Integrating geospatial information in census- UNFPA priorities for the 2020 round

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Value of GIS

1. Improves the precision of cartography, for cleaner boundaries, and quality assurance of census coverage

2. Enables the integration of different data sources (remote sensing, census, surveys), for higher resolution information (data disaggregation) and census estimations

3. Allows comparability of census data over time, by providing raster data independent of changing administrative boundaries and EAs

Why GIS is important for UNFPA strategy for the 2020 census round

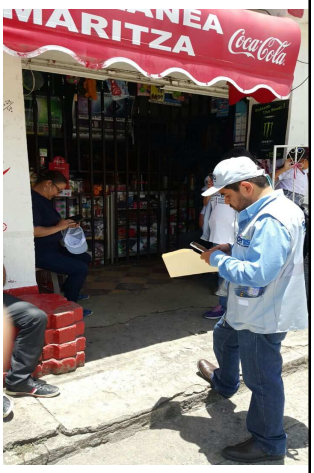
1. Increasing demand for disaggregated data for SDGs, and regional & national development
   - ➢ - 98 SDG indicators require population data for their calculation
2. The Independent Evaluation of UNFPA support to the 2010 census called for increased dissemination and use of census data- geocoded census data enables more efficient, effective & wider dissemination & use
3. Potential to use geo-coded census data to generate estimates of populations affected by humanitarian crises

UNFPA GIS priorities for the 2020 census round-

1. Advocate for greater application of GIS in census
2. Strengthen national capacity for production and use of high resolution geo-referenced census data
   - Overall – capacity strengthening –a top SDG priority – Target 17.18-with a target for year 2020-
   - Map census data at lower geographic levels – for development planning, implementation, monitoring & reporting
   - Capitalize on GIS to integrate census & survey data for small area estimation
3. Support Hybrid Censuses

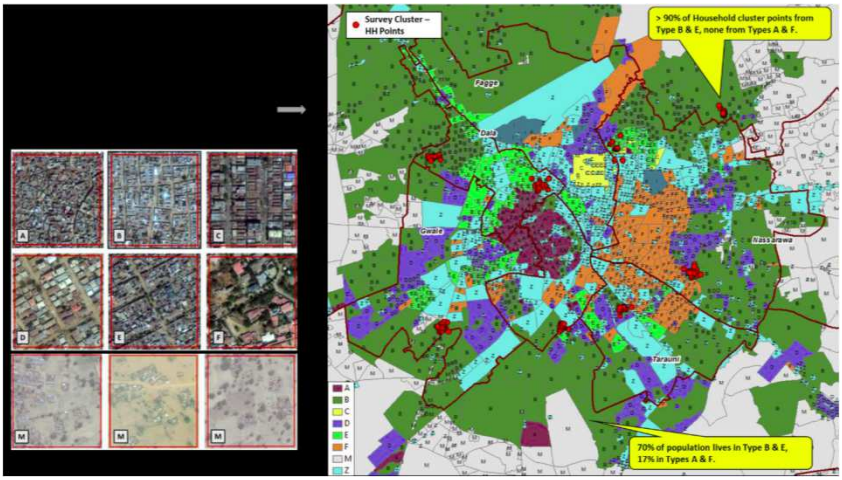
Advocate for greater application of GIS in census

- ICT/Mobile enabled censuses
- South-South partnership within Africa and LACRO to promote hand-held devices facilitating GPS



Advocate for greater application of GIS in census …

Update census-based national sampling frames



Source: *A joint project by ORNL, Flowminder and the Bill & Melinda Gates Foundation - Nigeria*

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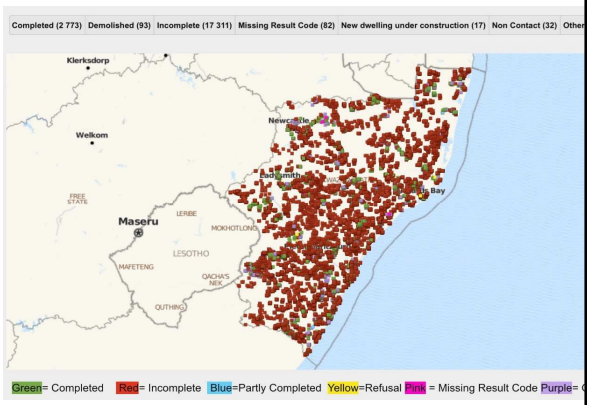
Advocate for greater application of GIS in census …

- Using satellite imagery of settlement patterns to verify enumeration areas
- Enable navigation (GPS) to HH by fieldworkers
- Real-time monitoring of enumeration



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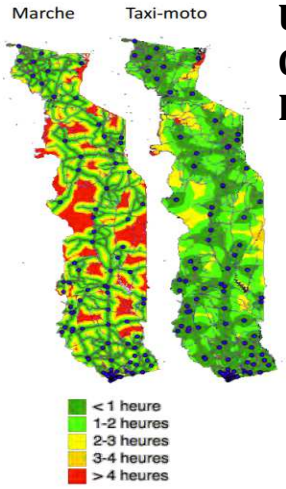
Strengthen national capacity for use of geo-referenced census data



Using GIS/Accessmod to map Geographic accessibility to Basic EmONC in Togo

Region	Perc. of cover Walk + motor	Perc. of cover Taxi-moto
PLATEAUX	70	94
KARA	75	91
MARITIME	92	98
CENTRALE	73	94
SAVANES	87	94
LOME_COM	99	99

N. Ray (University of Geneva/GRID)

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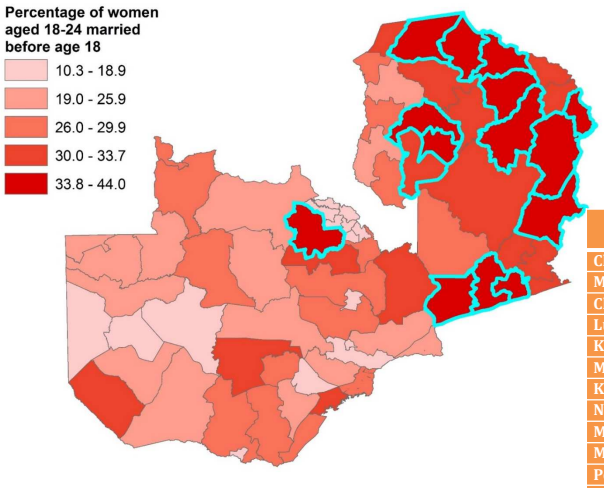
Strengthen national capacity for use of geo-referenced census data …



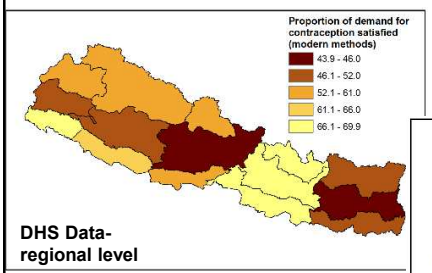
Mapping Child Marriage

	Child Marriage
Chama	44.0
Mpulungu	43.5
Chilubi	40.0
Lundazi	39.8
Katete	39.0
Mbala	38.2
Kaputa	38.1
Nyimba	37.8
Mungwi	36.9
Mafinga	35.3
Petauke	35.2
Lufwanyama	34.9
Chinsali	34.4
Luwingu	33.8
Samfya	33.7

Top 15 Districts with highest % Child Marriage

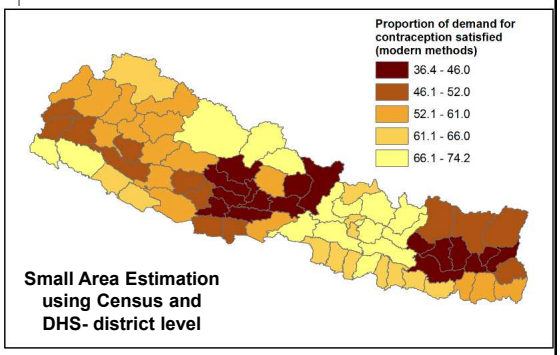
Strengthen national capacity for use – Small Area Estimation

Estimating SDG indicator 3.7.1 at district level - Nepal



DHS Data- regional level

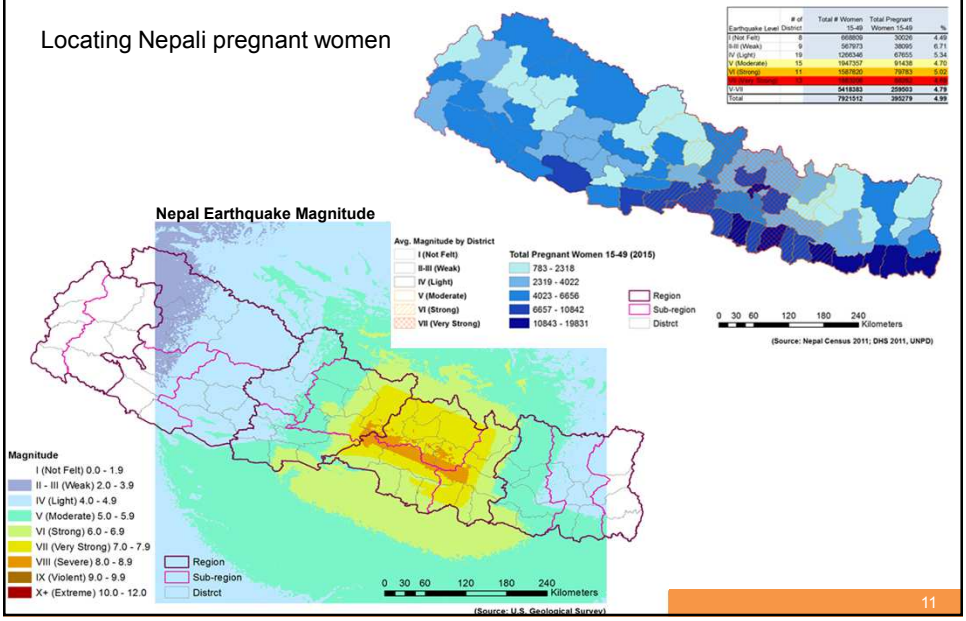
- DHS data alone gives only regional estimates of FP.
- Census does not have FP indicators
- SAE allows FP estimates at district level



Small Area Estimation using Census and DHS- district level

Strengthen national capacity for use of geo-referenced census data – Humanitarian Crises

Locating Nepali pregnant women



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Strengthen national capacity for use of geo-referenced census data

- Post-enumeration survey for quality assurance and validation
- Digital statistical products for data dissemination
- Promoting GIS-based platforms for public access

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Support for Hybrid Census-Afghanistan

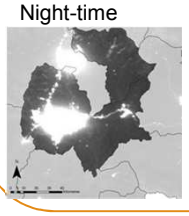
Innovative Modeling

Ancillary geospatial data

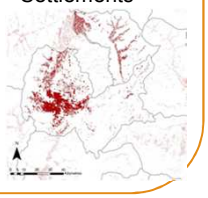
Vegetation index

Slope

Night-time

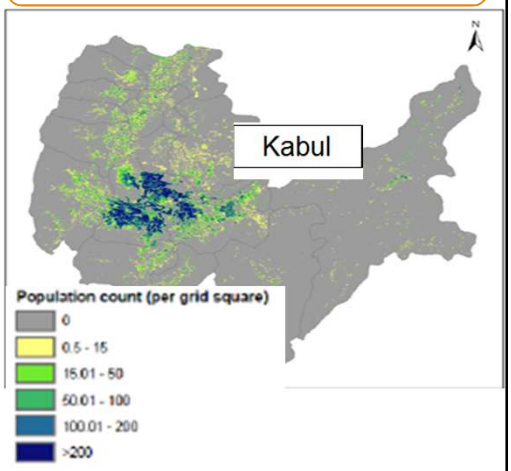


Settlements



Output

•100mx100m grid population estimates



Partnership of UNFPA, WorldPop/Flowminder, and Afghanistan National Statistics Office..

GRID Project

Partnership: UNFPA, WorldPOP/Flowminder, DFID, BMGF, CIESIN

Goal- Supporting governments to improve production, use and sharing of high-resolution population, settlement, and infrastructure data

- **Further work on promoting use of geospatial population data with other geospatial datasets (range of African countries)**
- **Use of high resolution geospatial settlement layers and micro-census data to generate population estimates where a census is not possible (beyond Afghanistan)**

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Census GIS collaboration

- Supporting censuses in 135 countries:
- Multi-lingual experts for expanding UNFPA regional census rosters in GIS-related work
- In-country and regional partnerships for GIS capacity strengthening – sustainable academic partnerships
- Guidelines, tools, and standards

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Thank you

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