**Earthquake key details:**

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|  | **Haiti 2010** | **Japan 2011** |
| **Location** | * Haiti – a Caribbean island that shares the island of Hispaniola, with its neighbor, The Dominican Republic. Haiti is on a conservative plate boundary, where the Caribbean and North American Plates are sliding past each other. | * Japan – A country in East Asia that is located at a destructive plate boundary. Japan is within the Pacific Ring of Fire – a very active zone of volcanic and earthquake activity. |
| **Background on the country** | * One of the poorest countries in the world (GDP per capita = $765) * 50% of people lived below the poverty line before the earthquake. * Haiti has been plagued by government corruption, brutal dictators and military regimes in its past. * A multi-hazard location – affected by earthquakes and hurricanes. | * One of the wealthiest countries in the world (GDP per capita =$38,000 ) * Japan is thought to be the most technically advanced country in seismic (earthquake) monitoring in the world. * Also a multi-hazard location – earthquakes, volcanoes, and typhoons. |
| **Earthquake key details** | * **Date:** 13th January 2011 (16.53) * **Location of epicenter:** It occurred 25 kilometres west of Haiti’s capital Port Au Prince. * **Depth of focus:** 13km * **Length of earthquake event:** 35 seconds-1 minute | * **Date:** March 11, 2011 (14.46) * **Epicenter:** This was an under-water earthquake event. It occurred in the Pacific Ocean, 70 kilometres off the NE coast of the Japanese island of Honshu. * **Depth of focus:** 30km * **Length of earthquake:** About 6 minutes |
| **Cause of the earthquake** | * Tension had been building up on a fault called the Enriquillo Plantain Garden Fault for a long time. On the 13th January 2010 the tension was released producing a major earthquake measuring 7.0 on the Richter Scale. | * The Pacific Plate is subducting beneath the Eurasian Plate. Tension built up between the plates. The release of tension produced an undersea megathrust earthquake measuring 9.0 on the Richter Scale. |
| **Impacts** | * 175,000-300,000 deaths * 1 million people had to sleep on the streets * 1/3 of the buildings in Port- au-Prince (Haiti’s capital city) collapsed. * Widespread looting occurred * 85% of rubble was still uncleared 6 months after the earthquake * Government all but wiped out (presidential palace collapsed etc) * People were housed in tented camps for more than 5 years after the earthquake. | * 15,000-20,000 deaths * 40 metre tsunami inundated the coastline * $200 billion damages (most expensive natural disaster in history) * Meltdown at the Fukushima Daiichi Nuclear Power Plant caused a permanent exclusion zone (20 mile radius) to be set up around the area. People were permanently evacuated from their homes and 50,000 been unable to return and are living in temporary accommodation. |
| **Management** | * Haiti was completely unprepared for the earthquake. * They didn’t have earthquake proof buildings. Much of the population lived in self-built housing (slums). Building codes were not enforced. Heavy concrete roofs collapsed during the earthquake, crushing victims. * Haitian people had never practiced earthquake drills – they didn’t know what to do in the earthquake, resulting in chaos and panic. * After the earthquake disaster crews did not arrive for 24 hours. The Haitian government lacked resources to cope and the country was reliant on international aid and charities such as Oxfam. | * Japan had the most advanced earthquake and tsunami detection systems in the world – the country is wired up to sensors that detects movement in the earth’s crust. Warnings are sent out via people’s cell phones (these alerts only arrive seconds before an earthquake). * Japan has invested in earthquake proof building technology e.g. use of steel frames and base isolation. The earthquake itself did little damage. * People in Japan are used to earthquakes, regular drill are carried out in schools and workplaces and people know what to do. * Within 4 minutes of the earthquake Prime Minister Naoto Kan had set up a special disaster response unit and had assumed leadership of the relief effort. Within the first hour of the disaster, defence forces, police and other rescue workers were on their way to the afflicted area. In the first two days 50,000 personnel were mobilized. * Japan had a tsunami flood wall that was built to withstand a 12 metre tsunami, unfortunately this mega tsunami was 40 metres! * Japan used other methods that were intended to reduce the impact of storm surges e.g. pine forests planted on the coastline. Unfortunately the tsunami easily broke these up and the trees added to the deadly debris flow. |