



Central Agency for Public  
Mobilization And Statistics

## Statistical Geospatial Framework - Egypt



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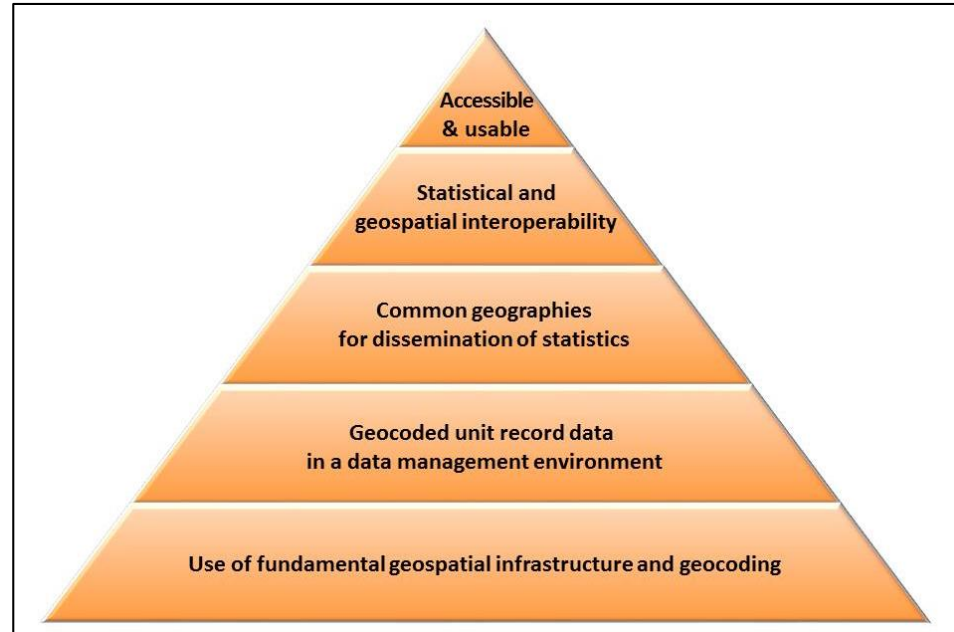
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# I. Five principles of Global Statistical Geospatial Framework



# Principle 1: Use of fundamental geospatial infrastructure and geocoding



- ❑ Egypt is working on establishing a National Spatial Data Infrastructure using a National Grid system with coordinate system MTM-WGS84 (Modified Transverse Mercator) which will be used to generate a unique numbering and geocoding system for each unit in a dataset, such as a building, household or business.

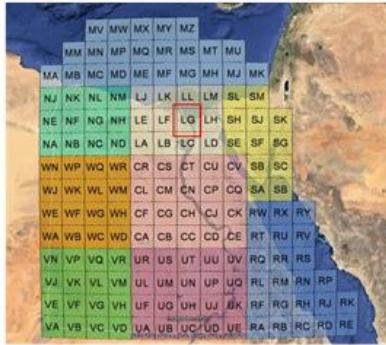
# How this geocoding system is generated?



- ❑ First a grid based system was generated to cover the Egyptian land in different scale levels;
- ❑ First level is a grid each cell is 100 km \* 100 km and by taking any cell of the m for example LG cell it is divided into cells each one of them is 10 km \* 10 km and by taking any cell of them for example 72 this cell name is LG 72 and this cell it is divided into cells each one of them is 1km \* 1 km and by taking any cell of them for example 46 this cell name is LG 72 46 and So on till reaching 1 m \* 1m

# Grid Based System

100 km X 100 Km



LG

10 km X 10 Km

|    |    |    |    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|----|----|----|
| 09 | 19 | 29 | 39 | 49 | 59 | 69 | 79 | 89 | 99 |
| 08 | 18 | 28 | 38 | 48 | 58 | 68 | 78 | 88 | 98 |
| 07 | 17 | 27 | 37 | 47 | 57 | 67 | 77 | 87 | 97 |
| 06 | 16 | 26 | 36 | 46 | 56 | 66 | 76 | 86 | 96 |
| 05 | 15 | 25 | 35 | 45 | 55 | 65 | 75 | 85 | 95 |
| 04 | 14 | 24 | 34 | 44 | 54 | 64 | 74 | 84 | 94 |
| 03 | 13 | 23 | 33 | 43 | 53 | 63 | 73 | 83 | 93 |
| 02 | 12 | 22 | 32 | 42 | 52 | 62 | 72 | 82 | 92 |
| 01 | 11 | 21 | 31 | 41 | 51 | 61 | 71 | 81 | 91 |
| 00 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 |

LG 72

1 km X 1 Km

LG 72 46

|    |    |    |    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|----|----|----|
| 09 | 19 | 29 | 39 | 49 | 59 | 69 | 79 | 89 | 99 |
| 08 | 18 | 28 | 38 | 48 | 58 | 68 | 78 | 88 | 98 |
| 07 | 17 | 27 | 37 | 47 | 57 | 67 | 77 | 87 | 97 |
| 06 | 16 | 26 | 36 | 46 | 56 | 66 | 76 | 86 | 96 |
| 05 | 15 | 25 | 35 | 45 | 55 | 65 | 75 | 85 | 95 |
| 04 | 14 | 24 | 34 | 44 | 54 | 64 | 74 | 84 | 94 |
| 03 | 13 | 23 | 33 | 43 | 53 | 63 | 73 | 83 | 93 |
| 02 | 12 | 22 | 32 | 42 | 52 | 62 | 72 | 82 | 92 |
| 01 | 11 | 21 | 31 | 41 | 51 | 61 | 71 | 81 | 91 |
| 00 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 |

## **Principle 2:**

### **Geocoded unit record data in a data management environment**

- ❑ All the geographical spatial data and statistical data in Egypt are identified with the smallest geographic boundary (Shyakha (Urban) - Village (Rural)).
- ❑ Egypt is currently working now on putting a mechanism in place to facilitate the integration and management of the geocode within a dataset including spatial number identifier to geocode linking mechanisms.
- ❑ This method more flexible and useful to join the detailed statistical building, household and business data.

## **Principle 3:**

### **Common geographies for dissemination of statistics**

- ❑ One of the most important roles of the National Spatial Data Infrastructure is to unify the administrative geographic boundaries between all the Egyptian agencies. It is also used as a mechanism for data dissemination using the National grid merged with the geographic boundaries.



## **Principle 4: Statistical and geospatial interoperability**

- ❑ Egypt applies standards for statistical and geospatial data, and agrees with Australia on the need to seek international agreement.**
- ❑ One of the main target of Egypt NSDI is to create a standard unified base map for Egypt to be used by all the governmental authorities.**
- ❑ Now we are working on building this base map using a recent photo with a high resolution and applying the Spatial ID which produced by CAPMAS to integrate with the census data**

## **Principle 5: Accessible and usable geospatially enabled statistics**

- Now CAPMAS starts the dissemination stage using the Egyptian Geoportal and Egyptian development atlas by disseminating the results on the Egyptian Grid system in different results (100KM\*100Km, 10KM\*10Km, 1KM\*1Km, and 200m\*200m) Which guarantee high accuracy and precision for the data analysis**

# II.National Spatial ID



- Is a unique number for each unit within the building.
- Is produced automatically from digital maps.
- Giving a fixed number for the unit linked to its geographical location which does not change with the administrative boundaries change.
- To organize, evaluate and follow-up of local government services such as electricity, natural gas, sewage

Arab Republic of Egypt  
Spatial Services Number

بلدية من عنة من

**Unit Spatial Services Number**  
LG 72 46 22 51 69 - A 001 - 01

Governorate: Cairo  
Section : Bolaq  
Sub-section : Al Alemy  
address : 5 Delta st.

011912 - 001- 0076 - 00 - A 001 - 01

# III. NSDI challenges:



- ❑ **NATIONAL SPATIAL DATA INFRASTRUCTURE Challenges**
  - **Unified Base-map**
  - **Geocoding system**
  - **Integration between Public sector organizations**

# IV. Next Step

- Frequent update for the Base Map using

Aerial photos by MESA  
( Military Egyptian Survey Authority)

The screenshot displays a web application interface for satellite imagery search and viewing. The interface is divided into several sections:

- Search Bar:** Located at the top left, with the text "Search for a location" and a close button (X).
- Filters:** Below the search bar, there are filter options: "No date ranges defined" (with a calendar icon), "Save search", "Daily Imagery - Aggregate of image captures" (with a dropdown arrow), "Cloud cover 0 - 25%", "Area coverage 10 - 100%", "Source 2 sources", and "All filters >".
- Image List:** A list of image captures is shown, sorted by "Most recent". Each entry includes a thumbnail, the date, the scene name, resolution, and area coverage. The data is as follows:

| Date              | Scene Name               | Resolution | Area Coverage | Number of Images |
|-------------------|--------------------------|------------|---------------|------------------|
| September 8, 2017 | 4-band PlanetScope Scene | 3 m        | 100 %         | 2                |
| September 7, 2017 | 4-band PlanetScope Scene | 3 m        | 100 %         | 2                |
| September 6, 2017 | 4-band PlanetScope Scene | 3 m        | 100 %         | 3                |
| September 4, 2017 | 4-band PlanetScope Scene | 3 m        | 57 %          | 2                |
- Map View:** On the right side, a satellite map shows the location of the images over Cairo and Giza. A white rectangular box highlights the area covered by the images. The map includes labels for various districts and landmarks, such as "Cairo", "Giza", "Nile River", and "Abn".
- Navigation:** At the bottom of the map, there is a timeline navigation bar showing dates from August 29 to September 7, 2017. A white circle indicates the current date selected.
- API and Actions:** At the bottom left, there is an "API {:}" button. At the bottom center, there is a "Compare days" button. At the bottom right, there is an "Order items (2)" button.

# Thanks

we have pleasure to receive your feedback ,comments and questions  
at the following email ; [pres\\_capmas@capmas.gov.eg](mailto:pres_capmas@capmas.gov.eg)

