



Centurion
UNIVERSITY
*Shaping Lives...
Empowering Communities...*

DROUGHT DISASTER



Centurion
UNIVERSITY
Shaping Lives...
Empowering Communities...

Drought is

A lack or shortage of water for an unusually long period of time, involving 50% less than the usual rainfall over 3 months

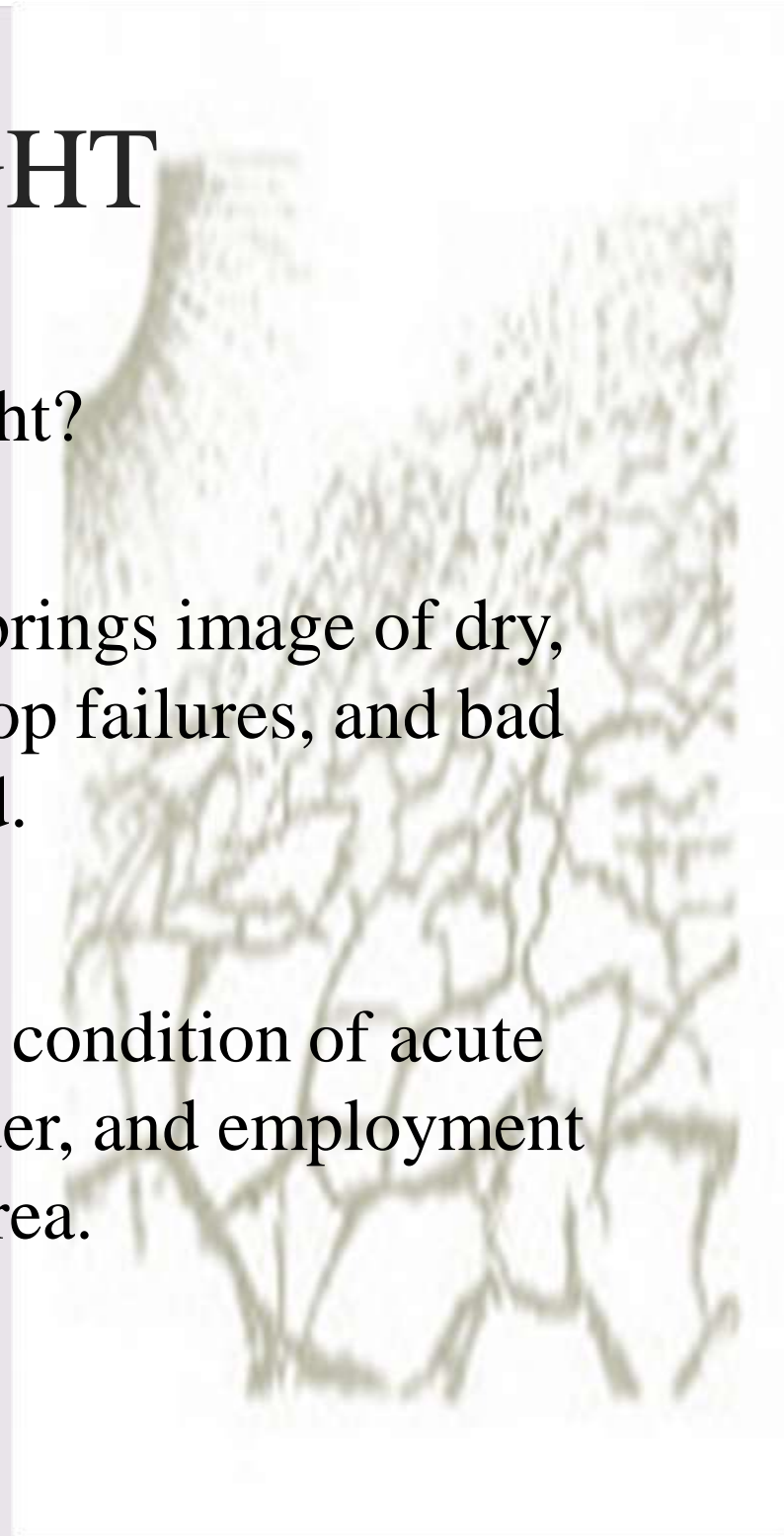


Centurion
UNIVERSITY

Shaping Lives...
Empowering Communities...

DROUGHT

- ✘ What do you mean by drought?
- ♣ The word drought instantly brings image of dry, parched land, no rainfall, crop failures, and bad living conditions to our mind.
- ♣ In simple terms, drought is a condition of acute scarcity of water, food, fodder, and employment due to scanty rainfall in an area.





Centurion
UNIVERSITY

*Shaping Lives...
Empowering Communities...*



CAUSES OF DROUGHT

**Deficiency Of Rain
Water**

**Deforesta
tion**

**Soil
Erosion**

**Global
Warming**



Centurion
UNIVERSITY

*Shaping Lives...
Empowering Communities...*

LANDSLIDES





Centurion
UNIVERSITY

*Shaping Lives...
Empowering Communities...*

INTRODUCTION

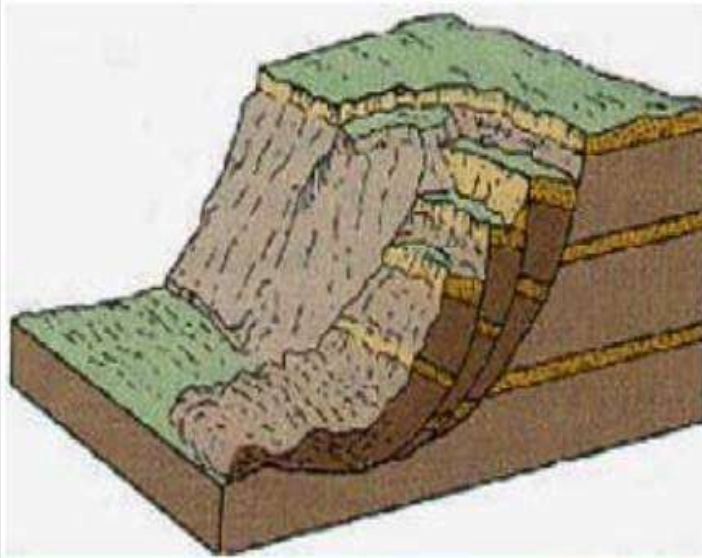
- A landslide is a downward or outward movement of soil, rock or vegetation, under the influence of gravity.



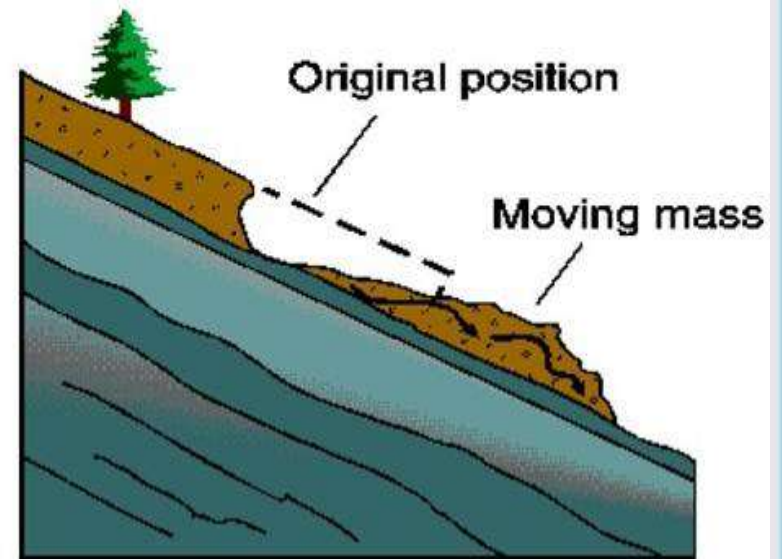
Centurion
UNIVERSITY

Shaping Lives...
Empowering Communities...

COMMON TYPES OF LANDSLIDES



a) **Rotational slides** move along a surface of rupture that is curved and concave.

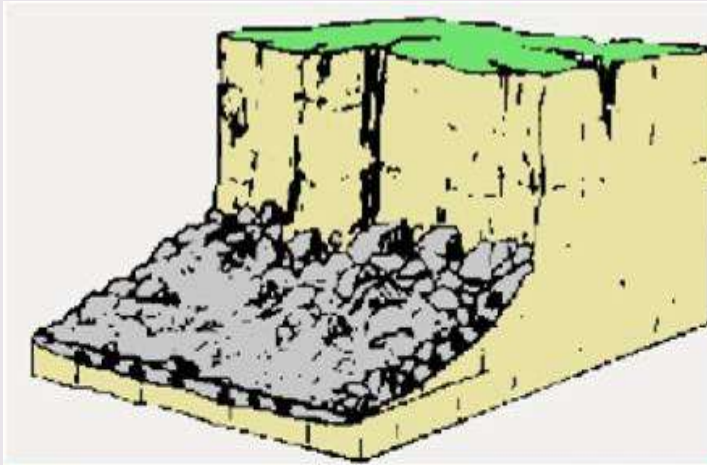


b) **Translational slides** occurs when the failure surface is approximately flat or slightly undulated



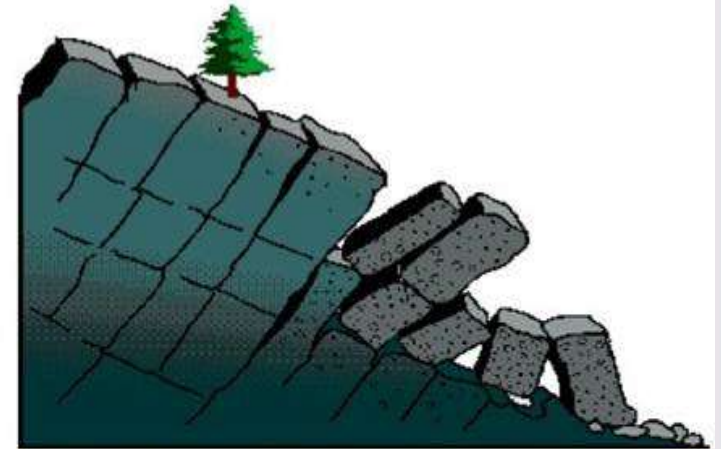
**Centurion
UNIVERSITY**

*Shaping Lives...
Empowering Communities...*



c) Rock Fall:

Free falling of detached bodies of bedrock (boulders) from a cliff or steep slope



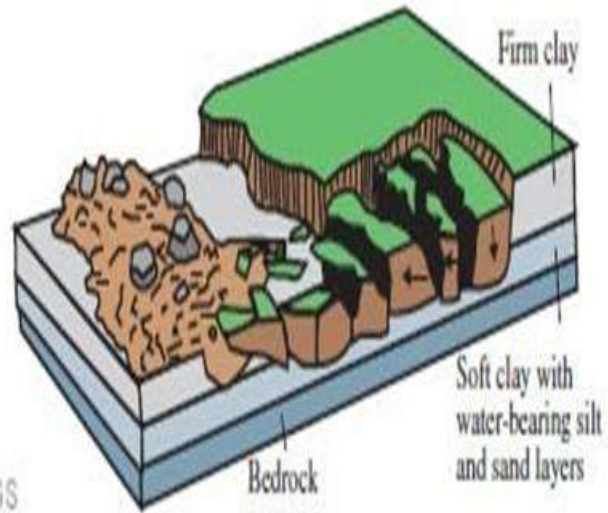
d) **Rock toppling** occurs when one or more rock units rotate about their base and Collapse.



Centurion
UNIVERSITY

Shaping Lives...
Empowering Communities...

USGS



e) **Lateral spreading** occurs when the soil mass spreads laterally and this spreading comes with tensional cracks in the soil mass.



f) **Debris Flow:**

Down slope movement of collapsed, unconsolidated material typically along a stream channel.



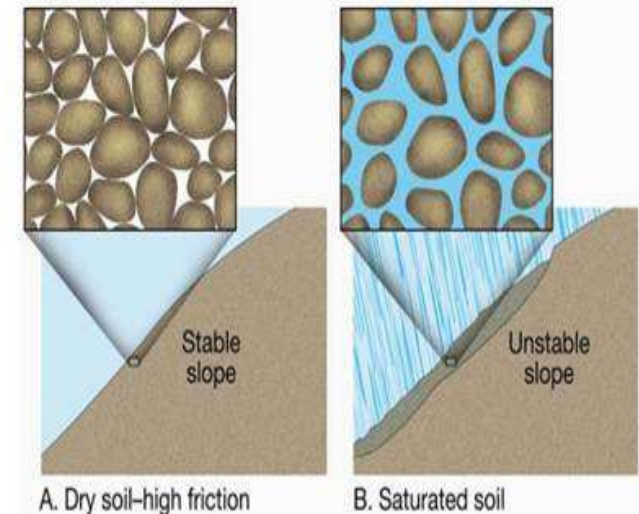
Centurion
UNIVERSITY

Shaping Lives...
Empowering Communities...

CAUSES OF LANDSLIDES

A) Natural Factors:

Gravity: Gravity works more effectively on steeper slopes.



Heavy and prolonged rainfall: slides occur often with intense rain by **creating zone of weakness**, also water tables rise with heavy rain makes some slopes unstable.

Earthquakes: Ground vibrations created during Earthquakes.



Centurion
UNIVERSITY

*Shaping Lives...
Empowering Communities...*

What is avalanche...???

- It is rapid flow of snow down on sloping surface.
- They are triggered in starting zone.
- They are mainly triggered by noise, shouting , seismic activity, explosion ,snowmobiler.





Centurion
UNIVERSITY

*Shaping Lives...
Empowering Communities...*

Occurrence

- Due to snow has different layers having dissimilar physical properties.
- Due to loose snow.
- Cohesive snow separates from the surrounding snow and slides out.

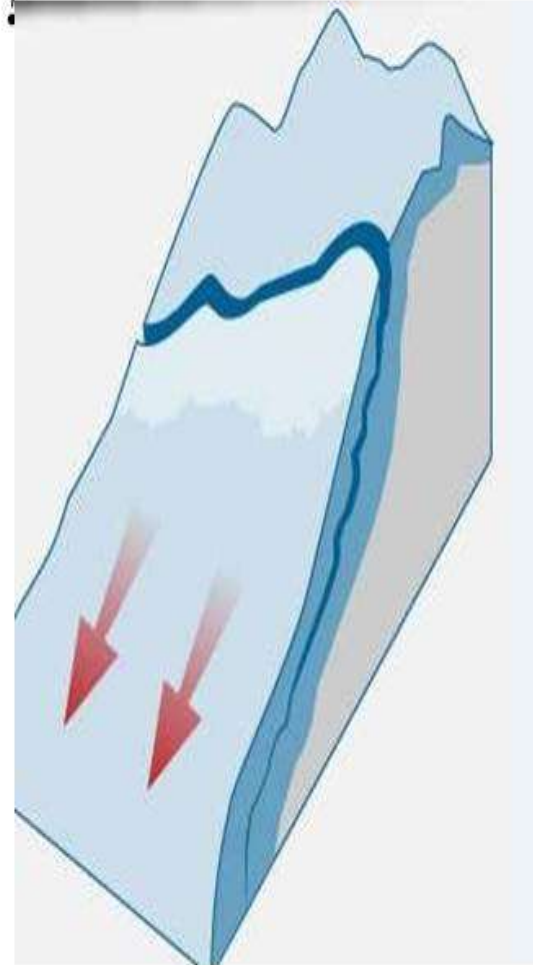


Centurion
UNIVERSITY

*Shaping Lives...
Empowering Communities...*

How an avalanche is occurred..??

- Decrease in temperature of top layer.
- Due to temperature difference between upper and lower layer.
- Evaporation of lower layer.
- Due to the lose of grip .





Centurion
UNIVERSITY

*Shaping Lives...
Empowering Communities...*

VOLCANIC ERUPTION



Centurion
UNIVERSITY

*Shaping Lives...
Empowering Communities...*

VOLCANIC ERUPTION

- A volcano is a mountain where lava (hot, liquid rock) comes from a magma chamber under the ground. Most volcanoes have a volcanic crater at the top. When a volcano is active, materials come out of it. The materials include lava, steam, gaseous sulfur compounds, ash and broken rock pieces.
- When there is enough pressure, it causes the volcano to erupt. The pressure blows off the top of the volcano. The magma comes out, sometimes quickly and sometimes slowly.



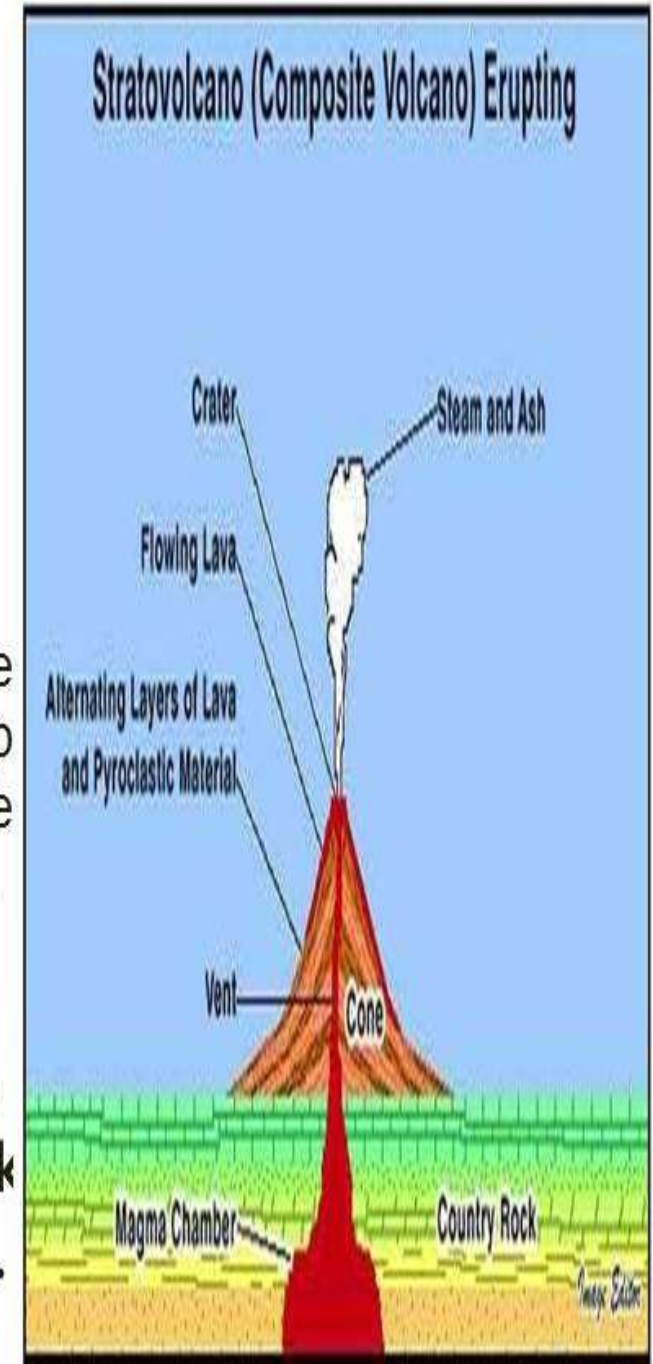
Centurion
UNIVERSITY

Shaping Lives...
Empowering Communities...

PROCESS OF VOLCANIC

ERUPTION

- Volcano is mostly a curve along destructive and constructive plate boundaries where Plates push together and drag a path.
- Cracks or weaknesses allow magma rise up from the lowest crust, pressure builds up which then releases something, causing the magma to explode, called volcanic eruption.
- Magma reaches to surface is called lava. This molten lava eventually cools to form new rock





Centurion
UNIVERSITY

Shaping Lives...
Empowering Communities...

REASONS

There are three dominating theories to explain what causes a volcano to erupt –

- Due to Density-difference in Magma
- Pressure of Released Gases
- Injection of New Magma



Centurion
UNIVERSITY
*Shaping Lives...
Empowering Communities...*



HEAT WAVES COLD WAVES





Centurion
UNIVERSITY
*Shaping Lives...
Empowering Communities...*

HEAT WAVES

- ♣ It is a prolonged period of excessive heat, often accompanied by excessive humidity.
- ♣ The weather is noticeably warmer than normal for the time of year and climate.
- ♣ Develop slowly and kills & injure many more animals and people nationwide in average year...more than any other disaster
- ♣ “**silent disaster**”





Centurion
UNIVERSITY

*Shaping Lives...
Empowering Communities...*

-
- } As temperature rises people animals and plants suffer from heat stress

 - } Apart from death more and more people are admitted with suffering sunstroke , severe dehydration, with vomiting and high fever.

 - } The condition become more severe in May and June in India.





Centurion
UNIVERSITY

Shaping Lives...
Empowering Communities...

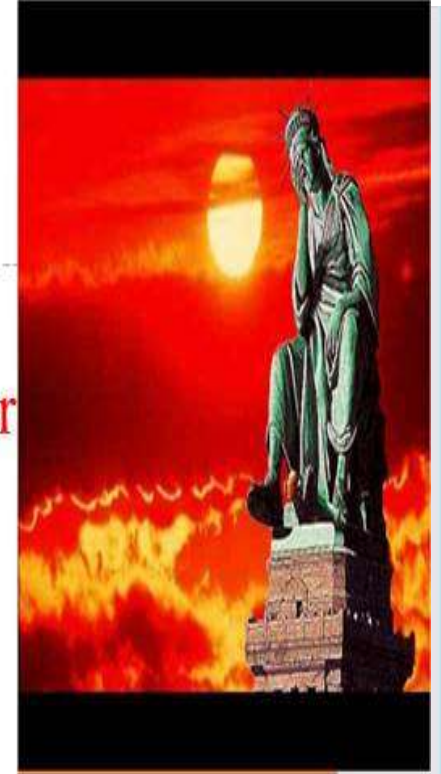
What causes heat wave?

} A heat wave is caused by a system of **higher atmospheric pressure.**

} In a high pressure system, air from upper levels of the atmosphere descends and rotates outward.

} As it comes down, it becomes compressed, **which increases temperature and dries it**

▶ **out.**





Centurion
UNIVERSITY

Shaping Lives...
Empowering Communities...

Effects- Human beings

- } Thousands of people suffer from heat stress where their bodies absorb more heat than they can expel.
- } Depletion of salt in the body may cause heat cramp.
- } Thousands of deaths from **hypothermia**.
- } Elevated ozone concentration irritates the mucous membrane and causes **illness of the respiratory system**.





Centurion
UNIVERSITY

Shaping Lives...
Empowering Communities...

} Heat can cause **heatstroke, sunstroke or circulatory collapse.**

} The most common human response to extreme heat is **dehydration**

} A heat wave is a danger because heat and sunlight may over **heat the human body.**





Centurion
UNIVERSITY

Shaping Lives...
Empowering Communities...

Agriculture and crop

- } Dry and hot weather causes no **precipitation**. This can result in **dryness** or even **drought**.
- } Plants are no longer **growing** and, in the worst case, they completely **wither**.
- } Under such conditions agriculture suffers **enormous damage and harvest loss**.
- } Severe heat waves could damage crop results in **crop failure**.
- } As plants start die from the effect of heat wave, fire increases.





Centurion
UNIVERSITY

*Shaping Lives...
Empowering Communities...*

Cold waves

- } A cold wave is an unusually cold air into middle or lower latitudes.
- } Cold waves affect much larger areas than ice storms, and other winter hazards.
- } Meteorologists measure cold waves by the departure from the normal temperature.





Centurion
UNIVERSITY

Shaping Lives...
Empowering Communities...

Formation of Cold Waves

- } A cold wave develops when cold air masses over large areas are brought in.
 - } The cold air masses transport only little moisture. Precipitation occurs as snow or sleet due to temperatures below freezing point.
 - } Cold waves can also be accompanied by strong wind. Such a phenomenon is called **winter storm**.
 - } Cold polar or air masses are relatively shallow, extending one to several km above the surface.
-



Centurion
UNIVERSITY

Shaping Lives...
Empowering Communities...

Effect on persons and economic activity

- Exposure to extreme and especially unexpected cold can lead to **hypothermia and frostbite**. Which require medical attention due to the hazards of tissue damage and organ failure.
- They can cause death and injury to **livestock and wildlife**.
- Exposure to cold mandates **greater caloric intake** for all animals, including humans.
- If a cold wave is accompanied by heavy and persistent snow, grazing animals may be unable to reach needed food and **die of hypothermia or starvation**.
- They often necessitate the purchase of **foodstuffs** at considerable cost to farmers to feed livestock . Such cold waves have caused **famines**.

