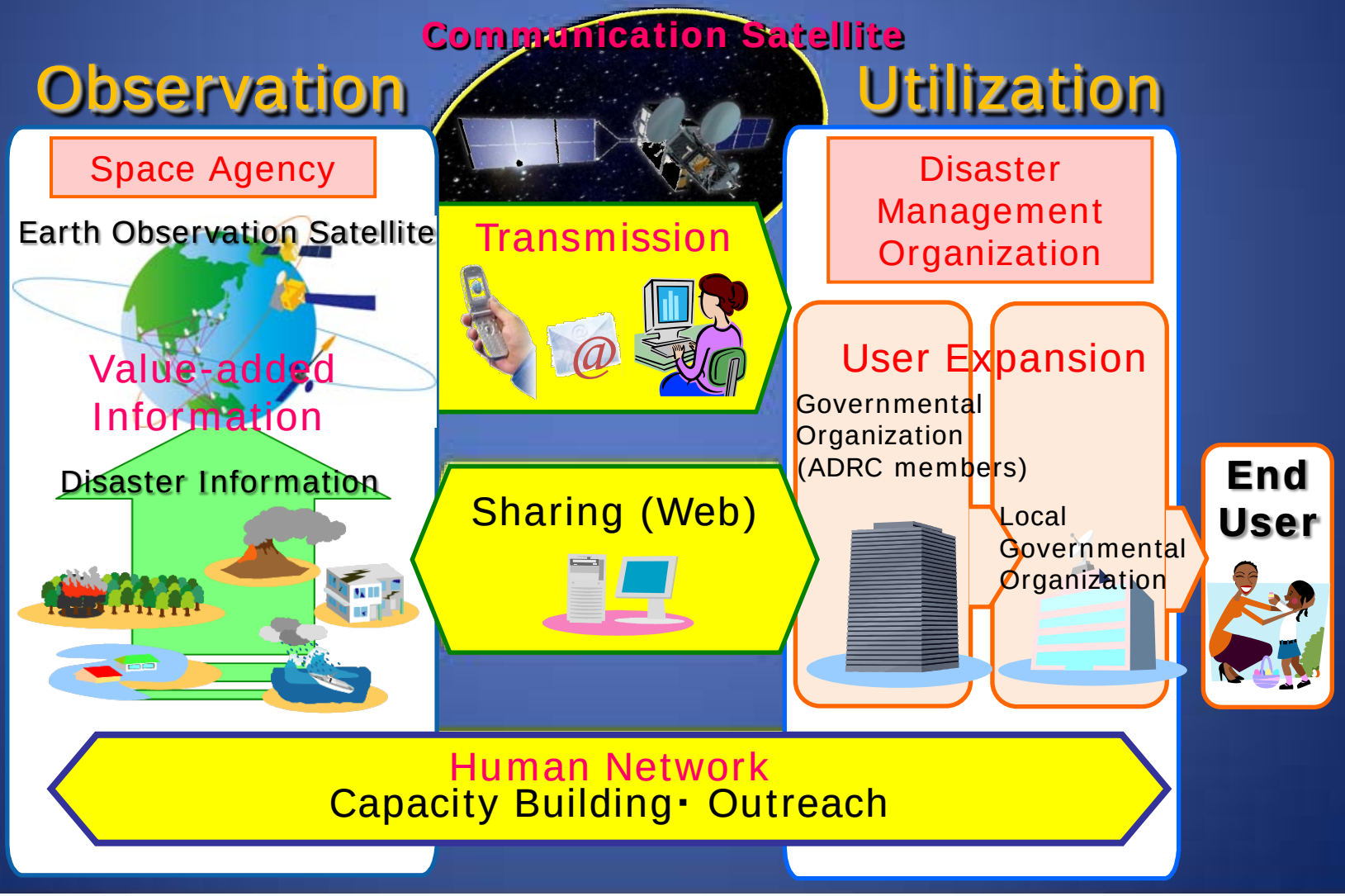
Present Situation of Emergency Observation in Sentinel Asia

Masami SUGIURA

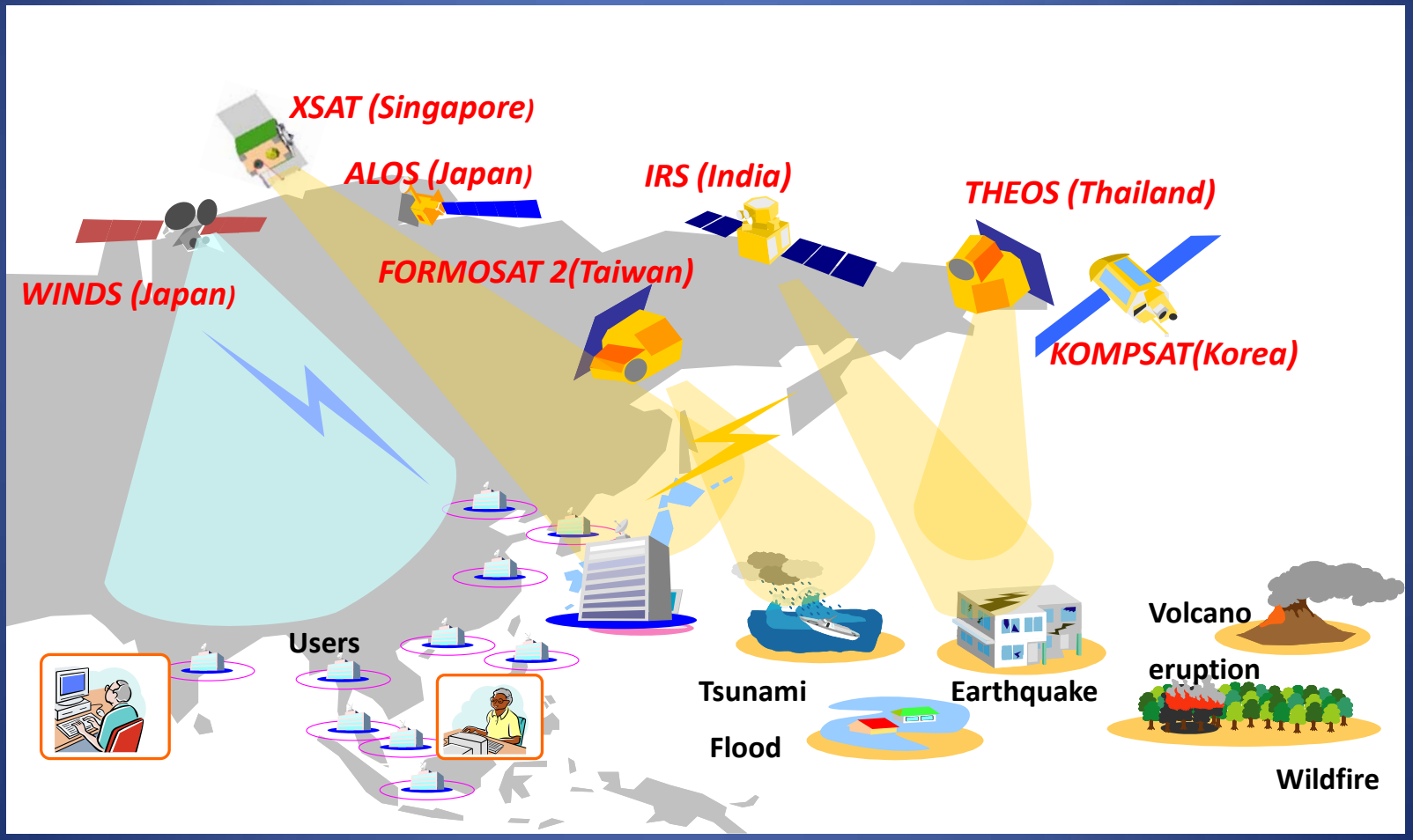
Senior Researcher of Asian Disaster Reduction Center (ADRC)

Concept of Sentinel Asia

Collaboration between space agencies and disaster management agencies



Satellites cooperating with Sentinel Asia



Emergency Observation

Procedure for Emergency Observation

- **Disaster**

User

- **Emergency Observation Request (EOR)**

ADRC

- Confirmation

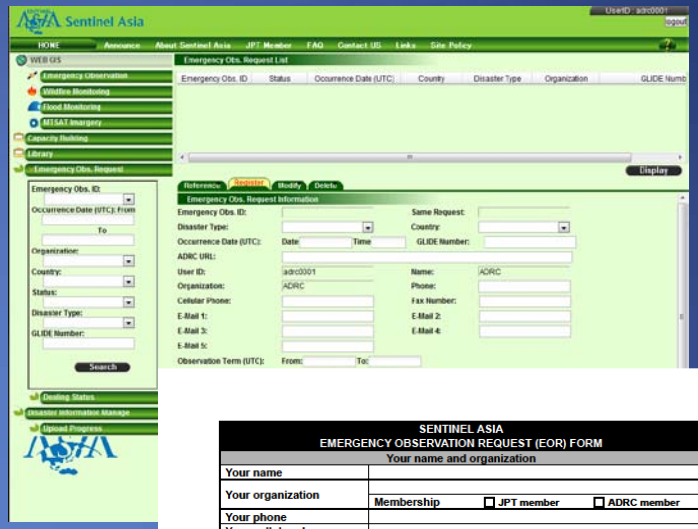
DPN

- Emergency Observation

How to submit EOR

By Web Site

By Mail, Fax



SENTINEL ASIA
EMERGENCY OBSERVATION REQUEST (EOR) FORM

Your name and organization		
Your name		
Your organization	Membership ☐ JPT member ☐ ADRC member	
Your phone		
Your cellular phone		
Your fax		
Your E-mail		
Other E-mail(s) for notification		
Disaster type		
☐ Flood ☐ Landslide ☐ Storm ☐ Fires ☐ Volcano ☐ Earthquake ☐ Ice hazard ☐ Tsunami ☐ Other :		
Place of occurrence		
Country		
Date of occurrence		
Date and time (UTC)		
Request area		
Name of a place		
Please select one	☐ Circular zone	Coordinates of center point Latitude : ° ' " N Longitude : ° ' " E Radius : km
	☐ Rectangular zone	Coordinates of corners Lat. : ° ' " N Lon.: ° ' " E Lat. : ° ' " N Lon.: ° ' " E
Details, news source		

Based upon request from requesting organization (RO), this Emergency Observation Request (EOR) may escalate to International Charter for Space and Major Disasters (IDC) when secretariat confirms its appropriateness. If RO wishes to escalate to IDC, Please check the box right.

Escalate ☐

Please fill the form and send it to ADRC
+81-78-262-5546 (Fax) or sarequest@adrc.asia (E-mail)

Request ID (To be filled by ADRC)

Flash Flood case in Philippine (1 / 3

Emergency Obs. Request Information

Emergency Obs. ID:	ERPHMO000004
Disaster Type:	Flood
Country	
Occurrence Date (UTC):	Date 17/12/2011 Time 10:00 GLID
ADRC URL:	http://www.adrc.asia/view_disaster_en.php?N

Disaster Situation

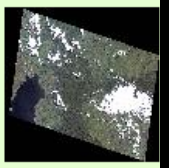
Flooding in Northern Mindanao around Cagayan de Oro City, Philippines

Satellite Images(Before Disaster)

ALOS(Jpeg)


ALOS AV2, P83 F...
04/10/2010 15:50


ALOS AV2, P83 F...
04/10/2010 15:50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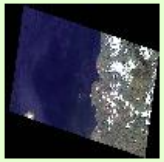
05/06/2010 02:16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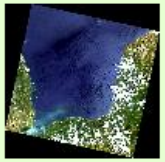
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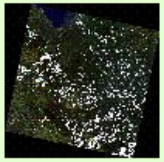
22/03/2010 02:24

ALOS(Geo-TIFF)


ALOS AV2, P83 F...
04/10/2010 15:50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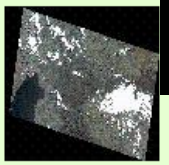
04/10/2010 15:50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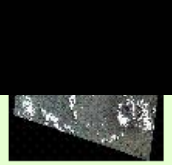
05/06/2010 02:16


ALOS Pan-sharpe...
05/06/2010 02:16


ALOS Pan-sharpe...
05/06/2010 02:16

Flash Flood case in Philippine (2/3)

Emergency Obs. Request Information

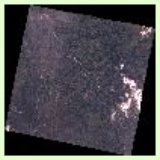
Emergency Obs. ID:	ERPHMO000004
Disaster Type:	Flood
Occurrence Date (UTC):	Date 17/12/2011 Time 10:00
ADRC URL:	http://www.adrc.asia/view_disaster_en.php?N

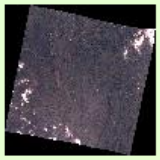
Disaster Situation

Flooding in Northern Mindanao around Cagayan de Oro City, Philippines

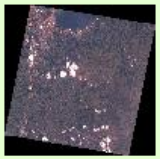
Satellite Images(After Disaster)

THEOS(Jpeg)

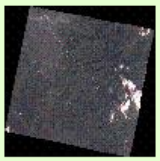

THEOS Pansharpe...
21/12/2011 00:00


THEOS Pansharpe...
21/12/2011 00:00


THEOS Pans
21/12/2011 0


THEOS Pansharpe...
21/12/2011 00:00

THEOS(Geo-TIFF)


THEOS Pansharpe...
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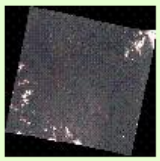
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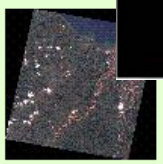
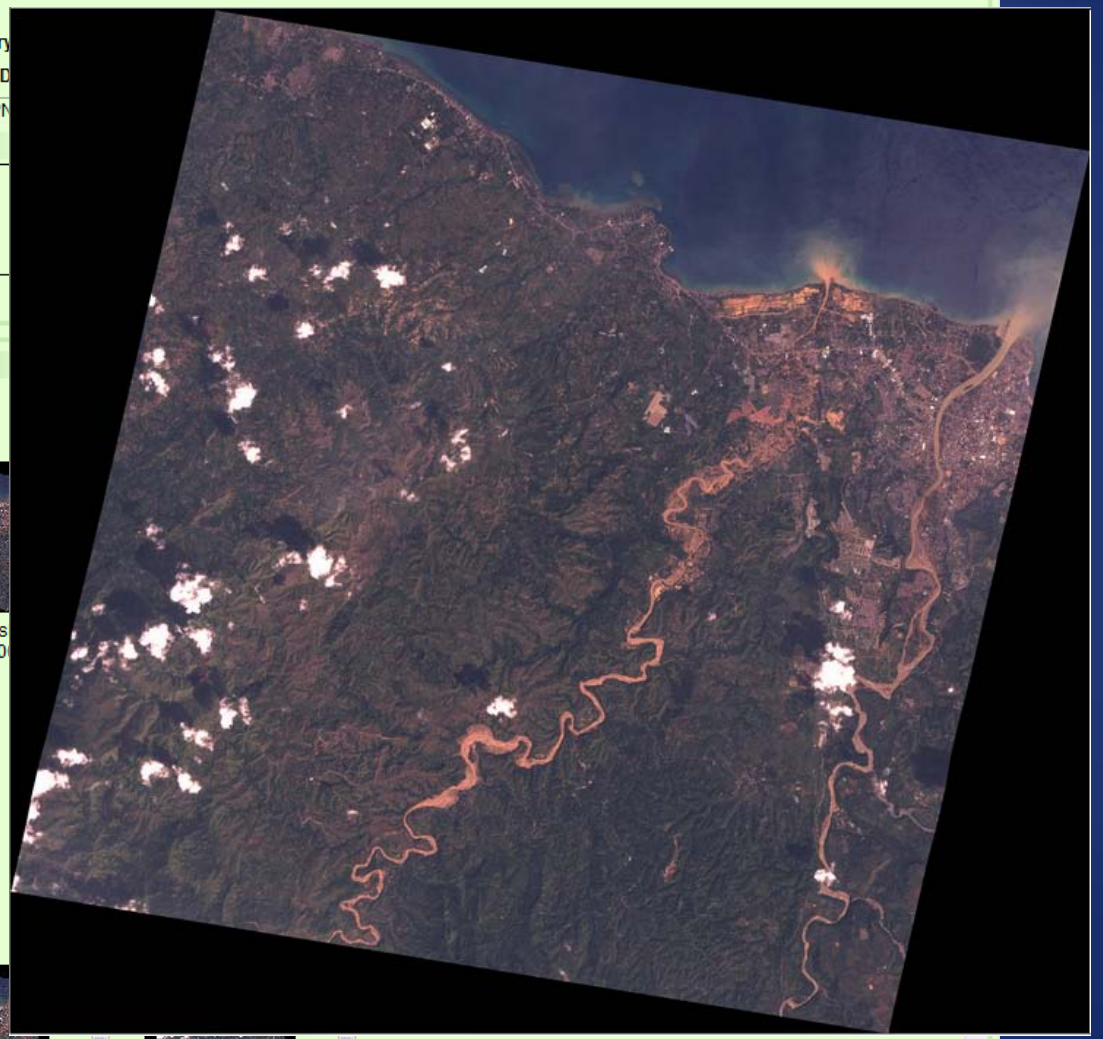
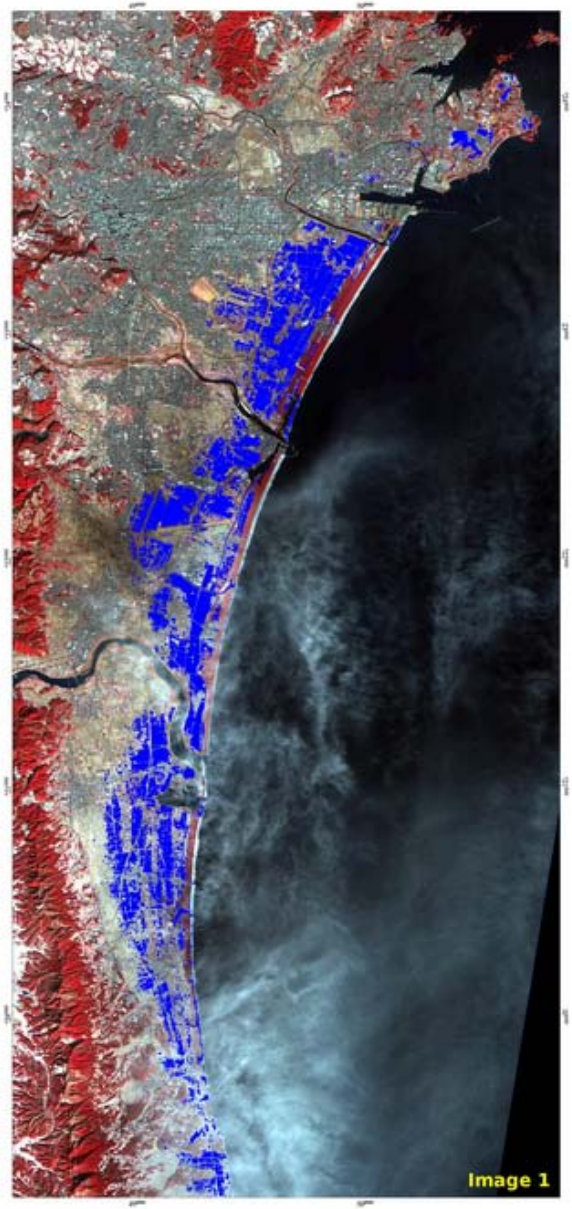

THEOS Pansharpe...
21/12/2011 00:00


THEOS Pansharpe...
21/12/2011 00:00



Earthquake case in Japan (3/3)



Tsunami Inundated Areas 2011 Sendai, Japan

Data source

Formosat-2 multispectral images displayed in RGB
Band combination:
R - Near infrared, G - Red, B - Green

Image 1 acquired on January 16, 2011 (pre-disaster)
Image 2 acquired on March 19, 2011 (post-disaster)

Map Projection: UTM zone 54N
Datum: WGS 84

Legend

Inundated Area

Description

The tsunami due to the Tohoku Earthquake of March 11, 2011 caused widespread inundation in the Sendai area. Here we show the inundated area in a coastal strip which extends from Sendai city to the southern end of Miyagi Prefecture.

Severely inundated areas are obtained by thresholding the NIR band in the post-disaster image, as the NIR reflectance in water is extremely low. The sea, rivers and large bodies of water are removed from the displayed inundated area as these regions are under water in both images.

The inundated area is indicated on the pre-disaster image in blue. It covers a total area of 58.03 sq km.

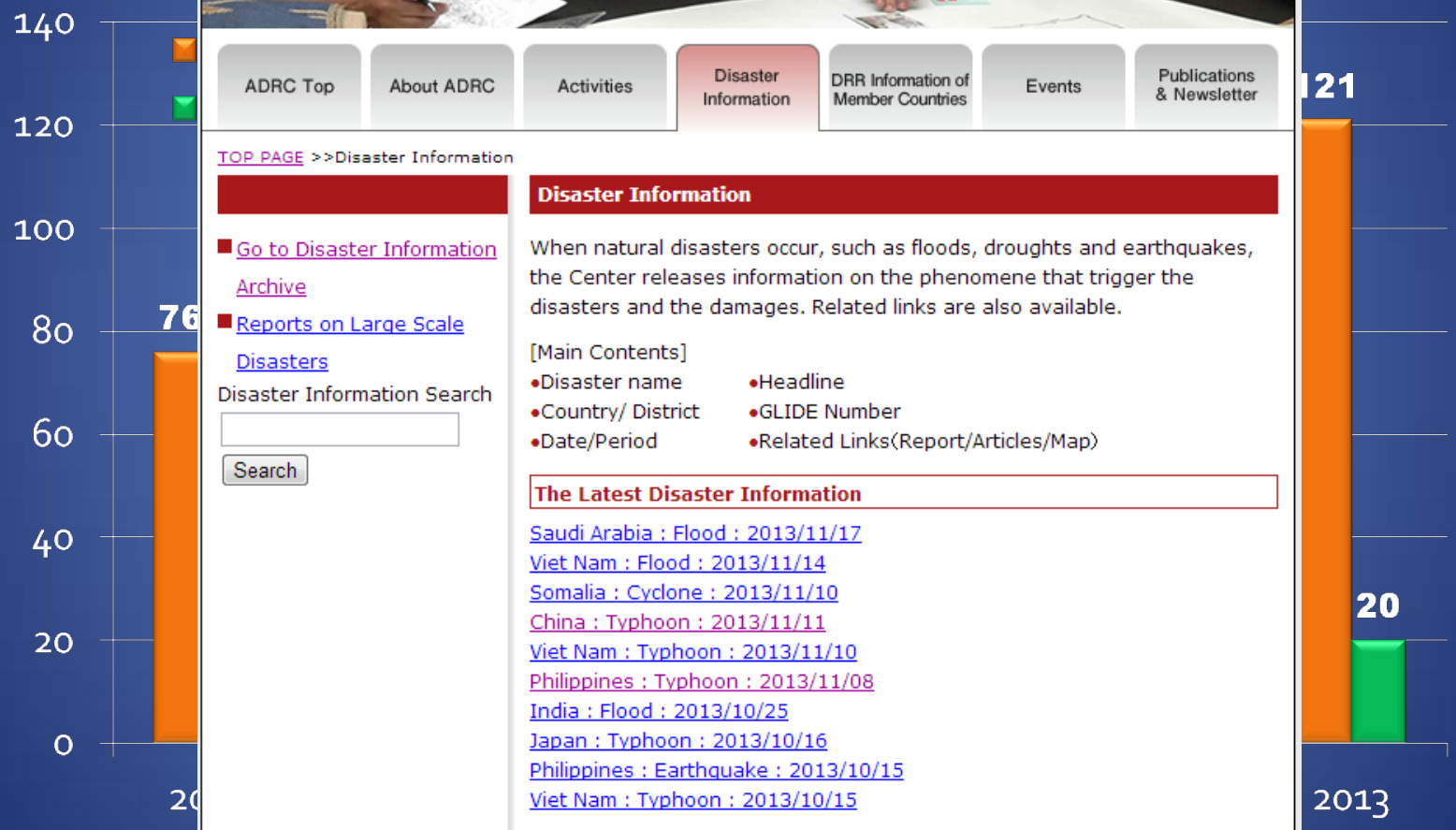
CRISP
National University of Singapore

Sentinel Asia

Sentinel Asia, Emergency Observation, 2013

Country	Region	Type			Implementation for Emergency							Requester	Analyzer
			Request	Implementation	JAXA	ISRO	KARI	GISTDA	NARL	CRISP	Disaster Charter		
Indonesia	Jakarta	Flood	2013/1/17	2013/1/17	Yes				Yes			LAPAN	AIT
Solomon Islands	Santa Cruz Islands	Earthquake, Tsunami	2013/2/14	2013/2/15	Yes							NDMO (SI)	
Indonesia	Manado City, North Sulawesi	Flood, Landslide	2013/2/21	2013/2/21	Yes	Yes						LAPAN	AIT
China	Southwestern Sichuan province	Earthquake	2013/4/20	2013/4/20	Yes	Yes						the Chinese University of Hong Kong	AIT
Nepal	Khalanga, Darchula district	Flood	2013/6/19	2013/6/19	Yes							NGIIP, Survey Department, NEPAL	
India	North India, Uttrakhand	Flood	2013/6/21	2013/6/21	Yes							Symbiosis Institue of Geoinformatics	
Indonesia, Malaysia	Sumatra, Riau Province (Indonesia)Muar (Malaysia)	Forest Fire (Indonesia) Haze (Malaysia)	2013/6/21	2013/6/21	Yes	Yes						LAPAN	
Vietnam	Quy Nhon coastal area	Oil spill	2013/7/15									NRSC(VN)	
Thailand	Chanthaburi Province	Flood	2013/7/25	2013/7/25	Yes						Yes	GISTDA	AIT
Japan	Yamaguchi Prefecture	Flood	2013/7/29	2013/7/29	Yes				Yes		Yes	Hiroshima Institute of Technology	Hiroshima Institute of Technology, Yamaguchi Univ., AIT
Myanmar	Kayin State	Flood	2013/8/12	2013/8/13	Yes							MEC, Myanmar Engineering Society	
Philippines	Metro Manila	Flood, Landslide, Storm	2013/8/19	2013/8/19	Yes						Yes	Manila Observatory (MO)	AIT, PHIVOLCS, MO, PAGASA
Pakistan	Rajan Pur, Punjab	Flood	2013/8/20									WWF (Pakistan)	
Japan	Shimane Prefecture	Flood	2013/8/25	2013/8/25	Yes				Yes			Hiroshima Institute of Technology	
India	State of Orissa and Andhra Pradesh	Flood	2013/10/14	2013/10/17	Yes							IWMI, ICAR (India)	
Philippines	Bohol Island	Earthquake	2013/10/15	2013/10/15	Yes	Yes					Yes	PHIVOLCS	
Japan	Izu Oshima Island (Tokyo)	Land slide	2013/10/16	2013/10/16	Yes				Yes		Yes	JAXA (on behalf of Ministry of Land & Transportation)	
Vietnam	Ha Tinh, Quang Binh and Binh Duong	Storm and Flood	2013/10/18	2013/10/18	Yes	Yes					Yes	MONRE	AIT
Philippines	East Visayas (Samar Is.), Tacloban, Ormoc (Leyte Is.)	Storm	2013/11/9	2013/11/9	Yes	Yes						AHA Center, NDRRMC (Philippines)	
Malaysia	Kuantan Pahang	Flood	2013/12/4	2013/12/4	Yes	Yes						ANGKASA	

Cha



Glossary on Natural disasters | Site Map | Japanese | Русский

ADRC
Asian Disaster Reduction Center (ADRC)

Search

ADRC Top | About ADRC | Activities | Disaster Information | DRR Information of Member Countries | Events | Publications & Newsletter

TOP PAGE >>Disaster Information

- Go to Disaster Information Archive
- Reports on Large Scale Disasters

Disaster Information Search

Search

Disaster Information

When natural disasters occur, such as floods, droughts and earthquakes, the Center releases information on the phenomene that trigger the disasters and the damages. Related links are also available.

[Main Contents]

- Disaster name
- Country/ District
- Date/Period
- Headline
- GLIDE Number
- Related Links(Report/Articles/Map)

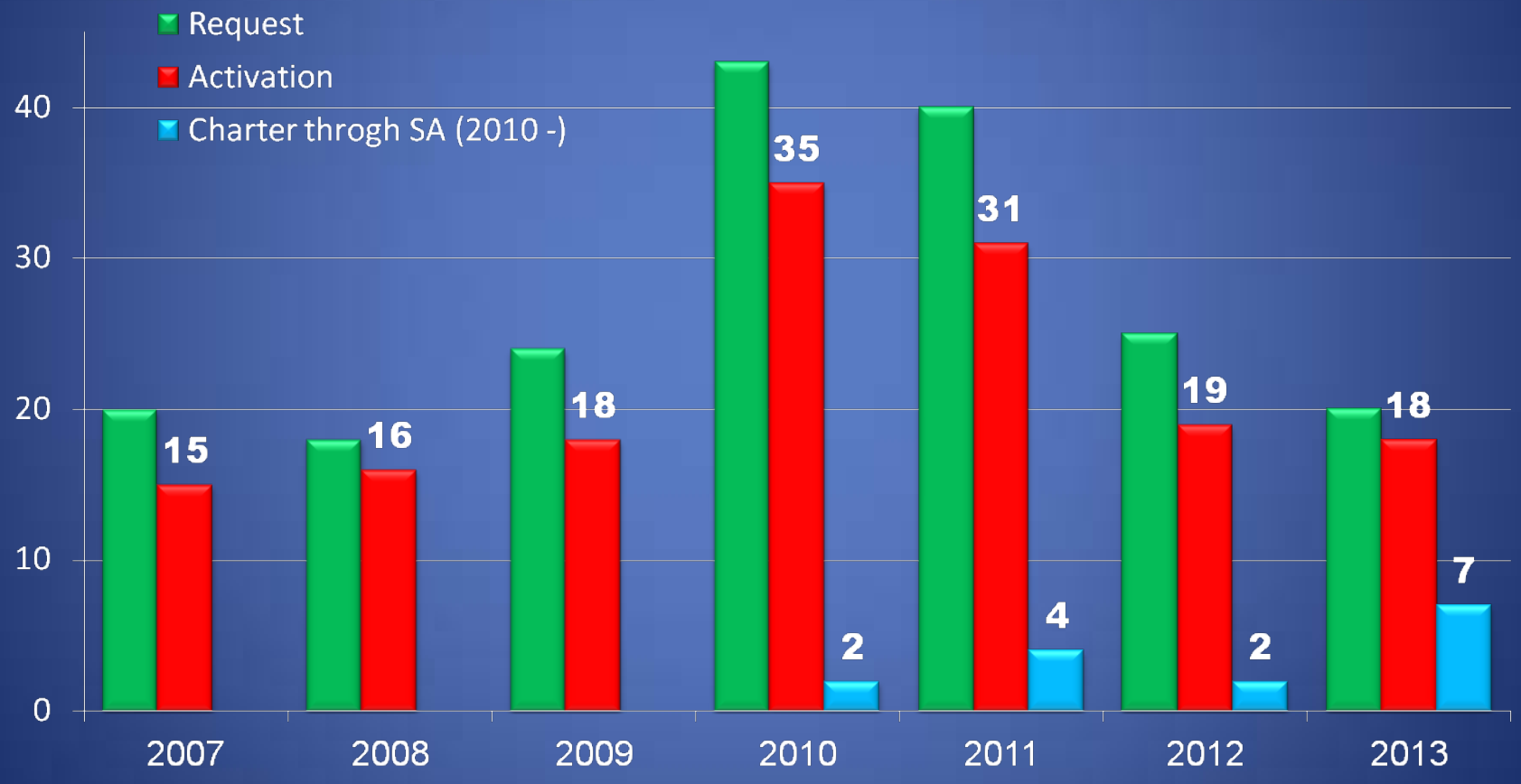
The Latest Disaster Information

Saudi Arabia : Flood : 2013/11/17
Viet Nam : Flood : 2013/11/14
Somalia : Cyclone : 2013/11/10
China : Typhoon : 2013/11/11
Viet Nam : Typhoon : 2013/11/10
Philippines : Typhoon : 2013/11/08
India : Flood : 2013/10/25
Japan : Typhoon : 2013/10/16
Philippines : Earthquake : 2013/10/15
Viet Nam : Typhoon : 2013/10/15

Go to Disaster Information Archive

| News from the ADRC | Site Policy | E-Mail to ADRC | Links |

Changes in the number of emergency observation 2007-2013

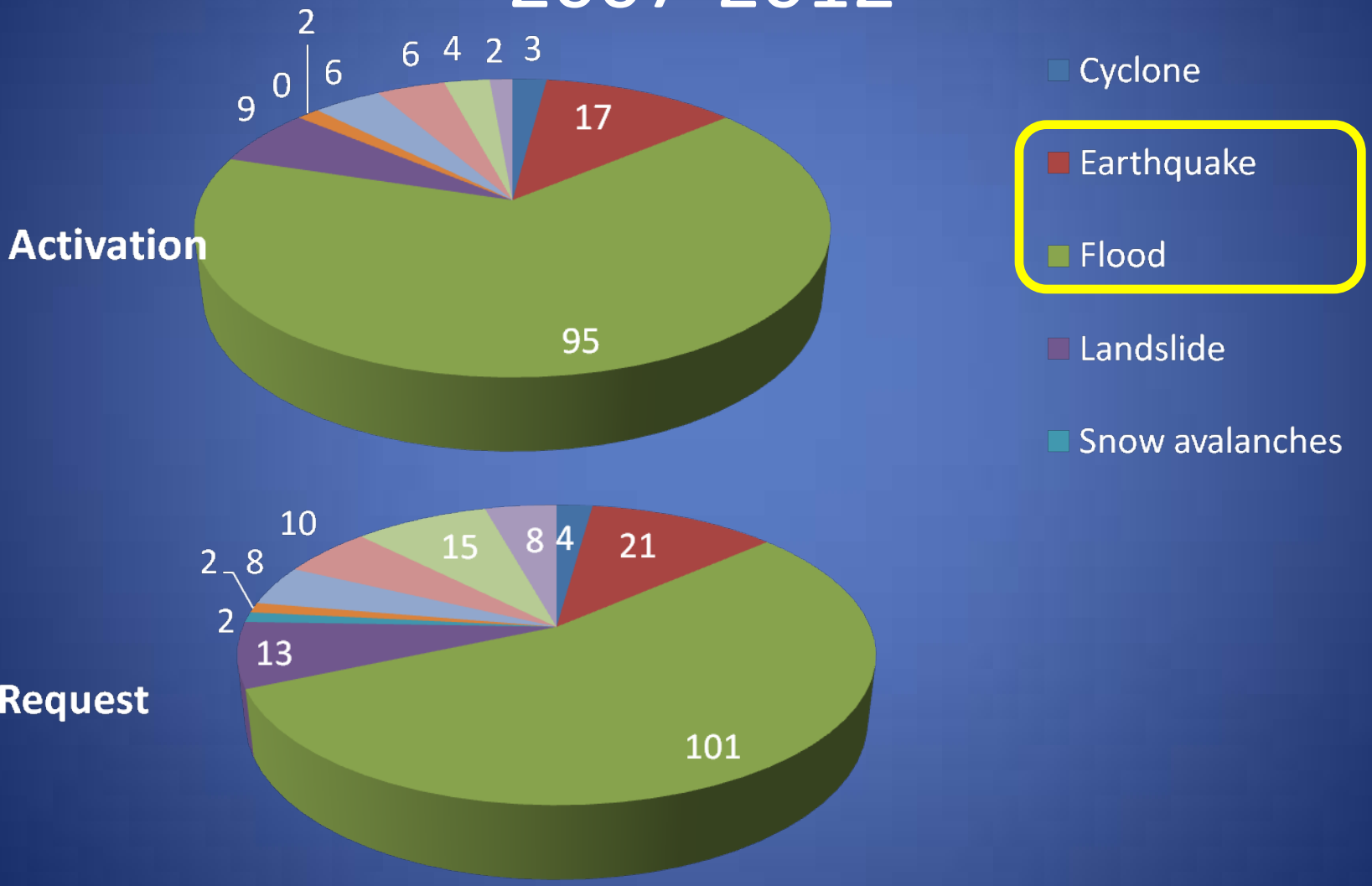


Changes in the Ratio of Requesters 2007-2013

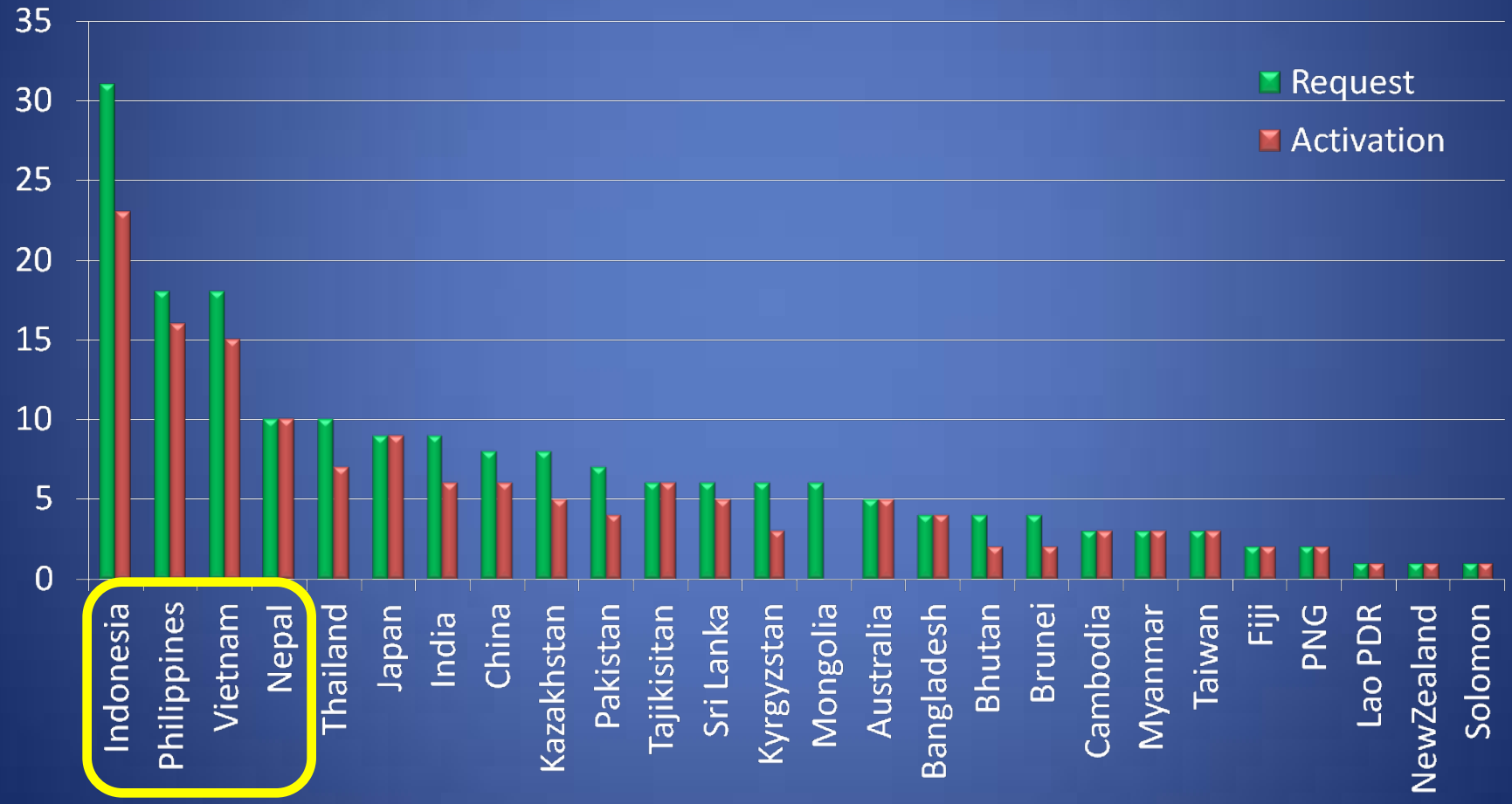
Notice :
2013 (until October)

Include requesters belonging to both JPT and ADRC member

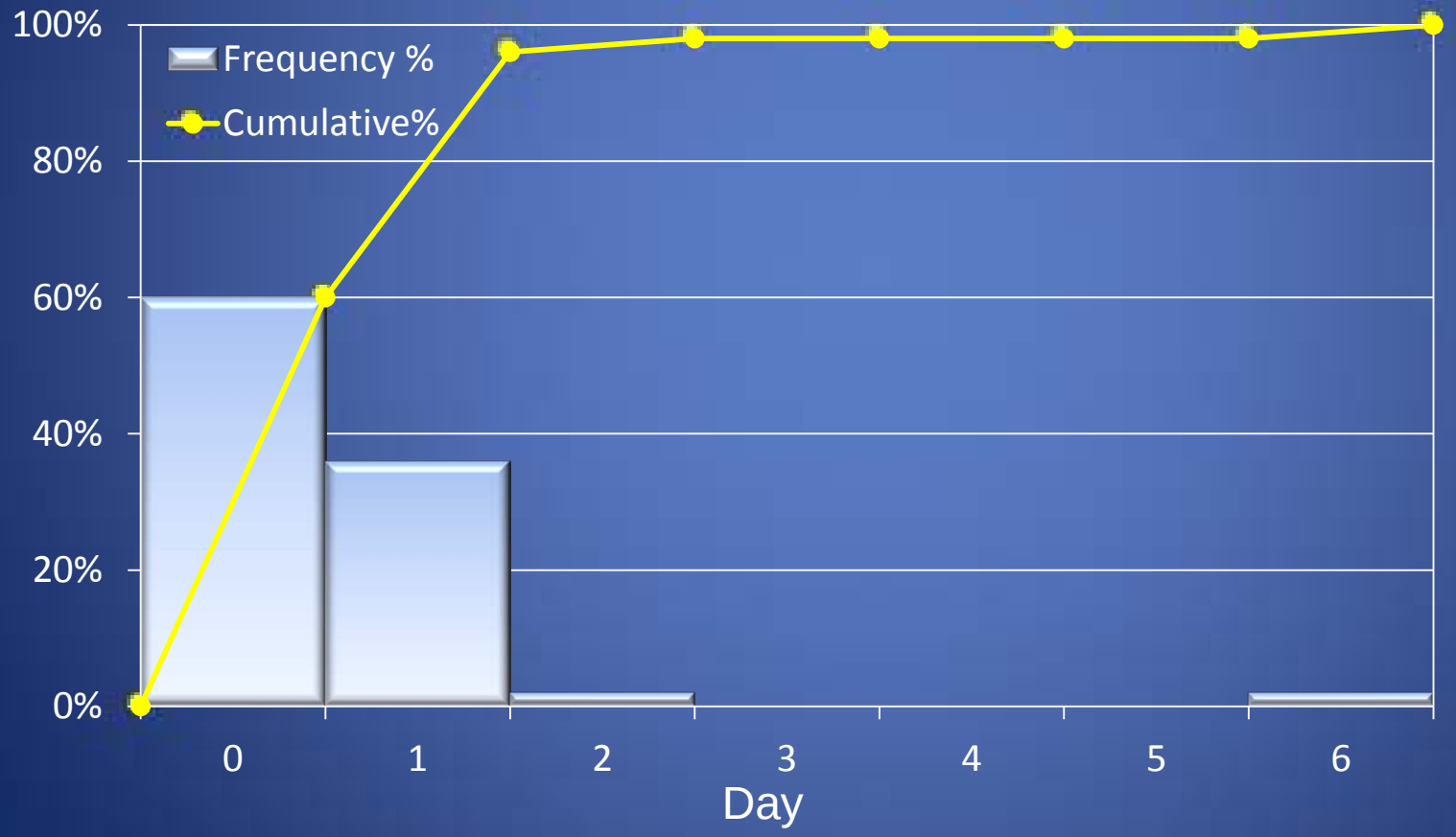
Breakdown by type of disaster 2007-2012



The status of implementation of emergency observation for each country 2007-2012



Analysis of Time from Request to Activation Jun.2011 – Aug.2013



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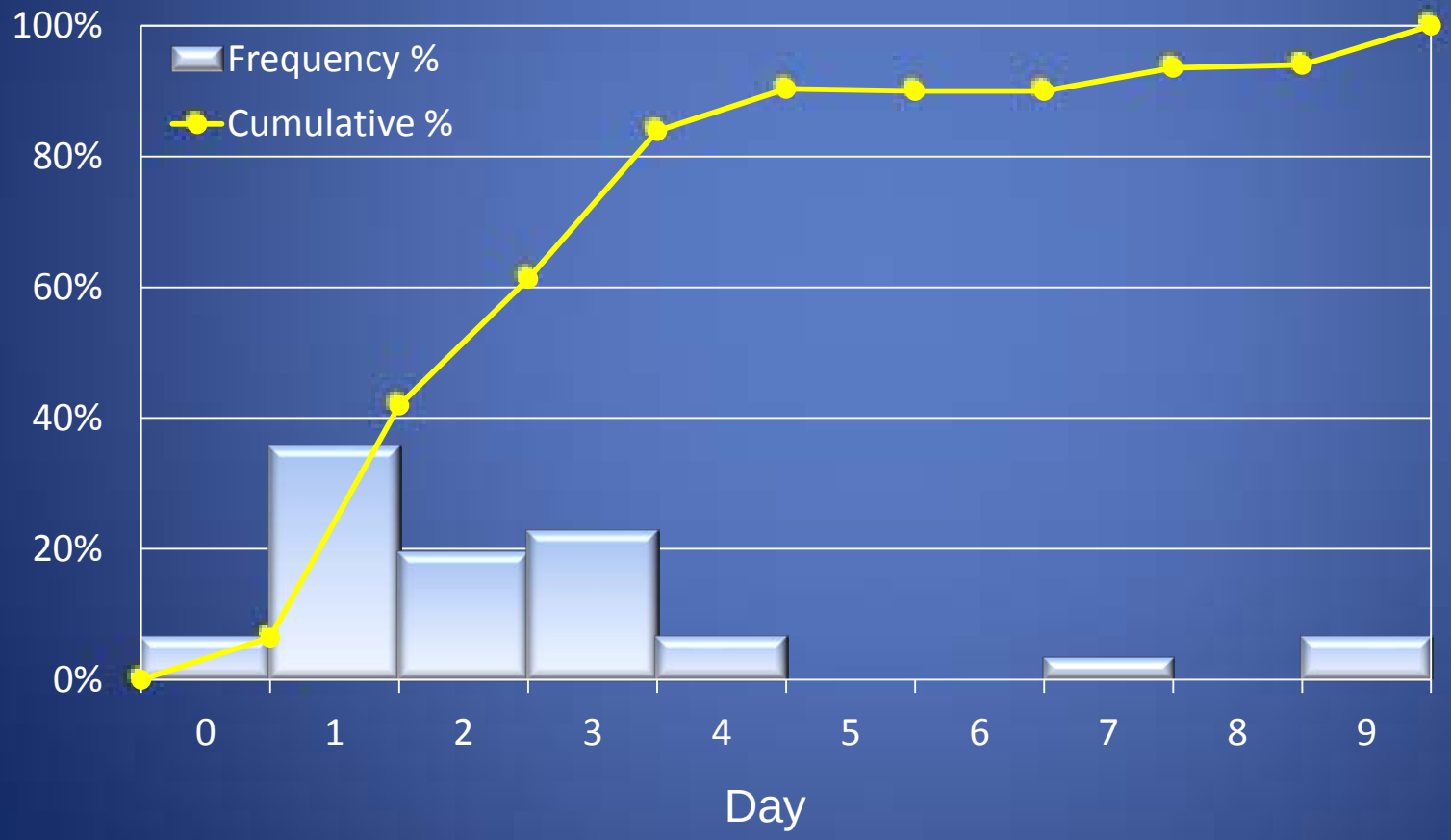
Ave. = 0.52
SD. = 0.95
Min. = 0
Max. = 6

Analysis of Time from Request to Archive Delivery Jun.2011 – Aug.2013



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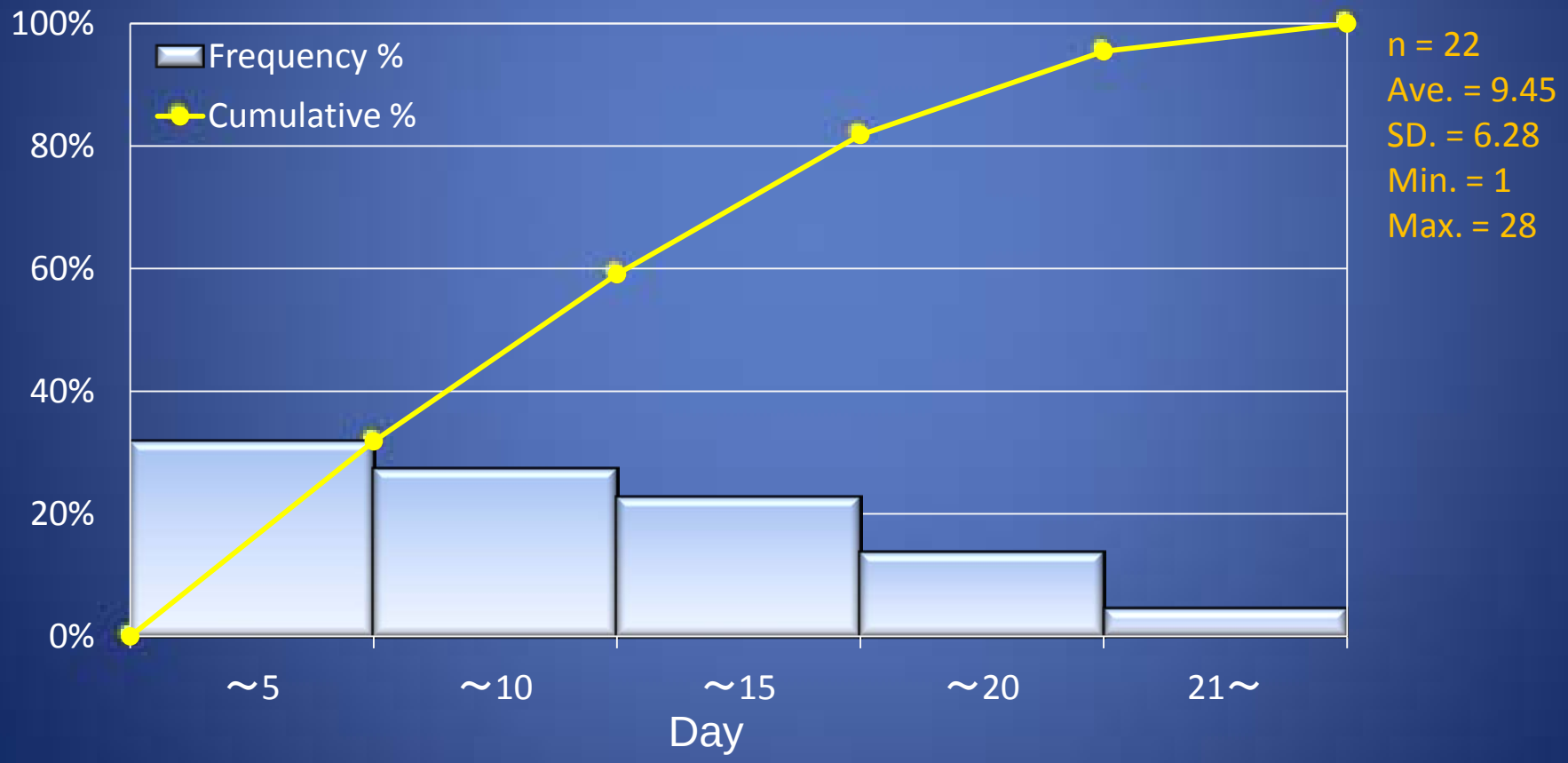
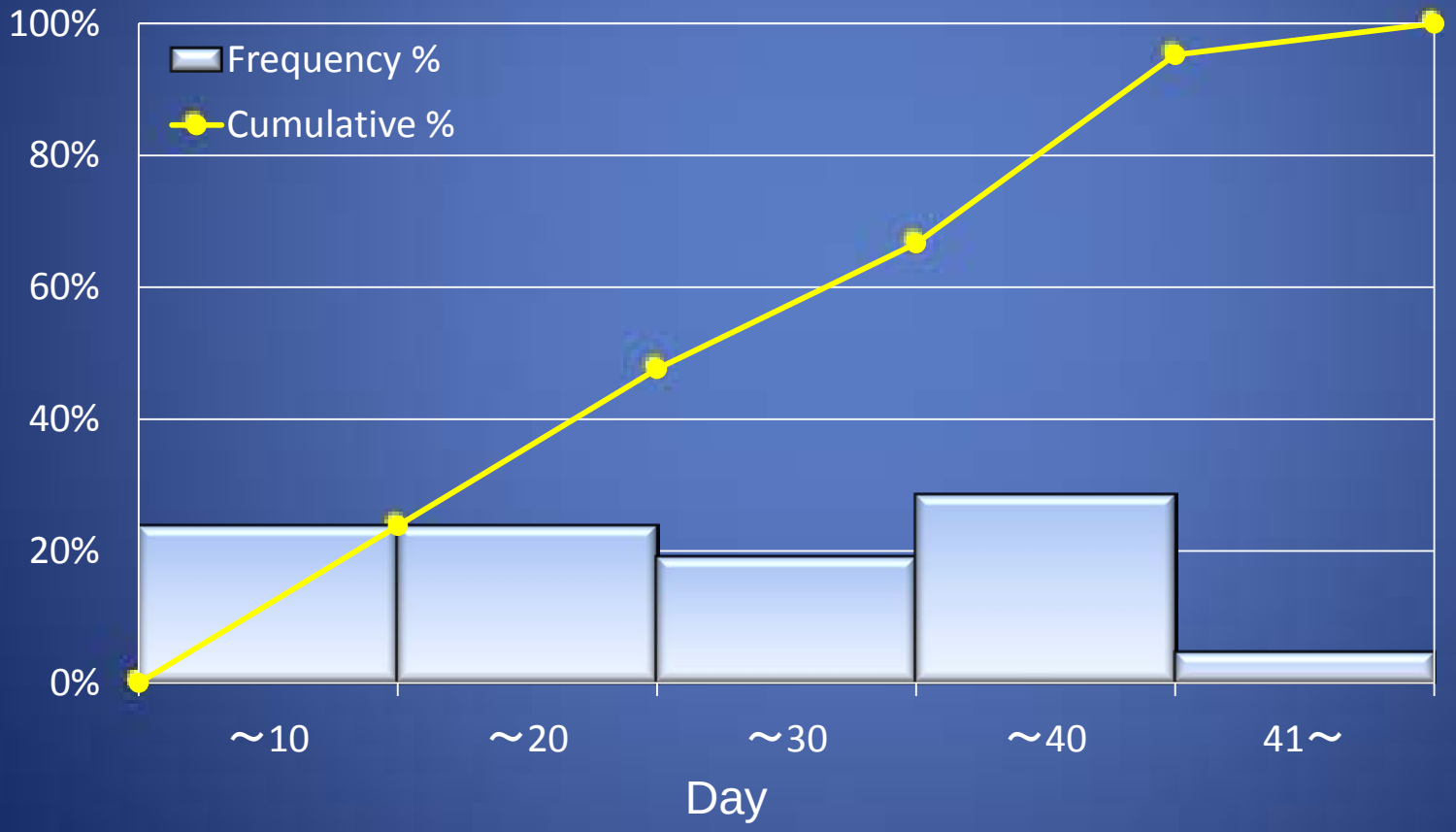
SD. = 2.23
Min. = 0
Max. = 9

Analysis of Time from Request to Post Image Delivery Jun.2011 – Aug.2013



Analysis of Time from Request to Product Delivery Jun.2011 – Aug.2013



n = 21
Ave. = 22.10
SD. = 11.21
Min. = 7
Max. = 41

Thank You For Your Attention

http://www.adrc.asia