

see whether those things are going on. As far as per capita expenditure is concerned, the hon. Member asked about Sikkim. The figures of per capita expenditure for Sikkim are as follows :

5th Plan	Rs. 1906
6th Plan	Rs. 5809
7th Plan	Rs. 10952

The All India average is Rs. 1493

SHRIMATI D.K. BHANDARI : I hope the hon. Minister is aware that Sikkim is the youngest State in our country, and it is far, far behind compared to many other developed States of our country in all respects. May I know from the Hon'ble Minister what then Central Government is doing for this backward State and make it self-sufficient, by generating its own resources ?

SHRI A.K. PANJA : The hon. Member has special knowledge about Sikkim and I appreciate that. As I said, the per capita expenditure is the highest—not only in terms of All India average, but it is the highest among the hill States also. Sikkim's figure is Rs. 10952. Therefore you will appreciate that special attention is being given to it, particularly to the basic need of the people. And then, naturally within those, education comes in and other social services come in, transport communication comes in and power comes in.

THE PRIME MINISTER (SHRI RAJIV GANDHI) : Sir, I would like to add one word. The total Seventh Plan for Sikkim is Rs. 230 crores and the Central Government is giving Rs. 247.62 crores. So, we are giving 107% of the Plan.

SHRIMATI D.K. BHANDARI : Sir, I thank them for general Central assistance given to Sikkim. May I know from Hon'ble P.M. But what is the Centre doing to make Sikkim self-sufficient ?

SHRI RAJIV GANDHI : Mr. Speaker, Sir we give all the assistance and we would appreciate Sikkim using it to make it self-sufficient.

SHRIMATI D.K. BHANDARI : Sir, we do not want to be dependent on the Centre always.

[Translation]

SHRI GIRDHARILAL VYAS : Mr. Speaker, Sir, I want to know whether the hon. Minister is aware that Aravalli hills are in Rajasthan which the Hon. Prime Minister had visited a few days back ? The condition of Adivasis there is appalling and the assistance which is given for the hill areas is not being given in the case of hill areas in Rajasthan. Will you please see to it Rajasthan is also provided with this assistance ?

[English]

SHRI A.K. PANJA : So far as Rajasthan is concerned, that area does not come under special category. We have to decide it according to certain broad line of parameters laid down because as far as these particular areas are concerned, each hill area is being attended to with special assistance. But to get special category assistance, there are certain demarcations and on that basis, we decide the particular hill area.

[Translation]

SHRI GIRDHARI LAL VYAS : The condition of the people there is appalling.

MR. SPEAKER : I also wanted to say something about the hills, but I have forgotten, anyway.

[English]

#### Steps for full Ocean Exploitation

\*335. SHRI VIRDHI CHANDER JAIN : Will the PRIME MINISTER be pleased to state :

(a) the steps envisaged to have an exhaustive data base and technology

option for full exploitation of ocean wealth in a phased manner;

(b) the long term and short term measures drawn with that end in view.

(c) how far it will go in meeting our expectations for exploitation of the ocean wealth; and

(d) whether any progress has been made in deep sea mining in Indian Ocean till now and if so, the details thereof ?

THE MINISTER OF STATE IN THE MINISTRY OF SCIENCE AND TECHNOLOGY AND IN THE DEPARTMENTS OF OCEAN DEVELOPMENT, ATOMIC ENERGY, ELECTRONICS AND SPACE (SHRI SHIVRAJ V. PATIL) : (a) to (c). An extensive data base is already available in the National Oceanographic Data Centre, which is located at the National Institute of Oceanography, Goa for storage, processing and dissemination of data and information systems related to ocean science and technology. Intensive efforts are underway to build R & D infrastructure for the development of requisite technology for the exploitation of ocean wealth.

During the seventh Five Year Plan, it is proposed to upgrade the above Data Centre and to develop technologies in different thrust areas.

(d) Yes, Sir. Two mine sites have been identified in the Central Indian Ocean and India has filed an application with the Preparatory Commission of the International Seabed Authority for the registration and allotment of one of the two sites for deep seabed mining. Considerable progress has been achieved in the extraction of metals from the nodules obtained from deep seabed.

[*Translation*]

SHRI VIRDHI CHANDER JAIN : Mr. Speaker, Sir, it is heartening to note that exploratory ocean mining work is in progress. I want to know whether any

programme has been envisaged in the Seventh Five Year Plan to step up research and development activities in the National Institute of oceanography, Goa and what provision has been made in this regard ?

SHRI SHIVRAJ V. PATIL : This research laboratory is under C.S.I.R and we can say that we spend Rs. 3 to 4 crores annually on this project. The work undertaken there is of different types. Firstly, the samples of living and non-living wealth in the ocean are taken out and examined how they can be used in our economic growth.

Secondly, effects of ocean on whether are also studied.

Thirdly, the effect of ocean water on iron, wood and another elements is studied. By doing so, we also consider developing protective measures to our ships, ports, etc. The work of testing polymetallic nodules taken out from deep sea bed and processing and dissemination of computerised data is also undertaken there. Thus, a variety of work is done there.

SHRI VIRDHI CHANDER JAIN : I want to know what are the expectations from the nodules obtained; what type of metal and in what quantity are we going to get ?

SHRI SHIVRAJ V. PATIL : Sir, these polymetallic nodules have been found in the Central Indian ocean at two places and we are making efforts to extract metals from these nodules in the laboratories. Cobalt, nickel, copper and zinc, etc. have been extracted from these nodules and experiments are being carried out in two to three laboratories—one of them in Bhubaneswar—to evolve processes for extraction of metal. But I do not have complete information at the moment to what extent we shall be able to accomplish it. I do have some information but not complete information. Permission is required to be obtained from the United Nations before the nodules are taken out and application for

that is required to be submitted to the Seabed Authority. Exploitation work starts after permission is obtained from the Seabed Authority. So far nodules have been found at two places and application for permission has been submitted to the Seabed Authority. We hope to get permission in one case and we can start work of its utilisation after it is extracted. I think the technology in this field is not yet fully developed in the world. Complete knowledge regarding its extraction and commercial use is not yet available in the world, what to talk of India. However, work in this field is going in India and outside India and it is hoped that complete technology in this field will be developed within 10-15 years and by that time it will be possible for mankind to extract metals from the sea besides earth for its use.

[English]

SHRI VIJAY N. PATIL : India has got vast sea-coast. Not only that. Our Andaman & Nicobar Islands are there. According to international law, we can explore up to 250 nautical miles from our land surface. So, we can explore 250 nautical miles from Andaman & Nicobar & Laccadives Islands also.

I would like to know from the hon. Minister what special efforts are being put in ? As the hon. Minister has stated that the seabed authority has to give the permission, are we obtaining the permission only near the Bombay coast or Visakhapatnam coast or the permission is also being sought for the research near Andaman & Nicobar coast ?

There was talk of purchasing three research vessels for conducting research at the bottom of the sea for sea food, for nodules and for exploration of oil. I would like to know whether these three research vessels are also purchased.

I would like to know these two points from the hon. Minister.

SHRI SHIVRAJ V. PATIL : The exclusive economic zone of India is equal to two-third of the land-mass of India. As

far as the exclusive economic zone is concerned, it is not necessary for India to obtain permission from International Sea Bed Authority or the United Nations. India has economic sovereignty over exclusive economic zone and India can exploit the natural resources from this area. For using the resources from the open sea, it is necessary to obtain the permission from the Sea Bed Authority and it is for that purpose we have made application to the Sea Bed Authority and not for using the resources in the economic zone. The survey is going on to find out what are the living and non-living resources in the economic zone of India. Now we propose to cover lot of area and find out what is being done. We have already obtained two ships, one is Sagar Kanya and the other is Sagar Sampada. Sagar Kanya is used for living and non-living resources survey in the economic zone as well as in the open. Sagar Sampada is the ship which is used for surveying the living resources in India. We have the third ship called 'Gaveshini' which is also being used for survey.

#### Steps to Encourage Forestry on Wastelands

\*336. SHRI D.P. JADEJA : Will the PRIME MINISTER be pleased to state :

(a) whether Government are aware of the special consideration being given by certain States to farmers raising forest crops on their lands;

(b) whether Government have considered treating forestry on the same lines as plantation crops like tea and coffee;

(c) the steps being taken to encourage forestry on waste lands by farmers; and

(d) the funds allotted for raising forestry crops on waste-land in 1985-86 ?

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