

GOVERNMENT OF INDIA
MINISTRY OF PANCHAYATI RAJ
RAJYA SABHA
UNSTARRED QUESTION NO. 246
ANSWER DATE 27.11.2024

PANCHAYAT LEVEL WEATHER FORECASTING INITIATIVE

246.SHRI A. A. RAHIM:

Will the Minister of Panchayati Raj be pleased to State:

- (a) the States in which Government has implemented Panchayat-level weather forecasting system/initiative;
- (b) what tools, such as radars, satellites, etc are currently used by the initiative to monitor local weather conditions, details thereof;
- (c) whether it is a fact that monitoring local weather in Kerala is challenging due to the lack of operational Doppler radars in the State, if so, the steps taken by Government to ensure the effective implementation of this initiative in Kerala; and
- (d) whether Government is willing to investigate and take action to implement an effective hourly weather forecasting system at the Panchayat level in Kerala?

ANSWER

MINISTER OF STATE FOR PANCHAYATI RAJ

(PROF. S. P. SINGH BAGHEL)

(a) The Ministry of Earth Sciences implemented the Panchayat-level weather forecasting system/initiative from 24 October 2024 for every part of the country. The weather forecast initiative aimed at Gram Panchayats across India emphasized the importance of providing timely and localized weather information to nearly 2.6 lakh panchayats. The innovative Mausamgram platform, developed by the India Meteorological Department (IMD), Ministry of Earth Sciences, delivers precise weather forecasts, offering hourly updates for immediate 36 hours and comprehensive forecasts for next 10 days. These updates cover critical parameters such as temperature, rainfall, humidity, wind, and cloud conditions—essential data that farmers need for informed decision-making regarding sowing, harvesting, and irrigation. The platform is making weather forecast information to be accessible anytime and anywhere at the panchayat level across the country.

(b) IMD utilizes various conventional manual observatories to collect reliable data for atmospheric parameters at the surface level as well as in the upper levels. The monitoring of the weather is also carried out in a seamless manner with the help of remote sensing observing

platforms and through automated functioning and efficient data communication. The observation networks cover nearly every part of India with surface & Upper-air observatories, Automatic Weather Stations (AWSs), Automatic Rain Gauges (ARGs), profilers, ground radiometer, Buoys, Ship & aircraft observations, Doppler Weather Radars (DWRs) and satellites. All observations are then utilized in the process of delivering weather forecast and warning service by IMD. Currently, two Geosynchronous Satellites INSAT-3D & INSAT-3DR located at longitude 82 degree East & 74 degree East respectively are being used for weather monitoring and forecasting in the country. Rainfall information from satellites is obtained from the rainfall estimation parameter derived from INSAT 3D & 3DR. Also several products to support weather monitoring are generated from satellite data including that for cyclones, heavy rainfall, thunderstorms and etc. There are very high-resolution numerical weather prediction models which assimilate all kinds of observations to provide accurate local forecasts.

(c) It is not correct to state that there is no operational weather Radar in the state of Kerala. Two Doppler Weather Radars are already installed in Kerala; one at Kochi and another at Thiruvananthapuram which meet the requirements of Kerala. DWR only enhances the weather monitoring capabilities in addition to other conventional and non-conventional observing platforms e.g. surface and upper-air observatories, AWS, ARG, profilers, ground radiometer, Buoys and ship observations, aircraft observations and satellites

d) Weather forecast at Gram Panchayats level is also available in the State of Kerala. Additionally, S-Band DWR at Kochi under IMD has been installed and operational since 12 July 2017 and the C-Band DWR at Thiruvananthapuram under ISRO has been installed and operational since 04 Aug 2016. They are being constantly utilized for weather monitoring in the state of Kerala. Presently the process for installing an X-band DWR in Wayanad district is in progress.