



# Challenges and Successes in Sharing Geospatial Data in Africa

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(GD=Geospatial Data)



# Introduction



The current population of Africa is 1,278,022,519 [2030, 1,703,537,504]]:

- Africa population is equivalent to 16.64% of the total world population, [2030, 20.8 %].
- The population density in Africa is 43 per Km<sup>2</sup> [2030, 57].
- The total land area is 29,648,481 Km<sup>2</sup> [2030, 29,648.481].
- 40.6 % of the population is urban (523,004,491 people in 2018) [2030, 45.2 %, 770,067,953].
- The median age in Africa is 19.4 years [2030, 21.2].



# Introduction...



# Prospects for GD Sharing



1. Agenda 2030 for Sustainable Development
  - Leaving no one behind.
  - Agenda 2030 has 17 Goals, 169 Targets 230 indicators.
2. Agenda 2063 for Africa
  - The Africa we want
  - Agenda has 7 aspirations

Adequate monitoring implementation of SDGs/Africa is of critical importance & will

- ☐ determine whether policy efforts are channeled adequately, and
- ☐ SDGs are achieved or missed



# Prospects for GD Sharing



3. National development plans
4. Data revolution (both non-traditional data sources, big data  
>multi-spectral-platform-temporal, etc)
5. International advocacy for use of geospatial technologies
  - UN IAEG-SDGs Working Group on Geospatial Information  
*-looking at SDGs with a geospatial lens;*
  - UN GGIM Africa- *driving Africa to become more spatially enabled*
6. Advancement of innovative free open and open source software for geospatial applications
  - GeoNode, ArcGIS Online/GeoPortal, etc



# Challenges in GD Sharing



1. Un-coordinated efforts in spatial data activities  
-donor/local impacted
2. Institutional mandates non-existent or overlapping
3. Spatial data not structured based on industry standards
4. Policies for accessibility not clear/non-existent
5. Lack of documentation (metadata)



# Challenges in GD Sharing



6. Insufficient and questionable datasets in terms of content, quality and coverage aspects -not fit for many purposes
7. Inadequate funding, non-prioritization in national budgeting
8. Limited use of earth observation data due its cost, inaccessibility, and licensing
9. Limited capacity of geospatial information technology, applications and infrastructure
10. Risk of leaving Africa behind against the Global SDGs agenda direction of "Leaving Nobody Behind"





# Successes in GD Sharing



1. African nations are now motivated to take up data as an essential part of their infrastructure for sustainable development: RCMRD, Malawi
2. Many states have started to keenly invest in the institutional structural improvement, technology and its human resources through partnerships: Uganda, Rwanda
3. Africa Agenda 2063 calls for nation resources in setting-up business workflows to use geodata in coordinated and harmonized decision-making processes: South Africa  
National Spatial Data Infrastructures are being established: Nigeria



# Successes in GD Sharing



1. The National Strategies for Statistical Development (NSDS)
  - are increasingly being aligned to National Development Plans through the integrated censuses and survey programme that are locational geo-referenced.
  - UBOS GIS policy stipulates that all the geospatial data produced shall be “a public good” freely and openly shared to the stakeholders.



# GD Sharing in Uganda



- a) Alignment of the Agendas towards NDPs
  - i. Creation of SD Data Working Group (*National Standard Indicator Framework*)
- b) Collaborative and partnership frameworks:
  - i. Firming up the existing partnerships (*strengthening of Geo-Information Management Working Group*)
    - comprised of membership (100nr) from Government, UN Agencies, Local and Inter- Governmental Organisations, Donor Agencies, Academia, the Private Sector as well as other actors with interest in the promotion of geo information best practices in Uganda
    - objectives: enhancing geo spatial data and information sharing, reducing duplication of efforts and the creation and consolidation of synergies – supplementing each other's efforts, harmonizing and standardization of common datasets



# GD Sharing in Uganda ...



- i. Establishment of Uganda Spatial Data Infrastructure (*USDI*)
  - streamline the framework for easy accessibility and utilization of spatial data captured and held by various institutions
  - facilitate online earth observation data integration best practices with other combining various information data themes for the purposes of analysis and decision making
  - ensure regular provision of satellite imagery for use by government agencies



# GD Sharing in Uganda ...



- i. Uganda Open Mapping Program (*supported by WB, Humanitarian OpenStreet Team, ITHACA*)
  - a GFDRR supported World Bank program to build resilience capacity and mapping capability using OSM tools for national agencies and local communities in for disaster mitigation, reduction and recovery.
  - Content verification
    - » Community Mobilisation
    - » Community-Verified
    - » Upskilling, Sustained, Inclusive
  - Partners skilling
    - » Broad Complete dataset accessed by ALL
    - » GIS skill sets across sectors
  - Field Feedback, Community Advocacy





# GD Sharing in Uganda...



## 2014 POPULATION AND HOUSING CENSUS

ENUMERATION MAP

Use this Map to work in the Following Enumeration Areas of

DISTRICT: KAMPALA

COUNTY: KCCA

SUB-COUNTY: MAKINDYE

**PARISH :** BUZIGA

01,02, 03 04 & 05



# GD Sharing in Uganda ...



- v. Uganda, Kampala hosts one of three UN Pulse Labs on Big Data, which is aimed at innovative new tools and technologies to enable us improve the quality of life of everyone and protect our planet using big data.
  - MDAs collaborative joint project arrangements to carry out advanced trainings in machine learning techniques for geodemographics



# GD Sharing in Uganda ...



## v. UBOS Geo-Information Services

- GIS support to collation of geo-referenced statistical data and information
- administrative units boundary and enumeration area geospatial data based on remote sensed imagery
- geo-coded service delivery location data based on GPS mapping,
- community roadnetwork datasets for census and survey undertaking and other users
- establishment of Uganda GeoNode platform for geospatial data sharing for evidence based planning and decision making (under development for new inclusion of SDGs)





# Conclusion



- + Taking advantage of the evident prospects, holding on the small success achieved, and meaningfully tackle the challenges facing the geospatial data sharing in Africa, **we must together help:**
  - in continuous capacity building in geospatial information technologies and applications, and
  - in provision of affordable regular earth observation data that are extremely required for Africa “**not to be left behind**” and also to support her “**achieve its aspirations**”.





# Word of Appreciation



I humbly register my sincere appreciation to WB, ITHACA and Geo-Solutions for the support in Geospatial Data Sharing Agenda in Africa, the opportunity and facilitation offered to Uganda in the past and now for this Summit.

And to all of you GeoNoders, GeoNodees and GeoNoded Delegates, thank you very much indeed for 2018 GeoNode Summit



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