalence 2000-15



Datasets, methods already in use operationally



Landslides and displacement in earthquake affected areas
Bi-weekly update
27 July 2015

Nepal Earthquake Assessment Unit

acaps

MapAction

OCHA

Office of the United Nations Resident and Humanitarian Coordinator

UKaid

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Summary

- In producing estimates for different geographical scales and time periods, the integration of multiple types of data to compliment traditional sources is often required
- Novel datasets (e.g. phones, satellite) are prone to biases, but each has advantages over census data in terms of the frequency of measurement and spatial precision
- Methods to account for biases, reporting uncertainties and providing clear metadata/documentation to inform users are all important
- ***Great potential in complimenting traditional sources to strengthen demographic databases in Ghana for measuring progress towards the SDGs***

Further information



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