

## Climate in India

India is a country of diverse landforms which have influenced its climate. The Himalayan ranges to the north, the Ganga and the Indus plains, the Thar desert, the highlands of the Deccan and the coastal plains have each influenced the climate of the country creating a mosaic pattern. The climatic pattern varies from the wet monsoon to semi-arid and arid conditions. The climate of India is classified as tropical.

There are four seasons in India

- Spring (February-March)
- Summer (March-mid June)
- Monsoon (mid June-mid October)
- Winter (mid October-January)

In summer temperatures vary from 20 °C in the Himalayan region to more than 30 °C in the arid desert regions. April and May are the hottest months of the year, with temperatures rising to 50°C in some parts of the country.

The monsoon season in India is controlled by the development of high and low atmospheric pressures over land and sea. The summer monsoon accounts for the bulk of the rain received during the year. When the monsoon winds meet the mountains of the west coasts, they release the bulk of the rain, making the region one of the wettest regions of the country. The summer rainfall is associated with the tropical depression originating in the Arabian Sea.

A similar event occurs when the rain-bearing clouds from the Bay of Bengal meet the Himalayan range. The wettest place, receiving more than 1000 mm of rainfall annually, is Cherapunji, in the Himalayas.

However, the rainfall regime is not very stable and the occurrence of long droughts and intense flooding is quite common.

In winter, areas of low depression occur in the interior of the country while currents of high depression occur in the Bay of Bengal and the Arabian Sea. The monsoon winds change direction from southeast in the summer to northwest in the winter. This regime is known as the winter or retreating monsoons.

The climate affects the agricultural production in the country. Failure of rains results in the onset of drought and scarcity in the production of food grains and famines. Flooding causes the destruction of maturing crops leading again to food shortages and the destruction of villages located on the banks of rivers.

The winter season is characterised by lower temperatures and scanty rainfall. December and January are the coldest months with temperatures ranging between

10°C and -5°C.

The winter monsoon lasts from mid-October to February. Here the pattern of rainfall changes with the rain-bearing winds blowing in a north-westerly direction from inland to the coastal regions. They pick up moisture over the Bay of Bengal before reaching the coastal regions. The winter monsoon, provides only a small proportion of the annual rainfall most of which falls along the eastern Coast and parts of the western Coast.