




United Nations World Geospatial Information Congress
The Geospatial Way to a Better World

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**Uganda is Not Being Left Behind:
Global Indicator Framework Agenda**

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Reflection on the current problems facing Uganda

wars migration
 environmental quality pandemics
 population displacements climate change economic crises
 famines
 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

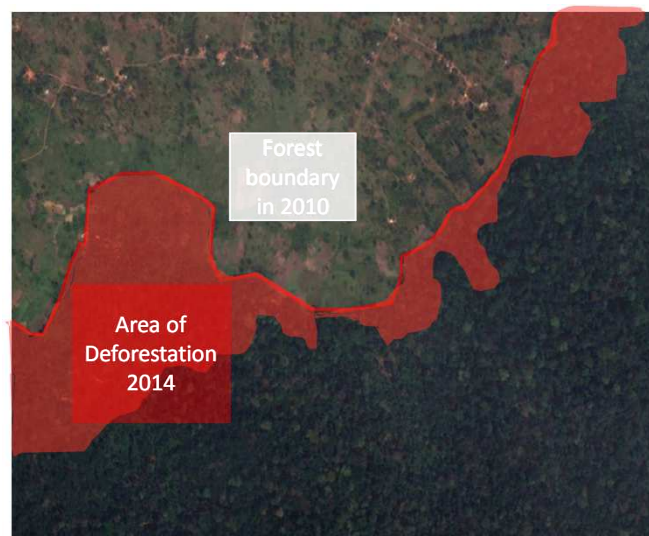


Uganda Bureau of Statistics, Ministry of Lands, Housing and Urban Development, National forestry Authority and Ministry of Agriculture, Animal Industry and Fisheries and working on SDG15



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 Education Survey baseline study to improve on the master sample frame for monitoring progress



Uganda Bureau of Statistics, and Ministry of Energy working on Energy Survey to improve on the disaggregation of the energy statistical data for analysis



Disaggregation>

Girls

Urban

Rural

Household wealth

Richest quintile

Second richest quintile

Middle quintile

Second poorest quintile

Poorest quintile

Education of household head

Secondary or higher

Primary

Less than primary



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

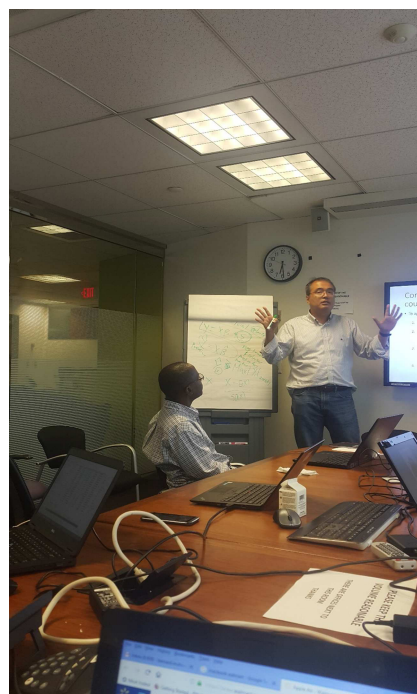


Uganda Bureau of Statistics and the Geo-Information Management WG with support from IAEG-SDGs working on SDGs 9.1.1, disaggregation Classification of roadnetwork and level of vulnerability



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

Goal 1	End poverty in all its forms everywhere		
SDG Target	Current official national indicator	Baseline Status	Data Source
1.1. by 2030, eradicate extreme poverty for all people everywhere, currently measured as people living on less than \$1.00 a day	1. Proportion of population below the national poverty line per day (MDG Indicator)	19.7% (2012/13)	UNHS
	2. Multidimensional Poverty Index	0.367 (2013)	HDR
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	1. Poverty gap ratio (MDG Indicator)	5.2 (2012/13)	UNHS
	2. Proportion of population living below national poverty line, differentiated by urban/rural (modified MDG Indicator)	22.8%/9.3% (2012/13)	UNHS





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



 **PULSE
LAB KAMPALA**



Monitoring Poverty

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.




Gulu district 2012


Gulu district
2014



 **PULSE
LAB KAMPALA**









UGANDA BUREAU OF STATISTICS


REPORT FOR THE STAKEHOLDERS CONSULTATIVE WORKSHOP
MEETING ON GEOSPATIAL INFORMATION FOR SDG INDICATOR




THE REPUBLIC OF UGANDA




9.1.1





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



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 Faecal Sludge Management programmes



5 GENDER EQUALITY

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Explore Statistics

Home > Explore Statistics

All Statistics

Demographics

Environment

Macro Economic

National Standard Indicators

Production

Standards, Methods and Classifications

Population & Censuses

ALL STATISTICS (14)

PUBLICATIONS AND ARTICLES

- Selected Indicators (Household Population, Hhds, Avg HhD Size,) by District_2002 Census - Last Updated on 17th March 2018
- Census population, average annual population changes and growth rates, 1911-2014 - Last Updated on 10th March 2018
- Distribution of Vulnerable Children by Type of Vulnerability and District (Number), NPHC 2014 - Last Updated on 23rd March 2018
- Distribution of Vulnerable Children by Type of Vulnerability and District (Number), NPHC 2014B - Last Updated on 13th March 2018
- Households that own Computer (Percentage), Census 2014 - Last Updated on 23rd March 2018
- Infant Mortality (Deaths by 1000 live births), NPHC 2014 - Last Updated on 23rd March 2018

11 SUSTAINABLE CITIES AND COMMUNITIES

Kampala Road

↑ 23-1 ↑

39

Kampala Rd.

Legend

- Kampala District Boundary (Proton Area)
- River Channels
- Catchment Boundaries
- Division Boundaries

Drainage Systems

- Hakubwa
- Lubigi
- Nakubulungo
- Kansanga
- Mayanja / Kibabuli
- Kiwanda
- Nakubaga
- Nakubaga/Nakubaga
- Wakumbi
- Mayanja North

City Council of Kampala

ECSS

DAL AND NDAH

IKC

Kampala Drainage Master Plan

Drainage Systems

Figure 1

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

