

**GOVERNMENT OF INDIA  
MINISTRY OF EARTH SCIENCES  
LOK SABHA  
UNSTARRED QUESTION No. 421  
TO BE ANSWERED ON WEDNESDAY, DECEMBER 12, 2018**

**Climate Change**

**421: SHRIMATI KAMLA DEVI PAATLE**

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

- a) Whether the Government has done any scientific study on climate change due to global warming;**
- b) if so, the details thereof;**
- c) whether mining activities in habitat is one of the main reasons for climate change and if so, the details thereof;**
- d) whether the Government considers establishing a national institute with regard to climate change and if so, the details thereof;**
- e) whether the Government has done any study regarding impact of climate change on monsoon due to climate change; and**
- f) if so, the details thereof and the remedial measures taken in this regard ?**

**ANSWER**

**MINISTER OF MINISTRY OF SCIENCE AND TECHNOLOGY AND  
MINISTRY OF EARTH SCIENCES  
(Dr. HARSH VARDHAN)**

- a) Yes Madam. There are several studies which have focused on climate change due to global warming, particularly focusing on the effects of such changes on the Indian Summer Monsoon.**
- b) Studies have shown an increase in extreme rainfall events during the monsoon season and severe heat wave events over many parts of India.**

- c) **This ministry has not done any research studies on the effect of mining activities on climate change. However, it is expected that large mining activities can influence regional (local) climate due to release of dust particles into the atmosphere.**
- d) **Yes Madam, the Ministry of Earth Sciences (MoES), Government of India has already established the Centre for Climate Change Research (CCCR) at the Indian Institute of Tropical Meteorology, Pune, since January 2009 to study the impact of climate change in the country. The Centre is dedicated to carry out research on global and regional climate change with particular focus on the Indian climate and the monsoons. CCCR has started coupled climate modeling and based on the efforts in the last 5 years, an Indian climate-specific Earth system model (ESM) has been developed which will contribute to the IPCC 6th Assessment Report (IPCC AR6). Currently, efforts are ongoing to generate the climate change scenarios. Also to better understand regional climate change issues, CCCR has also undertaken the Coordinated Regional Downscaling Experiment (CORDEX) - South Asia program. It is generating and collating from various partners, downscaled (regionalizing at high resolution) and latest climate projections from multiple models.**
- e) **Yes Madam, several studies have reported slight weakening trend in All-India averaged summer rainfall, at the same time significant rising trends in the frequency and the magnitude of extreme rainfall over different regions of India against a backdrop of global warming.**
- f) **These observed changes can be attributed to natural variability as well as due to human activities. Measures are being taken by the Government to mitigate the effects of climate change under the National Action Plan on Climate Change (NAPCC). States/Union Territories have prepared State Action Plans on Climate Change consistent with the objectives of NAPCC. The Ministry of Earth Sciences is conducting both observational and modeling studies in order to understand and provide accurate predictions of the extreme weather events over India.**

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