GOVERNMENT OF INDIA
OCEAN DEVELOPMENT
LOK SABHA

UNSTARRED QUESTION NO:234
ANSWERED ON:25.07.2000
NATIONAL CENTRE FOR ANTARCTIC AND OCEAN RESEARCH
SAHIB SINGH VERMA

Will the Minister of OCEAN DEVELOPMENT be pleased to state:

(a) The physical and financial dimension of National Centre for Antarctic and Ocean Research (NCAOR), Goa; and

(b) the manner in which the R & D Mandate in regard to the climatemodelling using polar remote sensing, palaeoclimatology and global change, Southern Ocean Oceanography and Creation of National AntarcticData Centre would be useful in solving the problems of the country ?

Answer

MINISTER FOR OCEAN DEVELOPMENT (DR. MURLI MANOHAR JOSHI)

(a) The national Centre for Antarctic & Ocean Research has been establishedat Goa by Department of Ocean Development as i) the nodal institution responsible for execution of the Indian Antarctic Program ii) taking up R & D in selected areas of polar sciences and establish required infrastructure facilities and iii) establish and maintain Indian Research Station in Antarctica. When fully operational NCAOR will have an icecore laboratory at sub zero temperature, ultra clean chemistry laboratory with facilities for ice core analysis and data base repository for Antarctic science and logistics. For the present NCAOR is assigned to manage theOceanographic Research Vessel Sagar Kanya of the Department. At present it has a total manpower of 32 staff of which 9 are scientific. The grant-in-aid received for the year 1999-2000 for executing the above programs was Rs.18.44 crores.

(b) The significance of the R & D mandate of NCAOR to the country will be in the following manner:

- The monsoons have a direct bearing on the economy of our country. This phenomenon is controlled by numerous parameters generated over the entire global system. Meteorological data collected over Antarctica on a decadenal scale by the Indian scientists is being used to develop a more realistic model on monsoon prediction and to understand the dynamics of the weather system over the Indian Ocean.

- Antarctica provides a singular platform to monitor ozone depletion. The understanding of ozone hole phenomena event, though being a part of a global effort, has significant interest for the Indian scientists. The hole, which was once considered static, has proved to be dynamic. This will have a direct bearing over the weather patterns over the Indian Ocean.

- Antarctica is a sensitive indicator of global warming which requires a long term monitoring for devising the response strategy to take preventive measures by any country well in time. For example, comparative studies on the mass balance of the large glaciers in Antarctica & Himalayas canprovide clues about the short-term climatic fluctuations, sea level rise and their linkage with the melt/freeze processes controlled by Antarctica and the Southern Oceans.

- Antarctic ice sheet is a repository of the past climate and environment. Reconstructing this historical data set through the facilities being established at the National Centre for Antarctic & Ocean Research, willhelp to test the climate models and understand the evolution of the climate patterns.

- The Southern Ocean is a major sink of CO2, from the atmosphere.This contributes to the high productivity of this water mass that has a direct effect on the nascent fisheries. Consequently, the stocks of krills, fin fish, tooth fish and squids in the Antarctic water offer potential economic resources. The Indian Ocean sector of the Antarctic waters is estimated togive a sustainable yield of fishery yields, which can be a future source of food.