

ENVIRONMENT MANAGEMENT IN INDIAN RAILWAYS - STATIONS, TRAINS AND TRACKS

[Action Taken by the Government on the Observations/
Recommendations of the Committee contained in their Third Report
(16th Lok Sabha)]

**MINISTRY OF RAILWAYS
(RAILWAY BOARD)**

**PUBLIC ACCOUNTS COMMITTEE
(2015-16)**

THIRTY EIGHTH REPORT

SIXTEENTH LOK SABHA



**LOK SABHA SECRETARIAT
NEW DELHI**

PAC NO. 2070

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PUBLIC ACCOUNTS COMMITTEE
(2015-16)

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MINISTRY OF RAILWAYS
(RAILWAY BOARD)



Presented to Lok Sabha on:

Laid in Rajya Sabha on:

LOK SABHA SECRETARIAT
NEW DELHI

March, 2016 / Phalgun, 1937 (Saka)

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* Not appended to the cyclostyled copy of the Report

COMPOSITION OF THE PUBLIC ACCOUNTS COMMITTEE
(2015-16)

Prof. K.V. Thomas - Chairperson

MEMBERS

LOK SABHA

2. Shri S.S. Ahluwalia
3. Shri Sudip Bandyopadhyay
4. Shri Ranjit Singh Brahmputra
5. Shri Nishikant Dubey
6. Shri Gajanan Kirtikar
7. Shri Bhartuhari Mahtab
8. Shri Ramesh Pokhriyal "Nishank"
9. Shri Neiphiu Rio
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12. Dr. Kirit Somaiya
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15. Dr. P. Venugopal

RAJYA SABHA

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19. Shri Vijay Goel
20. Shri Bhubaneswar Kalita
21. Shri Shantaram Naik
22. Shri Sukhendu Sekhar Roy

SECRETARIAT

1. Shri A.K. Singh - Additional Secretary
2. Shri T. Jayakumar - Director
3. Smt. Anju Kukreja - Under Secretary

INTRODUCTION

I, the Chairperson, Public Accounts Committee (2015-16), having been authorized by the Committee, do present this Thirty Eighth Report (Sixteenth Lok Sabha) on Action Taken by the Government on the Observations/Recommendations of the Committee contained in their Third Report (Sixteenth Lok Sabha) on "Environment Management in Indian Railways - Stations, Trains and Tracks" relating to Ministry of Railways (Railway Board).

2. The Third Report was presented to Lok Sabha/laid in Rajya Sabha on 25th November, 2014. Replies of the Government to all the Observations/Recommendations contained in the Report were received. The Public Accounts Committee considered and adopted the Thirty Eighth Report at their sitting held on 11th March, 2016. Minutes of the sitting are given at Appendix I.

3. For facility of reference and convenience, the Observations and Recommendations of the Committee have been printed in thick type in the body of the Report.

4. The Committee place on record their appreciation of the assistance rendered to them in the matter by the Office of the Comptroller and Auditor General of India.

5. An analysis of the action taken by the Government on the Observations/Recommendations contained in the Third Report (Sixteenth Lok Sabha) is given at Appendix-II.

NEW DELHI;
11th March, 2016
21 Phalgunā, 1937 (Saka)

PROF. K.V. THOMAS
Chairperson,
Public Accounts Committee

CHAPTER - I

INTRODUCTORY

This Report of the Public Accounts Committee deals with the Action Taken by the Government on the Observations and Recommendations of the Committee contained in their Third Report (16th Lok Sabha) on "Environment Management in Indian Railways - Stations, Trains and Tracks" based on C&AG Report No. 21 of 2012-13, Union Government (Railways) - Performance Audit, relating to Ministry of Railways.

2. The Third Report (16th Lok Sabha), which was presented to Lok Sabha/laid in Rajya Sabha on 25th November, 2014, contained 21 Observations and Recommendations. Action Taken Notes in respect of all the Observations and Recommendations have been received from the Ministry of Railways and are broadly categorized as under :

(i) Observations/Recommendations which have been accepted by the Government:

Para Nos. 1,2,7,8,13,15,16,17,18,19,20,21

Total: 12
Chapter - II

(ii) Observations/Recommendations which the Committee do not desire to pursue in view of the replies received from the Government:

Para No. NIL

Total: NIL
Chapter - III

(iii) Observations/Recommendations in respect of which replies of Government have not been accepted by the Committee and which require reiteration:

Para No. 9,10,11,12,14

Total: 5
Chapter - IV

(iv) Observations/Recommendations in respect of which Government have furnished interim replies:

Para No. 3,4,5,6

Total: 4
Chapter - V

3. The Committee's examination of the subject 'Environment Management in Indian Railways - Stations, Trains and Tracks' relating to the Ministry of Railways revealed the following shortcomings:

- Railway Board (RB) had not issued any comprehensive guidelines specifically for sidings handling and transporting the pollution intensive commodities like coal, iron ore, cement, fertilizers, petroleum etc. The Central Pollution Control Board had also failed to issue any guidelines for the transport of these commodities.
- The Air (Prevention and Control of Pollution) Act, 1981 stipulates that all sidings and Railway Goods sheds require Consent for Operation (CFO) from the State Pollution Control Board (SPCB) concerned, however, in majority of cases the Railway Administration had failed to comply with the existing provisions of obtaining consent for operation from the SPCB concerned, before operating the sidings/goods sheds. The CFO was obtained only in 55 percent of the sidings test checked.
- Indian Railways had neither initiated any measure to fix standards for emissions from the use of diesel for traction purposes nor any system had been set up to monitor the emissions from diesel locos and assess or compare the extent of emissions with the international standard. Further, there were no instructions to the Zonal Railways for regular monitoring of emission 32 levels and thus there was no such monitoring anywhere in Indian Railways.
- The work of electrification of railway tracks was being carried out selectively for sections of a particular route instead of electrifying the whole route. Patch-wise electrification of routes had resulted in hauling of diesel engines on electrified route leading to unavoidable pollution due to emission from diesel besides higher operational costs.
- No instructions had been issued at the level of Railway Board regarding noise control measures near habitation/silence zones.
- There was no system for monitoring the quality and quantum of waste water generated at Stations. The Railway Board's instructions for installation of Effluent

Treatment Plant (ETP) at all major stations had also not been adhered to. On an average, one Effluent Treatment Plant had been installed in each Zone leaving most of the major stations without any ETP. In the absence of ETPs, effluents were being discharged from major stations to the nearby low lying areas/water bodies and municipal drainage systems resulting in 34 contamination of surrounding surface and ground water.

- Despite the Railway Board's instructions issued in July/August, 2006 to zones for providing Water Recycling Plants (WRPs) at locations like Stations and sheds where water was scarce, no action had been taken till March, 2012 for installation of WRPs. Similarly, none of the major stations in SR where shortage of water was actually felt in summer months, has been identified for provision of WRP.
- Rain Water Harvesting (RWH) Systems had been installed at only 70 stations in five Zones.
 - No system had been put in place to monitor the performance of level crossings energized with solar panels or hybrid system. Further, no system of qualification of benefit accrued to Railways as a result of implementation of solar panels/hybrid system in electrification of level crossings had been set up.
 - Indian Railways had failed to make a major progress in tapping wind energy as only four Wind Power Plants had been sanctioned in three zones during the period 2010 - 12. The work of setting up of another 10.5 MW Wind Mill in North Western Railways sanctioned during 2010 - 11 had not been completed due to shifting of execution of the same from PPP model to JV model.
 - No energy audit had been conducted in three Zones, while 48 out of 149 recommendations made by the Energy Auditors had not been implemented in seven Zones and partial implementation had been noticed in respect of 18 recommendations.
 - 62 elephants died during the period 2007-11 due to train hits. The majority of elephant death occurred in Northeast Frontier Railway (NEFR) where 43 elephants

died followed by Southern Railway (SR) where 10 elephants died. Until 2011 no procedure had been evolved by the Ministry of Railways nor prescribed by the Ministry of Environment & Forests for controlling elephant casualties.

- The following shortcomings were revealed in the system of garbage disposal in 212 Stations over 17 Zones:

(i) In 64 per cent (135) of the total stations (212) test checked in audit, centralized dumping yard was not available within the station premises resulting in littering near station premises and along tracks. Further, there were instances when transportation of garbage was not being done hygienically i.e. covered by tarpaulin.

(ii) In 105 out of 123 major stations, disposal of garbage from stations to Municipal/Corporation notified areas was done by engaging outside agencies. The quantity of garbage generated was, however, not assessed and incorporated in the agreements entered into with the outside agencies in 43 out of 105 agreements.

(iii) In the remaining 18 major stations, disposal of garbage was done in-house. The quantity of waste generated was not estimated wherever garbage disposal was done departmentally.

(iv) In 16 out of 23 contracts entered into in four zones for disposal of garbage through outside agencies, no separate clause was incorporated for segregation of wastes.

(v) Disposal of garbage by outside agencies was being done either by burning or dumping in Railway premises in 37 stations (all categories) across all zones.

(vi) At 54 out of 212 stations the Railway Administration resorted to disposal by burning, dumping into adjacent canal, low lying areas, dumping on Railway land near the track, thereby causing environmental pollution.

- Indian Railways had not finalized the technology for 'green toilets' despite two decades of experimentation. Further, open discharge of toilets from running trains led to

premature renewal of 47 km of Rail (SER) and resulted in an excess expenditure of ₹ 35.79 crore during the period 2007-11 alone.

4. The Committee had accordingly given their Observations/Recommendations in the Third Report (16th Lok Sabha). The gist of important observations/recommendations as contained in the Report are given as under:

- (i) The Ministry should formulate a comprehensive and more reliable environment policy for controlling air pollution on the stations, yard, work places etc. in coordination with the Central and various State Pollution Control Boards. The Ministry of Railways should also ensure regular and effective monitoring to ensure strict compliance with the Pollution Control laws/guidelines/instructions at all levels so that advance and corrective steps are taken to minimize the air pollution.
- (ii) The requisite equipment for measuring air pollution levels should be procured and inducted at all the Stations in a time bound manner.
- (iii) Railway Board should periodically monitor the progress of the project undertaken by Research and Design Standard Organization (RDSO) and Indian Railway Organizations for Alternate Fuels (IROAF) so as to introduce LNG and Gas Turbine based locomotives by the targeted date.
- (iv) The Ministry, besides making efforts to gauge the impact of environmental pollution due to the movement of diesel locomotives in electrified routes, should also work out the feasibility of making route-wise electrification.
- (v) The Railway Board, in consultation with the Pollution Control Boards, should constitute a High Powered Body with adequate technical expertise for formulating a comprehensive policy to control environmental and noise pollution in the Trains and Stations and carrying out surprise checks to ensure effective implementation of the measures initiated to that effect.
- (vi) As regards discharging of effluents from the major Stations to the nearby low lying areas/water bodies, the Ministry should take up installation of ETPs at all the Railway Stations on priority basis by stipulating a deadline for the purpose. Stringent

Guidelines should also be issued and implementation monitored by the Ministry for scrupulous adherence by the Zonal Railways failing which responsibility be fixed.

(vii) The Ministry should impress upon the Zonal Railways in no uncertain terms to unflinchingly adhere to the instructions issued for installation of Water Recycling Plants and Rain Water Harvesting Systems at all the Stations.

(viii) The Ministry of Railways/Railway Board should ensure regular and effective monitoring of the targets set for energy conservation at all levels so that they could be completed within the stipulated time frame. The Ministry should also measure the benefit accrued to the Railways as a result of the electrification of level crossings with solar panels.

(ix) The Ministry should set up separate Waste Management Cell in all the Zones/Divisions and make necessary arrangements for staff in those cells who possess adequate knowledge and skills to deal effectively with waste management.

(x) The Ministry should take effective steps for ensuring that prescribed targets for introduction of bio-toilets in all the coaches are achieved within the specified time and any aberration on this score be viewed seriously.

5. The Action Taken Notes furnished by the Ministry of Railways in respect of all the Observations/Recommendations of the Committee as contained in their Third Report (16th LS) have been reproduced in the relevant chapters of this Report. The Committee desire that Government should furnish final/conclusive action taken replies to the Recommendations for which interim replies have been furnished. The Committee will now deal with the action taken by the Government on some of their Observations/Recommendations made in their Third Report (16th Lok Sabha), which need reiteration or merit comments.

Action taken on the Recommendations contained in the 83rd Report (14th LS) of the PAC

(Recommendation No. 2)

6. The PAC (2008-09) in their 83rd Report (14th LS) on "Cleanliness & Sanitation on Indian Railways" had recommended that the Ministry of Railways should strengthen the co-ordination efforts and put in place an institutionalized mechanism at the Apex level; frame a robust policy on Waste Management; draw up an action plan for provision of adequate infrastructure for each station, and dedicated budget exclusively meant for sanitation and cleanliness on Indian Railways etc. Upon noticing that though these recommendations were substantially accepted by the Government, shortcomings in the collection and disposal of garbage has remained unresolved, implementation of green toilets in trains has not yet been done and no concrete action has been taken by the IR to integrate environmental concerns with their developmental/operational policies, the Committee exhorted the Ministry to initiate the requisite and urgent measures so as to effectively address the ever growing menace of environmental pollution.

7. The Ministry of Railways in their Action Taken Note have stated as under :

"Following action/measures have been initiated in cleanliness & sanitation in Indian Railways:

1. Cleanliness & Sanitation:

a. Zonal Railway have been advised vide Commercial Circular No. 45 of 2011 and also reiterated from time to time for prompt disposal of waste arising out of catering services at station and in trains, inter-alia advising the procedural order for handling waste and their disposal arising of pantry car services as well as static catering units.

b. In Budget Speech of 2014-15, the Hon'ble Minister of Railways has proposed to set up a separate Housekeeping Wing to have focused attention and exclusive responsibility of maintaining cleanliness and sanitation at stations".

2. Further as regards the installation of Green Toilets, in trains, the Ministry have stated as follows:

"In a pioneering effort, Indian Railways in collaboration with DRDO was successful in developing Bio-toilets, where the faecal matter gets digested in a retention tank by a group of bacteria, and after the process, as the end-product, water gets discharged after being treated with chlorine tablets to take care of further disinfection and to control e-coli count. The first sets of bio-toilets were fitted on trial in 2010-11.

Upon seeing encouraging results in their performance and their user feedback, the number of Bio-toilets fitted has progressively increased over the years. As on date, more than 19,700 bio-toilets have been installed in more than 7,000 coaches.

Workshops and Production Units of Indian railways are gearing-up for fitting bio-toilets in newly manufactured coaches and for retrofitting on existing old coaches to the maximum extent possible.

IR is making its best possible efforts to achieve the target of (i) Compulsorily fitting all new coaches made by Production Units with environment-friendly toilet system by 2016-17 and (ii) elimination of direct discharge toilet system from entire fleet of coaches by 2021-22, unless unforeseen technical hurdles crop up in future.

A Joint Working Group (JWG) of IR,s Mechanical Engineers and DRDO's Bio-technologists, constituted for development & deployment of bio-toilets over Indian Railway passenger carrying coaches, meets periodically to review design issues and field performance of these Bio-toilets."

8. The Committee note that as regards the cleanliness and sanitation in Indian Railways, the Hon'ble Minister of Railways in his Budget speech of 2014-15 had proposed for setting up a separate Housekeeping Wing to have focused attention and exclusive responsibility of maintaining cleanliness and sanitation at stations. However, the ATN is silent as to whether the said wing has since been set up or not. As the cleanliness and sanitation of Indian Railways is the critical need of the hour, the Committee would like to be apprised of the present status of setting up of the Housekeeping Wing and, if set up, its objectives, action plan, if any, drawn up for effective cleanliness and sanitation, the results achieved so far and future plan of action. The Committee would also like to know the details regarding the expenditure sanctioned/incurred during the last two years on sanitation and cleanliness of India Railways and whether it was adequate enough to cater to the needs of cleanliness of the Railways. Similarly, the Action Taken Note is silent about the dirty passenger coaches infested with cockroaches, rodents and mugs. There had been complaints that the passenger compartments and its toilets were not swept, moped or disinfected at regular intervals and many a time unwashed bedrolls and blankets were issued to the passengers. Further, the system of lighting, drinking water and sewerage is in a totally bad shape in the peripheral villages of Railway Stations. The Committee, therefore, desire that as a part of Corporate Social Responsibility (CSR), the Ministry of Railways should provide these facilities not only in the nearby Railway colonies but also in the peripheral villages coming within a radius of 08kms of Railway stations. The Committee desire to be apprised of the concrete action taken in this regard within one month of the presentation of this report.

Further, in connection with installation of Green Toilets in trains, the Committee have been informed that as on December 2015, more than 19,700 bio-toilets have been installed in more than 7,000 coaches. Indian Railway is also making its best possible

efforts to achieve the target of compulsorily fitting all new coaches made by production units with environment - friendly toilet system by 2016-17 and elimination of direct discharge toilet system from entire fleet of coaches by 2021-22 unless unforeseen technical hurdles crop up in future. Ministry seems to be unsure about achieving the targets and hence put a rider with their said statement. The Committee would like to know as to what extent those targets have been met so far. The Committee further observe that despite issuing commercial circular and Committees' reiteration from time to time there has been no perceptible improvement as bio-toilets become non-functional and inconvenience when certain passengers knowingly or unknowingly drop plastic bottles or unwanted materials inside it. Hence for the success of the effective use of bio-toilets the Railways should initiate a drive to educate the passengers about the correct way of use of such toilets through announcements, T.Vs and written as well as picture signs.

Air Pollution

(Recommendation No. 3)

9. The Committee were constrained to note that the Railway Board (RB) had not issued any comprehensive guidelines specifically for sidings handling and transporting the pollution intensive commodities like coal, iron ore cement, fertilizers, petroleum etc. The Central Pollution Control Board had also failed to issue any guidelines for the transport of these commodities. As regards formulation of comprehensive environment policy in this regard, the Ministry of Railways had claimed that they were committed to alleviate the environment impact of carriage and handling of sensitive cargo. While noticing that despite their commitment no substantive action had been taken by the IR to integrate environmental concerns with operational policies, the Committee, had impressed upon the Ministry to formulate a comprehensive and more reliable environment policy for controlling air pollution on the stations, yard, work places etc. in coordination with the Central and various State Pollution Control Boards. The Ministry of Railways should also ensure regular and effective monitoring to ensure strict compliance with the Pollution Control laws/guidelines/instructions at all levels so that advance and corrective steps are taken to minimize the air pollution.

10. In their Action Taken Note, the Ministry of Railways have stated as under :

"In order to properly comply with the provisions of Air Pollution Act'1981 in sidings/Good Sheds of Zonal Railways, Ministry of Railways have decided to set up a Committee consisting of 02 SAG level officers, 01 from EnHM Dte. (as Convenor) & the other from Traffic/Commercial Deptt., who will study and submit a detailed report on the extent of pollution and the remedial actions to be taken."

11. The Committee are aghast to find that in order to properly comply with the provisions of Air Pollution Act, 1981 in sidings/Good sheds of Zonal Railways, Ministry of Railways have now decided to set up a Committee in 2015, to study and submit a detailed report on the extent of pollution and the actions to be taken. However, Ministry have not given sketchy details about the terms and targets of the said Committee. They have also yet to frame the reliable environment policy as desired by the Committee for controlling air pollution at Railway Stations, yard, work places etc. The Committee therefore, desire to be apprised about the progress achieved in this regard to ensure that the Committee submits its report at the earliest and the time lost is compensated by the early implementation of its suggestions.

Non-compliance with Statutory Regulations

(Recommendation No. 4 and 5)

12. The Committee were concerned to observe that while section 21 of the Air (Prevention and Control of Pollution) Act, 1981 clearly stipulates that all sidings and Railway Good sheds require Consent for Operation (CFO) from the SPCB concerned in majority of cases the Railway Administration have failed to comply with the existing provisions of obtaining consent for operation from the SPCB concerned before operating the sidings/good sheds. The CFO was obtained only in 55 percent of the sidings test checked. In some of the cases, there was inconsistent and variable understanding of issues which led some of the Zonal Railways to presume that consent to operate was not required for all sidings/goods sheds. The Ministry had no record of notices served by the CPCB or SPCB for noncompliance of provisions of law for control of Air and Water Pollution. Further, the Ministry of Railways do not have any mechanism to take action against the sidings for either non adherence to the instructions of RB or compliance with the statutory provisions, which is rather strange and highly deplorable. Deprecating the failure of the Ministry to act sternly against the sidings for violation of laws/provisions, the Committee had desired that the matter vigorously pursued for investigation, fixation of responsibility against the sidings and necessary follow-up action. The Committee had also desired that the Ministry instead of leaving things at the mercy of the Zonal Railways, should prescribe concrete guidelines for the operation of sidings/goods sheds which are to be scrupulously adhered to by the Zonal Railways.

13. Further, while observing that individual Railway establishments lack the equipment as well as expertise for measuring and monitoring air pollution levels at the Stations, the Committee had recommended that the requisite equipment for measuring air pollution levels be procured and inducted at all the Stations in a time bound manner so as to obviate air pollution to the desirable level.

14. The Ministry of Railways in their Action Taken Note have stated as under :

"In order to properly comply with the provisions of Air Pollution Act 1981 in sidings & Goods sheds of Zonal Railways, Ministry of Railways have decided to set up a committee consisting of 2 SAG level officers, one from EnHM Dte (as convener) & the other from Traffic / Commercial Deptt. who will study and submit a detailed report on the extent of pollution and the remedial actions to be taken.

The committee formed will also deal the matters pointed out in this para 4 and 5."

15. Upon noticing the failure of the Ministry of Railways to act sternly against the sidings for non-compliance of laws/provisions prescribed for operating the sidings/goods sheds the Committee in their earlier Report had desired to pursue the matter vigorously for investigation, fixation of responsibility against the sidings and necessary follow-up action. They had also desired the Ministry to prescribe concrete guidelines for the operation of sidings/goods sheds. Further as regards the induction of equipment at all railway stations for measuring and monitoring air pollution levels, the Committee had recommended for procurement and installation of such equipment at all the stations in a time bound manner. However, the ATN of the Ministry are silent over all these specific issues. They have rather furnished a routine reply. While deprecating the callous attitude of the Ministry towards such important issues the Committee reiterate their earlier recommendations and desire to be apprised of the specific action taken thereon within one month of the presentation of this Report to Parliament.

Emission from Diesel Locomotives and use of Bio-Diesel

(Recommendation Para No. 6)

16. The Committee were perturbed to note that Indian Railways had neither initiated any measure to fix standards for emissions from the use of diesel for traction purposes nor any system had been set up to monitor the emission levels from diesel locos and assess or compare the extent of emissions with the international standard. Further, there were no

instructions to the Zonal Railways for regular monitoring of emission levels and thus there is no such monitoring anywhere in Indian Railways. The Committee were also concerned to note that although several initiatives were stated to have been taken by the IR for using bio-diesel to help reduce emissions of many air pollutants from diesel locos, no instructions had been issued to the field offices for using blended bio-diesel. Out of 16 zones, bio-diesel was used only in five Zones. Further, during the period 2006-11, the production of bio-diesel over these five Zones was only 155.123 KI besides procurement of 47.46 KI from outside agencies. The Committee found that Indian Railways did not have any in-house bio-diesel production facility except experimental level at some plants. The plants at Chennai and Shakurbasti had been functional in part capacity and the Kharagpur plant was not working. The main constraint in their continuous operation was non-availability of raw-material for conversion into bio-diesel. The Committee had also observed that two contracts were executed in April 2011 and May, 2011 for setting up of plants at Tondiarpet (SR) and Raipur (SECR) respectively. While the work of setting up of biodiesel plant at Raipur was in progress, there had been no progress in respect of the plant at Tondiarpet as of March 2012 except identification of land. The Committee had been informed that Indian Railways were setting up two bio-diesel plants of 30 Tons per day capacity each which would be ready by December 2014. As the use of bio-diesel in the Diesel locomotives is the critical need of the hour to minimize air pollution and related public health risks, the Committee had desired the Ministry to make special efforts for speedier completion of the projects for production of bio-diesel.

17: The Ministry of Railways in their Action Taken Note have stated as under:

"1. A Mobile Emission Test Car was commissioned by IR in January 2013. This test car is capable of measuring levels of various pollutants of diesel engines. So far, emission levels of 22 locomotives including power cars of Diesel Electrical Multiple Units have been measured at different locations on IR. Emission norms for diesel locomotives are not available in India and have to be evolved. Formulation of Emission Standards is a specialized and time consuming job and process for appointment of a consultant is under process. This will be taken forward expeditiously. Instructions to Zonal railways to monitor emission levels would be issued after the emission standard are laid down.

2. The Hon'ble Minister for Railways, in his budget speech on 08.07.2014, stated that IR will start using bio-diesel upto 5% of the total fuel consumption in diesel locomotives. Action plan for implementation of 5% Bio Diesel blending in Diesel to all

Zonal Railways have been issued vide Railway Board's letter No. 2010/Fuel/282/2/ Pt 1 dated 02.03.2015, and procurement is in process.

3. Indian Railways has always promoted use of non-conventional energy sources. Use of bio-diesel in diesel locomotives was envisaged long before it was even established as a fuel for locomotives. The Indian economy and the ecosystem required for its production, distribution and usage were not geared up at that time. When IR started efforts to introduce biodiesel in 2001-02, there was no established path available to follow, but this did not deter IR from making attempts in all directions. Raw material was not available, so plantation of trees (Jatropha) was done, a Memorandum of Understanding with Indian Oil Corporation was signed, pilot plants were set up and even purchasing from open market was attempted. However, Jatropha production in the country did not take off. Even though the commitment of Indian Railway was serious and continuous efforts were made, bio-diesel could not be introduced.

3.1 Keeping these constraints in mind, Indian Railways is setting up two bio-diesel plants which are multi-feed plants i.e. they can use a variety of edible/ non-edible vegetable oils, by-product of oil refining process, fatty acids, animal fats, used cooking oil etc. Thus shortage of raw-material for plant operation is not envisaged. The present status of these plants is as under:

(a) Raipur plant: Work has been completed upto 4th stage out of 14 stages i.e. all Civil Engineering works of construction of office building, workshop, lab, store etc. are completed. Contract has since been terminated on 24.09.2014. For completion of balance works, fresh tender has been floated and is due to open on 21.04.2015.

(b) Tondiarpet plant: Work has been completed up to 7th stage out of 12 stages i.e. all Civil Engineering works of construction of office building, workshop, lab, store, ETP etc, supply of chilling unit, transformer, weigh bridge, storage tanks, RO softening system and Diesel generator are completed. The plant is expected to be commissioned by 30th September 2015.

3.2 Besides the bottlenecks in production of biodiesel, laws and regulatory regime prevented free sale and use of bio diesel in India. Certain clauses in MS & HSD control order, 2005 and Biodiesel Purchase Policy, 2005 were restrictive. The clauses have since been modified by the Government. In light of recent amendments in MS & HSD control order and Biodiesel Purchase Policy, IR is pursuing the roadmap to take forward the introduction of bio diesel on IR."

18. In response to the observation of the Committee that the Indian Railways have neither initiated any measure to fix standards for emissions from the use of diesel for traction purposes nor any system has been set up to monitor the emissions from diesel locos and assess or compare the extent of emissions with the international standard, the Ministry have stated that emission norms for diesel locomotives are not available in India and have to be evolved. Further it has been stated by the Railways that formulation of Emission Standards is a specialized and time consuming job and

appointment of a consultant is under process. The Committee are constrained to observe that the Ministry of Railways have not accorded due importance to such a serious environmental problem of emissions from diesel locos despite being pointed out by Audit in 2013, the appointment of Consultant for formulation of Emission Standards is still under process and according to the Ministry instructions to Zonal Railways to monitor emission levels would be issued after the emission standards are laid down. This implies that the Government is not at all serious and no sincere efforts have yet been resorted to by the Ministry in this direction. In the Committee's considered view, such a serious lapse cannot brook delay and, therefore, it is imperative and incumbent on Government to initiate effective and immediate action to address the problem and keep the Committee apprised.

Further, the Railways have formulated an action plan for implementation of 5% Bio Diesel blending in Diesel and issued the same to all Zonal Railways *vide* their letter dated 02.03.2015. As approximately one year has already completed since issuing of action plan to Zonal Railways, the Committee would desire to be apprised of the tangible outcome of this measure. The Committee also urge the Ministry to ensure monthly progress statement from Zonal Railways which would facilitate effective monitoring. Besides, keeping in view the grave health hazards posed by alarming level of diesel emissions from locos contributing rampant air pollution especially in metro cities, the Committee would urge the Ministry to explore the possibility of further increasing the level of blending of Bio-diesel in diesel after studying international standards in this regard.

As regards the status of setting up Bio-Diesel plants at Raipur and Tondiarpet, the Committee was unhappy to observe that there was no progress made by the Railways in respect of the work for construction of the plants at Tondiarpet, as of March 2012, except for identification of land. Now, the Railway have submitted that Todiarpert plant was expected to be commissioned by 30th September, 2015. The Committee would like to be apprised of the status of commissioning of the Tondiarpet plant and progress report on the work of setting up of plant at Raipur along with the expected date of commissioning of the same.

Noise Pollution

(Recommendation No. 9 & 10)

19. The study conducted by Central Pollution Control Board (CPCB) during March 2012 had revealed that noise levels were in excess of the prescribed limit at all Stations and no monitoring mechanism had been put in place by the Railways to gauge the noise level.

Further, Audit Survey of 2439 passengers at 34 Railway Stations across 17 Zones had also revealed that 31% of the passengers were of the view that the noise level at stations was unbearable. RDSO had also observed that noise level in AC Coaches increased from 71 to 72 DB inside the coaches which is unbearable. The Committee find that in the absence of any specific instructions either from Pollution Control Boards or from the Railway Board, the Zones have not initiated any remedial measure to reduce noise pollution. Further, no instruction had been issued at the level of Railway Board regarding noise control measures near habitation/silence zones. As several measures were reportedly being taken by the Ministry to reduce the noise pollution inside the coaches as well as at the Stations, the Committee had desired that these measures ought to be implemented earnestly and effectively so as to ensure eliminating/minimizing noise pollution in the coaches and at the Stations.

20. The Committee had also desired that the Railway Board, in consultation with the Pollution Control Boards, should constitute a High Powered Body with adequate technical expertise for formulating a comprehensive policy to control environmental and noise pollution in the Trains and Stations and carrying out surprise checks to ensure effective implementation of the measures initiated to that effect.

21. The Ministry of Railways in their Action Taken Note have stated as under:

"There were no values specified for noise level inside coaches when JCF design of coaches were designed. The new design LHB AC coaches have noise level of less than 68 dB specified by European specification.

There are no specified values of noise level inside the non-AC coaches. However, RDSO and Production Units constantly endeavour to reduce noise level inside the coaches."

22. The Committee note that the new design LHB AC coaches of the Railways have noise level of less than 68 DB as specified by European specifications. However, the Committee are unhappy to note that there is no specified values of noise level inside

the non-AC coaches. The Railways being a means of transport of masses, it is of utmost importance to ensure a noise pollution free journey for the masses travelling in non-AC coaches as well. The Committee would, therefore, like the Ministry of Railways to study the best practices being followed world over to reduce Railway related noise pollution and would like to be apprised of their status and feasibility of implementation in India. The Committee are again perturbed to find that as recommended in their earlier Report, no effort seems to have been resorted towards constituting a High Powered Body with adequate technical expertise for formulating a comprehensive policy to control environmental and noise pollution in the Trains and Stations. The Committee are of the view that in the absence of such a body having technical expertise the policies framed by the Railways towards checking noise pollution in Trains and Stations are quite ineffective. While reiterating their earlier recommendation the Committee would urge the Ministry that the desired high powered body be set up expeditiously so as to suggest ways and means to obviate noise pollution to the desirable level in trains and stations.

Effluent Treatment

(Recommendation No. 11)

23. The Committee were constrained to observe that there was no system for monitoring the quality and quantum of waste water generated at Stations. The Railway Board's instructions for installation of Effluent Treatment Plant (ETP) at all major stations had also not been adhered to. On an average, one Effluent Treatment Plant had been installed in each Zone leaving most of the major stations without any ETP. In the absence of ETPs, effluents are being discharged from major stations to the nearby low lying areas/water bodies and municipal drainage systems resulting in 34 contamination of surrounding surface and ground water. The Committee had further noted that out of 17 ETPs sanctioned over five Zones, 14 ETPs have been installed in three Zones till March, 2012. Considering the fact that discharging of effluents from the major Stations to the nearby low lying areas/water bodies is harmful to the environment, as well as public health, the Committee had recommended that the Ministry should take up installation of ETPs at all the Railway Stations on priority basis by stipulating a deadline for the purpose. Stringent Guidelines were also required to be issued and implementation monitored by the Ministry for scrupulous adherence by the Zonal Railways failing which responsibility be fixed.

24. The Ministry of Railways in their Action Taken Note have stated as under:

"Applicability & Availability of pollution control equipment like Effluent Treatment Plants (ETPs) in functional state, its regular use and monitoring of related pollution parameters is an integral part of ISO 14001 certification. All the six established PUs are certified under ISO 14001. Most of the mechanical workshops have also achieved IMS certification of which ISO 14001 certification is an integral part. The remaining few mechanical workshops are already in the process of obtaining IMS certification which is tentatively targeted to be completed soon."

25. In their earlier Report, the Committee had recommended for installation of Effluent Treatment Plant (ETP) at all major Railway Stations on priority basis by stipulating a deadline for the purpose. Instead, the reply submitted by the Ministry of Railways is silent about installation of ETPs at Railway Stations but merely mentioned about the existence of ETP at six Production Units (PU) and Mechanical Workshops of the Railways by virtue of their being ISO 14001 certified. The Committee deprecates the nonchalant approach of Indian Railways towards the matter. The Committee, thus, again reiterate that the Ministry should take up installation of ETPs at all major Railway Stations in the first instance on priority basis by stipulating a deadline for the purpose along with penal measures for non adherence to the instructions issued by the Railway Board as implementation of measures to check environment health of the country cannot be left as a matter of option to the Zonal Railways. The Committee would like to be apprised of the substantive actions initiated to get the ETPs installed at all major stations with names and number of defaulting stations under each zone of the Railways on urgent basis. The Ministry may also consider withholding of financial assistance to the defaulting zones pending installation of ETPs. The Committee desire to be informed of present status of obtaining IMS Certification by remaining mechanical workshops at the earliest.

Use of Renewable Energy at Manned Level Crossing Gates

(Recommendation No. 14)

26. The Committee had noted that the Zonal Railways were directed in March, 2007 to install solar based lighting system at all manned level crossings. But, the overall achievement of the Indian Railways in the electrification of level crossings with solar panel was far below the target set for the period 2007 to 2011. The Committee had found that no system has

been put in place to monitor the performance of level crossings energized with solar panels or hybrid system. Further, no system of qualification of benefit accrued to Railways as a result of implementation of solar panels/hybrid system in electrification of level crossings had been set up. As, the system of monitoring of instructions by the RB or Ministry had proved to be deficient, the Committee had recommended that the Ministry of Railways/Railway Board should ensure regular and effective monitoring of the targets set for energy conservation at all levels so that they could be completed within the stipulated time frame. The Ministry should also measure the benefit accrued to the Railways as a result of the electrification of level crossings with solar panels. As the Ministry had assured that solar panels at 2000 stations would be implemented in the next two years, the Committee had desired to be apprised of the periodical present progress of the matter.

27. The Ministry of Railways in their Action Taken Note have stated as under:

"As per the policy letter dated 08.03.2007, Solar based lighting system were to be provided at manned LC gates which are not electrified. Thereafter in 2008, Action plan targets were issued for provision of solar panel at LC gates. The progress of this item is regularly discussed in CESE/CEGE meetings held time to time and in the monthly PCDOs. Further, Railways have fixed annual energy target for non traction energy. Due to vigorous monitoring the electrical energy consumption in non traction application, inspite of increase in load is negligible during the last 04 years. Further DG/BEE vide their letter has also mentioned that Railways have been achieving annual reduction of about 2% in electric traction and about 2.8% per year in non traction applications. As on date, 4406 LC gates has been provided with solar based lighting system."

28. The Committee are happy to note that the electrical energy consumption in non traction application, inspite of increase in load is negligible during the last 04 years and the Railways have been achieving annual reduction of about 2.8% per year in non traction applications. However, the data on energy conservation targets set by each Zonal Railways and the extent to which such targets have been achieved have not been provided by the Railways. The Ministry of Railways have also not mentioned as to whether instructions have been issued to Zonal Railways to duly maintain such data towards energy conservation. The Committee, therefore, would like to be informed of status of such data being maintained by Zonal Railways and in absence of such practice, the corrective action taken by the Railways to monitor the timely completion of targets set for energy conservation by Zonal Railways. The Committee are unhappy to note that though as per letter dated 8/3/2007, Solar Panels were to be

installed at 2000 Railway Stations within a period of 2 years. Little progress seems to have been achieved as action taken notes are silent both on implementation and benefits achieved to India Railways. Since energy conservation is extremely vital for financial health of Indian Railways, the Committee desire that a plan of action be drawn up for time bound provisioning of solar panels at Railway Stations

Energy Audit

(Recommendation No. 16)

29. The Committee had observed that the progress of energy audit conducted in 17 Zones revealed that no energy audit had been conducted in three Zones, while 48 out of 149 recommendations made by the Energy Auditors had not been implemented in seven Zones and partial implementation had been noticed in respect of 18 recommendations. Further, recommendations given in case of 12 Traction Sub-Stations had either been partially implemented or no targets had been fixed for implementation of the same. While observing that there had also been no effective system of monitoring energy audit and implementation of their recommendations at Railway Board level, the Committee had desired to be furnished with a detailed report indicating the recommendations given by the Energy Auditors, implemented/not implemented by the Ministry along with the reasons for non-acceptance and remedial/corrective action taken on the recommendations accepted by them.

30. The Ministry of Railways, in their Action Taken Note have stated as under:

"Zonal Railways have been advised to carry out energy audit of all buildings having more than 100 KW and the same was reiterated vide Board's letter no. 2007/Elect9G/152/2 dated 18.07.2008. It was also stated that Zonal Railways can undertake by IRIEEN trained Officials for this purpose of energy audit. During the year 2014-15, 448 energy audits have been done. In addition, 66 Energy Audits have also been carried out during 2015-16 (up to Nov-15). For implementation of energy audit report Zonal Railways was advised to work out a small action plan vide Board's letter no. 2007/Elect9G/152/2 dated 30.3.2015 and feed back of the same be given on Rail saver website. Due to achievement in energy conservation, IR has bagged 86 National Energy Conservation Award during the period from 2010 - 2015.

Further, MoUs have been signed with Ministry of Power, Bureau of Energy Efficiency (BEE) for enhancing co-operation in the areas of energy conservation over IR."

31. In their earlier Report, the Committee had asked the Railways to furnish a detailed report indicating the recommendations given by the Energy Auditors, implemented/not implemented by the Ministry along with the reasons for

non-acceptance and remedial/corrective action taken on the recommendations. However, the Railways have not supplied the said information and the figure of energy audit as reported by the Ministry shows a declining trend with only 66 energy audits done in 2015-16 as compared to 448 in 2014-15 (upto November 2015), highlighting the lackadaisical approach of the Railways towards energy audit. The Committee, therefore, strongly desire the Ministry of Railways to put utmost importance on duly getting energy audit conducted in all Zonal Railways to identify the areas of improvement and present to the Committee status of energy audit of all eligible facilities along with details of non complying facilities/stations in the concerned Zonal Railways. The Committee also reiterate that a detailed report indicating the recommendations given by the Energy Auditors, implemented/not implemented by the Ministry along with the reasons for non-acceptance and remedial/corrective action taken on the recommendations may be furnished to the Committee at the earliest.

32. The Committee note that in pursuance of their recommendations, the Ministry of Railways have initiated several measures to make the environment management system in Indian Railways - Stations, Trains and Tracks more effective in future, however, in several cases the work was far from completion till December, 2015. The details of such cases as provided by the Ministry are given as under:

- (i) Balance works of Raipur plant are yet to be completed.
- (ii) Commissioning of Tondiarpet Plant is further delayed.
- (iii) Introduction of bio-diesel in Indian Railways is still at roadmap state.
- (iv) Tenders for Natural Gas based Alco engine for locomotives are yet to be awarded.
- (v) The Gas Turbine based locomotives, RDSO is still at discussion stage with Water recycling plant at Raipur Station is yet to be set up.
- (vi) Setting up of Water Recycling Plant (WRP) subject to techno-economic viability at major water consumption centres is still being assessed. It has been planned to take up work of WRPs at 32 major stations (A-1 and A Category) including 9 stations on Southern Railway during 2015-16.

- (vii) For the year 2015-16 total 326 Rain Water Harvesting (RWH) systems have been planned to be set up on various Zonal Railways, out of which 146 have been completed till September, 2015.
- (viii) Indian Railways has planned to set up additional 168 MW of Wind Mill Plants.
- (ix) Indian Railways is striving to achieve the target of fitment of 10500 bio-toilets in the passenger coaches during the financial year 2014-15.

While noting the aforesaid steps initiated by the Ministry of Railways, the Committee would like to be apprised of the tangible outcome of these measures and also the present status of aforesaid works already in process, and targets achieved till February, 2016 in respect of setting up of RWH, Water Recycling Plants, Wind Mill Plants, fitment of bio toilets, etc. The Committee would also impress upon the Government to intensify the measures initiated and make more concerted efforts towards cleanliness in stations and trains, curbing emission from Diesel locomotives, regulating Noise/Water Pollution, Electrification of tracks, conservation of water and energy and waste management in Indian Railways.

NEW DELHI,

11th March, 2016

21st Phalguna, 1937 (Saka)

Prof. K. V. THOMAS

Chairperson,

Public Accounts Committee