PARLIAMENT QUESTION: UPGRADATION IN OBSERVATION NETWORK

Posted On: 29 JAN 2026 5:10PM by PIB Delhi

Expansion in Doppler Weather Radar coverage

Currently, 47 Doppler Weather Radars (DWRs) are in operation across India, with 87% of the total area of the country coming under radar coverage. Additionally, the Ministry of Earth Sciences (MoES) launched Scheme "Mission Mausam" with the goal of making India a "Weather-ready and Climate Smart" nation, aiming to mitigate the impacts of climate change and extreme weather events.

Upgradation in Observation Networks

The upgrades made in the IMD observation networks during the period 2014-2025 is presented in the Annexure-1 through the comparison in the observation network as on end of 2014 and end of 2025. This clearly brings out the significant improvement in the weather observation network in the country during the last decade.

Use of Mobile-based Alert systems

India Meteorological Department (IMD) follows necessary steps and action in coordination with the National Disaster Management Authority (NDMA) and Centre of Development of Telematics (C-DOT) for the dissemination and communication of the warnings. As per Standard Operating Procedure (SOP), IMD is generating Common Alerting Protocol (CAP) alerts using SACHET platform for severe weather events like Heavy Rainfall, Lightning, Thunderstorm, Dust storm etc. These alerts are disseminated by State Disaster Management Authority (SDMA) to geo targeted users via SMS. These alerts are also disseminated through SACHET website and SACHET mobile app. IMD's CAP feeds are also disseminated to Global Multi-Hazard Alert System (GMAS), Google, AccuWeather and Apple.

Improvisation in Disaster Preparedness and Response

These systems have improved disaster preparedness and response. Due to such improvements in disseminations, a total of 9342 crore SMS has been sent since August 2021 and during recent cyclone "MonTha", a total of 77.64 crore SMS sent to people. All these improvements have led to significant improvement in forecast accuracy of severe weather events and also

significant reduction in death toll. For example, due to cyclones, around 7000 people lost their lives in 1999 Odisha Super Cyclone while it has been reduced to less than 100 over entire region from impact of tropical cyclones during recent years. Accurate forecast of 1 cyclone saves around 1100 crore rupees in terms of expenditure towards payment of ex-gratia to kins of dead, cost towards evacuation and savings to various sectors e,g Power, Marine, Aviation, Railways, etc. Similarly, heat wave related losses of lives have been reduced in recent years.

Annexure-1

Comparison in the status of IMD wether Observational network as on end of 2014 vs that as on end of 2025:

Parameter/System	As on end of 2014	As on end of 2025
Automatic Weather Station network	675	1008
Doppler Weather Radar	15	47
Rain Gauge Stations	3500	6726
Runway Visual Range Systems	20	186 (49 Drishti+137 FSM RVR)
Current Weather Instrument Systems at RWY	In 29 Airports	In 93 Airports (137 CWISs)
Pressure measuring	Mercury Barometers	Digital Barometers
Upper air observations	43 RS/RW Stations 62 Pilot Balloon Stations	56 RS/RW Stations. 62 Pilot Balloon stations
High Wind Speed Recorders	19	36 (Goa station decommissioned)
Lightning Location Network	None	104 locations

This information given by Union Minister of State (Independent Charge) for Earth Sciences and Science and Technology, Dr. Jitendra Singh in a written reply in Rajya Sabha today.

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