PDAN Activities and Future Plans to enhance the utilization of Sentinel Asia system

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Geoinformatics Center
Established in 1999 (Self-Funded)
Summary of Activities at GIC/AIT for DRR

- **Pre-Disaster Situation Analysis**
  - Identify Hazard/Risk
  - Local Capacity
    (Training/Consultancy)

- **Emergency Response**
  - VA Product
  - Local Capacity Development

- **Dissemination system**
  - Products, early warning

- **Tailored support**
  - JAXA, ESCAP Project, ADB Projects, WB Projects,
    Consultancy Services, Training etc.
DRR Related On-going Projects
- Implement through partnerships -

1. CAP-on-a-MAP: Improving Institutional Responsiveness to Coastal Hazards through Multi-Agency Situational Awareness in Philippines, Maldives and Myanmar (UNESCAP): SAHANA

2. Establishing a Remote Sensing and GIS (RS/GIS) Laboratory and capacity building in River behavior study for Brahmaputra river, Hazard Mapping and Risk Analysis (Assam Sate, India)


4. Applying Space-Based Technology (SBT) and Information and Communication Technology (ICT) to Strengthen Disaster Resilience (ADB); ADRC and RESTEC

5. Disaster Risk Assessment of Uttarakhand - Under the Uttarakhand Disaster Recovery Project. (World Bank): DHI and ERN


- **16 Oct 2016**: Vietnam sent a request to ADRC over serious flooding in Quang Binh province and for emergency observations.
- **17 Oct 2016**: JAXA informed the schedule of ALOS-2 data provision for this activation.
- **18 Oct 2016**: ALOS-2 data (observation image) were uploaded to SA website. A quick analyzed product was also provided.
- **19 Oct 2016**: AIT created value-added products and uploaded to SA website, both in .jpg and .geotiff formats. These products were also shared to DMC.
- **20 Oct 2016**: GISTDA also provided THEOS data and uploaded to SA website.
Value Added Products (19 October)

Flood in Vietnam
Image: Post (ALOS-2/PALSAR-2)
Method: Thresholding

Based on Post Disaster Image
Value Added Products (20 October)

Flood in Vietnam
Images: Pre (Landsat-8/OLI-TIRS), Post (ALOS-2/PALSAR-2)
Method: Thresholding

Flood in Vietnam
Images: Pre (Landsat-8/OLI-TIRS), Post (THEOS)
Method: Thresholding
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Sentinel Asia Data and Information Flow

Data Provider
- Activation
- Observation DPN

Data Analysis
- DAN
- PDAN
- DAN/JPTM

Products Users
- Local User

Data
- Products

Flow:
- Data Provider to Data Analysis
- Data Analysis to Products Users
- Data Analysis to Data Provider
- Data to Products Users
Geoinformatics Center (PDAN) Approach for Influence Product Usage in Local Level

- Demonstrate the potential use of space based technologies for DRR
- Identify agencies related to DRR activities
- Evaluate space technology capacities of local agencies dealing with DRR
- Organize multi-agency meetings to discuss and stimulate in establishing a local coordination framework;
  - For Activation
  - For Data analysis
  - For Data sharing
- Local agency capacity/knowledge improvement on satellite data analysis and product integration for emergency planning
- Prepare SOP customized for local system covering activation to product usage
Geoinformatics Center (PDAN) Approach for Influence Product Usage in Local Level

Action Plan

✓ Coordinate Meeting in Indonesia
✓ Coordination Meeting in Vietnam
✓ Coordination Meeting in Sri Lanka
✓ .......
Some Key Points agreed during the successful Coordination Meeting on 11/11/2016 in Vietnam

1. **Vietnam communication structure**
   a. **DMC** will be the coordination body for SA activations. When activations are requested by **DMC, STI and NRSD** (MONRE) should be notified (copy email). If necessary, activation of SA can be done by other agencies too (DAN).
   b. STI and NRSD are responsible for satellite data analysis and provide product to DMC
   c. DMC is responsible to use the products received from STI and NRSD and to report to *central committee of disaster management*.

2. **Establish a Technical Working Group (DMC, STI, NRSD)**
   DMC will initiate this activity as an informal group

3. **Standard Operational Procedures (SOP)**
   Develop SOP for activations, data receiving, data analysis, product generation for flood and typhoon including technical and communication mechanism
Summary

✓ Continue with support for Sentinel Asia activations and improvement to Value Added Product creation for both Sentinel Asia and IDC,

✓ Involve with local DRR agencies to create a better coordination mechanism (with necessary tools) to effectively use VAP and empower local agencies in map creation and usage,

✓ Software tools development and customization for effectively use in DRR including emergency mapping, early warning, damage assessment etc.