ONE SHOT
REVISION SERIES

CLASS 9 GEOGRAPHY

Climate

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Climate

Climate

It 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

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

Day to day phenomenon.

Similarity between climate and weather

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:

1. Winter
2. Summer
3. Rainy season

The world is divided into a number of climatic regions.

India ➡ Monsoon type of climate.

- Let us take two important elements – ***temperature and precipitation***, and examine how they vary from place to place and season to season.

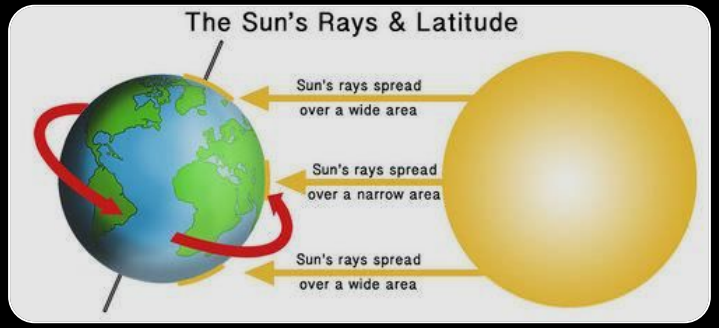
- Summers and winters in Rajasthan, Jammu and Thiruvananthapuram.

- Various form and type of precipitation.
- Coastal and interior parts : Variations

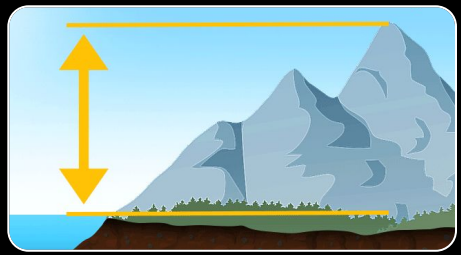
Climatic Controls

The climate of any place depends on the following factors:

Latitude ➡ The amount of solar energy received varies according to latitude due to the curvature of the earth.



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

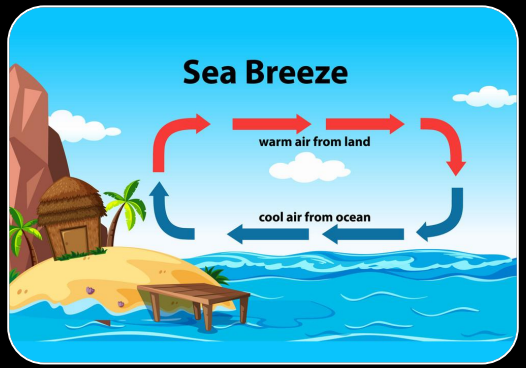


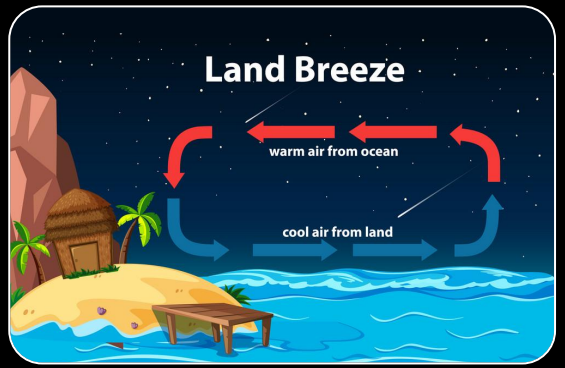
Pressure and wind system ➡ The pressure and wind system of any area depends on the latitude and altitude of the place. The low pressure and high pressure defines the direction of the wind. It influences the temperature and rainfall pattern. ➡ Explain

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.



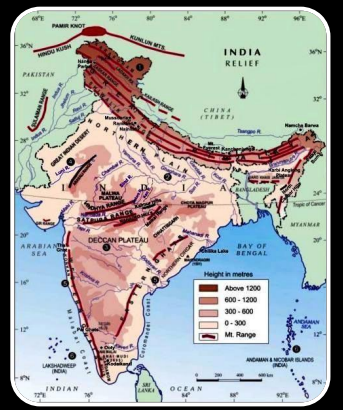


Ocean Currents

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

Relief

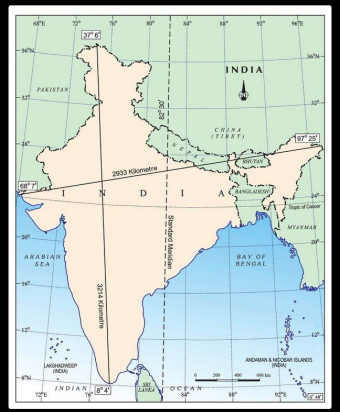
- High mountains act as barriers for cold or hot winds; they may also cause precipitation if they are high enough and lie in the path of rain-bearing winds.
- The leeward side of mountains remains relatively dry.



Factors Affecting India's Climate

Latitude

- The Tropic of Cancer passes through the middle of the country from the Rann of Kachchh in the west to Mizoram in the east.
- India's climate has characteristics of tropical as well as subtropical climates.



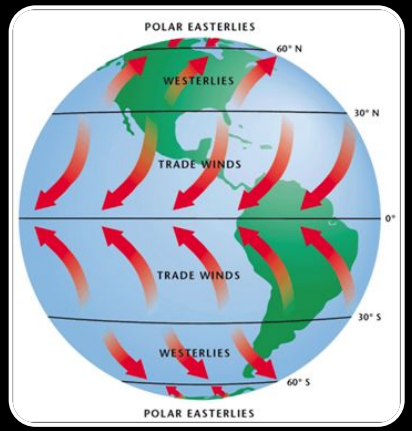
Altitude

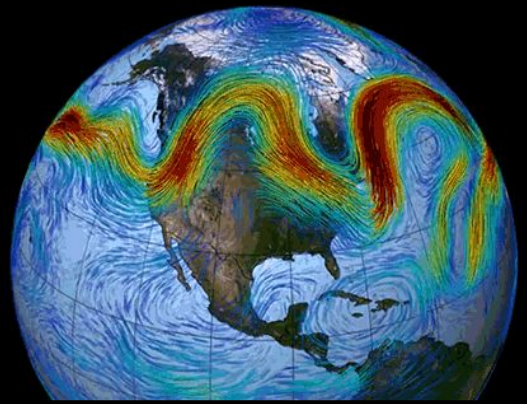
- India has mountains to the north, which have an average height of about 6,000 metres, and also has a vast coastal area.
- Owing to the mountains, the subcontinent experiences comparatively milder winters as compared to Central Asia.

Pressure and Wind

The climate and weather conditions in India are governed by the following atmospheric conditions:

- Pressure and surface winds.
- Upper air circulation.
- Western cyclonic disturbances and tropical cyclones.





The Seasons

- The monsoon type of climate is characterised by a distinct seasonal pattern. The weather conditions greatly change from one season to the other.
- These changes are particularly noticeable in the interior parts of the country. 
- **Four main seasons can be identified in India –**

i. The Cold weather season [Winter]
ii. The Hot weather season [Summer]
iii. The Advancing monsoon season [Rainy]
iv. The Retreating monsoon season [Transition]

The Cold Weather Season (Winter)

- Winter begins from mid-November in northern India and stays till February.
- December and January are the coldest months in the northern part of India.
- The temperature decreases from south to the north.
- Days are warm and nights are cold.
- The weather is marked by clear sky, low temperatures and low humidity and feeble, variable winds.
- This season is extremely important for the cultivation of 'the Rabi' crops.
- The peninsular region does not have a well-defined cold season.
- There is hardly any noticeable seasonal change in temperature pattern during winters due to the moderating influence of the sea.

The Hot Weather Season (Summer)

It begins from March to May. ➡ Why?

⬇

Due to the Northward movement of the Sun. ➡ Northward shift of Pressure belt

Characteristic of the Hot weather Season -

- Increase in the temperature over the time. [exception Peninsular region]
- Formation of low pressure over the Indian land mass. [Mainly Ganga plain]
- *Loo* - These are strong, gusty, hot, dry winds blowing during the day over the North and North Western India.Direct exposure to these winds may even prove to be fatal.
  Dust storms are very common in northern India during this time.
  ⬇
  At times, these storms bring temporary relief. ➡ Why?

- During the end to this season, thunderstorms, violent winds, torrential downpours, often accompanied by hail are observed.
- Known as Kalbaisakhi in West Bengal.
- Pre Monsoon showers known as 'Mango shower'

Advancing Monsoon [The Rainy Season]

It begins by early June ➡ Bringing rainfall for the whole country.

Characteristics of Advancing Monsoon

- Southwest winds, flowing with an average velocity of 30 km per hour.
- Brings a total change in the weather

⬇

Rainfall

⬇

Amount of Rainfall received may vary from region to region. ➡

- Monsoon have a ‘break’ in rainfall.
- Impact of the uncertainties of the monsoon.

Retreating/Post Monsoons [The Transition Season]

Beings October-November with the apparent movement of the sun towards the south.

⬇

Gradually replacement of low pressure with high pressure
and the monsoon winds also withdraws from the country.

Period of transition ➡ [Hot Rainy Season to Dry Winter Conditions]

Phenomenon of October heat.

⬇

Due to the condition of High temperature and humidity
the oppressive weather is felt during October.

This shift in the pressure condition is associated with the occurrence of Cyclones.

⬇

Along with them comes the destruction. ➡ How

Distribution of Rainfall

The Rainfall over India is unevenly distributed.

- Western coast and Northeastern parts receive over about 400 cm rainfall.
- Where as the parts of Western Rajasthan and adjoining areas receives less than 60 cm of rainfall.
- The rainfall is equally low in the interior part of the Deccan plateau.
- Similarly, the part of Ladakh also receives less rainfall.
- Rest part of the country receives moderate rainfall, snowfall is restricted to the Himalayan region.

Along with the uneven distribution, the annual rainfall is also highly variable. ➡ How

Monsoon as a Unifying Bond

- Understand the heading
- Physical features ➡ Helps in the Monsoonal type of climate ➡ Leads to Rhythmic cycle of seasons.

Monsoon

- Entire phenomenon such as landscapes, animal and plant life revolves around the monsoon.
- Whole agriculture calendar depends on monsoon.
- The life of the people including their festival revolves around the monsoon.
- Whole country eagerly await for the arrival of the monsoon.
- It provides water to river and ponds which unites the whole nation.

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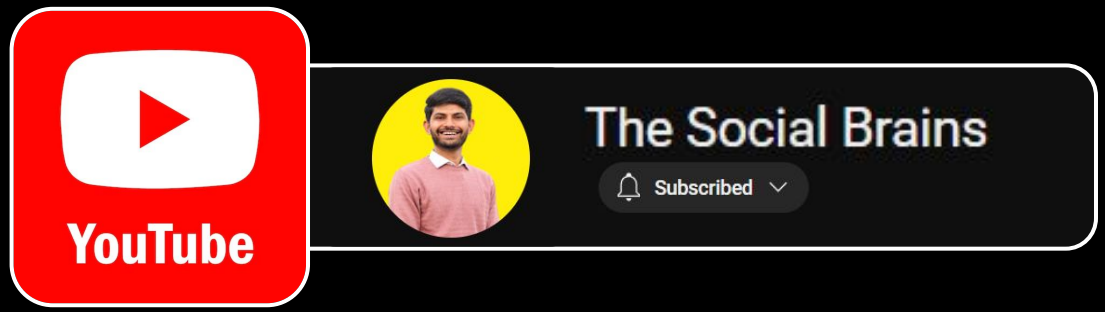
Digraj Singh Rajput



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