



国际航天及卫星应用(IASA)培训班(2015)

International Training Course on Earth observation technologies for earthquake damage and loss assessment

(Including the 5th UN-SPIDER Beijing Conference, 14-16 September 2015)

14-22 September 2015

Jointly organised by
UN-SPIDER (UN Office for Outer Space Affairs)
National Disaster Reduction Center of China (NDRCC) and
Asia Pacific Space Cooperation Organisation (APSCO)
RCSSTEAP (China), Beihang University



Objectives

The training programme on 'Earth observation technologies for earthquake damage and loss assessment' is jointly organized by the UNOOSA/UN-SPIDER, National Disaster Reduction Center of China (NDRCC), Asia Pacific Space Cooperation Organization (APSCO) and Regional Centre for Space Science and Technology Education in Asia and the Pacific (China) (affiliated to the United Nations). In the World Conference on Disaster Risk Reduction (WCDRR) in Sendai, the Sendai Framework for Disaster Reduction 2015-2030 identified critical role of space based technologies in disaster risk reduction. The momentum gathered from this important milestone in disaster risk reduction should be used to strengthen cooperation and capacity building in the field of space based technologies internationally. Very high resolution (VHR) satellite data are potential sources to provide detailed information on damage for a large area in a short time. Rapid post-disaster damage assessment of the house and other important infrastructure is essential for the decision of recovery and reconstruction. The damage caused by the event could be assessed by comparing pre- and post-disaster images. The objective of the training course is to impart skills to use integrated EO technology for earthquake damage and loss assessment by introducing the basic concepts and methodologies developed through operational research and application.

Coverage

The short training programme would cover theory and hands on sessions on following topics:

- Role of earth observation in providing critical information during earthquake disaster
- Rapid mapping using earth observation during earthquake situations
- Concepts of earthquake damage and loss assessment
- Visual interpretation, object-oriented segmentation and classification to facilitate change detection of pre and post-disaster based on VHR satellite imagery to perform structural damage assessment
- Semi-automated techniques to extract information on buildings and other infrastructure and integrating it with population and risk data to evaluate casualties and losses
- Crowdsourcing platforms to use EO to perform rapid assessment
- Advance techniques to access satellite images during emergencies

Expected outcome

The training it is expected to make participants fully conversant with use of earth observation in disaster management in general and assessing earthquake damage and losses in particular. The participants will be able to identify damaged infrastructure and



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learn about the methodology of damage and loss assessment using integrated EO technology. An interaction of experts and participants is expected to build a network, exchange of knowledge and new research frontiers in earthquake damage and loss assessment. Overall, this training is expected to contribute to the capacity building of national partners to use space technology for disaster management to augment development process.

Dates and Venue

Dates: 14-16 September 2015, 5th UN-SPIDER Beijing Conference

Venue: Grand Gongda Jianguo Hotel, Beijing, China

Dates: 17 to 22 September, 2015

Venue: International School, Beihang University, Beijing, China

Accommodation: Training Center of Beihang University

Programme at Glance

14-16 September 2015: 5th UN-SPIDER Beijing Conference

<http://un-spider.org/BeijingConference2015>

16 September 2015

1. Participants attending the training course need to **check out** from Grand Gongda Jianguo Hotel **before 14:00 PM on 16th September**.
2. The participants will proceed to institutional visit with their **baggage** and the same bus will drop training participants to Beihang University (training venue and residence).

17-18 September 2015

Training Programme as per the schedule provided in the agenda

19 September 2015

Free day for rest and recuperation

20-22 September 2015:

Training Programme continue as per the schedule provided in the agenda

22 and 23 September 2015

Departure

Airport pickup will be provided to the participants sponsored by RCSSTEAP



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Map of Beihang University

