

GOVERNMENT OF INDIA
MINISTRY OF EARTH SCIENCES
LOK SABHA
STARRED QUESTION NO. *77
TO BE ANSWERED ON 8th July, 2009

CONVERSION OF SEA WATER INTO POTABLE WATER

* 77 SHRI BRIJBHUSHAN SHARAN SINGH:

Will the Minister of EARTH SCIENCES be pleased to state:

- (a) whether the Government has formulated any scheme to convert sea water into potable water:
- (b) if so, the salient features of the said scheme;
- (c) whether any target has been set out in this regard; and
- (d) if so, the details thereof?

ANSWER

THE MINISTER OF STATE (INDEPENDENT CHARGE)
MINISTRY OF SCIENCE AND TECHNOLOGY, MINISTRY OF EARTH SCIENCES,
MINISTER OF STATE IN THE PRIME MINISTER'S OFFICE, MINISTER OF STATE
IN THE MINISTRY OF PERSONNEL, PUBLIC GRIEVANCES & PENSIONS AND
MINISTER OF STATE IN THE MINISTRY OF PARLIMANTARY AFFAIRS
(SHRI PRITHVIRAJ CHAVAN)

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

STATEMENT REFERRED TO IN REPLY TO PARTS (a) TO (d) OF THE
LOK SABHA STARRED QUESTION NO. *77 FOR ANSWER ON
8th JULY 2009

(a) Yes, Sir.

(b) The National Institute of Ocean Technology (NIOT) an autonomous body of the Ministry of Earth Sciences has indigenously designed developed and demonstrated the desalination technology for conversion of sea water into potable water based on Low Temperature Thermal Desalination System (LTTD). The LTTD is a process under which the warm surface sea water is flash evaporated at low pressure and the vapour is condensed with cold deep sea water. After conducting several experiments in the Laboratory (500 Liter per day capacity & 5000 Liter per day capacity), a LTTD plant with a capacity of 1 lakh liter per day production of fresh water was developed and installed in May 2005, at Kavaratti, Lakshadweep Island which is a land based plant. The plant has been effectively working since then and catering significantly to the needs of the population of Kavaratti. The plant has so far produced over 10 crores of liter so far. The Lakshadweep Islands have the advantage of ocean depth (~500 m) available within few hundred meters from the coast and hence, land based plants are possible. Another LTTD Plant of 1 lakh litre per day capacity was also established at Northern Chennai Thermal Power Station, Chennai in March 2009, which uses the waste heat discharge from the power plant. NIOT has also demonstrated an offshore barge mounted 10-lakh liter per day capacity plant about 40 kms off Chennai in April 2007, as a part of scaling up plants for the coastal region of India.

(c&d) Yes, Sir. NIOT is in the process of setting of 3 more plants in the islands of Lakshadweep one each in Agatti, Androth, and Minicoy which are in the advance stage of commissioning. The target for completion of one of the plants at Agatti is September 2009 and for the other two plants is December 2009. A scheme is also been formulated for large scale desalination plants in the coastal areas including at the coastal power plants.
