

High Level Committee Report on Disaster Management

INTRODUCTION :

1. Some of the major train accidents in recent years involving heavy casualties have underscored the need for a re-look at the prevailing Disaster Management System on the Indian Railways. In many countries, in the unfortunate event of a railway accident, relief and rescue work is not spearheaded by the Railway organisation, but by the civil authorities, as in the case in road accidents/other disasters. The role of the Railway systems in these countries is restricted to clearing the track and restoring traffic after the rescue work is over. In India, however, Railways have been historically handling rescue and relief operations in railway accidents, and therefore Indian Railways has to rise to the expectations of the public. Further, significant technological advancements have taken place in the area of post disaster relief and rescue operations. Consequently, a number of state of the art relief and rescue equipment, tools and plants and innovative techniques have emerged during the last decade for quickening the pace of rescue and relief operations.

2. In the above backdrop, the Ministry of Railways constituted a high level committee vide Board's order No.ERB-I/2002/23/44 dt.16.9.2002 to review the **Disaster Management System** over Indian Railways and to give recommendations for strengthening and streamlining the same. This Committee consists of the following :

1. **Member Mechanical, Railway Board** : **Convenor**
2. **Member Traffic, Railway Board** : **Member**
3. **Financial Commissioner, Railway Board*** : **Member**
4. **Director General/Railway Health Services** : **Member**
5. **Director General/ Railway Protection Force** : **Member**

* Nominated as AM(Budget) and continued to serve the committee as Financial Commissioner.

Executive Director / Safety, Railway Board is the Secretary of the Committee and the terms of reference of the Committee are:

- i. *To review the existing Disaster Management System over IR related to train accidents and natural calamities and to suggest improvements.*
- ii. *To identify additional technological and managerial inputs to quicken the pace of relief and rescue operations.*
- iii. *To institute a standing arrangement with other Central Ministries, State Governments and Armed Forces to enable quick and smooth restoration operations without any legal or procedural hurdles.*

3. At present, accident victims at the railway accident site receive immediate help from :
- i. Fellow passengers, particularly those who are qualified in giving first aid/doctors on train.
 - ii. Railway staff/officers on board who, as per Railway Service Conduct Rules, are expected to assist the accident victims.
 - iii. Neighbouring villages/towns, civil authorities, NGOs, etc.
 - iv. Organised railway rescue and relief team.

Therefore, it is natural and logical that in most of railway accidents/disasters, the relief in the form of response arrives quickly in urban /vicinity of urban areas. However, in case of remote area accident/disasters, factors such as lack of communication, lack of immediate accessibility, covering of distance gap to reach the site of accident and conveyance of equipment and trained manpower create serious problems for carrying out rescue and relief. The usual refrain of the media that local help was immediate, while the railways took some

time to organise assistance is somewhat uncharitable, since it is impossible to have organised efforts located at each and every remote area in anticipation of an accident/disaster.

4. The Committee sought suggestions directly from various sources such as General Managers, DRMs, AIRF, NFIR, FROA, IRPOF, etc. Further, a website <http://www.indianrailways.gov.in> was also set up to receive suggestions from railwaymen and public. The Committee also visited GSDMA(Gujarat State Disaster Management Authority) at Gandhi Nagar. The Committee had detailed discussion with Army/Navy/Air force authorities to explore the possibilities of institutionalising the standing arrangement for seeking their immediate assistance at the time of natural disaster or railway accidents. Similarly, detailed discussions were held with Ministry of Communications to institutionalise the standing arrangement for seeking immediate assistance from BSNL/MTNL for providing requisite communication facilities at/around the accident site.

5. The Committee believes that Indian Railways' first responsibility in case of accidents is to reach and extricate accident victims and organise effective trauma care. The Basic Principle of Trauma Management is speed & expediency -- "*Most trauma patients die of shock, which comes from sluggish or non-existent circulation and the resulting chemical changes in the body.*" [Dr. R Adams Cowley, Maryland Institute for Emergency Medical Services, (Pioneer of modern trauma care)].

Thus the first hour after the accident is termed as 'The Golden Hour' as

- *Most trauma patients can be saved if bleeding is effectively stopped and blood pressure restored within an hour.*
- *It is likely that patients, who have experienced shock and remain in that state of shock for long duration will die. Surgical intervention within that first one hour is, therefore, crucial for increasing the patients' chances of survival.*
- *This hour, called "The Golden Hour," begins the moment the injury occurs.*

6. Therefore, the basic steps for quick and effective rescue and relief operations are following :

- Rapid access to the site of accident.
- Quick extrication of victims and effective on-site medical management.
- Stabilization of condition.
- Expeditious extraction and shifting to rescue vehicle(s).
- Speedy transportation to hospital.

7. Indian Railways is spread over a vast geographical area, connecting 7000 stations over 63000 route Kms. **Therefore, it is not possible to locate rescue & relief equipment and manpower at each and every station.** Presently, there are 174 Accident Relief Medical Vans (ARMVs), and 185 Accident Relief Trains (A Class, B class & self propelled ARTs) stationed at strategic locations over BG & MG network in the Indian Railway system (**Details at Annexure-I**). Each ARMV has to service on an average an area covering a radial distance of over 150 kms. The set norms are, that the ARMV must leave within 20 minutes of receiving information of an accident. Therefore, in a remotely located accident, the relief train may take anything between one to four hours to reach the accident site, considering time taken to cover the distance and organising men and material. Further, in major accident involving heavy casualties, one or two ARMVs may not be able to cope up with the pressure of immediate relief.

8. As per experience, the present system of railway rescue and relief functions well in most of the accidents involving passenger trains, when the casualties are not heavy. It is also a fact that IR is now running significantly longer passenger trains and heavier freight trains. Hence, some accidents are likely to claim a large number of casualties depending upon nature

of accident, location and topographical features, etc. The committee believes that in case of major accidents involving hundreds of lives, there is a need for better managerial and technological inputs for the Disaster Management System to function satisfactorily.

9. Over the years, the accident handling mechanism over IR has been well defined and put into operation. The Accident Manual of each Zonal Railway lays down detailed drills and steps to be taken at the time of mishap. Each segment of activities is enumerated in various manuals, be it Medical Manual or Commercial Manual or other such rule books. However, being a multi-departmental emergency function, needing a high degree of precision, speed & coordination, the post accident management leaves some deficiencies and lacunae occasionally. These are corrected and updated periodically.

10. To ensure that IR's organised disaster management system is designed such that the victims are retrieved within the golden hour, it would require ARMVs/ARTs to be based at each and every station. However, the Committee believes that increasing the number of ARMVs/ARTs indiscriminately to reduce the beat or to increase number of relief and rescue equipment without any maintenance support would not achieve the objective. On the contrary, any embarrassing failure of equipment at the inappropriate moment during rescue and relief operations would render the very provision counter productive and the investments infructuous. Further, the ARMVs not properly supported by medical/para medical staff, who cannot be positioned throughout the length of railway track, will be useless for rescue and relief operations.

11. No doubt massive efforts have been made in the decades since independence to modernise and strengthen the infrastructure relating to accident relief and restoration. Replacement of steam cranes by high capacity diesel cranes and of non-standard stock by ICF all coil coaches along with induction of hydraulic re-railing equipment have imparted considerable strike force to the Accident Relief Trains. There has been general upgradation in the tools, equipment and the amenities to the staff, which has enhanced their capability and effectiveness. Despite these improvements, the response to the accident and disasters continues to fall short of rising expectations, especially in case of major accidents involving more than 15-20 casualties in remote areas.

12. These improvements have increased the operating speed of the Accident Relief Trains and brought down the transit time between the base depot to the accident site from the earlier 8 to 10 hours to around 1 to 4 hours on an average now. But, in case of an accident involving human life even the least delay can be crucial. However, the concept of golden hour is an ideal one, which cannot be achieved in any disaster/accident unless it occurs in the vicinity of the railway disaster management infrastructure/city/civil/armed forces establishments with adequate medical infrastructure. Therefore, a paradigm shift is now called for. The total approach to the concept of disaster management and the investment decisions thereof need a revamp. The strategy for setting up an effective Disaster Management System on the railways has to be based upon the twin plank of a stronger and appropriate infrastructure, backed by a well-trained team of disciplined and dedicated manpower.

13. Railway accidents/natural calamities can be categorised into different levels:

- Accidents/ natural calamities of a magnitude, which can be managed by the concerned divisional authorities;
- Accidents/natural calamities of a magnitude, which also require assistance from neighbouring divisions and can be managed by the Zonal railways, and;
- Disasters of a magnitude in terms of their severity or the scale of casualties to be treated as national level disasters and require active involvement of multiple agencies viz., the Central Government (Ministry of Railways & other Ministries).

While it is only in the case of disasters of an exceptionally severe magnitude that the Central Government's involvement will be necessary in disaster response --managing rescue, relief & restoration etc. --the Ministry of Railways (Railway Board)'s continuing involvement will be required in the pre-disaster phase in assisting the zonal railways in building up appropriate capabilities for disaster management at the divisional and the zonal levels and also in institutionalising appropriate systems for disaster management and mitigation of human misery and suffering.

14. The Committee notes that a National Disaster Management Authority (NDMA) is being constituted by the Govt. of India. This authority is expected to coordinate disaster management activities among various departments/Ministries. NDMA will work under the over all supervision of the Home Secretary. Ministry of Railways has already nominated Addl. Member (Mech. Engg.) as its representative in NDMA.

15. The Committee also examined in detail the Khosla-Trivedi Committee report on "*Modernisation and Reorganisation of Accident Relief Trains over IR*" submitted to the Board during 2002. Several recommendations made in this report have been selected and after review are included in the final recommendations given below.

16. In order to ensure their timely implementation, the time frame (e.g. M+'X') and the agency/agencies responsible have also been indicated against each recommendation. 'M' stands for the month of publication of this report and 'X' indicates the time period (in number of months) for implementing the recommendation

i. Institutionalising Golden Hour Drill

Sl. No.	Recommendations of the High-level Committee	Who will do it & by when?	Financial Implications
1	<p>National Disaster Management Authority (NDMA) is being constituted by the Government of India. This authority will be responsible for :</p> <p>(i) Coordinating/mandating Government's policies for disaster reduction/mitigation.</p> <p>(ii) Ensuring adequate preparedness at all levels in order to meet disasters.</p> <p>(iii) Coordinating response to a disaster when it strikes</p> <p>(iv) Coordination of post disaster relief and rehabilitation.</p> <p>Consequently, each State and District is expected to prepare its Disaster Management Plan taking into consideration the vulnerability analysis and the local resources (Civil, armed forces, NGOs, etc).</p> <p>The Committee recommends that each Division and each Zonal railway must revise and rewrite their Disaster Management Plan and dovetail the same with the State/District Disaster Management plans respectively. This would ensure proper coordination and mutual cooperation among Divisions and Zonal railways authorities with the District/State authorities in managing severe accidents over IR and disasters in general.</p>	<p>Zonal Railways Rly. Board (Safety dte.) M + 4</p>	
2	<p>SP-ART- Self Propelled ARTs and ARMVs to be bundled into a three coach train to be called SP-ART (Self Propelled Accident Relief Train). These should be deployed @ one SP-ART per Division. 10 such units each of ARTs/ARMVs are already available. These can be made into 20 SP-ARTs by adding 20 more coaches. In addition 47 more SP-ARTs @ one per Division may be introduced during the next 3 years (2003-06). While allotting these SPARTs, divisions with a geography of sparse road network and/or ghat sections may be given priority.</p>	<p>Zonal Rlys. ICF Railway Board (Mech. &Health Directorates) M+36</p>	<p>Rs.235 Cr. (@Rs.5 Cr.) x 47 Outlay</p> <p>2003-04 Rs.80 Cr. 2004-05 Rs.80 Cr. 2005-06 Rs.75 Cr.</p>

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3	<p>MOU with Civil/Private Hospitals- To improve the response time, feasibility of entering into a tie up with reputed civil/reputed private hospitals may be explored so that additional ARMVs can be stationed at intervals not exceeding 100 Kms each even in places where the railway medical infrastructure are not available.</p>	<p>Zonal Railways to submit their proposals to Railway Board. (Health & Mech. Dtes) Nodal Dte. –Health Dte. M+4</p>	<p>To be assessed</p>
4	<p>MOU with State Govts- Notwithstanding provision of 67 SPARTs and the existing ARMEs, the railway administration may not be able to reach the site of accident in reasonable time, say within two hours in all cases. Therefore, it is proposed to enter into an MOU with the State Governments so that Railway and District administration can join hands for mutual assistance in case of railway/non-railway disasters. Accordingly, railways may provide road mobile Accident Rescue & Relief Van and State Government may provide necessary medical/para-medical support for their manning and deployment. Railways may also station Railway Rescue and Relief Commissioners (Railway Mechanical & Medical officers) at State Headquarters for ensuring coordination between railway and civil authorities. To begin with each zonal railway will be provided with one rescue and relief mobile van for deployment at strategic locations (preferably at zonal headquarters) during the next one-year, provided States agree to man the accident rescue and relief vans.</p> <p>Based on the response from district authorities /State Government, each division can be provided with one such rescue and relief mobile van during the next one year.</p>	<p>Zonal Railways Railway Board (Mech.& Health Dte.) Nodal Dte. – Mech.</p>	<p>Rs.30 lakh * 67 = Rs.20 Cr. 2003-04 –Rs.4.8 Cr 2004-05-Rs.15.3 Cr</p>
5	<p>Rescue Ambulance- Divisions where the road network is good should procure one disaster management rescue ambulance and base it at their divisional hospitals. Such rescue ambulance is being manufactured by the Vehicle Ordnance Factory/Jabalpur under the Ministry of Defence. COFMOW to prepare a suitable specification and arrange procurements against indents from railways. To begin with one such ambulance may be introduced over each zone and based on experience gained, additional ambulances may be procured as per need.</p>	<p>COFMOW Zonal Railways Railway Board (Mech. & Health Dte.) Nodal Dte. – Mech. M+8</p>	<p>@Rs.30 lakhs * 16 = Rs.4.8 Cr.</p>
6	<p>a) Air Support- The Committee recommends that assistance of air support to dispatch the rescue teams to the site of accident and for air lifting of needy, seriously injured passengers to the nearby hospitals should be sought without any delay. DRM/GM may be empowered to seek this assistance as and when required. GMs & DRMs will have full powers.</p> <p>The issue of seeking assistance from Armed Forces for disaster management has been discussed in detail with Ministry of Defence. It has been agreed that the Divisional/ Zonal Railway authorities can contact the nearest unit of the armed forces for any type of assistance for managing the disaster and that would be provided. The communication from Ministry of Defence indicating the contact details of the concerned Army/Air Force/Navy authorities is enclosed as Annexure II.</p> <p>b) i. Leverage NDMA’s dedicated air fleet - NDMA is considering procurement of one fixed wing aircraft and three helicopters at a cost of Rs.225 crores for ensuring effective response in case of disaster. These aircraft/ helicopters can be used for moving Crack Teams to the site of disaster or for shifting seriously injured to hospitals IR may also leverage this facility as and when needed. Necessary coordination can be done by the Ministry’s representative in the NDMA.</p>	<p>Zonal Railways Secretary/Rly. Bd. M+1</p> <p>Zonal Railways Railway Board (Min. representative in the NDMA)</p>	

Sl. No.	Recommendations of the High-level Committee	Who will do it & By when?	Financial Implications
6	<p><i>Contd...</i></p> <p>ii. MOU with armed forces - Till the above proposal materialises, an MOU with armed forces may be finalised to seek assistance as and when the need arises.</p> <p>iii. MOUs with private air operators - General Managers may also explore the feasibility of entering into MOUs with private air operators for seeking assistance of air support in case of disasters over their zone.</p>	<p>Secretary/Rly. Bd. M+3</p> <p>Zonal Railways M+6</p>	
7	<p>Upgrade Speed of ARMVs Conventional ARMVs should be made fit to run at a maximum speed of the fastest mail/ express train running in the area of operation of ARMV.</p> <p>High Speed ARMVs New ARMVs/SPART should be fit for 140 kmph.</p>	<p>Zonal Railways ICF Rly. Bd. (Mech. Dte.) M+6</p>	<p>No additional financial implications since such upgradation is an ongoing activity.</p>
8	<p>Upgrade Speed of ARTs Speed of ART's to be increased to 100 kmph by conversion of freight stock to high-speed design.</p>	<p>RDSO to issue necessary guidelines. M+3 Railway workshops to do the conversion. Rly. Bd. (Mech. Dte.) M+18</p>	<p>One-time expenditure of Rs. 2.5 Cr. for conversion of 500 freight vehicles to high-speed design.</p>
9	<p>Emergency rail-cum-road vehicle - Feasibility of introducing an emergency rail-cum-road vehicle may be explored. WCR/Jabalpur may indent one such vehicle for field trials and base it at Jabalpur Division.</p>	<p>Zonal Railways Railway Board (Mech. Dte.) M+6</p>	<p>Rs.2 Cr.</p>
10	<p>Ensure specified minimum running of Dsl.locos on all Electrified Routes - It has been reported to the Committee by a number of General Managers of zonal railways and DRMs that relief, rescue and restoration operation after a serious passenger train accident over electrified route are adversely affected in case of damage to OHE and disruption of power supply as there is a :</p> <ol style="list-style-type: none"> i. Delay in loco hauled ARME and ART to reach the site of accident. ii. Delay in relief operations i.e. making arrangements for transportation of injured/non-injured passengers for affected/stranded train/trains. iii. Diversion of trains on diesel routes and making corresponding arrangements for carrying passengers. iv. Delay in despatching 'Relatives Specials' to the accident site. <p>To meet the requirements of relief, restoration and passenger convenience, it has been projected to the Committee that diesel locos in electrified territories be deployed in such a manner that there is a diesel loco available in 25-75 kms (average 50 kms) of the accident site so that the above mentioned constraints in approaching the golden hour concept are over come thus ensuring speedier rescue and relief operations in case of serious accidents disrupting the route or major power breakdown or grid failures, etc. This would ensure that diesel locos are available for running the rescue trains, relief trains, relative specials and for pulling out the unaffected trains with stranded passengers.</p> <p>The Committee recommends that in the interest of readiness and to meet the aspirations of the people for faster medical relief, each Zonal Railway must ensure that the time tabling and freight operations should be so carefully planned in order that the above stipulation is met at all times without vitiating our efforts to approach the golden hour concept.</p>	<p>Zonal Railways Railway Board (Traffic & Mech. Dte.) Nodal Dte. - Traffic M+3</p>	

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11	<p>First aid training to be mandatory for all railway personnel, especially for on board train staff, gangmen and station staff who are usually the first responders at site.</p> <p>MOU for First Aid Training- Zonal railways (GMs/DRMs) may explore the feasibility of entering into an MOU with reputed training institutes like St. John Ambulance /Red Cross or any other agency for providing periodic training on disaster management (first aid and other medical relief) for the front line staff over their zones/divisions. The frequency and contents of first aid training module as well as category of staff being covered should be reviewed thoroughly.</p> <p>As and when the frontline services etc get privatized, it must be ensured that the private operator must provide a certificate that his onboard staff is trained in first aid and are conversant with other medical resuscitation techniques. Further, it should be the duty of such private staff to play an active role in rescue and relief operations.</p>	<p>Zonal Railways Railway Board (T&MPP & Health Dte.) Nodal Directorate Health Dte. M+12</p> <p>Zonal Railways Railway Board (Commercial & concerned Dtes.)</p>	Rs.0.5 crores
12	<p>A Manual /Guide for On Board staff- A guide be made available with train crew like TTEs, AC coach attendants, AC pantry car staff, safaiwala, TXR staff, catering staff, security staff, driver and guard, which inter alia should include Dos and Don'ts for them in the unfortunate event of their train meeting with an accident. Such frontline staff can form the initial core relief and recovery team under the overall supervision of a train superintendent.</p>	<p>Zonal Railways Railway Board (Safety, Mech., Health and Commercial Dtes.) M+6</p>	
13	<p>Crack Team of Rail Rescue Experts - The Committee recommends that each zone should have a professionally trained Crack Team of Rail Rescue Experts (Mechanical and Medical officials) and containerised hospitals based at headquarters who can be rushed to any site of accident by air/land route at short notice. This group will continuously be exposed to the latest rescue, extrication techniques and medical relief. This group will support the accident rescue and relief arrangements made by Divisions at the site of accident.</p> <p>CRACK TEAMS – These will be Specialised Disaster Response Units :</p> <ul style="list-style-type: none"> - One complete set of sophisticated equipment/ gadgets required for rescue and relief must be available with one specialised disaster response unit at each Zonal headquarter. - Each unit will be provided with state of the art equipment for entrapment rescue from the accident involved coaches and will be kept at the disposal of GM. - Each specialised multi-disciplinary disaster response unit will be manned by 2 platoons (24 men) of handpicked staff. - This specialised disaster response unit (comprising of both men and material) available at Zonal headquarter must be rushed to accident site of a major disaster by Helicopter or along with GM's special train as needed. They would serve as an additional aid. - Specialised response unit must maintain its elite character. It must not be sent to sites of smaller accidents and should only be rushed to sites of major disasters. 	<p>Zonal Railways Railway Board (Mech. & Health Dtes.) M + 12</p>	To be assessed

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14	<p>Details of Local Resources All Divisions should be fully aware of the local, civil, army and other resources available for supplementing their disaster management efforts as and when required. For example, GSDMA(Gujarat State Disaster Management Authority) informed that 12 well-equipped mobile health centres have been pressed into service over the State. Divisional control office must have a ready updated list of names, addresses, telephone numbers and any other relevant information of the following :</p> <ul style="list-style-type: none"> - For every station/section of a Division, fastest approach by rail or road. - Detailed road maps. - Locations where a small plane or a helicopter can land (during day or night). - Local doctors, hospitals, polyclinics, nursing homes, etc. at all major junctions, along with facilities available. - Officials of civil administration, district-wise. - Senior officials of state administration. - Defence establishments, including army, navy and air force. - Paramilitary establishments (BSF/CISF, etc). - Names & addresses of Divers (Local/Police) - Names & addresses of Boatmen & Availability of Boats. - Social, voluntary , industrial and other non-government organisations. - Organisations having road cranes, bulldozers, etc. - Organisations having flood light equipment, etc. - Establishments having communication facilities, etc. - Establishments having tents, etc. - Fire brigade stations. - Road transport depots – both State Government and private. - Local AIR and TV stations. <p>Details of relevant items pertaining to each station must be available individually at major stations also.</p> <p><i>These details must be reviewed and updated in the month of January every year.</i></p>	<p>Zonal Railways Railway Board (Safety Dte.) M +6</p>	
15	<p>a) Disaster management plan - All Divisions and Zonal Railway headquarters (including Metro Kolkata* & DMRC**) must devise their disaster management plan, if not already done taking into consideration the resources available with them, their neighbouring divisions/Zonal Railways, civil authorities, industrial units and Armed Force bases located in their territory. This would enable the Divisions/Zonal Railways to muster the entire local resources in case of a major disaster/natural calamity. Zonal Railways Disaster Management plan should integrate all divisions and also to take into consideration adjacent railways' framework.</p> <p><i>*Metro operations are more vulnerable to disaster as underground/elevated tracks are bottlenecks to escape routes. Therefore, their disaster management plans should be more stringent and elaborate. CME/ER, CMD/ER and CSO/ER are nominated to review and draw up afresh, if required, the disaster management plan for Kolkata Metro.</i></p> <p><i>** DMRC will be asked to submit their disaster management plan for review of the high level committee. Recommendations/ revisions suggested by the High Level Committee would be mandatory on part of DMRC to implement with in the stipulated time frame.</i></p>	<p>Zonal Railways Railway Board (Safety Dte.) M+6</p> <p>M+3</p> <p>M+1 DMRC to submit their Disaster Mgmt. Plan M+3 DMRC to implement the recommendations.</p>	

Sl. No.	Recommendations of the High-level Committee	Who will do it & By when?	Financial Implications
15	<p>Contd....</p> <p>b) Preparation of Disaster Management Plan : The Disaster Management Plan must inter alia include “who is responsible for what activities in detail” :</p> <ol style="list-style-type: none"> i. Preparation and implementation of disaster management Plan is the responsibility of concerned <i>GM/DRM</i>. ii. Authority to order ART/ARMV/Breakdown crane -- <i>CME/CMPE (R&L)/Sr. DME/DME, etc.</i> iii. Senior most railway officer at the site of the accident shall be the designated Site Manager. iv. Management of rescue operations– <i>Primarily Mechanical and Medical departments</i>. Assistance to be provided by all railway men (irrespective of their department) as needed. v. Relief operations including care for the dead – <i>Commercial, Medical & RPF Deptts.</i> vi. Communication network – <i>Telecom Deptt.</i> vii. Crowd control and law & order at site – <i>RPF</i>. viii. State police clearance for restoration. – <i>RPF</i> ix. Restoration operations – <ul style="list-style-type: none"> Rolling stock – <i>Mechanical Deptt.</i> Fixed Infrastructure like track, OHE, signalling system etc. – <i>Concerned departments.</i> x. Maintenance of SPART/ART & ARMV Rolling stock/Breakdown cranes including rail-cum-road and road mobile emergency vehicle etc. – <i>Mech. Deptt.</i> xi. Maintenance of equipment kept in SPART/ART/ARMV for rescue and restoration operations– <i>Concerned Deptts.</i> xii. Media Management at site – <ol style="list-style-type: none"> a) Site Manager shall be the chief spokesman at site and can be assisted by the concerned branch officers, if needed. b) PR/Commercial Deptts. to look after the media needs at site. xiii. Checklist for the officers & supervisors must be issued in the form of a pocket booklet indicating DOs and DON'Ts for the benefit of : <ol style="list-style-type: none"> a) First official reaching the site of accident. b) Senior most officer at the site. c) Divisional/HQ control organisation. d) Station Manager/Station Master. <p><i>The disaster management plans must be reviewed and updated in the month of January every year.</i></p>	<p>Zonal Railways Railway Board (Safety & concerned Dtes. Nodal Dte. - Safety</p> <p>M+6</p> <p>Zonal Railways Railway Board (Safety & concerned Dtes. Nodal Dte. - Safety M+6</p>	
16	<p>ISO-9000 Certification : Disaster Management System of each Division/Zonal Railway to be certified ISO-9001:2000</p>	<p>Zonal Railways Railway Board (Safety Dte.)</p> <p>M+18</p>	To be assessed
17	<p>Multi Disaster Resistant Control Rooms: Zonal/Divl. Control rooms to be upgraded gradually to become multi disaster resistant and fully equipped with all back up systems for communication, power, drinking water etc. capable of sustaining for a week.</p>	<p>Zonal Railways Railway Board (TT & CE dtes..) Nodal- TT dte.</p>	To be assessed
18	<p>Coordination with civil medical authorities : Data about civil medical/private medical facilities is available on railnet. This should be kept updated. Railway medical officers should remain in touch with civil/private medical institutions for seeking assistance in case of need without any loss of precious time.</p>	<p>Zonal Railways Railway Board (Health Dte.)</p> <p>M + 3</p>	

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19	Leverage St. John Ambulance network- This organisation should be utilised to strengthen the arrangements for transportation of injured /dead from site to hospitals.	Zonal Railways Railway Board (Health & Comml. Dtes) M+3	
20	Assistance of NGOs- At present NGOs are offering assistance spontaneously. A drive to identify and register NGOs and working out a tie up should be explored by each Division.	Zonal Railways Railway Board (Comml.& Health Dte.) Nodal Dte. – Comml. M+6	
21	Assistance from Neighbouring Divisions- Whenever number of injuries is estimated to go beyond 50, assistance must be sought for from adjoining Divisions. As a rough thumb rule, the scale of such outside assistance required would be from one Division for every 50 additional injuries.	Zonal Railways Rly. Bd.(Health, Comml. & Safety Dte.) With immediate effect	
22	Expeditious clearance by the State police- The issue of expeditious clearance by the State police in case of railway accidents involving loss of human lives or injuries to the passengers has been taken up by the Ministry of Railways with Ministry of Home Affairs. Ministry of Home Affairs, Government of India has already issued necessary instructions to Home Secretaries of all States vide their letter No.VI-24022/11/2002-PN-I dt.24/12/2002 for taking prompt action and to expedite clearance certificate in the event of rail accidents. A copy of this letter is annexed at 'III' . In this context, DG/RPF has also clarified that there is no need for seeking the clearance from State police for launching rescue operations for saving as many human lives as possible which inter alia may involve handling/shifting of the rolling stock (locomotives, coaches & wagons). A copy of this letter is annexed at 'III-A' which may be displayed prominently over all ARTs/ARMVs and may also be widely publicised among the railway officers and staff.	Zonal Railways Rly. Bd.(Security Dte.) With immediate effect	
23	Coordination/liaison with state Police & civil authorities- The Committee recommends that necessary coordination/liaison must be maintained with the local police and civil authorities by the Divisional authorities and RPF officers to avoid any situation where precious time is lost in seeking the clearance of state police for carrying out rescue operations.	Zonal Railways Railway Board (Security Dte.) With immediate effect	
24	Gang Men to assist in Rescue operations- As gangmen are available in large numbers and staff of other departments are inadequate, their active assistance may be necessary at site to assist in rescue operations i.e. shifting of dead and injured. This may be made part of their duty list, unequivocal instructions to be issued and enforced.	Zonal Railways Railway Board (CE Dte.) M+1	
25	Guide Lines to be displayed in Coaches- Guidelines may be exhibited in the coach compartments to educate the passengers for taking suitable precautions and actions in case of accident in order to save human lives.	Zonal Railways Railway Board (Mech. & Health Dtes.) Nodal Dte.-Mech. M+6	To be assessed
26	Road Access to vulnerable locations- Divisions, having bridges, tunnels, high embankments and deep cuttings may explore the feasibility of providing road access to these vulnerable locations in cooperation with civil administration. Alternatively, plans should be kept ready indicating method to reach every kilometre of the rail track by road in case of accident on that Division.	Zonal Railways Railway Board (LM Dte.)	To be assessed

Sl. No.	Recommendations of the High-level Committee	Who will do it & By when?	Financial Implications
27	Roof & under floor hatches and emergency windows in Coaches- Emergency windows are being provided in the coaches. However, there are many railway accidents wherein coaches climb over each other or capsize with the doorways crushed. In such cases, it becomes difficult to extricate the injured/dead since the emergency windows on one side are inaccessible while on the other side take the position of a roof in capsized coaches. Therefore, two roof hatches and one under floor hatch for emergency escape should be provided in all coaches during the next three years.	Railway Board (Mech. Dte.) ICF/RCF Cut in date June '03 and existing coaches to be covered within 3 years. M+36	To be assessed
28	Emergency Automatic Lights- There should be emergency automatic lights in all the coaches. Further, Zonal railways to provide chemical based emergency lights to on board railway staff.	Zonal Railways Railway Board (Elect. Dte.) M+12 (Concerned Dtes.)	To be assessed
29	Civil engineering agreements -All open line/construction civil engineering agreements or track related works must include a clause that vehicles and equipment of contractors can be drafted by Railway administration in case of accidents/natural calamities involving human lives.	Zonal Railways Railway Board (CE Dte.) M+3	
30	Hiring of Vehicles for rescue & relief operations- Delegation of adequate financial powers to DRMs, Sr. DCM/DCM and medical officials for hiring vehicles for transportation and to medical officers for treatment of injured passengers at non-railway hospitals must be ensured. Adequate cash imprest/permission to withdraw from station earnings be there.	Zonal Railways Railway Board (Comml., Health & Finance Dte.) M+3	
31	Powers for procurement of additional life saving drugs from the market by Medical Officers at the site must be delegated.	Zonal Railways Railway Board (Health.& Fin. Dte.) Nodal Dte.- Health. M+3	
32	Power for making on the spot payment to private hospitals for treatment of injured must be delegated. Medical manual may be amended suitably.	Zonal Railways Railway Board (Health.& Fin. Dte.) Nodal Dte.- Health. M+3	
33	Requisitioning the medical assistance from the civil side- Station Master/Station Manager must be delegated adequate powers for requisitioning the medical assistance from the civil side in case of a disaster happening under his jurisdiction. Adequate powers for on the spot purchase of essential items including medicine must also be delegated.	Zonal Railways Railway Board (Safety, Health & Fin. Dte.) Nodal Dte.- Safety. M+5	
34	Withdrawal of money from station earnings- There will be no restriction on withdrawal of money from station earnings for rescue and relief operations for Commercial, Safety, Medical and Mechanical officers.	Zonal Railways Railway Board (Finance & Comml. Dtes.) M+3	
35	Delegation of adequate financial powers to DRM and concerned Branch Officers (Mech., Medical and Commercial) to ensure quicker rescue operations.	Zonal Railways Railway Board (Finance Dte.) M+3 By June '03	
36	Purchase Powers- Divisional and HQ Mechanical and Medical officers to be given purchase powers of Stores Officers for ART/ARME rolling stock and all equipments contained therein in line with such power already given to Engineering officers.	Zonal Railways Railway Board (Mech., Health, Stores & Fin. Dte.) Nodal Dte. – Mech. M+6	

Sl. No.	Recommendations of the High-level Committee	Who will do it & By when?	Financial Implications
37	Procurement of ART/ARMV equipments- No item/equipment shall be banned while being purchased for ART/ARMV/ breakdown crane. No circular/orders restricting the purchase procedure/powers for ART/ARMV/Crane equipments shall be applicable unless issued by Railway Board (MM & FC).	Zonal Railways Railway Board (Mech. & Fin. Dte.) Nodal Dte.- Mech. M+3	
38	Standing spot purchase Committee for ART/ARMV- To avoid any deficiency in keeping the ART/ARMV/Crane equipment in good fettle, each Division should have a Standing spot purchase Committee for ART/ARMV which inter alia should include DME/Sr.DME, DAO/Sr. DAO & DMO/Sr. DMO as permanent members and DEE(G)/Sr. DEE(G) & DSTE/Sr.DSTE as additional member as per requirement. Similarly, Standing Spot Purchase Committee at SAG level should exist at each Zonal railway headquarters.	Zonal Railways Railway Board (Mech. & Fin. Dte.) Nodal Dte.- Mech. M+3	
39	Full powers for sanctioning cash imprest for maintaining ART/ARMV/Crane to be given to CME without Finance concurrence.	Zonal Railways Railway Board (Mech. & Fin. Dte.) Nodal Dte.- Mech. M+3	
40	Individual purchase ceiling for ART/ARMV/Crane equipment of Rs.1000 to be enhanced to 10,000 under normal circumstances and upto Rs.50,000 with the approval of DRM/CMPE/CRSE without Finance vetting.	Zonal Railways Railway Board (Mech. & Fin. Dte.) Nodal Dte.- Mech. M+3	
41	Cash imprest for ARMV incharges A monetary imprest is required to be provided at the accident site for expeditious procurement of small items like fuel, food materials etc. which may be essential when the ARMV has to remain at accident site for longer periods. Cash imprest of Rs.5000/- can be provided to ARMV incharge for use during exigencies at the accident site.	Zonal Railways Railway Board (Health & Fin. Dtes.) M+3	
42	Cash Imprest with ART incharges- The imprest with all ART incharges should be raised to Rs.25,000/- as also recommended by RSRC.	Zonal Railways Railway Board (Mech. & Fin. Dte.) M+3	No additional expense
43	<p>a) Satellite phones – All Divisional and HQs control rooms have been provided with one satellite phone each. Instructions have also been issued for providing an additional satellite phone at each HQ and Divisional control room.</p> <p>b) One ISD connection at Each Zonal HQ control and Division control should be provided to establish communication with accident site through satellite phone.</p> <p>c) Specific DOT telephone No. for Railway Accident Information: - This issue was taken up by the committee with Ministry of Communication. It is understood that a four digit no.107 X ('X' is a specific digit to be allotted to Railway by DOT) can be specified for this purpose. The committee recommends that necessary modalities may be worked out with DOT for allotment of a specific four digit number.</p>	Zonal Railways Railway Board (Telecom Dte.) M+3	To be assessed

Sl. No.	Recommendations of the High-level Committee	Who will do it & By when?	Financial Implications
44	Powers to hire Cell phones- In case of a passenger train accident, at a station, which has a cell phone connectivity, a few cell phone should be immediately hired by the Station Master and the stranded passengers should be permitted to use these free of charge. It is learnt from RailTel that within one year, cell phone coverage will be available along the track in most areas. Station Manager should have powers to hire cell phones as needed for use of stranded passengers.	Zonal Railways Railway Board (Telecom & Fin. Dte.) Nodal Dte.- Telecom M+3	
45	Alphabetical list of passengers on board with their current status must be available and displayed and enquiry counters for quicker dissemination of information.	Zonal Railways Railway Board (Comml. Dte.) With immediate effect	
46	Disaster Management Team of RPF- There should be a Disaster Management Team of RPF on each Division of IR comprising about 15 men in different ranks. This team shall be specially trained in providing necessary support for disaster management over the division/neighbouring division. RPF should play an active role in managing law and order at site.	Zonal Railways Railway Board (Security Dte.) M+3	
47	Equipments for RPF : This Disaster Management team of RPF should have the following equipment available with them : i. Torches and other lighting arrangements. ii. Nylon ropes and poles for segregating the affected area from unwanted visitors and spectators. iii. Loud-hailer for making announcements. iv. Stretchers and first aid equipment. v. Wireless sets for inter-communication. vi. Cameras for photographing the scenes.	Zonal Railways Railway Board (Security Dte.) M+3	To be assessed
48	Luminous jackets: RPF personnel at site should wear luminous jackets of distinct colour.	Zonal Railways Railway Board (Security Dte.) M+3	To be assessed
49	Crowd control : Area of accident site should be cordoned off by the RPF so that by-standers (onlookers) and unwanted crowd do not disrupt the rescue operations.	Zonal Railways Railway Board (Security Dte.) M+3	

ii. Relief measures for injured and survivors :

Sl. No.	Recommendations of the High-level Committee	Who will do it & By when?	Financial Implications
50	Safe custody & appropriate disposal of the luggage : RPF and Commercial staff at the site of accident should coordinate their activities regarding safe custody and appropriate disposal of the luggage of the dead and the injured passengers. Commercial staff should properly label and stack the luggage of the dead and injured passengers. This luggage should be guarded by RPF personnel and thereafter can be handed over to the rightful claimants.	Zonal Railways Railway Board (Security & Comml. Dtes.) Nodal Dte.-Comml. M+3	
51	Accident Claims Compensation Booklet- Railway Board should prepare a comprehensive Accident Claims Compensation Booklet. Above booklet can be priced publication complementary copies of which can be given to accident involved passengers.	Rly. Board (Claims Dte.) M+6	

Sl. No.	Recommendations of the High-level Committee	Who will do it & By when?	Financial Implications
52	<p>No payment of meal charges at accident site – Existing instructions stipulate that the meal charges have to be paid at the site of accident. This involves large amount of paper work as well as cash handling at accident site. This also diverts the management's attention from the main objective of rescue and restoration.</p> <p>The Committee recommends that meal charges as admissible should be added to the salary of the staff concerned to avoid cash handling at site.</p>	<p>Zonal Railways Rly. Board (CE, Mech.& Health)</p> <p>M+3</p>	

iii. Care for the dead

Sl. No.	Recommendations of the High-level Committee	Who will do it & By when?	Financial Implications
53	<p>20 Nos. of Collapsible coffins must be kept at each Divisional hospital, which can be transported to the site by ARMV, road vehicles or train service as per need. The design is under finalisation and should be circulated to railways by Health Dte.</p>	<p>Zonal Railways Railway Board (Health Dte.)</p> <p>M+3</p>	Rs.0.15 Cr.
54	<p>Air-conditioned mortuaries- All divisional hospitals should have air-conditioned mortuaries which can store at least six bodies.</p>	<p>Zonal Railways Railway Board (Health Dte.)</p> <p>M+12</p>	Rs.0.5 Cr.
55	<p>Embalming Gun and Chemicals- All divisional hospitals should have a provision of embalming gun and chemicals for injecting into the bodies. This will ensure that bodies are preserved for reasonable time and if necessary the bodies can be transported to divisional hospital till claimed by relatives.</p>	<p>Zonal Railways Railway Board (Health Dte.)</p> <p>M+6</p>	Rs.0.67 Cr. (@1 lakh per gun)

iv. Technological Inputs in ARMVs/ARTs

Sl. No.	Recommendations of the High-level Committee	Who will do it & By when?	Financial Implications
56	<p>Review, rationalization and relocation of ARTs and ARMVs – An exercise should be undertaken to address the aberrations, if any, by way of unreasonable clusters or long gaps in the existing placement of the ARTs or ARMVs over IR network.</p>	<p>Railway Board (Mech. & Health Dtes.)</p> <p>M+3</p>	
57	<p>Nominated staff for ARMV and ART --- The present pattern of staffing is not found to be adequate in case of serious accidents involving heavy casualties. There is a need to nominate more trained staff for each ARMV/ART.</p>	<p>Zonal Railways Railway Board (Mech. & Health Dtes.)</p> <p>M+3</p>	
58	<p>Air Brake ARTs- All coaching and freight stock on ART's should be provided with air-brake system, either by replacing existing stock or by retrofitment of air-brake equipment on existing stock</p>	<p>Zonal Railways Railway Board (Mech. Dte.)</p> <p>M+6</p>	No additional financial expense since such conversion is an ongoing activity. Already a sanctioned work under RSP as part of normal coaching upgradation.

Sl. No.	Recommendations of the High-level Committee	Who will do it & By when?	Financial Implications
59	Rebuilt Coaches for ARTs/ARMVs Coaches given mid-life rehabilitation at Bhopal Workshop to be rebuilt for ARMV & ART. Such stock should be additionally provided in the bare requirement for train operation.	Zonal Railways to indicate their require-ment. Bhopal Workshop to do the conversion work. Railway Board (Mech. Dte.) Within 3 years (2003-06)	Cost of rebuilding @ 15 lakhs per coach works out to Rs.7.5 Cr. for 50 coaches.
60	Provision of EMERGENCY INFLATABLE LIGHTING TOWERS @ two per ARMV and four per A & B Class ART for effective general illumination. Possibility of using external power to light the tower may be examined.	Zonal Railways Railway Board (Mech. Dte.) M+6	Rs.8.2 Cr.
61	Oxy Fuel Cutting Equipments - Provision of one set of oxy-fuel cutting equipment for all SPARTs.	Zonal Railways Railway Board (Mech. Dte.) M+6	Rs.2 Cr.
62	Portable electrically operated cutting and boring tools - The Committee recommends provision of 1 set portable electrically operated cutting and boring tools comprising trepanner, shell shearer, channel cutter and bar cutter in each SPART.	Zonal Railways Railway Board (Mech. Dte.) M+6	Rs.1.4 Cr. @ Rs 1.75 lakhs per set
63	Provision of self-contained breathing apparatus , @ 4 sets in each 'A' class ART for dealing with accidents involving LPG, Ammonia and other Toxic gases.	Zonal Railways Railway Board (Mech. & Health Dte.) Nodal Dte. - Health M+6	Rs 3.5 Cr.
64	Inflatable Air Bags - Provision of inflatable Air Bags in all SPART's.	Zonal Railways Railway Board (Mech. Dte.) M+6	Rs 2.5 Cr.
65	One digital video and still camera each with 5-6 floppy discs may be provided in each Division to be kept for each ART/ARMV/SPART.	Zonal Railways Railway Board (Mech. Dte.) M+6	Rs 0.5 Cr.
66	Provision of a laptop computer for accident relief operations (with Sr.DME/DME) (one per Division).	Zonal Railways Railway Board (Mech. Dte.) M+6	Rs.67 * 1 lakh = Rs.0.67 Cr.
67	Charging Facilities : Charging facilities for Laptop, cell phones and cameras etc. may be provided in all SPARTs and A & B class ARTs/ARMVs.	Zonal Railways Railway Board (Mech. Dte.) M+6	
68	Provision of Inflatable tents in 16 SPART's initially. In the second phase, it should be provided in all SPARTs.	Zonal Railways Railway Board (Mech. Dte.) M+6	Rs.2 Cr.
69	Provision of Synthetic packings in all ART's with 140 tonne crane in lieu of wooden packing.	Zonal Railways Railway Board (Mech. Dte.) M+6	Rs.4 Cr.
70	Provision of one set of re-railing ramps in all 'A' & 'B' class ART's for re-railing derailed locomotives wagons and coaches.	Zonal Railways Railway Board (Mech. Dte.) M+6	Rs.0.5 Cr.
71	New ARMV and ART coaches should be manufactured / rebuilt on the pattern of Swiss Federal Railways , where the side panel unfolds and drops down like a ladder for easy unloading of equipment.	RDSO to develop the design. Railway Board (Mech. Dte.) M+4	Marginal

Sl. No.	Recommendations of the High-level Committee	Who will do it & By when?	Financial Implications
72	Provision of luminescent barrier tapes in all 'A' & 'B' Class ART's to assist RPF to barricade the work site to prevent trespassers from disturbing the ongoing rescue/relief/restoration operations.	Zonal Railways Railway Board (Mech. Dte.) M+3	Rs.0.15 Cr.
73	Livery of ART/ARMV Staff- The livery of ART coaches should be based on signal red colour. For ARMV, the colour scheme should be signal red with white cross on either end.	Zonal Railways Railway Board (Mech. Dte.) When coaches are replaced or given POH	No additional financial expense since change of livery would be at POH only
74	Provision of 20 stackable plastic chairs in each ART and ARMV/SPARTs.	Zonal Railways Railway Board (Mech. Dte.) M+3	Rs.0.16 Cr.
75	Provision of nylon slings of capacity up to 70 ton , which being lighter in weight shall help in speeding up the operations.	Zonal Railways Railway Board (Mech. Dte.) M+3	Rs.1.2 Cr.
76	TRIFOR- Induction of wire rope lifting and pulling machines known as Trifor	Zonal Railways Railway Board (Mech. Dte.) M+3	Inexpensive device (Rs 5000), already available in many ART's
77	Introduction of automatic and spring-loaded measuring gauges for the measurement of track and rolling stock parameters.	Zonal Railways Railway Board (Mech. Dte.) M+3	Rs.0.19 Cr.
78	Steam cranes attached to Accident Relief Trains may be phased out. For Meter Gauge sections RDSO & Jamalpur Workshop may design and develop such a 75 Tonne crane which can be eventually converted to BG crane of equal capacity with least inputs.	Jamalpur Workshop RDSO Railway Board (Mech. Dte.) M+9	Rs.4 Cr. for each MG crane
79	POH Periodicity of ART/ARMV Coaches ART/ARMV coaches may be given POH in 3 1/2 years instead of 2 years as at present. For coaches given POH henceforth the return date may be marked 3 1/2 years later, with a maximum limit of 4 years for any extensions that are given on the Railways.	Zonal Railways Railway Board (Mech. Dte.) M+3	Savings of Rs.9.5 Cr. each year
80	Ten coffins and body bags may be provided in each ARMV's in an under-slung area below the underframe of the coach.	Zonal Railways Railway Board (Health Dte.) M+3	Rs.0.15 Cr.
81	Wrist bands may be provided in ARMVs to identify the injured and dead. 100 serially numbered plastic tokens with tapes (1-100) are proposed to be kept in ARMVs, to be tied to the right wrist of the deceased persons and names are written in the list duly connecting to the token number.	Zonal Railways Railway Board (Mech. Dte.) M+3	To be assessed
82	Lightweight foldable ladders of adequate length may be provided in each ART/ARMV.	Zonal Railways Railway Board (Mech. Dte.) M+3	
83	140 Tonnes Break Down Crane- There should be a minimum of one 140 tonne breakdown crane in each BG division over Indian Railways. The availability and requirement may be reviewed by EDs' Committee after 2 years.	Zonal Railways Railway Board (Mech. Dte.)	

Sl. No.	Recommendations of the High-level Committee	Who will do it & By when?	Financial Implications
84	<p>Rescue platform for 140T crane : RDSO should finalise a design of a platform, which can be hooked on, with the zip of the 140 tonne crane to assist the rescuers in their effort to extricate accident victims from accident-involved coaches, which are not accessible otherwise.</p>	<p>RDSO Railway Board (Mech. Dte.) M+6</p>	To be assessed
85	<p>Revised List of ARMV Equipments- A revised list of equipments/materials to be available in ARMV issued by the health Dte. is indicated below-</p> <p>Contents of ARMV -- All contents of ARMV scale I in accordance with Annexure-I of IRMM-2000 Vol.II are proposed to be retained with the following modifications/additions :</p> <ul style="list-style-type: none"> - Existing tents in some ARMVs are of old canvas types which take more than 30 minutes for pitching. Light-weight synthetic prefabricated water proof tents can replace existing canvas tents. Synthetic tents can be pitched promptly by two persons only in 10-15 minute time. - Thirty number of luminous jackets duly containing white cross on red background are proposed to be provided in each ARMV for use by rescue workers. This will facilitate their ready identification. - Four additional number of foldable chairs are proposed to be provided in ARMVs. - Portable fire extinguishers – 2 numbers to be provided in the ARMV. - Augmented first aid boxes- 2 numbers are to be provided in ARMV. - 25 number of readymade splints for arm and forearm and 25 number of readymade slings to be provided in ARMVs. - One portable generator set with sufficient reserve fuel is proposed to be provided. - Battery operated headlights for medical and paramedical staff- 5 number to be provided. - Inj. and Tab,. Analgin be replaced by Inj. And Tab. Paracetamol. - Dettol to be replaced by Betadine/Cidex unit for unit. - Anti-inflammatory, analgesic and antibiotic ointments for local application and lotions are proposed to be replaced by sets of anti-inflammatory, analgesic, antiseptic, aerosol sprays unit for unit. - Dressings in autoclaved drums are proposed to be replaced by pre-sterilized disposal dressing of assorted sizes. - Seldinger nine-Tracheotomy set (1 number) is proposed to be provided. - Inflatable tourniquet (10 numbers) are proposed to be provided. - Spinal splint (10 numbers) are proposed to be provided. 	<p>Zonal Railways Railway Board (Mech. Dte.) M+6</p> <p>The revised list should be implemented</p>	
86	<p>Breakdown staff should be handpicked and there should not be any fixed tenure. A core group of dedicated men should be kept exclusively for ensuring proper maintenance of ART/ARMV/Crane and rescue and relief equipments.</p>	<p>Zonal Railways Railway Board (Mech. Dte.) M+6</p>	

Sl. No.	Recommendations of the High-level Committee	Who will do it & By when?	Financial Implications
87	Duty list of all ARMV/ART staff and supervisors should inter alia include that they shall assist in extricating injured as well as the dead. Only those staff and supervisors should be posted in the breakdown gang and on the ARMV who are willing to do the same and give written confirmation.	Zonal Railways Railway Board (Mech. Dte.) M+3	
88	All ARMV/ART coaches should have a standby arrangement of generator for the train lighting and air conditioning wherever required besides providing power for portable torchlights, floodlights, drills, abrasive metal cutters, etc.	Zonal Railways Railway Board (Mech. Dte.) M+9	To be assessed
89	A portable rail trolley - which can be easily disassembled/ assembled has been designed by NER for use on the site for moving the heavy equipment from ART to the required point at site. This should form part of ART/ARMV for carrying material.	Zonal Railways Railway Board (Mech. Dte.) M+9	To be assessed
90	Standby Driver for 140 Tonne Crane - Each 140 T crane must have an extra standby driver, fully trained in all respects.	Zonal Railways Railway Board (Mech. Dte.) M+2	
91	Specialised tunnel rescue equipment .- ARMVs/ARTs of Divisions including Metros (Kolkota & DMRC) that have sections comprising of long tunnels must be provided with additional specialised tunnel rescue equipment.	Zonal Railways Railway Board (Mech. Dte.)	To be assessed
92	Ramps - Each ART must have ramps for re-railment of rolling stock.	Zonal Railways Railway Board (Mech. Dte.) M+3	
93	Concrete pathway for approach to ART/ARMV - There should be a properly illuminated concrete pathway for approach to ART, ARMV and breakdown cranes.	Zonal Railways Railway Board (Mech. Dte.) M+3	Rs.0.5 Cr.
94	AMCs for critical equipments - Railways may enter into Annual Maintenance Contracts with OEMs or their authorised agents for critical equipment. The need may be decided by CMPE(R&L)/CRSE on case to case basis and he shall have full powers for approving such AMCs..	Zonal Railways Railway Board (Mech. & Fin. Dte.) M+6	No additional expense
95	Critical spares from approved sources only - The approved vendor list may be drawn up as follows: (i) for HRD/HRE - by COFMOW (ii) for 140 T Cranes - by JMP/Parel Workshop & (iii) For other items - by CME's. Powers to purchase on PAC from these approved vendors should vest with Mechanical & Medical officers in charge of ART/Crane/ARMV.	Zonal Railways Railway Board (Mech. & Fin. Dte.) M+3	No additional expense
96	Walkie-Talkie & VHF sets – ARTs at Divisional Headquarters to be provided with 30 Walkie-Talkie sets and two 25 W VHF sets.	Zonal Railways Railway Board (Telecom Dte.) M+6	Rs.5 Cr.
97	WLL exchange having 50 line capacity - ARTs at Divisional Headquarters to be provided with one WLL exchange having 50 line capacity. To begin with 16 divisions will be provided with such exchanges during 2003-04 and, based on experience, rest may be provided during 2004-05.	Zonal Railways Railway Board (Telecom Dte.) M+9	Rs.35 Cr.. (Rs.50 lakhs each) 2003-04 Rs.8 Cr. 2004-05 Rs.27 Cr.

Sl. No.	Recommendations of the High-level Committee	Who will do it & By when?	Financial Implications
98	<p>Video Conferencing facilities from the site of accident – It is proposed to provide Video Conferencing facility from disaster site to Railway Board and Zonal Railway Headquarter, which will help in assessing the damage and relief and assistance, required at the site. Initially, the Video Conferencing equipment will be provided in Railway Board and transportable units will be kept in one railway headquarter at a cost of Rs.1.3 Crore.</p> <p>Based on experience gained with the above units, decision could be taken to provide such facility at other Zonal Railway HQs also.</p>	<p>Zonal Railways Railway Board (Telecom Dte.) M+6</p>	<p>(Rs.0.8 crore each for transportable unit for 16 zonal headquarters and Rs.0.50 Cr. each for fixed unit for 16 Zonal Headquarters and 1 at Rly. Board)</p> <p>Outlay 2003-04 -Rs.1.3 Cr.</p>
99	<p>Divisional ARTs to be provided with one PC along with high-speed satellite modem (for Internet connectivity). Further, facility to provide phone for stranded passenger to be included through VOIP.</p>	<p>Zonal Railways Railway Board (Telecom Dte.) M+9</p>	<p>Rs.1.80 Cr. (Rs.2.5 lakhs each for 67 divisions and 4 Zonal Headquarters, where Internet connectivity through Railnet is available).</p>

V. HRD Training

Sl. No.	Recommendations of the High-level Committee	Who will do it & By when?	Financial Implications
100	<p>Railway Disaster Management Institute with a special focus on Rescue, Extrication, Medical relief and restoration techniques - RSRC (in their Part-II report) had recommended the following vide recommendation No.3.18.4 & 3.18.5 :</p> <ol style="list-style-type: none"> Setting up of disaster training cell at zonal training centers of each railway. A system of licensing of all ART staff (skill artisans and above) based on successful completion of an initial training programme and refresher courses in alternative years. Training to include <ul style="list-style-type: none"> ➤ Administration of first aid and evacuation/extrication of injured passengers *Handling of traumatized passengers ➤ Fire Fighting ➤ Overall management during major accidents. <p>This recommendation has been partially accepted. The Committee notes that there is no such facility for imparting integrated training anywhere in the country. The Committee recommends that Disaster Management modules should be started at an initial cost of Rs.3 Cr each for ZTC/UDZ. ZTC/Bhuli, IRITM/LKO and STS/SBC. This facility can be replicated to a limited extent at other places in a phased manner.</p> <p>The disaster management module to be set up at STS/SBC should lay special focus on imparting extensive state of the art training on rescue, medical relief and rolling stock restoration techniques. In this context, the state of the art special training equipment for extrication techniques, rescue, medical relief, rolling stock restoration and the software required for training of rescuers in virtual reality will need to be imported/developed in consultation with similar reputed institutes/organisations abroad. This would require an additional investment of around Rs.7 Cr at STS/SBC.</p> <p>Training requirements that need to be addressed for rescue, relief and restoration techniques are annexed at 'IV'. Since such an institute specializing in state of the art rescue, medical and restoration techniques will be first of its kind over IR, it is recommended that a consultancy may be awarded to an international reputed organisation engaged in setting up/running such institutes abroad.</p>	<p>Zonal Railways Railway Board (Safety, Mech. & Health Dte.) M + 36</p> <p>Southern Railway Railway Board (Mech. & Health Dte.) Nodal- Mech. Dte. M + 36</p>	<p>Rs.19 Cr. Outlay 2003-04 – Rs.4 Cr. 2004-05 – Rs.4 Cr. 2005-06 – Rs.4 Cr.</p> <p>Rs.7 Cr.</p>

Sl. No.	Recommendations of the High-level Committee	Who will do it & By when?	Financial Implications
101	Basic training in search and rescue- It has been proposed to impart basic training in search and rescue to the 12 specialised rescue and relief teams of NDMA so that the nearest available unit can respond in case of need. The High-Level Committee on Disaster Management constituted by the Ministry of Railways recommends that Group 'A' Railway officers (Mechanical, Safety and Medical) should also be nominated to undergo the proposed basic course in rescue and relief. Further, lessons in Railway Disaster Management will also form the part of rotational training programme and refresher and promotional course at RSC, ZTS & STS.	Zonal Railways RSC Railway Board (T&MPP, Mech. & Health Dte.) M+12	To be assessed
102	Manual on rescue, relief and restoration management – There is an urgent need of devising and formulating a manual on post-accident rescue & relief operations. The disaster management institute nominated to be developed as a pioneer premier railway institute specialising in extrication, rescue, medical relief and rolling stock restoration techniques shall prepare this manual.	Railway Board (Mech. & Health Dtes) Nodal Dte. - Mech. M+24	
103	Human Resource Development: NDMA proposes to train the local administration in the basics of search, rescue and relief. The national centre for Disaster Management may be asked to work out a plan for this as well as suggest a syllabi for different category of staff which can be built into their initial and refresher training courses. Similarly, the higher management at the site of disaster is handled by District Magistrates/Commissioners and it has been proposed that a capsule course in Disaster Management should form an integral part of IAS and IPS probationers' training. The Committee recommends that similar courses should be built into the probationers' training course of all organised Group 'A' services of railways at RSC and should include one full scale exercise.	Railway Board (T&MPP) RSC M+12	To be assessed
104	Around 5 to 10 disaster management-training films covering various types of accidents/disasters may be prepared and given to all divisions over Indian Railways.	Railway Board (Mech., Safety & PR Dtes.) Nodal Dte. – Mech. M+9	Rs.2 Cr.
105	Periodic training on disaster management for front line staff- Frontline staff such as RPF, TTEs, catering staff, TXR, AC attendants, safaiwalas, guard, driver/assistant driver, PWIs, gangman, etc. are usually the first responders in case of an accident. They can form the initial core relief and recovery team. Therefore, periodic training on disaster management for such front line staff may be organised over zonal railways (ZTS/STS).	Zonal Railways Railway Board (T&MPP, Mechanical, Safety, Health and Commercial Dtes.) M+6	To be assessed
106	Full scale disaster management exercise- Each division should conduct one full scale disaster management exercise on the similar exercise as army exercises are conducted once in a year.	Zonal Railways Railway Board (Safety, Mech. & Health Dtes.) M+6	
107	Training to handle Fire Related Disasters- We need to acquire the capability and specific specialisation to handle fire related disasters both in case of goods trains as well as passenger trains. Since inflammable material like naphtha, LPG, diesel/kerosene and other fuels are transported through tank wagons, there exist a vulnerability to fire and explosion. We must equip our ARTs and train our ARTs staff to handle fire related accidents. Assistance of Nagpur Fire College and Oil industry's Safety Coordination Committee may be sought.	Zonal Railways Railway Board (T&MPP & Mech. Dte.) Nodal Dte. - Mech. M+12	To be assessed

vi. Media Management

Sl. No.	Recommendations of the High-level Committee	Who will do it & By when?	Financial Implications
108	<p>Training in crisis communication - During the last decade, electronic and IT revolution has brought about a significant improvement in the media coverage. Therefore, the subjects of media management and crisis communication have assumed vital importance for all service organisations including IR. The Committee recommends that these topics may be covered at RSC during probationers' training.</p> <p>Further, GMs/PHODs/DRMs/ADRM and concerned branch officers (Sr.DCM/Sr.DME/Sr.DSO & Medical Officers) should be trained on these topics by organizing special courses either at zonal railways or at RSC. Further, short workshops be arranged specially for GMs/PHODs at Railway Board or Zonal Railways' level. Assistance of Institute of Mass Communication or specialized agencies be taken, if required.</p>	<p>Zonal Railways RSC Railway Board (PR & T&MPP Dtes.) M+6</p>	To be assessed

vii. Recommendations for Implementation

Sl. No.	Recommendations of the High-level Committee	Who will do it & By when?	Financial Implications
109	<p>Monitoring Implementation of the Accepted Recommendations: It shall be the responsibility of the concerned GM/DRM over their systems. All concerned GMs shall send quarterly feedback on the implementation status of the accepted recommendations to the Board (concerned Dtes.).</p>	<p>Zonal Railways Railway Board (concerned Dtes.) Nodal Dte. - Mech.</p>	
110	<p>Monitoring Implementation and addressing left out issues: In order to ensure expeditious implementation of the above recommendations and to address the issues not covered by the high level committee due to paucity of time, it is recommended that another committee headed by AM(ME) with the following members : ED(Safety), ED(Health), ED(F), DME (Frt.), DME(P)II & Director(Telecom) may be nominated.</p> <p>This committee shall function under the overall direction and guidance of the high level committee (MM- Convenor, MT, FC, DG/RHS & DG/RPF) and shall also review and revise the financial implications of individual recommendations, if required, besides addressing the following issues:</p> <p><i>i) Addressing all types of disasters, for example,</i></p> <ol style="list-style-type: none"> <i>a) Earthquakes,</i> <i>b) Floods & Cyclones,</i> <i>c) Industrial accidents</i> <i>d) Accidents involving trains carrying explosives/ inflammable/ hazardous material,</i> <i>e) Fires.</i> <p><i>ii) To study the Disaster Management Systems prevalent in other countries and adopt/ leverage their strengths.</i></p> <p><i>iii) Sharply focussing on the training needs for keeping the system in a state of alertness and to evolve a highly professional crisis management all over IR.</i></p> <p><i>iv) The committee headed by AM(ME) should dovetail the Railway Disaster Management Plan with the NDMA's Global Disaster Management Plan for the country.</i></p>	<p>Railway Board Nodal Dte. - Mech.</p>	

Sl. No.	Recommendations of the High-level Committee	Who will do it & By when?	Financial Implications
111	Adopt latest techniques/equipments for rescue and relief used by developed countries : The above multi-disciplinary Committees may be deputed abroad for a study tour to some developed countries to learn about the latest systems/techniques being utilised for railway disaster management. These committees would identify the reputed institution/institutions for possible tie up with IR and the areas of cooperation as well. The committees would also indicate the milestones expected to be achieved with such tie-ups along with financial implications for the same. Thereafter, further necessary inputs to strengthen the IR disaster management system, keeping in mind the NDMA's plans and the new technologies that are adopted, may be finalised.	Railway Board Nodal Dte. - Mech.	

17. The Committee recommends that above mentioned 111 recommendations may be accepted and recommendation nos. 1-109 may be implemented over the Zonal railways as per the time frame indicated against each.

(S. Dhasarathy)
Member Mechanical
& Convenor

(M. C. Srivastava)
Member Traffic

(V. Viswanathan)
Financial Commissioner

(Dr. K. Suresh)
Director General
Railway Health Services

(Dr. A. K. Pandey)
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Railway Protection Force