

**Office of Comptroller and Auditor General of India**

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**Press Release**

**CAG's report on Induction of Bio-toilets in passenger coaches in Indian Railways tabled in Parliament.**

**Audit indicates shortfall in achieving targets; Inadequate progress of retrofitment of bio-toilets in passenger coaches**

Comptroller and Auditor General of India's Report No. 36 of 2017 - Union Government (Railways) on 'Induction of Bio-toilets in passenger coaches in Indian Railways' was tabled in Parliament today.

Indian Railways (IR) operates 13,313 passenger trains with a large fleet of 54,506 coaches (including Diesel Electric Multiple Unit/ Diesel Hydraulic Multiple Unit) carrying 22.21 million passengers daily throughout its network of 1,19,630 track kilometers. The toilet system conventionally used in passenger coaches of Indian Railways is flush-type. This involves untreated human waste (night soil) being discharged directly onto the tracks and platform aprons. As a result, there is organic pollution and un-hygienic environment at Stations causing inconvenience to passengers and difficulty in proper maintenance of tracks.

To carry out feasibility study for use of suitable environment friendly toilets in Indian Railways, Railway Board set up (November 2009) a Core Group. The Core Group recommended (January 2010) adoption of the bio-digester technology for development of suitable bio-toilets to be fitted in passenger coaches. The 'bio-digester' is a technology developed by Gwalior-based Defence Research and Development Establishment (DRDE) and Tezpur-based Defence Research Laboratory (DRL) for disposal of human waste in an eco-friendly manner. The 'bio-toilet' (using bio-digester technology) is an eco-friendly waste management solution which reduces solid human waste to bio-gas and water with the help of a bacterial inoculum through biological degradation of human waste. It eliminates direct discharge of human waste from coach toilets onto railway tracks and platform aprons in stations, and helps avoid manual scavenging while keeping the platform aprons and trains clean.

The Audit was conducted to assess the pace of induction of bio-toilets in passenger coaches by Indian Railways. The Audit also examined the adequacy of infrastructure in Coaching Depots and Workshops to ensure proper maintenance and upkeep of bio-toilets.

**Major Audit Findings**

- Railway Board decided (January 2015) to eliminate provision of direct discharge toilets in new coaches by the end of 2016-17. In 2016-17, 5.7 *per cent* coaches were turned out without bio-toilets system by the three Production Units viz. RCF, Kapurthala, ICF, Perambur and MCF, Raebareli. Modern Linke Hofmann Busch (LHB) coaches were also turned out without bio-toilets to the extent of 6.7 *per cent* (95 coaches) in 2016-17.

**Para 2.3**

- Railway Board also decided for retrofitment of bio-toilets in existing passenger coaches and funds allotted for the same. However, during 2014-15 to 2016-17, utilization of funds for retrofitment of bio-toilets remained between 34*per cent* and 71*per cent*. For the year 2016-17, Minister of Railways announced that 20,000 bio-toilets were to be inducted through retrofitment. Railway Board fixed an internal target of 50,000 bio-toilets to be inducted through retrofitment. As against this target, various Zonal Railways could achieve induction of 22,198 bio-toilets through retrofitment. Shortfall of more than 30 *per cent* was noticed in five Zonal Railways out of 16 Zonal Railways (East Central-67 *per cent*, North Central-49 *per cent*, Noerthern-42 *per cent*, South Eastern-44 *per cent* and Western-43 *per cent*).

**Para 2.4**

- In 2016-17, as against a target of 16,800 bio-toilets for retrofitment during periodical overhaul in Carriage Workshops, various Zonal Railways could induct 12,828 bio-toilets. Due to delays in procurement of bio-tanks, bio-toilets could not be fitted in coaches as targeted.

**Para 2.4.2**

- The concept of Green Train Station and Green Corridors was introduced by Indian Railways. In Green Train Stations, all the originating, terminating, bypassing and platform return trains were required to have 100 *per cent* bio-toilet fitted coaches. The tracks on the Green Corridor were also to be made free from human waste discharge. However, the six nominated stations and corridors did not adhere to these conditions.

**Para 2.5**

- Due to inadequate progress of retrofitment of bio-toilets in passenger coaches by Zonal Railways, Railway Board decided to place bulk order for supply, installation and commissioning of approximately 80,000 bio-toilets in in-service coaches. As against 33,783 bio-toilets which were to be supplied to 16 Zonal Railways up to March 2017, only 14,274 bio-toilets were supplied by the firms. Out of these, 12,016 bio-toilets were fitted in coaches up to March 2017. Out of the nine firms on which orders were placed, seven firms, had complaints pending against them regarding quantity and quality of material supplied during 2015-16 and 2016-17.

**Para 3.1.1.2**

- Adequate storage space for bio-tanks and bacteria inoculum and other infrastructure facilities such as hydraulic/fork lifts, ramps for loading/unloading of bio-tanks, evacuation systems, bio-toilet aprons etc. were not available in most of the selected Carriage Workshops of various Zonal Railways. Inadequate supply/quality of supply of bacteria inoculum was also a constraint and installation/augmentation of bacteria generation facility in SECR, ECoR and ECR needed to be geared up.

**Para 3.2 and Para 3.3**

- Audit analysed the data of instances of defects/problems such as choking/foul smell, non-availability of dust-bins, and mugs etc. in selected 30 Coaching Depots of 15 Zonal Railways for 2016-17. Out of 613 trains being handled in these Coaching Depots, 160 trains did not have any bio-toilets fitted. In remaining 453 trains, having 25080 bio-toilets (either full complement or partial), 199689 instances of deficiencies /complaints were noticed.

**Para 4.1.1**

- There was an increase in cases of choking per bio-toilet in the year 2016-17 as compared to 2015-16. Non-availability of evacuation machines led to difficulties in removing biodegradable waste from the bio-tanks. Annual Maintenance and Operating Contracts were yet to be awarded in 12 Coaching Depots of nine Zonal Railways which impacted the maintenance of bio-toilets in in-service coaches.

**Para 4.1.2**

- Only 36.62 *per cent* Supervisory and 23.21 *per cent* non-Supervisory staff were trained in maintenance of bio-toilets, since May 2013, when the orders for imparting training were issued.

**Para 4.3**

- None of the Zonal Railway except Southern Railway conducted any specific Passenger Awareness Drive to educate the public by distributing pamphlets, making announcements or arranging display on display boards/LED screens.

**Para 4.4**