INTERNATIONAL WORKSHOP on

Multi-disciplinary Hazard Reduction from Earthquakes and Volcanoes in Indonesia and Beyond

Banda Aceh, 11 – 13 October 2009

RISTEK-LIPI/JST-JICA & TDMRC-UNSYIAH

I. Background

Indonesia archipelago with a chain of 129 active volcanoes frequently erupted has been the world's most suitable for forecasting volcanic eruptions. It is important to learn the knowledge from Japan long years experiences in volcanic earthquake disaster prediction and observation techniques, share the knowledge to mitigate earthquake and volcanic disaster hazard potential for both in Indonesia and Japan. In order to make the actual disaster reduction and social research results effectively, the multi-institutional collaboration is formed through JST-JICA ERI Ristek Lipi Collaboration Research Program. The program entitled " Multi-disciplinary Hazard Reduction from Earthquake and Volcanoes in Indonesia"

II. Purpose and Outputs

The ultimate purpose of this study, for Japan and Indonesia, is to reduce the disaster caused by earthquakes and volcanic eruptions. Damage caused by natural disasters, natural phenomena (hazards) and social vulnerability caused by natural phenomena such as earthquakes and volcanic eruptions can not be prevented but the impact of disaster with a good predictions based on research and observations could reduce the scale of damaged. In order to have a good prediction of the real disaster, it is necessary to implement the framework of interdisciplinary collaboration and research and researchers of these studies. In this workshop the following studies therefore are promoted;

① Mechanism and prediction of earthquakes and tsunamis,
② Evaluation methods to predict volcanic activity,
③ Building disaster-resistant infrastructure,
④ Methodology to overcome the vulnerability of society at the time of the disaster response and reconstruction,
⑤ Study to increase awareness and promote disaster prevention education divided into five subgroups to conduct a comprehensive interdisciplinary research under the close coordination.
⑥ Inter-institutional coordination to take advantage of the administration and coordination of research results.

The expected output of the workshop program is to promote the most recent finding on;

① The mechanism of earthquakes and tsunamis of Reveal the heterogeneity with the coupling between the plates in the region from Sumatra, Java.
② The risk of future earthquake and tsunami earthquake recurrence period of earthquakes through understanding of the past. In addition, this area is an area that has led to Indonesia, Japan, researchers improve the level of Indonesia.

③ The new knowledge about the diversity of subduction process through the comparison of plate subduction zone between Indonesia and Japan.

④ Capability to enhance volcanic eruption prediction and evaluation methods activities. Understanding of the process of long-term prediction of volcanic eruptions and the prediction before conducting experiments to clarify the evaluation method of volcanic activity in Indonesia. Research results are expected volcano in Indonesia and can also provide new insight for the study of volcanoes in Japan.

⑤ Building disaster-resistant infrastructure
From a hardware approaches, with the aim to reduce the tsunami disaster through the use of vegetation to contribute to building a safe and secure social infrastructure in coastal areas of Indonesia through an intensive use of tsunami hazard maps. Create and construct hazard maps based on geological hazards in terms of prediction of liquefaction and ground survey methods for safe and secure society based on Indonesian earthquake in Indonesia for the development of measures contributed to the building.

⑥ Methodology to overcome the vulnerability of society at the time of the disaster response and reconstruction. Sheds light on the social vulnerability of communities and religious backgrounds of Indonesia, to identify problems with, for individual earthquakes and volcanic disaster research community through the psychological aspects of communication with the other hand contribute to overcoming vulnerability. Also, make useful recommendations for an effective post-disaster reconstruction. Strengthen collaboration with scientists and disaster areas of Indonesia through sociological research.

⑦ Promoting disaster education and awareness
Development of methods for disaster education and awareness programs in Indonesia, take advantage of the experience affected the development of educational materials and scientific knowledge, and the development of distance education using satellite techniques and aims to spread the practice to verify.

⑧ Cooperation with the government to utilize the research results
To reduce the research community, education and awareness programs will be conducted independently by researchers in Indonesia for research and practice activities to build a more secure society through training and safety.
In addition, challenge through a strong collaboration and information sharing to achieve the Indonesian government officials and scientists awareness and to promote measures for volcanic disaster of earthquake and tsunami disaster in Indonesia.

Program:

11 October 2009 (Venue: Hermes Palace Hotel)			
Time	Activity		Organization
14.00-19.00	Registration, check-in		Irina Rafliana Secretariat, TDMRC-Unsyiah
19.00-19.55	Dinner & Cultural dance		
19.55-20.30	Opening Ceremony		
1’	Tribute to the earthquake victims by a minute of silence		
5’	Welcome Note	Lukman Hakim (Vice Chairman of LIPI)	
5’	Welcome Note	Rikio Minamiyama (MEXT)	
5’	Welcome Note	Kenji Satake (ERI, Univ. Tokyo)	
5’	Welcome Note	Syamsul Rizal (Vice Rector of Univ. Syiah Kuala)	
5’	Welcome Note	Idwan Suhardi (Deputy Minister of S&T / Ristek)	
10’	Opening Speech	M.Nazar (Vice Governor of Aceh)	
20.30-21.00	Keynote Speech	Sri Woro B. Harijono (Head of Climatology Meteorology and Geophysics/BMKG)	

12 October 2009 Technical Session (TS): Syiah Kuala University			
Time	Topic	Speaker	Moderator/Notula
07.50	Bus leaves Hermes Hotel to Syiah Kuala		
08.00-08.30	Registration		Secretariat
08.30-08.45	Remarks (Introduction of project; purpose of workshop etc.) Harjono/Satake		
08.45-12.30	Theme Group 1: Evaluation of potential and prediction of earthquakes and tsunami based on geophysical investigations (TS 1)		
08.45-09.00	Paleoseismological study of Lembang Fault, Bandung, W. Java	Yasuo Awata (AIST)	Teruyuki Kato (ERI, Univ. Tokyo) Hasanuddin Z. Abidin (ITB)
09.00-09.15	GPS observations in Java	Irwan Meilano, Hasanudin Z.A., Heri Andreas (ITB)	
09.15-09.30	GPS measurements in Aceh after the 2004 earthquake	Fumiaki Kimata (Nagoya)	
09.30-09.45	Crustal Deformation along active faults	Dr. Toto Bacolcol (PHIVOLCS)	
09.45-10.00	Study on strong ground motion prediction	Kazuki Koketsu, (ERI, Univ. Tokyo)	
10.00-10.15	Coffee and snack		
10.15-10.30	Earthquake Early Warning in West Sumatra: a system design and preliminary survey for its feasibility.	Hiroshi Inoue (NIED)	
10.30-10.45	Study of historical	Yuichi Nishimura	

	earthquakes based on tsunami deposit and coastal geology	(Hokkaido Univ.)	
10.45-11.00	Paleo-tsunami record of Indonesia areas and future activity	Eko Yulianto (LIPI)	Eko Yulianto (LIPI) Yuichi Nishimura (Hokkaido Univ.)
11.00-11.15	Progress of numerical simulations at Indonesia coastal areas	Hamzah Latief (ITB), Budianto Ontowirjo (RISTEK)	
11.15-11.30	Preliminary report on the Sept. 30 Samoa earthquake/tsunami	Yuichi Nishimura (Hokkaido Univ.)	
11.30-12.00	Padang Earthquake Report	Fauzi (BMKG)	
12.00-12.30	Discussion and Comments		Teruyuki Kato (ERI, Univ. Tokyo) Hasanuddin Z. Abidin (ITB)
12.30-14.00	Lunch, Shalat, Break, Poster Session		Secretariat
14.00-16.00	Theme Group 5: Education and outreach for disaster reduction (TS 2)		
14.00-14.15	Developing School Preparedness Model in Banda AcehTsunami Disaster	Irina Rafliana (LIPI), M.Ridha (Unsyiah)	Yujiro Ogawa (Fuji-Tokoha Univ.) Irina Rafliana (LIPI)
14.15-14.30	Disaster education for community through participatory approach	Syahrial Mursyad (TDMRC, Syiah Kuala University)	
14.30-14.45	Numerical simulation of the large tsunami observed by fishermen far away from the northern Sumatra coast	Mamoru Nakamura (Ryukyu Univ.)	
14.45-15.00	Population Data Development in Meraxa Sub-district	Agus Sabti (Unsyiah)	
15.00-15.15	Disaster effective methodology: lesson from Banda Aceh	Didik Sugiyanto, (Unsyiah)	
15.15-15.30	Tsunami height poles and disaster awareness for the reconstruction toward resilient city	Megumi Sugimoto (Kyoto Univ.)	
15.30-15.45	Internet Education	Keiko Okawa (Keio Univ.) Basuki Suhardiman (ITB),	
15.45-16.15	Discussion		Yujiro Ogawa (Fuji-Tokoha Univ.) Irina Rafliana (LIPI)
16.15-16.30	Parallel Coffee Break, Shalat, Poster Session		
16.30-17.30	Group 6: Research Collaboration (TS 3)		Secretariat

16.30-16.45	Japan's Disaster Management System & International Cooperation	Atsushi Koresawa(Asian Disaster Reduction Center)	Hery Harjono (LIPI) Kenji Satake (Univ. of Tokyo)
16.45-17.00	Tsunami Drill: experience on mechanism between researchers and the government officials	Pariatmono, Yudho Baskoro (RISTEK)	
17.00-17.30	Discussion and result today		

13 October 2009 Technical Session (TS): Syiah Kuala University			
Time	Topic	Speaker	Moderator/Notula
07.50	Bus leaves Hermes Hotel to Syiah Kuala		
08.00-08.30	Registration		Secretariat, TDMRC
08.30-10:15	Theme of Group 2: Short-term and long-term predictions of volcanic eruptions and development of their evaluation methods (TS 4)		
08.30-08.45	Current status of Semeru Volcano	Muhamad Hendrasto (PVMBG)	Masato Iguchi (DPRI, Kyoto Univ.) Surono (PVMBG)
08.45-09.00	Project of Prediction of Volcanic Eruptions at Indonesian volcano -Short, middle, long-term predictions and evaluation of activity	Masato Iguchi (DPRI, Kyoto Univ.)	
09.00-09.15	Current status of Guntur Volcano	Sri Hidayati (PVMBG)	
09.15-09.30	Geological aspect of caldera-forming eruption	Supriyati Andreastuti (PVMBG)	
09.30-09.45	Kelud volcano: monitoring and mitigation experiences	Muhamad Hendrasto, Surono (PVMBG)	
09.45-10.15	Discussion		
10.15-11.00	Coffee Break		
11.00-14.00	Theme of Group 3: Establishment of social infrastructure based on engineering developments (TS5)		
11.00-11.15	Tsunami hazard Map and its Utilization in Padang	Fumihiko Imamura, (Tohoku Univ.)	Fumihiko Imamura, (Tohoku Univ.) M. Harris Pradono (BPPT)
11.15-11.30	Current status of hazard map of Padang City	Velly Asvaliantina (BPDP, BPPT)	
11.30-11.45	Problems in the simulation of tsunamis inundationg the region of multi-storied forest	Hideo Matsutomi (Akita Univ.),	
11.45-12.00	Research and implementation of earthquake safer housing in Indonesia	M. Harris Pradono (BPPT)	
12.00-12.15	Liquefaction hazard potential along coastal of Indonesia	Adrin Tohari (LIPI)	
12.15-12.45	Discussion		
12.45-13.45	Lunch, Shalat, Break, Poster Session		Secretariat
13.45-14.15	Paleoseismological study of	Danny H.	

	the Sumatra Fault near Padang, Central Sumatra and Sungaipenuh Earthquake (2009), Jambi, W. Sumatra	Natawidjaja (LIPI)	
14.15-15.45	Theme Group 4: Mitigation of social vulnerability against geohazards (TS6)		
14.15-14.30	Science based community preparedness in Indonesia	Deni Hidayati (LIPI)	Makoto Takahashi (Nagoya Univ.) Deni Hidayati (LIPI)
14.30-14.45	Bridging gaps between science and local knowledge in disaster management in Indonesia (Indonesian/Japanese)	Hiroyuki Yamamoto (Kyoto Univ.), Yoshimi Nishi (Univ. Tokyo)	
14.45-15.00	Recovery framework from natural disasters: lesson learnt from Banda Aceh	Muhammad Dirhamsyah (TDMRC, Syiah Kuala Univ.)	
15.00-15.15	Trauma healing of disaster impact	Dicky Pelupessy (UI)	
15.15-15.45	Discussion		
15.45-16.00	Coffee Break		
16.00-16.30	General Discussion on the Project		Edie Prihantoro (Ristek) Kenji Satake (Univ. of Tokyo)
16.30-17.00	General Discussion on IOWave09 Technical program, Resume; prospect, future plan, crystallized		(Ristek, BGR, GTZ)
17.00	Closing Ceremony	(Deputy Ristek / Rector Unsyiah)	Secretariat, TDMRC

Posters
1-3 Tetsuro Imakiire (GSI)
4-1 Masatomo Umitsu, Shigeyoshi Tanaka and Makoto Takahashi (Nagoya Univ.)
5-1 Yozo Goto, Scientific Tsunami Evacuation Simulation of Meuraxa, Banda Aceh
5-1 Muzailin Affan (Unsyiah), Tsunami Evacuation Plan and Spatial Data Development for Simulation.
Note : Poster size : A1 Landscape
(Comments: one or two more poster boards would be preferable for free access. Some people may want to raise some pictures on recent earthquakes and tsunamis)

14 October 2009
Morning: Indian Ocean Wave-tsunami Drill

11.00-14.00:
Flashback to 2004's tsunami trail: a reflection for the future safety live of coastal area (excursion program)