

**GOVERNMENT OF INDIA  
MINISTRY OF EARTH SCIENCES  
LOK SABHA  
UNSTARRED QUESTION NO. 3261  
TO BE ANSWERED ON WEDNESDAY, 23<sup>RD</sup> MARCH, 2022**

**DISASTER PRONE DISTRICTS**

3261. ADV. DEAN KURIAKOSE:

Will the Minister of EARTH SCIENCES be pleased to state:

- (a) whether the Government has the details of services that a meteorologist can provide to a district administration in disaster prone regions;
- (b) if so, furnish details thereof;
- (c) whether the Government proposes to appoint a meteorologist with enough supporting infrastructure for disaster prone districts in the country;
- (d) if so, the details thereof;
- (e) whether the Government also proposes to appoint a meteorologist/geologist for assisting the district administration in highly landslide prone regions like Idukki; and
- (f) if so, the details thereof and if not, the reasons therefor?

**ANSWER**

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

- (a)-(b) India Meteorological Department (IMD) has a three-tier structure of forecasting services with National Weather Forecasting Centre (NWFC) at the Headquarters at New Delhi, Regional Weather Forecasting Centres (RWFC) at six Regional Meteorological Centres situated at New Delhi, Mumbai, Nagpur, Kolkata, Guwahati and Chennai and State Weather Forecasting Centres (SWFC) at the State Meteorological Centres situated at the State Capitals.

IMD follows a seamless forecasting strategy. The long-range forecasts (for the whole season) issued are being followed with extended range forecast issued on every Thursday with a validity period of four weeks. To follow up the extended range forecast, IMD issues short to medium range forecast and warnings daily valid up to next five days with an outlook for subsequent two days. The short to medium range forecast and warning at district and station level are issued by state level Meteorological Centres (MCs)/Regional Meteorological Centres (RMCs) with a validity of next five days and are updated twice a day. The short to medium range forecast is followed by very short range forecast of severe weather up to three hours (nowcast) for all the districts and 1089 cities and towns. These nowcasts are updated every three hours.

IMD has implemented Impact Based Forecast (IBF) which give details of what the weather will do along with what the weather will be. It contains the details of impacts expected from the severe weather elements and guidelines to general public about do's and don'ts while getting exposed to severe weather. These guidelines are finalised in collaboration with National Disaster Management Authority (NDMA) and is already implemented successfully for cyclone, heat wave, thunderstorm and heavy rainfall. Work is in progress to implement the same for other severe weather elements.



While issuing the warning suitable colour code is used to bring out the impact of the severe weather expected and to signal the Disaster Management about the course of action to be taken with respect to impending disaster weather event. Green color corresponds to no warning hence no action is needed, yellow color corresponds to be watchful and get updated information, orange color to be alert and be prepared to take action whereas red color signals to take action.

The district level forecast and warning for five days and every three hour nowcast for all the districts are issued by a Meteorologist. In addition,

- Location specific nowcast, city forecast, current weather observations and daily rainfall data are being provided to district administration from State Meteorological Centres on routine basis.
- A Meteorologist also coordinates and explains the disaster managers about the expected disastrous weather events, its forecast/warning, damage expected and suggested actions.
- A Meteorologist also helps in providing past historical data and its interpretations for preparedness, prevention and mitigation measures for any meteorological disasters.
- A Meteorologist also provides training in various capacity building programmes conducted by various authorities in the State for disaster management.
- A Meteorologist also participates in the awareness programmes for various stakeholders including farmers as and when required by State Government and other authorities.

(c) No Sir.

(d) Doesn't arise.

(e)-(f) The Geological Survey of India is mandated in the country for mapping, surveying and proposing mitigation plans with respect to landslide prone areas. National Centre for Earth Science Studies (NCESS) situated in Thiruvananthapuram, under MoES is a basic R&D institute for Earth Sciences that undertakes individual research programs on applications of investigation tools (like SAR interferometry, soil moisture, pore pressure), mechanism of failures (debris flow, soil creep, rock fall etc) pertaining to specific sites of interest. These programs are not extended to whole district or to different natural hazards.

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