

GOVERNMENT OF INDIA  
MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE

**LOK SABHA**  
**UNSTARRED QUESTION NO. 4700**  
TO BE ANSWERED ON 23.03.2018

**Research on Climate Change**

4700. SHRI HARI MANJHI:

Will the Minister of ENVIRONMENT, FOREST AND CLIMATE CHANGE be pleased to state:

- (a) whether the Government proposes to carry out any research regarding climate change in North Pole;
- (b) if so, the details thereof;
- (c) the amount of funds likely to be spent on such research;
- (d) whether any agreement has been signed for collaboration with any other country in this regard; and
- (e) if so, the details thereof?

**ANSWER**

**MINISTER OF STATE IN THE MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE**  
**(DR. MAHESH SHARMA)**

(a) & (b) The National Centre for Antarctic and Ocean Research (NCAOR), an autonomous institute under the Ministry of Earth Sciences operates a research base at Ny-Ålesund, Svalbard (around 1234 Km to North Pole) since 2008 where various research activities pertaining to climate change are carried out.

The Indian Arctic program primarily addresses issues pertaining to change in the Arctic triggered by variations in climatic cycles and the role of Arctic climate in governing the intensity of Indian monsoon. India has initiated major scientific programmes encompassing the atmosphere, cryosphere and hydrosphere. In this regard, Indian researchers have initiated measurement of aerosol properties, black carbon and precipitation in the Arctic. Studies have been undertaken to understand the mass balance of Arctic glaciers in addition to identifying and quantifying climate relevant natural and anthropogenic compounds and processes in Arctic cryosphere.

Studies indicate that the Kongsfjorden system of the Arctic is undergoing a gradual transformation with enhanced warming and freshening of certain water masses. Observations in the fjord system have yielded information to strategically place the India's Arctic Observatory

(IndARC) and India's first sub-surface mooring in polar waters. IndARC is contributing data needed to understand the teleconnection between Arctic processes and Indian monsoon.

(c) The budget estimates of the Indian Arctic program for the period (2017-2020) is Rs. 45 crore.

(d) & (e) The Ministry of Earth Sciences, Government of India, through its autonomous institute, NCAOR has entered into a Memorandum of Understanding with the Norwegian Polar Institute for scientific and logistic cooperation in the Arctic.

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