

**GOVERNMENT OF INDIA
MINISTRY OF EARTH SCIENCES
LOK SABHA
UNSTARRED QUESTION NO. 133
TO BE ANSWERED ON WEDNESDAY, 7TH DECEMBER, 2022**

RAINFALL PATTERN

133. SHRI JAGDAMBIKA PAL:

Will the Minister of EARTH SCIENCES be pleased to state:

- (a) whether the rainfall pattern has changed in different parts of the country, wherein some parts are receiving heavy rainfall and some parts receiving less rainfall;
- (b) if so, the details thereof;
- (c) whether the Meteorological Department has conducted any survey through experts to ascertain reasons for extreme diversity in the rainfall during the monsoon season recently, if so, the details thereof; and
- (d) the details of the steps taken by the Government to prevent such changes in the rainfall pattern?

ANSWER

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

- (a)-(c) Yes Sir. India Meteorological Department (IMD) has carried out an analysis of observed monsoon rainfall variability and changes of 29 States & Union Territory at State and District levels based on the IMD's observational data of recent 30 years (1989- 2018) during the Southwest monsoon season from June to September (JJAS) and issued a report on 30 March 2020. The reports on observed rainfall variability and its trend for each State and Union Territory are available in IMD website (<https://mausam.imd.gov.in/>) under "PUBLICATIONS" as well as in IMD Pune website;

<http://www.imdpune.gov.in/hydrology/rainfall%20variability%20page/rainfall%20trend.html>

The **highlights of the report** are given below;

- Five states viz., Uttar Pradesh, Bihar, West Bengal, Meghalaya and Nagaland have shown significant decreasing trends in southwest monsoon rainfall during the recent 30 years period (1989-2018).
- The annual rainfall over these five states along with the states of Arunachal Pradesh and Himachal Pradesh also show significant decreasing trends.
- Other states do not show any significant changes in southwest monsoon rainfall during the same period.

- Considering district-wise rainfall, there are many districts in the country, which show significant changes in southwest monsoon and annual rainfall during the recent 30 years period (1989-2018). With regard to the frequency of heavy rainfall days, significant increasing trend is observed over Saurashtra & Kutch, Southeastern parts of Rajasthan, Northern parts of Tamil Nadu, Northern parts of Andhra Pradesh and adjoining areas of Southwest Odisha, many parts of Chhattisgarh, Southwest Madhya Pradesh, West Bengal, Manipur & Mizoram, Konkan& Goa and Uttarakhand.
- (d) IMD has an effective forecast and dissemination mechanism through which necessary warnings and advisories are issued throughout the country well in advance for preparedness. The information on change in rainfall pattern is also shared with other stakeholders for its effective use and planning.
