2019 Advanced Institute -- Training Course on Landslide Investigations and Hazards Mitigation

June 24 – June 29, 2019
Hanoi University of Mining and Geology (HUMG), Hanoi, Vietnam

Call for Participation

Deadline for submission of applications: 31 MAR, 2019

Organized by

- Integrated Research on Disaster Risk, International Centre of Excellence-Taipei (IRDR ICoE-Taipei)

- International Council for Science Regional Office for Asia and the Pacific (ISC-ROAP)

- Landslide Research Team of Academia Sinica (LRT-AS)

- Landslide Research Team of National Central University (LRT-NCU)

- Earthquake-Disaster &Risk Evaluation and Management, E-DREaM Center, National Central University

- Hanoi University of Mining and Geology (HUMG), Hanoi, Vietnam

- Disaster Prevention Research Institute (DPRI), Kyoto University, Japan

Background

Landslides are common and widespread in many parts of the world. They can happen on hilly slopes or mountainous terrain given certain conditions in topography and material strengths in soil and bedrock for inducing the gravitational slope movement. Landslides also commonly occur during other major natural hazards, such as earthquakes, typhoons, heavy rains, volcanic eruptions, and tsunami, thus easily create a very dangerous situation of multiple hazards happening at the same time. Landslides have caused extensive infrastructure damage and threatened the human life through the centuries; densely populated modern societies are particularly vulnerable to the landside hazard.

The basic processes of triggering and initiation of landslides such as gravity, strength of material, external forces due to seismic shaking and pore-water pressure have been investigated for decades. However, research limitations remain for characterizing the landside processes due to inadequate amount of field observations and technological restrictions. But now many previous limitations have been effectively eliminated by using newly developed or improved technologies in geophysical, seismological, geological, remote sensing, geochemical research fields. These advanced technologies were developed and used in separate disciplines in the past decade, but are now reaching a point of potential integration and collaboration for resolving important issues in landslides. The introduction of these key techniques for landslide studies will be the main theme of this training course.

As one of the most tectonically active regions, Southeast Asian countries suffered from landslide hazards in the past long history. Build a platform to share and discuss the experiences regarding to landslide investigations and hazards evaluation is necessary. The training course, which is supported by ICoE-Taipei, Landslide Research teams in National Central University and Academia Sinica (LRT-NCU and LRT-AS), intend to provide a short training course which comprises a series of comprehensive lectures, practices and field trip. We hope this training course will provide fundamental information and knowledge about landslides for future mitigation of hazards and thus reducing human casualties and property losses for societies.

Objectives

The training course invites experts as well as young scientists from Southeast Asian countries to participate a two-way training course on the aspect of landslide investigations and landslide hazards mitigation. The participants will be asked to present the experiences in their countries. Discussions are also planned to facilitate the communications among the participants. The objective of this course is to enhance understanding, skills and practical knowledge to new waves of landslide investigations, landslide analysis, laboratory testing, monitoring, modeling, and landslide hazard evaluation.

To strengthen the outcomes of the training course, "call-for-proposal" will be announced no later than 3-6 months after this training course. The trainees will be invited to submit landslide research proposals followed by a competitive reviewing process. Only limited numbers of proposals will be granted for one year. IRDR ICoE-Taipei and ISC-ROAP will review and announce results no later than 3 months after closing of the proposal submission. The grantees will be required to submit a report to IRDR ICoE-Taipei and ISC-ROAP no later than 3 months after the end of the executive period.

Location

The training course is mainly organized by Integrated Research on Disaster Risk International Centre of Excellence, Taipei (IRDR ICoE-Taipei), of the Academia Sinica in Taiwan in partnership with ISC-ROAP. The Instructors are supported by the LRT-AS, LRT-NCU, E-DREaM, HUMG, and DPRI Kyoto University. The training course will be delivered at Hanoi University of Mining and Geology, Hanoi, Vietnam. For more information about the location, please visit http://en.humg.edu.vn/ .

Target Audience

Approximately 20-30 young to mid-career candidates from academia, practitioner, and policy communities from Vietnam are expected. Participants are encouraged to bring specific issues or research ideas about site specific or regional landslides study.

Training Course Agenda

     This training course includes the following topics and each slot contains lectures and/or discussion, plus one-day field trip to landslide sites in Northern Vietnam.

Landslide investigations and hazards mitigation		
	Morning	**Afternoon**
Day 0 **23 June**	Arrival	
Day 1 **24 June**	**1. Investigating landslides using seismology**	
	Monitoring of landslide slip characteristics	Seismic listening-and-quantifying sediment transport
Day 2 **25 June**	**2. Automated InSAR monitoring of landslides**	
	Principles of InSAR landslide monitoring	Practices of InSAR landslide monitoring
Day 3 **26 June**	**3. Remote sensing techniques for investigating landslides**	
	GNSS for landslide studies	Airborne Lidar for landslide investigations
Day 4 **27 June**	**4. Landslide warning and threshold values**	
	The threshold values for landslide warning	**Vietnam Lecturer TBD (we can expand the time slut if you have good lecturer)**
Day 5 **28 June**	**5. Landslide zonation and mitigation contermeasures**	
	The Road from National LiDAR mapping program to Zonation of the Geohazards in Taiwan	Non-Structural Countermeasures against Debris Flow and Landslide Disasters in Taiwan
Day 6 **29 June**	**6. Field trip in Northern Vietnam**	
Day 7 **30 June**	Departure	

Applying to Participate

Young to mid-career candidates from academia, practitioner, and policy communities from Vietnam are expected. Individuals who are interested to participate in the training course should complete the following items no later than 31 MAR, 2019.

a) Application form; see attached
b) An updated full Curriculum Vitae with publication list

The documents (items a and b) should be submitted by email to IRDR ICoE-Taipei at siyuyu@gate.sinica.edu.tw no later than 31 MAR, 2019.

Successful applicants will receive the following:

- Letter of Invitation: A formal letter of invitation from the host organization to participants to attend the workshop;

- Costs for 1) Transportation, if you are away from Hanoi 2) Accommodation, if you are away from Hanoi 3) Lunch during the AI period will be covered. Accommodation & transportation for the field trip will be arranged by Hanoi University of Mining and Geology, and ICoE-Taipei. Other costs not mentioned above will not be covered by the organizers.

For More Information

Questions about the workshop or this Call for Participations may be directed to IRDR ICoE-Taipei at siyuyu@gate.sinica.edu.tw

ORGANIZERS

	Integrated Research on Disaster Risk (IRDR) Programme
	IRDR International Centre of Excellence-Taipei (ICoE-Taipei)
	Academia Sinica
	International Council for Science Regional Office for Asia and the Pacific (ICSU ROAP)
	National Central University
	Earthquake-Disaster &Risk Evaluation and Management, E-DREaM Center, National Central University
	Hanoi University of Mining and Geology (HUMG), Hanoi, Vietnam
	Disaster Prevention Research Institute (DPRI), Kyoto University, Japan