



150th Foundation Day of IMD and Mission Mausam

[Source: TOI](#)

Why in News?

The [Prime Minister of India \(PM\)](#) participated in the **150th Foundation Day** celebrations of the [Indian Meteorological Department \(IMD\)](#) on **15th January 2025** at New Delhi.

- He also launched the **Mission Mausam initiative** and released the **IMD Vision-2047 document**.
- The event also witnessed the participation of the Secretary-General of the [World Meteorological Organization \(WMO\)](#).

What is the Mission Mausam Initiative?

- **About:** Mission Mausam is a government initiative aimed at **enhancing the capabilities of** India's weather department in weather forecasting, modelling, and dissemination.
- **Budget:** The mission will have an allocation of Rs 2,000 crore for its first two years of implementation.
- **Objectives:**
 - **Upgrade Weather Forecasting:** The mission seeks to **improve the accuracy of short to medium range weather forecasts by 5-10%**, enhance the **air quality prediction** in major metro cities by up to **10%** and extend predictions to the panchayat level with a lead time of **10-15 days**.
 - Currently, the IMD's accuracy for extreme events like heat waves is approximately **98%**, while heavy rainfall forecasts stand at around **80%**.
 - **Invest in Technology:** It will utilize advanced technologies like **AI, machine learning**, and **high-performance computing** to improve weather models and observational systems, including the deployment of additional [Doppler radars](#) and **satellites**.
 - **Weather Management:** Mission will explore **weather modification techniques** like **cloud seeding** to manage rainfall and mitigate extreme events such as **floods** and **droughts**.
 - **Cloud Chamber Research:** A cloud chamber will be set up at the [Indian Institute of Tropical Meteorology, Pune](#), to study **cloud dynamics** and **improve weather management** through [cloud seeding](#) experiments.
- **Phases:** Mission Mausam will be executed in **2 phases over 5 years**.
 - **Phase One (2025 - March 2026):** Focus on expanding the **observational network** by adding around **70 Doppler radars, high-performance computers, wind profilers, and radiometers**.
 - **Phase Two (2026 onwards):** Further enhancement of observational capabilities through the **introduction of satellites and aircraft**.

What is the IMD Vision-2047 Document?

- **About:**

- It is a strategic document that **sets ambitious targets for enhancing weather forecasting accuracy and disaster management in India by 2047**.
- It outlines milestones for the next **two years, ten years (2035), and twenty-two years (2047)**.
- **Key Objectives:**
 - **100% Detection of Severe Weather:** Aiming for complete detection of severe weather events at the **village and household levels** by 2047, using enhanced observational systems like **satellites and radars**.
 - **Forecast Accuracy:** Achieving:
 - **100% accuracy** for forecasts up to 3 days
 - **90% accuracy** for up to 5 days
 - **80% accuracy** for up to 7 days
 - **70% accuracy** for up to 10 days
 - **Zero Deaths from Weather Events:** Aiming to reduce fatalities from extreme weather events to zero, ensuring early warnings for disaster management.

India Meteorological Department (IMD)

- **IMD** is the principal agency responsible for meteorological observations, weather forecasting and seismology in India established in **1875**.
- It operates under the **Ministry of Earth Sciences**, Government of India.
- It provides **weather forecasts and warnings** for sectors like agriculture, aviation, and shipping, and **offers critical data for national development**.
- It also conducts **research to advance meteorological science**.

Major Initiatives Related to Meteorology in India

- [National Monsoon Mission \(NMM\)](#)
- [Mausam App](#)
- [Doppler Weather Radars](#)

UPSC Civil Services Examination, Previous Year Question (PYQ)

Prelims

Q. With reference to 'Indian Ocean Dipole (IOD)' sometimes mentioned in the news while forecasting Indian monsoon, which of the following statements is/are correct? (2017)

1. IOD phenomenon is characterised by a difference in sea surface temperature between tropical Western Indian Ocean and tropical Eastern Pacific Ocean.
2. An IOD phenomenon can influence an El Nino's impact on the monsoon.

Select the correct answer using the code given below:

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

Ans: (b)

Mains:

Q. What do you understand by the phenomenon of temperature inversion in meteorology? How does it affect weather and the inhabitants of the place? (2013)

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