

**GOVERNMENT OF INDIA
MINISTRY OF EARTH SCIENCES
LOK SABHA
UNSTARRED QUESTION No. 3579
TO BE ANSWERED ON WEDNESDAY, AUGUST 08, 2018**

PREDICTION OF RAINFALL

3579. SHRI DUSHYANT SINGH:

Will the Minister of EARTH SCIENCES be pleased to state:

- (a) the details of the current mechanism being followed to predict the rainfall;**
- (b) whether his Ministry is considering to take any steps to devise an intelligent prediction/expectation system with modern analytic tools by using local weather information for prediction of rainfall; and**
- (c) if so, the details thereof and if not, the reasons therefor?**

ANSWER

**MINISTER FOR MINISTRY OF SCIENCE AND TECHNOLOGY AND
MINISTRY OF EARTH SCIENCES
(Dr. HARSH VARDHAN)**

- (a) India Meteorological Department (IMD) issues three types of forecasts during the monsoon season i.e., seasonal forecast (for the whole season), extended range forecast (10- 30 days), short-medium range forecast (0-10 days). Under the National Monsoon Mission, MoES has implemented two state-of-the-art dynamical prediction systems for short range to medium, extended range and seasonal forecasts. All these initiatives have helped to improve the skill of monsoon forecasts over the country. For the first time, India Meteorological Department used the Monsoon Mission dynamical model to prepare operational seasonal forecast of 2017 monsoon rainfall over India.**
- (b)-(c) An improved suite of prediction models has already been implemented operationally at India Meteorological Department (IMD) for enhanced short range weather forecasting through assimilation of all available Indian and global satellite data in real time.**

Since December 2016 India Meteorological Department is using the Global Forecast System (GFS) operationally every day to generate deterministic forecasts at 12 km horizontal resolution in the short to medium range (Up to 10 days). The GFS assimilates global conventional atmospheric data as well data from the data from satellites and weather radars.

In addition, a high resolution (12 km grid scale) state of the art Global Ensemble Prediction System (EPS) was commissioned on 01 June 2018 for generating operational probabilistic weather forecasts for 10 days. The EPS will enhance the weather information being provided by the current models by quantifying the uncertainties in the weather forecasts. The above mentioned forecast systems will be improved further for better accuracy.
