

The Monsoon Mechanism

Chapter 9: Climate · Topic 2

Key Concept

During summer, land heats up faster than the sea, creating low pressure over land, which draws moisture-laden winds from the ocean, resulting in the southwest monsoon rains.

The southwest monsoon typically arrives in India around early June, moving from the Arabian Sea and Bay of Bengal branches, bringing rainfall across most of the country by September.

In winter, the process reverses - land cools faster than the sea, creating high pressure over land, causing winds to blow from land to sea, resulting in the drier northeast monsoon.

This monsoon mechanism is crucial for India's agriculture and water supply, though its unpredictable timing and intensity can sometimes lead to droughts or floods.

Quick Revision Notes

- The monsoon involves seasonal wind reversal.
- In summer, winds blow from sea to land, bringing rain.
- This creates the southwest monsoon.
- The southwest monsoon arrives around early June.
- It comes from the Arabian Sea and Bay of Bengal.
- In winter, winds blow from land to sea, bringing dry conditions.
- This is called the northeast monsoon.
- Monsoon unpredictability can cause droughts or floods.

Practice Questions

- 1 Explain why land heats faster than the sea in summer.
- 2 Discuss the path of the southwest monsoon.
- 3 Explain the difference between southwest and northeast monsoons.
- 4 Research a year when India faced monsoon-related drought or flood.
- 5 Discuss why monsoon prediction is important for farmers.
- 6 Create a diagram showing summer and winter wind patterns.