

offshore platforms and sub-marine pipelines are available in the country;

(e) if not, the steps taken by Government for training of personnel for the purpose; and

(f) whether any foreign personnel are working in the aforesaid area and if so, their number and the nationality ?

THE MINISTER OF STATE IN THE MINISTRY OF SCIENCE AND TECHNOLOGY AND MINISTER OF STATE IN THE DEPARTMENTS OF OCEAN DEVELOPMENT, ATOMIC ENERGY, ELECTRONICS AND SPACE (SHRI K.R. NARAYANAN) (a) and (b). Yes, Sir. The process technology for the extraction of metal values from polymetallic nodules has been developed. This work is being done in four laboratories in India. They have developed eleven process routes, out of which four, after critical evaluation, have been found to be feasible. These are being upscaled to semi-pilot project level.

(c) Does not arise.

(d) Yes, Sir.

(e) Does not arise.

(f) No, Sir. No foreign personnel are working in India in any area of polymetallic nodules programme.

SHRI BRAJAMOHAN MOHANTY : May I know whether the four process routes have been found feasible, and whether they are of international standards developed in advanced countries and are adequate to meet our requirements when we ourselves start the operations ?

SHRI K.R. NARAYANAN : Out of four routes, I think they will narrow down finally to one or two routes as the feasible way of extraction. But we have enough number of scientists who have got experience in this to be able to accomplish this process of extraction ourselves in time. At this stage, it is only done on a laboratory scale.

SHRI BRAJAMOHAN MOHANTY : Will the technological process that we have developed be adequate to meet our needs

and the international standard of the advanced countries of the world. Will you kindly enlighten about the number of personnel available in designing, engineering and consultancy services in nodule mining, off-shore platforms and submarine pipelines— in each category separately ? Why I have put this question is because your Annual Report is completely silent about it ?

SHRI K.R. NARAYANAN : As far as the technology is concerned, it has not been developed fully so far anywhere in the world. It is under the process of development. We hope by 1990 we would be able to set up a pilot plant. But the exploitation probably can take place only by 2000 or 2010 AD. As regards the number of personnel available in each category, I think I will have to collect it and send it to you.

SHRI ATISH CHANDRA SINHA : Has India got permission or a licence for exploration and exploitation of polymetallic nodules so far; if not, when do they expect to get that ?

SHRI K.R. NARAYANAN : We are to make our application this year for getting a licence for exploitation of the mineral nodules. This will be processed under the United Nations system what is called the Preparatory Commission or the International Sea Bed Authority. I cannot say exactly by what time the clearance will come.

#### Technical Processes Developed by CSIR

\*746. DR. T. KALPANA DEVI : Will the PRIME MINISTER be pleased to state :

(a) the major technical processes developed by the Council of Scientific and Industrial Research (CSIR) from 1984 to 1986; and

(b) the actual application of these processes in different industries and their results ?

THE MINISTER OF STATE IN THE MINISTRY OF SCIENCE AND TECHNOLOGY AND MINISTER OF STATE IN THE DEPARTMENTS OF OCEAN DEVELOPMENT, ATOMIC ENERGY, ELECTRONICS AND SPACE (SHRI K.R. NARAYANAN) : (a) and (b). A Statement is given below.

**Statement**

(a) The major technical processes developed by the Council of Scientific and Industrial Research (CSIR) from 1984 to 1986 are :

**Chemicals**

- Chrome lignite
- Butachlor
- Water absorbing polymer
- Zeolite catalyst for xylene isomerisation

**Drugs and Pharmaceuticals**

- Gugulipid
- Contbucridine
- Centbutindole
- Immunodiagnostic Kits

**Materials**

- Insulating bricks from rice husk ash
- Glass reinforced gypsum composite boards
- Graphite aluminium composites

**Minerals and Metals**

- Electrolytic copper powder
- High density dolomite sinters

**Machinery**

- 5-thread, 3-stitch safety industrial sewing machine
- Automatic cloth cutting machine
- Automatic brick moulding machine
- Hydraulic coil expanding and spreading machine

**Electronics**

- Microprocessor based pH control system (MAPCON)

**— Monitoring system for mine winder (MICROMON)**

(b) Of the above the following processes are in commercial production :

- (i) Zeolite catalyst
- (ii) Immuno-diagnostic kits
- (iii) 5-thread, 3-stitch safety industrial sewing machine
- (iv) Automatic cloth cutting machine
- (v) Automatic brick moulding machine
- (vi) Hydraulic Coil expanding and spreading machine
- (vii) Microprocessor based pH control system for sugar industry.

The rest of the processes licensed to industry are under various stages of implementation.

**DR. T. KALPANA DEVI :** In addition to two major technical processes, I would like to know whether CSIR has developed any processes for the development of rural and backward areas regarding the provision of drinking water in drought prone and drought hit areas and no water zones in our country; if so, I would like to know whether there is any proposal for the provision of these developed process in backward and drought prone areas of Telangana and Rayalseema Districts of Andhra Pradesh.

**SHRI K.R. NARAYANAN :** I did not hear the processes to which the hon. lady member was referring.

**DR. T. KALPANA DEVI :** Development of rural areas and backward areas, provision of drinking water facilities, in drought-prone and drought-hit areas and no-water zones in our country—these are the things I mentioned, I would like to know whether there is any proposal for the provision of these processes, in backward areas and drought-prone areas of Telangana and Rayalaseema of Andhra Pradesh.

**SHRI M. RAGHUMA REDDY :** What are the latest procedures developed by CSIR she is asking.

**SHRI K.R. NARAYANAN :** There is a technical mission for the provisions of drinking water with which CSIR is also involved. This mission is being worked out in detail and this would also apply to backward areas but this has not been fully worked out for implementation yet.

**DR. T. KALPANA DEVI :** What are the processes developed. I would like to know.

**SHRI K. R. NARAYANAN :** There are several. One is desalination process by which sea water is purified to be made into drinking water, That is one of the processes.

**SHRI M. RAGHUMA REDDY :** What are the exploratory processes ?

**SHRI PRATAP BHANU SHARMA :** I would like to know from the hon. Minister what effective steps are being taken by the CSIR for establishing better linkage between the R and D organisation and industries.

**SHRI K. R. NARAYANAN :** CSIR has been already working for the establishment of the links. In fact, some of the processes developed by CSIR are being manufactured by some of our industries in the way of collaborative arrangements or as sponsored projects. There are a number of areas in which such collaborations and such manufacturing of processes discovered by CSIR are taking place. I can give a number of examples of this, if you permit me. For example, one is, in the chemical field, a process developed by CSIR for chrome lignite drilling, and another is mud additive for oil wells. This has been licensed to Balmer Lawrie and co., Madras, and this is being developed by them. Another is, water absorbing polymer called Jalshakti. The Indian Organic Chemicals company is in the process of producing this. There is a large number of similiar examples which I would like to give or send to the Hon. Member for information.

**SHRI PRATAP BHANU SHARMA :** I will be glad to have them.

**SHRI C. P. THAKUR :** I want to know from the hon. Minister because, there was a news item that CSIR will be the nodal agency for any import of technology or indigenisation of technology and R and D in the domestic sector, there was also a report that the Abid Hussain committee report on the working of the CSIR has been submitted. What is the Government's thinking after that report of the working of the CSIR ?

**SHRI K. R. NARAYANAN :** The Abid Hussain report has been submitted to the Government and it is under examination by the Government. I would like to make it clear that the report is not a totally adverse report at all, there have been some criticisms on the working of the CSIR but it has also some praise for the way CSIR has been functioning. The report is being examined by an expert group and scientists and decisions will be taken by the Government later on.

CSIR is not a nodal agency for all the scientific research that is going on but it is a prime agency which gets involved in the development of science in the development of scientific processes. In the importation of technology it has some say but it is not a nodal agency for all kinds of scientific research.

[*Translation*]

**SHRIMATI USHA THAKKAR :** Mr. Speaker, Sir, through you I want to know from the hon. Minister whether there is any proposal to de-saline the sea water along the long coastal line of Saurashtra and Kutch by new techniques ? If any such proposal is under your consideration then by when will it be implemented and in which areas will it be implemented ?

[*English*]

**SHRI K. R. NARAYANAN :** There is already a Pilot de-salination plant already established in Gujarat coast for this purpose.

**SHRI C. MADHAV REDDI :** There is a general complaint that many of the processes developed by the constituent laboratories of the CSIR including NCL, NPL and other institutes are only bench scale processes. They do not have the funds to set up pilot plants to test the processes and when these processes are released to the industrialists for commercial exploitation they are not working. May I know whether the Government has got any proposal to see that these processes developed by the CSIR are first tested on a pilot scale before they are released either directly or through the NRDC ?

**SHRI K.R. NARAYANAN :** I think, I need not explain the process by which the CSIR processes are developed and then transferred to the industry.

As regards funds many of the collaborative projects which take place, actually the industry participates financially and sometimes to some extent even technologically. They sponsor projects...

**SHRI C. MADHAV REDDI :** I am not asking about the sponsored projects. I know about sponsored projects. I am asking about the processes which are available for everybody.

**SHRI K.R. NARAYANAN :** The processes which are developed by CSIR on its own are being contracted to the industry through the National Research Development Corporation.

We have funded our laboratories sufficiently. And many of these processes have been actually contracted to industry for development and some of them are already in the market.

#### Setting up of Indian Investment Fund in U.K.

\*747. **SHRI H.N. NANJE GOWDA :** Will the Minister of FINANCE be pleased to state :

(a) whether any bank in India has set up an Indian investment fund in the United Kingdom to tap funds of non-resident Indians and other investors abroad;

(b) if so, whether this is the first such venture in the banking history of India; and

(c) the objectives of this fund ?

**THE MINISTER OF STATE IN THE MINISTRY OF FINANCE (SHRI JANARDHANA POOJARY) :** (a) No, Sir. No, Indian bank has set up an Indian Investment Fund in the United Kingdom.

(b) and (c). Do not arise.

**SHRI H.N. NANJE GOWDA :** Is the Government aware that a leading foreign bank operating in India has set up an

Indian investment fund in the United Kingdom; if so, what is the reaction of the Government to this foreign bank setting up such an investment fund ?

**SHRI JANARDHANA POOJARY :** No Indian bank has set up investment fund in the United Kingdom. So far as foreign banks are concerned, the Reserve Bank of India or the Government of India has no control on a foreign bank setting up an investment fund in a foreign country ?

**SHRI H.N. NANJE GOWDA :** When a foreign bank could organise such an investment fund and attract non-resident Indians *i.e.* funds held by non-resident Indians, why not Government consider permitting one of our nationalised banks to set up such an investment fund and put some directors who are non-resident Indians and tap resources of non-resident Indians ?

**SHRI JANARDHANA POOJARY :** Even though the question does not relate particularly to this question, I may tell the hon. Member that UTI has set up a fund and it has collected funds to the extent of 75 million and it is investing in debentures and shares in India.

**PROF. MADHU DANDAVATE :** I would like to know from the hon. Minister whether he is aware of the fact that certain concessions and facilities are available to the non-resident Indians to have investments in India, there have been certain companies abroad which, in their balance-sheet, neither show profits nor any borrowings from any credit institutions and yet they have sought the investment in Indian companies and, if it is so, does it not lead us to the conclusion that such investments must be arising out of black-money from this country going abroad and coming back as white money for investment and if such aberrations are found out what steps are taken to see that misuse of your concessions and facilities is not done by the anti-social elements ?

**MR. SPEAKER :** Can it be done ?

**SHRI JANARDHANA POOJARY :** Whenever such instances are brought to our notice and if there is any proof or *bona fide* evidence, we can look into it.