

4th Joint Project Team Meeting for Sentinel Asia Step3 (JPTM2017)

Vietnam Academy of Science & Technology, Hanoi, Vietnam

Day1: 8th March, 2017 Session 2: Sentinel Asia Step3 Evolution Progress Report

Report from Sentinel Asia Steering Committee

Koji Suzuki, Co-Chair for Sentinel Asia Steering Committee

National Research Institute for Earth Science and Disaster Resilience (NIED)

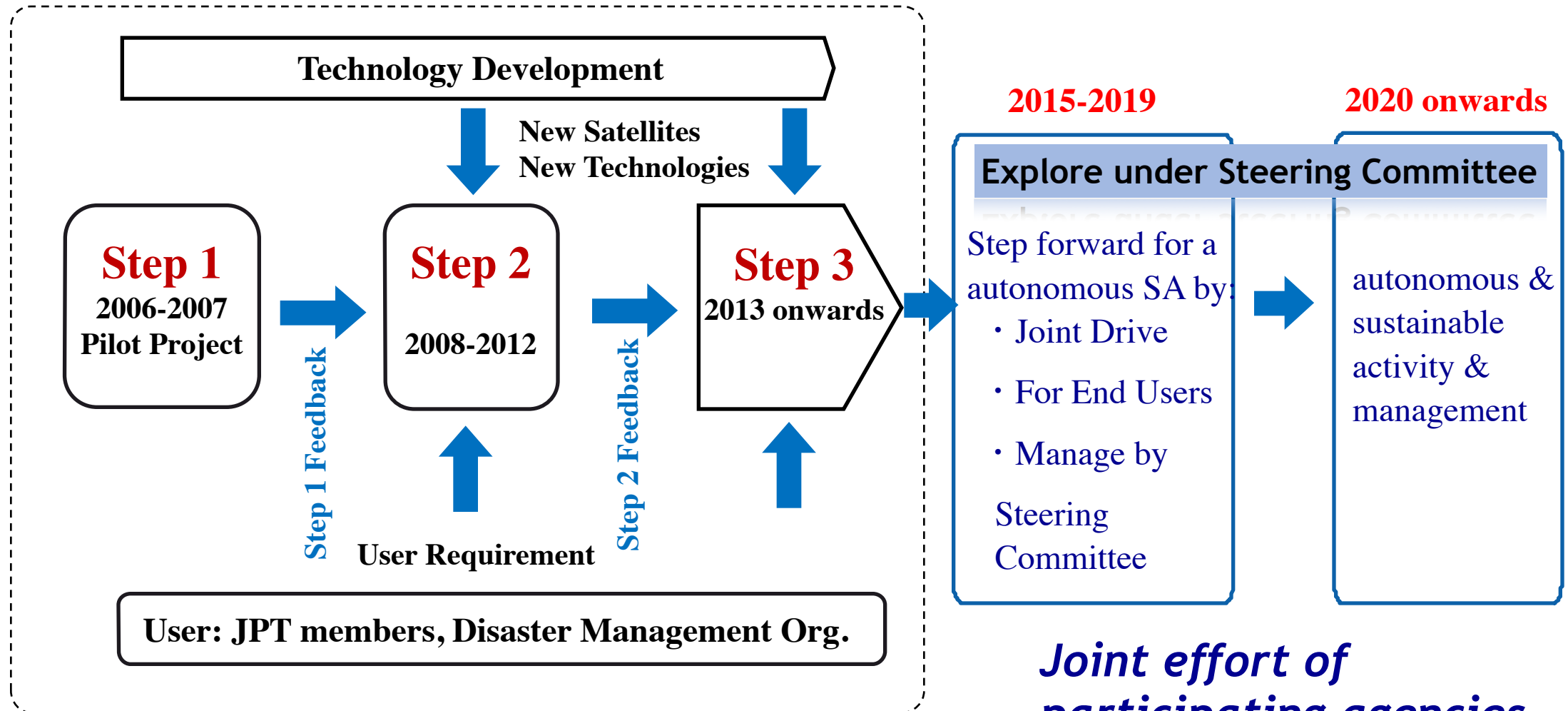
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- I. Discussions at the 2nd Steering Committee :
Dr. Lal introduced on 7th
- II. Draft “Long-term Action Plan”
- III. Way forward

I. Discussions at the 2nd Steering Committee

Steering Committee as high-level organization of Sentinel Asia to study, discuss and make decision necessary to promote the initiative

Image: Sentinel Asia **Step 3 Evolution**



Voluntary initiative under APRSAF, led by JAXA

Joint effort of participating agencies under APRSAF

Vision of SA: Sentinel Asia Step3 Evolution Plan

Recommendation of APRSAF-21

Step 3 (2015-2019) should be pushed forward by:

1. Joint drive of activity

- Increase contribution of each participating organization by each role, for example, to utilize programs of each participating organization, particularly in collaboration with funding agencies (ADB, WB, JICA, etc.), to implement Success Story projects to solve regional issues finally aiming at a community-operated system
- Collaborate with international initiatives (the International Disaster Charter, GEO, CEOS, etc.)

2. End user-oriented activity (For end users)

- Utilize SA data and information not only to the government level but also to community level.
- Need to establish projects which match the needs of each country.

3. Strategic management

- Establish “Steering Committee” in SA for strategic, quick decision making purpose, e.g., to discuss data policy, long-term strategy of SA.

2nd Sentinel Asia Steering Committee meeting

1. Date : 19th -20th January 2017
2. Venue: Tai-Pan Hotel, Bangkok, Thailand
3. Goals & Expected Outcomes:
 - i. To share the common views on important issues for sustainable and autonomous operation of SA and to discuss how to deal with them
 - ii. To draft “**Long-term Action Plan**” of SA
 - iii. To plan 10th anniversary event and select candidates for 10th anniversary achievement award
4. Co-Chairs
 - iv. Koji Suzuki (NIED, Japan)
 - v. Lal Samarakoon (GIC/AIT)

Participants

DPN members (A)

- 1) ISRO, Mr. S. V. Shivaprasad Sharma
- 2) GISTDA, Mr. Disapat Sawafisukhitkul, Mr. Wasanchai Vongsantivanich
- 3) NARLabs, Dr. Franz Ming-Chih Cheng, Research Fellow
- 4) CRISP, Mr. Kwoh Leong Keong, Director
- 5) VAST, Dr. Pham Minh Tuan, Deputy Director, STI
- 6) JAXA, Dr. Shin-ichi Sobue, ALOS-2 Project Manager

P-DAN (A)

- 7) GIC/AIT, Dr. Lal Samarakoon, Director, Dr. Kavinda Gunasekara, Mr. Syams Nashrrullah
- 8) UTokyo, Prof. Ryosuke Shibasaki, Director, Dr. Nagai, Dr. Miyazaki

Disaster Management Organizations

- 9) ADRC, Ms. Kyoko Kondo, Executive Director
- 10) PHIVOLCS, Dr. Arturo Daag, Chief, Geology, Geophysics Research & Development Division

Persons who worked for initiation of Sentinel Asia

- 11) CSIRO, Dr. Alexander Held, Director
- 12) NIED, Mr. Koji Suzuki, Executive Director

Representative from WGs(A)

- 13) IWMI, Dr. Giriraj Amarnath Co-chair of Water-related Disaster WG

Secretariat

JAXA, Dr. Shirou Kawakita, Ms. Rio Tanabe, Mr. Yoshinori Kobayashi, Mr. Takeshi Shiraishi, Mr. Taku Ujihara

Main topics of SA Steering Committee

1. Data Provide Nodes perspective
2. Data Analysis Nodes perspectives
3. Enhancement of value-added product usage
4. Identify DRR agency needs
5. Capacity building
6. Collaboration and coordination
7. Step-3 approach

Provision of satellite data for Sentinel Asia: DPN

Discussion Points:

1. Improved **EOR system** and EOR form depicting user needs,
2. Improve the **SA website**, link with social media, twitter and tag local information,
3. Searching for observation opportunities with **OPTEMIS**,
4. Consider to introduce **analysis-ready data** (similar to CEOS initiative),
5. Requestor response- and activation **status- information system**,
6. System to inform providing status of requests and observation plan,
7. Data services through **cloud storage**,
8. **Establishing PM** similar to IDC to ease the burden on space agencies and increase the efficiency in coordination.

Data Analysis Nodes perspective and expectations: DAN

Discussion Points:

1. Develop **Standard Operation Procedure** (SOP) for developing Value-added products (VAPs) **for each disaster**,
2. Explore potential of **university network** for data analysis and in-situ data collection,
3. In-situ data collection through GNSS system,
4. **Standardization of products** by DANs to avoid user confusion of VAPs,
5. **Develop pre-image repository** to reduce data analysis time and increase accuracy,
6. Research on use of satellite data on urban flood mapping,
.....<continues>

Data Analysis Nodes perspective and expectations: DAN

Discussion Points

7. Reduce PVAP development time, improving observation, data sharing, and VAP creation time,
8. **Reach communities** for promoting the VAP usage, tailor VAPs and improve accuracy,
9. Clear **data policy**: Consider necessary MoU etc.,
10. Identify required data sources (timing, scale, information content) to improve data acquisition,
11. **Stages of VAPs**: basic (emergency), advanced (verified) for damage assessment,
12. VAP Sharing: Push information to **multimedia** of users when VAPs are available.

Enhancement of the VAP usage: End users

Discussion points

1. Make effort to **evaluate user requirements**: product content, delivery time, product sharing and sharing data system,
2. Identify national **DRR information flow and decision making mechanism**,
3. Establish **local communication mechanism** for effective VAP sharing and SA activation,
4. Establish mechanism and local protocols to communicate with SA Secretariat (and DAN/DPN),
5. Identify the potential use of VAP (disaster type, time frame ..),
.....<continues>

Enhancement of the VAP usage: End users

Discussion Points

6. Empower local agencies through improving knowledge and tools,
7. Assist developing a national mechanism among DAN members and user agencies backed by necessary regulations and protocols,
8. Assist education of and improve awareness of space based technologies (SBT),
9. Provide easy and simple Open Source tools for incorporating VAP in the DRR related decision making process.

Needs assessment of disaster management agency

Discussion Points

1. **Raising awareness** among DM agencies about the use of VAP,
2. Train use of **activation system**,
3. Identify the potential of applying SBT tools and VAP in DRR operations,
4. Promote use of VAP for DRR decision making,
5. Solicit the ways how VAP are applied to DRR operations and follow up to receive information on the benefit/constraints/ etc.

Capacity building needs

Discussion Points:

1. Capacity building through **e-learning system**,
2. Capacity building by partner agencies with their own activities contributing to different communities (NSPO, GISTA, ISRO,.. ..),
3. Long-term and sustainable knowledge/experience/practical knowledge development through **university network**,
4. Provide programs those which address the appropriate use of SBT and in DRR for practitioners,
5. Improve SA website to host materials, e-learning platform, research / application information,
6. Use existing materials with partner agencies through website.

Communication, Collaboration and Promotion

Discussion Points:

1. Conduct **regular meetings** and **prepare annual reports** of SA progress and achievements,
2. Plan for **rotation of activities (meetings, coordination etc.)** among partners based on their requests,
3. Success Stories Development and sharing,
4. Coordination and mechanism of DANs to improve product generation and sharing,
5. Bulletin (to **influence policy makers** and share in the region) and report.

Step 3 Sentinel Asia activities

Discussion Points

1. Identify risk elements using SA data (mapping risk elements),
2. Find mechanism to receive satellite data on pre- and post- disaster situation analysis, monitor and etc. (contribution of DPN),
3. **Align with Sendai Framework for DRR** to link SA with global forum,
4. Discuss for achieving **SA sustainability and raising funds**,
5. Use SA WG activities to develop necessary support for SA activities for improvement of SA,
6. Consider collaboration with the CEOS disaster WG,
7. WG: Current WG mandates, directions need to be revisited, and roles and directions of WGs need to be reestablished to improve and sustainability of SA.

II. Outline of Draft “Long-term Action Plan”

Long-term Action Plan

- Sentinel Asia Step 3 was endorsed in APRSAF-21, December 2014
- 1st Steering Committee of Sentinel Asia Step 3, Oct. 2015, Bangkok
 - i) Implementation Strategy for SA Step 3 Evolution 2015 –
 - ii) Steering Committee as a driving force
 - iii) **Long-term Action Plan** for promoting sustainable and autonomous management and activity of SA Step 3 Evolution
- 2nd Steering Committee of Sentinel Asia Step 3, January 2017
 - i) Discussion on Long-term Action Plan

Long-term Action Plan

Sentinel Asia Vision

Joint drive of activity

End-user oriented activity

Strategic management

Target of **Long-term Action Plan** :

Improve the effective use of Sentinel Asia supported disaster information for DRR in;

Timely manner

With sufficient reliability

Products for user needs

Empower local user for practical usage of SA system

Vision of SA: Sentinel Asia Step3 Evolution Plan

Recommendation of APRSAF-21

Step 3 (2015-2019) should be pushed forward by:

1. Joint drive of activity

- Increase contribution of each participating organization by each role, for example, to utilize programs of each participating organization, particularly in collaboration with funding agencies (ADB, WB, JICA, etc.), to implement Success Story projects to solve regional issues finally aiming at a community-operated system
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2. End user-oriented activity (For end users)

- Utilize SA data and information not only to the government level but also to community level.
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3. Strategic management

- Establish “Steering Committee” in SA for strategic, quick decision making purpose, e.g., to discuss data policy, long-term strategy of SA.

Long-term Action Plan

- Terms of Plan: 2017 –
- Main Activities:
 - I. Satellite data provision system
 - II. Value-added products
 - III. For end users
 - IV. Step 3 activities (monitoring, early warning, etc.)
 - V. Communication & collaboration
- Agencies that can contribute to the activities in the Plan

Satellite data provision system

I. Improve Emergency Observation Request (EOR)

- i. Document on EOR form and EOR procedure
- ii. Satellite operation tasking tool
- iii. Satellite observation scenario in each type of disasters for POC and users
- iv. Web-based requesting system

II. Develop & share observation plan

- i. Data sharing system for cloud server

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Satellite data provision system

III. Share status of emergency observation

- i. Portal website
- ii. Sentinel Asia Step3 system

IV. Develop SA data policy document

- i. Procedure of data provider nodes (revise), particularly to promote Step3
- ii. Procedure of data analysis nodes (revise)

Value-added products

I. Research and study

- i. Products for urban area, vegetated area and etc.
- ii. Opportunity of university network for data analysis
- iii. Application of technologies like GNSS, OSM, ICT

II. Product development

- i. International level (standard maps, interactive maps, WMS)
- ii. National level (tool development for integrating local data to VAPs)

III. Validation

- i. Mobilizing national agencies for validation
- ii. Agency feedbacks using mobile applications
- iii. Community feedbacks through social media

For end users

I. Training or workshop

- i. Provide VAPs for users with assessment of their requirements
- ii. Empower local agencies through improving knowledge and tools
- iii. Enhancing capacities of DRR agencies for use of VAPs
- iv. Capacity development with e-learning system

II. Promotion

- i. Extracting possibilities of satellite data utilization in disaster management operations

Step 3 activities

- i. Proposals to materialize Step 3 from Working Groups
- ii. Align with SENDAI Framework for DRR to link SA with global fora supported by ADB, WB, JICA and etc.

Communication and collaboration

- i. Steering Committee (DPN) meeting
- ii. DAN meeting
- iii. User communication meeting

Main Activities

- I. Satellite data provision system : DPN
 - i. Improve Emergency Observation Request (EOR)
 - ii. Develop & share observation plan
 - iii. Share status of emergency observation
 - iv. Develop SA data policy document

- II. Value-added products : DAN
 - i. Research and study
 - ii. Product development
 - iii. Validation

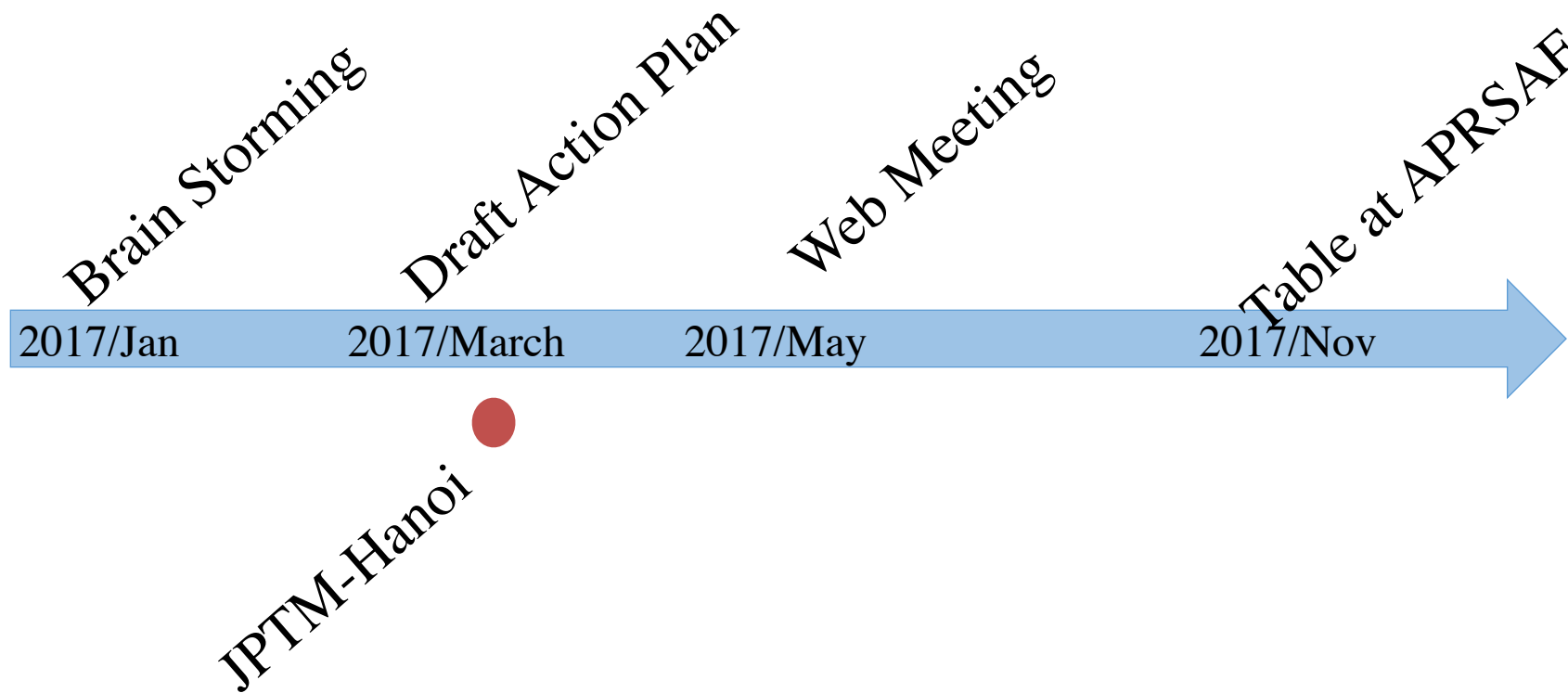
- IV. For end users : DMA
 - i. Training or workshop
 - ii. Promotion

- VI. Step 3 activities (monitoring, early warning, etc.) : Working Groups

- VIII. Communication & collaboration

III. Way forward

Milestones of 1st **Long-term Action Plan** of Sentinel Asia for final authorization by APRSAF



Welcome JPT member inputs for the draft

Thank you for your attention