



## **INFORMATION BULLETIN**

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### **Railway Safety**

The Indian Railways is one of the longest rail networks in the world spread over 64000 route kilometres, carrying around 23 million passengers and hauling nearly 2.7 million tonnes of freight daily. The safety of operations on the Railways and the safety and security of the millions availing the services of the Railways are, therefore, of paramount importance.

#### **Classification of Accidents**

For the purpose of Railway working, accident is an occurrence in the course of working of Railways which does or may affect the safety of the Railways, its engine, rolling stock, permanent way and works, fixed installations, passengers or servants or which affect the safety of others or which does or may cause delay to train or loss to the Railways. Train accidents are further divided as “consequential train accidents” and “other train accidents”. Consequential train accidents include train accidents having serious repercussions in terms of loss of human life, human injury, loss to Railway property or interruption to Rail traffic. Traditionally, consequential train accidents resulting in loss of lives of 10 or more persons have been treated under the category of major accidents and this has been the basis for publication of a list of these accidents in the Annual Booklet on Indian Railway Safety Performance which is laid in Parliament along with the Railway Budget documents.

Accident of a train carrying passengers which led to loss of life or which resulted in grievous hurt to a passenger or passengers in the train, or with serious damage to railway property of the value exceeding Rs. two crore (enhanced from Rs. 25 lakhs earlier), or interruption to communication for more than the prescribed number of hours (e.g. total disruption to traffic is for more than 3 hours or partial disruption to traffic is for more than 6 hours on important Broad Gauge routes) are put in the category of consequential train accidents. However, cases of trespassers run over and injured or killed through their own carelessness or of passengers injured or killed through their own carelessness are excluded. Such cases are reported to, registered and investigated by the Government Railway Police concerned of State Governments.

## Consequential Accidents

Consequential train accidents, excluding Unmanned Level Crossing Incidents on Indian Railways have declined from 239 in 2003-04 to 71 in 2013-14. In the current year during 1 April to 30 June 2014, the number of consequential train accidents excluding Unmanned Level Crossing Incidents increased from 14 to 27 in comparison to the corresponding period of the previous year.

A statement showing type-wise number of consequential train accidents during 2003-04 to 2013-14 and the current year is given below:—

**Table 1 - Consequential Train Accidents, 2003-2014**

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 (Upto 30 June 2014)
Collision	9	13	9	8	8	13	9	5	9	6	4	1
Derailments	202	138	131	96	100	85	80	80	55	49	53	22
Manned Level Crossing Accidents	9	5	10	7	12	7	5	5	7	5	4	2
Fire in Train	14	10	15	4	5	3	2	2	4	8	7	1
Miscellaneous	5	3	4	8	4	7	4	1	2	-	3	1
<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>68</b>	<b>71</b>	<b>27</b>

The above figures do not include incidents of trespassing at unmanned level crossings (UMLCs) caused due to negligence of road vehicle users. The number of such incidents of trespassing at unmanned level crossings during 2003-04 to 2013-14 and the current year is as under:—

**Table 2 - No. of Incidents at Unmanned Level Crossings, 2003-2014**

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 (upto 30 June)
Unmanned Level Crossing Incidents	86	65	65	72	65	62	65	48	54	53	46	20

Accidents Per Million Train Kilometres, an important index of safety, has come down from 0.41 in 2003-04 to 0.10 in 2013-14 despite quantum increase in the volume of traffic carried by Indian Railways over the years.

## Causes of Consequential Train Accidents

Human failure constitutes the largest single factor for accidents on Indian Railways. Failure of other than railway staff mainly road vehicle users is responsible for the incidents at unmanned level crossings. A statement showing broad cause-wise break-up of consequential train accidents excluding incidents of trespassing at unmanned level crossings during 2003-04 to 2013-14 and the current year is given below:—

**Table 3 - Causes of Consequential Train Accidents, 2003-2014**

<b>Causes of Accident</b>	<b>2003-04</b>	<b>2004-05</b>	<b>2005-06</b>	<b>2006-07</b>	<b>2007-08</b>	<b>2008-09</b>	<b>2009-10</b>	<b>2010-11</b>	<b>2011-12</b>	<b>2012-13</b>	<b>2013-14</b>	<b>2014-15 (upto 30 June)</b>
Failure of Railway staff	161	119	120	85	88	75	63	56	52	45	50	18
Failure of other than Railway staff	21	13	21	12	16	14	10	9	9	6	9	1
Failure of equipment	18	14	8	9	9	0	6	5	5	6	3	1
Sabotage	18	4	6	8	7	13	14	16	6	3	4	3
Combination of factors	2	1	0	1	0	4	1	3	1	0	0	0
Incidental	17	16	11	7	8	5	4	4	3	7	4	3
Could not be established conclusively	2	2	3	1	1	4	2	0	1	1	0	0
Under Investigation										0	1	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>68</b>	<b>71</b>	<b>27</b>

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

## Casualties

The number of casualties in train accidents is essentially fortuitous and not strictly susceptible to comparison. Number of persons who lost their lives in consequential train accidents (2003-04 to 2013-14) and the current year is as under:

**Table 4 - Loss of lives in Consequential Train Accidents (2003-2014)**

Type of Accidents	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15 (upto 30 June)
Collisions	8	39	25	2	1	8	44	240*	22	27 <sup>+</sup>	1	2
Derailments	90	15	148	8	13	10	14	4	73 <sup>#</sup>	5	6	56 <sup>\$</sup>
Manned LC Accidents	12	9	6	11	27	18	7	7	6	18	6	4
Fire in Train	41	0	15	0	0	31	0	0	9	30 <sup>ψ</sup>	35 <sup>%</sup>	0
Miscellaneous	5	0	1	41	2	13	3	0	5	0	6	1
<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>80</b>	<b>54</b>	<b>63</b>

UMLC Incidents	138	173	120	146	148	129	170	130	204	124	95	55
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## Accident Investigation

As per the provisions of the Railways Act, 1989, in the course of working of the Railways, any accident that results in loss of any human life or grievous hurt or an accident involving a passenger train or an accident resulting in loss of railway property of more than the norm prescribed is informed to the Commissioner of Railway Safety under the Ministry of Civil Aviation for investigating the same. If, for any reason, the Commissioner of Railway Safety is not able to hold an inquiry or desires the Railway Administration to hold the inquiry instead, then such cases are investigated by the Railway Administration. All other incidents that are not reportable to the

\* including 150 died in the derailment and collision of Jnaneshwari Express on 28.05.10 caused due to Sabotage, 66 in collision of Uttarbanga Exp. at Sainthia, 23 in collision of Intercity Exp. at Badarwas.

+ 25 in collision of Hampi Exp. with Goods train at Penukonda on 22.05.2012.

# including 71 persons died in the derailment of 12311 Kalka Mail near Malwan (U.P.) on 10.07.2011.

\$ includes death of 23 passengers in the derailment of Train No. 50105 down Diwe-Sawantwadi Passenger on 04.05.2014, death of 29 passengers in the derailment of Train No. 12556 Gorakhdham Express on 26.05.2014 and death of four passengers in the derailment of 12336 New Delhi – Dibrugarh Rajdhani Express on 25.06.2014 near Chhapra.

ψ 30 in Fire incident in Tamilnadu Exp. on 30.07.2012.

% 26 Killed in fire in Nanded Exp. on 28.12.2013 and 09 killed in Fire in Dehradun Exp. on 08.01.2014.

Commissioner of Railway Safety as per the provisions of the Act are also investigated by the Railway Administration. In some serious accidents, a Judicial Commission of Inquiry may also be appointed under the Commission of Inquiries Act, 1952 to inquire into the accident. The Commissioner of Railway Safety discontinues any inquiry, if already commenced, on appointment of any such Judicial Commission of Inquiry.

### **Compensation**

As per the extant rules, the amount of compensation payable in train accidents and untoward incidents, as defined under Section 124/124-A of the Railways Act, 1989, is Rs. 4 lakh in cases of death and Rs. 32000/- to Rs. 4 lakh in cases of injury (depending upon the gravity of the injury). As per the Act, compensation is paid by the Railways to the victims of train accidents after a claim is filed by the claimant in the Railway Claims Tribunal and a decree is awarded by the Tribunal in favour of the claimant and the decree so awarded is decided to be satisfied by the Railways. The Railway Claims Tribunal is a quasi-judicial body, independent from the Railways. Judicial process for settling the claims by the Tribunal involves different stages, like filing of written statements, filing of evidence and arguments, which is a formalized process having no fixed timeframe. The disposal of railway accident/untoward incident compensation claims in the Tribunal depends upon the facts and circumstances of each case. After sanction of the decreed compensation amount, Railways have to ensure that cheques are issued and dispatched within a period of 15 days.

Ex-gratia relief is given by the railway administration soon after an accident to meet the immediate expenses of the victim. With effect from 1 August 2012, the rate of ex-gratia in case of death as defined under Section 124 of the Railways Act, 1989 is Rs. 50,000 payable to the next of the kin of the deceased passenger. In case of grievous injuries, the ex-gratia is paid at the rate of Rs. 25,000 upto 30 days of hospitalization and if indoor treatment is required for more than 30 days, additional ex-gratia is paid at the rate of Rs. 300 per day to be released at the end of every 10 day period or discharge whichever is earlier. The maximum period of payment of such ex-gratia will be 12 months. Ex-gratia in case of simple injuries under Section 124 is Rs. 5000.

The rate of ex-gratia for death/injury in untoward incident as defined under Section 124A of the Railways Act, 1989 is Rs. 15,000 in case of death. In the case of grievous injuries, Rs. 5000 is paid upto first 30 days of hospitalization, beyond which Rs. 1000 per week or part thereof is paid upto further six months and Rs. 500 per week or part thereof upto the next 5 months of hospitalization. The maximum period for which ex-gratia is payable to the grievously injured persons in untoward incident is 12 months. Ex-gratia in case of simple injuries under Section 124A for untoward incident is Rs. 500. No liability for payment of ex-gratia accrues in case of incidents at unmanned level crossings in which railway passengers are not involved and in cases of persons run over by trains.

## Allocation and Utilization of Funds

In terms of funding meant specifically for safety related works there is no specific head meant solely for safety. The expenditure on safety related activities forms part of both Plan and non-Plan outlays. Items of work related to safety under both Plan and non-Plan expenditure include Repairs and Maintenance of Permanent Ways, Repairs and Maintenance of Motive Powers, Repairs and Maintenance of Carriages and Wagons, Repairs and Maintenance of Plant & Equipment, Acquisition, Construction & Replacement of level crossings and Road Over Bridges and Road Under Bridges, Track Renewals, Bridge Works, Signalling and Telecom Works, Workshops. The statement below shows the Budget provisions for safety related works. It includes the Budget Estimates and the actual expenditure on both non-Plan and Plan expenditure.

**Table 5 – Budget Provision for Safety Related Activities**  
**A – Non-Plan Expenditure (Gross) Safety**

(Rs. in crores)

	BE 2008-09	Actual 2008- 09	BE 2009- 10	Actual 2009- 10	BE 2010- 11	Actual 2010- 11	BE 2011- 12	Actual 2011- 12	BE 2012- 13	Actual 2012- 13 (prov.)
Repairs & Maintenance of Permanent Ways & Works	5412	5891	6909	7497	7157	7387	8156	7795	8787	8164
Repairs & Maintenance of Motive Powers	2571	2861	3307	3479	3349	3424	3661	3600	4016	3838
Repairs & Maintenance of Carriages & Wagons	5435	6236	7425	7857	7525	7800	8274	8385	9311	9031
Repairs & Maintenance of Plant & Equipment	2959	3318	4010	4307	4063	4167	4673	4421	5062	4766
Operating Expenses – Traffic-600-Safety	12	4	13	6	12	7	12	7	21	8
<b>Total Non-Plan (Safety):</b>	<b>16389</b>	<b>18310</b>	<b>21664</b>	<b>23146</b>	<b>22106</b>	<b>22785</b>	<b>24776</b>	<b>24208</b>	<b>27197</b>	<b>25808</b>

### **B – Plan Expenditure (Gross): Assets–Acquisition, Construction & Replacement**

Road Safety Works - Level Crossings	600	250	700	359	700	414	800	519	600	527
Road Safety Works - Road Over/Under Bridges	700	316	1000	541	1000	687	1200	810	1400	1057
Track Renewals	4700	5249	5135	4106	5000	4985	4964	5286	6003	5427
Bridge Works	606	422	500	371	408	354	330	319	464	322
Signalling and Telecom Works	1530	1382	1061	1056	1124	965	1102	845	2007	939
Workshops	1591	1022	1549	1083	1290	923	1552	1122	1112	1519
<b>Total Plan (Safety):</b>	<b>9727</b>	<b>8641</b>	<b>9945</b>	<b>7516</b>	<b>9522</b>	<b>8328</b>	<b>9948</b>	<b>8901</b>	<b>11586</b>	<b>9790</b>
<b>Total (Non Plan+Plan)</b>	<b>26116</b>	<b>26951</b>	<b>31609</b>	<b>30662</b>	<b>31628</b>	<b>31113</b>	<b>34724</b>	<b>33109</b>	<b>38783</b>	<b>35598</b>

## **Special Railway Safety Fund (SRSF)**

A non-lapsable Special Railway Safety Fund (SRSF) of Rs. 17000 crore had been set up by the Central Government in October 2001 to wipe out the arrears in renewal of over-aged assets, namely, tracks, bridges, signalling gears, rolling stock, etc. within a fixed time-frame. It also included certain safety enhancement measures such as track circuiting of stations, upgradation of training facilities, including training aids in training institutes, simulators for loco motive drivers, development of computer based training modules, etc. The Special Railway Safety Fund was set up w.e.f. 1 October 2001 with contribution from the Ministry of Finance to the extent of Rs. 12000 crore, and the balance Rs. 5000 crore from the Ministry of Railways. The currency of the Fund was up to 2007-08. The total expenditure on closure of SRSF on 31 March 2008 was Rs. 16318 crore.

The non-lapsable Special Railway Safety Fund proved to be very essential and useful in clearing the backlogs of renewal and replacement of over-aged assets, namely tracks, bridges, rolling stocks, signalling gears, etc. and also in undertaking various safety enhancement works in a time bound manner. As a result of the various works completed under SRSF, the number of consequential train accidents including incidents of trespassing at unmanned level crossings came down from 415 in 2001-02 to 194 in 2007-08 and to 117 in 2013-14. Accident per million train kilometer came down from 0.55 in 2001-02 to 0.22 in 2007-08 at the time of closure of SRSF in March 2008 and to 0.11 in 2012-13 and 0.10 in 2013-14.

### **Safety Review Committee**

The High Level Safety Review Committee under the chairmanship of Dr. Anil Kakodkar, former Chairman of Atomic Energy Commission appointed by the Ministry of Railways to review the safety of the Indian Railways submitted its report in 2012. The Committee has made a total of 106 recommendations which are being examined by the Railway Board. An outlay of Rs. one lakh crore is required over a period of five years to implement the recommendations. Some observations/recommendations are as follows:

- The 'present environment on Indian Railways reveals a grim picture of inadequate performance' largely due to poor infrastructure and resources, and lack of empowerment at the functional level. Railway organization is more centralized, top-heavy and hierarchical along departmental lines much to the detriment of a functional and objective-oriented organization.
- The financial state of Indian Railways is 'at the brink of collapse' unless some concrete measures are taken. The infrastructure is severely strained. All safety margins have been eaten up pushing Railways to a regime of adhocism in infrastructure maintenance.
- There is no practice of independent safety regulation by an independent agency separate from operations. Need is to create a statutory Railway Safety Authority with enough powers to have a safety oversight on the operational mode of Railways without detaching safety with the railway operations.
- The Research Design and Standards Organization (RDSO), the apex technical wing of the Railways, is highly constrained which hampers the ability of the system to internalize emerging technologies. Need to restructure RDSO with appropriate empowerment. A Railway Research and Development Council (RRDC) is required to be set up at the apex level directly under the Government.

- Recommends the adoption of an Advanced Signalling System similar to the European Train Control System Level II on the entire trunk route length of 19,000 km. within 5 years.
- Recommends elimination of All Level Crossings (both manned and unmanned) within five years. Estimated expenditure of Rs. 50,000 crore will be recovered within 7-8 years through savings in maintenance costs and improved train operations.
- Recommends for stopping production of ICF design coaches and complete switch over to manufacture of much safer Linke Hofmann Busch (LHB) design coaches immediately. This may cost Rs. 10,000 crore over the next five years.
- Rupees 20,000 crore per year should be raised for implementing the recommendations. Funding methodology includes creation of a non-fungible non-lapsable safety fund generated through safety cess on passengers of different classes in a graded manner.

### **Safety Measures in Indian Railways**

Safety measures in Indian Railways envisage Accident Prevention and Mitigation directed towards Continuous Reduction in Risk Level to its Customers. This is being done by adopting new technologies and improvement in asset reliability to reduce human dependence. One of the major efforts is directed towards progressively achieving reduction in accidents attributable to human failure. The Railways have started deploying various safety measures like the Anti Collision Device (ACD), Train Protection Warning System (TPWS), Auxiliary Warning System, Vigilance Control Device (VCD), etc. Anti Collision Device is a Global Positioning System (GPS) based device provided in the locomotive which continuously transmits position of loco to other locomotives in the vicinity and applies brakes in a collision like situation. Works for deployment of ACD have been sanctioned on 6800 RKM over Eastern, East Central, East Coast, Southern, South Central, South Western and South Eastern Railways. In order to eliminate accidents caused due to human error like Signal Passing at Danger and over, the Indian Railways are acquiring Train Protection Warning System (TPWS) which is a safety system based on International Safety Standards. Based upon experience gained from ACD and TPWS systems, Indian Railways have now taken up development of Train Collision Avoidance System (TCAS) which will be a fusion of functionalities of TPWS and ACD and will prevent Signal Passing at Danger (SPAD) and collisions. Auxiliary Warning System (AWS) has been installed at some places where suburban trains run at a Headway of about 4 minutes. This system applies brakes automatically in case driver disregards a RED Signal. The Vigilance Control Device (VCD) has been completed in almost all diesel and electric locomotives. It gives audio visual alarms and then applies brakes automatically where if the driver does not perform a certain set of actions over a period of 20 seconds. Measures like isolation of running lines to prevent accidents, complete track circuiting of the station to enhance safety by verification of track occupancy, electrical/electronic Interlocking System to eliminate human failure is being progressively provided at stations.

### **Accidents at Level Crossings**

Accidents at level crossings - both manned and unmanned — account for about fifty percent of the total rail accidents. According to the Ministry of Railways, the main factor responsible for high rate of accidents at unmanned level crossings is negligence of road users. As per Section 131 of the Motor Vehicles Act, 1988 and Section 161 of the Railways Act, 1989, the onus for safe movement over unmanned level crossings is entirely on the road users.

The Railways Vision-2020 document envisages the elimination of all unmanned level crossings. As of 1 April 2014, there are 30,348 level crossings in India out of which 18,785 (62 per cent) level crossings were manned and the balance 11,563 (38 per cent) were unmanned. According to the Ministry of Railways, the elimination of all the unmanned level crossings is a gigantic task and it involves a lot of manpower, resources and budgetary support. It is a continuous process and is done as per need, *inter-se* priority of works, availability of funds and co-operation of State Governments, particularly, in getting consent for closure of level crossing and undertaking to maintain road and drainage in future for subways. A multi-pronged strategy has been adopted to achieve this end. While some level crossings would be closed by merging them with the nearby level crossing by constructing connecting road, other level crossings would be provided with Road under bridge or Limited Height Subways (LHS) and also by manning of qualifying unmanned level crossings. In 2013, the Ministry had informed the Parliamentary Standing Committee on Railways that the quantum of funds required for this gigantic task would be to the tune of Rs.10,000 crore.

The progress of elimination of Unmanned Level Crossings and Manning of Unmanned Level Crossings during the period 2008-2013 can be seen at Table 7.

**Table 7 - Removal and Manning of Unmanned Level Crossings during 2008-2013**

Removal of Unmanned Level Crossings			Manning of Unmanned Level Crossings		
Year	Target for removal	Progress achieved	Year	Target for manning	Progress achieved
2008-09	600	556	2008-09	436	259
2009-10	600	533	2009-10	304	377
2010-11	811	800	2010-11	1500	434
2011-12	906	481	2011-12	2045	777
2012-13	669	700	2012-13	1066	463
2013-14	857	777	2013-14	495	325
<b>Total</b>	<b>4443</b>	<b>3867</b>	<b>Total</b>	<b>5846</b>	<b>2635</b>

## Derailments

After accidents at level crossings, derailments account for the most number of accidents on the Indian Railways. Derailments can occur due to a variety of reasons, but the overriding reason can be attributable to improper/poor maintenance of tracks.

**Table 6 - Consequential Accidents due to Track Defects (2008-2013)**

Year	No. of Consequential Train Accidents	Consequential Train Accidents due to Track Defects	Percentage
2008-09	177	17	9.60
2009-10	165	26	15.75
2010-11	141	22	15.60
2011-12	131	24	18.32
2012-13	121	22	18.18

In order to reduce derailments, the Railways are taking a number of measures like upgradation of track structure consisting of Pre Stressed Concrete (PSC) sleepers, installation of high strength rails on concrete sleepers and Steel Channel Sleepers on girder bridges, long rail panels to minimize number of welded joints, testing of rails and welds ultrasonically, shifting to superior welding technology, progressive use of modern track maintenance machines, electronic monitoring of track geometry, modern bridge inspection techniques, introduction of Wheel Impact Load Detector (WILD), regular patrolling of railway tracks at vulnerable locations, manufacture of coaches with Centre Buffer Couplers and anti-climbing features to minimize the effects of accidents.

### **Fire Accidents**

Accidents in trains as a result of fire are classified in the Class-B category of accidents by the Indian Railways. In the year 2013-14, (up to March 2014), there were 7 incidents of fire compared to 8 in 2012-13 and 4 in 2011-12. Indian Railways have endeavoured to enhance fire worthiness of coaches by using fire retardant furnishing materials to mitigate effect of fire. New manufacture of coaches/periodical overhauling of existing coaches is being carried out with fire retardant specifications of the furnishing materials wherever condition based replacements are warranted. A pilot project for provision of Comprehensive Fire and Smoke Detection System has been taken up. Improved materials for electrical fittings and fixtures such as MCB, light fittings, terminal boards, connectors, etc., are being used progressively. Two separate Fire Safety Audit Teams have been constituted recently to plan fire safety audits. Zonal Railways have been instructed to ensure observance of safe practices in handling of pantry cars and periodical inspection of electrical and LPG fittings in the pantry cars.

The Railway Board in its every meeting reviews safety performance as first agenda item and analyzes all accidents in detail. The Chairman and Board Members conduct safety review meetings with General Managers and Principal Heads of Departments (PHODs) of many Zonal Railways during their visits. Officers of Safety Directorate also visit Zonal Railways on field inspections. The Divisional Railway Managers have been directed to conduct intensive window trailing inspection of each section of their Division and submit an analytical review regarding safety preparedness in their jurisdictions. Thrust is given to imparting proper and adequate training to all safety category staff including on simulators besides launching drive to fill up all safety category vacancies in a time bound manner.

### **Parliamentary Standing Committee Report**

The Parliamentary Standing Committee on Railways, in its Report on *Major Railway Accidents During the Last Five Years — Causes and Remedial Measures* presented to Lok Sabha on 18 December 2013, has made many observations and recommendations. Some of them are:

- Railways do not take into account incidents of run over of passengers/pedestrians by trains as accidents under its classification scheme.
- As award of compensation to victims is dependent on the decree awarded by the Railway Claims Tribunal which has no fixed time frame, the Railways, in the case of accidents

accompanied by loss of life, limb or livelihood should dispose of cases in the shortest possible time so that compensation is not denied or delayed when most needed.

- Shortfall in utilization of the allocated funds in the safety category during 2011-12 and 2012-13.
- Critical of Railways' premise that the main factor responsible for the high rate of accidents at level crossings is the result of the negligence of road users.
- Railways are not addressing the unmanned level crossings issue with the desired purposiveness as the targets for elimination of unmanned level crossings have never been achieved in the last five years.
- Progress in manning the unmanned level crossings has been woefully inadequate.
- Railways should take proactive measures to put an end to accidents at level crossings.
- Tardy progress in respect of construction of ROB/RUBs during the last five years. Speedy and time-bound completion of work on ROB/RUBs could eliminate accidents and loss of life at unmanned level crossings.
- Make Anti-Collision Device (ACD) available on the entire rail network by December 2014.
- Poor maintenance of tracks despite strenuous efforts to improve their condition.
- Early introduction of the Train Protection Warning System is required to eliminate accidents caused due to human error.
- As 30-35 per cent of over one lakh bridges are hundred years old, stringent monitoring of their carrying capability and special emphasis on proper maintenance needed.
- Necessary to ensure that inflammable/combustible material is not carried on board through a system of rigorous security checking at entry points at stations to prevent fire incidents on train.
- Railway Ministry may consider requesting the Government to provide another safety fund in order to move to the next level of safety.

