

Space-enabled Products & Services for DRR/ DRM: Indian Initiatives



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EGM Meeting on Geo-reference Disaster Risk Management System

15-17 Feb 2012, Bangkok, Thailand



India's Vulnerability to Disasters

The Indian sub-continent is one of the world's most Disaster-prone areas.

Floods: ~40 M ha of total area

Cyclones: ~8% of total area
(5700 km long coastline)

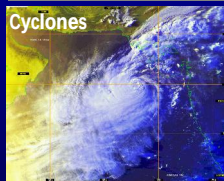
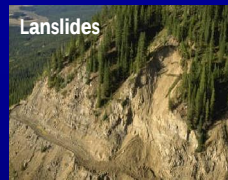
Drought: ~68% of total area (116 districts)

Landslides: ~8% of total area
(Himalayan/ Western Ghats)

Earthquakes: ~55% of area in Seismic Zone III- & V

Forest Fires: ~65% of total forests under potential threat

Tsunami: East Coast, part of West Coast, A & N Islands



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India's Approach to Disaster Management

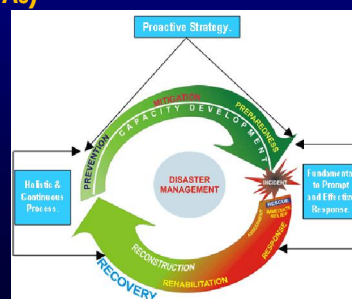
§ Paradigm shift in approach from **'relief centric'** to **'holistic & integrated'** with emphasis on prevention, mitigation and preparedness after introduction of **'Disaster Management Act'** in 2005.

§ Responsibility for implementing the integrated & holistic approach for Disaster Management in India lies with:

- **National Disaster Management Authority (NDMA)**, and
- **State Disaster Management Authorities (SDMAs)**

NDMA lays down the policies, plans and guidelines for DM to ensure timely and effective response to disasters.

§ Responsibility for providing **'space based support and services for DM'** lies with Indian Space Research Organisation (ISRO) / Department of Space (DOS).



Disaster Management Support Programme (DMSP) of ISRO/DOS

....provides timely support and services from aero-space systems, both imaging and communications, towards efficient management of disasters in the country.

§ Addresses disasters such as Flood, Cyclone, Drought, Forest Fire, Landslide and Earthquake.

§ Creation of GIS based digital database for facilitating

- hazard zonation,
- damage assessment,
- monitoring of major natural disasters.

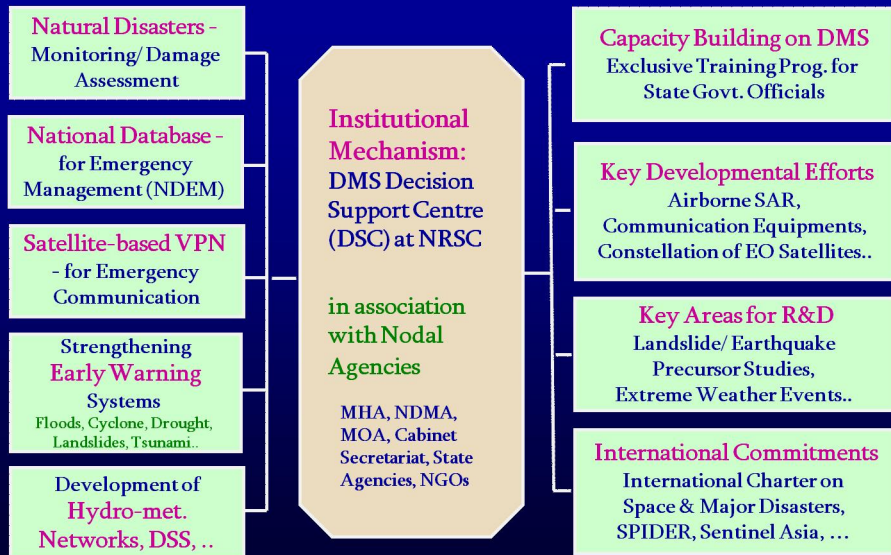
§ Development of appropriate techniques and tools for decision support.

§ Establishing satellite based reliable communication network and deployment of emergency communication equipments.

§ R&D towards early warning of disasters.



DMSP of ISRO/DOS contd.



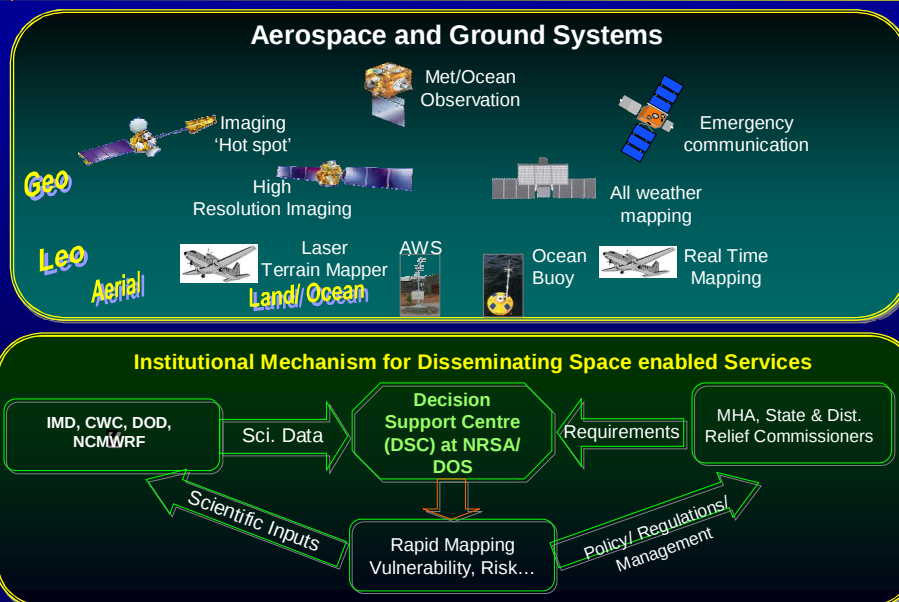
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MOA: Ministry Agriculture

NDMA: National Disaster Management Authority, 15-17 Feb 2012, Bangkok, Thailand

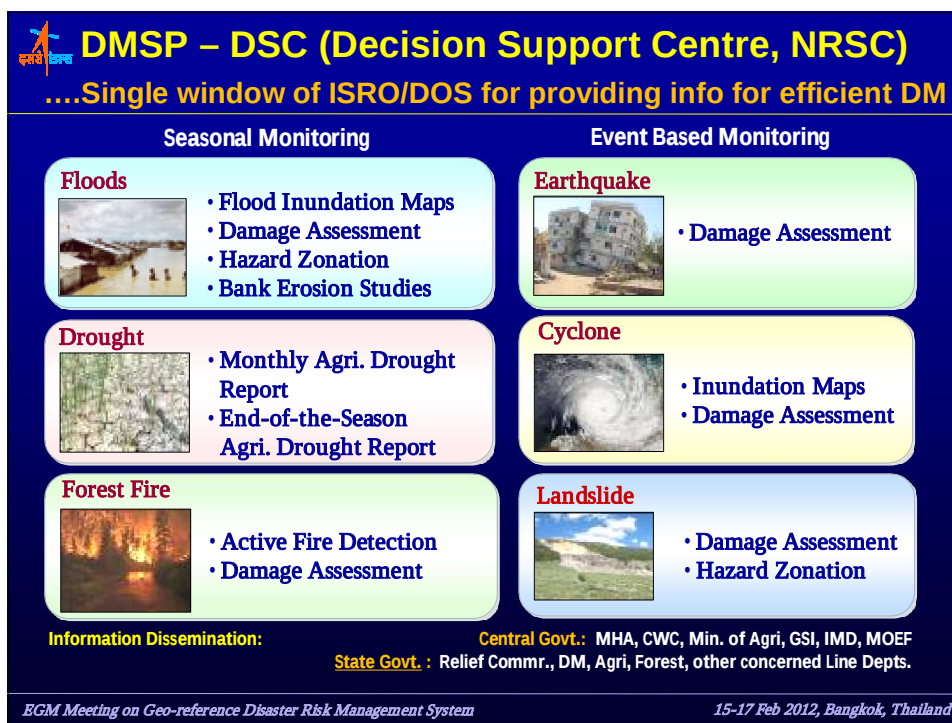
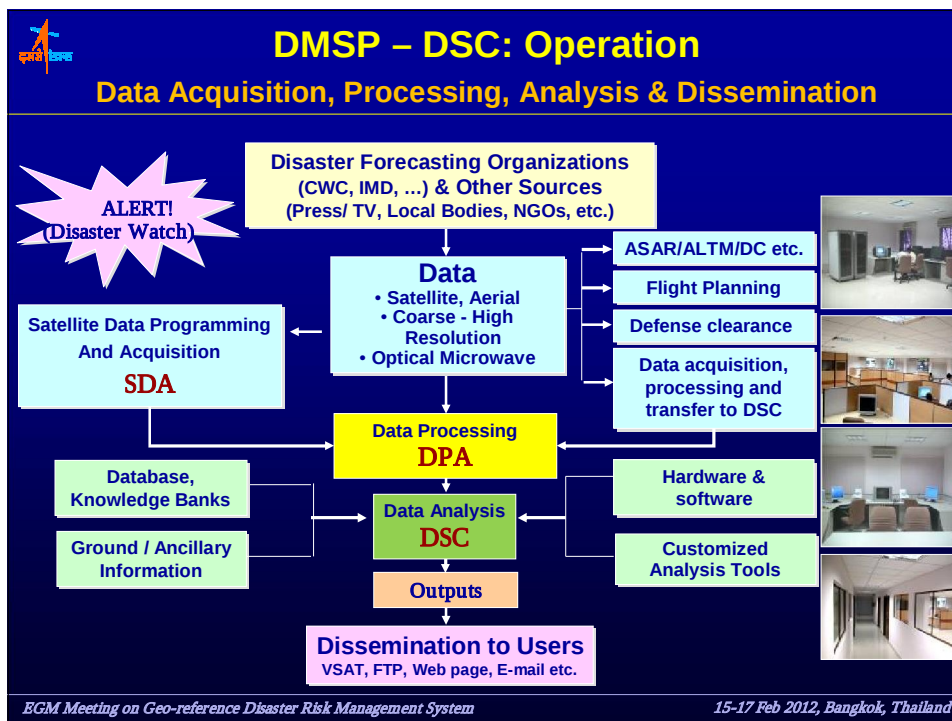


DMS – Infrastructure



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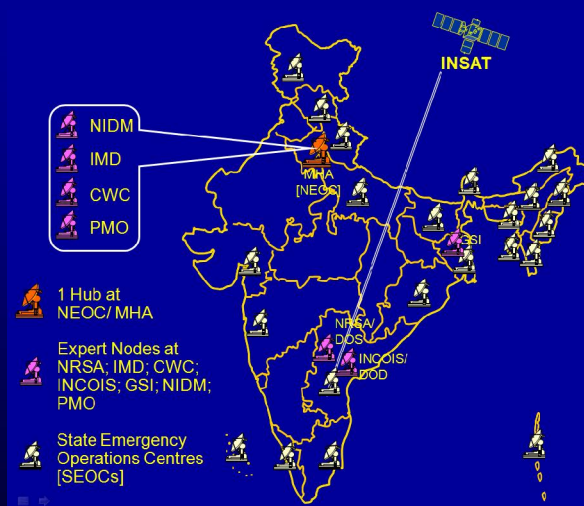




DMSP / DSC – Interface

....DMSP-DSC
(at NRSC/ISRO) is
dynamically linked –
through satellite
based VPN – with
NEOC, SEOCs &
knowledge
institutions.

Network is being expanded
to link multi-hazard prone
District Emergency
Operational Centres
(DEOCs).

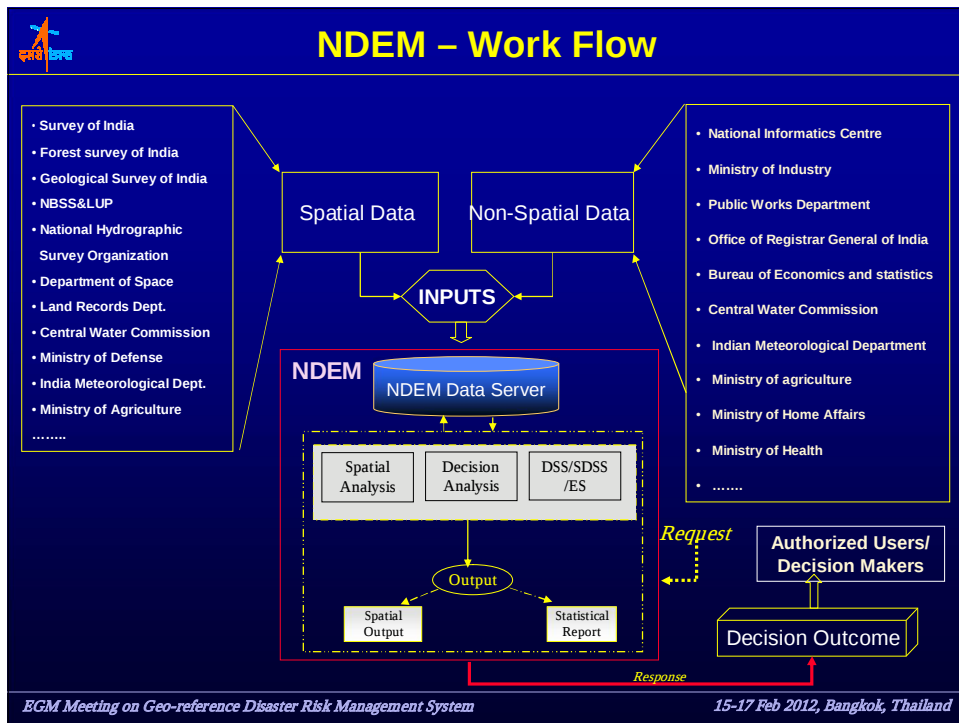
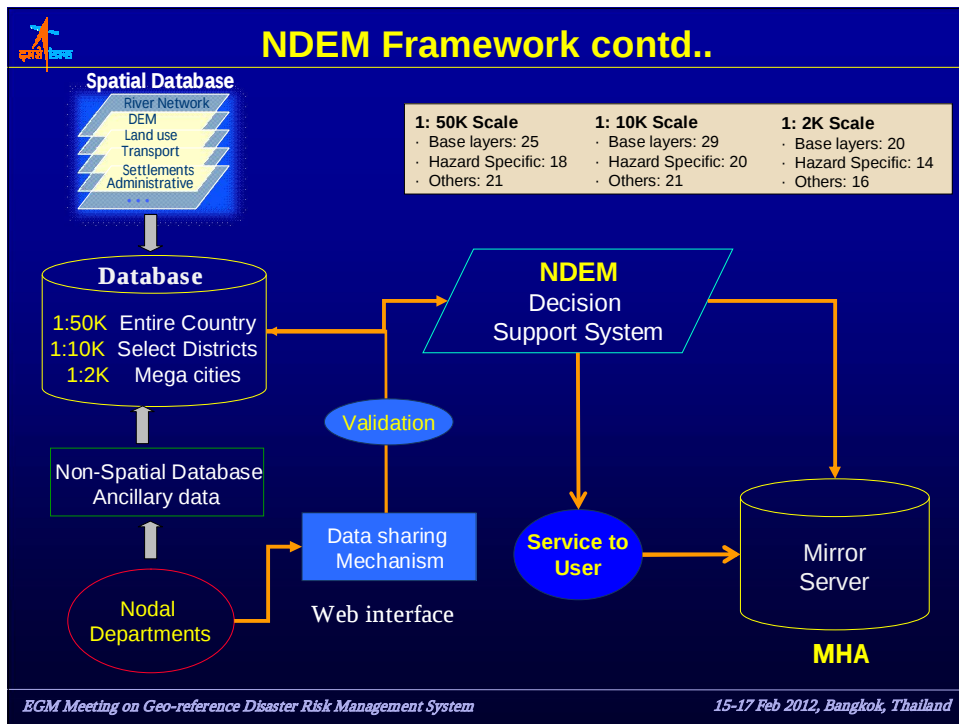


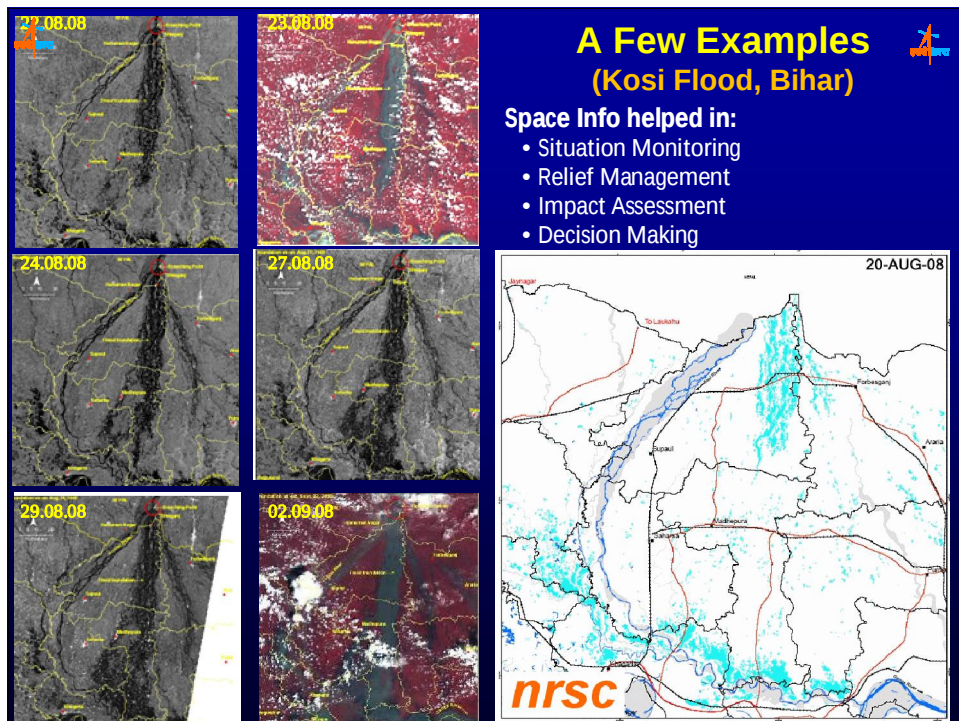
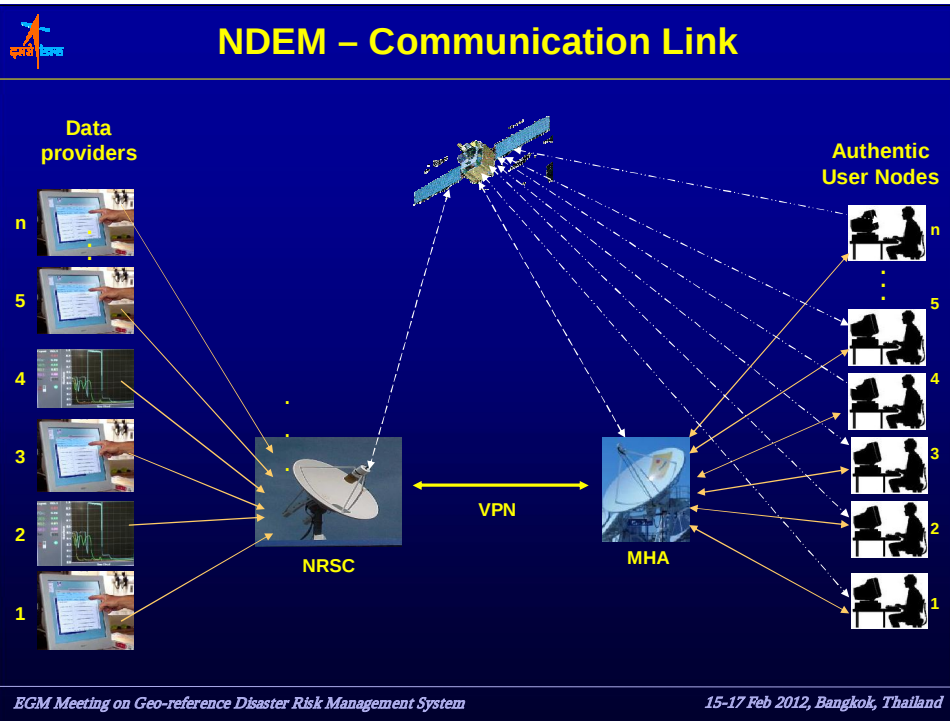
National Database for Emergency Management (NDEM)

...A Multi-institutional National Initiative of MHA, Govt. of India

- Generation/ organization of multi-level core and hazard specific geospatial database.
 - 1:50K scale (for entire country)
 - 1:10K scale (for multi-hazard prone districts)
 - 1:2K scale (for mega cities)
- Development of decision support tools for addressing emergency management and integrate with national disaster frame work
- Institutional mechanism for sharing and updating database on continuous basis
- Mirroring / Replica of database at MHA with suitable access/security mechanism.





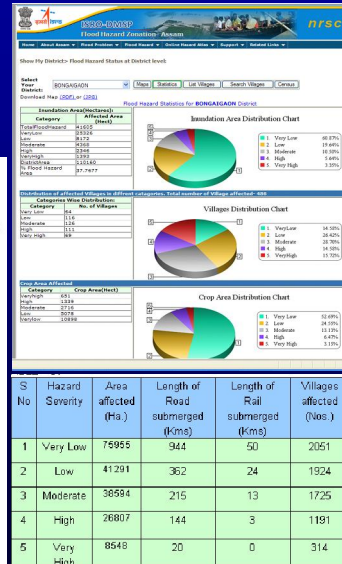
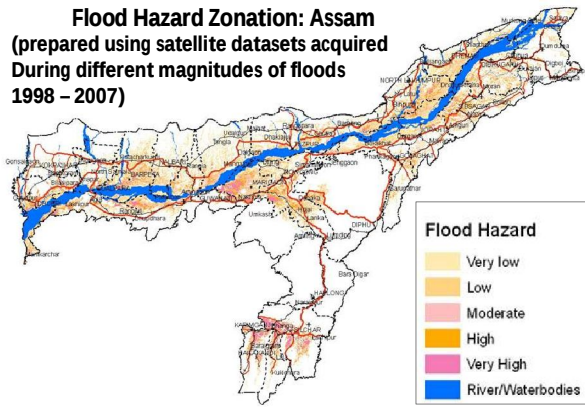




Flood Hazard Information Services

Services

- Near Real Time Flood Mapping and Monitoring
- Flood Damage Assessment
- Flood Hazard Zone Mapping
- River Bank Erosion Mapping
- Mapping changes in the river course



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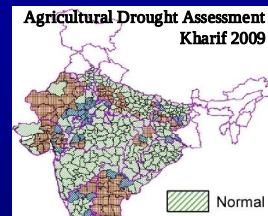
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Agricultural Drought

Services

- Agricultural vegetation condition Images maps at state/district level
- Agricultural drought assessment maps
- Products on drought related parameters - rainfall, crop areas, etc.



Satellite data: NOAA AVHRR, Resourcesat-1 AVHRS

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_7759

