



Geo-reference for disaster risk management – *concepts, needs and gaps* in Asia- Pacific region by ESCAP

Nitin Kumar Tripathi, PhD

IDD Consultant, ESCAP

Coordinator, Remote Sensing and GIS FoS,
Asian Institute of Technology

Thailand

nitinkt@ait.asia

14/07/2014

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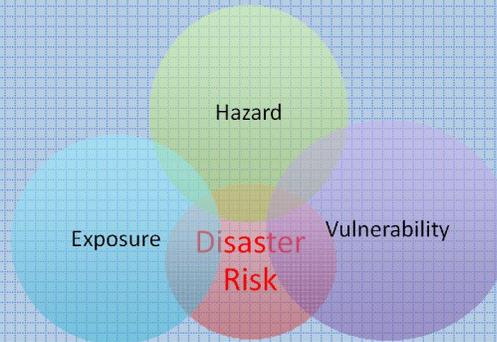
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- Need for Georeferenced System
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Disaster Risk Management



Disaster risk map

mapping of hazard, exposure and vulnerability
and finally combining using integrated overlay

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- Hazard, exposure and vulnerability **differ from region to region**

- topography,
- socio-economic condition and
- environmental/ climatic variables

- Disaster Risk Reduction (DRR) describes the policy objectives of reducing risk

- Disaster Risk Management (DRM) covers the actions needed to achieve those objectives

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Disasters in Asia and Pacific

- Of the world total affected by natural disasters, the Asia and the Pacific region included 90% of those, 65% of death, and 38% of economic damage (2001 -2010)
- UNDP
 - 24 out of 49 LDCs, most of which are in Asia and the Pacific, face high levels of disaster risk
- The vulnerability of economically challenged Least Developed Countries (LDCs), Land-locked Developing Countries (LLDCs) and Small Island Developing States (SIDS) is a crucial issue due to
 - lack of Disaster Preparedness Mechanism and
 - gaps in baseline geospatial data

Hyogo Framework for Action

- 168 countries *during World Conf. on Disaster Reduction in Kobe, Japan in January 2005*
- Hyogo Framework for Action (HFA) - targeted to reduce disaster losses – lives, social, economic, and environmental assets by 2015
- Substantial progress but there is a lot still to be achieved in next 4 years
- Basic Needs for DRR
 - a national facility for georeferenced maps

Need of Geospatial Data

- HFA Priority 2 states
 - *identify, assess and monitor disaster risks and enhance early warning*
- These objectives need satellite data
 - Various sensors and various space platforms
 - Different resolution
 - Different scene geometry
 - **Necessity to make them compatible** for overlay for analysis and finding the desired information on extent and magnitude of hazards, producing maps of exposure, vulnerability and risk for mitigation
 - **Possible only by georeferencing**

Geospatial and Statistical Data Needs for DRM

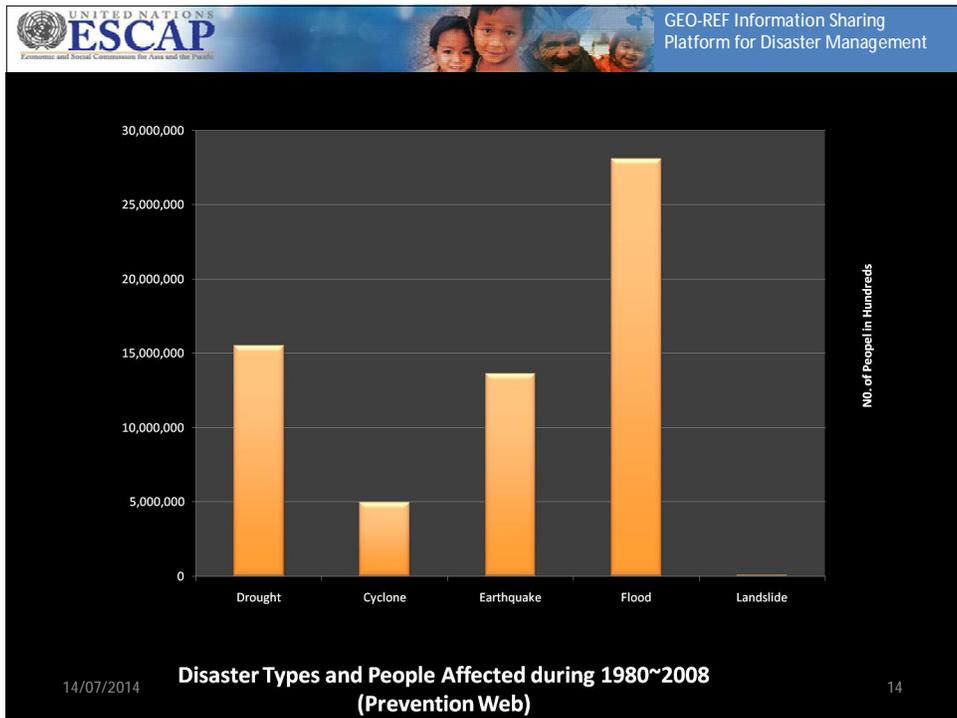
Data requirements for different disasters differ to conduct:

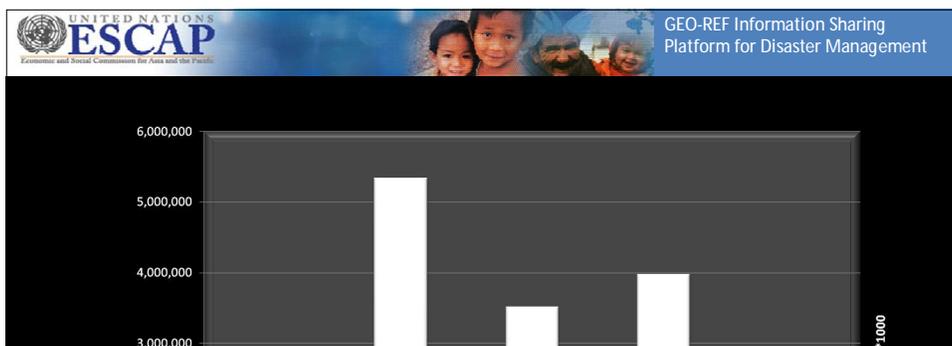
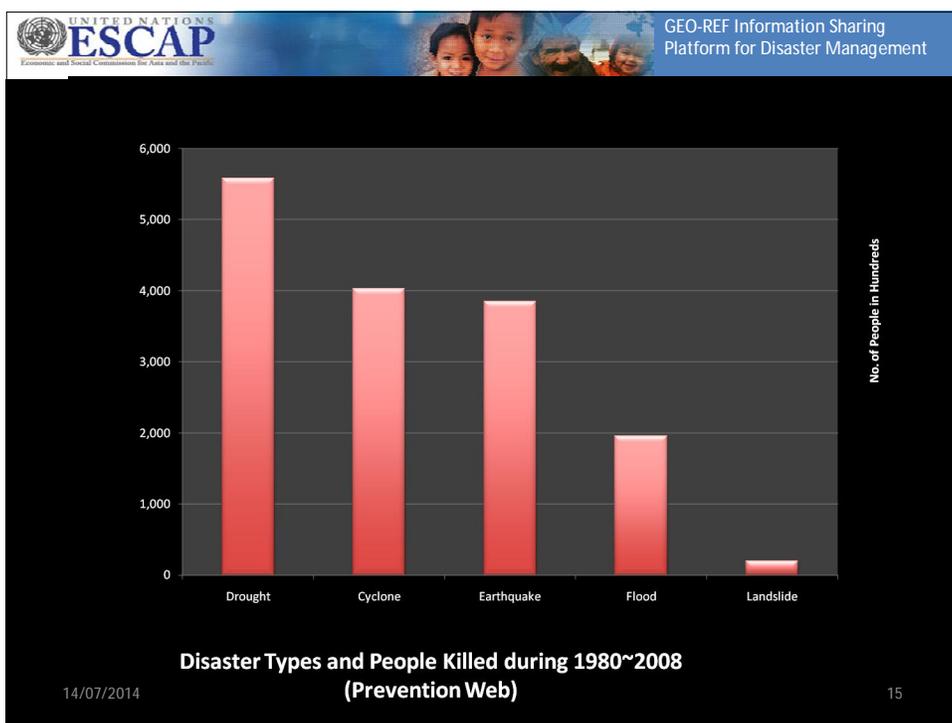
- Hazard Analysis
- Vulnerability Analysis
- Disaster Risk Mapping
- Post Disaster Damage and Loss Assessment (DaLA)
- Preparedness for disaster response (Evacuation Routes and Shelters)

 GEO-REF Information Sharing Platform for Disaster Management				
Disaster Type	Remote Sensing Data	GIS Data	Statistical/ Demographic Data	Ancillary Data for modeling and early warning
Earthquake	<p>District Level:</p> <p>Landsat, SPOT, IRS-1C, Resourcesat, Theos</p> <p>For large scale:</p> <p>High Resolution during earthquake or for damage assessment but NOT for monitoring</p>	<p>Geologic:</p> <p>Geology, Geostructural, Volcanic eruptions points,</p> <p>Landuse/ Landcover/ Topographic:</p> <p>Rivers/ Streams, reservoirs, lakes, ponds, Soil Type, Contour Maps, DEM, Admin boundary, Roads, Railways, Airports/helipads, Seaports, Agriculture, Forest, Urban.</p> <p>Facilities: Shelter places (hospitals/ religious places, academic buildings etc), Rescue points, Health facilities</p>	<p>Population, House Types, No. of houses, Households, Avg Family size</p>	
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 GEO-REF Information Sharing Platform for Disaster Management				
Disaster Type	Remote Sensing Data	GIS Data	Statistical/ Demographic Data	Ancillary Data for modeling and early warning
Cyclone	<p>Regional Mapping/Monitoring:</p> <p>MODIS</p> <p>Meteorological / Weather Satellite:</p> <p>INSAT, GMS (Europe Geostationary Meteorological), GOES, MTSAT, HIMAWARI, Wind-Cloud 2,4, GOMS, COMS, PCW</p>	<p>Cyclone Dataset,</p> <p>Admin boundary maps,</p> <p>Rivers,</p> <p>Evacuation centers, Hospital, Academic Buildings</p> <p>Transportation network</p>	<p>Population, House Types, No. of houses, Households, Avg Family size</p>	<p>Historical cyclone data</p>
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Disaster Type	Remote Sensing Data	GIS Data	Statistical/ Demographic Data	Ancillary Data for modeling and early warning
Landslide	SPOT-5, ASTER, IRS-ID, Aerial Photographs, High resolution – Geoeye, Quickbird	Landuse/ Landcover/ Topographic: Rivers/ Streams, reservoirs, lakes, ponds, Soil Type, Contour Maps, DEM, Admin boundary, Roads, Railways, Airports/helipads, Seaports, Agriculture, Forest, Urban. Slope, Aspect, Flow direction Previous landslide hazard maps, Lithology, Lineament, Settlement, Rescue points, Health facilities	Population, House Types, No. of houses, Households, Avg Family size	Rainfall,
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预览已结束，完整报告链接和二维码如下：

https://www.yunbaogao.cn/report/index/云报告?reportId=5_7767



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