


UNITED NATIONS
ESCAP
Economic and Social Commission for Asia and the Pacific

GEO-REF Information Sharing
Platform for Disaster Management

Technical Advisory Mission
September 2013,
Cook Islands



Concepts of Geo-referenced Information for disaster risk management system in Asia-Pacific region

Nitin Kumar Tripathi, PhD
IDD Consultant, ESCAP
nitingeo77@gmail.com

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Content


- Disaster Risk Management
- Disasters in Asia and Pacific
- Need of Geospatial Data for DRM
- Database Issues
- Need for Georeferencing
- Need for Georeferenced System
- GeoPortals for DRM
- Q/A

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Mapping Disaster Risk Areas



Disaster risk map
 mapping of hazard,
 exposure and
 vulnerability
 and finally combining
 - integrated overlay


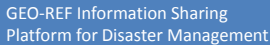
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- **Hazard, exposure and vulnerability** differ from region to region
 - topography,
 - socio-economic condition and
 - environmental/ climatic variables
- **Disaster Risk Reduction (DRR)** - the policy objectives of reducing risk
- **Disaster Risk Management (DRM)** - the actions needed to achieve those objectives


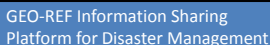
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Disasters in Asia and Pacific

- Of the total natural disasters in the world, 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


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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**

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Geospatial and Statistical Data Needs for DRM

Data needs for different disasters differ to conduct:

Hazard Mapping

Vulnerability Mapping


Exposure Mapping

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Disaster Risk Mapping

- Preparedness & response (Evacuation Routes and Shelters)
- Post Disaster Damage and Loss Assessment (DaLA)


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Various Formats & Data Types:




Maps




Socio-economic data



Satellite Image



Weather



Global Positioning System

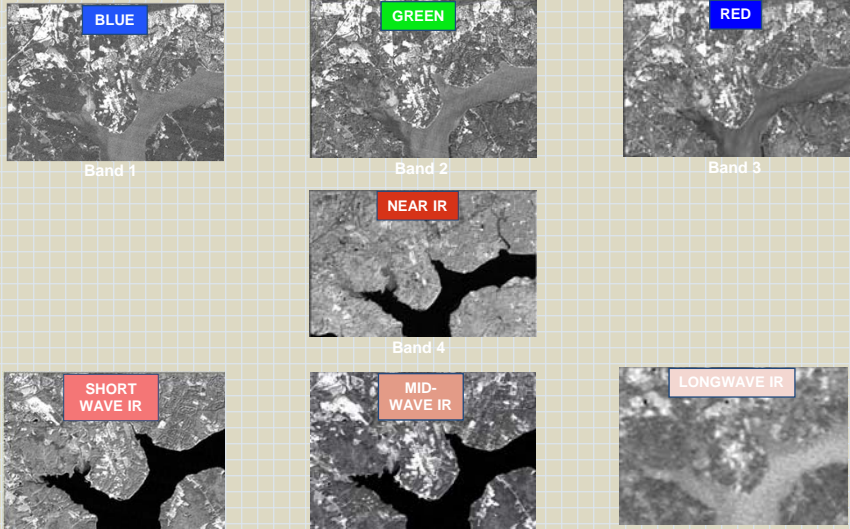
Year	Country	High Value	Low Value	Quantity	Assessment
2011	Japan	100	100	100	100
2012	Japan	100	100	100	100
2013	Japan	100	100	100	100
2014	Japan	100	100	100	100
2015	Japan	100	100	100	100
2016	Japan	100	100	100	100
2017	Japan	100	100	100	100
2018	Japan	100	100	100	100
2019	Japan	100	100	100	100
2020	Japan	100	100	100	100
2021	Japan	100	100	100	100
2022	Japan	100	100	100	100
2023	Japan	100	100	100	100
2024	Japan	100	100	100	100
2025	Japan	100	100	100	100
2026	Japan	100	100	100	100
2027	Japan	100	100	100	100
2028	Japan	100	100	100	100
2029	Japan	100	100	100	100
2030	Japan	100	100	100	100

Tabular Records

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Landsat Bands



Band 1

Band 2

Band 3

Band 4

Band 5

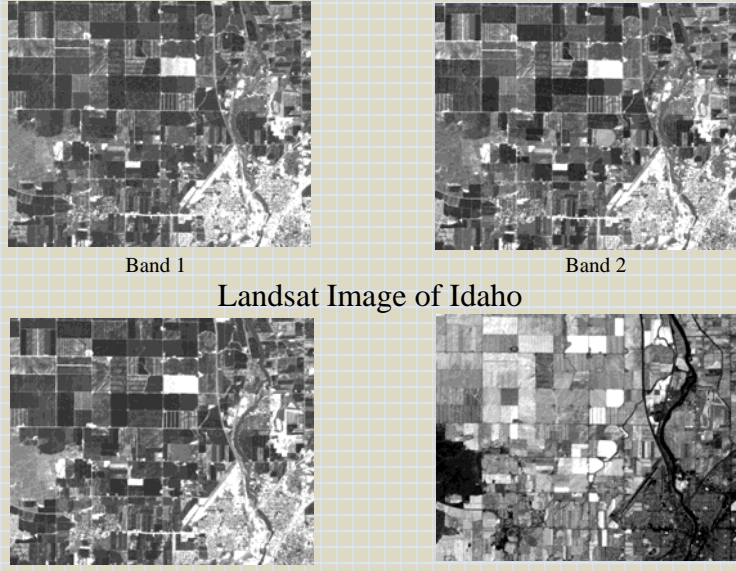
Band 7

Band 6

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Landsat Image of Idaho



Band 1

Band 2


Band 3

Band 4


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Landsat Image of Idaho



Band 5



Band 6



Band 7

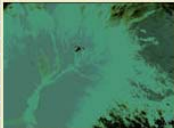
Landsat Image of Idaho

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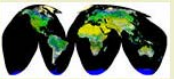
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NASA Visible Earth: [long list](#)

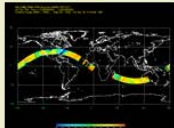
Selected satellite remote sensing systems




ASTER (Advanced Spaceborne Thermal Emission and Reflection Radiometer)




AVHRR (Advanced Very High Resolution Radiometer)




CERES (Clouds and the Earth's Radiant Energy System)




DMSP/OLS (Defense Meteorological Satellite Program/Operational Linescan System)




ETM+ (Enhanced Thematic Mapper Plus)



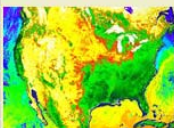
IKONOS



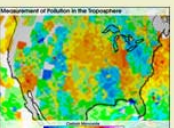
IRS (Indian Remote Sensing Satellite)




MISR (Multi-Angle Imaging Spectroradiometer)



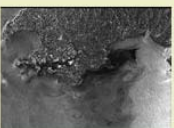
MODIS (Moderate-Resolution Imaging Spectroradiometer)



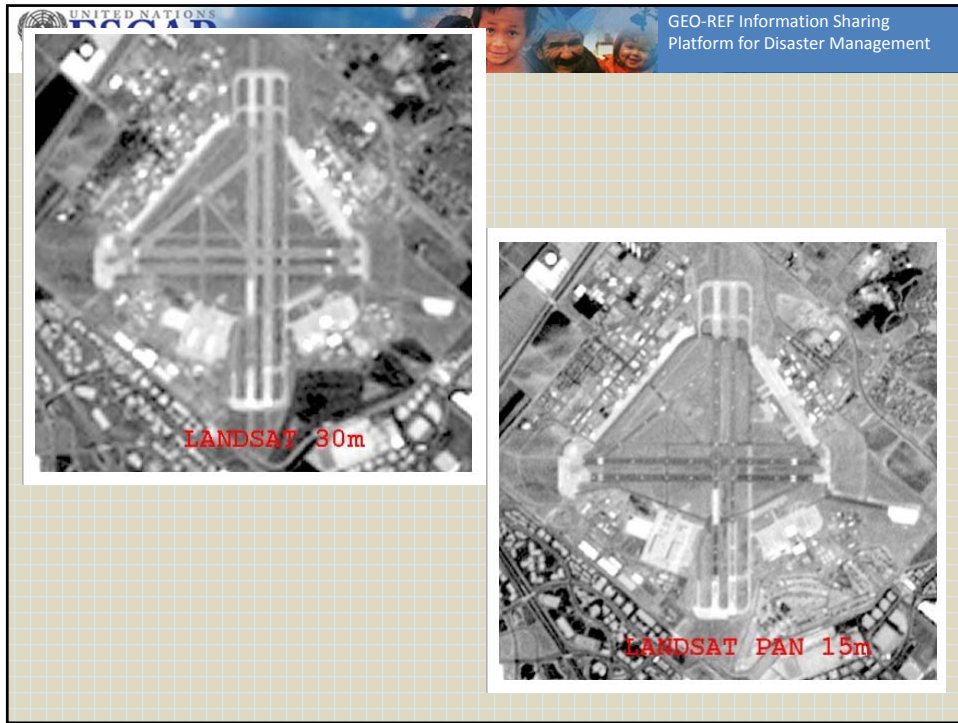
MOPITT (Measurements of Pollution in the Troposphere)

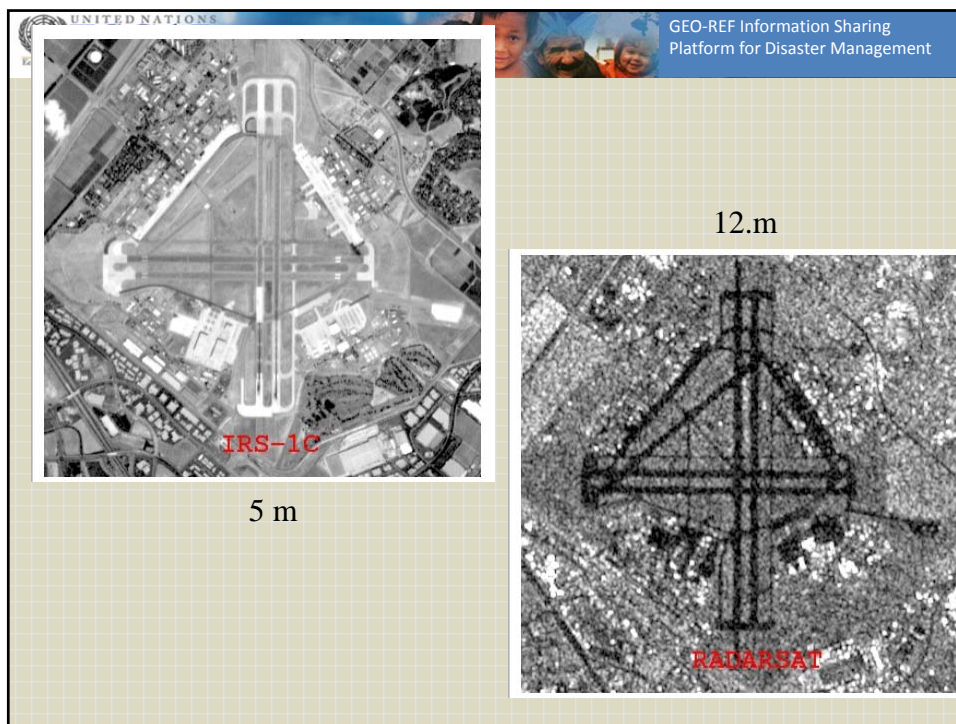


QuickBird



SAR (Synthetic Aperture Radar)





预览已结束，完整报告链接和二维码如下：

https://www.yunbaogao.cn/report/index/report?reportId=5_6815

