

PARLIAMENT QUESTION: Mission Mausam

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The country's Mission Mausam has been operational since November 2024. The scheme is primarily implemented by the India Meteorological Department (IMD), the National Centre for Medium Range Weather Forecasting (NCMRWF), Noida and the Indian Institute of Tropical Meteorology (IITM), Pune. The India Meteorological Department (IMD) is implementing several activities under the Mission to strengthen weather observation systems, forecasting capabilities, and research infrastructure.

Major activities under Mission Mausam include commissioning of 53 Doppler Weather Radars (DWRs), 60 Radiosonde/Radiowind (RS/RW) stations, 100 Disdrometers, 10 Wind Profilers, and 25 Microwave Radiometers; augmentation of the Solar Radiation Monitoring Network (55 stations); commissioning of 10 Aerosol/Raman LiDARs; procurement of 20 Skyradiometers; expansion of the Black Carbon Aerosol Network to 25 stations; strengthening of the Ozonesonde Network (3 stations in India plus Maitri and Bharati stations in Antarctica); and establishment of 5 Total Columnar Ozone monitoring stations. The Mission also includes establishment of mini-High Performance Computing Systems (HPCS), Visualization and Decision Support Systems, a Radar Data Centre, R&D laboratories for tropical cyclones, severe weather events, aviation meteorology and mountain weather, and augmentation of training facilities. Collaboration with various agencies and start-ups is also being undertaken for indigenous development of meteorological instruments, sensors and software.

Most of the instruments proposed under Mission Mausam are currently in advanced stages of procurement. At present, 48 Doppler Weather Radars operated by IMD and sister organizations such as the Indian Institute of Tropical Meteorology (IITM) and the Indian Space Research Organisation (ISRO) are operational.

The functioning of the India Meteorological Department (IMD) and the National Centre for Medium Range Weather Forecasting (NCMRWF) is expected to improve significantly under Mission Mausam.

Mission Mausam aims to enhance weather monitoring and forecasting capabilities across India and surrounding regions, including rural areas, by leveraging advanced observational networks, modern instrumentation, and enhanced computing infrastructure. The Mission envisages the installation and commissioning of several advanced meteorological instruments. The Implementation of Mission Mausam is expected to lead to:

- i. Improved forecasting of severe weather hazards at a spatial resolution of about 5×5 km by 2030.
- ii. Dynamic impact-based forecasting and risk-based warnings for all major severe weather events.

- iii. Strengthened last-mile connectivity to ensure dissemination of early warnings to all, with the objective of reaching each household by 2030; and
- iv. An improvement of about 10–15% in forecast accuracy by 2030.
- v. These initiatives will significantly strengthen the operational forecasting capabilities of IMD and NCMRWF and improve the effectiveness of weather services provided to various sectors and the public.

The India Meteorological Department (IMD) provides weather forecasts, including severe weather warnings, for all districts of the country, including Mayiladuthurai in Tamil Nadu. These forecasts and warnings are disseminated through multiple communication platforms.

Weather information and alerts are issued through the IMD website, the portals of the Regional Meteorological Centre Chennai, email and SMS alerts to the State Emergency Operation Centre (SEOC), district collectors, and other registered stakeholders, as well as through social media platforms and real-time weather portals. In addition, IMD provides public access to weather information through mobile applications such as MAUSAM, Meghdoot, Damini, and UMANG.

Weather forecasts and warnings are also disseminated in coordination with the Tamil Nadu State Disaster Management Authority, district administrations, national and regional media, community radio, and through SMS-based nowcasting alerts using the Common Alerting Protocol.

In view of the above arrangements, there is no proposal at present to establish an IMD extension centre at Mayiladuthurai. However, IMD expands its observational infrastructure from time to time based on operational requirements, vulnerability to weather hazards, and availability of resources.

There is no specific policy to establish a medium-range weather forecasting station exclusively at Mayiladuthurai in Tamil Nadu. Medium-range weather forecasts (up to 7 days) are issued daily by the India Meteorological Department (IMD) through its State Meteorological Centres and Regional Meteorological Centres for all districts and Union Territories across the country. For Tamil Nadu, such forecasts and warnings are issued by the Regional Meteorological Centre Chennai and disseminated to users and stakeholders.

However, observational infrastructure supporting weather monitoring already exists in the region. An IMD S-band Weather Radar is installed at Karaikal, located about 50 km from Mayiladuthurai, which monitors weather systems over adjoining coastal districts of Tamil Nadu. In addition, an Upper Air Weather Observing System (Radiosonde/Radiowind) is operational at Karaikal to monitor atmospheric parameters.

Further, an Automatic Weather Station (AWS) at Mayiladuthurai (11.00°N, 79.68°E) and an Automatic Rain Gauge (ARG) at Manalmedu (11.26°N, 79.60°E) provide real-time weather and rainfall data, supporting weather forecasting, disaster management, and agricultural planning in the district.

This information was submitted by Union Minister of State (Independent Charge) for Earth Sciences and Science & Technology, Dr. Jitendra Singh, in Lok Sabha on 18th of March 2026.

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