

## **MAINTENANCE OF BRIDGES IN INDIAN RAILWAYS**

[Action Taken by the Government on the Observations/Recommendations of the Committee contained in their 87<sup>th</sup> Report (16<sup>th</sup> Lok Sabha)]

### **MINISTRY OF RAILWAYS (RAILWAY BOARD)**

### **PUBLIC ACCOUNTS COMMITTEE (2018-19)**

### **ONE HUNDRED AND NINETEENTH REPORT**

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### **SIXTEENTH LOK SABHA**



**LOK SABHA SECRETARIAT  
NEW DELHI**

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(SIXTEENTH LOK SABHA)

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**MINISTRY OF RAILWAYS (RAILWAY BOARD)**



*Presented to Lok Sabha on:* 14.12.2018

*Laid in Rajya Sabha on:* 14.12.2018.

**LOK SABHA SECRETARIAT  
NEW DELHI**

December, 2018 /Agrahayana, 1940 (Saka)

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### **APPENDICES\***

- I Minutes of the 20<sup>th</sup> sitting of the Public Accounts Committee (2018-19) held on 5<sup>th</sup> December, 2018
- II Analysis of the Action Taken by the Government on the Observations/Recommendations of the Public Accounts Committee contained in their Eighty-seventh Report (Sixteenth Lok Sabha)

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*\*Not appended to the cyclostyled copy of the Report*

**COMPOSITION OF THE PUBLIC ACCOUNTS COMMITTEE**  
**(2018-19)**

**Shri Mallikarjun Kharge - Chairperson**

**MEMBERS**

**LOK SABHA**

2. Shri Subhash Chandra Baheria
3. Shri Sudip Bandyopadhyay
4. Shri Prem Singh Chandumajra
5. Shri Gajanan Chandrakant Kirtikar
6. Shri Bhartruhari Mahtab
7. Smt. Riti Pathak
8. Shri Ramesh Pokhriyal "Nishank"
9. Shri Janardan Singh Sigriwal
10. Shri Abhishek Singh
11. Shri Gopal Shetty
12. Dr. Kirit Somaiya
13. Shri Anurag Singh Thakur
14. Shri Shivkumar Chanabasappa Udasi
15. Dr. Ponnusamy Venugopal

**RAJYA SABHA**

16. Prof. M. V. Rajeev Gowda
17. Shri Bhubaneswar Kalita
18. Shri Shwait Malik
19. Shri Narayan Lal Panchariya
20. Shri Sukhendu Sekhar Roy
21. Shri C.M. Ramesh
22. Shri Bhupender Yadav

**SECRETARIAT**

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

## INTRODUCTION

I, the Chairperson, Public Accounts Committee (2018-19), having been authorised by the Committee, do present this One Hundred and Nineteenth Report (Sixteenth Lok Sabha) on Action Taken by the Government on the Observations/Recommendations of the Committee contained in their Eighty-seventh Report (Sixteenth Lok Sabha) on **'Maintenance of Bridges in Indian Railways'** based on Chapter-I of C&AG Report No. 24 of 2015 (Vol.II) relating to Ministry of Railways (Railway Board).

2. The Eighty-seventh Report was presented to Lok Sabha/laid in Rajya Sabha on 9<sup>th</sup> February, 2018. Replies of the Government to all the Observations/Recommendations contained in the Report were received. The Public Accounts Committee considered and adopted the One hundred and Nineteenth Report at their sitting held on 5<sup>th</sup> December, 2018. 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 Eighty-seventh Report (Sixteenth Lok Sabha) is given at *Appendix-II*.

**NEW DELHI;**  
**December, 2018**  
**Agrahayana, 1940 (Saka)**

**MALLIKARJUN KHARGE**  
**Chairperson,**  
**Public Accounts Committee**

## REPORT

### PART - I

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 Eighty-seventh Report (16<sup>th</sup> Lok Sabha) on "Maintenance of Bridges in Indian Railways" based on Chapter - I of C&AG Report No. 24 of 2015 (Vol. II).

2. The Eighty-seventh Report (16<sup>th</sup> Lok Sabha) which was presented to Lok Sabha/laid in Rajya Sabha on 9<sup>th</sup> February, 2018, contained 12 Observations and Recommendations. Action Taken Notes in respect of all the Observations and Recommendations have been received from the Ministry of Railways (Railway Board) and are broadly categorized as under:

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

Para Nos. 1-12

**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 Nos. NIL

**Total: NIL**  
**Chapter - III**

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

Para Nos. NIL

**Total: NIL**  
**Chapter - IV**

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

Para Nos. NIL

**Total: NIL**  
**Chapter - V**

3. During the course of examination of the subject, the Committee noted several irregularities in maintenance of bridges in Indian Railways. These inter-alia pertained to delay in sanctioning the bridgeworks even after identification for rehabilitation by Railway Board and speed restrictions, under-utilisation of funds, under-utilisation of modern equipments for bridge inspection, inordinate delay in execution of sanctioned bridgeworks, poor maintenance of Railway bridges within their codal life, bridge inspections were not carried out in many zones, inadequacy of manpower for inspection and maintenance of bridges and out of 20 modules proposed, only one module relating to creation of central structured Bridge Data Base was finalised. The Committee also observed that out of 147 bridges made of early steel/crew pile/cast Iron due to be phased out, 96 bridges of these types existed over five Zonal Railways. Further, delay in timely supply of steel girders by the Civil Engineering Workshops (CEWs) resulted in delay of rehabilitation of Railway bridges. The Committee had accordingly given their Observations/Recommendations in the Eighty-seventh Report (16<sup>th</sup> Lok Sabha). The Gist of these Observations/Recommendations are contained in the succeeding paragraphs:

- a) While viewing that speed restrictions and delaying crucial bridge work at zonal levels and RB level simply on monetary considerations defeats the very purpose of the system of identification for rehabilitation, besides compromising the safety of passengers as well as train services on the bridges, the Committee had desired that a strategic management system be developed for fast tracking sanction of rehabilitation/reconstruction of bridges within a time frame based on priority for safety.
- b) The Committee had desired that proper planning, execution and effective mechanism of monitoring should be set up at both Zonal and RB levels to ensure optimum utilization of funds.
- c) The Committee had desired that accountability should be fixed at all Zonal as well as RB levels against the officers who have procured equipments at exorbitant rates which are lying underutilized.

- d) The Committee had recommended the Railways to set timelines for the execution and completion of bridgeworks with effective planning and proper monitoring so as to ensure that safety of human lives is not compromised and railway assets protected.
- e) Upon noticing that out of 42 bridges found to have become due for rehabilitation/reconstruction within their codal life (normal life), 37 of them were located in South Western Region alone, the Committee had urged that the matter may be enquired into and action taken against the officers responsible for the lapse.
- f) The Committee had recommended that Bridge Cells be created in the remaining six Railway Zones for better monitoring of inspections and execution of bridgeworks over IR.
- g) While viewing that such large scale vacancies exposes the lack of seriousness on the part of railways to carry out the much needed inspection of railway Bridges, the Committee had recommended that urgent steps be taken to fill up vacant posts, expedite holding of DPCs and conduct the recruitment of requisite manpower.
- h) As Bridge Management System (BMS) will help Ministry of Railways in keeping track of all kinds of maintenance and inspection issues related to Railway Bridges, the Committee emphasized the imperative need for making the BMS system fully operational within six months of the presentation of the Report.
- i) The Committee had desired that keeping in view the safety of passengers, technically obsolete bridges need to be replaced in a time bound manner at the earliest.
- j) The Committee had desired that construction companies/contractors who fail to ensure quality and long life of bridges be debarred from participating in future tenders and penalized/earnest money forfeited. The Committee had also desired that the officials found lacking in their duties to ensure good quality work or colluded with contractors be punished in an exemplary manner.
- k) While observing that delays in supply of girders by the Civil Engineering Workshops affect execution of the relevant bridgeworks, the Committee had

recommended that Railways need to modernize/ enhance the number and capacity of the workshops and augment advance procurement of raw materials to avoid the delay in supply of steel girders as it ultimately impacts the safety of passengers on account of non-completion of bridgeworks identified for rehabilitation.

4. The Action Taken Notes furnished by the Ministry of Railways (Railway Board) as each of the Observation/Recommendation of the Committee contained in their Eight-seventh Report have been reproduced in the relevant chapters of this Report. The Committee will now deal with the action taken by the Government on some of their observations/recommendations which either need reiteration or merit comments.

**(Recommendation Para No. 1)**

5. The Committee in their 87<sup>th</sup> Report (16<sup>th</sup> Lok Sabha) had found substantial delays in rehabilitation of identified bridges. The Committee also noticed inordinate delays in sanctioning/executing and monitoring of bridgeworks which resulted in unpardonable delays in achieving target date for completion of bridges. Thus, the Committee observed that the non-serious approach of the Railways leads to the possibility of compromising passenger safety during operation of train service on those identified bridges.

6. In their Action Taken Note on the aforesaid observation of the Committee, the Ministry of Railways (Railway Board) stated as follows:

"Safety of Bridges is accorded very high priority on Indian Railways. Repair/ rehabilitation / rebuilding / strengthening of Bridges is a continuous process and is being undertaken primarily on the basis of their physical condition as ascertained during regular inspections at various levels. However, sometimes bridges are also rehabilitated / strengthened / rebuilt on account of increased loading standards/inadequate waterway/unforeseen damage due to floods etc. It is not true that Bridge works are sanctioned based on monetary considerations only. Bridge works are sanctioned keeping in view the safety aspects, existing throw forward, availability of funds, available time allowance without compromising with safety of bridges. If the corrective / remedial measures are expected to take a long duration, suitable speed restriction is imposed and such bridges are kept under close watch.

The bridge rehabilitation works are normally carried out as Plan expenditure under Plan Head-32 of Demand no. 16. However, bridges requiring urgent

repairs / rehabilitation are also rehabilitated under revenue to ensure safety of train operations.

As regards to sanction of Bridge works under Plan Head-32, the bridge works of more than ₹ 2.5 Crore each are sanctioned by Railway Board in Annual Budget every year based on proposals of Zonal railways received every year online on IRPSM (Indian Railways Projects Sanctions & Management), whereas works of less than 2.5 Crore are sanctioned by zonal railways themselves at Headquarter & Divisional Level.

In this regard, it is stated that the works proposed for sanction at Railway Board level (more than ₹ 2.5 crores each) are examined and prioritised based on safety considerations. However, all the works proposed by Zonal Railways do not involve safety aspects. The works being proposed by field level are critically examined at Zonal Head Quarter level and Railway Board level and highest priority is accorded to works having direct bearing on safety. The works are accordingly sanctioned at Zonal level/Board level. There is multi tier system of examining the proposals and finally the proposals required from safety point of view are accorded highest priority and sanctioned. The safety of train operations is never compromised. As already mentioned above, bridges requiring urgent repairs are also rehabilitated under revenue to ensure safety of train operations by issue of urgency certificate.

During Budget 2015-16 to 2017-18, total of 291 Bridge works (involving 1525 bridges) at a cost of ₹ 1577 crores under Plan Head-32 (PH-32) have been sanctioned at Railway Board level. During Budget 2018-19, total of 193 bridge works (involving 1367 bridges) at a cost of ₹ 1751 crores have been sanctioned at Railway Board level. These works were proposed by the zonal railways online on IRPSM about one to four months before the Annual Budget and sanctioned by Railway Board in the concerned Budget Year itself. Thus, the decision of sanctioning the bridge works proposed by the Zonal Railways is taken in the same year itself.

For work sanctioning and monitoring, Indian Railway has developed a Web-based Application called "Indian Railways Projects Sanctions & Management (IRPSM)" which allows Online Creation and forwarding of 'New Works' proposals for processing and sanctioning at various levels This reduces the processing time for each work and its further sanctioning subsequently"

**7. A perusal of the action taken note furnished by the Ministry of Railways reveals that during Budget 2015-16 to 2017-18, total of 291 bridge works (involving 1525 bridges) at a cost of ₹ 1577 crore under Plan Head - 32 were sanctioned at Railway Board level. Further, during Budget 2018-19 total of 193 Bridge works (involving 1367 bridges) at a cost of ₹ 1751 crore have been**

sanctioned. However, the ATN is silent about the progress of the projects sanctioned during Budget 2015-16 to 2017-18, present position and target date of their completion etc. The Committee have now been apprised that works sanctioned at Zonal Railway level are completed within 2-3 years and works sanctioned at Board level are completed within 4-5 years. The Committee are optimistic that vigorous monitoring would ensure timely completion of the projects. The Committee, therefore, recommend that the Monitoring Committees should be set up at Railway Board/every Zonal Railways level and there should be strict monitoring of all the projects. There should be strict monitoring of all the progress to ensure their timely completion. They should also fix responsibility for unreasonable and unexplained delays in execution/completion of the projects. The Committee would also like to be apprised of the present position of commencement of the aforesaid projects and targetted date for their completion within three months.

**Under-utilisation of funds**  
**(Recommendation Para No. 3)**

8. In their 87<sup>th</sup> Report (16<sup>th</sup> Lok Sabha), the Committee found that on the one hand, the Budget Grant provided was short of demand, whereas, on the other hand, the total average Budget Grant surrendered per year through the process of demand for less final Grant across the zones was ₹ 58.60 crore, i.e. 17.28 percent. The Committee had, therefore, desired that proper planning, execution and effective mechanism of monitoring should be set up at both zonal and Railway Board levels to ensure optimum utilization of funds.

9. In their Action Taken Note, the Ministry of Railways (Railway Board) stated as under:—

"Funds are allocated for Bridge rehabilitation works under Plan Head 32 to each Zonal Railway keeping in view the overall availability of funds and total requirement of zonal railways. It is not true that there has been surrender in the funds allocated during 2010-11 to 2013-14, to the extent indicated in Audit's contention. During this period, ₹ 1385.16 crores have been spent against allotment of ₹ 1388.31 crores. These are based on the final expenditure figures published by Ministry of Railways in the Budget documents.

It is further mentioned that the funds utilisation is monitored vigorously through various means such as periodical progress reports, regular meetings etc. to ensure that funds are not surrendered.

In order to ensure adequate funds for safety related works, in the Budget 2017-18, Rashtriya Rail Sanraksha Kosh (RRSK) has been created with a corpus of ₹ one lakh crore over a period of five years for carrying out safety related works which include Bridge works. ₹ 700 crores from RRSK are allotted for Bridge Rehabilitation Works during 2018-19."

10. In their vetting comments to the aforesaid Action Taken Note the Audit has observed as under:

"In SR, during 2016-17 there was surrender of ₹ 14.00 crore under Bridge Works. In ER, actual expenditure of ₹ 380.88 crore was incurred against total Final Grant of ₹ 397.53 crore during the period from 2013-14 to 2017-18 for rehabilitation of bridges. In ECoR, during 2016-17 there was surrender of ₹ 3.4 crore out of the final grant of ₹ 13 crore. In WR during 2017-18, ₹ 4.65 crore was surrendered. As such, surrender of funds allotted for bridge rehabilitation works still persist."

11. In response to the abovesaid Audit observation, the Ministry of Railways (Railway Board) stated as follows:

"Zonal Railway-wise utilization of fund may vary slightly depending upon the progress of various works. However, total utilization of fund for all Railways is within the projected grants. Efforts are always made to utilize full funds and Railways are suitably advised, from time to time, in this regard."

**12. The Committee are deeply concerned to note the instances of surrender of funds in SR, ER, ECoR and WR. However, the Ministry of Railways apprised that efforts are always made to utilize full funds and Zonal Railways are suitably advised, from time to time, in this regard. The Committee feel that efforts made by the ministry in this direction are inadequate. Since surrender of funds, speaks volumes for the faulty accounting information system and sheer negligence on the part of senior monitoring authorities in the aforesaid Zonal Railways, the Committee desire that the responsibility fixed should be fixed to avoid their recurrence of such lapses.**

**Under-utilisation of modern equipments for bridge inspection**  
**(Recommendation Para No. 4)**

13. In their 87<sup>th</sup> Report (16<sup>th</sup> Lok Sabha) the Committee had observed that even though for conducting objective inspection of bridges, 290 equipments of five types had been procured at different zones on the recommendations of the High Level Safety

Review Committee headed by Shri Anil Kakodkar, their utilization was barely only 7.07%. The Committee further observed that these equipments were procured at an exorbitant approximate cost of ₹ 12.99 crore. While observing the unjustified decisions of the officers of Indian Railways in procuring costly equipments without any proper planning, cost analysis, assessing the actual need and its effective utilisation, the Committee had desired that the accountability should be fixed at Zonal as well as Railway Board levels against the officers who have procured equipments at exorbitant rates which are lying underutilized.

14. In their Action Taken Note, the Ministry of Railways(Railway Board) submitted as under:

"The NDT equipments are for the specific purpose and being used by the zonal railways regularly on need basis to support the visual observations to assess various parameters related to condition of bridge such as strength of material, thickness of paint, quality of welds etc. These equipments are being used as per requirement only. However, Railways have been advised time to time in various forums to use them more frequently. These equipments are procured by zonal railways and Research Design and Standards Organization (RDSO) regularly on need basis.

Officials/supervisors from zonal railways are imparted training regularly at RDSO etc for getting acquainted with these instruments. Moreover, the following safety measures and modernization of Inspection and maintenance of Railway Bridges are also being taken:

- Continuous water level monitoring system to monitor the water level in vulnerable bridges has been introduced. So far the system has been installed and commissioned at 117 bridges.
- For modernizing the Bridge inspection and minimizing the human errors, inspection of Railway Bridges by Drones has been considered. This will help in capturing the Photographs / Videos of different parts of bridges including inaccessible parts. Zonal railways have been advised to undertake Drone Inspection of identified mega bridges in the first phase."

15. **The Committee find that the Action Taken Note is conspicuously silent on the issue of fixing accountability against the officers of the Indian Railways for procuring equipments at exorbitant rates as the same are lying underutilised. Since the under-utilization of the equipments is defeating the purpose of timely**

**strengthening of bridges, the Committee reiterate their earlier recommendation and would like to be apprised of the action taken against the officers responsible in the matter.**

**Inordinate delay in execution of sanctioned bridge works**  
**(Recommendation Para No. 5)**

16. While observing that out of 3979 bridgeworks, sanctioned by the Railway Board, works of 710 bridges remained to be completed as on March 2014 even after expiry of prescribed period of one/four years, the Committee had desired the Ministry of Railways to set timelines for the execution and completion of bridgeworks with effective planning and proper monitoring so as to ensure that safety of human lives is not compromised and railway assets protected.

17. In their Action Taken Note, the Ministry of Railways (Railway Board) stated as follows:

"Bridge rehabilitation/rebuilding works are always accorded very high priority. All efforts are taken to ensure that bridges are rehabilitated on time. Depending upon the quantum of work involved, bridge rehabilitation/rebuilding may take from few months up to few year. Sometimes some delay occur due to complexities of the work involved, land acquisition, contractual issues etc, which are beyond the control of Railway administration. However, safety is never compromised and it is ensured all the time that bridge is safe for running of trains at permitted speed.

In order to further ensure that bridge works get completed on time, zonal railways have been advised to ensure availability of all necessary requirements such as land, plan etc. before commencement of work, so as to complete the execution of work within 4 - 5 years."

**18. The Committee had observed that 710 bridges remained to be completed as on March, 2014, even after expiry of prescribed timelines and had recommended the Ministry to set timelines with effective planning and monitoring. The Committee are unhappy to note that the Ministry has failed to set timelines for the execution and completion of bridgeworks. The Committee are not satisfied with the explanation offered in this regard that depending upon the quantum of work involved, bridge rehabilitation/rebuilding may take from few months upto few years and sometime delay occur due to complexities of the**

woks involved, which are beyond the control of Railway administration. The Committee, while taking a serious note of the apathy displayed by the Ministry in this matter, reiterate their earlier recommendation for rehabilitation/rebuilding of bridges and setting timelines for completion of bridge works in future.

**Implementation of Bridge Management System (BMS)**  
**(Recommendation Para No. 9)**

19. Upon noticing that implementation of Bridge Management System (BMS) which would help the Ministry in keeping track of all kinds of maintenance and inspection issues related to Railway Bridges, was not been completed till February, 2018 though it was scheduled to be completed by 2006-07, the Committee had emphasized the imperative need for making the BMS system fully operational within six months of the presentation of PAC Report to Parliament.

20. In their Action Taken Note on the aforesaid recommendation, the Ministry of Railways (Railway Board) submitted as follows:

"The work for development of separate web enabled Bridge Management System (BMS) has been sanctioned for ₹ 9.85 crore. The work is being executed by CRIS. An MoU has been signed by Northern Railway with CRIS in this regard in 2017. A Committee has also been formed to provide guidance to CRIS for development of this Application. The work is expected to be completed by March 2019."

21. **The Committee note with regret that the Bridge Management system is yet to be commissioned even after a lapse of 11 years. While expressing deep dissatisfaction over the failure of the Ministry to expedite the work, the Committee would like the Ministry to address the matter seriously and take all necessary effective measures to ensure that the system is commissioned without further delay. The Committee would like to be apprised of the present status of the work within a period of one month.**

**NEW DELHI;**  
**December, 2018**  
**Agrahayana, 1940 (Saka)**

**MALLIKARJUN KHARGE**  
**Chairperson,**  
**Public Accounts Committee**

**APPENDIX-II**  
(Vide Paragraph 5 of Introduction)

**ANALYSIS OF THE ACTION TAKEN BY THE GOVERNMENT ON THE  
OBSERVATIONS/RECOMMENDATIONS OF THE PUBLIC ACCOUNTS COMMITTEE  
CONTAINED IN THEIR EIGHTY-SEVENTH REPORT (SIXTEENTH LOK SABHA)**

(i)	<b>Total number of Observations/Recommendations</b>	<b>12</b>
(ii)	<b>Observations/Recommendations of the Committee which have been accepted by the Government: Para Nos. 1 to 12</b>	<b>Total : 12 Percentage: 100%</b>
(iii)	<b>Observations/Recommendations which the Committee do not desire to pursue in view of the reply of the Government:  Para Nos. -Nil</b>	<b>Total : 0 Percentage: 0</b>
(iv)	<b>Observations/Recommendations in respect of which replies of the Government have not been accepted by the Committee and which require reiteration:  Para Nos. -Nil</b>	<b>Total : 0 Percentage: 0</b>
(v)	<b>Observations/Recommendations in respect of which the Government have furnished interim replies:  Para Nos. -Nil</b>	<b>Total : 0 Percentage: 0</b>