

**GOVERNMENT OF INDIA  
EARTH SCIENCES  
LOK SABHA**

STARRED QUESTION NO:192

ANSWERED ON:10.03.2010

IMPACT OF CLIMATE CHANGE ON MONSOON

Antony Shri Anto;Chavan Shri Harischandra Deoram

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

- (a) Whether the Government has conducted any study on the impact of climate change on monsoon especially southwest monsoon;
- (b) if so, the findings of the study; and
- (c) the corrective measures taken or being taken by the Government in this regard?

**Answer**

THE MINISTER OF STATE (INDEPENDENT CHARGE) MINISTRY OF SCIENCE AND TECHNOLOGY, MINISTRY OF EARTH SCIENCES, MINISTER OF STATE IN THE PRIME MINISTER'S OFFICE, MINISTER OF STATE IN THE MINISTRY OF PERSONNEL, PUBLIC GRIEVANCES & PENSIONS AND MINISTER OF STATE IN THE MINISTRY OF PARLIAMENTARY AFFAIRS (SHRI PRITHVIRAJ CHAVAN)

(a) to (c): A Statement is laid on the Table of the House.

STATEMENT REFERRED TO IN REPLY TO PARTS (a) TO (c) OF THE LOK SABHA STARRED QUESTION NO. 192 FOR ANSWER ON 10th MARCH 2010.

(a) Yes Madam. The Government agencies have conducted studies to examine and understand how the Indian southwest monsoon (ISM) has responded to the increase in Green House Gases (GHG's) and global warming during the past 100 years.

(b) There is no conclusive evidence to attribute the observed ISM variability to GHG's and their projection to the future. The major findings of various studies are as under:

- i) Daily mean temperature over the country is found to be increasing more or less at the same rate as the global mean (0.5oC during past 100 year).
- ii) The south-west monsoon rainfall over the country has decreased by nearly 4.7% during the period 1965-2006 as compared to the earlier period (1931-1964).
- iii) Heavy rain events (>10 cm/day) over central India are increasing at about 1%/year while weak and moderate events (1-5cm/day) are decreasing at about the same rate over the past 50 years.
- iv) No significant long-term trends are reported in the frequencies of large-scale droughts or floods in the summer monsoon season.

(c) The Government has undertaken the following steps to understand the phenomenon of Climate Change:

# Prime Minister's Council on Climate Change has been constituted to coordinate national action for assessment, adaptation and mitigation of climate change.

# A National Action Plan on Climate Change (NAPCC) was released by the Prime Minister on 30th June 2008. Under the National Action Plan on Climate Change, it is proposed to establish a permanent institutional mechanism that will play a development and coordination role. NAPCC outlines eight missions in specific areas of Solar Energy, Enhanced Energy Efficiency, Sustainable Habitat, Water, Sustaining the Himalayan Eco-system, Green India, Sustainable Agriculture and Strategic knowledge for Climate Change.

# Expert Committee on Climate Change impacts, which is headed by the Principal Scientific Advisor to the Government of India has been constituted.

# Launched a high-priority Programme to address the Science issues of Global and Regional Climate Change with a well equipped state-of-the-art Center for Climate Change Research (CCCR) at Indian Institute of Tropical Meteorology (IITM), Pune for inter-disciplinary research and training in the area of science of climate change. Prioritized R & D efforts are initiated to comprehensively understand the causes for the aforementioned changes in the southwest monsoon rainfall and to improve the rainfall predictions in all time scales.