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WELCOME TO VIRTUAL CLASS-IX

SUBJECT : (GEOGRAPHY)
CHAPTER NUMBER: 4
CHAPTER NAME : CLIMATE

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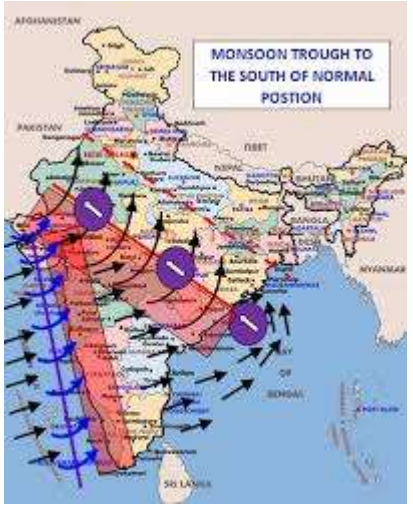
The Indian Monsoon

Monsoon winds strongly influence climate of India. The monsoons are experienced in the tropical area roughly between 20° N and 20° S.

Mechanism of Monsoon
The following facts are important to understand the mechanism of the monsoons



The differential heating and cooling of land and water creates low pressure on the landmass of India while the seas around experience comparatively high pressure-

The Inter-Tropical Convergence Zone (ITCZ) in summer season shifts its position over the Ganga plain. This is the equatorial trough normally positioned about 5°N of the equator. It is also known as the ‘monsoon trough’ during the monsoon season.

The presence of the high-pressure area, East of Madagascar (approximately 20°S over the Indian Ocean). The intensity and position of this high-pressure area affect the Indian monsoon.

The Tibetan plateau gets intensely heated during summer, which results in strong vertical air currents and the formation of low pressure over the plateau at about 9 km above sea level.

The movement of the westerly jet stream to the North of the Himalayas and the presence of the tropical Easterly jet stream over the Indian peninsula during summer.

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- Apart from the given facts, it has been noticed that changes in the pressure conditions over the Southern oceans also affect the monsoons. Normally, when the tropical Eastern South Pacific Ocean experiences high pressure, the tropical Eastern Indian Ocean experiences low pressure.

- But in past a few years, there is a reversal in the pressure conditions and the Eastern Pacific has lower pressure in comparison to the Eastern Indian Ocean. This periodic change in pressure conditions is known as **the Southern Oscillation (SO).**

EL Nino Southern Oscillations (ENSO)

- **EL Nino Southern Oscillations (ENSO)**
  The difference in pressure over Tahiti (Pacific Ocean, 18°S/149°W) and Darw in Northern Australia (Indian Ocean, 12°30’S/131°E) is computed to predict the intensity of the monsoons.
- If the pressure differences were negative, it would mean below average and late monsoons.
- The EL Nino phenomenon is a feature connected with the Southern Oscillation. In this, a warm ocean current flows past the Peruvian Coast, in place of the cold Peruvian current. It occurs at the interval of 2 to 5 years.
- The changes in pressure conditions are connected to the EL Nino. Hence, the phenomenon is referred to as ENSO (EL Nino Southern Oscillations).

THANKING YOU

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