



Japan Earthquake and Tsunami 2011

### **Tohoku Earthquake Pre Crisis**

 March 11, 2011, magnitude 9,
Tohoku earthquake off the coast of Japan generated a tsunami that crossed the Pacific Ocean and impacted the shores of the U.S. West Coast

- Earth crust and Japan tectonic plates
- It estimated an 80-90% probability that the area would have a large earthquake of magnitude 7.7-8.2 in the next 30 years
  - · Worst crisis since the Second World

## **Tohoku Earthquake Pre Crisis**





- Japan, one of the world's most seismically active areas.
- The country accounts for about 20 percent of the world's earthquakes of magnitude 6 or greater. (Fujioka & Lies, 2011).

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#### **Fukushima Daiich Nuclear Plant Pre Crisis**

- The Fukushima Daiichi power facility was built and maintained "by the Tokyo Electric Power Co. (TEPCO)
- New Plan proposed building eight reactors by 2020.
- The lack of reliable information
  - banned finishing
  - seaweeds and other marine organisms.

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#### **Fukushima Daiich Nuclear Plant Pre Crisis**





- Radiation monitors at the Daiichi plant briefly picked up radiation
- Extensive damage to infrastructure





- The early-warning system of earthquake forecast failed in performance. (Cyranoski, 2011)
- Failing to forecast the level of magnitude for earthquake, they were not expected the tsunami to happened after earthquake. The tsunami destroyed the cooling system. (Cyranoski, 2011)
- Due to the occurrence of the tsunami, it affected the surrounding nuclear plant causing it to erupted.



#### **Facts**

- More than 15,365 people were confirmed death. (Matanle, 2011)
- More than 8,260 was missing. (Matanle, 2011)
- More than 163,000 people were in shelters. (Matanle, 2011)
- At least 111,044 buildings were destroyed and damaged. (Matanle, 2011)