

Fundamental Geospatial Datasets in Africa

United Nations
Economic
Commission for
Africa

Geoinformation
& Spatial
Statistics

Andre
Nonguierma



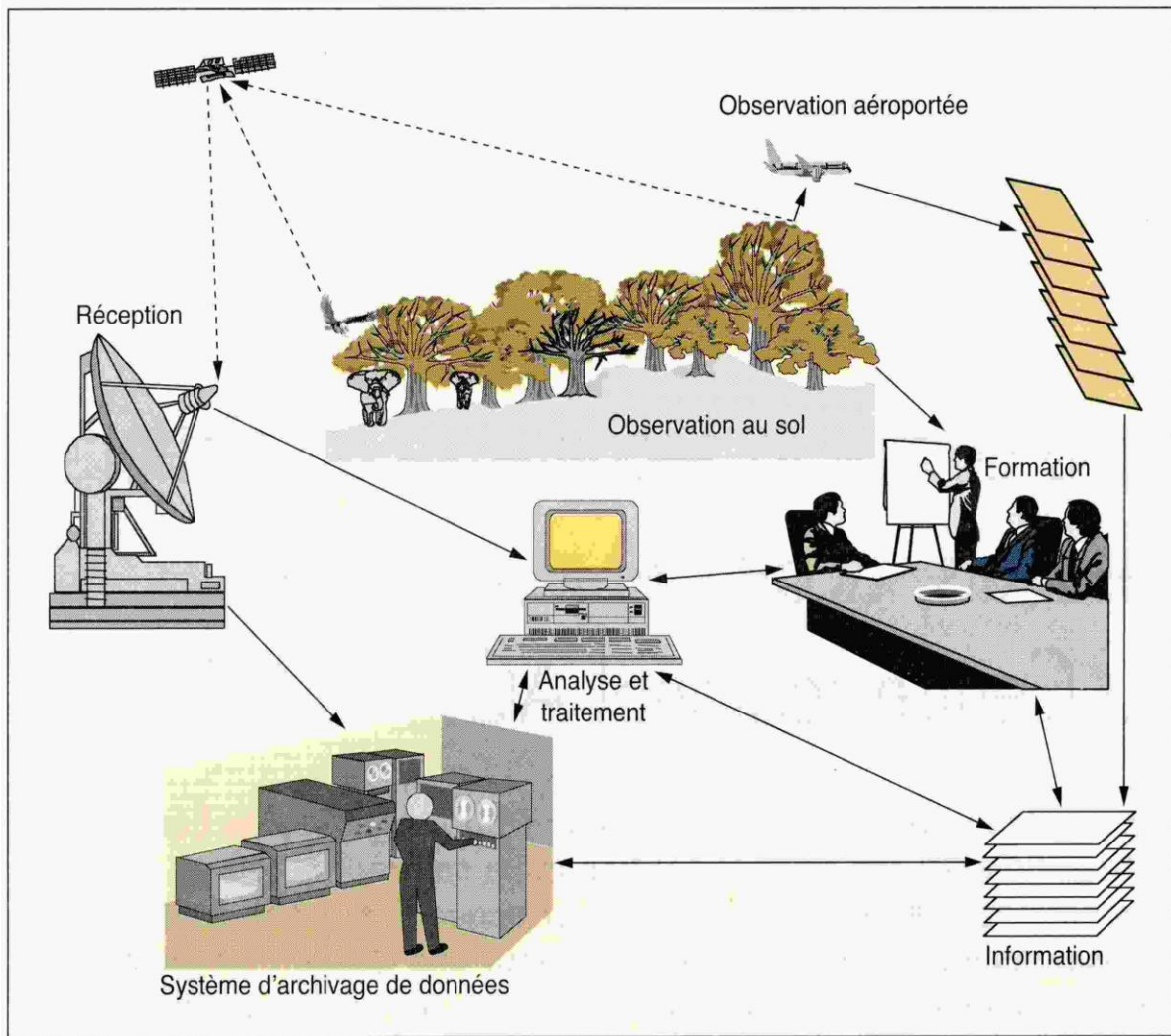
UN-GGIM: AFRICA

UNITED NATIONS INITIATIVE ON
GLOBAL GEOSPATIAL
INFORMATION MANAGEMENT

New York , 03 August 2015

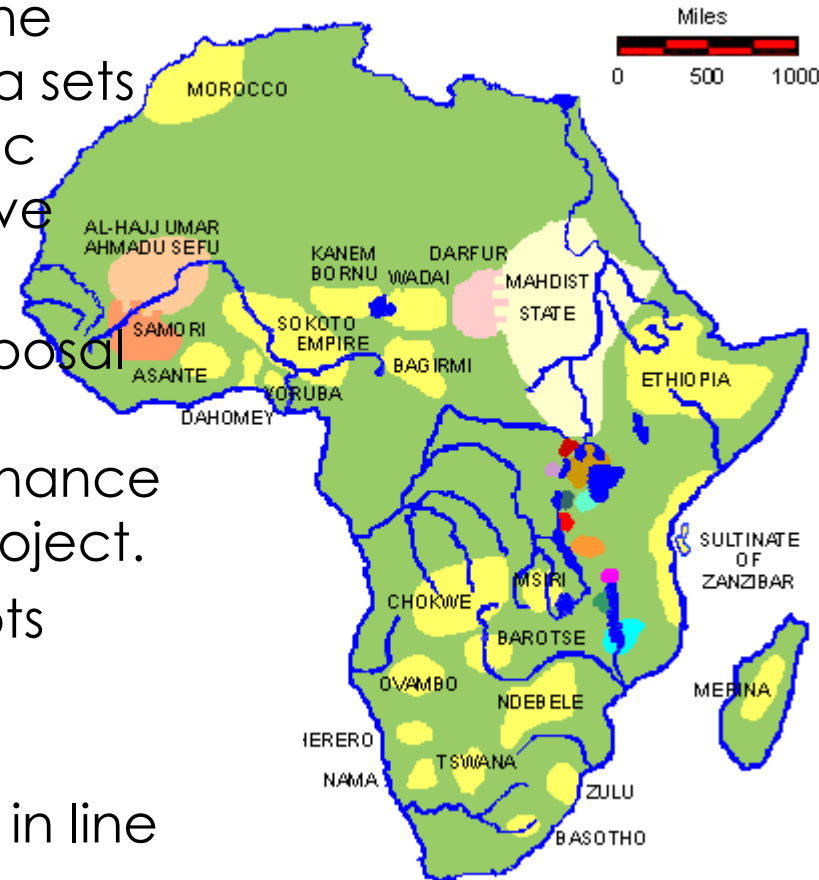
Africa's Geography Nexus Issues

Core Data : Lack of consistency	Poor Mapping Coverage 2.5 % of the Continent is Mapped at 1/25.000 (Europe: 86.9% ; Russia : 100%)
Infrastructure & Technology: Lack of Standardisation	Poor Interoperability Non codified rules for data access
Applications: Duplication of efforts	Several applications build the same datasets Data are not publicized
Capacity : Lack of critical mass	Recognition & Retention of Professionals
Governance: Lack of dialogue	Redundancies Poor Coordination



Africa Response : The Durban Statement

- That every country identifies its fundamental data sets, from which the consistent regional fundamental data sets should be derived, including geodetic framework, topography, administrative boundaries, transportation, etc.
- That every development project proposal identifies, up front, programmatic arrangements for continuous maintenance of resulting data sets at the end of project.
- That every country develops or adopts mapping standards consistent with international standards
- That mapping activities be prioritized in line with priority needs of Africa



Africa Initiative : Mapping Africa for Africa

- Initiative to accelerate the rate of geoinformation activities in Africa
- A plan of action to provide the fundamental geo-spatial information for sustainable development in support of regional projects
- Premised on the principle that Africa should be involved, if not lead, the production of maps of Africa
- Based on the Durban Statement
- In collaboration with the International Cartographic Association (ICA) and other global institutions
- **Fundamental data sets definition document published**
- **Ongoing Study : Guidelines for Best practices of FDS**



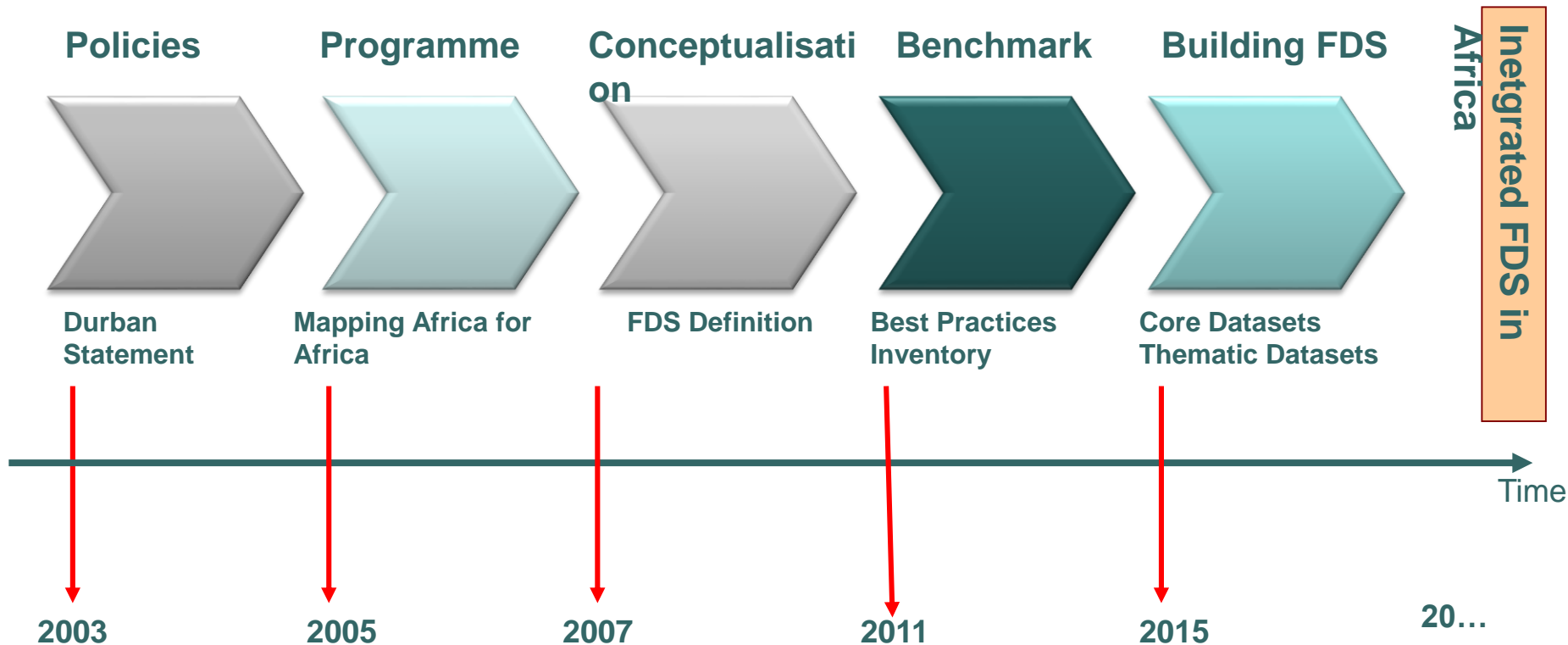
Determination of Fundamental Datasets for Africa

Geoinformation in Socio-Economic Development



● ● ● MAfA : Business Model

Phased Approach



What are Fundamental Geospatial Datasets for Africa

Data Theme	Data Set
Geodetic Control Network	Geodetic control points
	Height datum
	Geoid model
Rectified Imagery	Aerial photography
	Satellite imagery
Hypsography	Digital elevation model
	Spot heights
	Bathymetry
Hydrography	Coastline
	Natural water bodies
Boundaries	Governmental units
	Populated places
	Enumeration areas
Geographic names	Place Names
	Feature Names

Data Theme	Data Set
Land management units/ areas	Land Parcels/Cadastre
	Land Tenure
	Street Address
	Postal or zip code zones
	Land use planning zones
Transportation	Roads
	Road centrelines
	Railways
	Airports and ports
Structures	Bridges and tunnels
Utilities and services	Power
	Telecommunications
Natural environment	Land cover
	Soils
	Geology

Comparison with Others

	CODIST	INSPIRE	ANZLIC	UN-GGIM
	<i>Africa</i>	<i>Europe</i>	<i>Au. & NZ</i>	<i>Proposal</i>
1	Geodetic Control Network	Coordinate reference systems	Positioning	Positioning (geodetic)
2	Geographic names	Geographical names	Place names	Names (Gazetteer)
3	Boundaries	Administrative units	Administrative boundaries	Administrative Boundaries
4	Hydrography	Hydrography	Water	Water (Hydrology)
5	Land Management	Cadastral parcels	Geocoded addressing	Address (Buildings)
6	Transportation	Transport networks	Transport	Transport
7	Natural Environment	Protected sites	Land cover	Cadastre (Tenure)
8	Utilities	Addresses	Land parcels	Land Cover (Vegetation)
9	Hypsography	Geographical grid systems	Elevation & depth	Elevation
10	Imagery		Imagery	Imagery (Satellite & photo)
11				Bathymetry (Hydro.)

● ● ● Africa Efforts : Policies – People - Data

▣ Policies : (NSDI)

- Cooperative, multi-stakeholder approach to production, management, and dissemination of spatially enabled data.

▣ Data : Purpose-oriented datasets

- Structured and comprehensive data foundation that would be consistent, comparable and compatible at all levels.

▣ Technicalities

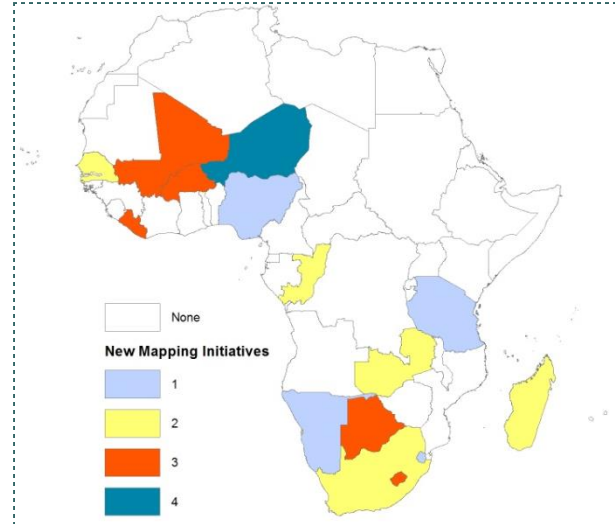
- Robust geodetic infrastructure
- Standards to ensure compatibility and interoperability



FDS Status In Africa : Mapping Activities

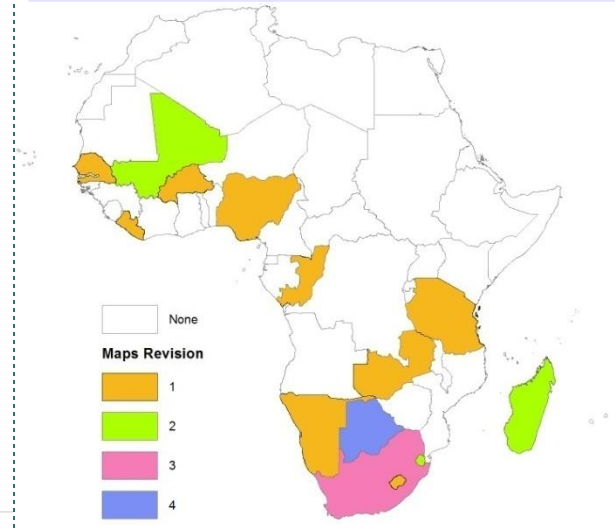
Country with New Mapping Initiatives

Botswana, Burkina, Congo, Lesotho, Liberia, Madagascar, Mali, Namibia, Niger, Nigeria, Senegal, South Africa, Sudan, Swaziland, Tanzania, Zambia



Countries with Maps Revision

Botswana, Burkina, Congo, Lesotho, Liberia, Madagascar, Mali, Namibia, Nigeria, Senegal, South Africa, Sudan, Swaziland, Tanzania, Zambia



What Next...

● Data Centric activities

- Developing a taxonomy of data sets relevant to studying
- Formulating policies relating to Geography and Statistics
- Fundamental geospatial datasets

● One Source Spatial Data Warehouse

- Identify existing data and information resources
- Create a metadata clearinghouse
- Upgrade the data and information resources to make their products accessible to the wider user community (online, interoperability, VGI...)

● One Source Visualization Facility

- Geospatial portal to integrate all datasets into the African Regional Spatial Data Infrastructure.



Contacting Us...



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- ▣ United Nations Economic Commission for Africa
- ▣ ANonguierma@uneca.org
- ▣ <http://geoinfo.uneca.org/sdiafrica/>
- ▣ www.uneca.org



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