

Catalogue of fundamental geo-spatial datasets for Africa: Country report for Egypt



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1. Background

A continental-wide study was conducted in 2006 to catalogue the existence of fundamental geo-spatial datasets in Africa. This study was contracted to a consortium consisting of the HSRC and EIS-AFRICA as lead organisations and numerous sub-regional partners. It was conducted under the auspices of the UNECA.

The study used a questionnaire to obtain information about the 30 fundamental geo-spatial datasets. This report reflects the findings collected from that questionnaire for Egypt.

2. Data availability

Table 1: Availability of fundamental geo-spatial datasets

Dataset	Have it?	Source
Geodetic control points	Yes	Egyptian Survey Authority/ Egyptian Environmental Affairs Agency
Height datum	Yes	Egyptian Survey Authority/ Egyptian Environmental Affairs Agency
Geoid model	Yes	Egyptian Survey Authority
Aerial photography	Yes	Central Agency for Public Mobilization and Statistics/ Egyptian Survey Authority/ Egyptian Environmental Affairs Agency
Satellite imagery	Yes	Central Agency for Public Mobilization and Statistics/ Ministry of Water resources and Irrigation/ Egyptian Survey Authority/ Egyptian Environmental Affairs Agency/ Map Maker Trust/ UNECA
DEM	Yes	Ministry of Water resources and Irrigation / Egyptian Survey Authority/ Egyptian Environmental Affairs Agency/ UNECA
Spot heights	Yes	Ministry of Water resources and Irrigation / Egyptian Survey Authority/ Egyptian Environmental Affairs Agency
Bathymetry	Yes	Ministry of Water resources and Irrigation, Central GIS Unit/ GEBCO
Coastline	Yes	Egyptian Environmental Affairs Agency
Water bodies	Yes	Central Agency for Public Mobilization and Statistics/ Ministry of Water resources and Irrigation/ Egyptian Survey Authority/ Egyptian Environmental Affairs Agency/ Map Maker Trust/ UNECA
Government boundaries	Yes	Central Agency for Public Mobilization and Statistics/ Ministry of Water resources and Irrigation/ Egyptian Survey Authority/ Egyptian Environmental Affairs Agency
Populated places	Yes	Central Agency for Public Mobilization and Statistics/ Ministry of Water resources and Irrigation/ Egyptian Environmental Affairs Agency/ UNECA
EA	Yes	Central Agency for Public Mobilization and Statistics/ Ministry of Water resources and Irrigation
Place names	Yes	Central Agency for Public Mobilization and Statistics/ Ministry of Water resources and Irrigation/ Egyptian Survey Authority/ Egyptian Environmental Affairs Agency
Feature names	Yes	Central Agency for Public Mobilization and Statistics/ Ministry of Water resources and Irrigation/ Egyptian Survey Authority/

Dataset	Have it?	Source
		Egyptian Environmental Affairs Agency /UNECA
Land parcels	Yes	Central Agency for Public Mobilization and Statistics/ Egyptian Survey Authority/ Egyptian Environmental Affairs Agency
Land tenure	Yes	Egyptian Environmental Affairs Agency
Street address	Yes	Central Agency for Public Mobilization and Statistics/ Egyptian Survey Authority/ Egyptian Environmental Affairs Agency
Postal code zones	Yes	Egyptian Survey Authority/ Egyptian Environmental Affairs Agency
Land use planning zones	Yes	Central Agency for Public Mobilization and Statistics/ Egyptian Survey Authority/ Egyptian Environmental Affairs Agency
Roads	Yes	Central Agency for Public Mobilization and Statistics/ Ministry of Water resources and Irrigation/ Egyptian Survey Authority/ Egyptian Environmental Affairs Agency/ Map Maker Trust/ UNECA
Road centrelines	Yes	Central Agency for Public Mobilization and Statistics/ Egyptian Survey Authority/ Egyptian Environmental Affairs Agency
Railways	Yes	Central Agency for Public Mobilization and Statistics/ Ministry of Water resources and Irrigation/ Egyptian Survey Authority/ Egyptian Environmental Affairs Agency/ Map Maker Trust/ UNECA
Airports	Yes	Central Agency for Public Mobilization and Statistics/ Egyptian Survey Authority/ Egyptian Environmental Affairs Agency/ UNECA
Bridges	Yes	Central Agency for Public Mobilization and Statistics/ Ministry of Water resources and Irrigation/ Egyptian Survey Authority/ Egyptian Environmental Affairs Agency
Power	Yes	Central Agency for Public Mobilization and Statistics/ Egyptian Survey Authority/ Egyptian Environmental Affairs Agency
Telecommunication	Yes	Central Agency for Public Mobilization and Statistics/ Egyptian Survey Authority/ Egyptian Environmental Affairs Agency
Land cover	Yes	Central Agency for Public Mobilization and Statistics/ Ministry of Water resources and Irrigation/ Egyptian Survey Authority/ Egyptian Environmental Affairs Agency
Soils	Yes	Central Agency for Public Mobilization and Statistics/ Ministry of Water resources and Irrigation/ Egyptian Environmental Affairs Agency
Geology	Yes	Central Agency for Public Mobilization and Statistics/ Ministry of Water resources and Irrigation/ Egyptian Survey Authority/ Egyptian Environmental Affairs Agency

Egypt has access to all of the 30 fundamental geo-spatial datasets and the country therefore has all the fundamental datasets. The quality of these datasets was defined by their characteristics which are discussed in the next section.

2.1 Data characteristics

Data characteristics were complete for most of the records and provide a good description of the fundamental geo-spatial datasets. The quality of the existing geo-spatial datasets indicate that some of the datasets might not be immediately useful for filling geo-information gaps. The table indicates for example: aerial photography is available at a scale of less than 10m, it is 51-75%

complete and available in a report, table, map, spreadsheet or other digital format. Empty cells in the table indicate that no response was received.

Table 2: Dataset metadata

Dataset	Scale at which available (000/ resolution m)	Completeness (%)	Format	Accessibility
Geodetic control points	62.5-100/ 125-250	100	Report/ Table/ Map/ Spreadsheet/ Dbase	Authorisation/ Restricted/ Payment
Height datum	12-50/ 125-250	<25/ 100	Report/ Map/ Spreadsheet/ Dbase/ GIS	Authorisation/ Restricted/ Payment
Geoid model			Report/ Map	Authorisation/ Payment
Aerial photography	>10	51-75	Report/ Table/ Map/ Spreadsheet/ Other	Authorisation/ Payment
Satellite imagery	All scales	<25/ <25/ 100/100	Report/ Table/ Map/ Spreadsheet/ Dbase/ GIS/ Other	Unrestricted/ Authorisation/ Free/ Payment
DEM	<2.5/ 5-50/ 50-125	<25/ 100/ 100	Report/ Table/ Spreadsheet/ GIS/ Other	Unrestricted/ Authorisation/ Scale/ Free/ Payment
Spot heights	>10/ 125-250	<25/ 100	Report/ Table/ Map/ Spreadsheet/ GIS/ Other	Unrestricted/ Authorisation/ Free/ Payment
Bathymetry	All scales	100	Map/ Db/ GIS/ Other	Unrestricted/ Authorisation/ Payment
Coastline	>10/ 12-50/ 62.5-100	76-99/ 100/ 100	Map/ GIS	Unrestricted/ Authorisation/ Scale/ Free
Water bodies	>10/ 12-50/ 62.5-100/ 500-1000	<25/ 100/ 100/ 100/	Map/ GIS	Unrestricted/ Authorisation/ Scale/ Free
Government boundaries	10-50/ 62.5-100/ 500-1000	100	Report/ Table/ Map/ Spreadsheet/ Dbase/ GIS/ Other	Unrestricted/ Authorisation/ Free/ Payment
Populated places	12-50/ 62.5-100	100	Report/ Table/ Map/ Spreadsheet/ Dbase/ GIS/ Other	Unrestricted/ Authorisation/ Free/ Payment
EA	10/ 50	<25/ 100	Report/ Table/ Map/ Spreadsheet/ Dbase/ GIS/ Other	Unrestricted/ Authorisation/ Free/ Payment
Place names	12-50/ 62.5-100/ 500-1000	100	Report/ Table/ Map/ Spreadsheet/ Dbase/ GIS/ Other	Unrestricted/ Authorisation/ Scale/ Free/ Payment
Feature names	>10/ 12-50/ 62.5-100/ 500-1000	100/ 76-99/ 51-75/ /	Report/ Table/ Map/ Spreadsheet/ Dbase/ GIS/ Other	Unrestricted/ Authorisation/ Scale/ Free/ Payment
Land parcels	>10	100	Report/ Table/ Map/ Spreadsheet/ Dbase/ GIS/ Other	Authorisation/ Payment
Land tenure				

Dataset	Scale at which available (000/ resolution m)	Completeness (%)	Format	Accessibility
Street address	>10/ 12-50	51-75	Report/ Table/ Map/ Spreadsheet/ Dbase/ GIS/ Other	Authorisation/ Scale/ Payment
Postal code zones			Report/ Table/ Map/ Spreadsheet/ Dbase/ GIS/ Other	Authorisation/ Payment
Land use planning zones	10-50/ 125-250	100/ 51-75	Report/ Table/ Map/ Spreadsheet/ Dbase/ GIS/ Other	Authorisation/ Scale/ Restricted/ Free/ Payment
Roads	10-50/ 62.5-100/ 500-1000	100/ 76-99/ 100	Report/ Table/ Map/ Spreadsheet/ Dbase/ GIS/ Other	Unrestricted/ Authorisation/ Scale/ Free
Road centrelines	>10	<25	Report/ Table/ Spreadsheet/ Dbase/ GIS/ Other	Authorisation/ Payment
Railways	10-50/ 62.5-100/ 500-1000	76-99/ 51-75/ 100	Report/ Table/ Map/ Spreadsheet/ Dbase/ GIS/ Other	Unrestricted/ Authorisation/ Scale/ Free/ Payment
Airports	125-250/ 500-1000	51-75/ 100	Map/ GIS	Unrestricted/ Authorisation/ Free
Bridges	>10/ 10-50	26-50/ 51-75	Report/ Table/ Spreadsheet/ GIS/ Other	Authorisation/ Scale/ Free
Power	62.5-100	51-75	Map	Authorisation
Telecommunication				
Land cover	10-50/ 500-1000	100/ 51-75	Report/ Table/ Map/ Spreadsheet/ Dbase/ GIS/ Other	Authorisation/ Scale/ Restricted/ Free/ Payment
Soils	10-50	<25	Map/ GIS	Scale/ Free
Geology	62.5-100/ 125-250	100/ 51-75	Map/ GIS	Authorisation/ Scale/ Free

Many datasets are available at a detailed scale. The data completeness is problematic since several datasets have data with an incomplete spatial coverage. This means the data does not cover the spatial jurisdiction on which respondents were reporting. Another concern is that many datasets are available in a map or non-GIS format and with restricted access. This indicates that such data requires some reworking before it can be used to try and complete the geo-spatial data gaps in Africa.

3. Conclusion

Although Egypt has access to all the fundamental geo-spatial datasets the quality of the data might be insufficient to serve as closing geo-spatial data gaps. The final decision on the quality of the existing data is complicated by the shortcomings of the data. Based on this it can be concluded that once the existing geo-spatial data have been re-worked it might be useful for filling the geo-spatial data gaps on the continent.