GOVERNMENT OF INDIA
MINISTRY OF EARTH SCIENCES
RAJYA SABHA
UNSTARRED QUESTION NO. 2752
ANSWERED ON 19/12/2024

DESALINATION PLANTS

2752. SHRI PRAMOD TIWARI:

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

(a) the number of desalination plants commissioned in the country;
(b) the number of new plants proposed to be set up, location-wise;
(c) the quantum of desalinated water gets produced daily and the cost thereof;
(d) whether there are any mobile or floating desalination facilities; and
(e) if so, the details thereof?

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

(a) Ministry of Earth Sciences, through its autonomous Institute, National Institute of Ocean Technology (NIOT), has set up eight Low Temperature Thermal Desalination (LTTD) technology-based sea water desalination plants at eight islands of the Union Territory of Lakshadweep. CSIR- Central Salt and Marine Chemical Research Institute (CSMCRI), Bhavnagar has commissioned 160 Reverse Osmosis (RO) based desalination plants in the different states of the country. Further, rural drinking water supply being a State subject, Government of India assists States by providing financial and technical assistance to provide potable water to rural population through the centrally sponsored Jal Jeevan Mission (JJM). Powers to plan, approve, and implement rural drinking water supply schemes including desalination plants are vested with States.

(b) Lakshadweep Administration had approved setting-up of a LTTD desalination plant with capacity of producing 1.5 lakh litre per day in the islands of Androth of the Union Territory of Lakshadweep. The project activities are at different stages of completion at this site.

(c) The capacity of the LTTD plants in the Lakshadweep islands varies from 1.0 million litre per day (MLD) to 1.5 MLD of potable water.According to the cost estimates made by an independent agency for LTTD technology, the cost per litre of desalinated potable water is about 61 paise for these island based plants.The RO based desalination plants set-up by CSMCRI produces nearly 5 MLD of potable water produced, with cost of water about 5 paisa per litre.

(d) & (e) Yes. CSMCRI, Bhavnagar has designed and developed a mobile bus consisting of RO based Plants for water desalination and purification in 2008. The bus mounted RO water filter houses RO plant that runs on auto engine of the bus obtaining required power. It is also provided with facility to install solar cells (0.3 kw) on the roof of the bus. RO plant can process the water from salinity ranging from brackish up to seawater. NIOT has demonstrated an experimental 1000 m3/day (one million liters per day) barge mounted desalination plant 40 km off Chennai coast meant for mainland usage. Temperature gradient of about 18°C was utilized with surface water at 28°C and the water at 550m depth at 10°C. The plant was commissioned in April 2007 and the sea trials were successfully conducted for a few weeks. Thereafter, the plant was dismantled.

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