

S. Ali Husain

Dr. Gershon

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Assignment 2.2 Brief - Mitigation Strategies

On March 11, 2011, disaster struck off the coast of Japan with a record magnitude 9.0 earthquake. Since modern record keeping of earthquakes has come into existence, the 2011 Japanese earthquake ranks fourth in history and is the most powerful to have ever struck Japan.¹ The earthquake was followed by a devastating tsunami causing damage beyond reckoning, incalculable loss of life, and even a nuclear incident with the damage caused to a power plant.² The Great East Japan Earthquake (GEJE) significantly impacted the infrastructure of the country and other crucial lifelines such as “a water supply disruption for up to 500,000 people in Sendai city, as well as completely submerging the city’s water treatment plant. Lack of access to water and sanitation had a ripple effect on public health and other emergency services, impacting response and recovery”.³ Water supply is critical to infrastructure during a megadisaster such as this as it can have grave implications for sanitation and drinking water related to public health and emergency services. After the disaster, the infrastructure of water was vastly improved, including adding seismic resilience, ensuring the business continuity of sanitation infrastructure, and adding a GIS system that helps identify and repair parts of the water infrastructure that become damaged.⁴

Planning and prevention are very important during a disaster, however, as the GEJE has shown, it cannot take precedence over preparedness. It is mentioned that “holistic, rather than single-sector approach to DRM improves preparedness for complex disasters”.⁵ It is very logical to take a holistic approach in these situations because a narrow-minded approach will prevent one from seeing the larger picture. For example, simply building stronger infrastructure in buildings may be enough to withstand an earthquake, but may not be enough to withstand a following tsunami. Some structural infrastructures that were built as a result of this disaster are sea walls, which would mitigate the aforementioned threat, and building codes. Additionally, stronger infrastructure related to water and emergency care are essential. Some non-structural infrastructure that has been put in place includes information and communication technology that help in risk management and identification. Moreover, a GIS system that can locate structural weaknesses and faults is in place. Preparedness maps are in place to help identify which areas in the country will be impacted by a disaster and how.⁶ Drills have also been in place to ensure preparedness, along with business continuity planning (BCP). BCP is very helpful both prior to and in the aftermath of a megadisaster in ensuring support from both the public and private sectors. The importance of a holistic approach was emphasized earlier and this will allow for the easiest pathway in preparing for and responding to disasters.

¹ Oskin B. Japan earthquake & tsunami of 2011: Facts and information.

² Ibid.

³ Sakoda K, Shibuya N, Takemoto S. Learning from Megadisasters: A decade of lessons from the Great East Japan earthquake. World Bank.

⁴ Ibid.

⁵ Ibid.

⁶ Ibid.

References

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