

(b) whether one of the reasons is less rainfall ;

(c) if so, whether the downward trend of rainfall is on account of natural reasons or man-made cause of deforestation of land ; and

(d) the preventive measures proposed to be taken to prevent the mass scale felling of trees ?

THE MINISTER OF STATE IN THE MINISTRY OF ENVIRONMENT AND FORESTS (SHRI Z.R. ANSARI) : (a) While lowering of water table has been observed, there is no lowering of watershed areas in the country ;

(b) and (c). There is no observed downward trend in rainfall. The reasons for variation in rainfall are not known.

(d) Measures proposed for preventing mass scale felling of trees include :

—Close scrutiny of projects involving diversion of forest land before approval is granted ;

—Conservation of biologically rich areas by protecting them as National Parks, Sanctuaries and Biosphere Reserves ;

—Emphasis on alternative energy sources to save fuel wood ;

—Massive social forestry programme to meet fuel and fodder requirements ;

—Control on shifting cultivation ; and

—Afforestation of 5 million ha/yr. of wasteland.

Development of means and Instruments to Tap Seawaves for Generation of Power

2354. SHRIMATI MADHUREE SINGH : Will the PRIME MINISTER be pleased to state :

(a) whether Government are aware of the tapping of seawaves as a source for generating power by the USSR and Japan and many other countries ;

(b) if so, the details thereof ;

(c) whether the development of the means and instruments to tap seawaves for generation of power have been undertaken in our country ; and

(d) if so, the details thereof ?

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) Yes, Sir.

(b) According to the available information, several countries, including USSR and Japan, have made considerable efforts in generating power by wave action in their off-shore and in-shore areas on a trial basis. Norway has developed a proto-type wave power generating plant using techniques of Oscillating Water Column (OWC).

(c) Yes, Sir.

(d) The Department of Ocean Development has sponsored a project at the Indian Institute of Technology, Madras, for power generation by waves. The Institute has completed laboratory experiments for power generation by waves. A sea trial experiment will be undertaken with a view to developing a proto-type wave power plant. The Calcutta Port Trust is also having a project for harnessing wave energy at the Sagar island in West Bengal.

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2355. SHRI V. SOBHANADREESWARA RAO : Will the PRIME MINISTER be pleased to state :