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Class IXth.

SUBJECT GEOGRAPHY

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Ch: CLIMATE

Climate Class 9 Notes Social Science Geography Chapter 4

The term climate is the sum of the total weather conditions (including variations) over a large area for a long period of time (more than thirty years).

The term weather refers to the state of the atmosphere at a place and time with reference to the following elements

- Temperature Humidity
- Air pressure
- Cloudiness or sunshine
- Precipitation (Rainfall or snowfall)
- Wind

The weather conditions fluctuate very often within a day. Based on the generalised monthly atmospheric conditions, the year is divided into seasons such as winter, summer and rainy seasons. The world is divided into a number of climatic regions. In Asia, India and other South and South-Eastern countries have monsoon type of climate.

The word monsoon is derived from the Arabic word 'mausim' which literally means season. 'Monsoon' refers to the seasonal reversal in the wind direction during a year.

Regional Climatic Variation In India

Although there is an overall unity in the general climatic pattern in India, there are some perceptible regional variations.

Temperature

The temperature in the winter in North-Western mountainous regions can go down to – 45° C (at Drass in Jammu and Kashmir), while it is 22°C in Thiruvananthapuram in Kerala. Similarly, it can go up to 50°C in summer in some parts of Western Rajasthan and 20°C in Shillong.

In many areas, there is a wide variation between day and night temperatures. In the Thar Desert, the day temperature may rise up to 50°C and drop down to near 15°C the same night. On the other hand, there is hardly any difference in day and night temperatures in the Andaman and Nicobar islands or in Kerala.

Precipitation

There is a wide variation observed in its amount and seasonal distribution. Precipitation in the form of snowfall occurs only in upper parts of Himalayas, the rest of the country receives rainfall.

A typical example, the annual precipitation varies from over 400 cm in Meghalaya to less than 10 cm in Ladakh and Western Rajasthan. Similarly, most parts of the country receive rainfall from June to September, but the Tamil Nadu coast gets most of its rain during October and November.

Coastal regions experience different weather conditions from the interior regions. For example, temperature and seasonal contrast are relatively mild. The rainfall also decreases from East to West. Such differences help to create a variety in lives of people— the food they eat, the clothes they wear, the kind of houses they used for living and so on.

Climatic Controls

Permanent factors which govern the general nature of the climate of any location on the earth are called factors of Climatic Controls.

Latitude The angular distance of a location from the equator in North-South direction is called latitude. Due to the curvature of the earth, latitude changes the amount of solar energy received. As a result, air temperature decreases from the equator towards the poles.

Altitude It refers to the height above mean sea level. With increase of height from the earth surface, the temperature decreases and air becomes less dense. Therefore, hilly regions are cooler in summer.

Pressure and Wind System It depends on the latitude and altitude of a place. Thus, it influences the temperature and rainfall pattern of the area.

Continentality or Distance from the Sea The sea exerts a moderating influence on the climate. As the distance from the sea increases, the weather conditions become more extreme (high temperature and rainfall variation between seasons).

Ocean Currents Along with onshore winds, the ocean currents (warm or cold) affect the climate of coastal areas. For example, cold onshore currents bring coolness in coastal areas.

Relief Features High mountains stop cold or hot winds from reaching a location. It can also cause rain or snow if the place is on the windward side of the mountains. The leeward side of the mountains are.

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