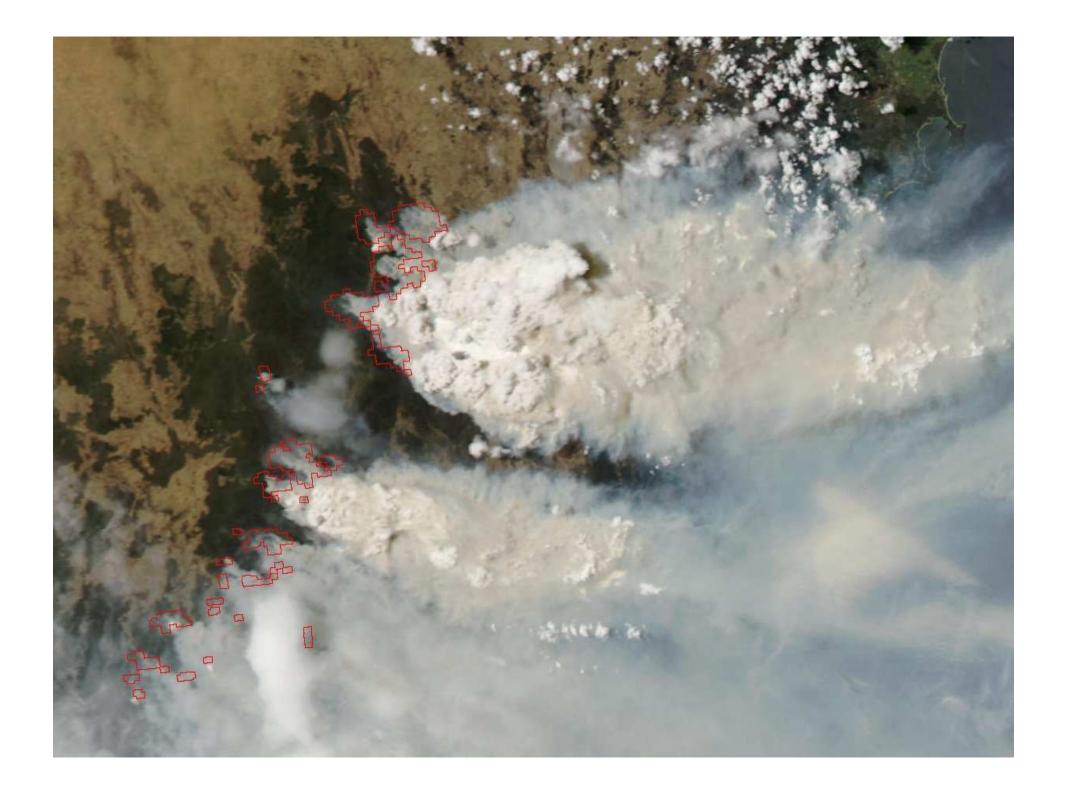


Alex Held (CSIRO Office of Space science and Applications - COSSA)

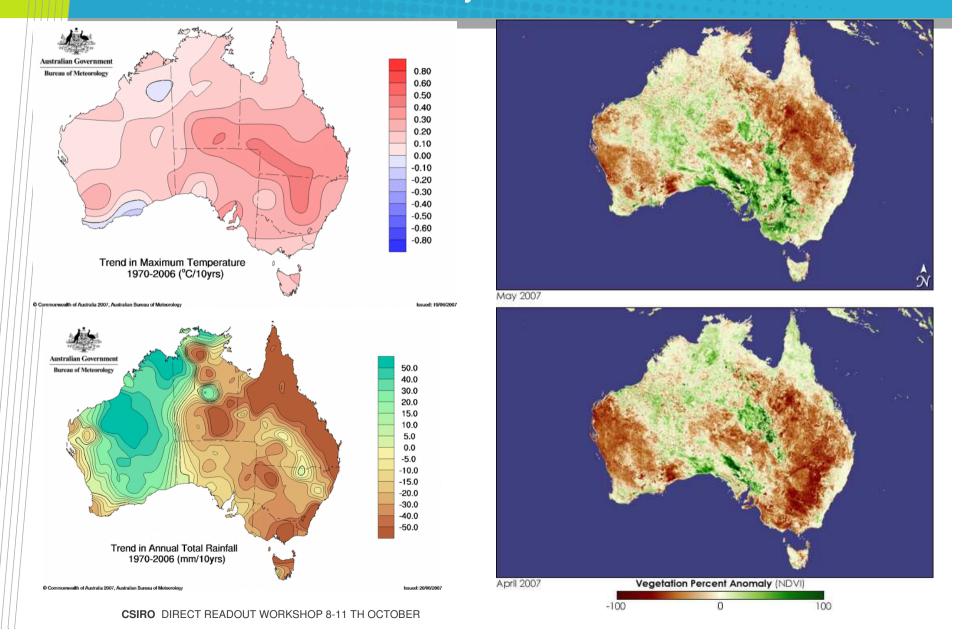


Presented by Craig Smith, ACRES, Geoscience Australia





Recent Climate Trends suggest potential for increased wildfire activity



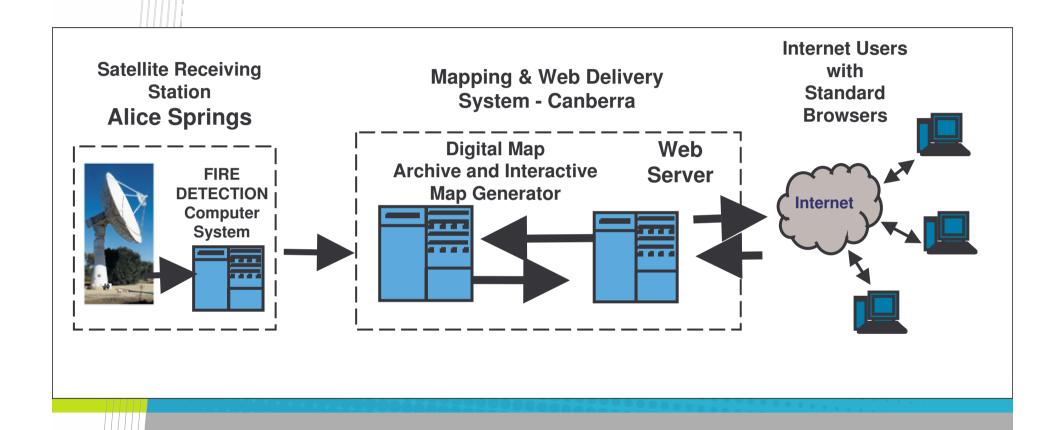
Technical Challenges - Sentinel

- To be effective for disaster response, data needs to be converted to easy to interpret information by non experts
- Turnaround time from satellite acquisition to website needs to be less than 1 hour
- Implement quickly with off-the-shelf hardware and software
- Ability for emergency managers to customize and print out their own maps
- Universal web access through:
 - Public website
 - Separate Secure Site
- Prototype with capacity to easily handle about 200 concurrent users at one time
- Current data sources MODIS, AVHRR
- Minimum 1 km resolution and 1.5 km pointing accuracy

Initiation of Sentinel Fire Hotspots Demonstrator

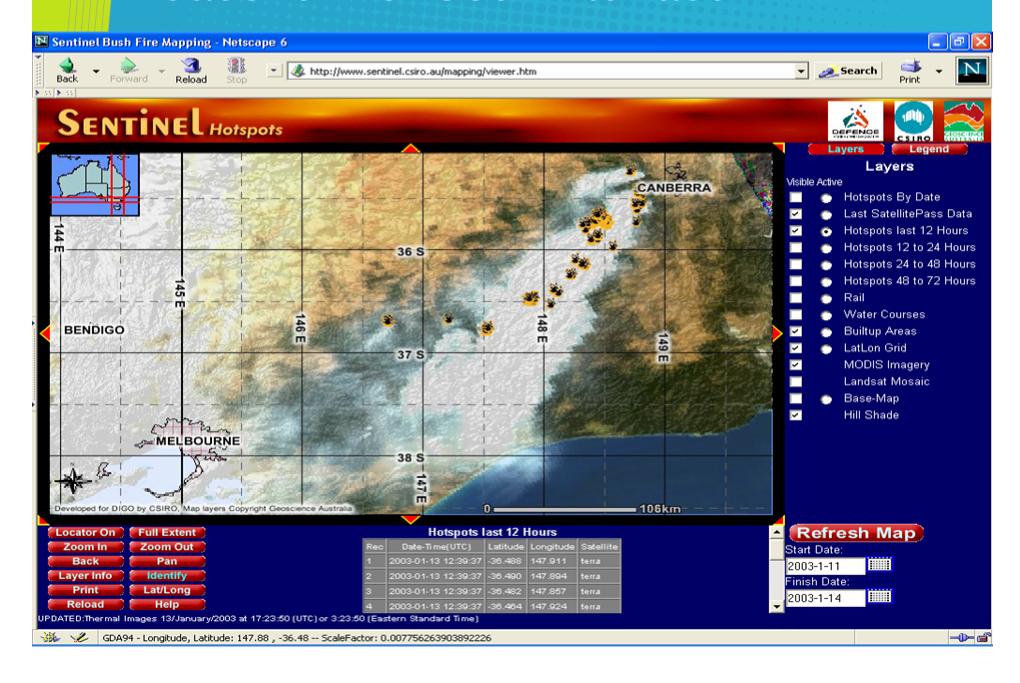
- Initial MODIS Rapid-Response Products 2002, manual delivery to fire agencies and national defence agencies
- Commissioned by Defence to build prototype in April 2002 (CSIRO & Geoscience Australia technical implementation team)
- Assembly and integration of off-the shelf components:
 - MOD14 Fire Hotspot algorithm (U. of Maryland and NASA)
 - Thermal Anomaly detection (U. Maryland)
 - Mapserver and Internet servers: Arc Info
 - User Interface: initially GEOMAC USGS and modified to suit Australian users and feedback by local firefighters
- Available to fire agencies via public website November 2002
- Official launch by Minister January 2003.

The Sentinel System





'Roadshow' of User Interface



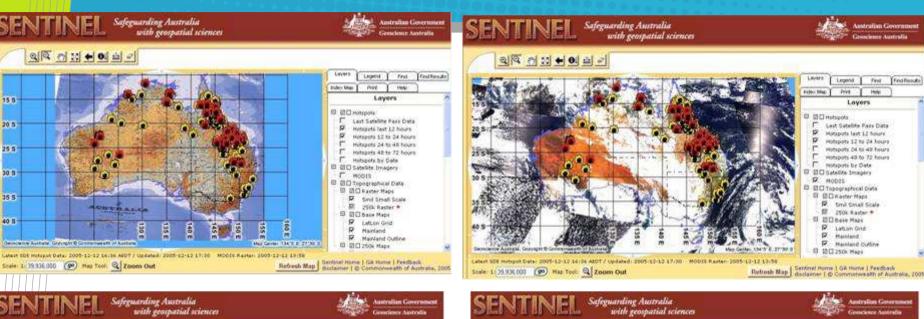


System Performance

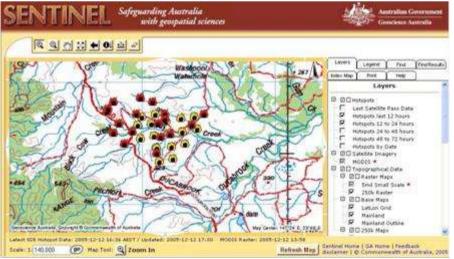
Visits by day January to March 2003



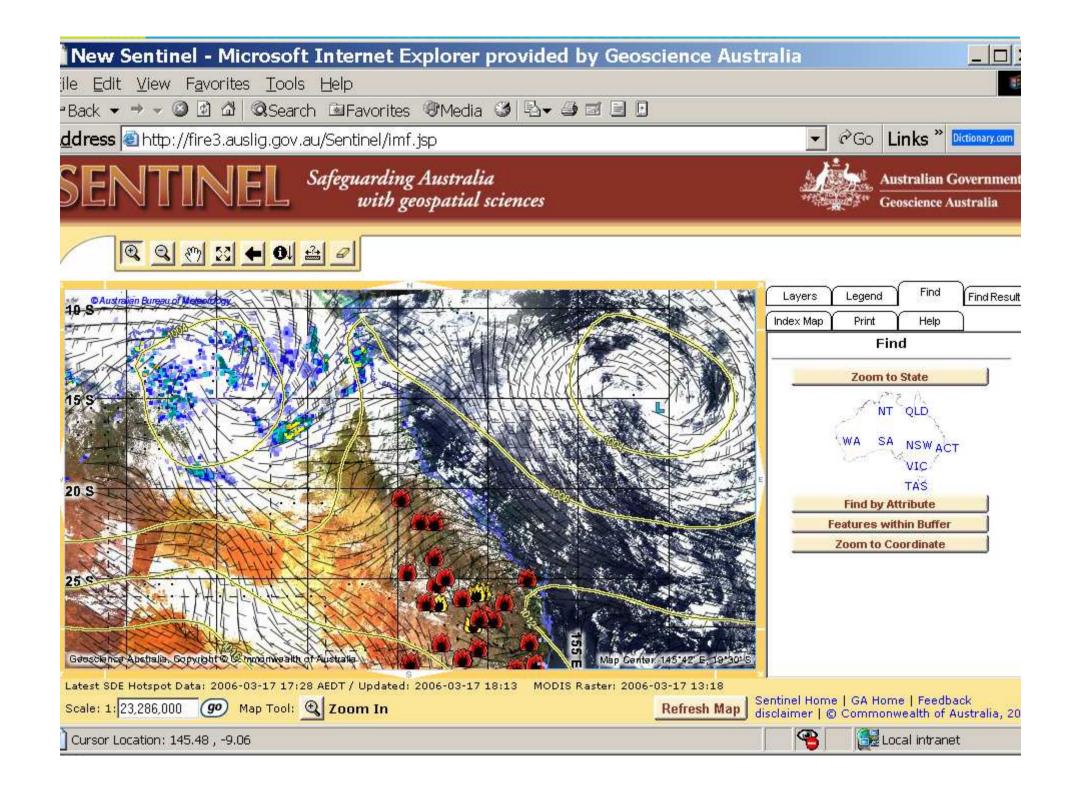
Transfer to Geoscience Australia

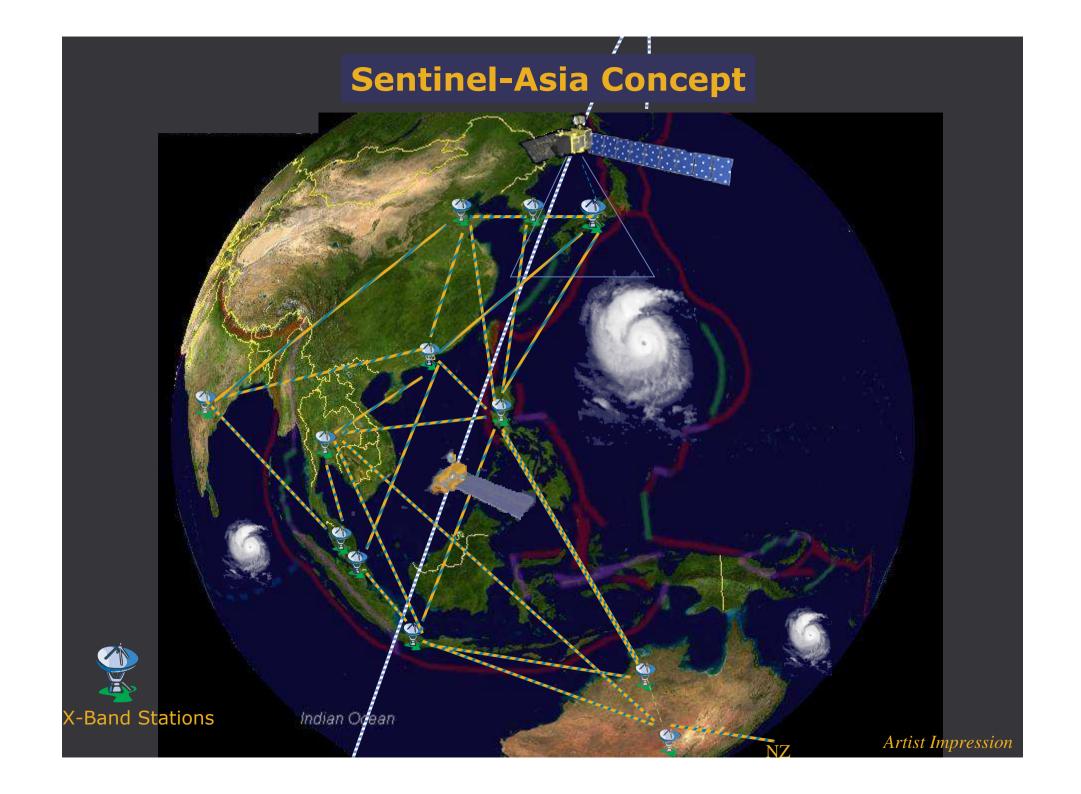


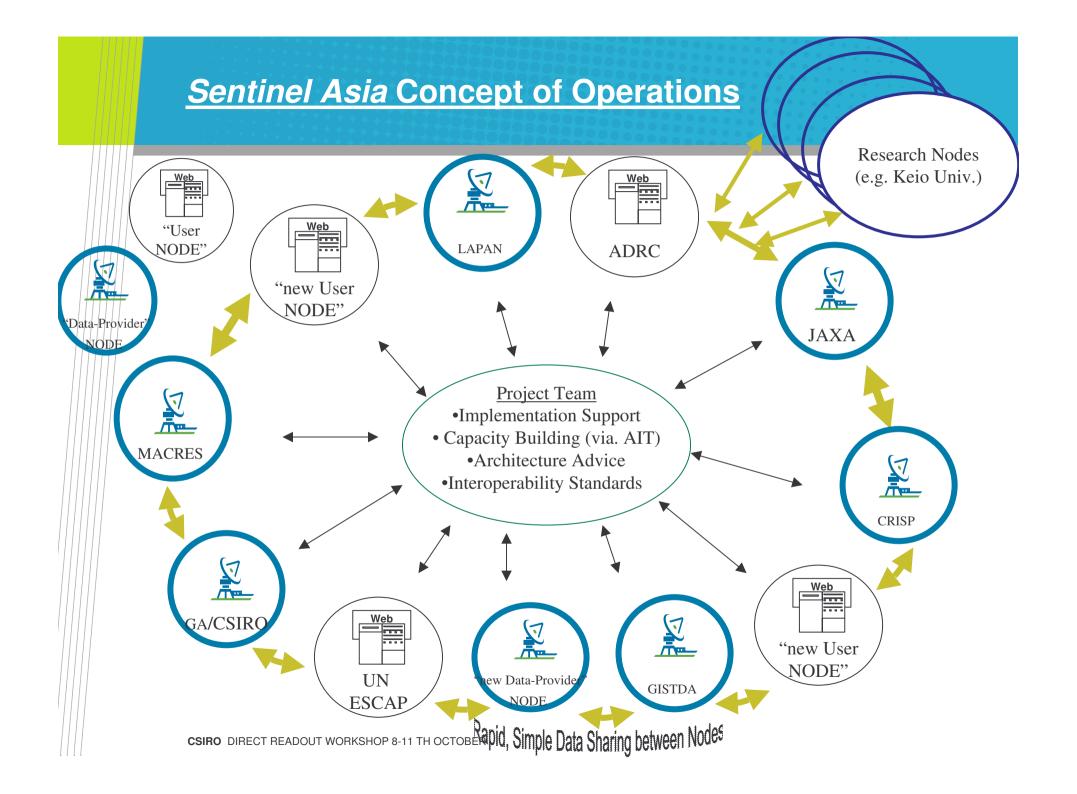




Since January 2006





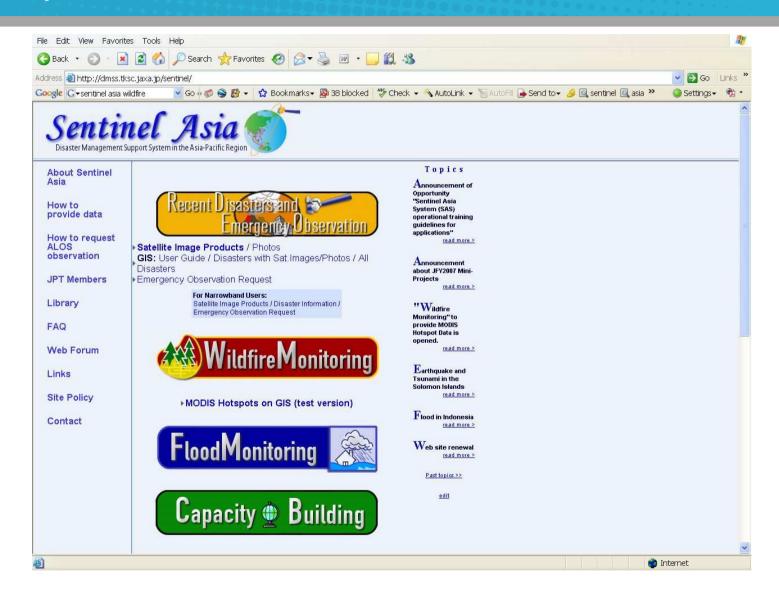


Update since Hanoi Joint Project Team Meeting early 2006

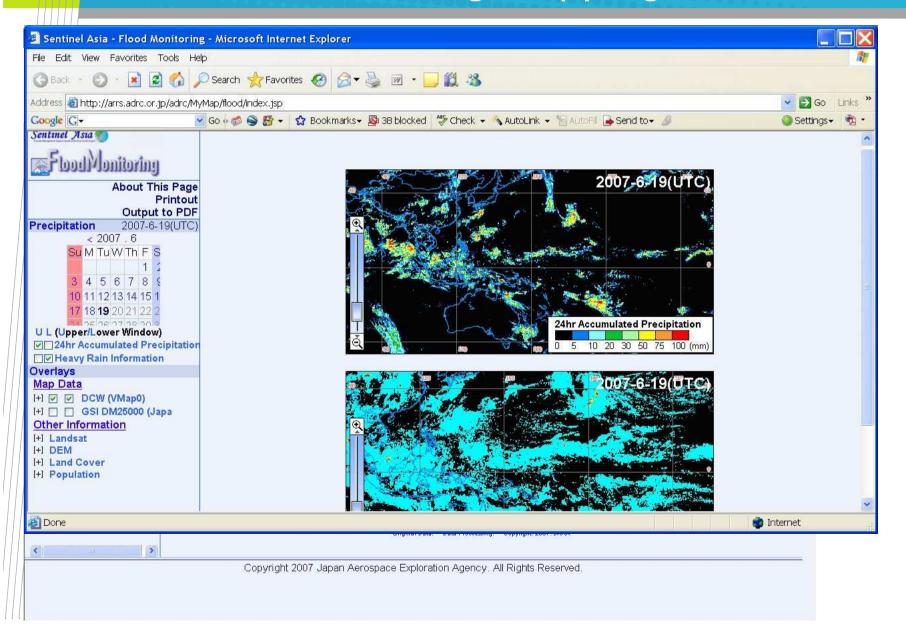
Commitments:

- Data Provider Nodes: Australia (GA); China (NDRCC); Indonesia (LAPAN); Japan (Keio U.); Japan (JAXA); Malaysia (MACRES); Singapore (CRISP); Thailand (GISTDA); Vietnam (VAST); AIT; INDIA (ISRO); KARI?
- User Nodes: Australia (GA); Bangladesh (SPARSSO); Brunei (MoD); Cambodia (Ministry of LMUPC); China (NDRCC); India (ISRO); ADRC; Japan (Keio U., JAXA; IDI); Malaysia (PM-Dept.); Mongolia (M. of Env.); Nepal (Surv. Dept.; Dept. Wat Disast Prev.); Philippines (Of, Civil Def.; NAMRIA); Sri Lanka (Surv. Dept.); Thailand (DDPM; DWR; GISDTA; RFD; DNP; RID); Vietnam (MARD); AIT, Myanmar (DMH), Lao P.D.R. (STEA-ERI), ICHARM; INDIA (ISRO)
- Research Nodes: Australia (CSIRO-GA); China (BNU); Japan (Keio U.; JAXA);
 Malaysia (MACRES); Thailand (GISTDA); Vietnam (MARD; VAST); AIT; ICIMOD;
 ICHARM; CCOP; Indonesia (LAPAN); INDIA (ISRO)

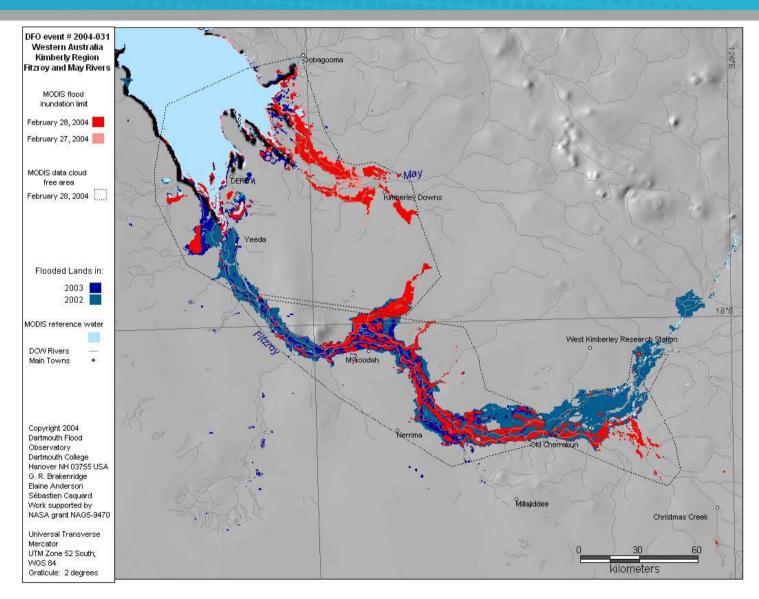
Sentinel Asia Website – operational since April 2007



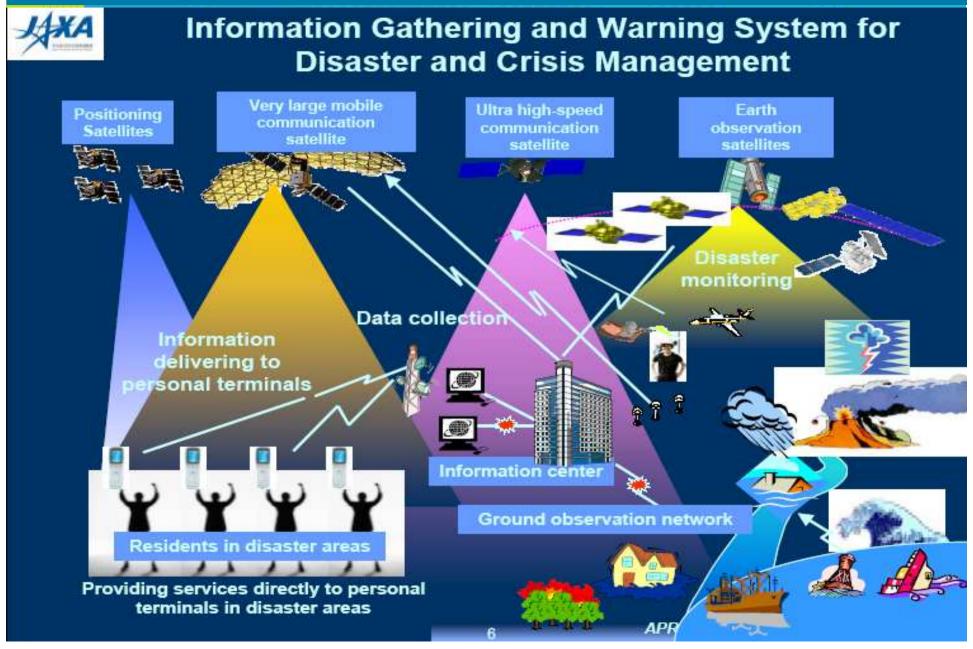
Wildfire & Flooding Mapping Interfaces



Future Data Layers: Flood Mapping



Use of Telecommunications Satellites for wide area Information Distribution on Multiple Disasters: Link to GEONetcast



Status as of June 2007: Progress

National NODES being implemented

- Several systems now producing MODIS hotspot information (Malaysia, Thailand, Singapore, LAPAN; Hokkaido, GA, Mongolia, AIT, Korea, China?)
- 6 Unix servers already delivered to nodes; 30 more to install in Asia – Pacific Region
- Hotspot information consolidated and calibrated across region: Hokkaido University
- Wildfire and Flooding Working Groups established
- Discussions on links to GEONetcast
- JAXA begin planning for use of WINDS data-relay satellite.
- Capacity Building Programs and projects at AIT linked to Sentinel Asia goals

Parallel Regional Capacity-Building Programs

Initiated Capacity Building programs (Satellite Technologies & remote sensing courses) for Sentinel Asia in collaboration with:

- UN-ESCAP and UN-OOSA
- Asian Institute of Technology, Bangkok

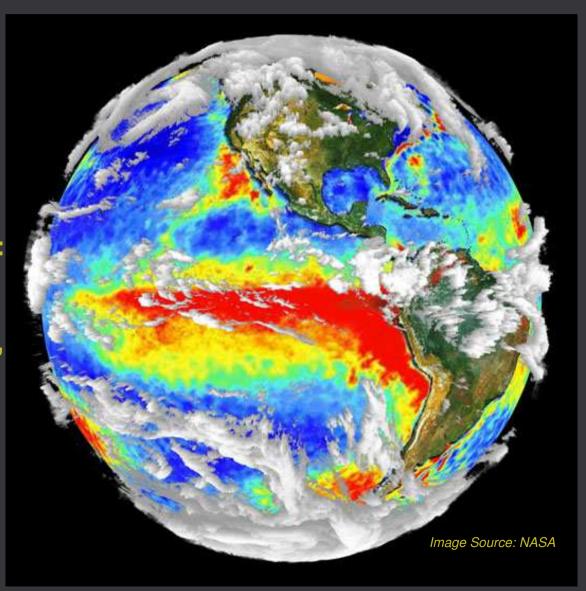




Similar Rapid Delivery System for the Americas is technically possible.

Opportunities to also link together national/regional dissemination systems in the Americas such as:

- GeoNetcast Americas
- NASA UMD Rapidfire,
- CONABIO,
- SERVIR,
- INPE
- •CONAE
- and X/L-band stations at Colombia, Chile, etc.



Division/Unit Name

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Thank you

