

Satellite Earth Observation & Disaster Risks



SANSA'S CONTRIBUTIONS TOWARDS DISASTER MANAGEMENT

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Defining Disaster Management in SA: Act 57 of 2002



Definition: Disaster Management – 'a continuous and integrated multi-sectoral, multi-disciplinary process of planning and implementation of measures aimed at

- Preventing or reducing the risk of disasters;
- Mitigating the severity or consequences of disasters;
- Emergency preparedness;
- A rapid and effective response to disasters; and
- □ Post-disaster recovery and rehabilitation'

(SA Disaster Management Act 57 of 2002)

The act calls for a "significantly strengthened capacity to track, collate, monitor and disseminate information on phenomena and activities..."

(SA Disaster Management Act 57 of 2002)



The Role of Earth Observation in Disaster Management



 Earth Observation plays a central role in various aspects of disaster management such as Monitoring, Hazard Analysis, Vulnerability- and Damage Assessment, Contingency Planning, Reporting Systems as well as Early Warning Systems.

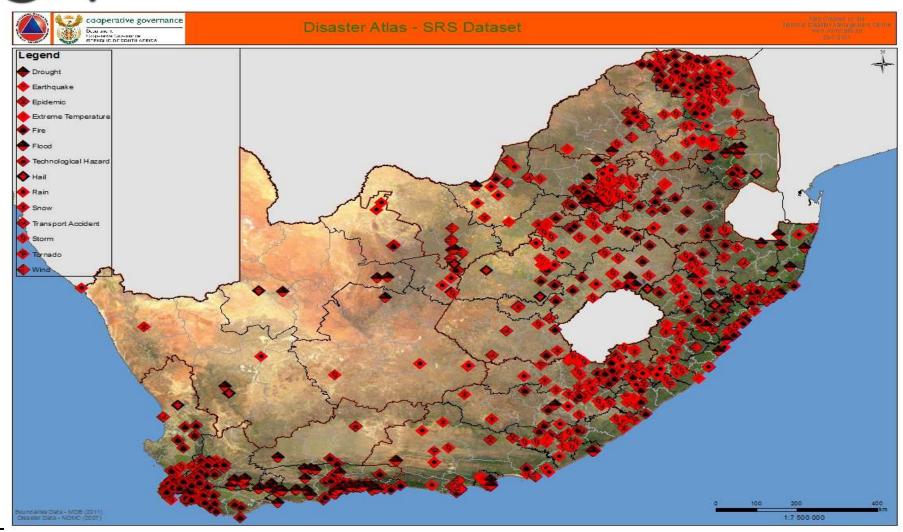
 Near real time satellite derived information is critical to decision-making and provision of disaster relief.

 Provision of immediate disaster relief can be enhanced through the provision of accurate satellite derived maps that can be used for assessment of the situation to enable logistical support.



SA Historical Disaster Events – Geographical Distribution





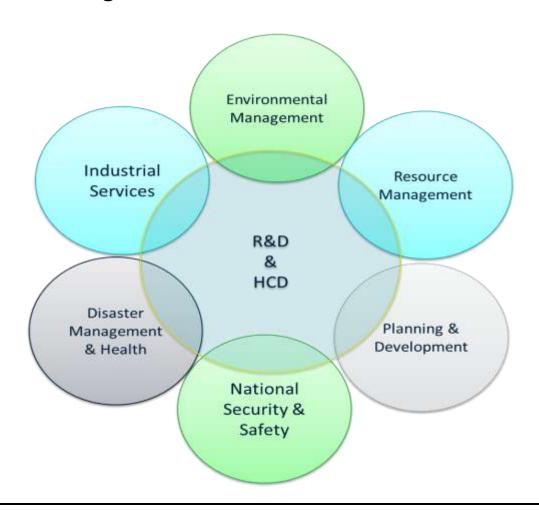
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Disaster Management is one of SANSA's thematic areas.





SumbandilaSat images show impact of flooding, Oshakati Namibia: April 2011



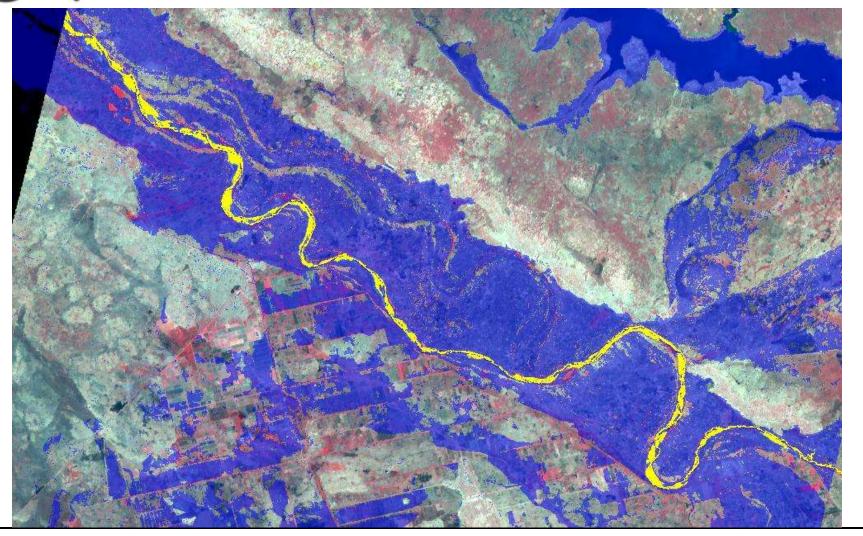


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Flood detection and monitoring using SPOT Imagery: Limpopo River

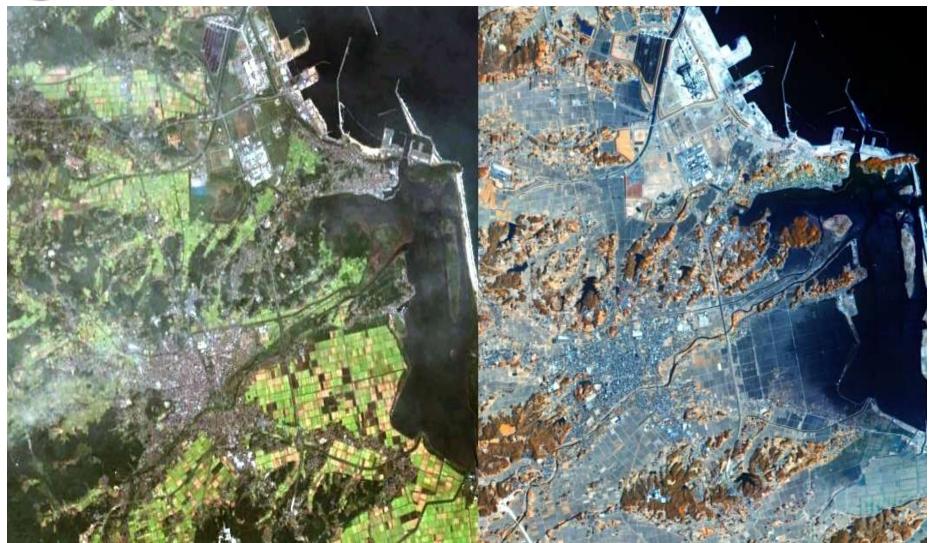




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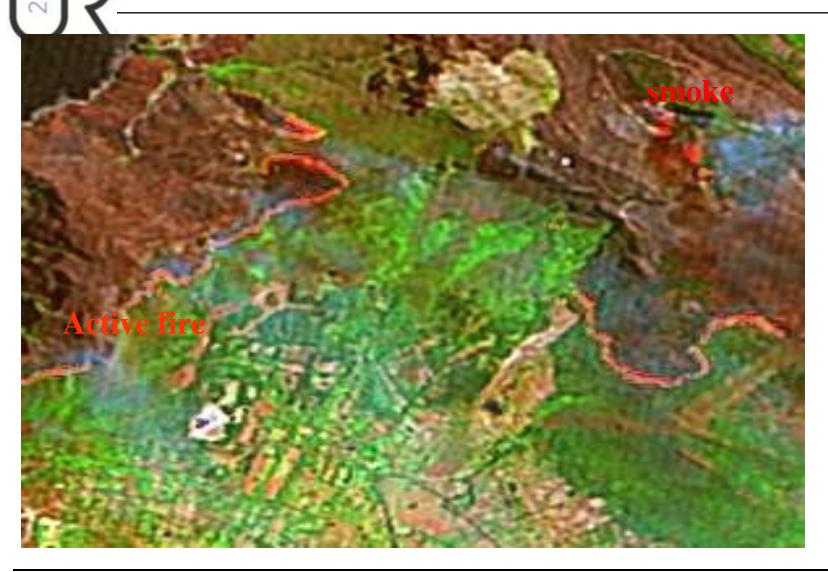
Disaster Monitoring in Japan using Sumbandilasat



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Fire detection



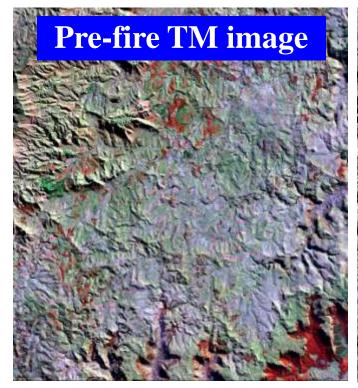


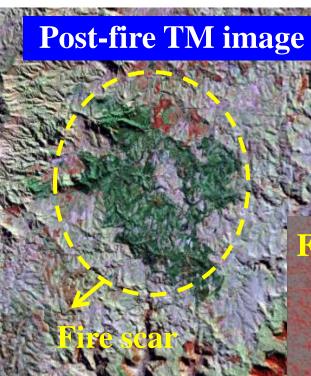
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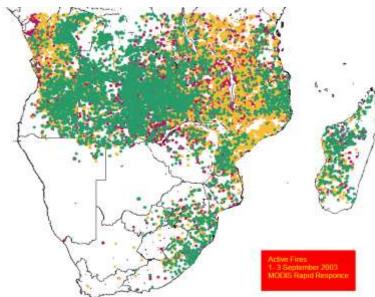
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Active Fire Detection System (AFIS)

•Designed to detect and display active fires onto a map Designed to detect and display active fires onto a map with each MODIS satellite overpass.

•System operating on the internet in a Web GIS environment.

•Quick SMS Alert System informs Fire Protection Association managers of fires within their areas within minutes of fire breakouts with each MODIS satellite overpass.





Disaster Management: Advanced Fire Information System





MODIS – 50m*50m fires, 10:00 and 14:00 MSG – 500m*500m, every 15mins 65 % of all fires are detected

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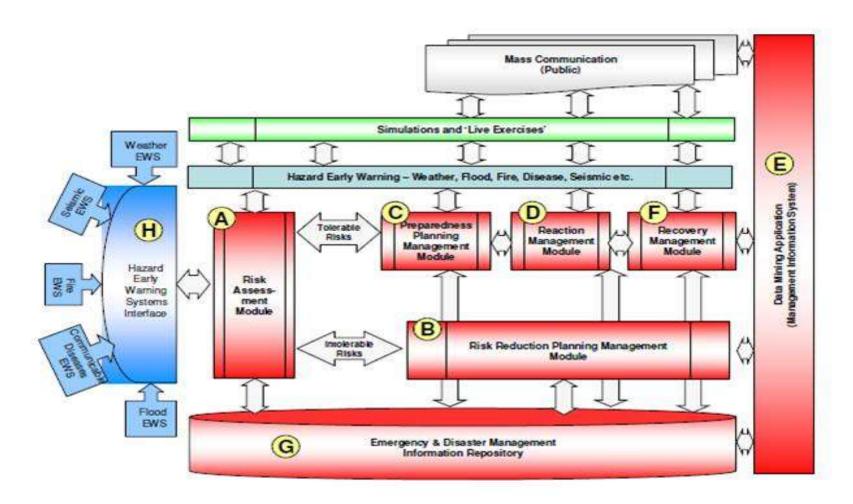






Vision: Seeing Earth Observation Feeding into the National Disaster Management Information System (NDMIS)

SPACE AGENCY



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Thank you

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