

Sentinel Asia

Strategic Plan for the next 10 years



November 1-2, 2018
Steering Committee Secretariat & Co-Chairs

Vision of SA: Sentinel Asia Evolution Plan (Recommendation of APRSAF-21)

SA Step 3 (2015-2019) need to be driven forward by:

1. Expanding Joint Activities

- Increase contribution of each participating organization; for example, to utilize existing programs/activities of participating organization,
- Collaborate with funding organizations (ADB, WB, JICA, etc.), to conduct Success Stories to address DRM/DRR activities by empowering communities,
- to collaborate with international initiatives (the International Charter, GEO, CEOS, etc.)

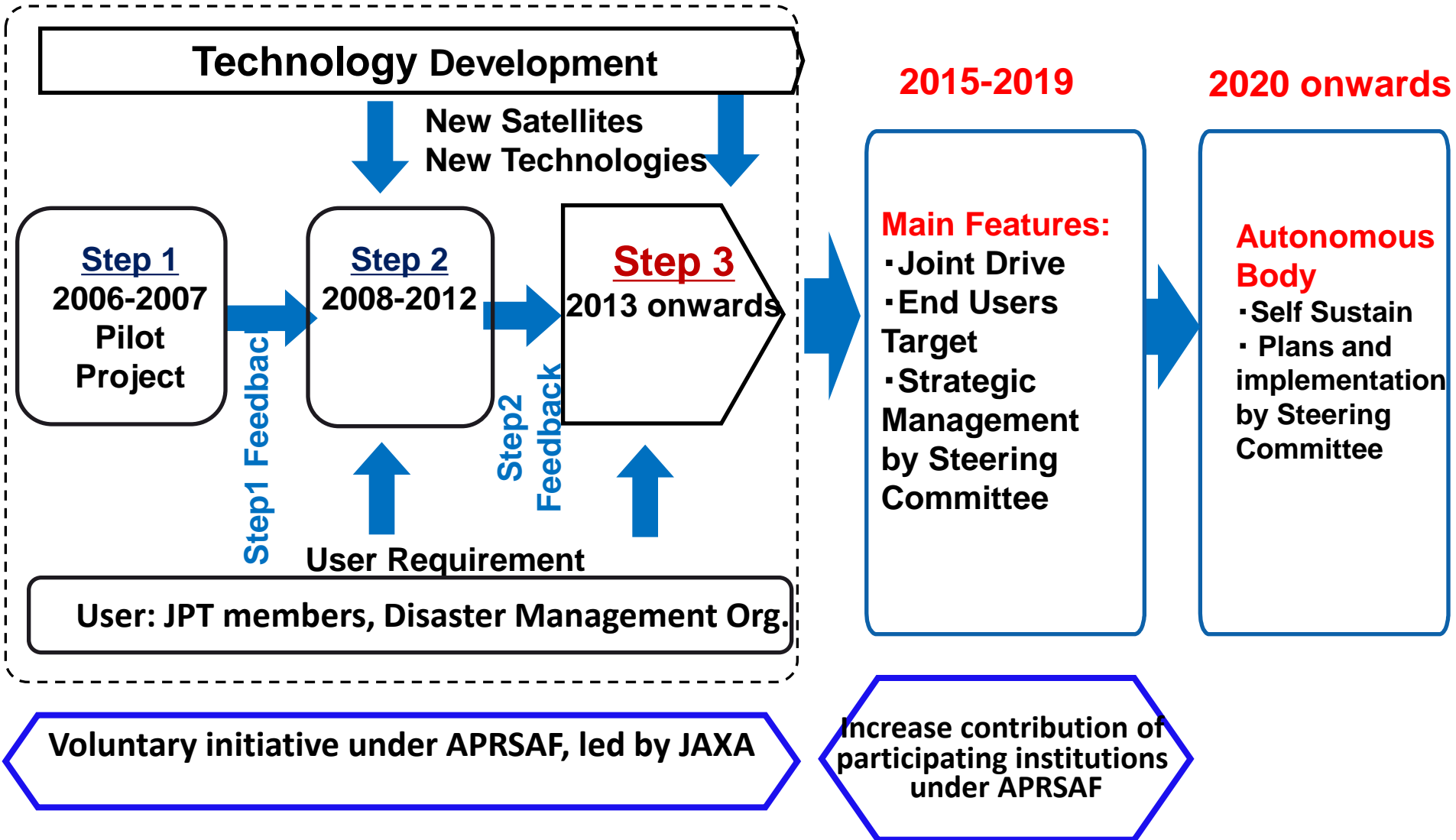
2. Enhance End User-Oriented Activities

- Introduce the product usage at community level and further increase the product usage at government level for DRM/DRR
- Establish country specific success stories to address needs of each country.

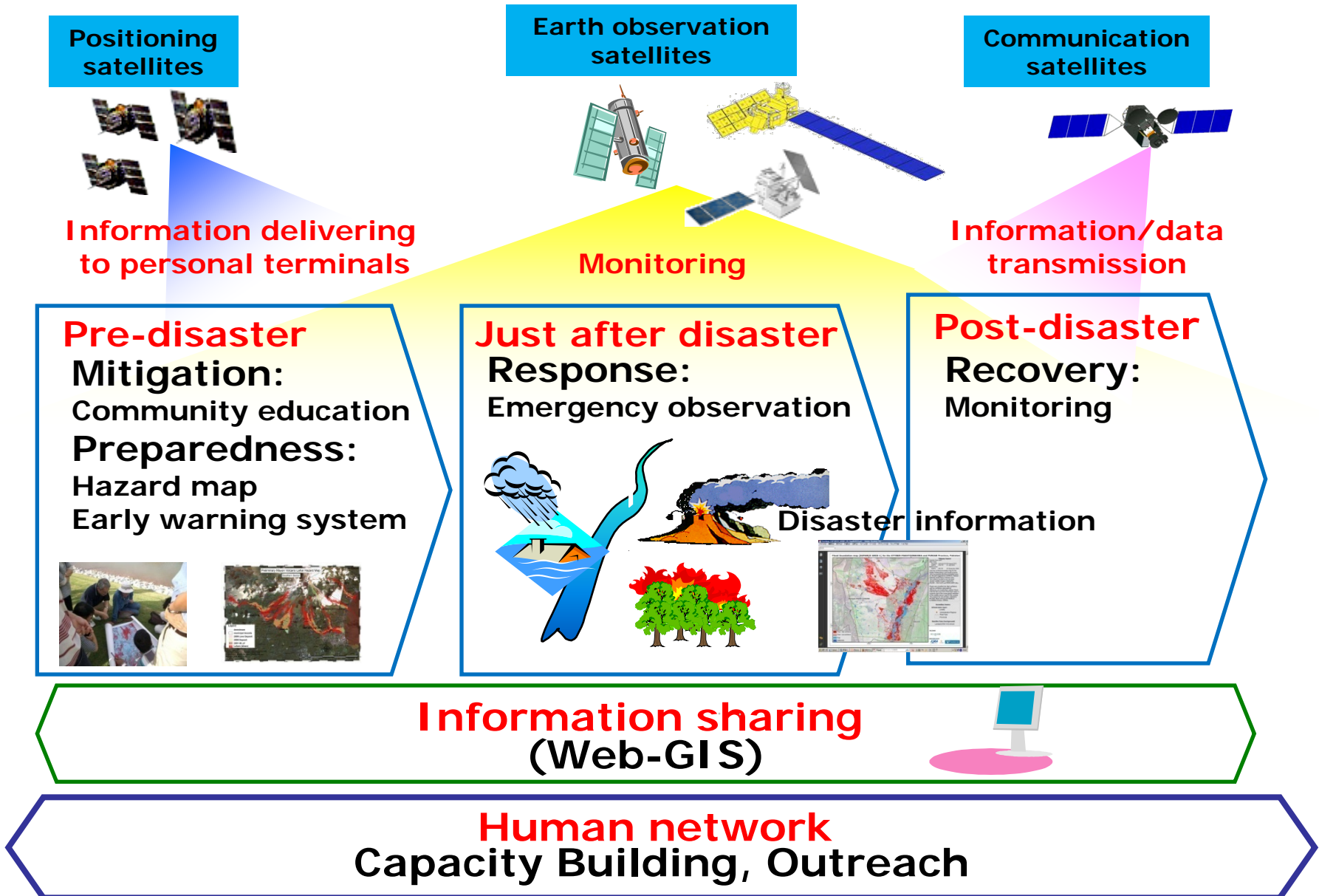
3. Strategic Management

- Establish a “Steering Committee” for collective and timely decision making, e.g., to discuss data policy, long-term strategy of SA etc.
- Provide opportunities to involve all space agencies and user agencies in strategic planning process

Sentinel Asia Evolution Plan



Concept of Sentinel Asia Step 3



Implementation strategies to address the challenges of Sentinel Asia Step 3

1. Establishment of **Steering Committee**
2. Strengthen **cooperation** between disaster management organization (DMO) and space/GIS organization
3. Evolution of the WGs activities to strengthen cooperation between DMO and space/GIS organizations to contribute to disaster preparedness, emergency disaster response and recovery
4. Emergency observation scenario considering **preparedness and early warning**, emergency response and recovery after disaster
5. Maximize utilization of performance of EOSs of DPN as well as to strengthen cooperation among DAN for rapid provision of analyzed products to end users
6. Improvement and active utilization of Sentinel Asia server system, WEB-portal and WINDS data transportation system and future cloud systems
7. Planning and implementation of “**success story**” by each WG with the cooperation of countries and/or the development support organizations
8. Trainings and capacity buildings for DAN and end users
9. Cooperation with **GPM/GSMaP, QZSS and MGA** (Multi-GNSS-Asia)
10. Maximize utilization of the WINDS’s high speed internet data transportation at its terminal phase
11. Develop and **utilize archive system** of the Sentinel Asia observation data

Sentinel Operational Framework: Steering Committee

Asia Pacific Regional Space Agency Forum (APRSAF)

Once a year

Report: Plenary Session

Joint Project Team Meeting (JPTM)
Decision-making

Once a year

Wild Fire WG

Tsunami WG

Water related Disaster WG

Specific activities under JPTM

Report

Steering Committee (SC)
Strategic matters

Operation:

Face to face meetings

Web meetings

Sentinel Asia Framework

The establishment and the role of Steering Committee

❖ Role of Steering Committee

The SC is a high-level body of Sentinel Asia to Study, Discuss and Take Decision about activities/issues for ***sustainable and autonomous*** operation of Sentinel Asia

❖ Steering Committee Members

SC members are primarily from the core members of JPTM (DPN, DAN, DRR community), and who have worked for the initiation of Sentinel Asia. Total number 10-15

❖ Secretariat of Steering Committee: JAXA (at the start)

❖ Operation of Steering Committee:

Coordinated by Co-Chairs invited from SC members

Communication through e-mail, web-meeting, and face-to-face meetings where possible

Steering Committee Meetings

1st SC Meeting: 13-15 October 2015 in Bangkok

2nd SC Meeting: 19-20 January 2017 in Bangkok

JPTM: 7th March Hanoi

3rd SC Meeting: 13 July 2017 (Tele)

4th SC meeting: October 2017 (Tele)

5th SC Meeting: 13-14 December 2017 in Bangkok

JPTM: 23-24 January 2018 in Taipei

6th SC Meeting: 3 March 2018 (Tele)

7th SC Meeting: 12 June 2018 (Tele)

8th SC Meeting: 04 October 2018 (Tele)

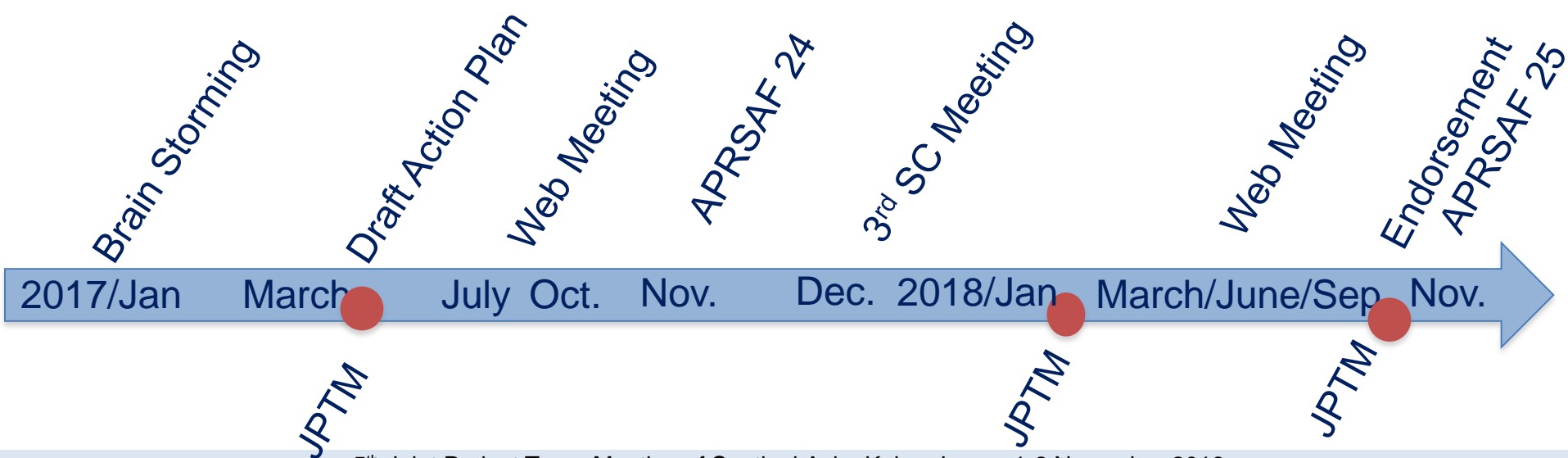
JPTM: 1st-2nd November 2018 in Kobe

APRSAF-25: November 6-9 2018 in Singapore

9th SC Meeting: January Date? 2019 at GISTDA, Thailand

Development of Sentinel Asia Strategic Plan

- ❖ The strategic plan was proposed by the Sentinel Asia Steering Committee based on the discussion at the 2nd Steering Committee meeting in Bangkok, January 2017.
- ❖ The expected goal of the strategic plan is to develop activities, procedures, and collaboration for the improvements of SA to achieve the vision of Sentinel Asia for the next 10 years.
- ❖ The Strategic Plan is discussed and reviewed by the comments, advices and discussion from the members of Steering Committee. It is expected to receive the endorsement for the Strategic Plan at JPTM 2018.



Participants of Bangkok meeting

3rd Steering Committee(SC) of Sentinel Asia was held at BKK in Dec. 2017, co-chaired by Dr. L. Samarakoon & Mr. K. Suzuki. 13 members, observers and Sec members, 23 in total got gathered and discussed the current status of strategic plan by leading agencies.



Overview of the Strategic Plan

The Strategic Plan was targeted to capture inputs of all the Steering Committee members through discussions conducted in January 2017 and subsequent web meetings. Attempt was made to address needs/gaps in all the components of SA to make an excellent information system that could stand for regional to local DRM needs.

Following five areas were identified as the main themes based on the discussions;

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

I. Satellite Data Provisions and Systems

End-users are requesting improvement of the data & information system; for example, rapid data provision after an incident and rapid access to products for local usage. Also, new data policies and data sharing guidelines should be in place to satisfy various user needs. These data/sharing policies need to be established in parallel to the development of an improved new system to make use of a system effectively addressing user needs.

Action Items

- Improvement for the Emergency Observation Request (EOR) System
Depicting User Needs
- Consider using Observation Opportunities by OPTEMIS of GISTDA
- Consider sharing plans of Observations, Data Provisions, Data Analysis Plan by DAN and Products Availability Plan
- Improvements to satellite data and VAP sharing using Data Services
- Develop Policy Guidelines and agreements with DPN for pre/post satellite data usage, covering all the activities under Sentinel Asia

II. Value Added Product (VAP)

The Steering Committee proposed the following items for the improvement of Sentinel Asia operation based on their abundant experience.

Action Items

- Develop Standard Operation Procedure (SOP) for each disaster type
- Explore the potential use of data analysis through a university network to augment current DAN and in-situ data collection through GNSS system
- Standardization of VAP to avoid user confusion; providing products in many different formats and also ambiguity in information content make the end-user perplex of the usage
- Develop a pre-disaster image repository and provide access to DAN members to use in VAP creation to reduce analysis time and improve accuracy
- Promote researches on urban flood mapping to improve VAP quality
- Develop and deliver VAPs in time for end-user requirements
- Review current data policies on emergency observation data as well as archived data and use of data for R&D
- Identify the potential use of VAPs in disaster; based on type of a disaster, type of information format (raster/vector), type of information need, deliverable time frame, etc.

III. End User Enhancement

It is important to enhance the capacity of end-users for effective contribution for disaster relief operations in each user agency through Sentinel Asia. Sentinel Asia system has been evolving and the system is yet to provide all its potentials to effective end-use operations, specifically developing end-users application abilities.

Action Items

- Train DRR agencies about activating the Sentinel Asia
- Empower local disaster management agencies by improving knowledge of space-based applications and simple tools
- Assist with easy and open source tools for promoting better usage of VAPs and facilitating VAP usage in local levels including evidence based decision making
- Create a reporting mechanism to report the ways VAPs are applied for DRR operations and feedback their needs, helping to identify the gaps limiting the effective use of VAP
- Develop an e-learning system for end-user training, capacity building and fostering space-based information culture .
- Develop long-term space-based application through university network
- Use Sentinel Asia Website to provide e-tools, documents on case studies, research, applications and etc.

IV. Step-3 Activities (for covering entire DRR cycle)

The Sendai Framework for Disaster Risk Reduction 2015-2030 was adopted in Sendai by global leaders with specific suggestion to use more and more space based data and GIS for Risk identification and for risk mitigation and reduction. Therefore, Sentinel Asia could consider the commitment of the initiative to the Sendai Framework by enhancing Sentinel Asia capacities for the risk assessment and establishing disaster prediction/alert systems for flooding, landslide, wildfire and tsunami and other necessary disasters using satellite images.

Action Items

- Identify risk elements using Sentinel Asia Data (mapping risk elements)
- Promote disaster monitoring, post disaster monitoring and damage assessment with Sentinel Asia data
- Promote knowledge, experience and practical knowledge development through networks; user, DAN and university network
- Align with Sendai Framework to link Sentinel Asia with global forum
- Use Sentinel Asia Working Group activities to develop necessary support for Sentinel Asia activities to cover entire disaster phase.

V. Communication, collaboration and cooperation

In order to promote balanced activities of Sentinel Asia, alliance and communications among disaster management organizations, Data Provider Nodes and Data Analysis Nodes is essential. It needs to improve the communication with members in Sentinel Asia through many other means. Steering Committee discussed some ideas to improve the communication as given below.

Action Items

- Organize regular meeting where possible combining various other meeting opportunities;
- Consider developing annual reports of achievements and share through websites and user forums
- Rotate major activities among the members; organizing JPTM meetings, organizing Steering Committee meetings, and other similar main functions;
- Develop various success stories and share
- Promote coordination mechanism of DANs to improve product generation and sharing
- Publish and circulate bulletin to policy makers and share in the region

Current Status of The Plan

- Currently the first draft of long-term plan is drafted,
 - Action items identified during the discussions are summarized and shared with SC members to identify possible contribution of partners and the time frame of achieving them,
 - Available resources and required resources are identified.
 - Leading agencies for the 5 main themes were suggested. The leading agencies need to communicate and collaborate with all other DPN, DAN, and user agencies to achieve the best possible solution in the responsible theme.
1. Satellite Data Provisions and Systems: **JAXA with GISTDA**
 2. Value Added Product (VAP): **Yamaguchi University**
 3. End-user Enhancement: **GIC-AIT**
 4. Step-3 Activities (Complete DRR cycle): **ADRC**
 5. Communication, Collaboration and Cooperation: **ADRC**

Detailed discussion will be on 2nd November at Section 7