

CLASS NOTES

Class: IX

Topic: Climate – Controls affecting the Climate of a place

Subject: Geography

Climate refers to the sum total of weather conditions and variations over a large area for a long period of time (more than thirty years).

Weather refers to the state of the atmosphere over an area at any point of time.

The elements of weather and climate are the same, i.e. temperature, atmospheric pressure, wind, humidity and precipitation. On the basis of the monthly atmospheric conditions, the year is divided into seasons such as:

- Winter
- Summer
- Rainy Seasons
- Generalised monthly atmospheric conditions determine the basis on which the year is divided into the seasons — summer, winter or rainy.
- India has a monsoon type of climate.
- Monsoon is basically a seasonal reversal in the wind through the year.
- There is huge difference in temperature from one region to another.
- Form of precipitation, its amount and distribution also differ from one part of India to another.
- Coastal areas observe lesser difference in temperature conditions. It is the interior of India that experiences temperature contrasts.
- Decrease in rainfall is seen from east to west in the Northern Plains. All this influences diversity in professions, food, dress and houses of people.

Climatic Controls

The climate of any place depends on the following factors:

1) Latitude

The amount of solar energy received varies according to latitude due to the curvature of the earth. That's why air temperature generally decreases from the equator towards the poles.

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CLIMATIC CONTROLS

- **Latitude:**

Due to the curvature of the earth, the amount of solar energy received varies according to latitude.

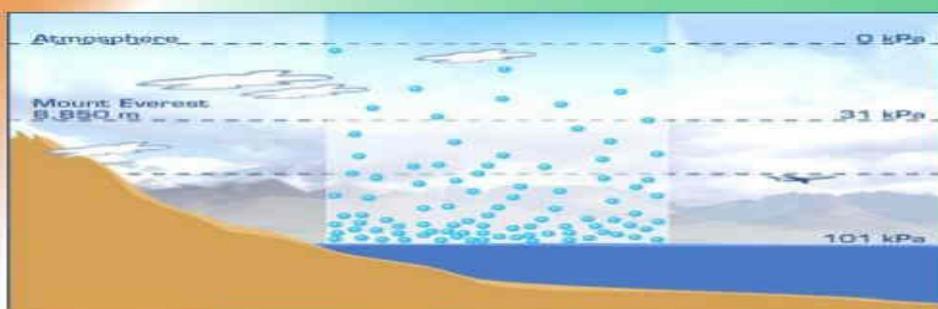


2) Altitude

The atmosphere becomes less dense and temperature decreases when we go to the higher altitude from the earth surface. This is the reason why hills are cooler during summers.

- **Altitude:**

As one goes from the surface of the earth to higher altitudes, the atmosphere becomes less dense and temperature decreases.

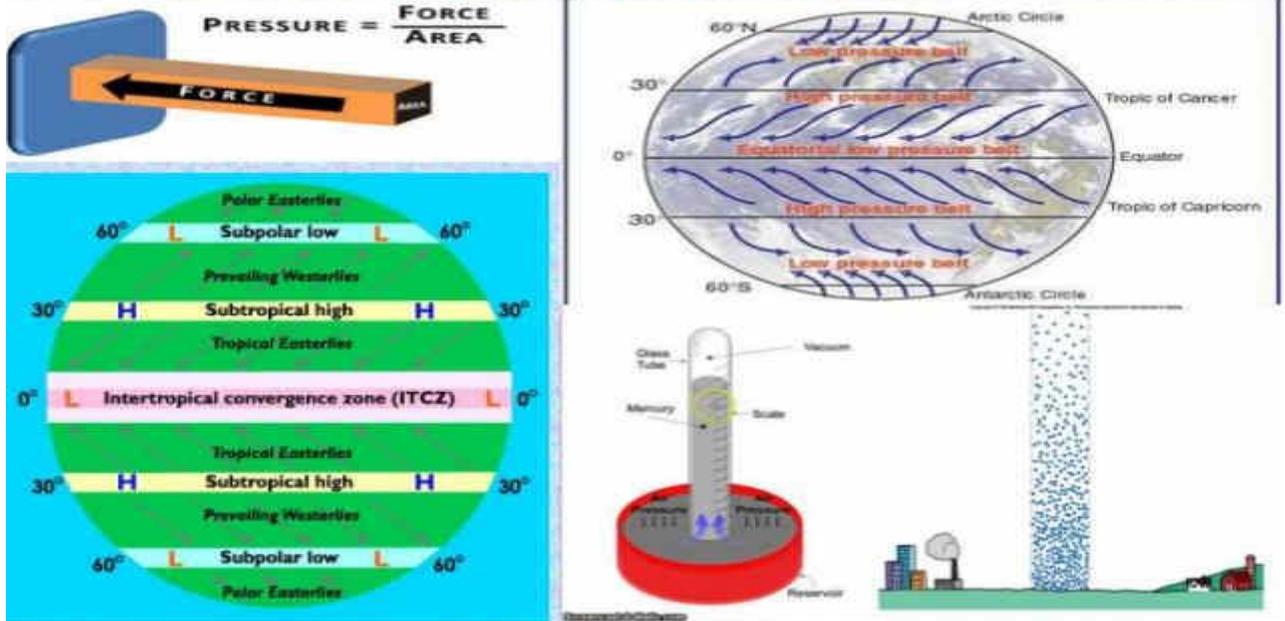


3) Pressure and wind system

The pressure and wind system of any area depends on the latitude and altitude of the place. It influences the temperature and rainfall pattern.

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Pressure and Winds



4) Distance from the sea

The sea exerts a moderating influence on the climate. As the distance from the sea increases, its moderating influence decreases and people experience extreme weather conditions. This condition is known as continentality i.e. very hot during summers and very cold during winters.

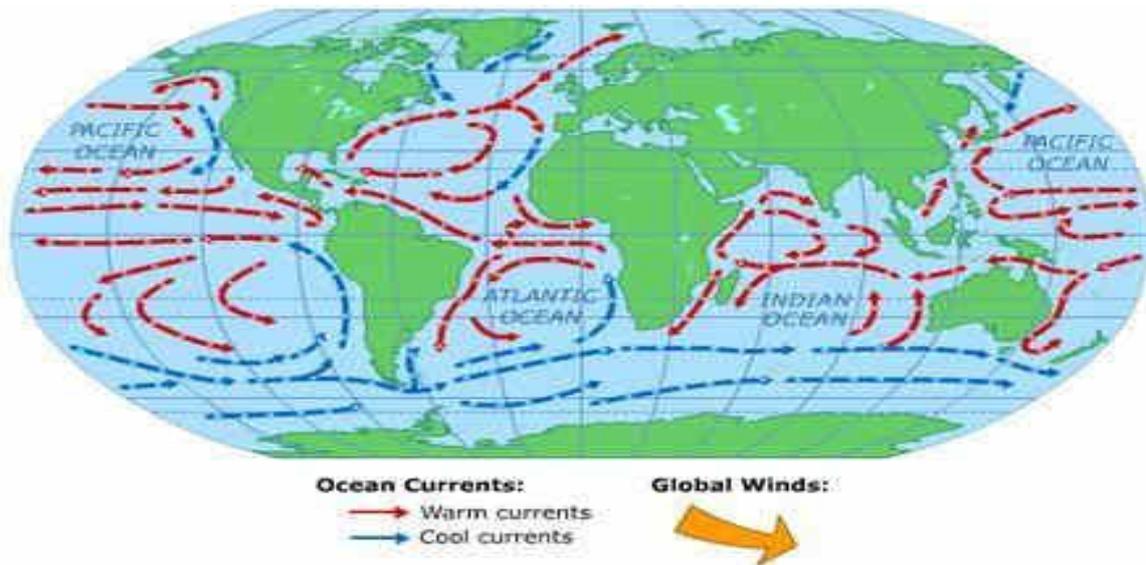
- **Distance from the sea (continentality) :**
As the distance from the sea increases, its moderating influence decreases and the people experience extreme weather conditions. This condition is known as continentality.



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5) Ocean currents

Ocean currents along with onshore winds affect the climate of the coastal areas. For example, any coastal area with warm or cold currents flowing past it, will be warmed or cooled if the winds are onshore.



6) Relief features

Relief plays a major role in determining the climate of a place. High mountains act as barriers for cold or hot winds. They may also cause precipitation if they are high enough and lie in the path of rain-bearing winds. Precipitation is any form of moisture which falls to the earth. It includes rain, snow, hail and sleet.

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