



150 Years of India Meteorological Department

[Source: IE](#)

Why in News?

[India Meteorological Department \(IMD\)](#) with the mandate of providing public weather services will complete 150 years of presence on 15th January, 2025.

- To mark this milestone, IMD plans a nationwide celebration in all sub-offices from January 15, 2024, to January 15, 2025.

What is India Meteorological Department (IMD)?

- **About:**
 - It is the **National Meteorological Service** of the country and the principal government agency in **all matters relating to meteorology** and allied subjects.
 - It is an agency of the **Ministry of Earth Sciences**, Government of India.
- **Objectives:**
 - To take **meteorological observations** and to provide current and forecast meteorological information for optimum operation of weather-sensitive activities like agriculture, irrigation, shipping, aviation, offshore oil explorations, etc.
 - To **warn against severe weather phenomena** like tropical cyclones, norwesters, duststorms, heavy rains and snow, cold and heat waves, etc., which cause destruction of life and property.
 - To **provide meteorological statistics** required for agriculture, water resource management, industries, oil exploration and other nation-building activities.
 - To **conduct and promote research** in meteorology and allied disciplines.

How has the IMD Evolved Over The Years?

- **Historical Background:**
 - In 1864, two devastating cyclones hit Kolkata and the Andhra coast, causing significant loss of life.
 - The severity of these calamities highlighted the absence of a system to monitor atmospheric parameters, leading to the **establishment of the [India Meteorological Department \(IMD\)](#) in 1875.**
- **Evolution of IMD:**
 - The IMD commenced its official operations with the appointment of just one individual, **HF Blanford**, an Englishman recognized as the Imperial Meteorological Reporter.
 - Under the leadership of **Gilbert Walker**, appointed as the head of IMD in 1903, significant progress was made in understanding monsoons.
 - Walker identified large-scale oscillations in atmospheric circulations, laying the foundation for modern comprehension of the **[El Niño phenomenon](#).**
 - Over 150 years, IMD has grown into a **massive organization with permanent observatories** and automatic weather stations across the country.
- **Advancements in Cyclone Forecasting:**
 - The IMD experienced a pivotal moment in **1999 during the Odisha super cyclone**,

prompting significant investments in technology and manpower. Since then, **cyclone-related casualties have notably decreased**, attributed to IMD's effective forecasts.

- IMD's cyclone forecasts now serve not just India but **the entire neighbourhood, with as many as 13 countries** in the region operating their cyclone management systems using these forecasts.
- **Diversified Roles :**
 - Initially focused on weather forecasting, IMD now provides specialized services for elections, sporting events, space launches, and various sectors.
- **Global Role and Recognition :**
 - IMD's enhanced capabilities have led to its recognition **as the Regional Climate Centre for South Asia.**
 - IMD has partnered to contribute to the [United Nations](#)' 'Early Warning for All' programme, for which 30 countries have been identified.

What are the 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)