



IISEE Newsletter



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1 Tachihara Tsukuba Japan 305-0802 tel+81-29-879-0678 facsim+81-29-864-6777

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Professional lectures on disaster management policy

By Mr. Takahiro Yamada, Head of Administration Division, IISEE

As One-Year Training Course held at the International Institute of Seismology and Earthquake Engineering (IISEE) is cooperating with the National Graduate Institute for Policy Studies (GRIPS), it is possible to obtain a master's degree. Training participants who are aiming to acquire a master's degree in disaster management policy of GRIPS moved from Tsukuba to Tokyo and took professional lectures on disaster management policy from November 25th to December 6th.

In addition to lectures by GRIPS professors, they made inspection tours of Roppongi Hills, the construction site of the concentrated urban area in Nakano Yayoi town, and Shibuya station, where continues development one after another. They also made presentations and discussions about disaster management policy by being divided into each group. In group research, a group that made a presentation about the 2018 Kerala Floods in India was an award. In inspection presentation, a group that made a presentation about Climate change biz 2019 took place in the Tokyo Rinkai Disaster prevention park, and Tokyo Big site was an award.

In Japan, a cold day will continue, but the daytime, from sunrise to sunset, will be getting longer.

We hope all participants enjoy this cold winter with joining the Year-end party held by IISEE and coming into contact with Japanese New Year custom.



Lecture at GRIPS



Inspection of underground storage tanks to prevent flood damage around the east exit of Shibuya Station

IISEE Net and Training

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IISEE-UNESCO Lecture Note

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Synopsis Database

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Earthquakes

The 2011 off the Pacific coast of Tohoku Earthquake

Reports of Recent Earthquakes

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Report on Tohoku and Niigata Study Trip

By Mr. OCTANTYO Ardian Yudhi from Indonesia, Seismology course

On November 11th to 15th, 2019, participants of "2019/2020 JICA Seismology, Earthquake Engineering, and Tsunami Disaster Mitigation Course" went on a study trip to visit the affected area of 2011 Great East Japan Earthquake in Tohoku region and 2004 Niigata Ken Chuetsu Earthquake in Niigata Prefecture.



Having lectures outside the class during a vacation trip was an exciting experience. Learning about the devastating effects of the earthquake from different perspectives between coastal and mountainous regions has widened our point of view. Countermeasures action, as well as recovery and reconstruction approachment due to these different types of damage, were other important notes for us.

The dedication of Japanese people was impressive where the government, private sector, community, and another society aspect like NGO could integratedly working together hand in hand to recover from significant disasters. I believe that it is not easy to recover from such tragedies. Still, through the time of difficulties and sacrifices, Japan successfully heals and builds better preparedness towards disasters that may reoccur in the future.

This trip also gives us inspiration concerning the importance of educating the public, especially the younger generation, about earthquake hazards as straightforward and attractive as possible so that it can be easily understood



Sendai

without ignoring the substances of earthquake hazards and causing excessive dread in the middle of the community.

By Mr. DALAIJARGAL Lkhagvadorj from Mongolia, Seismology Course

11-15 November 2019, All of the course participants visited Miyagi and Niigata prefecture to observe the consequences of the tsunami and earthquake. The Tohoku region suffered from devastating damages during,



and after the event, which was a gigantic earthquake in Japanese history, on March 11, 2011. In Ishinomaki city and Arahama village area, the process of the reconstruction already been in full swing, even though it hasn't been for a long time since the event.

During this study trip, the lecturers we met were victims survivors of such a destructive event.

They share their valuable experiences from disaster with the next generations, contribute their effort to the society with their community center as well. I am so delighted that we took worthwhile lessons from them.

Moreover, we saw plenty of newly built

evacuation centers equipped with advanced technologies in tsunami-affected areas. As well as, at Tohoku University, experiencing virtual earth was the most exciting, and we traveled across the simulated earth and went beneath the own countries. It was so impressed that we could see the subduction zones, hypocenters, active faults, and hot spots. In this trip, I acquired such useful approaches that can be implemented in my country to educate our further generation.

By Mr. DELGADO RODRIGUEZ Carlos Hugo from Mexico, Earthquake Engineering Course

This study trip is carried out in the prefectures of Miyagi and Niigata, Miyagi with damage from tsunamis and Niigata from earthquakes. Miyagi prefecture is located in the central part of Tohoku, facing the Pacific Ocean, and contains Sendai, the largest city of Tohoku.

The earthquake of March 11, 2011, of magnitude 9.0, It's sometimes called by different names like the 2011 Tōhoku earthquake, the Great Sendai Earthquake, the Great Tōhoku Earthquake, and the 3.11 earthquake. Most of the damages in Miyagi was by the tsunami, despite the anti-tsunami walls, no one could imagine the amount of water that attacked the coast. In the prefecture of Niigata, on the other hand, the most considerable damage was caused by the unpredictable earthquake on October 23, 2004.

We visited places like Arahama Elementary School, Ishinomaki, 3.11 Memorial Hall and Yamakoshi District. The people who attended us explained their experiences kindly. Many of them were present at the catastrophic events, and there was a word that stood out among them "do not forget".



Enjoy Now

During this beautiful trip, I go with that keyword "do not forget" because you can be resilient and get back up, but if you forget the disasters that presented to you, you are condemned to repeat the predicaments. For these, I would like to thank JICA and BRI-IISEE staff members for organizing this 5-day study trip, and I will not forget it.



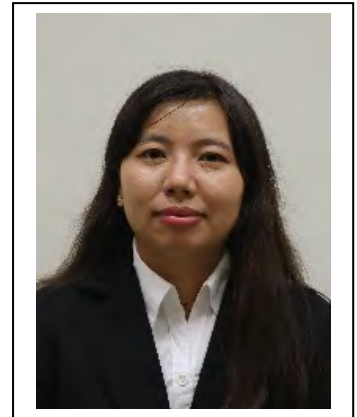
Sendai mediatheque

By Ms. Nwet Nwet Yi from Myanmar, Earthquake Engineering Course

We took a study trip to Miyagi and Niigata Prefectures from 11th to 15th November in 2019. This trip was an excellent experience for us. The 2011 Great East Japan Earthquake and Tsunami happened in Miyagi, and the 2004 Chuestu Earthquake hit Niigata.

Those disasters caused massive damage to the cities and districts. People helped each other, and they cooperated to repair the things that were destroyed by disasters. Those actions are the best ways to survive from catastrophe. The government organized the agency for reconstruction and relocation. The rehabilitation was conducted by the local communities and the agency. Now the places have recovered from disasters. We learned the disaster management policies and the countermeasures based on the lessons from the disasters. We saw a lot of memorial things which preserved as a memory of disasters for future generations. The people who survived the disasters are working in community centers and museums. They share their knowledge and experiences to the visitors. Their spirits and actions are full of nobility and dignity. They gave us the valuable messages that what we should prepare and how we evacuate from disaster.

I wish to show my appreciation to JICA and BRI-IISEE staff for allowing us to learn about the effects of two great earthquakes.



By Mr. GUTERRES JONES Felix Januario from Temor-Leste, Tsunami Disaster Mitigation Course

Call for Papers

IISEE Bulletin is now accepting submissions of papers for the seismology, earthquake engineering, and tsunami. Developing countries are targeted, but are not limited.

Your original papers will be reviewed by the editorial members and some experts.

NO submission fee is needed.

Try to challenge!!



This is a Brief impression during a five-day visit to Tohoku District. It was an extraordinary experience and an honor for me. I saw with my own eyes the place where the disaster occurred, and I had a chance to talk to the victim and witnesses of the tragedy in Japanese history. The earthquake and tsunami that occurred in Tohoku District on 11th of March 2011, were the most devastating disaster in Japanese history. It wiped out the area along the Tohoku coast, and casualties of this disaster are more than eighteen thousand victims. The economic losses are also remarkable. The Japanese will never forget the disaster, and the next generation will always

remember it. It is a reminder for all of us always to be alert on an emergency, both earthquake and tsunami, that might come at any time. It is remarkable that only within eight years, the government and the community were able to recover from such a disaster. They worked together to rebuild the city which was affected by the earthquake and tsunami. Now there are safe area facilities for everyone, such as seawall construction with a maximum high exceeding the old wall, the higher level of every road along

the coastline, and secure evacuation sites. Also, the community willingly participates in tsunami-affected development. They are willing to be relocated to a safer place provided by the government. Tohoku earthquake and tsunami are references to Japan and lessons for the island countries which are facing to the sea trenches and located in the active volcanic zone. It is a must to prioritize the safety of the community from any natural disaster.



Matsushima

Attendance at SEE8 in Tehran and visit to National Research Institute of Armenia

By Dr. Tatsuya Azuhata, Chief Research Engineer, IISEE

Iranian societies relating to seismology and earthquake engineering held the eighth International Conference of Seismology and Earthquake Engineering (SEE8) on November 11-13 in Tehran. In 2017, they had a big earthquake (Mw=7.3) in the western part of Iran. Therefore, lots of

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The IISEE Newsletter is intended to act as a go-between for IISEE and ex-participants.

We encourage you to contribute a report and an article to this newsletter. Please let us know your current activities in your countries.

We also welcome your co-workers and friends to register our mailing list.

iiseenews@kenken.go.jp

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<http://iisee.kenken.go.jp/nldb/>

researchers presented their investigation results for this earthquake in addition to ordinal research topics at the conference.

I attended the special session for "Post-disaster Need Assessment and Early Recovery Planning" and introduced Japanese methods for a quick inspection and a damage classification of damaged buildings. These technologies are essential to prevent secondary seismic disasters and to promote the recovery process after earthquakes. In Iran, also, they have been carrying out researches on those, and issued the guideline after the 2017 Iran earthquake. I could know their advanced knowledge based on the experiences of earthquake disasters by attending the conference. I think such exchanging of knowledge and information is significant for each other to improve our disaster mitigation technologies.

After the SEE8, I went to Yerevan, the capital city of Armenia. I visited the Earthquake Engineering Center of National Survey for Seismic Protection (NSSP) and introduced the training program of the IISEE. Also, I exchanged recent information on earthquake engineering and discussed it with Armenian researches of the NSSP. I think that we could build a dense human network between the NSSP and the IISEE due to this visit.



Presentation at the SEE8 in Tehran



External Appearance of the NSSP in Yerevan

A paper by Chief Research Scientist Dr. Bunichiro Shibazaki, published in the *Journal of Geophysical Research: Solid Earth* on 21 November 2019.

By Dr. Bunichiro Shibazaki, Chief Research Scientist, IISEE

Chief Research Scientist Dr. Bunichiro Shibazaki published a paper on slow slip events in the Hikurangi subduction zone in New Zealand in the *Journal of Geophysical Research: Solid Earth*, on 21 November 2019. Recently, various slow earthquakes have been discovered worldwide, including slow slips and low-frequency earthquakes along subduction zones. This paper investigated the interaction between slow slip events and large earthquakes. Please inform Dr. Shibazaki (bshiba@kenken.go.jp) if you are interested in this work.

Shibazaki, B., Wallace, L. M., Kaneko, Y., Hamling, I., Ito, Y., & Matsuzawa, T. (2019). Three - dimensional modeling of spontaneous and triggered slow - slip events at the Hikurangi subduction zone, New Zealand. *Journal of Geophysical Research: Solid Earth*, 124.

<https://doi.org/10.1029/2019JB018190>

Snapshot of Tohoku and Niigata Study Trip



Stone monument in Settai Taro, Miyako



Former Tarou Tourist Hotel in Miyako



Tsunami Stone in Yoshihama, Ohunato



TV Interview at breakwater in the mouth of Kamakshi bay



Virtual earth experience at Tohoku University



Ishinomaki



Observation of Tsunami deposit in Sendai Plain Area



former Arahama Elementary School (Tsunami Damaged Area)



Matsushima

Ruins of the Great East Japan Earthquake: Sendai Arahama Elementary School
https://www.city.sendai.jp/kankyo/shisetsu/documents/mitsuori_arahamasyo_2.pdf

Miyagi Reconstruction Agency: <http://www.reconstruction.go.jp/english/>

Sendai Mediatheque: <https://www.smt.jp/en/about/>

International Research Institute of Disaster Science: <http://irides.tohoku.ac.jp/eng/>



Nagaoka Earthquake Disaster Archive Center



Yamakoshi Revitalization Center Orataru



Nagaoka city Crisis Management and Disaster prevention headquarters



Kogomo Memorial Park



Aore Nagaoka

Nagaoka Earthquake Disaster Archive Center:
<http://www.c-marugoto.jp/nagaoka/index.html>(Japanese only)

Aore Nagaoka:
<https://www.ao-re.jp/> (Japanese only)

Yamakoshi Village:
<http://www.yamakoshi.org/> (Japanese only)

Kogomo Memorial Park
<https://c-marugoto.jp/route/base07.html>(Japanese only)