

**GOVERNMENT OF INDIA  
EARTH SCIENCES  
LOK SABHA**

UNSTARRED QUESTION NO:2492  
ANSWERED ON:10.03.2011  
INDIA AND NORWAY  
Reddy Shri Komatireddy Raj Gopal

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

- (a) whether India and Norway are working for joint polar research;
- (b) if so, the details thereof; and
- (c) the manner in which it would be beneficial to the country in future?

**Answer**

MINISTER OF STATE IN THE MINISTRY OF PLANNING, MINISTER OF STATE IN THE MINISTRY OF PARLIAMENTARY AFFAIRS,  
MINISTER OF STATE IN THE MINISTRY OF SCIENCE AND TECHNOLOGY AND MINISTER OF STATE IN THE MINISTRY OF  
EARTH SCIENCES(SHRI ASHWANI KUMAR)

(a) & (b) Yes, Madam. An MoU has been signed on 1st July, 2008 between National Centre for Antarctica and Ocean Research (NCAOR), Goa, an autonomous institute under the ministry and Norwegian Polar Institute (NPI) on Cooperation in Polar Research. The cooperation is primarily in the following fields of scientific research in both the Arctic and Antarctic regions:

- # Geological mapping and allied Earth Science studies
- # Biogeochemistry of sea-ice ecosystems
- # Atmospheric Physics and Chemistry
- # Glaciological studies
- # Paleoclimatology

(c) The cooperation will give a much-needed bi-hemispherical approach to our polar science programmes. The Arctic Ocean and the surrounding regions are one of the most important areas that not only govern the earth's climate but have also recorded the past climatic history. The region is also an excellent harbinger of future changes, as the signals or clues that signify climate change are much stronger in the Arctic region than anywhere on the planet. The ministry has been undertaking scientific research in Arctic region around Ny-Alesund in Svalbard in various disciplines, i.e. glaciology, Palaeoclimate, microbiology, atmospheric science, etc. during different seasons in a year. Geologically, Svalbard is unique place where a complete geological column extending from Pre-cambrian is exposed. The close proximity of glaciers, mountains, streams and fjords present contrasting environment for research.