

# Learning from New Zealand: Disaster Risk and Emergency Management

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*Augustina Remedios and Justin Sauder, juniors at Cal Poly's BSCRIP program, had the opportunity to participate in a program on disaster risk and emergency management at New Zealand's Massey University in the summer of 2016. Constantly affected by severe earthquakes types of natural disasters and other types of emergency, New Zealand and its governmental agencies offered our students a great learning opportunity in this fundamental field of city and regional planning. In this article, Augustina and Justin share their thoughts with us.*

## Augustina Elise Remedios

In late June, I began my journey to New Zealand to participate in a program on disaster risk and emergency management run by Massey University in Wellington. The program consisted of a two-week course which included traveling throughout the North and South Islands, and a four-week internship in Wellington. Including myself, there were only six students, all from different parts of the US. The entire country of New Zealand experiences a variety of natural disasters and is forced to plan thoroughly, prepare, and respond to such occurrences often.

The two-week course began in Christchurch, a city located in the middle of the South Island's east coast. It was a very appropriate place to begin our journey since they had suffered a major earthquake in 2011, and the damage can still be seen throughout the entire city. We toured the city and saw that rebuilding had just begun because, we would later learn, of many political issues. Many buildings were still in terrible disrepair along with several empty lots where the previously existing buildings had been raised to the ground by the quake. New Zealand's Ministry of Civil Defense and Emergency Management (CDEM) has the duty to coordinate preparation and responses to disasters on the national, regional, and local level.

Starting in Christchurch, and in almost every place that we visited, we met with local representatives of the CDEM and visited local, regional, and the national offices where we got an understanding of their missions and daily work. This experience was incredibly insightful because we were able to get first-hand knowledge about the community and its relationship with CDEM, and the economic, environmental, and natural disaster impacts specific to their area.

During these two weeks, we traveled from place to place on a small bus and had the great benefit of having our professor

John Mitchell accompanying us on the trip. He was incredibly knowledgeable from having worked with a variety of different disciplines and jobs in the field. He helped us think about all the potential hazards of particular communities as we drove through them, and shared past experiences he had in dealing with disasters throughout New Zealand. In this company, all bus drivers were Kiwi, and our particular driver was Maori (New Zealand's indigenous people). She was also extremely knowledgeable and shed light on several cultural aspects and particularly on those that affected what we were studying.

After Christchurch, the bus took us up the South Island's east coast. We took the ferry to the North Island. We traveled from Wellington, at the south of the island, up through the center towards the north eastern side then crossing over in the most northern part of New Zealand in the northwest. Some of the well-known places that we stopped were Tongariro National Park, Rotorua, Lake Taupo, Bay Plenty, Auckland, and Paihia. New Zealand is a gorgeous country, and every place where we

Figure 1: Augustina sharing her internship experience at Cal Poly.



stopped and drove through was incredibly beautiful. I was in constant awe.

Once settled in Wellington, the group was divided into four different internship positions. I was placed at the Ministry of Primary Industry's (MPI) Major Incident Management Team (MIMT). The MPI sets the policies, manages, coordinates, and regulates a variety of different governmental areas such as customs and immigration, agriculture, fisheries, forestry, trade, food safety, animal welfare, and more. The MIMT specifically manages responses to major and severe threats to trade, biosecurity (pest incursions), food safety, and adverse events (fires and floods). Although my internship was slightly different than what I had been learning about during our two-week course, I was happy to be in a position dealing with the responses to emergencies and disasters that were not necessarily from natural causes. The responses to these threats were often more slow rolling and very complex.

The MPI had to coordinate with many different stakeholders and options for action. Their style of planning for some of the most common and severe events looked different as well because of each issue's specific aspects and the political dimensions involved. An example of an emergency and response that happened during my time there, and that is still occurring, is the pea weevil. In New Zealand, peas are not fumigated to avoid pest incursions and are sold at a higher price because of this. Because only about ten percent of the pea farmers were affected, and only in the north island, the MPI decided to close this area off and stop the selling and growing of the affected peas. A crucial decision was made to stop a smaller number of farmers from growing for two years until decided it might be safe, rather than risking the pea weevil spread to other parts of New Zealand. I was able to attend many meetings regarding this response, and others. I was also able to assist in preliminary research on where the peas might be bought and sold so that

*Figure 2: The group in a field visit with professor John Mitchel. Augustina is in the center foreground, and Justin is the second from the right.*



those groups could be contacted and made aware of the issue. Another responsibility I took was to create a document model that could be used across all types of responses. I felt very lucky to be a part of this team and to learn about such different and not often thought of emergencies and problems. Upon arrival and going through customs, I did not quite understand why New Zealand was so extremely strict on what is brought into the country. However, after my internship, I understood the necessity for the strictness in minimizing the causes of some of these types of emergencies.

Overall, I had a fantastic and fruitful professional experience in the most amazing country. I found myself not wanting to leave when the time came. I learned so much on such a short trip and gained amazing insights on New Zealand and the topic of disaster risk and emergency management.

## Justin Sauder

This summer I had the wonderful opportunity to study abroad in New Zealand. I was part of a pilot program from Massey University in New Zealand focused on disaster risk management. I was in the program with five other students from all over the U.S. The program, split into two different parts, was just six weeks long yet I gained so much valuable knowledge and experience. For the first two weeks, we took an intro class on Civil Defense in New Zealand. For the remaining four weeks, each student was put into an internship related to emergency management. Two of us were placed at New Zealand Fire Services, two at the Wellington Regional Emergency Management Office, one at the Ministry of Primary Industries, and one at the Ministry of Health.

Our journey started on the south island, in Christchurch, a city devastated by several earthquakes in 2010 and 2011. During our initial two-week course, we travelled on a bus with our professor, John Mitchell. He was an incredibly seasoned professional in the field of disaster risk management. We were lucky to have him with us for the entire two weeks, teaching us every day as we travelled. From Christchurch we travelled to Paihia at the top of the north island, staying in youth hostels all along the way. We visited several emergency management offices throughout our travels. A typical day on the road consisted of a couple of site visits with representatives of the Emergency Management Office in each respective area, lectures on the bus, and then travelling to our next destination. We kept this rigorous schedule for two weeks staying in a new city almost every night. The trip allowed us to see a large part of the North Island from Wellington to Lake Taupo, Rotorua, the Bay of Plenty, Auckland, Paihia, Hamilton and finally Tongariro National Park before we headed back down to Wellington for our internships.

The nature of the two-week course allowed us to learn so much in such a short time. We were constantly being taught

as we drove from region to region learning about the natural disasters, vulnerabilities, and mitigation measures. The various Emergency Management Offices that hosted us were very hospitable and often dedicated their day to teaching us, sometimes travelling with us to different sites to give us a more personal experience. We also visited several fire departments, police departments, and even organizations such as the Red Cross. We even got to tour the bunker underneath New Zealand's national parliament building where all emergency management services coordinate together in times of national crisis. Our travels taught us so much about natural disasters and how emergency management services mitigate, respond, and recover in New Zealand. But we also learned so much about the culture and got a basic understanding of different regions, which would prove to be helpful in our respective internships. After two weeks on the road we were happy to get to Wellington and stay in one place for the next four weeks.

Our new temporary home away from home was the Trek Global Backpacking Hostel in Wellington. Each of us gave a presentation about our two-week expedition as a final for our class. Then we had a couple of days to rest, shop, and explore the city before we started our internships. I worked for the New Zealand National Fire Services and spent my first day at their National Headquarters, observing their operations and getting a basic understanding of their job at the national level. Then I was moved over to the Wellington City Fire Station where I worked with the Planning Sector. I was tasked with starting to plan to move a fire station that was just fifteen feet from the ocean and was at risk of flooding or even being destroyed in the event of a storm.

Given my short stay in New Zealand, I had to get to work very fast. The Fire Services arranged for me to work with Beca Consultants to get a better understanding of the region as well

as the planning processes in New Zealand. I spent a couple days in their office learning about new areas of growth, a new highway project, local laws and studying possible sites for a new fire station. Since I needed to gain a better understanding of the Fire Services as a whole, I spent a couple of days in their different branches. I spent a day at the Communications Center, where I sat with a dispatcher listening to him take calls and dispatch the fire trucks to different locations, and a day out in the countryside with an employee of the area's Rural Fire Station. We checked in on people who were burning brush on their properties, and also met with a consulting firm to talk about the location of the water tanks in a new subdivision.

I even got to a ride along with a day and a night fire response crews! This was the most exciting part of my internship as we responded to seven or eight calls with the firefighters, and I could see them in action. Although we did not respond to any real fires, we were very busy. When not responding to calls, we would go check out on buildings with which the crew was not familiar and perform a walk-through to identify the important elements in the event of a fire. All was able to gain a lot of valuable information for my given task: to put together a brief report on opportunities, constraints, and suggestions for a few different locations for a new fire station.

Although my time in New Zealand was brief, I learned more than I ever thought I would. I had the unique opportunity to experience the New Zealand culture by living and working in the beautiful city of Wellington. I will never forget this experience, the places I went, or the people I met. There was a lot of learning for me as a major in City and Regional Planning.

I am very grateful to the Errett Fisher Foundation for providing me with a scholarship and for helping me to make my dream a reality!

Figure 3: Justin and New Zealand's beautiful coast line.



Figure 4: Justin (grey shirt) with a crew of the New Zealand's Fire Service.

