



NEWSLETTER

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GLOBAL STATISTICAL GEOSPATIAL FRAMEWORK

WHAT IS THE GSGF?

The Global Forum on the Integration of Statistical and Geospatial Information, convened in New York on August 2014, identified that “there is an **urgent** need for a mechanism, such as a **global statistical-spatial framework**, to facilitate consistent production and integration approaches for geo-statistical information.” The Committee of Experts endorsed decision 8/113 held in New York from 1 to 3 August 2018 at eight session, in **part 1** which is consisting strategic framework of the **Integrated Geospatial Information Framework**, as a forward-looking document, integrated national framework, focusing on the policy, perspectives and key elements of geospatial information. For **part 2**, the committee approved in principle with **implementation guide** and actions to be taken in implementing Framework. It may needs to **draft** the implementation guide for concerning country-level actions plans for the Framework in **part 3**.



Figure 1: Location as a link between society, the economy and the environment

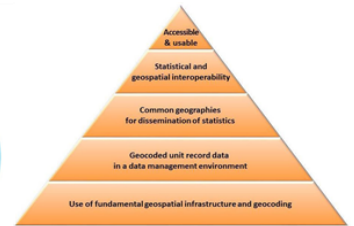


Figure 2: Global Statistical Geospatial Framework

Figure 1 highlights the importance of **location information** as an **integrating tool** between the three broad data domains: **society**, the **economy** and the **environment**. The Global Statistical Geospatial Framework is a high-level framework that consists of **five** broad **principles** that are considered essential for integrating **geospatial** and **statistical** information.

WHAT IS THE PRINCIPLES BETWEEN GEOSPATIAL AND STATISTICS

1 Fundamental geospatial infrastructure and geocoding

The **location information** recorded should also be **associated** with each **unit record**. For instance, **address, property, building,** and **location** information are more accurate and consistent, The **geocoding** results are as **accurate** and **consistent** management of any geocoding issues through application of standardised approaches.

2 Geocoded unit record data in data management

Its objectives is more **consistent** and **interpretable** geocode, aggregation of data for **larger geographies** through **storage,** **adaptation** to changes to existing geographies and the flexible use of geocoded unit records. Hence, these will lead to a more effective data management, including protection of **privacy** and compilation of **metadata,** clear **maintenance** and **custodianship** roles.

3 Common geographies for dissemination of statistics

Its aim is to make data from different sources to be **integrated** using **common geography** and **visualisation**. **Data analysis** is simplified and conversion of data between geographies is also well supported. The use of a common set of geographies will ensure that all statistical data is **consistently geospatially** enabled and that **users** can **discover,** access, integrate, analyse and visualise statistical information seamlessly for geographies interest.

4 Statistical and geospatial interoperability

Implementation of **service based** or machine-readable access mechanisms (e.g. APIs) will provide **greater efficiency** of access and use, and allow **adaptation** and **evolution** of uses through time. It also able to increase the potential application of a larger range of data and technologies and make wider range of **data available** and **accessible** for use in **comparisons** and **analysis** in **decision making**. Source : Global Statistical Geospatial Framework



5 Accessible and usable geospatially enabled statistics



Data custodians can **release** data with **confidence**, with **privacy** and **confidentiality** protected. Data users can **discover** and **access** **geospatially** enabled statistics and can undertake analysis and visualisation. **Web services** enable **machine-to-machine** access, as well as dynamic linkage of information. The production of this technology provide data more quality in its different dimensions (reliability, timeliness, and relevance), analysis, dissemination and visualisation.

COUNTRY EXAMPLE - EGYPT



1 Fundamental geospatial infrastructure and geocoding

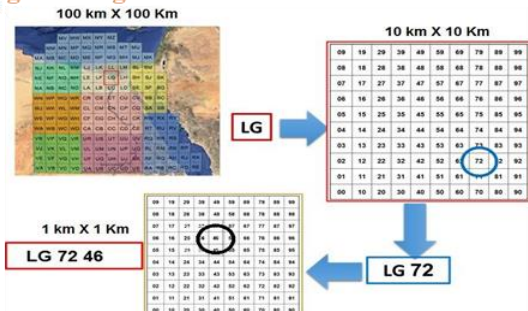


Figure 3: Grid Based System



Figure 4: Spatial ID and distributed on individual during the enumeration Census 2017

Authorized geospatial data from the relevant **National Spatial Data Infrastructure (NSDI)**. Egypt is currently working on National Grid System with projection system **MTM-WGS84 (Modified Transverse Mercator)**. This **projection** has been standardized and generate a **unique numbering** and **geocoding** system for each unit in a dataset like building, household, pipelines and boundaries. **Source** : Global Statistical Geospatial Framework

DISCLAIMER: The article in this newsletter is the initiative of DOSM officers based on ad-hoc observation and collection of brief information in the field during the Movement Control Order. It does not meet the country's official statistics released standards. Therefore, the content of this newsletter cannot be interpreted as DOSM's official statistics.

2 Geocoded unit record data in data management



Figure 5: Spatial ID

National Spatial Identifier is considered a new **Geocoding System**. It is a unique number for each unit within the building and automatically produced from digital maps. This integration is using the **Spatial ID** as a common **unique key** in linking all **national databases** and following up with local government services.

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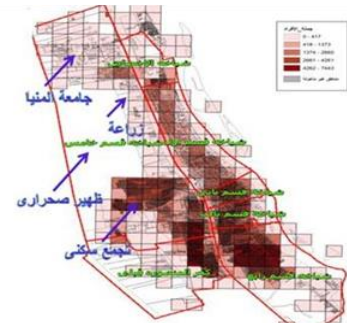


Figure 6: National Grid System

The advantages of using **National Grid System**:

1. It does **not depend** on **administrative** or **topographical** boundaries
2. It **fixed** and regular areas
3. Ease of data integration for **different grid squares**
4. It distinguishes between **urban** and **rural** areas
5. Realistic and **accurate** results to support **decision makers**.

4 Statistical and geospatial interoperability

Egypt applies standards statistical and geospatial data and collaborate with Australia for international statistical and geospatial metadata standards. One of the main targets of **Egypt NSDI** is to create a **standard unified base map** by all the governmental authorities and boundaries of Egypt updated during **Census2017** by **CAPMAS** to be standard basemap.

5 Accessible and usable geospatially enabled statistics

The dissemination stage uses the **Egyptian geoportal** and **Egyptian development atlas**. The grid system produces different results (100km*100km, 10km*10km, 1km*1km, and 200m*200m) which gives **high accuracy** and **precision** for data analysis.

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