



Mount Nyiragongo eruption 2002, an LIC case study

Watch the following video and make notes below (you may need to use additional paper): youtu.be/rZLSvO6vJZ0

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Cut out the cards below and sort them into the following categories:

- general information
- causes
- impacts
- responses.

Now stretch yourself:

- Are the impacts social, economic or environmental? You could colour code the cards.
- Are responses short or long term? Again you could colour code the cards.

<p>The volcano has an extensive volcanic history, and has erupted at least 34 times since 1882.</p>	<p>Warnings had been given and 400000 people were evacuated from the city.</p>	<p>It is found on the Kivu part of the Albertine rift, the western branch of the Great African Rift Valley.</p>
<p>Despite some seismic activity in the area, the eruption was largely unexpected. However, warnings of lava flows allowed most people to flee from their effects.</p>	<p>This was a large eruption, with a 13km fissure spewing lava up to two metres deep which flowed in the direction of Goma and Lake Kivu.</p>	<p>Together with neighbouring volcano, Mount Nyamuragira, the volcano is responsible for around 40% of Africa's volcanic eruptions.</p>
<p>The authorities were able to issue a 'Red Alert' for Goma and the surrounding area which enabled a full evacuation to take place, keeping the death toll relatively low.</p>	<p>The volcano sits in a fertile agricultural region. The combination of altitude, extended growing season and fertile volcanic soils has encouraged large numbers of people to settle there.</p>	<p>Months of increased earthquakes and steam/gas eruptions (fumaroles) resulted in a 13km fissure opening on the south flank of the volcano.</p>

<p>Its crater is 250m deep, 2km wide and contains a lava lake.</p>	<p>The UN set up camps to house displaced people.</p>	<p>The lava covered the northern third of the runway at Goma airport.</p>
<p>Mount Nyiragongo is 3470m high and is an active stratovolcano in Eastern Democratic Republic of the Congo (an LIC).</p>	<p>There was fear that the rise in temperature of Lake Kivu could allow toxic gasses to be released from the lake bed.</p>	<p>The death toll reached 147, largely through inhaling poisonous gasses, drinking contaminated water and the collapse of buildings.</p>
<p>Several earthquakes accompanied the eruption, one measuring over five on the Richter scale. These tremors were strong enough to cause structural damage to some buildings in the area.</p>	<p>Thousands of people required medical attention, first from the effects of smoke and lava, which caused eye irritation and respiratory problems, and secondly from such complaints as dysentery linked to the drinking of contaminated water.</p>	<p>The UN estimated that the cost of providing food, blankets, household utensils, temporary shelter, clean water, sanitation and healthcare to refugees was \$15 million.</p>
<p>In recent times, people have become vulnerable to the emissions of poisonous carbon dioxide seeping from the ground around the volcano.</p>	<p>Lava flows destroyed businesses, resulting in unemployment.</p>	<p>Sulphurous lava entered Lake Kivu and poisoned the water which was a major source of drinking water in the area.</p>

<p>Minor volcanic activity has continued to the present day. Recently several animals and children died due to inhaling poisonous carbon dioxide which seeped from the ground.</p>	<p>Two days after the eruption, the UN was able to ferry in emergency aid such as high energy biscuits. This was followed by more substantial food aid as communications started to improve.</p>	<p>It was estimated that over 350000 fled the area, many over the border to Rwanda. This caused an enormous problem in providing food and shelter in this small country.</p>
<p>The commercial centre of the town was destroyed along with water and power facilities, and many of the health facilities including three health centres and one hospital.</p>	<p>Lava flows at Nyiragongo have been known to move at up to 100km per hour because of the extremely low silica content.</p>	<p>Many people were killed when a petrol station, which they were attempting to loot, exploded. It is believed that the looters were hoping to sell the petrol in order to buy food.</p>
<p>120000 people were left homeless.</p>	<p>Lava exited from three points on the fissure and moved in a stream 200-1000m wide and up to 2m deep through Goma.</p>	<p>The volcano is active because it sits above the point where the African plate is moving apart.</p>
<p>The eruption was not violent, recorded as only one on the VEI scale.</p>	<p>There was a vast amount of looting of abandoned homes and commercial properties.</p>	<p>The volcano has fluid eruptions of Basaltic lava.</p>