

**GOVERNMENT OF INDIA
MINISTRY OF EARTH SCIENCES
LOK SABHA
UNSTARRED QUESTION NO. 3035
TO BE ANSWERED ON WEDNESDAY, 19TH MARCH, 2025**

LOCATIONS FOR NEW RADARS

3035. SHRI YOGENDER CHANDOLIA:
SHRI SURESH KUMAR KASHYAP:

Will the Minister of EARTH SCIENCES be pleased to state:

- (a) whether the Government has the data regarding the proposed locations for new radars in the country including sites in Himachal Pradesh, if so, the details thereof and if not, the reasons therefor;
- (b) the manner in which their placement be prioritized based on geographical vulnerability to extreme weather events;
- (c) whether the Government has the data regarding outlined the expected percentage increase in forecast accuracy, particularly for extreme weather conditions such as cyclones and thunderstorms and if so, the details thereof; and
- (d) the timeline for full deployment and operationalization of these advanced data collection systems?

ANSWER

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

- (a) Yes. The India Meteorological Department (IMD) has planned new radars across the country, including one at Lahual & Spiti in Himachal Pradesh. Tentative sites where the radars are planned to be installed are given below:
 - 12 no. of C-Band Doppler Weather Radars (DWRs) tentatively at Raipur, Mangalore, Ranchi, Lakshadweep, Malda, Aurangabad, Balasore, Sambalpur, Ahmedabad, Bengaluru, Rupsi & Port Blair.
 - 12 no. of X-Band DWRs tentatively at Pune, Kolkata, Purnea, Varanasi, Wayanad, Bhubaneswar, Dharwad, Lahaul & Spiti, Aligarh (GoUP), Azamgarh (GoUP), Jhansi (GoUP), Lucknow (GoUP).
 - 10 no. of X-Band DWRs for North East tentatively at Jorhat, Tezpur, Aizawl, Namsai, Silchar, Imphal, Dimapur, Mandala Top, Central Arunachal Pradesh, & Guwahati.
 - In addition, 53 radars (8 S-Band, 20 C-Band, and 25 X-Band) are also planned to be installed across the country under Mission Mausam so that the entire country is brought under radar coverage.

- (b) The locations of the DWRs have been arrived upon considering the gap areas in the coverage of the existing DWR network.
- (c) In addition to the proposed improvement in the radar coverage as mentioned above other observation systems like wind profilers, radio sonde/radio wind, microwave radiometers, etc, are also planned under Mission Mausam. Along with the improvement in the observational network, deployment of high-performance computing infrastructure, advanced Earth system models, integration of artificial intelligence (AI) and machine learning (ML) technologies, etc, under Mission Masuam will help improvement in forecasts on various timescales, especially in location - specific nowcast (forecast up to a few hours) to short-range forecast up to 3 days. The implementation of the Mausam Mission is likely to help (i) in capturing and monitoring all the weather events happening in the country so that no weather system will go undetected, (ii) improve the frequency of nowcasting extreme weather such as thunderstorms, lightening, strong winds, etc. from 3 hrs. to 1 hr. (iii) Improve the short and medium range weather forecast accuracy by about 5-10%. and (iv) improve air quality forecasts by about 5-10% in the major metro cities.
- (d) Entire country will be under radar coverage within next 2-3 years.
