



Sentinel Asia Evolution

1st JPTM for Sentinel Asia Step3
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Kazuya Kaku
JPT Secretariat
Japan Aerospace Exploration Agency

Background

- Frequent catastrophic disasters, e.g. recent Typhoon Haiyan: enforce our desire to enhance our efforts in the risk and damage reduction in disasters
- The 3rd World Conference on Disaster Risk Reduction (WCDRR) in Sendai of Japan in March 2015, and post-Hyogo Framework for Action 2005-2015: how can Sentinel Asia contribute?
- ALOS-2 of JAXA will be launched soon, which will contribute to Sentinel Asia

Why Evolution (1)?

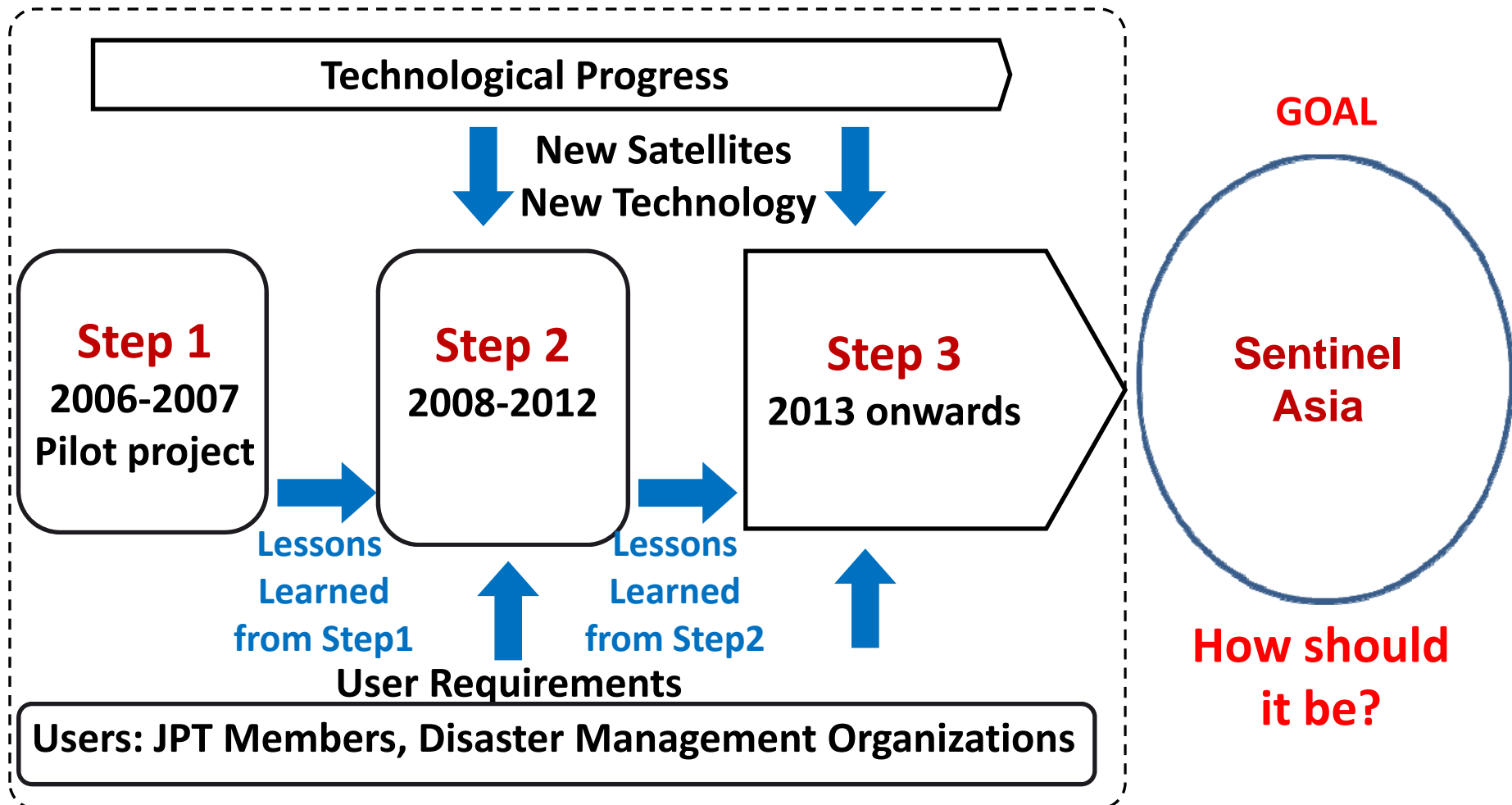
1. What was the Sentinel Initiative's vision and specific goals?
 - Free and open access to satellite imagery and derived products, associated with disasters in the Asia-Pacific Region
 - Fast, web-based delivery of disaster information (pre-disaster, post-, and recovery)
2. What was the success so far of Sentinel Asia since the project started in 2005?
 - Over 20+ regional national partners as data providers and users
 - Satellite data distribution to many disaster-affected areas has been successful
 - Linkages to the International Charter for Disasters

Why Evolution (2)?

2. What still needs to be done to fulfill the original vision?

- Ensure Sentinel Asia data provider nodes deliver also a standard set of derived products in addition to only basic satellite imagery.
- Speed up data delivery time between acquisition and product delivery via ftp or web-service to affected communities and national government agencies. Goal should be less than 1 hour from acquisition to product delivery.
- Link closely to CEOS Disaster Monitoring task, to ensure reliable and continuous satellite data services are provided for processing and delivery to disaster response agencies in the Asia-Pacific region.
- Website and data service capable to serve thousands of visitors at the same time.
- Provide capacity-building for emergency agency users who interpret the satellite data.

“Sentinel Asia” as an Evolution of Step 3



**Initiative under APRSAF, led by JAXA,
for closed communities**

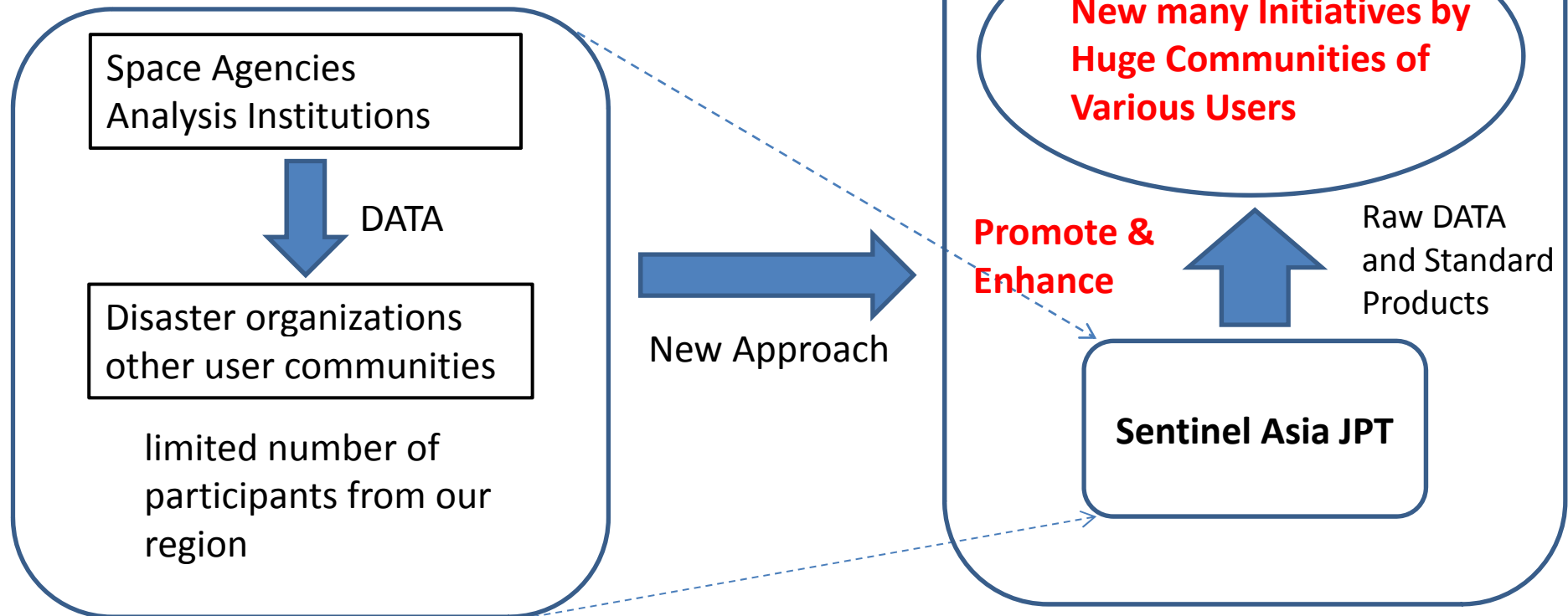
How should we proceed?

- Establish a Task Force Team (TFT) to study the Goal for Step 3
- Develop a plan of action and report it to JPTM2014 and APRSAF-21
- TFT Composition: People who participated in the development and initiation of Sentinel Asia and key disaster response agency partners
- TFT Secretariat: JAXA

Ideas of Step 3 Evolution

1. New Approach for **Data Utilization by Regional Users Communities as Their Own Initiatives**

Sentinel Asia Project for closed communities

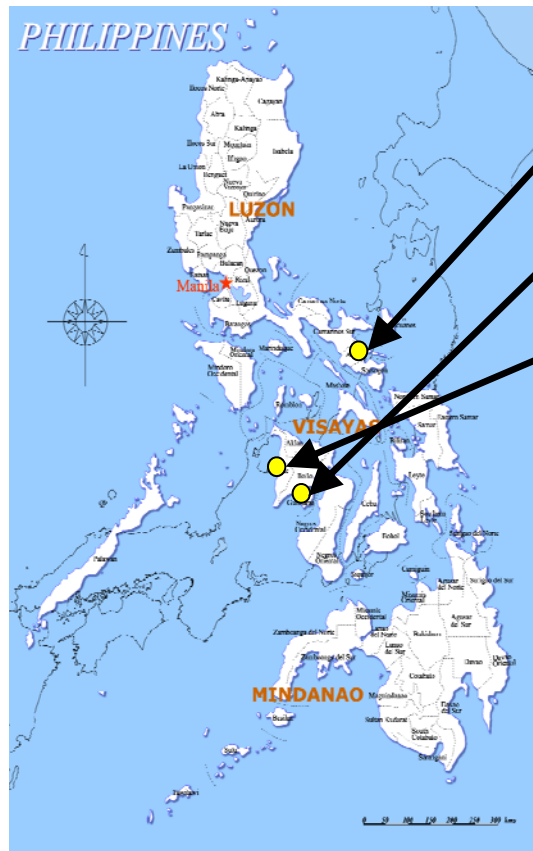


New Sentinel Asia Initiative

Example 1 of Regional Initiatives: **Success Story** in the Philippines

- Regional cooperation to promote utilization of Sentinel Asia by end-users
- Local awareness and knowledge transfer through capacity building
- Human resources and human network development

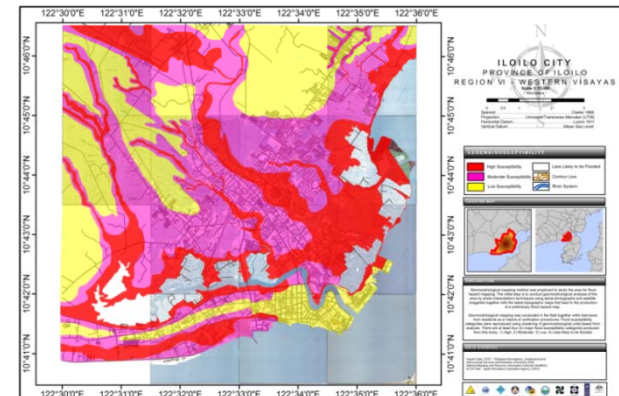
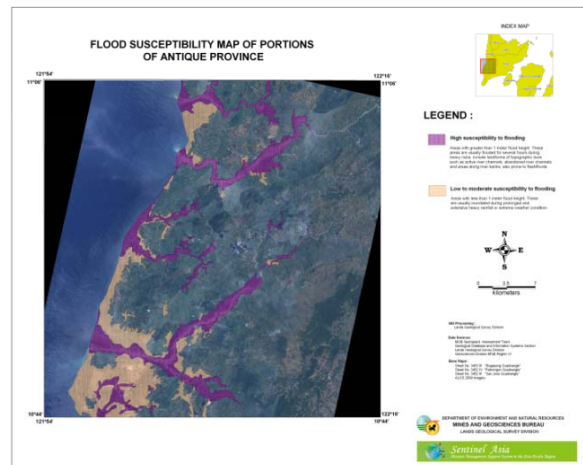
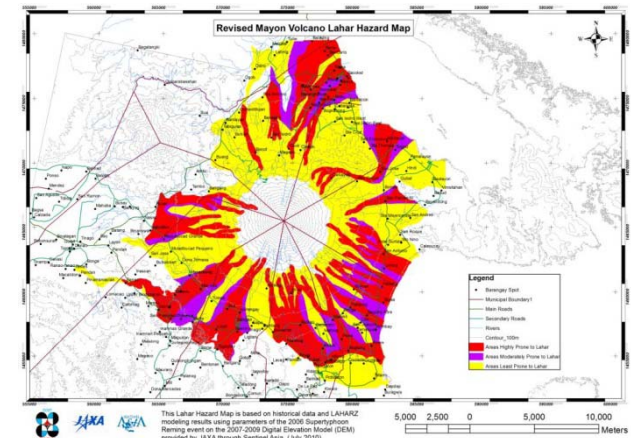
Hazard maps (Flood, Lahar and Landslide) of 3 study areas (Antique, Iloilo and Mt. Mayon) were created by using ALOS Pansharpen Image and DSM.



**Lahar - Mt. Mayon
(PHIVOLCS)**

**Flood - Iloilo City
(PAGASA)**

**Landslide - Antique
(MGB)**



Example 2 of Regional Initiatives:
GLOF Early Warning System in Bhutan
**based on community cooperation in Mo River basin, Bhutan
by ADRC and Ministry of Home and Cultural Affairs**

- Creating map with elevation data in upstream area of the Mo River and hazard map based on past flood records in Punakha
- Capacity development on community level: disaster education and training among local residents
- To install community-based river level gauges, and develop early warning system

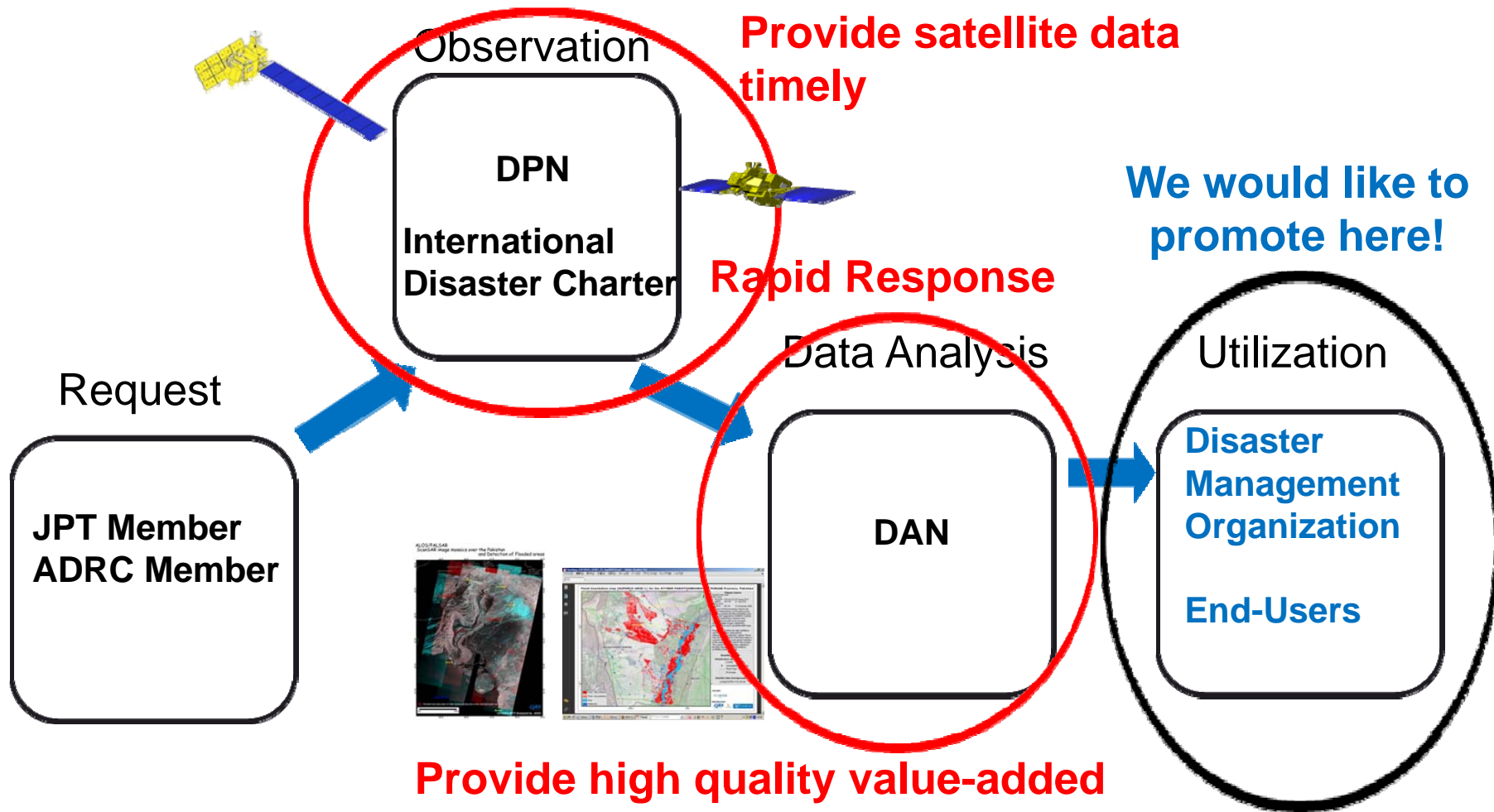


Flood water level of the Mo River in 2009



Public awareness workshop on GLOFs and earthquakes in Punakha in February 2012, quoted from ADRC Highlights¹⁰ Vol. 229, <http://www.adrc.asia/highlights/NewsNo229>

2. Evolution of Emergency Response



Provide high quality value-added data products !

- Pre-disaster preparedness
- Post-disaster evaluation

3. Evolution of Response to Specific Disasters

- Current Working Groups: wildfire, flood, GLOF, and tsunami
- Expand the area: e.g., drought, earthquake, volcanic eruption, landslide
- Alignment with CEOS Disaster Strategy and Case studies.
- Include additional satellite datasets (e.g., ESA Copernicus, DLR-TET & Tandem-X)
- Strengthen activities by cooperating other initiatives, specialists, researchers in each field



Thank you for your attention

Japan Aerospace Exploration Agency
Satellite Applications and Promotion Center
Sentinel-Asia Project Office
E-mail : z-sentinel.asia@jaxa.jp

