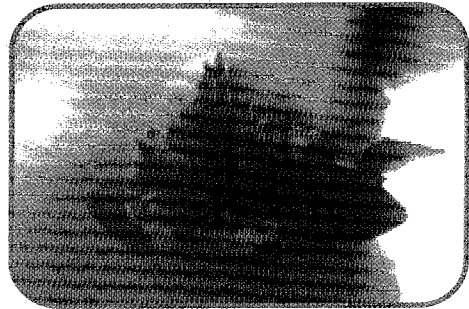


## SOME ACTIVE VOLCANOES OF VANUATU

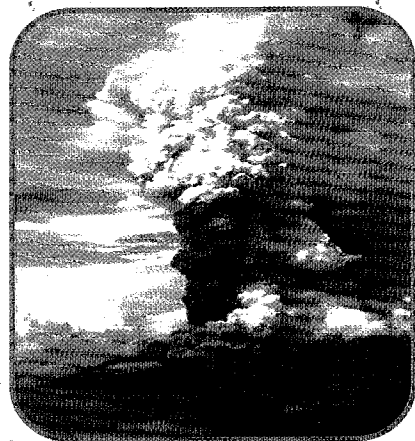
### Ambae:

This volcano vent is located in the center of a lake— Lake Manaro. When magma has contact with water, it causes very explosive and dangerous activity.



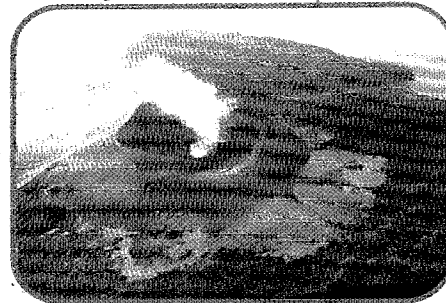
### Lopevi:

Lopevi volcano is an active strato-volcano that has a history of ejecting huge volumes of volcanic ash. Often the wind carries its ashes over Paama island causing much devastation to crops, water, people and settlements.



### Tanna:

The Yasur volcano on Tanna is the most accessible and visited volcano in Vanuatu. It is a tourist attraction however it also has a history of dangerous activity which has caused deaths. This volcano usually has strombolian activity.



### Ambrym:

The two volcanoes on Ambrym, Benbow and Marum are one of the largest emitters of sulphur dioxide gas on the planet. These gases often mix with the clouds causing acid rain which affects, crops, water and people's health:



This project was funded by NZAID and implemented by the Vanuatu Meteorology and Geo-hazard Department. For more information, visit the Vanuatu Geo-hazards Website on: [www.geohazards.gov.vu](http://www.geohazards.gov.vu) or email to [geohazards@meteo.gov.vu](mailto:geohazards@meteo.gov.vu)

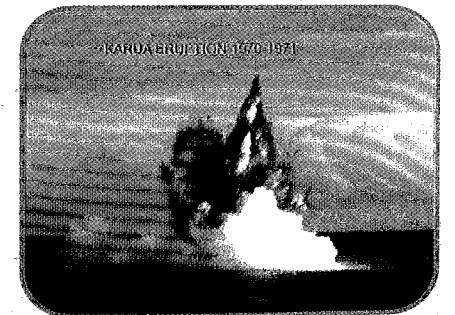
### Gaua:

Gaua volcano also known as Mt Garet, is situated in the caldera located at the center of Gaua Island. This volcano cone is surrounded by the lake Letas from its north west to its south-western part. In 2009, significant gas and ash emissions caused the relocations of many villages from the west to the eastern part of the island.

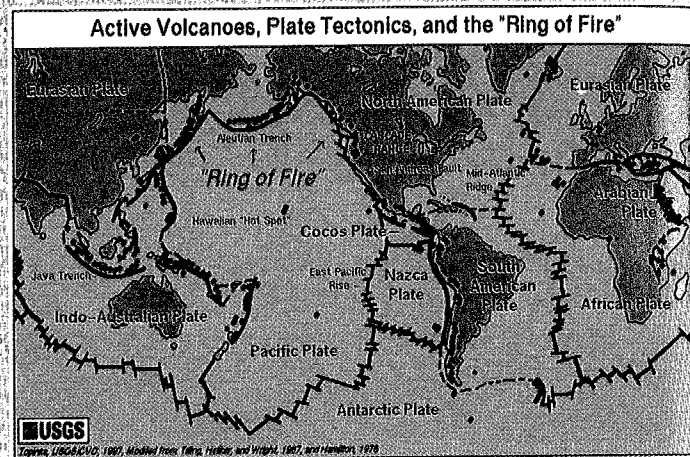


### Karua Volcano:

Karua is an underwater volcano located between Epi and Tongoa island in the Shepherds Group. It is said to be part of the greater Kuwae volcano which erupted in 1452, creating an underwater caldera which remains to this day. There are also other underwater volcanoes around the Shepherds area.

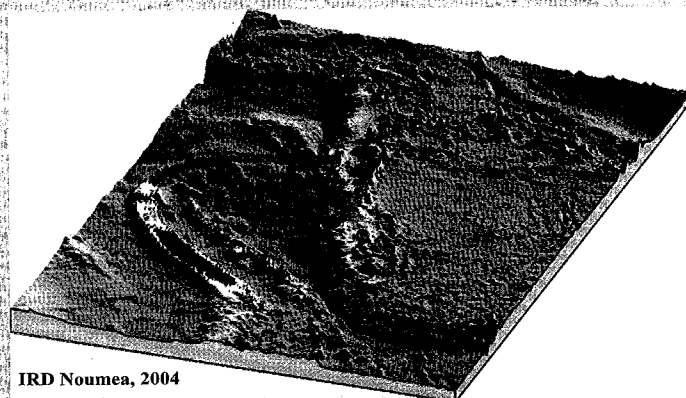


## Vanuatu's geographical location



Volcanoes usually occur on active tectonic plate boundaries, but can also occur on the centre of tectonic plates. Plate boundaries are also where many earthquakes and tsunamis occur.

Vanuatu is located on the western convergent (where plates meet) boundary of the Pacific Plate. It is also part of the 'Ring of Fire', a chain of volcanoes that are located on the edge of the Pacific Plate.

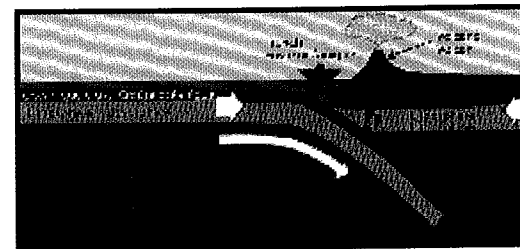


IRD Noumea, 2004

## VANUATU VOLCANISM

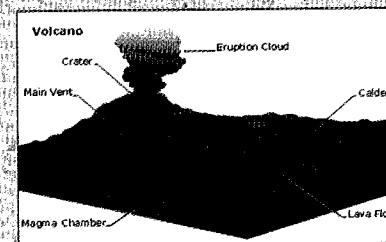
### Subduction Zone Processes

On convergent plate boundaries, one plate is pushed or subducted beneath and the other plate is pushed above it. The subducting plate melt under high pressure and temperature to form hot magma. This rises up towards the surface forming



Subduction and volcanic impacts (D. Dzurlin, USGS)  
Subduction et impacts volcanologiques (D. Dzurlin, USGS)

As a result of this subduction, volcanoes are allowing this magma to be released at the surface of the earth through volcano products (rocks, gases, ashes etc...)

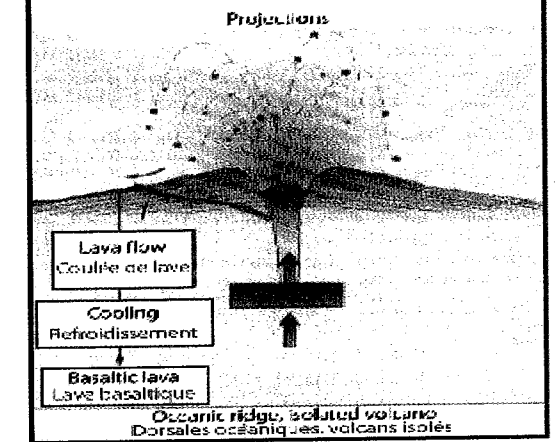


### Types of Volcanic Activities

Different volcanoes have different characteristics based on their geography, geology and historical activity. Many volcanoes in Vanuatu have explosive activity and eject mostly ash or tephra, volcanic gases and lava.

### "Red" eruption Eruption "rouge"

Effusive volcanic activity  
Activité volcanologique effusive



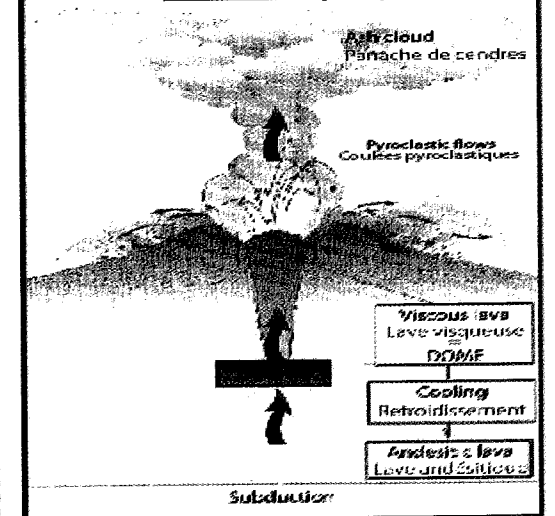
Fluid lava  
Lave fluide

Low in silica  
Faible teneur en silice

Viscous lava  
Lave visqueuse

High in silica  
Forte teneur en silice

Explosive volcanic activity  
Activité volcanologique explosive



Subduction

### "Gray" eruption Eruption "grise"