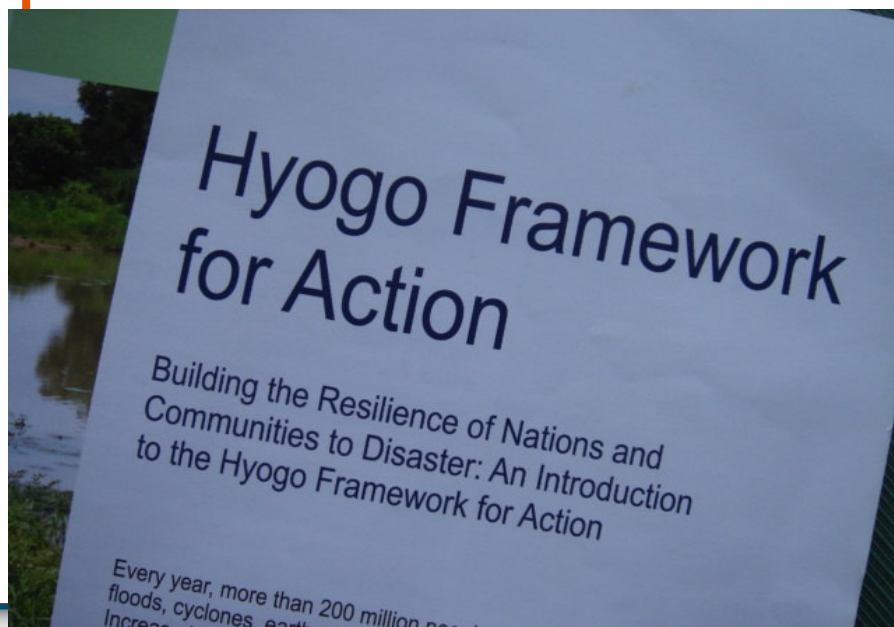


Geo-spatial Information in support of strengthening HFA Implementation



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Regional Workshop – GeoDRM
Kathmandu 10-12 July 2012



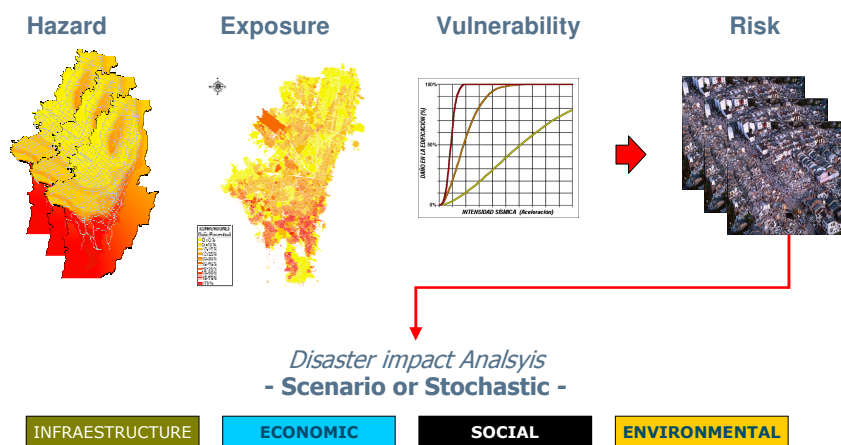
HFA: Priorities for action 2005-2015

1. **Policies and governance:** *ensure that disaster risk reduction is a national and local priority with strong institutional basis for implementation.*
2. **Risk identification:** *identify, assess and monitor disaster risks and enhance early warning.*
3. **Knowledge:** *use knowledge, innovation and education to build a culture of safety and resilience at all levels.*
4. **Reducing the underlying risk factors:**
 1. *Environment and natural resources management.*
 2. *Social and economic development practices.*
 3. *Land-use planning, building codes and other technical measures.*
5. **Strengthen disaster preparedness for effective response**

Role of Geo-spatial Information in accelerating HFA implementation

HFA Priority of Action	Specific role that Geo-information could play
Policies and governance	Nationwide risk assessment, Spatial mapping for land use planning incorporating risk reduction strategies...
Risk identification	Spatially - identify, assess and monitor disaster risks to enhance the effectiveness of early warning systems.
Knowledge	Understanding risk - unknown to known, capturing risk dynamics, ecological foundations of disaster risk..
Reducing the underlying risk factors:	Baseline information for - Environment and natural resources management. Social and economic development practices. Land-use planning, building codes and other technical measures.
Strengthen disaster preparedness for effective response	Access to geo-spatial info for disaster monitoring, damage and loss assessment (DaLA), Post-disaster recovery and rehabilitation planning

Risk Assessment: Geo-spatial for Policies and Governance

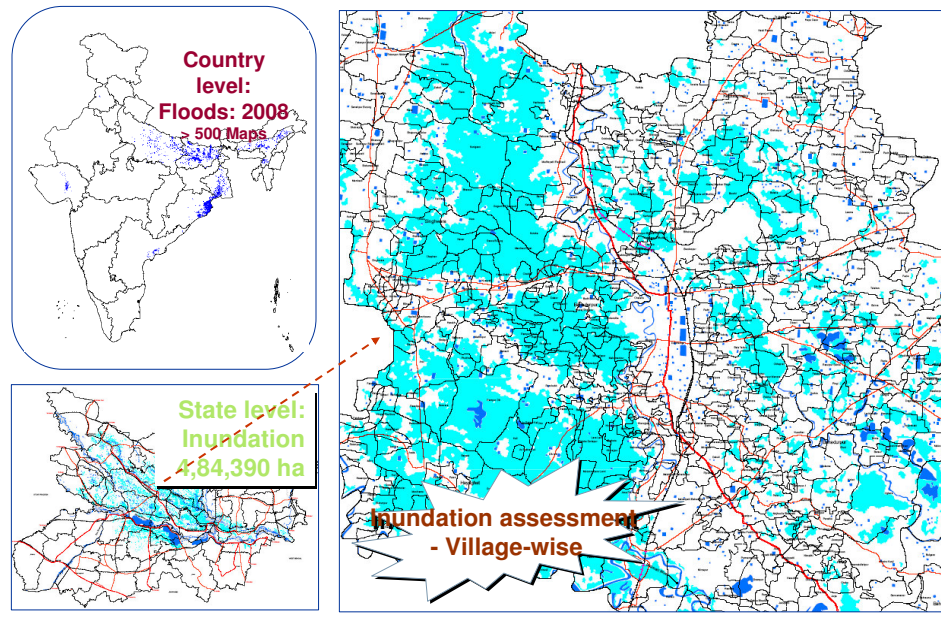


Source: Francis Ghesquiere, The World Bank
Asian Conference on Disaster Reduction, Colombo June 13, 2011

Geo-spatial Info for Risk Governance

Map Scale	Level	Purposes of GIS Application
1:1,000,000 or smaller	National	- Formulation of national disaster risk management strategy; - Inventory of major hazards in the country; - Identification of areas affected or threatened for an entire country
1:100,000 to 1:1,000,000	Provincial	- Draft regional development projects or large engineering projects; - Utilized more for spatial analysis at this scale, although the type of analysis will mostly be qualitative, due to the lack of detailed information.
1:25,000 to 1:100,000	District or county	- Conduct the feasibility study of developmental projects; - GIS analysis capabilities are used extensively for hazard zonation.
1:5,000 to 1:25,000	Municipality or Community	- Formulate projects at feasibility levels; - Generate hazard and risk map for existing settlements and cities; - Planning disaster preparedness and disaster relief activities.
1:2,000 or larger	Site	- Planning and design of engineering structure and in detail engineering measures to mitigate natural hazards; - Data management and 3D visualization.

'Actionable' Information – Levels of Details



Priority for action 2

Identify risks (risk mapping, hazard & vulnerability assessments), and develop early warning systems

To what extent satellite imagery has been utilized in this regard??

Have access to regular satellite data for hazard 'hotspot' monitoring, regional system

Narrative of 2007-08 Afghanistan Drought (1)

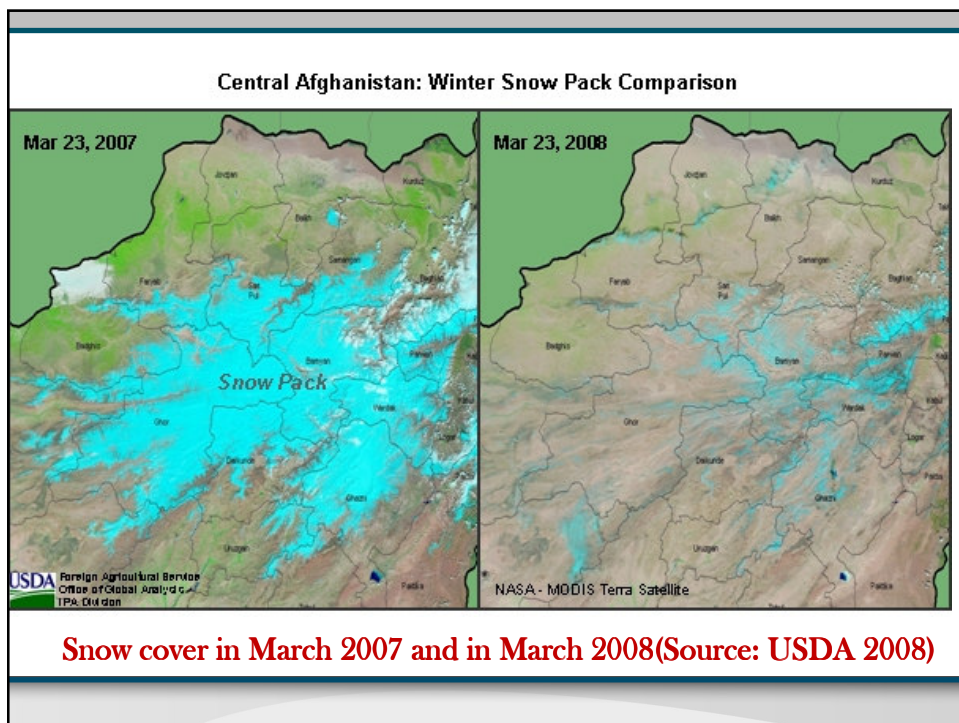
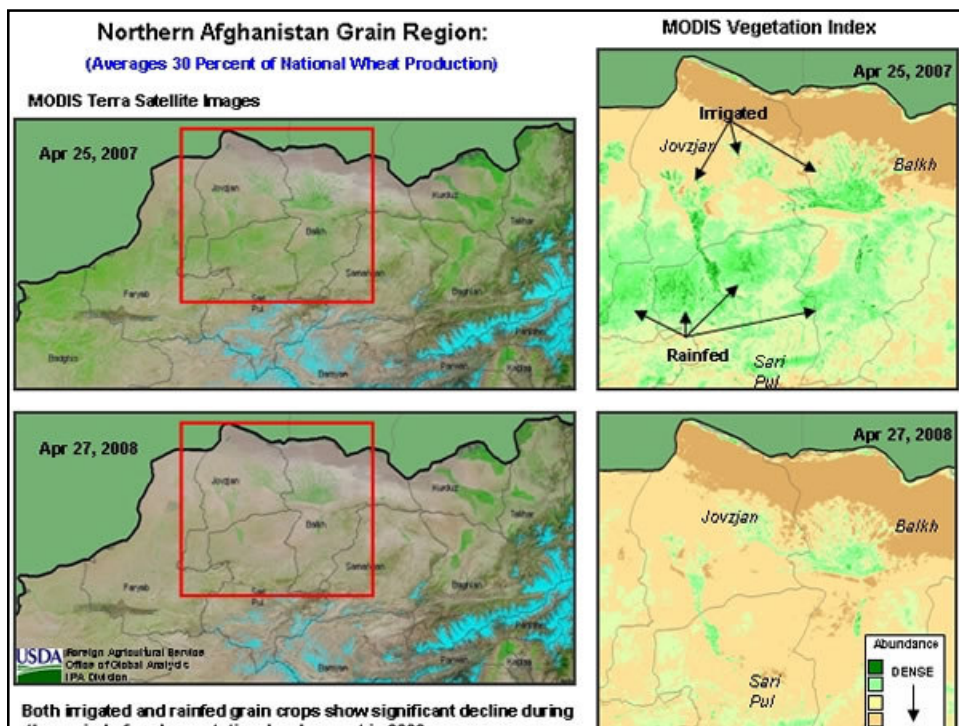
- Well-below normal rainfall and winter snowfall across the majority of Afghanistan during late 2007 and early 2008 have led to the worst drought conditions in the past 10 years.
- Severe drought in 2008/09 caused a precipitous decline in grain production, which has also led to an acute food grain supply crisis. The USDA estimates 2008/09 wheat production **in Afghanistan at 1.5 million tons, down 2.3 million or 60 percent from last year.**
- Losses to winter grain production are expected to be substantial enough to have serious ramifications in the domestic food and feed grain market during the 2008/09 marketing year.



Narrative of 2007-08 Afghanistan Drought (2)

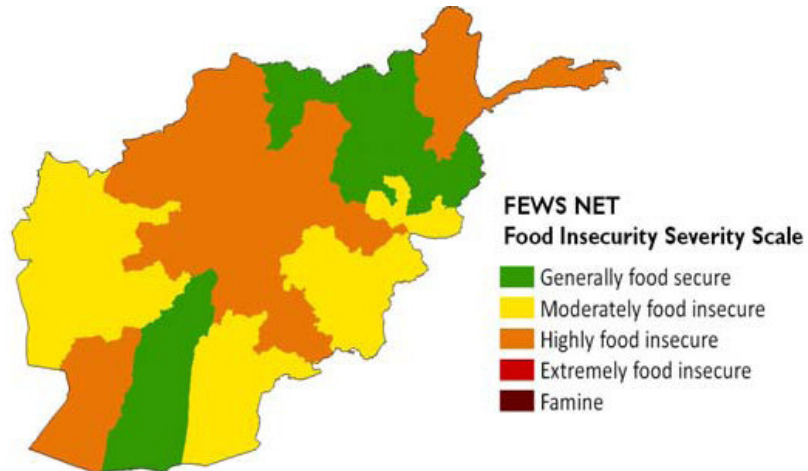
- In recognition of the **severity of the grain production shortfall, the government of Afghanistan and the United Nations issued an emergency appeal in July to the world community to donate \$400 million to cover sizable wheat import and food aid needs for approximately 4.5 million affected Afghans, as well as to prepare for the next winter cropping season beginning in October.**
- Irrigated wheat production in Afghanistan accounts for **roughly 70 percent of total output, and is nearly totally reliant on snowmelt and the resulting surface water flow through mountain streams and rivers. Low snowfall in 2008/09 caused the majority of the grain losses, and should Afghanistan experience another dry winter a humanitarian catastrophe could ensue. Afghanistan normally produces 3.5-4.0 million tons of wheat annually.**





Analysis from the Famine Early Warning Network (FEWSNET)

Afghanistan Drought 2007-08



Estimated food security conditions due to drought 2008 in Afghanistan, third quarter 2008 (July to September) (Source: www.fews.net/docs/Publications/afghanistan_2008_07_final.pdf)

Priority for action 5

Strengthen disaster preparedness for effective response
at all levels

To what extent space applications/satellite imagery has
been utilized in this regard??

Case Study # 1:

India Nepal Kosi Floods
2008

**Breach of Embankment
upstream in Nepal**

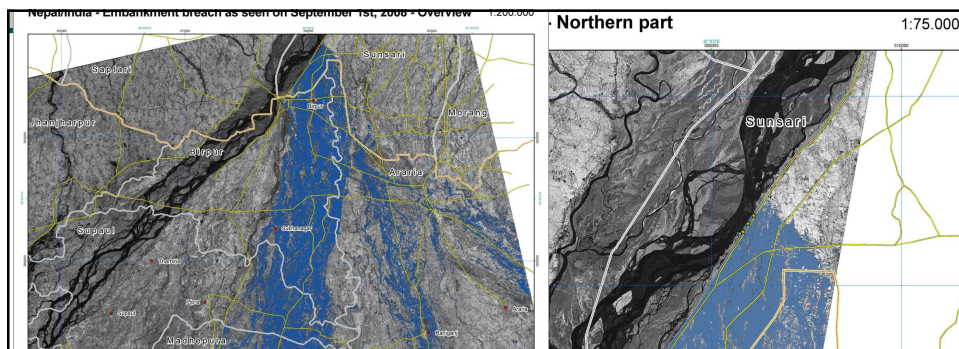
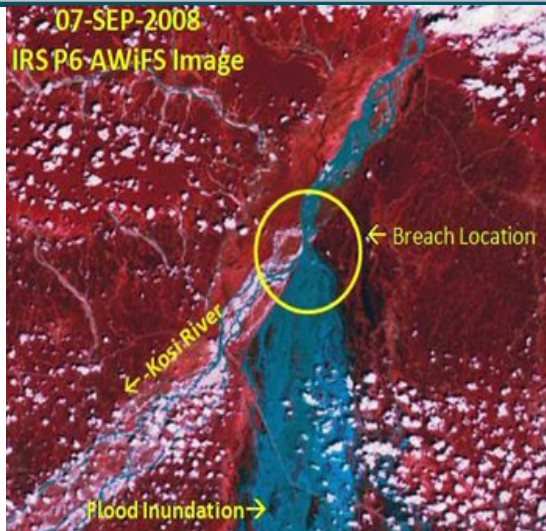
(Aug 18, 2008)

**Change of River Course &
Flooding downstream in
Bihar, India**

Affected 3.5 Million

Dead - 800

*Does Space Applications
Made a Difference?*



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_7513

