

Volcanic hazard  
depend primarily on  
physical factors?



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Volcanic eruptions happen all across the surface of the globe, many argue that if controlled and monitored they would have little effect on the population. However others argue that some volcanic events are too powerful or unpredictable to control. Firstly I do not agree with this view I believe it is more to do with the human decisions that make a volcanic eruption a hazard. For example we can see this in such volcanic events such as Mount Pelee which erupted in 1902.

In the town of Saint Pierre there was early warning of an eruption from the volcano. From mid-April animals in the area started dying from poisonous gas released from the volcano. In early May more signs were showing of an eruption in the near future this made the inhabitants of the town nervous and some moving out to a safe distance from the volcano. However there was an election due to take place on the 10th May so the current governor did not want the population spread across the island, he decided to call in the army to keep people in the town and stop them leaving.

On the 8th May the pressure became too much and caused a gas explosion which led to a pyroclastic flow moving at Saint Pierre heading toward the town of Saint Pierre killing all but 2 of the 29,000 inhabitants. This shows how human decision caused unnecessary death. I believe that if the evacuation took place when the early warning was recognized that the loss of life would have been kept down to a smaller number.

It can be argued that there is always a risk when people decided to build towns or villages on the slopes of a volcano, a good example of this is the Nevado del Ruiz eruption in the country of Colombia in mid-19th century.

killed 1000 people in the town of Aimer over the village was once again inhabited. In early November 1985 there was activity from the volcano showing signs of an eruption in the near future. However many inhabitants did not have the knowledge that the signs meant to an eruption.

By November 13th eruptive activity had increased which caused the ice caps to melt which lead to Lars to run down westwards killing 1000 people in the town of Cinchona and eastwards killing 22000 people in the town of Aimer. Although the hazard had been mapped out by scientist when the early warning signs occurred it as planned to be presented to officials the day after the disaster. This shows how human decisions to live on the past debris of the Lars and also the hazard map not being produce in time lead to deaths which could have been avoided.

However human can also have positive effects on volcano eruptions the main way of protecting people is to monitor the volcano an evacuate the people to a safe place a good example of this the Chasten earthquake on May 2008 in Chile. Chile has one of the longest volcano chains in the world due to the destructive plate boundary where the Pacific Ocean plate was subjecting beneath the South American continental plate. Due to this is meant that the Chilean government where able to put plans in place in case of an eruption.

When early signs showed that a volcano eruption was going to happen, the response was to evacuate people in nearby settlements where 4000 people were evacuated Ana another 3 people were evacuated Walt Throttled evacuation orders to make people move who refused to leave. When the

volcano erupted in May there was only one death due to stress of the evacuation and very few injuries direct from the volcano. This shows how early planning and evacuation can save many lives and stop a volcanic hazard.

However human can also manage a volcano the best example of this is Mount Tektite in 1991 volcano erupted where lava flowed down its slopes toward the villagers around the volcano. An earth barrier was constructed which was built as a temporary defense to stop the lava flow. Eventually in May 1992 engineers used explosive material to blast open another tube so that lava would flow away from the town. This shows how human can positively affect a volcano eruption to stop harmful effects.

Although human decisions can prevent deaths and injuries the cost of monitoring a volcano can be very expensive. To monitor a volcano it can be very expensive so this might be the reason why volcanoes have a bigger effect in the poorer countries in the world. However, scientists have the technology to predict when a volcano will erupt from satellites in space due to an increase in thermal activity. Most scientists do not have the money or technology to monitor these volcanoes all year round especially ones that have not erupted in decades of years and have been labeled dormant.