

**GOVERNMENT OF INDIA  
EARTH SCIENCES  
LOK SABHA**

UNSTARRED QUESTION NO:6787  
ANSWERED ON:17.05.2012  
LIMITATION OF STATISTICAL METHODS OF IMD  
Antony Shri Anto

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

(a) whether the Government has noticed the limitations of the present statistical methods used by the India Meteorological Department (IMD) to forecast monsoon; and

(b) if so, the steps taken by the Government to develop a state of the art model in this regard?

**Answer**

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

(a) Yes Madam.

(b) Suite of statistical models used for seasonal prediction of monsoon rainfall are not able to successfully assess the extreme variability of rainfall leading to large scale drought/flood due to poorly represented treatment of non- linear response/feedback of various earth system components such as ocean-atmospheric interactions, cryosphere and geosphere etc. that have direct bearing on the enhancement/reduction of rainfall over Indian sub-continent.

Commissioning of the high performance computing (HPC) system has provided opportunity to implement coupled ocean-atmospheric models in India for seasonal scale predictions and assimilate satellite radiance data in to the global/ regional forecast systems and to enhance the spatial resolution of the global forecast systems from about 50km grid scale to about 22km grid scale for the medium range forecast predictions.

Efforts are being organized under the National Monsoon Mission initiative to develop a most representative and advanced dynamical model framework for India for forecasting monsoon rainfall and its variability in various space and time scales by involving all relevant/leading organizations and research institutes of India and abroad.