

**GOVERNMENT OF INDIA  
EARTH SCIENCES  
LOK SABHA**

UNSTARRED QUESTION NO:1766  
ANSWERED ON:01.12.2011  
MONSOON FORECASTING  
Semmalai Shri S.

**Will the Minister of EARTH SCIENCES be pleased to state:**

- (a) the details of types of observations maintained by India Meteorological Department(IMD) and the nature of information collected by these agencies;
- (b) the details of research projects undertaken by the IMD;
- (c) whether IMD has introduced long range forecasts in different regions of the country; and
- (d) if so, the details thereof?

**Answer**

MINISTER OF STATE IN THE MINISTRY OF PLANNING, MINISTER OF STATE IN THE MINISTRY OF SCIENCE AND TECHNOLOGY AND MINISTER OF STATE IN THE MINISTRY OF EARTH SCIENCES (SHRI ASHWANI KUMAR)

(a) IMD operates and maintains 24X7 weather and climate monitoring networks comprising

i) Surface observations (446 regular manual observatories collecting temperature; humidity; pressure; wind direction and speed; cloud amount; 3000 manual rain gauges to prepare rainfall statistics during the monsoon season; 45 radiation measuring observatories; 657 Automatic Weather Stations (AWS); 493 Automatic Rain Gauges(ARG) that measures rain rates and temperature.

ii) Upper air observation network to collect vertical profiles (up to 30km from the surface) of temperature, humidity, pressure, wind direction and speed spread over 39 stations; vertical wind direction and wind profiles up to 8-10km (below the cloud base) spread over the country at 62 stations

iii) Network of Doppler Weather Radar (DWR) is being commissioned over the country to capture damaging wind structure and zones of heavy precipitation associated with cyclone as and when cyclone moves in to the 500km radial coverage range (currently operated at 13 locations and being expanded gradually).

iv) Range of operational products derived from geostationary satellites (KALPANA and INSAT series) and polar orbital satellites (OCEANSAT, MEGHA TROPICUES and NOAA etc.) on continuous basis

(b) Operational R & D efforts are continuously pursued for improving the forecast skills by trying out advances in S & T. Currently the efforts are directed towards

i) Forecast Demonstration Projects (FDPs) in respect of improving prediction capabilities for tropical cyclones, pre-monsoon severe thunder storms, fog over airports etc.

ii) Monthly and seasonal scale prediction of tools in respect of generating temperature and precipitation anomalies over India

(c) Yes Madam.

(d) Long range forecasts are issued in two stages, first in April for the seasonal rainfall over the country as a whole and second at the end of June with an update of April assessment and seasonal rainfall assessment for the four homogeneous geographical regions of the country namely Northwest India, Central India, Peninsular India and Northeast India.