

Class: 9th                    subject: geography

Study Material            chapter: Climate

General weather conditions over a period of thirty years period is said to be the climate of a place. Weather refers to the state of the atmosphere over an area at any point of time.

Temperature, atmospheric pressure, wind, humidity, and precipitation are elements of weather and climate.

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 interplay of latitude, altitude, distance from the sea, pressure and wind system, ocean currents and relief features determine climatic conditions of a place.

#### Factors Affecting India's Climate

Latitude, altitude and pressure and winds affect Indian climate.

The Tropic of Cancer passes through the middle of the country from the Rann of Kuchchh to Mizoram.

Air temperature generally decreases from equator to poles.

Temperature and air pressure decreases as on moves from surface of the earth to higher altitudes.

The Himalayas prevent the cold winds from central Asia from entering the subcontinent.

The climate and associated weather conditions in India are governed by various atmospheric conditions namely pressure and surface winds, upper air circulation, western cyclonic disturbances and tropical cyclones.

The sea exerts a moderating influence on climate. People far away from sea experience extreme weather conditions. This is known as 'continentality'.

Ocean currents also affect the climate of the coastal areas.

An apparent force caused by the earth's rotation is the Coriolis Force.

The wind direction changes as per the season. They are from northeast to south west in winter whereas completely reverse in summer bringing moisture.

Jet streams are narrow belts of high-altitude (above 12,000 m) westerly winds in the troposphere. The western cyclonic disturbances are weather phenomena of the winter months, brought in by the westerly flow from the Mediterranean region.

Subject Teacher :Mukesh kumar Singh