

# Capacity Building in Asian Countries (Project, Graduate Course and Training)

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## Capacity Building Activities

### 1) Projects

- JAXA supported 'Mini-Project'
- Japan Aerospace Exploration Agency (JAXA), initiated a capacity building program in Asian countries as a part of its 'Sentinel Asia' project.
- 8-10 projects are taken-up for implementation every year (since 2004)
- Projects have been implemented in 14 Asian countries, *Bangladesh, Bhutan, Cambodia, China, Indonesia, Kyrgyzstan, Laos, Malaysia, Mongolia, Myanmar, Nepal, Philippines, Sri Lanka and Vietnam*

- ADRC supported 'Satellite Data Applications for Disaster Management'

### 2) Graduate course in 'Disaster Preparedness, Mitigation and Management (DPMM)'

### 3) Short-term Training Courses

## Mini-Project - JAXA/AIT



- Involvement of *two important stakeholders* at national level;  
1) data/product provider and 2) data/product user
- Mini-project area/topic will be proposed by the stakeholders, according to countries' needs and priorities (May/Jun)
- Project planning workshop and training at AIT (Aug/Sep – 1 month)
- Fieldwork and local consultation (Nov/Dec – 1 week)
- Final workshop at AIT (Jan/Feb – 1 month)

## Mini-Project - Supports



- Training on remote sensing and GIS applications
- Modeling and data integration
- Free satellite data (JAXA's ALOS data – Optical & MW)
- Joint field work
- All logistic support for the training/workshop and field visits.

## Mini-Project Workshop at AIT (2008)



## Mini-Projects : 2005-06



1. Earthquake Risk Assessment – **Nepal** (Survey Dept./Urban Planning Dept)
2. Food Mapping – **Cambodia** (Geography Dept.)
3. Landslides Hazard Ass. – **Sri Lanka** (CECB/Survey Dept.)  
– **Philippines** (NAMRIA/PhiVolcs)
4. Flood Risk Assessment – **Bangladesh** (BDPC/LGED/FFWC)  
– **Nepal** (Survey Dept./DWIDP)  
– **Vietnam** (DMC/MONRE)

## Mini-Projects : 2006-07



1. Flood Risk Assessment – **Bangladesh** (SPARSSO/LGED/FFWC)  
– **Cambodia** (Geography/Hydrology Dept.)  
– **China** (Beijing Normal University)  
– **Lao PDR** (ERI/Hydrology Dept.)  
– **Nepal** (DWIDP/DHM/Survey Dept.)
2. Landslide Hazard Ass. – **Philippines** (PhiVolcs/NAMRIA)  
– **Sri Lanka** (NBRO/Survey Dept)  
– **Vietnam** (STI/MONRE)
3. Drought Assessment – **Philippines** (PhilRice/NAMRIA)

## Mini-Projects : 2007-08



1. Flood Risk Assessment
  - Bangladesh (SPARSSO/FFWC)
  - Lao PDR (ERI/LNMC)
  - Myanmar (Dept. Meteorology/Hydrology)
  - Nepal (Survey Dept.)
  - Sri Lanka (Survey Dept./Irrigation Dept.)
2. Volcanic Mudflow
  - Philippines (NAMRIA/PhiVolcs)
3. Forest Fire Mapping
  - Vietnam (MARD/VAST)
4. Web-Mapping/Disaster
  - Bhutan (Survey Dept.)
5. Tsunami Modelling
  - Indonesia (LAPAN/BPPT)

## Mini-Projects : 2008-09



1. Flood Risk Mapping
  - Bangladesh (SPARSSO/LGED/FFWC)
  - Lao PDR (DMC/Hydrology Dept)
  - Thailand (Irrigation Dept)
  - Vietnam (STI/MONRE)
2. Drought Analysis
  - Philippines (PhilRice)
  - Mongolia (National RS Center)
3. Landslide Hazard Ass.
  - Bhutan (Dept. of Geology and Mines)
4. Risk due to Sea Level Rise
  - Sri Lanka (CCD/Survey Dept.)
5. Forest Fire Risk Mapping
  - Indonesia (LAPAN)

## Mini-Projects : 2009-10

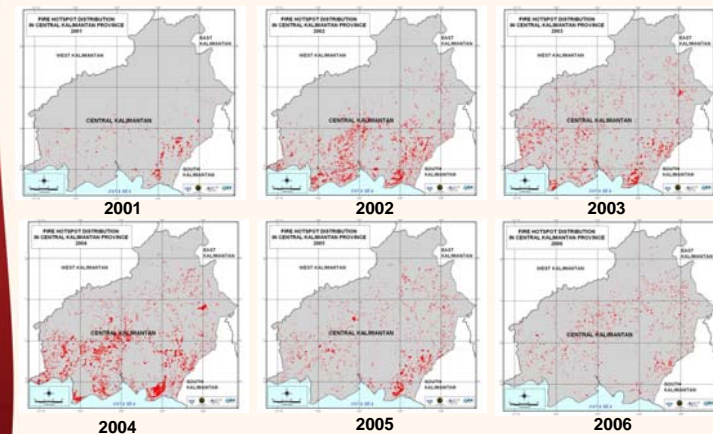


1. Landslide Hazard Ass.
  - Indonesia (ICALRD)
  - Nepal (Survey Dept.)
2. Flood Risk Assessment
  - Sri Lanka (PU/MU/Survey Dept.)
  - Lao PDR (Irrigation Dept./ERI)
  - Myanmar (Mandalay Univ./Forest Dept.)
  - Nepal (Ministry of Land Reform & Mangt.)
3. Cyclone Risk Assessment
  - Bangladesh (LGED)
4. Drought Analysis
  - Mongolia (National RS Center)
5. Earthquake
  - Kyrgyz Republic (Central Asian Institute of Applied Geo-Sciences)

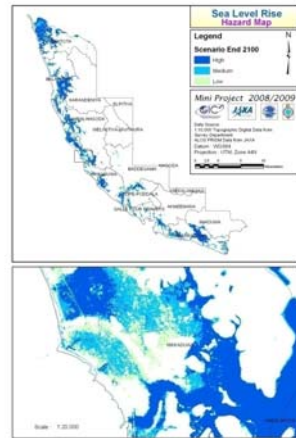
## Indonesia: Influence of Climate Variation and Vegetation Greenness on Forest Fire Occurrence - A Case study (2008-09)



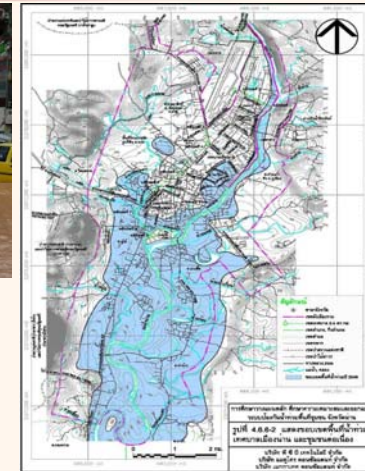
### AMOUNT OF FIRE HOTSPOT DISTRIBUTION IN CENTRAL KALIMANTAN PROVINCE



**Sri Lanka: Risk Profiling for the Sea Level Rise in the South-west Coast of Sri Lanka (2008-09)**



**Thailand: Flood Hazard Mapping in Nan River Basin, Nan Municipality, Thailand (2008-09)**



**Satellite Data Applications for DM - ADRC/AIT (2009-11)**



- 1) To provide technical knowledge and skills for **utilizing satellite images** for producing products and information for disaster management.
- 2) To demonstrate the potential of space based technologies for disaster risk reduction and management through a **case study**.

**Project Modules**



**Module I**

Discussion with all the stakeholders coordinated by the country representative of the ASEAN Subcommittee on Space Technology and Applications (SCOSA) to assess the gaps and needs

**Module II**

Development of educational material to provide basic knowledge of space based technology to relevant stakeholders. These will be easy-to-read materials in local language if necessary

**Module III**

One-day seminar to raise awareness among decision makers and senior officials on use of space based technology for various disaster related activities (Target : 30-40 participants)

**Module IV**

Carryout 5 days hands-on training using one local case-study (Target: 20-30 participants).

**Module V**

Conduct two Regional Workshops in Thailand and Indonesia to share the knowledge and promote networking in the region (Target: To be decided)

## Modules I



Vietnam 10 July, 2009

Cambodia, 27 July, 2009



## Graduate Course at AIT



Graduate course on Graduate course in **Disaster Preparedness, Mitigation and Management (DPMM)** started in August, 2008.

1. Professional Master's Degree Program - 12 months
2. Professional Master's Degree Program - 22 months
3. Doctoral Degree Program - 36 months

Subjects taught on RS and GIS for DRM : 2

## Trainings at AIT



### Regular Trainings

- GIS for Disaster Risk Management (Introductory) - AIT-ADPC-ITC
- GIS for Multi-hazard Risk Assessment (Advance) - AIT-ADPC-ITC

### Customized Training

- MW Remote Sensing (for Malaysian Surveyors) - AIT
- Digital Photogrammetry - AIT & Armin Gruen (Switzerland)
- Flood Modeling and Applications of RS/GIS - AIT
- Landslide Modeling and Applications of RS/GIS - AIT
- Rainfall Forecasting for Flood Early Warning - AIT

Thank you

