Mission MAUSAM

Prelims: *Current events of national & international importance | Geography | Disaster Management*

Why in News?

Updates on implementation of Mission Mausam presented in Parliament.

- **Aim –** It is a mission to ***modernise weather tracking and forecasting*** and to deliver high-resolution weather services and provide impact-based services to every citizen with accurate weather alerts.
- **Type of Scheme –** Central Sector Scheme (100% funded by Union Government).
- **Launched in –** November 2024.

  The mission was officially inaugurated by Prime Minister Narendra Modi on January 14, 2025, marking the 150th anniversary of the India Meteorological Department (IMD).

- **Nodal Ministry –** Ministry of Earth Sciences.
- **Implementing Agency –**
  - India Meteorological Department – Operational Forecasts.
  - National Centre for Medium Range Weather Forecasting – Modelling (3–7 days).
  - Indian Institute of Tropical Meteorology – Research Support.
  - Indian Space Research Organisation – Satellite Data.
- **Coverage –** Pan-India + surrounding regions, includes **Antarctic stations (Maitri & Bharati).**
- **Objectives –** To achieve 5 × 5 km resolution forecasting.
- Improve accuracy by 10–15%.
- Enable impact-based & risk-based warnings.
- Ensure last-mile dissemination (household level by 2030).
- **Target - All citizens**, especially - Farmers, Fishermen, Disaster-prone populations.

- **Features – Observation Network –** Expansion of ***Doppler Weather Radars (DWRs)*** for precipitation and wind movement. Radiosonde for Upper-air systems
- Utilisation of Advanced instruments like **Disdrometers** (raindrop size), **LiDAR** (aerosols/clouds), **Radiometers** (temp & humidity).
- **Computing Power -** Use of High-Performance Computing (HPC) systems like *Pratyush* and *Mihir*, alongside AI and Machine Learning models.
- **Forecasting Approach –** Shift to impact-based forecasting and Risk-based warnings (damage-focused).
- **Nowcasting -** Increase the frequency of "Nowcasts" (very short-term predictions) from every 3 hours to **every hour**.
- **Dissemination Mechanism -** Mobile Apps – Meghdoot (Agriculture), Damini (Lightning alerts).
- Disaster alerts → SMS alerts via **Common Alerting Protocol (CAP).**
- Space → ISRO satellites.
- Integration with disaster management authorities.

References

1. IMD | Mission Mausam
2. PIB | Mission Mausam

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