RESEARCH AND ANALYSIS OF TSUNAMI, EARTHQUAKE, AND NUCLEAR DISASTER RECOVERY EFFORTS IN FUKUSHIMA, JAPAN

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RECOVERY EFFORTS AND COMMUNITY RESILIENCE

This four week education abroad opportunity occurred in January of 2016 and was supported by the College of Emergency Preparedness, Homeland Security, and Cyber Security at the University at Albany (SUNY).

Students traveled to the prefecture of Fukushima, Japan to study and participate in research, evaluation, and analysis of the Fukushima Daiichi and Daini nuclear disasters that occurred on March 11, 2011. Participants were granted the opportunity to visit and speak with members of temporary housing communities, visit farmland and impacted business owners, and study alongside students of Fukushima University.

VISITS TO IMPACTED REGIONS ACROSS FUKUSHIMA

Figure 1. Fukushima Daiichi Nuclear Reactor Unit 2

Unit Reactor 2: The Fukushima Daiichi nuclear disaster was a series of equipment failures, nuclear meltdowns, and release of radioactive materials at the Tokyo Electric Power Company (TEPCO) site. These horrific events were caused by a tsunami and earthquake which sent waves at over 30 meters high straight towards the powerplant and nuclear facility.

Figure 2. TEPCO Employees lead a tour through impact zones

On Site: Employees who responded to the crisis in the region explained the importance of strategic communication and cohesiveness while working to mitigate the impacts of the disaster in real time.

Funding was provided to support travel and activity within the Fukushima Prefecture by the Japanese Government and the Tokyo Electric Power Company (TEPCO)

CHALLENGES AND OBSTACLES ENCOUNTERED

Impacted Communities: Many homes across the Prefecture were structurally demolished by the earthquake and tsunami and were deemed uninhabitable without comprehensive reconstruction efforts. Thousands of families who lived within the region relocated to other parts of Japan and left behind their land, places of residence, and belongings. Those without the means to travel and re-establish, primarily the aging population of Fukushima, moved into temporary housing communities across the region.

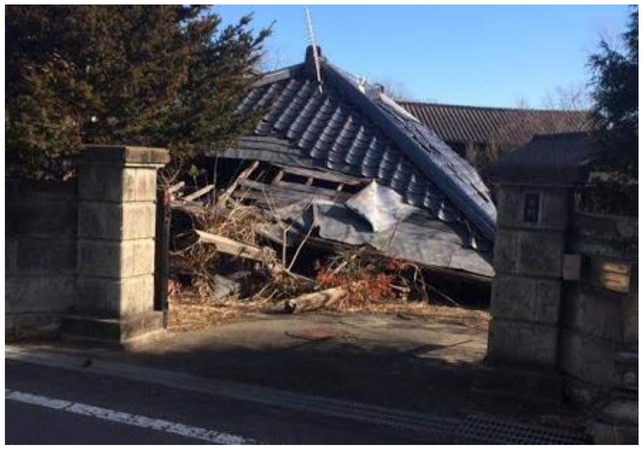

Figure 3. Homes within the impacted areas of the Fukushima Prefecture were deemed uninhabitable and were left untouched after the disaster

Radiation in the Environment: A massive area was impacted by radioactive fallout after the nuclear disaster. A comprehensive clean up effort was taken by the government to remove radioactive material, largely radioactive cesium, and decontaminate the prefecture. Farmers across the region produced thousands of bags full of contaminated top soil from their fields while local municipalities installed solar powered radiation detectors near schools, parks, and other public areas. Students were given the opportunity to learn elements of community resilience the from with residents living within impacted zones in addition to participating in farm work contributing to decontamination of land.

Figure 4. Solar powered radiation detectors were installed in public areas to inform the community of the hourly radiation dose due to outside exposure

LESSONS LEARNED FROM RECOVERY EFFORTS

Cultural Immersion and Service: This trip allowed students the opportunity to participate in field work at the power plants and classroom learning at Fukushima University, Japan. Homestay provided a unique cultural experience that can only be gained by immersion into a foreign culture. Additionally, students participated in service by clearing farmland and ensuring that land in the region continues to remain clean and safe.

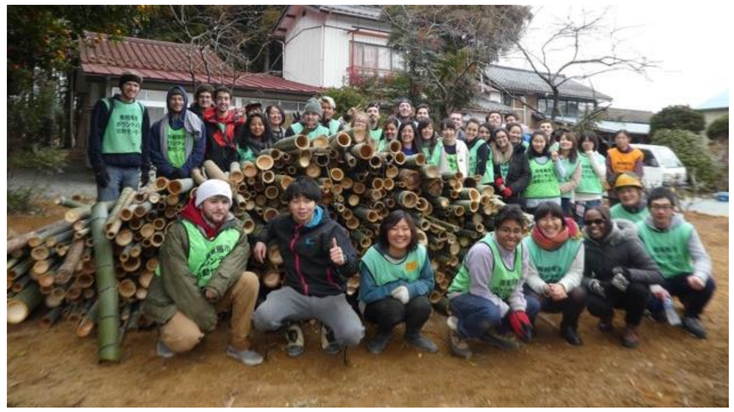

Figure 5. Students chop bamboo and clear debris at an impacted home in Fukushima, Japan

RESILIENCY LESSONS APPLIED BEYOND THE PROGRAM

Moving Forward: Students can learn best practices for recovery efforts from their colleagues and community leaders. It is imperative that all people involved engage and interact with other volunteers and residents in a proactive and positive manner. Universities can promote disaster response habits and ensure that students demonstrate preparedness as a critical aspect of college culture. Additionally, providing students the opportunity to run training exercises and facilitate service activities is a great way to develop leadership skills.

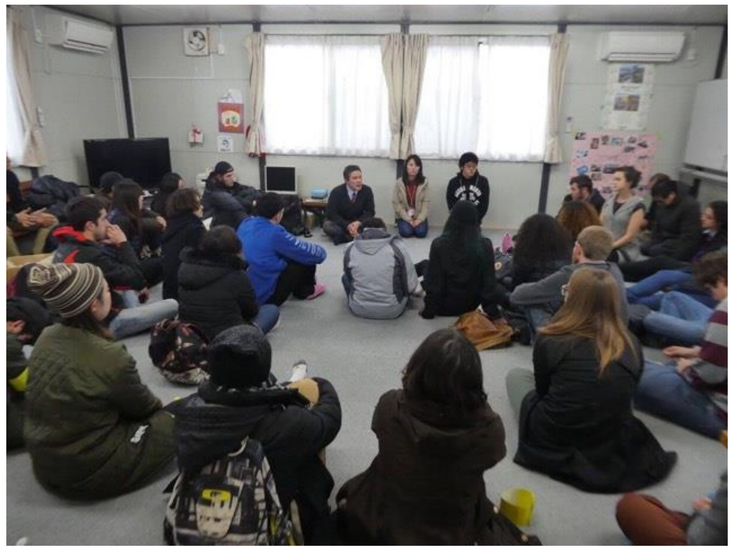

Figure 6. Students speak with residents of temporary housing communities in the Fukushima Prefecture

All pictures taken by Bradley Hershenson, January 2016.