

**Research and development by India companies**

3263. SHRI VISHWASRAO RAMRAO PATIL: Will the PRIME MINISTER be pleased to state:

(a) whether any Indian companies have tried to develop their own research and development skill and adopt imported technologies to suit Indian conditions;

(b) if so, the details thereof; and

(c) if not, whether Government propose to make it obligatory for the Indian companies to do so?

THE MINISTER OF STATE IN THE MINISTRY OF SCIENCE AND TECHNOLOGY, DEPARTMENT OF ELECTRONICS AND DEPARTMENT OF OCEAN DEVELOPMENT AND MINISTER OF STATE IN THE MINISTRY OF PARLIAMENTARY AFFAIRS (SHRI P. R. KUMARMANGALAM): (a) to (c) Over 1200 Indian Companies have set up their own In-house R&D Units. Out of these, there are about 350 in Chemical and Allied Industries, about 250 in Electrical and Electronics Industries, 225 in Mechanical Industries, 300 in processing industries and about 75 in Agro Industries. The objectives of these In-house R&D units are primarily to provide technical and technological support to the manufacturing units and also to develop skills and adopt imported technologies to suit the Indian conditions. The In-house R&D units have employed over 65000 R&D personnel and have created infrastructural facilities, such as, sophisticated instruments, pilot plants, proto-type design and development facilities for R&D. The R&D expenditure incurred by the In-house R&D units is estimated to be nearly Rs. 825 Crores during 1991-92.

**Exploration of Ocean near Dwarka**

3264. SHRI SUSHIL KUMAR SAMBHAJIRAO SHINDE: Will the PRIME MINISTER be pleased to state:

(a) whether exploration of the ocean near Dwarka, undertaken by Dr. Rao has been completed;

(b) if so, what are the findings thereof; and

(c) if not, what are the preliminary findings thereof;

THE MINISTER OF STATE IN THE MINISTRY OF SCIENCE AND TECHNOLOGY, DEPARTMENT OF ELECTRONICS AND DEPARTMENT OF OCEAN DEVELOPMENT AND MINISTER OF STATE IN THE MINISTRY OF PARLIAMENTARY AFFAIRS (SHRI P. R. KUMARAMANGALAM): (a) No, Sir.

(b) and (c) The underwater exploration of the Ocean near Dwarka have led to the recovery of the following:

—a jetty and inner and outer fortifications;

—Mooring stones and large 3-holed anchors datable to 1500 BC found in 12.5 metre water depth.

—A number of antiquities, such as seal inscribed jar, anchors, pottery, iron, bronze and copper artefacts and bases of flagposts.

As per the tentative conclusions drawn, the legendary city of Dwarka is believed to have been a large fortified port-city built by reclaiming land from the sea and subsequently submerging in it. The proto-historic settlement was nearly 4 km. in length and one of the submerged fortifications was 550 metres in perimeter. Further studies have established that the Thermoluminescence dating of the city of Dwarka can be assigned to 1500 B.C.

**Working of Meteorological Department**

3265. SHRI S. K. T. RAMACHANDRAN:

SHRI K. R. JAYADEVAPPA:

Will the PRIME MINISTER be pleased to state:

(a) whether Government's attention have been drawn to a newsitem published in the Times of India dated 12th July, 1992 on the working of the Meteorological Department on Lodi Road, New Delhi,

if so, the details of malfunctioning as reported, indicating action taken/proposed to be taken;

(b) whether it is a fact that Super Computer Department is rudderless, over-staffed and without any concrete plan and programme; and

(c) whether Government propose to order an inquiry and revamp the entire Department?

THE MINISTER OF STATE IN THE MINISTRY OF SCIENCE AND TECHNOLOGY, DEPARTMENT OF ELECTRONICS AND DEPARTMENT OF OCEAN DEVELOPMENT AND MINISTER OF STATE IN THE MINISTRY OF PARLIAMENTARY AFFAIRS (SHRI P. R. KUMARAMANGALAM): (a) Yes, Sir. The news report did not talk about the malfunctioning of the India Meteorological Department but has committed on a few individual experiences at junior working levels apparently without proper examination of the scientific background of the work.

(b) No, Sir. The Supercomputer has been installed in India with a definite objective to develop models for providing medium range weather forecasts for India. A high-power Programme Implementation Committee guides its work programme. Its present staffing is need-based.

(c) Does not arise.

#### **Setting up a Bureau for bringing NRI Scientists and Technologists**

3266. DR. SANJAYA SINH: Will the PRIME MINISTER be pleased to state:

(a) whether Government have set up a Bureau that would bring Non-Resident Indians (NRI)—Scientists and Technologists—in contact with the Indian Industries; and

(b) if so, what are the details thereof?

THE MINISTER OF STATE IN THE MINISTRY OF SCIENCE AND TECHNOLOGY, DEPARTMENT OF ELECTRONICS AND DEPARTMENT OF OCEAN DEVELOPMENT AND MINISTER OF STATE IN THE MINISTRY OF

PARLIAMENTARY AFFAIRS (SHRI P. R. KUMARAMANGALAM): (a) and (b) The Government of India through the Council of Scientific and Industrial Research, operates two programmes for utilization of Non-resident Indian Scientists and Technologists:

(i) Transfer of Knowledge Through Expatriate Nationals (TOKTEN) programme which is funded by UNDP and has been in operation since 1980. This programme is meant for undertaking projects with R&D organisations, Academic Institutions, Universities and also Industrial organisations—both public and private sectors.

(ii) Interface for Non-Resident Indian Scientists and Technologists (INRIST) programme is funded by the Government of India and has been in operation since 1990. The objectives of the INRIST programme are given below:

—Promote environment for using NRI expertise in India;

—Compile & analyse information on NRI expertise available and publish a Directory of experts;

—Identify challenges/opportunities/facilities in India for NRI professionals;

—Facilitate contact, rendezvous, settlement & linkage of NRIs in India;

—Act as a focal point for information concerning implementation of various activities.

—Explore possibilities of setting up R&D units or facilities of important nature to support manufacture of critical items and materials for industry and social sectors;

—Involve NRI expertise in Mission areas, thrust and emerging areas of S&T as well as important social sectors of activities;

—Work for establishment of independent or joint ventures in selected areas in collaboration with NRIs.