Overview of Sentinel Asia including reports on JPTM2018Awaji and APRSAF

12 November 2019
Takanori MIYOSHI
Sentinel Asia Executive Secretariat

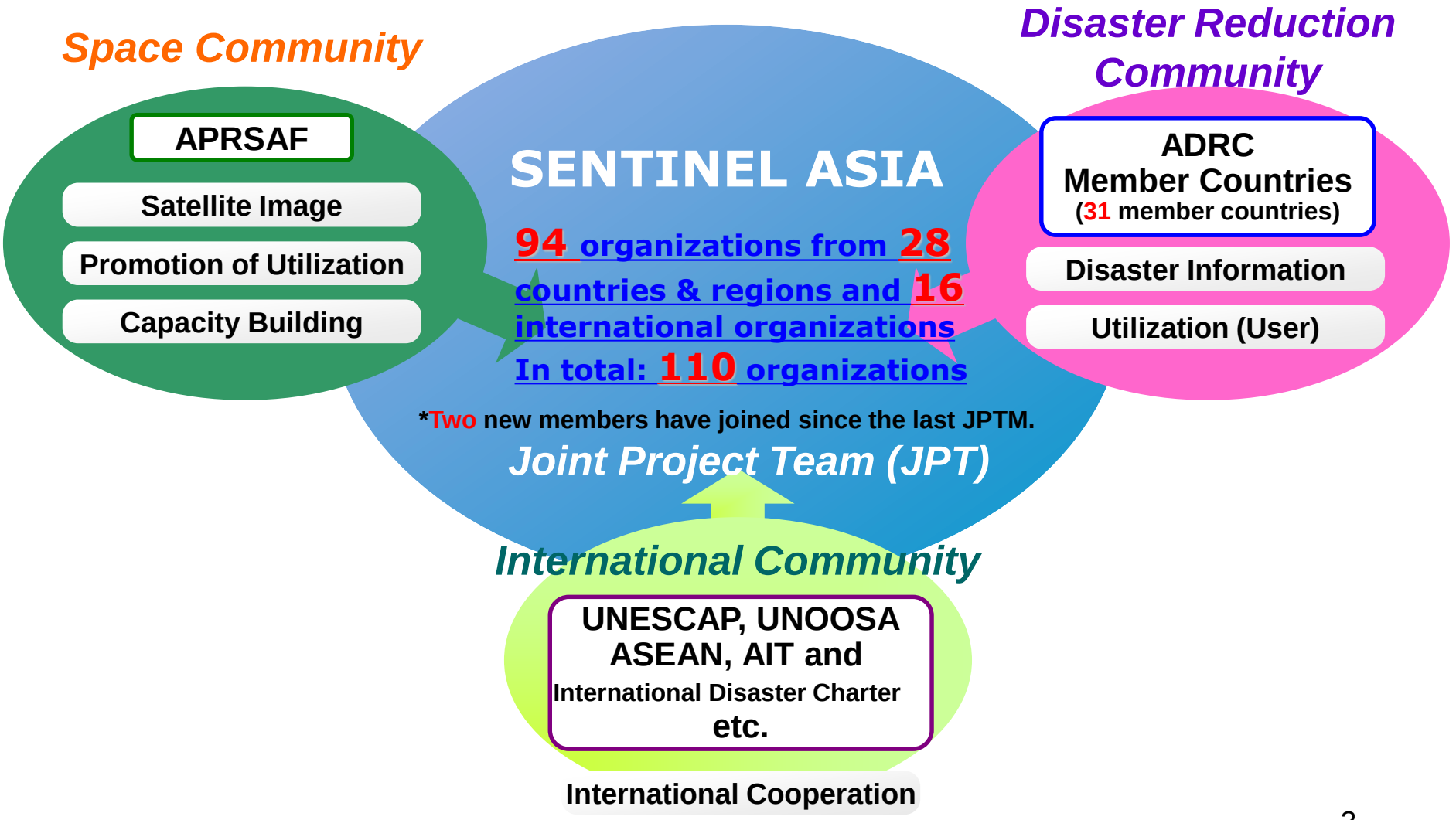
APRSAF and Sentinel Asia

Sentinel Asia

- Initiative under the Asia-Pacific Regional Space Agency Forum (APRSAF)
- Established in accordance with the recommendation at APRSAF in Kitakyushu, Japan, co-hosted by MEXT/JAXA

Membership Status

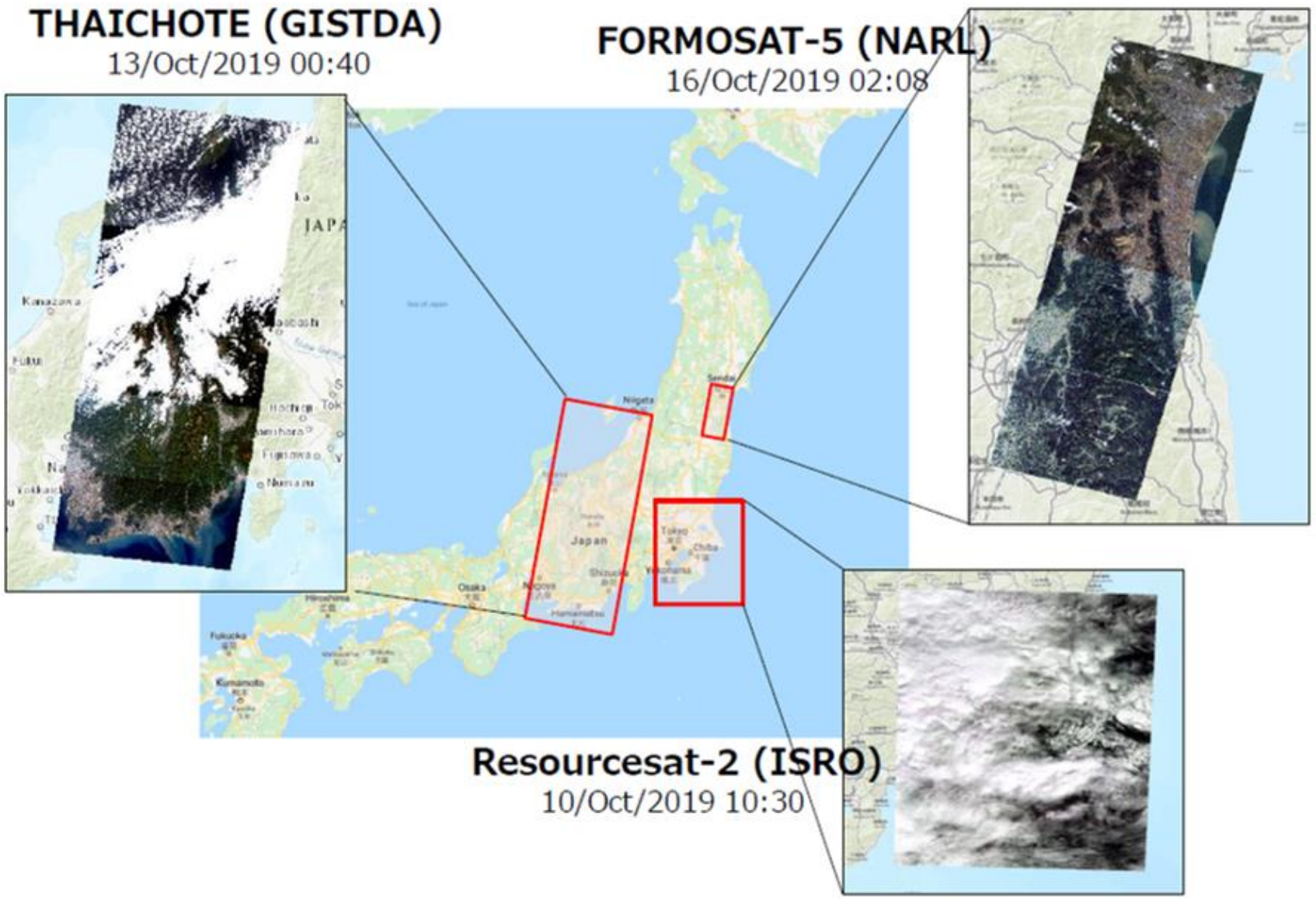
(As of 31 October 2019)



Emergency Observation
Cooperation between Sentinel Asia and the Charter
“Sentinel Asia’s Escalation to the Charter”

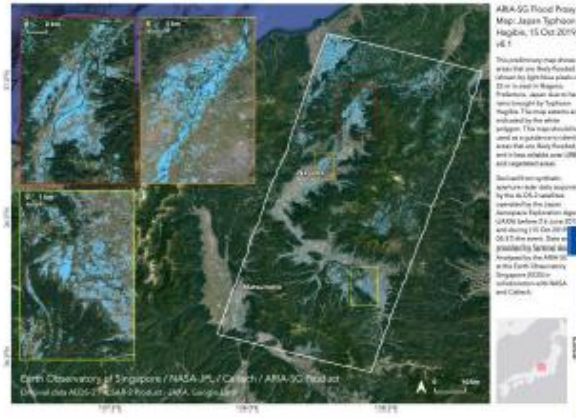
EOR Review, Responded Disaster by Geographical Distribution

The latest Emergency Observation
Typhoon Hagibis in October, Japan

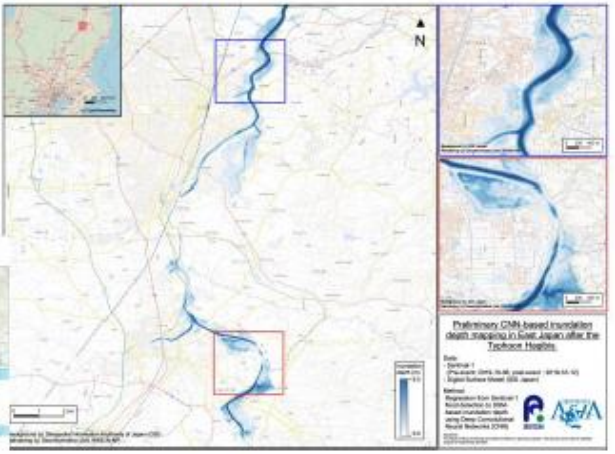


The latest Emergency Observation
Typhoon Hagibis in October, Japan

EOS



RIKEN



AIT

CHIBA

Sentinel-1 (S1) imagery
TerraSAR-X (TSX) imagery

ID: 2019-038-JPN
Typhoon No. 19 in 2019

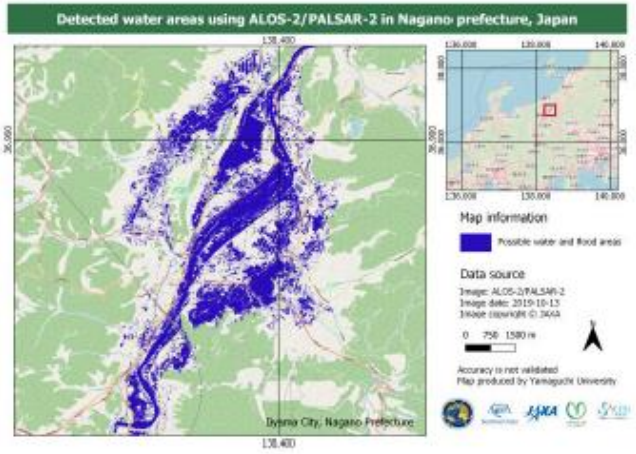
Water extraction from three-temporal SAR intensity images.
Water was extracted by the thresholding value
$W_{dB} > \mu_w + 2\sigma_w$
The water sample was selected from Kasumigaura Lake.

TerraSAR-X/TanDEM-X © DLR e. V. 2019, Distribution Airbus DS GEO GmbH
Sentienl-1 image was owned by ESA, downloaded from OpenHub.

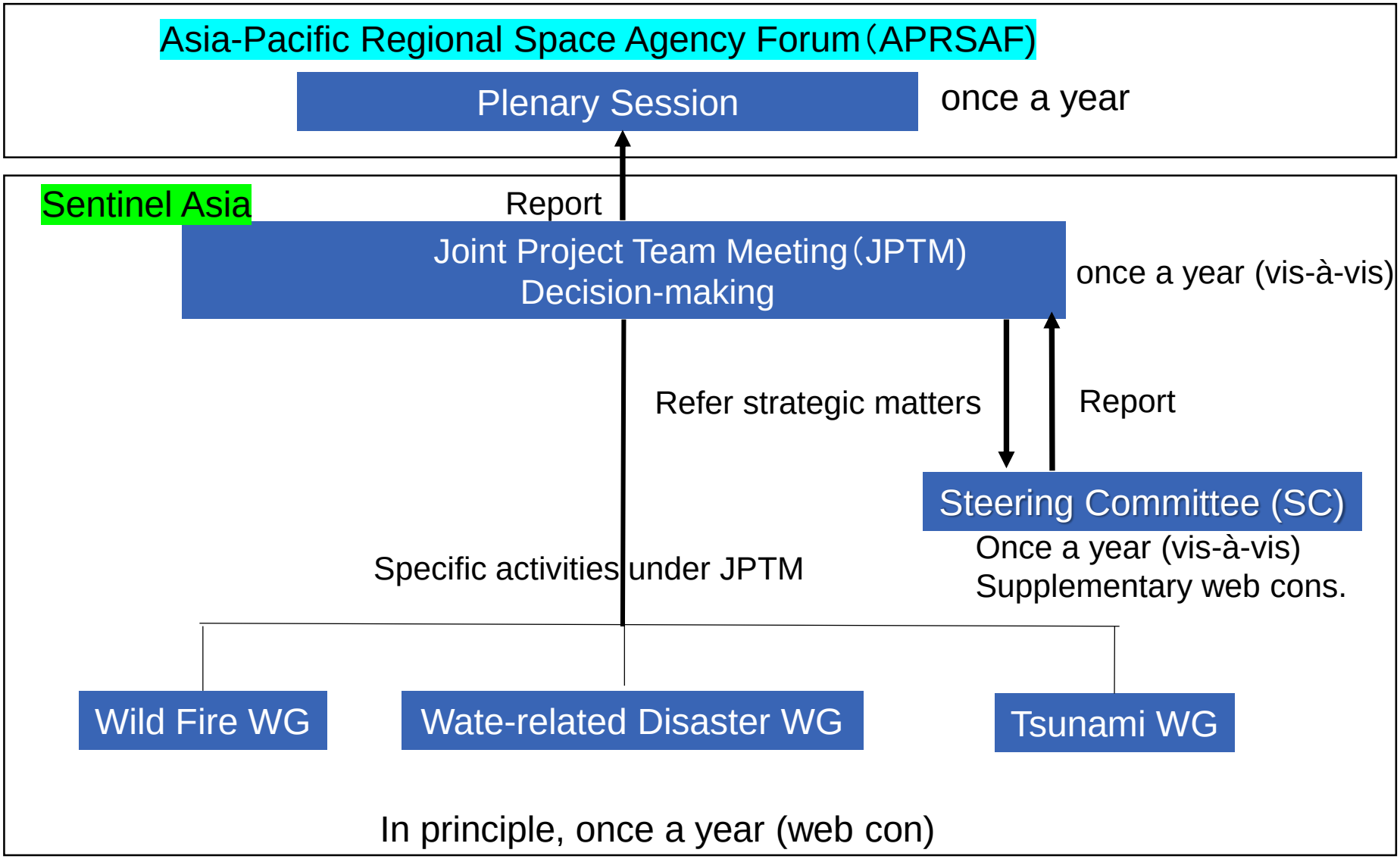
Water regions
- S1 (17:33 JST on Oct. 7, 2019)
- TSX (05:44 JST on Oct. 12, 2019)
- S1 (17:34 on Oct. 13, 2019)

JAXA DLR esa CHIBA UNIVERSITY

JPYU



Sentinel Asia's relevant conference bodies



The 6th Joint Project Team Meeting for Sentinel Asia STEP-3 (JPTM2018Awaji)

- held on 1-2 November 2018 at Awaji Yumebutai, Awaji-island, Hyogo, Japan co-organized by Asian Disaster Reduction Center (ADRC) and JAXA.
- number of participants : 51
- number of organizations : 33

JPTM2018Awaji
Agenda (Day 1)

[Day 1] 1st November, 2018

Time		Program items
08:30 - 9:00		Registration
		Opening Session
09:00	5 min	Welcome Remarks: JAXA
	10 min	Adoption of Agenda and Self-introduction of Participants
		Session 1 : Overview
09:15	10 min	1.1 Overview of Sentinel Asia Status: JAXA
	10 min	1.2 Overview of Emergency Observation: ADRC
	10 min	1.3 Report of the Steering Committee: Dr. Lal Samarakoon
	10 min	1.4 JPTM2018 Report: NARL
09:55	25 min	Photo Session & Break
		Session 2 : New membership and Working Group Activities
10:20		2.1 Presentation by new members
	10 min	- MIMU
	10 min	- VIGMR
	10 min	2.2 Water-related Hazard Working Group: IWMI
	10 min	2.3 Tsunami WG: MMAF
	10 min	2.4 WildFire WG: JAXA
11:30	20 min	Break
		Session 3 : Users' session
11:30		3.1 Presentation by guest speakers from the ACDR community
	15 min	- National Committee for Disaster Management (Cambodia)
	15 min	- Ministry of Labour and Social Welfare (Lao PDR)
	15 min	- National Disaster Management Agency (Malaysia)
12:15	75 min	Lunch

		Session 3 : Users' session
11:30		3.1 Presentation by guest speakers from the ACDR community
	15 min	- National Committee for Disaster Management (Cambodia)
	15 min	- Ministry of Labour and Social Welfare (Lao PDR)
	15 min	- National Disaster Management Agency (Malaysia)
12:15	75 min	Lunch
		Session 3 : Users' session (continued)
13:30		3.2 Presentation on good practices
	10 min	- ADB
	10 min	- ADPC
	10 min	- AHA Centre
	10 min	- EOS
	10 min	- ICIMOD
	10 min	- Manila Observatory
	10 min	- MONRE
	10 min	- MoSWRR
	10 min	- PHIVOLCS
	10 min	- PNGNDC
	10 min	- SUPARCO
	25 min	3.3 Discussion - expectation for Sentinel Asia toward further improvement
15:45	20 min	Break
		Session 4 : Local Host's session
16:05	20 min	4.1 Keynote presentation: Dr. Kaku
		4.2 Presentation by Japanese disaster management organizations and research institutions
	15 min	- GSI
	15 min	- JMA
	15 min	- Chiba university
	15 min	- NIED
	15 min	- Yamaguchi University
	20 min	4.3 JAXA's Activities for Domestic Disaster Response: JAXA
18:00		Adjourn
19:00		Dinner

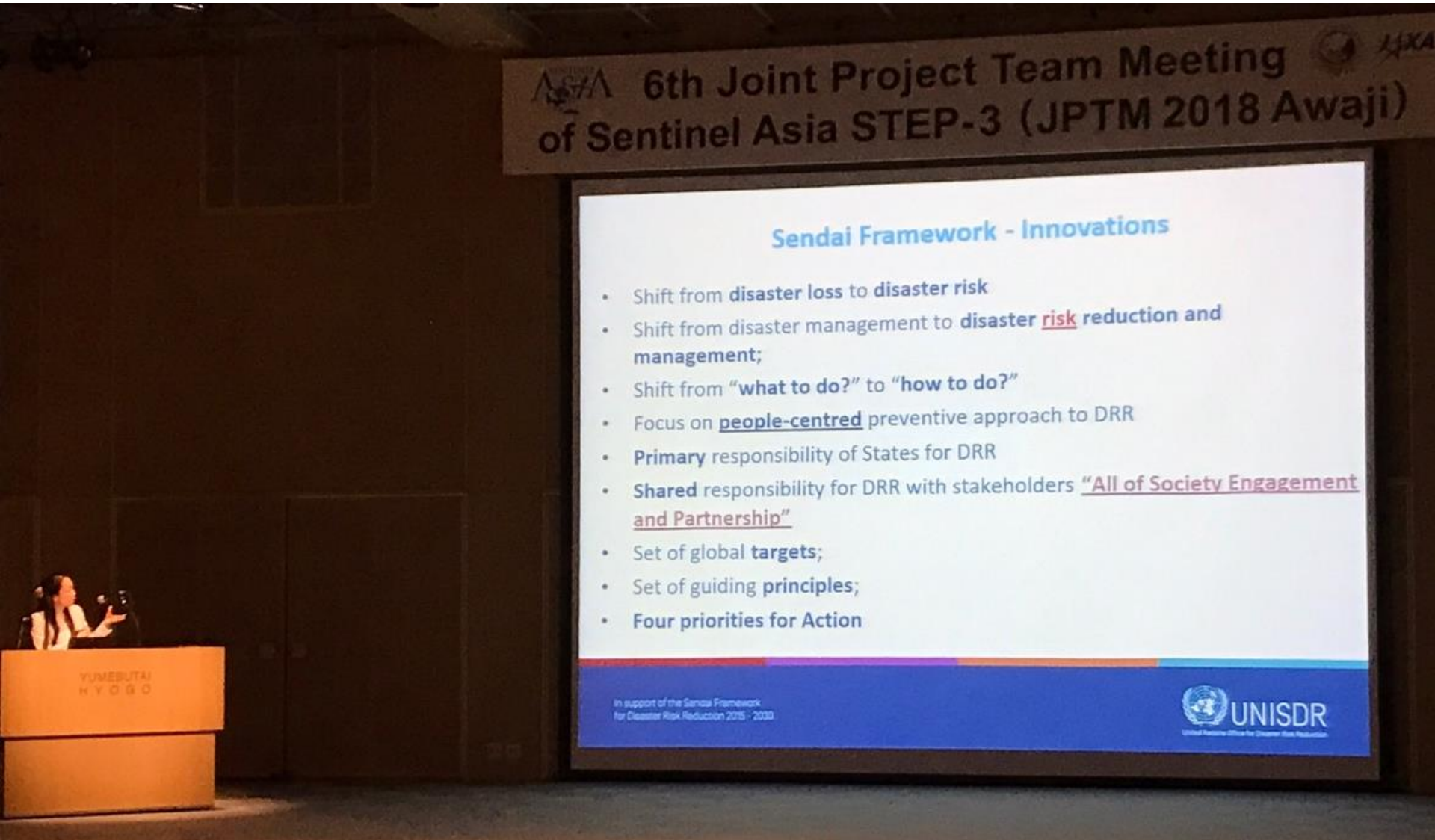
JPTM2018Awaji
Agenda (Day 2)

[Day 2] 2nd November, 2018

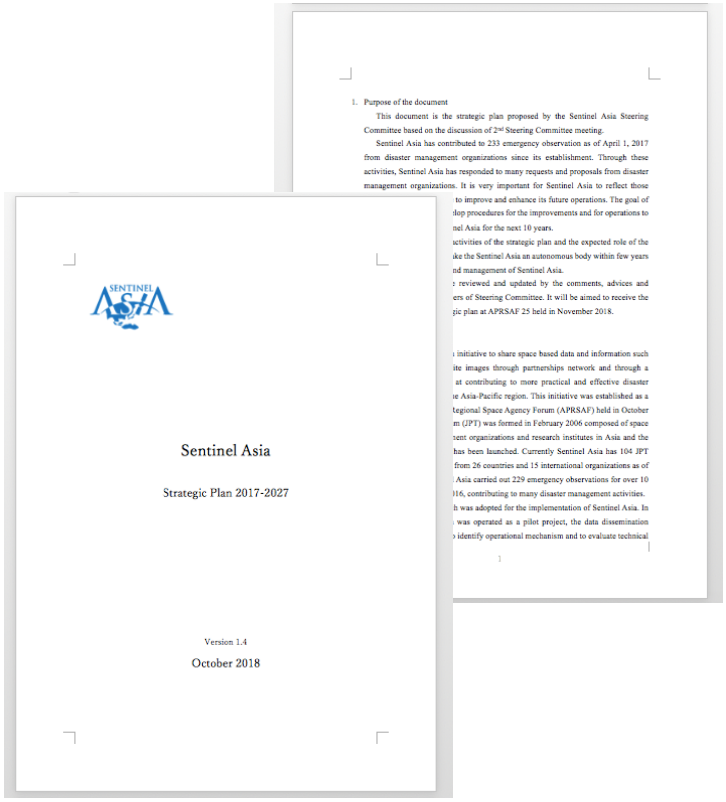
Time		Program items
		Session 5 : Project Management
09:00		5.1 Reports by Data Provider Nodes (DPN)
	10 min	- GISTDA
	10 min	- ISRO
	10 min	- JAXA
	10 min	- MBRSC
	10 min	- NARL
	10 min	- VAST
		5.2 Primary Data Analysis Node (P-DAN)/DAN Report
	10 min	- GIC/AIT, P-DAN
	10 min	- University of Tokyo, P-DAN
	10 min	- Yamaguchi University, VAP leader
	10 min	5.3 Sentinel Asia documents (TOR): JAXA
10:40	20 min	Break
		Session 6 : Sentinel Asia System
11:00	10 min	6.1 Sentinel Asia Step 3 System: JAXA
	10 min	6.2 Contribution to Sentinel Asia regional cloud servers: NARL
	10 min	6.3 OPTEMIS development status: GISTDA
	20 min	6.4 Demonstration of OPTEMIS: GISTDA
12:00	75 min	Lunch

		Session 7: Strategic Plan of Sentinel Asia (under the leadership of the Steering Committee)
13:15	10 min	7.1 Introduction of the Strategic Committee: Dr. Lal Samarakoon / Mr. Suzuki
	10 min	7.2 I Satellite Data Provisions and Systems: JAXA / GISTDA
	10 min	7.3 II Value Added Product (VAP): Yamaguchi University
	10 min	7.4 III End-user Enhancement: GIC/AIT
	10 min	7.5 IV Step-3 Activities (Complete DRR cycle): ADRC
	10 min	7.6 V Communication, Collaboration and Cooperation: ADRC
	15 min	7.7 Discussion and adoption of the Strategic Plan
14:30	20 min	Break
		Session 8: Special Sesssion - Contribution of Sentinel Asia to achieving global agenda
14:50	20 min	8.1 Keynote Speech: UNISDR
	15 min	8.2 Toward the strengthened link between Sentinel Asia and Sendai Framework and SDGs: IWMI
	15 min	8.3 Toward further global partnership: GIC/AIT
	20 min	8.4 Discussion
16:00	20 min	Break
		Session 9: Wrap-up session
16:20	10 min	9.1 Summary of JPTM2018Awaji: JSF/JAXA
	10 min	9.2 Next host organization: ADPC
	10 min	9.3 Closing Remarks: ADRC
17:00		Adjourn

JPTM2018Awaji
Highlight
Cooperation with the UNDRR (former UNISDR)



JPTM2018Awaji
Highlight
Endorsement of the 10-year Strategic Plan

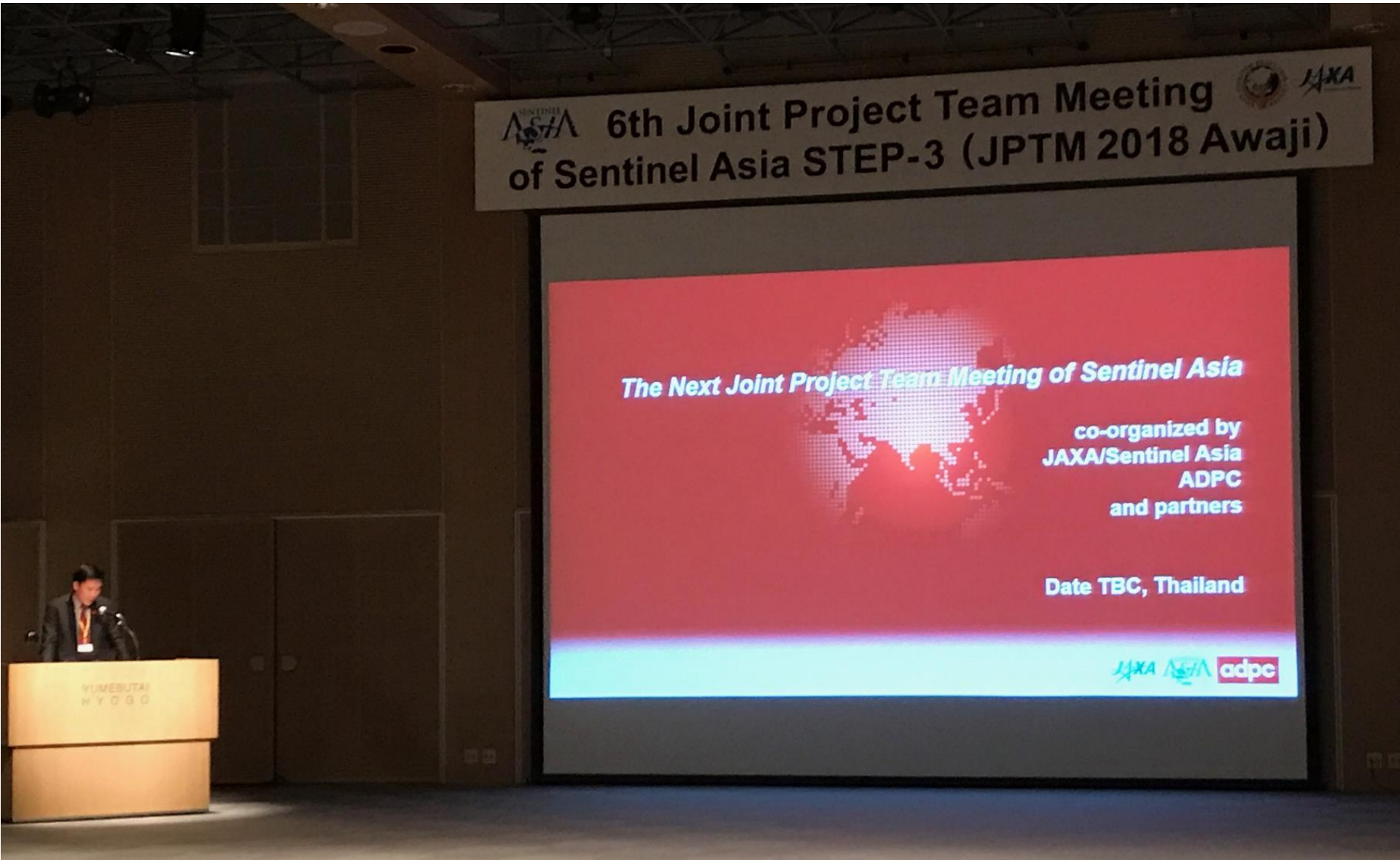


Sentinel Asia Strategic Plan.

5 pillar items ;

1. Satellite Data Provisions and Systems
2. Value Added Product (VAP)
3. End-user Enhancement
4. Step-3 Activities (Complete Disaster Risk Reduction cycle)
5. Communication, Collaboration and Cooperation

JPTM2018Awaji
Highlight
ADPC's offer to host JPTM2019 in Thailand



APRSAF-25
held in Singapore, 6-9 November 2019

APRSAF-25
Space Applications Working Group

SAWG Summary Report
Sentinel Asia and DisasterManagement

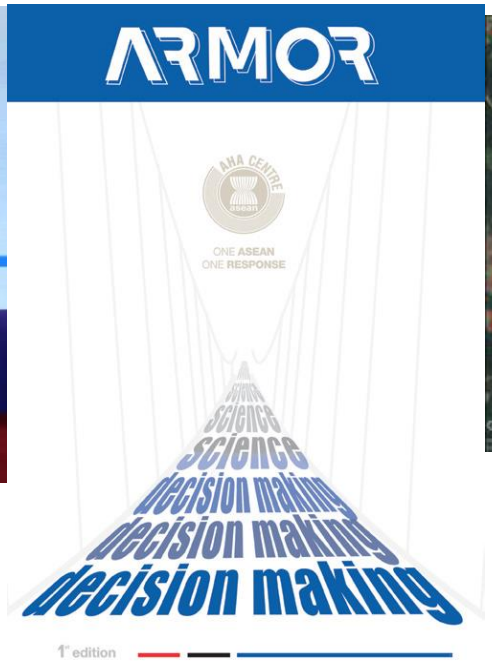
- Understand significance of multiple satellite data (standard and value added products) provided from the Asia-Pacific region
- Address latency issues in product disseminating to users
- Realize disaster preparedness / recovery period to implement full Sentinel Asia Step-3
- Acknowledgement of organizations contributing to SA, in particular, noting GISTDA's OPTEMIS being a good example to achieve one of the ideals of Sentinel Asia Step-3, "resource sharing and joint implementation"

APRSAF-25
Plenary Report

ASEAN Risk Monitor and Disaster Management Review (ARMOR)

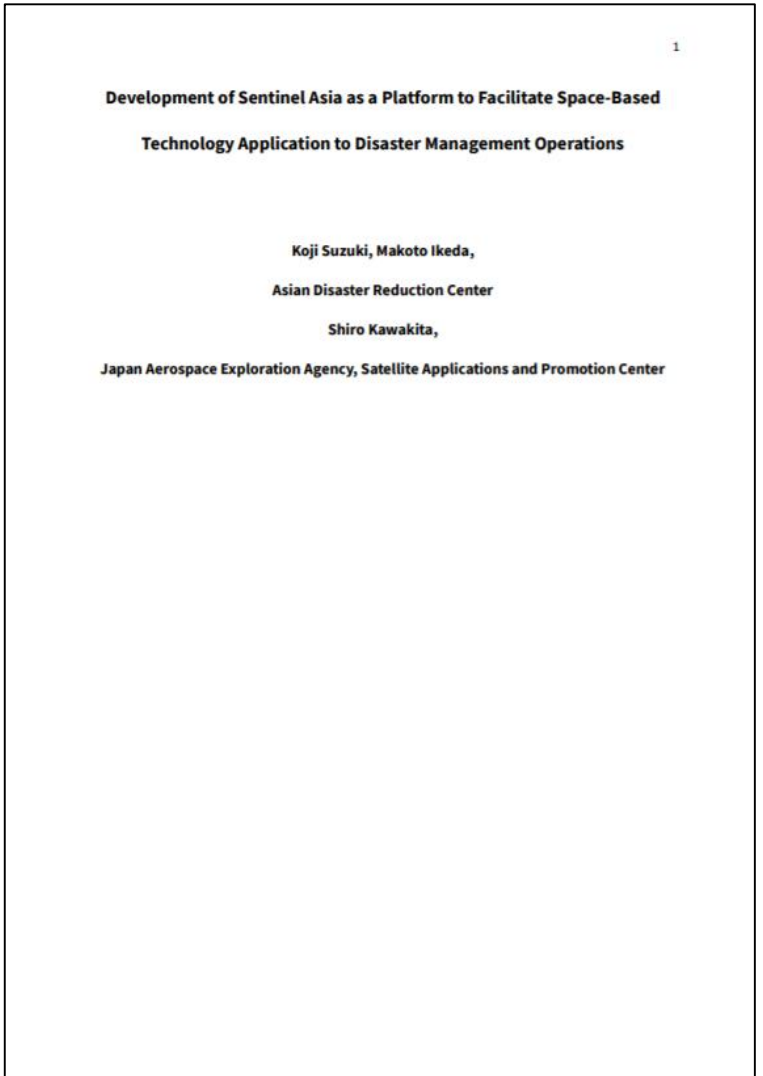
- edited and launched by the AHA Centre in March 2019
- presented good practices of Sentinel Asia
- underlined the importance of Sentinel Asia
- recommended that all DMOs of ASEAN region be exposed to Sentinel Asia

Launch Ceremony of ARMOR
Attended by higher officials
including the ASEAN Deputy Secretary-General,
and the executive director of the AHA Centre



Floods in Lao P.D.R:
Sentinel Asia's products
contributed to actual relief
activities of AHA Centre.

Sentinel Asia's presence at the UNDRR community ~UNDRR Global Platform High-Level Panel presented by the President of JAXA~

Sentinel Asia's presence at the UNDRR community

- Sentinel Asia's paper "Development of Sentinel Asia as a Platform to Facilitate Space-Based Technology Application to Disaster Management Operations"
- Co-authored by ADRC and JAXA
- Accepted and published as part of Global Assessment Report (GAR) by UNDRR