



# The Global Statistical Geospatial Framework and the Global Fundamental Geospatial Themes

Sub-regional workshop on integration of administrative data, big data  
and geospatial information for the compilation of SDG indicators

Addis Ababa, Ethiopia. 23-25 April 2018  
United Nations Economic Commission for Africa

# The 2030 Agenda

- **Declaration**  
Vision and shared principles for people, planet, prosperity, peace and partnership
- **Results Framework**  
17 integrated and indivisible **goals** and 169 aspirational **targets**
- **Follow-up and Review**  
Global **indicators** underpin an integrated follow-up and review framework
- **Means of implementation**  
Governments, civil society, industry, the UN System, science and technology



# Global SDG Indicator Framework

- List of **232 unique indicators** (nine indicators repeat under two or three different targets)
  - Developed by the Inter-Agency and Expert Group on SDG Indicators (IAEG-SDGs)
  - Agreed at the 48th session of the UN Statistical Commission in March 2017
  - Adopted by the General Assembly on 6 July 2017



# Vision

Implementing the 2030 Agenda through the effective **dissemination and use of integrated statistical and geospatial data**, supported by technologies that facilitate data sharing and interoperability and collaboration to **report on the SDGs across local, national and global levels.**



# 2030 Agenda and statistical capacity building

*“We will support developing countries, particularly African countries, least developed countries, small island developing States and landlocked developing countries, in strengthening the capacity of national statistical offices and data systems to **ensure access to high-quality, timely, reliable and disaggregated data**. We will promote transparent and accountable scaling-up of appropriate public-private cooperation to **exploit the contribution to be made by a wide range of data, including earth observation and geospatial information**, while ensuring national ownership in supporting and tracking progress.”*



# Cape Town Global Action Plan for Sustainable Development Data

- **Objective 3.4: Integrate geospatial data into statistical production programmes at all levels.**
  - Promote the integration of modern geospatial information management systems within mainstream statistical production programmes by highlighting synergies between the two systems.
  - Promote the integration of geospatial and statistical metadata.
  - Encourage the use and adoption of technologies that promote integration of geospatial and statistical information.
  - Support the implementation of the **Global Statistical and Geospatial Framework**



# New geospatial capabilities

- **Ability to collect more accurate and timely information about people, the economy and the environment**
  - Advances in Global Navigation Satellite Systems (GNSS)
  - Availability of affordable aerial and satellite imagery
- **Powerful data analysis tools to identify patterns and inter-relationships**
  - Geographic information systems (GIS)
- **More efficient and impactful dissemination of statistical data**
  - Online access to geospatial data visualizations, including the ability to create maps and embed them in web applications



# Global statistical geospatial framework

- Adopted and endorsed by UN GGIM and UNSC in 2016
- Goals:
  - Improve NSO's capability to integrate geospatial data, methods and processes into mainstream statistical production
  - Support production of disaggregated data for small-area geographies
  - Link aggregate statistical outputs to standard geographies
  - Provide the basis for collaboration between NSO's, Mapping Authorities, and other providers of geospatial and EO data





# Global statistical geospatial framework

- **Principle 1:** Use of fundamental geospatial infrastructure and geocoding
  - Assign to every statistical unit accurate and unambiguous location information from authoritative, relevant and nationally agreed fundamental data sources
  - So that they can be placed as points on the earth's surface (and therefore on a map)



# Global statistical geospatial framework

- **Principle 2:** Geocoded unit record data in a data management environment
  - Implement persistent storage of the geo-coded statistical microdata in a relational database management system
  - So it can be efficiently retrieved, analyzed, and combined into time-series and geographic aggregates.



# Global statistical geospatial framework

- **Principle 3:** Common geographies for dissemination of statistics
  - Make use of authoritative geographies to disseminate all statistical outputs
  - So users can discover, analyze and integrate different statistical datasets using common administrative or functional geographies



# Global statistical geospatial framework

- **Principle 4:** Statistical and geospatial interoperability
  - Overcome structural, syntactic and semantic barriers between statistical and geospatial data and metadata
  - So as to improve the potential for data sharing and re-use between different systems and applications within and across organizational boundaries



# Global statistical geospatial framework

- **Principle 5:** Accessible and usable geospatially enabled statistics
  - Support the release, access, analysis and visualization of geospatially enabled information
  - So user can easily derive insights and fully use the data available for local action



## Fundamental Geospatial Data Themes

Designed to bridge the gap between the geospatial data community and other stakeholders, to make a difference in the achievement of the SDGs

Fundamental Data Themes



Global Geodetic Reference Frame



Geographical Names



Addresses



Functional Areas



Buildings and Settlements



Land Parcels / Properties



Transport Networks



Elevation and Depth



Population Distribution



Land Cover and Use



Geology and Soils



Physical Infrastructure/ Service Points



Water



Imagery

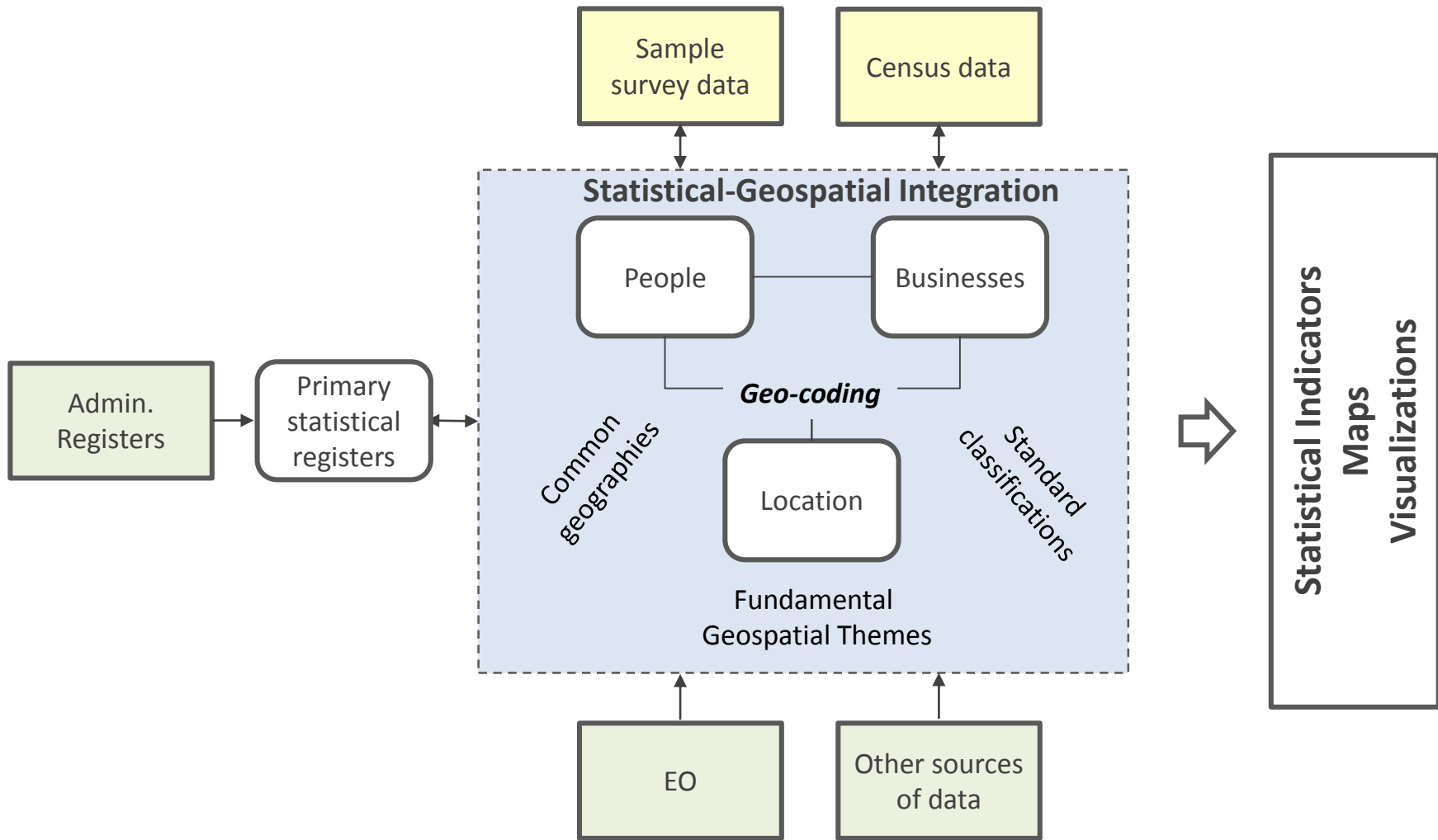
- ✓ Location-based
- ✓ Cross-sectoral
- ✓ Universal – applicable across all regions
- ✓ Used to reference other data
- ✓ Comprehensive coverage
- ✓ Documented methodology
- ✓ Global standards
- ✓ Official – authoritative – trusted
- ✓ Critical data
- ✓ Identified source
- ✓ ....



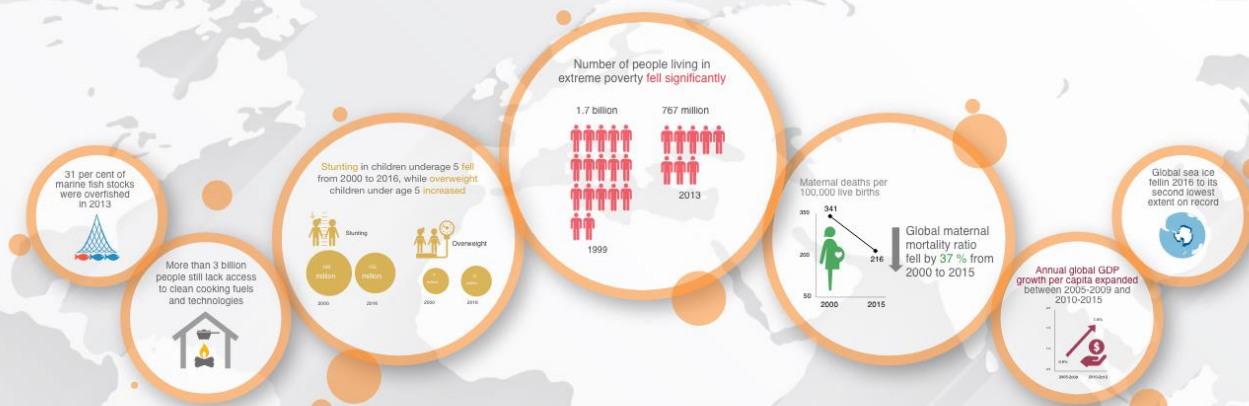
# A Federated Information System for the SDGs

- Interoperability and web-based collaboration
  - The interface to each SDG data hub is based on **open standards** and the use of **common vocabularies** for describing and organizing data content
  - Web-based technology enables collaboration within and across organizations.
    - Anyone within and outside a data provider's organization can directly access data and applications made publicly available through the organization's open data hub
    - Users with proper credentials can access content shared with specific user groups.









**UN Data HUB**

## Welcome to the Open SDG Data Hub

To fully implement and monitor progress on the Sustainable Development Goals, decision makers everywhere need data and statistics that are accurate, timely, sufficiently disaggregated, relevant, accessible and easy to use. This open data website promotes the exploration, analysis and use of authoritative SDG data sources for evidence-based decision-making and advocacy. Its goal is to enable data providers, managers and users to discover, understand, and communicate patterns and interrelationships in the wealth of SDG data and statistics that are now available.

