

#### Disasters

 Disasters are hazards that cause destruction or environmental changes.

#### The types are

- Natural disasters
- Man made disasters



### Natural Disasters

A natural disaster is the effect of a natural hazard (e.g., flood, tornado, hurricane, volcanic eruption, earthquake, or landslide)





## Cyclones

India

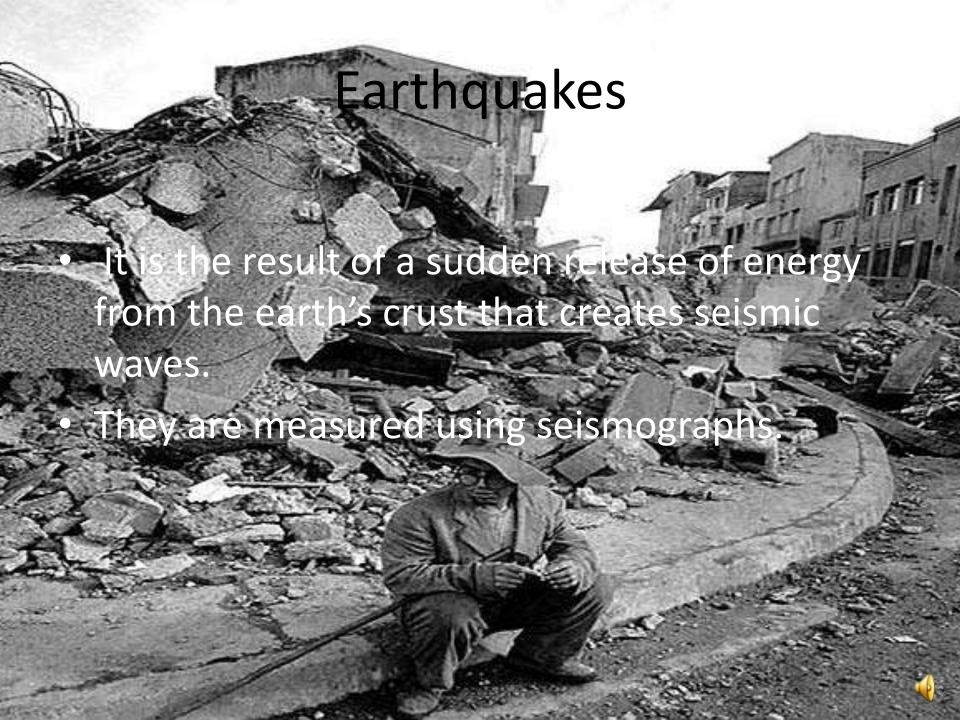
- A cyclone is an area of closed, circular fluid motion. It has low pressure on the inside and high pressure on the outside.
- The center of the storm is called the eye and it has the calmest water and the lowest pressure



## Cyclones

- Cyclones turn counter-clockwise in the northern hemisphere and clockwise in the southern hemisphere. This is because it follows the rotational movemeent of the earth.
- The biggest cyclone recorded is the Bhola cyclone. It hit the coast of today's Bangladesh in 1970 with a death toll of around 500,000.







## Tornados (Twisters)

- A tornado is a violently rotating column of air that is touching both the ground and a cumulonimbus cloud.
- Tornado conditions are caused when different temperatures and humidity meet to form thunder clouds
- "Twisters" can attain speeds up to 100 miles an hour



#### **Tornados**

- The biggest tornado recorded was the Hallam, Nebraska tornado on May 22, 2004. It was around 2.5 miles big and had a death toll of around 160.
- The deadliest tornado recorded occurred in Daultipur and Salturia, Bangladesh on April 26<sup>th</sup>, 1989. 1300 recorded dead and 12,000 injured.



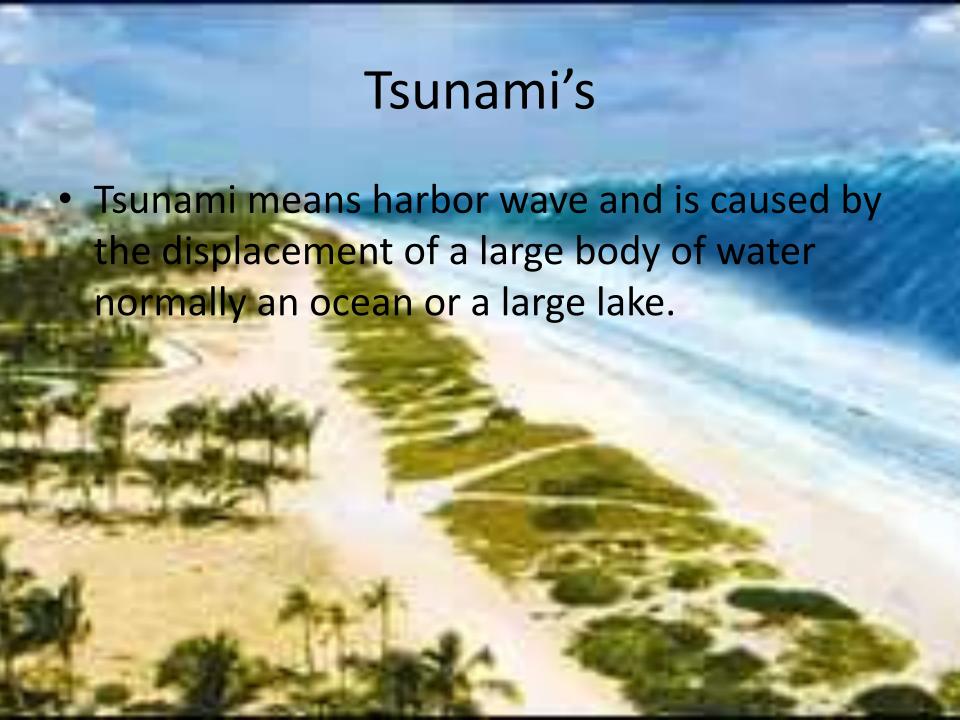
## Volcanic Eruption

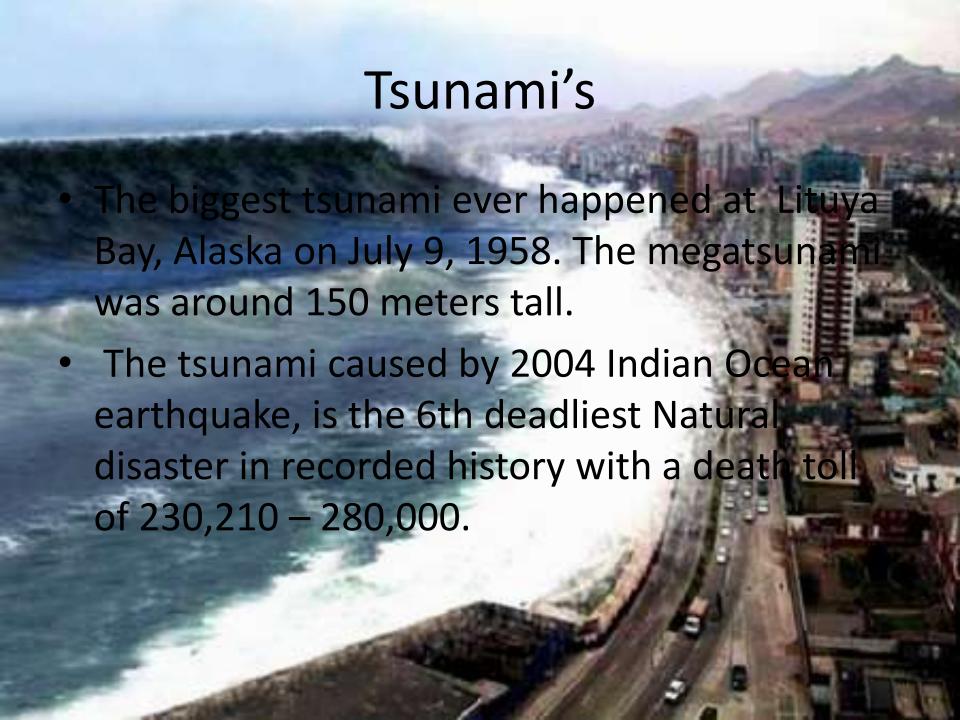
- A volcano is an opening in a planet's surface which allows hot magma to escape from below the surface.
- Study of volcano's is called Volcanology and volcanic eruptions are measured using Volcanic Explosivity Index

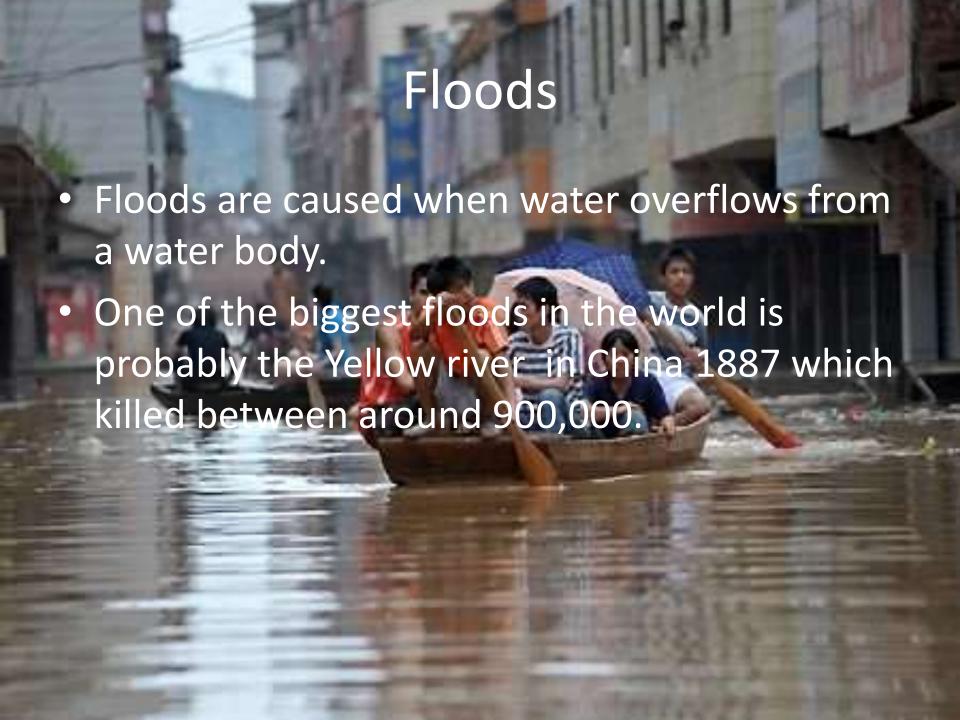


## **Volcanic Eruption**

- The biggest volcanic eruption was Mount Tambora on April 10, 1815, it heard over 2000 km away and had a death toll of around 71,000. Due to the explosion 1816 became known as "The Year Without Summer".
- The largest volcano known to humans is Olympus Mons on Mars. Olympus Mons means Mount Olympus and is bigger than Mount Everest.







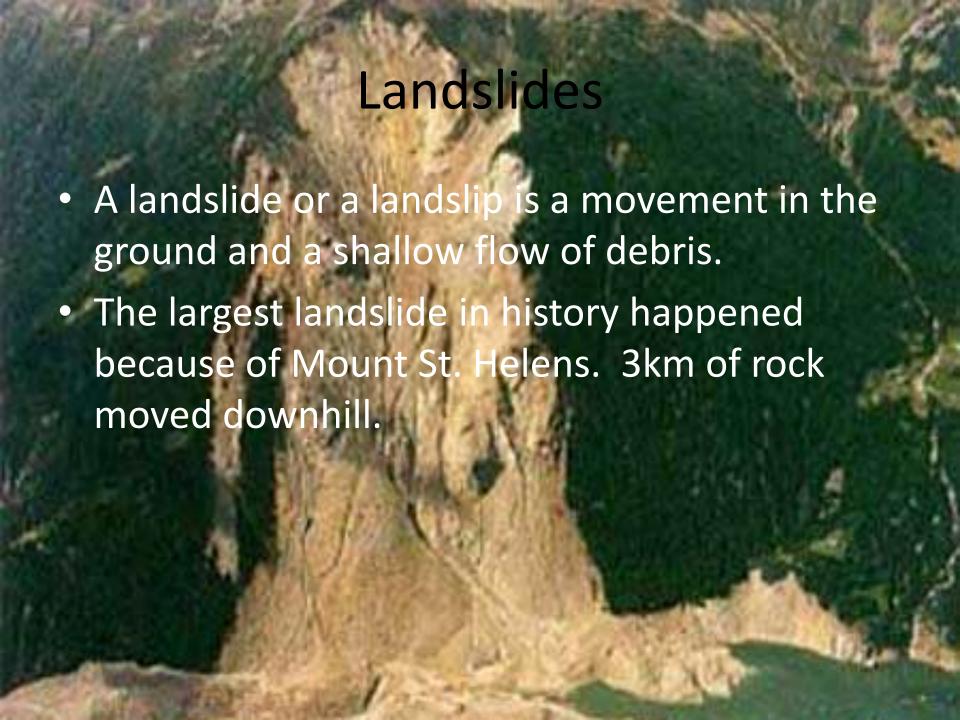
### Wildfire

- A wildfire is any uncontrolled fire in the countryside or wilderness.
- Other names for a wildfire are brush fire, bushfire, forest fire, desert fire, grass fire, hill fire, peat fire, vegetation fire, and veldfire.
- One of the largest wildfire is the 1910 wildfire



- A drought is a long period of time in which a certain region receives a shortage of water
- Lasting three years from 1958 to 1961, the Great Chinese Famine is the worst on record, 15 to 43 million were killed as a result
  - USA has been hit by a huge drought in 2012 decreasing corn income by 12%





### **Unusual Natural Disasters**

- Firenadoes
- Limnic Eruptions



### Firenadoes

- A firenado is a column of smoke and fire caused when fire gets into a tornado.
- Firenadoes are also known as firewhirls, fire devils and fire tornadoes

## Limnic Eruptions

- A limnic explosion is also called a lake overturn and is caused by an explosion of gas from the lake (normally carbon dioxide) erupting and suffocating people.
- There are only three exploding lakes. They are Lake Menoun, Lake Nyos and Lake Kivu

### Limnic Eruptions

- The biggest eruption ever recorded is Lake
  Nyos killing 1800 people and many animals.
- The biggest danger is Lake Kivu which would cause a methane explosion and kill around 2 million.
- Interestingly all these lakes are in Africa and both Menoun and Nyos are in Cameroon.





## The atomic bombing

- The first two atomic bomb were used by the USA to end the war against Japan in 1945.
- The first one was called Little Boy and dropped by a flight called Enola Gay on Hiroshima with a death toll of around 166,000 on 6 August 1945.
- The second was named The fat man and wad dropped by a plane called Bockscar on Nagasaki with a death toll of around 80,000 on 9 August 1945.
- If Japan did not surrender the USA planned too continue dropping atomic bombs until they did.

### Terrorism

- 9/11 is the big act of terrorism on US
- On September 11<sup>th</sup>, 2001, 4 flights were hijacked 2 of them hit the twin towers in New York and third flight hit pentagon, in Washington DC killing
- 4<sup>th</sup> flight, passengers attacked the hi-jackers and crashed the flight down.
- 4<sup>th</sup> flight was believed to have a target of White house or the Capitol.

# Deepwater Horizon oil spill

- The oil spill flowed for 3 months without being stopped.
  - About 780,000m3 oil is estimated to have flowed out
  - 17 people were killed in the explosion that released the oil.