

**GOVERNMENT OF INDIA
MINISTRY OF HOME AFFAIRS**

**LOK SABHA
UNSTARRED QUESTION NO. 4579**

TO BE ANSWERED ON THE 8TH JANUARY, 2019/ PAUSHA 18, 1940 (SAKA)

DISASTER PREPAREDNESS OF KERALA

4579. DR. SHASHI THAROOR:

Will the Minister of HOME AFFAIRS be pleased to state:

(a) whether the Ministry of Home Affairs has received a communication from the Additional Chief Secretary to the Government of Kerala on 6.10.2018, pointing out how the inadequacy of Automated Rain Gauges, absence of highend ensemble nested models and lack of meteorologists posted in the State of Kerala, have been hindering the ability of the State Government to carry out Disaster Management activities under the National Disaster Management Plan, 2016;

(b) if so, whether steps have been taken to address these points, especially to increase the number of Automated Rain Gauges in Kerala and to provide high-end ensemble nested models customised for the State;

(c) if so, the details thereof; and

(d) if not, the reasons therefor?

ANSWER

**MINISTER OF STATE IN THE MINISTRY OF HOME AFFAIRS
(SHRI KIREN RIJIJU)**

(a) to (d): Yes Madam, in this regard, India Meteorological Department (IMD) has reported that IMD has adequate observational network in Kerala.

In addition to 11 No. of IMD observatories, there are also 15 Automated Rain Gauge (ARG) stations for the proper monitoring of rainfall over Kerala.

The list of IMD Observatories and ARG stations in Kerala are given in the Annexure.

With regard to high end ensemble nested models, IMD has reported that 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.

In addition, a high resolution (12 km grid scale) state of the art Global Ensemble Prediction System (EPS) namely Global Ensemble Forecasting System (GEFS) and unified model Ensemble Prediction System (UMEPS) 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.

There are sufficient scientists posted at IMD offices in Kerala to provide service to the state to meet all emerging requirements.

List of IMD Observatories in Kerala

1. **ALAPPUZHA**
2. **CIAL KOCHI**
3. **KANNUR**
4. **KARIPUR AP**
5. **KOCHI AP (NAS Kochi)**
6. **KOTTAYAM**
7. **KOZHIKODE**
8. **PUNALUR**
9. **THIRUVANANTHAPURAM (AIRPORT)**
10. **THIRUVANANTHAPURAM (CITY)**
11. **VELLANIKKARA**

Stations with ARG in KERALA		
DISTRICT: CANNUR	1	CHERUTHAZHAM ARG
	2	MATTANUR ARG
DISTRICT: ERNAKULAM	3	KAKKUNADU ARG
DISTRICT: IDUKKI	4	THODUPUZHA ARG
DISTRICT: KOLLAM	5	ANCHAL ARG
	6	THENMALA ARG
DISTRICT: KOZHIKODE	7	THAMARASSERY ARG
	8	PERUVANNAMUZHI ARG
DISTRICT: PALAKKAD	9	MEENKARA ARG
DISTRICT: PATHANAMTHITTA	10	KURUDAMANNIL ARG
DISTRICT: THIRUVANANTHAURAM	11	PERINGAMALA ARG
	12	PERUMKADAVILA ARG
DISTRICT: THRISSUR	13	VYNTHALA ARG
DISTRICT: WYNAD	14	MEENANGADI ARG
	15	POOKOT ARG