

MOUNT ETNA: GEOGRAPHY

NEWS: Mount Etna erupts: All about Europe's most active volcano

WHAT'S IN THE NEWS?

Mount Etna, Europe's largest active volcano in Sicily, recently erupted due to pressure buildup from expanding gases, causing lava flows. Scientists classified the eruption as Strombolian, though some suggest it may have been Plinian.

About Mount Etna

Location

- Mount Etna is located on the east coast of Sicily.
- Sicily is the largest island in the Mediterranean Sea, situated just off the toe of Italy's "boot" (Southern Italy).

Geographical and Geological Features

- Mount Etna is the largest active volcano in Europe.
- It is an active stratovolcano (a volcano built up by many layers of hardened lava, tephra, pumice, and volcanic ash).
- It has the highest peak in Italy south of the Alps.

World Heritage Status

- Mount Etna has been designated as a UNESCO World Heritage Site since 2013.

Eruption History

- Mount Etna is known for frequent eruptions.
- Since 1600, there have been at least 60 documented flank eruptions (eruptions occurring from fissures on the sides of the volcano).
- Many more summit eruptions have also been recorded.
- The volcano's summit hosts five craters, which are responsible for the majority of the volcano's eruptions.

Cause of the Recent Massive Eruption

- Experts suggest that the recent eruption began due to a build-up of pressure inside the volcano.
- The increasing pressure was caused by expanding gases within the magma chamber.
- This pressure eventually led to the collapse of the volcano's southeast crater.

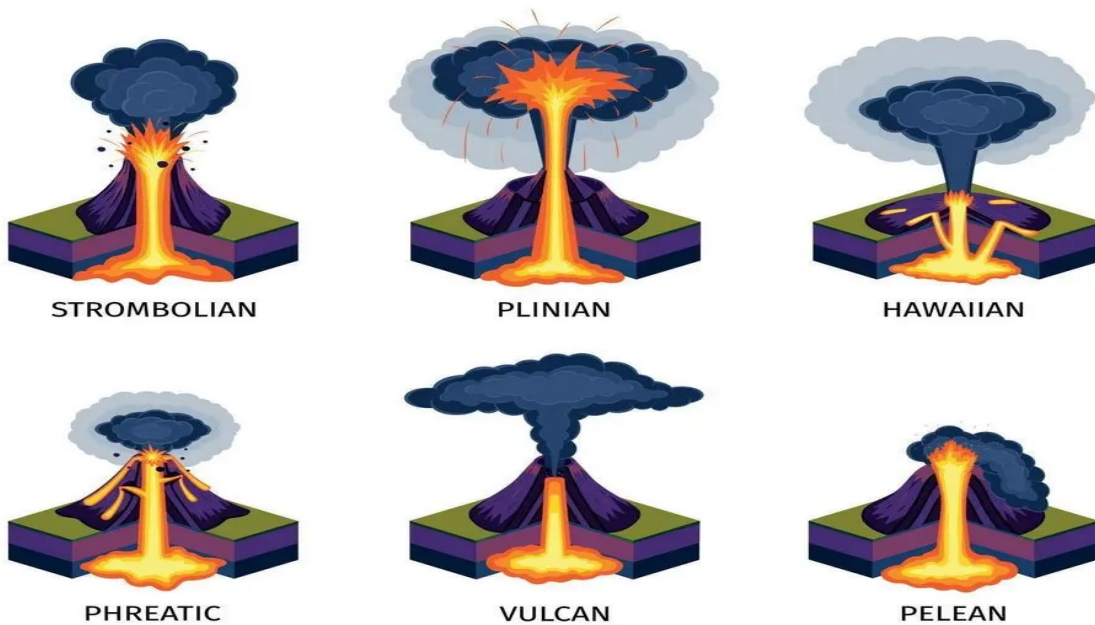
- As a result, hot lava flows were released from the crater.

Type of Eruption

- Scientists classify volcanic eruptions based on their explosivity and characteristics.
- According to the Italy's National Institute of Geophysics and Volcanology (INGV) Etna Observatory, the recent eruption of Mount Etna was classified as a "Strombolian" eruption.

Strombolian Eruption

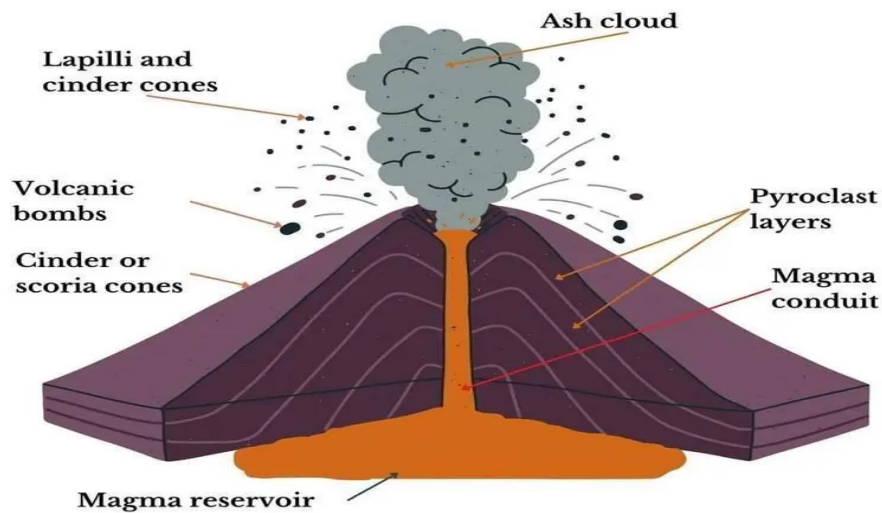
TYPES OF VOLCANIC ERUPTIONS



- This eruption type is characterised by discrete, moderately explosive bursts.
- It typically ejects chunks of rock and cinders, which can travel hundreds of metres into the air.
- Strombolian eruptions occur due to the presence of gas bubbles in the magma chamber.

- The Strombolian eruption type is named after another Italian volcano, Stromboli, which is famous for producing small eruptions every 10 to 20 minutes.

Strombolian Eruption Diagram



Strombolian eruptions are mild to moderately explosive eruptions characterized by intermittent or pulsating, short-lived explosions. These explosions eject incandescent pyroclasts mostly cinders, lapilli, and a smaller amount of volcanic bombs, volcanic ash, and lithic fragments.

Alternate Scientific View

- Some volcanologists believe that Mount Etna may not have experienced a purely Strombolian eruption during this event.
- Instead, they suggest it may have been a Plinian eruption.
- A Plinian eruption is a highly explosive type of eruption.
- It ejects hot gas, ash, and rock violently enough to reach the stratosphere, causing more widespread effects.

Source: <https://www.thehindu.com/news/international/mount-etna-erupts-all-about-europes-most-active-volcano/article69651897.ece>