

The Second UN-GGIM-AP Plenary Meeting

# NGIAs' roles in successful disaster response

## *Azerbaijan*

Teheran Iran  
28 October 2013

*Prof. Garib Mammadov  
State Committee of Land and Cartography of  
the Republic of Azerbaijan (SCLC)*



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## Outline

- State Committee of Land and Cartography of the Republic of Azerbaijan
- Type of Disasters Occur in Azerbaijan
- Practical Examples for Type of Disasters
- Mandate Given to SCLC for Disaster Management
- Practical Examples of Measures Taken for Disaster Management by SCLC
- Type of Data Developed and Provided
- Equipment or Technical Methods used by SCLC for Disaster Management.
- Factors Contributing to Effective Disaster Preparedness by SCLC
- Users of SCLC's Data and Services
- Kinds of Data/Services NGIAs Should Deliver to the Communities
- Role of UN-GGIM-AP in Disaster



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## State Committee of Land and Cartography

- State Land Committee was established on July 17, 1992 upon Decree 54 of the President of the Republic of Azerbaijan.
- State Land Committee and State Geodesy and Mapping Committee were annulled in 2001 as a result of structure reforms carried out in country and in base of them State Land and Cartography Committee was founded upon Decree 460 of 18 April 2001 of the President of the Republic of Azerbaijan.
- Besides, Committee prepares technical documents to form state registration of rights of property to land according to legislation, assures creation of geographic information systems of state importance, designing and publication of general geographic, land, geobotanical, political-administrative, scientific information and other interfield thematic maps, carries out delimitation and demarcation of state frontiers of the Republic of Azerbaijan, also frontier waters and sector of Caspian Sea (lake) belonging to the Republic of Azerbaijan.
- One of main works Committee has performed till now was land reforms. In this phase up to 3,500,000 subjects entitled to land share have been given land share

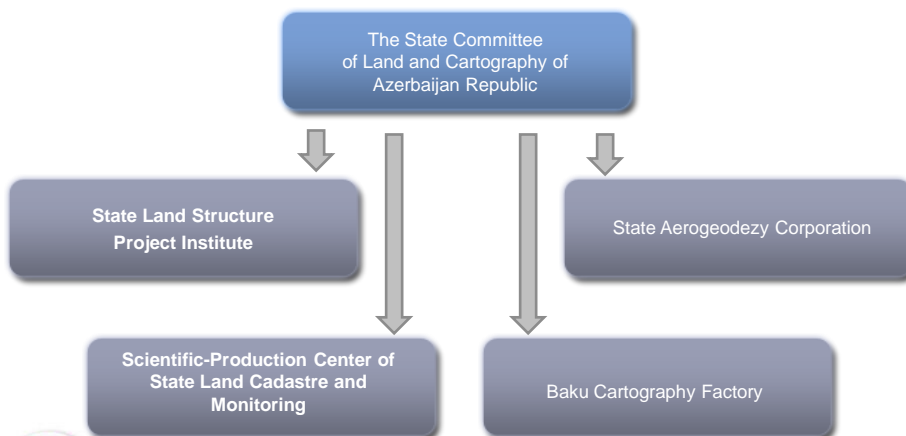


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## Structure of the State Committee of Land and Cartography

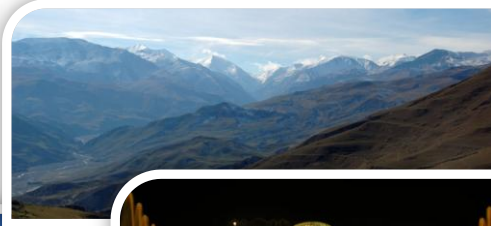


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## Azerbaijan



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## Type of Disasters Occur in Azerbaijan

- Earthquake
- Flood
- Landslide
- Forest fire ....



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## Practical Examples for Type of Disasters

- **Earthquake:**

- Date: 7/05/2013
- Amplitude: 7
- Region: North-West

- **Flood:**

- Date: May-June 2010
- Region: between Kur and Araz rivers

- **Land Slide**

- Region: Shemakha

- **Forest fire**

- Region: central part



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## Mandate Given to NGIA for Disaster Management

- **Ministry of Emergency Situations of the Republic of Azerbaijan**

Ministry is the central body of executive power providing coordination of activities of on the central and local executive bodies, enterprises and other organizations for protection of the population in the country from natural disasters, man-made disasters, and fire, the settlement of the issues for elimination of such consequences, as well as carrying out state policy in the field of civil defense, rescue and restoration works.

By Order of Cabinet of Ministries of the Republic of Azerbaijan "On the Azerbaijan State System for preventing emergency situation and activities in this situation" SCLC is responsible for monitoring and control the potentially dangerous objects.



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## Practical Examples of Measures Taken for Disaster Management by SCLC

### **What SCLC did at flood (during the process and after)**

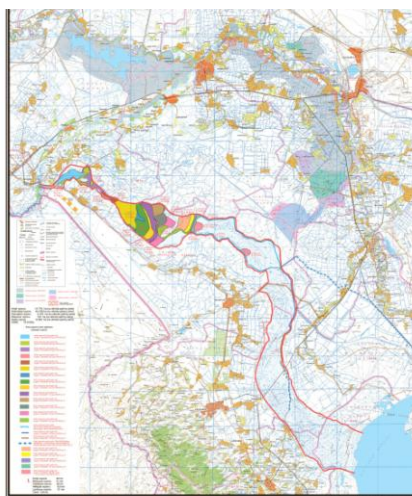
- Provision of maps of affected areas
  - Immediately (< 1h) provide to Government offices starting from small-scale maps (1:150k)
- Detection and analysis of ground surface movement with GNSS control point network
- Aerial Survey (Ortho images)
  - Photo interpretation and measurement of damaged areas
- Forecasting of directions of flooding  
1:5000 scale mapping for reconstruction planning



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## Provision of Base Maps



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## Type of Data Developed and Provided

- Base Maps and Geospatial Information
- Data of Ground Surface Movement with GNSS Control Point Network
- Aerial Photos and Ortho Images
- Disaster Overview Maps
- Thematic Maps (e.g. Inundation Mapping)
- Correction Parameters for Triangulation Points
- Recovery Planning Maps
- .....



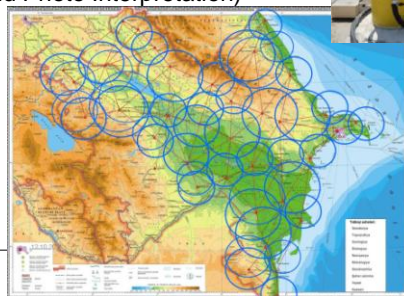
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## Equipment or Technical Methods Used by NGIA for Disaster Management

- Detection and analysis of ground surface movement with GNSS control point network
- Fault Modeling and Observation of Slip
- Triangulation Survey and Leveling
- Aerial Survey (Ortho Images and Photo Interpretation)
- Mobile Mapping System (MMS)
- Thematic Mapping
- .....



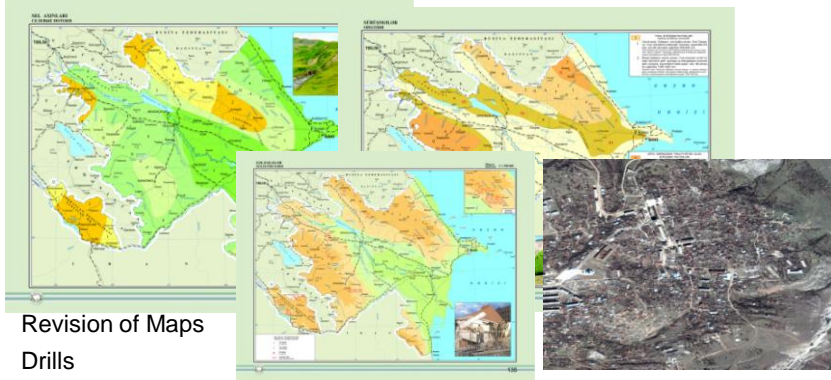
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## Factors Contributing to Effective Disaster Preparedness by SCLC

- Archive Data (Aerial Photos, Base Maps and Thematic Maps...)



- Revision of Maps
- Drills



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## Users of SCLC's Data and Services

- Central Government Offices
  - Ministry of Emergency Situations
  - Cabinet of Ministries
  - Relevant Ministries and Agencies
- Local Governments affected by the disaster
- General Public and Mass Media
- Researchers



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## Kinds of Data/Services NGIAs Should Deliver to the Communities

- NGIA should deliver the data/services that enlighten policy makers and government officials on utilization of the geospatial information in disaster management.
- Such data/services should provide common tools for utilization of the geospatial information in disaster management.
  - Base Maps and Geospatial Information
  - Data of Ground Surface Movement with GNSS Control Point Network
  - Aerial Photos and Ortho Images
  - Disaster Overview Maps
  - Thematic Maps
  - Correction Parameters for Triangulation Points
  - Recovery Planning Maps etc.



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## Role of UN-GGIM-AP in Disaster Management

- Share the NGIA's Experiences of Disaster Management with the Asia-Pacific countries
- Share the Disaster Information by Maps and Photos etc. with the Asia-Pacific countries
- Represent the region at the global level of GIM
- Consultant of Technology Transfer on Disaster Management



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