GOVERNMENT OF INDIA
MINISTRY OF EARTH SCIENCES
LOK SABHA
UNSTARRED QUESTION No. **937**
TO BE ANSWERED ON WEDNESDAY, JULY 16, 2014

CONVERSION OF SEA WATER INTO POTABLE WATER

937. DR. M. THAMBI DURAI:

Will the Minister of **EARTH SCIENCES** be pleased to state:

(a) whether the project for conversion of sea water into potable water has become a success and if so, the details thereof;
(b) the details of desalination plants set up in the country, State/UT-wise along with their capacity;
(c) whether the Government proposes to set up more such plants, in the country ;
(d) if so, the details thereof, State/UT-wise including Tamil Nadu; and
(e) the details of the cost of conversion of sea water into potable water; and the details of the sharing of cost between the Centre and the State in this regard?

ANSWER
MINISTER FOR MINISTRY OF SCIENCE AND TECHNOLOGY AND
MINISTRY OF EARTH SCIENCES
(DR. JITENDRA SINGH)

(a) Yes, Madam. The National Institute of Ocean Technology (NIOT), Earth System Science Organization (ESSO) has indigenously designed, developed and demonstrated desalination plants for conversion of sea water into potable water based on Low Temperature Thermal Desalination (LTTD) technology. 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. This technology is efficient and found suitable for the Lakshadweep islands.

(b) Three LTTD plants have been successfully commissioned in the country, one each at Kavaratti, Minicoy, and Agatti islands of the Union Territory of Lakshadweep. The capacity of each of these LTTD plants is 1 lakh liter of potable water per day.

(c) Yes, Madam.

(d) Work has been initiated to set up a prototype LTTD plant with a capacity of generating 2 million litres of potable water per day (2 MLD) at the Tuticorin Thermal Power station, Tamil Nadu. The Lakshadweep Administration requested ESSO-NIOT for setting up similar plants in remaining six islands. ESSO-NIOT has sent a detailed project report to the Lakshadweep Administration in this regard.

(e) 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 by an independent agency for LTTD technology, the operational costs per litre of desalinated potable water is about 61 paise for island based plants. The plants set up at Lakshadweep were funded fully by the Central Government.

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