Environment & Ecology · GS - III

Explain how El Niño and rising temperatures can influence India's rainfall patterns, agriculture and public health. Suggest measures to improve climate resilience.

EXAM YEAR	PAPER	SUBJECT
DAILY PRACTICE 01/11/2026	GS - III	Environment & Ecology

MARKS	WORD LIMIT
10	~150 words

Answer Hint

ENSO; Indian monsoon variability; temperature anomalies; agricultural vulnerability; heat-related health risks; climate adaptation

Model Answer

Introduction

El Niño is a major ocean-atmosphere phenomenon that can influence global weather patterns. In India, it may affect monsoon performance and interact with rising temperatures to intensify climate-related risks.

Impact on India

Rainfall Variability: El Niño can weaken the Indian summer monsoon, increasing the possibility of rainfall deficits, although the relationship is not uniform in every year.

Agriculture: Heat stress can reduce crop productivity, increase irrigation requirements and affect livestock. Changes in rainfall can also disrupt sowing and harvesting schedules.

Public Health: Extreme heat raises the risk of dehydration, heat exhaustion and heatstroke. Outdoor workers and vulnerable groups face greater exposure.

Economic Effects: Agricultural losses, higher cooling demand and pressure on water resources can affect rural incomes, food prices and productivity.

Way Forward

India should strengthen seasonal forecasting, heat-action plans, climate-resilient crops, efficient irrigation, rainwater harvesting and public awareness. Local authorities must use weather warnings to protect vulnerable communities.

Conclusion

El Niño cannot alone explain every temperature or rainfall anomaly. Combining climate science, local adaptation and effective early-warning systems is essential for reducing India's vulnerability to extreme heat and rainfall variability.

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