Disaster Management in Mongolia
~Coordination among NGIA & Other Related Organizations and Recommendations~

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Outline

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• Recommendations on the Activities of UN-GGIM-AP WG2 on Data Sharing and Integration for Disaster Management
Briefly about Mongolia

1. Location: in the Central Asia.
2. Territory: 1,564,116 km² after Iran and 19th place of the world/
3. Population: 2.9 million /2013/
4. Capital city: Ulaanbaatar
5. Official language: Mongolian
6. Religion: Buddha
7. Currency: Tugrug
8. Political system: Parliamentary type of governance
9. Located at an average altitude of 1,580 meters.
10. Hieght point: Cold mountain Altai Tavan Bogd / sea above 4,374 m /

Introduction

- Organizational Structure within NGIA for Disaster Management
  - Ministry of Construction and Urban Development (MCUP) of Mongolia.
  - Mongolian Implementation Agency, Administration of land affairs, geodesy and cartography (ALAGaC)
    - Implementation of state policy
    - Definite surveying and topographic mapping of Mongolia,
    - Horizontal and vertical geodetic reference systems,
    - Making of data and information available except those in confidential mode and transparent government services to the public
    - Establishment of national spatial data infrastructure
  - Land management
  - Cadastre /Addressing/, land valuation
Introduction

- Organizational Structure within NGIA for Disaster Management

- Featured products and services
  - Geospatial data
    - Large and medium scale topographic maps
    - Various scales of thematic maps and atlas
    - Geodetic networks
    - Various types of geospatial data
    - Land use plan
    - Cadastral map and registration
    - Orthophoto, satellite images, photography
# Introduction

- Legal Framework and the Role of NGIA in Disaster Management
  - A Disaster Protection Law - 2003 /now in amendment process/
    - 7 chapters, 36 articles /new amended law will be 9 chapters, 46 articles/
  - Law on Emergency Management Officials /new law in process of endorsement/
  - State Policy on A Disaster Protection /Parliament's order No. 22, 2013 May 13/
  - National Program on Strengthening A Disaster Protection Potential /Parliament's order No. 22, 2013 May 13/
  - Law on Fire Safety /1999 May 28/

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## Type of Disasters Occur in Mongolia

- Drought
- Powerful snow (dzud)
- Dust storms
- Flood
- Forest and steppe fires
- Earthquake
- Human and animal epidemic diseases
- Chemical and radioactive substance release
- Industrial and transport accidents
Type of Disasters Occur in Mongolia

Practical Examples for Type of Disasters

- 2014 оны 7 сард Архангай аймгийн Хашаат суманд байгалийн ганэтийн акулт үзэргдлийн ул мөр
Products and role of NGIA for Disaster Management

Probability dzud

UN-GGIM-AP
Regional Committee of United Nations Global Geospatial Information Management for Asia and the Pacific

Probability drought

UN-GGIM-AP
Regional Committee of United Nations Global Geospatial Information Management for Asia and the Pacific
Products and role of NGIA for Disaster Management

The number of snow storms

Products and role of NGIA for Disaster Management

The number of dust storms
Products and role of NGIA for Disaster Management

Wildfire frequency

Flood map
Coordination with Public Disaster Management Agencies

- Framework for Coordination between NGIA and Public Disaster Management Agencies
  - National Emergency Management Agency (NEMA)
  - Institute of Meteorology and Hydrology
  - Emergency Management Department, Ulaanbaatar City Metropolitan Urban Planning & Construction Department
  - Information, Post, Communication and Technology Agency
  - Offices in each level of district & sub-district, and U.B city
- Coordination through NSDI
  - NSDI development strategy
  - Standardization
  - System design
  - Web service
  - Map supply
  - Spatial data including underground facilities
  - Addressing system
Coordination with Public Disaster Management Agencies

• The necessity to utilize information for government, private sector and people’s activity arises dramatically. Linking the spatial data with the information that is fundamental for a country’s economic and social developments, and tracking its implementation in medium and long-term plan are essential as well. Mongolia is facing new era of sharing information among all others /awaked-stage/.

• Depending on the capacity of the public and private organizations, acquisition and usage of the spatial data in various levels not only emphasize demand and importance of spatial data, as well as unified geographic databases and their administrative managements.

• Administration of land affairs, geodesy and cartography is responsible for building the NSDI to provide standardized spatial data, create its metadata, enhance the cooperation between all levels of public and private organizations and enable the Internet-based information network and services within authorized administrative framework.

Coordination with Public Disaster Management Agencies

• Framework for Coordination between NGIA and Public Disaster Management Agencies
  • Cooperation between National Emergency Management Agency /NEMA/ and ALAGaC
    • Established contract to collaborate since March of 2014
    • Many scales topographic maps and data are provided to NEMA /in compliance with the State secret act and regulations/.
    • Primary level of Geographic information systems/ArcGIS/ training has been organized for NEMA staffs

• Challenges
  • Enhance the cooperation with NEMA especially for identifying risk zone, responding hazards in efficient and effective way
  • Awareness in Importance of Geospatial information/maps
  • Proper addressing system through whole territory
Coordination with the Private Sectors in Disaster Management

- Framework for Coordination between NGIA and the Private Sectors
  - For establishing and maintaining the NSDI, ordinance and regulation to coordinate functions of and cooperation between all levels of government organizations will reduce the spatial data duplication, and accelerate the e-government development. It will also support cost-effective and time-efficient innovative production and services meeting user needs.
  - Development of platforms
  - Development of Web Services
  - Standardization
- Challenges in Coordination
  - Government/NGIA should support Geospatial information industry through state policy

Coordination with Universities/Academic Institutions and NPOs (Volunteers, Citizens etc..)

- Framework for Coordination between NGIA and Universities/Academic Institutions and NPOs (Volunteers, Citizens etc...)
  - Research Center of Geophysical and Astronomical (RCGA)
  - Ministry of Education, Culture and Science
  - Disaster Research Institute
- Examples on Coordination Efforts in Disaster Response Activities at each Stage of Disaster Cycle
  - ALAGaC shares Geospatial Information such us fundamental data/topographic maps/
- Challenges in Coordination
  - Needs to improve the quality of data/temporal, spatial../
  - Support Research and Development
Challenges and Efforts in Disaster Management Coordination with Related Organizations

- Current Status of Disaster Related Information Sharing by using Geospatial Information Services (Geoportals etc)
  - We don’t have fully completed/functioning Geospatial Information Services yet
  - Platforms and geoportals are in research and implementing stages
- Challenges in Sharing Disaster Related Information
  - Needs Improved emergency management and cooperation
  - Enhanced usability in immediate response to natural disaster.
  - Remove the duplication of the data acquisition
  - Different sources of data and information could be access through one service.

Recommendations on the Activities of UN-GGIM-AP WG2 on Data Sharing and Integration for Disaster Management

- Assistance in international standard transfers for the NSDI in developing countries among AP.
- Consultancy in human resources development assistance and training regards to Disaster Management
- Share the NGIA’s Experiences of Disaster Management with the AP countries
- Sharing the best practices and methods in human resource development, geospatial information services and data processing
Summary

- Mongolia is in their early stage of Geospatial information technology
- Feasibility study in developing SDI
- Effective coordination with public organizations are beginning to expand
- Real time LOCATION BASED geospatial data is important to make quick response to the hazard. So mutual cooperation has been taken place since mid of 2013 /NEMA/
- As for the disaster management, of course there are certain actions are carrying out, however use of geospatial information is mediocre.

**Collection of spatial data theme /organizational SDI**

**Strengthen the policy and legal framework**

**Establishment of SDI /Local SDI**

**NSDI establishment**

**2017**

- NSDI establishment

**2016**

- Establishment of SDI /Local SDI

**2015**

- Strengthen the policy and legal framework

**2014**

- Collection of spatial data theme /organizational SDI
Contact information

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