GOVERNMENT OF INDIA
EARTH SCIENCES
LOK SABHA

UNSTARRED QUESTION NO:2061
ANSWERED ON:05.12.2012
LONG RANGE FORECASTS
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Will the Minister of EARTH SCIENCES be pleased to state:

(a) whether most of the long range forecasts issued by the Indian Meteorological Department (IMD) during the just concluded South-West monsoon season went wrong;

(b) if so, whether the Government has conducted any study to ascertain the reasons for making the wrong forecasts by IMD and if so, the details thereof; and

(c) the measures taken to improve the working of IMD and to remove the shortcomings in the functioning thereof?

Answer

MINISTER FOR MINISTRY OF SCIENCE AND TECHNOLOGY AND MINISTRY OF EARTH SCIENCES (SHRI S. JAIPAL REDDY)

(a) Long range forecasts of monsoon rainfall always have certain degree of error. The endeavour of the Earth System Science Organization (ESSO) - IMD has always been to reduce this margin of error through continuous efforts to improve. Quantitatively, monsoon season rainfall for the country as a whole has been only to the extent of 92% of its long period average (deficit by 8%) as against normal monsoon outlook issued on

26th April, 2012 that has kept at 99Â±5% of long period average

22nd June, 2012 that has kept at 96Â±4% of long period average

In addition, the monsoon rainfall outlooks issued for four homogeneous regions of the country, monthly outlook for the all India monsoon rainfall for the months of July and August 2012, that are presented below:

Region	Period	In % of long term average Issued on 22nd June	Issued on 2nd August	Actual Rainfall verification
Northwest India	June to September	93 Â± 8		93
Central India	June to September	96 Â± 8		96
Northeast India	June to September	99 Â± 8		89
South Peninsula	June to September	95 Â± 8		90
All India	July	98 Â± 9	87	
All India	August	96 Â± 9	96 Â± 9	101
All India	August-September	91 Â± 8		104

(b) Yes Madam. The deficiency to certain extent is attributed to the delayed onset and advance of monsoon over various parts of the country (in a range of 1-2 weeks). The lower frequency of the formation of principal rain bearing cyclonic weather systems (monsoon depressions) over the Bay of Bengal and Arabian Seas during the current season (as none of the low pressure systems formed this year got intensified into depressions as against the normal frequency of 4-6 monsoon depressions per season) is seen to be the main contributing factor for the deficit rainfall distribution observed over the country. Detailed studies on the above seasonal scale monsoon circulation anomalies and associated characteristics along with the examination of their realized impacts on the seasonal rainfall during 2012 is underway.

(c) ESSO-IMD has been using a suite of statistical models for prediction of seasonal monsoon rainfall over India. This year the forecast using dynamical model of USA was also prepared. We are examining the performance of coupled ocean-atmospheric models of USA and UK towards their suitability for seasonal monsoon rainfall predictions over India so as to enhance their capabilities under the National Monsoon Mission.