GOVERNMENT OF INDIA
MINISTRY OF EARTH SCIENCES
RAJYA SABHA
UNSTARRED QUESTION NO. 2114
ANSWERED ON 18/12/2025

MISSION MAUSAM

2114 SHRI RAGHAV CHADHA:

Will the Minister of **EARTH SCIENCES** be pleased to state:

(a) the objectives and scientific advancements made under the Mission Mausam since its approval, and
(b) the details and current status of expected improvements in weather forecasting, climate prediction and disaster early warning systems?

ANSWER
THE MINISTER OF STATE (INDEPENDENT CHARGE) FOR
MINISTRY OF SCIENCE AND TECHNOLOGY
AND EARTH SCIENCES
(DR. JITENDRA SINGH)

(a) The central sector scheme "Mission Mausam" aims to significantly enhance the country's weather and climate observations, understanding, modelling, and forecasting, resulting in improved, more useful, accurate, and timely services. The objective is to strengthen various components of Earth System observations to realize an Earth System approach, providing accurate predictions and an early warning system for seamless weather and climate services to all.

Key objectives include:

- Developing cutting-edge weather surveillance technologies and systems.
- Implementing higher-resolution atmospheric observations with improved temporal and spatial sampling and coverage.
- Deploying next-generation radars, wind profilers, and satellites equipped with advanced instrument payloads.
- Implementing advanced high-performance computing (HPC) systems.
- Enhancing our understanding of weather and climate processes and improving prediction capabilities.
- Developing advanced Earth system models and data-driven methods, including the use of AI/ML.
- Creating technologies and protocols for effective weather management.
- Establishing a state-of-the-art Decision Support System (DSS) and a dissemination system for last-mile connectivity.
- Strengthening capacity building and research collaborations.

(b) The implementation of Mission Mausam is expected to enhance weather forecasting capabilities at higher spatial and temporal resolutions, improve the prediction of extreme weather events, and strengthen last-mile connectivity to support the 'Early Warning for All' initiative. Under Mission Mausam, state-of-the-art High-Performance Computing (HPC) systems were established at IITM and NCMRWF, along with the installation of several Doppler weather radars and other in-situ observational networks. These advancements have strengthened the country's weather monitoring infrastructure and improved prediction models, enabling forecasts at a spatial resolution of nearly 6 km. Consequently, the accuracy and reliability of weather forecasts have improved significantly.

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