Exploring Geo-Spatial Patterns of Private Sector FP Use: Uganda
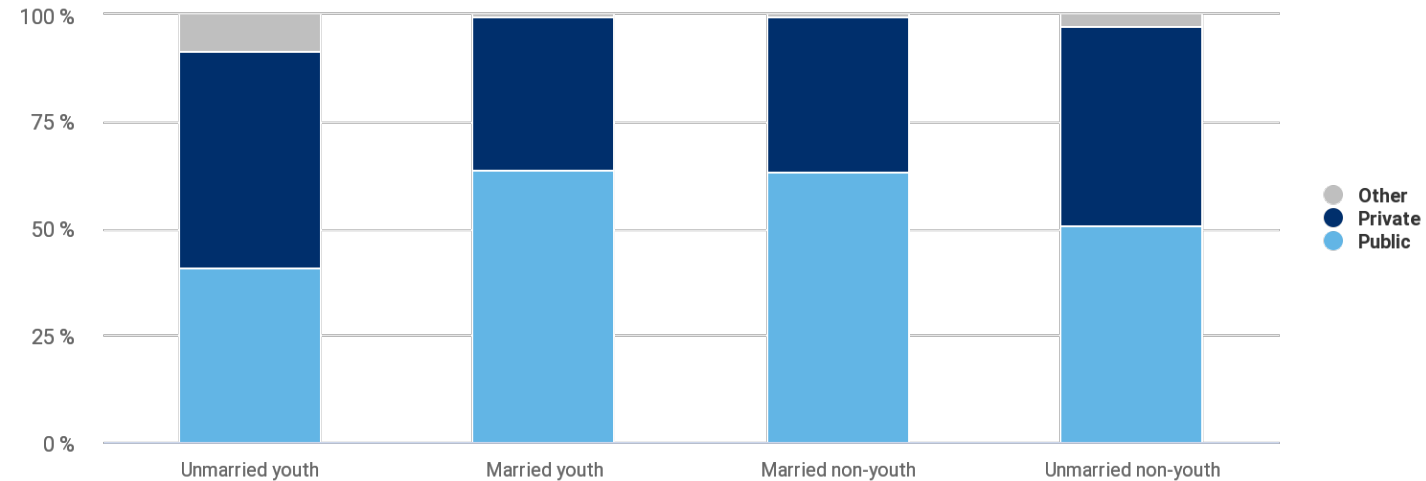
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Avenir Health

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Private Sector use patterns often explored by socio-demographics

Source mix by age and marital status

Legend: Other (grey), Private (dark blue), Public (light blue)
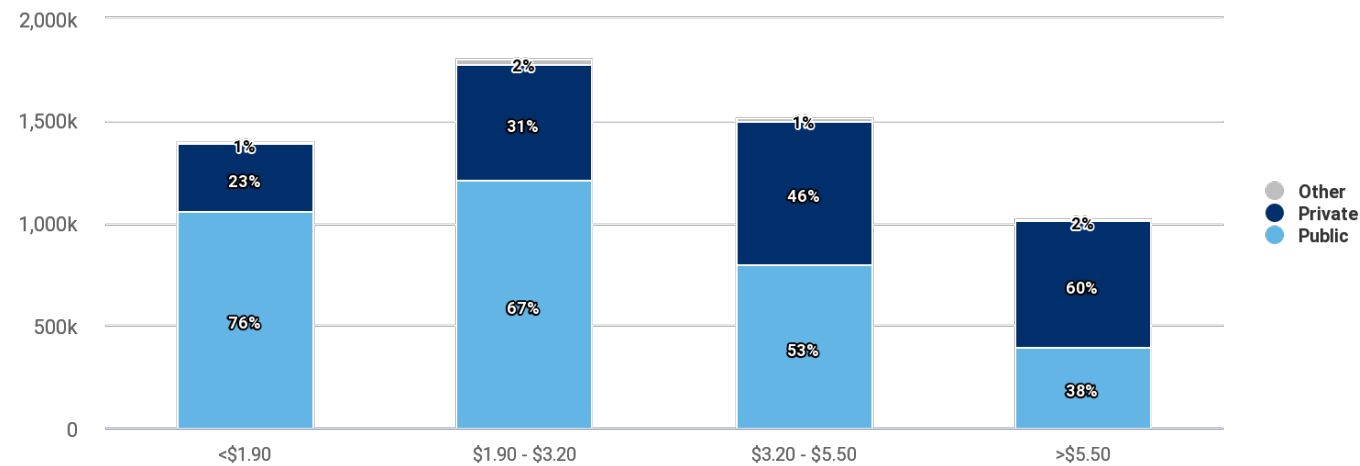
Categories: Unmarried youth, Married youth, Married non-youth, Unmarried non-youth

Source: FP Market Analyzer (data for Kenya)

But what about geographic patterns of use across a county?

Users by income and source (2020)

Income	Public	Private	Other
<$1.90	76%	23%	1%
$1.90 - $3.20	67%	31%	2%
$3.20 - $5.50	53%	46%	1%
>$5.50	38%	60%	2%

Legend: Other (grey), Private (dark blue), Public (light blue)

Addressing this gap: small area estimation

- Statistical techniques used to estimate the value of parameters over a small geographic area – smaller than sample size would allow using typical survey analysis methods

- Produces a **modeled surface** of spatial distribution of a given parameter

- Estimates here use prevR – package for R developed to estimate HIV prevalence from DHS cluster data

- Utilizes DHS geospatial resources

See Larmarange and Bendaud (2014) for more details on prevR: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4247267/

Why develop small area estimates?

- Creates visual representation of how concentrated or disperse private sector use is within a country

- Explore variations in patterns across countries

    – Role of private sector in peri-urban areas?

    – Role of private sector in larger vs small cities & towns

- Inform advocacy and planning

Initial scoping

- Exploration of DHS subnational data to determine potential countries for small area estimation

- Considerations for analysis:

  – Recent DHS with GPS dataset available

  – Variation in method sourcing (i.e. not heavily public-sector dominated like Senegal and Rwanda)

Available maps: Uganda

- **mCPR** = modern method users / all women

- **Private market share** = modern method users getting method from private sector / modern method users

- **Private prevalence** = modern method users getting method from private sector / all women

- **Public prevalence** = modern method users getting method from public sector / all women

- **Unmet need**

- **Population of WRA**

- **Modern method users**

- **Private users**

- **Public users**

- **Income levels**
  - **Below the poverty line ($1.90)**
  - **Above $5.50**

Uganda: mCPR and sector by residence

mCPR by residence (latest DHS)

Legend: ● Urban ● Rural ● Overall
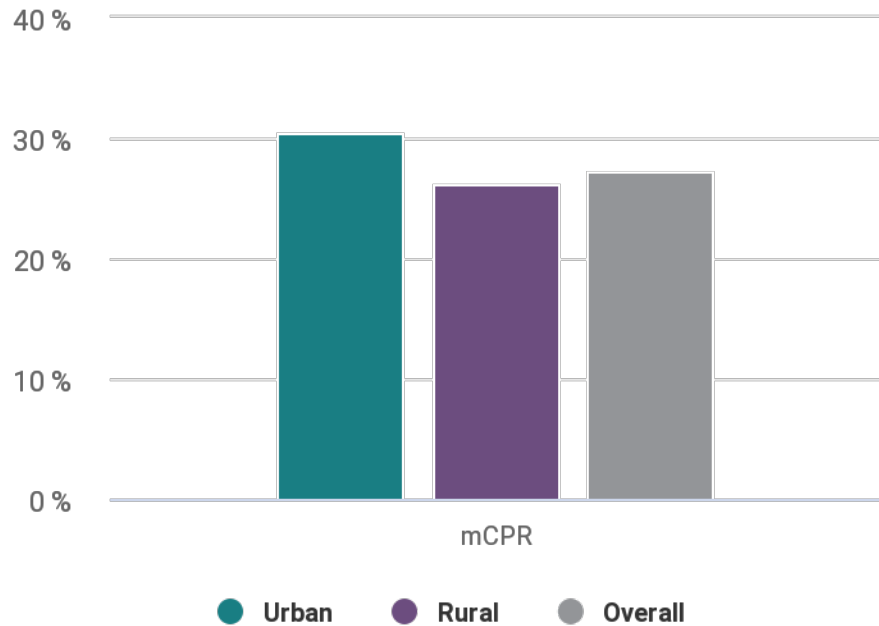
Source mix of users by residence (2020)

Urban: Other 2%, Private 52%, Public 46%
Rural: Other 1%, Private 35%, Public 64%

Legend: ● Other ● Private ● Public
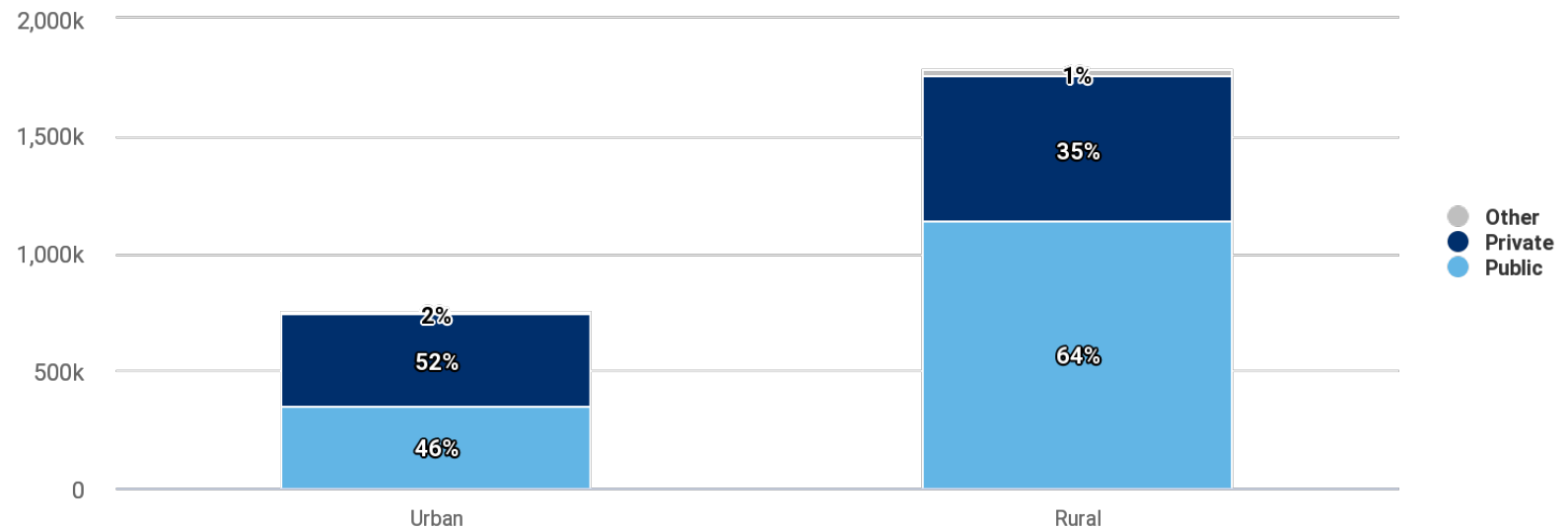
Source: DHS 2015-16, FP Market Analyzer

Uganda: mCPR and private sector use

Private sector market share does not account for levels of mCPR; could have low mCPR but high private use or vice versa. Combining with mCPR gives a better sense of utilization of private services.

mCPR   Private market share   Private prevalence

Source: DHS 2016

Legend:
- 0%
- 20%
- 40%
- 60%
- 80%
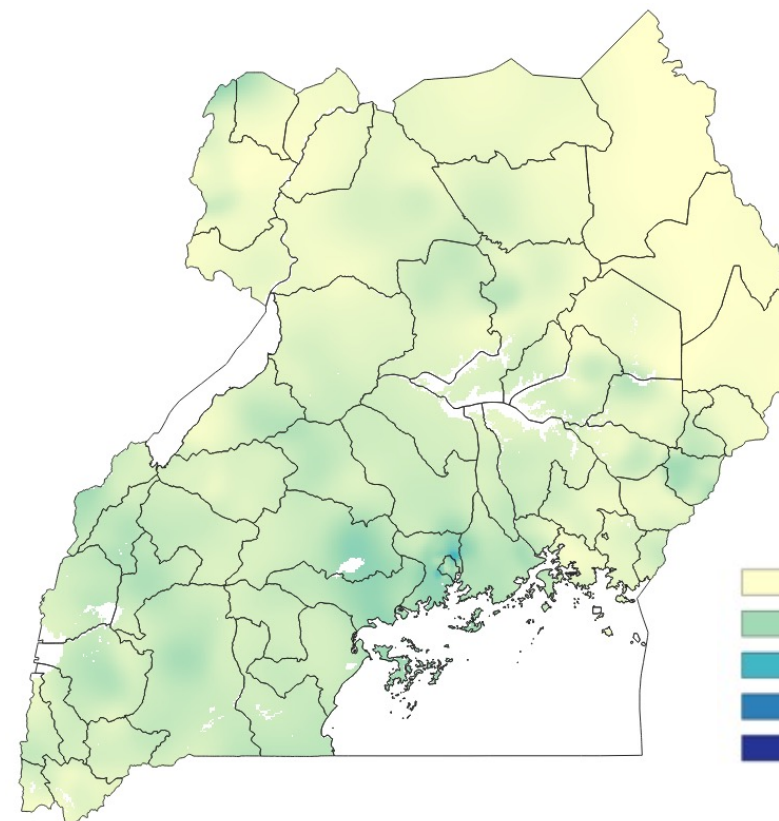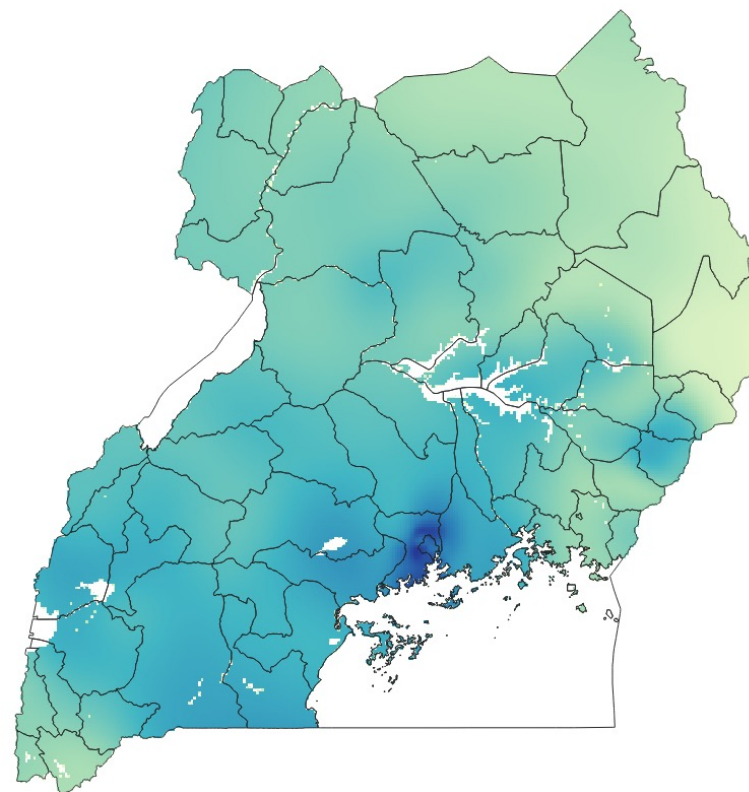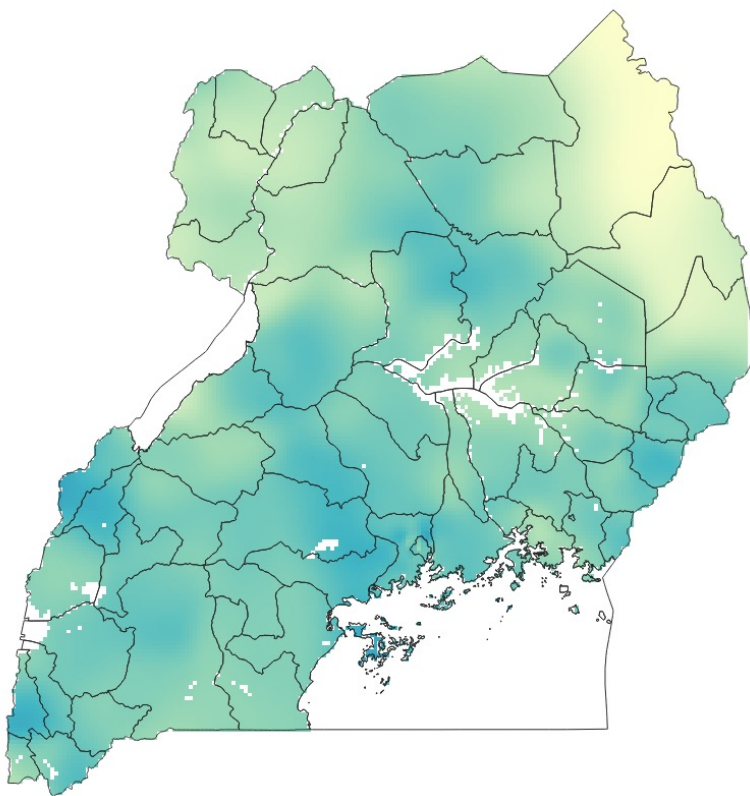
Uganda: women, users and private users

Absolute numbers useful to think about how to focus services and distribution of commodities

Population of women 15 - 49

Modern method users

Private users

High

Low
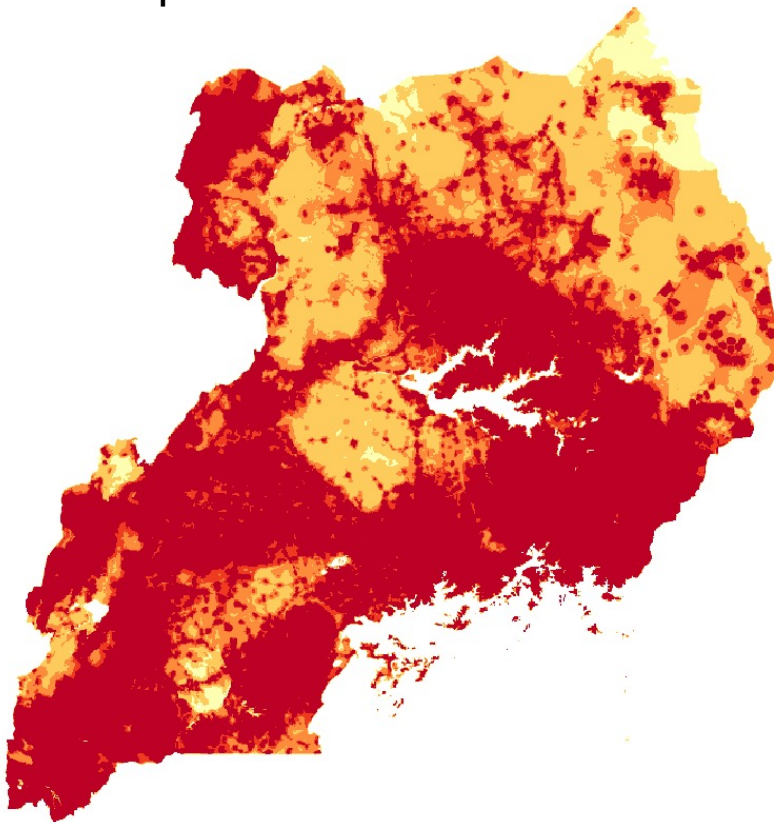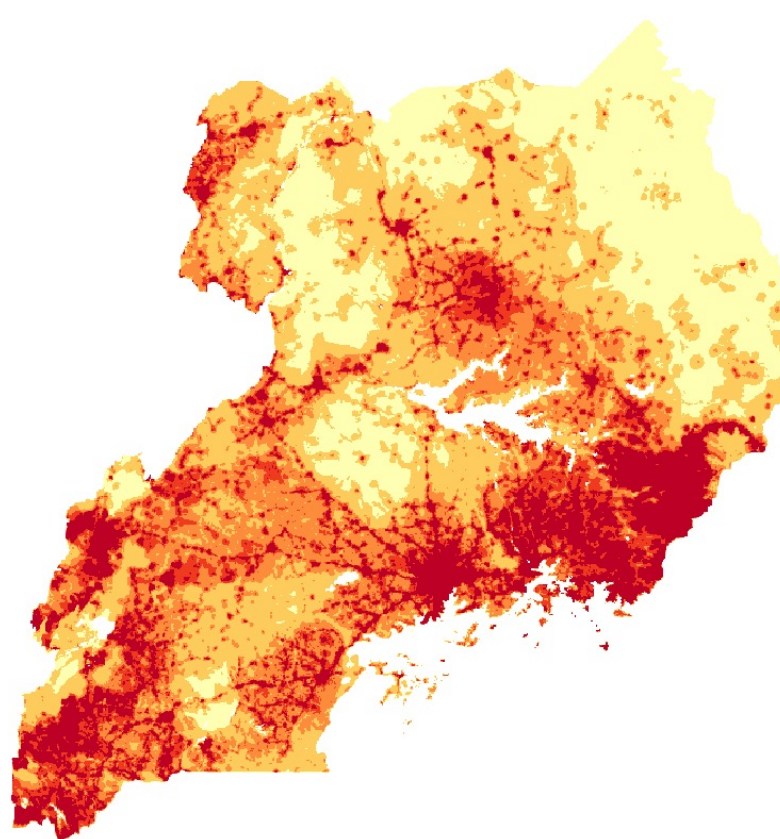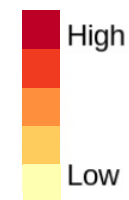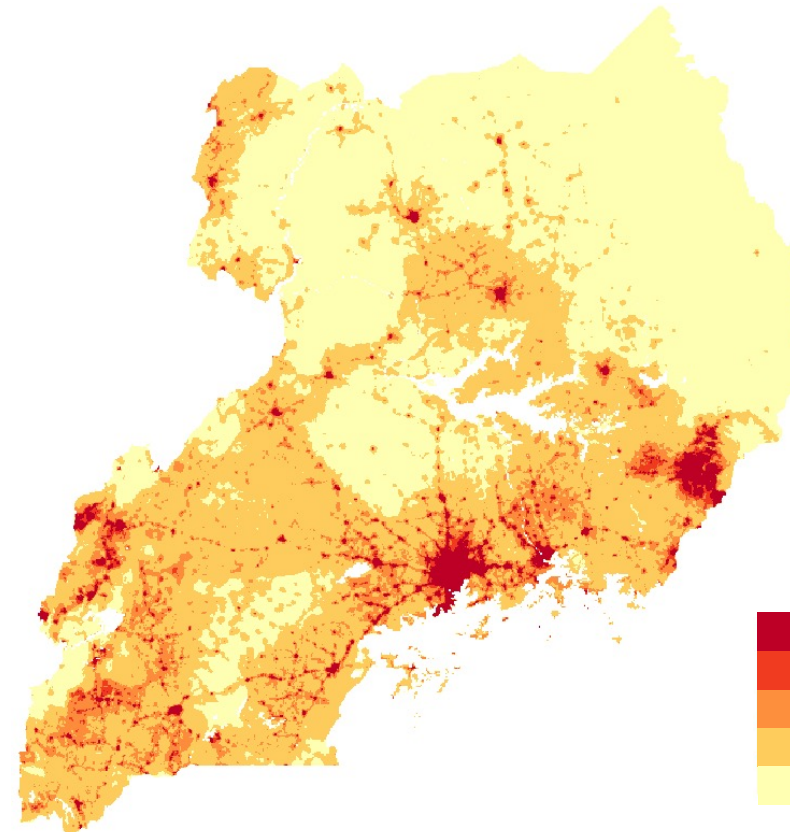
Source: DHS 2016, WorldPop

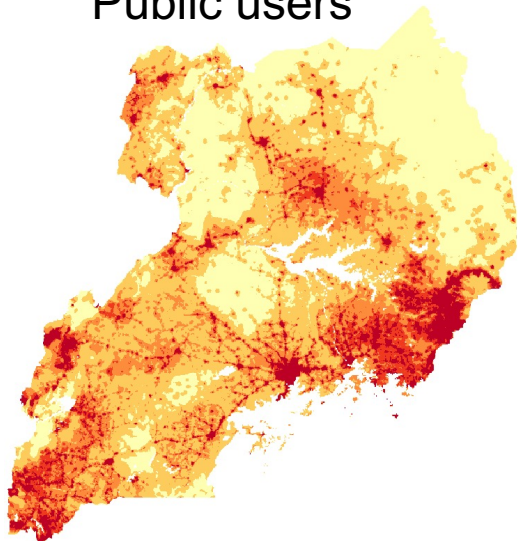# Uganda: women, users, unmet need, and public/private users
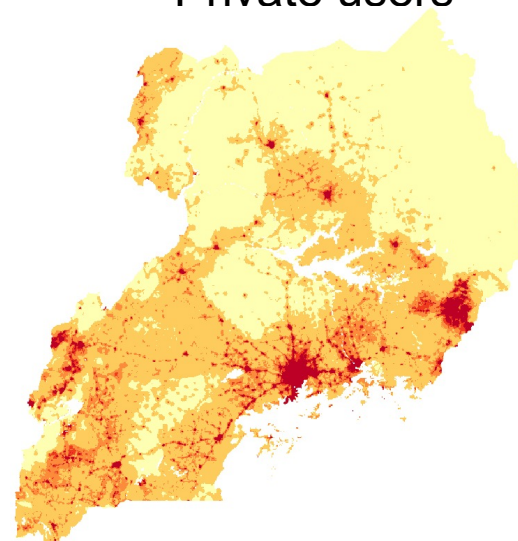
Population of women 15 - 49
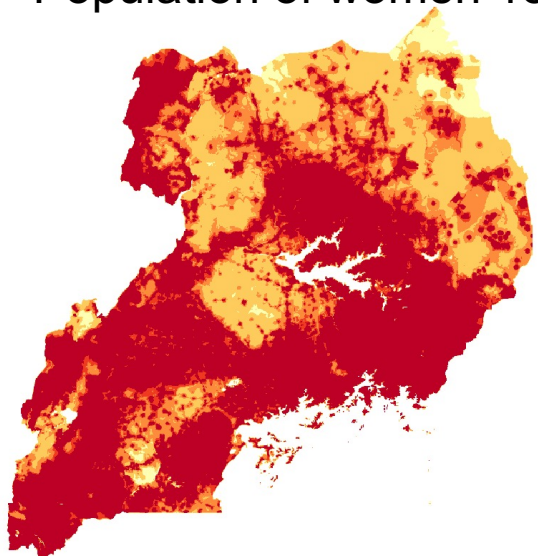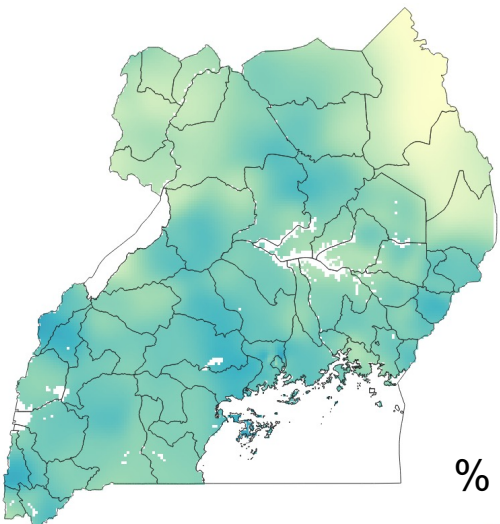
Modern method users
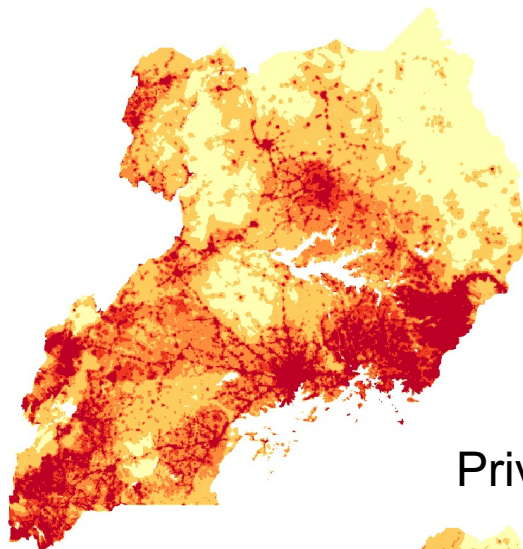
Unmet need
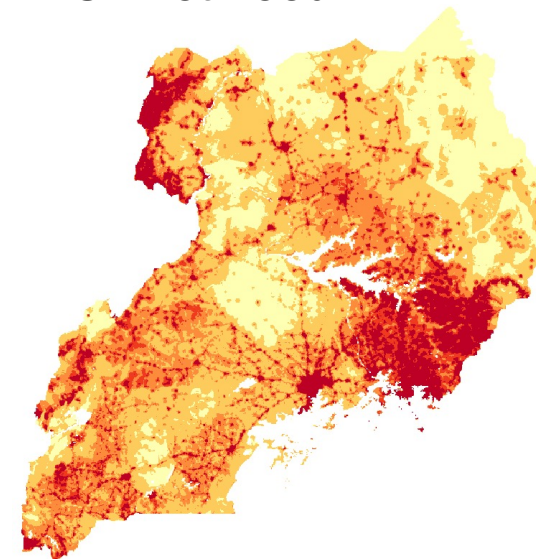
Public users

Private users

High

Low

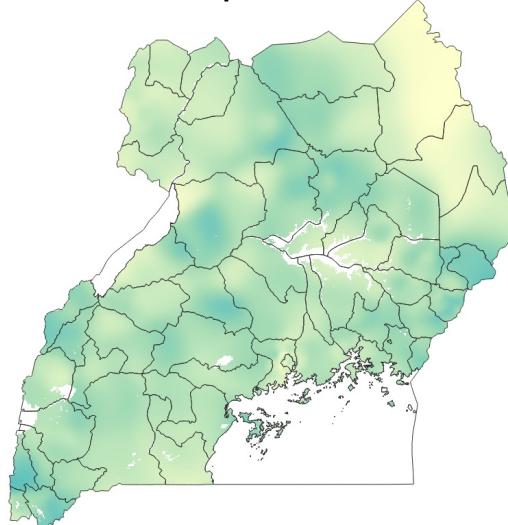Source: DHS 2016, WorldPop
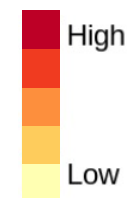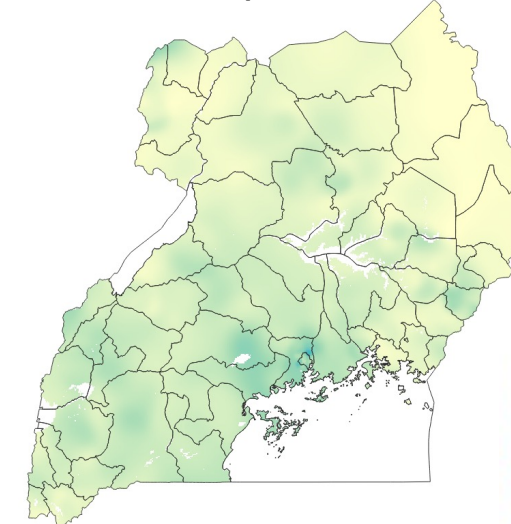
Uganda: mCPR, private and public sector use, and income levels

mCPR

Public prevalence

Private prevalence

% living on < $1.90

% living on > $5.50

0%
20%
40%
60%
80%

0%
25%
50%
75%
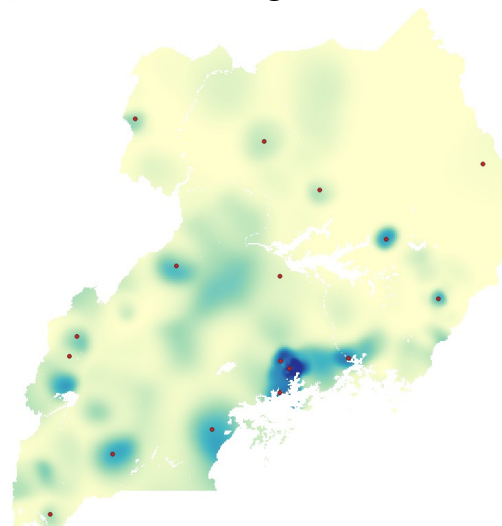100%

Source: DHS 2016
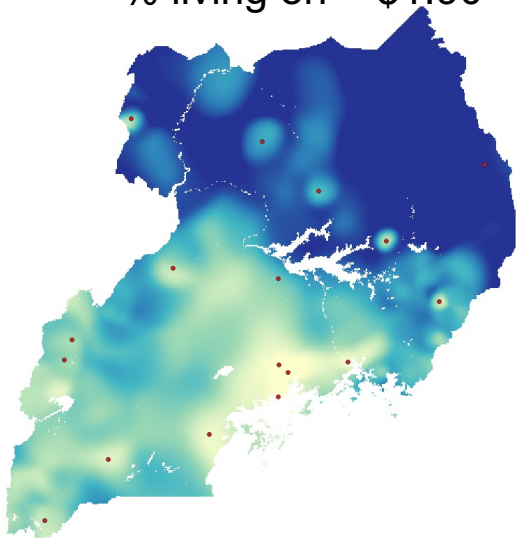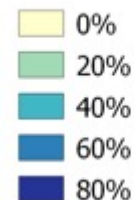
Uganda: cities and roads with private market share