Best Practices in Pakistan of Using Space-based Information for Disaster Management

PAKISTAN SPACE AND UPPER ATMOSPHARE RESEARCH COMMISSION



Sequence of presentation

Pakistan

SUPARCO Establishments

- Disaster Monitoring
- Agriculture/Drought monitoring

Conclusion

Pakistan

- Pakistan is a country of diverse agro-climatic regions. The climate is predominantly arid to semi arid
- Agriculture occupies pivotal position as it contributes 21% of GDP and provides employment to 45% of labor force
- The main focus of the Government in agriculture has been on addressing the issues of nation's food security

SUPARCO Establishments



Spot Receiving Station



Aqua / Terra Receiving Station



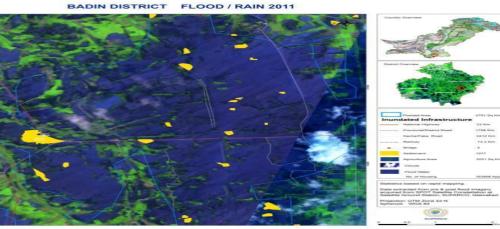
Disaster Monitoring

Pakistan Floods - 2011

- A rapid mapping of the flood affected areas was carried out using prepost MODIS data.
- This was followed by use of SPOT 4 and SPOT 5 data for detailed damage analysis.
- The information was supplied in regard to monitoring damages to infrastructure, settlements, canal breaches, roads, bridges, railways and cropped area.
- Temporal flood inundation mapping, extent of flood water and statistics for various attributes regarding flood damage
- Geographic and agriculture area damaged and extent losses in crop yield and production for Kharif season
- The flood recession statistics are being provided on 5 daily basis

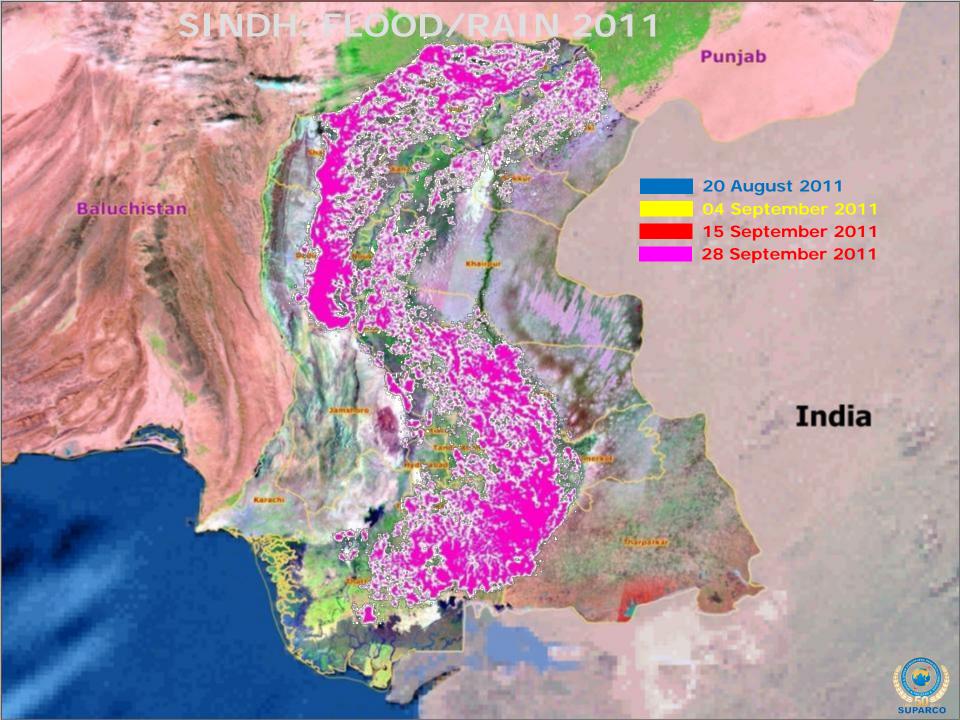
Pakistan Floods - 2011

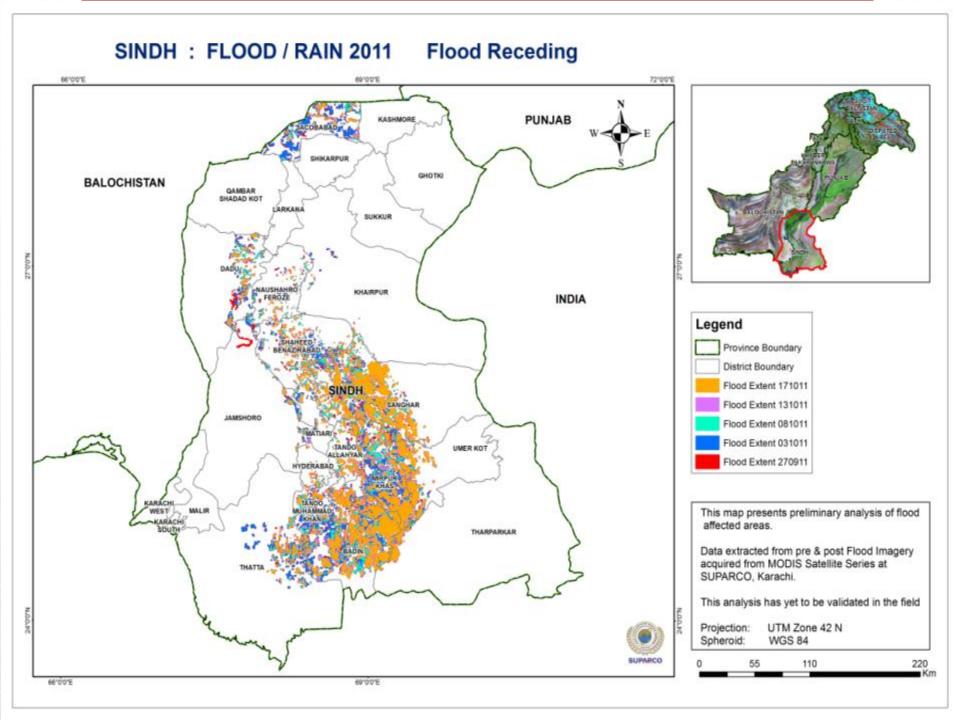








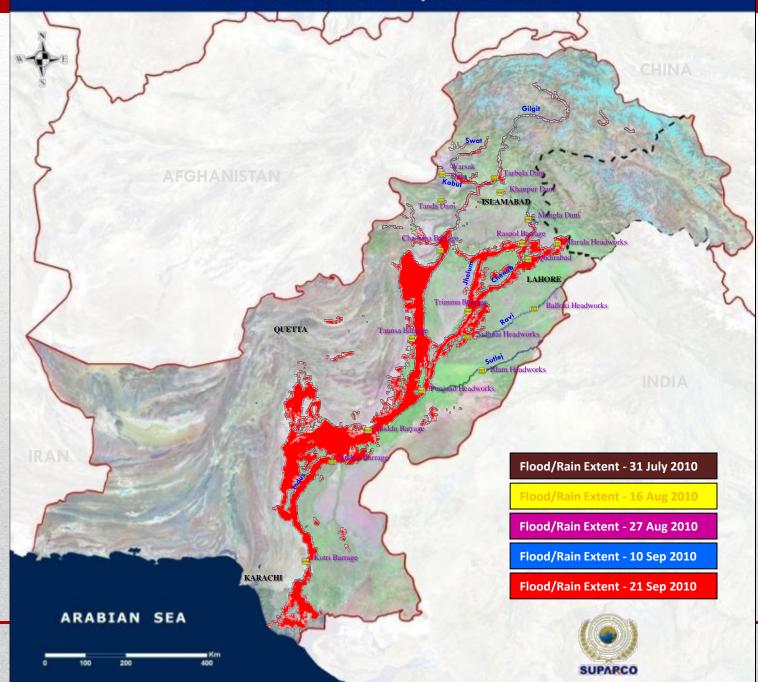




Pakistan Floods - 2010

- Pakistan experienced worst monsoon-related floods since 1929.
- SUPARCO monitored this disaster since its inception.
- It developed maps showing flood extent, damage assessment on daily basis.
- Provided these to the concerned agencies such as NDMA, MINFA, etc.

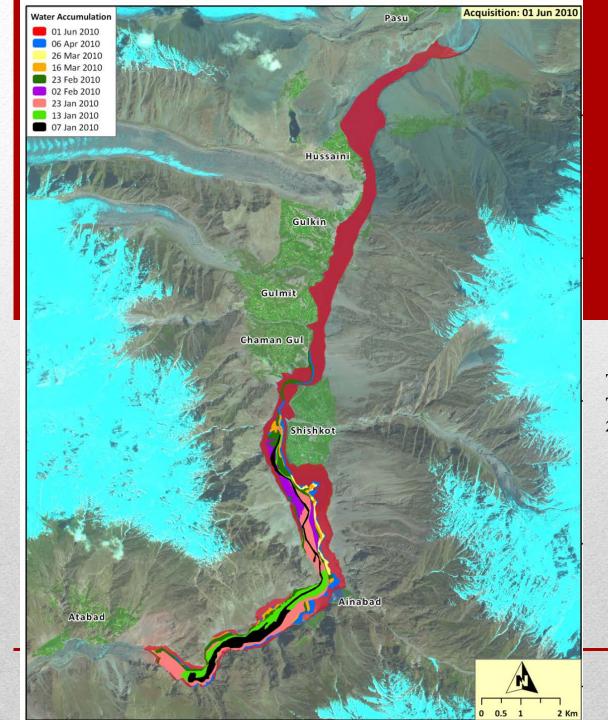
PAKISTAN: FLOOD/RAIN 2010



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Pakistan Landslide - 2010





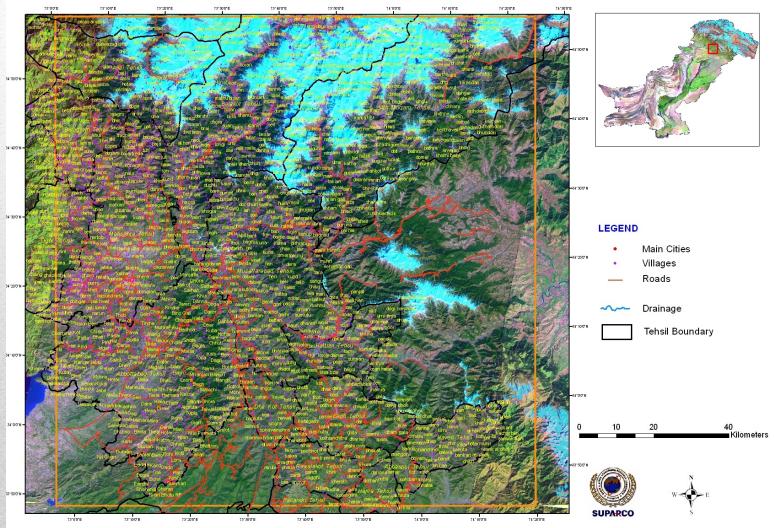
Hunza Lake

Temporal analysis of water accumulation The water discharge started on 30 May 2010



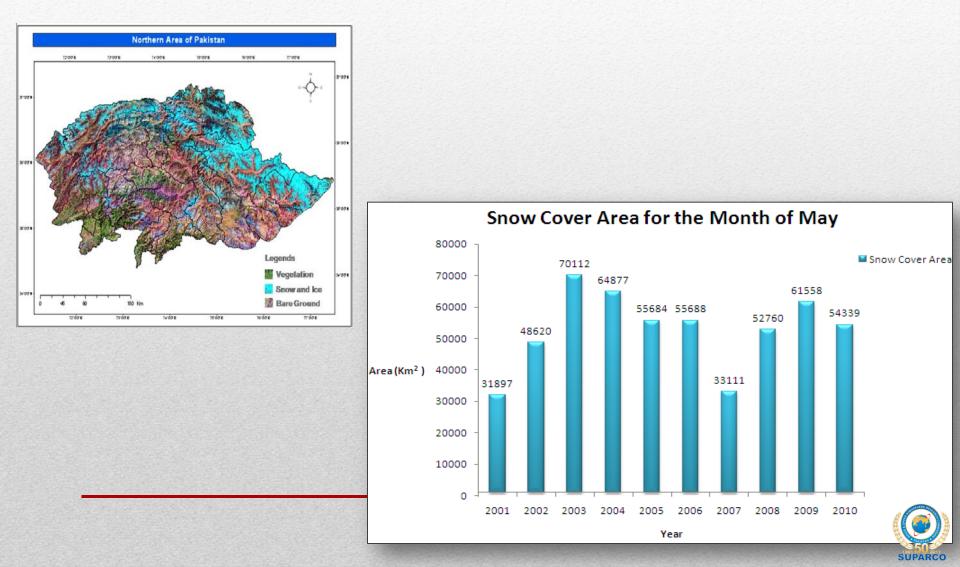
Earthquake

Roads Network in Affected Area



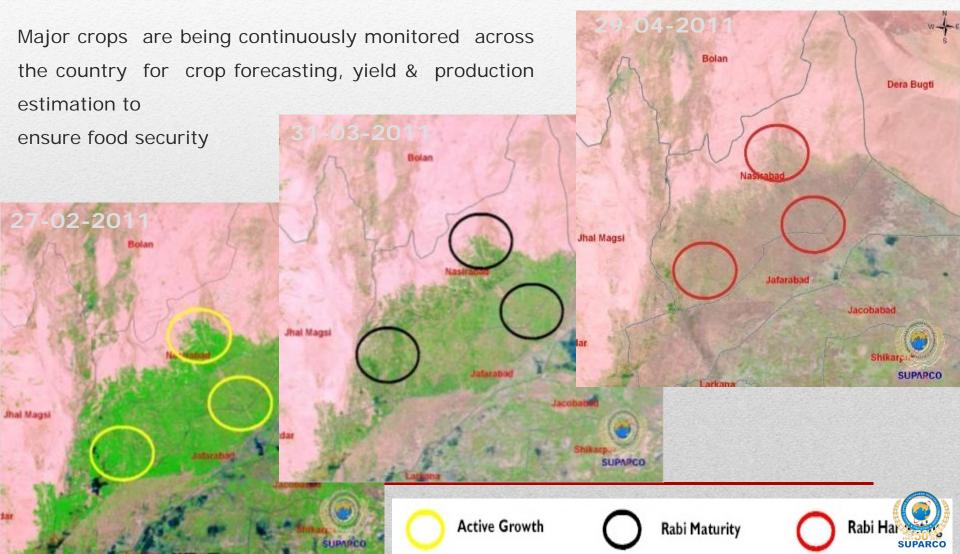
Glaciers Monitoring

Seasonal Snow Cover Mapping using

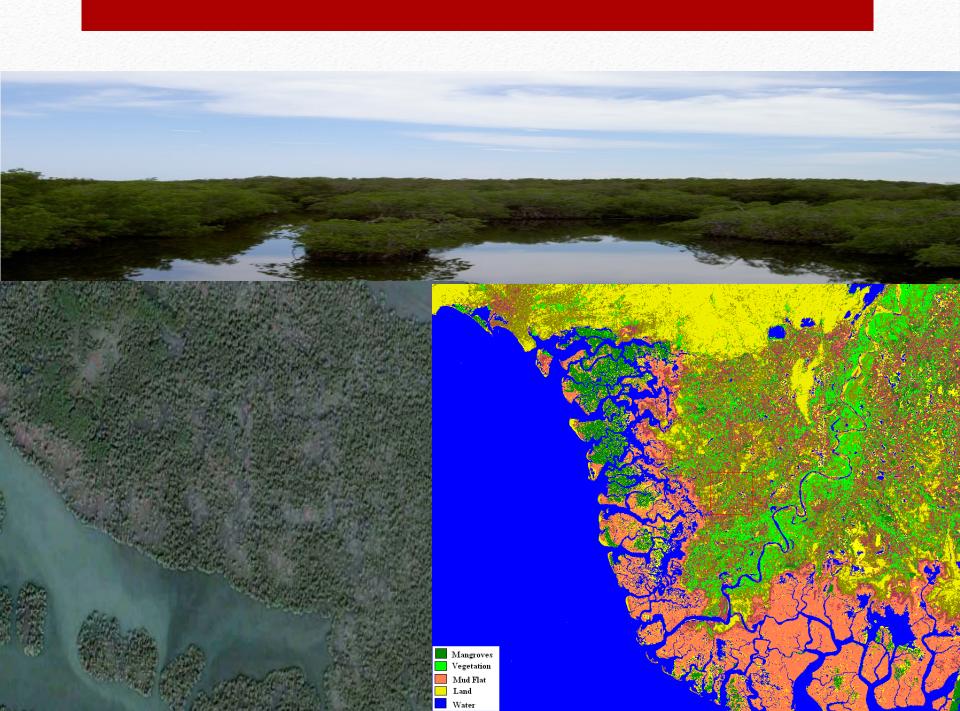


Agriculture/Drought monitoring

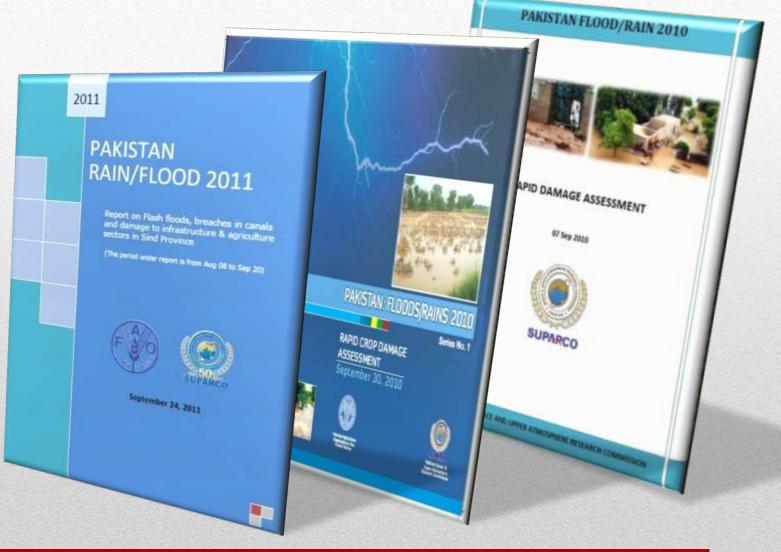
Agriculture



Mangroves monitoring



BULLETINS



BULLETINS

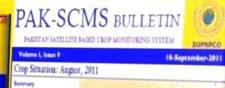


PAK-SCMS BULLETIN

PAKISTAN SATELLITE BASED CROP MONITORING SYSTEM SUPARCO 6-October-2011

Volume I, Issue 18 Crop Simation: September, 2011



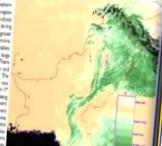


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Volume I, Issue #

SUPARCO continuously watches spricultural growth system of crops

Crop Situation: July, 2011

PAK-SCMS BULLETIN PARISTAN SATELLITE BASED CROP MONITORING SYSTEM

SUPARCO

01-August-2011

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International Cooperation

- Bilateral and multilateral cooperation
- Joint research projects
- Capacity building and technology upgradation
- Scientific & technical trainings

Conclusion

Space science and technology can be effectively used for socio-economic development.

Thank you