GEOGRAPHY 07 October 2026

Tamil Nadu's Unique El Niño Rainfall Pattern

A recent report suggests Tamil Nadu's unique geographical factors may alter El Niño's typical rainfall patterns, differing from the rest of India.

El Niño Southern Oscillation (ENSO) is a climate phenomenon in the Pacific Ocean that happens every two to seven years, affecting global weather patterns.

KEY EXAM POINTS

- In strong **El Niño years**, India generally records **deficient rainfall** and a higher incidence of **droughts**.
- However, **Tamil Nadu** has reported a strikingly **different rainfall pattern** during **El Niño events**.
- Pressure differences between the **Bay of Bengal** and the **Arabian Sea** can drive moist air into **coastal Tamil Nadu** during strong El Niño years.
- When an El Niño coincides with **warmer waters** in the **Bay of Bengal**, **evaporation increases**.
- **Cyclonic circulations** in **November-December** release this stored heat as **intense, localised rainfall** in Tamil Nadu.

DID YOU KNOW..!?

The **El Niño Southern Oscillation** (ENSO) is a recurring climate pattern involving changes in the temperature of waters in the central and eastern tropical **Pacific Ocean**.

El Niño is characterized by **warmer-than-average sea surface temperatures** in the central and eastern tropical **Pacific**.

La Niña is the **opposite phase** of ENSO, featuring **cooler-than-average** sea surface temperatures in the same region.

The **Indian Monsoon**, particularly the **Southwest Monsoon**, is significantly influenced by the **ENSO phenomenon**.

Tamil Nadu receives the majority of its rainfall during the **Northeast Monsoon** season, which typically occurs from **October to December**.

The **Northeast Monsoon**'s intensity and distribution in **Tamil Nadu** are influenced by pressure systems and **cyclonic activity** in the **Bay of Bengal**.

REVISION FLASHCARD

Tamil Nadu's rainfall patterns during El Niño years differ from the rest of India due to regional atmospheric and oceanic interactions.

Syllabus Relevance: High

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