

GOVERNMENT OF INDIA  
MINISTRY OF JAL SHAKTI  
DEPARTMENT OF WATER RESOURCES, RIVER DEVELOPMENT & GANGA REJUVENATION  
**LOK SABHA**  
**UNSTARRED QUESTION NO. 2489**  
ANSWERED ON 03.08.2023  
**WATER AUDIT IN INDUSTRIES**

2489. SHRI T.R.V.S. RAMESH

Will the Minister of **JAL SHAKTI** be pleased to state:

- (a) whether there is any water auditing conducted in water intensive industries like thermal power plants, steel plants, tanneries, pulp and paper, textiles, fertilizers, etc.;
- (b) if so, the manner in which waste water is managed in these industries;
- (c) the various measures taken for sustainable use of water in the above water intensive industries; and
- (d) whether there is any plan for advanced waste water treatment technology to be used in these industries and if so, the details thereof?

**ANSWER**

**THE MINISTER OF STATE FOR JAL SHAKTI**

(SHRI BISHWESWAR TUDU)

**(a) & (b)** The status with regard to water auditing in water intensive industries and management of waste water in these industries along with the steps taken by Government in this regard is as follows:

- i. The study on “Benchmarking Industrial Water Use to assist policy for enhancing Industrial Water Use in India” was entrusted to The Energy and Resources Institute (TERI) by National Water Mission for evaluation of water use in water intensive industries (viz. Thermal Power Plants, Textiles, Pulp & Paper and Steel Industries) in India through secondary data collection and water audits to identify the specific interventions to enhance water use efficiency and facilitate the process of setting up guidelines and benchmarks for industrial water use to assist the policy. TERI has submitted the Draft Final Reports of Thermal Power Plants, Textiles, Pulp & Paper Industries.
- ii. Notification dated 24th September, 2020 of the Central Ground Water Authority makes it mandatory to undertake annual water audit by all industries including water intensive industries abstracting ground water in excess of 100 cubic meter/ day.
- iii. Under the provisions of the Environment (Protection) Act, 1986 industry-specific environmental standards are notified for consumption of freshwater/ discharge on inland surface water, public sewer, land irrigation, and marine coastal area. Compliance of these standards are enforced by concerned State Pollution Control Boards (SPCBs)/Pollution Control Committees (PCCs).
- iv. Regulation of industrial pollution is implemented through various provisions of “The Water (Prevention and Control of Pollution) Act 1974” which provides for previous consent of the State Pollution Control Board (SPCB) for establishing any industry, operation/ process/ treatment and disposal system which is likely to discharge sewage or trade effluent.

- v. Cooling water is generally recycled in industries. Waste water generated in the industries is treated in Effluent Treatment Plants (ETP). The conditions for reuse/ discharge of treated effluent are prescribed in Environment Clearance/ Consent issued by Ministry of Environment Forest & Climate Change/ State Pollution Control Boards/Pollution Control Committees. Compliance verification of Grossly Polluting Industries (GPIs) ( including Textile , Sugar, Distillery, Pulp & Paper Industries, Fertilizers, Tannery , Chemicals etc ) having potential to discharge into river Ganga and its tributaries is being carried out through third party institutes (TPIs) since 2017. GPIs have installed Effluent Treatment Plants (ETPs) for treatment of waste water and compliance of ETP systems are verified through regular surveillance. Units have also been directed to install Online Connectivity Effluent Monitoring System (OCEMS) for self-regulatory purpose and connect it to State Pollution Control Board (SPCB) and Central Pollution Control Board (CPCB) server. All the GPIs are inspected by joint team of officials from technical institutes and SPCBs for compliance verification.
- vi. CPCB has prepared the Charter, which is based on participatory approach for five water intensive industrial sectors namely; Pulp & Paper, Distillery, Sugar, Textile and Tannery, which suggest the various measures for sustainable use of freshwater through adoption of cleaner technology, waste minimization practices& re-use/recycle. Beside the measures for reduction in freshwater consumption, Charter also promote the augmentation & up gradation of effluent treatment plant (ETP) up to tertiary treatment level. Charter also prescribe the norms for freshwater consumption and wastewater discharge for different categories of these industrial sectors, based on raw material and product. Metering at freshwater abstraction points, recycling & discharge points and record keeping for same is ensured in GPIs.

Besides above measures, it is stated that since water is a state subject, State Governments take several measures for efficient utilization of water within the States, including water audit, implementation of laws and penal action against those violating the rules/ regulations etc. The Central Government supplements the measures and efforts being taken up by the State Governments.

**(c)** In the interest of operational feasibility and profitability, the water intensive industry adopts various measures for sustainable use of water. The measures for sustainable use of water need specific tailor solution and therefore differ from industry to industry. However, these measures are primarily based on the objective of reducing water consumption and increasing efforts for water conservation so that the industries become water positive. Adhering to the concept of 3 R's Reduce, Reuse and Recycle at a macro level is the key to comprehensive, holistic and sustainable management of water resources in the water intensive industries.

**(d)** Usage of advanced waste water treatment technology is a continuous process and varies from industry to industry depending upon environmental status and regulatory requirement. As the various types of contamination of wastewater require a variety of strategies to remove the same, the treatment technologies adopted are Activated Sludge Process, Chemical Oxidation, Distillation, zonation, incineration, Ultra Filtration, Reverse Osmosis, Multiple Effect Evaporator etc. Further, the Ministry of Jal Shakti incentivizes industries through the National Water Awards to improve water management, including innovations in water saving.