

**GOVERNMENT OF INDIA  
MINISTRY OF EARTH SCIENCES  
LOK SABHA  
UNSTARRED QUESTION No. 1744  
TO BE ANSWERED ON WEDNESDAY, JULY 26, 2017**

**VARIABILITY OF MONSOON**

**1744. DR. MURLI MANOHAR JOSHI:**

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

- (a) whether the Government has undertaken any study regarding the variability of monsoon in South and South-East Asia;**
- (b) if so, the details and findings thereof; and**
- (c) if not, whether such a study is likely to be undertaken with a view to find the causes and effects of such variability in coming years and its possible impact on socio-economical conditions of Indian people?**

**ANSWER**

**MINISTER OF STATE FOR MINISTRY OF SCIENCE AND TECHNOLOGY AND  
MINISTRY OF EARTH SCIENCES  
(SHRI Y. S. CHOWDARY)**

- (a) Madam, the Government has undertaken extensive study on variability of monsoon especially in South Asia.**
- (b) Details and findings of the study are;**
  - Monsoon varies on all time scales from daily to seasonal, decadal and centennial. We have good understanding especially on intra seasonal and seasonal variability**
  - The mechanisms driving the Monsoon Intraseasonal variability are understood in great detail, which lead to the successful setting up of an extended range prediction system for all the seasons by Ministry of Earth Sciences (MoES). This includes both the summer and winter monsoons up to three weeks, heat wave conditions etc.**
  - A dynamical Seasonal prediction system for seasonal monsoon prediction is set up through monsoon mission mode initiative by MoES.**
  - The teleconnection between El Nino Southern Oscillation (ENSO) and monsoon and its time varying relationships are established. As a result most of the current seasonal prediction models are currently able to capture these teleconnections.**
  - Subseasonal variability of monsoon and its relationship with ENSO and Indian Ocean established.**
  - Changing mean state of Indian Ocean and its role on possible weakening of ENSO monsoon teleconnections is understood in great detail.**
  - The relationship between South-East Asia rainfall variability with Indian rainfall variability is established.**
- (c) Does not arise.**

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