

**GOVERNMENT OF INDIA
EARTH SCIENCES
LOK SABHA**

UNSTARRED QUESTION NO:3477
ANSWERED ON:01.12.2010
CLIMATE CHANGE IN NORTH POLE
Sinha Shri Shatrughan

Will the Minister of EARTH SCIENCES be pleased to state:

- (a) whether there is any proposal to undertake research on climate 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 other countries in this regard; and
- (e) if so, the details thereof ?

Answer

MINISTER OF HUMAN RESOURCE DEVELOPMENT, MINISTER OF SCIENCE AND TECHNOLOGY, MINISTER OF EARTH SCIENCES AND MINISTER OF TELECOMMUNICATION AND INFORMATION TECHNOLOGY (SHRI KAPIL SIBAL)

(a) Yes, Madam. The National Centre for Antarctic and Ocean Research (NCAOR) alongwith National Institute of Oceanography (NIO), Goa have a research project for 'Long – term monitoring of Kongsfjorden system (Ny-A lesund, Svalbard, Norway) of Arctic region for climate change studies'.

(b) The objective of the project is to establish a long-term comprehensive physical, chemical, biological and atmospheric measurement programme to study:

1. The variability in the Arctic/Atlantic climate signal.
2. The effect of interaction between the warm Atlantic water and the cold glacial-melt fresh water on the biological productivity and phytoplankton species composition and diversity within the fjord.
3. The winter convection and its role in the biogeochemical cycling.
4. The trigger mechanism of spring bloom and its temporal variability and biomass production.
5. The production and export of organic carbon in the fjord.

(c) Expenditure of Rs.15 crore is estimated to be incurred for the programme during current Five Year Plan.

(d)&(e) The study is to be carried out under the MoU between National Centre for Antarctic and Ocean Research (NCAOR) Goa and the Norwegian Polar Institute (NPI), Tromso, Norway.