

**12**

**STANDING COMMITTEE ON  
RAILWAYS  
(2016-17)**

**SIXTEENTH LOK SABHA**

**MINISTRY OF RAILWAYS  
(RAILWAY BOARD)**

**SAFETY AND SECURITY IN RAILWAYS**

**TWELFTH REPORT**



**LOK SABHA SECRETARIAT**

**NEW DELHI**

December, 2016/ Agrahayana, 1938 (Saka)

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(RAILWAY BOARD)**

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**Presented to Lok Sabha on 14.12.2016**

**Laid in Rajya Sabha on 14.12.2016**



**LOK SABHA SECRETARIAT**

**NEW DELHI**

8 December, 2016/ 17 Agrahayana, 1938 (Saka)

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**COMPOSITION OF STANDING COMMITTEE ON RAILWAYS (2016-17)**

**Shri Sudip Bandyopadhyay - Chairperson**

***MEMBERS***

**LOK SABHA**

2. Shri E. Ahamed
3. Kunwar Pushpendra Singh Chandel
4. Shri Ram Tahal Choudhary
5. Shri Gaurav Gogoi
6. Shri Sudheer Gupta
7. Shri Chandra Prakash Joshi
8. Shri Ramesh Kaushik
9. Shri Gajanan Chandrakant Kirtikar
10. Shri Balabhadra Majhi
11. Shri K.H. Muniyappa
12. Shri A.T. Nana Patil
13. Shri R. Radhakrishnan
14. Shri M. Raja Mohan Reddy
15. Shri Lakhanlal Sahu
16. Prof. (Dr.) Ram Shanker
17. Shri G.M. Siddeshwara
18. Shri Ganesh Singh
19. Shri Uday Pratap Singh
20. Shri Narasimham Thota
21. Shri S.R. Vijayakumar

**RAJYA SABHA**

22. Shri A.K. Antony
23. Shri Ranvijay Singh Judev
24. Shri Shwait Malik
25. Shri Satish Chandra Misra
26. Shri Mukut Mithi
27. Shri Garikapati Mohan Rao
28. Shri T. Rathinavel
29. Shri Bashistha Narain Singh
30. Shri Alok Tiwari
31. Shri Motilal Vora

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Constituted w.e.f. 01.09.2016 *vide* Lok Sabha Secretariat Bulletin Part II No.4105 dated 15.09.2016

**LOK SABHA SECRETARIAT**

- |    |                            |   |                         |
|----|----------------------------|---|-------------------------|
| 1. | Smt. Abha Singh Yaduvanshi | - | Joint Secretary         |
| 2. | Shri Arun K.Kaushik        | - | Director                |
| 3. | Smt. Geeta Parmar          | - | Deputy Secretary        |
| 4. | Smt. Banani Sarker Joshi   | - | Sr. Committee Assistant |

## INTRODUCTION

I, the Chairperson of the Standing Committee on Railways (2016-17), having been authorised by the Committee to present the Report on their behalf, present this Twelfth Report of the Standing Committee on Railways on 'Safety and Security in Railways'.

2. The Committee took evidence of the representatives of the Ministry of Railways (Railway Board) on 14.10.2015, 08.02.2016, 24.10.2016 and 04.11.2016.

3. The Committee considered and adopted the Report at their sitting held on 8 December, 2016. Minutes of the related sittings are given in the Appendix to the Report.

4. This Report is based on facts and figures submitted by the Ministry of Railways on the subject 'Safety and Security in Railways' and depositions made by the representatives of the Ministry of Railways before the Committee. The Committee wish to express their thanks to the officers of the Ministry of Railways (Railway Board) and the representatives of the various Railway Associations for appearing before the Committee and furnishing the information that the Committee desired in connection with the examination of the subject 'Safety and Security in Railways'. They would also like to place on record their appreciation for the assistance rendered to them by the officials of Lok Sabha Secretariat attached to the Committee.

5. For facility of reference and convenience, the observations and recommendations of the Committee have been printed in bold letters in Part-II of the Report.

NEW DELHI;  
8, December, 2016  
17, Agrahayana, 1938 (Saka)

**SUDIP BANDYOPADHYAY**  
**Chairperson**  
**Standing Committee on Railways**

## **CHAPTER-I**

### **SAFETY IN INDIAN RAILWAYS**

#### **Introductory**

Indian Railways is the largest railway network under a single management in the world. It has a route kilometre of nearly 66,030 kms, an operating fleet of 2,43,337 wagons (in terms of 8-wheelers), 61,464 coaching vehicles and 10,773 locomotives.

1.2 During 2014-15, on an average, 20,849 (provisional) trains including 12,995 (provisional) passenger carrying trains were run daily. Nearly 23 million passengers were booked daily and 1101.08 (provisional) million tonnes of freight traffic was loaded during the year. With the massive utilisation of assets, safety is of paramount importance for operational efficiency. A very high priority is accorded to safety to enable railways to achieve still greater heights of performance.

1.3 The Corporate Safety Plan of the Indian Railways for 2003-2013 was formulated whose broad objectives included reduction in the rate of accidents and passenger fatalities, development of manpower, safety on all fronts of train operations and maintenance and adoption of fail-proof environment, etc. The targets set in the Corporate Safety Plan for reduction in derailment and accidents at unmanned level crossings have since been achieved. By the end of the Corporate Safety Plan in 2012-13, accidents per million train kilometres reduced to 0.11 from 0.17 in 2002-03. After completion of the Corporate Safety Plan 2003-13, Hon'ble Minister for Railways announced framing of a new five year Corporate Safety Plan for IR in the Railways' Budget 2015-16. Pursuant to this announcement, preparation of draft Corporate Safety Plan has since been initiated.

1.4 With regard to ensuring safety and security in train operations, the Chairman, Railway Board, during evidence submitted as under:

*"...The Railways makes a lot of efforts. We accord highest priority because unless the operations are safe, there are no operations. People have a lot of faith in the railway transportation. We handle a very large number of passengers.*

*So, it is a duty to ensure that they reach their destination safely and securely. Nevertheless, once in a while, there are some unfortunate incidents. We thoroughly investigate them and take corrective measures as required."*

## **Overview of Safety in Indian Railways**

1.5 As regards the mechanism existing in IR for ensuring safety of railway property and passengers, it has been stated that each department defines its own safety parameters for assets installed and used on Indian Railways and monitors and maintains the parameters in the safe limit as defined. These safety limits are codified in manuals and assets are maintained as per laid down protocol. The operations are done as per G&SR (General and Subsidiary rules). Concerted efforts are made for safe movement of trains as well as safety of passengers in trains and all possible steps are undertaken on a continual basis to prevent accidents and to enhance safety.

1.6 When asked about the effectiveness of the existing mechanism for safety in IR, the Ministry have stated that adherence to safety standards is a continuous process and Indian Railways gives highest priority to Safety. This is evident from the fact that despite quantum increase in traffic carried by Indian Railways over the years, the number of train accidents including incidents at unmanned level crossings which are mostly due to carelessness of road vehicle users has shown a decreasing trend from 418 in 2001-02 to 107 in 2015-16 and Accidents Per Million Train Kilometres, an important index of safety has also come down from 0.55 Accident Per Million Train Kilometers during 2001-2002 to 0.10 (Provisional) in 2015-16. In this context, it has been apprised that though the traffic of both passengers and freight over the Railways network had increased by 1344 per cent and 1642 per cent respectively, over the last 64 years the route kilometres had grown by only 23 per cent.

1.7 The Committee wanted to know the reasons for such a sluggish growth of the rail network which was not commensurate with the growth of passenger and freight traffic, the Ministry has stated that network expansion has suffered from chronic and significant under investment as well as low internal generation of resources. There

has been significant decline in expenditure on railways as a percentage of transport sector expenditure. Railway expenditure as of percentage of transport sector expenditure has come down from 56% in 7th plan to 30% in 11th plan. Further, the share of the Indian Railway in overall GDP has in fact sunk now below 1 per cent of the total. As a result of this, network expansion has been severely stunted and undue burden is being put on existing infrastructure leading to severe/chronic congestion. The extent of this immense congestion can be assessed from the fact that on the Indian Railways out of total 1219 sections, 492 sections (40%) are running at 100% or above line capacity. Similarly 161 sections out of 247 section of High Density Network are over saturated.

1.8 Asked about the areas of concern that endanger safety, it has been stated that the areas of concern are derailments, unmanned level crossings accidents and signal passing at danger by loco pilots. For derailments, major factors are rail fracture, weld failure and other track defects, coach and wagon defects, SPAD, etc. These concerns can be addressed by timely replacement of over-aged assets, adoption of suitable technology for upgradation and maintenance of track, rolling stock, signalling and interlocking systems, safety drives, greater emphasis on training of officials and inspections at regular inspections to monitor and educate staff for observance of safe practices.

1.9 As regards the constraint being faced by Indian Railways to address those areas of concerns affecting safety in rail operations, they are stated to be non-availability of funds to create additional capacity and modernisation of assets as well as difficulty in giving time for maintenance of assets due to saturation of the current network. It has been added that additional funds are being raised from internal and external resources to generate new capacity so as to create required maintenance time slots. Mechanisation of maintenance and modern technology is also being used so as to reduce downtime. The system of assured integrated maintenance blocks for scheduled maintenance/overhaul of track has been envisaged and is under consideration of Railway Board.

1.10 When the Committee wanted to know whether safety is being compromised as a result of such a situation, the Railways have greatly stressed that in spite of this grim scenario there is no compromise on the part of safety of train operations in

Indian Railways. They have informed that notwithstanding increase in freight loading and passengers kilometers, accidents have come down from 418 in 2001-02 to 107 in 2015-16 (including incidents of unmanned level crossings caused mainly due to carelessness of road users) which indicates improved safety performance of Indian Railways year after year.

## ACCIDENTS IN INDIAN RAILWAYS

1.11 Accidents in Indian Railways are stated to be mainly caused by the following factors:

- (i) Derailments
- (ii) Fire
- (iii) Collision
- (iv) Level Crossings Accidents

1.12 The table showing type-wise number of consequential train accidents during 2003-04 to 2015-16 and the current year is given below:-

Table-I

Type of Accident	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
<b>Collision</b>	9	13	9	8	8	13	9	5	9	6	4	5	3
<b>Derailments</b>	202	138	131	96	100	85	80	80	55	49	53	63	65
<b>Manned Level Crossing Accidents</b>	9	5	10	7	12	7	5	5	7	5	4	6	6
<b>Fire in Train</b>	14	10	15	4	5	3	2	2	4	9	7	6	0
<b>Miscellaneous</b>	5	3	4	8	4	7	4	1	2	0	3	5	4
<b>Total</b>	<b>239</b>	<b>169</b>	<b>169</b>	<b>123</b>	<b>129</b>	<b>115</b>	<b>100</b>	<b>93</b>	<b>77</b>	<b>69</b>	<b>71</b>	<b>85</b>	<b>78</b>

Table-II

Type of Incident	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
<b>Unmanned Level Crossing Accidents</b>	86	65	65	72	65	62	65	48	54	53	47	50	29

## CAUSES OF TRAIN ACCIDENTS

1.13 It has been mentioned that a train accident occurs as a result of failure on a number of accounts. A statement showing the main causes of consequential train

accidents (excluding incidents of trespassing at unmanned level crossings) during 2003-04 to 2015-16 is given below:

Causes of Accident	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
Failure of Railway staff	161	119	120	85	88	75	63	56	52	46	51	60	54
Failure of other than Railway staff*	21	13	21	12	16	14	10	9	9	6	10	8	9
Failure of equipment	18	14	8	9	9	0	6	5	5	6	3	3	2
Sabotage	18	4	6	8	7	13	14	16	6	3	3	3	1
Combination of factors	2	1	0	1	0	4	1	3	1	0	0	0	1
Incidental	17	16	11	7	8	5	4	4	3	7	4	8	9
Could not be established	2	2	3	1	1	4	2	0	1	1	0	3	1
Under Investigation	0	0	0	0	0	0	0	0	0	0	0	0	1
<b>Grand Total</b>	<b>239</b>	<b>169</b>	<b>169</b>	<b>123</b>	<b>129</b>	<b>115</b>	<b>100</b>	<b>93</b>	<b>77</b>	<b>69</b>	<b>71</b>	<b>85</b>	<b>78</b>

\*Mainly road vehicle users are responsible for the incidents at unmanned level crossings.

**Note: incidental causes include acts of nature like falling of boulders, sinking of track due to heavy rain, cattle run over, etc.**

From the statement above, it is seen that during 2015-16 out of 78 accidents, 54 accidents (about 70 percent) occurred due to failure on the part of railway staff. The figure for 2014-15 shows a similar trend with failure of Railway Staff accounting for nearly 71 % of the total consequential train accidents. The trend has been replicated throughout the years where failure of railway staff is the major cause of consequential railway accidents. The Committee were further informed by the Chairman, Railway Board, during the briefing meeting that bulk of accidents other than at unmanned level crossing have taken place because of the failure on the part of railway staff.

1.14 When the Ministry was asked about the different faults on the part of the railway staff causing maximum number of accidents, the Ministry have stated that

these include carelessness working, poor maintenance cases, adoption of short cuts, non-observance of laid down safety rules and procedures.

## CASUALTIES

1.15 The number of casualties in Consequential train accidents is essentially fortuitous and not strictly amenable to comparison. Number of persons who lost their lives in consequential train accidents (2003-04 to 2014-15) and the current year is as under:

Type of Accident	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
Collision	8	39	25	2	1	8	44	240	22	27	1	15	1
Derailments	90	15	148	8	13	10	14	4	73	5	6	103	36
Manned Level Crossing Accidents	12	9	6	11	27	18	7	7	6	18	6	31	12
Fire in Train	41	0	15	0	0	31	0	0	9	31	35	0	0
Miscellaneous	5	0	1	41	2	13	3	0	5	0	6	12	15
<b>Total</b>	<b>156</b>	<b>63</b>	<b>195</b>	<b>62</b>	<b>43</b>	<b>80</b>	<b>68</b>	<b>251</b>	<b>115</b>	<b>81</b>	<b>54</b>	<b>161</b>	<b>64</b>

Type of Accident	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
Unmanned Level Crossing Accidents	138	173	120	146	148	129	170	130	204	124	98	130	58

1.16 During the course of evidence, the witness submitted with regard to casualties as under:

*"There are two or three categories of accidents where bulk of accidents and casualties had taken place. Of course, the biggest is unmanned level crossing accidents. We have taken a lot of measures but still it remains an area of concern because the road users' responsibility is substantial."*

1.17 In a written reply, it has been stated that level crossing accidents mainly occurred due to negligence of road users, road vehicle users by not following the provisions of Sections 131 of Motor Vehicle Act, 1988.

### **ACCIDENTS AT UNMANNED LEVEL CROSSINGS (UNMLCs)**

1.18 It has been observed that there are around 30348 level crossings across the country, out of which 10,440 are unmanned level crossings as on 01.04.2015. Out of 10,440 unmanned level crossings; 7,414 are on Broad Gauge (BG) and remaining 3,026 are on Meter Gauge (MG)/Narrow Gauge (NG). The following table provides year-wise details of the number of unmanned level crossings eliminated during the last five years:

Year	Elimination of Unmanned Level crossings	
	Target	Achievement
2010-11	1720	1234
2011-12	2065	1258
2012-13	1735	1163
2013-14	1352	1102
2014-15	730	1148
2015-16 (upto Feb.2016)	820	992
<b>Total</b>	<b>8422</b>	<b>6897</b>

1.19 Regarding allocation of funds for Road Safety Works, the Ministry have informed that works related to elimination of Unmanned Level crossings by Closure/Merger/Manning, elimination of manned Level crossings by Closure/Merger and other works like interlocking of busy manned level crossings and improvement/upgradation of level crossings etc. are chargeable to Plan Head-29 (Road Safety Works - Level Crossings). Whereas, works related to elimination of Manned/Unmanned Level crossings by ROB/RUB/Subways are charged to Plan Head-30 (Road Safety Works - ROB/RUB). As, works of elimination of Level crossings are charged to Plan Head-29 as well as Plan Head-30, separate allocation and utilization of funds for unmanned and manned level crossing is not available. Allotments of funds and expenditure in Road Safety Works in last five years are as under:

**(Rs. in crore)**

Year	Plan Head-29		Plan Head-30		Total (PH-29 + (PH-30))		
	Revised Allocation	Expenditure	Revised Allocation	Expenditure	Revised Allocation	Expenditure	% Utilisation
<b>2010-11</b>	702	414	999	687	1701	1101	65%
<b>2011-12</b>	652	519	1005	810	1657	1329	80%
<b>2012-13</b>	650	528	1350	1057	2000	1584	79%
<b>2013-14</b>	510	504	1490	1482	2000	1986	99%
<b>2014-15</b>	460	441	1740	1782	2200	2222	101%
<b>2015-16 (upto Feb.2016 )</b>	518	373	2144	1389	2662	1645	61%
<b>Total</b>	<b>3492</b>	<b>2779</b>	<b>8728</b>	<b>7207</b>	<b>12220</b>	<b>9867</b>	

1.20 From the above two tables, it is seen that with the exception of the years 2014-15 and 2015-16, the actual physical achievements for elimination of unmanned level crossings have fallen way below the targets. Similar is the case with utilisation of funds for safety which, with the exception of the last two years have always been way below allocations.

1.21 It may be seen from Table I and Table II at para 1.8 that consequential train accidents, excluding unmanned level crossing incidents on Indian Railways have declined substantially from 239 in 2003-04 to 85 in 2014-15. However, the trend is not positive in case of accidents at unmanned level crossings where during 2003-04, 86 accidents occurred while 50 such accidents occurred in 2014-15. Further, during 2014-15, out of 135 accidents, 50 accidents (around 37 percent) occurred at unmanned level crossings. It may simultaneously observed from para 1.11 that out of 291 casualties during 2014-15, 130 (around 44 per cent) and during 2015-16, 58 casualties (48%) were at unmanned level crossings

1.22 Since the exercise of closure of all unmanned level crossings has been pending for a long time, the Ministry was asked about how they were prioritising this matter. The Ministry has replied that Priority is being given for elimination of unmanned level crossings on Broad Gauge (BG) as percentage of rail traffic, speed of trains and percentage of consequential accidents at unmanned level crossings on BG is higher than that on Meter Gauge (MG)/Narrow Gauge (NG). Unmanned level

crossings on Meter Gauge (MG)/Narrow Gauge (NG) will preferably be eliminated during gauge conversion.

1.23 The Ministry has however stated that the issue of closure of unmanned LCs are also dependent upon the availability of funds for Road Safety Works as also for getting the consent of the State Governments for closure of level crossings. Given the gigantic task of elimination of unmanned level crossings, the Ministry have submitted that the biggest challenges being faced are shortage in Railway Safety Fund and delay in getting the consent from State Govt. to eliminate the unmanned level crossings. Further, the Ministry have elaborated that elimination of all these level crossings is a gigantic task and it involves lot of manpower, resources and budgetary support. Regarding the action plan for elimination of unmanned level crossings, the Ministry has stated that they were not in a position to fix-up the timeline for elimination of all unmanned level crossings.

1.24 Funds for the Road Safety Works including elimination of unmanned level crossings, is received by Railways from Central Road Fund (CRF) as a percentage of cess collected on diesel and petrol. Present requirement of funds by Railways to complete all sanctioned Railway Safety Works is Rs.31,931 crore.

1.25 Asked how do the Ministry plan to resolve the present constraints, it has been stated that the Ministry of Railways is continuously chasing with the Ministry of Finance (MoF) for enhancement of Railways' share from CRF. Also Zonal Railways are making continuous efforts with the State Governments for resolving issues for elimination of unmanned level crossings.

1.26 It has been stated that the onus for safe movement over UMLCs is entirely on the road users. However, in view of loss of human life at UMLCs, the Ministry of Railways have decided to progressively eliminate all UMLCs by one of the following methods:-

(i)Closure: Closing unmanned level crossings having NIL/negligible Train Vehicle Units (TVUs),

(ii)Merger: Merger of unmanned level crossing with nearby unmanned/manned gates or Road Under Bridge or Road Over Bridge or Subway by construction of diversion road,

(iii)Provision of Subways/Road Under Bridges (ROBs/RUBs): The Unmanned Level Crossings which cannot be eliminated by the above means, will be progressively manned based on the volume of rail road traffic (TVU) and visibility conditions.

1.27 In addition to these measures, the Ministry has also outlines the steps taken to create awareness and sensitizing people about dangers of rashly using level crossing. The Chairman, Railway, Board has stated that *"..... We already have a laid down scheme for all unmanned level crossings. We have warning boards there. There are speed breakers. There are blinker lights and when the driver passes the level crossing, 400 metres before that, he is supposed to continuously give a horn so that people know that the train is approaching. With all this, we are also taking care of sensitising the people nearby by going to various villages. We are distributing the pamphlets. We are meeting the Gram Panchayat Chiefs. We are conducting some counselling, some nookad natak things, etc. We also do some ambush checks in association with Road Transport authority and the one who tries to pass the truck on the face of an approaching train, they are fined. In fact, fine etc. helps only to a limited extent. I think it is the mind set and the counselling which can help in this direction much more than any other thing. We are serious about it. If you see the figures, unmanned level crossing casualties over a period of time are coming down and they have come down drastically. So, because of the measures that we are serious about, it is coming down. This year, we are going to eliminate around 440 unmanned level crossings out of total 9000 which are available with us supported with the measures that we are taking."*

1.28 He, however, also informed the Committee of the challenges being faced in this regard, stating, during evidence *"..... I think the problem of casualties at unmanned level crossings cannot be eliminated but it will get reduced substantially. But road user has a big responsibility. As per the Act, the right of way is with Railways. Now even if a loco pilot sees that a person or a vehicle is crossing and he wants to stop, he cannot stop because there is a minimum braking distance involved. If he applies the brake, the train will stop after half a kilometre or 700 metres or so. So, by that time he will collide. So it is for road user to be more conscious about it. I am not blaming anybody but the way the system is today, if*

*the road users are little more sensitive on this issue, perhaps these casualties can substantially be reduced."*

1.29 It has been informed that in the last eight years 2008-16 (upto Feb.2016), 8642 UMLCs have been eliminated.

1.30 It has also been informed that during a meeting of General Managers with Board on 21.08.2014, it was decided that Zonal Railways should take immediate action for manning of UMLCs where an accident has taken place in last three years. It was also decided that all UMLCs on Meter/Narrow Gauge network of Indian Railways must be eliminated during their gauge conversion works. Further, Zonal Railways have been directed for closure/merger of UMLCs with very low or negligible TVU with the adjacent MLC/ROB or RUB in consultation with State Authorities.

1.31 Additionally, the Ministry is taking the following steps to prevent accidents at unmanned level crossings:

(a) Provision of basic infrastructure on all unmanned level crossings which includes provision of appropriate visibility, width, gradient, level surface on either side from centre of the nearest track, whistle boards, road warning boards, surface of the approach road and speed breakers/rumble strips as per laid down standards.

(b) Social awareness campaigns to educate road users with the use of various print and electronic media for observance of safe practices prescribed in Motor Vehicles Act and The Railways Act and joint ambush checks along with civil police to counter misadventure in front of approaching trains.

(c) Provision of Second Whistle Board (Repeater) for level crossings for the loco drivers to whistle while approaching unmanned/manned level crossings to warn the road users.

(d) Gate Counsellors or Gate Mitras are being deployed as a purely temporary measure on experimental basis at identified vulnerable unmanned level crossings till these gates are eliminated. There is no plan to appoint Gate Mitras on permanent basis.

1.32 During the tour of the Standing Committee on Railways to Tirupati, Hyderabad, Bengaluru and Thiruvananthapuram in August, 2015, the Committee were informed of the new concept of Gate Mitras who were deployed at vulnerable railway crossings to educate road users of safety practices. The Ministry has further elaborated that Gate Mitras were initially deployed at unmanned level crossings (UMLCs) on few Zonal Railways and later on after getting the benefits, this scheme is being now tried on all Zonal Railways. Vulnerability of UMLCs is assessed based on various parameters like restricted visibility, past accidents, frequent plying of buses, etc. As on 01.04.2015, out of 10440 UMLCs on Indian Railways, Gate Mitras have been deployed on 3536 UMLCs. Presently, this scheme is under experimental phase. The result varies widely based on geographical location. In some of the Zonal Railways, there have been decrease in the rate of accidents at Unmanned Level Crossings while on some other Railways, there have been cases of accidents even, where Gate Mitras have been deployed. Overall it is seen that deployment of Gate Mitras is helpful in reducing accident at Unmanned Level Crossing by creating an additional layer of safety.

1.33 During the course of evidence of different railway associations, it was recognised that as most of the accidents at unmanned level crossings occur due to rash and careless driving of road users. They, therefore, suggested that there should be a reduction in speed of road vehicle while crossing the unmanned LCs. To this end, they advocated that additional speed breakers be provided to bring the speed substantially down i.e. up to dead speed, so that the time for judgment will be sufficient for the driver of road vehicle to negotiate the level crossing safety. When this issue was put to the Ministry, they have stated that speed breakers at level crossings are provided as per guidelines issued by Indian Road congress (IRC) and as per para 918 of Indian Railways P. Way Manual.

1.34 Further, the Committee had also raised the issue of faulty designs of RUBs which do not have adequate drainage facilities leading to severe water-logging in the monsoon months rendering them not only unusable but unsafe as well. The Ministry, in reply, have informed that Road Under Bridge (RUB) is designed for drainage also as per site requirement. As per Railway Board circular dated 18.04.2012, it is the responsibility of State Government to maintain the road, drainage system and

lighting arrangements for RUBs. The Chairman, Railway Board, during evidence further elaborated *"..... As per the agreement, when we construct the RUB, the responsibility for taking out the water which is there is with the local bodies. The maintenance of the road and removing the water is the responsibility of the States. Since these RUBs are spread over all villages, they also do not have resources perhaps to handle it. In main areas and cities proper water pumps are there to take care of it or there is a proper drainage system. Our Engineering Directorate is working on a different design altogether to take care of this problem. This is a very-very genuine problem and I absolutely appreciate that. In case the RUB is sufficiently below the normal ground level, there will be a cover from the point that there is a downward slope so that water does not go under that RUB. We are working on that. Presently the problem is there.*

## **DERAILMENTS**

1.35 It may be seen from the statement showing type-wise number of consequential train accidents during 2003-04 to 2015-16 that out of the total number of accidents during all these years, the maximum number of accidents occurring after at UMLCs were due to derailment. During 2003-04, 202 accidents (84.51 percent) out of a total of 239 accidents occurred due to derailments. Further, during 2014-15, out of a total of 85 accidents, 63 accidents (74.11 percent) occurred due to derailments. And the trend is similar during the previous years. During 2015-16, out of 78 accidents, 65 (84 %) were due to derailment. During 2014-15, out of 161 casualties, 103 (around 56 per cent ) were due to derailment. During 2015-16, out of 64 casualties in various types of accidents, 36 (56 %) were due to derailment.

1.36 On 20th November, 2016, 14 coaches of Indore-Patna Express derailed where 146 passengers lost their lives, while 58 passengers sustained grievous injuries and 122 passengers sustained simple injuries. On humanitarian grounds, an enhanced ex-gratia amount of Rs.3.5 Lakh each to the next of the kin of deceased, Rs.50 Thousand to the grievously injured and Rs.25 thousand to passengers who sustained simple injuries is being paid. Hon'ble PM has also announced additional ex gratia payment of Rs.2 lakh to the kin of dead and Rs.50 thousand for each of the seriously injured passengers. In addition, several passengers who have opted for the Optional Travel Insurance facility

initiated from September 2016, will also be eligible for additional compensation. (Rs 10 Lacs for death/total disability, 7.5 Lacs for partial & permanent disability). Statutory inquiry by Commissioner of Railway Safety (CRS) into this accident has commenced to determine the correct cause of the accident.

1.37 When asked about the major causes of derailments, they are stated to be rail fracture, weld failure, track defects particularly in turnout areas, improper protection at work site, rolling stock defects (wagon and coach defects), and signal passing at danger (SPAD) by loco pilots, etc.

1.38 The document 'Safety Performance (2015-16)' of the Ministry of Railways states that track forms the backbone of railway transportation system and therefore needs to be maintained in a safe and fit condition. To this end, it is essential to carry out not only the track maintenance operations, but also to renew the track as and when it becomes due for renewal. The track renewal is carried out under the Depreciation Reserve Fund (DRF).

1.39 During the course of evidence, the Chairman, Railway Board had stated that derailment may be on account of defect in the track or defect in the rolling stock. He further submitted that the railways have over a period of time upgraded the track structure. They have gone in for a long welded rails, reducing the number of joints. Joint has one weak area where failure may cause accident. Thus, they are also going for flash butt welds instead of thermit welds which have proved to be better. They are regularly doing ultra sonic testing of their rails and welds and gone in for large scale mechanised maintenance of the tracks.

1.40 One of the key areas of concern across on the issue of track renewals in the rail network is the replacement of over aged assets - both track and rolling stock. When asked about the criteria being followed for track renewals, the Ministry have informed that the track renewal is a continuous activity, which is to be undertaken as and when a stretch of track becomes due for renewal on the basis of criteria laid down in Indian Railway Permanent Way Manual. These are as under:

- a. Expected Service Life in terms of Gross Million Tonnes carried.
- b. Incidence of rail fractures/failures.
- c. Wear on rails.

- d. Maintainability of track to prescribed standards.
- e. Plan based renewals.

1.41 When questioned whether the criteria is justified or there is scope for review, the Ministry has stated that the criteria of track renewal are reviewed as and when required based on technological upgradation. At present, no scope is considered necessary to change the existing system.

1.42 A 'White Paper on Indian Railways' published in February, 2015, states that IR has a network of total track length of 1,14,907 kilometres. Of this, on an average 4500 kilometres of track should ideally be renewed annually. However, due to financial constraints the progress of track renewals is constantly coming down since the last six years. Currently, 5000 km track length was due for renewal. The Ministry of Railways has furnished the details of the financial allocation vis-a-vis utilisation and physical targets achievements in respect of track renewals as under:

<b>Year</b>	<b>Financial Allocation</b>	<b>Utilization</b>	<b>Targets (km)</b>	<b>Achievements (km)</b>
2016-17	4000	--	1500	--
2015-16	4299.78	3479.46 (upto Dec., 2015)	2500	2350 (upto Feb., 2016)
2014-15	5145.80	5371.80	2200	2424
2013-14	4692.92	4985.35	2100	2885
2012-13	5341.93	5426.19	3000	3296
2011-12	5014.51	5285.98	3000	3300

1.43 It has simultaneously been informed that the Railways were aspiring to cover about 2700 Kms annually under track renewals. The Chairman, Railway Board during evidence stated that out of a total 5000 kms backlog for track renewals, he hoped to cover around 2700 kms during the current year and the balance of 2300 Kms in the next year. The progress of track renewal (upto Feb.2016) is 2350 kms. During the current financial year, 3495 wagons and 656 coaches are due for replacement. During evidence, the Chairman, Railway Board has stated as under:-

*"Today overdue track renewal is around 5000 kilometres. We are doing annually the track renewal of around 2700 kilometres. So, we have an arrear of which is not more than one year. 2700 kilometres I will do this year and the balance left will be 2300 kilometres. Maybe, to this extent, something more will become due for renewals. We are very conscious about it. So far the problem of track renewal has been on account of funds which used to come from our surpluses."*

*"... as I had explained we had very little surpluses. So, from this year, the Ministry of Finance has given me a relaxation that whatever money they give to me from road safety fund, for safety works, can also be used for capital works on other safety account. So, this track renewal we have taken on that side. So funds availability problem will get reduced to some extent as far as track renewals are concerned."*

1.44 It may be seen from the table above that though utilisation has been commensurate with the allocation for track renewals, yet the quantum of allocation has remained largely static in spite of the fact that the backlog of track renewals were increasingly piling up each year. Similar is the case where though yearly targets were exceeded, yet there was no impact on the immense backlog. Moreover, the physical targets for track renewal are being continuously lowered.

1.45 As regards steps taken by the Ministry to reduce derailments, they are given as under:

- **Upgradation of Track Structure** consisting of Pre-Stressed Concrete (PSC) sleepers, 52 Kg/ 60 Kg high strength (90 Kg/ mm<sup>2</sup> ultimate tensile strength) rails on concrete sleepers, fanshaped layout on PSC sleepers, Steel Channel Sleepers on girder bridges has been adopted on most of the routes.
- **Standardization of track structure with 60 Kg Rails and PSC Sleepers:** Track structure is being standardized with 60 kg rails and PSC sleepers on all the Broad Gauge routes, especially on high density routes to reduce fatigue of rails under higher axle-load traffic. New track construction and replacement of over-aged tracks is being done by PSC sleepers only.
- **Long Welded Rails:** To improve maintenance and reliability of assets, efforts to eliminate fish-plated joints by welding single rails into long welded rails were continued. During relaying/ construction of new lines/ gauge conversion, long welded rails are laid on concrete sleepers. Long rail panels of 260 Meters / 130 Meters length are being manufactured at the steel plants to minimize number of welded joints. Turnouts are also being improved systematically.
- **Flash Butt Welding:** There is progressive shifting to flash butt welding which is superior in quality as compared to Alumino Thermic (AT) welding.
- **Ultrasonic Testing of Rails and Welds:** All rails and welds are ultrasonically tested as per laid down periodicity. To improve quality of testing, it is planned to replace existing analogue type USFD testing machines with digital type USFD testing machines which are capable of data logging, saving and transferring scan to computers.
- **Tie Tamping and Ballast Cleaning Machines:** There has been progressive use of Tie Tamping and ballast cleaning machines for track maintenance. Also,

sophisticated Track Recording Cars, Oscillograph Cars and Portable Accelerometers are being used progressively.

- **Rail Grinding Machines:** Two Rail Grinding Machines are working on high density routes of Indian Railways for enhanced reliability of Rails.
- **Electronic monitoring of track geometry** is carried out to detect defects and plan maintenance.
- **Modern Bridge Inspection and Management System:** Modern bridge inspection and management system has been adopted, which includes non-destructive testing techniques, under water inspections, intelligent water level monitoring system, mapping unknown foundations and integrity testing, etc.
- **Patrolling of Railway Tracks:** During adverse weather conditions patrolling of railway tracks including night patrolling is carried out at vulnerable locations regularly.

1.46 Further, in order to reduce derailment due to rolling stock, it has been stated that as the rolling stock utilization increases along with its turnaround, maximum speeds and throughput, there is requirement of technical Upgradation of certain safety related systems of the wagons mainly – Brakes, CBC, Draft gears etc. Further low speed stocks are required to be replaced/ upgraded to higher speed versions.

- Twin pipe is an essential input for improving safety since it reduces the time taken for propagation of braking power in longer trains and subsequent applications of brakes and thus it has the advantage of more efficient braking and release on longer trains.
- Bogie mounted Brake system in wagons enhances the safety of operation as it does not have long pull/push rods which are to prone dropping/hanging.
- Indigenous High capacity Centre Buffer Couplers have been developed for high speed heavy haul wagons. These couplers are expected to reduce cases of train parting and make operation of longer trains safer.
- Existing BOXN wagons which are used to carry coal, iron ore etc. to be converted to BOXNHAM which will increase the speed potential from 60 KMPH to 75 KMPH in loaded condition and 80 KMPH to 100 KMPH in empty condition.
- **Centre Buffer Coupler:** Progressive fitment of tight lock Centre Buffer Coupler (CBC) in lieu of screw coupling on new manufacturing of ICF design coaches has been carried out with a view to prevent the coaches from climbing over each other in unfortunate event of an accident. So far, 2900 LHB coaches, 425 Hybrid Stainless Steel Coaches and 1340 Conventional ICF Design Coaches have been manufactured

with Centre Buffer Couplers. Design of CBC has been upgraded to mitigate problem of jerks during acceleration/deceleration of trains.

- **Crashworthy Features of Passenger Coaches:** To improve upon the standards of safety, a “crashworthy” ICF design, in conjunction with a Centre Buffer Coupler (CBC), was evolved. Such a design enables absorption of significant amount of energy during the impact/collision. About 530 such crashworthy ICF design coaches have been manufactured so far. LHB AC Double Decker coaches introduced first time on Indian Railways have also been provided with enhanced crashworthy features. On similar lines, principal design for a crashworthy LHB coach shell has been manufactured and crash test for design validation on this coach has been completed at RDSO. Enhancing crashworthiness of coaches, therefore, remain continuous endeavor of Indian Railways which minimizes injury/loss of life in the event of collision when compared with ICF design conventional coaches.

- **Progressive use of Air Springs:** For enhancing safety and reliability of passenger coaches, the suspension systems are being redesigned with air springs at secondary stage capable to maintain constant height at variable loads. Air springs have been developed and are being fitted on all the newly built EMU & DMU coaches for sub-urban trains. Air springs have now been developed for mainline coaches as well and have been fitted in limited number of coaches. Trials have been planned on use of LHB type second class coaches which are subjected to higher payloads in service.

1.47 To a pointed query that with the advent of technology, satellite imaging could be used to identify faulty tracks/assist in inspection of tracks, and whether the Railways have taken up this issue with the Department of Space. The Ministry have replied that to leverage rapid advances made by India in the field of Space Technology, Ministry of Railways have signed a Memorandum of Understanding (MoU) with Indian Space Research Organisation (ISRO) recently. Under the MoU satellite imaging and GIS mapping of all rail assets are planned. Further, methods to identify faulty track will be worked out, if feasible.

1.48 On the system of inspection of tracks, the Ministry have elaborated that Indian Railways have a system of scheduled inspections and patrolling of track by Railway officials. Railway Tracks are inspected daily on foot by Keyman. Also, The field P.way officials conduct inspection of track by Push/Motor Trolleys and Fast train as per schedule laid down in Indian Railway P.way Manual (IRPWM). Senior Section/Junior Engineer (P.Way) of section inspect the railway track of his section in his charge by push trolley at least once in a fortnight systematically. The Senior Section Engineer/**P.Way (SSE/P.Way)** incharge inspects the entire section by Push Trolley/Motor Trolley at

least once in a month. Assistant Divisional Engineer inspects his entire section by trolley once in two /three months as per importance of Railway Routes. Also Divisional officers /Head quarter Officers conduct track inspections at regular interval.

1.49 Regarding the inspection and maintenance regime followed by the Indian Railways in respect of coaches, the Ministry have informed that maintenance and upkeep of coaches and wagons is a continual requirement and this is carried out periodically as per laid down maintenance schedules in Coaches & Wagons (C&W) depots. The coaches are maintained in coaching depots after every trip and Periodical overhauling of coaches are done in Workshop after 18 and 36 months depending upon the type of coaches. Besides, coaches are also being given mid-life rehabilitation after attaining 12-15 years of life and complete interior furnishing is replaced including seats and berths.

### **COLLISION/SIGNAL PASSING AT DANGER (SPAD)**

1.50 The Chairman, Railway Board submitted during evidence that they have also analysed the causes of the rail accidents. They have found that almost half of the accidents is on account of failure of the Railway staff for one reason or the other. With regard to rail accidents due to collision, he submitted as under:

*"..... One of the biggest concerns in our system is the collision. We want to avoid collision which is one of the most serious forms of the accidents. Presently, train operations in the Railways basically depend upon - particularly the collision part - our loco pilots. They watch the aspect of the signal and control the train accordingly.*

*If by any chance, he misses or ignores a signal, it may be due to any reason. It is a potential case of accident. With traffic going up, with number of signals which have gone up substantially because of various intermediate block stations, huts which have come up, various gate signals which have come up, loco pilot encounters a signal almost every km. of his run, almost every minute he has to see a signal and then control the train as per the aspect of the signal.*

*Presently there is no technological support available to him; he has to only watch the signal and control the train. In advanced countries where high speed operations are available on a very large sector they have technological support.*

*We are gradually going in for that. Presently, that is available only in very small sections. We have Train Protection Warning System (TPWS) which is available in some suburban sections and some main line sections, where high density is there like Delhi-Agra. We have tried this on Chennai-Gummidipoondi of Southern Railways. On Kolkata Metro between Dum Dum and Kavi Shubash Nagar.*

*We have sanctioned this TPWS on around 3,000 kms. of our sections which are auto signal routes on high density network. These works will be taken up. This will give a big relief to loco pilots also and we will be able to control the accidents in case of any fault on the line which will avoid collisions or passing the signal on danger.*

*On main line system, we are doing a pilot project which is going on south central railway which is Train Collision Avoidance System (TCAS) which is on 250 kms. fitted in almost 40 locomotives, which is likely to be completed shortly. This is a low cost solution to whatever protection system ATC1 or ATC2 are available in European countries, as much lower a cost which has been developed indigenously by RDSO in collaboration with three firms of Secunderabad and Hyderabad areas. This has features of anti-collision and passing the signal at danger. It controls the train operation.*

*In case the driver is not able to control his speed, whether seeing aspect of the signal or because of any speed restriction that has been imposed, if he does not control the train, the automatically breaks will be applied to control the trains to bring the train to the specified limits.*

*We have on all diesel and electric locomotives Vigilance Control Devices(VCD) which may in case the driver is not attentive or does not press the button after a few seconds, it will give a warning and then the breaks will apply. "*

1.51 In a subsequent written information furnished to the Committee it has been elaborated that Signal Passing at Danger is increasingly becoming another reason for derailment and collision in the Railways. SPAD involves direct failure/negligence on the part of railway staff, in this case the loco pilots. The Ministry have apprised the Committee that they have developed certain technologies to aid the loco pilot to prevent SPAD. The first, Train Protection Warning System (TPWS) prevents train accidents caused by human error like Signal Passing At Danger (SPAD) and Over Speeding. Regarding implementation of TPWS, the Ministry has submitted as under:-

- TPWS is a safety system based on proven European technology of ETCS (European Train Control System) Level -1. It eliminates accidents caused due to human error like Signal Passing at Danger and over speeding.
- Two pilot projects of Train Protection Warning System(TPWS) have been implemented (i) between Chennai Central and Gummidipundi (50 Route Kms) on suburban section of Southern Railway and (ii) Non-

Suburban Delhi-Agra Section (200 Route Kms) of Northern/North Central Railways where commercial train services are provided with TPWS.

- TPWS has also been commissioned on Kolkata Metro between Dumdum and Kavi Subhas stations (25 Route KMs) for all the existing 27 EMU rakes.
- Work for provision of TPWS on Basin Bridge-Arakonam Section (67 Route Kms.) of Southern Railway is under progress and targeted for commissioning in current financial year.
- Further, works have been approved for provision of TPWS (ETCS level 1) on 3330 Route Kms at a cost of Rs. 1740 Cr., on Indian Railways covering Automatic Signalling section/High Density Network(HDN) of eight Zonal railways.
- In Phase-I, the implementation of TPWS works has been taken up on 1244 Route Kms, Automatic Signalling suburban sections on Zonal Railways where EMU services ply with onboard equipments on EMUs rakes only.
- In phase II, implementation of the balance sanctioned work of TPWS on 2086 Route Kms on HDN-1/HDN-2/HDN-3 Routes is also being taken up.

1.52 Further, the Ministry has also developed the Train Collision Avoidance System (TCAS) which has dual capability of preventing train accidents caused due to Signal Passing at Danger (SPAD) or non observance of speed restrictions by train drivers as well as preventing train collisions. Development of TCAS is being carried out as an indigenous, multi-vendor, interoperable cost-effective system by RDSO. Subsequent to Proof of concept field trials of the prototype TCAS equipment developed by RDSO in association with an Indian Vendor. Regarding implementation of TCAS, the Ministry has submitted as under:-

- After initial Proof of Concept field trials of the prototype TCAS equipment developed by RDSO on Tandur-Nawandgi section, South

Central Railway, initial field trials also conducted on a limited section (32 Route Km) demonstrating various train protection scenarios and multi-vendor inter-operability features.

- Extended field trials of TCAS are in progress by RDSO on Lingampalli-Vikarabad-Wadi-Bidar pilot section (250 Route Km) on South Central Railway, Physical work related to equipment installation at stations/LC Gate/IBH and erection of Communication Towers, RFID tags etc. have been completed. The Onboard equipment has been installed on 38 locomotives.
- After completion of field works in the pilot section (250 Route Km), extended field trials on two pairs of Passenger trains have commenced in April 2016.
- System performance under field condition is being monitored and corrective action being taken based on regular analysis of trial results by RDSO.
- Operational development of TCAS on Railways on Absolute Block Signalling sections will be considered after conclusion of the extended field trials successfully and safety validation of system by an Independent Safety Assessor (ISA).

1.53 The Railways have also developed the Auxiliary Warning System (AWS) which aims to prevent cases of Signal Passing at Danger (SPAD). During the course of evidence with the various railway associations, the importance of AWS was emphasised. To a query on the implementation of AWS, the Ministry have replied that it has been provided on Electrical Multiple Unit (EMU) Suburban trains plying on Mumbai suburban sections of Western & Central Railways.

1.54 As regards the steps taken by the Railways to correct lapses by the railway staff, it has been stated that the train running railway staff is regularly counselled by their nominated inspectors with regard to observance of safety rules. Need based training in new equipments accompanied by periodical refresher courses are being

provided to keep them updated in the use of technology. Apart from these, Railways have taken up trials for systems like TCAS, TPWS, FOGSAFE devices, Vigilance Control Devices(VCDs) which can work as aid to the Railway staff towards prevention of accidents. With regard to imparting training to the safety category staff, it has been informed that the staff is imparted training once in 3/4 years.

1.55 It has been stated that irrespective of the technologies available, ultimately the task of train operations is solely entrusted to loco pilots who are the human element of train operations. The Committee have observed that the working hours of Loco Pilots are governed by the provisions of the Railways Act, 1989 and the Railway Servants (Hours of Work & Period of Rest) rules, 2005. According to which, Loco Pilots are required to work for cumulative 104 hrs. in a fortnight and their running duty at a stretch ordinarily should not exceed 10 hours but sometimes they are required to work beyond stipulated duty hours due to operational exigencies. The Ministry has further clarified that in terms of Hours of Employment Rules (HoER) provisions, locomotive or traffic running staff are granted, each month, a rest of at least five periods of not less than 22 consecutive hours each, or a rest of at least four periods of not less than thirty consecutive hours each including a full night. The hours of work for this purpose shall be calculated from "signing on" to "Signing off".

1.56 The Committee wanted to know whether there has been any review made to the abovementioned Act or whether any expert committees had been set up for reviewing the working hours and working conditions of loco pilots given the stressful nature of their job. In reply, the Ministry have stated that in order to review the working condition of loco pilots a High Power Committee constituted to review the duty hours of running and other safety related categories of staff on Railways had submitted its Report in August 2013 and which is under examination.

1.57 Locomotives on the Indian Railways do not have toilet facilities. The loco-pilots during the course of evidence had stated that sometimes they run 3-4 hours without stoppages especially on super-fast trains and complained of lack of toilet facilities. The Ministry was questioned as to what arrangements were in place to address this problem of loco-pilots and whether toilet facilities would be made

available in new locomotives. Tender for provisioning of Water Closets on electric locos have been opened on 09.09.16 at Chittaranjan Locomotive Works and letter of acceptance (LOA) has been issued on 31.10.16. However, the loco pilots are allowed to stop the train at convenient place, with intimation to Station Master/Controller, if required to attend to nature call. The gravity of the situation was also addressed by the Chairman, Railway Board during the evidence on the subject. He stated *inter alia* .....A point was made regarding toilet facilities in the locomotives. It is a very valid point. For the last 150 years, we have been running the trains and we never perhaps gave enough attention to the problem of loco toilets. We are already working on this. Hon. Minister had inaugurated one of the locomotives fitted with the toilets. In fact, the problem was, the locomotives are for both freight stock and coaching stock. Watering was an issue. The toilet discharge was also an issue. Here, a special toilet has been designed with a vacuum bio arrangement which is provided in aircrafts and bio toilets which we are not providing in our coaching services. So, it sucks the solid waste which is then bio digested by various bacteria which are there. This design has been developed and this is running for the last few months. We will now proliferate it and fit it in locomotives which will come out now from DLW and CLW. A very valid point was asked. It was asked as to how do we expect the loco toilets to attend to nature's call. That is only at the stoppages where it is possible in the present system but we are providing it.

1.58 As regards measures to deal with grievances of the running staff, the Ministry has informed that loco pilots are regularly counselled by their nominated loco inspectors and officers concerned. In addition, Railway Board at the highest level (AML/ML) have been issuing instructions to Zonal Railways for counselling of Loco Pilots on taking proper rest, use of mobile phones, alcohol policy etc. Besides, following measures are being taken by the Railways to improve the working conditions of the loco pilots as well as the avenues for them to air their grievances:

- Improvements in terms of air cooled rooms (as per requirements), availability of hygienic eating and staying arrangements at running rooms.
- Improvements in the locomotive cabs in terms of increase in space and better driver seats in all new locomotives manufactured by CLW.
- Provision of cab air conditioning in Electric loco cabs has also been started by CLW.

1.59 As regards the total sanctioned posts of Loco Pilot Cadre vis-à-vis actual staff strength in all Zonal Railways as on 01.04.2015, it has been informed that the total sanctioned strength of loco pilots on Indian Railways is 93181. Out of this, 16464 posts are vacant. Many vacancies have arisen due to creation of new posts in the Loco Pilot Categories, which have increased the sanctioned strength by 4613 in 2014-15 and 4958 in 2013-14. Recruitment against vacancies is a continuous process and Railway Recruitment Boards are holding recruitment examination on a yearly basis to fill up vacancies. During the last 2 years i.e., 2013-14 & 2014-15, panels of 8959 and 1737 respectively of Assistant Loco Pilots were provided to the railways to address the situation.

1.60 When enquired about the total sanctioned strength in different categories of safety staff and actual staff strength, it has been stated that filling up of vacancies is a stated to be a continuous process and involves issue of notification of vacancies, holding examinations, finalization of select panels and issue of appointment letters. Requirement of posts is reviewed periodically and posts are created as found necessary as per procedure. The total sanctioned strength, on-roll strength and vacancy position in different safety categories as on 01.04.2016 (provisional) are given below:

**CATEGORY WISE POSITION OF SAFETY CATEGORIES ON ZONAL RAILWAYS AS ON 01.04.2016 (PROVISIONAL)**

S.NO.	Railway	As on 01/04/2016		
		Sanctioned Strength	On Roll Strength	Vacancy
1	ASMs/SMs/SSs	39671	34398	5273
2	Controllers	2814	2346	468
3	Guards	38704	28078	10626
4	Gateman(Traffic)	10061	9332	729
5	Switchmen	1405	983	422
6	Cabinmen	5140	4124	1016
7	Leverman	2264	1695	569
8	Pointsman	40577	37816	2761
<b>Sub Total</b>	<b>Pointsman category</b>	<b>59447</b>	<b>53950</b>	<b>5497</b>
9	JE/SE/SSE(P.way)	10063	8042	2021
10	Supervisor(P.Way)	236	315	-79
11	Gangmen/Gangmate	247758	206291	41467
12	Keymen	6083	3649	2434
13	Gateman(Engg.)	11110	10047	1063

<b>Sub Total</b>	<b>Engineering P.Way</b>	<b>275250</b>	<b>228344</b>	<b>46906</b>
14	JE/SE/SSE(Signal)	3973	3456	517
15	ESM/MSM	17158	14221	2937
<b>Sub Total</b>	<b>Signalling</b>	<b>21131</b>	<b>17677</b>	<b>3454</b>
16	Drivers	47212	35770	11442
17	Motormen	3926	3309	617
18	Shunters/ Engine Turners	8243	5529	2714
19	Dsl./Elec. Asstts.	45064	38490	6574
<b>Sub Total</b>	<b>Drivers category</b>	<b>104445</b>	<b>83098</b>	<b>21347</b>
20	JE/SE/SSE(C&W)	9337	7402	1935
21	Counsellors of all Deptts.	936	740	196
22	All other safety categories	194941	167880	27061
	<b>Total</b>	<b>746676</b>	<b>623913</b>	<b>122763</b>

<b>VACANCIES ON ZONAL RAILWAYS AS ON 01.04.2016 (Provisional)</b>									
<b>Railway</b>	<b>SAFETY CATEGORIES</b>			<b>NON SAFETY CATEGORIES</b>			<b>TOTAL STRENGTH</b>		
	S/S	MOR	Vacancy	S/S	MOR	Vacancy	S/S	MOR	Vacancy
CR	65993	56083	9910	63614	51946	11668	129607	108029	21578
ECOR	32711	26626	6085	21225	20313	912	53936	46939	6997
ECR	58189	48155	10034	40287	33639	6648	98476	81794	16682
ER	64618	55041	9577	72411	59922	12489	137029	114963	22066
Metro	1649	1346	303	3285	2787	498	4934	4133	801
NCR	35629	26406	9223	46909	42563	4346	82538	68969	13569
NER	26323	21677	4646	39960	33462	6498	66283	55139	11144
NFR	32671	27862	4809	43077	37669	5408	75748	65531	10217
NR	77772	63330	14442	96548	85595	10953	174320	148925	25395
NWR	31123	24434	6689	31914	27128	4786	63037	51562	11475
SCR	58576	50154	8422	42287	37895	4392	100863	88049	12814
SECR	31925	26678	5247	21431	20200	1231	53356	46878	6478
SER	58406	48439	9967	40863	34595	6268	99269	83034	16235
SR	51667	47985	3682	52711	46160	6551	104378	94145	10233
SWR	20974	17874	3100	21532	19585	1947	42506	37459	5047
WCR	40987	32847	8140	25555	22261	3294	66542	55108	11434
WR	57463	48976	8487	61038	54321	6717	118501	103297	15204
<b>Total</b>	<b>746676</b>	<b>623913</b>	<b>122763</b>	<b>724647</b>	<b>630041</b>	<b>94606</b>	<b>1471323</b>	<b>1253954</b>	<b>217369</b>

It has been pointed out that the vacancy position in the safety category is acute with almost 16 percent posts lying vacant . The CRB, while acknowledging the problem has elaborated:-

*".....Today we are having approximately 15 per cent vacancies. There will always be some vacancies. Filling up vacancies is a continuous process and that we continue to do. But the point always arises as to how Railways is managing the system with 15 per cent or 16 per cent of vacancies because that is too large a number of vacancies to manage the system. It means we are not managing our system efficiently. Sir, let me clarify this. We have a thing called leave reserve which is around 12.5 per cent. Whatever is the calculation worked out of staff strength with reference to the requirement, we add 12.5 per cent so as to arrive at the leave reserve percentages to take care of replacements when some persons go on leave. So, with these vacancies perhaps I am not sanctioning the leave to the extent that people would have desired, but not that I am not running a system which is an inefficient system or I am not able to run it. But that in no way underscores the need for filling up these vacancies and which is a continuous process which we do."*

## **ACCIDENTS CAUSED DUE TO FIRE**

1.61 From the material furnished to the Committee, it has been observed that during 2003-04, 2004-05 and 2005-06, 14, 10 and 15 numbers of fire accident cases were respectively reported. During 2012-13, 2013-14 and 2014-15, about 9, 7 and 6 such cases respectively were reported. When asked about the major reasons of fire on trains, they are stated to be as under:

Reasons	Sub Reasons
Passengers	Bidi, Cigarette, Inflammable material carried by passeng etc.
Electrical	Short circuit, expresser, burning of coils/leads, etc.
Mechanical	Leakage from flexible pipes
IRCTC/Private party	Negligence by Pantry Car staff, Lease Contractor, Private party
Cause not established	Cause could not be established conclusively
Others	RDSO (maintenance failure)
Outsiders negligence	--

1.62 As regards the specific measures being taken to prevent such accidents, the Chairman, Railway Board, during evidence submitted that there is nothing like fire proof coaches, however, they are using the material which are fire retardant, which means that if a fire takes place, it retards the spreading of fire in the system. But in case it

reaches a particular temperature then perhaps it cannot be controlled. There is nothing like absolute fire proof system but they are trying with automatic fire and smoke detecting system. Field trials are on in pilot projects in few trains.

1.63 When asked about the steps being taken to prevent incidents of fire on trains, the Ministry have in a written reply provided the following information:

- **Improving Fire Retardancy in Coaches.**

Coaches are being provided with fire retardant furnishing materials such as Fire retardant curtains, partition paneling, roof ceiling, flooring, seat and berths along with cushioning material and seat covers, Windows and UIC Vestibules etc. The specifications of these items are being upgraded from time to time as a part of continual improvement. In the specification of major furnishing items, now a new parameter related to fire retardancy is ' heat release rate' (HRR) per latest international norms has been added in the material specification of all major interior furnishing materials used in coaches as per latest European norms.

- **Provision of Automatic Fire and Smoke Detection System in Coaches.**

A pilot project for field trial with Automatic Fire and Smoke Detection system was taken up in one rake of New Delhi- Bhubaneswar Rajdhani. Beside, one LHB rake in New Delhi –Jammu Tawi Rajdhani train and one rake of LHB AC Double Decker rake running between Kacheguda-Tirupati/Guntakal of South Central Railway have been provided with Automatic Fire and Smoke Detection system. In the latest specification Air brake system has been interfaced with Fire and Smoke detection system for stoppage of trains in emergency situations. Provision on 2750 number of coaches has been further sanctioned by this Ministry .Besides AC coaches trial on Non AC coaches have also been planned.

- **Provision of Fire Extinguishers**

Dry chemical powder type fire extinguishers are being provided in all mainline trains. These are portable fire extinguishers and easy to use by on board staff or passengers in case of emergency. Fire extinguishers are being provided in all Air-conditioned coaches, Second class- cum-guard and

luggage van, Pantry cars and train locomotives. In other Non –AC passenger coaches, trial fitment have been done on 100 coaches

- **Provision of fire suppression system on Pantry cars and powers**

On Power cars and pantry cars through water mist technology is also being explored. Besides fire and smoke detection system, water mist type fire suppression system for LHB Hot Buffet Car and LHB power has been developed by RDSO and same is being tried out on limited no. coaches before large scale proliferation.

1.64 When asked whether fire retardant material is being used in all coaches, the Committee have been informed that coaches are fitted with fire retardant material during new manufacture as well as during mid life rehabilitation and periodic overhauling in workshops.

1.65 During the course of evidence, the various railway associations pointed out that the Kakodkar committee had recommended a system of flame detection in coaches which should sound hooter at many places in coaches to warn the passengers. The Ministry have replied that this recommendation has been partially accepted. Automatic Fire and Smoke Detection System is being provided in AC coaches and Power cars/Pantry cars in phased manner. Presently, around 58 coaches running in 3 different rakes and 10 power cars have been provided with this system on trial basis. It was also informed that the Railway Board has sanctioned for extended trials in 2750 coaches.

1.66 Asked about the details regarding total casualties in fire accidents from 2003-04 to 2014-15, the information is given as under:

Years	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
<b>Deaths</b>	41	-	15	-	-	31	-	-	9	31	35	-	--
<b>Injuries</b>	44	3	68	-	3	11	-	-	7	40	6	1	--

1.67 In June 17, 2015, a major fire had broken out at the Route Relay Interlocking (RRI) panel at the Itarsi Railway Station in Madhya Pradesh leading to

a major disruption in Railway traffic, cancellation of 2404 trains and a 34 day disruption of services at the station (Itarsi). When the Ministry was asked about the causes of the fire they have submitted that on 17/06/2015 around 05:45 hours, fire was noticed emanating from cable coming from the relay room to the operating panel of Itarsi RRI by the Operating staff working on panel. Immediately fire brigade was called and fire was doused. Further, a Selection Grade / Junior Administrative Grade level committee consisting of five officers of Bhopal division had been ordered by DRM/ Bhopal for fact findings with respect to Itarsi Route Relay Interlocking (RRI) incident. As per enquiry report of the Committee and the inspection of Forensic Experts at the site of incident, the exact cause of Itari RRI fire was faulty electrical cable. The matter was then examined by the Western Railway and their findings are as under:

“As per Administrative Grade level committee and Forensic Expert’s Inspection of site report it was concluded on the basis of site condition that the probability of fire is from electrical cables only”.

1.68 When the Committee wanted to know whether this incident was preventable, the Ministry responded that the fire could have possibly been prevented if the electrical wiring of Relay Room was replaced in time as its codal life had expired. There was extensive damage to the interlocking cable wiring, signalling equipments and relays which were burnt badly in the relay room. Eventually the whole interlocking was rendered unusable and irreparable. After the fire incident, train movements were badly affected at Itarsi station due to lack of interlocking between points & signals and manual operation had to be resorted to facilitate train movements. The number of trains that moved via Itarsi station after fire incident was much less in comparison to the number of trains before the fire incident.

1.69 On being enquired, the safeguards put in place for preventing such accidents in future are stated to be as under:

(i)Provision of Fire detection and Alarm:The new RRI (Route Relay Interlocking) at Itarsi has been commissioned with provision of “Fire

Detection and Alarm System” on 21/07/2015. Provision of automatic fire suppression system is under deliberation.

(ii) Fire fighting: The policy guidelines have been issued for provision and maintenance of CO2 type fire extinguishers for PI/ EI, RRI, ABS/ IBH/ LC gate installations.

(iii) Monitoring on '24X7' basis by CCTV cameras:- Two numbers of CCTV cameras have been commissioned in RRI room at Itarsi, one CCTV camera has been commissioned in Panel room at Itarsi and one CCTV camera has been commissioned at entrance of RRI building at Itarsi for surveillance of the RRI on 24X7 basis so that any untoward incident may be detected in time followed by corrective action.

1.70 Besides, a Safety Drive was undertaken jointly by S&T (Signal & Telecommunication) and Electrical officials at all the stations and Joint Procedure Order (JPO) in connection with joint checking of S&T installations by Electrical and S&T officials has been issued.

### **ACCIDENTS INVOLVING ANIMALS**

1.71 The Committee have observed that not only humans, animal lives are also often lost in railway accidents. It has been informed that Northeast Frontier Railway is most vulnerable for deaths of Elephants on tracks. The details of accidents involving elephants deaths in the last five year are given as under:

<b>Railway</b>	<b>Year wise details of elephant deaths</b>				
	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015(upto Oct'15)</b>
East Central	1	0	1	0	0
East Coast	1	5	1	0	0
Northern	0	0	2	0	0
Northeast Frontier	7	6	19	5	4
South Eastern	0	3	1	0	0
South Western	0	0	2	0	0
<b>Total</b>	<b>9</b>	<b>14</b>	<b>26</b>	<b>5</b>	<b>4</b>

1.72 Regarding the remedial measures being taken by the Railways to prevent animal deaths on railway tracks, the Committee have been informed that a permanent Co-ordination Committee has been formed at Zonal Railway level and at

Ministry Level (Ministry of Railway and Ministry of Environment and Forests) to monitor and review the measures taken to control incidences of elephants mortalities. Meetings of the Committee are being held at regular intervals.

1.73 Further, to prevent train accidents involving elephants, General Advisories approved by Ministry of Environment and Forests & Ministry of Railways has been jointly issued to Railways in 2010 as enumerated below –

- (i) Clearance of Vegetation on the sides of Railway track.
- (ii) Under passes/overpasses across the Railway track to allow elephants to escape.
- (iii) Signage boards to pre-warn the Train Drivers.
- (iv) Sensitising programmes for Train drivers/Guards/Station Masters.
- (v) Engagement of Elephants trackers by Ministry of Environment & Forests and communication with Station Masters.
- (vi) To keep Railway track free from food waste that attracts elephants.

1.74 The Ministry have also furnished details of some of the completed works in North Frontier Railway in order to address the problem of animal accidents as under:

- (i) Construction of Passes- Passes with 20 mtrs have been constructed between Chalsa and Nagarkata Stations.
- (ii) Construction of Ramps- Two earthen Ramps of 20 mtrs and one Ramp have been constructed between Madarihat and Hasimara stations.
- (iii) Construction of Girder Bridge - A Girder Bridge has been constructed between Gulma and Sevok Stations.

1.75 In addition, the work of providing barricading/Fencing of Railway lines at vulnerable locations indentified jointly by Railway and Forest Department are sanctioned and executed on deposit terms. Rail fencing/barricading have been provided between Gulma and Sevok Stations in North Frontier Railway and an elephant fence has been built for approximately 4 kms on either side of track using rail section on deposit terms in South Eastern Railway.

1.76 It may be seen from the statement depicting year-wise details of elephant deaths on rail tracks that the Northeast Frontier Railway (NFR) is most vulnerable for

deaths of elephants on tracks. Out of 58 cases of elephant deaths reported since 2011 to October 2015, as many as 41 cases pertain to NFR. When asked about the major steps being taken and are proposed to be taken by the Ministry to prevent the deaths of elephants on railway tracks particularly in context of NFR. It has been stated that the measures taken to curb the elephant deaths on railway tracks in North Bengal include imposition of speed restrictions, clearance of vegetation on the side of railway track, provision of signage boards to pre-warn the train drivers, sensitizing train Drivers and Guards, keeping railway track free from food waste that attracts elephants, flow of communication from forest official to railway control, construction of under passes between Chalsa and Nagrakata station, construction of two ramps between Madarihat and Hasimara station, construction of girder bridge between Gulma and Sevok station to prevent the entry of elephants into deep cuttings, rail fencing between Sevok and Bagrakot station. In addition, doubling work from New Jalpaiguri-Samuktala Road via New Cooch Behar has been sanctioned. Doubling work from New Jalpaiguri to Rani Nagar Jalpaiguri has already been commissioned and for balance, work is in progress. On completion of sanctioned work, the traffic on elephant corridor will reduce satisfactorily and this will reduce rail-elephant collision.

## **WEATHER CONDITIONS**

1.77 Fog is a major cause of disruption of rail travel in India which is pronounced during the winter months. Regarding the provisions of alteration signalling procedures in low visibility conditions, the Ministry have informed that provisions have been made in General Rules so as to ensure that during foggy weather in Automatic Block System the number of trains is restricted to two between two stations. This is also called Modified Automatic Signalling and has been provided on North Central Railway and Northern Railway to improve safety during fog. Instructions have already been issued to Zonal Railways regarding preparatory works to be completed before onset of foggy weather and precautions and rules to be observed. These instructions are reiterated every year well before onset of foggy weather with a view to ensure smooth train operation. When asked whether advance technologies used by the aviation industry to tackle this problem are being adopted by the Railways, they have replied in the negative, however, they have started implementing fog safety and vision instrumentation devices in certain

affected sectors. The Committee were informed that 1381 nos. of Fog safe device has been implemented on Northern (1017), North Eastern (240) and North Western (124) Railways on trial basis. The Railways are planning to further proliferate Fog safe device, on ECR, NR, NCR, NER, NWR and WCR which experience severe Foggy weather conditions in winter season. 5000 additional equipments are required to cover all fog affected zones and Rs.50,000 per equipment are anticipated fund requirement would be Rs.25 crore. Also, a proposal for further proliferation is under consideration of the Railway Board.

1.78 Regarding the feedback of the abovementioned device, the Ministry has submitted as under:

- The drivers have found the equipment useful.
- The reliability of the equipment is satisfactory.
- There have been no safety incidents on account of these equipments.
- The crew lobby based system of charging and loading the equipments is working satisfactorily.

1.79 The Committee then pointed out that in winter, airlines use the sophisticated and highly successful Automated Landing System (ALS) for undisrupted service in foggy conditions and asked whether the Railways propose to adopt similar technology and has the Railways done any study to know about the technologies being followed in other countries to combat this issue. In reply, it has been stated that no such technology has so far been used in the Railways. In advanced railway systems, technology of ATP system (Cab Signalling System) is used for high speeds. However, specific studies regarding combating the fog-problem in other countries have not been undertaken on IR.

### **Compensation**

1.80 The Committee have observed that 156 161 and 64 casualties respectively occurred in rail accidents during 2003-04, 2014-15 and 2015-16. When asked how many families of the deceased have so far been compensated and if there are cases

where the compensation is pending. In reply, it has been stated that from 2003-04 to 2014-15, 1165 cases for compensation for casualties in train accident have been registered out of which 230 cases are pending. An Amount of Rs 3685.17 lakhs have been paid as compensation during this period.

1.81 To a specific query with regard to year-wise pendency of the above mentioned 230 claim cases as on 31.03.2015. The details are given as under:

Up to 1 year	1-3 years	3-5 years	More than 5 years	Total
46	63	89	32	230

1.82 The Committee further desired to know that how many claims had so far been dismissed. In reply, it has been stated that 141 claim cases have been dismissed out of 1165 cases registered during the period 2003-04 to 2014-15. It has further been stated that disposal of cases is a judicial matter. Reasons for dismissal of cases is to be seen by the RCT/Court. No reason can be explained in this regard as the dismissal of individual cases depends upon various aspects and merits of the case.

#### **IMPLEMENTATION OF THE RECOMMENDATIONS OF THE KAKODKAR COMMITTEE**

1.83 The Committee have observed that A High Level Safety Review Committee (HLSRC) under the Chairmanship of Dr. Anil Kakodkar, former Chairman, Atomic Energy Commission, was constituted on 16.09.2011 to look into all technical and technology related aspects in connection with safe running of train services in the country. Shri E. Sreedharan, former Managing Director, Delhi Metro Rail Corporation was appointed as the Adviser of the Committee. Based upon trends of accidents and their consequences, the committee was asked to lay down a road map for improving safety in respect of signalling systems, rolling stock, fixed structures (track, bridges and OHE), human resource development including training, education and research, etc. High Level Safety Review Committee (HLSRC) submitted its report on 17.02.2012. The HLSRC has made 106 recommendations covering the various aspects of Indian Railways. All the recommendations have been examined by the

Board. Out of the 106 recommendations, 68 have been fully accepted and 19 partially accepted. Of these, 22 recommendations have been fully implemented and the remaining recommendations are under various stages of implementation. The 106 recommendations have been made under the following heads:

**(i) General Safety Matters:**

IT system based on e-mail/SMS should be introduced to report safety related matters; projects for augmentation of line capacity on busy routes and maintenance facilities for coaches and wagons to be funded and executed on top priority; no new trains be introduced without adequate capacity for operation and maintenance.

**(ii) Organizational Structure:**

Restructuring of IR be examined and studied by a Separate Expert Group.

**(iii) Empowerment at Working level:**

Enhanced powers be delegated to GMs and DRMs in regard to safety matters.

**(iv) Safety Related Works & Issues:**

Core Safety Groups be formed under the Additional General Manager/Safety at Headquarter level and Sr. Divisional Safety Officer at Divisional level.

**(v) Vacancies in Critical Safety Categories & Manpower Planning Issues:**

All the vacancies of supervisors and staff in safety category be filled up in a time bound manner; Railway Board should issue outsourcing policy to get expert service and save cost.

**(vi) Shortage of Critical Safety Spares:**

A thorough review of the quality system for material procurement process by an external professional agency.

**(vii) External Interference, Encroachment & Sabotage:**

Removal of all encroachments in the vicinity of Railway track be addressed; Railway should take up disruptions and vandalism to their assets to the courts for compensation and remedial measures.

**(viii) Signalling, Telecommunication and Train Protection:**

State of the art, signalling and protection system should be deployed throughout Indian Railways (IR).

**(ix) Rolling Stock:**

Indian Railways should switch over to the manufacture of LHB design coaches; Hot box detectors, Wheel impact load detector and Track side bogie monitoring system should be extensively deployed; Cooking in Pantry Cars should be strictly prohibited.

**(x) Track:**

A national level expert committee be constituted to establish the root cause of rail failures and identify the metallurgical and chemical solutions; Production of 52 kg Rail and 52 kg PSC sleepers should be stopped.

**(xi) Bridges:**

Distressed and vulnerable bridges should be monitored by advanced scientific instruments.

**(xii) Level Crossings:**

All level crossings whether manned or unmanned should be eliminated in next five years.

**(xiii) Human Resource Development with emphasis on Education & Training:**

A large number of projects of importance to Railways should be regularly awarded to some select engineering academic institutions in which students can participate; one training institute at the divisional level should be nominated and upgraded for training the staff on safety environment in the Railways; customized signalling panels should be introduced at the earliest in Zonal Railway Training Institutes (ZRTIs) for the training of Station Operating Staff.

**(xiv) Training Institutes on Indian Railways:**

All sanctioned capacity enhancement works of CTIs, ZRTIs and STSs should be fully funded and executed within next two years; funds for these institutes should be allocated separately both under Works as well as Revenue.

**(xv) Research Eco-System on Indian Railways:**

An apex body called Railway Research & Development Council (RRDC) and Advanced Railway Research Institute (ARRI) should be established; Power of DG/RDSO should be enhanced.

**(xvi) Safety Architecture on IR:**

A Railway Safety Authority should be set up as a statutory body independent of Railway Board under the Government; the Institution of Commissioner of Railway Safety should be merged with Railway Safety Authority.

1.84 It has further been informed that for implementation these recommendations, the Kakodkar committee has projected an investment requirement of Rs. one lakh crore on safety over a period of five years and has recommended that a non-fungible

non-lapsable safety fund be generated. The Chairman, Railway Board during evidence further elaborated:-

*".....Rail Sanraksha Kosh, and whether it is not lapsable and what is the status of that. We had submitted a proposal to Ministry of Finance for a Rail Sanraksha Kosh of around Rs. 1,19,000 crore. In fact, this also arose from Kakodkar Committee's recommendations which said that you should have around Rs. 1,00,000 crore to be invested on various assets so as to improve the safety scenario of Railways. We had worked on that. Those Committee's recommendations were almost two years old. We worked out on Rs. 1,19,000 crore and we submitted it to the Ministry of Finance for their consideration for providing this fund to us over a period.*

*We were not seeking this fund immediately. We were saying, over a period of time, over a five-year period. On average around Rs.20,000 crore per year we were looking for as a support or as a grant from the Ministry of Finance to take care of this assets which were stressed so that we are able to improve the safety scenario in Indian Railways. Somehow the Ministry of Finance has so far not agreed to it. They said they can fund only 25 per cent of that and balance the Railways should raise through their own resources."*

1.85 When asked about the progress with respect to the recommendation of projection of funds for safety, it has been informed recently that this recommendation has been partially accepted in as much as the need for non-fungible, non-lapsable safety fund has been found acceptable. The mode for generating this fund, however requires further examination. As of now, the accepted recommendations of the High Level Safety Review committee are being implemented through regular budget.

1.86 As regards the present status with regard to the recommendations of the above stated committee, the Ministry have informed that the Railway Board has agreed in principle for implementation of only 68 recommendations. Some of the recommendations have already been implemented, instructions for which have already been issued by the Board. These are building of redundancies in the Signalling system at vulnerable locations, formation of an expert committee for analyzing rail fracture, checking of trains for formation Leak rate, weighbridges for each stream of traffic,

elimination of level crossings, IT based system for monitoring train accidents (Safety Information Management System), enhancing the production of Linke Hofmann Busch coaches (LHB), introduction of customised Signalling Panels in Zonal Railway Training Institutes, separate handbooks for Loco pilots, Public Premises Eviction Act to deal with eviction of encroachers, Grievance Redressal Machinery in each division, posting of an Senior Administrative Grade officer (SAG) for inspection of rails at Bhilai Steel Plant etc. As regards implementation of the recommendation of the Kakodkar Committee, the Chairman, Railway Board has highlighted the difficulties being faced by them therein as under:-

*"On the Kakodkar Committee, as I have already mentioned, this Rs.1 lakh crore was the recommendation that they had given. Bulk of the recommendation involved either introduction of some technology which was under trial or improvement of the asset quality which required money. So, that is how we have not been able to fully implement the recommendations. But we are still working on that and we will continue our dialogue with the Ministry of Finance. Now that both the Budgets are merged, maybe they will be more amenable to accept our request of funding substantially more portion of the Sanraksha Kosh to improve the things. "*

## **EXPENDITURE ON SAFETY**

1.87 The Committee have observed that while the freight loading on railway tracks have grown by 1344 percent and passenger kilometres by 1642 percent in the last 64 years, the route kilometres have grown only by 23 percent and doubling and multiple route length by only 289 percent. It has been stated that there has been significant decline in expenditure on Railways as a percentage of transport sector expenditure. Railway expenditure as a percentage of transport sector expenditure has come down from 56 percent in Seventh Plan (1985-90) to 30 percent in Eleventh Plan (2007-12). Network expansion has, therefore, suffered from chronic and significant under-investment as well as low internal generation of resources.

1.88 As a result of slow expansion of the rail network across zones, 492 sections on IR out of a total of 1291 sections (40 percent) are running at 100 percent or above line capacity. Further, 161 out of 247 sections, i.e., 65 percent of the sections are running at 100 percent or above line capacity on High Density Network (HDN) routes. In view of

the severe congestion, the punctuality of trains is also getting severely affected on trunk routes.

1.89 The Ministry of Railways, however, has stated that there is no compromise on the part of safety of train operations on Indian Railways. Despite increase in freight loading and passenger kilometres, accidents have come down from 418 in 2001-02 to 135 in 2014-15 and 117 in 2015-16 which indicates improved safety performance of Indian Railways year after year. Though the growth of railway network is slow, the operation and maintenance on IR is done on a regular basis.

1.90 Elaborating on the issue of severe under-investment, the Committee have been informed by the Ministry that due to under-investment, there has been severe congestion on the network and has resulted in the inability of the system to accommodate more trains and increase the speed of trains. Therefore, the need of the hour is to undertake a massive infrastructure expansion and decongestion program coupled with upgradation of technology and judicious electrification of tracks along with enhancement of terminal capacity. It is evident that the real issue today is the lack of physical capacity over IR on key routes due to severe congestion and the incremental traffic is being offered on the saturated routes only. The consequential impact of the above arises in the areas of network expansion, customer satisfaction, project planning and implementation and safety.

1.91 The expenditure on safety work include expenditure incurred on safety related activities, in both Capital (i.e. Road Safety Works-Level Crossings & ROB/RUBs, Track Renewals, Bridge Works, Signal & Telecom Works and Workshop) and Revenue segments (i.e. Repairs & Maintenance of - Permanent Ways & Works, Motive Powers, Carriages & Wagons, Plant & Equipment and Operating Expenses–Traffic Safety)

1.92 The following table show the expenditure on safety work for both Plan and Non-Plan for 2012 onwards:-

	<b>Actual 2012-13</b>	<b>Actual 2013-14</b>	<b>Actual 2014-15</b>	<b>Actual 2015-16</b>	<b>Actual 2016-17 (upto Sep.16)</b>

<b>Non-Plan Expenditure (Gross) Safety:</b>	26187	29382	32379	34383.26	19079.16
<b>Plan Expenditure (Gross)</b>	9595	9818	9925	11132.66	4574.34
<b>Total (Non-Plan + Plan) Safety</b>	35782	39200	42304	45515.92	23653.50

1.93 To a specific query, it has been informed that a committee comprising of concerned Executive Directors of Railway Board has been formed for putting up the consolidated proposal for creation of a 'Rashtriya Rail Sanraksha Kosh (RRSK)' amounting to Rs.1,10,237 crores. The committee report containing consolidated proposal is expected to be soon.

1.94 The Ministry was asked to enumerate about the measures being taken to augment railway finances. In reply, they have stated that in order to overcome the acute funds shortage, the Indian Railways have managed to attract large scale institutional funding. The Ministry has informed that a Memorandum of Understanding (MOU) has been signed by the Ministry of Railways (MOR) with the Life Insurance Corporation of India (LIC) on 11<sup>th</sup> March 2015, whereby LIC has agreed to make available financial assistance up to an amount Rs.1,50,000 crore to Railways for financing projects. It was further elaborated that funds will be disbursed by LIC over a period of 5 years from 2015-16 to 2019-20. Tenor of the financial assistance will be 30 years, which includes a moratorium on principal repayment for 10 years from the date of drawdown of each installment along with capitalization of interest accruing during the first five years. Interest rate is linked to 10 year benchmark (G-Sec) plus a margin of 30 basis points. The funds will be drawn against issue of bonds by Indian Railway Finance Corporation Ltd. (IRFC).

1.95 The Committee wanted to know the plan of action of the Ministry on utilising these funds. In reply, it has been stated that Rs.1,27,000 crore, out of the total Rs.1,50,000 crore would be the proposed Investment Plan for the five years (2015-2019) for funding of safety related works (track renewal, bridge works, ROB, RUB and Signalling & Telecom). Safety related works are normally funded from internal resources of the Railways.

1.96 The Ministry have also informed that the terms of utilization and repayment has been summarised. LIC funds would be utilized for priority railway projects and for completion of last mile projects with a view to enhancing throughput on congested corridors. The financial assistance drawn from LIC of India will be repayable over a period of 20 years after initial 10 year moratorium on repayment of principal amount. Funds drawn from LIC will be repaid out of higher revenues that Railways expect to generate over the repayment period.

1.97 Regarding the works to be undertaken with this funds injection, the Ministry have informed that they have identified a list of corridors where LIC funds will be utilized for network expansion/ strengthening (**Annexure-I**). Further, 24 corridors have been selected for expansion and strengthening. These corridors have been prioritized to achieve benefit of enhanced capacity in a time bound manner. These corridors have been identified on the basis of traffic pattern and average speed.

1.98 Besides LIC, the Railways will also be receiving external assistance from Japan International Cooperation Agency (JICA) and the World Bank for financing the Dedicated Freight Corridor project which is under implementation by the Dedicated Freight Corridor Corporation of India Limited (DFCCIL). JICA has agreed to extend loans totalling to Japanese Yen 646 billion for the Western DFC of which loan agreements for Phase-I and Phase-2 of Western DFC of JPY 90 billion and JPY 136 billion respectively have already been signed. International Bank for Reconstruction and Development (IBRD) of the World Bank Group has agreed to extend loans amounting to US\$ 2.725 billion for Eastern DFC. Loan agreements for Phase-1 and Phase-2 of US\$ 975 million and US\$ 1100 million respectively have been signed.

1.99 The Ministry has further stated that as regards external loans to be utilized for financing DFC project, it may be mentioned that JICA loan will be received by the Government of India in the Ministry of Finance and will be passed on to Railways as budgetary support, on which Railways will have to pay interest at the rate of 7% per annum. Repayment by Railways of the principal loan amount of JICA loan is, therefore, not required. World Bank loans will have to be repaid in semi-annual installments spread over 15 years after initial moratorium of 7 years on principal repayment. Interest rate on World Bank loans is variable as the rate is linked to 6-Month US Dollar LIBOR (London Inter-Bank Offered Rate) plus a variable spread. Principal repayment

and interest of the WB loans, as also 7% interest on proceeds of JICA loans, will be met by the Dedicated Freight Corridor Corporation of India Limited (DFCCIL) out of revenues to be generated by the DFC in the form of Track Access Charges.

1.100 The Committee have expressed their apprehension about the terms of repayment of these loans and the ability of the Railways to service these loans. They have, however been assured by the Ministry that as institutional funds will be invested in priority projects which will enhance carrying capacity and throughput, it is expected that loan servicing can be met with incremental revenue generation.

1.101 While examination of DFG 2016-17, the Committee have been informed that the Finance Bill 2016 proposes to cover 'railways safety works' also in the scope of works on which this amount could be allocated. Though the nature of safety works have not been defined in the proposed amendment, after passing of the Budget for 2016-17, the Ministry of Railways would request Ministry of Finance to include within the scope of safety works certain identified works including works of replacements and renewals which has clear safety implications and which are sanctioned under DRF. For example, track renewals, bridge renewals and signalling works are plan-heads which have cent per cent safety implications. This issue has already been discussed with Ministry of Finance in pre-Budget discussions and communications.

1.102 It has further been clarified that the General Budget has proposed changes in the CRF Act 2000. These changes are mentioned in the Finance Minister's Budget Speech and also in part VII of the Finance Bill 2016. Earlier under CRF Act, railways could take up works relating to ROBs/RUBs and Level Crossings but now under the proposed amendment the scope has been enlarged to also cover New Lines, Gauge Conversion, Electrification and Safety works but excluding any repairs, maintenance and renovation works. The Section 10 of the Central Road Fund Act 2000 is being amended so as to substitute clause (viii) of subsection (1) to provide a formula for redistribution of the cess for different purposes. The proposed amendment clause pertaining to Railways states "allocation of fourteen percent of the cess on high speed diesel and petrol for railway safety works, including the construction of road either under or over the railways by means of a bridge and erection of safety works at unmanned rail-road crossings, new lines, conversion of existing standard lines into gauge lines and electrification of rail

lines: provided that no repair, maintenance or renovation work shall be carried out from the allocation of cess under this sub-clause”.

1.103 Further, in B.E. 2016-17, Ministry of Railways has allocated the allotment of Rs 10780 crore; received from Ministry of Finance out of railways’ share in ‘diesel cess’ proceeds under CRF Act; to plan-heads under Demand for Grants no. 16. This is tabulated below:-

<b>Plan-head</b>	<b>Outlay in B.E. 2016-17 (Rs in crore)</b>
New Lines	4912
Gauge Conversion	2870
Road Safety Works- Level Crossings	555
Road Safety Works- ROBs/RUBs	2443
Total	10780

1.104 It has also been informed that at the time of communication of GBS (Gross Budgetary Support) from Ministry of Finance, it had been stipulated vide No.F.2(43)-B(CDN)/2015 dated 05.02.2016 and vide O.M. No. F.No.2 (1)-B(AC)/2016 dated 18.02.2016, that out of Rs 10780 crore, the allocation for Railway Safety Works (through Central Road Fund) was ring-fenced at Rs 3000 crore and Rs 7780 crore for capital expenditure for electrification, gauge conversion and new lines with a stipulation that no ‘repairs/maintenance/renovation work would be allowed out of Central Road Fund proceeds’.

### **Views of Railway Associations on Safety in Railways**

1.105 The Committee took evidence of various railway associations, viz., National Federation of Indian Railways (NFIR), All India Railwaymen's Federation (AIRF) and All India RPF Association (AIRPFA). The main issues on safety and security highlighted by them vis-a-vis the replies of the Ministry of Railways on these points are as under:

#### **Working Condition**

1.106 The railway associations had advocated that night inspections of maintenance depots and other activity centres be ensured. **In reply, the Ministry**

**have stated** that instructions for night inspections of maintenance depots have already been issued from Railway Board.

1.107 The railway associations had highlighted the need for Human Resource Development (HRD) cell which would involve dynamic and knowledgeable supervisors to study working habits of ground level staff, factors leading to short cuts, to reduce fatigue, minimize monotony and improve safety consciousness. **The Ministry in response** has stated that efficiency cell at all Zonal Railways' HQs are functioning effectively for these activities.

1.108 Regarding stress management skills, the railway associations wanted that they be taught at least twice a year. **The Ministry have replied** that yoga training has been made mandatory in Centralised Training Institutes (CTIs) and training centres for all the staff of Indian Railways.

1.109 The railway associations had wanted that goods brake vans should be adequately equipped for making them Guard-friendly and easing stress on Guards to which **the Ministry have informed** that currently 8 Wheeler Guard Brake Vans have replaced the 4 wheeler brake vans, to provide comfort to the Guard during train run.

1.110 When the railway associations advocated that loco cabs should be ergonomically designed which would reduce fatigue of loco drivers driving for long hours, **the Ministry replied** that such a suggestion on the issue on standardization of Loco cab layout is under consideration.

1.111 The associations also brought forward the requirement of air-conditioned Crew rest places such as running rooms and Loco cabs. They also felt that crew lobbies needed to be upgraded by providing basic amenities, facility for proper display of various instructions, computer and software package for proper booking of crew and ensuring adequate rest for running staff. **In reply, the Ministry have stated** as under:

*"For provision of AC in Running Room, instructions are being issued to Zonal Railways to examine their need, based on local conditions and availability of funds. Instruction has already been issued to Diesel Locomotive Works (DLW) for provision of cab AC on all newly manufactured locomotives. Up-gradation of crew lobbies is being*

*done based on the requirement and availability of funds. Computerized Crew Management System (CCMS) is operational in 360 lobbies, others (257) will be covered in phases."*

1.112 The railway associations felt that the Railways should conduct periodical safety drives to correct the system failures in which all equipments that are to be attended would undergo a cycle inspection. To this, **the Ministry have stated** that the Railway Board launches Safety Drives from time to time on various aspects connected with safety of train operations. Besides, Zonal Railways also launch their own safety drives including the drives before the onset of monsoon and winter involving inspection of the required infrastructure and rolling stock. Moreover, all assets of Railways have codified periodic schedule of inspections and safety checks to be undertaken by different level of Railway officials – starting from supervisors to the highest level officers.

1.113 On the issue of hand-books for running staff, the railway associations felt that separate handbooks needed to be prepared for staff such as loco pilots, station masters, Electrical Signal Maintainer (ESMs) etc., which should contain all the necessary instructions to be followed by them while performing their duty. In future, all the relevant rule books, trouble shooting directories, manuals, train passing documents etc., may be given duly uploaded in the TABS (pocket laptop). **The Ministry in response have** stated that hand books for Loco Pilots covering trouble shooting, gist of G&SR, safety bulleting, etc., are prepared and issued to them by concerned Zonal Railways. Further, **the Committee has been** informed that provision of TABs to Loco Pilots is under consideration.

### **Level Crossings:**

1.114 The railway associations had strongly advocated the implementation of Train Actuated Warning system and approaching train warning system for giving audio/visual warning to road users about an approaching train which would reduce accidents at unmanned level crossings. They had urged that these technological innovations be provided at all LC gates (manned and unmanned). In reply, **the Ministry have informed** that while Railways have right of way on its track, road users are suitably

warned about passage of train in both unmanned and manned level crossings. Further, trials are being done by RDSO for developing sturdy warning systems that can work without electricity or track circuiting for unmanned LCs. Moreover, Railways have planned for elimination of unmanned LCs.

1.115 The railway associations recommended that there should be a mechanism for reduction in speed of road vehicles while crossing the unmanned LC. Further, they felt that additional speed breakers should be provided to bring down the speed substantially, i.e., up to dead speed, so that the time for judgment will be sufficient for the driver of road vehicle to negotiate the level crossing safely as most of the accidents occur due to rash and careless driving of road users. **The Ministry have informed** that speed breakers at level crossings are provided as per guidelines issued by Indian Road congress (IRC) and as per para 918 of Indian Railways P. Way Manual.

1.116 Regarding the reduction of unmanned level crossings, the railway associations stressed that in many sections of railways, too many unmanned LCs are located. Sometimes over a stretch of 500 metres to 1 kilometre, two or more level crossings are located. They felt that such unmanned level crossings be identified & closed duly diverting the road users through another nearby level crossings. **The Ministry have informed** that they have identified unmanned level crossings which can be eliminated by diversions. Further, it was informed that 866 unmanned level crossings have been eliminated in last 5 years since 2010 upto the current year (upto Jan 2016).

1.117 The railway associations had felt that to avoid collision of trains, the implementation of the following measures should be stringently implemented.

- (a) Anti Collision Device (ACD)
- (b) Train Collision Avoidance System (TCAS)
- (c) Train Protection Warning System (TPWS)
- (d) Vigilance Control Device (VCD)
- (e) Auxiliary Warning System (AWS)

**The Ministry have replied as under:-**

(a) Anti Collision Device: ACD developed by Konkan Railway Corporation Limited (KRCL) has been provided as a pilot project on Northeast Frontier Railway (1736 RKM). Based on experience on NFR, to improve reliability and dependability of ACDs, the specifications and design configuration were revised and was tried on the electrified multiple lines, automatic signalling section of the Southern Railway (SR) in 2010-2011. A large number of complex operational and technical problems were experienced during the trials of ACD on Southern and NF Railways. Despite improvements carried out in the design of ACD, these could not be fully resolved by KRCL due to inherent design limitations of ACD. Therefore, further trial of ACD has been put on hold.

(b) Train Collision Avoidance System (TCAS): TCAS has been indigenously developed by Research Designs and Standards Organisation (RDSO) in association with Indian Vendors. This system is aimed at preventing train accidents due to driver's error of Signal Passing at Danger (SPAD) or over-speeding. After initial Proof of Concept trials, limited field trials with multi-vendor equipment interoperability have been successfully conducted. Further, extended field trials of TCAS in pilot section Lingamapalli-Vikarabad-Wadi-Bidar (250 RKms) of Secunderabad Division of South Central Railway are in progress. Decision regarding its implementation on rail network shall be taken after successful conclusion of the trials. TCAS in its present design is suitable for Absolute Signalling sections and further development would be required for automatic block signalling.

(c) Train Protection & Warning System (TPWS): Train Protection and Warning System (TPWS) based on European technology ETCS L-1 is a proven Automatic Train Protection (ATP) System to avoid train accidents/ collisions on account of human error of Signal Passing At Danger (SPAD) or over-speeding. As a pilot project, TPWS has been provided on Chennai-Gummidipundi Suburban Section of Southern Railway (50 RKms). In another pilot project on Hazrat Nizamuddin – Agra Section of Northern/North Central Railway (200 RKms), commercial trials with 35 locomotives in nominated trains have been completed. TPWS has also been provided on Dum Dum-Kavi Subhash section of Kolkata Metro (25 RKMs) and introduced in commercial service on all the Electrical Multiple Units (EMU) rakes. Work for provision of track side equipments of TPWS on Basin Bridge-Arakonam Section (67 RKms) of Southern Railway is in progress.

Implementation of TPWS on 1244 RKms of Automatic Signalling section, where EMUs ply, has been planned and Zonal Railways have been advised to execute the work.

(d) Vigilance control device: It is provided in all Electrical/Diesel Locomotive.

(e) Auxiliary Warning System (AWS): To prevent cases of Signal Passing At Danger (SPAD), AWS has been provided on Electrical Multiple Unit (EMU) Suburban trains plying on Mumbai suburban sections of Western & Central Railways.

1.118 The railway associations felt that for better communication walkie talkie needed to be provided to all Operating staff as well as to the Patrolman. **The Ministry have informed** that Walkie talkie sets are being procured by Zonal Railways for use of operating & Patrolman as and when required based on the funds availability. However, they also pointed out that currently the annual recurring Spectrum charges on walkie talkies are very high.

1.119 The railway associations raised the issue of separate category wise modules containing DO's and DON'T's for equipments should be considered. **The Ministry have stated in reply** that DO's and DON'Ts have already been issued for most of the equipments.

1.120. Further, the railway associations felt that handbooks with simple language containing relevant rules for different categories of staff should be prepared and supplied. **The Ministry in reply** have informed that it was already being done.

1.121 On the question of rest for running and safety category staff, the railway associations felt that they should be provided a minimum of 16 hours rest at headquarters. Additionally, on the day of periodic rest, they should be allowed total rest of not less than 16+24 hours. To this, **the Ministry have replied** that this issue is a part of the recommendations of the High Power Committee constituted to review the duty hours of Running Staff. Rest of running staff is compliant with Hours of Employment Rules (HOER) provisions.

### **Empowerment of RPF**

1.122 The AIRPFA strongly felt that the principal RPF Act, 1957 deserves to be corrected by deleting therefrom the unconstitutional provisions of section 02 to 18 of the RPF (Amendment) Act, 1985 inserted therein. The Ministry have replied that an Act was enacted by the Parliament in the year 1957 for constitution and regulation of a Force i.e. Railway Protection Force (RPF) for the better protection and security of railway property. The Act was further amended in the year 1985 and the RPF was declared as an Armed Force of the Union. The RPF (Amendment) Act, 1985, received the assent of the President on the 6th September, 1985 and in exercise of the powers conferred by the Sub-section 2 of Section 1 of the RPF (Amendment) Act, 1985, the Central Government appointed 20th September, 1985, as the date for commencement of the Act. The RPF Act was further amended in the year 2003 and responsibility of protection and security of passenger area and passengers was also entrusted to RPF. As such, the Principal Act, enacted in the year 1957, has been duly amended in the year 1985 and 2003 by Acts of Parliament and no provisions are unconstitutional.

1.123 Further, the AIRPFA felt that Section 19 of the RPF (Amendment) Act, 1985 which lays down provisions as to existing Force and exercising of the option of reverting or retiring by officers on deputation to the Force may be inserted in the principal act of 1957. The Ministry have stated that the issue has been examined in consultation with the Ministry of Law & Justice and as advised by the Ministry of Law & Justice, Section 19 of the RPF (Amendment) Act, 1985 has been inserted as Annexure to the RPF Act, 1957. Copy of the same has also been uploaded in the security portal of Indian Railways website [www.indianrailways.gov.in](http://www.indianrailways.gov.in).

1.124 The railway associations especially the All India RPF Association (AIRPFA) stringently advocated for the amendment of the RPF Act for legal empowerment of the RPF. They stated that there is a requirement to bring a comprehensive Bill in Parliament to empower RPF like British Transport Commission Police of British Railways or the Chinese Railway Police for ensuring smooth running of and better protection to the Indian Railways. This would empower RPF for ensuring smooth running of and better protection to the Indian Railways, its huge property and passengers with their belongings. **In reply, the Ministry have stated** that a

proposal for amendment in the RPF Act, 1957, to empower RPF to deal with passenger related offences in the passenger area, was moved by the Ministry of Railways with the concurrence of Ministries of Law and Justice and Home Affairs. As advised by the Cabinet Secretariat, comments of States have been solicited on the above proposal. Comments have so far been received from 26 States and reply is awaited from 05 States. Further, the Ministry of Home Affairs has conveyed that the proposed amendments will effectively lead to creation of a Federal Police Force, exclusion of the jurisdiction of the State Police from the passenger area apart from creating jurisdictional confusion and conflicts. Moreover, Police (including Railway Police) is a State subject under Entry 2, List II of Schedule 7 of the Constitution. Therefore, empowering RPF with police powers may also disturb Constitutional scheme of distribution of powers and would run counter to the concept of Cooperative Federalism. Hon'ble Home Minister has further emphasized for continuation of crime management on Railways by GRP and capacity enhancement and modernization of GRP for improving passenger safety and crime prevention in the Railways properties/passenger area. In view of above, Hon'ble Home Minister has concluded that Min. of Home Affairs does not support the proposal contained in the draft Cabinet Note for amendment in the RPF Act, 1957. As such matter is being further considered in the Ministry of Railways.

## **CHAPTER-II**

### **SECURITY IN INDIAN RAILWAYS**

The system of providing security on the Indian Railways at present includes a three tier security system of District Police, Government Railway Police (GRP) and Railway Protection Force (RPF). There is a well-defined separation of duties and powers of the three agencies.

- **District Police:** Security of tracks, bridges and tunnels and over Indian Railways
- **GRP:** Wing of the State Police responsible for prevention and detection of crime and maintenance of peace and order in station premises, circulating area and trains. 50% of the cost on GRPs is shared by Railways with respective States.
- **RPF:** RPF has been constituted under the Railway Protection Force Act, 1957 (as amended from time to time) for better protection and security of railway property, passenger area and passengers and for matters connected therewith. RPF functions under the Ministry of Railways.

2.2 Given the multiplicity of agencies for handling such an important aspect of rail security, the Ministry was questioned on the mechanism for coordination between GRP, DP and RPF and whether it was in their opinion effective and adequate. The Ministry has opined that the three tier security system of RPF, GRP and District Police is not fully effective to deal with security related aspects. Multiplicity of law enforcement agencies over Railways may sometime leads to confusion among public and grey areas among these agencies. However, in spite of these challenges the Ministry is stated to be working towards effective coordination within the 3 groups so that security in Railways is not compromised at any time. The Ministry have outlined the coordination mechanism as Co-ordination between GRP, District Police and RPF is primarily done on a regular periodic basis, apart from need based co-ordination meetings as and when required. Apart from regular co-ordination and co-operation for maintaining harmonious relations, periodic co-ordination meetings are held between GRP and RPF at Zonal, Divisional and

Post/Police Station level for exchange of intelligence on passengers safety and security. At the apex level, regular meetings are held by DG/RPF with DGP of the States as well. Regular coordination meetings are held by the RPF with GRP and concerned District Police to ensure security over Railways. Coordination meetings are held at Zonal, Divisional and Station level between RPF and GRP, to review security over Railways, at regular interval of time.

2.3 Regarding the strength of the RPF, the Committee have been informed that sanctioned strength of RPF is about 76000 and actual strength is about 69000. Process for recruitment of 160 Sub-Inspector, 2030 Women Constables and 4220 Male Constables are being initiated. Besides above, for filling up of existing vacancies recruitment of 763 Ancillary Staff is in advance stage. The Chairman, Railway Board has informed that the Committee during evidence that RPF currently has a vacancy of approximately 15 %.

2.4 Given the magnitude of train operations in the country, when asked whether the present strength of the RPF was adequate. In reply, the Ministry have stated that the present strength of the RPF is not adequate. Zonal Railways have already been advised to draw details of ideal strength for firming up of the proposal for enhancing the RPF strength. When asked about the time-frame for arriving at ideal strength in RPF, it has been stated that earlier, Zonal Railways were advised to firm up ideal strength required by RPF. However, a four Member Committee, constituted by the Board, has formulated Yardsticks for creation of posts in RPF. Copy of the Report has been circulated to all the zonal railways for reviewing manpower requirement accordingly. Various factors viz. operational requirements, crime position, availability of security infrastructure at stations, and financial implications, Budget availability etc. will be taken into consideration while firming up the proposal for need-based creation of posts. However, no time-frame has been fixed for this purpose. Further, a proposal for creation of 4192 posts is stated to be under consideration with Ministry of Finance. In this connection, three meetings have been held with the officials of Ministry of Finance on 14.10.2015, 10.11.2015 and 11.12.2015 where some additional information/clarifications were sought by the Ministry of Finance which have already been furnished.

## **SPECIAL MEASURES FOR WOMEN'S SAFETY**

2.5 Placing paramount importance on the safety of women, the Ministry have stated that total strength of women personnel in RPF is about 2708. Target is to raise the representation of women in RPF to 10% of the total sanctioned strength which will be about 7600. 10% of the vacancies in the initial recruitments of Constable and Sub-Inspector have been kept reserved for women candidates.

2.6 As regards the special measures for women security, they are stated to be as under:

- At present, there are about 2400 lady personnel in RPF (including 1000 newly recruited lady constables). Further, recruitment of another 2072 Lady Constables was under process.
- Escorting of trains, including ladies special trains in suburban sections. On an average, 2500 trains are being escorted by Railway Protection Force and 2200 trains are being escorted by Government Railway Police of different States, daily. Escort party has been instructed to pay special attention towards coaches reserved for lady passengers.
- All the ladies special trains running in metropolitan cities are being escorted by lady RPF constables.
- Ladies compartments in local trains are being escorted by RPF and GRP during peak/non-peak hours. Staff deployment is made during late night and early morning local trains to ensure proper security to the lady passengers.
- Drives against male persons travelling in ladies compartment and offenders are prosecuted under relevant provisions of the Railways Act. In 2015, 1,26,938 offenders were prosecuted under section 162 of the Railways Act, 1989 and fine to the tune of Rs. 2.43 crore was realized.
- Public awareness programmes with regard to security of women passengers.
- Surveillance through CCTV cameras at important stations.
- Operationalisation of 182 Security Helpline and All India Security Helpline No. '1800-111-322' to provide round the clock security relates assistance to passengers, including women commuters.
- Regular coordination with GRP to ensure security of women passengers.
- Special squad including lady RPF Sub Inspectors and Constables has been formed at Divisional level for providing assistance to women passengers.

- To improve representation of women in the Force, 10% of all posts advertised in the rank of constable & SI are earmarked to be filled up by women.
- Creation of 4192 more posts, to be filled with women candidates, has been announced in Budget 2014-15 and proposal has been forwarded to Ministry of Finance for approval.

2.7 In addition to the above, an App has been operationalised for security of women passengers in Central and Western Railway, South Central Railway and Eastern Railway. It is proposed to operationalise this App over other Zonal Railways, to strengthen security of women passengers.

### **ALL INDIA SECURITY HELPLINE**

2.8 The Chairman, Railway Board, during evidence informed that a security helpline number 182 has been introduced. An All India Security Helpline '1800-111-322' has also been made operational at Railway Board to enable passengers to seek security related assistance round the clock. The feature of this helpline is that from wherever a person calls this number, the call will land at the nearest security control room of that railway division. Suppose the person is travelling by train from Delhi to Chennai and he is somewhere near Agra if he dials 182, the call will land at the Agra Security Control Room because that will be nearest to that train. Immediately a message will go to the nearest RPF post to send somebody to check the complaint. The call is thus addressed and the security concern of the passenger is addressed in the least possible time and this helpline is working satisfactory.

2.9 The Committee desired to know whether the Ministry have taken certain steps to publicise the All India Security Helpline number to make the public aware of the same. In reply, it has been stated that publicity of 182 security helpline has been done by advertisements, through print media. Emphasis has also been accorded for publicity of 182 helpline during passenger interaction programmes and on special occasions like 'RPF Raising Day week', 'upbhogta pakhwara', through Railway stall at IITF etc.

2.10 To a specific query, it has been informed that the security helpline was first introduced in the year 2014 (25.02.2014) through Divisional Security Control Rooms of RPF over Northern Railway. Subsequently, this facility was extended from

Divisional Security Control Rooms of other Zonal Railways on different dates. Earlier, this facility was provided through four digit no.1322. Later on, 182 was allotted by the Department of Telecom for Security Helpline. Accordingly, Zonal Railways ensured migration from four digit no.1322 to three digit no.182 for Security Helpline. Since then, Security Helpline is functioning through three digit no.182. It has further been stated that for smooth and effective functioning of Helpline System, Zonal Railways have already been advised to get the calls, received at 182 Helpline, assessed and accordingly to ensure provision of adequate lines at Divisional Security Control Rooms to ensure that calls do not remain in waiting.

2.11 Further, it has been informed that 'RPF Security Management System' (RSMS) has been successfully implemented at 187 locations over Western and Central Railways and Security Control Rooms of RPF under pilot project. Roll-out phase to the tune of Rs. 21.99 cr has been approved and is under implementation.

2.12 To a specific query, it has been informed that a total of 9055 calls have so far been received at Security Helpline 182 over Indian Railways, since its inception, till January, 2016.

2.13 When asked whether the above said helpline is functioning to the satisfaction of IR, it has been replied that Helpline No.182 has been established at all Divisional Security Control Rooms of all Zonal Railways and it is functioning successfully. CSCs of the zones have been advised to extend dedicated lines, as per volume of complaints, wherever required, in co-ordination with concerned department of railways. General Managers & CSCs of zonal railway have also been advised for ensuring wider publicity of toll free no. 182 Security Helpline among passengers.

2.14 To a pointed query with regard to the response time to a call received, it has been stated that on receipt of passenger complaints on toll free No-182, it is immediately conveyed to concerned RPF Post/Out Post, GRP, train escorting RPF staff or other Divisional Security Control Room (as the case may be) for rendering immediate assistance to the needy passenger/complainant. As such, the response time to a call received at Security Help Line toll free no. 182 varies in each case depending upon various factors.

However, in all situations, best efforts are made by RPF for providing quick assistance to needy passengers, giving top priority at all level.

### **Integrated Security System (ISS)**

2.15 The background note furnished by the Ministry of Railways states that an Integrated Security System (ISS) is being implemented by the Railways to strengthen surveillance mechanism over sensitive stations of the Indian Railways. The system consists of IP based CCTV surveillance system, access control, personal and baggage screening system and Bomb Detection and Disposal System. The System is being implemented at an approved cost of Rs.353 crore over 202 sensitive stations of the country. CCTV surveillance cameras have already been installed at 90 stations under ISS. Besides above, 113 baggage scanners, 206 Door Frame Metal Detectors (DFMDs), 997 Hand Held Metal Detectors (HHMD) & 40 Block Detectors (BD) items have so far been installed under ISS.

2.16 Regarding installation of CCTV Cameras, the Ministry has submitted that a total of 344 railway stations over Indian Railways have been provided with CCTV cameras over Indian Railways which includes 94 stations where CCTV cameras have been installed under Integrated Security System. A total of 202 stations have been identified as sensitive for the purpose of installation of Integrated Security System (ISS) comprising of CCTV surveillance system, access control, personal and baggage screening system and bomb detection & disposal system (BDDS). It is further proposed to install CCTV cameras at 983 stations under 'Nirbhaya Fund'. It has been agreed by the Ministry of Women and Child Development and with the Ministry of Finance that Railways would be covering around 1,000 railway stations with CCTV cameras and they would be sanctioning some money to the Ministry of Railways for this purpose. So, we would be installing CCTV cameras at other stations also.

2.17 In this regard, it has been stated in a written reply furnished to the Committee that the Ministry of Women and Child Development (MoWCD) has agreed and committed to fund the project for provision of Video Surveillance System (VSS) at important stations of Indian Railways out of the corpus fund available on the 'Nirbhaya Fund' for the safety and security of women and children in station areas. It has been

decided that 1,000 important stations in the category of A1, A and B & suburban stations, not covered by the Video Surveillance System, at present, should be equipped with VSS under the purview of this project. List of stations has already been drawn and on receipt of final sanction of funds, detailed estimates, tender schedule, site plan for installation of cameras etc., will be taken up forthwith.

### **Legal Empowerment of RPF**

2.18 The Committee have been informed that multiplicity of law enforcement agencies (RPF, GRP and District Police) over Railways has caused confusion among passengers with regard to the role and responsibilities of these agencies especially with regard to registration of FIRs for passenger related offences.

2.19 In this regard, the Chairman, Railway Board, during evidence submitted as under:

*"The other thing that we, perhaps, felt is that because of multiplicity of the agencies like the three tier security system that we have, as a passenger he recognises only the Railways, he does not distinguish between District Police, GRP and RPF. So, we thought that, perhaps, some more IPC powers can be given to RPF. They can control the crimes better because a train passes through the jurisdiction of many States and so the jurisdiction of GRP and District Police keeps on changing. The train going from Delhi to Jhansi will pass through five States over a distance of about 450 kms. If a crime takes place in one State, the thief or the person who commits the crime can get down and walk away in the other State. There are a lot of jurisdictional issues. So, we felt that, perhaps, RPF can be given these powers. But since Law and Order is a State Subject, a view was taken that we should consult the States and most of the States felt that this should remain a State Subject. So, this is at this stage now. We have not been able to amend the RPF Act to give more powers to RPF to handle serious crimes which is a bottleneck."*

2.20 The Committee has desired to know the proposed amendments in RPF Act to empower the RPF on which the Ministry have given the details as under:

- **Amendment of Section 2 of the RPF Act** – Clause (cb) of section 2 of the RPF Act reads as under:-

*"passenger area" shall include railway platform, train, yard and such other area as is frequently visited by passengers".* It is proposed to substitute the said clause as under-

*"Passenger area" shall include railway platform, yard, train and any other rolling stock, portion of railway situated between the outermost signals of the station and such other railway area as is visited by passengers but shall not include blocks of residence for railway servants on railway land and workshops".*

➤ It is also proposed to insert a new definition of "post" as under-

"(cc) "post" means any unit or place declared generally or specially by the Inspector-General to be a post and includes any railway area specified in this behalf by him"

➤ **Amendment of Section 11 of the RPF Act** – Section 11 is proposed to be amended to include a new clause as follows –

"(d) to exercise the power of the officer in charge of a police station in any passenger area by a member of the Force referred to in section 12A; and"

➤ **Insertion of new Section 12A in the RPF Act**- After section 12 of the RPF Act, it is proposed to insert a new section 12A as under:-

*"12A. Notwithstanding anything contained in the Code of Criminal Procedure, 1973, a member of the Force of the rank of Sub-Inspector and above may exercise the powers of the officer in charge of a police station, in respect of any offence committed within the limits of the passenger area of the post, in accordance with the provisions of that Code, and when so exercising such powers, he shall be deemed to be an officer in charge of a police station discharging the functions of such officer in respect of the limits of the police station under the Code of Criminal Procedure, 1973, and every such post shall be deemed to be a police station for the purposes of that Code.*

*Explanation.– For the purposes of this section, the word "offence" shall have the meaning as assigned to it under clause (n) of section 2 of the Code of Criminal Procedure, 1973."*

➤ **Amendment of Section 14 of the RPF Act-** Section 14 is proposed to be amended as follows:-

"(a) for the words "police officer" occurring at both places, the words " a member of the Force referred to in section 3 12A" shall be substituted;

(b) for the words "police station" the word "post" shall be substituted."

2.21 As desired by the Cabinet Secretariat, comments of States on the proposed amendments were solicited from the States. State-wise position of comments is enclosed as **Annexure-II**. However, the Ministry of Home Affairs have recently advised that amendment in the RPF Act is not acceptable to MHA.

2.22 The Committee wanted to know what changes would be effected by this Act. The Ministry have informed that with amendment in the RPF Act, there will be 2 tier security system of RPF and District Police over railways, in place of presently prevailing 3 tier security system of RPF, GRP & District Police. RPF will take over security of passengers and will have all the legal powers, as exercised by the GRP, in passenger area (i.e. station premises and trains) and district police will continue to have jurisdiction over tracks, bridges and law and order.

### **Views of Railway Associations on Empowerment of RPF**

2.23 The railway associations especially the All India RPF Association (AIRPFA) had been stringently advocating for the amendment of the RPF Act for legal empowerment of the RPF. They stated that there is a requirement to bring a comprehensive Bill in Parliament to empower RPF for ensuring smooth running of and better protection to the Indian Railways, its huge property and passengers with their belongings. In reply, the Ministry have stated that a proposal for amendment in the RPF Act, 1957, to empower RPF to deal with passenger related offences in the passenger area, was moved by the Ministry of Railways with the concurrence of

Ministries of Law and Justice and Home Affairs. As advised by the Cabinet Secretariat, comments of States have been solicited on the above proposal. Comments have so far been received from 26 States and reply is awaited from 05 States. Further, the Ministry of Home Affairs has conveyed that the proposed amendments will effectively lead to creation of a Federal Police Force, exclusion of the jurisdiction of the State Police from the passenger area apart from creating jurisdictional confusion and conflicts. Moreover, Police (including Railway Police) is a State subject under Entry 2, List II of Schedule 7 of the Constitution. Therefore, empowering RPF with police powers may also disturb Constitutional scheme of distribution of powers and would run counter to the concept of Cooperative Federalism. Hon'ble Home Minister has further emphasized for continuation of crime management on Railways by GRP and capacity enhancement and modernization of GRP for improving passenger safety and crime prevention in the Railways properties/passenger area. In view of above, Hon'ble Home Minister has concluded that Min. of Home Affairs does not support the proposal contained in the draft Cabinet Note for amendment in the RPF Act, 1957. As such matter is being further considered in the Ministry of Railways.

## **RECOMMENDATIONS/OBSERVATIONS**

### **Overview of Safety in Indian Railways**

The Committee note that the Indian Railways is entrusted with the immense task of providing transportation facilities to the passengers and the freight alike while undertaking utmost care to ensure that the operations are safe and secure. They further observe that adherence to safety, an ongoing and a continuous process, is a multi-disciplinary effort in the Indian Railways. Each department defines its own safety parameters for assets installed/used and monitors/maintains the parameters in the safety limits which are codified manuals i.e. General and Subsidiary Rules and are maintained as per laid down protocol. Each department lays emphasis and keeps the concern of their own department a priority without realizing that the needs could be more significant on other sides. The Committee, however, have their reservations on the existing system in IR of providing safety in the backdrop of inter department differences or even intra-department prioritization on safety issues. They are of the view that safety being a non negotiable subject should be dealt with in a prompt, precise and diligent manner and preferably by a separate department as inter disciplinary methods of dealing with this aspect at micro level only serves to reduce its efficiency, resulting in delayed response and compromises on safety. The Committee, therefore, recommend that the current structure of Railway Board as well at the Zonal and Divisional levels should be reviewed and the safety infrastructure of the Indian Railways should be recast to the extent that it

**includes at least a separate or a full-fledged Department solely entrusted with providing safety and security across its area of jurisdiction. The Ministry with their presently ongoing organisational restructuring, should seriously consider appointment of a full-fledged Member (Safety) within the Railway Board in order to provide dedicated focus to the railway safety operations. This will help and ensure synchronise micro level safety measures into a holistic and macro level safe Railway operations. They agree with the proposal of the Ministry that there will be in-house operational changes such as the Safety Directorate will now be involved in proactive auditing operations, instead of being the passive data analyst as of now. They, however, desire that this proposal should be finalised at the earliest so that necessary correctives can be taken up immediately.**

### **Overall growth of Indian Railways since 1950**

**2. The Committee are concerned to note that over the last 64 years i.e. from 1950-51 to 2015-16, though the traffic of both passengers and freight over the Railways network has increased by 1344 per cent and 1642 per cent respectively, the route kilometres had grown only by 23 per cent. The reason for this sluggish rail network expansion which is not commensurate with the growth of passenger and freight traffic thus putting undue burden on existing infrastructure leading to safety compromise and severe congestion, is stated to be chronic and significant under investment non-priority area of attention, more focus on adding and running of trains to carry passengers and freight as well as low internal generation of resources. Further, there has been a significant decline in expenditure in**

railways as a percentage of total transport sector expenditure, that is, it has come down from 56% in 7<sup>th</sup> Plan (1985-90) to 30% in 11th Plan (2007-12). Further, the share of the Indian Railway in overall GDP has in fact sunk now below 1 per cent of the total. The extent of this immense congestion can be assessed from the fact that on the Indian Railways out of total 1219 sections, 492 sections (40%) are running at 100% or above line capacity. Similarly 161 sections out of 247 section of High Density Network are over saturated. The Committee are concerned to note that the scale of under-investment in Railways and decline in expenditure in Railways as a percentage of transport sector expenditure has resulted in severe congestion on the oversaturated IR rail routes, inability of the system to accommodate more trains, affecting drastically the speed of trains and more importantly becoming one of the major causes of Railway accidents. Needless to say, the bottlenecks in this regard have to be dealt by the Railways with a great sense of urgency and utmost priority.

### **Performance of the Corporate Safety Plan (2003-13)**

3. The Committee note that pursuant to the announcement made by the Hon'ble Minister for Railways in Budget 2015-16, for framing of a new five year Corporate Safety Plan for Indian Railways, the Railways have initiated the preparation of draft Corporate Safety Plan. The Committee also note that the targets set in the Corporate Safety Plan for 2003-2013, relating to reduction in derailment and accidents at unmanned level crossings have been achieved. By the end of the Corporate Safety Plan in 2012-13, accidents per million train kilometres were reduced to 0.11 accidents per

million train kilometres from 0.17 accidents per million train kilometres in 2002-03. Endorsing the statement made by the Railways that unless the operations are safe, there are no operations, the Committee strongly desire that a Corporate Safety Plan should be finalised and rolled out at the earliest thereby according the highest priority to Railways' safety operations.

### **Safety performance of Indian Railways**

4. The Committee note that the constraints faced by Railways to address the areas of concern are stated to be non-availability of funds to create additional capacity, modernisation of assets and difficulty in finding time for maintenance of assets due to saturation of the current network. Resource Crunch has been the basic cause for not proceeding with identified safety items like track circuiting or renewal of overaged assets in the past three or four decades. The Ministry have submitted that additional funds are being raised from internal and external resources to generate new capacity so as to create required maintenance time slots. Mechanisation of maintenance and modern technology is also being used so as to reduce downtime. Also, the system of assured integrated maintenance blocks for scheduled maintenance/overhaul of track has been envisaged and is under consideration of Railway Board. According to the Ministry, notwithstanding increase in freight loading and passengers kilometers, accidents have come down from 418 in 2001-02 to 107 in 2015-16 which indicates improved safety performance of Indian Railways year after year. Despite the above submission of the Ministry, the Committee are not convinced about their

contention that there is no compromise on the safety part in rail operations. They desire the Ministry to acknowledge the seriousness of safety and the fact that 107 rail accidents during 2015-16 were due to collision, derailments, fire in train and at level crossings etc. involving certain lapse whatsoever on the part of Railways which could have been avoided. Hence, the Committee desire the Railways to gear up itself to overcome the challenges before them to attain much higher level of safety by addressing the basic reasons for these accidents contained in the findings of various enquiries set up at the time of occurrences of the accidents.

### **Accidents at UMLCs**

5. The Committee note with concern that Unmanned Level Crossings (UMLCs) continue to be the biggest cause of maximum casualties in rail accidents. There are still 11440 UMLCs in IR network. During 2014-15, out of 135 train accidents, 50 accidents (around 40 per cent) were at UMLCs. The trend continued during 2015-16 as well with 29 out of 107 (around 28 %) accidents being attributed to unmanned level crossings. Further, the Committee are dissatisfied to note that against the targets to eliminate 720, 2065, 1735 and 1352 unmanned level crossings during 2010-11, 2011-12, 2012-13 and 2013-14 actual achievement stood at 1234, 1258, 1163 and 1102 respectively. Further, to their dismay, they find that there were under-utilisation of funds during all these years. The funds were utilised to the extent of 65%, 80% and 79% of the allocation during 2010-11, 2011-12 and 2012-13 respectively. The Committee fail to understand the reason(s) for keeping lower targets for elimination of UMLCs for the year 2014-15 and 2015-16 at 730 and 820 respectively, i.e., a reduction in physical targets by

nearly 50 per cent as compared to previous years. The Committee take a very serious view of this lackadaisical attitude of the Ministry in dealing with elimination of UMLCs and recommend the Ministry to act proactively and take all possible measures to ensure that financial and physical targets are optimally achieved.

6. The Committee are aware about the contention of the Railways that the onus of safe movement over UMLCs is on the road users. However, given the magnitude of casualties at UMLCs, Railways will have to fulfill their role as a facilitator for safe train operations and therefore there is need for expeditious corrective steps in this direction. The Committee are also aware that the Ministry is taking various steps to prevent accidents at UMLCs like provision of basic infrastructure on all UMLCs, organising social awareness campaigns to educate road users with the use of various print and electronic media, provision of second whistle Board (Repeater) for level crossings for loco drives to whistle while approaching level crossing to warn road users and deployment of Gate Mitras on experimental basis at vulnerable level crossings. However in spite of these measures, the Committee note that out of total 107 accidents, 29 (around 28 per cent) occurred at UMLCs. Besides, out of 122 casualties, 58 (around 48 per cent) were at UMLCs. The Committee find that while a third of the total accidents occurred at UMLCs, yet the casualties are disproportionately high, accounting for around 50% of the total casualties. The Committee desire that certain concrete steps such as Approaching Train Warning System, Train Actuated Warning System for giving audio-visual warning to road users about an approaching train and additional road speed breakers before the level crossing gates to reduce the

**speed of approaching traffic should be used to reduce accidents at UMLC. This needs to be provided at all manned and unmanned level crossing. In view of the foregoing, the Committee strongly urge the Ministry to create awareness among people and take up the preventive steps on extensive scale proactively on mission mode for progressive elimination of the UMLCs.**

**The Committee have come across various instances of faulty designs of RUBs, which do not have adequate drainage facilities leading to sever water logging in Monsoon Season rendering them not only unusable but unsafe as well. Besides, there have been problem of poor lighting arrangements in some RUBs, which are susceptible to anti social criminal activities besides being accident prone. The Committee are not convinced with the contention of the Ministry that the drainage, lighting and maintenance aspect of RUBs is the responsibility of State Governments or the local bodies. They feel that there are some lacunae in the basic design of these RUBs, which is the responsibility of the Railways. The Committee, therefore, desire the Railways to look into the designing concept of the RUBS, so that such problems do not occur in future. They will also like the Railways to conduct a survey of all the existing RUBs and remove the deficiencies including their design, if any, so that the users do not face any inconvenience.**

### **Accidents due to derailment**

**7. The Committee observe that during 2003-04 to 2015-16, second highest reason for consequential accidents and casualties was derailment. Out of total 239 rail accidents occurred during 2003-04, 202 accidents (around 85 percent) were due to derailment. During 2015-16, out of total 78**

rail accidents, 65 accidents (around 84 percent) were due to derailment. The situation does not seem to have improved during 2016-17, where already one devastating major incident of the derailment of Indore-Patna Express with casualties running into 149 deaths and injuries to more than 180 people has already occurred. As submitted one of the reasons for derailment is defect in the track or rolling stock. The Committee gather and is also explicitly stated in "Safety Performance (2015-16) document of the Ministry of Railways" that track forms the backbone of the rail transportation system and therefore needs to be maintained in a safe and fit condition. However, in the instant case there seems to be total failure in regard to maintaining the safety standards of their tracks. Ideally, out of the total track length of 1,14,907 kms, 4500 kms should be renewed annually, however, out of 5000 kms of track length due for renewal as currently, only 2700 kms of track length were targeted to be renewed. It is evident that the targets kept for track renewals are not commensurate with the actual requirement on ground. Taking into account that Ministry of Railways accord highest priority to safety, the Committee believe that the physical as well as financial targets in respect of track renewals need to be enhanced as per the annual requirement for track renewals.

### **Measures to reduce derailment**

8. The Committee observe that the Ministry are taking several steps in order to reduce the defects in tracks viz. upgradation of track structure consisting of Pre-Stressed Concrete(PSC) sleepers, standardisation of track structure with 60 kg rails and PSC sleepers, laying of long welded rails to minimise number of welded joints, flash butt welding, ultrasonic testing of

rails and welds, use of tie tamping and ballast cleaning machines and rail grinding machines besides carrying out electronic monitoring of track geometry, adopting modern bridge inspection and management system and patrolling railway tracks at vulnerable locations. Also in order to reduce defects in rolling stock, railways are taking steps to technically upgrade certain safety related systems of wagon mainly- brakes, CBC, draft gears etc. Further, low speed stocks are being replaced/upgraded to higher speed versions. The Committee also note the initiative of the Ministry to utilize the modern technologies to monitor asset quality through satellite imaging and urge the Ministry to explore more such avenues such as increasing frequency of detecting faults in tracks with ultrasonic devices extensively in order to reduce errors and improve the system. The Committee trust that the Railways' focussed efforts to reduce the defects in track and rolling stock through detection of faults in tracks by ultrasonic devices, switching from conventional ICF coaches to LHB coaches especially on High Speed, Superfast train routes and in overnight express trains. The Committee are hopeful that these would yield the desired result and lessen the accidents due to derailment.

9. The Committee note that the progressive fitment of tight lock Centre Buffer Couplers (CBC) in lieu of Screw Coupling of new manufacturing of ICF design coaches has been carried out with a view to prevent the coaches from climbing over each other in an unfortunate event of accident. Further, so far 2900 LHB coaches, 425 hybrid stainless coaches and 1340 ICF design coaches have been manufactured with Centre Buffer Couplers. Further the design of CBC has been upgraded to mitigate the problem of jerks during

**accelerations/decelerations of trains. The Committee have been informed that such designs enables absorption of significant amount of energy during the impact/collision, which minimises injury/loss of life in the event of collision when compared with ICF design conventional coaches.**

**10. The Committee feel that had the Railways completely switched over to the manufacturing of LHB coaches – which do not pile up unlike the conventional coaches in case of an accident, the toll in the recent accident of Indore-Patna Express on 20.11.2016 could have been much lower. The Committee, therefore, recommend the Railways to switch over to the LHB coaches replacing the conventional coaches in a time bound manner and in the meantime work on attaching CBC to the ICF designed coach. In any case the existing LHB coaches should be made available on super fast train routes forthwith.**

### **Accidents due to failure of railway staff**

**11. It is a matter of grave concern that more than half of the accidents is on account of the lapses on the part of the railway staff. Out of 69 , 71, 85 and 78 rail accidents during 2012-13, 2013-14, 2014-15 and 2015-16, respectively, 46, 51, 60 and 54 accidents, respectively were on account of the failure on the part of the railway staff. The faults of railway staff in such cases include carelessness working, poor maintenance cases, adoption of short-cuts, non-observance of laid down safety rules and procedures. The most serious form of accidents involved in such cases is collision and Signal passing at Danger (SPAD) for which particularly loco-pilots are responsible.**

**As submitted, with traffic going up, there has been substantial increase in number of signals because of various intermediate block stations, huts, various gate signals, loco pilot encounters a signal almost every km. of his run and almost every minute he has to see a signal and accordingly control the train. What is more alarming is that at present there is no technological support available to the loco-pilots and he has to depend only vigilant watch on the signal and control the train accordingly. Looking at the huge number of rail accidents due to lapse of the railway staff, the Committee derive that the Ministry have failed to assess the root cause of continuous and possibly repeated lapses by railway staff and therefore have failed completely to curb such accidents. They, therefore, urge the Ministry to deliberate on the issue with various Railway Associations and railway staff, to check the faults of the railway staff and take the required corrective measures.**

### **Working hours/conditions of loco-pilots**

**12. The Committee are aware that the working hours of Loco Pilots are governed by the provisions of the Railways Act, 1989 and the Railway Servants (Hours of Work & Period of Rest) rules, 2005 and accordingly, Loco Pilots are required to work for cumulative 104 hrs. in a fortnight and their running duty at a stretch ordinarily should not exceed 10 hours but sometimes they are required to work beyond stipulated duty hours due to operational exigencies. In terms of Hours of Employment Rules (HoER) provisions, locomotive or traffic running staff are granted each month a rest of at least five periods of not less than 22 consecutive hours each, or a rest of**

at least four periods of not less than thirty consecutive hours each including a full night. The hours of work for this purpose shall be calculated from "signing on" to "signing off". The Committee, however, wonder that the High Power Committee constituted to review the duty hours of running and other safety related categories of staff on Railways had submitted its Report way back in August 2013 and is still under consideration of the Ministry. The fact that Report of the High Power Committee is still under consideration of Railways even after a period of more than two and a half years casts a poor reflection on the functioning of Indian Railways besides indicating the non-priority attached to such a vital issue. Therefore, the Committee strongly recommend that the report of the High Power committee to review the working hours of the safety staff, should be considered and implemented by the Ministry of Railways forthwith.

### **Measures to reduce accidents due to human failure**

13. The Committee are aware that in order to correct the failures by the railway staff, the Ministry has been providing need based training in new equipments accompanied by periodical refresher courses. Besides, Railways have taken up trials for systems like TCAS, TPWS, FOGSAFE devices, Vigilance Control Devices(VCDs) which can work as aid to the Railway staff towards prevention of accidents. The Committee are really concerned about the fact that the Ministry has been found doing trials with the technological support system for quite some time now and none of the above have so far been adopted by the Railways. Safety of passengers which should be the first and foremost responsibility of the Railways are not given the importance, it

**deserves. Needless to mention that the is required to be taken up more seriously and expeditiously. The Committee also desire that a regular refresher course for each category to be based on case study of accidents due to common errors, on modified operating system, pattern of working, modernisation and technology upgradation should be arranged undertaken to make them simple for compliance. Stress management skill should also be taken for various categories regularly. Further, HRD cell involving knowledgeable supervisors to study working habits of ground level staff factors leading to short cuts of to reduce fatigue, minimise, monotony and to improve safety consciousness should also be undertaken. There should be intensive training regularly to upgrade knowledge levels to handle improved security, arms and ammunition. The training facilities with Indian Railways should be fully utilised.**

**14. In this context, the Committee observe that ultimately the task of train operations is solely entrusted to loco pilots who are the human element of train operations. The Committee, however, find that in actual practice especially the drivers and gangman work for even 22 to 24 hours at a stretch. At times, drivers have been working for five consecutive days. Due to work stress, fatigue and stifling conditions, the life of thousands of commuters is at risk and it certainly affects the safety of train operations. Therefore, the Committee desire that the loco pilots and other related running staff be provided with sound working conditions, better medical facilities and other amenities to improve their performance. Certain measures should be undertaken by the Railways across the Railway network viz. improvements in terms of air cooled rooms, availability of hygienic eating and staying**

arrangements at running rooms, improvements in the locomotive cabs in terms of increase in space and better driver seats in all new locomotives manufactured by CLW and provision of cab air conditioning in Electric loco cabs, Guard friendly Brake Vans etc., proper display of instructions. The location of signals be uniformly displayed with linked with visibility, braking distance, speed load etc. These signals should be placed uniformly and in standardised format so as to not create confusion in minds of loco drivers and they identify correct signals. Further, the signal aspect could be displayed in driving cab itself with recording arrangement and if a loco pilot could be alerted about the signal in his cabin with the help of technology like Global positioning, it may help in safe and punctual running of trains. The Committee believe that such a move would definitely help in better performance by the running staff.

#### **Vacancy position of safety category posts**

15. The Committee are concerned to note that at present 16464 posts of loco pilots are vacant. Further, as on 01.04.2016, out of total staff strength of 7,46,676 posts (provisional), for safety category, there are 1,22,736 vacancies. The Committee are extremely concerned that the Railways are functioning with the vacancy position of around 16% and take a serious view in this matter. Needless to say the role of safety category staff is crucial in running of trains especially in the present scenario where there is more threat perception and lack of staff directly affect their performance and consequently jeopardise safety of rail passengers and property. The Committee are not convinced by the statement of the Ministry that recruitment is a continuous process. They feel that there is definite

**callousness towards the need to fill up these vacancies promptly. They desire that the hitherto faulty recruitment process and planning regarding the filling up of vacancies in security (GRP and RPF) should be rectified by taking up all corrective measures. They should ensure that all the safety category posts are filled up promptly on regular basis. Further, more safety category posts for maintenance of new assets should be promptly created and the persons be deployed forthwith.**

### **Accidents caused due to Fire**

**16. The Committee find that though the instances of accidents due to fire in trains are not many yet the casualties in such cases are usually very high. During 2012-13, there were 31 deaths and 40 injuries and in 2013-14, there were 35 deaths and 6 injuries due to fire in train. The Committee note the steps taken by the Ministry to prevent incidents of fire on trains viz., improving fire retardancy in coaches, provision of automatic fire and smoke detection system in coaches, provision of fire extinguishers and provision of fire suppression system on pantry cars and powers etc. The Committee urge the Ministry to ensure that combustible or high inflammable material are not carried by the passengers on the trains through public awareness as well as through a system of rigorous inspection. The Ministry may consider imposing stiff fines on passengers carrying inflammable material in trains. Also, pictorial warnings regarding inflammable material and the quantum of fines should be strategically placed in coaches and at stations to act as a deterrent as well as for educating the travellers.**

**17. The Committee find that the fire incident at the RRI Itarsi caused immense damage not only to Railway property but to train operations for several months as well . There was a major disruption in Railway traffic, cancellation of 2404 trains and a 34 days disruption of services at the station (Itarsi). The Committee take a note of the fact that the fire could have been prevented if the electrical wiring of Relay Room was replaced in time as its codal life had expired. The Committee do not approve of such callous approach of the Railways with regard to maintenance of their electrical gadgets and recommend that the Ministry should take all necessary steps to check recurrence of such unfortunate incidents. The Committee further hope that the matter has been investigated with a view to fixing responsibility for the same. They would like to be apprised of the final outcome of the investigations in this regard.**

#### **Rail Accidents Involving Animals**

**18. The Committee note that there are an increasing number of railway accidents involving animals especially in Northeast Frontier Railway. Out of total animal deaths in rail accidents, maximum deaths occur in Northeast Frontier Railway. Out of total 14, 26, 5 deaths during 2012-13, 2013-14 and 2014-15, 6, 19, and 5 deaths, respectively have occurred in Northeast Frontier Railway. Some instances of killing of Tigers, an endangered species, have also come to the notice of the Committee through Media Reports. The Committee note that various steps are being taken to prevent animal deaths during rail operations. Further, a permanent Co-ordination Committee has been formed at Zonal Railway level and at Ministry Level (Ministry of Railway and Ministry of**

**Environment and Forests) to monitor and review the measures taken to control incidences of elephants mortalities. Also, in North Frontier Railway, Construction of Passes, Construction of Ramps and Construction of Girder Bridge have been completed to address the problem of animal accidents. The Committee trust that the Railways will continue with their efforts to avoid animal deaths during rail operations.**

### **Weather conditions**

**19. The Committee note that weather conditions especially fog prove to be a challenge for operation of train services during winter. In order to combat the foggy weather, the Railways have implemented 1017 fog safe device in Northern Railway, 240 in North Eastern Railway and 124 in North Western Railway, on trial basis. There are plans to further proliferate fog safe device, on ECR, NR, NCR, NER. As apprised, a proposal for further proliferation is under consideration of the Railway Board. The Committee have also been informed that in advanced Railway System, technology of ATP system (Cab Signaling System) is used for High Speed Trains. But to their dismay the specific studies regarding combating the fog problem in other countries have not been undertaken on Indian Railways. The Committee recommended that the Railways should take up specific studies with regard to the technologies available in other countries to combat the fog problem without any further delay and implement such technologies in Indian Railways without further loss of time.**

### **Payment of Compensation**

**20. The Committee are unhappy to note that as on 31.03.2015 there are 230 claim cases pending with the Railways for compensation in case of casualties occurred in rail accidents. Out of these, 46 cases are pending for up to one year, 63 cases pending for upto 1-3 years, 89 cases for 3-5 years and 32 cases are such which are pending for settlement for more than 5 years. This is a very alarming position. The Committee feel that the next of kin who have lost their near and dear ones and others for compensation should be paid the same at the earliest without holding them back. The Committee, therefore, call upon the Ministry to ensure that all the pending cases for compensation claims should be settled within a time frame of 6 months.**

#### **Implementation of the recommendations of Kakodkar Committee**

**21. The Committee note that the Kakodkar Committee was constituted to review safety of railways system and had submitted its report on 17.02.2012. The report has 106 recommendations in total. Out of these, 68 recommendations have been fully accepted and are stated to be under various stages of implementation, 19 recommendations were partially acceptable and 19 recommendations were non-acceptable to the Ministry of Railways. The Report laid down a series of comprehensive and far reaching recommendations calling for a concerted effort to improve throughput and efficiency on the system, besides enhancing safety. It envisaged a method of investment and structural change to transform the Indian Railways to a more vibrant organization with commercial success and high levels of safety. It has projected an investment requirement of Rs. One Lakh Crore on safety over a period of five years and has recommended to generate a non-fungible non-lapsable safety fund in this regard. However, the Committee find to their utter**

dismay that the said recommendation has been partially accepted. As stated, the mode for generating this fund, however requires further examination and the accepted recommendations are being implemented through regular budget. The Committee are concerned about the manner in which the Railways choose to ignore the recommendations of the various Committees which were constituted specifically for a purpose using valuable money of the exchequer and the expertise of the Committees become infructuous when their suggestions/recommendations are not implemented or delayed for implementation. In case, the recommendations of Expert Groups are not implemented with a sincere approach, the Committee find no justification in constituting such Committees. The Committee, therefore, strongly recommend that the Ministry should prescribe a time-bound implementation of the recommendations of the Expert Committees at least those recommendations which have been accepted by the Government. The progress made in this regard should be closely and scientifically monitored regularly, at the highest level in the Ministry. The Committee would like to be apprised of the action taken by the Railways in this regard.

### **Provision of funds for safety**

22. The Committee find that while the traffic has increased manifold, the commensurate increase in Assets for capacity generation has not been there. The system is over-stretched and over-stressed which has a direct co-relation with the safety of operations in running trains. The Committee are of firm opinion that there is an urgent and over powering need for renewal and replacement of overaged assets, modernisation and technological

**upgradation of not only the operation assets but also the rolling stock. The Committee urge the Ministry to approach the Ministry of Finance for creation of another special Railway Safety non-lapsable fund which could cater to this long impending and urgent need in order to ensure safety of train operations.**

**23. The Committee are well aware that the Railways have in recent years been reeling under a massive resource crunch due to severe underinvestment . This has permeated all aspects of rail infrastructure including safety. Prudence demands that in such a scenario there should be a careful and sagacious prioritization of works in terms of expenditure. However, expenditure on safety cannot be compromised with at any time and should always be kept on a high priority. The Committee however find that surprisingly the percentage of expenditure on safety from the total OWE has remained rather static, and is around 20%. The Committee wish to remind the Ministry that a rail accident does not merely involve damage to rail infrastructure alone. There is a huge cost to society as well, society pays dearly through lost lives, lost livelihood, loss of productivity, disability, medical expenses, disruption of traffic, loss of the wagons etc. However the highest cost is the loss of passenger confidence which may translate into loss of revenue in future for the railways. The Committee are of the firm view that taking the issue of safety and investments on safety lightly may cost the railways very dearly in terms of share in transportation of passenger and freight and thereby decrease in Revenues. They, therefore, recommend that not only the Ministry should optimally utilise the available funds for safety issues**

but take up the matter of higher allocations for safety at the highest level in the Ministry of Finance. They also emphasise that a portion of the railway funds should be utilised for R&D in safety related technology so that newer methods/equipments/technology is available to avert the accident.

### **Need for non-lapsable Safety Fund**

24. The Committee learn that a committee comprising of concerned Executive Directors of Railway Board has been formed for putting up the consolidated proposal for creation of a 'Rashtriya Rail Sanraksha Kosh (RRSK) amounting to Rs. 1,10,237 crore. As reported, the report of the said committee containing consolidated proposal is expected soon. Considering the huge requirement of funds for safety issues in Railways, the Committee support the need for creation of the RRSK and desire the Ministry to expedite the matter and inform them with the progress about the same.

### **Railway Budget 2016-changes in funds proposed for safety works**

25. As reported, the General Budget has proposed changes in the CRF Act 2000, which are mentioned in part VII of the Finance Bill 2016 that proposes to cover 'railways safety works' also in the scope of works on which this amount could be allocated. Earlier under CRF Act, railways could take up works relating to ROBs/RUBs and Level Crossings but now under the proposed amendment, the scope has been enlarged to also cover New Lines, Gauge Conversion, Electrification and Safety works but excluding any repairs, maintenance and renovation works. The Ministry of Finance had stipulated that out of the allocation of Rs 10780 crore during 2016-17, out of railways'

share in 'diesel cess' proceeds under CRF Act, the allocation for Railway Safety Works (through Central Road Fund) was ring-fenced at Rs 3000 crore and Rs 7780 crore for capital expenditure for electrification, gauge conversion and new lines with a stipulation that no 'repairs/maintenance/renovation work would be allowed out of Central Road Fund proceeds'.

26. As apprised, though the nature of safety works has not been defined in the proposed amendment, the Ministry of Railways, after the passing of the Budget for 2016-17, would request Ministry of Finance to include within the scope of safety works, also works of replacements and renewals which has clear safety implications and which are sanctioned under DRF viz. track renewals, bridge renewals and signalling works, plan-heads having cent per cent safety implications. The Committee share the concern of the Ministry in the proposed amendment in the CRF Act and desire the Ministry to vigorously take up the matter with the Ministry of Finance in the right earnest and keep the Committee informed of the progress in this regard.

#### **Suggestions on railway safety by Railway Associations**

27. The Committee fully appreciate the valuable suggestions/views brought forward by the various railway associations viz. National Federation of Indian railways(NFIR), All India Railwaymen's federation(AIRF) and All India RPF Association(AIRPFA), recognising their vast experience in train operations. They note that certain measures suggested by these Federations/Association to improve the working conditions of safety staff are being taken up by the Railway Board like instructions have been issued for night inspections of maintenance depots, efficiency cells at all zonal railways headquarters for

**studying working habits of ground level staff to improve safety, yoga training has been made mandatory for stress management in Centralised Training Institutes (CTIs) and other training centres for all the staff of Indian Railways, 8 wheeler Guard Brake Vans have been replaced by 4 wheeler Vans to make them Guard-friendly and easing stress on Guards, separate category-wise modules containing DO's and DON't's have already been issued for most of the equipments, handbooks with simple language containing relevant rules for different categories of staff have been supplied. As stated, Railways have codified periodic schedule of inspections and safety checks for all its assets, to be undertaken by different level of Railway officials. For provision of AC in running room, instructions have been issued to zonal railways to examine the matter, instruction have also been issued to Diesel Locomotive Works(DLW) for provision of AC cab on all newly manufactured locomotives, upgradation of crew lobbies is also being done on the requirement and availability of funds. Besides, provision of TABs to loco pilots is under consideration of the Ministry. While noting the above stated steps, measures taken to improve the working conditions of the safety staff, the Committee desire that these should be implemented in letter and spirit uniformly over the entire network. In matters under consideration, it is desired to expedite the process to avoid any sort of stress on the staff and avoid even a single lapse.**

### **All India Security Helpline**

**28. The Committee note that an All India Security Helpline number 182 has been introduced by the Railways. First it was introduced in the year 2014 through Divisional Security Control Rooms(DSCR) of RPF over Northern Railway and subsequently extended from DSCR of other Zonal Railways.**

**Zonal Railways have been advised to get the calls, received at 182 Helpline, assessed and accordingly to ensure provision of adequate lines at DSCR to ensure that calls do not remain in waiting when needed most. Further, 182 security helpline number is being publicised through advertisements and print media. Emphasis has also been accorded for its publicity during passenger interaction programmes and on special occasions like 'RPF Raising Day week', 'upbhogta pakhwara', through Railway stall at IITF etc. The Committee are of the view that 182 security helpline number need to be vigorously publicised on war footing to make the public aware of the same. Use of electronic as well as print media. Besides, pictorial advertisement in coaches and at stations be done at places where it catches the eyes most with a view to make passengers aware of this helpline number.**

### **Integrated Security System (ISS)**

**29. The Committee learn that an Integrated Security System (ISS) is being implemented over 202 sensitive railway stations at an approved cost of Rs.353 crore. Under the system CCTV surveillance cameras have been installed at 94 stations and 113 baggage scanners, 206 Door Frame Metal Detectors (DFMDs), 997 Hand Held Metal Detectors (HHMD) & 40 Block Detectors (BD) items have also been installed. Further, the Ministry of Women and Child Development has agreed to fund the project for provision of Video Surveillance System (VSS) at 983 important stations in the category of A1, A and B & suburban stations, out of the corpus fund available on the 'Nirbhaya Fund' for the safety and security of women and children in station areas. While appreciating this cooperation from M/o Child & Welfare, the Committee desire that seeing the utmost significance of security and safety of**

passengers and tariff the Ministry of Railways should also probe more such possibilities and at any cost all categories of stations should be covered by CCTV surveillance Cameras. The Committee would like to be informed of the further development in the matter.

### **Legal Empowerment of RPF**

30. The Committee find that security in Indian Railways is provided by three separate forces, i.e., the RPF, GRP and District Police. The Committee also note that security on running trains is provided by RPF whereas the other two agencies provide security to railway tracks, bridges, tunnels and in station premises and circulating areas. The Committee are in full agreement with the Ministry that the existing three tier security system is not at all conducive to providing optimum safety. It is common knowledge that RPF does not have FIR powers which are only available with the GRP and District Police, yet they are entrusted with the security on trains. This presents a peculiar situation where passengers who are not well versed with the existing security system feel that the Railways are apathetic to their concerns.

31. In this context, the Committee note that the Ministry of Railways had moved a proposal for amendment in the RPF Act, 1957, to empower RPF to deal with passenger related offences in the passenger area, with the concurrence of Ministries of Law and Justice and Home Affairs. As advised by the Cabinet Secretariat, comments of States have been solicited on the above proposal. Comments have so far been received from 26 States and reply is awaited from 05 States. Out of 26 States, 17 States have opposed the proposed amendment on various grounds. Further, the Home Minister has emphasized for continuation of crime management on Railways by GRP and

capacity enhancement and modernization of GRP for improving passenger safety and crime prevention in the Railways properties/passenger area etc. Hon'ble Home Minister has concluded that Min. of Home Affairs does not support the proposal contained in the draft Cabinet Note for amendment in the RPF Act, 1957. The Committee are aware that an atmosphere of opposition to this Bill already exists and therefore, recommend that the Ministry should intensify their efforts to convince the State Government to favour the Bill so that safety on rail travel can be seamlessly achieved.

### **Vacancies in Railway Protection Force(RPF)**

32. The Committee find to their dismay that the vacancy position in respect of RPF is quite alarming. Out of the sanctioned strength of 76000, the actual strength is about 69000. The vacancies in RPF itself is therefore to the tune of 7000 posts. The large number of posts of RPF lying vacant, have certainly mounted undue burden on the existing workforce and compromise security in railways. Furthermore, at times it has been noticed that the RPF personal on alternative duties putting further burden on them in their performance. The Committee urge the Ministry to fill up the vacant post of RPF urgently on priority basis to give a boost to the security in Railways and also ensure that the RPF personal are not utilised on some other alternative duties. The Ministry should not hesitate in engaging officers from other security forces/organisations on deputation basis as a temporary measure till the requisite RPF strength is made available to them. With a view to expedite the recruitment process, the possibility for selection of candidates through the examinations conducted by UPSC/SSC could also be explored.

### **Women personnel in RPF**

**33. The Committee laud the decision of the Ministry to increase the representation of women in RPF to 10 per cent of the entire force. They are of the considered view that such a step would surely enhance the safety for women and increase their confidence in train journey. At the same time, they caution the Ministry that such a step would be meaningless if the decision in this regard is not implemented within a fixed time frame. recruitment for the same is not done in a time bound manner. The Committee, therefore recommend that desired recruitment and training of women personnel in the RPF should be completed in a time bound manner.**

**34. The Committee find that the Railways are in the process of introducing a safety app for women passengers. Given the popularity of mobile based apps in present day scenario, they are of the opinion that the proposed app will go a long way in ensuring safety of women, if implemented in the right spirit. The Committee, therefore, recommend that this technology should be expeditiously developed and given wide publicity through electronic as well print media and they be kept apprised about the progress in this matter.**

NEW DELHI;  
8, December, 2016  
17, Agrahayana, 1938 (Saka)

**SUDIP BANDYOPADHYAY**  
**Chairperson**  
**Standing Committee on Railways**

## Annexure-I

### Route wise Planning on IR

<u>1 Delhi - Howrah</u>
<u>2 Howrah - Mumbai</u>
<u>3 Mumbai - Delhi</u>
<u>4 Delhi - Guwahati-Lumding</u>
<u>5 Delhi - Chennai</u>
<u>6 Howrah - Chennai</u>
<u>7 Chennai - Mumbai</u>
<u>8 Vizianagram-Titlagarh-Raipur/Sambhalpur</u>
<u>9 Jharsuquda-Sambalpur-Angul/Talcher-Bimalgarh-Cuttack-Paradeep</u>
<u>10 Vijaywada-Guntakal-Hospet-Bellary-Goa</u>
<u>11 Dhanbad-Garwa Rd./Sonnaqar-Singrauli-Katni-Bina-Kota</u>
<u>12 Singrauli-Satna-Lalitpur</u>
<u>13 Bilaspur-Anuppur-Katni-Bina</u>
<u>14 Champa-Gevra Rd.-Pendra Rd-Anuppur</u>
<u>15 Amritsar-Ludhiana-Saharanpur-Moradabad-Lucknow-Sultanpur-Zafrabad-Mughalsarai-Varanasi</u>
<u>16 Ratlam-Nimach-Chittaurgarh-Ajmer</u>
<u>17 Ahmedabad-Viramgaon-Samakhiyali-Gandhidham</u>
<u>18 Palanpur-Samakhiyali-Gandhidham-Bhuj-Naliya</u>
<u>19 Ahmedabad-Surendranagar-Rajkot</u>
<u>20 Lucknow-Sitapur</u>
<u>21 Mathura-Alwar-Rewari-Hissar-Bhatinda-Suratgarh/Rajpura</u>
<u>22 Rewari-Ringus-Ajmer-Palanpur</u>
<u>23 Andal-Sainthia-Pakur-Bhagalpur-Kiul-Tall-Patna-Mughalsarai</u>
<u>24 Jabalpur-Nainpur/Gondia-Chhindwara-Nagpur-Nagbhir-Ballharshah</u>

<b>Annexure- 2</b>		
<b>STATES OPPOSED</b>		
1	Delhi	We are in agreement with the view that enactment of the amendment is within the competence of the central legislature. However, it is felt that the proposed amendments may adversely impact prevention and detection of crime in the 'passenger area' because of deployment of police personnel in GRP from District having better knowledge of criminals, better coordination with police.
2	Madhya Pradesh	State Government of Madhya Pradesh would like to convey its strong opposition to the proposed amendment.
3	Chhattisgarh	State of Chhattisgarh does not agree to the proposed amendments.
4	Gujrat	Proposal advanced is against the constitution of India and against the provisions of certain laws and hence cannot be implemented.
5	Tamilnadu	To issue suitable instructions to the Ministry of Railways not to proceed with the proposed amendment to the Railway Protection Force Act, 1957.
6	Odisha	The Ministry of Railways may be asked not to proceed further with this matter.
7	Tripura	Kindly advice the Ministry of Railways to withdraw the proposed amendment to the RPF Act, 1957 and to initiate consultation with the States on the subject.
8	Punjab	Purposed amendments are uncalled for, unwarranted, unsubstantiated and are very much against the principles on which GRP was founded which has rendered yeomen's services to the nation thus far in protection, detection, investigation and prosecution of crimes relating to the Railways.
9	Andhra Pradesh	It is not advisable to replace the GRP with the RPF for dealing with crime matters in the passenger area.
10	Nagaland	Giving away the powers of the State Police to central agency by way of amending RPF Act, 1957 is in violation of Indian Police Act and not in consonance provided under Article 246 of the Constitution of India.
11	Kerala	The sovereign function of law and order cannot be subjected to the interests of commercial convenience and profit. Hence elimination Government Railway Police from Railway premises in the name of cost cutting and convenience of the Railway Board is not desirable and is vehemently opposed.
12	West Bengal	The State Government is not in favour of the proposed amendments. The term 'railway area' as referred to in the

		proposed amendment may be defined clearly leaving no scope for confusion or jurisdictional conflict between the State Police and the RPF. Moreover, the proposal for insertion of Section 12A into the RPF Act, 1957 to confer the powers of an officer-in-charge of a police station on RPF officers with regard to investigation of crimes occurring within the 'passengers area' is violative of constitutional provisions and is unacceptable. This change would also cause grave jurisdictional conflicts since the O.C.s of the local police stations concerned are already empowered under the provisions of Cr.P.C., 1973.
13	UP	Empowerment of RPF by amending RPF Act falls outside the purview of Union List. RPF can not be assigned with the powers of maintenance of Law & order.
14	J&K	It would not be advisable to agree to the proposed amendments as an independent agency in the shape of Government Railway Police (GRP) with well defined responsibilities already operates at the State level which needs to continue.
15	Arunachal Pradesh	The proposed amendment in the RPF Act may attract power clash and overlapping. It is experienced in most of the cases that the culprits after committing crimes, even beyond passenger area, frequently take shelter of Railways to escape from police grip. In such cases the civil police should have free access and unhurdled approach to passenger area with a view to take prompt action against escaping culprits. There may not be any necessity of requiring RPF to investigate the cases. However, the RPF can apprehend the criminals and handle them over to GRP at the concerned PS.
16	Bihar	As per the provisions of CrPC, the SHO has jurisdiction over crime investigation as well as law and order. Maintenance of the law & order and crime control is responsibility of the State Government. Creation of RPF police station with power of investigation in criminal offences will amount to transgressing the domain of State Government. Further it will be extremely difficult for RPF to handle Law & Order and LWE problem without the assistance of State Police Force. This will have an adverse effect and implications on the State police administration.
17	Assam	It would encroach upon the powers of the State Police, which is not desirable.
1	Andaman	No comments to offer

SL No.	Name of State	Comments
STATES AGREED		
1	Mizoram	No objection to the proposed amendments in the RPF Act.
2	Karnataka	Government of Karnataka agrees and concurs with suggestions.
3	Sikkim	State Government of Sikkim fully endorses the proposed amendment in the RPF Act.
4	Goa	Government of Goa agrees with the proposed amendments to the Railway Protection Force (RPF) Act, 1957.
5	Himachal Pradesh	State Government has no objection to the proposed amendments.
6	Puduchery	This Administration has examined the matter afresh in view of further developments after the reply sent to Govt. of India vide letter first cited and this Administration has agreed to the proposed Amendments to Railway Protection Force Act, 1957.
7	Rajasthan	Rajasthan does not have any objection to the proposed amendments.

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**MINUTES OF THE STANDING COMMITTEE ON RAILWAYS (2015-16)**  
**(Third Sitting)**

The Committee sat on Wednesday, the 14<sup>th</sup> October, 2015, from 1500 hours to 1700 hours in Committee Room No.'62', Parliament House, New Delhi.

**PRESENT**

**SHRI DINESH TRIVEDI - CHAIRPERSON**

**MEMBERS**

**LOK SABHA**

2. Shri E. Ahamed
3. Kunwar Pushpendra Singh Chandel
4. Shri Ram Tahal Choudhary
5. Shri Chandra Prakash Joshi
6. Shri Sanjay Dhotre
7. Shri Balabhadra Majhi
8. Shri K.H. Muniyappa
9. Shri Thota Narasimham
10. Shri A.T. Nana Patil
11. Shri Ganesh Singh
12. Shri Uday Pratap Singh
13. Shri S.R. Vijayakumar

**RAJYA SABHA**

14. Shri A.K. Antony
15. Shri Mukut Mithi
16. Shri Dilipbhai Pandya
17. Shri Motilal Vora

**SECRETARIAT**

- |    |                            |   |                      |
|----|----------------------------|---|----------------------|
| 1. | Shri K. Vijayakrishnan     | - | Additional Secretary |
| 2. | Smt. Abha Singh Yaduvanshi | - | Joint Secretary      |
| 3. | Shri Arun K. Kaushik       | - | Director             |

## REPRESENTATIVES OF THE MINISTRY OF RAILWAYS (RAILWAY BOARD)

1. Shri A.K. Mital Chairman, Railway Board & Ex-officio Principal Secretary to the Government of India
2. Shri S. Mookerjee Financial Commissioner, Railways & Ex-officio Secretary to the Government of India
3. Shri V. K. Gupta Member-Engineering, Railway Board & Ex-officio Secretary to the Government of India
4. Shri Pradeep Kumar Member-Staff, Railway Board & Ex-officio Secretary to the Government of India
5. Shri Kundan Sinha Member-Traffic, Railway Board & Ex-officio Secretary to the Government of India
6. Shri Navin Tandon Member-Electrical, Railway Board & Ex-officio Secretary to the Government of India

2. At the outset, the Chairperson welcomed the representatives of the Ministry of Railways (Railway Board) to the sitting of the Committee and congratulated Shri S. Mookerjee, on his appointment as Financial Commissioner, Railway Board. The Chairperson invited their attention to the provisions contained in Direction 55 of the Directions by the Speaker, Lok Sabha regarding the proceedings to be treated as confidential.

3. Thereafter, the representatives of the Ministry of Railways (Railway Board) briefed the Committee on various aspects of the subject 'Safety and Security in Railways', viz., different types of consequential train accidents, causes of such accidents, casualty occurred and safety measures being taken and are proposed to be taken by the Indian Railways in this regard. Issues relating to the training of staff, funds for safety related activities and status of implementation of Dr. Anil Kakodkar's committee recommendations were also discussed. Besides, the Committee were apprised of the three-tier system of security adopted by the Railways as also the status with regard to the proposed amendment in the RPF Act.

4. The Committee, then, sought certain clarifications on issues relating to the subject and the representatives of the Ministry of Railways (Railway Board) replied to the same. The Chairperson desired the Chairman, Railway Board, to furnish detailed replies to the queries within 15 days.

5. A verbatim record of the sitting has been kept.

**The Committee then adjourned.**

**MINUTES OF THE STANDING COMMITTEE ON RAILWAYS (2015-16)  
(Sixth Sitting)**

The Committee sat on Monday, the 8<sup>th</sup> February, 2016, from 1130 hours to 1410 hours in Committee Room 'C', Parliament House Annexe, New Delhi.

**PRESENT**

**SHRI DINESH TRIVEDI - CHAIRPERSON**

**MEMBERS**

**LOK SABHA**

2. Kunwar Pushpendra Singh Chandel
3. Shri Chandra Prakash Joshi
4. Shri Ramesh Chander Kaushik
5. Shri Thota Narasimham
6. Shri Mekapati Raja Mohan Reddy
7. Shri Lakhan Lal Sahu

**RAJYA SABHA**

8. Shri Mukut Mithi
9. Shri Dilipbhai Pandya
10. Shri Motilal Vora

**SECRETARIAT**

- |    |                       |   |                      |
|----|-----------------------|---|----------------------|
| 1. | Smt. K. Vijaykrishnan | - | Additional Secretary |
| 2. | Shri Arun K. Kaushik  | - | Director             |
| 3. | Smt. Geeta Parmar     | - | Deputy Secretary     |

## **REPRESENTATIVES OF RAILWAY FEDERATIONS/ ASSOCIATIONS**

### **National Federation of Indian Railwaymen (NFIR)**

1. Shri Guman Singh - President, NFIR
2. Dr. M. Raghavaiah - General Secretary, NFIR
3. Shri V. Gopalakrishnan - Loco Pilot, Chennai Division, Southern Railway
4. Shri V.V. Naresh - Loco Pilot, Hyderabad Division, South Central Railway
5. Shri S.K. Mastan - Loco Pilot, Hyderabad Division, South Central Railway

### **All India Railwaymen's Federation (AIRF)**

1. Shri Rakhal Das Gupta - President, AIRF
2. Shiva Gopal Mishra - General Secretary, AIRF
3. Shri P.T.S. Raja - Asstt. General Secretary, National Railway Mazdoor Union, Mumbai
4. Shri P. Ganeshan - Asstt. General Secretary, Southern Railway Mazdoor Union, Chennai
5. Shri Pancham Singh - Loco Pilot, Kota Railway Division, West Central Railway

### **All India RPF Association (AIRPFA)**

1. Shri S.R. Reddy - President, AIRPFA
2. Shri U.S. Jha - Secretary General, AIRPFA
3. Shri V.K. Tiwari - General Secretary, AIRPFA/NER
4. .Shri Sita Ram - General Secretary, AIRPFA/RPSF

2. At the outset, the Chairperson welcomed the representatives of the National Federation of Indian Railwaymen (NFIR), All India Railwaymen's Federation (AIRF) and All India RPF Association (AIRPFA) to the sitting. He also invited their attention to the provisions contained in Direction 55 of the Directions by the Speaker, Lok Sabha, regarding the proceedings to be treated as confidential.

3. Then, the representatives of NFIR, AIRF and AIRPFA, one by one placed their views/suggestions before the Committee on 'Safety and Security in Railways' and xxx xxx xxx, the subjects which are under examination by the Committee. The representatives of the above-mentioned Federations/Association highlighted the poor working conditions of the railway safety category staff in general and running staff, in particular. They referred to the long working hours of the loco running staff, less remuneration for their food, snacks, etc., non-availability of resting facilities, etc. The issue of non-implementation of recommendations of various expert committees set up from time to time to review the safety aspects of the Railways, was also raised. Xxx xxx xxx.

4. The All India RPF Association (AIRPFA), thereafter, presented their views on the existing three-tier security system in the Indian Railways and emphasised the need to empower RPF for ensuring security to railway property and passengers.

5. The Committee then sought certain clarifications on the issues raised by the representatives of NFIR, AIRF and AIRPFA. The representatives of the Federations/Association responded to the queries.

6. A verbatim record of the sitting has been kept.

**The Committee then adjourned.**

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**Xxx: Not relevant to the Report.**

**MINUTES OF THE SECOND SITTING OF THE STANDING COMMITTEE  
ON RAILWAYS (2016-17)**

The Committee met on Thursday, the 24<sup>th</sup> October, 2016 from 1100 hrs. to 1410 hrs. in Committee Room 'C', Parliament House Annexe, New Delhi.

**PRESENT**

**Shri Sudip Bandyopadhyay - Chairperson**

**MEMBERS**

**LOK SABHA**

2. Shri E. Ahamad
3. Shri Ram Tahal Choudhary
4. Shri Gaurav Gogoi
5. Shri Sudheer Gupta
6. Shri Chandra Prakash Joshi
7. Shri Ramesh Chander Kaushik
8. Shri Gajanan Kirtikar
9. Shri Balabhadra Majhi
10. Shri K.H. Muniyappa
11. Shri Lakhan Lal Sahu
12. Prof. (Dr.) Ram Shanker
13. Shri G.M. Siddeshwara
14. Shri Ganesh Singh
15. Shri Uday Pratap Singh
16. Shri Thota Narasimham
17. Shri S.R. Vijayakumar

**RAJYA SABHA**

18. Shri Ranvijay Singh Judev
19. Shri Shwait Malik
20. Shri Mukut Mithi
21. Shri Garikapati Mohan Rao
22. Shri Bashistha Narain Singh
23. Shri Motilal Vora

**SECRETARIAT**

1. Shri K. Vijayakrishnan - Additional Secretary
2. Smt. Abha Singh Yaduvanshi - Joint Secretary
3. Shri Arun K. Kaushik - Director

2. At the outset, the Chairperson welcomed the representatives of the Ministry of Railways (Railway Board) to the sitting of the Committee and invited their attention to the provisions contained in Direction 55 of the Directions by the Speaker, Lok Sabha, regarding the proceedings to be treated as confidential.

3. Thereafter, the representatives of the Ministry of Railways (Railway Board) briefed the Committee on various aspects of the subject, 'Safety and Security in Railways', including the data relating to accidents in Indian Railways during 2015-16 as well as the casualties occurred. Further, the Committee were apprised on different types of consequential train accidents, causes of these accidents, accidents occurring due to failure of Railway staff, high rates of accidents at level crossings, etc. The Chairman, Railway Board, also informed the Committee about measures being taken by the Railways for safety, while outlining the challenges faced therein. Issues relating to the acute shortage of personnel at various levels, including gangmen, adequate training of staff, funds for safety related activities and status of implementation of Dr. Anil Kakodkar's committee recommendations were also discussed. Besides, the Committee were apprised of the three-tier system of security adopted by the Railways.

4. The Committee, then, sought certain clarifications on issues relating to the subject and the representatives of the Ministry of Railways (Railway Board) replied to the same. The Committee also enquired about the impact and implications of the merger of the Railway Budget with the General Budget on the Safety and Security of Railways. The Chairperson desired the Chairman, Railway Board, to furnish detailed replies to the queries raised by Members in the next sitting of the Committee.

5. A verbatim record of the sitting has been kept.

**The Committee then adjourned.**

**MINUTES OF THE THIRD SITTING OF THE STANDING COMMITTEE ON  
RAILWAYS (2016-17)**

The Committee met on Friday, the 4<sup>th</sup> November, 2016 from 1100 hrs. to 1250 hrs. in Committee Room 'E', Parliament House Annexe, New Delhi.

**PRESENT**

**Shri Sudip Bandyopadhyay      -      Chairperson**

**MEMBERS**

**LOK SABHA**

2. Kunwar Pushpendra Singh Chandel
3. Shri Ram Tahal Choudhary
4. Shri Gaurav Gogoi
5. Shri Sudheer Gupta
6. Shri Ramesh Chander Kaushik
7. Shri Gajanan Kirtikar
8. Shri Balabhadra Majhi
9. Shri K.H. Muniyappa
10. Shri A.T. Nana Patil
11. Shri Mekapati Raja Mohan Reddy
12. Prof. (Dr.) Ram Shanker

**RAJYA SABHA**

13. Shri A.K. Antony
14. Shri Ranvijay Singh Judev
15. Shri Satish Chandra Misra
16. Shri Bashistha Narain Singh
17. Shri Motilal Vora

**SECRETARIAT**

1. Smt. Abha Singh Yaduvanshi      -      Joint Secretary
2. Shri Arun K. Kaushik              -      Director
3. Smt. Geeta Parmar                 -      Deputy Secretary

2. At the outset, the Chairperson welcomed the representatives of the Ministry of Railways (Railway Board) to the sitting of the Committee and invited their attention to the provisions contained in Direction 55 of the Directions by the Speaker, Lok Sabha, regarding the proceedings to be treated as confidential.
  
3. Thereafter, the Chairperson reminded the Ministry of the various issues raised by the Members of the Committee in their previous sitting i.e. on 24.11.2016. The representatives of the Ministry of Railways (Railway Board), then, gave replies to all those queries raised by the Members in detail. The main issues covered were the merger of the Rail Budget with the General Budget, implementation of the recommendations of the Kakodakar Committee Report, accidents occurring due to failure of the Railway Staff, procedures to be followed by Railways on detection on cases on human trafficking and the dismal state of RUBs/ROBs and their closure by the Indian Railways.
  
4. The Committee, then, sought certain clarifications on replies given by the representatives of the Ministry of Railways (Railway Board). The evidence was, then, concluded.
  
5. A verbatim record of the sitting has been kept.

**The Committee then adjourned.**

**MINUTES OF THE FIFTH SITTING OF THE STANDING COMMITTEE ON  
RAILWAYS (2016-17)**

The Committee met on Thursday, the 8<sup>th</sup> December, 2016 from 1500 hrs. to 1540 hrs. in Committee Room 'B', Parliament House Annexe, New Delhi.

**PRESENT**

**Shri Sudip Bandyopadhyay - Chairperson**

**MEMBERS**

**LOK SABHA**

2. Shri E. Ahamed
3. Shri Ram Tahal Choudhary
4. Shri Ramesh Chander Kaushik
5. Shri Gajanan Kirtikar
6. Shri Balabhadra Majhi
7. Shri K.H. Muniyappa
8. Shri A.T. Nana Patil
9. Shri Mekapati Raja Mohan Reddy
10. Shri Lakhan Lal Sahu
11. Prof. (Dr.) Ram Shanker
12. Shri Ganesh Singh
13. Shri Uday Pratap Singh

**RAJYA SABHA**

14. Shri Ranvijay Singh Judev
15. Shri Shwait Malik

**SECRETARIAT**

1. Shri Arun K. Kaushik - Director
2. Smt. Geeta Parmar - Deputy Secretary

2. At the outset, the Chairperson welcomed the Members to the sitting of the Committee. Thereafter, the Committee took up for consideration the following draft Reports:-

- (i) **xxx xxx xxx** ; and
- (ii) 'Safety and Security in Railways'

The Committee adopted the Report at Sl. No. (i) **xxx xxx xxx** and the Report at Sl. No.(ii) with some modifications as per **annexure**.

3. The Committee also authorized the Chairperson to finalise the Reports and present the same to Parliament.

**The Committee then adjourned.**

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**Xxx: Note related to the Report**

## ANNEXURE

- (i) Page No.68, at the end of para 6, the following sub-para may be added :-

The Committee have come across various instances of faulty designs of RUBs, which do not have adequate drainage facilities leading to severe water logging in Monsoon Season rendering them not only unusable but unsafe as well. Besides, there have been problem of poor lighting arrangements in some RUBs, which are susceptible to anti social criminal activities besides being accident prone. The Committee are not convinced with the contention of the Ministry that the drainage, lighting and maintenance aspect of RUBs is the responsibility of State Governments or the local bodies. They feel that there are some lacunae in the basic design of these RUBs, which is the responsibility of the Railways. The Committee, therefore, desire the Railways to look into the designing concept of the RUBS, so that such problems do not occur in future. They will also like the Railways to conduct a survey of all the existing RUBs and remove the deficiencies including their design, if any, so that the users do not face any inconvenience.

- (ii) Page No. 77, Para No.18, line 6, after the words North East Frontier Railway, the following may be added :-

Some instances of killing of Tigers, an endangered species, have also come to the notice of the Committee through Media Reports.

- (iii) Page No.78, Para No.19, Line 7 For 'The Committee would.....Railway Board' the following may be substituted :-

The Committee have also been informed that in advanced Railway System, technology of ATP system (Cab Signaling System) is used for High Speed Trains. But to their dismay the specific studies regarding combating the fog problem in other countries have not been undertaken on Indian Railways. The Committee recommended that the Railways should take up specific studies with regard to the technologies available in other countries to combat the fog problem without any further delay and implement such technologies in Indian Railways without further loss of time.