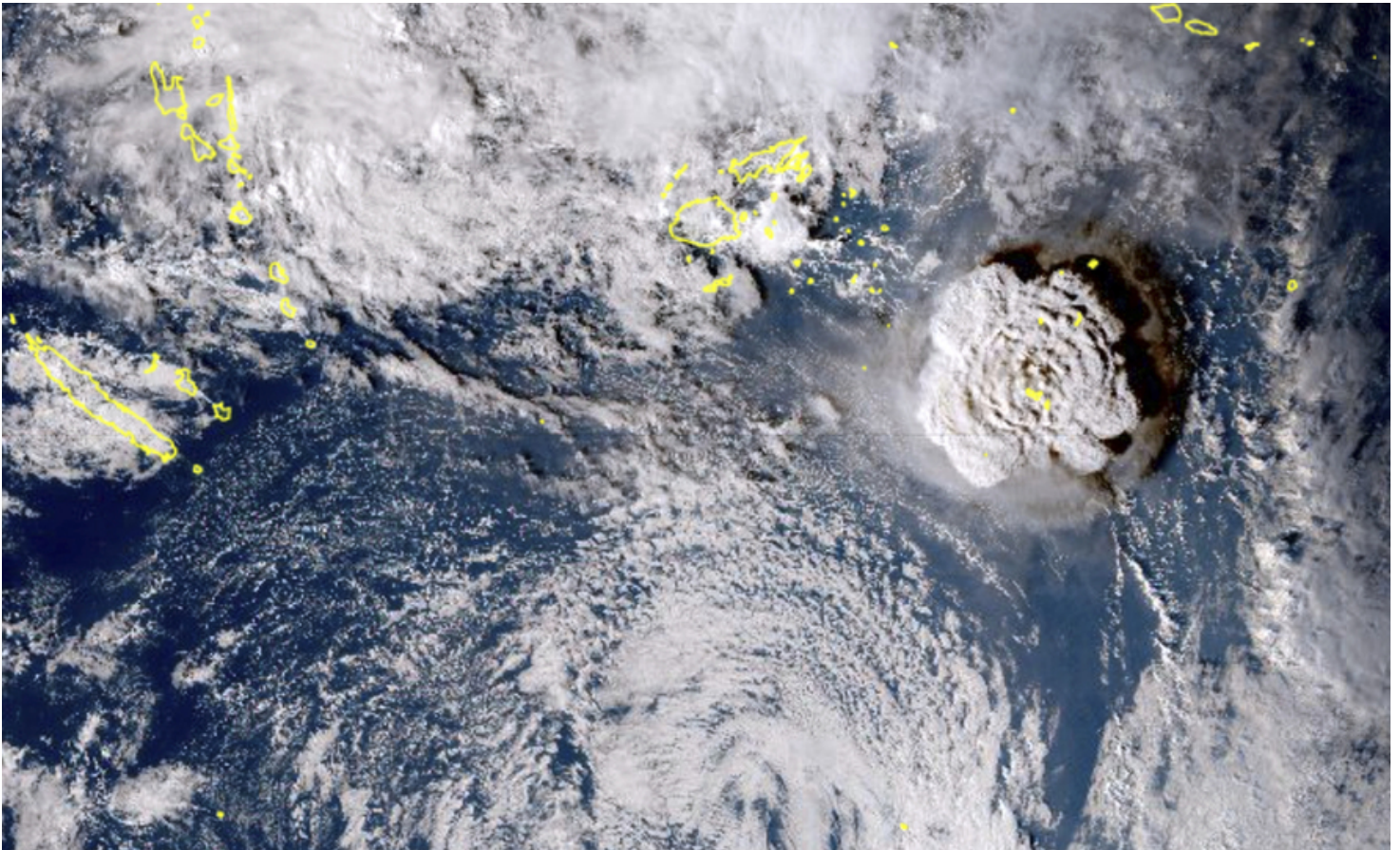


Huge Tonga underwater volcano erupts

By Future plc, adapted by Newsela staff on 01.20.22

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The Japanese weather satellite Himawari-8 captures the undersea volcano eruption that occurred near the Pacific nation of Tonga on January 15. People rushed to higher ground as large waves crashed against the shore. Photo: Japan Meteorology Agency via AP Photo: Japan Meteorology Agency via AP

On January 15, a huge underwater volcano erupted. It happened near the Kingdom of Tonga. This is a country in the South Pacific Ocean. A volcano is an opening where lava, small rocks, and steam are released onto the Earth's surface. An eruption is a sudden explosion of these materials from a volcano.

A satellite took images of the event in real time. A satellite is a machine that travels around Earth and collects images and information.

Sonic Boom

There are 170 islands in the Kingdom of Tonga. The eruption took place on one called Hunga Tonga-Hunga Ha'apai.

A video of the eruption showed a huge plume, or puff of smoke, rising from the volcano like a giant mushroom. Shortly after, a shockwave extended outward from Hunga Tonga-Hunga Ha'apai. A shockwave is a strong pressure wave that moves faster than the speed of sound.

The eruption created a 4-foot (1.2-meter) tsunami. This is a long, tall ocean wave usually created by an earthquake. The wave hit Tonga's capital of Nuku'alofa. The city is about 40 miles (65 kilometers) south of the volcano. A sonic boom from the eruption could be heard as far away as Alaska. Sonic booms are loud explosive noises caused by shock waves.

Ash Plume

Nuku'alofa was reportedly covered in a thick layer of dust from the volcano. There were no immediate reports of injuries or damage from Tonga's capital. However, the eruption interrupted the city's internet.

The volcano on Hunga Tonga-Hunga Ha'apai has erupted before. First, it first erupted in December 2021. Then, the volcano exploded again on January 13. That eruption was seven times more powerful than the December event. It sent a huge plume of ash and gas into the air.

This latest eruption also sent an ash plume nearly 12 miles (20 kilometers) up, said Jacinda Ardern. She is New Zealand's Prime Minister. New Zealand will send its military to look at the volcano from the sky. They will also send aid and supplies for Tonga.



Quiz

- 1 Read the section "Sonic Boom." Which sentence from this section supports the conclusion that the eruption affected places outside of Tonga?
- (A) The eruption created a 4-foot (1.2-meter) tsunami.
 - (B) There are 170 islands in the Kingdom of Tonga.
 - (C) A sonic boom from the eruption could be heard as far away as Alaska.
 - (D) The city is about 40 miles (65 kilometers) south of the volcano.
- 2 Read the section "Ash Plume." Select the sentence from the section that shows a problem the eruption on January 15 caused for people in Tonga's capital.
- (A) However, the eruption interrupted the city's internet.
 - (B) That eruption was seven times more powerful than the December event.
 - (C) It sent a huge plume of ash and gas into the air.
 - (D) There were no immediate reports of injuries or damage from Tonga's capital.
- 3 According to the introduction [paragraphs 1-2], how did the satellite become useful during the volcanic eruption?
- (A) It collected lava, small rocks and steam from the eruption.
 - (B) It warned people in Tonga when the volcano was going to erupt.
 - (C) It helped the volcano to stay underwater and not reach the surface.
 - (D) It got pictures of the eruption as it was actually happening.
- 4 What is the relationship between Hunga Tonga-Hunga Ha'apai and Nuku'alofa?
- (A) Hunga Tonga-Hunga Ha'apai is the capital city of Tonga and Nuku'alofa is the island that has volcanoes.
 - (B) Hunga Tonga-Hunga Ha'apai had a volcano erupt in December and Nuku'alofa had one erupt in January.
 - (C) Hunga Tonga-Hunga Ha'apai is where the volcano erupted and Nuku'alofa felt the effects of it.
 - (D) Hunga Tonga-Hunga Ha'apai had a tsunami from an earthquake and Nuku'alofa had one from a volcano.