

CLIMATE

L.No	Title of Lesson	SKILLS	Activity
10	Climate	Critical thinking, Problem Solving, Effective Communication, Decision Making	Festival Related with Various Seasons

Meaning

India has monsoon type of climate. The word 'monsoon' refers to the seasonal reversal of the wind direction in a year. Due to this, India has four prominent seasons – cold weather season, hot weather season, advancing southwest monsoon season and post or retreating monsoon season.

Monsoons are irregular in nature and are affected by different atmospheric conditions. Because of this, sometimes monsoons are late or sometimes early. Monsoonal rainfall is not equally distributed. It goes on decreasing from east to west in the northern plains and decreases from west to east in the southern part of India. In some parts of the country the floods are causing havoc, whereas in other parts of the country drought makes people unhappy.

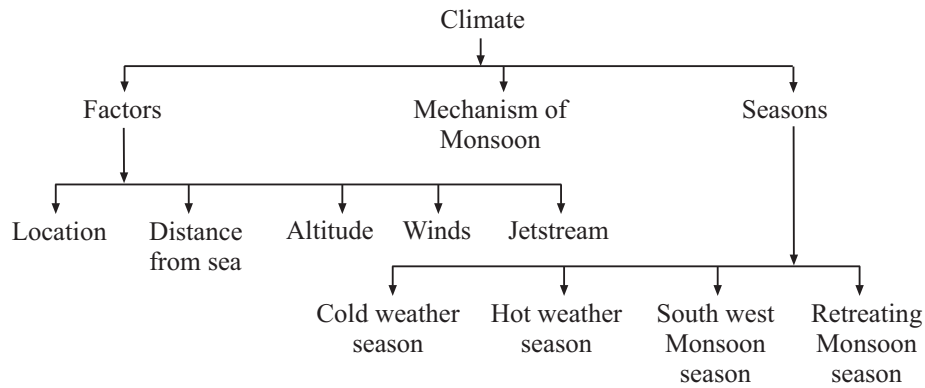
There are many factors which affect the climate of India. These are location, distance from the sea, altitude, mountain ranges, direction of surface winds and upper air currents.

Most of the rainfall of India is received by advancing south-west moisture bearing winds. Due to the tapering of mainland into Indian ocean, the south west monsoons are divided into two branches, viz. Arabian Sea branch and Bay of Bengal branch. The amount of rainfall received at a particular place depends upon its location besides other factors. Himalayas also play an important role in blocking these winds from going towards north and compel them to shed their moisture in India.

Principal Points

There are four distinct areas of rainfall

- Areas of heavy rainfall - more than 200 cms
Areas - Western Coast, sub-Himalayan Region of North eastern states, Garo, Khasi, Jaintia hills of Meghalaya.
- Areas of Moderate rainfall - 100 to 200 cm Areas - Western Ghats, West Bengal, Odisha, Bihar etc.
- Areas of low rainfall - 60 to 100 cms, Areas - Rajasthan and interior Deccan Plateau.
- Areas of inadequate rainfall - less than 60 cms Areas- Western part of Rajasthan and Gujarat, Ladakh and south central part of India. (See map in the study material)



Build Your Understanding

Mechanism of Monsoon

During summer, the interior parts of North India plains are intensely heated. This high temperature heats up the air and a low pressure is created. This low pressure is also known as monsoonal trough. On the other hand, temperature over the Indian ocean is relatively low causing high pressure in the region. Due to this difference in air pressure, the winds start blowing from high pressure to low pressure or from sea to land. Their direction is just opposite, i.e. southwest to northeast. Since these winds blow from sea to land, they are moisture laden and cause rainfall.

El Nino and southern oscillation also affect the monsoons.

Seasons	Months	Temp.	Rainfall	Festival Celebrated
Cold Weather	Dec. to February	Low Temp.	No Rainfall except coast of TamilNadu	Makar San-kranti, Pongal, Basant Panchmi
Hot Weather	March to May	High Temp. Hot & dry wind (Loo)	Mango showers (Kerala, Karnataka) Kal Baisakhi W. Bengal, Assam)	Holi, Baisakhi
Advancing South West Monsoon	June to Sept.	Hot & Wet	Whole of India gets rain	Onam (Kerala)
Retreating or Post Monsoon season	October, Nov.	Humid and Warm (October heat)	Cyclone in the Bay of Bengal	Durga Pooja, Dusshehra, Diwali

Global warming is also affecting Indian climate. The cycle of seasons has been disturbed. Global warming has been caused due to industrialisation, urbanisation and emission of gases like carbon dioxide, chlorofluoro carbon and other dangerous gases. It is time for us to stop or at least minimise such activities which are responsible for global warming.

Evaluate Yourself

- Q. How are our socio-cultural activities related with monsoons?
- Q. What happens when the monsoon is late or the rainfall is deficient?
- Q. Make a list of such human activities which are responsible for increasing the global temperature.