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18 Participants Completed the 2021-22 Training Course

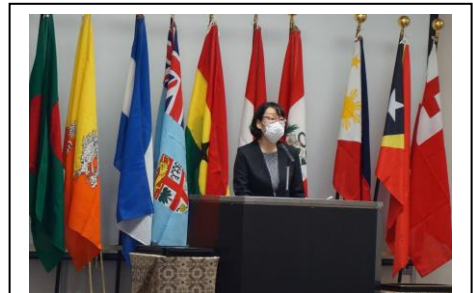
By Mr. Takahiro Yamada, Head of Administration Division, IISEE

On Sep 13, we had a closing ceremony of the training courses in Seismology, Earthquake Engineering, and Tsunami Disaster Mitigation, which started on Oct 5, last year.

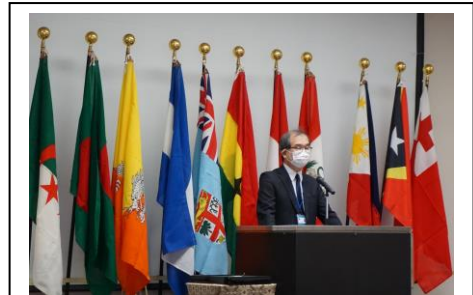
18 participants from 11 countries (Algeria(1), Bangladesh(1), Bhutan(1), El Salvador(2), Fiji(1), Ghana(1), Indonesia(6), Peru(1), Philippines(1), Timor-Leste(1), and Tonga(2)[online] joined the training course. In the ceremony, the representative of participants received a certificate of completion and Post Graduate Diplomas. After that, all the participants were awarded.

During the training period, the participants were divided into three courses, Seismology, Earthquake Engineering, and Tsunami Disaster Mitigation, and have attended specialized lectures considering their field. They summarized the research and solutions for the problems in their countries.

In the closing ceremony, the Director of Disaster Management Policy Program of GRIPS, Mr. Sugahara, who joined remotely,



Ms. Emiko MUTSUYOSHI,
Deputy Director General, Tsukuba
Center, JICA



Dr. Takao SAWACHI,
President of BRI



Mr. Masaru SUGAHARA,
Director of Disaster
Management

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announced 3 participants of the best research award. Dr. Shibazaki, the director of IISEE, announced 3 participants of the IISEE award and 3 participants of the encouragement award. Lastly, Ms. Aldilla from Indonesia made an address in reply to congratulatory speeches.

We wish their success in their country using the knowledge from this training course and the network of the people.



Presentation of Certificate
Mr. Mule Saula from Fiji, S course



Presentation of Diploma
Mr. Kunzang TENZIN from Malaysia,
E course



Best Research Award
Mr. Wahyudi Nasrul PRATAMA from
Indonesia, S course



Best Research Award
Mr. Jean Jairo CUEVA RIVERA from Peru,
E course



Best Research Award
Mr. Yogha Mahardikha Kuncoro PUTRA
from Indonesia, T course



IISEE Director's Award
Ms. Aidilla Damayanti Purnama RATRI
from Indonesia, S course

Earthquakes

The 2011 off the Pacific coast of Tohoku Earthquake

Reports of Recent Earthquakes

Utsu Catalog

Earthquake Catalog



IISEE Director's Award
Mr. Angga WIJAYA from Indonesia, S course



IISEE Director's Award
Ms. Eugenia Guadalupe CAMPOS CARRANZA
from El Salvador, E course



IISEE Director's Award
Mr. Aziz WIDIARSO from Indonesia, T course



Encouragement Award
Mr. Kevyn Enrique PINEDA ORTIZ
from El Salvador, S course



Encouragement Award
Mr. Benjamin Osei FORDJOUR
from Ghana, E course



Encouragement Award
Mr. Sidiq Hargo PANDADARAN
from Indonesia, T course



Group Photo

URL of IISEE: <https://iisee.kenken.go.jp/en/>

Closing Ceremony Speech 2022

By Ms. Aldilla Damayanti Prnama RATRI

Thank you for inviting me to speak today, also thank you for the kind introduction.

Hello everyone.

“When one door closes, another opens, but we often look so long and so regretfully upon the closed door that we do not see the one which has opened for us.” —Alexander Graham Bell.



Ms. Aldilla

Good morning to Dr. Takao SAWACHI, President of the Building Research Institute. Professor Masaru SUGAHARA, Program Director of the Disaster Management Policy Studies. Ms. Emiko MUTSUYOSHI, General Director of JICA Tsukuba International Center. Dr. Bunichiro SHIBAZAKI, Director of the International Institute of Seismology and Earthquake Engineering, distinguished guests. And to the amazing graduating class of 2021-2022.

Congratulations. Finally, we did it.

On behalf of the Graduates of 2021-2022, this is truly an honor to stand at this podium, delivering closing words on our graduation day. To be honest, I'm very nervous. Standing in front of the experts and the bright generation from the greatest country. All of you are amazing. I am grateful for this opportunity.

I remember when we were doing everything together. Eating, cooking, studying, traveling, and getting lost together. We cherish all these moments. We are traveling away from our family and friends. Then, meet friends from oversea with different cultures and build a connection as a new family, Family of IISEE/GRIPS 2021-2022. Thank you for the incredible memories.

If we recall, we were still in the pandemic era a year ago. Most of us may have been worrying about whether we can go to Japan for offline learning or be a zoom fighter along the lecture. But we did both, attended online classes and face-to-face learning in this beautiful city, Tsukuba. Then, day by day we have to go to our beloved campus together and separated by Thesis session. We got sleepless nights to finish our thesis. I realize there is no shortcut to being a successful person; the elevator to success is out of order. Therefore, we, the eighteen participants from eleven countries, used the stairs step by step. I have been very honored to climb the stairs with you. And now, all of our work is done, and having a big day today. Graduation.

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 course was very special and we're lucky to be part of this course. We learned a lot of theory and practice of Seismology, Earthquake engineering, and Tsunami disaster mitigation from the most excellent Senseis, who were very kind and patient in teaching. Not only preparing us academically but also preparing us for life. Thank you for being truly outstanding lecturers. Your passion for teaching and dedication to us is obvious in everything you do. We are so lucky to have you as our lecturers. Thank you for helping us to express our creative side and come out of our shells.

I cannot just thank one person on this occasion because I have a great team. Thank you the IISEE staff. I cannot imagine without your help; maybe we would have forgotten to send a questionnaire and submit our homework. You always remember and notify us about the schedule, the lecture material, and everything; you also ensure the program runs very well. Thank you all, who are helping and supporting us. I'm feeling so loved and blessed.



Last but not least, thank you, JICA for your continuous support, guidance, and struggle to give the best for us, especially in this exceptional condition, pandemic COVID-19. You are always doing the best for us, allowing making a study trip that was meaningful for us. We can learn everything from Japan, the best country for disaster management. We can try the earthquake simulator and feel the shaking of several major earthquakes in Japan. It was such a fantastic experience.

Dear my colleagues whom I am proud of, thank you for being a happy family and the best support system. Remember that graduation is not the end. The real adventure, the new chapter of our life just begins. So, never stop learning. Although we are at the end of our schooling life, we are only on our learning journeys. Like Albert Einstein said, "Your imagination is your preview of life's coming attraction". Let's do DNA (Dream and Action). Dream high and more action. Follow your passion and believe in your heart. Finally, I would like to end my speech with a quote from Jim Rohn based on my one-year experience in Japan. "Discipline is the bridge between goals and accomplishment." Use your time well and I wish you all the best. Safe trip to your beloved country and keep in touch, because together make us better.

Once again, congratulations to the class of 2021-2022. I am Aldilla. Thank you.

GRIPS Graduation Ceremony

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

With the collaboration of the National Graduate Institute for Policy Studies (GRIPS), IISEE participants are awarded the degrees of

Master of Disaster Management when they complete a one-year training course.

This year, the GRIPS graduation ceremony was held in person for the first time in three years while taking measures to prevent COVID-19 infection.

On Sep 14, 16 of the IISEE participants attended the graduation ceremony held at GRIPS in person and 2 of the IISEE participants who have joined the training course remotely from Tonga attended the ceremony online.

In closing the 2021-2022 IISEE training course, we would like to express our sincere gratitude to all the people involved for their cooperation. Thank you very much.



GRIPS Graduation Ceremony

URL of GRIPS: <https://www.grips.ac.jp/en/>



Enjoy, Now

Courtesy Call on the MLIT Minister

By Mr. Takahiro Yamada Head of Administration Division, IISEE

On Sep 1, IISEE participants made a courtesy call on Mr. Tetsuo Saito, the Minister of Land, Infrastructure, Transport, and Tourism. 16 participants from 10 countries joined face-to-face, and 2 from Tonga joined remotely. The breakdown is Algeria(1), Bangladesh(1), Bhutan(2), El Salvador(2), Fiji(1),



Mr. Tetsuo SAITO,
The Minister of Land, Infrastructure,
Transport, and Tourism

Ghana(1), Indonesia(6), Philippines(1), Timor-Leste(1) and Tonga(2).

Minister Saito encouraged them to take advantage of the results of this training and mutual network to play an active role as leaders of earthquake disaster prevention measures in their respective countries.

Representing IISEE participants, Mr. Jean from Peru expressed his gratitude for support to developing countries through the venerable IISEE training course and a precious and forgettable year they could spend. He stated that it is our job to use the valuable knowledge we have acquired in this training program and to disseminate the process of preparing for natural phenomena, the process of recovery, and building a resilient community. Also, he said that is no doubt all the knowledge will be applied to disaster risk management productively according to the needs of each of our countries.

In the end, Minister Saito and all the participants took a commemorative photo.

I hope this opportunity of the courtesy call encourages them to take important roles in the future of their home counties.

URL of Ministry of Land, Infrastructure, Transport and Tourism:

<https://www.mlit.go.jp/en/kokusai/0000040.html>

URL of Building Research Institute:

<https://www.kenken.go.jp/english/award/20220905.html>

Contact Us

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

<https://iisee.kenken.go.jp/en/>

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Minister Saito and the IISEE Participants

Report on Kansai Study Trip

(1) Aldilla Damayanti Purnama Ratri
(Indonesia) S-Course



At the end of the IISEE program in 2022, the participants got an opportunity to join a study trip to Kansai on 23-25 August and Tokyo-Gunma on 29-30 August. We had three days for the trip to Kansai and two days to Tokyo-Gunma. The trip opened by visiting Myoho-in Temple, which has enormous gates and a large wooden structure hosting the kitchen and offices. Then, we enjoyed the beautiful view of Kinkaku-Ji Temple and were amazed by the design and construction of the temple. Then, we got a lot of knowledge from the experts when we visited Disaster Reduction and Human Renovation Institution and E-Defense, Hyogo Earthquake Engineering Research Center (NIED) on the second day. We learned about the best structure for the building to face the earthquake and the importance of retrofitting. There are many insights to deal with a catastrophic disaster, prepare the building and local society before, during, and after the earthquake. All of them was utterly recorded at The Great Hanshin-Awaji Earthquake Memorial.

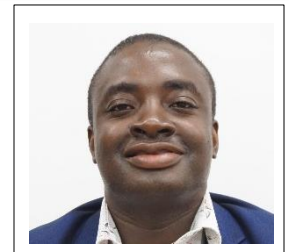
The Last day in Kansai was to visit Akashi Kaikyo Bridge Exhibition Center and Nojima Fault Preservation Museum. At the Akashi Kaikyo Bridge Exhibition Center, we learned and saw the technologies used to construct the second longest suspension bridges in the world at 3.911 meters which connect Kobe city to Awaji Island. I am amazed with this bridge because the design not only focuses on the material but also considers the fault location when an earthquake or flood occurs at any time. I got an important point by visiting this place which is considering the geology setting around the building or bridge as one of the disaster preventions.

Next, we learned about the Nojima fault and observed the surface displacement recorded in stone steps. I am impressed that can see a clear dextral offset and trench wall are well recorded at this museum. It was very beneficial to learn fault directly. At the end of this trip, I want to thank you for the wonderful opportunity from JICA, BRI, IISEE, and GRIPS for us to visit and study a lot of things related to earthquakes and how to deal with them. Hopefully, I can utilize this extraordinary knowledge and experience to support disaster management in Indonesia.



Akashi Kaikyo Bridge (Photo taken by Nassim from E-Couese)

(2) Benjamin Osei FORDJOUR (Ghana) E-Course



1.0 INTRODUCTION.

Participants of the Earthquake Engineering and Seismology Course embarked on a field trip to the Kansai District from Tuesday, 23 August, to Thursday, 25 August 2022. Followed by a two-day trip to Tokyo and Gunma, on the 29th and 30th of August. The Study trip was led and organized by the International Institute of Seismic and Earthquake Engineering staff in the person of Dr T. Hayashida and Dr Ito, with Ms Koyano as our JICA coordinator. Apart from its educational purpose, this study trip served as an avenue for participants to explore the rich culture and hospitable lifestyle of the people in Japan. The structural development and settlement recovery in all the disaster-struck areas was a sight.

2.0 DAY 1 TSUKUBA CITY TO KANSAI DISTRICT.

The day's journey began after 7:00 am from the forecourt of JICA Tsukuba through the Tokyo station unto Tokaido Shinkansen to Kyoto station to our first destination at Myoho-in Temple at about 1:15 pm for a tour of refurbishment work on Kuri.

Tour on Kuri Refurbishment Work At Myoho-in Temple.



Plan view and wooden structure of the Myoho-in Temple Kuri in Kyoto.

On the day of visitation at the Myoho-in Temple, we studied the history of the existence of the structure dating back to the era of Emperor Go-Shirakawa (1127-1192). The Kuri, translated as the Kitchen, is a national treasure in Japan dating back to 1595. Its architectural and engineering

design is characterized mainly by Japanese Cypress as beams and Pines as beams with historic clay roofing. Studies showed that the heavy roofing caused cracks in five beams leading to the renovation of the Kuri. The policy of renovation is based on maintaining the historic design and exact building materials as closely as possible. There were also exposures of past renovation works at the base of the interior pillars. During this tour, we appreciated the historic design and the importance of old Japanese architecture and design well perseveres for the future generation.



Group photograph at the Myoho-in Temple

We then made a short pass through the Kinkaku-ji (Golden Pavilion) a Zen Buddhist temple in the north of Kyoto. The Kinkakuji Temple is a three-story building consisting of one section of white and brown wooden planks and two sections of gold leaf, and its grandeur is clearly visible from a distance. The magnificence of the Kinkaku-ji Temple is appreciated at a distance as a two-floor structure conserved in gold leaf on a white and brown wooden painted ground floor. The Temple is built overlooking a large pond, home to colorful fishes. Along the journeying path are also historic information on the inspirations and hierarchy responsible for this special edifice. After the tour, we retired at the JICA Kansai in Kobe.



The magnificent temple Kinkaku-ji (Golden Pavilion)

DAY 2: A VISIT TO THE DISASTER REDUCTION AND HUMAN RENOVATION INSTITUTION, E-DEFENSE & PORT OF KOBE EARTHQUAKE MEMORIAL PARK.

The first stopped on this day was a three-meter walk from the JICA Kansai. The Disaster Reduction and Human Renovation Institution is a four-level massive structure with each floor housing exhibitions on past earthquakes and their impact on the life of its citizens. We took a tour through the earthquake recorded video session after that we went through several museum sessions both of disaster replicated structures and picture documentation. We then visited the educational facility on the east wing where several educational simulations were made available. This facility signifies a well-documented and relatable experience of the Kobe earthquake in several parts of Japan.



Group photograph at the entrance of the Disaster Reduction and Human Renovation Institution

We then proceeded on an hour's drive to the National Research Institute for Earth Science and Disaster Resilience (NIED), formally known as the E-Defense. During our visit to the E-Defense, we were welcomed to a lecture during which we learnt about the history, goals and the kind of research projects carried out by the institution. As a facility with a record of the world's largest shaking table, we were humbled as we toured the main experimental area and its functional massive units. We were pleased to experience the arrangement of such a massive set-up and some wonderful project achievements including numerical simulators (E-Simulator), which the facility has contributed.



Group picture at the Shaking table warehouse at E-Defense

Our next and final stop was the Port of Kobe Earthquake Memorial Park. We were honored to have a glance at the beautiful scenery from the bay to a 60 m stretch wall of the Meriken wharf quay wall. Re received some talk on the history of the location and experiences from Sensei Hayashida after which we retired to the JICA Kansai.

Day 3 VISIT TO AKASHI KAIKYO BRIDGE EXHIBITION CENTER AND THE NOJIMA FAULT PRESERVATION MUSEUM.

The final day of the Kansai District trip started with a tour at the Akashi Kaikyo Bridge Exhibition Center during which period we had the opportunity of viewing the total construction phase of the 3.9km long, three-span suspension bridge. We were educated through the materials used right from the foundation level throughout to the finishing touches. Historically, the actual design of the bridge was altered by 1m due to the Great Hanshin Awaji Earthquake of 1995. We then had a tour to the levels of the bridge and finally to the apex of about 490m above ground.



A visit to the top level of the Akashi Kaikyo Bridge

We final visited the Nojima Fault Preservation Museum after a 25min drive from the Akashi Kaikyo Bridge. A well conserved museum with actual fault exposures due to the M7.2 Great Hanshin-Awaji Earthquake of 1995. There were several other preserved monuments apart from the exposed fault line, including displaced fence walls, drainage pavements and fallen cabinets in a kitchen setting of the family that preciously occupied the accommodation. a recreation of the kitchen immediately after the earthquake, based on photographs and testimonies. We had a very informative talk and discussion, once again, from Sensei Hayashida. After which we headed back to Tsukuba.



Exposed fault displacement due to the Great Hanshin-Awaji earthquake on display at the Nojima Fault Preservation Museum.

(3) Sidiq Hargo PANDADARAN (Indonesia)
T-Course



Kinkaku-ji

These three days of the study trip to Kansai District on 23-25 August 2022 have been a very mesmerizing experience. We went by Shinkansen, but unfortunately, in the middle of the trip, we could not enjoy the beautiful view of Mount Fuji due to the rainy weather at that time. Kyoto was the first city we visited. In this

city, we visited Myoho-in Temple and Kinkaku-ji. At that time, Myoho-in Temple was under renovation because some of the foundation wood had rotted. Because the construction of this temple uses traditional methods, the renovation method also uses the conventional method. Next, we visited Kinkaku-ji or commonly called the Golden Temple. This place was once



The Great Hanshin-Awaji Earthquake Memorial



Akashi Kaikyo Bridge

used as the resting place of Shogun Ashikaga Yoshimitsu. I like the design of the area around the temple, where the Golden Temple is located near the lake and pedestrians surround it. After finishing at this place, we headed to JICA Kansai, our place to stay for the next two nights. My first impression of JICA Kansai was pretentious. In

addition to the large building,

the view of the room is also excellent, facing the beach.

The next day, we visited Wakayama. In this place, there is a story of a village head who is very instrumental to his village, and his name is Hamaguchi Goryo. He fled to Inamura (piles of rice) as a guide for his residents to go to a safer place when the tsunami was caused by the Ansei-Nankai earthquake in 1854. He also built a tsunami embankment for the village with his own money by paying local people to work. All of Hamaguchi Goryo's stories are immortalized in Inamura-no-Ho no Yakata. Next, we visited the Tsunami/Storm Surge Disaster Prevention Station located in Osaka. Here we see how the technology of the city of Osaka which is lower than sea level. There are permanent dikes, operational dikes that are opened and closed when there is a storm surge or tsunami, and a giant water pump that is used to equalize the river water level after the storm. After that, we visited The Great

Hanshin-Awaji Earthquake Memorial. The building is not far from JICA Kansai, only about a 3-minute walk. In this place, I saw a diorama of the city of Kobe damaged by the 1995 Kobe earthquake and how the Japanese government, as well as more than 1,380,000 volunteers, helped recover after the earthquake.



Nojima fault
caused the 1995 Kobe earthquake

On the last day, we went to the Akashi Kaikyo

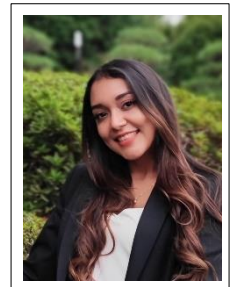
Bridge Exhibition Center before going to the top of the Akashi Kaikyo Bridge. Here we get explanations such as the stages of construction until when this bridge was under construction, the Kobe earthquake occurred in 1995, which made this bridge shift by +90 cm, which resulted in a re-calculation. Afterward, we

headed to the top of the bridge, equivalent to a 58-story building. Here I am afraid but also amazed by the beautiful surrounding scenery I can see above. The last place in a series of study trips to the Kansai region is the Nojima Fault Preservative Museum. In this museum, the fault that caused the 1995 Kobe earthquake is visible; interestingly, there is a house on the fault line that does not suffer significant damage.

Report on Tokyo · Gunma Study Trip

(1) Eugenia Guadalupe CAMPOS CARRANZA (El Salvador) E-Course

The study trip started with a visit to the Life Safety Learning Center, Tokyo Fire Department. In this place, we acquire and improve our disaster preparedness knowledge and techniques by being involved in practical activities. We focused on three natural disasters, Inundation, Earthquake, and Fire. First, we experienced the inundation disaster by trying to open pressured doors of a false room and car that replicated inundation heights of 10cm, 20c, and 30cm. Even with 10cm, it was very difficult for me to open the door. The lesson that I learned from this is that in an inundation situation, you must act quickly and try not to put yourself in danger, avoiding staying in basement levels or passing bridges over overloaded rivers. The second activity was related to earthquakes, we experienced the different intensities of strong motion on an earthquake simulator, and they taught us the safety position when you don't have access to a table or secure place. I have never felt something like the movement of an intensity 7 earthquake; this could easily throw me through the air being stood up, so trying to stay in the safety position covering the head is surely the best you could do in a real event. I also experienced some real famous earthquakes in Japan through the simulator. The last activity involved Fire. It was my first time learning and using a fire stingier and is a valuable lesson that I will remember all my life. I hope not to need to use it; however, I think is a basic skill that everyone should know. Finally, we experienced going out from a smoke room. It was very challenging because we couldn't see very well in the low light, which simulated the electricity shortage and the smoke in our faces. We learned how to avoid breathing the smoke while walking in a low position and to look for the exit using all our senses. It is amazing the preparedness of Japan; this place is open to the public and gives training for free. In Tokyo, they are expecting a great earthquake soon, so the



communities are preparing to learn evacuation routes and how to prevent/stop fires.

On the last day, we visited Yabadam. This dam is an amazing project with lovely sightseeing. We learned about the structure, which is mainly conformed by gravity walls, and we did a tour of the facilities. In this project, preparedness is also evident because the design is considered the maximum level of water during the Typhon season, and it has multiple gates to drain after the water when the level goes up.

We finished this study trip by visiting a world heritage place, The Tomioka Silk Mill. We learned about the process of mechanized silk production and the leading technology of Japan in the Meiji era, which represented a great contribution to the world at that time. We enjoyed ourselves and relaxed in this place.



On the top of Yabadam

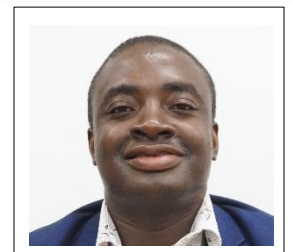
(2) Benjamin Osei FORDJOUR (Ghana) E-Course

Day 4: VISIT TO LIFE SAFETY LEARNING CENTER, TOKYO FIRE DEPARTMENT.

Our study trip continued on to Monday, the 29th of August, at the Life Safety Learning Center which doubles as the Tokyo Fire Department.

Together with participants from other disaster management policy programs, we toured the grounds in three groups. The third group, my group, started off with the fire extinguishing practice point after viewing a narrative video on past events and their impact on the Japanese people and most importantly the role of the local people in saving lives during these events.

We were first taught how to operate a fire extinguisher and its importance after which we ran drills in extinguishing simulated fires in turns. We then proceeded towards the process of exiting a



fire-engulfed location. Importantly we got to know that smoke from fires is lighter hence in order to escape a fire in a room one needs to bend over and exit quickly to prevent suffocation. We then visited the earthquake simulation chamber where all participants took turns experiencing various scenarios within the chamber. Generally, the importance of simulating disasters in advance was made clearer and easier to practice in case of an actual disaster.



Left: Participants hearing the guidance to take the fire extinguishing challenge
Right: Lecture in the earthquake simulation area at the department



Group photo in front of the Life Safety Learning Center, Tokyo Fire Department.

Day 5: VISIT TO THE YAMBA DAM AND THE TOMIOKA SKILL MILL. At the Yamba Dam in Gunma Prefecture, we were first given a lecture on the history, construction, and importance of the Dam to the people in the district. The concrete gravity dam stood at a levee height of 116m and a crest length of 290.8m within a catchment area of about 711.4km².

As part of the dams on the Tono Tone River upstream area, the roles of the Yamba dam include disaster prevention control in times of floods and heavy rainfalls caused by typhoons and it also supplies municipal water of up to about 22.209m³/s for Gunma Prefecture and other downstream prefectures. The dam is also a

power-generation edifice and it's also used to secure and maintain the normal flow and function of water. Its beauty upon completion in about 68 years has added a touch of tourism to the Gunma area as people travel near and far to tour the dam and its surrounding tourist sites. Location-wise, the dam is said to be constructed further away from existing fault lines.



Group photo at the first floor of the Dam



upstream view of the dam

The Tomioka Silk Mill being the last place to visit, housed one of the Oldest Japanese memories in silk production. The factory which serves as a world heritage site was established back in 1872. The unit includes three major rectangular structures with surrounding quarters which serve as dormitories for the director, instructor, and workers at large

Amongst the three units are the two eastern and western cocoon warehouses which are structurally a timber-frame brick design construction. It is made of wooden structures as columns and beams with bricks as walls laid with Shikkui a traditional Japanese mortar from lime. The southern rectangular unit houses the history of silk dating back to the 1870s till date, including its revolution as an industry, the processes involved in its production and finally the pioneers in the industry. We finally got to appreciate the work done and the dynamics in getting a well-designed silk fabric for use.



Tour talk on the front view of east cocoon warehouse

[Kansai Study Trip]

Disaster Reduction and Human Renovation Institution:

<https://www.dri.ne.jp/en/>

E-Defense, Hyogo Earthquake Engineering Research Center(NIED)

<https://www.bosai.go.jp/hyogo/ehyogo/index.html>

Inamura-no-Hi no Yakata:

<https://www.town.hirogawa.wakayama.jp/inamuranohi/english/>

Akashi Kaikyo Bridge Exhibition Center:

<https://www.hashinokagakukan.jp/>

Nojima Fault Preservation Museum:

<https://www.nojima-danso.co.jp/nojima/>

Kinkaku-ji:

<https://www.shokoku-ji.jp/en/kinkakuji/>

Tsunami/Storm Surge Disaster Prevention Station:

http://tsunami-osaka.jp/index_en.php

[Tokyo • Gunma Study Trip]

Life Safety Learning Center, Tokyo Fire Department:

<https://tokyo-bskan.jp/en/>

Yamba Dam:

https://www.ktr.mlit.go.jp/tonedamu/tonedamu_index004-1.html

Tomioka Silk Mill:

<http://www.tomioka-silk.jp.e.wv.hp.transer.com/tomioka-silk-mill/>