

**GOVERNMENT OF INDIA
EARTH SCIENCES
LOK SABHA**

STARRED QUESTION NO:256

ANSWERED ON:18.08.2011

CONVERSION OF SEA-WATER INTO POTABLE WATER

Joshi Shri Mahesh;Kataria Shri Lal Chand

Will the Minister of EARTH SCIENCES be pleased to state:

- (a) whether our scientists have achieved success in converting sea-water into potable water;
- (b) if so, the details thereof;
- (c) whether the Government has set up any plant for this purpose;
- (d) if so, the details thereof, location-wise;
- (e) the states wherein the said converted water is proposed to be supplied;
- (f) the efforts made to reduce the cost of the conversion process; and
- (g) the quantum of sea water processed into potable water during the last three years?

Answer

MINISTER OF SCIENCE & TECHNOLOGY AND MINISTER OF EARTH SCIENCES (SHRI VILASRAO DESHMUKH)

a) – g) A statement is laid on the Table of the House.

STATEMENT LAID ON THE TABLE OF THE LOK SABHA IN REPLY TO (a) to (g) OF STARRED QUESTION No. 256 REGARDING "CONVERSION OF SEA WATER INTO POTABLE WATER" TO BE ANSWERED ON THURSDAY, AUGUST 18, 2011.

a) Yes.

b) The Ministry of Earth Sciences (MoES) had launched a program for development of Low Temperature Thermal Desalination (LTTD) technology for conversion of seawater into potable water, suitable for installation in the island territories and near the coastal Power Plants. The National Institute of Ocean Technology (NIOT) an autonomous body of the Ministry of Earth Sciences has been responsible for design, develop, demonstrate and commission the LTTD plants in selected coastal locations. 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. The technology is completely indigenous, robust and environment friendly

c) Yes.

d) Till date 4 LTTD plants have been successfully commissioned in the country, one each at Kavaratti, Minicoy, Agatti, Lakshadweep and at Northern Chennai Thermal Power Station (NCTPS), Chennai. Out of these four plants, the Minicoy and Agatti plants were established in April 2011 and July 2011, respectively. The capacity of each of these LTTD plants is 1 lakh liter per day of potable water. Besides, the ministry is working to set up 6 more plants funded by Lakshadweep Administration, one each in the islands of Lakshadweep viz., Amini, Chetlet, Kadamath, Kalpeni, Kiltan and Andrott plants.

e) Currently, LTTD plants are located in the islands of Lakshadweep and one plant is operational at NCTPS, Chennai. The water is used locally.

f) The cost per liter of desalination would depend on the technology used and cost of electricity which varies from place to place. According to the cost estimates made recently by an independent agency for LTTD technology, the operational costs per litre per of desalinate water currently works to be 19 paise. Efforts are being made to reduce operational cost by adopting optimum design parameters.

g) The quantum of fresh water, equivalent to bottled quality, produced in last 3 years is 1150 lakh liters in the Lakshadweep islands.