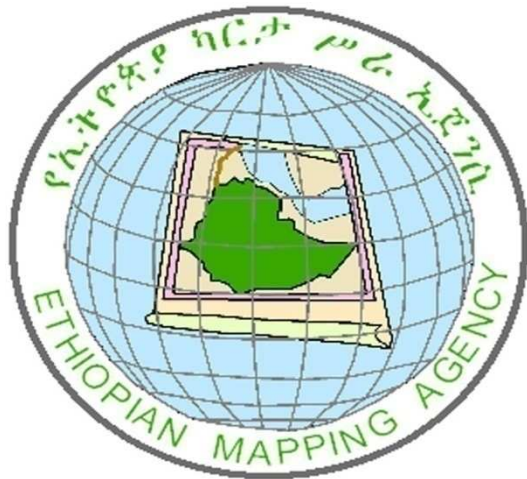


# ***Geospatial Capacity Building & Knowledge Transfer***



By

Sultan Mohammed  
Director General

**Ethiopian Mapping Agency**

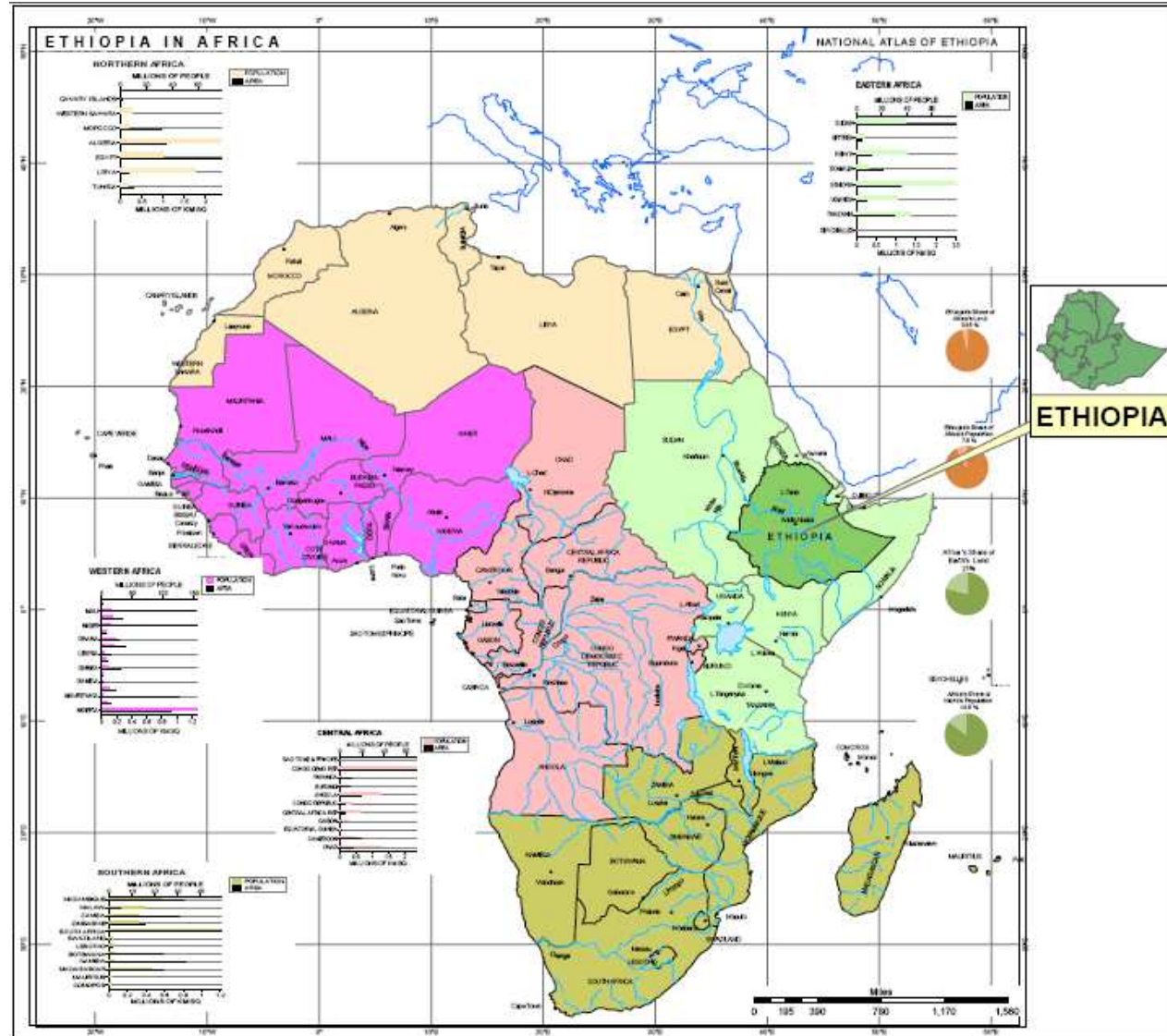
23 October 2011

Industry – NMO Exchange Forum

UN-GGIM, Seoul, Korea

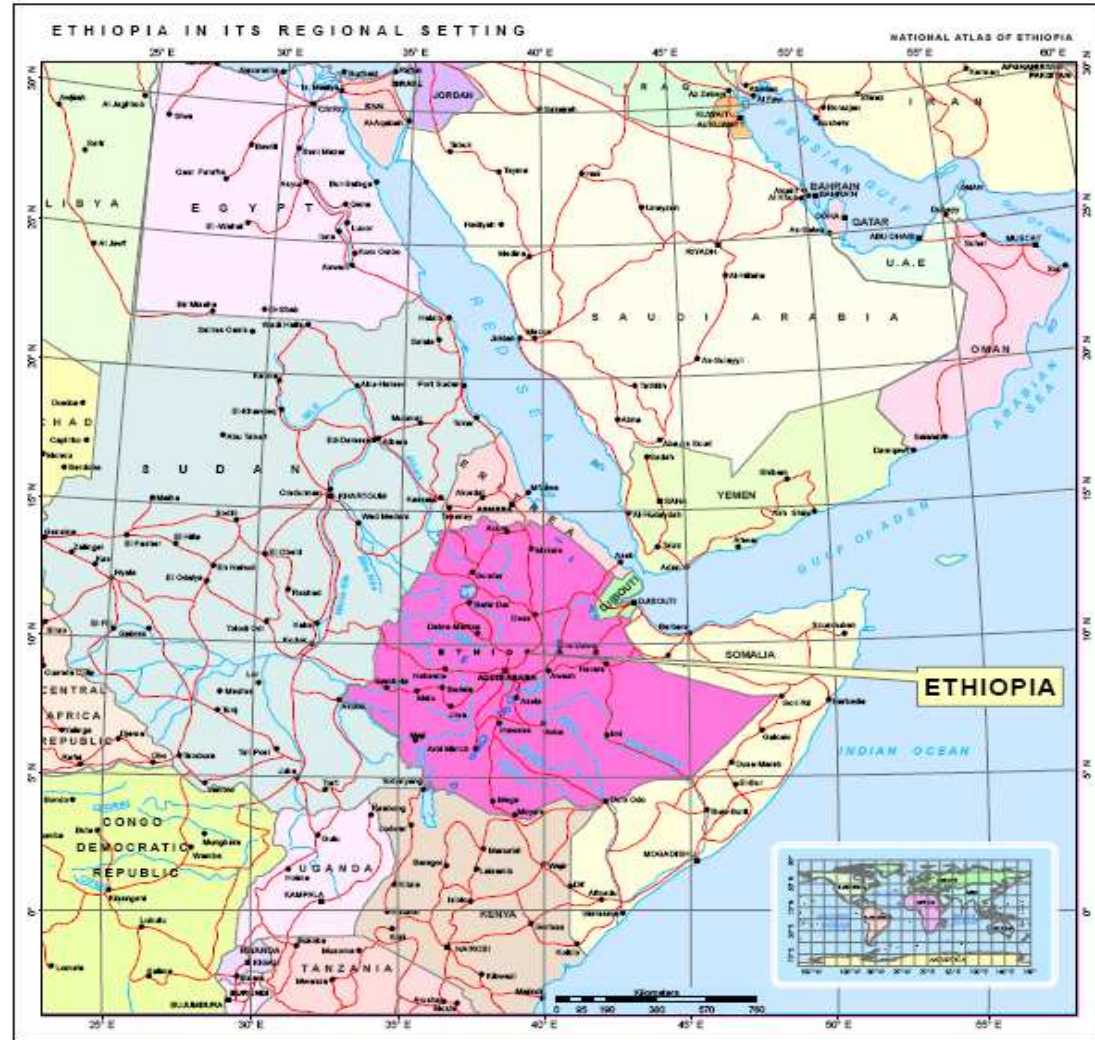
# 1. Africa

## Africa



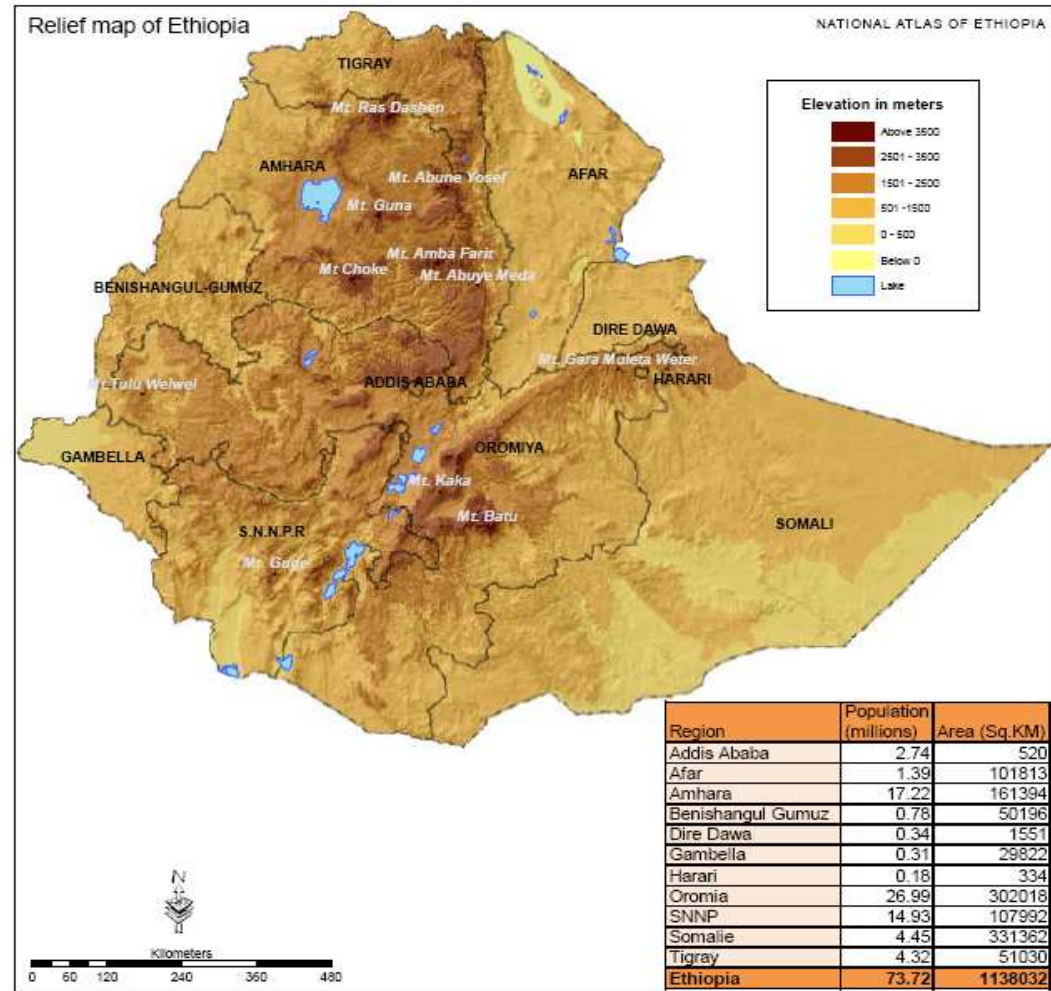
# 1. Ethiopia in its Regional Setting

Regional  
Setting



# 1. The Federal Democratic Republic of Ethiopia

- Ethiopia



## 2. Introducing the Ethiopian Mapping Agency (EMA)



### Organizational Background

- The origins of the Ethiopian Mapping Agency (EMA) date back to 1954.
- Established as an autonomous agency by the Proclamation of the Government of Ethiopia in 1980.

## 2. EMA ...



**Mandate:** Under the Proclamation, EMA is mandated to collect, transform, generate, store & disseminate the following sets of Fundamental Geospatial Data sets in Ethiopia:

- ✓ Geodetic Control Networks (Ground Control Points)
- ✓ Remotely Sensed Imagery (Aerial Photographs, Satellite Imagery)
- ✓ Topographic (Base) Maps
- ✓ Thematic Maps
- ✓ Hypsography (Contours, DEM, Spot Heights, etc.)
- ✓ Administrative Boundaries (International, Regional, Zonal & District)
- ✓ Geographic Names
- ✓ Atlas (National, Regional, etc.)

## 2. EMA ....



- ❖ Furthermore, EMA is the authorized Agency of the Federal Democratic Republic of Ethiopia to Regulate Surveying & Mapping Activities.

## 4. Survey & Mapping Activities in Ethi



### 4.1. Surveying

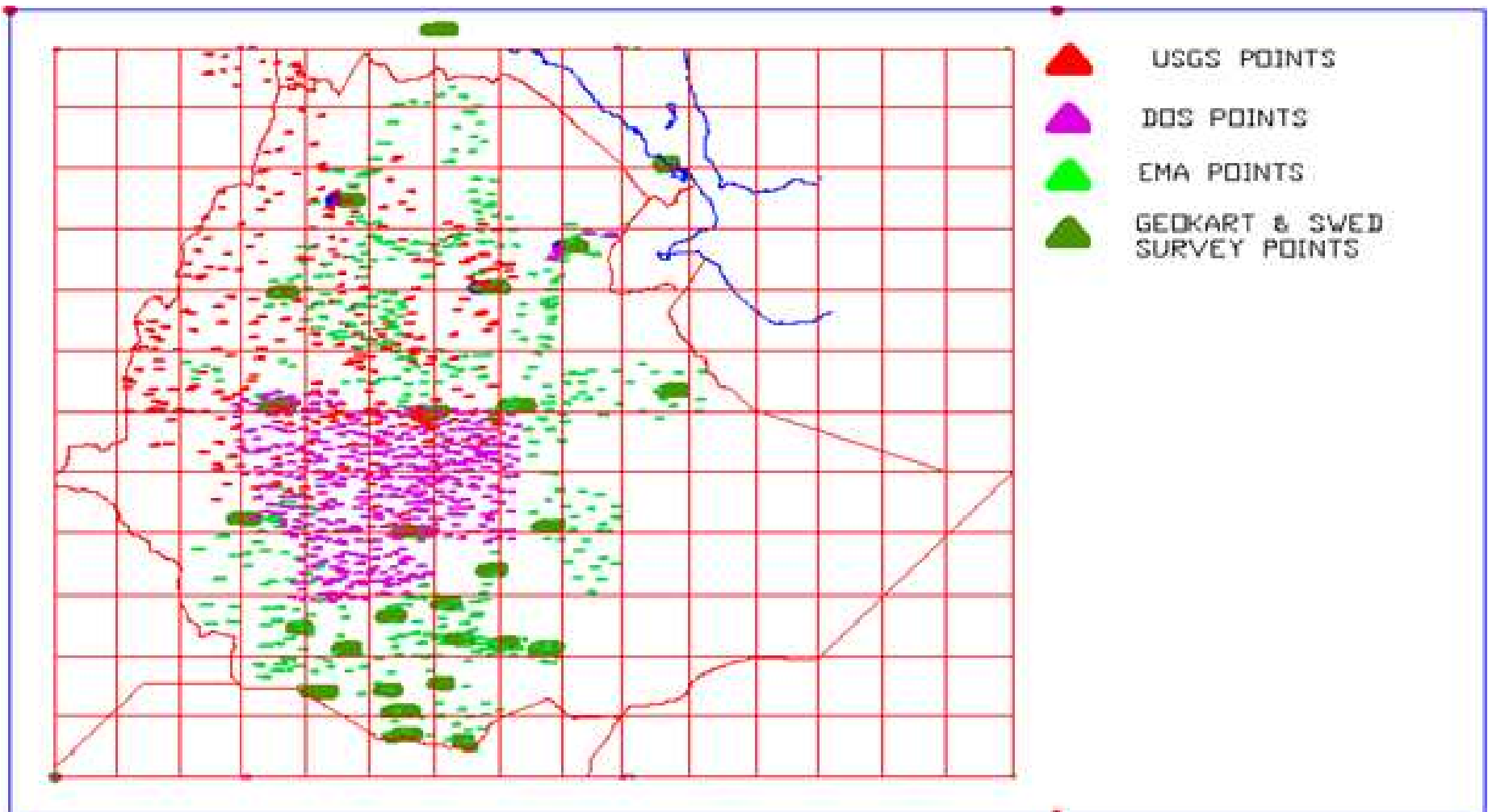
- **Establishment of the National Geodetic Network**



## 4. Survey & Mapping Activities...



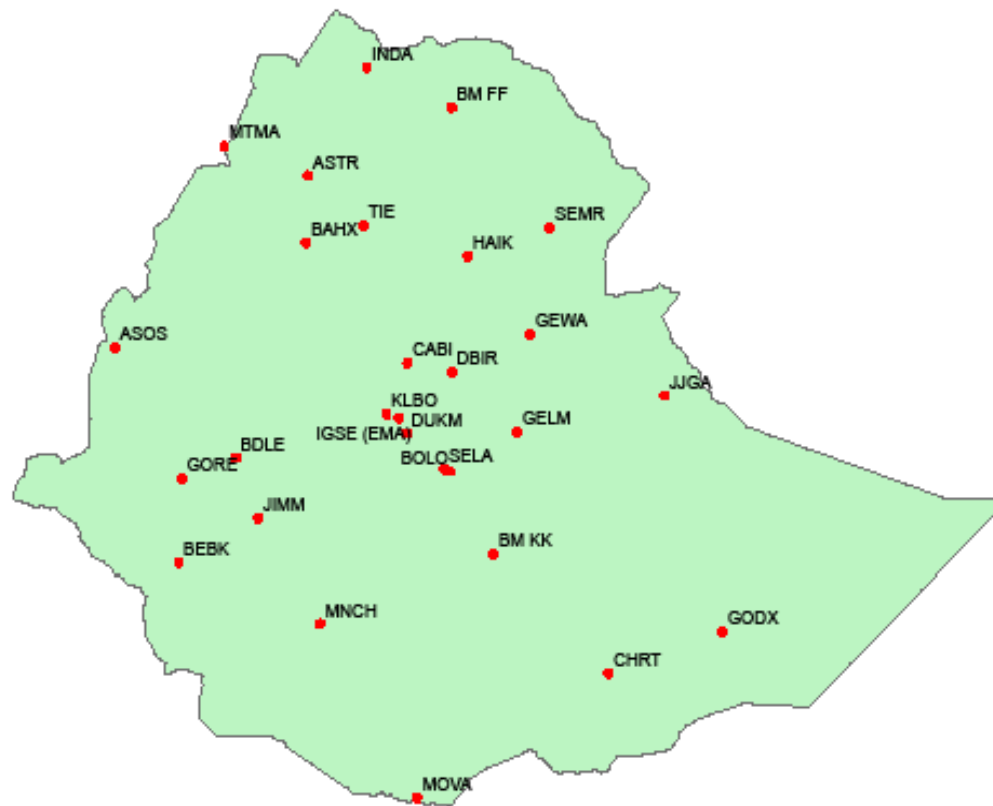
- Distribution of Ground Control Points



## 4. Survey & Mapping Activities....



Recently Established Primary GCPs



## 4. Survey & Mapping Activities....



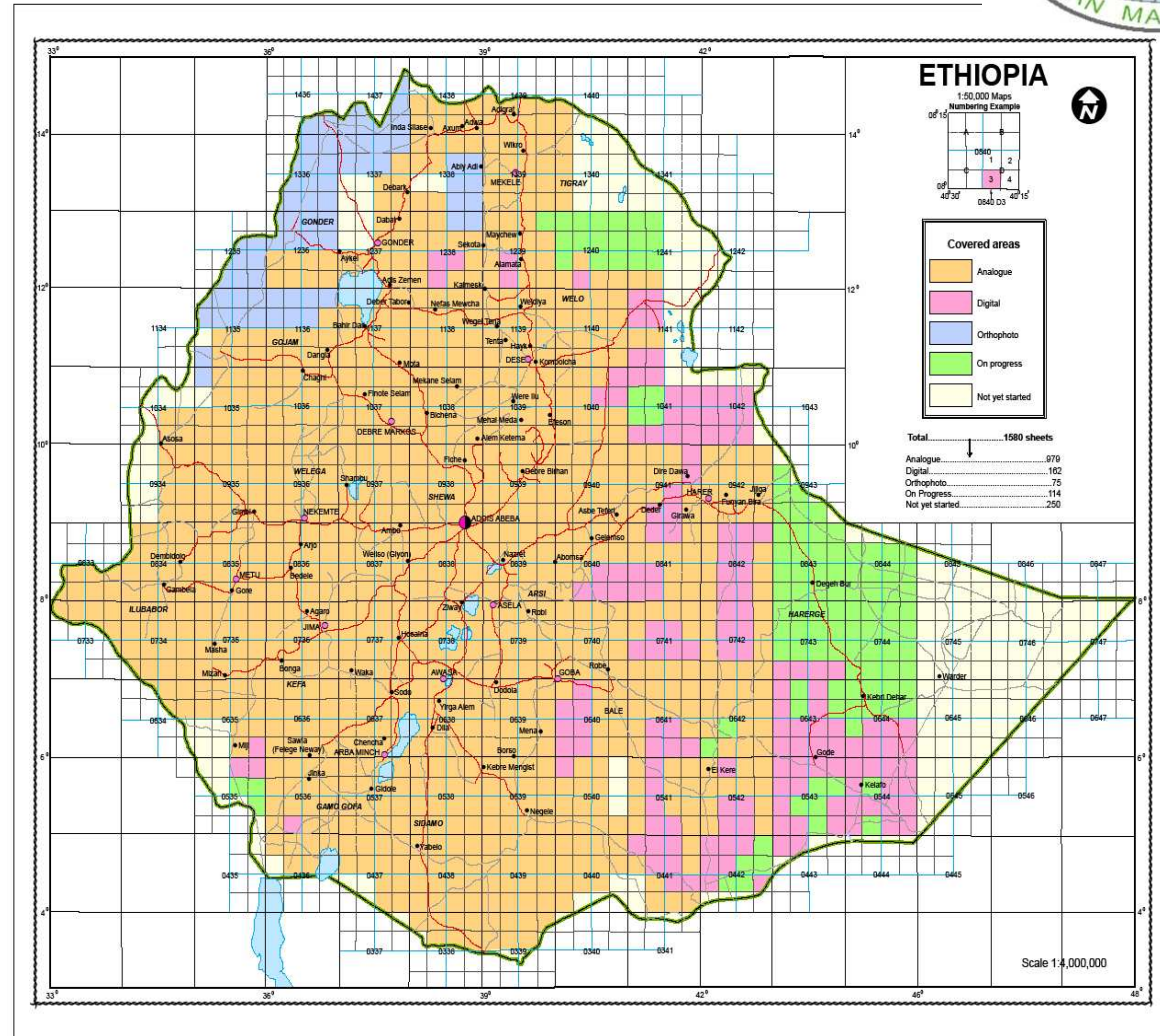
### 4.2. Mapping

- **1: 250,000 (Full Coverage)**
- **1:50,000 (85% Coverage)**
- **1:2,000 – 1:25,000 (Major Urban Centres & Development Corridors)**

# 4. Survey & Mapping Activities....



1:50k coverage



## 4. Survey & Mapping Activities....



- **Currently Available Maps**

- 1:2,000,000 scale wall map of Ethiopia
- 1:1,000,000 scale maps (10 sheets covering the whole country)
- 1:250,000 scale maps (73 sheets covering the whole country)
- 1:50,000 scale maps (1340 sheets covering 85% of the country)
- Various large scale maps (1:2,000 to 1:25,000) of major cities and areas of interest.

## 5. Ongoing Survey & Mapping Initiatives

- **5.1. Surveying**

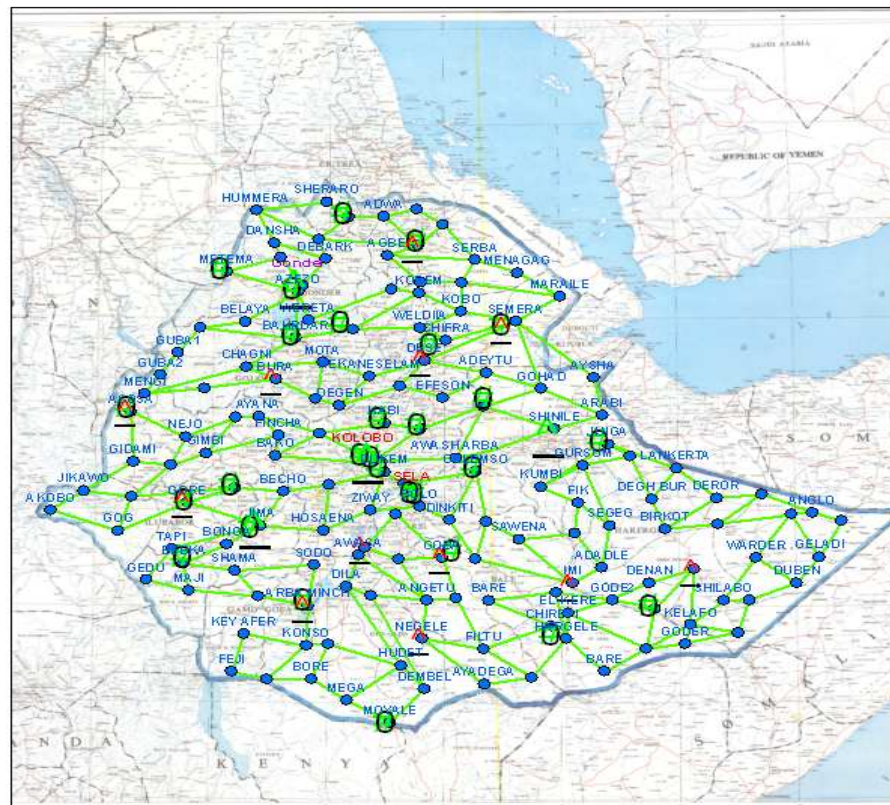
- Densification of the existing Geodetic Network



## 5. Ongoing/Planned Survey & Mapping Initiati



### Existing & Planned GCPs



#### Legend

- ExpCORSEXIST
- ExpPROPCORS
- ExpEXSTCPT
- ExpPROPSCPTI

## 5. Ongoing Survey & Mapping Initiatives



### • 5.2. Mapping

- Analogue to Digital Conversion and updating of existing Maps
- 1:25,000 and 1:10,000 scale topographic and orthophoto mapping of the Country via Aerial Photography & Ground Survey.
- Large scale mapping (1:2,000 to 1:5,000) of towns and other development corridors.



## 5. Ongoing Initiatives.....



- **Establishing the Ethiopian National Spatial Data Infrastructure (ENSDI)**
  - Policy (Legal Framework)
  - Organization
  - Standards

## 6. Capacity Building & Knowledge Transfer Requirements

### Interoperability of systems and data

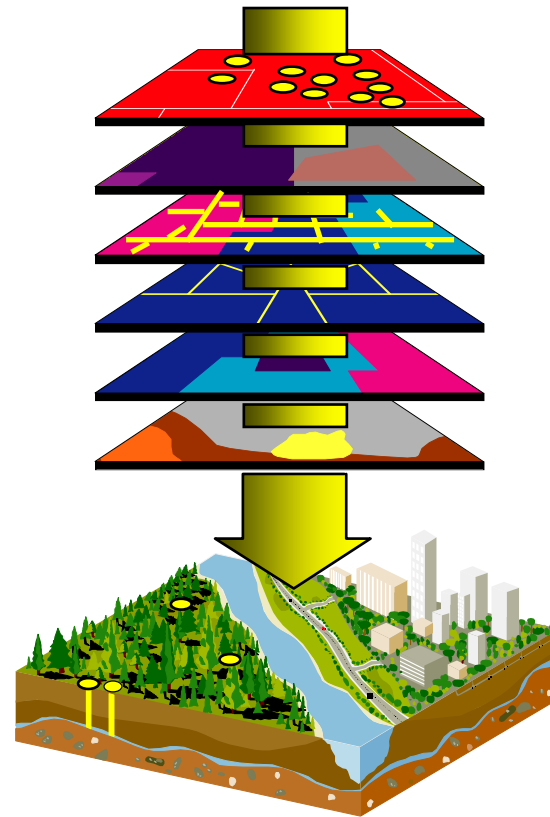
1. Identify the data/information requirements and the appropriate processing tools
2. Identify and develop the required capacity to produce the required data/information and to use the tools.



## 6. Capacity Building & Knowledge Transfer..

### Aspects of Interoperability

- Technical
- Policy
- Legal
- Institutional



## 6. Capacity Building & Knowledge Transfer..

- Human Resources Capability Development Aspect in:
  - Surveying
  - Photogrammetry & Remote Sensing
  - Cartography



## 6. Capacity Building & Knowledge Transfer..

- Technological Capacity Development Aspect
  - Hardware
  - Software



THANK YOU !!