GOVERNMENT OF INDIA
MINISTRY OF EARTH SCIENCES
RAJYA SABHA
UNSTARRED QUESTION NO. 2747
ANSWERED ON 19/12/2024

PLAN TO IMPROVE WEATHER FORECASTING

2747. SHRI JOSE K. MANI:

Will the Minister of EARTH SCIENCES be pleased to state:

(a) whether Government is planning to improve India's weather forecasting capabilities;
(b) if so, whether it has adopted any advanced technologies like Artificial Intelligence or Machine Learning to enhance the accuracy of forecasts; and
(c) the measures taken to extend real-time weather updates to rural farmers for better crop management?

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

(a) Yes.

(b) Yes. The Ministry of Earth Sciences (MoES) integrating artificial intelligence (AI) and Machine Learning (ML) technologies into weather, climate, and ocean forecasting systems, apart from physics-based numerical models. This initiative is part of a broader strategy to enhance the accuracy and efficiency of meteorological predictions, which are crucial for various sectors, including agriculture, disaster management, and urban planning. The key initiatives in this regard include the establishment of a specialized virtual center at the Indian Institute of Tropical Meteorology (IITM) in Pune. This center focuses on leveraging AI and ML techniques for advancements in Earth Sciences. It has already developed several AI/ML-based applications tailored for localized predictions and the analysis of weather and climate patterns.

(c) Yes. The India Meteorological Department (IMD) is rendering the weather forecast-based agro-advisory services to farmers under the Gramin Krishi Mausam Sewa (GKMS) project through the existing 130 Agrometeorological Field Units (AMFUs) in collaboration with the Indian Council of Agricultural Research (ICAR), State Agricultural Universities (SAUs), Indian Institute of Technology (IITs), etc. The AMFUs prepare agro-advisories for their respective districts and disseminate them through various modes, including mass media, mobile Apps, SMS, etc.

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