GOVERNMENT OF INDIA
MINISTRY OF RAILWAYS

LOK SABHA
STARRED QUESTION NO. 552
TO BE ANSWERED ON 12.04.2017

WATER MANAGEMENT IN INDIAN RAILWAYS

***552. SHRI ADHALRAO PATIL SHIVAJIRAO:**
SHRI SHRIRANG APPA BARNE:

Will the Minister of RAILWAYS be pleased to state:

(a) whether there is a need to regularise the use of water in Indian Railways and if so, the details thereof;

(b) the annual water consumption of the Indian Railways and the manner in which the Railways meet its regular water consumption;

(c) whether the Indian Railways is taking steps towards the preservation of water and rolling out a new policy that is likely to be a game-changer and if so, the details and the salient features thereof;

(d) whether the Railways has decided to encourage private players to set up water treatment plants specifically for this purpose and if so, the manner in which this is likely to check water wastage and cut down the annual water bill of the Indian Railways; and

(e) the services and areas where this policy is proposed to be implemented and the extent to which the new water policy would promote a better water management system and curtail water wastage and consumption?

ANSWER

MINISTER OF RAILWAYS

(SHRI SURESH PRABHAKAR PRABHU)

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

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STATEMENT REFERRED TO IN REPLY TO PARTS (a) TO (e) OF STARRED QUESTION NO. 552 BY SHRI ADHALRAO PATIL SHIVAJIRAO AND SHRI SHRIRANG APPA BARNE TO BE ANSWERED IN LOK SABHA ON 12.04.2017 REGARDING WATER MANAGEMENT IN INDIAN RAILWAYS

(a) Yes, Madam. Indian Railways (IR), being a major consumer of water, ought to take adequate and effective measures to improve the management of demand and supply of water to avoid water scarcity coming in the way of operation and management of Railways.

(b) Indian Railways has more than 8000 stations and other establishments/ institutions spread over length and breadth of the country. To meet the demand of water of these settlements, Railways are using various sources for water like bore-well, municipal supply, tankers, rivers/ dams etc. Although accountal of water received from the municipality is maintained but it is practically not feasible to have accountal of water taken from other sources like bore-well, dams / rivers etc.

(c) Yes, Madam. Indian Railways are already taking a number of steps towards preservation of water. Some of these are:

Water Recycling: At present 39 number of waste water treatment plants are treating around 1.26 crore litres of water every day. Another 48 plants are at various stages of construction and installation. Water

requirement has been reduced by about 15 million litres per day. IR signed an MOU on 03.12.2015 with the Ministry of Water Resources regarding use of non-potable water released from Effluent Treatment Plants located in Ganga Yamuna River Zones for Railway purposes.

Rain Water Harvesting (RWH): Railways have identified about 3539 buildings having rooftop area of more than 200 sqm on which installation of RWH facilities is feasible. 2997 rain water harvesting systems have already been provided.

Water Audit: 157 water audit have been conducted.

Water bodies - Created/ Nurtured/ Protected: IR has revived 40 old water bodies and 5 are newly created. One 200 year old "Salarjung" open well revived during the year is yielding 2-4 lakh litres of water per day saving precious water and also revenue of ₹ 2 crore per annum. A total of 1527 functional water bodies exist on Railway land.

In order to further strengthen water conservation efforts and to meet self target of 20% reduction in water consumption as part of commitment made under Intended Nationally Determined Contribution (INDC), Indian Railways has formulated Water Management Policy, 2017. The policy aims to curb water wastage and to reduce expenditure on fresh water by way of setting up of Effluent Treatment Plants (ETPs), Sewage Treatment Plants (STPs), Rain Water Harvesting (RWH), Water Recycling Plants (WRPs), Restoring and creating water bodies etc. Main features of policy are:

1. **Each Zonal Railway/ Production Unit shall endeavour to make at least one unit (colony, workshop, shed, station etc.) every year to**

become water positive which implies that recycled water plus water harvested is more than water extracted and consumed.

2. **Indian Railways, where ever possible and advisable, shall use SCADA (supervisory control and data acquisition based system) which is configured to control various equipments and monitor the water throughout this entire process.**
3. **Solar heating systems shall be a standard component of the water supply system.**
4. **Water audit shall be carried out in all establishments (station, sheds/ depots, colonies and Workshops/ Production Units etc.) where (a) water consumption is more than 5 lakh litres per day and/ or (b) water supply is from ground water source and Ground Water Block falls in 'Semi-Critical', 'Critical' or 'Over-exploited' category as per Central Ground Water Board categorization and/ or (c) where railway is purchasing substantial quantity of water from Municipality.**
5. **Water meters shall be installed in major service buildings, workshops, depots/ sheds, stations, major utility buildings covering supply point(s) and major distribution/ end-use point(s).**
6. **ETPs/ WRPs have to be provided at railway stations, colonies, workshops/ sheds, hospitals etc., including other units as per the Central Ground Water Authority's guidelines.**
7. **RWH systems shall be provided in all existing establishments (station buildings, service buildings, residential quarter and other units) having roof top area of more than 200 sqm subject to techno-economic feasibility.**

8. **Bathroom sinks and toilets including flushing tanks shall be equipped with low water consumption kits/ fittings. Waterless urinals need to be used progressively.**
9. **For the first time private participation in water recycling and purchase of recycled water on Build Own Operate Transfer (BOOT) basis has been envisaged in the policy.**

Railways have planned to meet the expenditure on environmental works including water management through 1% lumpsum provision in the works estimates for environment related works. Provisions are also planned from Corporate Social Responsibility (CSR) funds. Indian Railway is also exploring the feasibility of leveraging green climate fund (GCF) for water management.

(d) Yes, Madam. Private participation in water recycling and purchase of recycled water on Built Own Operate Transfer (BOOT) basis has been envisaged in the policy for the first time by recognizing water recycling plants as revenue saving projects by cutting down expenditure on purchase of fresh water. Water vending machines have also been set up by private participation for supply of clean drinking water. As stated above, recycling of water shall prevent water wastage and therefore cut down annual water bill of Indian Railways.

(e) The policy will be implemented in all railway establishments i.e. stations, sheds/depots, Workshops/Production Units/ colonies to reduce expenditure on purchase of fresh water by using recycled water for non-potable purposes. Features like Water Management Plan, upgrading water supply system, measurement and accountal of water consumption, water audit and waste water management along with use of water efficient fittings, automatic valves, use of SCADA

(supervisory control and data acquisition) based control system would promote better water management.

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