IMD Forecasts 'Above Normal' Monsoon in 2025

☐ Key Points for Easy Understanding:

1. Above Normal Rainfall Expected

- IMD predicts India will receive 5% more rainfall than the average 87 cm during June-September 2025.
- This would be the **second year in a row** with above-normal monsoon rainfall.

2. What This Means

- **Good for Agriculture**: More water for **kharif crops** like rice and maize.
- 🛮 **Better Water Storage**: Reservoirs will be better filled.
- **A Caution**: High rainfall in short time can cause **flooding** in some areas.

3. Why Monsoon Might Be Good This Year

- ∘ ☐ **No El Nino**: El Nino is linked to **less rain**. Its absence is good news.
- * Low Eurasian Snow Cover: Less snow in Europe/Asia = more rainfall in India (inverse relation).

4. How IMD Forecasts Monsoon

- They use a **dynamical**, **coupled model**, combining:
 - Ocean data
 - Atmosphere data
 - Supercomputers simulate future weather patterns

5. Ocean and Climate Conditions

- **[ENSO is Neutral**: Neither El Nino nor La Nina, but atmospheric features lean toward **La Nina** (good for rainfall).
- [IOD is Neutral: Not positive, but stable for now. Positive IOD would support more rainfall.

6. Where Will It Rain More or Less?

Above-normal rainfall: Most of India

• **Below-normal rainfall**: Parts of:

- North-West India
- North-East India
- South Peninsular India
- India)

 Normal rainfall in the Core Monsoon Zone (central and eastern India)

7. Better Accuracy in Forecasts

- Since 2021, IMD's forecasts are more accurate.
- Forecast error reduced to **2.7**%, compared to **7.5**% before 2021.

□□ Explanation of Important Terms:	
Term IMD	Explanation India Meteorological Department – national
	weather forecasting body.
Kharif Crops	Crops sown in June (rainy season) and harvested in October (e.g., rice, millets).
Reservoirs	Water storage systems (lakes/dams) used for irrigation and drinking water.
El Nino	Warming of Pacific Ocean – linked to weaker monsoon in India.
La Nina	Cooling of Pacific Ocean – linked to stronger monsoon in India.
ENSO	El Nino-Southern Oscillation – a climate pattern that includes both El Nino & La Nina.
IOD	Indian Ocean Dipole – temperature difference in Indian Ocean affecting Indian rainfall.
Eurasian Snow Cover	Snow in Europe & Asia - less snow = more rainfall in India.

Climate model using ocean + atmosphere

based, heavily depends on monsoon.

Central & eastern India - mainly agriculture-

data for better forecasting.

□ FAQ: Indian Monsoon

Dynamical Coupled Model

Core Monsoon Zone

1. What is the monsoon season in India?

➤ The Indian monsoon season lasts from **June to September**, and it provides nearly 70% of India's annual rainfall.

2. Why is monsoon important for India?

➤ It is essential for **agriculture**, water supply, and electricity generation (via hydro-power).

3. What are kharif crops?

➤ Crops that are **sown with the onset of monsoon** (June) and harvested in **October**. Examples: rice, maize, cotton.

4. What happens if rainfall is below normal?

➤ It may lead to **drought**, crop failure, water shortage, and reduced food production.

5. What is the role of El Nino and La Nina?

- > El Nino weakens monsoon.
- ➤ La Nina strengthens monsoon.
- > Neutral ENSO has mixed effects.

6. Can monsoon cause floods?

➤ Yes. Intense, heavy rainfall in short time can lead to flooding, especially in cities or low-lying areas.

□□ MCQ for Practice

Q: Which of the following is *not true* about the Indian monsoon forecast for 2025?

- A. IMD expects 5% above normal rainfall this year
- B. El Nino is active and will bring heavy rains
- C. Low Eurasian snow cover may lead to more rainfall
- D. Forecast accuracy has improved since 2021

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