

What is the Pacific Ring of Fire?

By IASToppers | 2022-01-20 17:35:00



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The Hunga Tonga-Hunga Ha'apai volcano, which lies along the Pacific rim, erupted recently.



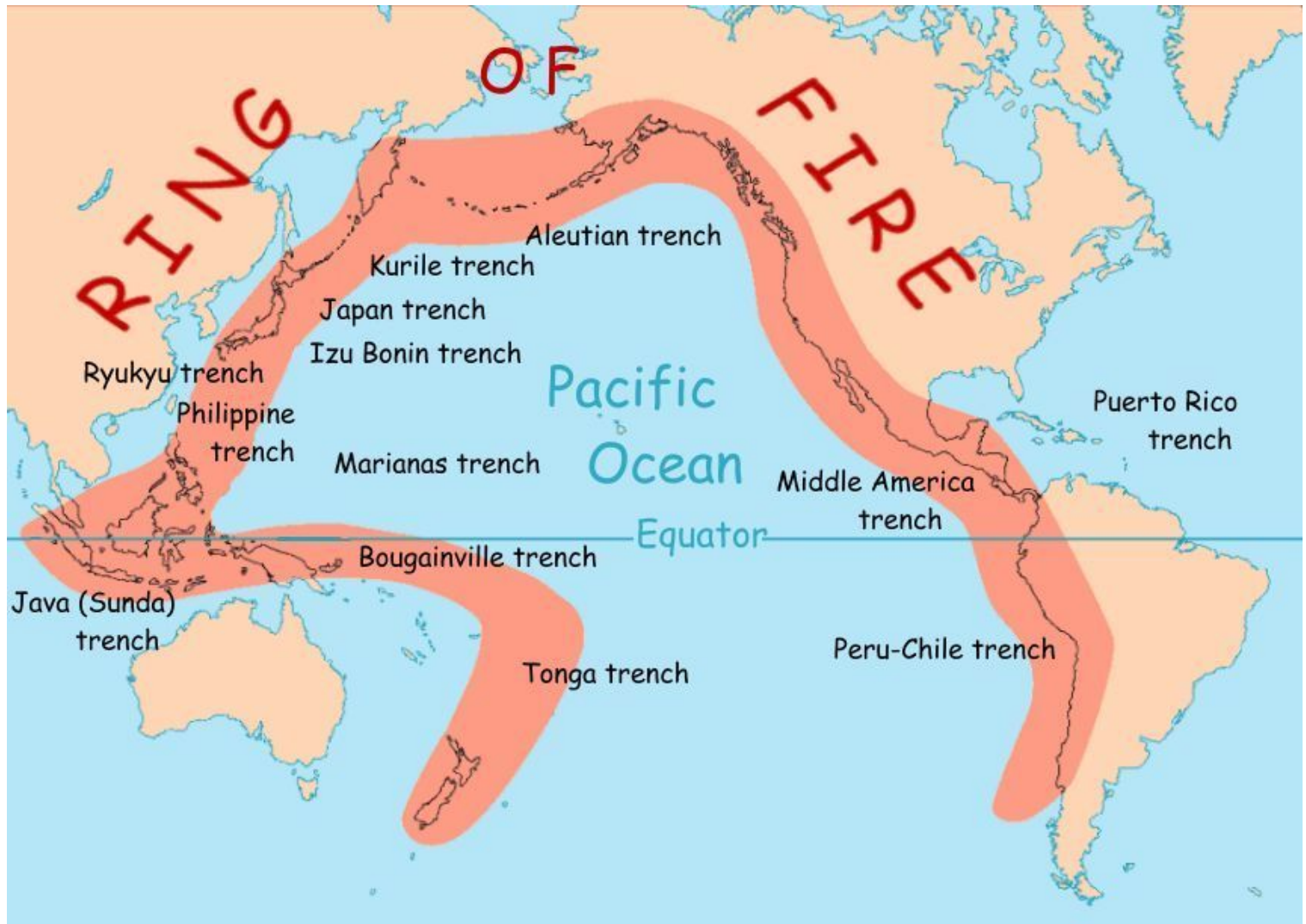
[Ref: BBC]

Hunga Tonga-Hunga Ha'apai volcano:

- They are twin uninhabited **volcanic islands** in the **South Pacific region**.
- The islands were merged by a volcanic eruption in 2009.
- It lies along the **Pacific 'Ring of fire'**.
- It is over 60 kilometres from the island nation of **Tonga**.
- It is part of the highly active **Tonga-Kermadec Islands volcanic arc**.
 - The arc is a subduction zone extending from New Zealand north-northeast to Fiji.

Pacific Ring of Fire:

- The Pacific 'Ring of Fire' is an area along the **Pacific Ocean**.
- It is home to about 75 per cent of the world's **volcanoes**.
- About 90 per cent of the **world's earthquakes** occur here.
- It is stretched over 40,000 kilometres and traces from New Zealand in a circular arc covering Tonga, Kermadec Islands and stretching eastward to the Aleutian Islands, then southward along the western coast of **North & South America**.

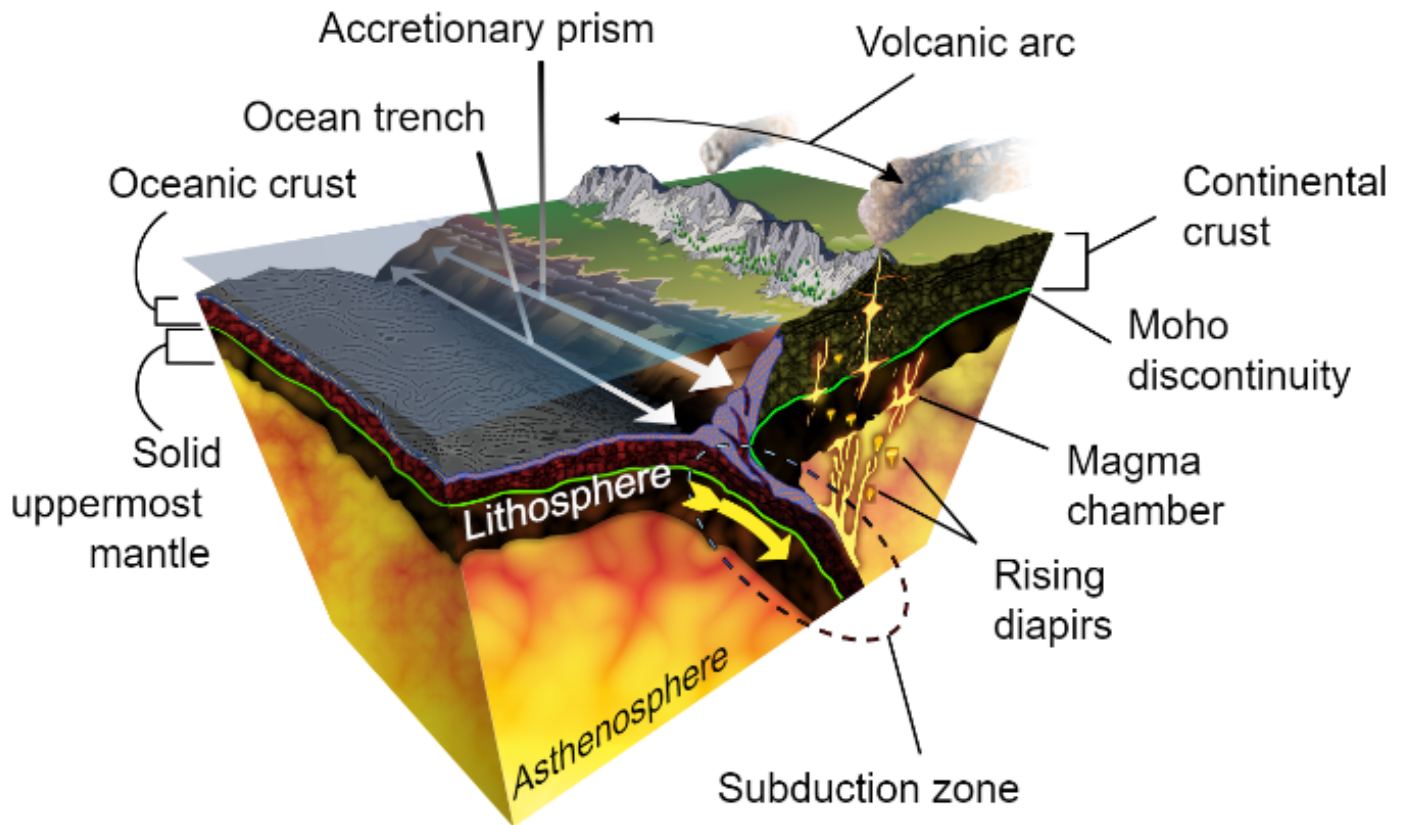


[Ref: National Geographic]

Tectonic Plates

- The area is along several tectonic plates including the **Pacific plate**, Philippine Plate, Juan de Fuca plate, Cocos plate, **Nazca plate** and **North American plate**.

Movement of Plates



[Ref: Wikipedia]

- The movement of the plates or tectonic activity makes the area witness abundant **earthquakes and tsunamis**.
- Along much of the Ring of Fire, the tectonic plates move towards each other creating **subduction zones**.
- One plate gets pushed down or is subducted by the other plate.
 - As this subduction happens, rocks melt, become magma and move to Earth's surface and cause **volcanic activity**.