

The 2010 Mount Merapi eruption – cause, effect & response

Mount Merapi is an active volcano in Indonesia and has erupted regularly since 1548. Smoke can usually be seen emerging from the summit of the volcano on at least 300 days a year. There was a series of large eruptions in 2010, with a death toll of 353. The volcano erupted again in March and April 2014.



Map adapted from http://en.wikipedia.org/wiki/Mount_Merapi

Student tasks

1. Study the two images of the Mount Merapi eruption below. Write a description of the two photographs.



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<https://www.flickr.com/photos/coolinsights/5127886252>



Image courtesy of the
U.S. Geological Survey
<http://volcanoes.usgs.gov/vdapi/images/merapi/6sept06buriedhouse.jpg>

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2. Arrange the statements below into three categories:

- the causes of the 2010 Mount Merapi eruption
- the effects (impacts) of the 2010 Mount Merapi eruption
- the responses to the 2010 Mount Merapi eruption.

Over 350,000 people were evacuated from the affected areas.	There were numerous pyroclastic flows.	Repeated eruptions of lava and ash occurred.
Ash from the eruption fell more than 30 km away.	Local farmers lost their livelihoods.	The price of many vegetables, e.g. potatoes and spinach increased.
An initial 10 km evacuation zone was established.	The Indonesian Red Cross and Red Crescent provided meals for displaced people.	Heavy rain triggered lahars (a volcanic mudflow) which destroyed communications.
Volcanic bombs were thrown more than 11 km away.	The ash plumes from the volcano caused major disruption to aircraft flying over Indonesia.	The volcano is close to the boundary of the Indo-Australian and Eurasian plates.
A layer of ash, up to 2.5 cm thick covered nearby fields and villages.	Gases, up to 800°C in temperature, were measured on the slopes of the volcano.	Pyroclastic flows, at speeds of up to 100 km/h were recorded.
A cloud of volcanic ash was reported to have risen 1.5 km into the air.	The Australian government pledged almost \$1 million in aid.	The Indonesian government raised the alert for the volcano to its maximum.
The volcano is close to a subduction zone.	There was a risk of disease in the overcrowded evacuation centres.	The 10 km evacuation zone was later extended to a 30 km radius.
Schools were closed up to 120 km west of the volcano.	Many houses were burnt to the ground.	Pyroclastic flows spread 3 km down the slopes of the volcano.
Jobs have been provided in the tourism industry	Mount Merapi is part of the Pacific Ring of Fire	The Indonesian government is providing grants to farmers to help them replace their livestock.
When the volcano erupted tourists cancelled visits to Indonesia.	At least 200,000 people were made homeless.	The volcano is located on a destructive plate margin