



Promoting Disaster Reduction through Multi-National Cooperation in Asian Region

Asian Disaster Reduction Center (ADRC) and it's activities

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- 2. ADRC's Activities as UN-SPIDER RSO**
- 3. Sentinel Asia**



1. What is ADRC?



ADRC Member Countries



- Established in July 1998 in Kobe, Hyogo, Japan.
- 28 member countries and 5 advisor countries.



Objective and Activities of ADRC

Objective

To facilitate multi-national cooperation for disaster reduction in the Asian region

Main Activities

- Information Sharing
- Human Resource Development
- Community Capacity Building

ACDR 2010, 17th Jan – 20th January
Kobe, Hyogo, Japan

36 countries and 53
organizations participated





2. ADRC's Activities as UN-SPIDER RSO



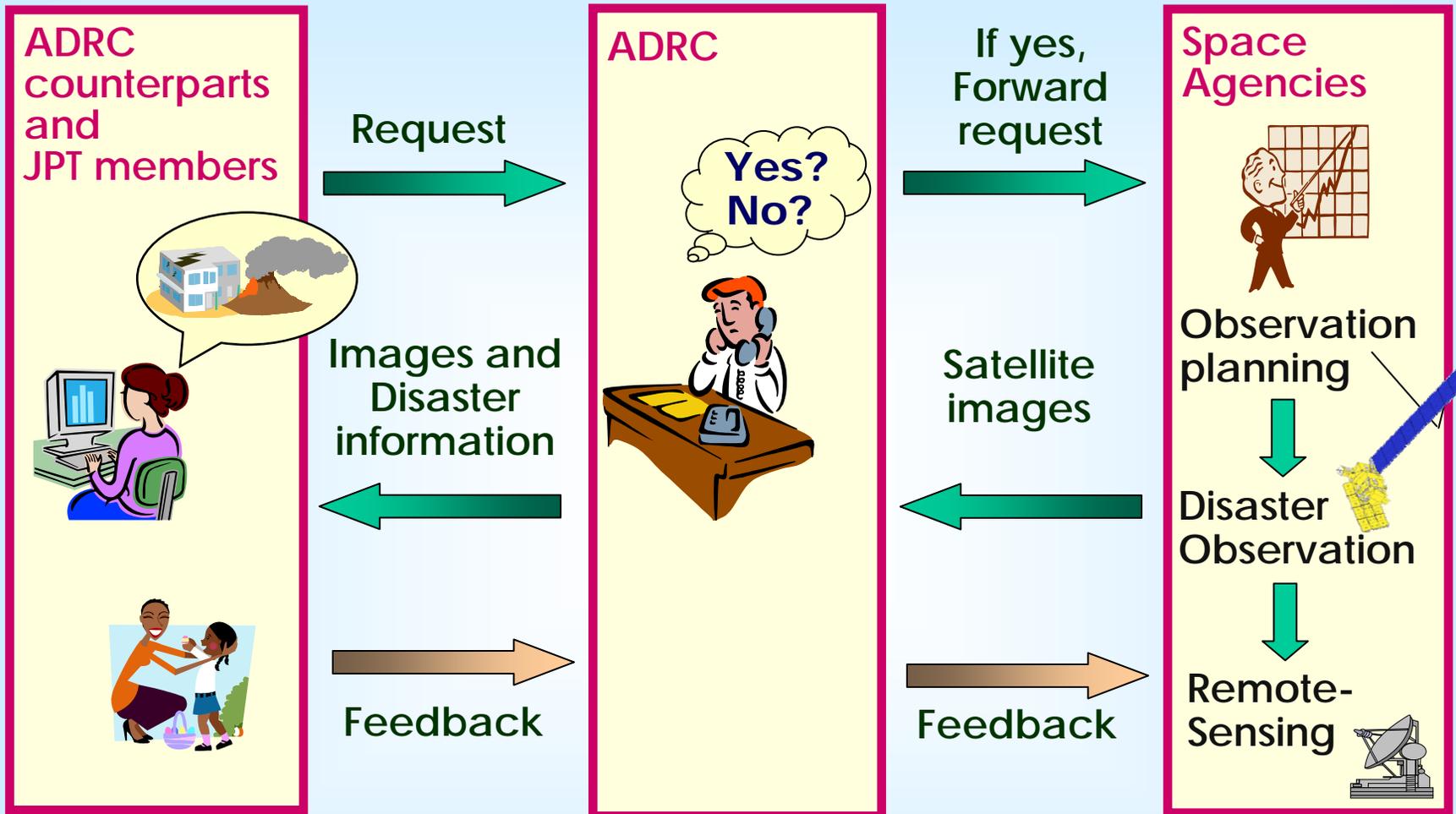
Activities in 2009 as a RSO

- (a) Emergency Observation
- (b) Capacity Building
- (c) Outreach Activities



*(a) Emergency Observations
in 2009*

(a) Emergency Observation



ADRC: Focal point for emergency observation

ADRC Role:

- Follow-up and further Promotion
- Capacity building

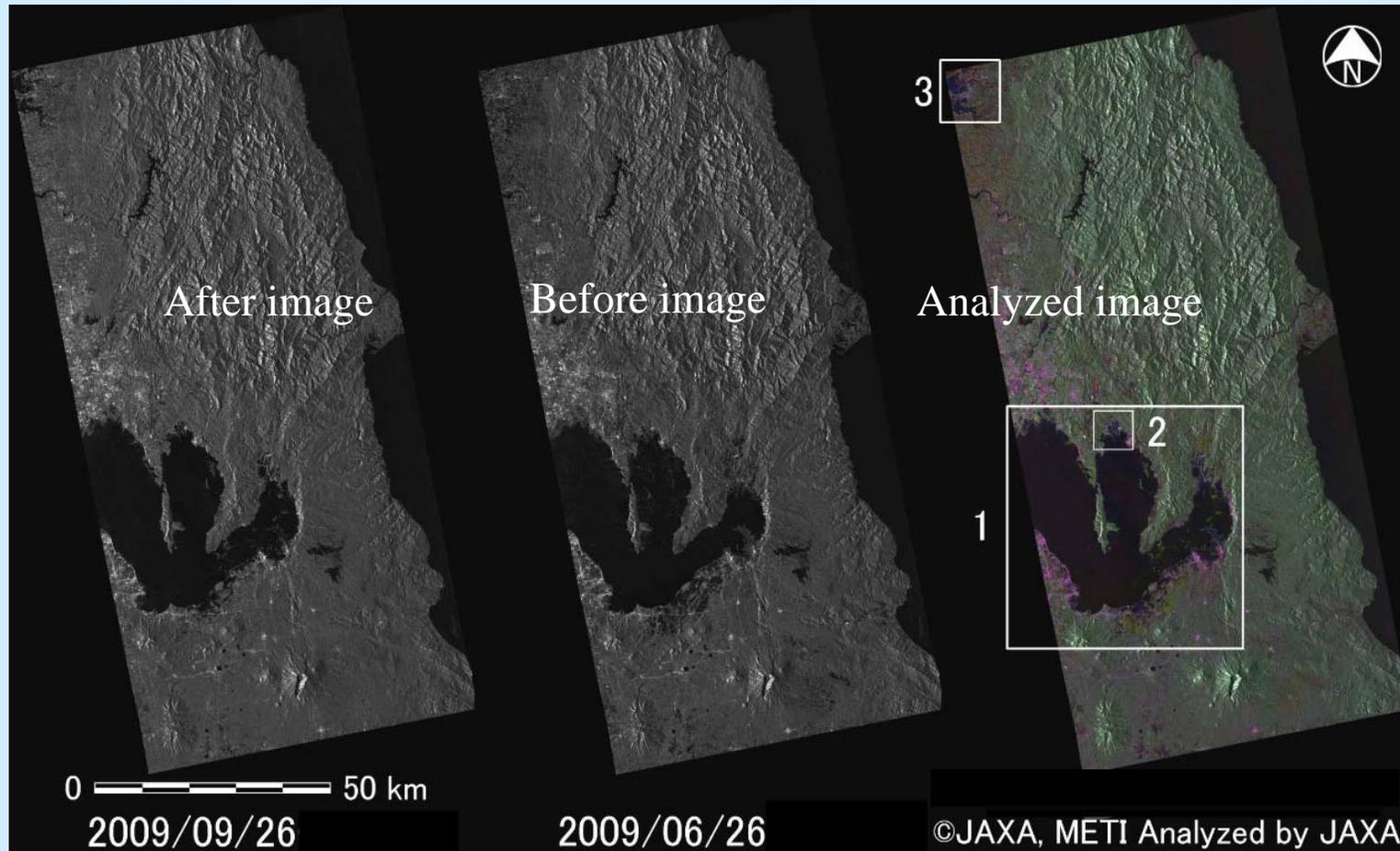


(a) Emergency Observation in 2009

Country	Region	Type	Date	Requester
Indonesia	Papua State	Earthquake	2009/1/4	LAPAN
Philippines	Province of Negros Oriental, Province of Misamis Occidental	Flood	2009/1/22	MGB • NDCC
Australia	Victoria	Forest Fire	2009/2/7	GA • CSIRO
Australia	New South Wales, Queensland	Flood	2009/ Early in January	GA • CSIRO
Philippines	Dumaguete, Negros Oriental	Flood	2009/2/7	PAGASA
Australia	Brisbane City, Moreton Bay, Queensland	Typhoon	2009/3/11	GA • CSIRO
Indonesia	Jakarta	Flood	2009/3/27	LAPAN
Vietnam	Central Vietnam	Flood	2009/4/13	VAST
Indonesia	Mt. Slamet	Volcanic Eruption	2009/5/20	LAPAN
Vietnam	Bac Kan	Flood	2009/7/7	MONRE
Philippines	Mt. Pinatubo	Typhoon	2009/8/8	PHIVOLCS
Mongol	Central Mongol	Forest Fire	2009/5/5	NRSC
Mongol	Gov Altai	Flood	2009/7/16	NRSC
Nepal	Sunsari District	Flood	2009/8/18	SD
Indonesia	Cianjur, West Java state	Earthquake	2009/9/2	LAPAN
India	Andhrapradesh	Other	2009/9/3	ISRO
Philippines	Manila ctiy, Quezon ctiy	Flood	2009/9/26	PHIVOLCS
Vietnam	Quang tri, Da Nang	Flood	2009/9/28	MONRE
Indonesia	Western Sumatera	Earthquake	2009/9/30	LAPAN
Philippines	Northern Luzon	Flood	2009/10/9	PHIVOLCS
Nepal	Western Nepal	Flood	2009/10/12	SD
Vietnam	Binh Dinh, Phu Yen, Khanh Hoa	Flood	2009/11/3	MONRE
Sli Lanka	Eastern Province	Flood	2009/12/15	DMC
Philippines	Mayon volcano	Volcanic Eruption	2009/12/25	PHIVOLCS



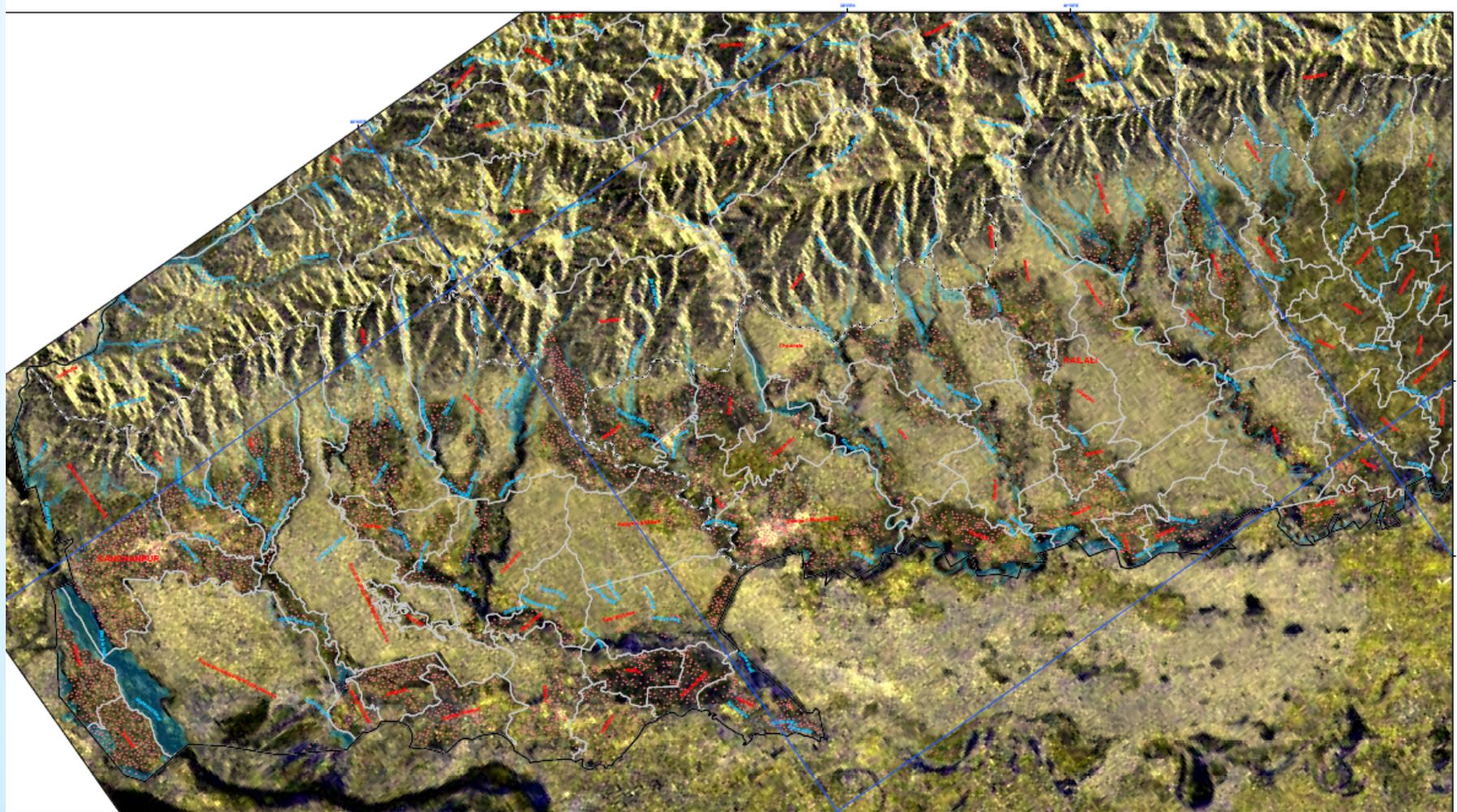
Emergency Observation Image Data





Provided image data

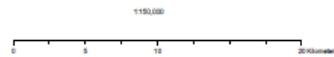
SATELLITE IMAGE MAP OF FLOOD AFFECTED WESTERN PART OF NEPAL



Map Prepared by National Geographic Information Infrastructure Project, Survey Department, Kathmandu, Nepal

Image Provided by United Nations Disaster Management Support System in the Asia Pacific Region, Kathmandu, Nepal

- Legend**
- Building
 - Streams
 - VDC Boundary
 - District Boundary
 - International Boundary
 - Flooded Area





Satellite Image

Sentinel Asia 

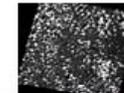
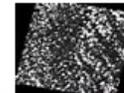
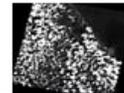
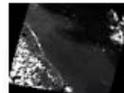
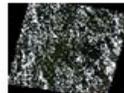
Disaster Management Support System in the Asia-Pacific Region

Satellite Image

GLIDE Number:	FF-2009-000260-LRA	Thousands of people in eastern Sri Lanka have been marooned by flash floods caused by continuous torrential rains since 9 December 2009.
Event:	Flood	
Duration:	2009/12/09	
Country or District:	Sri Lanka	

Satellite Image(After Disaster)

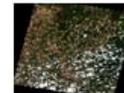
Thumbnail



Date	2009-12-17 05:13	2009-12-17 05:13	2009-12-17 05:13	2009-12-17 05:13	2009-12-17 05:13	2009-12-17 05:13
Satellite/Sensor	ALOS/AVNIR-2	ALOS/AVNIR-2	ALOS/PRISM	ALOS/PRISM	ALOS/PRISM	ALOS/PRISM

Satellite Image(Before Disaster)

Thumbnail



Date	2009-10-15 05:11	2009-06-16 05:13	2009-06-16 05:13
Satellite/Sensor	ALOS/AVNIR-2	ALOS/AVNIR-2	ALOS/AVNIR-2

[\[Back\]](#)

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Web site image



(b) Capacity Building



(b) Capacity Building

Japan-ASEAN Integration Fund Project (JAIF)

Utilization of Space Based Technologies for Disaster Risk Management

The purpose of the project is to build individual and institutional capacity . In particular, it intends to:

- **Improve technical knowledge of using satellite images**
- **Demonstrate the potential of space technologies (remote sensing/GPS/GIS) for management and reduction of risks due to natural disasters**



(b) Capacity Building

Japan-ASEAN Integration fund Project (JAIF)

Utilization of Space Based Technologies for Disaster Risk Management

Modules to Achieve the Goal

Module 1

Preliminary discussion and need survey with all the stakeholders

Module 2

Development of educational material to provide basic knowledge of space based technology to all the stake holders.

Module 3

1-day seminar to raise awareness among decision & policy makers (senior & junior) about the use of space technologies for various disasters

Module 4

Carryout at least 5 day technical training locally.

Module 5

Conduct 2 Regional Workshops in Thailand & Indonesia to share the gained knowledge and networking in the region.



(b) Capacity Building

Japan-ASEAN Integration fund Project (JAIF)

Utilization of Space Based Technologies for Disaster Risk Management



Meeting in the Philippines



Meeting in the Philippines



(c) Outreach Activities



(c) Outreach Activities

- Promoted the utilization of satellite image for DM to countries that have not requested for emergency observations yet
- Conducted follow-up survey on further utilization of satellite image for disaster management
- Implemented capacity building for staff of disaster management agencies and offices.



Promotion meeting in Sri Lanka



Promotion meeting in Kyrgyzstan

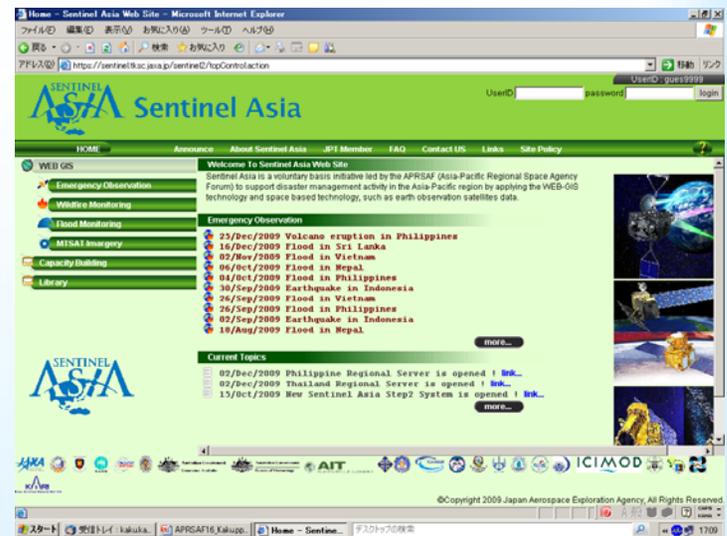


3. Sentinel Asia



Sentinel Asia

Sentinel-Asia is a “voluntary and best-efforts-basis initiative” led by the APRSAF to share disaster information in the Asia-Pacific region on the Digital Asia (Web-GIS) platform and to make the best use of earth observation satellites data for disaster management in the Asia-Pacific region.



New Website:

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



Framework of Sentinel Asia

Space Community

APRSAF*

Data Provision

Promotion of Utilization

Capacity Building

* Asian-Pacific
Regional
Space Agency Forum



Sentinel Asia

Joint Project Team (JPT)

Joint Project Team consists of total 65 organizations including 56 agencies from 22 countries and 9 international organizations as of January 2010

Disaster Management Community

ADRC**
Member Countries

Utilization (User)

** Asian Disaster
Reduction Center

International Community

UN / ESCAP UN / OOSA
ASEAN AIT etc.

International Cooperation



Sentinel Asia's Stepwise Approach

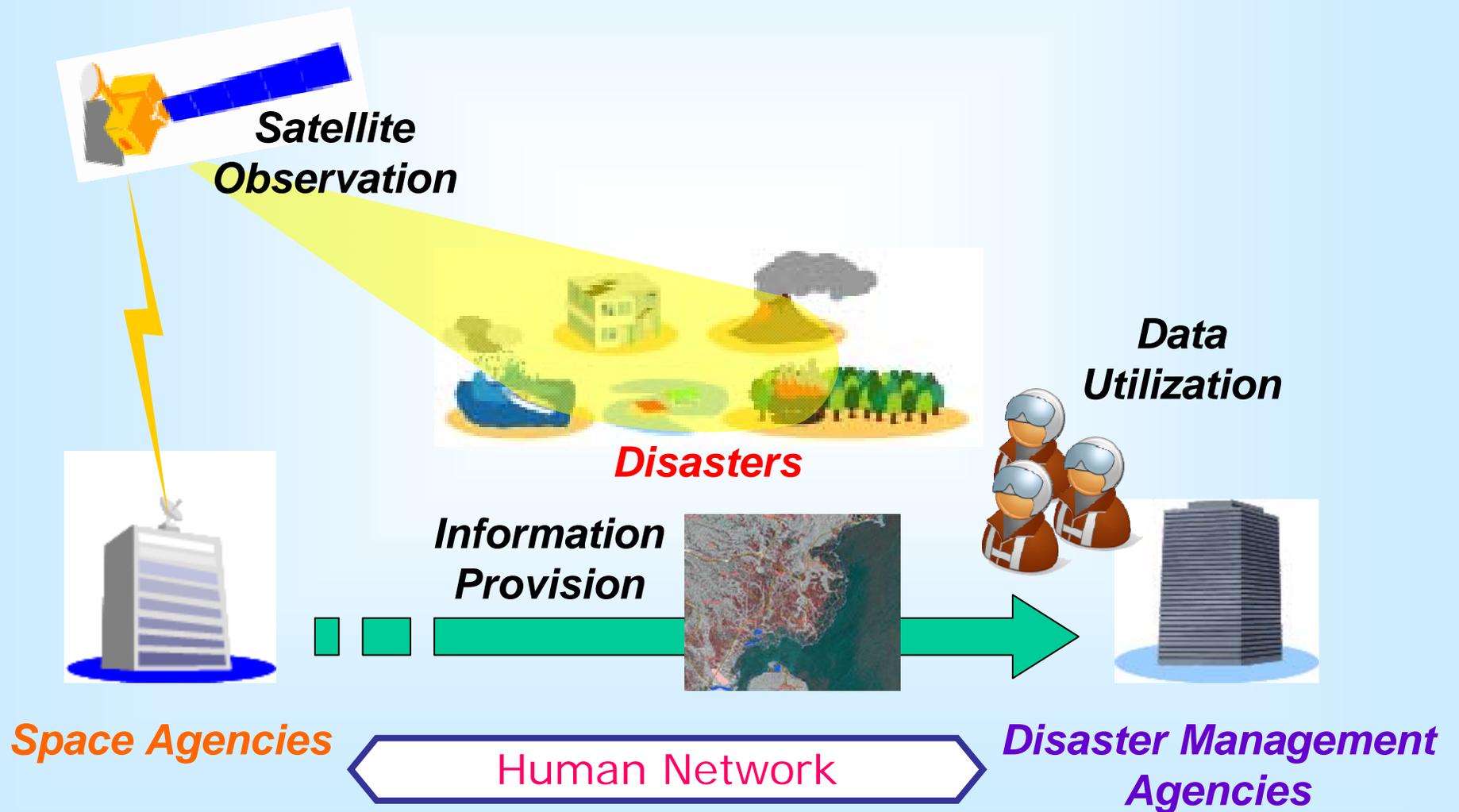
STEP 1: Implementation of the backbone 'Sentinel Asia' data dissemination system and associated Nodes, to showcase the value and impact of the technology using standard internet dissemination systems (February 2006 - December 2007)

STEP 2: Expansion of the dissemination backbone with new Satellite Communication Systems (2008 - 2012)

STEP 3: Establishment of a comprehensive DMSS(Disaster Management Support System in the Asia-Pacific Region)(2012 and onwards)



Concept of Sentinel Asia STEP1





Activities of Sentinel Asia

The screenshot shows the Sentinel Asia website in a Microsoft Internet Explorer browser window. The address bar displays the URL <http://dmss.tksc.jaxa.jp/sentinel/>. The website header features the 'Sentinel Asia' logo and the tagline 'Disaster Management Support System in the Asia-Pacific Region'. A navigation menu includes links for Home, About Sentinel Asia, JPT Members, Library, FAQ, and Contact Us. A sidebar on the left lists several key activities: Emergency Observation, Wildfire Monitoring, Flood Monitoring, MTSAT Imagery, Capacity Building, Web Forum, and Emergency Observation Request. The main content area highlights these activities with a list:

- Emergency Observation of Major Disasters
- Wildfire Monitoring
- Flood Monitoring
- Capacity building

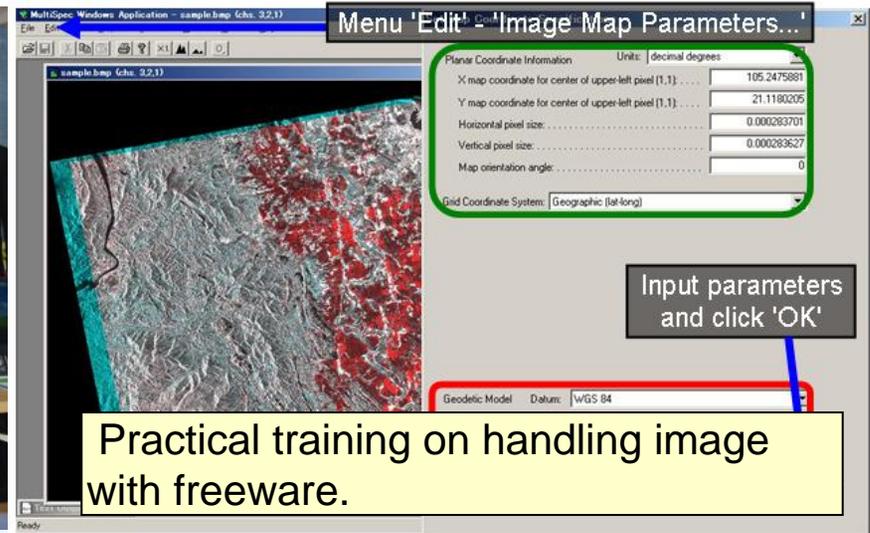
Below the list, a snippet of text is visible: 'to 'trigger' dedicated satellite data acquisitions through their participating and cooperating...'. The browser's status bar at the bottom shows 'Internet'.



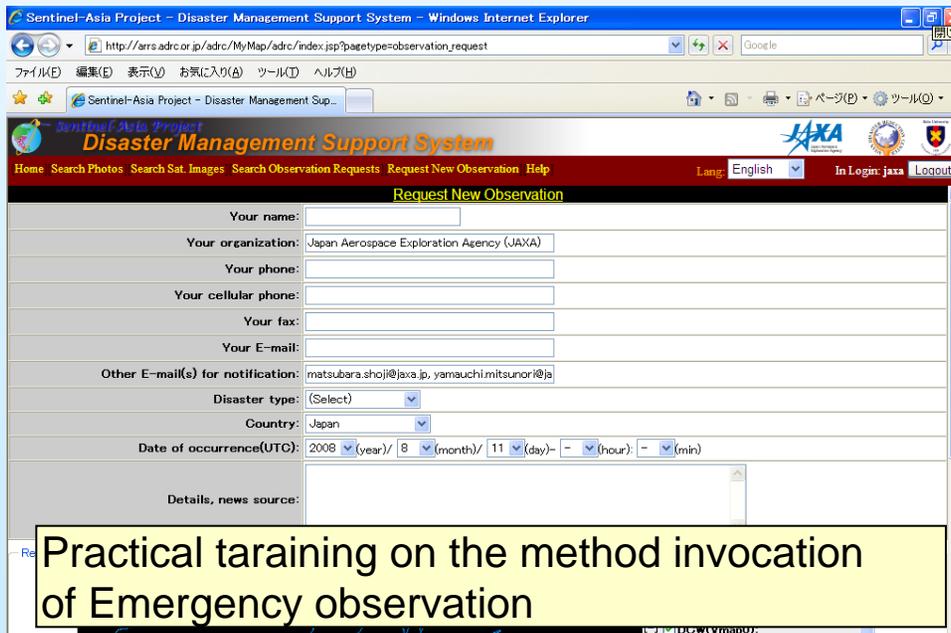
Capability Development



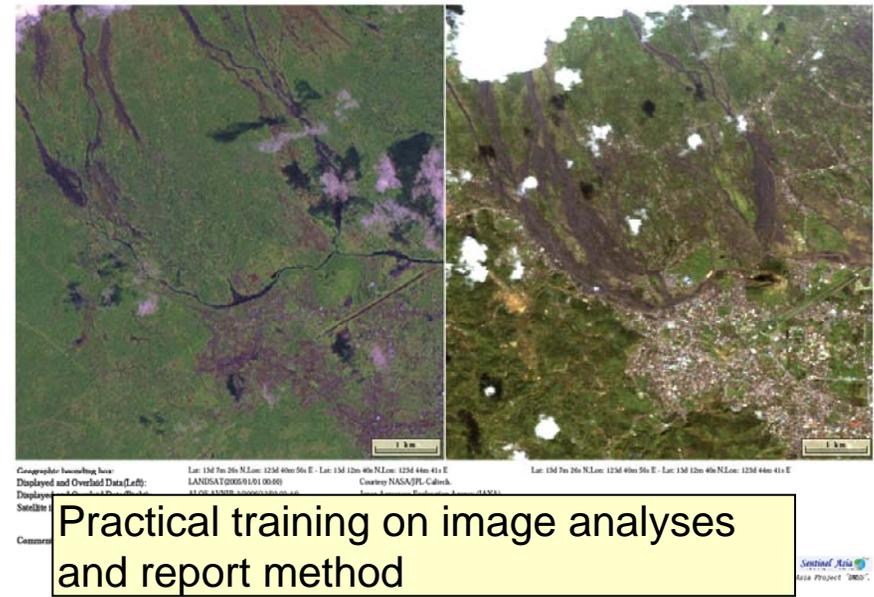
The 4th Operation Training in LAOS



Practical training on handling image with freeware.



Practical training on the method invocation of Emergency observation



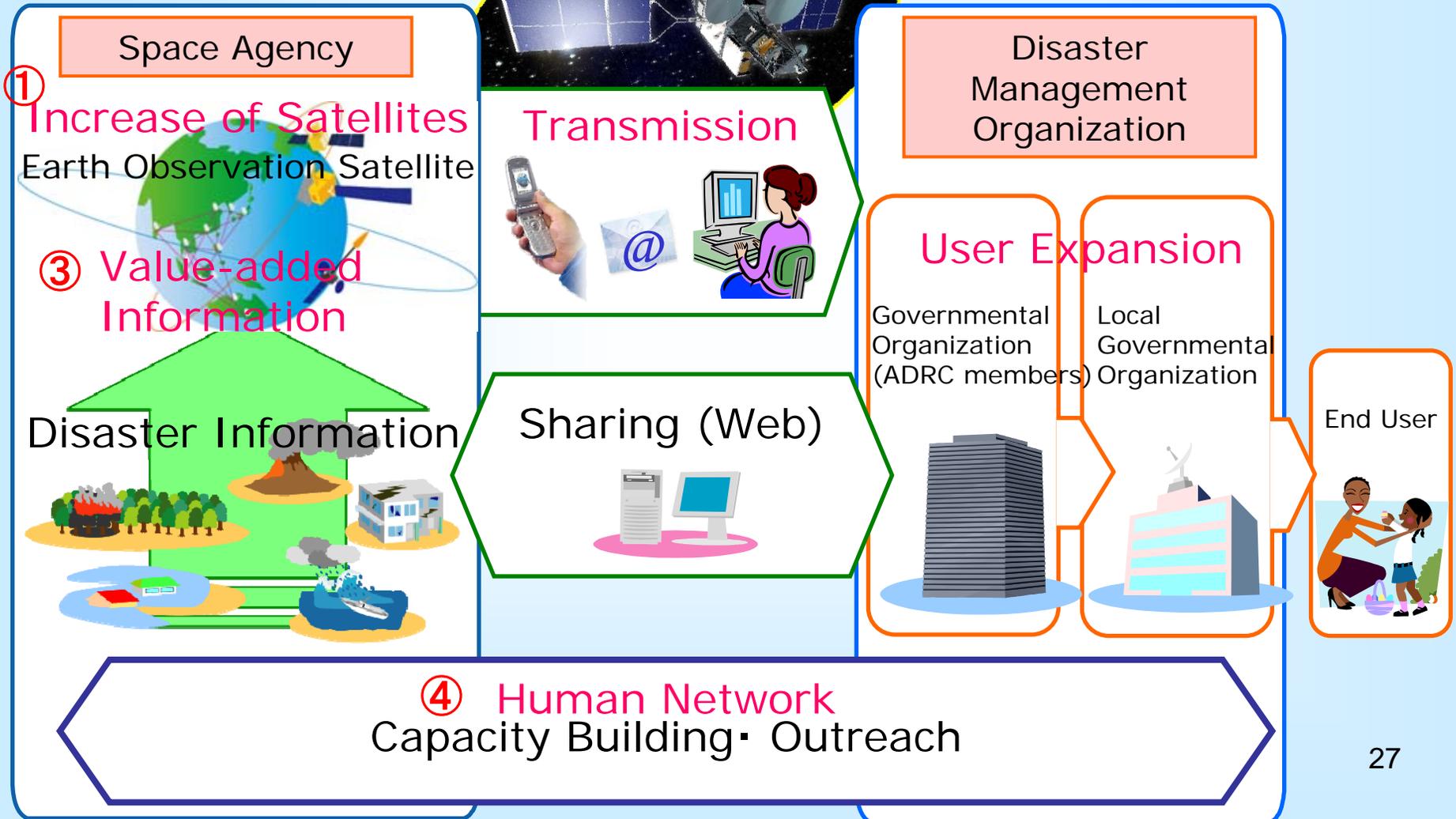
Practical training on image analyses and report method

Concept of Sentinel Asia STEP2

Observation

② Communication Satellite

Utilization



Increase in the number of participating satellites



International
Disaster
Charter



International disaster charter

“Interface of Charter”
JAXA will interface with SA as one of Charter member, NOT ACTIVATE Charter

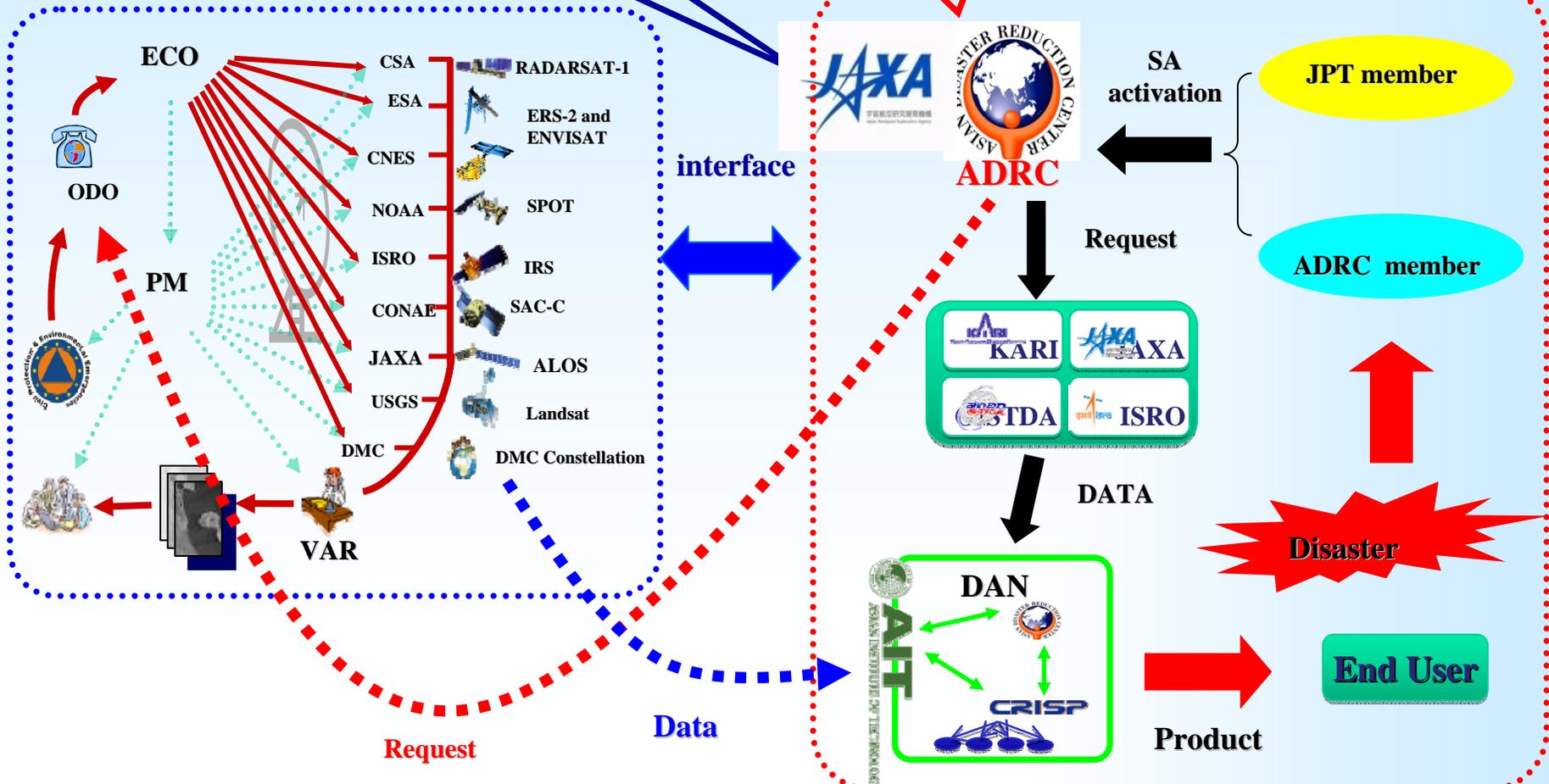
“SINGLE Gateway”
ADRC **COORDINATES** if their request would be **REASONABLE** or **NOT**. They check if the request needs Charter activation.



International Disaster Charter



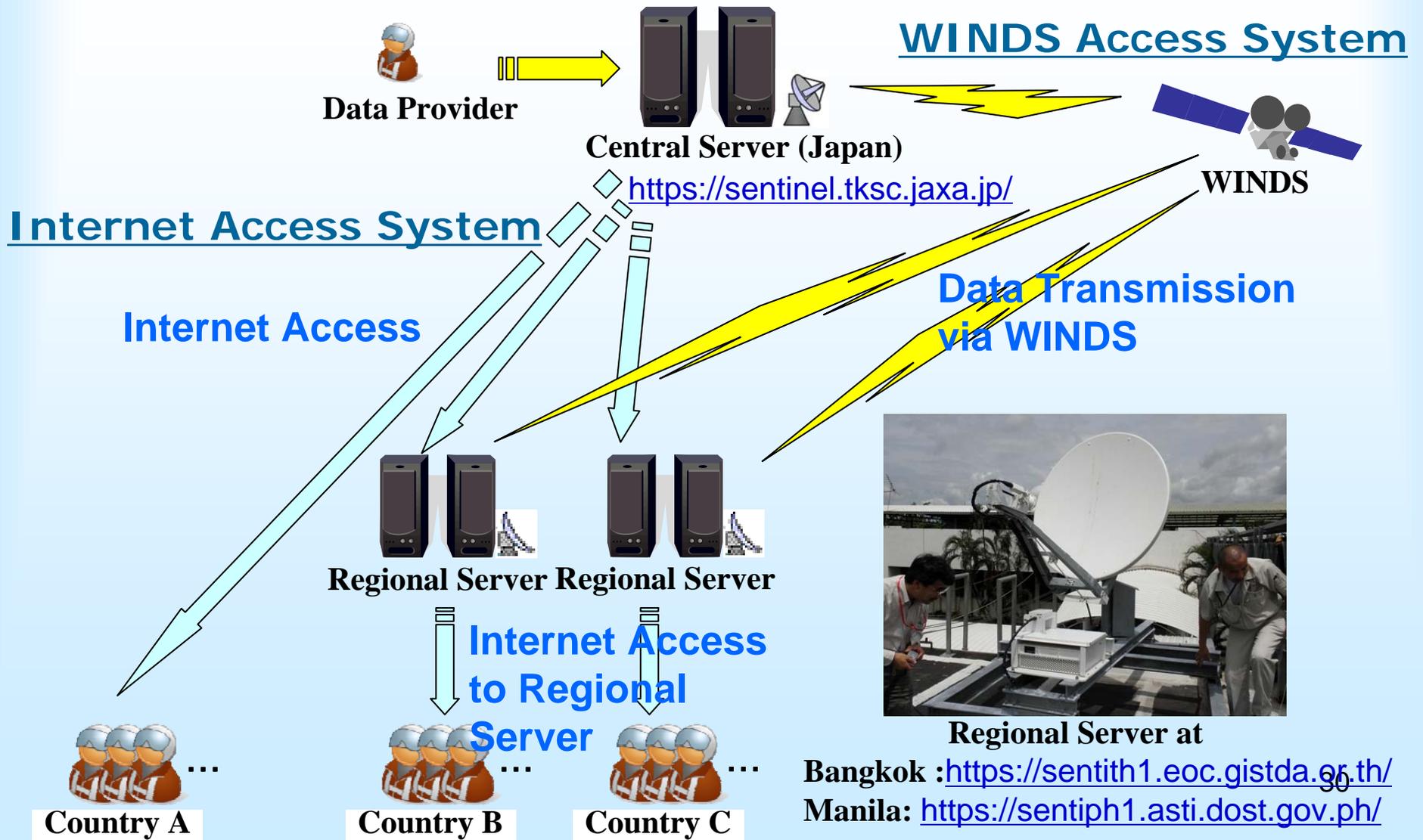
Sentinel Asia



Draft Interface between IDC and SA



Utilization of WINDS "KIZUNA"





2nd JPTM for STEP2 in Bali, Indonesia July 2009

❑ 117 participants coming from 43 organizations, 18 Asian countries, and 7 international organizations

❑ Jointly organized by JAXA, LAPAN, and UNESCAP





**ADRC promotes disaster reduction through
multi-national/multi-stakeholder/multi-lateral
cooperation in the Asian region**



<http://www.adrc.or.jp>

Thank You For Your Attention