

Overview of the Sentinel Asia

Supporting Disaster Management
in the Asia-Pacific Region by space technology



Asian Conference on Disaster Reduction(ACDR)2011

June 13-15 2011

Kengo Aizawa

Disaster Management Support Systems Office

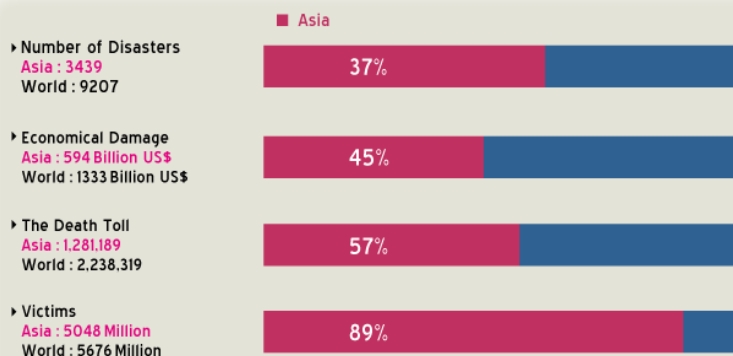
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Disaster Management Support System in the Asia-Pacific Region

Background



Derived from 'ADRC-Natural Disasters
Data Book-2007' originally in CRED EM-DAT, 2007



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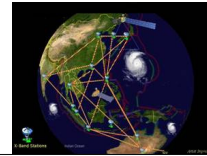
Disaster Management Support System in the Asia-Pacific Region

Purpose

In Oct 2005, APRSAF*-12, approved the plan to initiate the **Sentinel Asia** to assist disaster management in the Asia-Pacific region and it aims to:

- > Improve safety in society by ICT and space technology
- > Improve speed and accuracy of disaster preparedness and earlywarning
- > Minimize the number of victims and social/economic losses.

* : Asia-Pacific Regional Space Agency Forum



Sentinel Asia Project
establishing Disaster Management Support System

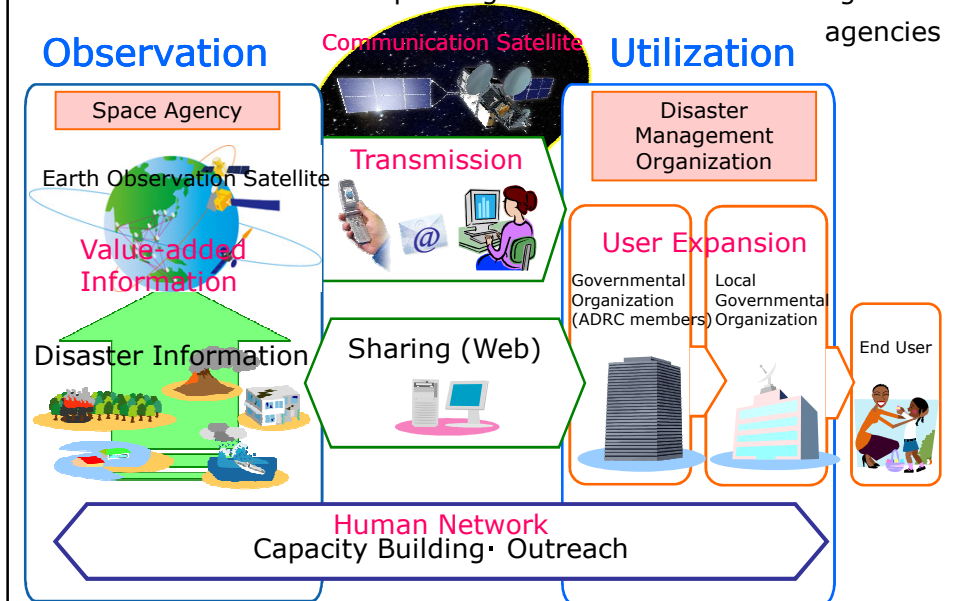


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Concept of Sentinel Asia

Collaboration between space agencies and disaster management agencies



Main Activities

1. Emergency observation

Member agency request **emergency observation** to data providers via ADRC

2. Monitoring

Provide precipitation, hotspot data for **Flood, Wildfire**

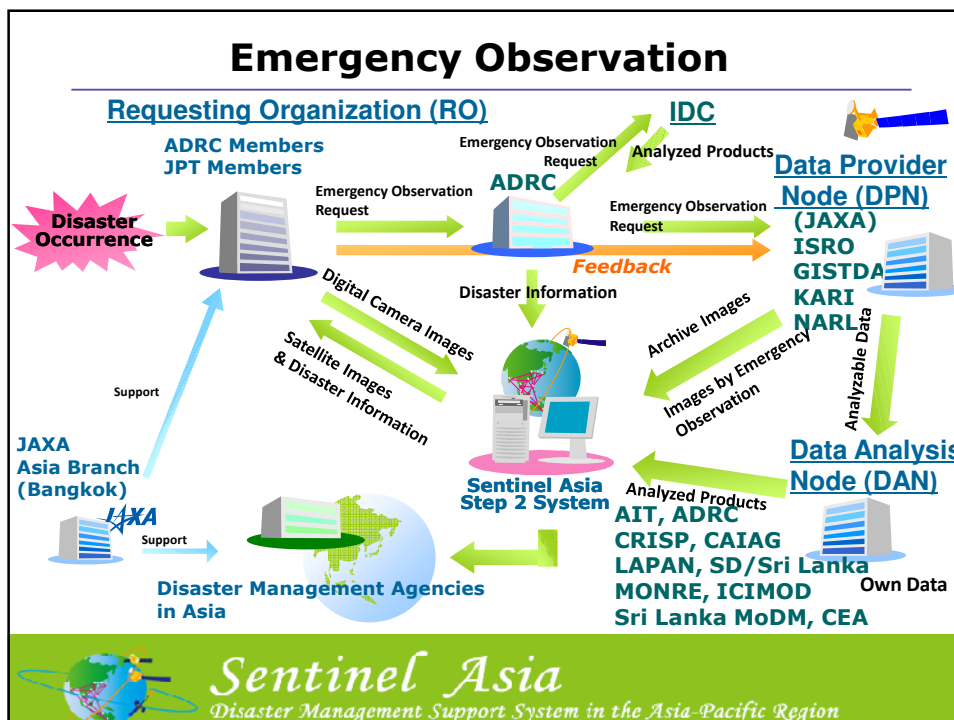
3. Outreach

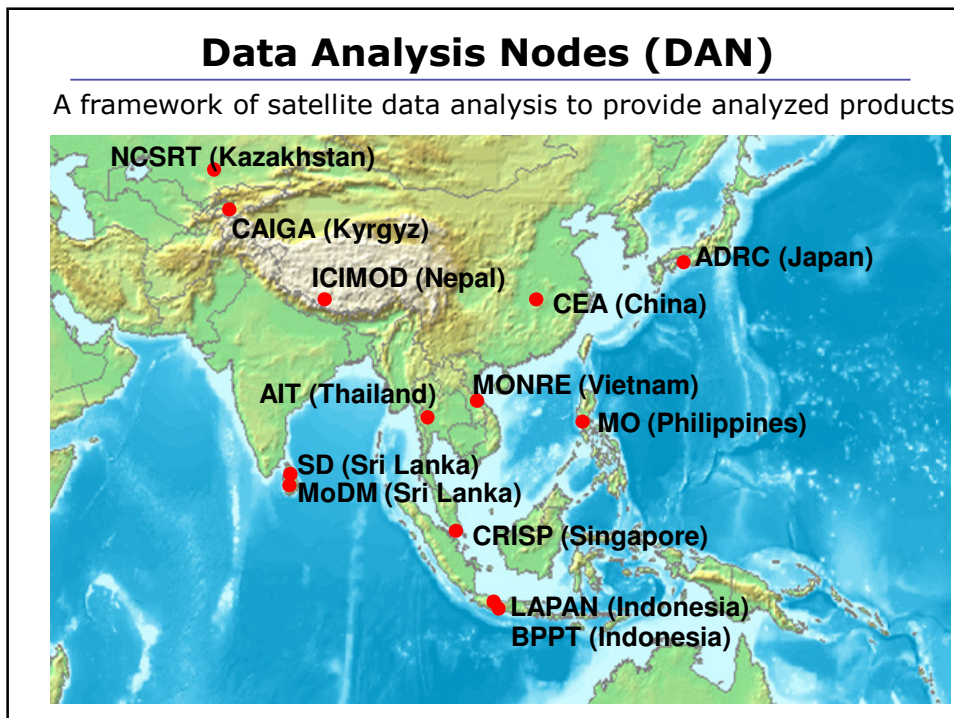
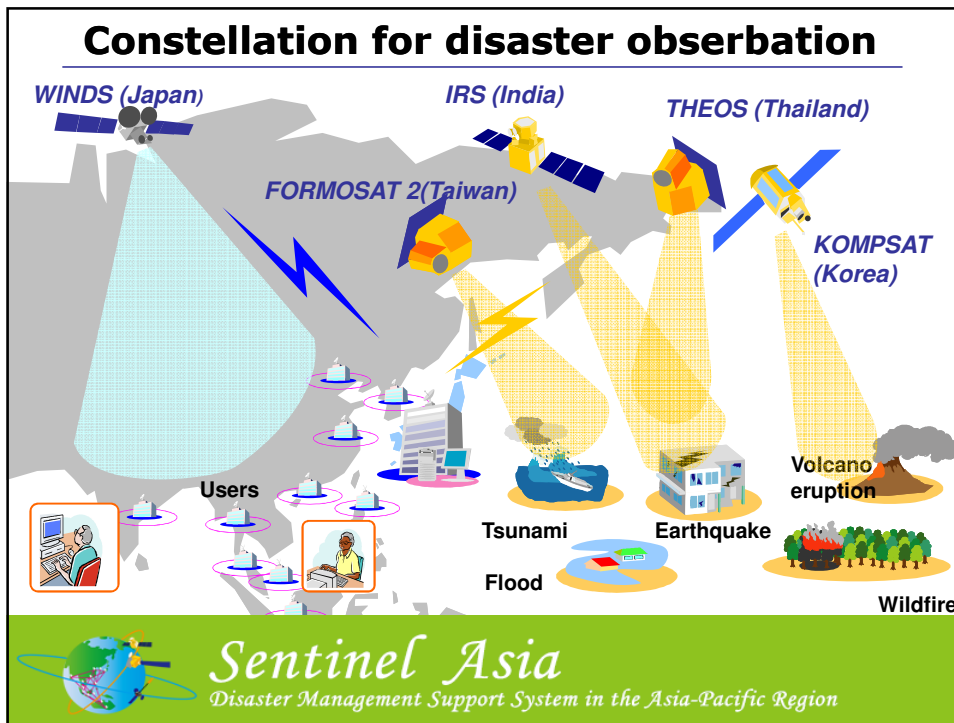
Capacity building and **human resource development** for promotion of utilization



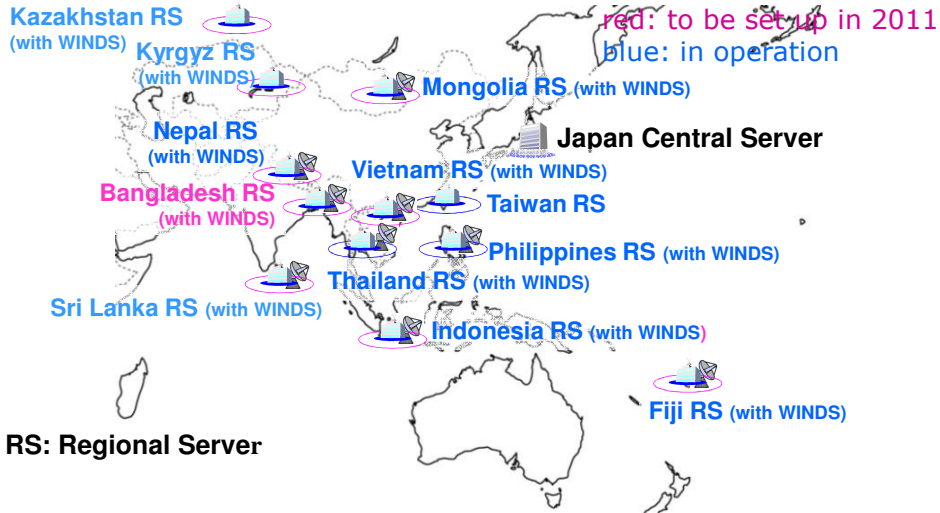
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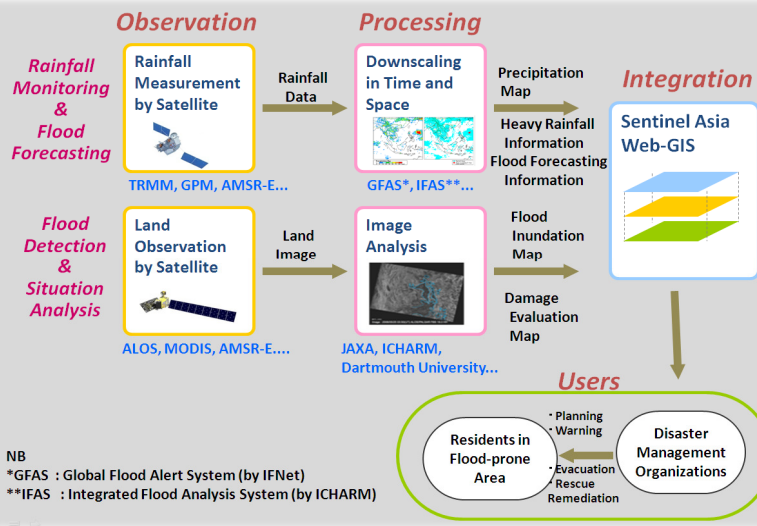
Step2 System Regional Servers



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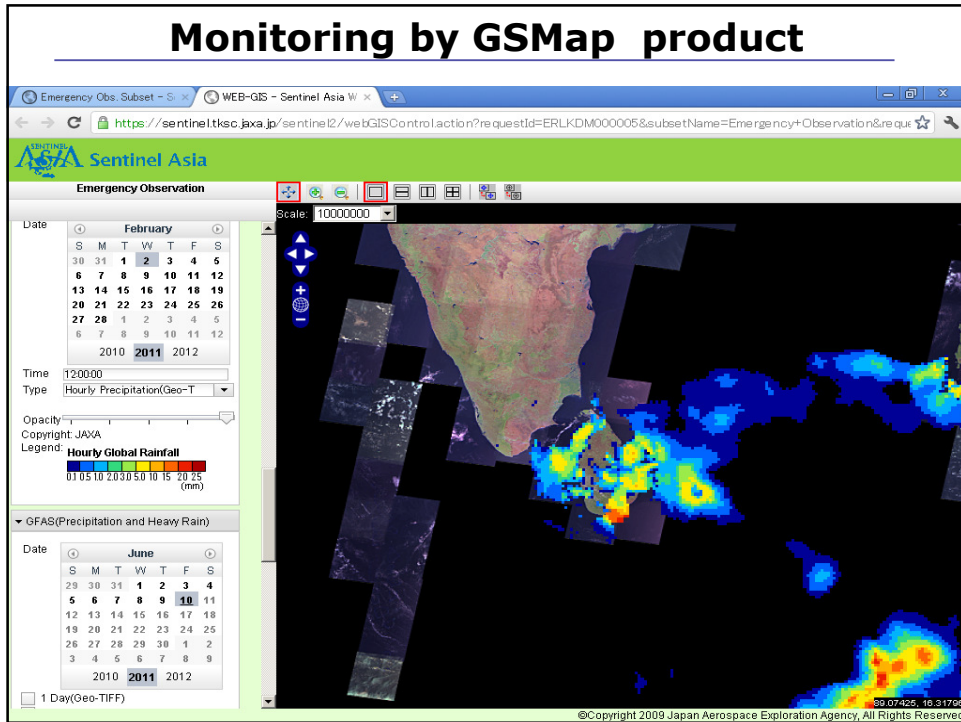
Flood Monitoring



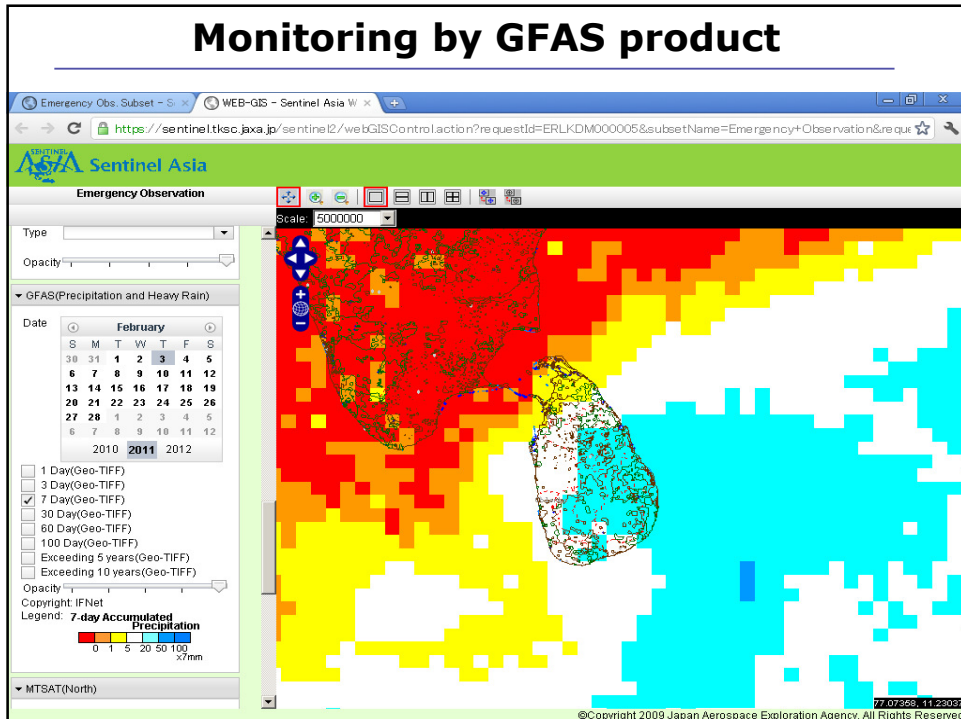
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Monitoring by GSMaP product



Monitoring by GFAS product



Flood case in Sri Lanka

The screenshot shows the 'Emergency Obs. Request List' on the Sentinel Asia website. The table lists various disaster events. A yellow callout box points to the entry for Sri Lanka on 2011/02/03.

Emergency Obs. ID	Occurrence Date (UTC)	Country	Disaster Type	Status	Product	WEB-GIS
ERIDL000031	2011/05/06	Indonesia	Flash flood	Active		
ERKZNC000001	2011/04/12	Kazakhstan	Flood	Active		
ERADRC000008	2011/03/24	Myanmar	Earthquake	Active		
ERADRC000007	2011/03/26	Thailand	Flood	Active		
ERJFJX000018	2011/03/11	Japan	Earthquake	Active		
ERADRC000006	2011/02/22	New Zealand	Earthquake	Active		
ERLKD000005	2011/02/03	Sri Lanka	Flood	Active		
ERPHVS000009	2011/02/03	Philippines	Flood	Active		
ERENSD000003	2011/01/20	Brunei	Flood	Active		
ERLKD000004	2011/01/10	Sri Lanka	Flood	Active		

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Flood case in Sri Lanka

The screenshot shows the 'Emergency Obs. Request Information' page for the Sri Lanka flood event (ERLKD000005). It includes details about the disaster type, occurrence date, and a grid of satellite images.

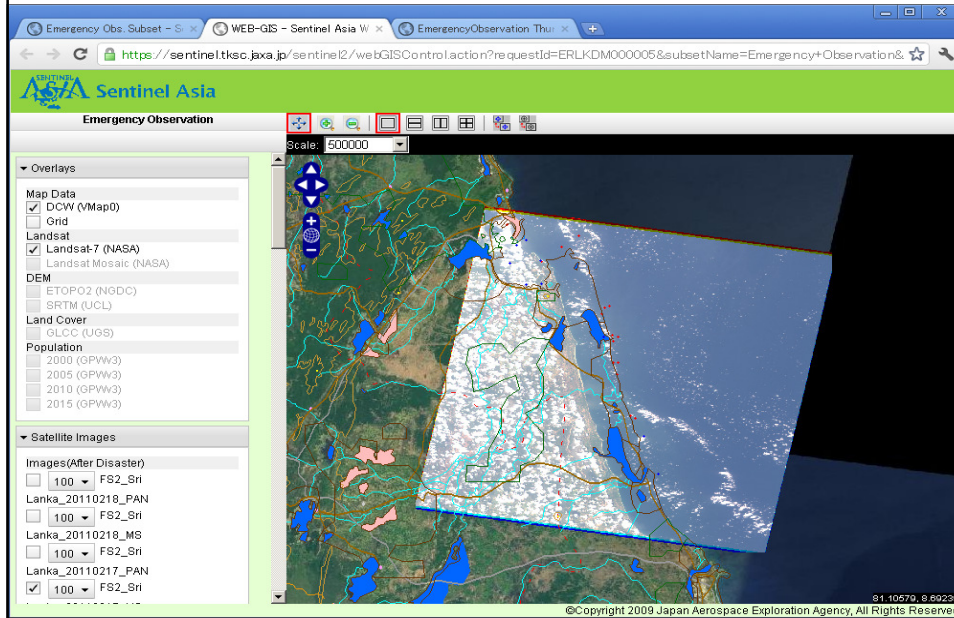
Emergency Obs. ID: ERLKD000005
Disaster Type: Flood
Country: Sri Lanka
Occurrence Date (UTC): Date: 03/02/2011 Time: 00:00 **GLIDE Number:** FL-2011-000003-LKA
ADRC URL: http://www.adrc.asia/view_disaster_en.php?NationCode=144&lang=&KEY=1488

Disaster Situation
 Just after one month of heavy flooding in North, North Central and Eastern provinces of Sri Lanka, received heavy rainfall again from 02nd February 2011. Just after one month of heavy flooding Sri Lanka is facing another flood spell and landslides to central hills, created disaster situation again. All major reservoirs are filled with water and opened sluice gates. Due to that many down stream areas has been flooded. Overall, more than 1.2

The grid contains 15 satellite images with the following timestamps:
 - Row 1: 18/02/2011 03:50, 18/02/2011 03:50, 17/02/2011 03:50, 17/02/2011 03:50, 16/02/2011 03:50
 - Row 2: 16/02/2011 03:50, 14/02/2011 03:50, 14/02/2011 03:50, 13/02/2011 03:50, 13/02/2011 03:50
 - Row 3: 12/02/2011 03:50, 12/02/2011 03:50

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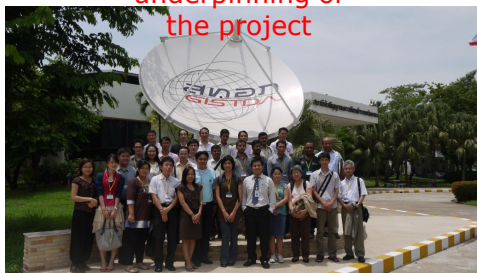
Flood case in Sri Lanka



Capacity Building and Human Network



The 5th Training by JAXA, hosted by MoDM in Sri Lanka, in February 2010



The 6th Training by JAXA, hosted by GISTDA in Thailand, in July 2010



Next Step

1. **Contribution remote sensing and ICT in Asia-Pacific region by APRSAF.**
2. **Accumulating more contributions and strengthen role(function) sharing to promote Joint steering of SA project.**
3. **To cover all phases, add pre-disaster phase and recovery phase to our range of work, in addition to emergency observation**
4. **Promote regionally or "bi" cooperation aiming to utilize SA more deeply.**



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Thank you for attention



<https://sentinel.tksc.jaxa.jp/>

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