Reflection on the current problems facing Uganda

- wars
- environmental quality
- migration
- pandemics
- population
- displacements
- famines
- climate change
- economic crises
- cross-border challenges
- natural disasters
What geolocation got to do with our problems?

• The extent of the problems vary in space and time
• The magnitude of the problems vary in space and time
• The impact of the problems vary with respect to geo-demographic disaggregation – small area geographies

• Logically these problems are of a global nature to a good extent that require global, regional and national policy responses

A Hopeful Nation on Global Indicator Framework

SDGs Working Group under custodianship of Uganda Bureau of Statistics
New and Innovative Methods for Disaggregation by Geolocation

An increasing amount of geospatial data is being created and captured by using high-resolution satellite imagery and other data collection techniques.

Uganda Bureau of Statistics, Ministry of Water & Environment, Makerere University and working on at SDG 6

Uganda Bureau of Statistics, Ministry of Lands, Housing and Urban Development, National forestry Authority and Ministry of Agriculture, Animal Industry and Fisheries and working on SDG15

Monitoring Land Cover

- A tool through machine learning that automatically identifies the areas depleted, usually requiring also some work of field verification to calibrate the tool.
New and Innovative Methods for Disaggregation by Geolocation

Explosion of rich geospatial information has created a new business domain of location-based services, such as those focused on navigation, and contributed to economic growth, as well as to the competitive development of related technologies.

- Uganda Bureau of Statistics, and Ministry of Education working on Education Survey baseline study to improve on the master sample frame for monitoring progress.

New and Innovative Methods for Disaggregation by Geolocation

Rapid advances in geospatial information technology present enabling better access and integration of location-based information, growing the traditional use of maps to include new tools for information analysis and management.

Uganda Bureau of Statistics, UNICEF and WB working on poverty indicators using SAE techniques and PoverMap to engage government, disaggregation: Children Poverty Maps, and machine learning/big data with UN Pulse Lab

Uganda Bureau of Statistics and the Geo-Information Management WG with support from IAEG-SDGs working on SDGs 9.1.1, disaggregation: Classification of road network and level of vulnerability

<table>
<thead>
<tr>
<th>SDG Target</th>
<th>Current official national indicator</th>
<th>Baseline Status</th>
<th>Data Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1. by 2030, eradicate extreme poverty for all people everywhere, currently measured as people living on less than $1.00 a day</td>
<td>1. Proportion of population below the national poverty line per day (MDG indicator)</td>
<td>19.7% (2012/13)</td>
<td>UNHS</td>
</tr>
<tr>
<td></td>
<td>2. Multidimensional Poverty Index</td>
<td>0.367 (2013)</td>
<td>HDR</td>
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<tr>
<td>1.2. by 2030, reduce at least by half the proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions</td>
<td>1. Poverty gap ratio (MDG Indicator)</td>
<td>5.2 (2012/13)</td>
<td>UNHS</td>
</tr>
<tr>
<td></td>
<td>2. Proportion of population living below national poverty line, differentiated by urban/rural (modified MDG indicator)</td>
<td>22.8%/9.3% (2012/13)</td>
<td>UNHS</td>
</tr>
</tbody>
</table>

Modern poverty analysis and monitoring techniques including SAE –Brazil GI Training Centre, and PovMap by WB techniques capacity building
Monitoring Poverty

- A tool through machine learning that automatically identifies and counts different types of roofs of households, as a proxy indicator of poverty in Uganda as in many other countries.

- As the household economy improves, the thatched roof is changed to a metal one.
- We can count metal roofs and thus, monitor poverty trends.

Using “machine counting” technique, satellite imagery from 2012, with metal-roofed buildings highlighted in yellow, image from 2014, with new metal-roofed buildings highlighted in red.
### Key words from indicator 9.1.1

<table>
<thead>
<tr>
<th>No</th>
<th>Key words from indicator 9.1.1</th>
<th>Recommendation/comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>All Season roads</td>
<td>All national, urban and district</td>
</tr>
<tr>
<td>2</td>
<td>Rural Population</td>
<td>Urban and rural population are as gazetted by Ministry of Local Government</td>
</tr>
<tr>
<td>3</td>
<td>Peri-urban</td>
<td>Too should be classified as urban</td>
</tr>
<tr>
<td>4</td>
<td>2km Distance</td>
<td>Agreed that the 2km can be measured however the challenge is on how to ascertain the population density of an area</td>
</tr>
<tr>
<td>5</td>
<td>UNRA roads</td>
<td>All UNRA roads are National roads</td>
</tr>
<tr>
<td>6</td>
<td>Feeder roads</td>
<td>Feeder roads are District roads</td>
</tr>
</tbody>
</table>

### New and Innovative Methods for Disaggregation by Geolocation

Much of the digital data and information currently available online is location-referenced, providing both new opportunities and challenges for the effective use of geospatial information to help address problems of major global significance.

**Uganda Bureau of Statistics:** Gender disaggregated statistics and figures a factor in all stages of planning including engendering budgets and activities

**Kampala Capital City Authority:** House numbering and road naming and Feecal Sludge Management programmes
The Role of Government is shifting ...

Being a primary supplier of authoritative geospatial data. At the country level, to being an acquirer of data for national programmes, serving in a coordinating and regulatory role and facilitating partnerships among the producers and consumers of geospatial information.

All the judicial and related institutions are fully mapped the Uganda Police Force including home security police stations and units to improve the level of services shared with UBOS for monitoring crime statistics, analysis and reporting.

All opportunities are being sought and bought in to make the SDG agenda possible with the national development agenda for transformation: Dev. partners, stakeholders, academia, international agencies, etc.

Thank you
UNWGIC Team
and
PR of China