

## Tanzania, Africa

- due to acid weather it suffers from water issues
- uses ground water + surface water, however the water is contaminated with a lot of bacteria leading to health issues such as cholera and malaria.

Wateraid is helping Tanzania

### ECONOMIC BENEFITS

- time to invest in businesses → money
- children can go to school
- spare money

### SOCIAL BENEFITS

- no more diseases
- wash themselves and clothes

### ↳ Drip-irrigation

- ↳ washing dishes by hand rather than using dishwasher

### ↳ Dam building

- ↳ Recycle water



- ↳ **Health**: LEDC's people drink contaminated water which leads to water-borne diseases (cholera) + sanitation issues

- ↳ **Hunger**: No water = no possibility to grow crops or animals

- ↳ **Education**: Children have to go get water = miss school

- ↳ **Poverty**

- ↳ **Loose jobs** as they have no energy → no income → death
- ↳ countries **GDP** is lowered.

2.5 million tourists / year

- ↳ rubbish is **destroying mangrove swamps** + piling up on beach → too many **investors**
- ↳ has become very **commercialised** and are even giving up precious land
- ↳ a lot of **water waste** → **cultural degradation**

• **Rapid air travel**

↳ **cheap fares**

• Go on **holiday to cope** with stress

• **Internet + advertising** and holiday programmes have made people **more aware**

• People have become **richer** so they have more money to spend

• Encourage visitors to **buy local products**

• **Educate locals + tourists** about sustainable tourism (posters)

• Use **renewable energy**

• **Recycle water**

• Create **natural parks**

• **Protect environment + resources**

• Respect local customs + traditions

• Use **renewable energy**

• Build pathways / footpaths

• Limit number of tourists / entrance fee

• **Rubbish piled up**

↳ **greenhouse effect**

**WHY HAS TOURISM GROWN?**

**MAKING TOURISM SUSTAINABLE**

**CASE STUDY: BALI**

**HOW DOES TOURISM IMPACT THE ENVIRONMENT**

**ADVANTAGES**

**DISADVANTAGES**

- **Jobs** for local people are created
- **Local infrastructure** is improved
  - ↳ can be used to **improve local services** (schools)
- Tourists see beautiful landscapes
- Allows them to **experience different cultures**
- Higher GDP

- **Employment** is only seasonal
  - ↳ **low paid + long hours**
- **Traffic congestion + pollution**
- **Profits** go to **foreign companies**
- **Damage** to the landscape (litter)
- **Crime** rates increase
- Culture becomes **westernized**

• **Waste** is dumped into the rivers

↳ **water pollution**

• Building new hotels + buildings

↳ **species lost + CO<sub>2</sub> emissions** → air pollution

• **More transport** → CO<sub>2</sub> emissions + deforestation

↳ **greenhouse effect**

## Earthquake's

- ↳ earthquake resistant buildings
- ↳ emergency plans
- ↳ earthquake drills
- ↳ tsunami warnings

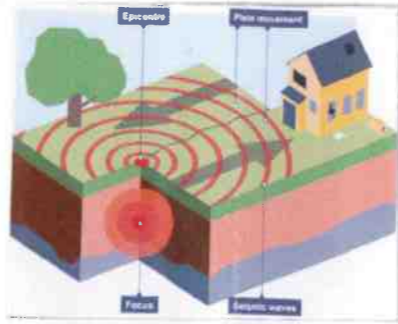
## Volcanoes

- ↳ prediction (technology)
- ↳ preparation
  - evacuation
  - diversion of lava flows
  - emergency supplies

**Focus:** Centre of the earthquake

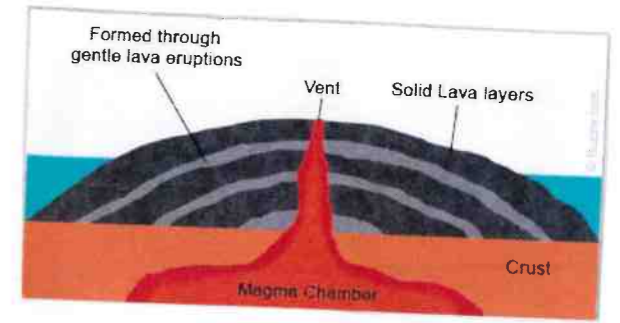
**Epicenter:** Point on Earth's surface directly above focus

**Intensity:** Severity of earthquake (effects caused)



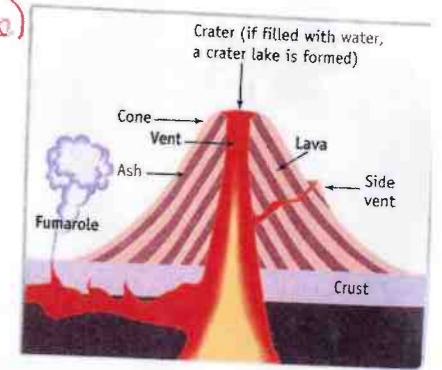
## Shield volcano's:

- ↳ flat, gently sloping sides
- ↳ lava that forms is thin and runny
- ↳ frequent but gentle eruptions



## Strato volcano (composite cone)

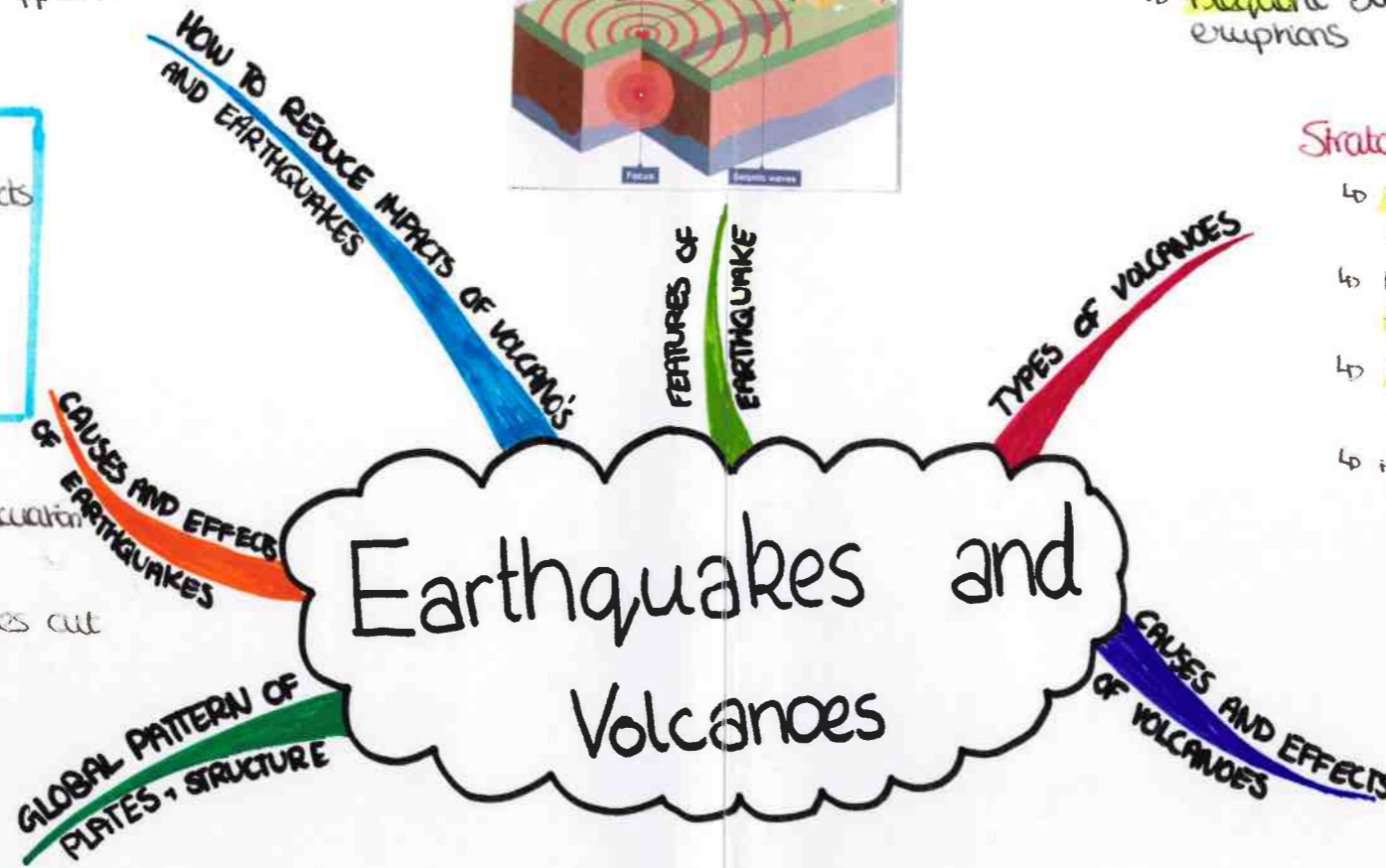
- ↳ alternating layers of rock and ash
- ↳ lava that form is thick and sticky
- ↳ infrequent, but violent eruptions
- ↳ + pyroclastic flows



## Tohoku, Japan 2011

Destructive plate margin (Pacific plate subducts under Eurasian plate). Friction causes Pacific plate to stick and pressure builds up and when it was released an earthquake is caused.

- Effects:
- ↳ 12000 people died
  - ↳ Destruction to roads, houses + evacuation
  - ↳ Underground pipes broke
  - ↳ Power lines and fresh water supplies cut
  - ↳ Disruption to economy
  - ↳ Fukushima nuclear plant explosion
  - ↳ 200 billion € damage made



## Mount Del Ruiz, Colombia 1985

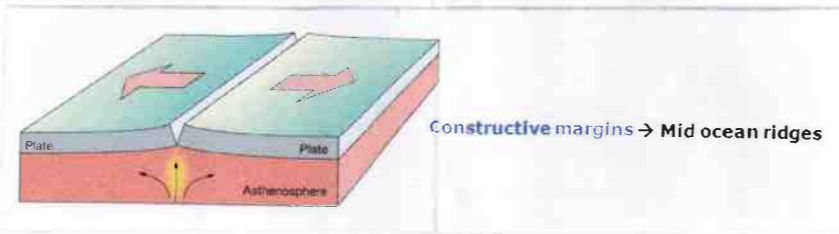
Nazca plate subducted beneath South American plate. Had not erupted for 8-100 years so pressure had built up and volcano erupted causing a pyroclastic flow which caused lahars (destructive mud flow).



Earth's crust is broken into pieces called plates. Heat rising and falling inside the mantle creates convection currents, which moves the plates. The point where 2 plates meet is called plate boundary. Earthquakes and volcanoes occur on or near plate boundaries.

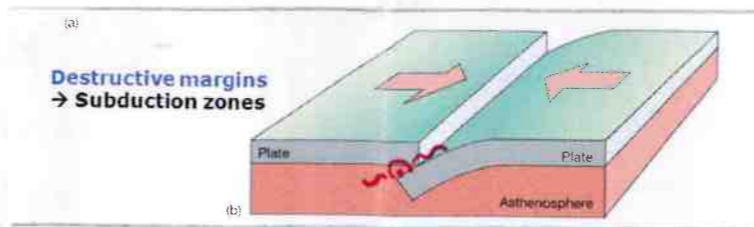
Primary Effects	Secondary Effects
Roads, bridges (communication) was destroyed.	15000 animals killed by lahars
3500 hectares of agricultural land was lost.	23000 killed, 5000 injured
Water + electricity supplies damaged	Land was made more fertile after lahars
50 schools 2 hospitals 350 shops destroyed.	Mud upto 40m was deposited in valley paths.

2 plates pulling apart = constructive boundary. Gap is created between 2 pieces of crust, magma rises to fill the gap, and new oceanic crust is created.

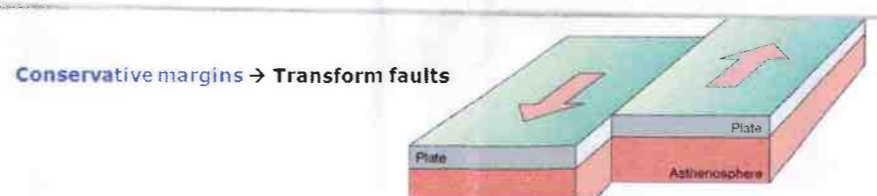


ex. Mid-Atlantic ridge

When oceanic crust meets with continental crust. The oceanic crust is more dense, so subducts. Friction occurs as plate moves down = causing earthquake. Crust is sent to magma, so it boils to rise to the surface and forms a volcano.



2 plates are sliding against each other. No subduction so no volcanoes formed. If the plates get stuck pressure can build. If the pressure is suddenly released, an earthquake is caused.



## OPPORTUNITIES THAT VOLCANOES BRING

- ↳ Ash from volcano creates fertile soil which is excellent for growing crops
- ↳ Opportunities for tourism -> generate income + employment
- ↳ Minerals can be mined
- ↳ Heat from earth can be used for geothermal energy production.