

**GOVERNMENT OF INDIA  
EARTH SCIENCES  
LOK SABHA**

UNSTARRED QUESTION NO:2591  
ANSWERED ON:22.07.2009  
RESEARCH ON CLIMATE CHANGE IN THE NORTHERN POLE  
Agarwal Shri Jai Prakash

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

- (a) whether there is any proposal to undertake research on climatic changes in the North Pole;
- (b) if so, the details thereof;
- (c) the estimated expenditure likely to be incurred on such research;
- (d) whether any agreement has been signed by the Government with some other countries in this regard; and
- (e) if so, the details thereof?

**Answer**

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

(a-b) Yes Madam.

India has already initiated a Research Program in 2007 with the thrust on climate change in the Arctic Region, which surrounds the North Pole.

The major objectives of the Indian Research in Arctic Region are as follows:

1. Study of the hypothesized tele-connections between the Arctic climate and the Indian monsoon by analyzing the sediment and ice core records from the Arctic glaciers and the Arctic Ocean.
2. To characterize sea ice in Arctic using satellite data to estimate the effect of global warming in the northern polar region.
3. Research on the dynamics and mass budget of Arctic glaciers focuses on the effect of glaciers on sea-level change and on the fresh input into fjords and embayments.
4. To carry out a comprehensive assessment of the flora and fauna of the Arctic vis-à-vis their response to anthropogenic activities. In addition, it is proposed to undertake a comparative study of the life forms from both the Polar Regions in terms of environment.

(c) Till now India has spent 180.29 Lakhs towards the Arctic Research while in the current year a budgetary provision of 260 Lakhs has been provided.

(d-e) Yes Madam.

India has entered into MOU with Norwegian Polar Research Institute of Norway, for cooperation in science, as also with Kings Bay (A Norwegian Government owned company) at Ny-Alesund for logistic and infrastructure facilities for undertaking Arctic research and maintaining Indian Research base 'Himadri' at Arctic region