

**GOVERNMENT OF INDIA
SCIENCE AND TECHNOLOGY
LOK SABHA**

STARRED QUESTION NO:362
ANSWERED ON:08.04.2003
STUDY ON CHANGES IN OZONE LAYER
A. VENKATESH NAIK;RAMSHETH THAKUR

Will the Minister of SCIENCE AND TECHNOLOGY be pleased to state:

- (a) whether the studies conducted by the Indian Team in the Antarctica region since 1981 indicate any changes in the ozone layer;
- (b) if, so, whether some holes have developed into the ozone layer over the World causing the danger of ultraviolet radiation ;
- (c) if so, the details of the studies conducted in the Antarctica region; and
- (d) the amount spent by the Government of India thereon so far?

Answer

THE MINISTER OF HUMAN RESOURCE DEVELOPMENT, MINISTER OF SCIENCE AND TECHNOLOGY AND MINIS OCEAN DEVELOPMENT (DR. MURLI MANOHAR JOSHI)

(a) & (b) Yes, Sir. While ozone hole has been observed over Antarctica, it is not seen over any other part of the world, though ozone depletion to an extent of 25-30% has been reported in Arctic regions. This depletion in ozone level is associated with increase in harmful ultra violet radiation with possible links to higher incidence of skin cancer and cataract, as indicated by the UNEP(United Nations Environment Programme) Report of 1991.

(c) The Indian teams in Antarctica have made measurements of vertical profile of ozone (with Indian ozone sondes) since 1986 from Dakshin Gangotri and since 1990 from Maitri, the permanent Indian stations in Antarctica. The measurements show that during the months of September-October there is a fall in ozone concentration over Maitri by approx.80% at 17 Km height as compared to the average value of ozone concentration during other months. Total ozone measurements were started by IMD at Maitri in 1999. Analysis of data obtained during the period 1999-2002 shows that during the month of September-October, total ozone also decreases by approx.60% as compared to the average value of total ozone during other months.

(d) The total expenditure incurred so far by India Meteorological Department is approx.Rs.2.5 crores for the scientific programme, including total and vertical ozone measurements in Antarctica since 1981.