

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

STARRED QUESTION NO:222

ANSWERED ON:29.03.2012

INVESTMENT IN S & T SECTOR

Rao Shri Nama Nageswara;Sharma Shri Jagdish

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

- (a) the status of India in the field of scientific research and technology development at international level;
- (b) whether the Government has taken note of the relatively backward position of India in this respect in comparison to China;
- (c) if so, the details thereof and the reaction of the Government thereto;
- (d) the private sector participation in research and development and investment to its GDP in China and India, separately; and
- (e) the action being taken by the Government to step up investment and to bridge the technological gap in this regard?

Answer

MINISTER OF SCIENCE AND TECHNOLOGY AND MINISTER OF EARTH SCIENCES (VILASRAO DESHMUKH)

(a) to (e): A Statement is laid on the Table of the House.

STATEMENT AS REFERRED TO IN REPLY TO PARTS (a) TO (e) OF LOK SABHA STARRED QUESTION NO. 222 FOR 29.03.2012 REGARDING "INVESTMENT IN S&T SECTOR"

(a) Madam, at the World Science Forum held in 2011 at Budapest, Hungary, India has been grouped among rising super powers of science and technology along with China. India ranks 9th both in respect of number of Research and Development (R&D) personnel and scientific publication output. India's scientific publication output is growing 4 times faster than that of the world average. According to the Economic Survey 2011-12, India is witnessing a rise in the number of R&D centres established by Multinational Corporations (MNCs) for outsourced R&D services and offshore R&D activities. Internationally, India is a centre of advantage for R&D.

(b) & (c): The Government has taken note of China's higher performance in research and development relative to India. In scientific outputs, China has surpassed not only India but also many developed nations including Japan, Germany, UK, and France. However, larger R&D outputs do not always lead to technological advancement. In areas such as space, software, vaccines, renewable energy etc India is ahead of China in technology strength, as for example in the area of vaccines, India commands more than 40% of global share in case of children vaccine, 66% of national share. The Government has declared 2010-20 as "Decade of Innovations". India's strategy is to accord equal emphasis on both affordable and globally competitive innovations. Technological self reliance in areas of developmental needs of the country has been accorded high priority in our R&D plans.

(d) The private sector participation in Research and Development in India as percentage of GDP is 0.23% as compared to 1.05% in China. Government is engaging with the private sector to increase their contribution to India's R&D expenditure which stands at level of around 0.9% of GDP. In most of the countries, private sector participation in R&D is larger than public sector expenditure. Over time as Indian industry becomes more global with the larger resources, private sector contribution to R&D efforts is expected to increase substantially.

(e) Government has proposed to increase the total R&D spending as percentage of GDP to 2% by the end of XII plan period. International S&T cooperation with technologically advanced countries like USA, UK, Germany, France, Australia, Canada, Japan and Korea and also EU has been strengthened for scientific research, joint development of technologies during the last five years. Some of these global R&D partnerships involve industrial sector in the country and aim to gain manufacturing competitiveness in high technology areas. Steps have been taken to invite industry chambers to prepare a white paper for improving policy environment for increasing the private sector engagement into R&D. Government have taken steps to build national capability and capacities in the area of super computing, open drug discovery, national geographical information system (GIS) etc.