Volcanic Eruption As A Catastrophic Event: Volcano de Fuego

Overview

What is the Volcan de Fuego?

Volcan de Fuego, known as the “Fire Volcano,” is a stratovolcano (a volcano which is made out of a layer of lava/magma and volcanic ash) which is currently active. It is located in Guatemala (country in central America), and lies on the borders of Chimaltenango, Escuintla and Sacatepéquez. Volcan de Fuego is over 200Kyr (200 Thousand Years or 200,000 years) old and rises up to 3,763 metres above sea level.

How was the Volcan de Fuego formed?

Volcan de Fuego was formed because of convergent tectonic plates underground. Tectonic plates are pieces of hard rock that make up the Earth’s crust. At a convergent plate boundary, the tectonic plates move toward each other and collide. Usually, the denser plate goes under the other plate, and as this continues, the temperature and pressure increase. This causes changes to the plate and melts the Mantle (the layer of the Earth between its crust and the core). Over time, magma rises through this gap and erupts to form lava flows. Over time, as the volcanoes erupt, they will also get bigger as when lava stops flowing, they stack on one another (a bit like sedimentary rocks) and continues to enlarge the rock size.

Impact Zones:

Statistics:

- At least 190 people were killed after the 2018 eruption
- A minimum of 256 were missing following the 2018 eruption
- 1.7 MILLION people affect by the eruption, Guatemala’s most severe volcanic eruption in 45 years.
- The eruption of listed as a Level 3 eruption, which means it was a “minor” Volcanic Eruption

Preventative Measures:

Before the eruption, within the UN system, several coordination mechanisms were activated to respond to the emergency. A couple officials from the UN, travelled to the town of Escuintla to gain knowledge on the conditions in shelters and observe the volcano’s activity.

Despite this being a positive step, majority of people weren’t aware of Volcan de Fuego’s activeness. They were taken by surprise by the eruption and many were affected.

Economic Impacts:

Volcan de Fuego has had such huge economical impact on Guatemala. Vast flows of mud ash have covered roads, buried villages and masses of crops have been put to waste, causing vegetable prices to rocket. Many flights had to have been cancelled, these planes grounded in Western Australia because of the risk of damage to the aircraft from the ash clouds. Many bridges have also been destroyed. This took weeks and even months for some places to clear these impacts. This cost Guatemala hundreds of million dollars to repair and its economy to drop to its lowest point in many years.

Social Impacts:

The Volcan de Fuego eruption had massive social impacts. Around 184,000 had to be evacuated from their homes and tens of thousands were made homeless. Evacuation centres were over populated, which caused poor sanitation, no privacy and a serious disease risk unknown at the time. Many farmers lost their lives and lava flows caused the destructions of villages and roads. Along with these, tourists' numbers also decreased, showing the huge impact caused.

Environmental Impacts:

The environment was affected by the eruption. Ash, rock, and lava layered on the side of the volcano were washed into towns by rainfall, creating lahar (destructive mudflow). Soils were becoming were being affected by ash, and farming was going through rough times because the soil wasn't safe for growing crops. Water supplies were also contaminated, and hygiene levels throughout the affected areas dropped severely, affecting both the individual and the environment itself.

Conclusion:

There have been many changes to the landscape. Huge holes have been left, made by soil running off. Villages were destroyed, leaving big tasks for renewing that area till what it once was. Trees have been knocked down, resulting in plants and animals' habitats being destroyed. Famine can arrive in areas where people rely on those food supplies.

Sadly, it is likely this may happen again. Volcan de Fuego is still very active, with small steams of gas and ash every 15-20 minutes. Large eruptions have already occurred 3 times since 2018, causing chaos in the affected areas.

Bibliography:

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