

The Second UN-GGIM-AP Plenary Meeting

# NGIAs' roles in successful disaster response **MONGOLIA**

Teheran Iran  
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## Outline

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- Equipment or technical methods used by NGIA for disaster management.
- Factors contributing to effective disaster preparedness by NGIA
- Users of NGIA's data and services
- Cooperation with related communities for disaster management
- Kinds of data/services NGIAs should deliver to the communities
- Role of UN-GGIM-AP in Disaster Management (e.g., Regional Clearinghouse)



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## Briefly about Mongolia



- Mongolia is Landlocked country with territory of 1,566,000 sq.km. 19<sup>th</sup> in the World after Islamic Republic of Iran (18) and . It is significantly larger than the next-largest country, Peru (20<sup>th</sup>). (wiki)
- Population of near 3 million within 21 provinces (Aimags)
- The geography of Mongolia is varied with the Gobi Desert to the south and with cold and mountainous regions to the north and west.
- During past 20 years population of capital city Ulaanbaatar increased up to 40% from total population. Primary reason - migration of nomads to the city.
- Why? Loss of primary life income - cattle's during natural disasters such as **drought, snow and sand storm**
- Global warming and climate change, uncontrolled mining activities, use of **chemicals in agriculture affecting to the nomadic way of life**
- Mining industry requested new safety standards due to increasing numbers of **man made accidents**.



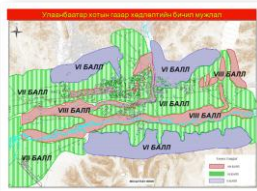
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## Briefly about Mongolia



- A strong earthquake occurred in a desert place without human settlements is not disastrous for Mongolia whereas if it takes place in any other country with densely populated areas it would cause heavy losses and casualties which occurs rather frequently.
- However 40% from total population concentrated in a capital city puts at the same risk level and requires immediate actions



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## Type of Disasters Occur in Mongolia

- Drought
- Powerful snow (dzud) and dust storms
- Flood
- Forest and steppe fires
- Earthquake
- Human and animal epidemic diseases
- Chemical and radioactive substance release
- Industrial and transport accidents



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## Type of Disasters Occur in Mongolia



Classification	Type	Disasters
Natural Disasters	Climatic hazardous phenomena	Snow storm
		Severe snowfall
		Dzud
		Dust storm
		Flood
		Steppe and forest fire
	Geological threats	Desertification
		Thunderstorm
	Biological threats	Earthquake
Landslides		
Spread of detrimental rodents		
Manmade Disasters	Technological accidents	Human infectious diseases
		Livestock or animal infectious diseases
		Industrial accidents
		Traffic accidents
		Leakage of chemical and radiological substances
		Explosion

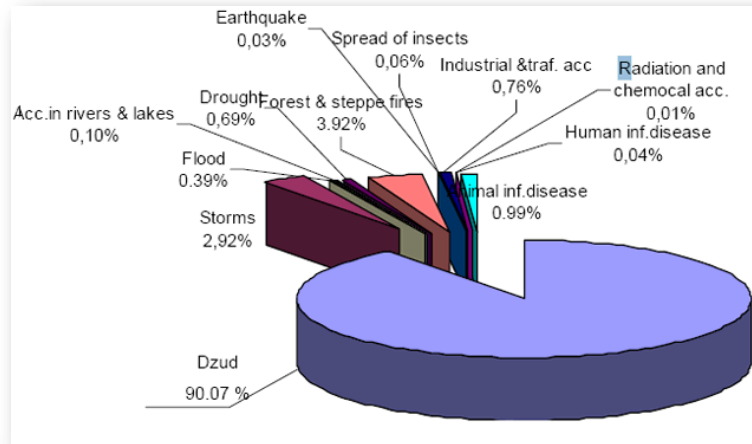


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## Type of Disasters Occur in Mongolia



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## Practical Examples for Type of Disasters

- Dzud statistics by 31 December 2010
  - 9,735,527 animals dead
  - 223 people dead
  - 2413 people injured
  - 1699 human life's rescued



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## Practical Examples for Type of Disasters

ONE CENTURY OF SEISMICITY IN MONGOLIA (1900 – 2000)

Past and recent earthquakes:

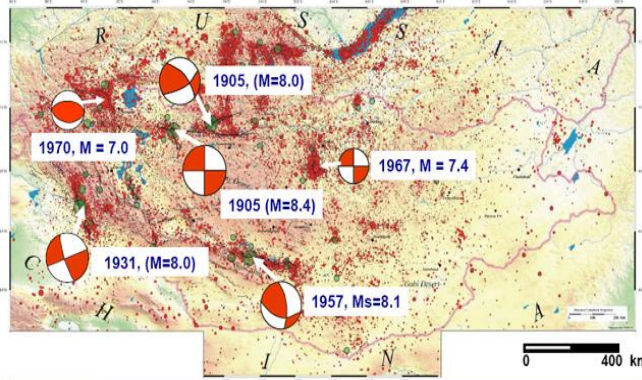
30 earthquakes are with  $M > 7$ , 4

earthquakes with  $M > 8$  1905 ( $M=8.0$ ),

1931 ( $M=8.0$ ),

1957 ( $M=8.3$ ),

and 1967 (7.4: damage in UB)



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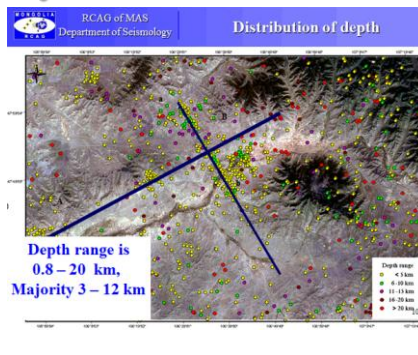
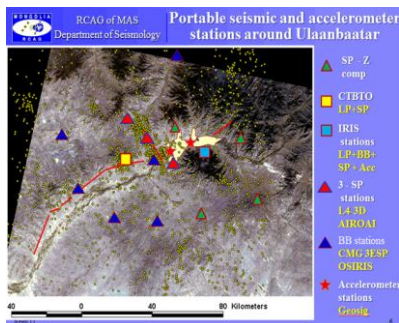
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## Practical Examples for Type of Disasters

### • Seismic activity around UB



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## Mandate Given to NGIA for Disaster Management

- Historically Government Implementing Agency of Administration of Land Affairs, Geodesy and Cartography (ALAGaC) has been established in August 14, 2002 by decree of the Mongolian government of No. 58 and decree of No.162.
- The Agency started activities from 2002 and it was established on basis of three implementing Government Agencies, such as Land Administration Authority under the Ministry of Nature and Environment, Real Property Registration Authority under the Ministry of Justice and Internal Affairs and the State Administration of Geodesy and Cartography under the Ministry of Infrastructure.



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## Mandate Given to NGIA for Disaster Management

### **Today's Government Implementing Agency Main goals are:**

- Implementation of Land and Geodesy, Cartography related laws at country level
- Land management planning, Cadastre,
- Land tax and fee,
- National Land Information System
- Land valuation
- Land market, Geodesy, Cartography,
- National Spatial Data Infrastructure

Assistance with monitoring, location, management and distribution of Geospatial Information to the community



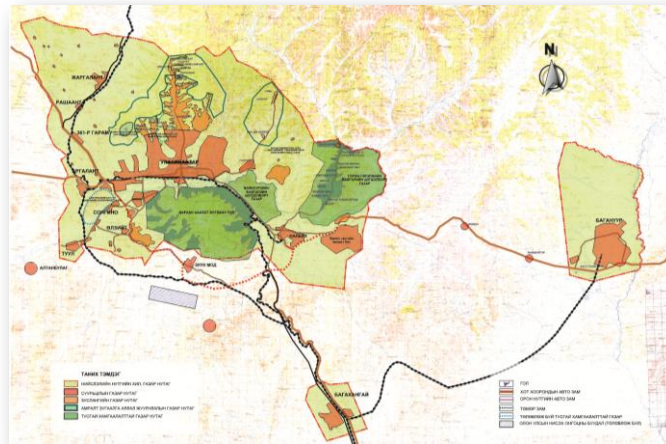
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## Practical Examples of Measures Taken for Disaster Management by NGIA



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## Type of Data Developed and Provided



- NSDI development strategy
- Technical assistance on NSDI
  - Standardization
  - System design
- Cooperation with other government organizations
- Web service
  - Geodetic points' distribution
  - Map supply
  - Spatial data including underground facilities



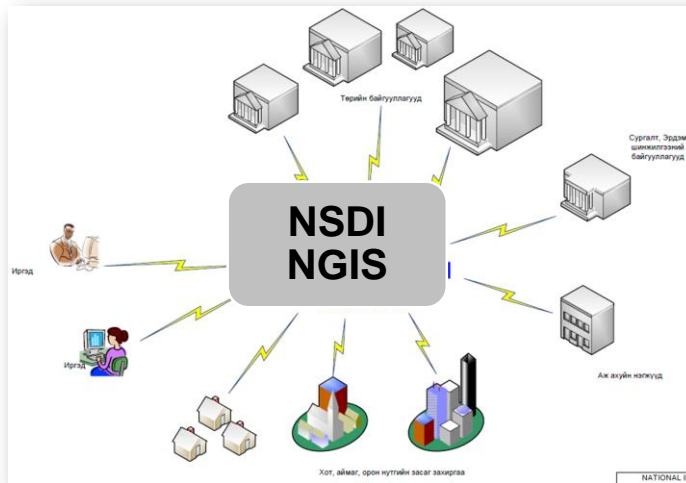
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## Equipment or Technical Methods Used by NGIA for Disaster Management



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



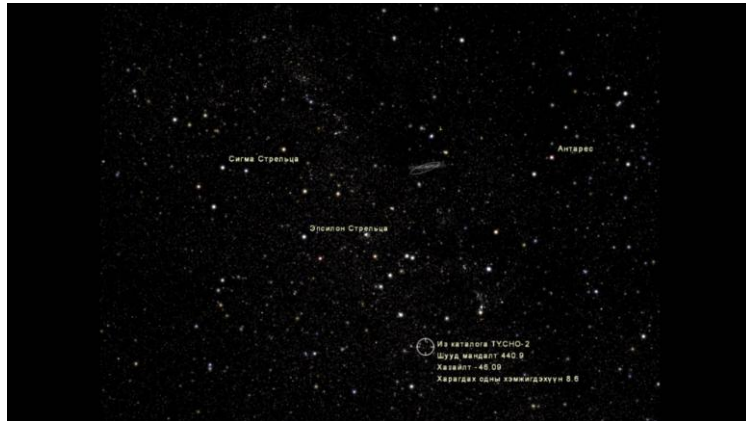
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## Factors Contributing to Effective Disaster Preparedness by NGIA



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## Factors Contributing to Effective Disaster Preparedness by NGIA



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## Cooperation with Related Communities for Disaster Management

- National Emergency Management Agency
- Institute of Meteorology and Hydrology
- Disaster Research Institute
- Emergency Management Department, Ulaanbaatar City  
Metropolitan Urban Planning & Construction Department
- Information, Post, Communication and Technology Agency
- Research Center of Geophysical and Astronomical (RCGA)
- Ministry of Education, Culture and Science
- Offices in each level of district & sub-district, and U.B city
- NGO's



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

- Further development of National SDI portal
- Wider geospatial information intergration by the agency
- Simplified, but accurate information delivery to the public
- Further cooperation such as PPP etc.)
- True identification of our roles in EW processes,
- Friendly approach towards EW systems.



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

- Assistance in international standard transfers for the NSDI in developing countries.
- 'Monitoring' technology transfer, such as Satellite Data Receiving Stations
- Consultancy, in human resources development assistance and training
- Consultant of Technology Transfer on Disaster Management
- Share the NGIA's Experiences of Disaster Management with the Asia-Pacific countries



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