

DISASTER MANAGEMENT PLAN 2026

PART-I

BHAVNAGAR DIVISION

(ISO 9001:2015 CERTIFIED)

(Eleventh Edition)



PUBLISHED BY SAFETY DEPARTMENT – BHAVNAGAR DIVISION
WESTERN RAILWAY



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उद्देशिका

आपदा एक गंभीर घटना है, जो प्राकृतिक अथवा मानव निर्मित कारणों से उत्पन्न होती है और जिसके परिणामस्वरूप व्यापक जनहानि, मानवीय पीड़ा, संपत्ति की क्षति तथा पर्यावरण का क्षरण होता है। ऐसी स्थिति प्रभावित क्षेत्र की सामुदायिक क्षमता से परे होती है। रेलवे में आपदा का तात्पर्य किसी गंभीर रेल दुर्घटना अथवा किसी भी प्रकार की गंभीर अप्रिय घटना से है, जो रेलवे परिसरों में या रेलवे गतिविधियों के कारण, प्राकृतिक अथवा मानव निर्मित कारणों से घटित होती है।

भारत सरकार द्वारा वर्ष 2005 में आपदा प्रबंधन अधिनियम अधिसूचित किया गया, जिससे राहत-केंद्रित दृष्टिकोण से हटकर आपदा जोखिम न्यूनीकरण, तैयारी, शमन तथा प्रभावी प्रतिक्रिया पर आधारित एक व्यापक एवं सक्रिय व्यवस्था अपनाई गई। विशाल भौगोलिक क्षेत्र में फैले होने के कारण, रेलवे की प्राकृतिक एवं मानव निर्मित आपदाओं के प्रति संवेदनशीलता को पूरी तरह से नकारा नहीं जा सकता। यद्यपि भारतीय रेल विभिन्न प्रकार की आपदाओं से निपटने हेतु पर्याप्त संसाधनों एवं प्रणालियों से सुसज्जित है, फिर भी किसी भी आपदा की स्थिति में लागू किए जाने हेतु एक सुव्यवस्थित एवं निर्धारित योजना का होना अत्यंत आवश्यक है। त्वरित प्रतिक्रिया, शीघ्र राहत, बचाव एवं पुनर्स्थापन प्रभावी आपदा प्रबंधन के मुख्य तत्व हैं, जिन्हें एक सुव्यवस्थित एवं समन्वित ढंग से संबोधित किया जाना आवश्यक है।

रेलवे बोर्ड के निर्देशानुसार, आपदा की रोकथाम, शमन, तैयारी एवं क्षमता निर्माण के लिए **मंडलीय आपदा प्रबंधन योजना -2026** तैयार की गई हैं, जिनमें विभिन्न विभागों एवं अधिकारियों की भूमिकाएँ एवं जिम्मेदारियाँ स्पष्ट रूप से परिभाषित की गई हैं। **भावनगर मंडल की यह मंडलीय आपदा प्रबंधन योजना**, पश्चिम रेलवे की आपदा प्रबंधन योजना के अनुरूप तैयार की गई है तथा किसी भी आपदा से निपटने हेतु हमारी सतत तत्परता को दर्शाती है।

मुझे पूर्ण विश्वास है कि इस योजना में सम्मिलित जानकारी एवं दिशा-निर्देश आपदाओं के दौरान त्वरित एवं प्रभावी राहत तथा पुनर्स्थापन सुनिश्चित करने हेतु एक सक्रिय, कुशल एवं प्रभावी उपकरण सिद्ध होंगे। सभी अधिकारियों एवं संबंधित कर्मचारियों से अपेक्षा की जाती है कि वे अपने-अपने दायित्वों से संबंधित प्रावधानों से भली-भाँति परिचित रहें तथा किसी भी आपदा का सामना करने के लिए सदैव तत्पर रहें।

मैं वरिष्ठ मंडल संरक्षा अधिकारी/भावनगर एवं उनकी टीम को भावनगर मंडल की आपदा प्रबंधन योजना के 11वें **संस्करण** को वैज्ञानिक एवं सुव्यवस्थित ढंग से तैयार करने हेतु हार्दिक बधाई देता हूँ, जिसमें राहत, बचाव एवं पुनर्स्थापन के विभिन्न पहलुओं को समग्र रूप से सम्मिलित किया गया है।

Date – 30.01.2026

(दिनेश वर्मा)
मंडल रेल प्रबंधक
भावनगर मण्डल



FOREWORD

Railways are a vital mode of transportation in India, handling both passenger and freight traffic. Safety performance remains the primary index for assessing the efficiency of the Railways. While continuous modernization and upgradation of technology is being undertaken to prevent accidents, any disaster involving casualties demands immediate and effective action. Judicious utilization of the “Golden Hour” is crucial to reduce the suffering of critically injured persons and to save valuable lives.

An effective Disaster Management Plan must, therefore, emphasize prompt response, quick relief, rescue, and restoration measures, all of which need to be addressed in a systematic and coordinated manner. This booklet incorporates the latest instructions on the operation of ART/ARME, management of disasters such as fire, flood, earthquake, and chemical or biological emergencies, and clearly defines the duties of officers and supervisors during disaster situations. It also includes updated lists of officers and supervisors with their respective jurisdictions and current contact details for immediate use during emergencies.

All officers and supervisors of Bhavnagar Division are expected to carefully study this Disaster Management Plan, understand its functional aspects, and act strictly in accordance with the provisions of this plan, the Accident Manual and relevant instructions in force while dealing with train accidents or other disaster situations.

I am confident that the instructions contained in this 11th edition of the Disaster Management Plan will serve as a useful guide for officers and staff of Bhavnagar Division in effective and efficient handling all types of disasters.

(Himanshu Sharma)

**Additional Divisional Railway Manager
Bhavnagar Division**

Date – 30.01.2026



PREFACE

Bhavnagar Division of Western Railway is located in the western coastal region of Gujarat and has, in the past, been affected by major natural disasters such as earthquakes, cyclones, floods, and breaches. While the Railways have their own infrastructure and systems to deal with disasters, effective disaster management requires close coordination and liaison with State authorities, Civil Administration, Defence Forces, NDRF, local village bodies, Panchayats, and NGOs, who possess additional resources and skilled manpower.

In this 11th Edition of the Disaster Management Plan, various aspects of relief, rescue, and restoration have been covered in a systematic and schematic manner in line with the guidelines issued by Headquarters and the Railway Board. The plan clearly defines the roles and responsibilities of each department and individual, incorporating relevant provisions from the Disaster Management Plans of Indian Railways as well as Western Railway. Road connectivity diagrams of different sections have been included to facilitate quick movement and early restoration at accident sites. Successful disaster management also requires active support and participation from every railway official during emergencies.

I extend my sincere thanks to our esteemed PCSO-WR Shri Sanjay Khare, DRM-BVP Shri Dinesh Verma and ADRM-BVP Shri Himanshu Sharma for their valuable guidance and encouragement in the preparation of the Disaster Management Plan–2026. I also express my heartfelt gratitude to all Branch Officers, other officers, and Safety Counsellors for their support and contributions in finalizing this plan.

No plan can be completely foolproof, and continuous improvement is essential. I therefore request all concerned to offer their valuable suggestions for further strengthening and improving this Disaster Management Plan.

**Sonu
Kumar** Digitally signed
by Sonu Kumar
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(Sonu Kumar)

**Senior Divisional Safety Officer
Bhavnagar Division
Western Railway**

Date – 30.01.2026

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Executive Summary

The Disaster Management Act, 2005 (DM Act 2005) lays down institutional and coordination mechanism for effective Disaster Management (DM) at the national, state, district and local levels. As mandated by this Act, the Government of India (GoI) created a multi-tiered institutional system consisting of the National disaster Management Authority (NDMA) headed by the Prime Minister, the State Disaster Management Authorities (SDMAs) headed by the respective Chief Ministers and the District Disaster Management Authorities (DDMAs) headed by the District Collectors and co-chaired by Chairpersons of the local bodies. These bodies have been setup to facilitate a paradigm shift from the hitherto relief-centric approach to a more proactive, holistic and integrated approach of strengthening disaster preparedness, mitigation, and emergency response.

The National Disaster Management Plan (NDMP) provides a framework and direction to the government agencies for all phases of disaster management cycle. The NDMP recognizes the need to minimize, if not eliminate, any ambiguity in the responsibility framework. It, therefore, specifies who is responsible for what, at different stages of managing disasters. The NDMP is envisaged as ready for activation at all times in response to an emergency in any part of the country. It is designed in such a way that it can be implemented as needed on a flexible and scalable manner in all phases of disaster management:

- a) Mitigation (prevention and risk reduction),
- b) Preparedness,
- c) Response and
- d) Recovery.

The NDMP is consistent with the approaches promoted globally by the United Nations, in particular the Sendai Framework for disaster Risk Reduction 2015-2030. It is an on-binding agreement, which the Signatory nations will attempt to comply with on a voluntary basis. India will make all efforts to contribute to the realization of the global target by improving the entire disaster management cycle in India by following the recommendations in the Sendai Framework and by adopting globally accepted best practices. The four priorities for action under the Sendai Framework are:

1. Understanding disaster risk
2. Strengthening disaster risk governance to manage disaster risk
3. Investing in disaster risk reduction for resilience
4. Enhancing disaster preparedness for effective response and to “Build Back Better” in recovery, rehabilitation and reconstruction

The NDMP incorporates substantively the approach enunciated in the Sendai Framework and will help the country to meet the goals set in the framework. By 2030, the Sendai Framework aims to achieve substantial reduction of disaster risk and losses in lives, livelihoods, and health and in the economic, physical, social, cultural, and environmental assets of persons, businesses, communities, and countries.

Vision of NDMP

Make India disaster resilient, achieve substantial disaster risk reduction, and significantly decrease the losses of life, livelihoods, and assets — economic, physical, social, cultural, and environmental — by maximizing the ability to cope with disasters at all levels of administration as well as among communities.

Multi-Hazard Vulnerability

India, due to its, physiographic and climatic conditions is one of the most disaster-prone areas of the world. Vulnerability to disasters/emergencies of Chemical, Biological, Radiological and Nuclear (CBRN) origin also exists. Heightened vulnerabilities to disaster risks can be related to increasing population, urbanization, industrialization, development within high-risk zones, environment degradation, and climate change. Hazard vulnerability maps for India are annexed to NDMP.

Reducing Risk; Enhancing Resilience

In the domains of DM planning, preparedness, and capacity building, the central agencies will constantly work to upgrade Indian DM systems and practices as per global trends. The planning framework has arranged the action envisaged for risk reduction under five thematic areas for action with one of the four priorities for action of Sendai Framework as its dominant feature.

For each hazard, the approach used in national plan incorporates the four priorities enunciated in the Sendai Framework the planning framework for Disaster Risk Reduction under the five thematic Areas for Action:

1. Understanding Risk
2. Inter-Agency Coordination
3. Investing in DRR–Structural Measures
4. Investing in DRR-Non-Structural Measures
5. Capacity Development

For each thematic area for action, the NDMP has identified a set of major themes for undertaking actions within the broad planning framework. For each hazard; themes for action are presented in a separate responsibility matrix assigning roles of centre and state for each of the thematic areas for action.

Response:

Response measures are those taken immediately after receiving early warning, anticipating an impending disaster, or post-disaster in cases where an event occurs without warning. The primary goal of response to a disaster is saving lives, protecting property, environment, and meeting basic needs of human and other living beings after the disaster. The immediate focus will be on search and rescue of those affected and to evacuate those likely to be affected by the disaster or secondary disaster that is likely to happen.

At the national level, the central government has assigned nodal responsibilities to specific ministries for coordinating disaster-specific response. The NDMA will be coordinating with relevant nodal ministry.

Different central ministries and departments will provide emergency support to the response effort as per request from the State Government. It may be noted that the SDMA, Department of Revenue of Commissioner of Relief (as applicable) is the nodal agency for coordination of disaster response. The various agencies whose responsibilities are defined in detailed DM plans for the state and district will be responsible for specific response measures. The DDMA is the nodal agency for coordination of response at district level supported by other district level agencies. The department wise specific activities at central ministries and state government are summarized in matrix providing clarity to the roles and responsibilities of various agencies.

Structure of Disaster Management plan of Ministry of Railways

Based on the National Disaster Management Plan, context specific changes were made in the DM plan of Ministry of Railways duly indicating the role and responsibilities at Board, Zonal Headquarters and Divisional level. Zonal Railway and Divisional Disaster Management plans need to be developed on similar lines.

Disaster management plan also contains detailed guidelines relating to cases of breach/floods, earthquakes, cyclones, manmade disasters like terrorism etc. DM plan at divisional level must include management of rescue and relief

operations including care for dead, communication network, restoration operations, maintenance of ART/ARMV & their equipment, media management, checklist for officers and supervisors etc. DM plan should also include details of local resources as indicated in chapter no.6.

Accident Manual contains definitions, classification of accidents, reporting of accidents and other unusual occurrences, duties of officials, relief measures, investigation and inquiries, disposal of inquiry reports etc. in case of a train accident. It is a compendium of all instructions, rules, procedures and guidelines issued from time to time on Railway accidents and for safe working of trains in general. These details have, therefore, not been included in DM plans. Accident Manual of Railways may be referred for details related to train accidents.

Divisions shall identify vulnerable locations and risks associated with natural disasters and incorporate them in the Divisional DM plan. Information flow chart for communicating alerts issued by early warning agencies to the field officials shall be clearly specified in the DM plan duly indicating preparedness and response to deal with them.

NDMA has issued guidelines on “Managing Crowd at Events and Venues of Mass Gathering”. Guidelines on crowd management and role of RPF in crowd control are included in the chapter no. 9 and 15. Further, in the event of Mass gathering, (viz. Kumbh Mela etc.) Divisions are instructed to prepare and Implement event specific Disaster Management plans for the stations where the crowd is expected.

Guidelines issued by NDMA regarding chemical disaster are included in chapter no.14. Rules for carrying Hazardous chemicals are legislated in Railway Red Tariff Rules, 2000. In Red Tariff, general rules governing acceptance, handling, carriage, storage, delivery and the list of commodities along with the Dos and Don'ts in case of leakage of hazardous chemicals is included. Carriage of commodities other than those specified in Red Tariff, shall not be accepted for transport by rail unless specially authorized by the Railway administration. Do's and Don'ts issued by MHA regarding CBRN disasters is also included in the plan.

Capacity development covers strengthening of institutions, mechanisms, and capacities of all stakeholders at all levels. Chapter no.14 indicates disaster management training methodology and schedule at all levels.

Structure of Divisional Disaster Management plan of BVP Division on Western Railways

Based on the Zonal Disaster Management Plan Western Railway, specific changes were made in the Divisional Disaster Management Plan of BVP Division. This Disaster Management Plan not only brings out the role and responsibilities at Divisional level but also specifically list out the duties of each staff from “On board” staff to First responders, Non- Railway & Railway staff, to the Staff of ART/ARMs.

Disaster Management Plan of BVP Division includes management of rescue and relief operations including care for dead, communication network, restoration operations, maintenance of ART/ARMV & their equipment, media management, check list for officers and supervisors etc. Further, this Disaster Management Plan also includes details of local resources along with Contact Numbers.

According to the guidelines of Railway Board Disaster Management Plan BVP Division has identified vulnerable locations and risks associated with natural disasters and incorporate them in the Divisional Disaster Management Plan. Information flow chart for communicating alerts issued by early warning agencies to the field officials are specified in Chapter 10 of Disaster Management Plan duly indicating preparedness and response to deal with them.

This Divisional Disaster Management Plan also includes:

Division specific information like road maps, etc.

Divisional action plan - dealing with all types of Railway disasters.

Detailed inventory of Railway and non-Railway resources as envisaged in High Level Committee's Report on Disaster Management.

New developments of sharing of resources with all stake holders.

Information common to all divisions of a Zonal Railway replicated uniformly in DM Plans of all divisions of the Zonal Railway.

All 28 Items brought out in 18.3.1 of the Railway Board Disaster Management Plan. Regarding Role & responsibilities, Details of various actions to be taken in managing the disaster, details off vulnerable locations, details & contact mobile Nos. of various officials & agencies-Government as well as private etc.

DISASTER MANAGEMENT PLAN

1. Disaster in the railway context is defined as under: -
“Railway Disaster is a serious train accident or an untoward event of grave nature, either on the railway premises or arising out of railway activity in that area, due to natural or man-made causes, that may lead to loss of many lives and/or grievous injuries to a large number of people, and/or severe disruption of traffic, necessitating large-scale help from other Government/Non- government and private Organizations”
 (Rly.Bd's letter No.2003/Safety (DM)/6/2Pt.dated 06.01.09 & based on the definition of the Disaster Management Act 2005).
2. This compendium of instructions has been prepared for dealing with such disasters, and not for normal train accidents of non-serious nature. Instruction in G&SR, SWR and Accident Manual are also to be followed.

TERM OF REFERENCE:

Railway Board's Safety Directorate vide their letter No.2003/Safety-I/6/2 dated 29th September 2003 laid down the requirement of Zonal Railway's Disaster Management Plan as follows.

1. **Disaster Management Plan:** All Divisions and Zonal Railway Headquarters (including Metro Kolkata & Delhi Metro Rail Corporation) 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 take into consideration adjacent railway's framework.
2. **Preparation of Disaster Management Plan:** The Disaster Management Plan must inter-alia include who is responsible for what activities in detail like: -
 - (i) Preparation and implementation of disaster management plan is the responsibility of concerned General Manager / Divisional Railway Manager.
 - (ii) Authority to order ART/ARME/Break Down crane – Chief Mechanical Engineer/Chief Motive Power Engineer (Running & Loco)/Sr. Divisional Mechanical Engineer/Divisional Mechanical Engineer, etc.
 - (iii) Senior most railway officer at the site of the accident shall be the designated Site Manager.
 - (iv) Management of rescue operations – Primarily Mechanical and Medical Departments. Assistance to be provided by all railwaymen (irrespective of their department) as needed.
 - (v) Relief operations including care for the dead – Commercial, Medical & RPF Departments.
 - (vi) Communication network–Telecom Department.
 - (vii) Crowd control and law & order at site – RPF.
 - (viii) State Police clearance for restoration – RPF.
 - (ix) Restoration operations –
 - (a) Rolling stock – Mechanical Department.
 - (b) Fixed infrastructure like Track, Over Head Equipment, Signaling systematic. – respective department.
 - (x) Maintenance of SPART/ART & SPARME/ARME, Break Down cranes including rail-cum-road and road mobile emergency vehicle etc.– Mechanical Department.

- (xi) Maintenance of equipment kept in SPART/SPARME/ART/ARME for rescue and restoration operations – respective departments.
- (xii) Media Management at site–
 - (a) Site Manager shall be the chief spokesman at site and can be assisted by the branch officer concerned, if needed.
 - (b) Public Relation / Commercial Department to look after the needs of media persons at the site.
- (xiii) Checklist for the officers & supervisors must be issued in the form of a pocket booklet indicating DO's and DON'Ts for the benefit of:
 - (a) First official reaching the site of accident.
 - (b) Senior most officers at the site.
 - (c) Divisional/HQ control organization.
 - (d) Station Manager / Station Master.

The Disaster Management Plans must be reviewed and updated in the month of January every year.

ABBREVIATIONS

1AC	-	1 st Air-Conditioned Coach
(G)	-	General
2AC	-	2 Tier Air-Conditioned Sleeper Coach
3AC	-	3 Tier Air-Conditioned Sleeper Coach
ABR	-	Abu Road Station
AC	-	Air Conditioned
ADEN	-	Assistant Divisional Engineer
ADG	-	Additional Director General
ADI	-	Ahmadabad Junction
ADME	-	Assistant Divisional Mechanical Engineer
ADMO	-	Assistant Divisional Medical Officer
ADRM	-	Additional Divisional Railway Manager
AGM	-	Additional General Manager
AII	-	Ajmer Junction
ARME	-	Accident Relief Medical Equipment
ART	-	Accident Relief Train
Asstt.	-	Assistant
ASTE	-	Assistant Signal & Tele communication Engineer
MMCT	-	Mumbai Central Terminus
BDSpl.	-	Breakdown Special
BCN	-	8-Wheel covered vacuum brake wagon
BFR	-	8-wheel open flat vacuum brake wagon
BL	-	Valsad Station
BPL	-	Bhopal Junction
BRC	-	Vadodara Junction
BSL	-	Bhusaval Junction
BSNL	-	Bharat Sanchar Nigam Limited
BVP	-	Bhavnagar Junction
C&W	-	Carriage and Wagon
CAC	-	Combined Assistance Centre
CBE	-	Chief Bridge Engineer
CCRS	-	Chief Commissioner of Railway Safety
CFTM	-	Chief Freight Transportation Manager
Chg.	-	Coaching
CMI	-	Commercial Inspector
CMPE (Diesel)	-	Chief Motive Power Engineer (Diesel)
COR	-	Chittaurgarh Junction
CPRO	-	Chief Public Relations Officer
CPTM	-	Chief Passenger Transportation Manager
CR	-	Central Railway
CRS	-	Commissioner of Railway Safety
CRSE	-	Chief Rolling Stock Engineer
CSE	-	Chief Signal Engineer
PCSO	-	Principal Chief Safety Officer

CSTE	-	Chief Signal & Tele communication Engineer
CTE	-	Chief Track Engineer
CTNL	-	Chief Controller
CWE	-	Chief Workshop Engineer
CWI	-	Carriage & Wagon Inspector
DAC	-	Dahisara Junction
DAS	-	Dhasa Junction
DB	-	Dabhoi Junction
DCM	-	Divisional Commercial Manager
DEE	-	Divisional Electrical Engineer
DEN	-	Divisional Engineer
DFM	-	Divisional Finance Manager
DG	-	Director General
DLJ	-	Dhola Junction
DM	-	Disaster Management
DME	-	Divisional Mechanical Engineer
DMM	-	Divisional Material Manager
DMO	-	Divisional Medical Officer
DMT	-	Disaster Manager Team
DMU	-	Diesel Multiple Unit
DOM	-	Divisional Operations Manager
DOT	-	Department of Telecommunication
DPO	-	Divisional Personnel Officer
DR	-	Disaster Response
DRM	-	Divisional Railway Manager
DSC	-	Divisional Security Commissioner
DSO	-	Divisional Safety Officer
DSTE	-	Divisional Signal & Telecommunication Engineer
Dy.	-	Deputy
Dy.TNL	-	Deputy Controller
EC	-	Emergency Control
ED	-	Executive Director
E-Mail	-	Electronic Mail
EMU	-	Electric Multiple Unit
Engg.	-	Engineering
ETL	-	Emergency Train Lighting
FA&CAO	-	Financial Advisor and Chief Account Officer
FR	-	First Responders
G&SR	-	General & Subsidiary Rule
GDA	-	Godhra Junction
GGC	-	Gangapur City
GIM	-	Gandhidham Station
GM	-	General Manager

GRPHLC	-	Government Railway Police High Level Committee
HMT	-	Himmatnagar Station
HOD	-	Head of Department
HOR	-	High Official Requisition
HPC	-	Hindustan Petroleum Corporation
HQ	-	Head Quarters.
HRD	-	Hydraulic Rescue Device
HRE	-	Hydraulic Re-railing Equipment
IAF	-	Indian Air Force
IAT	-	Instant Action Team
IG	-	Inspector General of Police
IOC	-	Indian Oil Corporation
IR	-	Indian Railways
IRCM	-	Indian Railway Commercial Manual
IRMM	-	Indian Railway Medical Manual
IRPWM	-	Indian Railway Permanent Way Manual
ISD	-	International Subscriber Dialling
IT	-	Information Technology
JA	-	Junior Administrative
JCB	-	Jack-cum-Bulldozer
JE	-	Junior Engineer
JLR	-	Jetalsar Junction
Jn.	-	Junction
JND	-	Junagadh Junction
KJV	-	Khijadiya Junction
KKF	-	Kankariya
KNW	-	Khandwa Junction
KTJ	-	Kota Junction
KYN	-	Kalyan Junction
LC	-	Level Crossing
LCC	-	Local Command Centre
LI	-	Loco Inspector
LPG	-	Liquefied Petroleum Gas
LR	-	Leave Reserve
MALB	-	Maliya Miyana Junction
MG	-	Meter Gauge
MOR	-	Ministry of Railways
MOSR	-	Minister of State for Railways
MP	-	Madhya Pradesh
MR	-	Minister for Railways
MSH	-	Mehsana Junction
NAD	-	Nagda Junction
NG	-	Narrow Gauge
NGO	-	Non-Govt.Organisation
NMH	-	Neemach Station

NWR	-	North Western Railway, Jaipur
OC	-	Officer-in-Charge
OHE	-	Over Head Equipment
OKO	-	Okha Station
Op.	-	Operations
P.W.I	-	Permanent Way Inspector
PA	-	Public Address
PBR	-	Porbandar Station
PC	-	Personal Computer
PCCM	-	Principal Chief Commercial Manager
PCE	-	Principal Chief Engineer
PCEE	-	Principal Chief Electrical Engineer
PCMD	-	Principal Chief Medical Director
PCME	-	Principal Chief Mechanical Engineer
PCMM	-	Principal Chief Materials Manager
PCO	-	Public Call Office
PCOM	-	Principal Chief Operations Manager
PCOS	-	Principal Controller of Stores
PCPO	-	Principal Chief Personnel Officer
PCR	-	Power Controller
PCSC	-	Principal Chief Security
PCSO	-	Commissioner Principal Chief Safety Officer
PHOD	-	Principal Head of Department
PNU	-	Palanpur Junction
POL	-	Petroleum & Oil
PR	-	Public Relations
PRO	-	Public Relations Officer
PSU	-	Public Sector Undertaking
RCT	-	Railway Claims Tribunal
RE	-	Railway Electrification
RG	-	Rest Giver
RJT	-	Rajkot Junction
RMS	-	Railway Mail Service
RPF	-	Railway Protection Force
RPZ	-	Rana Pratap Nagar Station
RTM	-	Ratlam Junction
S&T	-	Signal & Telecommunication
SBI	-	Sabarmati Junction
SDGM	-	Senior Deputy General Manager
SE	-	Section Engineer
Secy.	-	Secretary
SHO	-	Station House Officer
SI	-	Sub-Inspector
SLR	-	Second Class-cum-Luggage-cum-Brake Van
SM	-	Station Manager
SO	-	Staff Officer

SOS	-	International Call for Distress
SP	-	Self-Propelled
SPARME	-	Self-Propelled Accident Relief Medical Equipment SPART
	-	Self-Propelled Accident Relief Train
Sr.	-	Senior
Sr.DCM	-	Senior Divisional Commercial Manager
Sr.DEE	-	Senior Divisional Electrical Engineer
Sr.DME	-	Senior Divisional Mechanical Engineer
Sr.DMO	-	Senior Divisional Medical Officer
Sr.DOM	-	Senior Divisional Operations Manager
Sr.DPO	-	Senior Divisional Personnel Officer
Sr.DSC	-	Senior Divisional Security Commissioner
Sr.DSTE	-	senior Divisional Signal & Telecommunication Engineer
SS	-	Station Superintendent
SSE	-	Senior Section Engineer
ST	-	Surat Station
St.JAB	-	St.John Ambulance Brigade
STD	-	Subscriber Trunk Dialling
STM	-	Senior Transportation Manager
SUNR	-	Surendranagar Junction
TCI	-	Telecommunication Inspector
TCM	-	Telecommunication Maintainer
TI	-	Traffic Inspector
TRD	-	Traction Distribution
TS	-	Train Superintendent
TTE	-	Travelling Ticket Examiner
TXR	-	Train Examiner
UCC	-	Unified Command Centre
UDN	-	Udhna Junction
UJN	-	Ujjain Junction
VG	-	Viramgam Station
VHF	-	Very High Frequency
VPV	-	Vehicle Parcel Van
VRL	-	Veraval Station
VSW	-	Visavadar Junction
WCR	-	West Central Railway
WKR	-	Wankaner Junction
WLI	-	Welfare Inspector
WLL	-	Wireless on Local loop
WSJ	-	Wansjaliya Junction
WTT	-	Working Time Table
ZRTI		Zonal Railway Training Institute

ORGANISATION SETUP**DRM****ADRM**

BRANCH OFFICERS											
Sr.DEN-Co.	Sr.DME	Sr.DOM	Sr.DEE/P.,	Sr.DEE/TRD.	Sr.DSTE	Sr.DCM	Sr.DPO	Sr.DMM	Sr,DFM	Sr.DSO	Sr.DSC
Sr.DEN-C, DEN-E., DEN-W				DEE/TRD	DSTE	DCM					
ASSISTANT OFFICERS											
ADEN-TRACK	ADME-I, ADME-II	AOM-G, AOM-PRCL	ADEE/P,	ADEE/TRO	ADSTE	ACM-BVP, ACM-PRCL	APO-I, APO-II	ADMM	ADFM	ADSO	ASC

CHAPTER-1**INTRODUCTION AND CONCEPT OF DISASTER ON RAILWAY****1.1 Background :**

Indian Railways is the life-line of nation and the fourth largest Railway network in the world by size, with a route length of over 69181 kilometres and total track length of 1,35,207 kilometres. Indian Railway runs more than 13,198 passenger trains and 11,724 Goods trains daily, from 7,318 stations across India.

Western Railway is one of the 17 zones of Indian Railways, and is among the busiest railway networks in India. The railway system is divided into six operating divisions: Mumbai, Vadodara, Ratlam, Ahmedabad, Rajkot & Bhavnagar. Western Railway has a route length of over 6284 kilometres and total track length of 11,101 kilometres consisting of 723 stations.

BVP Division is one of the Six Divisions of Western Railway has a route length of over 1331.78 kilometres (MG & BG).

KJV-AE section of 13 KM is closed due to termination of train services at AE, hence track length/route kilometers of these sections is not take in consideration of track length/route kilometers.

The electrification work of the Surendranagar – Pipavav (SUNR-PPSP), DLJ-BVC, Kanalus –Porbsndar (KNLS-PBR) and SOJN-PIT, Rajkot-Somnath (RJT-SMNH) 189 KM, DAS-WSJ 195.05 KM, BTD-SBI-B 168.67 KM section is completed and operational for AC traction power.

As a national common carrier, transporting passenger and goods over its vast network, Indian Railways has always played a key role in India's social and economic development. It is a cheap and affordable means of transportation for millions of passengers. As a carrier of bulk freight viz. ores and minerals, iron and steel, cement, mineral oils, food grains and fertilizers, containerized cargo etc., the importance of Indian Railways for agriculture, industry and the common man is well recognized. Indian Railways carried 18.87 million passengers and 4.34 million tonnes of freight each day during 2023-24

Indian Railways, functioning as Ministry of Railways, is headed by the Minister for Railways. The apex body entrusted with the management of this mega enterprise is led by the Chairman, Railway Board (CRB). Members of the Railway Board include Financial Commissioner, Member Traffic, Member Engineering, Member Rolling Stock, Member Traction, Member S&T, Member Material Management and Member Staff who represent their respective functional domains. Further for administrative convenience, Indian Railways is divided into 17 Zones, each headed by a General Manager (GM). The Zonal Railways are further divided into 68 divisions, each under a Divisional Railway Manager (DRM) where teams of officers, supervisors and staff are directly looking after day to day operational works of the Railways and interacting with rail users. In addition, there are a number of Production Units, Training Establishments, Public Sector Enterprises and other offices working under the control of Railway Board.

Indian Railways came into existence with the running of the first train from Kurla to Thane in 1853. Ever since then handling train accidents has been a priority area for the railways. With the main reason for building up of the rail network by the British Empire being the transportation of the military requirements through the Indian Railways, the railway organization worked hand in hand with the army authorities. Sharing of the Indian Railways and Army Cranes as also their Medical Vans in times of a train accident was an accepted system for handling disasters (rail accidents).

With the gradual growth of Indian Railways and its transition to transportation of passengers and other goods including raw material for industries etc. the railway gradually built up its own infrastructure of Cranes, Accident Relief Trains (ARTs), Accident Relief Medical Equipment Van (ARMVs). Till the beginning of the year 2005, a disaster on the railway in effect meant a serious train accident and other disaster viz. Floods, Earthquakes etc. and were handled in an uncoordinated manner. Disaster preparedness of the Railways, mainly pertaining to handling train accidents, had been gone into by a High-Level Committee (HLC) in the year 2002/03 whose recommendations, where relevant, have been kept in view in the preparation of Railways Disaster Management Plan.

The situation has now changed with the promulgation of the Disaster Management (DM) Act in 2005. A disaster in

Railway's parlance also, no longer means only a train accident, but its scope has become much wider to include other incidents, terrorism related activities and natural calamities etc. The Indian Railways Disaster Management Plan has been prepared on the principles now incorporated in the Disaster Management Act, National Disaster Management Plan and also Guidelines issued by NDMA. The basic philosophy is now to be followed is of sharing resources of all Government Departments along with Railways own resources available to handle serious train accidents, other mishaps, terrorism related crisis, natural calamities etc.

1.2 CONCEPT OF DISASTER ON RAILWAYS:

1.2.1 Disaster Risks in India:

India is vulnerable, in varying degrees, to a large number of natural as well as man-made disasters. 58.6% of the landmass is prone to earthquakes of moderate to very high intensity; over 40 million hectares (2% of land) is prone to floods and river erosion; of the 7516km long coastline, close to 5700km is prone to cyclones and tsunamis; 68% of the cultivable area is vulnerable to drought and hilly areas are at risk from landslides and avalanches. Vulnerability to disasters/emergencies of Chemical, Biological, Radiological and Nuclear (CBRN) origin also exists. Heightened vulnerabilities to disaster risks can be related to expanding population, urbanization and industrialization, development within high-risk zones, environmental degradation and climate change.

1.2.2 Disaster defined in Railways' Context:

The concept of a Disaster was, till the year 2005, not adequately and comprehensively defined on Indian Railways. It was understood that a Disaster situation implies, on the railways, to cover only cases of serious rail/train accidents. It was, perhaps, due to this anomaly as late as the year 2008, even CAG's report on DM on Indian Railways has broadly adopted this fact in the concept of disaster and has gone to examine the relief/rescue/mitigation and preparedness of Indian Railways based on the earlier concepts and has reviewed the facilities for handling disasters available with the Railways only on the report/recommendations of the HLC on DM.

The definition of DM as given by the Government of India was legislated for the first time in the Disaster Management Act, 2005. The broad principles of disaster for any department of the government changed to the concept of any incident, which could not be handled by the department singularly i.e. if it was beyond the coping capacity of a particular department, the incident could be termed as a disaster. With this came the concept of the departments of Government of India as also the State governments joining hands to extend whatever facilities were available with them to provide relief/rescue and mitigation on the occurrence of a disaster.

In the Disaster Management Plan of Western Railway, this concept of disaster, which has now evolved, has been adopted. All efforts are being made by this railway to ensure that, down the line, this concept is understood. While this Disaster Management Plan is a comprehensive document, more detailed guidelines where required will be laid down by Railway Board on specific topics under the overall philosophy of Disaster Management laid down in this document. For instance, this has been done in the Guidelines on Management of Chemical Disasters and the Hospital DM Plan.

1.2.3 Strengths of the Railways to handle a Disaster: -

In handling disasters, Indian Railways is in a unique position as it has a number of strengths not available with many other departments of Government of India. These include:

- Railways' own Communication Network.
- Operating Control on each Division linked with each Station.
- Territorial Army Units.
- Uniformed force of RPF/RPSF
- Railways' own Medical Infrastructure
- Civil Defence Organization
- An army of gangmen spread out all over the Indian Railways.
- Scouts and Guides
- Dedicated Rescue / Restoration and Medical Equipment on Rails.

1.2.4 Types of Disasters:

Disaster in the Railway context was traditionally a serious train accident, caused by human /equipment failure, which may affect normal movement of train services with loss of human life or property or both. This is now extended to include natural and other manmade disasters. Different types of disasters are described alongwith a few examples, as below:

(a) Natural Disasters:

Earthquakes, Floods, Cyclones, Land Slides, Snow Avalanches, Tsunami etc.

(b) Train Accident related Disaster:

Collisions (with a huge number of casualties), Train marooned (flash floods), derailments on a bridge over a water body/gorge and coaches fallen down, train washed away in cyclone, derailment of a train carrying explosives or highly inflammable material, collapse of tunnel/deep cutting on a train, fire or explosion in trains, and other miscellaneous cases.

(c) Manmade Disasters:

Acts of Terrorism and Sabotage, i.e. causing deliberate loss of life and/or damage to property, which includes: - Setting a Train or Railway installations etc. on fire, bomb blast at Railway Station/Train, Chemical (Terrorism) Disaster, Biological, Radiological and Nuclear (CBRN) Disaster.

1.2.5 Changed Philosophy of Disaster Management in the Railways

With the enactment of the Disaster Management Act, 2005 and other developments on the national level, DM philosophy has also changed to adopt the latest concepts.

NEW - PHILOSOPHY:

- Serious train accidents, not the only events termed as disasters.
- Other events, e.g. Internal security related events like terrorist attack at station/train, marooning of train due to flash flood, disruption to traffic due to natural factors like earth-quake, cyclone, floods etc.
- No more Relief and Rescue Centric.
- Holistic Approach adopted to incorporate:
 - Understanding Disaster
 - Risk Reduction
 - Risk Prevention
 - Mitigation
 - Preparedness
 - Rescue, Relief
 - Rehabilitation

New Philosophy gives more Emphasis on Understanding disaster risk, risk reduction, prevention and mitigation as under:

- Understanding Risks
- Risk reduction
- Prevent and mitigate disasters.
- Audit Existing Systems for Disaster Resistance, Disaster Prevention and Mitigation on the basis of NDMA's and self-prepared guidelines.
- Disaster Management in Developmental Planning-New activities should be disaster resistant.
- Preparedness, Rescue, Relief and Rehabilitation-Dimensions of DM.
- Expertise based response from all stakeholders.

Pooling of resources of all agencies, e.g. local administration, community, defence, hospitals and other Govt. Organizations.

1.2.6 Sendai Framework

The NDMP is consistent with the approaches promoted globally by the United Nations, in particular the Sendai Framework for Disaster Risk Reduction 2015–2030 (hereafter referred to as “Sendai Framework”) adopted at the Third UN World Conference in Sendai, Japan, on March 18, 2015 (UNISDR 2015a) as the successor instrument to the Hyogo Framework for Action 2005–2015. It is a nonbinding agreement, which the signatory nations, including India, will attempt to comply with on a voluntary basis. However, India will make all efforts to contribute to the realization of the global strategy by improving the entire disaster management cycle in India by following the recommendations in the Sendai Framework and by adopting globally accepted best practices.

The Sendai Framework was the first international agreement adopted within the context of the post-2015 development agenda. Two other major international agreements followed it in the same year: The Sustainable Development Goals 2015–2030 in September, and the UNFCCC Paris Agreement to combat human-induced climate change in December. DRR is a common theme in these three global agreements. The Paris Agreement on global climate change points to the importance of averting, minimizing, and addressing loss and damage associated with the adverse effects of climate change, including extreme weather events and slow onset events, and the role of sustainable development in reducing the risk of loss and damage. These three agreements recognize the desired outcomes in DRR as a product of complex and interconnected social and economic processes, which overlap across the agenda of the three agreements. Intrinsic to sustainable development is DRR and the building of resilience to disasters. Further, effective disaster risk management contributes to sustainable development.

In the domain of disaster management, the Sendai Framework provides the way forward for the period ending in 2030. There are some major departures in the Sendai Framework:

- For the first time the goals are defined in terms of outcome-based targets instead of focusing on sets of activities and actions.
- It places governments at the centre of disaster risk reduction with the framework emphasizing the need to strengthen the disaster risk governance.
- There is significant shift from earlier emphasis on disaster management to addressing disaster risk management itself by focusing on the underlying drivers of risk.
- It places almost equal importance on all kinds of disasters and not only on those arising from natural hazards.
- In addition to social vulnerability, it pays considerable attention to environmental aspects through a strong recognition that the implementation of integrated environmental and natural resource management approaches is needed for disaster reduction.
- Disaster risk reduction, more than before, is seen as a policy concern that cuts across many sectors, including health and education.

As per the Sendai Framework, in order to reduce disaster risk, there is a need to address existing challenges and prepare for future ones by focusing on monitoring, assessing, and understanding disaster risk and sharing such information. The Sendai Framework notes that it is “urgent and critical to anticipate, plan for and reduce disaster risk” to cope with disaster. It requires the strengthening of disaster risk governance and coordination across various institutions and sectors. It requires the full and meaningful participation of relevant stakeholders at different levels. It is necessary to invest in the economic, social, health, cultural and educational resilience at all levels. It requires investments in research and the use of technology to enhance multi-hazard Early Warning Systems (EWS), preparedness, response, recovery, rehabilitation, and reconstruction.

The four priorities for action under the Sendai Framework are:

1. Understanding disaster risk
2. Strengthening disaster risk governance to manage disaster risk
3. Investing in disaster risk reduction for resilience.
4. Enhancing disaster preparedness for effective response and to “Build Back Better” in recovery, rehabilitation and reconstruction.

India is a signatory to the Sendai Framework for a 15-year, voluntary, non-binding agreement which recognizes that the State has the primary role to reduce disaster risk but that responsibility should be shared with other stakeholders including local government, the private sector and other stakeholders. It aims for the “substantial reduction of disaster risk and losses in lives, livelihoods, and health and in the economic, physical, social, cultural, and environmental assets of persons, businesses, communities, and countries.” India will make its contribution in achieving the seven global targets set by the Sendai Framework:

1. Substantially reduce global disaster mortality by 2030, aiming to lower the average per 100,000 global mortality rates in the decade 2020 - 2030 compared to the period 2005 - 2015;
2. Substantially reduce the number of affected people globally by 2030, aiming to lower the average global figure per 100,000 in the decade 2020 - 2030 compared to the period 2005 - 15.
3. Reduce direct disaster economic loss in relation to global gross domestic product (GDP) by 2030;
4. Substantially reduce disaster damage to critical infrastructure and disruption of basic services, among them health and educational facilities, including through developing their resilience by 2030;
5. Substantially increase the number of countries with national and local disaster risk reduction strategies by 2020;
6. Substantially enhance international cooperation to developing countries through adequate and sustainable support to complement their national actions for implementation of the present Framework by 2030;
7. Substantially increase the availability of and access to multi-hazard early warning systems and disaster risk information and assessments to people by 2030.

The four priorities for action under the Sendai Framework have been incorporated into the DM plan of Railways is summarised below for quick reference:

Sendai Framework for DRR (2015-2030) Priority	Chapters with the priority as its dominant theme
1.Understanding disaster risk	Chapters 3,12,13,14,16
2. Strengthening disaster risk governance to manage disaster risk	Chapters 3,4,5,6
3.Investing in disaster risk reduction for resilience	Chapters 3,4,5,6,7,8,9,15
4.Enhancing disaster preparedness for effective response and to “Build Back Better” in recovery, rehabilitation and reconstruction	Chapters 4,7,15,16,17,18

1.2.7 Definition of a Disaster on Railways:

Based on the definition of the Disaster Management Act 2005, Ministry of Railways has adopted the following definition of Railway Disaster:

“Railway Disaster is a serious train accident or an untoward event of grave nature, either on railway premises or arising out of railway activity, due to natural or man-made causes, that may lead to loss of many lives and/or grievous injuries to a large number of people, and/or severe disruption of traffic etc. necessitating large scale help from other Government / Non-government and Private Organizations.”

1.2.8 Nodal department for Policy Formulation on DM on Indian Railways:

The preparation of the Disaster Management Plans on Indian Railways and on the Zonal Railways in co-ordination with the different Departments of the Railway, other Central/State Govt. agencies, NGOs, Private agencies, etc. has to be done by the Safety department in the Railway Board, on the Zonal Railways and Divisions.

The Hospital DM plans and the Security arrangements (drills etc.) shall be prepared and coordinated by the Medical and the Security department respectively.

The Management of Floods, Cyclones, Earthquakes, Landslides, etc. And preventive action/mitigation shall be coordinated by the Civil Engineering Department.

The Rescue and Restoration centric DM including preparation of plans and procurement of specialized equipment and rescue centric training of personnel has to be coordinated by the Mechanical Department.

1.2.9 Authority to declare a Disaster on Railways:

Railway Board has nominated GM, AGM or PCSO (when GM/AGM are not available) of a Zonal Railway for declaring an untoward incident as Railway Disaster. With the adoption of the above definition of Railway disaster as envisaged in para 1.2.6, it needs to be appreciated that apart from serious train accidents, there may be many more Railway related events which may not even involve human lives, but if not handled and managed properly, may cause a disaster. Necessary prevention and mitigation measures are to be taken by the Railways beforehand for such eventualities.

Bhavnagar Division Western Railway through this Divisional Disaster Management Plan has tried to address risk assessment, risk reduction, prevention, mitigation, preparedness, rescue and relief related issues covering all types of disasters affecting railway system in detail.

CHAPTER-2**INSTITUTIONAL FRAMEWORK FOR DISASTER MANAGEMENT****2.0 National Level**

The overall coordination of disaster management vests with the Ministry of Home Affairs (MHA). The Cabinet Committee on Security (CCS) and the National Crisis Management Committee (NCMC) are the key committees involved in the top-level decision-making with regard to disaster management. The NDMA is the lead agency responsible for the preparation DM plans and the execution of DM functions at the national level. Figure2-1 provides a schematic view of the basic institutional structure for DM at national level. The figure represents merely the institutional pathways for coordination, decision-making and communication for disaster management and does not imply any chain of command.

In most cases, state governments will be carrying out disaster management with the central government playing a supporting role. The central agencies will participate only on the request from the state government. Within each state, there is a separate institutional framework for disaster management at the state-level. The DM Act of 2005 provides for the setting up of NDMA at national level, and the SDMA at the state level. The role, composition and the role of the key decision-making bodies for disaster management at national-level are briefly described in the Table 2-1.

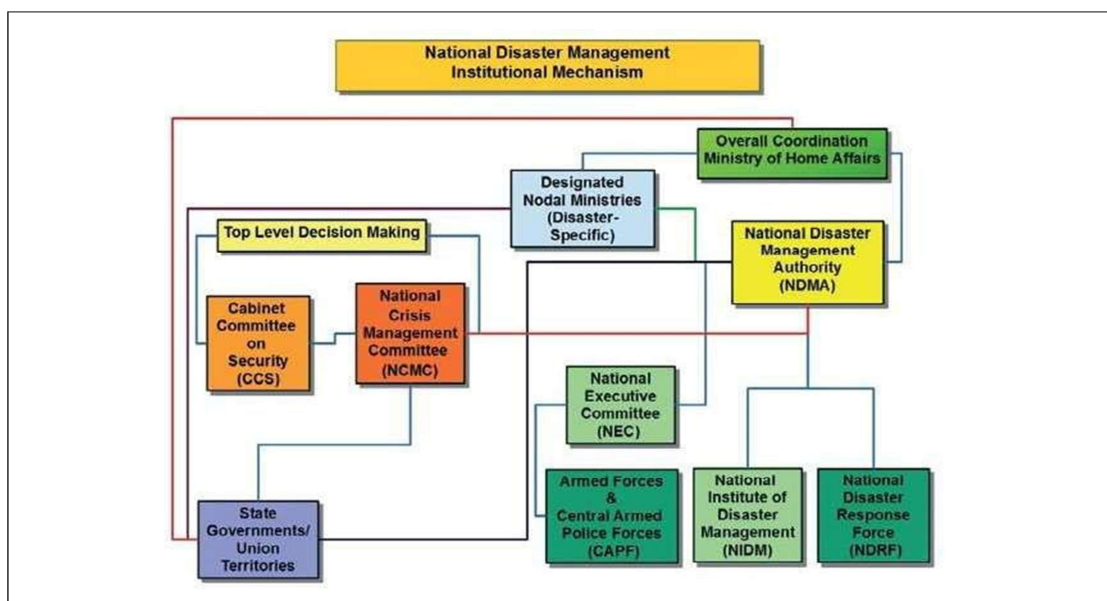


Figure2-1: National-level disaster management-basic institutional framework.

Table2-1: Key National-level decision-making bodies for disaster management

Sr No	Name	Composition	Vital Role
1.	Cabinet Committee on Security (CCS)	Prime Minister, Minister of Defence, Minister of Finance, Minister of Home Affairs, and Minister of External Affairs	• Evaluation from a national security perspective, if an incident has potentially security implications • Oversee all aspects of preparedness, mitigation and management of Chemical, Biological, Radiological and Nuclear (CBRN) emergencies and of disasters with security implications • Review risks of CBRN emergencies from time to time, giving directions for measures considered necessary for disaster prevention, mitigation, preparedness & effective response
2.	National Crisis Management Committee (NCMC)	Cabinet Secretary (Chairperson) Secretaries of Ministries/ Departments and agencies with specific DM responsibilities	• Oversee the Command, Control and • Give direction to the Crisis Management Group as deemed necessary • Give direction for specifications to face crisis situations
3.	National Disaster Management Authority (NDMA)	Prime Minister (Chairperson) Members (not exceeding nine, nominated by the Chairperson)	• Lay down policies, plans and guidelines for disaster management • Coordinate their enforcement and implementation throughout the country • Approve the NDMP and the DM plans of the respective Ministries and Departments of Government of India • Lay down guidelines for disaster management to be followed by the different Central Ministries, Departments and the State Governments
4.	National Executive Committee (NEC)	Union Home Secretary (Chairperson) Secretaries to the GOI in the Ministries/ Departments of Agriculture, Atomic Energy, Defence, Drinking Water and sanitation, Environment, Forests and	• To assist the NDMA in the discharge of its functions • Preparation of the National Plan • Coordinate and monitor the implementation of the National Policy • Monitor the implementation of the National Plan and the plans prepared by the Ministries or Departments of the Government of India • Direct any department or agency of the Govt. to make available to the NDMA or SDMA's such men, material or resources as are available.

		Climate Change Finance (Expenditure), Health and Family Welfare, Power, Rural Development, Science and Technology, Space, Telecommunications , Urban Development, Water Resources, River Development and Ganga Rejuvenation, The Chief of the Integrated Defence Staff of the Chiefs of Staff Committee, ex officio as members. Secretaries in the Ministry of External Affairs, Earth Sciences, Human Resource Development, Mines, Shipping, Road Transport and Highways and Secretary, NDMA are special invitees to the meetings of the NEC.	with it for the purpose of emergency response, rescue and relief. • Ensure compliance of the directions issued by the Central Government. • Coordinate response in the event of any threatening disaster situation or disaster. • Direct the relevant ministries/ Departments of the GOI, the State Governments and the SDMAs regarding measures to be taken in response to any specific threatening disaster situation or disaster. • Coordinate with relevant Central Ministries /Departments/Agencies which are expected to provide assistance to the affected State as per Operating Procedures (SOPs) Coordinate with the Armed Forces, Central Armed Police Forces⁶ (CAPF), the National Disaster Response Force (NDRF) and other uniformed services which comprise the GoI's response to aid the State authorities • Coordinate with India Meteorological Department (IMD) and a number of other specialized scientific institutions which constitute key early warning and monitoring agencies • Coordinate with Civil Defence volunteers, home guards and fire services, through the relevant administrative departments of the State Governments.
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5.	National Disaster Response Force (NDRF)	Specially trained force headed by a Director General, Structured and like paramilitary forces for rapid deployment	Provide assistance to the relevant State Government/District Administration in the event of an imminent hazard event or in its aftermath
6.	National Institute of Disaster Management (NIDM)	Union Home Minister; Vice Chairman, NDMA; Members including Secretaries of various nodal Ministries and Departments of Government of India and State Governments and heads of National level scientific, research and technical organizations, besides eminent scholars, scientists and practitioners.	- Human resource development and capacity building for disaster management with in the broad policies and guidelines laid down by the NDMA - Design, develop and implement training programmes - Undertake research - Formulate and implement a comprehensive human resource development plan - Provide assistance in national policy formulation, assist other research and training institutes, state governments and other organizations for successfully discharging their responsibilities - Develop educational materials for dissemination - Promote awareness generation

From time to time, the central government notifies hazard-specific nodal ministries to function as the lead agency in managing particular types of disasters (see Table 2-2 for current list of disasters specific nodal ministries notified by Government of India).

Table2-2: Nodal Ministry for Management/Mitigation of Different Disasters.

SN	Disaster	Nodal Ministry/Dept./Agency
1	Accident-Air (Civil Aviation)	Min. of Civil Aviation (MOCA)
2	Accidents-Rail	Min. of Railways (MOR)
3	Accidents-Road	Min. of Road Transport and Highways (MORTH)
4	Avalanche	Min. of Defence (MOD) - Border Road Organization (BRO)
5	Biological Emergencies	Min. of Health and Family Welfare (MHFW)
6	Cold Wave, Drought, Frost, Hailstorm, Pest Attack	Min. of Agriculture and Farmers Welfare (MAFW)
7	Cyclone/Tornado, Tsunami, Earthquake	Min. of Earth Sciences (MOES)
8	Flood	Min. of Jal Shakti (MOJS)
9	Flood - Urban	Min. of Housing and Urban Affairs (MHUA)
10	Forest Fire, Industrial and Chemical	Min. of Environment, Forests and Climate Change (MEFCC)
11	Landslides	Min. of Mines (MOM)
12	Oil Spills	Min. of Defence (MOD) - Indian Coast Guard (ICG)
13	Nuclear and Radiological	Dept. of Atomic Energy (DAE)
14	Disaster in mines	Min of Coal, Min of Mines.

2.1 National Disaster Management Authority (NDMA):

The Government of India established the NDMA in 2005, headed by the Prime Minister. Under the DM Act 2005, the NDMA, as the apex body for disaster management, shall have the responsibility for laying down the policies, plans, and guidelines for disaster management for ensuring timely and effective response to disaster. The guidelines of NDMA will assist the Central Ministries, Departments, and States to formulate their respective DM plans. It will approve the National Disaster Management Plans and DM plans of the Central Ministries/ Departments. It will take such other measures, as it may consider necessary, for the prevention of disasters, or mitigation, or preparedness and capacity building, for dealing with a threatening disaster situation or disaster. Central Ministries / Departments and State Governments will extend necessary cooperation and assistance to NDMA for carrying out its mandate. It will oversee the provision and application of funds for mitigation and preparedness measures.

NDMA has the power to authorise the Departments or authorities concerned, to make emergency procurement of provisions or materials for rescue and relief in a threatening disaster situation or disaster. The general superintendence, direction, and control of the National Disaster Response Force (**NDRF**) is vested in and will be exercised by the NDMA. The National Institute of Disaster Management (**NIDM**) works within the framework of broad policies and guidelines laid down by the NDMA. The NDMA has the mandate to deal with all types of disasters—natural or human-induced. However, other emergencies such as terrorism (counter-insurgency), law and order situations, hijacking, air accidents, CBRN weapon systems, which require the close involvement of these security forces and/or intelligence agencies, and other incidents such as mine disasters, port and harbour emergencies, forest fires, oilfield fires and oil spills will be handled by the National Crisis Management Committee (NCMC). Nevertheless, NDMA may formulate guidelines and facilitate training and preparedness activities in respect of CBRN emergencies.

2.2 National Institute of Disaster Management (NIDM):

As per the provisions of the Chapter-VII of the DM Act, Government of India constituted the National Institute of Disaster Management (NIDM) under an Act of Parliament with the goal of being the premier institute for capacity development for disaster management in India and the region. The vision of NIDM is to create a Disaster Resilient India by building the capacity at all levels for disaster prevention and preparedness. NIDM has been assigned nodal responsibilities for human resource development, capacity building, training, research, documentation, and policy advocacy in the field of disaster management. The NIDM has built strategic partnerships with various ministries and departments of the central, state, and local governments, academic, research and technical organizations in India and abroad and other bi-lateral and multi-lateral international agencies. It provides technical support to the state governments through the Disaster Management Centres (DMCs) in the Administrative Training Institutes (ATIs) of the States and Union Territories. Presently it is supporting as many as 30 such centres. Six of them are being developed as Centres of Excellence in the specialised areas of risk management—flood, earthquake, cyclone, drought, landslides, and industrial disasters.

2.3 National Disaster Response Force (NDRF):

The NDRF has been constituted as per the Chapter-VIII of the DM Act 2005 as a specialist response force that can be deployed in a threatening disaster situation or disaster. As per the DM Act, the general superintendence, direction and control of the NDRF shall be vested and exercised by the **NDMA**. The command and supervision of the NDRF shall vest with the Director General appointed by the Government of India. The NDRF will position its battalions at different locations as required for effective response. NDRF units will maintain close liaison with the designated State Governments and will be available to them in the event of any serious threatening disaster situation. The **NDRF** is equipped and trained to respond to situations arising out of natural disasters and CBRN emergencies. The NDRF units will also impart basic training to all the stakeholders identified by the State Governments in their respective locations. Further, a National Academy will be set up to provide training for trainers in disaster management and to meet related National and International commitments. Experience in major disasters has clearly shown the need for pre-positioning of some response forces to augment the resources at the State level at crucial locations including some in high altitude regions.

2.3.1 General–First and Key Responders:

The role and importance of community, under the leadership of the local authorities, Panchayati Raj Institutions (PRIs) and Urban Local Bodies (ULBs), being the bedrock of the process of disaster response, is well recognized. For their immediate support, there are other important first responders like the police, State Disaster Response Force (SDRFs), Fire and Medical Services. The NDRF will provide specialist response training whenever required. In serious situations, the resources of all NDRF battalions, on an as required basis, will be concentrated in the shortest possible time in the disaster affected areas. Other important responders will be the Civil Defence, Home Guards and youth organizations such as NCC, NSS and NYKS. The deployment of the armed forces will also be organized on as required basis.

2.3.2 Location, Constitution and Functions:

NDRF Battalions have been formed under the Disaster Management Act at 12 selected locations in the country for dealing with relief and rescue operations related to all types of disasters. The NDRF consists of battalions of Central paramilitary forces drawn from the Border Security Force (BSF), Indo-Tibetan Border Police (ITBP), Central Industrial Security Force (CISF) and Central Reserve Police Force (CRPF) for the purpose of specialist response in disaster situations. Each Battalion has 6 Companies comprising of 3 teams each. Team comprises of 45 men out of which 24 are for Search & Rescue and balance 21 for support functions. Short-listed & trained staff is on deputation in NDRF. **The Details of NDRF organization, 12 battalions & Locations of Regional Response Centres (RRC) of NDRF are brought out in Para 5.11 & 5.12 of Zonal Disaster Management Plan Part-2.**

As per the Disaster Management Act, various ministries and departments under Government of India should join hands for mutual assistance in case of a disaster. Assistance from local government and non-government agencies is invariably required by the railway administration for prompt relief and rescue operation in case of disasters affecting railways and, therefore, assistance of NDRF could be of great help to the railways. The rail infrastructure is not in an island away from the civil areas (of the Districts/States). In most cases of a disaster, other than a train accident, the State Governments as well as the Zonal Railways would, therefore, requisition the NDRF simultaneously (for the same disaster). Coordination amongst the affected agencies (many departments of the Central Government and the States) is very important before the help of NDRF is requisitioned.

2.3.3 Coordination with NDRF:

Zonal Railways should get in touch with NDRF offices at the nearby locations to have the first-hand knowledge of the resources available with them and also to familiarize them with railway related disaster situations and expose them to the issues relevant to the rescue and relief of passengers during railway accident. It has also been advised to associate NDRF in full scale exercise that is held once every year. There are no charges for availing the services of NDRF except the rail transportation which railways may provide at railways cost for attending to rail disasters. Railways may also have to provide rail transportation logistics for transporting NDRF team even in case of non-railway exigencies.

The Railway Board has empowered DRMs/CSOs to directly requisition the relevant NDRF battalion for relief and rescue operations depending on the gravity of situation so that their services could be made available expeditiously without any loss of time. NDRF Headquarter office, New Delhi will draw an annual calendar for zone/division-wise meeting between NDRF Battalion Commandants and Railway Safety officials for better coordination and management during disasters/major train accidents. NDRF battalion should carry out at least one or two mock exercises/coordination meeting with each zonal Railway in a year, for which an annual calendar will be issued by Board in consultation with NDRF HQs office.

2.4 State Level:

As per the DM Act of 2005, each state in India shall have its own institutional framework for disaster management. Among other things, the DM Act, mandates that each State Government shall take necessary steps for the preparation of state DM plans, integration of measures for prevention of disasters or mitigation into state development plans, allocation of funds, and establish EWS. Depending on specific situations and needs, the State Government shall also assist the Central Government and central agencies in various aspects of DM.

The DM Act mandates the setting of a State Disaster Management Authority with the Chief Minister as the ex officio Chairperson. Similar system will function in each Union Territory with Lieutenant Governor as the Chairperson. At the district level, District Disaster Management Authority (DDMA), the District Collector or District Magistrate or the Deputy Commissioner, as applicable, will be responsible for overall coordination of the disaster management efforts and planning. Figure- 2-2 provides schematic view of the typical state-level institutional framework does not imply any chain of command.

2.5 State Disaster Management Authority (SDMA):

As per provisions in Chapter-III of the DM Act, each State Government shall establish a State Disaster Management Authority (SDMA) or its equivalent under a different name with the Chief Minister as the Chairperson. In case of other UTs, the Lieutenant Governor or the Administrator shall be the Chairperson of that Authority. For the UT of Delhi, the Lieutenant Governor and the Chief Minister shall be the Chairperson and Vice-Chairperson respectively of the State Authority. In the case of a UT having Legislative Assembly, except the UT of Delhi, the Chief Minister shall be the Chairperson of the Authority established under this section. The SDMA will lay down policies and plans for DM in the State. It will, inter alia approve the State Plan in accordance with the guidelines laid down by the NDMA, coordinate the implementation of the State Plan, recommend provision of funds for mitigation and preparedness measures and review the developmental plans of the different Departments of the State to ensure the integration of prevention, preparedness and mitigation measures. The State Government shall constitute a State Executive Committee (SEC) to assist the SDMA in the performance of its functions. The SEC will be headed by the Chief Secretary to the State Government. The SEC will coordinate and monitor the implementations of the National Policy, the National Plan, and the State Plan. The SEC will also provide information to the NDMA relating to different aspects of DM.

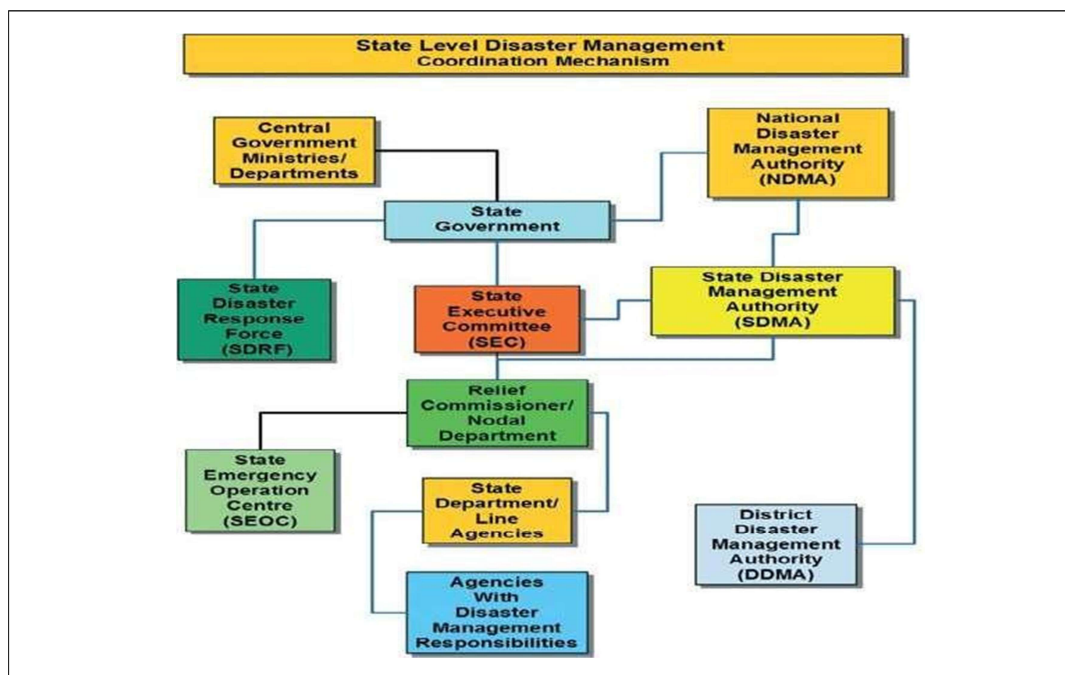


Figure2.2: State level Disaster Management–Basic Institutional framework

2.6 District Disaster Management Authority (DDMA):

As per provisions in Chapter-IV of the DM Act, each State Government shall establish a District Disaster Management Authority for every district in the State with such name as may be specified in that notification. The DDMA will be headed by the District Collector, Deputy Commissioner, or District Magistrate as the case may be, with the elected representative of the local authority as the Co-Chairperson. The State Government shall appoint an officer not below the rank of Additional Collector or Additional District Magistrate or Additional Deputy Commissioner, as the case may be, of the district to be the Chief Executive Officer of the District Authority. The DDMA will act as the planning, coordinating and implementing body for DM at the District level and take all necessary measures for the purposes of DM in accordance with the guidelines laid down by the NDMA and SDMA. It will, inter alia, prepare the DM plan for the District and monitor the implementation of the all relevant national, state, and district policies and plans. The DDMA will also ensure that the guidelines for prevention, mitigation, preparedness, and response measures laid down by the NDMA and the SDMA are followed by all the district-level offices of the various departments of the State Government.

2.7 Plan Implementations:

The DM Act 2005 enjoins central and state governments to make provisions for the implementation of the disaster management plans. In this respect, the sections of the DM Act 2005 applicable for national, state, and district DM plans are 11, 23, and 31. The Chapters V and VI of the DM Act spell out the responsibilities of the central, state, and local governments with respect to disaster management. The DM Act states that every Ministry or Department of the Government of India shall make provisions, in its annual budget, for funds for the purposes of carrying out the activities and programmes set out in its disaster management plan. The Act mandates that every Ministry and Department of the Government of India and every state must prepare a DMP in accordance with the NDMP. Annually, respective DM authorities must review and update their DM plans. Central ministries and state governments will integrate DRR into their development policy, planning and programming at all levels. They must adopt a holistic approach and build multi-stakeholder partnerships at all levels, as appropriate, for the implementation of the DM plans. Depending on its nature, different components of the NDMP will be implemented within a span of five, ten, or fifteen years. The plan is highly ambitious and the complete implementation of all elements across the country may take a very long time. Never the less, both central and state governments have already made considerable progress and they are expected to make since re efforts for the implementation of the DM plans. The NDMA has prepared and published hazard-specific guidelines and reports covering various aspects of disaster management and including a separate one for response, details are listed below.

Table 2.3: NDMA's Guidelines on Disaster Management: -

1.	Management of Chemical Disaster (Industrial)	2007
2.	Management of Earthquakes	2007
3.	Formulation of State Disaster Management Plans	2007
4.	Management of Floods	2008
5.	Medical Preparedness & Mass Casualty Management	2008
6.	Management of Cyclones	2008
7.	Management of Biological Disasters	2008
8.	Management of Nuclear & Radiological Emergencies	2009
9.	Management of Chemical (Terrorism) Disasters	2009
10.	Management of Landslides and Snow Avalanches	2009
11.	National Policy on Disaster Management	2009
12.	Psycho-Social Support & Mental Health Services in Disasters	2009
13.	Incident Response System Guidelines	2010
14.	Management of Tsunamis	2010
15.	Management of Urban Flooding	2010
16.	Drought Management	2010
17.	National Disaster Management Information & Communication System	2012

18.	Scaling, type of Equipment and Training of Fire services	2012
19.	Guidelines for Seismic Retrofitting of Deficient Buildings and structures	2014
20.	Guidelines on Management of Hospital Safety	2016
21.	Guidelines on Management of School Safety	2016
22.	Guidelines for Preparation of Action Plan-Prevention and Management of Heat-wave	2016

Table2.4: NDMA Reports (As Broad Guidelines) on disaster Management: -

1. Revamping of Civil Defence.
2. NIDM's Functioning.
3. Pandemic Preparedness Beyond Health.
4. Disaster Response Training at the Centre & States.
5. NDRF and SDRF.
6. Strengthening Safety/Security in Transportation of POL Tankers.
7. Threats to Municipal Water Supply and Water Reservoirs.
8. Mechanism to Detect, Prevent and Respond to Radiological Emergencies.
9. Management of Dead in the Aftermath of Disaster.
10. Minimum Standards of Relief.
11. Role of NGOs in Disaster Management.
12. Pilot Project on Capacity Building for advanced Trauma Life Support in India.
13. Capacity Building in Disaster Management for Government Officers and Representative of Panchayat Raj Institution and Urban District Level.
14. Training Regime for Disaster Response.
15. Hand Book for Training and Capacity Building of Civil Defence & sister Organisations (part-I)
16. Hand Book for Training and Capacity Building of Civil Defence & sister Organisations (part-II)
17. Managing Crowd at Events and Venues of Mass Gathering.
18. Cyclone Hudhud-Strategies and lessons for preparing better & strengthen risk resilience in coastal regions of India.

CHAPTER-3**REDUCING RISK AND ENHANCING RESILIENCE****3.1 Background:**

The Disaster Management Act, 2005 and the National Policy, 2009 marks the institutionalization of paradigm shift in disaster management in India, from a relief-centric approach to one of proactive prevention, mitigation and preparedness. The Policy notes that while it is not possible to avoid natural hazards, adequate mitigation and disaster risk reduction measures can prevent the hazards becoming major disasters. Disaster risk arises when hazards interact with physical, social, economic and environmental vulnerabilities. The National Policy suggests a multi-pronged approach for disaster risk reduction and mitigation consisting of the following:

- Integrating risk reduction measures in to all development projects.
- Initiating mitigation projects in identified high priority areas through joint efforts of the Central and State Governments.
- Encouraging and assisting State level mitigation projects.
- Paying attention to indigenous knowledge on disaster and coping mechanisms.
- Giving due weightage to the protection of heritage structures.

In the terminology adopted by the "United Nations International Strategy for Disaster Reduction" (UNISDR), the concept and practice of reducing disaster risks involve systematic efforts to analyse and manage the causal factors of disasters, including through reduced exposure to hazards, lessened vulnerability of people and property, wise management of land and the environment, and improved preparedness for adverse events. While both the terms "Disaster Reduction" and "Disaster Risk Reduction" (DRR) are widely used, the latter provides a better recognition of the ongoing nature of disaster risks and the ongoing potential to reduce these risks. Mitigation consists of various measures required for lessening or limiting the adverse impacts of hazards and related disasters.

The disaster risk reduction and mitigation plan integrate the global targets in to the national efforts and seeks to strengthen significantly India's reliance to both natural and human-induced disasters. The DM Act 2005 defines "Mitigation" as measures aimed at reducing the risk, impact, or effects of a disaster or threatening disaster situation." Goal of mitigation is to minimize risks from multiple hazards and the threats from individual hazards need not always occur in isolation. At times, a hazardous event can trigger secondary events. For example, an earthquake can produce a tsunami or may create flooding or landslides. Similarly, cyclones often lead to flooding and various other cascading events spread over an area wider than the primary event. In addition, demographics, nature of human settlements, and effects of global climate change can magnify the vulnerability of the communities at risk. The DM Plan, therefore, focuses on enhancing the mitigation capabilities for multiple hazards and their likely cascading effects.

Guiding principle of Sendai Framework states that disaster risk reduction requires responsibilities to be shared by different divisions of governments and various agencies. The effectiveness in disaster risk reduction will depend on coordination mechanisms within and across sectors and with relevant stakeholders at all levels. For each hazard, the approach used in national plan incorporates the for priorities enunciated in the Sendai Framework in to the planning framework for Disaster Risk Reduction under the five thematic areas for action.

1. Understanding Risk
2. Inter-Agency Coordination
3. Investing in DRR-Structural Measures
4. Investing in DRR-Non-Structural Measures
5. Capacity Development

For each of these thematic areas for action, asset of major themes have been identified for inclusion in the planning framework.

3.1.1 Understanding Risk:

This thematic area for action focuses on understanding disaster risk, the Priority-1 in the Sendai Framework integrates into its numerous actions needed for strengthening disaster resilience. The major themes for action are: a) Observation Networks, Information Systems, Research, Forecasting, b) Zoning/Mapping, c) Monitoring and Warning Systems, d) Hazard Risk and Vulnerability Assessment (HRVA), and e) Dissemination of Warnings, Data, and Information. Having adequate systems to provide warnings, disseminate information, and carryout meaningful monitoring of hazards are crucial to disaster risk reduction, and improving resilience. They are also an integral part of improving the understanding of risk.

3.1.2 Inter-Agency Coordination:

Inter-agency coordination is a key component of strengthening the disaster risk governance - Priority - 2 of the Sendai Framework. The major themes for action required for improving the top-level interagency coordination are a) Overall disaster governance b) Response c) Providing warnings, information, and data and d) Non-structural measures. The central ministries and agencies mentioned are those vested with hazard-specific responsibilities by the Govt. of India or those expected to play major roles in the thematic areas given in the matrix.

3.1.3 Investing in DRR–Structural Measures:

Undertaking necessary structural measures is one of the major thematic areas for action for disaster risk reduction and enhancing resilience. These consist of various physical infrastructure and facilities required to help communities cope with disasters. The implementation of these measures is essential to enhance disaster preparedness, a component of Priority-4 of the Sendai Framework. It is also an important component of investing in disaster risk reduction for resilience, which is Priority-3 of Sendai Framework.

3.1.4 Investing in DRR–Non-Structural Measures:

Sets of appropriate laws, mechanisms, and techno-legal regimes are crucial components in strengthening the disaster risk governance to manage disaster risk, which is Priority-2 of the Sendai Framework. These non-structural measures comprising of laws, norms, rules, guidelines, and techno- legal regime (e.g., building codes) framework and empowers the authorities to mainstream disaster risk reduction and disaster resilience into development activities. The central and state governments will have to set up necessary institutional support for enforcement, monitoring, and compliance.

3.1.5 Capacity Development:

Capacity development is a theme in all the thematic areas for action. The Sendai Priority-2. (Strengthening DRR governance to manage DR) and Priority-3 (Investing in DRR for resilience) are central to capacity development. The capacity development includes training programs, curriculum development, large-scale awareness creation efforts, and carrying out regular mock drills and disaster response exercises. The capabilities to implement, enforce, and monitor various disaster mitigation measures has to be improved at all levels from the local to the higher levels of governance. It is also strengthening the DRR governance at all levels to better manage risk and to make the governance systems more responsive.

3.1.6 Hazard-wise Responsibility Matrices for Disaster Risk Mitigation:

For the DM plans to succeed, it is necessary to identify various stakeholders/agencies and clearly specify their roles and responsibilities. At all levels - from local to the centre - the relevant authorities must institutionalise programmes and activities at the ministry/department levels, and increase inter-ministerial and inter-agency coordination and networking. They must also rationalize and augment the existing regulatory framework and infrastructure. For each hazard, in the subsections that follow, themes for action are present. Each has a separate responsibility matrix for each of the five thematic areas for action. It must be noted that the role of the central agencies is to support the disaster-affected State or the UT in response to requests for assistance. However, the central agencies will play a pro-active role in disaster situations. In the domains of DM planning, preparedness, and capacity building, the central agencies will constantly work to upgrade Indian DM systems and practices as per global trends. This section covers the hazards relevant to Indian Railways listed below:

- 1) Train Accidents
- 2) Cyclone and Wind
- 3) Floods
- 4) Seismic
- 5) Tsunami
- 6) Landslides and Snow Avalanches

3.2 Understanding Disaster Risk, Investing, capacity development and Mitigation

Planning framework for Disaster Risk Reduction under the above five thematic areas mentioned in para 3.1 for all the six hazards mentioned in para 3.1.6 has been detailed in section 3.1.7 of Railway Board Disaster Management Plan under the head of Disaster Risk Reduction measures. This has been summarised as follows:

3.2.1 Train Accidents:

1. Collisions
2. Derailments
3. Fire
4. Manned & Unmanned Level Crossing

The “**Responsibility of Zone in Disaster Risk Reduction – Action Framework**” in these Type of Disasters mainly pertains to Implementation of “Board’s Policies & Guidelines” laid down by the executive departments and Preparedness for facing these situations by conducting mock trials.

3.2.2 Natural Disasters:

1. Cyclone and Wind
2. Floods
3. Seismic
4. Tsunami
5. Landslides and Snow Avalanches

The “**Responsibility of Zone in Disaster Risk Reduction–Action Framework**” in Natural Disasters mainly pertains to:

- i Preparation of Implementation of “Board’s Policies & Guidelines” laid down by the executive departments
- ii Adapting of Norms/Codes.
- iii Support & Coordination-for collection of warning Data
- iv Preparation of detailed maps identifying vulnerable locations.
- v Coordination with state authorities and disseminate early warning signals to Divisional Authorities.
- vi Implementation of Disaster Management Plans.
- vii Training and orientation of all concerned staff.
- viii Preparedness for facing these situations by conducting mock trials.

Railway Board’s Disaster Management Plan (Chapter-3 Para 3.2 for Train Accidents & Para 3.3 for Natural Disasters) may be referred for detailed measures of Disaster Risk Reduction. The actionable aspects of the above are elaborated in Chapter - 4 & also in specific chapters for disasters.

CHAPTER-4**PREPAREDNESS AND RESPONSE****4.0.1 Background:**

Response measures are those taken immediately after receiving early warning from the relevant authority or in anticipation of an impending disaster, or immediately after the occurrence of an event without any warning. The primary goal of response to a disaster is saving lives, protecting property, environment, and meeting basic needs of human and other living beings after the disaster. Its focus is on rescuing those affected and those likely to be affected by the disaster. The UNISDR (United Nations International Strategy for Disaster Reduction Now UNDRR United Nations Office for Disaster Risk Reduction) defines response as “the provision of emergency services and public assistance during or immediately after a disaster in order to save lives reduces health impacts, ensure public safety and meet the basic subsistence needs of the people affected.”

Preparedness, as defined by UNISDR, consist of “the knowledge and capacities developed by governments, professional response and recovery organizations, communities and individuals to effectively anticipate, respond to, and recover from, the impacts of likely, imminent or current hazard events or conditions. “Based on the preparedness, the response process begins as soon as it becomes apparent that a disastrous event is imminent and lasts until the disaster is declared to be over. It is conducted during periods of high stress in highly time-constrained situations with limited information and resources. It is considered as the most visible phase amongst various phases of disaster management. Response includes not only those activities that directly address the immediate needs, such as search and rescue, first aid and temporary shelters, but also rapid mobilization of various systems necessary to coordinate and support the efforts. For effective response, all the stakeholders need to have a clear vision about hazards, its consequences, clarity on plans of action and must be well versed with their roles and responsibilities.

Any emergency requires a quick response to save lives, contain the damage and prevent any secondary disasters. In most cases, first responders such as members of Incident Response Teams (IRT) of district, block, or other agencies (medical fire, police, civil supplies, municipalities) manage emergencies immediately at the local level. If an emergency escalates beyond their capabilities, the local administration must seek assistance from the district administration or the State Government. If State Government considers it necessary, it can seek central assistance.

The Cabinet Committee on Security (CCS) deals with issues related to defence of the country, law and order, and internal security, policy matters concerning foreign affairs that have internal or external security implications, and economic and political issues impinging on national security. CCS will be involved in the decision making if the disaster has serious security implications. The National Executive committee (NEC) will coordinate response in the event of any threatening disaster situation or disaster where central assistance is needed. The NEC may give directions to the relevant Ministries/Departments of the Government of India, the State Governments, and the State Authorities regarding measures to be taken by them in response to any specific threatening disaster situation or disaster as per needs of the State.

The National Disaster Management Authority (NDMA) is mandated to deal with all types of disasters; natural or human-induced. The general superintendence, direction and control of the National Disaster Response Force (NDRF) is vested in and will be exercised by the NDMA. The National Crisis Management Committee (NCMC) will deal with major crises that have serious or National ramifications. These include incidents such as those requiring close involvement of the

security forces and/or intelligence agencies such as terrorism (counter-insurgency), law and order situations, serial bomb blasts, hijacking, air accidents, CBRN (Chemical, Biological, Radiological, and Nuclear), weapon systems, mine disasters, port and harbour emergencies, forest fires, oilfield fires, and oil spills.

The immediate response in the event of a disaster lies with the local authorities with the support of the State Government. The Union Government supplements their efforts through providing logistic and financial support, deploying NDRF, Armed Forces, Central Armed Police Force (CAPF), and other specialized agencies like in case of CBRN disaster. It will depute experts to assist the State Government in planning and its implementation, during severe natural or human- induced disasters as requested by the State Government.

4.0.2 Institutional Framework

Chapter-2 provided an overview of the institutional arrangements covering all aspects of disaster management. There are specific tasks, roles and responsibilities in the domain of response, which as mentioned before, is the most critical and time-sensitive aspect of disaster management. This section summarizes the function and responsibilities of Ministries and agencies that have a key role to play in disaster response as per current guidelines. The plan will be updated periodically to reflect any changes in the key roles envisaged to particular ministries or agencies.

No single agency or department can handle a disaster situation of any scale alone. Different departments have to work together to manage the disaster with an objective to reduce its impact. Section 37(a) of the DM Act, 2005 mandates that Departments / Ministries of Central Government prepare disaster management plans keeping mitigation, preparedness and response elements in to consideration. Sections 22(2), 24, 30 and 34 of the DM Act, 2005 have clearly laid down various duties relating to DM to be performed by various agencies.

The institutional arrangements for the response system consist of the following elements:

- 4.1.1.1 Nodal Central Ministries with disaster-specific responsibilities for national-level coordination of the response and mobilization of all the necessary resources.
- 4.1.1.2 Central agencies with disaster-specific responsibilities for Early Warning Systems and alerts.
- 4.1.1.3 National Disaster Response Force (NDRF).
- 4.1.1.4 State Disaster Response Force (SDRF).

There will be National Emergency Operations Centre (NEOC) known as NEOC-1 under the MHA and NEOC-2 under the National Disaster Management Authority (NDMA). It will be connected to the following control rooms:

- a) All agencies designated to provide early warning information about hazard events.
- b) State Emergency Operations Centre (SEOC)
- c) District Emergency Operations Centre (DEOC)
- d) NDRF
- e) Integrated Defence Staff (IDS)
- f) MEA
- g) CAPFs

4.0.3 National Early Warning System:

4.0.3.1 Central Agencies Designated for Natural Hazard-Specific Early Warnings.

The GOI has designated specific agencies to monitor the onset of different Natural Disasters, setup adequate Early Warning Systems (EWS), and disseminate necessary warnings/alerts regarding any impending hazard, for all those hazards where early warning and monitoring is possible with the currently available technologies and methods. These agencies provide inputs to the MHA, which will issue alerts and warnings through various communication channels. The agencies responsible for EWS will maintain equipment in proper functioning order and conduct simulation drills to test their efficacy.

The details of Central Agencies Designated for Natural Hazard-Specific Early Warnings are detailed below:

SN	Hazard	Ministry	Agencies
1.	Avalanches	MOD	Snow and Avalanche Study Establishment (SASE)
2.	Cold Wave	MOES	India Meteorological Department (IMD)
3.	Cyclone	MOES	India Meteorological Department (IMD), Regional Specialized Meteorological Centre (RSMC), Tropical Cyclone Warning Centres (TCWC) for different regions.
4.	Drought	MAFW	Central Drought Relief Commissioner (CDRC) and Crop Weather Watch Group (CWWG)
5.	Earthquake	MOES	India Meteorological Department (IMD)
6.	Epidemics	MHFW	Ministry of Health and Family Welfare (MHFW)
7.	Floods	MOJS	Central Water Commission (CWC)
8.	Heat Wave	MOES	India Meteorological Department (IMD)
9.	Landslides	MOM	Geological Survey of India (GSI)
10.	Tsunami	MOES	India National Centre for Oceanic Information Services (INCOIS)

On their part, the relevant State Government and district administration shall disseminate such alerts and warnings on the ground through all possible methods of communications and public announcements.

4.0.3.2 Role of Central Agencies/Departments

The National Emergency Operations Centre (NEOC) will act as the communication and coordination hub during this phase and it will maintain constant touch with early warning agencies for updated inputs. It will inform State Emergency Operations Centre (SEOC) and District Emergency Operations Centre (DEOC) through all the available communication channels and mechanisms. The DM Division of the MHA will communicate and coordinate with designated early warning agencies, various nodal Ministries, and State Governments. It will mobilise reinforcements from the NDRF, Armed Forces and the CAPFs and put together transportation plans for moving resources. The NDMA will support the overall coordination of response as per needs of MHA. The NDMA will be providing general guidance, and take decisions for the deployment of the NDRF. The NDRF will be deployed as required depending on the request from State Government. They will keep the force in operational readiness at all times.

4.0.4 Coordination of Response at National Level

At the national level, the Central Government has assigned nodal responsibilities to specific Ministries for coordinating disaster-specific responses. As described in Chapter-1, the NEC will coordinate response in the event of any threatening disaster situation or disaster. The State Government will activate the IRTs at State, District, or block level and ensure coordination with the SEOC. The SDMA will provide the technical support needed to strengthen the response system. It is essential that the first responders and relief reach the affected areas in the shortest possible time. Often, there are inordinate delays due to real constraints imposed by the location, nature of disaster and, most regrettably, due to inadequate preparedness. In many situations, even a delay of six to twelve hours will prove to be too late or unacceptable. To make matters worse, relief tends to arrive in a highly fragmented or uncoordinated form with multiple organisations acting independently of each other without a cohesive plan, without mechanisms to avoid overlaps and without proper prioritization of different aspects of relief such as shelter, clothing, food, or medicine. From an operational perspective, the challenges are similar across most hazards. The NDMA has formulated IRS Guidelines for the effective, efficient, and comprehensive management of disasters. The implementation of NDMA's IRS Guidelines by the States will help in standardization of operations, bring clarity to the roles of various departments and other agencies, which are common to most disaster response situations.

The details of Central Ministries for Coordination of Response at National level are tabulated below:

SN	Disaster	Nodal Ministry/Dept./Agency
1	Accident-Air (Civil Aviation)	Min. of Civil Aviation (MOCA)
2	Accidents-Rail	Min. of Railways (MOR)
3	Accidents-Road	Min. of Road Transport and Highways (MORTH)
4	Avalanche	Min. of Defence (MOD) - Border Road Organization (BRO)
5	Biological Emergencies	Min. of Health and Family Welfare (MHFW)
6	Cold Wave, Drought, Frost, Hailstorm, Pest Attack	Min. of Agriculture and Farmers Welfare (MAFW)
7	Cyclone/Tornado, Tsunami, Earthquake	Min. of Earth Sciences (MOES)
8	Flood	Min. of Jal Shakti (MOJS)
9	Flood - Urban	Min. of Housing and Urban Affairs (MHUA)
10	Forest Fire, Industrial and Chemical	Min. of Environment, Forests and Climate Change (MEFCC)
11	Landslides	Min. of Mines (MOM)
12	Oil Spills	Min. of Defence (MOD) - Indian Coast Guard (ICG)
13	Nuclear and Radiological	Dept. of Atomic Energy (DAE)
14	Disaster in mines	Min of Coal, Min of Mines

The state and district administration shall identify sites for establishment of various facilities as mentioned in the IRS guidelines such as Incident Command Post, relief camp, base, staging area, camp, and helipad, for providing various services during the response. The state and local administration must widely disseminate and publicise information about these arrangements as mandated in the SDMP and DDMP. Since disaster response operations are multifaceted, time sensitive, extremely fast-moving, and mostly unpredictable, it requires rapid assessment, close coordination among several departments, quick decision-making, fast deployment of human resources and machinery as well as close monitoring. In order to prevent delays and to eliminate ambiguities with regard to chain of command, the SDMP and DDMP must clearly spell out the response organization as per IRS. These plans must clearly identify the personnel to be deputed for various responsibilities in the IRT at various levels of administration along with proper responsibility and accountability framework. Provision for implementation of unified command in case of involvement of multiple agencies such as Army, NDRF, CAPF, and International Urban

Teams Search and Rescue must be spelt out in the SDMP. From time to time, the DM plan must be tested and rehearsed by carrying out mock exercises.

4.0.5 Fire and Emergency Services (FES):

The primary role of Fire and Emergency Service (FES) is of responding to fire incidents. However, besides fire-fighting, FES attends to other emergencies such as building collapse, road traffic accidents, human and animal rescue, and several other emergency calls. FES also takes part in medical emergencies. The role of FES has become multi-dimensional. The role of FES extends to the domain of prevention, especially in urban areas. FES is an integral part of the group of agencies responding to disaster situations. FES is one of the first responders during the Golden Hour after a disaster and plays a vital role in saving lives and property. Therefore, it is imperative to adequately equip and develop the capacities of FES. Further, continuous training should also be provided to the fire staff in using and maintaining the equipment.

Fire and Emergency Service is a key element in the emergency response system. It comes under the 12th schedule of the Constitution dealing with municipal functions. At present, States and UTs, and ULBs are managing the FES. The MHA and NDMA will render technical advice to the States, UTs, and Central Ministries on fire protection, prevention, and related legislation. While in several States, FES is under the jurisdiction of Municipal Corporations, in others it is under the respective Home Department. Only a few States have enacted their own Fire Act. As on today, there is no standardization with regard to the scaling of equipment, the type of equipment, or the training of their staff. In each State it has grown according to the initiatives taken by the States and the funds provided for the FES. Government of India has taken many initiatives to strengthen the techno-legal regime for fire safety. Apart from initiating major legal changes, Government is also reviewing many laws that have to be amended. Government of India has also taken steps for institutional reforms and organizational restructuring of FES. However, it is the responsibility of the State Governments to implement the major changes for the modernization of the FES to make them more effective.

4.0.6 Responding to Requests for Central Assistance from States:

Catastrophic disasters like earthquakes, floods, cyclones and tsunami result in a large number of casualties and inflict tremendous damage on property and infrastructure. The Government of India has established a flexible response mechanism for a prompt and effective delivery of essential services as well as resources to assist a State Government or Union Territory severely hit by a disaster. Disaster management is considered as the responsibility of the State Governments, and hence the primary responsibility for undertaking rescue, relief and rehabilitation measures during a disaster lies with the State Governments. The Central Government supplements their efforts through logistic and financial support during severe disasters as requested by the State Governments. Responding to such emergencies stretches the resources of district and State administration to the utmost and they may require and seek the assistance of Central Ministries/Departments and agencies like the NDRF, Armed Forces, CAPF, and Specialized Ministries/Agencies.

4.0.7 Management of Disasters impacting more than one State:

At times, the impact of disasters occurring in one State may spread over to the areas of other States. Similarly, preventive measures in respect of certain disasters, such as floods, etc. may be required to be taken in one State, as the impact of their occurrence may affect another. The administrative hierarchy of the Country is organized into National, State and District level

administrations. This presents challenges in respect of disasters impacting more than one State. Management of such situations calls for a coordinated approach, which can respond to a range of issues quite different from those that normally present themselves—before, during and after the event. The NCMC (National Crisis Management Committee) will play a major role in handling such multi-state disasters. The NDMA will encourage identification of such situations and promote the establishment of mechanisms for coordinated strategies for dealing with them by the States and Central Ministries, departments and other relevant agencies.

4.0.8 Major Tasks and the Responsibilities – Centre and State:

While there are disaster-specific aspects to the post-disaster response, the emergency functions are broadly common to all disasters and there are specific ministries, departments, or agencies that can provide that emergency response. Besides, very often, there are multiple hazards and secondary disasters that follow a major disaster. Hence, response intrinsically follows a multi-hazard approach. Therefore, all the response activities have been summarized in a single matrix applicable to all types of disasters. The response responsibility matrix specifies the major theme of response. It specifies the agencies from the Central and State Government responsible for the major theme of response. All agencies responsible for response should follow the NDMA's IRS guidelines, which will help in ensuring proper accountability and division of responsibilities. Different ministries and departments have to provide specialized emergency support to the response effort. Certain agencies of Central Government will play a lead role, while others will be in a supporting role. The SDMA, CoR, or the Dept. of Revenue is the nodal agency at the state level for coordination of response. The DDMA is the nodal agency for coordination of response at District level. Various central ministries, departments, agencies, and state governments have to prepare their own hazard specific response plans as per guidelines of the NDMA and in line with the NDMP. They need to ensure preparedness for response at all times and must carry out regular mock drills and conduct tests of readiness periodically, and the ministries/departments must report the status to the NDMA. The major tasks of response given in the responsibility matrix is:

1. Early Warning, Maps, Satellite inputs, Information Dissemination
2. Evacuation of People and Animals
3. Search and Rescue of People and Animals
4. Medical care
5. Drinking Water/Dewatering Pumps /Sanitation Facilities/Public Health
6. Food & Essential Supplies
7. Communication
8. Housing and Temporary Shelters
9. Power
10. Fuel
11. Transportation
12. Relief Logistics and Supply Chain Management
13. Disposal of animal carcasses
14. Fodder for livestock in car city-hit areas
15. Rehabilitation and Ensuring Safety of Livestock and other Animals, Veterinary Care
16. Data Collection and Management
17. Relief Employment
18. Media Relations

4.0.9 Responsibility Matrix for Preparedness and Response

Preparedness and Response								
S. No.	Major Theme	Central/State Agencies and their Responsibilities						
		Centre	Responsibility Centre	State	Responsibility-State	R.B.	Zonal HQ	Divisional HQ
1.	Early Warning, Maps, Satellite inputs, Information Dissemination	Lead Agencies: IMD, CWC, INCOIS, SASE, GSI, BRO, MoIB, MoES, MoWR, MoAFW, Support Agencies: Sol, NRSC, DoT, MHA, NDMA, MoCIT, hazard specific Nodal ministries	- Issue forecasts, alerts, warnings - Provide early warnings (wherever possible) to reduce loss of life and property. - Disseminating warnings and information to all Central Ministries/Departments/Agencies and State Government - Use of Satellite imageries and other scientific methods for risk assessment and forecasting	State/UT, SDMA, Revenue Dept., CoR, SEOC, DDMA, all other relevant Department/Agencies	- To disseminate early warning signals to the district administration, local authorities, and the public at large in the areas likely to be affected by a disaster so as to reduce loss of life and property - Dissemination of warnings and information up to the last mile - Ensure appropriate compilation/analysis of received data - Use of satellite imageries and other scientific methods for risk assessment and forecasting	CE Directorate- Co-ordination with the Ministries and Railway Zones.	Engineering Department – To Coordinate with state Authorities and to disseminate early warning signals to Divisional Authorities.	Engineering Department– To Coordinate with Local Authorities and to disseminate early warning signals/ Information to last mile.

Preparedness and Response								
S. No.	Major Theme	Central/State Agencies and their Responsibilities						
		Centre	Responsibility Centre	State	Responsibility-State	R.B.	Zonal HQ	Divisional HQ
2.	Evacuation of People and Animals	Lead Agency: MHA Support Agencies: MoD,CAPF, MoRTH, MoR, MoCA, ministries/depts. with hazard specific responsibilities, NDRF, Civil Defence	- On request, support the affected state government in evacuation of people and animals from areas likely to be affected by major disaster. Special situations: - Evacuation of large numbers of people from far flung areas and islands (e.g., Andaman and Nicobar Islands, Lakshadweep Islands, etc. in cases of cyclone) - Evacuation of visitors/pilgrims stranded in remote Himalayan regions on account to inclement weather, landslides, flashfloods & avalanches - Evacuation of fishermen from the highseas in case of a cyclone	State/UT, SDMA, Revenue Dept., CoR,SEOC, FES, DDMA, all other relevant Departments /Agencies, SDRF, Civil Defence	- Quick assessment of evacuation needs such as the number of people and animals to be evacuated and mode of evacuation - Mobilize transport and resources for evacuation - Identify and prepare sites for temporary relocation of affected people and animals - Identify requirements of resources for Evacuation such as helicopters, aircrafts, high-speed boats and Ships to be provided to the affected state Government. - Request for central resources, if needed - Coordinate with central agencies to Mobilise required resources - Monitor the situation Earmark resources/ units/	TT Directorate - Co-ordination with the Ministries and Railway Zones	Operating Department – Coordinate with RB and State Authorities	Operating Department – Coordinate with HQs and Local Authorities

					battalions of SDRF for quick deployment • Prepare handbook/manuals and SOP for evacuation of people and animals • Undertake Review and revise DMPs and SOPs after each major incident • Prepare evacuation plan taking in to account local conditions and periodically update it • Under take mock/simulation drills • Prepare operational check lists • Prepare list of agencies/ organizations who could assist in evacuation • Web-based resource inventory and its regular updates			
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Preparedness and Response								
S. No	Major Theme	Central/State Agencies and their Responsibilities						
		Centre	Responsibility Centre	State	Responsibility-State	R.B.	Zonal HQ	Divisional HQ
3.	Search and Rescue of People and Animals	Lead Agencies: MHA, NDMA, NDRF Support Agencies: MoD,CAPF, MoHFW, MHA, MoRTH, MoCA, MoR, ministries/ Departments with hazard specific responsibilities, Civil Defence	- Fail safe communication between early Warning agencies and EOC of Central and State/ District, Central Min. - Adequate NDRF support in a state of readiness to move at a short notice - MoU with suppliers for blankets, tarpaulins, tents, boats, inflatable lights, torches, ropes, etc. with a condition that they will be supplied at short notice (usually within 24hours) from the placement of order - SOPs for sending rescue/ Relief material from other adjoining States to the affected state immediately - Support of Armed Forces and CAPF as per requirement	State/UT, SDMA, Revenue Dept., CoR,SEOC, SDRF,FES,DD MA, All other relevant Departments /Agencies, Civil Defence	- Various positions of IRTs (State, District, Sub- division & Tehsil) are trained and active for response at the irrespective administrative jurisdiction - SDRF teams are trained, equipped & ready to move at a short notice. - Strategic stationing of state-of-the-art equipment for search rescue & response with dedicated trained manpower - MoU with suppliers for blankets, tarpaulins, tents, boats, inflatable lights, torches, ropes, etc. with a condition that they will be supplied quickly (usually within 24 hours) - Nodal officer selected for coordination is in touch with MHA/NDMA for additional requirements	Safety Directorate-Coordination with NDRF/NDMA Mechanical directorate – Policy/ Planning of rescue centric equipment and training of staff. Establishment – Developing and conducting training Modules.	Safety Department – Coordination with NDRF/ SDRF Mechanical Department – Upgrading/ Maintenance of ARTs/ ARMVs /SPARTs Rescue equipment, training of ART/ARMV/ SPARTs Personnel Staff in rescue operations. Personnel Department – Organising and monitoring rescue centric Training to ART/ARMV/ SPARTs staff.	Safety Department – Coordination with NDRF/SDRF Mechanical Department – Rescue of passengers, Maintenance of ARTs/ARMVs/SP ARTs rescue equipment and training of ART/ARMV/ SPARTs staff in rescue operations. Personnel Department – Organising and monitoring rescue centric training to ART/ARMV/ SPARTs staff.

Preparedness and Response								
S. No.	Major Theme	Central/State Agencies and their Responsibilities						
		Centre	Responsibility Centre	State	Responsibility-State	R.B.	Zonal HQ	Divisional HQ
4.	Medical Care	Lead Agencies: MoHFW Support Agencies: MoD, CAPF, MoR	- Medical assistance to the affected state in response to its request for post disaster emergency medical care. - Mobile Field Hospitals similar to the military field units that have trauma-care for the disaster-affected and serve as a temporary substitute for the collapsed local general medical and Surgical facilities in the Disaster zone. - Gradual improvement of the field hospital to conform to global standards. - Mobile medical care units with OT facility, power sources, dedicated trained staff of doctors, and paramedics who could be immediately summoned at the time of emergency - Mobile medical support units stocked with medicines usually needed such as those for BP, diabetics, heart	State/UT, SDMA, Revenue Dept., CoR,SEOC, SDRF,FES, DDMA, Health Dept., all other relevant departments, Civil Defence	- Health & Family Welfare Dept. works with the logistic section of the state. - IRT to provide effective services (Medical Unit) to the field level IRTs for response. - District repository of hospitals (both Government and Private), availability of beds, doctors, paramedics & other trained staff available along with other infrastructure details & update it on a regular basis Include the hospital wise information in the DM Plans at local levels - Tie-up with the companies for easy availability of common medicines during the Emergency situations - Hygienic conditions are prevalent at all times in various facilities established as well as hospitals to	Health Directorate– Policy/ Planning of medical equipment in ARMVs and Hospital for trauma care in disasters, Coordination with MOHFW, Monitoring of hospital Disaster Management plans and training of staff. Establishment Directorate – Establishment – Developing and organizing training modules for Doctors and Paramedics in Trauma Care.	Medical Department –Upkeep of Hospitals and ARMVs, Implementation of Hospital disaster Management plans and training of Doctors and paramedics. Personnel Department- Organising training modules for Doctors and Paramedics in Trauma Care.	Medical Department– Rescue and relief of effected passengers, Upkeep of Hospitals and ARMVs, Preparation and Implementation of Hospital disaster Management plans and training of Doctors and paramedics. Personnel Department – Organising training modules for Doctors and Paramedics in Trauma Care.

			problems, common ailments, etc. as well as provisions such as: bleaching powder, chlorine tablets; nutritional supplements catering to specialized groups such as lactating mothers, elders, and children below 6. • Timely technical support to the State Governments for restoration of damaged hospitals as well as infrastructure • Ensure strict compliance with minimum standards of relief as per Section 12 of DM Act 2005		Curb the spread of diseases • Establishment of sound protocols for coordination between state's health Dept. and the central agencies • Ensure strict Compliance with minimum standards of relief as per Section 12 of DM Act 2005.			
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Preparedness and Response								
S. No.	Major Theme	Central/State Agencies and their Responsibilities						
		Centre	Responsibility Centre	State	Responsibility-State	R.B.	Zonal HQ	Divisional HQ
5.	Food and essential supplies	Lead Agencies: MoCAFPD, MoFPI Supporting Agencies: MoRTH, MoCA, MoR, MoSJE, MHA, FCI	- Ensure availability of adequate and appropriate food supplies to the disaster affected areas - Immediate availability of ready-to-eat/precooked food/meals - Deploying transport with essential supplies at strategic locations - MoU with suppliers to provide required quantities of family packs of essential food provisions - Special provisions to address the needs of infants/small children(baby food) - FCI godowns are able to supply required food grains as per requirement of disaster – affected areas.	State/UT, SDMA, Revenue Dept., CoR,SEOC, DDMA, Food and Civil. Supply Dept., all other relevant Departments, Civil Defence.	- Dept. of Food & Civil Supply works with the logistic section of the state level IRT to provide effective services to the field level IRTs for response - Agreements/MoUs with trusts, firms & organisations setting up community kitchens in the affected areas. - Depending upon the requirement, coordinate with the relevant Central Ministry to make sure that supplies reach the site on time. Deploy a dedicated team at the local level to receive the supplies, maintain log, and distribute them at required locations. - Food godowns have sufficient food materials and not situated at vulnerable locations	TC Coordination with Zonal Railways and Issue policy guidelines. TT Directorate - Coordination with the Ministries and Railway Zones form movement of supplies.	Commercial department – Coordinate with Divisional authorities. Operating Department – Coordinate with HQs and Local Authorities for movement of supplies.	Commercial department – Arrangement of food and water to the passengers. Operating Department – Coordinate with HQs and Local Authorities for movement of supplies.

Preparedness and Response								
S. No.	Major Theme	Central/State Agencies and their Responsibilities						
		Centre	Responsibility Centre	State	Responsibility-State	R.B.	Zonal HQ	Divisional HQ
6.	Communication	Lead Agencies: MoCIT, DoT Support Agencies: MoR, MoC A, MoD, Telecom Providers	- Detailed plans for fail safe communication with all the early warning agencies (such as IMD, CWC, etc.) and Control Rooms (Central/State) for getting accurate information at regular intervals. - Restoration of emergency Communication in disaster affected areas. Emergency response teams to be in place with detailed technical plans to restore Communication after the occurrence of a disaster. - Provide a dedicated radio frequency for disaster communications.	State/UT , SDMA, Revenue Dept., COR, SE OC, DD MA, Information Dept., all other relevant departments	- Fail safe communication plan is prepared with all early warning agencies - Logistic section of the state level IRT coordinates with central agencies to provide effective communication support to the field level IRTs for response. - State and districts EOCs are equipped with satellite phones/VHF/HF as a backup to the landline. All communication equipment, especially the satellite phones are in good working condition 24X 7 on all days through regular testing.	Telecommunication Directorate — Coordination with Zonal Railways and Policy guidelines effective communication at disaster site.	Signalling & Telecommunication department — Coordination with division and implementation of RB policy guidelines.	Signalling & Telecommunication department — Provide effective communication, Provide and maintain communication equipment in ARTs/ARMVs

Preparedness and Response								
S. No.	Major Theme	Central/State Agencies and their Responsibilities						
		Centre	Responsibility Centre	State	Responsibility-State	R.B.	ZonalHQ	Divisional HQ
7.	Transportation	Lead Agencies: MoRTH, MoR, MoCA Support Agencies: MHA, MoD, NHAI, IWAI, NDRF, MoHFW	- Adequately address the post-disaster transportation needs to ensure that the emergency response and recovery efforts are carried out in a timely manner; restore the public transport; resumption of the movement of essential goods. - Pool heavy-duty earthmoving machineries, tree cutters, fork lifters and other required equipment either at strategic locations or centralized. Quick deployment of Resources and equipment for quick repairs/restoration of rescue and relief teams with their supplies. - Operational plans are in place to transport the any machinery (like dewatering pumps, boats, etc.) through road in close coordination with the relevant Ministries. Operational plans are in place for quick restoration or train services, providing additional railway wagons, containers and passenger coaches for movement of	State/UT, SDMA, Revenue Dept., CoR, SEOC, DDMA, Transport Dept., Forest/ Environment Dept., PWD, Railways, Airport officer , all other relevant departments	- Requirement of transport for the sending the relief material, responders are arranged. - Need of the transport of various activated section of the IRT as per Incident Action Plan is fulfilled. - Indian Railway works with the logistic section of the state level IRT to provide effective services (Ground Support Unit) Restoration of railway tracks and functioning of railway at the earliest. - Coordinate with Central Govt. for transportation of relief materials - Within and near Airports: AAI works with the logistic section of the state level IRT to provide effective services (Ground Support Unit) and also provide Nodal Officer for coordination of the relief operations.	TT Directorate - Coordination with Railway Zone for quick restoration of train services and planning for relief trains for stranded passengers.	Operating Department – Coordinate with RB for regulation/diversion and cancellation of trains, coordinate with division for quick restoration of train services and planning for relief trains for stranded passengers.	Operating Department – Movement of relief trains to Disaster site quickly, Coordinate with HQs for regulation/diversion and cancellation of trains.

			relief supplies/rescue equipment and personnel and shifting affected population to safer places/shifting stranded passengers in consultation with State Government. Availability of diesel locomotives and drivers in disaster affected areas where power is disrupted/shut as a preventive measure; maintain a live roster of such emergency support systems which can be mobilized at very short notice by periodic review of readiness. • Establishment of emergency services group within the railways with staff having experience of working in disaster situations. • Contingency plan is in place to deploy rail coaches as make shift shelters if required. Activation of railway hospitals/ mobile rail ambulances to shift/treat injured patients in consultation with the Health Ministry. • Easy availability of heavy equipment available with the Railways for search and rescue. • Plans in place for quick restoration of airport	• Restoration of Airport at the earliest involving specialized response force of the central government. • Coordination with state and district administration to provide air support • Cater to the needs of transporting affected people if required.			
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			runway and restoration of air traffic for facilitation of transport or relief teams/supply/equipment, stranded passengers, etc. • Control room gets activated for smooth coordination in receiving and dispatching resources and equipment in close coordination with the State Government. Availability of trained manpower for making night landing during emergencies. • Availability of Air Ambulances at strategic locations with trained manpower and equipment in close coordination with the Health Dept.					
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Preparedness and Response								
S. No.	Major Theme	Central/State Agencies and their Responsibilities						
		Centre	Responsibility Centre	State	Responsibility-State	R.B.	Zonal HQ	Divisional HQ
8.	Relief Logistics and Supply Chain Management	Lead Agencies: MHA, Ministries with hazard specific responsibilities , NDMA Support Agencies: MoD, MoR, MoRTH, MoCA, MoCAFPD, MoFPI, MoAFW	- Coordinate transportation (air, rail, road, water) for other Central ministries/ departments/agencies - Locate, procure and issue resources to Central agencies involved in disaster response, and supply to the affected state.	State/UT, SDMA, Revenue Dept., CoR, SEOC, DDMA, all other relevant department/ Agencies	- Establish mobilization centre at the airport/railway station for the movement of relief supplies within the state - Deploy special transport mechanism for the movement of relief supplies within the state - Make arrangements to receive and distribute relief and emergency supplies received from different parts of the country - Coordinate transportation (air, rail, road, water) with Central Ministries/ depts./agencies. - Arrange alternative means of transportation to send relief supplies to the affected locations if normal transport can not reach.	TT Directorate - Coordination with the Ministries and Railway Zones	Operating Department — Coordinate with RB and State Authorities	Operating Department — Coordinate with HQs and Local Authorities

Preparedness and Response								
S. No.	Major Theme	Central/State Agencies and their Responsibilities						
		Centre	Responsibility Centre	State	Responsibility-State	R.B.	Zonal HQ	Divisional HQ
9.	Rehabilitation and Ensuring Safety of Livestock and Other Animals, Veterinary Care	Lead Agency: MoAFW, DoAHDF Support Agencies: MoRTH, MoR	- Support the setting up of livestock camps/shelters for animals in distress due to disasters, including drought - Provide assistance for care of animals in the camps/shelters - Assist State/UT in the proper management, and running of livestock camps/shelters - Assist in proper rehabilitation of animals - Supplement the needs of State/UT to provide veterinary care to disaster affected livestock, including drought-hit areas.	State/UT, SDMA, Revenue Dept., CoR, SEOC, DDMA, Forest/ Environment Dept., Agriculture Dept., AHD, Animal Welfare Organizations	- Include provisions for evacuation, safety, and rehabilitation of animals in SDMP - Setup of livestock camps/shelters for animals in distress due to disasters, including drought. - Organize proper care of animals in the camps/shelters - Ensure proper management and running of livestock camps/ shelters Proper rehabilitation of animals - Provide veterinary care to disaster affected livestock, including in drought areas.	TT Directorate – Coordination with other Ministries and Railway Zones.	Operating Department – Coordinate with RB and State Authorities	Operating Department – Coordinate with HQs and Local Authorities

Preparedness and Response								
S. No.	Major Theme	Central/State Agencies and their Responsibilities						
		Centre	Responsibility Centre	State	Responsibility-State	R.B.	ZonalHQ	Divisional HQ
10.	Data Collection and Management	Lead Agencies: MHA, NDMA Support Agencies: NIDM, MoIB, MoCIT, MoST, MoES, MoWR, MoEFCC, ministries/ departments with hazard specific responsibilities	- Maintain proper records of all the essential services needed for rescue, response and relief phases, both by the State Governments and by the Central Ministries/ Departments - Establish a sound reporting mechanism to meet the information needs of both Central and State Governments about the disaster response	State/UT, Revenue Dept ./SEOC/ CoR, SDMA, DDMA, Bureau of Economics and Statistics, all other relevant Departments	- Representative of SDMA works with the planning section at state level for making of IAP and Dissemination of information. - Creation of a cell at the District level (preferably as part of DEOC) and placed dedicated resources to collect/ update data on all essential services (as per the template given in the IRS guidelines) which will help during the response phase for effective reporting and compilation.	Safety Directorate - Coordination with Mechanical and TT directorate– for maintaining record of Accidents and essential services needed for rescue, response and relief.	Safety Department – Coordination with Mechanical and Operating Department – for maintaining record of Accidents and essential services needed for rescue, response and relief.	Safety Department – Coordination with Mechanical and Operating Department– for maintaining record of Accidents and essential services needed for rescue, response and relief.

Preparedness and Response								
S. No	Major Theme	Central/State Agencies and their Responsibilities						
		Centre	Responsibility Centre	State	Responsibility-State	R.B.	ZonalHQ	DivisionalHQ
11.	Media Relations	Lead Agencies: MoB, MHA, NDMA Support Agencies: MoCIT, MoST, MoES, MoWR, MoEFCC, ministries/ departments with hazard Specific responsibilities	- Collect process and disseminate information about an actual or potential disaster situation to all stakeholders so as to facilitate response and relief operations; update information on disaster and disaster victims; maintain contacts with mass media; inform public regarding the impact of disaster and the measures taken for the welfare of the affected people. - Ethical guidelines for disaster coverage by media as per accepted global standards respecting dignity and privacy of the affected communities and individuals and work with media to adopt the guidelines through self-regulation as well as oversight by relevant regulatory institutions. - Mechanisms for broadcasting warnings, do's and don'ts etc.to media and public before, during and after the disasters. - Proper schedule for media briefing (once/twice/thrice daily depending on the severity of the disaster) and designate a nodal officer for interacting with media on behalf of the Government.	State/UT, SDMA, Revenue Dept.,CoR, SEOC,D DMA, Information Dept., all other relevant Departments	- Dept. of Information and Public Relations works with the Command staff as Information and media officer of the state level IRT to provide effective services - Ethical guidelines for coverage of disaster is prepared and shared with all media agencies - Plan is prepared for providing/broadcasting warnings, do's and don'ts etc.to media and ensure its dissemination.	Director Public Relations (DPR) and Director Information and publicity (DIP) – for information to the representative of media.	Chief Public Relation Officer (CPRO)- For information to the representative of media.	Public Relation Officer (PRO) -for information to the representatives of media.

Preparedness and Response								
S. No	Major Theme	Central/State Agencies and their Responsibilities						
		Centre	Responsibility Centre	State	Responsibility-State	R.B.	Zonal HQ	Divisional HQ
12.	Fodder for livestock in scarcity-hit areas	Lead Agency: MoAFW, DoAHDF Support Agencies: MoRTH, MoR	- When required, mobilize fodder and cattle feed to meet shortages, as in drought or scarcity conditions - Transport fodder from storage facilities or distant areas to the scarcity hit areas - Organize fodder resource and mobilization centres - Enlist PSUs and private agencies.	State/UT, SDMA, Revenue Dept., CoR,SEOC, DDMA, Forest/Environment Dept., Agriculture Dept., AHD, Animal Welfare Organizations	- Mobilize fodder and cattle feed to meet shortages, as in drought or scarcity conditions - Transport fodder from storage facilities or collection centres to the scarcity-hit areas - Organize collection centres for fodder and cattle feed.	Traffic Commercial department – Coordination with Zonal Railways and issue policy guidelines. TT Directorate - Co-ordination with the Ministries and Railway Zones for movement of supplies.	Commercial department – Coordinate with Divisional authorities. Operating Department – Coordinate with RB and State Authorities for movement of supplies.	Commercial department – Arrangement of food and water to the passengers. Operating Department – Coordinate with HQs and Local Authorities for movement of supplies.

Preparedness and Response								
S. No	Major Theme	Central/State Agencies and their Responsibilities						
		Centre	Responsibility Centre	State	Responsibility-State	R.B.	ZonalHQ	Divisional HQ
13.	Fuel	Lead Agencies: MoPNG Support Agencies: MoD, MoR, MoRTH, MoCA	- Petrol pumps are functional and adequate petrol, oil and diesel are available to Government for relief, rescue and general public - Adequate supply of petrol, diesel, kerosene and LPG Gas in the affected areas in close coordination with the State Government for general public as well as emergency responders / equipment - Quick mobilization of fuel in hilly areas to avoid delays caused by complex supply chain to such areas.	State/UT, SDMA, Revenue Dept., CoR, SEOC, DDMA, Civil Supply Dept., all other relevant Departments	- Logistic section of the state level IRT to coordinate with the relevant departments/agencies to provide effective services (Ground Support Unit) to the field level IRTs for response. - Assess and indicate clear requirement of fuel to the Central Ministry and coordinate the delivery of fuel through Local arrangements. - Ensure sufficient availability of tankers/other vehicles for local transportation through the relevant Dept. - Establish mechanism for stocking the fuel at strategic locations with relevant agencies.	Traffic Commercial department - Coordination with Zonal Railways and issue policy guidelines. TT Directorate - Co-ordination with the Ministries and Railway Zones for movement of supplies.	Electrical/ Mechanical department Coordinate with Divisional authorities. Operating Department — Coordinate with RB and State Authorities for movement of supplies.	Electrical/ Mechanical department. Arrangement of Fuel. Operating Department — Coordinate with HQs and Local Authorities for movement of supplies.

4.1 DISASTER PREPAREDNESS - RESOURCES

The primary responsibility of disaster management rests with the divisions and they should be in full preparedness for effective management of disasters.

Railways are generally self-reliant in carrying out rescue and relief operations as a result of having a well-organized set up including ARMEs and ARTs & SPARTs/SPARMEs. However, major accidents involving heavy casualties in remote areas or in difficult terrain or under adverse weather conditions are possible to be managed efficiently only by mobilizing non-railway resources. Disaster Management mechanism in Railways can be maintained at a high level of preparedness and efficiency by keeping all resources readily available and in good fettle.

- 4.1.1 Resources:** Resource simply both railway and non-railway men and material including medical, personnel, transport, volunteers, police and fire services. Details of these resources, their location, contact numbers and other details have been identified, compiled and placed in a 'Data Bank'. This Data Bank is available in the Divisional DM Plan Part-II.

Resources available in case of a major accident may be grouped into 4 different units, depending on the time frame within which these can be made available after an accident. These are as follows:

- | | | | |
|----|-------------------|---|---|
| 1. | Resource Unit-I | – | Railway and non-railway resources available on the train, and at nearby surroundings. |
| 2. | Resource Unit-II | – | Railway resources available at ARME/ART/SPARTs/SPARMEs depots and elsewhere within the division. |
| 3. | Resource Unit-III | – | Railway resources available at ARME/ART/SPARTs/SPARMEs depots and elsewhere on adjoining Zones and Divisions. |
| 4. | Resource Unit-IV | - | Non-railway resources available within or outside the division. |

4.1.2. Resource Unit – I:

(a) On trains carrying Passengers following resources are available:

- (i) First Aid Box available with the Guard.
- (ii) First Aid Box available with Train Superintendent and in the Pantry Car as per the laid down norms.
- (iii) Portable Telephones.
- (iv) PCT as Personal equipment in Electric loco and as Loco equipment in diesel loco.
- (v) Fire Extinguishers in Brake Van, AC/ Sleeper coaches, & Pantry cars.
- (vi) Walkie-Talkie/CUG mobile phones with Guard and Loco Pilot.
- (vii) Cell Phones/Mobile communications with Passengers.
- (viii) Information collected by Train Superintendent/Travelling Ticket Examiner about Medical Practitioners travelling on the train.
- (ix) Information collected by TS/TTE about Railway Officers travelling on the train.
- (x) Railway Staff travelling on the train-either on duty (TTEs, Guard, Loco Pilot, Assistant Loco Pilot, RPF, C&W, Electrical etc. and others) or on leave as passengers.
- (xi) Passengers travelling on the train who volunteer their help for rescue and relief work.
- (xii) Stretcher in Brake Van.

- (b) Non-railway resources available nearby:
- (i) Volunteers from nearby villages and towns.
 - (ii) Transport facilities available at site or passing through nearby LC Gates.
 - (iii) Tractors with trolleys from nearby villages both for transport purposes and for lighting up the accident site.
 - (iv) Station staff and local railway administration should requisition help from non-railway sources before railways own rescue team arrives.
 - (v) NGOs working in that area.
 - (vi) Private doctors, hospitals, clinics, PMC's in the vicinity.
 - (vii) Police and other agencies of State Governments
 - (viii) Army or paramilitary establishments nearby
 - (ix) Coolies and vendors of nearby stations
 - (x) Such local networks are most effective in rushing assistance immediately, especially with regard to:
 - Medical succor,
 - Additional manpower,
 - Rescue equipment,
 - Lighting arrangements,
 - Transport services,
 - Firefighting tools etc.
- (c) Railway resources available nearby:
- (i) Engineering gangs.
 - (ii) OHE staff and signal staff available.
 - (iii) Other resources such as medical facilities, communication facilities.
- (d) At Adjoining Stations:
- (i) Staff available at adjoining or nearby stations.
 - (ii) Railway resources as given in respective Divisional DM Plans.
 - (iii) Non-railway resources as given in respective Divisional DM Plans.
 - (iv) Resources should be mobilized to send medical team at short notice as given in the respective Divisional DM Plans.

4.1.3. Resource Unit-II:

- (i) SPARTs/SPARMEs, ARMEs, ARTs with 140Tcrane are stabled at nominated stations.
- (ii) Railway medical and departmental resources.

4.1.4 Resource Unit-III:

- (i) SPARTs/SPARMEs, ARMEs, ARTs with 140Tcrane based on adjoining Zones / Divisions.
- (ii) Resources of men and material available on adjoining Zones / Divisions.

NOTE: Copies of DM Plans of adjoining divisions shall be available with the Divisional control office and referred to when required from the SIMS web page or website of individual Zones/Division of WR / Other Railway as also of another Zonal Railway.

4.1.5 Resource Unit-IV:

- (i) Non-railway resources available within the division-as given in the data book and included in the Divisional DM Plan.
- (ii) Non-railway resources available outside the division - as given in the data bank and included in the Divisional DM Plans of adjoining Zones / Divisions.

4.2 DISASTER PREPAREDNESS: DIFFERENT DEPARTMENTS:

Natural disaster in general like floods, cyclones can be forecast whereas other natural disasters like earthquakes, landslides are difficult in nature to forecast. But preparedness for floods & cyclone will help in tackling situation for other natural disasters also.

4.2.1 Engineering Department:

- Shall identify Risk zones prone for natural disasters like floods, cyclones or earthquakes with the help of meteorological department.
- Shall identify and list out detailed inventory of reserve stock to be used in restoration of tracks, bridges like empty bags, sand, stone dust, cinders, ballast, boulders, relieving girders, CC cribs etc. and such material should be kept readily available at nominated depots/ stations/ locations or on wheels as laid down. The material should be at such locations so as to be loaded by rail as well as road. Condition of material susceptible to degrade should be periodically checked for strength and functionality.
- The action plan for Weather and Cyclone warnings shall be followed according to the Joint Engineering / Operating Circular No.W.556/1/Vol.V2007.
- Arrangements for patrolling of vulnerable locations as per the provision in the manuals.

4.2.1.1 The yardstick for engineering materials:

- The details of the yardstick for engineering materials to be kept in Accident Relief trains are given below:

4.2.1.2 Track Material:

- Track materials sufficient to lay 500 m of track should be kept loaded on to the BFRs. These BFRs (BRNHS) should be kept stabled at a suitable central place in the division so that the same can be moved anywhere in the division in the shortest possible time.
- In addition to the track materials loaded in the BFRs, the following track material should be kept as are serve stock. These materials should preferably be stacked close to a siding, so that they can be loaded easily for dispatch:
- Track materials for laying 500 m of track.
- Switches Left Hand and Right Hand, one set each, 1 in 12 as well as 1 in 8.5 turnouts, along with crossing and lead rails etc.
- One set of fan shaped turnout concrete sleepers for 1 in12 as well as1in 8.5 turnouts.
- One set of SEJ along with the concrete sleepers.
- One set of concrete sleepers for level crossings including checkrails & corresponding fittings etc.
- Adequate number of bridge timbers depending upon the type, number and span of the existing bridges in the division.

4.2.1.3 Labour:

- Details in respect of P.Way labour, their addresses and how to contact them-The details to be kept with ADEN/SSE (P.Way) & SE (P.Way).
- The details in respect of temporary labour - availability and how to get them -The details to be kept with ADEN/SSE (P.Way) & SE (P.Way).
- The details in respect of contractors labour working in the Division with the numbers at each side - The details to be available with each Sr.DEN/ DEN/ ADEN for the whole division.

4.2.1.4 Mobility:

- The Divisions have been authorized to hire trucks on regular basis for use of SSE (P.Way) & SSE(Bridges). The contract agreement for hiring such trucks should have a provision for hiring additional number of trucks at short notice in the event of an emergency. Each PWI is provide with a trucks.
- Each SSE (P.Way) should have a plan for movement of labours and materials to the site of restoration with various alternatives like movement of the same by rail/road. For this; a complete roadmap should be prepared showing connections to the track through level crossings or canal roads or the nearest points to track where the truck can reach.

4.2.1.5 Equipment and Miscellaneous:

- The details in respect of heavy earth moving machinery available in the nearby areas, their contact persons, the telephone numbers etc. must be kept with ADEN/DEN/Sr.DEN.
- Areas such as ghat sections may need use of explosives in the restoration process. The Divisions having such areas will also keep the details in respect of availability of explosives in the nearby areas, the contact address and telephone numbers etc. readily available. Use of explosives also needs availability of duly authorized persons approved by the Govt. Authorities and therefore, the contact details of such authorized persons should also be kept handy.
- The details of availability of tentage in the nearby areas, the contact numbers etc. should be kept handy. This is in addition to the availability of the tentage in the relief train as per prescribed scale.
- Suitable arrangements need to be made for supply of drinking water for the labour working at site. Therefore; the addresses and contact numbers of the agencies who could supply drinking water may be kept handy with ADEN / SSE (Works) of the sub-division.
- Needless to mention, that the small track machines like rail cutting, drilling welding equipment etc. are already forming part of the equipment of each relief train. In case, the same is not kept in the relief train, these equipment/small track machines must be procured and kept in the relief train in adequate numbers.
- All SSE (P.Way) should have an arrangement of portable generators for lighting so that the dependence of Electrical Department even for small magnitude emergencies can be avoided. The above are only guidelines. The Division may keep these in view while formulating the detailed Action Plan for their jurisdiction.

4.2.2 Mechanical Department:

- Shall ensure that ART, ARME/SPARTs/SPARMEs are equipped with sufficient rescue and re- railing equipment including power packs etc.to handle railway accidents and untoward incidents.

4.2.3 Medical Department:

- Shall ensure that ARME/ SPARTs/SPARMEs are equipped with sufficient rescue relief medicines and equipment and manpower is nominated.
- Shall ensure availability of adequate medicines in first aid box, POMKA's and materials or disinfectants etc.at health unit/hospitals near the forecast warned places.
- Shall take enough measures to prevent epidemics in co-ordination with engineering department for sanitation and drainage and disinfection.

4.2.4 Electrical Department:

- Shall ensure availability of lighting equipment and stand-by power (generator) at strategic locations.
- Tower wagons with quick mast erection facilities, sufficient spares should be kept ready at Tower wagon shed.

4.2.5 Telecommunication Department:

- Shall ensure proper communication with adequate facilities like wireless communication, satellite phones, V-Sat and arrangement for drone recording etc.

4.2.6 Transportation Department:

- Require men to essential staff and their deployment.
- Ensure movement of relief trains.
- Ensure availability of rollingstock and locomotives for the rescue relief and rehabilitation.
- Ensure all station equipment are in good condition in co-ordination with respective department like Generators, Emergency lights, VHF sets, First Aid equipment etc.
- Ensure proper securing of stabled coaches/wagons as per extant instructions with information to control.
- PCOM of the Railway will issue instructions regarding regulation, diversion or cancellation of trains in the warned/affected section with information to CPRO.

4.2.6.1 Ensuring full complements of Brakevan equipment:

- (a) At the originating and interchanging points of all passenger carrying trains, it must be ensured that these trains run with full equipment of brake van as prescribed in Working time Table and other special instructions.
- (b) The Officers and Senior Subordinates of the Traffic, Mechanical, S&T, Electrical, and Civil Engineering Departments must examine this equipment regularly and take necessary action to ensure that they are in good working condition.
- (c) The first Aid Box and the stretchers should also be examined for this purpose by the concerned Medical Officers.
- (d) The Guards of the passenger carrying trains while taking over the charge of this equipment should also ensure that they are in good working condition.

4.2.7 Commercial Department:

- Shall alert arrangements to open enquiry offices at areas likely to be affected.
- Shall ensure arrangement for food, water and other requirement at vulnerable places.

4.2.8 Security Department:

The Railway Protection Force is the only force under the Ministry of Railway which plays an important role in not only ensuring uninterrupted operations of the railways, but also ensuring the continuous activities of the Railway Administration. Therefore, in case of any kind of disaster related matters relating to the Railway such as-Accident, obstruction, Bomb Blast, Fire or Other Natural Disaster etc., all the personnel of the RPF have to immediately reach the spot and start performing relief work along with other department. Integrated security systems at stations etc. should be used wherever required and also:

- **To ensure alertness of security personnel to accompany relief material trains.**
- To help vulnerable station in handling public enquiries to move to location vulnerable.

4.2.8.1 Disaster Management Team of RPF:

There should be a Disaster Management Team of RPF on each Division of IR composing about 15 men in different ranks. This team shall be specially trained in providing necessary support for disaster management over the Division/neighboring Division. RPF should play an active role in managing law and order at site.

4.2.8.2 Equipment 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.
- vii) Plastic pillars.
- viii) Helmet.
- ix) Luminous Jacket
- x) Video Recording.
- xi) Yellow Plastic Tape

4.2.9 Helicopter Requirements:

Zonal Railways have been delegated powers to requisition helicopter/ airplane for expeditious action in the event of serious accidents vide Railway Board's letter No. 86/Safety-1/24/47 dated 13.03.87 & 19.07.89. The subject matter has been reviewed by the Board and the following revised powers are delegated to the Zonal Railways vide Railway Board's letter No. 2002/Safety-1/6/6 dated 13.06.2004. The circumstances under which GM exercise these powers, broadly cover the following types of cases:

- (i) Where more than 10 casualties (death-cum-serious injuries) are feared and it is difficult for Officials to reach the site within reasonable time.
- (ii) Where heavy damage is caused to Railway installations in sensitive and tension filled areas (e.g. wreckage of track, bridges etc. through bomb blast, other means of sabotage, etc.)
- (iii) Where public reaction in case of late arrival of senior officers at site is likely to be highly adverse.
- (iv) Normally, in case of an accident, only one helicopter should be requisitioned by a Zonal Railway, except when there is a serious passenger train accident involving several casualties when it is essential for both the General Manager and the Divisional Railway Manager to reach the site at once to satisfy the public and the Press. However, for dispatching the rescue teams to the site of the accident, separate helicopter/airplane may be requisitioned, if so needed.

The GMs may exercise the above powers personally and may not delegate these powers.

- (i) Zonal Railways are further empowered to requisition helicopter/airplane to evacuate injured and dead in the event of serious accident. GMs may personally exercise these powers and may not delegate these further.

4.2.10 Details of other hospitals with Railway Hospitals/ Health Units

Each Railway Hospital/Hospital Units should similarly maintain a display containing information about other Govt. /Private Hospitals nearby, Govt./Pvt. Doctors, Social Organizations having ambulance facilities, and details of voluntary organizations in the nearby locality, Blood bank and blood donor details. All these details must be available in the respective stations also.

4.2.11 General:

- Apart from the above, each PHOD/DRM shall nominate an officer to monitor vulnerable locations and order arrangement.
- A monitoring cell shall be formed by all departments concerned at Divisional/Zonal level to ensure proper co-ordination and planning.

4.3 DISASTER PREPAREDNESS–ARMEs, ARTs & SPARTs:

4.3.1 SPART/ARME Scale I- Equipment stored in Special Medical Relief Vans stabled in separate sidings:

The target time for turning out of ARME & SPART (SPARME) is 20” and 30” inclusive of dispatch time for Double exit and Single exit sidings respectively from the time of sounding siren.

- (i) One key of the van is available with the Loco Foreman or the Station Master in a glass fronted case.
- (ii) Other key is with the doctor incharge of the ARME
- (iii) Medicines and equipment are provided as per Railway Board norms.
- (iv) Keys of all locks inside the ARME are also in duplicate. One set of keys are with the Medical officer incharge of the ARME and the other set of keys are kept in a glass-fronted case inside the ARME.

4.3.2 Location of SPART/ARME scale-I:

Locations of SPART/ARME Scale-I on Divisions as under:

1. Bhavnagar Terminus (BG)
2. Veraval (MG)
3. Porbandar (BG)

Location Map given in Zonal Disaster Management Plan-Part-II and Divisional Disaster Management Plan-Part-II carries the details, as also given in the Accident Manual of Western Railway.

4.3.3 Locations of SPART/ARME Scale-I on adjoining Zones/Divisions:

Locations of SPART/ARME Scale - I on adjoining Zones/Divisions as under:

a) Adjoining Divisions

Ahemdabad: Ahemdabad, Gandhidham (GIM), Palanpur, Kankariya (KKF)

Rajkot: Rajkot, Hapa

b) Adjoining Zones:

Ajmer: Ajmer, Udaipur, Mavli (MG)

Bikaner: Churu, Lalgah, Suratgarh

Jaipur: Rewari, Jaipur

Jodhpur: Barmer, Jodhpur, Merta Road

Details of SPART/ARME Scale-I, on Adjoining Zones/ Divisions is given in ZDMP-II as also in the Accident Manual of Western Railway.

4.3.4 Section wise chart for requisitioning of SPART/ARMEs from adjoining

Zones/Divisions from both ends:

Details of section wise chart for requisitioning of SPART/ARMEs from Adjoining Zones/ Divisions given in Accident Manual of Western Railway.

4.3.5 ARME Scale-II: Equipment stored in boxes in special room on platform at or near the station:

- (i) The medical equipment is sealed without any lock.
- (ii) The scale-II room have duplicate keys.
- (iii) One is with Medical Officer and the other is in Station Master's Office.
- (iv) This equipment is to be taken out and rushed to the site of an accident by any train or available road vehicle.

4.3.6 Location of ARME Scale-II:**Locations of ARME SCALE-II in Bhavnagar Division as under:**

(1) Dholka (BG), (2) Dhola Junction (BG), (3) Jamjodhpur (BG), (4) Visavadar (MG), (5) Veraval (BG), (6) Prachi Road (MG), (7) Junagadh (BG), (8) Botad (BG), (9) Jetalsar (BG), and (10) Mahuva (BG).

4.3.7 Location of ARTs:**Locations of ARTs in Bhavnagar Division as under:**

- (1) **Bhavnagar Terminus (BG) Class 'A' ART**
- (2) **Veraval (MG) Class 'B' ART**

Location Map given in Zonal Disaster Management Plan-Part-II carries the details, as also given in the Accident Manual of Western Railway.

4.3.8 Accident Relief Train:

Details are given in the Accident Manual of Western Railway

- (i) The target time for tuning out of ART is 45" by day and 60" by night & for SPART is 20" and 30" inclusive of dispatch time for double exit and Single exit sidings respectively irrespective of day and night from the time of sounding siren.
- (ii) ART formation is to be stabled complete on separate siding having double exit for faster movement in both directions.
- (iii) Rescue/Restoration equipment's are kept as per Railway Board's instructions.
- (iv) **Brake Down special keys are with the following Officials:**
 - Engineering Tool Van - SSE/SE/JE/Permanent Way.
 - Mechanical Tool Van - SSE/SE/JE/Mechanical.
 - O.H.E. Tool Van - SSE/SE/JE/OHE-TRD.
 - S&T Equipment Cupboard/Almirah - SSE/SE/JE/Tele
- (v) Crane Supervisors will ensure availability of adequate fuel in the crane at all times.
- (vi) On getting Emergency call, the Crane Supervisors shall check and ensure:
 - Correct marshaling of Crane according to site requirement.
 - Alert the stand by Crane Operator of 140T Crane.
- (vii) In case road approach is faster, prevailing equipment may be moved by road as required.

4.3.9 Location of ART on adjoining Zone/Division:

Locations of ART on adjoining Zones/ Divisions as under:

c) Adjoining Divisions

Ahmedabad: Kankariya (KKF) (Class 'A' ART)

Rajkot: Rajkot (Class 'A' ART)

d) Adjoining Zones:

Ajmer: Abu Road (Class 'A' ART) and Ajmer (Class 'C' ART)

Bikaner: Laalgarh (Class 'A' ART) and Suratgarh (Class 'A' ART)

Jaipur: Jaipur (Class 'A' ART)

Jodhpur: Jodhpur (Class 'A' ART)

Details of ART on Adjoining Zones/ Divisions is given in ZDMP-II as also in the Accident Manual of Western Railway

4.3.10 Section wise chart for requisitioning of ARTs with 140T crane from adjoining Zones / Divisions from the other end.

Details of section wise chart for requisitioning of ARTs from Adjoining Zones/Divisions given in Accident Manual of Western Railway.

4.3.11 Use of accident alarm signals-Sounding of engine whistle/hooter/station bell:

4.3.11.1 Long Range Electric Sirens:

In case of an emergency when ordered by Divisional Control Office, take out the siren key by assigned staff.

If required break open the glass fronted case to takeout the key and sound the siren.

The delayed action switch (the tabular lever switch marked 'accident warning') is used to give call of 3- 4-minute duration each with half-minute interval between two successive calls. This switch shall be switched on and left in that position for a period of approximately 20 minutes to give the emergency call and then switched off.

If there is a failure of delayed action switch, manually operate the check switch to give calls of 3- 4-minute duration with half-minute interval between two successive calls for a period of approximately 20 minutes.

4.3.11.2 At stations where an electric siren is either not provided or failed:

Give 5 whistles/hooting or calls of 1-minute duration each with half-minute interval between two successive whistles/hooting using an engine if available. This shall be repeated twice at an interval of 3 minutes. If an engine is not available ring the station bell continuously.SM to advise Transportation, Medical, Mechanical, Electrical, Engineering and other staff.

4.3.11.3 Authority to order movement of ARME & ART & SPART/SPARME to site:

- (i) On receipt of information about train accidents, SPARTs/ARMEs and ARTs shall be ordered immediately as required.
- (ii) This decision for ordering would be taken by the PCR/Mech. Officer and Dy. CTNL on duty.
- (iii) ***After sounding of siren, the ARME/SPARME and ART/SPART should be turned out within the stipulated target time.***

4.3.12 List of material in ART/ARME

ANNEXURE-A

LIST OF TOOLS & EQUIPMENTS REQUIRED IN "A" & "B" CLASS ARTs:

Cat. S.N.	DESCRIPTION	Recommended for "A" Class ART	Recommended for "B" Class ART	Recommendations of HLC
CATEGORY No.1: GENERATORS & ELECTIRCAL EQUIPMENTS				
1	GENERATOR- Diesel driven 15 KVA/ 5/6 KVA (02 Nos.) 220/230V fixed complete with switch board and accessories.	01 Set	01 Set	
2	PORTABLEGENERATOR-1.5/2/3KVA220/230V with Integral switch Board. (sufficient 3KVA sets may also be kept).	Min.10 sets	Min.10 sets	Qty reviewed due to increase in number of LED fittings and spare
3	Portable Switch board with 4 water proof Industrial Sockets each capable of taking 500-watt load & 5 Mtrs. 5/15 Amp. Cap. PVC insulated copper lead with plug on one end.	Min.12 sets	Min.12 sets	To cater to increased number of LED fittings & B Class ART to have same quantity as that of A Class
4	120/100 Watt LED Flood light fitting, IP65 protection suitable for 240 V single phase AC supply with 50m PVC insulated copper leads with plug at one end and suitable arrangement for keeping cable	40 Nos	40 Nos	To minimize the Nariety of LED lights and to replac Halogen lights due to better illumination & better energy efficiency.
5	Main Cable for fixed generators 15 amps capacity 3 core 10 Sq.mm armoured PVC Insulated & PVC sheathed 2 x 150 mtrs.	300 Mtrs	300 Mtrs	
6	Drum on fixed stand for main elect. cable.	02 Nos.	02 No.	Only increased at par with that for A Class ART
7	30meters 3core, 15Amps cable on spool with Plug on free end & one socket on fixed end.	10 Nos.	10 Nos.	
8	Stand floodlights approx.2000 mm height	20 Nos.	20 Nos.	
9	Metal Rectifier for charging 2 TL batteries at a time 230 V AC / 110V DC, 60Amp.	02 Nos.	02 Nos.	
10	Telescopic masts 6 meters high.	06 Nos.	06 Nos.	Qty increased for more LED fittings & B Class ART to have same quantity as that of A Class
11	Toolkit for Generator set as per make of GEN Set comprising of 254 mm cutting pliers - 01, screw driver round 300 mm, 150 mm, 100 mm - 03 nos., knife - 01 No., Hammer DP- 01 No., Spanner DE- 03 mm to19mm instep of 1.5 mm & sockets spanner with lever 3mm to19mm.	02 sets	01 set	
12	Diesel Oil	As required	As required	As requirement projected by

				ZRs
13	Petrol	As required	As required	As requirement projected by ZRs
14	Kerosene Oil	As required	As required	As requirement projected by ZRs
15	Collapsible Aluminium telescopic ladder.	01 Nos.	01 Nos.	As per suggestions from NWR
16	Polythene container 20Ltr.Capacity for handling kerosene oil & pouring into auxiliary tank of engine.	06 Nos.	04 Nos.	
17	Oil measuring can of 01 ltr, 2 Ltr, 5 ltr. Capacity.	01 No.each	01 No.each	
18	Lubricating oil	40 Ltrs.	30 Ltrs.	
19	Insulation tape PVC in roll of 10 mtrs.	20 Nos.	16 Nos.	
20	Hand driven centrifugal pump separate for each type of oil.	02 Nos.	02 Nos.	
21	Garden umbrella size 48 Inch X 10 Inch (H-Nylon) cloth.	03 Nos.	03 Nos.	
CATEGORY No.2: ILLUMINATION (OTHER THAN ELECTRICAL)				
1	Rechargeable Battery-Operated Lamps/ LED lamp	Min.10 Nos	Min.06 Nos	
2	4 Cell torches/ Drycell LED torches	12 Nos.	06 Nos.	
3	3 Cell LED torches	10 Nos.	06 Nos.	
4	Portable Telescopic LED Tower light (AC & Battery Operated) of min. 4m high with flexibility of 180 to 360 degree coverage. Min. 50000 lumen along with suitable capacity portable G.set	06 Nos.	06 Nos.	Future procurement as replacement to Inflatable tower lights may be done Portable with Telescopic LED Tower light
5	Dry cells	06 Dozen	06 Dozen	
CATEGORY No.3: CUTTING EQUIPMENTS				
1	Cutting torch with hoses, nozzle sets and accessories with back fire arrestor.	06 Sets	04 Sets	Increase in qty. is till such time proposed extra Plasma and/or Exothermic equipment procured by ZRs Easy availability & ease of handling of Industrial
2	Pressure regulator with Gauge OXYGEN (Double type)	06 Nos	04 Nos	
3	Pressure regular with Gauge Industrial LPG ACCETELENE (Double type)	06 Nos	04 Nos	

				LPG as an alternate to Acetylene.
4	OXYGEN Cylinder 150 Cu.Ft.	06 Nos	08 Nos	
5	Industrial LPG (19kg) / ACCETELENE Cylinder 150 Cu.Ft.	06 Nos	04 Nos	
6	Nozzle cleaning tool	06 Sets	04 Sets	
7	Safety Goggles for welder	06 Pairs	04 Pairs	
8	Gloves–Leather made	12 Pairs	08 Pairs	
9	Leg Guards	06 Pairs	04 Pairs	
10	Tool sets for maintenance	02 Set	01 Set	
11	Portable plasma cutting equipment for cutting SS coaches / wagons	02 set (*As an alternative to 200 set Plasma, exothermic cutting equipment can also be procured as decided by PCME of ZR)	02 set (*As an alternative set of exothermic cutting equipment can also be procured as decided by PCME of ZR)	Increased population of SS One extra set as spare
12	Exo-thermic cutting equipment /Thermic lance with consumables	01 set	01 set	Faster cutting of even SS & underwater cutting as per experience gained by SCR, SECR & WR
13	Leather apron for welder.	06 Nos.	04 Nos.	
14	High capacity HRD for cutting stainless steel coaches / wagons (complete set).	01 set	01 set	Rly Board's letter 09/02/2012
15	Hole Saw 60-100mm	02 sets	02 sets	
16	Power chain saw	02 sets	02 sets	
17	Abrasive cutting Equipment	01 set	01 set	
18	Window bars napping tools	05 Nos.	05 Nos.	
19	Nibbler (Portable Electrically Operated Tool suitable for cutting SS also)	02 Nos.	02 Nos.	Description modified to specify cutting of SS also
20	Telescopic chain saw	02 Nos.	02 Nos.	As per suggestions received from NWR

CATEGORY No.4: HYDRAULIC RE-RAILING EQUIPMENT:

1	Hydraulic Re-railing Equipment set	02 set	02 set	Specific names of Makes removed & qty increased for simultaneous operation as suggested by NWR
2	Spare power pack and control table and roller carriage with traversing jack for Hyd. Re-railing equipment with one full set hose reel & extending connectors.	1 each	1 each	As per suggestion received NWR from
3	Hydraulic Oil for re-railing equipment with container.	50 ltrs	50 ltrs	Specific names of makes removed

CATEGORY No.5: WIRE ROPE SLING & SHACKLES

1	Wire rope sling single part spliced type with ordinary galvanized (Medium) Thimbles of both ends wire rope dia 48 mm effective length 3 mtrs.	02 Nos.	--	
2	Wirerope sling single part spliced type with ordinary Galvanized (Medium) Thimbles of both ends wire rope dia 48mm effective length 6mtrs.	02 Nos.	--	
3	D-Shackle 10 Ton capacity.	06 Nos.	2 Nos.	
4	D-Shackle 20 Ton capacity.	06 Nos.	2 Nos.	
5	D-Shackle 40 Ton capacity.	06 Nos.	2 Nos.	
6	Bow Shackle 10 Ton capacity	06 Nos.	2 Nos.	
7	Bow Shackle 20 Ton capacity.	06 Nos.	2 Nos.	
8	Bow Shackle 50 Ton capacity.	06 Nos.	2 Nos.	
9	Derrick Tie rope dia 76mm,(6X49),9 Mtrs. Long for 140 T crane	1 No.	-	
10	Derrick rope dia 23mm,(6X36),271 Mtrs. Long for 140 T crane	1 No.	-	
11	Main hoist wire rope dia 36mm,(6X36),282Mtrs.Long for 140 T crane	1 No.	-	
12	Hoist wire rope dia 26mm,(6X36),118Mtrs.Long for 140 T crane	1 No.	-	
13	Mechanical equipment for restoration work for double stack container			Suggested by ZRs. Applicable for those ZRs. where double stack container are running.
	a) Two leg chain sling minimum 35T and 8m length	2 No.	-	
	b) Crane staff rescue platform (Men basket) as per RDSO Drg No. RDSO SK.CR-840	1 No.	-	

	c) Wall supported extension ladder for height 30 feet	1 No.	-	
14	Gadget for opening ATL fitted between double stack containers.	01 set	-	
15	Crane prop Offloading Warning System for 140T BD Crane	01 set	-	As suggestion received from ZRs
16	CCTV camera system for 140T BD crane operator to provide different views for better assessment	01 set	-	As suggestion received from NWR

Note: - Items from Sr. No.-9 to 12 to be kept in Parel Work Shop under centralized store.

CATEGORY No.6 :
CHAIN AND WIRE ROPE SLINGS (Required for 140 Te.Cowans Sheld on Diesel Crane)

1	Two leg chain sling 25 Te.length 5mtrs.	4Nos.	-	
2	Single leg chain sling 10 Te.length 6mtrs.	4Nos.	-	
3	Single leg wire rope sling without hooks of at both end 70 Te. length 6mtrs.	2Nos	-	
4	Two leg wire rope sling 70 Te. length 6mtrs.	2Nos	-	
5	Two leg wire rope sling 50 Te. length 5mtrs.	2Nos	-	
6	Two leg wire rope sling 30 Te length 7mtrs.	2Nos	-	
7	Two leg wire rope sling 30 Te length 5mtrs.	2Nos	-	

CHAIN AND WIRE ROPE SLINGS (Required for 140Te. Gottwald Diesel Crane).

8	7 Te.doubleleg alloysteel chainsling 4mtrs.long	02Nos.	-	
9	28 Te.doubleleg alloysteel chainsling 5mtrs. Long	04Nos.	-	
10	12.5 Te.Singleleg alloysteel chainsling 6mtrs.Long	04Nos	-	

11	70 Te.doubleleg Wire Rope Sling 6mtrs.Long 68mm dia	02Nos.	-	
12	30 Te.doubleleg Wire Rope Sling 5mtrs.Long, 48mm dia	04Nos.	-	
13	50 Te.Singleleg Wire Rope Slings 5mtrs.Long, 60mmdia	04Nos.	-	
14	70 Te.Singleleg Wire Rope Slings 6 mtrs. Long,72 mmdia	04Nos.	-	
15	70 Te.Special Draw Bar Wire Rope Slings 4mtrs.Long, 57mm dia	02Nos.	-	
16	28 Te. 4leg Wire Rope Slings 4mtrs long 28mm dia	01No.	-	
17	Main Hoist Wire Rope Star Lift, D26X470M, RGG Langslay, 520 KN, 1960N/mm.sq. with accessories	01No.	-	
18	Auxiliary Hoist Wire Rope Star Lift, D22X130M, RGG Langslay,373KN, 1960N/mm. sq.with accessories	01No.	-	
19	Derrick WireRope D26X390 MRGG Langslay, 585KN, 1960 N/mm.sq.with accessories.	01No.	-	

Note: -Items from Sr.No.-18 and 19 to be kept in JMP/ Parel Work Shop under centralized store.

CATEGORY No.7

OTHER MECHANICAL ITEMS

1	Trolley for seized roller bearing wheels of loco and wagon	1 Set	1 Set	1 set to be light weight trolley at SN2
2	Light Weight wheel skate trolley for seized roller bearing wheels of loco and wagon	1 Set	1 Set	As per suggestion use received from ZR as it is more convenient in use.
3	Universal Pulling & lifting machine TIRFOR T. 35 or similar or SAMSON MAJOR, 5.2 Ton Capacity for pulling & 3.2 Ton capacity for lifting.	04Nos.	2Nos	HLCNo.76
4	Wheel Barrow (Tubular steel stock truck) 04 Wheels push trolley.	1No.	1No.	HLCNo.89
5	High Pressure (300 bar) air compressor motor/engine driven) for refilling compressed air bottles (Air bag/SCABA). unit (Electrical	Optional as per requirement based upon usage of Air bags & SCBA	Optional per requirement as based upon usage of Air bags & SCBA	As per suggestion received from ZR
6	Battery operated impact torque wrench with capacity 5 N-m to 1015 N-m along with different size sockets (M8 to M 36) for LHB coaches	01 sel	01 sel	As per suggestion received from ZR for opening Jammed nuts
7	Union puller for pulling out Traction motor pinion	01 Nos.	01 Nos.	As per suggestion received from

				NWR
CATEGORY No.8 : FITTER TOOLS				
1	Bench Vice6"(150mm)	1No.	1No.	
2	Bag Tool / Tool box with all necessary tool as per requirement	04nos.	02nos.	
3	Hack Saw 305 mm to 407 mm (Adjustable)	2Nos	2Nos	
4	Blades for Hack Saw 300x12.5x1.00mm and 350x32x1.6mm	12each	06each	
5	Bar Pinch Ram pattern	04Nos.	02nos.	
6	BarsTommy 2'6"x7/8" (765 mmx22mm)	06Nos.	04Nos.	
7	Special purpose hand tools, as per requirement, for attending derailments explosive atmosphere (Non-sparking tool set as per CAMTECH guidelines CAMTECH/2014-15/M/INF-BTPN/1.0 of JAN-2015.	01 set	01 set	Suggested by ZRs for attending derailments in explosive atmosphere
8	Inverter based single phase DC Arc Welding Rectifier conforming to IS4559: 1993 with accessories	01 set	01 set	Suggested by ZRs for minor welding works during restoration
9	Hammer sledge 7 lbs(3.2Kg)	04Nos	2Nos	
10	Hammer ballpane1.1/2 lbs(0.67Kg or 600gms)	06Nos.	04Nos	
11	Hammer lead 6 lbs.	02Nos	2Nos	
12	Pliers Electrician and nose plier 200mm long	02each	01each	
13	Centre Punch	1No.	1No	
14	Spanner Box (10to50mm)	02Set	1Set	
15	Allen key 1mm to 25mm	02Sets	01Set	
16	Allen key size 1/8",3/8",1/4",5/16",3/8",7/16",1/2",9/16",5/8",11/16",3/4",13/16",7/8",15/16"	02Sets	01Set	

17	Steel scale for measuring 6",12",24"	02each.	01each	
18	Screw driver 6",12"& 18"	04Nos.each	2Nos.each.	
19	Screw driver 4",8"&10"	04Nos.each	2No.each.	
20	Drill machine	02Nos.	02Nos.	
21	Drill 1mm to 13mm (carbide tips suitable for carton SS)	03each	3Nos.each	
22	Adjustable Spanner 06",12"&18"	02Nos.each	1No.each	
23	Pipe wrench 10",14",18"& 24"	02Nos.each	1No.each	
24	Wrenches pipe chain 1/2" to 3"	02Nos.	1No.	
25	Test plate with Master gauge (Air Brake)	2Nos	2Nos	
26	Axes felling Canadian (2Kgs)	2Nos	2Nos	
27	Pick Axes 3Kg	06Nos	03Nos	
28	Shovels round nose T 16Kgs 685mm long handle	06Nos	03Nos	
29	Wire Claw for leveling of ballast	10Nos.	06Nos.	
CATEGORY No. 9: MEASURING INSTRUMENTS				
1	Magnifying glass 6"	2Nos	2Nos	
2	Callipers 6"(150mm) outside	1No.	1No.	
3	Callipers 6"(150mm) inside	1No.	1No.	
4	Wheel and tyre gauge for Diesel and AC Loco	1No.	1No.	
5	Gauge tyre (C&W) 16mm & 22mm	1No.	1No.	
6	Gauge Buffer height	1No.	1No.	
7	Spring loaded Wheel distance measuring gauge Model equivalent to PIE Model No. WG-1	1No.	1No.	HLCNo.77
8	Spring loaded Wheel diameter measuring gauge Model equivalent to PIE Model No. WD-0	1No.	1No.	HLCNo.77
9	Spring loaded track measuring gauge	1No.	1No.	HLCNo.77
10	Tread wear measuring gauge model equivalent to PIE model No. TWG-1(BGL) for B.G. locos.	1No.	1No.	
11	P-Way measuring kit	1set	1set	
12	Measuring Steeltape 16mm width and 30meters long	2Nos.	2Nos.	
13	Measuring tape steel 2 meter	4Nos.	4Nos.	
14	Feeler gauge 100 mm long 0.03 mm to 1mm	2Nos.	2Nos.	
15	Buffer projection gauge	1No.	1No.	
16	CBC Height gauge	1No.	1No.	
17	Buffer face plate dummy	1No.	1No.	
18	Multi-meter for 140 T crane	1No.	1No.	
CATEGORY No.10 : WOODEN PACKINGS				
1	Wooden Packing 300x300x25mm.	30Nos.	30Nos.	
2	Wooden Packing 300x300x50mm.	As per requirement	As per requirement	As suggested by ZRs based upon their requirement.
3	Wooden Packing 300x300x75mm.	30Nos.	30Nos.	

4	Wooden Packing 300x300x100mm.	As per requirement	As per requirement	As suggested by ZRs based upon their requirement
5	Wooden Packing 900x225x50mm.	30Nos.	15Nos.	
6	Wooden Packing 900x300x25mm.	30Nos.	15Nos.	
7	Wooden Packing 900x225x75mm.	40Nos.	20Nos.	
8	Wooden Packing 900x 225x100mm.	40Nos.	20Nos.	
9	Wooden Packing 900x 225x150mm.	50Nos.	25Nos.	
10	Wooden Packing 900x 300x100mm.	30Nos.	10Nos	
11	Wooden Packing 1200X300X150mm	24Nos.	-	
12	Wooden Packing 1200x300x300mm.cornerProp	10Nos.	-	
13	Wooden Packing 1800 X300X300mm	8Nos.	-	
14	Joint Wooden Packing 750X450X150mm for MFD	20Nos.	20Nos.	
15	Wooden wedges with 1"dia hole	30Nos.	30Nos.	

Note:-All wooden packings must be recessed at the ends & bonded with 30X 5mm thick MS strip band.

CATEGORY No.11: OILS & GREASES (WITH CONTAINERS)

1	Kerosene Oil in 20 lts cane (Including elect. Requirement)	As required	As required	As requirement projected by ZRs.
2	Soft Grease (SG-3)	05 Kgs.	05 Kgs.	
3	Petrol (Including elect. Requirement)	As required	As required	As requirement projected by ZRs.
4	Diesel Oil for 140 Te. Crane + MFD powerpack+ Gen.set	03Barrels	02Barrels	
5	Engine Oil as recommended by OEM for power packs	20Ltrs.	15Ltrs.	
6	Pump for drawing oil from 180/205 lit. drum	02Nos.	01No.	
7	Pump for drawing oil from 20 lits T in/drum	02Nos.	01No.	

A. OILS & GREASES FOR COWANS SHELLED ON 140 T. CRANE (WITH CONTAINERS)

8	Hyd. Oil HLP-68/SS-68	210Ltrs.		
9	Engine Lube oil Servo Super 20W40 or 15W40 (as recommended)	50ltrs.	-	
10	Servo grease MP	20Kg	-	
11	ServoTak - 40/ MolycotG-npluspaste	05Kg	-	
12	OKS – 410/ Molycot BR 2 plus	05Kg	-	

B. OILS & GREASES FOR GOTTFWALD 140 T. CRANE (WITH CONTAINERS)

13	Engine Lube Oil (15W40)	210Lts.	-	
14	Hydraulic Oil (HLP-68)	210Lts.	-	
15	Gear Box Oil (HP/EP-90)	105Lts.	-	
16	Coolant (Premix) for Engine	10Lts.	-	

CATEGORY No.12 : C&W ITEMS

1	Screw Coupling hooks (Drawbar hook)	02No.	02No.	
2	Screw Coupling with shackles and pins	02No.	02No.	
3	Transitional coupling complete with clevis pin	02No.	02No.	
4	Hanger for Bolster Spring suspension (ICF) with pin, stone and hanger block.	4 Nos.each	4 Nos.each	
5	Angle cock (Bogie cut out cock)	2 Nos.each	2 Nos.each	
6	Bolster spring ICF(AC & Non AC)	1 No.each	1 No.each	
7	Axle Box spring (AC & Non AC)	2Nos.each	2Nos.each	

8	Equalising stay rod (AC & Non AC)	2Nos.each	2Nos.each	
9	Anchor link (ICF)	2Nos.each	2Nos.each	
10	Bypass coupling set for Airbrake stock (Fly coup.).	2sets	2sets	
11	Coil spring for casnub bogie (Outer, Inner & Snubber)	6 Nos.each	6 Nos.each	
12	Side frame key for casnub bogie	24Nos.	24Nos.	
13	Adapter for casnub bogie (Wide Jaw & Narrow Jaw)	4 Nos.each	4 Nos.each	
14	Elastomeric pads	10 Nos.each	10 Nos. each	
15	BP & FP Air Hose with MU washer	20 Nos.each	10 Nos.each	
16	Bolts for Center pivot	08+08Nos.	8Nos.	
17	Knuckle	2Noseach	2Noseach	
18	Lock Piece	2Noseach	2Noseach	
19	Dashpot ICF	4Nos.	4Nos	
20	Safety Loop	6Nos.	6Nos.	
21	Wooden wedges	20Nos.	20Nos.	To have sufficient number for rolling stock.
22	Skids	06Nos	06Nos	
23	Clamp for coupling CBC & Screw coupling	01No.	01No.	
24	Lock piece for BOXN wagon	04Nos	04Nos	
25	Polyurethane side bearer pad complete assembly with bolt	02Nos.	02Nos.	
26	Important items of LHB coach	As per req.	As per req.	
27	Center Pivot with pin for CASNUB trolley	Optional as per requirement	Optional as per requirement	Optional as per requirement
28	PVC Nylon braided pipe ¾ inch dia x 28 m length with palm end fittings (for LHB Coach Bypass Purpose)	Optional as per requirement	Optional as per requirement	Optional as per requirement projected by ZRs.
29	LHB spares: Control arm LH, RH and Lower with nut and bolts.	Optional as per requirement	Optional as per requirement	
CATEGORY No.13: GENERAL STORES				
1	Bolt M.S.Hexagonal heads 10x 110mm	As required	As required	
2	Bolt M.S.Hexagonal heads 12x75mm	As required	As required	
3	Bolt M.S.Hexagonal heads 12x 150mm	As required	As required	
4	Bolt M.S.Hexagonal heads 16x65mm	As required	As required	
5	Bolt M.S.Hexagonal heads 16x75mm	As required	As required	
6	Bolt M.S.Hexagonal heads 16x 100mm	As required	As required	
7	Bolt M.S.Hexagonal heads 20x65mm	As required	As required	
8	Bolt M.S.Hexagonal heads 20x100mm	As required	As required	
9	Bolt M.S.Hexagonal heads 20x 150mm	As required	As required	
10	Bolt M.S.Hexagonal heads 20x 200mm	As required	As required	
11	Bolt M.S.Hexagonalheads 22x 100mm	As required	As required	
12	Bolt M.S.Hexagonal heads 22x 150mm	As required	As required	
13	Bolt M.S.Hexagonal heads 24x 110mm	As required	As required	
14	Bolt M.S.Hexagonal heads 30x 150mm	As required	As required	
15	Nut M.S.Hexagonal heads10mm	As required	As required	
16	Nut M.S.Hexagonal heads 12mm	As required	As required	
17	Nut M.S.Hexagonal heads 16mm	As required	As required	
18	Nut M.S.Hexagonal heads 20mm	As required	As required	
19	Nut M.S.Hexagonal heads 22mm	As required	As required	

20	Nut M.S.Hexagonal heads 24mm	As required	As required	
21	Nut M.S.Hexagonal heads 30mm	As required	As required	
22	Handle wooden for sledge hammers as 36" long	02Nos.	02Nos.	
23	Handle wooden for hand hammers as 16" long	02Nos.	02Nos.	
24	Handle wooden for files for spares 125mm long	02Nos.	02Nos.	
25	Rope Manila approx. 115mm circumference	150ft	50ft	
26	Red & White Luminescent barrier tap	500Mtrs.	250Mtrs.	HLCNo.72
27	Padlock with duplicate keys 65/75mm size	12Nos.	08Nos.	
28	Measuring cans conical pouring type capacity-1Ltrs, 2Ltrs, 5ltrs & 50ml-1 set of four.	01Set	01set	
29	Difference sizes Funnels for oil	1set of 3 Nos	1set of 3 Nos	
30	Oil feeder 2 liters capacity	02Nos.	02Nos.	
31	Lashing chains 1/2" dia x 15ft length.	02Nos.	02Nos.	
32	Lashing chains 5/8" dia x 10ft length	02Nos.	02Nos.	
33	Lashing chains 5/8" dia x 20ft length	02Nos.	02Nos.	
34	-do- 3/4" dia 50Ft length with width (20mm)	02Nos.	02Nos.	
35	Lamp hand signal Tri Colour torch	02Nos.	02Nos.	
36	LED Flasher type (Tail Lamp)	02Nos.	02Nos.	
37	Flags Banner (Track)	02Nos.	02Nos.	
38	Poles for Flag Banner	02Nos.	02Nos.	
39	Flags Hand Signal Green 45x10cm	04Nos.	04Nos.	
40	Flags Hand Signal Red 45x10cm	04Nos.	04Nos.	
41	Board Last Vehicle (LV)	02Nos.	02Nos.	
42	Fog Signals (one box of 10 Detonators)	02Nos.	02Nos.	
43	Elect. Flashing Hand Signal Lamp	04Nos.	02Nos.	
44	Blanket woolen superior quality	80Nos.	50Nos	
45	Bed Sheet Khadi	80Nos.	50Nos	
46	Pillows with cover	30Nos	20Nos	
47	Pillows cover	30Nos	10Nos	
48	Towels bath	20Nos	10Nos	
49	GI Box for keeping linen	As per req.	As per req.	
50	Alluminium Ladder 6ft long	04No.	04No.	
51	Telescopic Alluminium ladder 6/11mtr. Height	02each	2No.each	HLCNo.82
52	Hand umbrellas water proof and electric shock proof	25Nos	15Nos	
53	Rain Coat 2 Pieces industrial	75Nos	50Nos	
54	High visibility jackets (for summer & winter)	75Nos	50Nos	HLCNo.85
55	Gum Boots/Jungle Shoe	45Nos	35Nos	
56	Heavy duty industrial safety shoes	75Nos	50Nos	
57	Helmet Heat and chemical resistant with rechargeable battery operated mounted LED light.	100Nos	100Nos	As per suggestion received from NWR.
58	Rope Manilla Nylon 100mts	01roll	01roll	As per Rly. Board letter
59	Uniform for nominated staff (2 Sets per staff with replacement after every 2 years)	As per requirement	As per requirement	As per suggestion received from NWR.

60	Light weight Portable trolley	01 No.	01 No.	As per suggestion received from NWR.
61	Wooden dowel rods to cordon off the site with rope/scene tape.	As per requirement	As per requirement	Item required for cordon off the site.
62	Full body harness with accessories.	As per requirement	As per requirement	For staff working at height.
CATEGORY 14: GENERAL STORES LIST OF UTENSILS & STORES FOR ONE KITCHEN CAR (ONLY WHERE KITCHEN CAR IS PROVIDED)				
1	Tumbler Stainless steel (Glass)	50Nos	50Nos	
2	Glass tumblers 250 ML Capacity	12Nos	12Nos	
3	Tea cups and saucers B/china 6O zs capacity	24Nos	24Nos	
4	Cutglass superior	24Nos	24Nos	
5	Tea spoons stainless steel	50Nos	50Nos	
6	Desert spoon stainless steel	12Nos	12Nos	
7	Kitchen spoon stainless steel	4Nos	4Nos.	
8	Knives cook large 230mm long blade with handle	4Nos	4Nos.	
9	Stainless Steel Bhagona with cover	6Nos	4Nos.	
10	Frying pan aluminum 300mm dia	2Nos	2Nos	
11	Stainless Steel Palta	2Nos	2Nos	
12	Ghamela with handles (Kadai), i.e. pan with handles 16" dia 6"deep	2Nos	2Nos	
13	Pressure Cooker 10Ltr. Capacity	2Nos	2Nos	
14	Compartment Thallies Steel 24"/15" to 18" Dia Approximately	50Nos	50Nos	
15	Katories stainless steel 3" approximately	50Nos	50Nos	
16	Parat Stainless Steel	4Nos	4Nos.	
17	Wooden board with roller for pastry	4Nos	2Nos	
18	Puri machine	2Nos	2Nos	
19	Jhara for Puri	2Nos	2Nos	
20	Iron Tawa 12"dia	2Nos	2Nos	
21	Stainless steel Tray size 15"x11 1/2"	4Nos	4Nos.	
22	Serving tray Plastic	4Nos	4Nos.	
23	Hot case 3 1/2Ltr. & 5Ltr.Cap.	1each	1each	
24	Tea	1kg	1kg	
25	Sugar in Tin	10Kg.	10Kg.	
26	Sugar Free	500 pellets	500 pellets	For requirements of officials attending the site
27	Biscuits	5Kg.	5Kg.	
28	Coffee	200Gram	100Gram	
29	Caffeinated Energy drink	10 bottles	10 bottles	For requirements of officials attending the site

30	Condensed milk/ Powder milk	3kg	1kg	
31	Ready Mix Tea/Coffee	1 kg	1 kg	For requirements of officials attending the site
32	LPG Connection with stove and spares gas cylinders	2set	1set	
33	Gas lighter	2Nos	2Nos	
34	Safety Matches	2Packets	2Packets	
35	Paper Plate	200Nos	200Nos	
36	Paper glass (Thermocol)	200Nos	200Nos	
37	Tea thermos 1 liter capacity	2Nos	2Nos	
38	Tea thermos Steel 20/10 liter capacity	2Nos.	2Nos.	
39	Tea Strainer	6Nos	6Nos	
40	Kettle Stainless steel 2 liters capacity	2Nos	2Nos	
41	Steel container 1Kg cap. for storage of kitchen raw masala	12Nos	12Nos	
42	Steel containers for keeping food raw material	6Nos	6Nos	
43	Water Chalties 4 Ltr. capacity	6Nos	6Nos	
44	Steel Bucket 20 Ltr.Cap.	4Nos	4Nos.	
45	Jug Stainless steel Cap. 2 Ltrs	3Nos	3Nos	
46	Stainless steel drinking water containers with handles and covers 50 lit. Capacity	4Nos	4Nos.	
47	Water Thermos 5 ltrs. & 16 ltrs. capacity	1No.each	1No.each	
48	Aqua Guard for water filtration 230 VAC/ 110VDC	2Nos	2Nos	
49	Soap Toilets (Soap Cake)	4Nos	4Nos.	
50	Duster Cloth	12Nos	12Nos	
51	Water storage tank (Syntax capacity 1000 Ltrs)	As per req.	As per req.	
52	Duster cloth (Khadi) 1Mtr. length	10Nos	10Nos	
53	Cooking apron & cap	4sets	4sets	
54	Ration	As per req.	as per req.	
55	Cooking Toyes	2sets	2sets	
56	Vim Powder / Bar for cleaning of Kitchen wares	4Kg.	4Kg.	
57	Water cooler	1No	1No	
58	Mixer Grinder	1Nos.	1Nos	
59	Refrigerator 220 Ltrs.	1No.	1No.	
60	Water bottles	400-500 Nos.	400-500 Nos.	For ART staff, as per Rly Bd letter dt. 27.07.11
CATEGORY No.15: FIRE FIGHTING EQUIPMENTS				
1	Sand filled buckets (Buckets fire standard 300mm)	04Nos	04Nos	
2	Water buckets.GI	04Nos	04Nos	
3	Water mist and CAF fire fighting back pack system (High pressure) 10 lts. Capacity.	02Nos.	02Nos.	Typing error corrected.
4	Steel body cylinders 200 bar with tools for item. 3	01No.	01No..	
5	ABC Dry powder fire extinguisher approx. 5Kg.	20Nos.	15Nos.	
6	Approx. 9.0 Lts. Cap., Nitrogen type Fire Extinguishers	06Nos	04Nos	Particular Brand name removed

7	Explosion meter (Explosive Gas Detector)	01No.	01No	
8	Self-contained breathing apparatus with spare cylinders	As per requirement based on last 10 years usage.	As per requirement based on last 10 years usage.	HLC No.63 Qty reviewed as per suggestions from ZR
9	Fire Resistant/Fighting suit complete	As per requirement based on last 10 years usage.	As per requirement based on last 10 years usage.	Qty reviewed as per suggestions from ZR
10	Fire Ball	10 Nos.	10 Nos.	Added as per suggestion from NWR.
11	Portable Smoke Extractor	02 Nos.	02 Nos.	Added as per suggestion from NWR.

CATEGORY No.16: ENGINEERING ITEMS A - P-Way Material

1	Rails 60/52Kg. (13mts. long) with holes at ends for fish bolts	20Nos.	20Nos.	
2	Insulated ST sleepers pad-plated 60/52Kg (depending upon existing track structures and jurisdiction of ART)	600Nos	600Nos	
3	60/52Kg fish plates	20pairs	20pairs	
4	60/52Kg.Fish bolts	80Nos.	80Nos.	
5	60Kg./52Kg.and 52Kg.90R combination fishplates	04seteach	04seteach	
6	60/52Kg.Joggle fishplates	04sets	04sets	
7	ERC (RDSOT-3701)	500Nos.	500Nos.	
8	G.R Soleplates (RDSOT-3703&RDSO T-3711)	250each	250each	
9	GFN Liner (RDSO T-3702)	500Nos.	500Nos.	
10	GFN Liner (RDSO T-3706)	500Nos.	500Nos.	
11	Combination GFN Liner (RDSO T-3707) & (T-3708)	100sets	100sets	
12	Hook Bolts	50Nos.	50Nos.	
13	Plate screw T-3911	25Nos.	25Nos.	
14	Plate screw T-3912	50Nos.	50Nos.	
15	Plate Screw T-3915	25Nos.	25Nos.	
16	Wooden Blocks 500mm long	10Nos.	10Nos.	
17	STO Sleepers for 60/52Kg section,1:12 & 1:8.5	1seteach	1seteach	
18	BuiltupCrossingfor60/52 Kg. section1:12 & 1:8.5	1No.each	1No.each	
19	Switches complete with fittings for 60/52Kg.sec1:12 & 1:8.5	1set each	1set each	
20	1 in 12 switch for F/S turnouts with fittings (LH=1set and RH=1set) 60/52Kg	1set each	1set each	
B	Tools and Equipments			
21	Rail Dolly with attachment to transport concrete sleepers	04Nos.	04Nos.	
22	Abrasive Rail Cutter with min12 nos. spare disc	2sets	2sets	
23	Rail Drilling machine	02Nos.	02Nos.	
24	Drill Bits 28mm, 30mm & 32mm	03Nos.each	03Nos.each	
25	Non-infringing lifting jacks mechanical / Hydraulic, Cap-9T	04Nos.	04Nos.	
26	Gas Cutting Equipment	02Set	02Set	
27	Box spanner suitable for Rail / Plates screw	02Nos.	02Nos.	
28	Fish Bolts spanner	02Nos.	02Nos.	
29	Rail Tongs	10Nos.	10Nos.	

30	Crow bar	20Nos.	20Nos.	
31	Rake Iron Ballast	10Nos.	10Nos.	
32	Shovel with handle	10Nos.	10Nos.	
33	Iron Pan	10Nos.	10Nos.	
34	Pick Axe with handle	10Nos.	10Nos.	
35	Safety Helmet	20Nos.	20Nos.	
36	Safety Jackets luminous type	20Nos.	20Nos.	
37	Rain Coat industrial	20Nos.	20Nos.	
38	Gloves	20pairs	20pairs	
39	Track measuring equipments set	2sets	2sets	
40	Hand signal lamps	2Nos.	2Nos.	
41	Hand signal flags (Green & Red)	2nos.each	2Nos.each	
42	Banner flag	2nos.	2Nos.	
43	Detonators	12Nos.	12Nos.	
44	Steel Buckets and Mugs	2sets	2sets	
45	Umbrella	10Nos.	10Nos.	
46	Poles for Flag Banner	4Nos.	4Nos.	
47	Walkie-Talkie sets	5sets	5sets	
48	Folding / Plastic chairs	4Nos.	4Nos.	
49	Centre Table (Plastic)	1No.	1No.	
50	Consumables	AsperReq	AsperReq	
51	White Chalk	01Box	01Box	
52	Hammer keying/spiking 07 lb	06Nos.	06Nos.	
53	Beater with handle	40Nos.	40Nos.	
54	Jim Crow with rod	1No.	1No.	
55	Phowrah with handle	5Nos.	5Nos.	
56	Dip Lorry	2sets	2sets	
57	Tent including kanath, Bamboos, ropes, pegs etc.	1set	1set	
58	Clamp points	2Nos.	2Nos.	
59	Measuring tapes 15 and 30 meters	2Nos.each	2Nos.each	
60	Torch 3cell LED	20Nos.	20Nos.	
61	Balloon Light	04Nos.	04Nos.	
62	Chamfering kit	1set	1set	
63	Hooter big and small	01No. each	1No. each	
64	Tree cutting Machine	2Nos.	2Nos.	
65	First Aid Box	1No.	1No.	
66	Wire Claw	10Nos.	10Nos.	
67	LED Lamp	05Nos.	05Nos.	
CATEGORY No.17: MEDICAL EQUIPEMENTS				
1	First Aid Boxes	02Nos.	01No.	
2	Stretcher with Blanket and Canvas bag	04Nos.	02Nos.	
CATEGORY No.18: SIGNALLING AND TELECOMMUNICATION EQUIPMENTS				
1	Inspection Book	01No.	01No.	
2	Magneto Telephone /Group telephone with DTMF signaling Operated on ¾, 5V	04Nos.	04Nos.	
3	Dry cells large 6-ICells 1.5Volt each for Magneto Phones or Torch	48Nos.	48Nos.	

	cells R-20 size, 1.5V for group telephone			
4	PVC Insulated, PVC Sheathed twin core cable	500Mtr.	500Mtr.	
5	Dynamic Microphone with 15mtrs. Lead & floor stand.	2Nos	1No.	
6	Loud Speaker horn type 5/10 Watts	04Nos.	02Nos.	
7	Amplifier of min. 20 W power output operating on 2 DC (Charging interface for cordless microphone)	02Nos.	01No.	
8	Microphone for cordless PA system	02Nos.	02Nos.	
9	12 V Storage Battery with appropriate battery charger	02Sets	01Set	
10	Mega phones transistorised (min.10W each) complete with battery	03Nos.	03Nos.	
11	Portable Stand for Loud Speaker with telescopic adjustable height from 1.5 Meter to 3meters.	02Nos.	01No.	
12	Field Service PVC insulated Cable	500Mtrs.	500Mtrs.	
13	Pushbutton Auto telephone with Tone /Pulses witching facility.	04Nos.	02Nos.	
14	Portable Generator Set Petrol start and Kerosene oil run (Honda 750 W or equa.)	02Nos.	02Nos.	
15	VHF Set 25 Watts along with accessories.	02Nos.	02Nos.	
16	Walkie-talkies Sets (5W VHF) with 100% spare batteries	30Nos.	20Nos.	HLCNo.96
17	Battery Charger for 5W VHF Set	08Nos.	08Nos.	
18	Folding Table	01No.	01No.	
19	Folding Chair	04Nos.	04Nos.	
20	Beach Umbrella	01No.	01No.	
21	Light weight pre-fabricated water proof tent	01No.	01No.	
22	Bell Hailer 6V DC	04No.	01No.	
23	Multimeter digital (Motwani) or equivalent	01No.	01No.	
24	Extension board for Power supply (Mains)	04Nos.	04Nos.	
25	Handheld torch of 3 cells complete with dry cells	04Nos.	04Nos.	
26	Jointing Kit & material for cables and overhead wires (this is to be decided by the Railways) Cable jointing material with overhauling material to be kept in one box.	As per Req.	As per Req.	
27	Tool box containing: -			
	Soldering Iron 10W/12V, 10W/220V & 65W/220V.	01No.each	01No.each	
	Long Nose Plier	01No.	01No.	
	Cutter Diagonal	01No.	01No.	
	Box Spanner 6,5.5 and 5mm	01No.each	01No.each	
	Hammer Steel 750grams	01No.	01No.	
	Hammer Wooden	01No.	01No.	
	Adjustable Spanner (300mm)	01No.	01No.	
	Screw Driver 8" (200mm)	01No.	01No.	
	Screw Driver 10" (250mm)	01No.	01No.	
	Mains Tester (230Volts)	01No.	01No.	
	Electrical Insulation Tape 12 mm x 15 meters	01No.	01No.	
	Resin Core	500gm	500gm	
28	Portable communicator set of Train Radio system where applicable along with charger	2Nos.	02Nos.	
29	Digital voice recorder and CD/DVD player having USB interface	2Nos.	02Nos.	
30	2 wire Portable control phone in a suitable box with dry cells	2sets	2sets	
31	Telescopic pole of minimum 6 Mtrs. height with its bracket opening space at least 350 mm.	2Nos.	2Nos.	

32	Emergency socket plan of the Division / Neighbouring Div.	1set	1set	
33	Cellular Phones	4Nos.	4Nos.	
34	Satellite phone (SAT Phone miniature Type) which supports video, audio and text features.	1No.	1No.	
35	FAX Machine (Plain paper)	01No.	01No.	
36	4 Wire portable control phone in a suitable box with dry cells	2sets	2sets	
37	Tapping transformer 1120:1120,1120:600-02	02Nos.	02Nos.	
38	Terminating transformer (1120:470)	2Nos.	2Nos.	
39	WLL Exchange having 50 wire capacity.	1set	1set	HLC No.97
40	Fixed Cellular Terminals (FCT) (one of which compatible with 3G SIM)	04Nos.	04Nos.	

CATEGORY No19: OHE ITEMS & EQUIPMENTS

A	T&P Items			
1	Pull lift 1.5T	01Nos	01Nos	
2	Tirfor 1.6 T	01Nos	01Nos	
3	Tirfor 3 T	01Nos	01Nos	
4	Single sleeve pulley	02Nos	02Nos	
5	Double sleeve pulley	01Nos	01Nos	
6	Manila rope	50M	50M	
7	Comea long clamp (Universal)	04Nos	04Nos	
8	Comea long catenary clamp	02Nos	02Nos	
9	"D" Shackle	08Nos	08Nos	
10	Hammer 8 pound	01Nos	01Nos	
11	Extension ladder Alluminium 11 Mtrs. Adjustable	1No	1No	
12	Emergency mast complete	1No	1No	
13	Spike	15Nos	15Nos	
14	Wire rope sling 1 mtr.	2Nos	2Nos	
15	Wire rope sling 1.5 mtrs	2Nos	2Nos	
16	Discharge Rod	2Nos	2Nos	
17	M.S.BOX	2Nos	2Nos	
18	Padlock (50mm)	2Nos	2Nos	
19	Sling wire rope 9M	1No		
B	OHE Items			
1	Catenary splice	4Nos	4Nos	
2	Suspension clamp with nut & bolt	02Nos	02Nos	
3	Suspension bkt (Std)	03Nos	03Nos	
4	Suspension bkt (large)	02Nos	02Nos	
5	C-Clamp (STD)	02Nos	02Nos	
6	C-Clamp (Large)	02Nos	02Nos	
7	Large BT Tube 3.10	01Nos	01Nos	
8	STd. BT Tube 3.10	02Nos	02Nos	
9	RT (1.10M)	02Nos	02Nos	
10	Catenary clip	10Nos	10Nos	
11	Catenary dropper clip	50Nos	50Nos	
12	Contact dropper clip	20Nos	20Nos	
13	PG 1030	10Nos	10Nos	

14	PG 1041	10Nos	10Nos	
15	RE drum with SS Rope (3:1)	01Nos	01Nos	
16	GI Nut bolt 16x50 x38	25No	25No	
17	GI nut bolt 20x65mm	30Nos	30Nos	
18	GI nut bolt 16x360x150 mm	25Nos	25Nos	
19	GI nut bolt 16x260x100 mm	10Nos	10Nos	
20	Bulldog clamp	10Nos	10Nos	
21	T.T. Sleeve	02Nos	02Nos	
22	STD. Steady Arm	04Nos	04Nos	
23	Double strap	04Nos	04Nos	
24	BT Insulator	03Nos	03Nos	
25	ST Insulator	03Nos	03Nos	
26	9 Te. Insulator	04Nos	04Nos	
27	Solid core	01Nos	01Nos	
28	S.S. fastener BT+ST	12Nos	12Nos	
29	Adopter	02Nos	02Nos	
30	Top fitting	02Nos	02Nos	
31	Cate. ending cone	02Nos	02Nos	
32	Cont. ending cone	02Nos	02Nos	
33	Large wire ending cone	01No	01No	
34	Contact splice	04Nos	04Nos	

CATEGORY No. 20: BOOKS, MANUALS & RECORDS

1	Accident Manual	1No	1No	
2	G&SR Rule Book	1No	1No	
3	First Aid Manual	1No	1No	
4	Conference Rules Part III & IV for Train examining staff	2Nos	2Nos	
5	Safety First Instruction Book	01No	1No	
6	Maintenance & Operation manual for ARTs/ARMES/140Tcr	01No	1No	
7	Working Time table	01No	1No	
8	ART Logbook	1No	1No	
9	Attendance register	1No	1No	
10	Equipment testing register	1No	1No	
11	Dead stock register	1No	1No	
12	Chain & wire rope testing register	1No	-	
13	Maintenance manuals of the equipments	1No	1No	
14	ART Inspection register	1No	1No	
15	Inspection schedule display board	1No	1No	
16	Fire Fighting Instruction book	1No	1No	
17	Copy of the recommendations of High-Level Committee's Report on Disaster Management along with amendments.	1No	1No	
18	Manuals and drawings of 140Te Crane	1each	-	
19	IRPWM (P-Way Manual) with correction slips	01Set.	01Set.	
20	A.C. Traction Manuals	01Set.	01Set.	
21	S&T Manuals	01Set.	01Set.	
22	Maintenance Manual for ICF Coaches & LHB Coaches.	01Set.	01Set.	
23	Maintenance Manual for Wagons	01Set.	01Set.	

24	Commercial Manual.	01Set.	01Set.	
CATEGORY No. 21: MISCELLANEOUS GROUP				
1	Smartphone with 5g/4g connection, Rugged, Tough, Waterproof, Shockproof, Dustproof, 18 GB RAM + 512 GB ROM, Min 6" FHD screen with 200MP + 64MP Night Vision Camera & Min 100 Lumens DLP Projector.	1No.	1No.	HLCNo.65 Description changed keeping in view of latest technology and ease of use as suggested by NWR.
2	One Digital Video handycam Camera for video filming of the restoration work	1No.	1No.	HLCNo.65
3	Plastic Moulded Chairs (stackable)	40Nos	40Nos	HLCNo.74 As per suggestions received from ZRs.
4	Garden Umbrella	2Nos.	2Nos.	
5	Light weight Tent pre-fabricated waterproof for ART equipments & crane equipments	02Nos	02Nos	
6	Almirah with safe locker for keeping valuable items and Imprest.	03Nos.	2Nos.	
7	Digital Breath Analyser	2Nos.	2Nos.	
8	Safety Cone	12nos.	12nos.	Board letter
9	Safe steel cashbox for imprest money	01No.	1No.	
10	Life Jackets (Water rescue) [Qty may be reduced as per considering requirement & space availability] [Bd's letter 31.12.2012]	25 Nos	25 Nos	Quantity reviewed based on feedback from ZRs regarding less utilization.
11	Scene tape	6rolls	6rolls	Board letter
12	Water jet unit for removing garbage /bio-toilet effluent of damaged Bio-Toilet tanks.	01Set	1Set	
13	Face mask	75Nos.	50Nos.	
14	Safety hand Gloves (Non-leather)	40Nos.	30Nos.	
15	Nano Drone with live streaming / recording capability	1No.	1No.	Railway Board letter 2022/Safety (A&R) /1/2 dated: 06.05.2022. "Nano" for avoiding any licensing issues.
16	Vacuum System for sucking garbage from bio-toilet effluent.	Optional as per requirement.	Optional as per requirement.	As per suggestions received from ZRs.
17	Inflatable Tent	1No.	1No.	For Command Centre.

NOTES:-

1. In addition to above, the following equipments to be provided for 140t. Gottwald crane unit only as recommended by B. Dixit & Quraishi committee for 140t. Gottwald new design crane.

Sr. No.	Description	Quantity	Recommendations of B. Dixit & Quraishi Committee
1	Digital / conventional Vernier Calliper (Mitutoyo make-18" size or equ.)	01No	on 140 t. Gottwald new design crane.
2	Branded digital Multi-Meter (Capable of showing ranges of Resistance, Voltages, Current and Temperature	01No	
3	F.M. band Transmitter Set (2Nos) & receiver set (6Nos)	01Set	
4	Electronic Continuity tester	01No	
5	Automatic Fall Prevention device (Tractel Make-Model BLOCFOR-20) With full body harness & anchorage device Model UEE307 B.	01No	
6	Odysse Ascender (Make ACSTAFE)	01No	

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ANNEXURE-B

Standard List of Tools & Equipments for SPART (3-Coach) on Indian Railways			
Sr. No	Description	Quantity	Recommendation of HLC
	CATEGORY NO.1: ILLUMINATION:ELECTRICAL EQUIPMENTS		
01	Diesel driven 125KVA capacity fixed generator complete with switch board and Accessories. (For old SPART/SPARMV, lower capacity DG sets are available)	02Nos.	
02	Portable Generator set 3/2KVA on antivibration mounts, 230/250V with integral switch, spare sparkplug & its spanners.	06Nos.	To cater to increase number of LED fittings
03	Main cable fixing from DG set to terminal board, 3core cable 10sq.mm PVC insulated.	100Mtrs	
04	Toolkit for maintenance of portable generator set as per make of Gen. Set.	02sets	
05	Portable Switch board with 4 water proof industrial sockets each capable of taking 500 watt load and 5 mtrs 5/15 Amps capacity PVC insulated copper leads with plug at each end.	10 Nos.	To cater to increase number of LED fittings
06	Telescopic Stand floodlight 1.8/2.5 meter high.	20 Nos.	To cater to increase number of LED fittings
07	120-Watt LED flood light fittings IP65 protection suitable for 240 V single phase AC supply with 50 mtrs insulated copper lead with plug at one end & suitable arrangement for keeping cable.	20 Nos.	To minimize the variety of LED lights and to replace Halogen lights due to better illumination & better energy efficiency.
08	Handlamp with Electrical cable.	05Nos.	
09	Insulation tape 3/4"	10Nos.	
10	Oil measuring cane, set consisting of (200 ml, 500 ml, 1 Ltr, 2 Ltr & 5 Ltr)	01set	
11	Kerosene Oil	As per requirement	As per requirement projected by ZRs.
12	Diesel Oil in 200 lts. barrel	As per requirement	As per requirement projected by ZRs.
13	Petrol	As per requirement	As per requirement projected by ZRs.
14	Toolset complete with cutting pliers, hammers, screw drivers, knife etc.	01set	
15	Earthing rod for earthing of OHE	02Nos.	
16	Aluminium Telescopic ladder	01No	
17	Lubricating Oil (For DG sets)	20Ltrs.	
18	Battery Charger 230 volts/ 110Volts DC, 60Amps	01Nos.	
	CATEGORY No.2 : Illumination: Other than Electrical		
01	Portable telescopic LED Tower light (AC & Battery Operated) of min. 4-meter-high with flexibility of 180 to 360-degree coverage. Minimum 50000 lumen along with suitable capacity portable G. set.	4 Nos.	Future procurement as replacement to Inflatable Tower Lights may be done with Portable

			Telescopic LED Tower Light.
02	LED Lamps (High illumination)	10Nos.	
03	LED torches	10Nos.	
04	3-Cell torches	10Nos.	
05	Spare bulb for 3 cell torches	12Nos.	
06	Dry Cells	03 Dozens	
07	Search Light Chargeable	04Nos.	
	CATEGORY No.3		
	Cutting Equipments		
01	Cylinder Oxygen (150Cu.ft)	6 Nos.	Increase in qty. is till such time proposed extra Plasma and / or Exothermic equipment is procured by ZRs.
02	Industrial LPG 19 Kg / Cylinder Acetylene (150Cu.ft.)	4 Nos.	
03	Cutting torch with Hoses-Nozzles and accessories with back fire arrestor, pipe blow CR and CH type and Nozzle cutogen 1/16" and 3/16"	4 sets	
04	Spare nozzle 1/16" & 3/16"	4 each	
05	Pressure regulator with gauge Oxygen (Double type)	4 Nos.	
06	Pressure regulator with gauge Industrial LPG / Acetylene (Double type)	4 Nos.	Easy availability & ease of handling of Industrial LPG as an alternate to Acetylene.
07	Safety Goggle for welder	4 pairs	
08	Gloves and leg guards of levlar heat resistant	12 pairs	
09	Leather Apron for Welder	4 Nos.	Due to increase in qty. of cutting equipment.
10	Toolset for maintenance + Nozzle cleaning tool	2 set	
11	Portable Plasma cutting equipment with required capacity Generator and compressor	2 sets* (*As an alternative to 2 nd set of Plasma exothermic cutting equipment can also be procured as decided by PCME of ZR)	Increased population of SS Coaches/Wagons. One extra set as spare.
12	Exo-thermic cutting equipment /thermic lance	1 set	As per experience granted by SCR, SECR & WR. Faster cutting specially of CBC & thick SS & MS sheets. Underwater cutting is possible.
	CATEGORY No.4		

	Rescue and Relief Equipments		
01	High capacity Hydraulic Rescue Device [HRD] with spare power pack for cutting SS Coach/Wagons.	1set	
02	Spare cutter blades	1set	
03	Spare tips for spreader	1set	
04	Hydraulic hoses with extending connectors (Spare set for replacement)	1each	As per suggestion received from NWR
05	Hydraulic Oil with container for HRD	50Ltrs	
06	Portable set of electrically operated cutting tools comprising of Trepanner, Bar cutter, Channel cutter and shell shearer, Nibbler for relief and rescue of trapped passengers.	2sets	HLCNo.62
07	Nose plier, Electrician plier 200 mm long, and Outer circlipplier	1each	
08	Screw spanners 12"	1No.	
09	Toolkit for HRD maintenance	1set	
10	Petrol	As required	As per requirement projected by ZRs.
11	Diesel Oil	As required	As per requirement projected by ZRs.
12	Screw driver 6" & 12"	2Nos. each	
13	Electrically operated Drill machine 230V with extension cable 50M upto ½" Cap. with 10 Nos. 10mm spare drill bits	1No.	
14	Portable Angle grinder similar to Bosch model No. GWS-20-180, 2000W with 10 nos. spare grinding wheels.	2Nos.	
15	Power Chain Saw (Electrically operated)	1No.	
16	Window rod cutter/Bar napping tool	5Nos.	
17	Hydraulically operated C- Cutter	01 Nos.	Faster continuous cutting of SS & as suggested by NWR
18	Portable battery operated hydraulic window bar cutter	02 Nos.	As per suggestion received from NWR.
	CATEGORY NO. 5		
	HYDRAULIC RE-RAILING EQUIPMENTS		
01	Hydraulic Re-railing equipment set (complete)	1set	Specific names makes removed.
02	Spare powerpack and control table and roller carriage with traversing jack for Hyd. Re-railing equipment with one full set hose reel with extending connectors.	1each	As per suggestion received from NWR.
03	Hydraulic Oil for re-railing equipment with container.	50 ltrs	Specific names makes removed & qty. reviewed as per suggestion of ZRs.
04	Journal Jack similar to Duff Norton No. 111-C-2 or BEMCO Model 15- J-10 Capacity minimum-15 Te. Height -10" Lift -5".	2Nos	
	CATEGORY No.6		
	Lifting Appliances		
01	Inflatable Airbags (2Nos. rectangular type)	1set	HLCNo.64 Inflatable bags round type of approx. 130 T capacity are least utilized and difficult to use as per feedback of ZRs.

02	Hydraulic hand operated jack 20 ton capacity closed height 250mm, lift 150 mm	2Nos.	
03	Hydraulic hand operated jack 30 ton capacity closed height 285mm, lift 150mm	2Nos.	
04	Jack operating handle	4Nos.	
05	Spare Hydraulic Oil for jacks	20Ltrs.	
06	10T capacity D-Shackle	4Nos.	
07	05T capacity D-Shackle	4Nos.	
08	Confined space entry, exit and rescue system with safe secure anchorage, along with winch, fiber rescue stretcher and full body harness.	1No.	For vertical entry and exit from top of coaches for rescue of injured passengers.
	CATEGORYNO.7		
	OTHER MECHANICAL EQUIPMENTS		
01	Universal pulling & lifting machine (TIRFORSAMSON MAJOR)	2Nos.	HLCNo.76
	1)3.2Ton capacity for lifting		
	2)5.2Ton capacity for pulling		
02	Block differential pulley with chain 3 ton capacity	1No.	
03	Saw Hand 20"	1No.	
04	Trolley for seized roller bearing wheels of Loco, Coach & wagons (Wheel Skate)	1Set	
05	4-Wheeled hand push trolley	1No.	
06	Spare filters and V-Belts for engine of SPART	2sets	
07	Coolant concentrate for SPART engine	10Lts.	
08	Lube oil for SPART Engine	As per req.	
09	Transmission oil	As per req.	
10	Gear oil	As per req.	
11	Multimeter	As per req.	
12	Teflon Tape	As per req.	
13	Quick setting M-Seal	As per req.	
	CATEGORY No.8		
	Tools and Accessories		
1	Benchvice 150mm	1No.	
2	Hack saw 305mm to 407mm adjustable	1No.	
3	Hack saw blade 300x12.5x1.00mm or 350x 2x1.6mm	6Nos.	
4	Pick Axes 3Kg.	3Nos.	
5	Axes Felling	3Nos.	
6	Hand hammer ballpane 600gms	5Nos.	
7	Sledge hammer 3.2Kg	4Nos.	
8	Centre punch	1No.	
9	Chisel crosscut	6Nos.	
10	Wire punch 1"dia	4Nos.	
11	Bars Tommy 7/8"x2'-6" long	4Nos.	
12	Plastic Bucket Cap.10 Ltrs.	4Nos.	
13	GI Bucket Cap. 15 Ltrs.	4Nos.	
14	Goggles made from heat resistant plastic material	6pairs	

15	Spanner Box 10mm,19mm,24mm,27mm,30mm,32mm,40mm	1set each	
16	Spanner double ended 8x10mm, 13x17mm, 19x22mm, 24x27mm, 30x32mm, 36x41mm	2Nos.each	
17	Shovel round nose 16Kg 685mm long handle	6Nos.	
18	Navghan (Singada)	2Nos.	
19	Beaters with handle	3Nos.	
20	Phawrah country	3Nos.	
21	Tongs of sorts 455mm	4Nos.	
22	Tongs of sorts 610mm	4Nos.	
23	Calipers 6"outside	1No.	
24	Calipers 6"inside	1No.	
25	Measuring steel tape100ft (30mtrs) (16mm width)	1No.	
26	Spring loaded measuring gauges (Track and Rolling stock)	1set	HLCNo.77
27	Light weight synthetic pre-fabricated water proof tent for Mechanical equipments	01No.	
	CATEGORYNO.9		
	GENERAL STORES		
1	Bolt MS Hex head of different sizes	10Kg.	
2	Nuts MS Hex of different sizes	5Kg.	
3	Handle wooden/ bamboo for sledge hammer 36" long	2Nos.	
4	Handle wooden /bamboo for sledge hammer 16" long	2Nos.	
5	Rope Nylon (one bundle of 12mm dia)	100mtrs	
6	Barrier tape	200mtrs.	
7	Padlock (Godrej make with duplicate keys)	10Nos.	
8	Hand umbrellas water proof and electric shock proof	20Nos.	
9	Rain coat industrial two pieces	30Nos.	
10	Oil measuring cans conical pouring type1)1 lit.cap.2)2 lit.cap.3)5 lit.cap. &10 lit.cap.	1No.of each	
11	Lamp hand signal (Tri colour)	2Nos.	
12	Fog signals (Detonators)	20Nos.	
13	Flag hand signal (green) 45x10cms	4Nos.	
14	Flag hand signal (Red) 45x10cms	4Nos.	
15	Board Last vehicle (LV)	1No.	
16	Gum Boots (Free size)	30pairs	
17	Heavy duty safety shoes	30pairs	
18	Flag Banner (Red) with track poles	2Nos.	
19	Alluminium ladder 6 ft.long	1No.	
20	Self-supporting Aluminum ladder 5'&10'	1each	HLCNo.82
21	Collapsible Telescopic Aluminum ladder 6/8 Meter & 11Mtr.	1each	HLCNo.82 As per suggestion received from NWR
22	Helmet (Heat and chemical resistant) with rechargeable battery operated mounted LED light.	50 Nos.	As per suggestion received from NWR
23	Rope Manila 1"dia	50ft.	
24	Plastic moulded chairs	40 Nos.	HLCNo.74

			As per suggestion received from NWR
25	Folding table 115x74x71cm	1No.	HLCNo.85
26	LPG connection with spare gas cylinder	1set	
27	Gas lighter	2Nos.	
28	Safety match boxes	2Boxes	
29	Paper Plates	300Nos.	
30	Glass paper (Thermocol)	300Nos.	
31	Tea spoon(S/S)	12Nos.	
32	Stainless Steel Bhagona with cover, Medium size	2Nos.	
33	Stainless Steel Kettle 2 Ltrs.& 4 ½ Ltr	1each	
34	Tea Strainer	6Nos.	
35	Tea cup & Saucers	12Nos.	
36	Desert spoon	6Nos.	
37	Biscuits	3 Kg.	As suggested by ZRs.
38	Tea leaf	1Kg.	
39	Milk Powder	2 Kg.	As suggested by ZRs.
40	Readymix Tea/Coffee	1 Kg.	For requirement of officials attending the site.
41	Coffee	1/2Kg.	
42	Caffeinated Energy drink	10 bottles	For requirement of officials attending the site.
43	Sugar	10Kg.	
44	Sugar Free	500 pellets	For requirement of officials attending the site.
45	Steel container of sufficient capacity for keeping Food & Raw material.	4Nos.	
46	Tea Thermus Steel (SS)20/10Ltr. Cap.	2Nos.	
47	Water container (SS) with cover 50Ltr.Cap.	1No.	
48	Steel glass	12Nos.	
49	Stainless steel Jug (Cap. 2 Ltrs)	2Nos.	
50	Thermos 2 Ltr.Cap.(For tea)	2Nos.	
51	Duster (Khadi cloth)	12Nos.	
52	Khadi cloth	5Mtr.	
53	Water storage tank 500 Ltr. Cap.	1No.	As suggested by ZRs.
54	Soap	4Nos.	
55	Soap toilet	4Nos.	
56	Soap dish	2Nos.	
57	Aqua Guard for water filtration	1No.	
58	Cotton Darri size 9'x12'	6Nos.	
59	Garden Umbrella with stand	2Nos.	
60	Charging facility for laptop Computer	As per Rqmt.	HLCNo.67

61	High visibility jackets (Red cross on White background)	30Nos.	HLCNo.85
62	Wrist band with serially numbered plastic tokens (1to100) with taps	100Nos.	HLCNo.81
63	Respiratory Mask	2units	
64	Digital Video & Still Camera with min. 16GB data card with tripod	1each	HLCNo.65
65	Almirah with safe locker for keeping valuable items	1No.	
66	Inflatable tent	1No.	HLCNo.68
67	Portable rail trolley	1No.	HLCNo.89
68	Stainless Steel Palta	01No.	
69	Ghamela with handle (Kadai) i.e. pan with handles 16" dia, 6" deep	01No.	
70	Pressure Cooker 10 Ltrs. Capacity	01No.	
71	Compartment thalies steel 15" to 18" dia	25Nos.	
72	Kotries stainless steel 3" approx.	25Nos.	
73	Parat stainless steel	02Nos.	
74	Wooden Board with roller for pastry	01No.	
75	Puri Machine	01No.	
76	Jhara for puri	01No.	
77	Iron Tawa 12" dia	01No.	
78	Mixture Grinder 230V AC/ 110V DC with pots.	1No.	
79	Kitchen Ration	As per Requirement	
80	Cooking toys	01set	
81	Steel Containers for keeping Food, Raw materials.	08Nos.	
82	Steel Bucket 10 ltrs. capacity	02Nos.	
83	Smartphone with 5g/4g connection, Rugged, Tough, Waterproof, Shockproof, Dustproof. 18 GB RAM 512 GB ROM. Min 6" FHD screen with 200MP+ 64MP Night Vision Camera & Min 100 Lumens DLP Projector	01 set	As per suggestion received from NWR
84	Pinion Puller for pulling out Traction motor pinion	01 Nos.	
85	Uniform for nominated staff (2 Sets per staff As with replacement after every 2 years)	As per requirement	
86	Folding vertical rescue stretcher	05 Nos.	
87	Telescopic chain saw	02 Nos.	
88	Wooden dowel rods to cordon off the site with rope/scene tape	As per requirement	Item required for cordon off the site
89	Water bottles	400-500 Nos.	For SPART staff, as per Rly Bd letter dt. 27.07.11
90	Full body harness with accessories.	As per requirement	For staff working at height
	CATEGORY No.10		
	Wooden Packings		
1	Wooden Packing 300x300x25mm	12Nos.	
2	Wooden Packing 300x300x50mm	12Nos.	
3	Wooden Packing 300x300x75mm	12Nos.	
4	Wooden Packing 300x300x100mm	6Nos.	
5	Wooden Packing 300x150x75mm	6Nos.	
6	Wooden Packing 900x300x75mm	6Nos.	

7	Wooden Packing 900x300x50mm	6Nos.	
8	Wooden Packing 900x300x25mm	6Nos.	
9	Wooden Packing 1200x300x50mm	6Nos.	
10	Wooden wedges	10Nos.	
Note: All packing must be recessed at the end & bonded with 30x5mm thick MS strip bend.			
	CATEGORY No.11		
	C&W Items		
1	BP Air hose	06Nos.	
2.	FP Air Hose	04Nos.	
3.	MU Washers	12Nos.	
4.	Coupling hooks	02Nos.	
5.	Screw coupling with shakle & pins	03Nos.	
	CATEGORY No.12		
	Telecommunication Equipments		
1	Inspection book	1No	
2	Megaphone transistorized 2 watts to work on 9 volt dry battery cells.	3Nos.	
3	4 wire emergency portable control telephone set with accessories DTL10093	1set	
4	Hand held walkie talkie sets with battery charger	6sets	
5	Charging facility for Laptop, Cellphone and camera	1Unit	HLCNo.67
6	Mobile cellular telephone	4sets	
7	VHF set, 25 Watts along with accessories.	2Nos.	
8	Multimeter Digital along with toolkit	1Unit	
9	Hand held torch of 3 cells complete with dry cell	4Nos.	
10	Satellite phone	1No	
11	Wireless PA System	1Unit	
12	Light weight synthetic pre-fabricated water proof tent for Telecom equipments.	01No.	
	CATEGORY No.13		
	Fire Fighting Equipments		
1	Dry chemical powder ABC type fire extinguisher approx. 5 Kg Cap.	15Nos.	HLCNo.85
2	Fire Resistant suit complete	As per requirement based on last 10 years usage.	Qty reviewed due to rare usage as per suggestion received from ZRs
3	Gas detector	1 No.	
4	Water mist and CAF fire fighting backpack system (High Pressure) 10 ltr. Capacity.	1 set	As per suggestion received from ZRs.
5	Fire Ball	10 Nos.	Added as per suggestion received from NWR.
6	Portable Smoke Extractor	02 Nos.	Added as per suggestion received from NWR.
	CATEGORY NO.14		
	BOOKS & MANUALS		
1	Accident manual	1No.	
2	G&SR Rule book	1No.	
3	Conference rule Part III & IV for TXR staff	1No.	

4	Safety first instruction book	1No.	
5	Working time table	1No.	
6	SPART Logbook	1No.	
7	Attendance register	1No.	
8	Equipment register	1No.	
9	Dead stock register	1No.	
10	Equipment testing register	1No.	
11	Register for the periodical schedules of SPART equipment	1No.	
12	Maintenance manual of the equipments.	1No.	
13	SPART Inspection Register	1No.	
14	Inspection schedule board (White writing board)	1No.	
15	Transportation manual	1No.	
16	First Aid manual	1No.	
17	Copy of the high level committee report on Disaster Management with all amendments	1No.	
18	Maintenance & Operation Manual for 140T cranes, ARTs, SPART, ARME	1No.	HLCNo.102
19	Medical Manual	1No.	
20	SPART Main engine parts catalogue manual	1No.	
21	Main Engine Maintenance Manuals (Electrical & Mechanical)	1No.	
	CATEGORYNo.15		
	Other General Items		
1	Details of local resources like local doctors, Hospitals, Nursing homes, official of civil administration, defence establishment, Paramilitary establishment, boatmen, Road cranes/ Bulldozers, Fire brigade, Stations, Road transport depot etc.	1Unit	HLCNo.14
2	List of nominated staff for SPART	1Unit	HLCNo.57
3	Duty list of all SPART staff and supervisor for extricating injured as well as dead.	1Unit	HLCNo.87
4	AMC's for critical equipments with record of periodicity.	1Unit	HLCNo.94
	CATEGORY No.16: MISCELLANEOUS GROUP		
1	Lightweight Tent pre-fabricated water proof for SPART equipments	01Nos	
2	Charging facilities for Lap-Top / Computer / Cellphone & Camera	As per req.	HLCNo.67
3	Almirah with safe locker for keeping valuable items and Imprest	02Nos.	
4	Digital Breath Analyser	1Nos.	
5	Safety Cone	12Nos.	Boardletter
6	Safe steel cashbox for imprest money	01No.	
7	Life Jackets (Water rescue)	20 Nos.	Boardletter
8	Scene tape	6 rolls	Boardletter
9	Power bank for Mobile charging at site	4Nos.	
10	Safety Hand Gloves (Non-leather)	20Pairs	
11	Laptop with high speed Internet Dongle and B&W laserjet printer	1 set	Item added for requirement of internet and printing facility at site
12	Blanket	10 Nos.	As per suggestion from ZRs
13	Bedsheet	25 Nos.	As per suggestion from ZRs

14	Pillow	10 Nos.	As per suggestion from ZRs
15	Pillow Cover	20 Nos.	As per suggestion from ZRs
	CATEGORY NO.17		
	MEDICAL EQUIPMENTS / ITEMS		
1	Augmented First Aid Boxes.	2Nos.	HLCNo.85
2	Body bags	20Nos	HLCNo.80
3	Lightweight synthetic pre-fabricated water proof tents for Medical staff & injured passengers	2Nos	HLCNo.85
4	Luminous jackets duly containing white cross on red background for use by rescue workers	30Nos.	HLCNo.85
5	Foldable chairs	4Nos	HLCNo.85
6	Portable fire extinguishers	2Nos	HLCNo.85
7	Readymade splints for arm & forearm	25Nos	HLCNo.85
8	Readymade slings	25Nos	HLCNo.85
9	One Portable generator set with sufficient reserve fuel	1set	HLCNo.85
10	Battery Operated headlights for medical and para medical staff	5Nos	HLCNo.85
11	Inj. & tablets, Analgin to be replaced by Inj. & tablet paracetamol	-	HLCNo.85
12	Dettol to be replaced by betadine/cidexunit	As per Req.	HLCNo.85
13	Anti-inflammatory, Analgesic & antibiotic ointments for local application and lotions to be replaced by sets of anti-inflammatory, analgesic, antiseptic, aerosol, sprays unit for unit.	foreach unit	HLCNo.85
14	Dressings in autoclaved drums to be replaced by pre-sterilized disposal dressing of assorted sizes.	AsperReq.	HLCNo.85
15	Seldingernine- Tracheotomy set(1Number) is to be provided	1No.	HLCNo.85
16	Inflatable tourniquets (10Nos) are to be provided.	10Nos.	HLCNo.85
17	Spinal splints (10Nos) are to be provided.	10Nos.	HLCNo.85
18	Phuadephia Cervical Collar	5Nos.	
	CONTENTS FOR SCALE –I (as per IRMM-2000 Vol.II)		
1	V. Fluids in disposable plastic transfusion bottles.		
	a)5% Glucose	5Nos	
	b)Normal saline	5Nos	
	c)Plasma expander like low molecular dextran	5Nos	
2	a)Disposable sterile infusion sets	12Nos	
	b)Ven flow	5Nos	
3	Sterile disposable syringes		
	a)2ml	20Nos	
	b)5ml	10Nos	
	c)10ml	10Nos	
	d)20ml	10Nos	
	Disposable needles.	50Nos	
4	Inj. Pentazocine	50amps	
5	Inj. Atropine sulphate 0.65 mg or 0.6 mg	10amps	
6	Inj. Diclofenac sodium 3 ml	50amps	
7	Inj. Adrenaline1:1000 strength amps	5amps	

8	Inj. Buprenorphine	10Nos	
9	Inj. Lignocaine hydrochloride without adrenaline 2% vial of 50ml.	5vials	
10	Inj. Ampicillin 250 mg/vial.	20vials	
	a) Amoxycillin	100caps trips	
11	Inj. Dopamine 5ml.	10amps	
12	Inj. Dexamethasone each vial containing 4mg	10vials	
13	Inj. Diazepam 10mg	10amps	
14	Inj. Pheneramine maleate	6amps	
15	Inj. Ranitidine	6amps	
16	Inj. Deriphylline	6amps	
17	Nifedipine liquid capsule for sublingual use	6caps	
18	Inj. Paracetamol 2ml I.M	6amps	
19	Inj. Dicyclomine Hcl 2ml I.M	6amps	
20	Inj. Metoclopramide	10amps	
21	Inj. Lasix	12amps	
22	Surgical spirit 350ml in wax stoppered bottle	2bottles	
23	Solution of Iodine 2% 120 ml in stoppered bottle/Povidone Iodine solution	2bottles	
24	Chloroxylenol or similar antiseptic 120 ml	2bottles	
25	Sterile paraffin tulle 10cm x 10cm or equivalent in tins of 24 pieces	5 Tin / Packets	
26	Lignocaine jelly in tube	01 No.	
27	Redistilled water for inj 10 ml vials	10 vials	
28	Paracetamol tablets 0.5 Gm in strip	100 Tab	
29	Tab Diazepam 5mg	50 Tabs in strip	
30	Tab pheneramine maleate	50 Tabs in strip	
31	Oral rehydration powder	12 packets	
32	Tab Diclofenac sodium	100 Tabs in strip	
33	Tab Prochlorperazine 5mg	50 in strip	
34	Tab Dicyclomine Hcl	50 in strip	
35	Tab Metronidazole + Furazolidine	100 Tabs in strip	
36	Tab Antacids	100 in strip	
37	Tab Salbutamol 4mg	50 in strip	
38	Tab Metoclopramide hydrochloride	30 in strip	
39	Coronary vasodilator sublingual (Sorbitrate 10mg)	50 in strip	
40	Nasal drops	3 vials	
41	Tinidazole (300mg)	100 in strips	
42	Chloramphenicol eye applicaps in bottles of 25	2Nos	
43	Anti-infective or antiseptic insufflation powder 10gms container.	5Nos	
44	Surgeon's instruments and ligature in a case containing the following		

	a) Liston's Amputation knife	1No	
	b) Bard Parkerscalpel handle size no. 4	2Nos	
	c) B.P.Blade for above	1Packet	
	d) Amputation saw	1No	
	e) Probesinus 20cm	1No	
	f)Director butterfly wing	1No	
	g)Forceps bone 18cm	1No	
	h)Needle holder universal	2Nos	
	i)Scissors blunt pointed12cmS.S	1No	
	j)Scissors sharp pointed15cmsS.S	1No	
	k)Artery force psspencerwells12cmS.S.	10Nos	
	l)Razor safety with packet of 5 blades incase	1No	
	m)Catheter male G.S.size 8&12	1each	
	n)Tourniquet Esmarch(I.R.Bandage)	2Nos	
	o)Suture needle cutting curved and straight assorted size in vulcanite case	5each	
	p)Ligature catgut chromic with straight needles of 50mm and curved needles of 40mm attached in sealed tubes	5each	
	q)Ligature nylon medium	50strands	
	r)Ligature catgut plain in sealed tube with needles size 0 & 1	6each	
45	Forceps tongue S.S	1No	
46	Mouth Gag. Adult and child size	1No.each	
47	Airways plastic or rubber,child and adult size	2each	
48	Sponge holder 20cm long S.S	4Nos	
49	Scissors surgical12cm blunt and sharp pointed S.S.	3Nos	
50	Forceps dissecting12cm toothed S.S.	1No	
51	Forceps dissecting12cm non toothed S.S.	1No	
52	Forceps dressing 12cm S.S.	3Nos	
53	Forceps cheatle S.S.	2Nos	
54	Corneal loupe	1No	
55	Tracheostomy set in a case labelled' sterile', consisting of tracheostomy tube with tapes, one scalpel with blade, one sharp hook, two artery forceps, mosquito silk suture, one blunt hook and double hook retractor, sterile gauze	1No	
56	Labelled cut-open set sterilized in a case consisting of: 1 B.P. Scalpel with blade No. 4, 2 Nos. mosquito artery forceps, one fine dissecting forceps, one I.V. Cannula, silkthread, one needle connected polythene tube gauze.	1No	
57	Eyelidretractor	1No	
58	Eyespud S.S.	1No	
59	Eye fixation forceps S.S.	1No	
60	Rubber catheter sizes 4,6 & 8	1Noeach	
61	Foley's catheter universal size	2Nos	
62	Tourniquet Esmarch's (I.R. bandages and card in tin case)	2Nos	
63	Stethoscope binaural	3Nos	
64	Sphygmomanometer	2Nos	

65	Scissors Mayo 7" straight	1No	
66	Bowls lotion 25 cm, 20cm, 16cm diameter E.I.	2Nos. each	
67	Trays instrument and dressing with cover 30x 25cm, 25x 20cm, 25 x 15 cm all S.S.	1No each	
68	Tray kidney size 25cm and 20 cm	2Nos. each	
69	Brush nail	5Nos	
70	Apron operation plastic	5Nos	
71	Apron operation, long cloth to be kept in sterilized drums	5Nos	
72	O.T. Slippers size 7, 8	2Nos. each	
73	Face mask disposable	10Nos	
74	Head cap disposable (Surgeon)	10Nos	
75	Towels operation surgical 100x 60cm in sterilized drums	20Nos	
76	Gloves surgical size 6½", 7", 7-½" sterilized is possible assorted size	10Nos	
77	Coats surgeons	5Nos	
78	Towels hands surgeons (In Polythene bag)	10bags	
79	Soap toilet incase-cakes	5Nos	
80	Stopper loosener	1No	
81	Operation table tubular steel with sponge rubber mattress	1No	
82	Shadowless lamps 30cm dia or angle poise and fixed on side panel	1No	
83	Trolley anesthetic without castor with stand for oxygen cylinder	1No	
84	Oxygen cylinder 1320 Ltr. Capacity with key	1No	
85	Inj. ketamine hydrochloride	5amps	
86	Mask Oxygen, polythene (big and small)	1No. each	
87	Portable resuscitation kit in a bag containing:	1No	
	a) Automatic resuscitator with provision for positive pressure ventilation, inspiratory, expiratory flow adjustments.		
	b) Manual resuscitator (Ambu's Bag)		
	c) Oxygen cylinder (small) Venti mask with tubes		
	d) Suction (Manual and automatic)		
	e) Intubation set with laryngo scope, endotracheal tubes of all sizes.		
	f) Stetho scope, sphygmo manometer, Hammer, Spatula, torch, thermometer		
	g) I.V. Rod in two (folded) disposable IV set, adhesive plasters, sterilised gauge, bandage scissors, dissecting & tissue forceps, haemostatic forceps, needle holder, disposable syringe & needle, Splint.		
88	Revolving tool	2Nos	
89	Trolley instrument without castors & with castors and glass top	1No. each	
90	Steriliser instrument portable with two burner spirit stove sizes 30x20x15cms & 20x10x10cms	1No	
91	Gauge cut in assorted sizes and packed in dressing drum 23x25cms sterilised	20Mtrs/ 200FFP	
92	Wool cotton absorbent cut to size and sterilised in drum 23x 25 cm	2 kg / 4pairs	
93	Wool cotton absorbent packet of 500 Gms	10Pkts	
94	Bandage loose woven compressed 7.5cm wide and 4.5mtr long	100Nos	
95	Bandage loose woven compressed 10cm wide and 4mtr long	100Nos	
96	Bandage adhesive 7.5cm wide in sealed tins	2Nos	

97	Bandage triangular 130x 90x90cm (SJAB)	30Nos	
98	Adhesive plaster 2.5cmx5 Mtr	3Nos	
	Adhesive plaster 10cmx5 Mtr	3Nos	
99	Scissors Mayo 7"	1No	
100	Mackintosh 1Mtr size	5Nos	
101	Swab sticks in bundles of 25 wrapped in cloth bag and sterilized in drums	50Nos	
102	Spirit methylated in wax stoppered bottles of 250ml each	4bottles	
103	Readymade plaster of Paris bandage 10 cm & 15 cms sizes in tins	20 Bandages of each size	
104	Corrugated rubber drain for operation	1sheet	
105	Pins safety assorted sizes in packets of 10	4sets	
106	Thomas splint adult and child size	2Nos	
107	Splint arm and forearm wooden set of 6	2sets	
108	Splint thigh wooden liston set of 6	3sets	
109	Hammer 400 Gms	1No	
110	Chisel 2.5cms wide	1No	
111	Saw 30cm long	1No	
112	Clasp knife	2Nos	
113	Cork screw opener	1No	
114	Matches safety packet of one dozen boxes	1Pkt	
115	Torch Eveready 4cell (compact and carrying)	10Nos	
116	Bulbs for torches (spare)	5Nos	
117	Water bottle with drinking cup and strap 1ltr	5Nos	
118	Basin wash hand E.I. 35 cms dia	5Nos	
119	Buckets plastic 5 ltrs capacity	5Nos	
120	Jug water E.I. 2ltr capacity	2Nos	
121	LPG stove	2Nos	
122	Day carrier	1No	
123	LPG petromax 1.5/2 ltr	5Nos	
124	Notebook with pencil	5Nos	
125	Memo pad with carbon paper	5Nos	
126	Book for noting injury particulars identification etc	5Nos	
127	Skin marking pencil	2Nos	
128	Ground sheet size 200x 120cm	2Nos	
129	Brassards arm with red cross	50Nos.	
130	Haversack each containing the following	5Nos	
	a) Roller bandages	10Nos	
	b) Triangular bandages	2Nos	
	c) Tab. Paracetamol	20instrips	
	d) Sterile adhesive strip dressing standard size	40Nos	
	e) Antiseptic cream (25Gm)	1tube	
	f) Chloramphenicol eye applicaps in plastic box	10	
	g) Torch (3 cell)	1	

	h)Arm brassard red cross	5Nos	
	i)Memo pad with pencil	1	
	j)Tallycards10cmx7cm with eyelets & tapes	12	
	k)Disposable sterilized syringes with needle 2cc	2	
	l)Inj. Diclofenac sodium	2amps	
	m)Safety pins	10Nos	
	n)Esmarch tourniquet	1No	
	o)Wooden splint set of 6	1set	
	p)Analgesic aerosol spray	1	
	q)Analgesic antiseptic spray	1	
131	Sterile adhesive strip dressing standard size box of 150	1Box	
132	Cups feeding E.I (200ml)	5Nos	
133	Mugpolythene 300ml capacity	5Nos	
134	Hot water bags IR with cover & icecap	5Nos	
135	Spittoons	5Nos	
136	Bedsheets cotton white 2.1x1.5mtr	40Nos.	
137	Pillow cotton 50 x20cms with 2 waterproof covers for each pillow	20Nos.	
138	Sarees cotton white 5.5Mtr	10Nos	
139	Lungis cotton white 2Mtr each	20Nos.	
140	Shirts open in front with half sleeves large size	20Nos.	
141	Waterproof sheeting1 x1 mtr in pieces	20Nos.	
142	Sand bags 30cmx15cm	10Nos	
143	Hand punkhas	10Nos	
144	Shrouds long cloth 2.1mtr x1.5mtr	40Nos	
145	Backrest wooden	1No	
146	Camps stool folding	2Nos	
147	Camps table folding	2Nos	
148	Blankets woolen/cotton according to climate	50forBG	
149	Bedpan E.I. slipper shaped	4Nos	
150	Urinalmale E.I	4Nos	
151	Urinalfemale E.I	2Nos	
152	Milkpowder 450Gms or Milk condensed	2Tins	
153	Sugarinleverliddtin in 0.5Kg/1Kg poly pack	2Kgs4tins	
154	Tea in sealed tin of 500 Gms(250Gms packs2)	1tin	
155	Coffee (instant)100Gms in sealed tins	2Tins	
156	Table spoons SS	5Nos	
157	Tea spoons SS	10Nos	
158	Tea pot	1No	
159	Tumbler polythene or disposable glass(400mlcapacity)	40Nos.	
160	Corkscrew	1No	
161	Tin Opener	1No	
162	Bucket with flat cover polythene size 5ltr	2Nos	
163	Kettle aluminium size 3ltr	1No	

164	Degchi aluminium with cover 20,18,15 & 10cms dia set of 4	1set	
165	Sterile/mineral water	25bottles	
166	Bucket G.I 5 ltr. capacity	2Nos	
167	Polythene carbuoys with handle and stopper 18Ltr capacity (for drinking water)	2Nos	
168	Stretcher folding SJ Apattern (aluminium)	10Nos	
169	Umbrella hand	5Nos	
170	Rain coat plastic with hood (like ladies rain coat)	5Nos	
171	Gumboots standard and large	2Noseach	
172	Breath analyser	1No	
173	Vials for collection of blood samples for testing alcohol content	5Nos	
174	Dictaphone	3No	
175	Staircase steel	6Nos	
176	Underwater seal	1No	
177	Foot operated suction machine	1No	
178	MFR Kit with splints	5Sets	
179	Portable Defibrillator	1No.	
	Augmented First Aid Boxes (2Nos.)		
1	Bandaids strips(1.9x 7.2cms)	20	
2	Povidone Iodine solution(500ml)	1	
3	Surgical pad 7.5cmx20cm	5	
4	Antiseptic Cream	1	
5	Safety pins	10	
6	Adhesive Plaster 2.5 to 5mtrs	2	
7	Disposable spirit swabs(box of 20)	1	
8	Chloramphenicol eye applicaps in bottle of 50	1	
9	Orohydrate pwd.Pkts	5	
10	Tab.Antacid/digene	30	
11	Anti-inflammatory spray	1	
12	Antiseptic spray dressing	1	
13	Pencil torch	1	
14	Liquid Paraffin drops 5ml bottle	1	
15	Voveron Emulgel	1	
16	Otrivin Nasal drops	1	
	<i>Contents to be used by qualified Doctor</i>		
17	Disposable syringes 5ml	5	
18	Disposable needles 23G	5	
19	Disposable needles 21G	5	
20	IV set disposable	2	
21	Ven flow	2	
22	Laryngo scope,adult & child	1	
23	Sphyg manometer (Aneroiltype)	1	
24	Stetho scope	1	
25	Tab.Sorbitrate 10mg	10	

26	Tab.Paracetamo 1500mg	50	
27	Syrup Paracetamol	1	
28	Syrup Brufen	1	
29	Syrup Antispasmodic drops	1	
30	Antispasmodic drops	2	
31	Tab.Brufen 500mg/Diclofenac sodium 300mg	50	
32	Tab.Diazepam 5mg	10	
33	Nefidipine liquid caps 5mg.for sublingual use	10	
34	Tab.Ranitidine 300mg	10	
35	Tab.Domstal10mg/Reglan10mg	10	
36	Tab.Spasmindom 20mg	10	
37	Tab.Cetirizine10mg	10	
38	Tab.Asprinsoluble 100/150mg/Disprin	10	
39	Tab.Metronidazole-400mg+Furazolidine	20	
40	Tab.Salbutamol 4mg	10	
41	Inj.Adrenaline 1ml	2	
42	Inj.Efcorline100mg	2	
43	Inj.Atropine 1ml	2	
44	Inj.Diazepam 5mg	2	
45	Inj.Buscopan	2	
46	Inj.Pheniramine Maleate 25 mgm/Inj.Avil	2	
47	Inj.Deriphyllin	2	
48	Inj.Lasix 40mgm	5	
49	Inj.Diclofenac Sodium 3ml Ampule 1ml/25 mgm	2	
50	Inj.Domstal10mgm/ Reglan10mg	2	
51	Inj.Pentazocine	2	
52	Inj.Glucose 25%	5	
53	Inj.Ranitidine	2	
54	Inj.Buprenorphine 0.03-0.06mg/1ml	2	
55	Inj.Buprenorphine 0.03-0.06mg/2ml	2	
56	Ringerssoslution-450ml	1	
57	Inj. Normal saline 0.9% 450ml	1	
58	Injury card	1	
59	A pair of gloves (size7)	1	
	FOR STATIC FIRST AID BOXES		
60	Triangular Bandages compressed	2	
61	Roller bandage (7.5cmsX 4Mtr)	5	
62	Esmarch's Tourniquet	1	
63	Splints wooden extensible (Setof6)	1	
64	Airway plastic(medium)	1	
65	Airway plastic(small)	1	
66	Ambu Bag (Adult & child)	1	
67	Endotracheal tube disposable-Adult	1	

68	Endotracheal tube disposable-Child	1	
69	Curved Artery Forceps 6"	1	
70	Scissors Surgical Mayo's 8"	1	
71	Needle holder medium size, straight	1	
72	Toothed dissecting forceps, medium size	1	
73	Chromic catgut with cutting needle	2	
74	Suction pump-foot/hand operated (portable.)	1	
75	Portable Oxygen cylinders with accessories.	1	

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List of Tools & Equipments for ARMEs on Indian Railways

Sr. No	Description	Quantity	Recommendation of HLC
	CATEGORY No.1		
	Illumination:Electrical Equipments		
1	Portable Generator set 3/2KVA on antivibration mounts,230/250V with integral switch, spares parkplug & its spanners. (preferably one Generator of 3KVA required)	2Nos.	
2	Main cable fixing from DG set to terminal board,3 core cable10sq.mm PVC insulated	100Mtrs	
3	Tool kit for maintenance of portable generator set as per make of Gen. Set	2sets	
4	Portable Switchboard with 4 waterproof Industrial Sockets each capable of taking 500 watt load & 5Mtrs. 5/15AmpCap.PVC insulated copper lead with plug on one end.	4Nos.	
5	Stand floodlight 1.8/2.5 meter high.	10Nos.	To meet requirement of increased LED fittings.
6	120/100-Watt LED Flood light fitting, IP65 protection suitable for 240V single phase AC supply with 50mtrs PVC insulated copper leads with plug at one end and suitable arrangement for keeping cable.	10Nos.	Halogen lamp to be replaced with LED lamp only. Qty reviewed for better illumination.
7	Handlamp with Electrical cable.	5Nos.	
8	Insulation tape 3/4"	10Nos.	
9	Oil measuring cane, set consisting of (200ml,500ml,1Ltr,2Ltr & 5Ltr)	1set	
10	Kerosene Oil	As required	As per requirement projected by ZRs.
11	Petrol	As required	
12	Toolset complete with cutting pliers, hammers, screw drivers, knife etc.	1set	
13	Earthing rod for earthing OHE	2Nos.	
14	Alluminium Telescopic ladder	1Nos.	
15	Lubricating Oil (SAE- 30)	5Ltrs.	
	CATEGORY No.2		
	Illumination: Other than Electrical		
1	Portable telescopic LED Tower light (AC & Battery Operated) of min. 4-meter-high with flexibility of 180 to 360 degree coverage. Minimum 50000 lumen along with suitable capacity portable G. set.	3Nos.	Future procurement as replacement to Inflatable Tower Lights may be done with Portable Telescopic LED Tower Light.
2	Rechargeable Battery Operated LED Lamps	Min.06 Nos	Board's letter dated 26.02.2014

3	Plastic body LED type torches	6Nos.	
4	Dry Cell	04 Dozens	
	CATEGORY No.3		
	Oxy-Fuel Cutting Equipments		
1	Cylinder Oxygen (150Cu.ft)	4Nos.	
2	Industrial LPG 19 kg / Cylinder Acetylene (150Cu.ft.)	01 Nos./ 2Nos.	Easy availability & ease of handling of Industrial LPG as an alternate to Acetylene.
3	Cutting torch with Hoses-Nozzles and accessories with pipe blow CR and CH type and Nozzle cutogen 1/16" and 3/16" with back fire arrester	2sets	
4	Spare nozzle 1/16" & 3/16"	2each	
5	Pressure regulator with gauge Oxygen (Double type)	2Nos.	
6	Pressure regulator with gauge Industrial LPG / Acetylene (Double type)	2Nos.	Easy availability & ease of handling of Industrial LPG as an alternate to Acetylene.
7	Safety Goggle for welder	2pairs	
8	Gloves and legguards of levlar heat resistant	12pairs	
9	Safety apron for welder	2Nos.	
10	Toolset for maintenance + Nozzle cleaning tool	1set	
11	Portable Plazma cutting equipment with suitable capacity generator & compressor for cutting SS coaches/wagons.	2 sets* (*As an alternative to 2 nd set of Plasma exothermic cutting equipment can also be procured as decided by PCME of ZR)	Increased population of SS Coaches / Wagons. One extra set as spare.
	CATEGORY No.4		

	Rescue and Relief Equipments		
1	Highcapacity Hydraulic Rescue Device (HRD) with spare powerpack for cutting of SS coaches.	1set	
2	Spare cutter blades	1set	
3	Spare tips for spreader	1set	
4	Hydraulic hoses with extending connectors (Spare set for replacement)	1each	As per suggestion received from NWR.
5	Hydraulic Oil with container for HRD	50 Ltrs	
6	Noseplier, Electricianplier 200mm long, and Outer circlipplier	1each	
7	Screw spanners 12"	1No.	
8	Toolkit for HRD maintenance	1set	
9	Petrol	As required	As per requirement projected by ZRs.
10	Screw driver 6" & 12"	2 Nos. each	
11	Portable electrically operated cuttingtools (Nibbler, Sabre Saw, Jig Saw, Hole Saw of 60-100mm with blades.	2Sets	
12	Window bar snapping tools/window rod cutter	05Nos.	
13	Hydraulically operated C- Cutter	01 Nos.	Faster continuous cutting of SS & as suggested by NWR
14	Portable battery operated hydraulic window bar cutter	02 Nos.	As per suggestion received from NWR.
	CATEGORY No.5		
	Lifting Appliances		
1	Hydraulic hand operated jack 20ton capacity closed height 250mm, lift 150 mm	2Nos.	
2	Hydraulic hand operated jack 30ton capacity closed height 285mm, lift 150 mm	2Nos.	
3	Jack operating handle	4Nos.	
4	Spare Hyd. Oil for jacks	10Ltrs.	
	CATEGORY No.6		
	Other Mechanical Equipments		
1	Universal pulling & lifting machine (TIRFOR SAMSON MAJOR)	2Nos.	HLCNo.76
	1)3.2Ton capacity for lifting		
	2)5.2Ton capacity for pulling		

2	Block differential pulley with chain 3Tone capacity	1No.	
3	Saw Hand 20"	1No.	
4	Power Chain Saw (Electrically operated)	1No.	
5	Light weight synthetic pre-fabricated water proof tent for Mechanical equipments	1No.	
6	Generator set 3KVA capacity for electrically operated equipments	1No.	
7	Confined space entry, exit and rescue system with safe secure anchorage, along with winch, fiber rescue stretcher and full body harness.	1No.	For vertical entry and exit from top of coaches for rescue of injured passengers.
8	Inflatable Tent	1No.	For Command Centre.
	CATEGORY No.7		
	Tools and Accessories		
1	Benchvice 150mm	1No.	
2	Hacksaw 305mm to 407mm adjustable	1No.	
3	Hacksaw blade 300x12.5x1.00mm or 350x 2x1.6mm	6Nos.	
4	Pick Axes 3Kg	3Nos.	
5	Axes Felling	6Nos.	
6	Hand hammer ballpane 600gms	5Nos.	
7	Sledge hammer 3.2Kg	4Nos.	
8	Steel pin punches 3mm, 6 mm, 10mm	6Nos.	
9	Centre punch	1No.	
10	Wire punch 1" dia	4Nos.	
11	Chisel rod flat 1" dia x 2'-6" long	4Nos.	
12	Bars Tommy 7/8" x 2'-6" long	4Nos.	
13	Plastic Bucket Cap. 10Ltrs.	4Nos.	
14	GI Bucket Cap. 15Ltrs.	4Nos.	
15	Goggles made from heat resistant plastic material	4pairs	
16	Spanner Box 10mm, 19mm, 24mm, 27mm, 30mm, 32mm, 40mm	1 set each	

17	Spanner double ended 8x10mm,13x17mm,19x22mm,24x27mm,30x32mm,36x41mm	2Nos.each	
18	Shovel round nose T16Kg 685mm long handle	6Nos.	
19	Navghan (Singada)	2Nos.	
20	Phawrah country	3Nos.	
21	Tongs of sorts 455mm	4Nos.	
22	Tongs of sorts 610mm	4Nos.	
23	Calipers 6"outside	1No.	
24	Calipers 6"inside	1No.	
25	Measuring steel tape 100ft (30mtrs) (16mm width)	1No.	
	CATEGORY No.8		
	General Stores		
1	Bolt MS Hex head of different sizes	10Kg.	
2	Nuts MS Hex of different sizes	5Kg.	
3	Handle wooden / bamboo for sledge hammer 36" long	2Nos.	
4	Handle wooden / bamboo for sledge hammer 16"long	2Nos.	
5	Rope Nylon (one bundle of 12mm dia)	100mtrs	
6	Wooden dowel rods to cordon off the site with rope / scene tape.	As per requirement	Item required for cordon off the site.
7	Barrier tape	200mtrs.	
8	Padlock (Godrej make with duplicate keys)	10Nos.	
9	Hand umbrellas waterproof and electric shockproof	10Nos.	
10	Raincoat industrial in two pieces	30Nos.	
11	Oil measuring cans conical pouring type 1)1 lit.cap. 2)2 lit.cap. 3) 5 lit. cap. & 10 lit.cap.	1No.of Each	
12	Lamp hand signal (Tricolour)	2Nos.	
13	Fog signals (Detonators)	20Nos.	
14	Flag hand signal (green) 45x10cms	4Nos.	
15	Flag hand signal (Red) 45x10cms	4Nos.	

16	Board Last vehicle (LV)	1No.	
17	Gum Boots (Freesize)	30pairs	
18	Heavy duty safety shoes	30pairs	
19	Flag Banner (Red) with track poles	2Nos.	
20	Alluminium ladder 6 ft. long	1No.	
21	Self-supporting Aluminum ladder 5'&10'	1each	HLCNo.82
22	Collapsible Telescopic Aluminum ladder 6/8 Meter & 11 Mtr.	1each	As per suggestion received from NWR
23	Helmet (Heat and chemical resistant) with rechargeable battery operated mounted LED light.	50Nos.	As per suggestion received from NWR
24	Rope Manila 1"dia	50ft.	
25	Plastic Moulded Chairs	40Nos.	HLCNo.74 As per suggestion received from NWR
26	FoldingTable-115x74x71 cm	1No.	HLCNo.85
27	LPG connection with spare gas cylinder	1set	
28	Gas lighter	2Nos.	
29	Safety matchboxes	2Boxes	
30	Paper Plates	300Nos.	
31	Glasspaper (Thermocol)	300Nos.	
32	Tea spoon(S/S)	12Nos.	
33	Stainless Steel Bhagona with cover Medium size	2Nos.	
34	Stainless Steel Kettle 2 Ltrs.& 4 1/2 Ltr	1each	
35	Tea Strainer	6Nos.	
36	Tea cup & Saucers	12Nos.	
37	Desert spoon	6Nos.	
38	Biscuits	5Kg.	Qty. reviewed as suggested by ZRs.
39	Tea leaf	1Kg.	

40	Readymix Tea/Coffee	1 Kg.	For requirement of officials attending the site.
41	Milk Powder	2Kg.	Qty. reviewed as suggested by ZRs.
42	Coffee	1/2 Kg.	Qty. reviewed as suggested by ZRs.
43	Caffeinated Energy drink	10 bottles	For requirement of officials attending the site.
44	Sugar	5 Kg.	Qty. reviewed as suggested by ZRs.
45	Sugar Free	500 pellets	For requirement of officials attending the site.
46	Steel containers of suitable capacity for keeping Food, Raw material etc.	4 Nos.	
47	Tea Thermus Steel (SS) 20/10 Ltr. Cap.	2 Nos.	
48	Insulated Water jug with cover 16 Ltrs. Capacity. (Cello, Milton or any other reputed brand)	2 Nos.	
49	Steel glass	12 Nos.	
50	Stainless steel Jug (Cap. 2 Ltrs)	2 Nos.	
51	Thermos 2 Ltrs. Cap.(For tea)	2 Nos.	
52	Duster (Khadi cloth)	12 Nos.	
53	Khadi cloth	5 Mtr.	
54	Water storage tank 1000 Ltr. Cap.	1 No.	As suggested by ZRs.
55	Soap	4 Nos.	
56	Soap toilet	4 Nos.	
57	Soap dish	2 Nos.	
58	Aqua Guard for water filtration	1 No.	
59	Cotton Darri size 9'x12'	6 Nos.	
60	Electric operated drill machine 230V with extension cable 50M upto 1/2" Cap. With 10Nos.10mm spare drill bit	1 No.	
61	Portable Angle grinder similar to Model Bosch GWS-20-1802000W with 20 Nos. spare grinding wheel	2 Nos.	
62	Garden umbrella with stand	2 Nos.	
63	Charging facility for laptop Computer	As per requirement	HLC No. 67
64	High visibility jackets (Red cross on white back ground)	30 Nos.	HLC No. 85

65	Wrist band with serially numbered plastic tokens (1 to 100) with taps.	100 Nos.	HLC No. 81
66	Respiratory Mask	2 units	
67	Goggles	6sets	
68	Smartphone with 5g/4g connection, Rugged, Tough, Waterproof, Shockproof, Dustproof, 18 GB RAM + 512 GB ROM, Min 6" FHD screen with 200MP + 64MP Night Vision Camera & Min 100 Lumens DLP Projector.	1 each	HLCNo.65 Description changed keeping in view of latest technology and ease of use as suggested by NWR.
69	Almirah with safe locker for keeping valuable items	1No.	
70	Portable rail trolley	1No.	HLCNo.89
71	Woollen Blankets	10Nos.	
72	Bed Sheets	25Nos.	
73	Pillows	10Nos.	
74	Pillow Covers	20Nos.	
75	Uniform for nominated staff (2 Sets per staff with replacement after every 2 years)	As per requirement	
76	Folding Vertical rescue stretcher	05 Nos.	As per suggestion received from NWR
77	Telescopic Chain Saw	02 Nos.	As per suggestion received from NWR
78	Water bottles	400-500 Nos.	For ART staff, as per Rly Bd letter dt. 27.07.11
79	Full body harness with accessories.	As per requirement	For staff working at height.
	CATEGORY No.9		
	Wooden Packing		
1	Wooden Packing 300x300x25 mm	3Nos.	
2	Wooden Packing 300x300x50 mm	3Nos.	
3	Wooden Packing 300x300x75 mm	3Nos.	
4	Wooden Packing 300x300x100 mm	3Nos.	
5	Wooden Packing 300x150x75 mm	3Nos.	

Note: All packing must be recessed at the end & bonded with 30x5mm thick MS strip bend.

	CATEGORY No.10		
	TELECOMMUNICATION EQUIPMENTS		
1	Inspection book	1No	
2	Bell Hailer 6V DC	3Nos.	
3	4 wire emergency portable control telephone set with accessories DTL10093	1set	
4	Handheld walkie talkie sets with battery charger	10sets	
5	Charging facility for Laptop, Cellphone and camera	1Unit	HLC No.67
6	Fixed Cellular Terminals (FCT)	4Nos.	
7	VHF set, 25Watts along with accessories.	2Nos.	
8	Multi-meter Digital along with tool kit	1Unit	
9	Handheld torch of 3 cells complete with dry cell	4Nos.	
10	Torch cells	36Nos.	
11	Satellite phone	1No	
12	Wireless PA System	1Unit	
13	Light weight synthetic pre-fabricated water proof tents for Communication centre at site & Telecom equipments	01Nos	
14	Emergency socket plan of the division / Neighbouring Div.	01Set	
15	Push Button Auto Telephone with tone / Pulse	02Nos.	
16	Digital Voice Recorder	01No.	
17	Field service Telephone cable insulated PVC (D-8Wire)	500mtrs	
18	5 pair switch board cable with EC plug and socket	500mtrs.	

19	Flexible wire	100mtrs.	
20	4-Wire autotune dialler	01No.	
	CATEGORY No.11		
	FIRE FIGHTING EQUIPMENTS		
1	ABC Dry chemical powder type fire extinguisher approx. 5 Kg Cap.	14Nos.	HLC No.85
2	Nitrogen type Fire Extinguisher approx. 9Kg. Cap.	4Nos.	
3	Firefighting suit complete	As per requirement based on last 10 years usage.	Qty reviewed as per suggestions from ZR
4	Fire Ball	10Nos.	Added as per suggestion received from NWR.
5	Portable Smoke Extractor	02 Nos.	Added as per suggestion received from NWR.
	CATEGORY No.12		
	Books & Manuals		
1	Accident Manual	1No.	
2	G&SR Rule book	1No.	
3	Conference rule Part III & IV for TXR staff	1No.	
4	Safety first instruction book	1No.	
5	Working time table	1No.	
6	ARME Logbook	1No.	
7	Attendance register	1No.	
8	Equipment register	1No.	

9	Deadstock register	1No.	
10	Equipment testing register	1No.	
11	Register for the periodical schedules of ARME equipment	1No.	
12	Maintenance manual of the equipments.	1No.	
13	ARME Inspection register	1No.	
14	Inspection schedule board (White writing board)	1No.	
15	Transportation manual	1No.	
16	First Aid manual	1No.	
17	Copy of the high-level committee report on disaster management	1No.	
18	Manual on rescue, relief and restoration management	1No.	HLCNo.102
19	Medical Manual with correction slips	1No.	
	Category No.13		
	Other Items		
1	Details of local resources like local doctors, Hospitals, Nursing homes, official of civil administration, defence establishment, Paramilitary establishment, boatmen, Road cranes / Bulldozers, Fire brigade Stations, Road transport depot etc.	1Unit	HLCNo.14
2	List of nominated staff for ARMV	1Unit	HLCNo.57
3	Duty list of all ARMV staff and supervisor for extricating injured as well as dead.	1Unit	HLCNo.87
4	AMC's for critical equipment with period	1Unit	HLCNo.94
5	Scene Tape	6rolls	As per RlyBoard
6	Rope Manila Nylon 100meters	1roll	As per RlyBoard
7	Safety Cone	12Nos.	As per RlyBoard
8	Life Jackets (Water Rescue)	20 Nos.	Qty. reviewed as suggested by ZRs

9	Laptop along with highspeed satellite modem / Dongle/ data card (if permitted by Zonal Railway)	1 No.	
10	Power bank for mobile charging	02 Nos.	
11	Safety hand gloves (Non-Leather)	25 Nos.	
	Category No.14		
	Medical Equipments / Items		
1	Augmented First Aid Boxes.	2Nos.	HLCNo.85
2	Light weight synthetic pre-fabricated waterproof tents for Medical staff & injured passengers	2Nos	HLCNo.85
3	Foldable chairs	4Nos	HLCNo.85
4	Portable fire extinguishers	2Nos	HLCNo.85
5	Readymade splints for arm & forearm	25Nos	HLCNo.85
6	Readymade slings	25Nos	HLCNo.85
7	One Portable generator set with sufficient reserve fuel	1set	HLCNo.85
8	Battery Operated headlights for medical and paramedical staff	5Nos	HLCNo.85
9	Inj.& tablets, Analgine be replaced by Inj. & tablet paracetamol	-	HLCNo.85
10	Dettol to be replaced by betadine / cidexunit	As per Req.	HLCNo.85
11	Anti-inflammatory, Analgesic & antibiotic ointments for local application and lotions to be replaced by sets of anti- inflammatory, analgesic, antiseptic, aerosol, sprays unit for unit.	For each unit	HLCNo.85
12	Dressings in autoclaved drums to be replaced by pre-sterilized disposal dressing of assorted sizes.	As per Req.	HLCNo.85
13	Seldingernine-Tracheotomy set (1Number) is to be provided	1No.	HLCNo.85
14	Inflatable tourniquets (10Nos) are to be provided.	10Nos.	HLCNo.85
15	Spinal splints (10Nos) are to be provided.	10Nos.	HLCNo.85
16	Phuadephia Cervical Collar	5Nos	

17	Body bags	20Nos.	
	CONTENTS FOR SCALE –I (as per IRMM-2000 Vol.II)		
1	V.Fluids in disposable plastic transfusion bottles.		
	a)5%Glucose	5Nos	
	b)Normal saline	5Nos	
	c)Plasma expander like low molecular dextran	5Nos	
2	a)Disposable sterile infusion sets	12Nos	
	b)Ven flow	5Nos	
3	Sterile disposable syringes		
	a)2 ml	20Nos	
	b)5 ml	10Nos	
	c)10 ml	10Nos	
	d)20 ml	10Nos	
	Disposable needles.	50Nos	
4	Inj.Pentazocine	50amps	
5	Inj.Atropine sulphate 0.65 mg.or 0.6mg	10amps	
6	Inj.Diclofenac sodium 3ml	50amps	
7	Inj.Adrenaline1:1000 strength amps	5amps	
8	Inj.Buprenorphine	10Nos	
9	Inj.Lignocaine hydro chloride without adrenaline 2%vial of 50ml.	5vials	
10	Inj.Ampicillin 250 mg/vial.	20vials	

	a)Amoxycillin	100cap in strips	
11	Inj.Dopamine 5ml.	10amps	
12	Inj.Dexamethas one each vial containing 4mg	10vials	
13	Inj.Diazepam10mg	10amps	
14	Inj.Pheneramine maleate	6amps	
15	Inj.Ranitidine	6amps	
16	Inj.Deriphylline	6amps	
17	Nifedipine liquid capsule for sublingual use	6caps	
18	Inj.Paracetamol 2ml I.M	6amps	
19	Inj.Dicyclomine Hcl 2ml I.M	6amps	
20	Inj.Metoclopramide	10amps	
21	Inj.Lasix	12amps	
22	Surgical spirit 350ml in wax stoppered bottle	2bottles	
23	Solution of Iodine 2% 120 ml in stoppered bottle / Povidone Iodine solution	2bottles	
24	Chloroxylenol or similar antiseptic 120ml	2bottles	
25	Sterile paraffin tulle 10cmx10 cm or equivalent in tins of 24 pieces	5tins/packages	
26	Lignocaine jelly in tube	1No	
27	Redistilled water for inj. 10ml vials	10vials	
28	Paracetamol tablets 0.5Gm in strip	100tab	
29	Tab Diazepam 5mg	50tab in strips	
30	Tab pheneramine maleate	50in strips	

31	Oral rehydration powder	12pkts	
32	Tab Diclofenac sodium	100tabins trips	
33	Tab Prochlorperazine 5mg	50instrips	
34	Tab Dicyclomine Hcl	50instrips	
35	Tab Metronidazole + Furazolidine	100tabins trips	
36	Tab Antacids	100instrips	
37	Tab Salbutamo 14mg	50instrips	
38	Tab Metoclopramide hydrochloride	30instrips	
39	Coronary vasodilator sublingual (Sorbitrate 10mg)	50instrips	
40	Nasal drops	3vials	
41	Tinidazole (300mg)	100instrips	
42	Chloramphenicol eye applicaps in bottles of 25	2Nos	
43	Anti infective or antiseptic in sufflation powder 10gms container.	5Nos	
44	Surgeon's instruments and ligature in a case containing the following		
	a)Liston's Amputation knife	1No	
	b) Bard Parker scalpel handle size no. 4	2Nos	
	c)B.P.Blade for above	1Packet	
	d)Amputation saw	1No	
	e)Probesinus 20cm	1No	
	f)Direct or butterfly wing	1No	
	g)Forceps bone 18cm	1No	

	h)Needle holder universal	2Nos	
	i)Scissors blunt pointed 12cm S.S	1No	
	j)Scissors sharp pointed 15cms S.S	1No	
	k)Artery for cepsspencerwells 12cm S.S.	10Nos	
	l)Razor safety with packet of 5 blades in case	1No	
	m)Catheter male G.S.size 8 & 12	1each	
	n)Tourniquet Esmarch (I.R.Bandage)	2Nos	
	o)Suture needle cutting curved and straight assorted size in vulcanite case	5each	
	p)Ligature catgut chromic with straight needles of 50 mm and curved needles of 40mm attached in sealed tubes	5each	
	q)Ligature nylon medium	50strands	
	r)Ligature catgut plain in sealed tube with needles size 0 & 1	6each	
45	Forceps tongue S.S	1No	
46	Mouth Gag. Adult and child size	1No.each	
47	Airways plastic or rubber,child and adult size	2each	
48	Sponge holder 20cm long S.S	4Nos	
49	Scissors surgical 12cm blunt and sharp pointed S.S.	3Nos	
50	Forceps dissecting 12cm toothed S.S.	1No	
51	Forceps dissecting 12cm non toothed S.S.	1No	
52	Forceps dressing 12cmS.S.	3Nos	
53	Forceps cheatle S.S.	2Nos	
54	Cornealloupe	1No	

55	Tracheostomy set in a case labelled 'sterile', consisting of tracheostomy tube with tapes, one scalpel with blade, one sharp hook, two artery forceps, mosquito silk suture, one blunt hook and double hook retractor, sterile gauze	1No	
56	Labelled cut-open setsterilized in a case consisting of: 1B.P. Scalpel with blade No. 4, 2 Nos. mosquito artery forceps, one fine dissecting forceps, one I.V. Cannula, silk thread, one needle connected polythene tube gauze.	1No	
57	Eye lidretractor	1No	
58	Eye spud S.S.	1No	
59	Eye fixation forceps S.S.	1No	
60	Rubber catheter sizes 4,6 & 8	1Noeach	
61	Foley's catheter universal size	2Nos	
62	Tourniquet Esmarch's (I.R. bandages and card in tin case)	2Nos	
63	Stethoscope binaural	3Nos	
64	Sphygmo manometer	2Nos	
65	Scissors Mayo 7" straight	1No	
66	Bowls lotion 25 cm, 20cm, 16cm diameter E.I.	2Nos.each	
67	Trays instrument and dressing with cover 30x 25cm, 25x 20cm, 25x15cm all S.S.	1Noeach	
68	Tray kidney size 25 cm and 20 cm	2Nos.each	
69	Brush nail	5Nos	
70	Apron operation plastic	5Nos	
71	Apron operation, long cloth to be kept in sterile drums	5Nos	
72	O.T. Slippers size 7,8	2Nos.each	
73	Face mask disposable	10Nos	
74	Head cap disposable (Surgeon)	10Nos	
75	Towels operation surgical 100x 60cm in sterile drums	20Nos	

76	Gloves surgical size 6½",7",7-½" sterile disposable assorted size	10Nos	
77	Coats surgeons	5Nos	
78	Towels hands surgeons (In Polythene bag)	10bags	
79	Soap toilet in case-cakes	5Nos	
80	Stopper loosener	1No	
81	Operation table tubular steel with sponge rubber mattress	1No	
82	Shadowless lamps 30cm dia or angle poise and fixed on side panel	1No	
83	Trolley anesthetic without castor with stand for oxygen cylinder	1No	
84	Oxygen cylinder 1320 Ltr. Capacity with key	1No	
85	Inj. ketamine hydrochloride	5amps	
86	Mask Oxygen, polythene (big and small)	1No.each	
87	Portable resuscitation kit in a bag containing:	1No	
	a) Automatic resuscitator with provision for positive pressure ventilation, inspiratory, expiratory flow adjustments.		
	b)Manual resuscitator (Ambu's Bag)		
	c)Oxygen cylinder (small) Venti mask with tubes		
	d)Suction (Manual and automatic)		
	e)Intubation set with laryngoscope, endotracheal tubes of all sizes.		
	f)Stethoscope, sphygmomanometer, Hammer, Spatula, torch, thermometer		
	g)I.V. Rod in two (folded) disposable IV set, adhesive plasters, sterilised gauge, bandage scissors, dissecting & tissue forceps, haemostatic forceps, needle holder, disposable syringe & needle, Splint.		
88	Revolving stool	2Nos	
89	Trolley instrument without castors & with castors and glass top	1No.each	

90	Steriliser instrument portable with woburner spirit stove sizes 30x20x15 cms & 20x10x10 cms	1No	
91	Gauge cut in assorted sizes and packed in dressing drum 23x25cms sterilised	20Mtrs/ 200FFP	
92	Wool cotton absorbent cutto size and sterilised in drum 23x 25 cm	2 kg / 4pairs	
93	Wool cotton absorbent packet of 500Gms	10Pkts	
94	Bandage loosewoven compressed 7.5cm wide and 4.5Mtr long	100Nos	
95	Bandage loosewoven compressed 10cm wide and 4mtr long	100Nos	
96	Bandage adhesive 7.5cm wide in sealed tins	2Nos	
97	Bandage triangular 130x 90x90cm (SJAB)	30Nos	
98	a)Adhesive plaster 2.5cmx5 Mtr	3Nos	
	b)Adhesive plaster 10cmx5 Mtr	3Nos	
99	Scissors Mayo 7"	1No	
100	Mackintosh 1 Mtr size	5Nos	
101	Swabsticks in bundles of 25 wrapped in cloth bag and sterilized in drums	50Nos	
102	Spirit methylated in wax stoppered bottles of 250ml each	4bottles	
103	Readymade plaster of Paris bandage 10 cm & 15 cms sizes in tins	20 bandages of each size	
104	Corrugated rubber drain for operation	1sheet	
105	Pins safety assorted sizes in packets of 10	4sets	
106	Thomas splint adult and child size	2Nos	
107	Splintarm and forearm wooden set of 6	2sets	
108	Splintthigh wooden liston set off 6	3sets	
109	Hammer 400Gms	1No	

110	Chisel 2.5cms wide	1No	
111	Saw 30cm long	1No	
112	Clasp knife	2Nos	
113	Corkscrew opener	1No	
114	Matches safety packet of one dozen boxes	1Pkt	
115	Torch Eveready 4cell (compact and carrying)	10Nos	
116	Bulbs for torches (spare)	5Nos	
117	Water bottle with drinking cup and strap 1 ltr	5Nos	
118	Basin wash hand E.I. 35 cms dia	5Nos	
119	Buckets plastic 5 ltrs. capacity	5Nos	
120	Jug water E.I. 2 ltr. capacity	2Nos	
121	LPG stove	2Nos	
122	Day carrier	1No	
123	LPG petromax 1.5/2 ltr	5Nos	
124	Note book with pencil	5Nos	
125	Memo pad with carbon paper	5Nos	
126	Book for noting injury particulars identification etc	5Nos	
127	Skin marking pencil	2Nos	
128	Ground sheet size 200x 120 cm	2Nos	
129	Brassardsarm with red cross	50Nos.	
130	Haversack each containing the following	5Nos	

	a)Roller bandages	10Nos	
	b)Triangular bandages	2Nos	
	c)Tab.Paracetamol	20 in strips	
	d)Sterile adhesive strip dressing standard size	40 Nos	
	e)Antiseptic cream (25Gm)	1tube	
	f)Chloramphenicol eye applicaps in plastic box	10	
	g)Torch (3 cell)	1	
	h)Armbrassard red cross	5Nos	
	i)Memo pad with pencil	1	
	j)Tally cards 10cmx7cm with eyelets & tapes	12	
	k)Disposable sterilized syringes with needle 2cc	2	
	l)Inj. Diclofenac sodium	2amps	
	m)Safety pins	10Nos	
	n)Esmarch tourniquet	1No	
	o)Wooden splint set of 6	1set	
	p)Analgesic aerosol spray	1	
	q)Analgesic antiseptic spray	1	
131	Sterile adhesive strip dressing standard size box of 150	1Box	
132	Cups feeding E.I (200ml)	5Nos	
133	Mugpolythene 300ml capacity	5Nos	
134	Hotwater bags IR with cover & ice cap	5Nos	

135	Spittoons	5Nos	
136	Bed sheets cotton white 2.1x1.5mtr	40Nos.	
137	Pillow cotton 50 x20cms with 2 waterproof covers for each pillow	20Nos.	
138	Sarees cotton white 5.5 Mtr	10Nos	
139	Lungis cotton white 2 Mtr. each	20Nos.	
140	Shirts open in front with half sleeves large size	20Nos.	
141	Water proof sheeting 1 x1 mtr. In pieces	20Nos.	
142	Sand bags 30cmx15cm	10Nos	
143	Hand punkhas	10Nos	
144	Shrouds long cloth 2.1mtr x1.5mtr	40Nos	
145	Backrest wooden	1No	
146	Campsstool folding	2Nos	
147	Campstable folding	2Nos	
148	Blankets woolen / cotton according to climate	50 for BG	
149	Bed pan E.I. slipper shaped	4Nos	
150	Urinalmale E.I	4Nos	
151	Urinalfemale E.I	2Nos	
152	Milkpowder 450Gms or Milk condensed	2Tins	
153	Sugar in leverlid tin in 0.5Kg/1Kg poly pack	2Kgs 4tins	
154	Tea in sealed tin of 500 Gms (250Gms packs2)	1tin	
155	Coffee (instant)100Gms in sealed tins	2Tins	

156	Table spoons SS	5Nos	
157	Tea spoons SS	10Nos	
158	Tea pot	1No.	
159	Tumbler polythene or disposable glass(400ml capacity)	40Nos.	
160	Corkscrew	1No	
161	Tin Opener	1No	
162	Bucket with flat cover polythene size 5 ltr	2Nos	
163	Kettle aluminium size 3 ltr	1No	
164	Degchi aluminium with cover 20,18,15 &10cms dia set of 4	1set	
165	Sterile / mineral water	25 bottles	
166	Bucket G.I 5 ltr. capacity	2Nos	
167	Polythene carbuys with handle and stopper 18 Ltr. capacity (for drinking water)	2Nos	
168	Stretcher folding SJA pattern (aluminium)	10Nos	
169	Umbrella hand	5Nos	
170	Raincoat plastic with hood (like ladies raincoat)	5Nos	
171	Gumboots standard and large	2Nos. each	
172	Breath analyser	1No	
173	Vials for collection of blood samples for testing alcohol content	5Nos	
174	Dictaphone	3No	
175	Staircase steel	2Nos	
176	Under water seal	1No	

177	Foot operated suction machine	1No	
178	MFR Kit with splints	5 Sets	Asper RlyBoard
179	Portable Defibrillator	1No.	Asper RlyBoard
	Augmented First Aid Box (2Nos.)		HLCNo.85
1	Bandaid strips (1.9x 7.2cms)	20 No.	
2	Povidone Iodine solution (500ml)	1 No.	
3	Surgical pad 7.5cmx20cm	5 No.	
4	Antiseptic Cream	1 No.	
5	Safety pins	10 No.	
6	Adhesive Plaster 2.5 to 5 mtrs	2 No.	
7	Disposable spirit swabs (box of 20)	1 No.	
8	Chloramphenicol eye applicaps in bottle of 50	1 No.	
9	Orohydrate pwd. Pkts	5 No.	
10	Tab. Antacid/digene	30 No.	
11	Anti-inflammatory spray	1 No.	
12	Antiseptic spray dressing	1 No.	
13	Pencil torch	1 No.	
14	Liquid Paraffin drops 5ml bottle	1 No.	
15	Voveron Emulgel	1 No.	
16	Otrivin Nasal drops	1 No.	
	<i>Contents to be used by qualified Doctor</i>		

17	Disposable syringes 5ml	5 No.	
18	Disposable needles 23G	5 No.	
19	Disposable needles 21G	5 No.	
20	IVset disposable	2 No.	
21	Ven flow	2 No.	
22	Laryngoscope, adult & child	1 No.	
23	Sphyg manometer (Aneroil type)	1 No.	
24	Stethoscope	1 No.	
25	Tab.Sorbitrate 10mg	10 No.	
26	Tab.Paracetamol 500mg	50 No.	
27	Syrup Paracetamol	1 No.	
28	Syrup Brufen	1 No.	
29	Syrup Antispasmodic drops	1 No.	
30	Anti spasmodic drops	2 No.	
31	Tap.Brufen 500mg / Diclofenac sodium 300mg	50 No.	
32	Tab.Diazepam 5mg	10 No.	
33	Nefidipine liquid caps 5mg. for sublingualuse	10 No.	
34	Tab.Ranitidine 300mg	10 No.	
35	Tab.Domstal 10mg/ Reglan 10mg	10 No.	
36	Tab.Spasmindom 20mg	10 No.	
37	Tab.Cetirizine 10mg	10 No.	

38	Tab.Asprinsoluble100/150mg/Disprin	10 No.	
39	Tab.Metronidazole - 400mg + Furazolidine	20 No.	
40	Tab.Salbutamo 14mg	10 No.	
41	Inj.Adrenaline 1ml	2 No.	
42	Inj.Efcorline 100mg	2 No.	
43	Inj.Atropine 1ml	2 No.	
44	Inj.Diazepam 5mg	2 No.	
45	Inj.Buscopan	2 No.	
46	Inj.Pheniramine Maleate 25mgm /Inj.Avil	2 No.	
47	Inj.Deriphyllin	2 No.	
48	Inj.Lasix 40mgm	5 No.	
49	Inj.Diclofenac Sodium 3ml Ampule1ml / 25mgm	2 No.	
50	Inj.Domstal10mgm / Reglan10mg	2 No.	
51	Inj.Pentazocine	2 No.	
52	Inj.Glucose 25%	5 No.	
53	Inj.Ranitidine	2 No.	
54	Inj.Buprenorphine 0.03-0.06mg/1ml	2 No.	
55	Inj.Buprenorphine 0.03-0.06mg/2ml	2 No.	
56	Ringerssoslution - 450ml	1 No.	
57	Inj.Normal saline 0.9% 450ml	1 No.	
58	Injury card	1 No.	

59	A pair of gloves(size7)	1 No.	
	FOR STATIC FIRST AID BOXES		
60	Triangular Bandages compressed	2 No.	
61	Roller bandage (7.5cmsX 4Mtr)	5 No.	
62	Esmarch's Tourniquet	1 No.	
63	Splints wooden extensible (Set of 6)	1 No.	
64	Airway plastic (medium)	1 No.	
65	Airway plastic (small)	1 No.	
66	Ambu Bag (Adult & child)	1 No.	
67	Endotracheal tube disposable-Adult	1 No.	
68	Endotracheal tube disposable-Child	1 No.	
69	Curved Artery Forceps 6"	1 No.	
70	Scissors Surgical Mayo's 8"	1 No.	
71	Needle holder medium size, straight	1 No.	
72	Toothed dissecting forceps, medium size	1 No.	
73	Chromic catgut with cutting needle	2 No.	
74	Suction pump - foot / hand operated (portable.)	1 No.	
75	Portable Oxygen cylinders with accessories.	1 No.	

♦♦

4.4

DISASTERP REPAREDNESS– ONBOARD RESOURCES:

4.4.1 On board resources play an important part in Conveying the Information & rescue during an Accident. Following Onboard resources are available on the train. Their location, use and maintenance has been laid down in the Divisional Disaster Management plans. The on-board resources include the following:

1. The Portable Telephone:

- a) Landline type (Overhead Telephone line transmission)
- b) Socket Type (Underground cable transmission)

2. Walkie-Talkie sets:

Walkie-Talkie sets are available with Loco Pilots, Guards, Train Superintendent, RPF staff and are also available with the Station Masters.

3. BSNL / CellPhone / Mobile Phones -CUG mobile Phones have been provided to Loco Pilots, Guards and Travelling Ticket Examiners. Telephone numbers of Station are available in the working time table.

4. Emergency Train Lighting Box: This box is available in the Brake Van of Passenger carrying trains.

4.4.1.1 Types of Portable Telephones:

- a. Portable Telephones are available in Brakevan of Passenger carrying Trains.
- b. Telephones presently in use are of the 4-wire/2-wire type, which can be used in RE area and in overhead communication territory.
- c. There are two types of Portable Telephones
 - i) Landline type (Overhead Telephone line transmission)
 - ii) Socket Type (Underground cable transmission)
- d. In overhead territory additional poles are to be carried by Guards for connecting phones to the overhead lines.

4.4.1.2 Use of Portable Telephones:

a. Overhead type:

- (i) Fix “Y” bracket on the poles.
- (ii) Use required number of poles available.
- (iii) Connect the two wires to phone terminals.
- (iv) Circuit on Red colour bracket side connects the section controller telephone line.
- (v) Circuit on the Green colour bracket side connects the Deputy Chief Controller telephone line.
- (vi) Link “Y” bracket on the circuit and rub it for clear communication.

b. Underground cable type:

- (i) Look at Receiver Arrow sign for socket location on Over Head Equipment mast/location post and move towards the Arrow pointing direction.
- (ii) On reaching EMC Socket location, open the socket by using the key kept in the phone box where required.
- (iii) Plugin the phone terminal properly for communication.
- (iv) In electrified section this phone connects the Traction Power Controller and then link to section controller. (In non-electrified section it goes directly to section controller).

4.4.2 WALKIE-TALKIE SETS:

- (i) Ensure that the set is charged.
- (ii) Check that the proper channel is selected for communication.
- (iii) Do not intervene when the channel is engaged.

4.4.3 USE OF BSNL/CELL PHONE/MOBILE PHONES:

- (i) BSNL phone numbers with STD code for Railway Stations in a Division are given in WTT which is available with Guard, Driver, and Assistant Guard.
- (ii) Refer WTT for nearest Station contact number.
- (iii) BSNL Phone Numbers of Important stations are available in Public Time Table.
- (iv) CUG mobile Phones have been provided to Loco Pilots and Guards.

4.4.4 EMERGENCY TRAIN LIGHTING BOX:

- (i) This box is available in the Brake Van of Passenger carrying trains.
- (ii) Open the box by removing the seal.
- (iii) Fix the crocodile clip of hand Torch to the coach power supply terminal and use it for searching / surveying.
- (iv) Fix the floodlight to the Tripod Stand and connect its crocodile clip to the power supply terminal.

4.5 DISASTER RESPONSE–OVERVIEW:

4.5.1 Golden Hour:

“If a critical trauma patient is not given definite medical care within one hour from the time of accident, chances of his ultimate recovery reduce drastically, even with the best of Medical attention thereafter. This one-hour period is generally known as the Golden Hour.”

During this Golden Hour period every effort should be made to:

- (i) Render definite medical care to the extent possible by qualified medical practitioners.
- (ii) Stop bleeding and restore Blood Pressure.
- (iii) Persons under shock should be immediately relieved of shock.
- (iv) Transport casualties to the nearest hospital
- (v) For being effective, any Disaster Management system should aim at covering as many critical patients as possible and rushing them to hospital within this period.

4.5.2 Disaster Syndrome:

A victim's initial response following a Disaster is in three stages. These initial responses are called Disaster Syndrome.

- (i) **Shock stage:** In which victims are stunned, dazed and pathetic.
- (ii) **Suggestible stage:** In which victims tend to be passive but open to suggestions and willing to take directions from rescue workers and others.
- (iii) **Recovery stage:** In which individuals may be tense and apprehensive and may show generalized anxiety.

4.5.3 Different phases of Disaster Response:

Disaster Response in case of a railway accident consists of 3 phases. These 3 phases are determined both by the time factor, as also by the extent of specialized assistance available.

Firstly, it begins with the spontaneous reaction of men available on the train at the time of the accident. Thereafter the second phase continues with contributions made in rescue and relief work by men and material available locally in nearby areas of the accident site. The third and longest phase consists of meticulously planned action by trained DM teams who arrive at the accident site to carry out rescue and relief operations.

The first phase is of shortest duration, last for about half an hour. It is an amateurish, poorly equipped effort, but is nevertheless the most important phase. In most cases, this is the only help available for a major part of the '**Golden Hour**'.

The second phase which is of 2-3 hrs. Duration is comparatively less amateurish and much better equipped. Their contribution is vital since the 'Golden Hour' period comes to an end during the working of this group. How many critically injured passengers can finally be saved depends solely on the efficiency of this group.

The last and final phase of Disaster Response by railway's DM team continues for a few days. It comes to an end not only with the restoration of traffic but also with the departure of most relatives and next of kin from the accident site and disposal of all bodies. Few of the grievously injured that continue to be hospitalized for comparatively longer spells are then the sole responsibility of railway's medical department.

With the above scenario in mind, it is necessary to take firm and quick decisions to save lives and property. To achieve these objectives Railways, have a well-defined action plan that is successfully executed by the coordinated efforts of different disciplines, all of who function as a team. The three groups which are active during the above mentioned 3 phases of Disaster Response, may be classified as follows:

- i) Instant Action Team (IAT).
- ii) First Responders (FR).
- iii) Disaster Management Team (DMT).

4.5 .4 First Aid in Emergency

- a) Order of priority for dealing with and helping injured passengers should be as follows:
 - Unconscious.
 - Bleeding excessively.
 - Having breathing problems.
 - Grievously injured.
 - In a state of shock.
 - Having fractures.
 - Simple injured.
- b) For assessing and handling injuries, a cronym DRABC is to be followed.
 - (i) D-DANGER:
Look for danger; Make sure that no further danger exists either for the patient or for the First Aider.
 - (ii) R-Response:
Check for consciousness. Call by his / her name, slap, and pinch and shake gently. If there is no response, then it means that the patient is unconscious.
 - (iii) A-AIRWAY:
Clear the airway (Trachea) if patient is unconscious, then the airway may be narrowed or blocked making breathing impossible. This occurs due to several reasons. Mass food particles or foreign body in the air passage, or the tongue may have sagged back and blocked the air passage.
To open the airway, lift the chin forward with the fingers of one hand while pressing the forehead backwards with the other hand, now the tongue comes forward and the airway is cleared. To clear the other objects in the mouth, press the Jaw, open the mouth put your fingers or a clean cloth in them out hand clears the things. Now the air passage is clear.
 - (vi) B-BREATHING:
Check for Breathing. Keep the back of your fingers near the nose of the patient. You can feel the warm air (or) keep your ear near the nose and look for the movement of chest, listen to the sound from the throat and feel the warm air from the nose.
 - (v) C-CIRCULATION:
Check the pulse. Normally we check the pulse at the wrist: however, sometimes it is not felt because of severe bleeding. So, it is better to check the pulse at neck (Carotid Pulse).

After checking DR ABC, there may be two possibilities.

- i) If patient is breathing and has circulation but is unconsciousness, immediately turn him to Recovery position and transport to hospital.
 - ii) If the patient has failure of breathing and circulation, then immediately start CPR (CARDIO PULMONARY RESUSCITATION) the important lifesaving technique in First Aid.
 - To revive the lungs, you have to give artificial respiration by mouth to mouth (Kiss of Life) method. Lift the chin forward and press the jaw open the mouth with one hand and close the nose with other hand keep your mouth on the casualty's mouth and blow.
 - To revive the heart, you have external chest compression. The casualty should be made to lie down on a hard surface. Keep heel of the palm on the chest (pit of stomach) of the casualty and keep the other palm over that hand and compress.
 - Mouth to mouth ventilation and external chest compression should be given in the ratio of 2:5. This should be continued upto the revival of life or till reaching the hospital. Once life starts, immediately turn the casualty into recovery position and transport to hospital. (Recovery position or three-quarter prone position means turn to one side, better to right side).
- (vi) Recovery Position:
- Recovery position is the safest position for unconscious patients. Normally we keep the patient in a supine position. However, in case of unconscious patients, it is a very dangerous position because the tongue can fall back and close the airway or saliva and other secretions may get into wind pipe. To avoid that, turn the casualty into recovery position and transport to hospital.
- Sometimes, you may not be in a position to do First Aid due to tense situation. In such circumstances turn the casualty to Recovery Position, to save many precious lives.

4.6

DISASTER RESPONSE - INSTANT ACTION TEAM:**4.6.1 Instant Action Team Comprises:**

- (i) The Guard, Crew, TS, TTEs, AC coach attendant, Asst. Guard, RPF and other railway staff on duty on the accident involved train.
- (ii) GRP staff travelling on the train on duty.
- (iii) Railway staff travelling by the accidental train either on duty or on leave as passenger.
- (iv) Doctors travelling by the train.
- (v) Passengers travelling on the train who volunteer for rescue and relief work.
- (vi) Railway staffs working at site or available near the site of the accident.
- (vii) Non-Railway personnel available at or near the accident site.

4.6.2 Duties of Instant Action Team:

Detail duty list of Guard and Loco Pilot in case of Train accidents/ unusual are laid down in the Accident Manual of Zonal Railways. In addition, duties of the Instant Action Team consisting the following Staff is laid down in detail in the Divisional Disaster Management Plans.

- (i) Guard
- (ii) Loco Pilot
- (iii) Assistant Guard
- (iv) Assistant Loco Pilot
- (v) Train Superintendent / Travelling Ticket Examiner / Train Captain
- (vi) AC Mechanic / Attendant
- (vii) RPF/GRP Staff
- (viii) Railway Staff travelling in the accident Affected Train
- (ix) Duties of on-board Railway staff and contractual staff.
- (x) Duties of Member of Instant Action Team - Till arrival of Divisional Officers.
- (xi) Duties of attendant of AC Container in freight stock.

4.6.2.1 Guard:

- (i) Switch on the Flashing Tail Lamp if provided, in, in the rear of brakevan.
- (ii) Secure the train and prevent escaping of vehicles.
- (iii) Protect line of accident and adjacent line / lines if required as per GR 6.03
- (iv) Note the time of the accident and the location. Inform Loco pilot/ Station Master on Walkie-talkie set if possible.
- (v) Make a quick survey of accident magnitude and roughly assess casualty, damage and assistance required.
- (vi) Send information through quickest means to Control Office and SMs on either side of the block section by CUG Mobiles / Walkie-talkie/ field telephone/ other line train crew/ Assistant driver or Assistant guard may be sent to the next station to convey information/ one of the railway staff on duty on the train should be sent on foot to the nearest station.
- (vii) Utilize Emergency Train Lighting box to facilitate medical aid.
- (viii) Render First Aid and save lives.
- (ix) Call for Doctors and seek their assistance.
- (x) Seek assistance of railway staff and other volunteers from train to rescue injured or entrapped passengers.
- (xi) Direct railway staff and other volunteers from train for attending to injured.
- (xii) Ensure that railway staff constantly man field telephone.
- (xiii) Arrange protection of passengers' belongings and railway property with the help of railway staff, volunteers on train, RPF and GRP.
- (xiv) Stop running trains on adjacent line and utilize resources on that train.

- (xv) In electrified section if OHE is affected, take steps to switch off OHE supply.
- (xvi) Arrange for transportation of injured to hospital.
- (xvii) Record evidence or statements, if any, given by passengers.
- (xviii) Preserve all clues and evidences regarding probable cause of the accident and ensure that these do not get disturbed.
- (xix) Log your activities. Do not leave the spot unless a competent authority relieves you.

4.6.2.2 **Loco Pilot:**

- i) Note the time of the accident and location.
- ii) Switch "ON" the 'Flasher Light' and give 4 short whistles.
- iii) Inform Guard on walkie-talkie set.
- iv) Inform Station Master on CUG mobile phone/ walkie-talkie set, if possible.
- v) Protect the obstructed /adjacent line as per GR 6.03.
- vi) Take necessary action to prevent Loco /Vehicles /Wagons from rolling down.
- vii) Make a quick survey of accident magnitude and roughly assess casualty, damage and assistance required.
- viii) Send information through quickest means to Control Office and SMs on either side of the block section by Walkie-talkie/ Field telephone/ train crew on the other line/ Assistant driver or Assistant guard may be sent to the next station to convey information/ one of the railway staff on duty on the train should be sent on foot to the nearest station.
- x) Render all possible assistance to the guard.
- xi) Preserve all clues and evidence regarding probable cause of the accident.
- xii) Log your activities; Do not leave the spot unless you are relieved by a competent authority.
- xiii) If necessary, detach Loco and take it to inform SM.

4.6.2.3 **Assistant Guard:**

- i) Ensure that train is protected as per GR 6.03.
- ii) Help Crew /Guard in arranging protection of adjacent line, if obstructed.
- iii) Assist Guard in conveying information to SM/ Section Controller.
- iv) Help the Guard in rendering First Aid to injured.
- v) Help in shifting injured persons to the nearest hospital.
- vi) Ensure protection of Railway and public property till arrival RPF / GRP.
- vii) Carryout the work as signed by Guard.

4.6.2.4 **Assistant Loco Pilot:**

- Assistant Loco Pilot should work under the control of the Loco Pilot with the same duty list of the Loco Pilot. Loco Pilot and Assistant Loco Pilot should divide the work so that the duties are carried out in the shortest Possible time.
- To provide First Aid to injured. First Aid box is available with Guard.
- If necessary, use fire extinguishers of AC coaches/brakevan/loco.
- In case if the Loco Pilot is dead or injured, Asst. Loco Pilot will perform all the duties of Loco Pilot.

4.6.2.5 **Train Superintendent / Travelling Ticket Examiners:**

- i) Preserve reservation charts of each coach containing names of passengers who actually travelled and in which berth no.
- ii) Avail services of Doctors travelling by the train and render Medical Aid.
- iii) Render First Aid to injure.
- iv) Collect particulars of injured passengers and prepare a list showing their position coach wise from Train Engine to Brake Van and handed over to railway doctors when ARME arrives.
- v) Prepare a separate list of dead passengers with address and ticket particulars, if available.
- vi) Take assistance of local people and other volunteers at site.
- vii) Transport injured passengers by road vehicles, if available, to the nearest hospital.
- viii) Inform stranded passengers about alternative transport arrangement.
- ix) Record Evidences or statement given by passengers /other at site.

4.6.2.6 AC Mechanic / Attendant:

- i) Switch "OFF" the power supply to avoid short-circuiting.
- ii) Assist the TS / TTEs in their duties at the accident site.
- iii) Report to the guard of the train for assistance.
- iv) In case of fire assist the operations by using fire extinguishers provided in the AC coaches.
- v) Assist in providing lighting in affected coaches.
- vi) Blankets and linen of the AC coaches is to be made available for use by grievously injured / dead. The record of the same should be kept.

4.6.2.7 RPF / GRP Staff:

- i) Try and rescue as many passengers as possible from the accident involved coaches.
- ii) Render First Aid to injured.
- iii) Arrange to shift injured persons to the nearest hospital.
- iv) Protect passenger's luggage and railway property.
- v) Preserve all clues and evidences regarding probable cause of the accident and ensure that these do not get disturbed.

4.6.2.8 Railway staff travelling in the accident affected train:

- i) Whenever a train is involved in a serious accident with casualties/injuries to passengers, all railway staff travelling on the train either on duty or on leave is deemed to be on duty with immediate effect.
- ii) Under no circumstances should any of them leave the accident site unless and until divisional officers arrive, take over charge of rescue and relief operations, and permit them to leave.
- iii) Railway staff on train/at site shall volunteer themselves to render assistance and report to TS/ TTE/ Guard of the Train.
- iv) The senior most officers travelling on the train will assume charge as Officer-in-Charge Site (OC Site). Normally the senior most officers will be travelling in either the 1AC or in 2AC coach, and most probably in the Emergency Quota section of the coach. The Emergency Quota section of 2AC is invariably in the centre of the coach (berthnos. 19-22). In any case the TS/ TTE would know whom are the railway officer travelling in 1AC or 2AC.
 - Similarly, other railway staff will be travelling in 3AC coach, and most probably in the Emergency Quota section of the coach. The Emergency Quota section of 3AC is also in the centre of the coach (berth nos. 25-30).
 - Similarly, some Group 'D' railway staff maybe travelling in Sleeper coach, and probably in the Emergency Quota section of the coach. The Emergency Quota section of a Sleeper coach is located in the centre of the coach (berth nos.33-40).
 - In the absence of any officer, the TS or senior most TTE/ Guard will discharge duties listed out for OC site.

4.6.2.9 Duties of On-board Railway staff and Contractual staff:**(i) Duties of Onboard railway staff:**

- i) Don't panic.
- ii) Inform the divisional control office immediately about the accident.
- iii) Observe the position of coach standing upright/ turned upside down/lying on its side/stopped on bridge / on level ground.
- iv) In case the coach is on a bridge or very high embankment or in case it is raining heavily, then wait for some time.
- vi) Search your coach with your torch and try to determine the general position.
- vii) See that passengers don't panic either. Try to calm the mand buildup their confidence.
- viii) As certain whether passengers are injured/ trapped/ pinned down inside the debris.
- ix) Callout a loud to find out for any doctors present & any railway staff present
- x) Ask Doctors if available to attend and help injured passengers.
- xi) Ask the Railway staff if available to attend and help other passengers.
- xiii) Form a core team comprising of railway staff available, doctors and 3 or 4 uninjured passengers and take the lead in helping remaining passengers.

(ii) Duties of On-board Contractual staff:

- i) To assist the Guard / Driver / TTE of the train in case of any type unusual of the train enroute.

4.6.2.10 Duties of members of Instant Action Team–Till arrival of Divisional Officers:

- i) If a person is bleeding and loosing blood, or if he is unconscious, then in that case you have to act quickly. 'Golden Hour' should be kept in mind. You may have at the most only one hour's time on hand.
- ii) In such cases, immediately administer First Aid to the injured passenger and try and stop further loss of blood.
- iii) Persons trained in first aid may do 'Cardio Pulmonary Resuscitation.' This may save several lives.
- iv) If the door is open and is accessible, then uninjured passengers should be helped to come out from the door.
- v) In AC coaches the windows panes should be broken open in order to let in fresh air for the occupants, and thereafter to evacuate them.
- vi) Non-AC coaches have one emergency exit window on each side. The position of this emergency window is 5" from the left when facing the line of windows from inside the coach. They are opposite berth nos.23 and 57. In case the door is locked and jammed, try and open these windows so that some of the uninjured passengers can come out through the emergency exit.
- vii) Special care should be taken while evacuating the old, infirm and children in order to ensure that they are not separated from their family members.
- viii) Extrication of critically injured should be done under medical supervision as far as possible.
- ix) In case medical supervision is not available, then critically injured passengers should be made to lie down on a bedsheet and thereafter taken out by 4 persons holding the four corners. This will ensure that no further damage takes place (Bedsheets will be available in AC coaches)
- x) Passengers who are bleeding from open cuts should be tied up with strips of cloth so as to reduce if not stop the bleeding altogether.
- xi) It is better not to take out the luggage from inside the coaches at the first instance, for two reasons. Firstly, passengers both injured and uninjured should get preference in this evacuation process. Secondly, it may be safer for the luggage to be left inside where the risk of fewer chances of their being stolen or pilfered.
- xii) After passengers have been evacuated from your coach, cross check with the reservation chart and against the name of each passenger note down as to whether he/she is injured or not.
- xiii) After all passengers have been evacuated; water and eatables can be taken out gradually.
- xiv) Building up confidence of injured passengers by suitable advice is of great importance.
- xv) After helping evacuate all passengers from your coach go over to other coaches and provide similar help to those passengers also.
- xvi) Railway officials from divisional HQ generally arrive at the site of the accident within 2 to 3 hours, depending on the distance of the accident site from the divisional HQ. Wait for them to come and make further arrangements.
- xvii) Grievously injured passengers who are bleeding or those who are unconscious require immediate hospitalisation. In case some local people have arrived by that time; their help should be taken in shifting the grievously injured to the nearest hospital.
- xviii) In case your train has been involved in an accident but neither has your coach derailed nor any passengers of your coach injured, then you should go to the unreserved coaches and carry out the duties as listed above.

4.6.2.11 Duties of attendant of AC Container in freight stock:

- (I) To assist the Guard of the train in case of any type unusual occurred.

4.6.2.12 Duties of O.C. site–Till arrival of Divisional Officers:

Having formed different groups consisting of available railway staff on the train and volunteers from amongst passengers, the rescue and relief work should be got started in right earnest. This entire exercise would take about 30" time. Once the rescue and relief work by the **Instant Action** Team has got underway, the OC site should then devote his attention to contacting **First Responders**.

(a) Locating nearby villages:

- (i) Look for villages nearby, either visible or out of sight.
- (ii) In most cases, villagers turn up on their own having heard the sound of the disaster.

- (iii) In case none of the above is possible, then speak to either the control office or the nearest station and find out the location of nearby villages.
 - (iv) Location of nearby villages with their general direction will be available in the Divisional DM Plans.
 - (v) Send messengers (preferably railway staff) to inform villagers and seek their assistance.
- (b) Locating the nearest manned level crossing gate:**
- (i) The train driver is the fastest source of information regarding location of the nearest manned level crossing gate in either direction.
 - (ii) Send a messenger (preferably a railway staff) to the gate for contacting the gateman.
 - (iii) The gateman will be able to give location of nearby villages.
 - (iv) The messenger can take help of a passing vehicle to inform villagers and seek their assistance.
- (c) Organizing assistance from local people in nearby villages:**
- (i) Villagers should be asked to make an announcement from their loud speaker (generally available in the local temple, mosque, gurudwara, church etc.) informing others regarding the accidents.
 - (ii) Everybody should be asked to rush to the accident site with following:
 - Tractor trolleys (both for transportation as also for general lighting).
 - Cutting implements, hammers, chisels Ropes, Ladders, etc.as are available.
 - (iii) Ask doctors or Para-medical staff of village to reach the accident site.
 - (iv) The messenger should stay back and try and organize opening of a big building (preferably a school) for sheltering of injured passengers and /or preservation of dead bodies.

4.6.3 Duties of OC Site—Immediately after the accident:

- 4.6.3.1 Note down the time of accident.
- 4.6.3.2 Ensure protection of traffic by Guard and Driver.
- 4.6.3.3 Ensure reporting of accident to nearest Station / Control.
- 4.6.3.4 Roughly assess the extent of damage and likely number of casualties.
- 4.6.3.5 Collect railway staff and volunteers from amongst the passengers and form different groups. Each of these groups should be assigned work.
- 4.6.3.6 Maintain a log of events.
- 4.6.3.7 Till Divisional Officers arrive and take over charge of the situation, continue to discharge duties of OC site.
- 4.6.3.8 After Divisional Officers arrive, fully brief the DRM and hand over charge to him.
- 4.6.3.9 The on-board OC site should ensure issue of a detailed message with following information before leaving the site of the accident.
 - 4.6.3.9.1 Time/Date of accident.
 - 4.6.3.9.2 Location Km. /between stations.
 - 4.6.3.9.3 Train number and description.
 - 4.6.3.9.4 Nature of accident.
 - 4.6.3.9.5 Approximate number of killed / injured.
 - 4.6.3.9.6 Extent of damage.
 - 4.6.3.9.7 Assistance required.
 - 4.6.3.9.8 Condition of the adjacent line, if any.
 - 4.6.3.9.9 Whether OHE is involved.
 - 4.6.3.9.10 DRM on arrival assumes the Charge as OC site.

4.6.4 Formation of Groups comprising members of Instant Action Team:

- i) OC Site shall immediately collect all Railway staff on train/ at site and form separate groups.
- ii) Passengers travelling by the same train that volunteer for rescue and relief work should also be drafted in to these groups.

- iii) Passengers from accident-involved coaches should be directed toward their own coach.
- iv) Passengers from coaches, which are not affected, can be distributed amongst other accident-involved coaches.
- v) In the absence of OC site, TS /TTE shall take steps to form such groups.
- vi) In the absence of TS/ TTE the Guard/ Assistant Guard shall take steps to form such groups.
- vii) 5 or 6 groups should be formed depending on number of coaches involved.
- viii) Ideally, one group should be formed for handling each coach.
- ix) In case sufficient numbers of officers are present, then one officer should be made in charge of each group.
- x) Otherwise, Sr. Supervisors travelling by the accident-involved train should be nominated as in-charge of each group to co-ordinate it's working.
- xi) In case sufficient numbers of Sr. Supervisors are also not present, one TTE should be nominated as in-charge of each group to co-ordinate it's working.
- xii) Each group should rescue injured, entrapped passengers.

4.6.5 Duties of the Instant Action Team–In case of afire:

- 4.6.5.1 In case of fire pull the Alarm, Chain and stop the train immediately.
- 4.6.5.2 Try and put out the fire before it become sabigblaze by using either water or blankets etc.
- 4.6.5.3 More people expire due to suffocation from smoker other than due to actual burning.
- 4.6.5.4 Advise passengers to take a cloth, wet it in their drinking water and cover their nostrils.
- 4.6.5.5 Instruct passengers to go to the other end of the coach, which is away from the fire, and if possible cross over to the next coach through the vestibule.
- 4.6.5.6 Insist that passengers should save themselves first and not to bother about their luggage which can be retrieved later on.
- 4.6.5.7 Make sure that no passenger lies down on the floor.
- 4.6.5.8 After train has stopped, passengers should come down from the coach immediately.
- 4.6.5.9 Building up confidence of injured passengers by suitable advice is of great importance.

4.6.6 Duties of Control Staff / Organization

Sectional Controller

1. He shall advise the Dy. CTNL/CTNL and note important details in diary and chart.
2. He shall advice the TI, SSE (P.way), CSI (Signal), CLI, CMI, AEN, Railway doctor etc. of the section immediately.
3. He shall keep loop lines of adjacent stations clear of affected section.

Dy. CTNL / CTNL

1. He shall advise all concerned officers, supervisors' inspectors and CMS/ Railway doctor in charge and sectional DMO.
2. He shall order ARME / ART at once.
3. Ensure ARME and ART is turned out within the Schedule time.
4. He shall inform police officials and collector concerned where ever required.
5. He shall inform HQ emergency control.
6. He shall maintain Accident Log register in chronological order of information received on right side page and information / instruction passed on/ out on left page of the register.

Movement of trains

1. Stop movement of trains in the affected section on double line and in both the directions on single line.
2. Check from site/ station if adjacent line/ lines fouled or otherwise.
3. Collection of information and Reporting:
4. Open a register in which all items are to be logged.
5. Collect relevant information in the register and report to all concerned from time to time.

Ordering of Relief Trains and Medical Relief Vans

1. Immediately order ARME/-ART whenever trains be come over due as per G&SR 6.04 or required otherwise.
2. In case of an accident involving a passenger carrying train or an accident involving a road vehicle at a level crossing, invariably order the Medical Relief Train irrespective of the information received or otherwise about causalities.
3. Advise Railway Headquarters giving full details of the accident.
4. Obtain regular information from site and advise Headquarters.
5. Advise RMS authorities if Mail carrying train involved.

Location of ART / ARME - BVC: There is a separate siding in BVC yard for stabling SPARMV and ART. SPARMV and ART are stable on nominated sidings. Above arrangement justified and helpful for in time departure of SPARMV or ART at time of ordering.

Running of ART/ARME-BVC: A halt of 2 minutes is permitted at BVP (enroute) to facilitate boarding of Officers & staff due to railway colony is in BVP, whenever ART/ARME will be ordered to work beyond BVP to avoid any possible delay in dispatching ART / ARME ex. BVC.

Medical relief:

1. Advise immediately civil, military and public hospitals and medical officers in the area and arrange for doctors, medical equipment and ambulance from nearby stations.
2. Make arrangements for the transport of Railway doctors to the site immediately, if necessary, by engaging road vehicles.
3. Obtain the names of the injured/dead passengers with full particulars and pass on the same to the Railway Headquarters.
4. Arrange to relay the names of the injured/ dead to the important stations / junction stations on the section.
5. Attend to enquiries from general public regarding the accident, the names of the injured etc., promptly and courteously.

Regulation and diversion of trains:

1. Arrange to regulate all passenger carrying trains which are nearer to the accident site at convenient stations, preferably junction stations where catering facilities, drinking water, etc. are available.
2. Arrange to draw out the unaffected portion of the train involved in the accident without delay to nearby convenient station where catering/ drinking water facilities are available.
3. Obtain realistic forecast of restoration. Arrange diversion of long-distance trains, if necessary, keeping in view the time required for restoration of line/lines in consultation with HQ and plan for resumption of passenger trains and ordering goods trains.

Information to public

1. Ensure that information counters/booths are opened at the accident site as also at outer important stations/ enroute adjoining Railway for giving the information to the general public.
2. Ensure frequent announcement through the public address system/ manuscript notices regarding arrangements.
3. Advise civil authorities, superintendent of police, GRP with in whose jurisdiction the accident has occurred.
4. Advise RPF for arranging protection of Railway and public property.

Power Controller

1. Arrange power and crew for medical van and ART.
2. Ensure ARME and ART is turned-out within the Schedule time.
3. Also inform the Mechanical Officers.
4. Advise adjacent Divisions for ARTs and inform the CMPE (R&L) etc.
5. Plan for additional powers and crews in consultation with CTNL.
6. Obtain bio-data of running staff involved in accident and arrange for breathalyzer test at the earliest possible.
7. Co-ordinate with the Dy. Chief Controller so that the necessary locomotive, driver, fitters and other technicians reach the site of accident promptly as required.

Carriage Controller

1. As soon as he becomes aware about incident, he will inform the divisional officer and concerned supervisors about the incident.
2. He will inform to the ART/ ARME incharge / staff and will ensure its timely departure.
3. He will ensure that rollingstock involved is having any schedule repair due or not.
4. Arrange for any extra coaching stock if required.
5. He will give timely information /feedback to HQ and concerned divisional officers.
6. He will inform to nearest SSE / SE/ JE (carriage depot) in charge to rush to site.
7. Will maintain close coordination with control organization.

Engineering Controller

1. Information to Engineering officers / officials.
2. Information to Sectional Supervisor to reach at site by quickest possible means.
3. Instruction to first reached SSE/ SE/ JE (P.way) to protect the track and preserve the clues.
4. Arranging water supply at site.
5. To ensure necessary equipment available with SSE/ SE/ JE (P.way).
6. Instruction to SSE/ SE/ JE (P.way) to take joint observation of site.
7. To arrange manpower and material as per requirement at site.
8. To keep close coordination with control organization.

Electrical Controller

1. To informed the concerned officers and supervisors.
2. To informed the nominated staff of ART/ARME.
3. Sectional/ nearest Supervisor to be advised to reach site at earliest.
4. To keep close coordination with control organization.

Commercial Controller

1. To inform the concerned officers and supervisors.
2. To inform Sectional CMI to proceed for affected side.
3. Ensure that drinking water, tea and snacks are supplied.
4. To ensure securing of luggage of the injured person.
5. Ensure arrange buses for standard passenger and keep record of the buses destination wise with the number of passenger.
6. Keep in touch with progress of patient in hospital.
7. Ensure to open information booth at important station for help of traveling public.
8. Ensure announcement through public addressing system regarding arrangement for diversions of train's regulation probable time of arrival of relief train for standard passenger.

S&T Controller

1. To inform the concerned officers and supervisors.
2. To inform Sectional SSE/ SE/ JE (signal) to proceed for affected side.
3. To ensure that portable control telephone or field telephone are fitted at site of accident promptly and manned continuously.
4. Inform to concerned supervisor to reserve crew and sealed the relevant equipment if required.
5. To ensure the restore the signaling and interlocking for normal working without delay.
6. To keep close coordination with control organization.

RPF/Security Controller:

1. To inform the concerned officers.
2. To inform nearest RPF post to reach the site.
3. To inform Disaster Management Supervisors and staff to reach the site.
4. To inform nearest GRP/City Police/ SP regarding incident and necessary help.
5. To maintain close coordination with control organization.

4.6.7 Duties of Safety Branch:

Assistant Divisional Safety Officer (ADSO)

- 4.6.7.1 Reach in Control office immediately after he receives information.
- 4.6.7.2 To remain in contact with Sr.DSO /DSO for further action.
- 4.6.7.3 In absence of Sr.DSO/DSO, he will carry out the duties of Sr.DSO /DSO.

Incharge Civil Defense and Volunteers CD

1. At the emergency response to rail transport accident.
2. Rapid access to the site of accident.
3. Effective site management by making best use of on board and locally available resources.
4. Quick extrication of victims.
5. Speedy transportation of victims to hospital
6. Proper communication system for assisting the stranded passengers.

SC (Traffic):

1. He will note the events at the site of the accidents.
2. He will take statement of Guard and Assistant Guard of the train involved in accident.
3. He will take breathalyzer test of Guard / Assistant Guard.
4. He will associate clearance of involved train with other restoration staff.
5. In absence of TI he will take the statement of operating staff and passengers.
6. Any other duties assigned by Sr. DSO/ DSO/ADSO.

SC (Loco)

1. He will seize speedometer graph and / or freeze the memory of digital speedometer and if possible, take out the memory card of loco with running diary of driver and engine repair book.
2. He will take statement of driver and diesel assistant of those involved in accident.
3. He will take breathalyzer test of LPs / ALP.
4. He will search out those staff who is not having adequate knowledge of Mechanical and working rules.
5. He will counsel mechanical staff for disaster management and will take periodical test of running staff in this regard through gradation of staff.
6. Any other duties assigned by Sr. DSO/ DSO/ADSO.

SC (C&W)

1. He shall make thorough inspection of the accident involved coaches/ wagons and assist Sr. DSO /DSO in finding out the probable cause of the accident.
2. He will ensure that the joint measurements of wagons/coaches taken in proper Performa.
3. He will take down particulars of the derailed wagon/coaches and will show to Sr.DSO/DSO.
4. He will also check up the brake power certificate and its validity of the accident involved train and also seize the same.
5. Any other duties assigned by Sr. DSO/ DSO/ADSO.

SC (Engineering):

1. He will ensure that the joint observation measurements of the track are taken in the standard Performa as per the accident manual.
2. He will ensure that proper sketch of the accident site is being prepared and jointly signed.
3. He will inspect the site and also go through the track observation and measurements and will assist Sr.DSO/DSO in ascertaining the probable the cause of accident.
4. He will seize the gang dairies and gang chart, curve register and other related documents from the concerned SSE/ SE/ JE (P.way).
5. He will note down on the spot statement of the P.way staff working at the Site (if any) at the time of accident.
6. Any other duties assigned by Sr. DSO/ DSO/ADSO.

SC (S & T):

1. He will inspect the accident site particularly, if points and crossings and signal gears are involved and will assist Sr.DSO/DSO in ascertaining probable cause of the accident. He will ensure that joint observation of cabin /panel are taken.
2. In case of accident in station yard and on points he will note down the gauge position of the points and all levers/push buttons in the SS/Dy. SS/ASM rooms along with TI/SS of the station.
3. He will ensure that communication between the site and the control is arranged at the earliest. He shall also ensure that site telephone is manned by responsible S&T staff to assistance in making calls.
4. Any other duties assigned by Sr. DSO/ DSO/ADSO.

4.6.8 Duties of Operating Branch:**Assistant Operations Manager (AOM)**

- 4.6.8.1 He will reach at the site immediately.
- 4.6.8.2 He will lead the rescue operation according to the orders given by Sr.DSO/DSO.
- 4.6.8.3 He will see the timely dispatch of ART/ARME from the HQ stations.
- 4.6.8.4 He will supervise the relief operation and will give the direction to staff working at site.
- 4.6.8.5 He will also collect the records from the supervisors and will seize the documents and records in his presence.
- 4.6.8.6 He will produce the documents received from the supervisors at the time of enquiry.
- 4.6.8.7 He will associate Sr.DSO/ DSO during the course of enquiry if required.

Transportation Inspector (TI)

- 4.6.8.7.1 He shall ensure that the joint measurements of the track, wagons/coaches cabin panel are taken and recorded.
- 4.6.8.7.2 He shall ensure that speedometer graph of loco is taken out jointly and seized.
- 4.6.8.7.3 He shall seize all train passing records of stations if warranted.
- 4.6.8.7.4 He will take statement of the ASM on duty of the station, Cabin-man and any other operating staff related with the accident.
- 4.6.8.7.5 He will keep liaison with control and ensure reception of ARME and ART at site and also ensure that all necessary shunting required to be done at site or at station is done smoothly in the minimum time.
- 4.6.8.7.6 Any other duty allotted by Sr. DSO/ DSO and Operating officers at site.

4.6.9 Duties of Commercial Branch:**Assistance Commercial Manager (ACM)**

- 4.6.9.1 Send sufficient Ticket Collectors, Porters, and RPF to the site.
- 4.6.9.2 Arrange drinking water, tea and snacks quickly.
- 4.6.9.3 Arrange for refund at important stations.
- 4.6.9.4 Issue Press handouts after prior approval of the DRM.
- 4.6.9.5 Open Enquiry Officers with proper staff at important stations.
- 4.6.9.6 Arrange for buses if required.
- 4.6.9.7 Arrange for reservation of stranded passengers by advising the stations concerned and CCS(G) where Other Railway / Divisions are involved.
- 4.6.9.8 Arrange for labour for loading and unloading of luggage, parcels & goods.

Divisional Commercial Inspector (DCMI)

- 4.6.9.8.1 Collect the cash from station i.e. booking office and report to the site by first /fastest means.
- 4.6.9.8.2 Arrange eatables and drinking water at site for Passengers / Staff.
- 4.6.9.8.3 Arrange meals for Officers and Staff if desired.
- 4.6.9.8.4 Arrange private /government vehicle for shifting injured/ dead bodies/ luggage/ passengers to suitable / desired place.
- 4.6.9.8.5 Arrange private labour if required to unload the wagon or any other work as demanded by OI / Cat site.
- 4.6.9.8.6 Collect the list of staff accompanying / attending the accident site.
- 4.6.9.8.7 Pay the meal allowance to staff attending accident site.
- 4.6.9.8.8 Pay the reimbursement to staff who reported to site by hiring private vehicle.
- 4.6.9.8.9 Issue passes for free destination.
- 4.6.9.8.10 Follow the orders/instructions given by site I/C of OC at site / in charge of commerce department.

4.6.10 Duties of Mechanical Branch:**ART Supervisor and Staff**

- 4.6.10.1 Proceed to the site of accident. Assisting evacuating passengers if any trapped Under/inside coaches involved in accident.
- 4.6.10.2 Record the details regarding brake power and other aspects of the rolling stock as per prescribed Performa.
- 4.6.10.3 Should have the measurement of the rolling stock taken as per the prescribed Procedure.
- 4.6.10.4 Should check the fitness of the stock which are supposed to move from the Accident site.
- 4.6.10.5 Should ensure that loco/coaches/wagons re-railed are in a fit condition to be taken from the accident site.
- 4.6.10.6 Plan for efficient movement of ART, Engine, Tower wagon etc. between site and station for quicker restoration.
- 4.6.10.7 Ensure safe and efficient working of cranes, Hydraulic re-railing equipment and other rescue devices.
- 4.6.10.8 Ensure that the log/diary regarding restoration at the accident site is maintained properly.
- 4.6.10.9 As per para 305 of accident manual ART incharge will keep enough quantity of proforma for joint observation and readings (Track, coach & Loco) which will be supplied to them by safety department from time to time on demand.

4.6.11 Duties of Engineering Branch:**Senior Section Engineer /P.Way**

- 4.6.11.1 Immediately proceed to site of accident.
- 4.6.11.2 Protect the track.
- 4.6.11.3 Arrange adequate labour with tools and track materials as required. At night arrange adequate number of petromax / lamps/ portable electric generators.
- 4.6.11.4 Record Joint Observation/ measurements of track C&W, S&T Gears, Points and Crossing etc. Prepare detailed sketch.
- 4.6.11.5 Preserve all clues of accident.
- 4.6.11.6 Depute labour for unloading of wagons if required.

Duties of the officer incharge at the site of accident:

1. Arrange constant manning of the portable telephone.
2. Ensure necessary protection of adjacent line (s) and the affected train.
3. Make quick assessment and relay information regularly.
4. Ensure arrangements for rendering first aid at the site, transporting injured to the nearest dispensary / hospital, etc.
5. Arrangements to look after the bodies of the dead, if any, identification of the bodies, transporting the dead bodies to the nearest stations, advise Police, etc.
6. Arrangements for transporting stranded passengers preferably to Stations, where drinking water, catering arrangements, etc. are available. Depute commercial officer to assist them.
7. If clues are preserved and noted, arrange clearance of the unaffected portion of the train to facilitate closer arrival of ART, cranes, etc.
8. If sabotage suspected, advise DIG/ SP and await their clearance.
9. Ensure adequate security and protection of the area.
10. Depute Officers and / or staff for specific duties in rescue operations; preservation of clues and Transshipment work.
11. Arrange for early issue of: Telephone /telegraphic advice of the accident to all concerned.
12. (a) Arrange for the opening Enquiry Booths at convenient points.
(b) Record relevant information the form of an accident log.
13. Arrange through liaison with the Divisional Control Office and Headquarters for transshipment of trains, diversion of trains, restriction of traffic, running of duplicate trains, if necessary.
14. Keep the Control Office informed of the progress of clearing operations
15. Work out the damaged vehicles from the site promptly after rerailment and being certified fit to be moved out.
16. Ensure adequate lighting of the area in case of night or darkness.
17. Arrange for speedy ex-gratia payment as per extant rules.
18. Timely arrangements for staff meals where required or permitted.
19. Arrange labour for unloading where necessary.
20. Ensure that Commercial staff takes down particulars of loaded wagons and consignments.
21. Ensure that the Railway Staff wear Distinctive Arm Bands.

4.6.12**CHECK LIST OF SAFETY ITEMS AT STATIONS**

It is the responsibility of SS/ Dy.SS/ ASM incharge of station to keep following equipment ready in all respect.

4.6.12.1 Following equipments updated and inworking condition:

- | | |
|-----------------------|---|
| i. Fire buckets | : 06 fire buckets at small stations & 12 at medium station. |
| ii. Fire extinguisher | : Minimum 02 DCP type fire extinguishers. |
| iii. Stretcher(s) | : Minimum 01 |
| iv. First Aid box | : Minimum 01 |

4.6.12.2 Following information should be complete and updated after every three months:

- i. List of Civil authorities i.e.DM, SP, Police station and GRP post with telephone numbers.
- ii. List of local Hospitals and Ambulance with telephone numbers.
- iii. Road approach route particulars from various directions and also mentioning nearby telephone booth.

- iv. List of nearest Fire brigade with telephone numbers.
- v. List of staff of all departments along with their local address and contact telephone number at their station.
- vi. List of staff of all departments along with their local address and contact telephone number of adjacent railway stations.
- vii. List of Railway Officers and their Phone Nos.

4.6.13**Deployment of Officer and Supervisors**

Department	Control Office	Accompanying ART/ARME & reaching site	
1. Safety	ADSO	Sr.DSO/DSO	All SCs, IC/CD
2.Operating	DOM	AOM(G)	Sectional TI
3.Mechanical	Sr.DME	ADME	ART/ARME staff, CLI, DCWI, SSE (carriage) and all nominated staff
4.Electrical	Sr.DEE	ADEE	ART/ARME staff, Nominated SSE, Technicians & Khalasis.
5.S&T	Sr.DSTE	ADSTE	ART/ARME Staff, Sectional SSE (T), SE(J), TCM
6.Engineering	Sr.DEN/ Co	Sr.DEN/DEN and sectional ADEN	ART/ARME Staff, Sectional SSE, SE
7.Medical	CMS	SrDMO/DMO	ARME Staff, Sr.PHR, staff nurse, Sr.HA, dresser, Dispensary peon.
8.Security	DSC/RPF	ASC/ RPF	Sr. IPF, IPF, Res. coy
9. Personal	DPO	APO	Sectional WLI
10.Commercial	ACM	DCM	Sectional CMI / DCMI (Marketing), TCs, Licensed Porters.

Note: The nomination of Officers at control office and site may be decided & altered there to, by DRM/ADRM at the time of receiving information of accident, depending upon the gravity of situation.

4.7 DISASTER RESPONSE–FIRST RESPONDERS:

4.7.1 Role of First Responders – Local people:

4.7.1.1 At accident site:

- (i) Local people will call 108 Ambulance service.
- (ii) Tractors, which arrive, should be lined up in a row facing the track with their headlights switched “ON” for illuminating the accident site.
- (iii) Tractors should be so spaced out that they illuminate the entire length of the accident site. Such spacing would also depend on number of tractors that have arrived.
- (iv) Rescue and relief work should now be mounted under the available light.
- (v) Villagers arriving for rescue and relief work should be formed in to separate groups for handling individual coaches.
- (vi) Group leaders of IAT who were earlier conducting rescue and relief work should co-ordinate with the local people and guide them.
- (vii) Grievously injured passengers extricated from coaches should be sent to the nearest hospitals in tractor trolleys.
- (viii) Passengers who have suffered trivial injuries and uninjured passengers should stay back at accident site and wait for arrival of railways DM team who would take charge of them.
- (ix) As a thumb rule, any injury requiring hospitalization of more than 48hrs. is grievous, hospitalization of less than 48 hrs. is simple, and any injury not requiring hospitalisation at all is trivial.
- (x) The following priority should be adhered to while sending such grievously injured passengers:
 - Unconscious,
 - Bleeding excessively,
 - Having breathing problems,
 - Grievously injured,
 - In a state of shock,
 - Having fractures,
 - Simple injury,
- (x) Dead bodies, if extricated should be kept alongside the coach but away from the track for proper tagging etc. before being dispatched for preservation.
- (xi) Bodies should be kept in separate lots, coach wise, so that they do not get mixed-up.
- (xii) Tagging of dead bodies should indicate the coach number and also the cabin number, if possible, (For example NCR 98127, cabin number containing berths 9-16).

4.7.1.2 In Villages / Towns:

- (i) A big building, preferably a school building should be got vacated and made ready for keeping of dead bodies and unclaimed luggage of passengers.
- (ii) They should be asked to bring the following to the accident site for train passengers:
 - Tea and refreshments,
 - Warm clothing, if required.
- (iii) Look after injured passengers who have been taken to the village.
- (iv) Take injured passengers to the nearest hospital by means of any transport available. For this purpose, apart from tractor trolleys, even trucks passing on the highway can be utilized.

4.7.2 Duties of First Responders – Railway Staff:

The First responders from Railways will normally include the staff present at the vicinity/ Station. However, all other Staff available / posted at the station are to report to the Station master at the earliest. Detailed duties of each of these staff are brought out in the Divisional Disaster Management Plans. Some Staff available include the below:

1. Gang Staff
2. Gate men
3. Cabin man
4. Points man
5. Station Superintendent incharge
6. Station Master
7. Safaiwala:
8. Station Master at adjoining stations: Station Masters of adjoining Stations plays an important role at the time of Disasters. Their duties Include:
 - i. Conveying of Information
 - ii. Call108, if it has not been called by the local people.
 - iii. Medical Assistance
 - iv. Passenger Assistance
 - v. Transport Assistance
 - vi. Security Assistance.
 - vii. Communication Assistance.
 - viii. Sending Manpower Power to site
 - ix. Preservation of clues and Evidences.
9. Transportation Inspector/ Chief Loco Inspector/ SSE(P.Way)/ SSE (Signal)/ SSE(C&W) & SSE(TRD): These officials are Chief supervisors of their respective departments. At an accident site they play an important role in:
 - i. Rescue and relief
 - ii. Preservation of clues / evidences
 - iii. Joint measurements
 - iv. Restoration of Assets for operation.

4.7.2.1 Gang Staff:

- (i) On double/ multiple line section stop any other train approaching the accident area by showing hand danger signal.
- (ii) Ensure that track alignments or lines are not disturbed.
- (iii) Report to OC Site and assist in rescue and relief work.
- (iv) Assist in extricating injured passengers from coaches.
- (v) Assist in transporting them to nearest hospitals.

4.7.2.2 Gate man:

- (i) Keep gate closed if the train has not cleared the gate.
- (ii) Arrange to inform SM immediately under exchange of private number regarding the nature of the accident.
- (iii) Collect men and material available nearby and direct them to site.
- (iv) In case the gate is involved in an accident, which obstructs and fouls the track and the gate is provided with the gate signals, then the signals shall be put to 'ON' position immediately.

- (v) If the Boom / Wing is broken he shall close the gate with Safety Chain. Keep gates closed if the train has not cleared the gate.
- (vi) Immediately fix Red Banner Flag in Daytime and Red Lamp in Night time on **wooden staff** at both ends of the gate 5 meters away from the obstruction on either side.
- (vii) On Double / Multiple line section he shall stop any train approaching the accident area by showing Danger Hand Signals.
- (viii) Rush with Detonators and Red Flag by Day and Red Hand Signal by night in the direction of the approaching train and place one detonator at a distance of 400 Mts. on MG & 600 Mts. on BG line. Thereafter he shall proceed to a distance of 800 Mts. on MG & 12000 Mts. on BG section and place three detonators on the track 10 Mts. apart. After that he shall return to the level crossing gate picking up the intermediate detonator on his way back. Thereafter he shall proceed towards the other direction and place the detonators similarly.
- (ix) On returning to the gate he shall not meddle with the clues and evidences of accident & also not tamper with the interlock system.
- (x) Avail services of road vehicles waiting or passing through LC Gate.
- (xi) Send message to nearby village, informing them regarding the accident.
- (xii) On double/multiple line section stop any other train approaching the accident area by showing hand danger signal.
- (xiii) Parting of Trains: If a gateman notices that a train has parted, he shall not show a stop hand signal to the pilot, but shall endeavor to attract the attention of the pilot and guard by shouting gesticulating and displaying a Green Flag by Day and white light by night in Up & Down Vertically as High & Low as possible.
- (xiv) Gateman shall not leave his gate unless other gateman has taken charge of it. If it is necessary to leave his gate in an emergency, before doing so, he should close and lock the gates against the public road and must inform and get permission to do so.

4.7.2.3 Cabin man / Panel Station Master:

- (i) In case of an accident first he shall put back the related signals to 'ON' position immediately and put stop collars on the relevant points.
- (ii) Reverse the points against the train involved in the accident.
- (iii) Not tamper with the interlocking system.
- (iv) Preserve clues and evidences.
- (v) Keep readily available all the cabin records and do not tamper the entries made in Train passing records.
- (vi) Be in close contact with SM/ ASM on duty and strictly obey the orders/ instructions.
- (vii) Not leave the cabin without his reliever and without the permission of the competent authority.

4.7.2.4 Points man:

- (i) In case of an accident he shall be in close contact to follow the instructions of Incharge SS or on duty SMs / ASMs.
- (ii) Help / assist the passengers in every rescue & relief operation.
- (iii) Report promptly / quickly if any defects is noticed in points, track, S&T gear, Rolling stocks involved in the accident which may endanger safety.
- (iv) Pilot the first train while dispatching on accident as per the instructions given by on duty SS / SM/ ASM.
- (v) Report the position of the adjacent line whether it is fouled or not and also ensure clearance of fouling mark or not.
- (vi) If the train involved in an accident caught fire, he shall first ring the bell

continuously to inform 'ON' & 'OFF' duty staff and then use Fire Extinguishers, water buckets, sand buckets provided at the station to extinguish the fire.

4.7.2.5 Station Superintendent Incharge:

- (i) Quickly & promptly convey all type of information to adjoining stations and section control.
- (ii) Arrange protection of traffic by keeping relative signals at 'ON' position and also arrange to preserve the clues / evidences of accident.
- (iii) Call for the 'On' duty & 'OFF' duty staff at the site of all departments including RPF & GRP staff.
- (iv) Communication with civil authorities, Village, Town, Cities, NGO Representatives / Volunteers for possible relief assistance.
- (v) Call for assistances for medical aspects from civil / private doctors and Army medical hospitals. Mobilise local medical team and injured passengers to hospitals. Quickly transport of ARME Scale-II equipment.
- (vi) Passenger assistance: Arrange drinking water beverages and refreshment free of cost either from refreshment room and local resources. Open emergency counter and display necessary information regarding dead / injured passengers and convey it. Make frequent announcement about diversion, cancellation and regulation of train services and arrange for refund of fares as per extent rules.
- (vii) Transport assistance: Arrange transporting injured passengers to nearest hospitals apart from tractors, trolleys, Trucks, Buses passing on the Highways /nearby can be utilized or by hiring road vehicles.
- (viii) Security assistance: Arrange RPF/GRP/State police to provide security to passengers their belongings and RLY. Properties. They should also be asked to assist in rescue and relief work.
- (ix) Communication Assistance: Direct passengers to PCO booths available nearby and issue free telegram and make available STD phone to relatives of dead / injured.
- (x) Sending manpower: Proceed to site of the accident by quickest means with trolleys, coolies, lamps, vendors and any other equipment that is considered necessary.
- (xi) Preservation of clues and evidences: Secure records related to accident in the Station / Cabin. Seal slides, levers, knobs and Relay room, if accident takes place within the Station limit.
- (xii) Protection: Protect adjacent lines then protect the same line on either side. Note the position of points etc., and clamp the points against the line on which the train is affected. Put "Line Blocked" lever collar in cabin / SM's slide control from where the lever is operated.
- (x) He shall not relive the site of accident till the Traffic Inspector or Divisional Officers relieves him.

4.7.2.6 Station Master / Assistant Station Master:

- (i) Quickly & promptly convey information to adjoining stations and section control. Arrange protection of traffic by keeping relative signals at 'ON' position and preserve the clues / evidences of accident.
- (ii) Prepare the relevant Authority to send the first train on occupied section and nominate one Points man to pilot the train/ vehicle.
- (iii) Call for the 'ON' duty & 'OFF' duty staff at the site of all departments including RPF & GRP.
- (iv) Communicate with civil authorities, Village, Town, Cities, NGO Representatives /Volunteers for possible relief assistance.
- (v) Call for assistances from civil/private doctors and Army medical hospitals. Mobilise local medical team and injured passengers to hospitals. Quickly transport of ARME Scale-II equipment.
- (vi) Passenger assistance: Arrange drinking water beverages and refreshment free of cost either from refreshment room and local resources. Open emergency counter and display necessary information regarding dead /injured passengers and convey it. Make frequent announcement about diversion, cancellation and regulation of train services and arrange for refund of fares as per extent rules.
- (vii) Transport assistance: Arrange transport to injured passengers to nearest hospitals by available means, passing on the Highways/nearby or by hiring road vehicles.
- (viii) Security assistance: Arrange RPF/ GRP/ State police to provide security to passengers their belongings and Railway property. They should also be asked to assist in rescue and relief work.
- (ix) Communication Assistance: Direct passengers to PCO booths available nearby and issue free telegram and make available STD phone to relatives of dead / injured.
- (x) Sending manpower: Proceed to site of the accident by quickest means with trolleys, coolies, lamps, vendors and any other equipment that is considered necessary.
- (xii) Preservation of clues and evidences: Secure records related to accident in the Station/ Cabin. Seal slides, levers, knobs and Relay room, if accident takes place within the Station limit.
- (xiii) Protection: Protect adjacent lines then protect the same line on either side. Note the position of points etc., and clamp the points against the line on which the train is affected. Put "Line Blocked" lever collar in cabin / SM's slide control from where the lever is operated.
- (xi) Not leave the site of accident till the Traffic Inspector or Divisional Officers relieves him.
- (xii) Obey the orders of higher authorities from time to time.
- (xiii) Work as per the instructions laid down in G&SR, Accident Manual and SWR during accident.

4.7.2.7 Safaiwala:

- (i) Follow the instructions of the Team leader of the Rescue operations.
- (ii) Preserve Dead bodies under the instructions of the team leader & Doctors.
- (iii) Do all sanitation work at the site.

4.7.2.8 Station Master at Adjoining Station:**4.7.2.8.1 Conveying of information:**

- (i) Arrange protection of traffic by keeping all signals at "ON" position.
- (ii) Report the accident to Station Master at the other end. He should be asked to call all OFF-DUTY staff at his station and send them to the accident site.
- (iii) Report the accident to Section Controller.
- (iv) Control to be advised regarding-
 - Time and nature of accident.
 - Brief description of accident.
 - Adjacent lines position.
 - Damage to rolling stock/ Track/ OHE/ Signal & Telephone installation.
 - Approximate number of dead and injured (grievous, simple) from the TS/ TTEs.
- (v) Following functionaries should be advised regarding the accident:
 - All "OFF-DUTY" railway staff posted at that station.
 - SS of Junction stations at either end.
 - TI, CMI.
 - P.Way Supervisors-SSE/JEetc.
 - TRD Supervisors-SSE/JEetc.
 - C&W Supervisors-SSE/JEetc.
 - S&T Supervisors-SSE/JEetc.
 - SI/ RPF, SHO/ GRP.
- (vi) Nearest Fire Station. Inform civil authorities, village/ town /city representatives and volunteers for possible relief assistance.
- (vii) Supervisory Station Manager of the nearest Jn. Station shall proceed to accident site.

4.7.2.8.2 Call108, if it has been called by the local people immediately for passengers rescue.

4.7.2.8.3 Medical Assistance:

- (i) Call for assistance from local Doctors, St. JAB, Civil and Army Hospitals, Civil defence, Scouts and guides or any such organisation.
- (ii) Arrange adequate number of First Aid boxes and stretchers.
- (iii) Mobilize local medical team and send it to site to render First Aid to the injured.
- (iv) Quickly transport ARME Scale-II equipment to the site of the accident.

4.7.2.8.4 Passenger Assistance:

- (i) Arrange drinking water, beverages and refreshments, either from Refreshment Room or local sources.
- (ii) Supply beverages and refreshments free of cost to stranded passengers.
- (iii) Open emergency counter and display necessary information.
- (iv) Obtain reservation charts and display it.
- (v) Collect information of dead/ injured and convey it whenever asked for.
- (vi) Make frequent announcements about diversion, cancellation, and regulation of train services.
- (vii) Arrange for refund of fares as per extant rules.

4.7.2.8.5 Transport Assistance:

- (i) Arrange for transport from local resources, for transporting injured passengers to nearest hospitals by fastest possible means.
- (ii) Apart from tractor trolleys, even trucks passing on the highway can be utilised.
- (iii) Stranded passengers to be transported from the accident site by train / hiring road vehicles.

- 4.7.2.8.6 Security Assistance:**
- (i) Advise RPF/ GRP/ State Police to provide security to passengers, their belongings and railway property.
 - (ii) They should also be asked to assist in rescue and relief work.
- 4.7.2.8.7 Communication Assistance:**
- (i) Direct passengers to PCO booths available nearby.
 - (ii) Issue free telegrams and make available STD phone to relatives of dead / injured.
- 4.7.2.8.8 Sending Manpower for site:**
- (i) Proceed to the accident site by quickest means with trolleys, coolies, lamps, vendors and any other equipment that is considered necessary.
 - (ii) Till relieved by a Traffic Inspector or Divisional Officers be incharge of site and carryout rescue / relief operations.
- 4.7.2.8.9 Preservation of Clues and Evidences:**
- (i) Preserve clues and evidences.
 - (ii) Secure records related to accident in the Station / Cabin.
 - (iii) Seal slides, levers, knobs and Relay room, if accident takes place within the Station limit.
- 4.7.2.9.1 Duties of TI/ PWI/ SI/ CWI/ LI:**
- Rescue and relief:**
- (i) Organise maximum number of men to go to the accident site along with their equipment & proceed by quickest available means to the accident site.
 - (i) Ensure that the obstructed line is protected.
 - (ii) Direct all staff to assist in rescue and relief work.
 - (iii) Work as per directions of OC Site.
 - (iv) Assess casualties and arrange to render First Aid.
 - (v) Shift injured to nearest hospital.
- 4.7.3.2 Joint Measurements and Preservation of Clues/ Evidences:**
- (i) Collect and record all evidences relating to the accident such as:
 - Condition of track, with special reference to alignment, gauge, cross levels, superelevation, point of mount and drop and any sign of sabotage etc.
 - Condition of Rolling stock with reference to Brake Power and braking gear.
 - All marks on sleepers, rails, locomotives and vehicles etc.
 - Position of derailed vehicles.
 - Prima facie cause of accident.
 - (ii) Seize and seal the Train Signal Register, Logbook, Private Number Book, Line Admission Book, Speed Recorder Chart and other relevant records.
 - (iii) Note down the position of panel switches, indication, block instrument, condition of relay room, status of datalogger, etc.
 - (iv) Condition of switches, ground connections, point locking, occupancy of track circuit, details of damage to outdoor signal/ point gears should be noted down.
 - (v) Seize and seal the Speed Recording Graph and all other registers and repair logbook of the locomotive.
 - (vi) Record details of Brake Power and other aspects of Rolling stock as per Performa.
 - (vii) Joint measurements of Rolling stock, Note down observations, measurements of Loco etc. at site. If it is not possible arrange for taking the reading at shed.

- (viii) These can also be recorded on a video or digital camera subject to the availability.
- (ix) Details of all readings taken and position of all equipment noted should be jointly signed by supervisors of all 5 departments at accident site.
- (x) Obtain statement of staff involved in the accident.
- (xi) CWS/ DCWI shall prepare a sketch showing position of Rolling stock.
- (xii) PWI shall prepare a final sketch indicating the position of track, w.r.t. alignment, point of mount, point of drop, OHE mast, point number etc.
- (xiii) Survey the situation, assess assistance required and issue message to Divisional Control Office.
- (xiv) Take charge of the situation pertaining to your own department and remain till Divisional officers arrive at the site.

4.8 DISASTER RESPONSE– OFFICERS AT DIVISION & HEAD QUARTER:

4.8.1.1 Intimation of Accident–Divisional Control Office:

- (i) In the Divisional Control Office, information regarding an accident is generally received either by the Section Controller or the TPC.
- (ii) In most cases, the First Information Report also intimates the approximate number of coaches involved and a rough estimate of the likely number of casualties (such as 'heavy casualties expected').
- (iii) Accidents involving a passenger carrying train where the first information says that heavy casualties are expected, should prima-facie be treated as a Disaster?
- (iv) The moment information regarding an accident involving a passenger carrying train is received in the divisional control office; the accident bell in the control room should be sounded for alerting all on-duty functionaries.
- (v) After all, on-duty functionaries gather around the section control board, they will be briefly informed about the accident.
- (vi) Each functionary will thereafter resume his position and take steps to set in motion activities required of him.
- (vii) TPC will switch off OHE in case it has not tripped. OHE will not be restored even on adjacent line unless confirmation has been received from site that adjacent line is not obstructed and OHE is alright.
- (viii) PCR will undertake the following action in the given order of priority:
 - (a) Give orders to Loco Foreman/ SSE Loco for sounding the siren for ARMEs and ARTs.
 - (b) Order movement of ARME and ART (with 140T crane) from adjoining divisions for approaching the accident site from the other end
 - (c) Thereafter he will inform his departmental officers and supervisors.
- (ix) Dy. CTNL (Punctuality.) will first inform Hospital Casualty. Thereafter he will inform officers and supervisors as given below:
- (x) Each departmental functionary will inform divisional officers and supervisors of his department about the accident as detailed below:

<u>Functionary</u>	<u>Officers and Supervisors</u>
• Dy.CTNL (Op.) Operating & Safety, Stores, Personal & Accounts	
• Dy.CTNL (Punctuality) Hospital Casualty, DRM, ADRM, Medical	
• TPC	Electrical,
• S&T Control	S&T
• Engineering Control	Engineering
• PCR	Mechanical
• Commercial Control	Commercial,Public Relations
• Security Control	RPF
- (xi) All functionaries working in the divisional control office will have a ready list of telephone numbers (Railway, BSNL and Mobile) of all officers and supervisors of their departments.
- (xii) After Dy.CTNL (Punctuality) has informed Hospital Casualty, DRM, ADRM and Medical Doctors, he will then inform Dy.CTNL (Punctuality) or Dy.CTNL (Op) in Headquarters, Emergency Control regarding the accident.

4.8.1.2 Intimation of Accident–Railway Doctors:

Dy. CTNL (Punctuality) will inform the Hospital Emergency of Railway Hospital regarding details of the accident; Railway doctor on emergency duty shall under take the following:

- (i) Note down time of receiving message.

- (ii) Inform CMS, MS, and other Doctors & Para medical staff and instruct them to reach the ARME immediately.
- (iii) Collect necessary Medical team in the hospital.
- (iv) Inform CMD about movement of ARME.
- (v) Alert blood donors, St. JAB, Civil defence, Scouts and guides or any other such organisation.
- (vi) Bare minimum medical team should remain in the hospital; rest of the doctors should be rushed to the accident site.
- (vii) Arrange to move Emergency box from ARME Scale-II locations to the accident site.

4.8.1.3 Intimation of Accident–Head Quarters Emergency Control Office:

- (i) In Head Quarters Emergency Control Office also, the accident bell in control room should be sounded for alerting all on-duty functionaries.
- (ii) After all, gather around the CTNL/Dy. CTNL they will be briefed about the accident.
- (iii) Each functionary will thereafter resume his position and take steps to set in motion activities required of him.
- (iv) Each departmental functionary will inform HQ Officers of his department about the accident as detailed below:
 - Dy.CTNL(Op). Operating, Safety. Engineering, Personnel, Accounts.
 - Dy.CTNL(Punctuality) GM, Medical.
 - TPC Electrical,
 - S&T Control S&T
 - PCR/CCR Mechanical, Stores
 - Commercial Control Commercial, Public Relations, RPF
- (v) All functionaries working in the Emergency control office will have a ready list of telephone numbers (Railway, BSNL, and Mobile) of all officers and supervisors of their departments.
- (vi) After Dy. TNL (Punctuality) has informed GM and Medical Doctors, he will inform Safety Directorate's Emergency Cell in Railway Board.
- (vii) GM will inform CRB regarding the above accident.
- (viii) PHODs will inform their respective Board Members. In case PHOD is not available in Head Quarters, then the next senior most officer of that department will inform to his Board Member.
- (ix) CSO/ Dy.CSO(T) will inform CRS.
- (x) Dy.CTNL(Punctuality) will thereafter inform BCT Division control office regarding running out of 1st Special train to the accident site carrying GM and other HQ Officers.
- (xi) Functionaries of different departments will also inform their respective departmental officers regarding timing of 1st special train carrying GM and other Head Quarters officers to the accident site.
- (xii) In case the accident site is far off and going by air would be faster, then either helicopters or special Air Force planes may be organized from the IAF Base at Gandhinagar by Secy. to GM or by private hiring.

4.8.1.4 Informing Non-Railway Officials by the Division:

The portion having details relating to Disaster management plan i.e. relevant information such as details of civil authorities to be contacted whenever required or assistance during serious accidents (disasters) shall be dealt with by Operating Department (Chief Operations Manager) of the Railway concerned. (Rly. Bd's Letter No. 2002/Safety(A&R)/19/29 Dated 31.12.08).

- (i) DM, SP and CMS of the district within which the accident site falls should be informed regarding the accident by the CTNL of the concerned Division.
- (ii) ADRM will inform the following regarding the accident:
 - IG/ GRP
 - ADG/ GRP,
 - Divisional Commissioner.
 - Home Secretary.
- (iii) In case POL rake is involved, then IOC/ BPC/ HPC officials should also be informed.
- (iv) In case Mailbags of RMS are involved, then postal officials should also be informed.
- (v) Telephone numbers of all DM, SPs, CMSs on Divisional Commissioners & IOC, BPC and HPC officials are available in Divisional DM Plans.

4.8.1.5 Divisional Officers required to go to site:

- (i) All concerned divisional officers should proceed to the accident site by the ARME.
- (ii) Road vehicles should also be sent to accident site from Divisional Head Quarters.
- (iii) Target time for turning out Medical Relief Van from the siding and their dispatch from the stations.
- (iv) Target time for turning out of SPARME CUM SPART- from the siding and their dispatch from the stations.
- (v) DRM will proceed to the accident site; ADRM shall stay back at divisional Head Quarters for co-ordination work.
- (vi) All Branch Officers should proceed to the accident site. Officers heading different branches with in the same department are referred as Branch Officers.
- (vii) The second senior most officer of each branch should stay back at divisional Head Quarters.
- (viii) Other remaining officers from each branch, a majority of both Senior and Junior scale officers should also proceed to the accident site.
 - (a) Once it has become clear that the accident is a Disaster, then the 80/20 rule should be followed: 80% of all officers should go to the accident site, and only 20% should stay back at Head Quarters.
- (ix) Divisional DM Plans should specifically spell out, department wise, designations of officers & Supervisors who will be required to go to site, and those who will be required to stay back in Head Quarters.
- (x) Arrangements of Road Vehicles to proceed to accident site, indicating alternative vehicles as well, shall be indicated in Divisional DM Plans.
- (xi) Arrangements of vehicle drivers including spare drivers shall also be notified.

4.8.1.6 Supervisors required going to Accident Site:

At the divisional level 80% of all supervisors available in divisional Head Quarters should proceed to the accident site.

- (i) All other supervisors available in the field at other stations should also proceed to the accident site.
- (ii) Divisional Control Office should issue a computerized recorded control message from DRM to all Supervisors for proceeding to the accident site immediately by fastest possible means.

4.8.1.7 Disaster Management Team:

Nominated officials from various departments arriving at site by ARMEs and ARTs form part of the Disaster Management Team. Officials representing each department are responsible to ensure that assigned duties of their respective departments are efficiently carried out. Senior officers of each department will also ensure that their work is synchronized with that of functionaries of other departments for quick rescue, relief and restoration operation.

4.8.1.7.1 Members of the Disaster Management Team:

Disaster Management Team normally comprises members of following departments:

- (i) Trained railway men from Medical, Commercial, Safety, Electrical, S&T, and Mechanical, Engineering, Security, Personnel and other departments.
- (ii) In case of fire accidents, trained fire service personnel shall form part of this unit.
- (iii) In case of an accident on water body, divers and naval cadets will also be part of the team.
- (iv) In case of sabotage or bomb explosion, bomb disposal squads and GRP/ Local Police will also be involved.
- (v) Various rescue units shall accompany ARMEs, ARTs or move by road as quickly as possible.
- (vi) Identifying railway personnel and they should be supplied with orange coloured armbands to be kept in ARMEs/ ARTs. Adequate number of armbands, gloves and face masks should also be provided in the ARMEs/ ARTs.
- (vii) Communicating with railway personnel in the crowd through Microphones/ loudspeakers provided in ARMEs/ARTs. These should be used both for crowd control as also for giving instructions to railway personnel working at accident site.
- (viii) Once initial rescue operations have got underway, arrangements have to be made for water and food for railway staff working at site. Contract arrangement should be made for supply of food.
- (ix) Spare coaches should be stabled at nearby stations where watering and charging facilities are available for stay of staff.

4.8.1.7.2 Rescue, Relief and Restoration Operation:

DM Team on arrival by ARMEs and ARTs shall undertake following actions:

- i) Crowd Control and Law and Order.
- ii) Rescue operation.
- iii) Relief operation.
- iv) Video coverage of accident site.
- v) Installation of communication Network.
- vi) Clearance from State Police for restoration.
- vii) Preservation of clues and Evidence.
- viii) Media Management at site.
- ix) Salvage Operation.
- x) Restoration operation.

4.8.1.7.3 Formation of two teams at accident site for round the clock working:

- i) At the accident site, departmental officers available from both Head Quarters and division shall be formed into two teams for round the clock working in 2 shifts, preferably 8hrs. to 20hrs. and from 20hrs. to 8hrs.
- ii) PHODs shall be available on duty during the day time.
- iii) PHODs shall take on the spot decision regarding composition of the team for night shift for their respective department. This composition should not normally be changed during the 3-4day stay at the accident site.
- iv) Branch Officers shall be available on duty during the day time.
- v) Branch Officers shall take on the spot decision regarding composition of the team for night shift for their respective department. This composition should not normally be changed during the 3-4day stay at the accident site.

- vi) Similarly, the supervisors available from both Head Quarters and divisions shall also be put in two teams.

4.8.1.7.4 **Officer-in-charge of Site (OC Site):**

On arrival of ARME at accident site DRM shall take over as OC site from the senior-most officer of the accident involved train. On arrival of 1st Special train carrying GM and other head quarter Officers, GM shall be OC site. In the absence of GM the senior most officers shall be OC Site. He will be responsible for forming Core Groups as required and direct them to carryout efficient rescue, relief and restoration operations.

4.8.1.7.5 **Photography & Videography:**

Prior to starting restoration work of an accident site, divisions should undertake suitable video film coverage to the extent feasible. Still photography by digital camera should also be undertaken extensively for its obvious advantages. The photograph should be taken from a vantage point and from as many angles as possible so as to give a bird's eye view as also close up photographs.

- i) Such photographs should clearly indicate: (a) Severity of the accident. (b) Illustrate the damage to P. Way, Rolling stock, Signal, OHE and other structures and equipment.
- ii) Separate set of photographs to be taken to preserve clues and evidence of sabotage is suspected.
- iii) Victims and unidentified bodies should also be extensively photographed.

4.8.1.7.6 **OC Site:**

- i) Ensure setting up of UCC, CAC and LCCs at the earliest.
- ii) Collect information from OC site of IAT.
- iii) Take stock of the situation and plan for efficient rescue operation.
- iv) Estimate quantum of assistance required for each department from:
 - Within the division,
 - Adjoining divisions of WR,
 - Adjoining zones,
 - Non-railway agencies,
- v) Channelize local resources to supplement available railway resources.
- vi) Ensure that duties of various functionaries of different departments as laid down in WR's Zonal DM plan are carried out.
- vii) Ensure co-ordination among all departments for efficient rescue, relief and restoration operation.
- viii) Ensure information to SP Police and District Magistrate.
- ix) In case of sabotage, direct RPF to obtain quick clearance from State Police.
- x) In case of serious explosions or fire, clearance from Controller of Explosives is to be obtained.
- xi) Give prima facie cause of the accident along with forecast of expected date and time of restoration.
- xii) Ensure timely information on the progress of rescue, relief and restoration work every 3hrs. with following details:
 - Number of coaches searched.
 - Number of injured passengers recovered.
 - Nature of injuries to passengers.
 - Number of bodies recovered.
 - Number of bodies identified.
 - Number of coaches dealt with.
 - Supplementary assistance required, if any,

- xiii) Forecast for completion of each activity mentioned below should also be firmed up. These target dates and times should be communicated to all officers and supervisors at accident site:
 - Re-railment.
 - Track fitness.
 - OHE fitness.
 - Points and inter-locking.
 - Clearance of section.
 - Movement of first train.

4.8.1.7.7 Duties of Divisional Railway Manager (DRM):

- i) Ensure that functionaries of different branches at the accident site carry out duties assigned to them as per Zonal and Divisional DM Plan.
- ii) Co-ordinate with Divisional Emergency Cell regarding assistance required.
- iii) Co-ordinate with Civil Authorities especially with regard to:
 - Requisitioning of buses from State transport authorities, with drivers for round the clock duty.
 - Waving off of post Mortem formalities.
 - Positioning of Municipal Officials in the CAC for issuing of Official Death Certificate.
- iv) Ensure that proper assistance is rendered by each department.
- v) Ensure that in addition to one vehicle available in Control Office round the clock, sufficient numbers of vehicles are available along with particulars of the Drivers.
- vi) Immediately decide which officer should go by road/ ART/ ARME.
- vii) Nominate the officer to remain in Control Office.
- viii) Depute ADRM as in charge in Control Office if proceeding to the site.
- ix) Arrange to advise the Home Secretary / Chief Secretary or other Officers of the state in case of sabotage for prompt attendance of the S.P.
- x) Function as the senior most officer and as "Accident Manager".
- xi) Arrange a preliminary enquiry by Divisional Officers, in cases where an enquiry by the CRS/SAG Officers is to be held but immediate investigation of certain matters is necessary
- xi) Appoint two officers as reporters of serious accidents.
- xii) Arrange for taking joint observation / reading by supervisors.

4.8.1.7.8 Duties & Responsibilities of Various departments:

For efficient Disaster Management, responsibilities of various departments are to be executed by deputing responsible officers and supervisors. Important duties of such officers/ supervisors are enlisted as follows:

4.8.2 OPERATING - DEPARTMENT:

4.8.2.1 General (on Receipt of Information):

Immediately after getting the information:

- i) All sectional Tis and Supervisory SSs should be directed to reach the accident site by first available means.
- ii) Similarly, additional RG/LR staff from the section should be sent to 3 stations on either side so that SMs can be free for going to accident site.
- iii) Since considerable amount of shunting is required to be performed at adjoining stations, 2 traffic supervisors in 2 shifts should be posted at adjoining stations on each side.
- iv) Ensure that special trains are sent into the accident affected block section according to the sequence.
- v) Ensure proper marshaling of crane while proceeding to the accident spot in the block section.

- vi) Ensure that Engineering vans of the ART are placed nearest to the accident site. For this purpose, Engineering van/wagon should be placed closest to site of accident by sending it in pushing condition.
- vii) Ensure prompt clearance of standard passengers at the site in coordination with the Divisional Emergency Cell.
- viii) Regarding running of special trains, keep in touch with Divisional Emergency Cell and give requirement from site.

4.8.2.2 Duties of Sr.DOM (At the Site):

- 1) Ensure that ARME and ART reach the site without delay.
- 2) Plan for trains for the prompt transport of stranded passenger at site and clearance of passenger held up at other stations.
- 3) Plan for regulation of Passenger, Mail/Express trains, cancellation, diversion, and termination short of destination in consultation with Headquarters.
- 4) Check that information regarding passengers, dead, injured (grievous and simple) is verified by Railway Doctor and approved by senior most officer at the site.
- 5) Details of the dead, injured (grievous or simple) their originating and destination station, ticket No. Hospitals to which sent for treatment and also particulars of next kith and kin to be obtained from the site and relayed to Emergency Control, CSO etc.
- 6) See that chronological log of all items of information and action taken connected directly or indirectly with accident is maintained properly.
- 7) Keep liaison with adjacent Divisions, Site and Headquarters.

4.8.3 SAFETY - DEPARTMENT:

4.8.3.1 Duties of Safety Department:

- i) Preserve all clues and evidences regarding probable cause of the accident and ensure that these do not get disturbed till police clearance is received.
- ii) Ensure that video / still photographs by digital cameras are taken as required.
- iii) Ensure that joint measurements, observations are recorded in the prescribed Performa before restoration work begins.
- iv) Ensure that unaffected rolling stock is moved away from the site and thereafter stabled at convenient location for further examination during accident inquiry.
- v) Ensure that evidence of train staff, station staff and public are recorded on the spot.
- vi) Addresses of passengers willing to give statements later should also be obtained.
- vii) Ensure that special trains are sent into the accident affected block section according to the sequence.

4.8.3.2 Duties of Sr.DSO (At the Site):

- 1) Proceed to the site of accident by first available means.
- 2) Inform to CSO and NDRF/ SDRF after assessment of Requirement.
- 3) Ensure marshaling of the crane before the ART reaches site.
- 4) Ensure joint measurements etc.in prescribed Performa.
- 5) The required affected vehicles are kept for enquiry as per rules.
- 6) Plan for efficient movement of ART, engine, tower wagon, etc. between site and station for quicker restoration.
- 7) Ensure that the log diary at the site is maintained properly with details and that the Field telephone is manned.
- 8) Produce public witnesses and advise S.P. and DM in time, issue press notification in local press when advised by CSO, in case of CRS Enquiry.
- 9) Arrange to preserve the clues.
- 10) Ensure that front and rear portion are cleared from the site.

4.8.4 MEDICAL-DEPARTMENT:**4.8.4.1 General on Receipt of Information:**

On receipt of information regarding the accident where casualties are expected, the doctor on emergency duty in the hospital casualty would inform all other doctors and Paramedical staff concerned.

4.8.4.2 Formation of Two Teams:

- (i) Two teams of Doctors and Para medical staff would be formed. Team 'A' and Team 'B'. In case the accident site is far away from divisional Head Quarters and injured passengers are unlikely to be brought back to the divisional hospital for treatment keep bare minimum number of doctors in Team 'B' and all remaining available doctors should be rushed to accident site as part of Team 'A'.
- (ii) Team 'A'- headed by CMS/ MS incharge will rush to the accident site by ARME along with Team-A (12-15 doctors and 15-20 paramedics).
- (iii) Team 'B'- headed by the senior most doctor amongst them will stay back at the divisional hospital; and perform duties as given below:

4.8.4.3 Duties of Team 'B':

- (i) Establish an Emergency Cell in the Casualty Unit of Railway Hospital.
- (ii) Contact adjoining divisions and organize movement of 2 more ARME to accident site, one from each end.
- (iii) Contact local hospitals (Railway/ Govt. / Private) near the accident site to and ask them to rush their road ambulances along with necessary medical team to the accident site.
- (iv) Ask the local hospitals to be in readiness to receive and provide medical treatment to injured passengers.
- (v) Data Bank of medical facilities along the track section wise is available in Divisional DM Plans. Copy of Divisional DM Plans should be available in the Hospital Emergency of Railway Hospital.
- (vi) Arrange to send backup logistic support (more medical teams, Safaiwalas, health workers, St. JAB, Scouts and Civil Defence personnel) to the accident site in the 2nd and 3rd Special trains carrying from each end:
- (vii) Co-ordinate with MS/CMD of adjoining Divisions/ Zones to send their medical teams to the accident site by any means.
- (viii) Arrange and send adequate number of items such as Body bags, Polythene covers for dead bodies, Coffins, Dry ice. etc for handling of dead bodies.
- (ix) Keep one doctor in Divisional Emergency Cell to liaison with UCC and the medical team at the accident site for Requirement of medicines either at the accident site or in various patients admitted hospitals.
- (x) Prepare Railway Hospital to receive and provide treatment to injured passengers, when they are brought back from accident site.
- (xi) Arrange to send anti snake venom 4vials and other items in cold chain carrier.

4.8.4.4 Duties of CMS / Medical Officer:

- 1) Collect all staff that can be spared and proceed to site with necessary equipment from the hospital that can be quickly get-together whilst waiting for ARME:
- 2) Arrange for a message to be sent to his Senior Officer.
- 3) Report his time of arrival to the SM on duty.

- 4) Rough notes are recorded at the site of the accident but very detailed confidential notes including X-ray reports of the injuries sustained should be kept, after arrival at the hospital or health units.
- 5) Make a note in respect of the log of events and action taken.
- 6) Ensure that a qualified person will accompany the ARME.
- 7) Write Injury report on the prescribed form for each case of injury. List of dead/ injured and nature of injury to be advised immediately from the site.
- 8) Submit reports indicating the progress of injured including those receiving treatment at non-Railway Hospitals, to the MS / DMO / CMO daily during the first week and weekly thereafter.

4.8.4.5 Duties of Medical Department at Site (Team A): Main functions of the Medical department can be broadly classified as:

- a) Taking out injured passengers from accident involved coaches.
- b) Attending to injured passengers and giving them First Aid.
- c) Preparing list of injured passengers.
- d) Classification of their injuries.
- e) Transporting them to hospitals and getting them admitted.
- f) Taking an initial round of hospitals and assessment of situation.
- g) Post admittance hospital care of the injured.
- h) Dealing with dead bodies.
- i) Preservation of dead bodies.

4.8.4.6 General (On Arrival at the Site):

- i) Ensure collecting blood and urine samples of train crew in case the same is necessary.
- ii) Organize as many road ambulances as possible at the accident site.
- iii) Data Bank of Divisional DM Plans has names, telephone numbers and other details of hospitals near the accident site. They should be contacted on phone for sending road ambulances along with team of doctors.
- iv) Setup Medical Counter in UCC and CAC for passenger assistance.
- v) Setup First Aid Posts in LCCs.

4.8.4.7 Site Management:

- i) Leader of Team 'A' (Normally CMS/ MS In-charge of the Division) would take control of the site, co-ordinate relief measures and distribute duties amongst doctors available as below:
- ii) Different teams and groups will be formed discharging various duties of the Medical department. Each team should consist of 4-6 members and each group should consist of 3-5 teams, depending upon requirement.
- iii) One group of doctors will take a round of various hospitals where injured passengers have already been admitted.
- iv) One group consisting of 4-5 teams of doctors and Para-medics will take out injured passengers and dead bodies from accident involved coaches.
- v) One team will attend to injured passengers and give them First Aid and other medical treatment.
- vi) One team will prepare list of injured passengers, note down details of their injuries and classify them.
- vii) One team would be in-charge of transporting injured passengers to hospitals and getting them admitted.
- viii) One team would be in-charge of post admittance hospital care of the injured.
- ix) One team will deal with dead bodies after these have been extracted from coaches. They will prepare a list and arrange for their preservation.
- (xi) In case sufficient doctors are available then more groups should be formed for rescue operations.

4.8.4.8 Taking out Injured Passengers:

- i) Maximum number of doctors should be deputed for this activity.
- ii) This group should consist of at least 4-5 teams. If numbers permit, more such teams should be formed.
- iii) Teams involved in rescue operation should ensure rapid access to all injured passengers.
- iv) They should take assistance of Mechanical/ Engineering/ RPF staff to extricate injured passengers.
- v) Each team will join up with teams of Mechanical staff who would also be involved in extracting dead and injured from coaches.
- vi) Maximum number of coaches should be tackled simultaneously, except those that have climbed on top or have telescoped into one another.
- vii) Coaches should be thoroughly searched including lavatory and vestibule portions before abandoning further search and moving on to the next coach.

4.8.4.9 Attentions to Injured Passengers:

- i) One team will be asked to provide medical treatment to injured passengers immediately after their evacuation from coaches.
- ii) Ensure stabilization of condition of injured passengers already taken out from coaches, before they are dispatched to hospitals by road.
- iii) In case of patients in critical condition where stabilization of condition at site is not possible, they should be moved immediately by road ambulance or shifted to ARME.

4.8.4.10 Preparing list of Passengers:

- i) Collect list of injured passengers prepared by TS/ TTEs/ Train Conductors and assess the situation.
- ii) Separate lists to be prepared coach wise.
- iii) The list should contain following details:
 - If found Conscious: Name, sex, age, identification marks, address, and ticket number, originating and destination station.
 - If found Unconscious: Approximate age, sex, identification marks, ticket number and other particulars if relatives and friends are available.
- iv) Once the preliminary list of injured passengers has been prepared, the list should be signed by the CMS/ MS Incharge and a copy handed over to Commercial department.
- v) The list of injured passengers will thereafter be updated periodically, as rescue and relief work continue.

4.8.4.11 Classification of Injuries:**Injuries are classified as: -**

(A) Grievous (B) Simple

(A) 'Grievous' injuries for the purpose of these statistics should be taken as injuries as defined in Section 320 of Indian Penal Code reproduced below for ready reference. (Section 320, Indian Penal Code 45 of 1860) Following kinds of hurt only are designated as 'Grievous':

- (i) Emasculation.
- (ii) Permanent privation of the sight of either eye.
- (iii) Permanent privation of the hearing of either ear.
- (iv) Privation of any member or joint.
- (v) Destruction or permanent impairing of the power of any member or joint.
- (vi) Fracture or dislocation of a bone or tooth.
- (vii) Any hurt which endangers life, or which causes the sufferer to be, during the space of twenty days, or in severe bodily pain or unable to follow his ordinary pursuits.

(B) Simple Injuries: -

- (i) A person will be considered to have incurred simple injuries, if these injuries incapacitate the injured person to follow his customary vocation during 48 hours after the occurrence of the accident.
- (ii) A Railway servant is considered to have been injured if he/she is prevented from returning to work as a result of injuries for a period of 48 hours, after the occurrence of the accident.

(C) Trivial Injuries:-

These include injuries other than grievous hurt or simple injuries as defined above.

Note: A person is not to be considered as 'injured' when the injuries received are petty abrasions or bruises or injuries which in the opinion of the reporting officer, do not incapacitate the injured person from following his customary vocation, or mode of life for a period of more than two days. These are to be considered as 'Trivial Injuries'. While reporting figures of **DEFINITIONS 6** casualties in respect of train accidents, however, information in respect of injured persons should also be communicated, while giving the first information report about the accident. This is to be repeated in the detailed reports and in the enquiry proceedings. It is to be emphasized, however, that such trivial injuries are not to be taken into account, while compiling final statistics of persons injured/ killed in an accident.

4.8.4.12 Transporting Injured Passengers to Hospitals:

- i) One team will be asked to arrange transport of injured passengers to nearby hospitals.
- ii) Ensure expeditious transportation of injured either to ARMEs or to nearby hospitals.
- iii) Critically injured passengers should be transported by means of road ambulances and other by means of ordinary road vehicles.
- iv) Commercial staff should also be associated with transfer of injured passengers to hospitals.
- v) Before doctors and supervisors leave the accident site for hospital duty, they should note down the DOT and Mobile Telephone No. of the accident site, CMS, MS and other doctors at the site for quick communication.
- vi) Doctors going to different hospitals should have separate vehicles.
- vii) In case sufficient numbers of railway vehicles are not available; they should hire taxis for their movement by withdrawing cash from station earnings.
- viii) Air lifting of Passengers.
- ix) Hiring of Skilled swimmers / Divers for under water rescue.

4.8.4.13 Taking an initial round of Hospitals:

- i) Separate doctors will be deputed to visit each hospital where injured passengers have already been shifted.
- ii) One commercial Officer will also accompany doctors and make a general assessment.
- iii) At the hospital, they should collect information about dead/ injured persons, their name, age, sex, address, telephone number, name and telephone no. of relatives / friends, nature of the injury etc.
- iv) This information should be immediately communicated to CMS/MS at accident site by using PCO/ Cell phone etc.
- v) Prepare a list of person's dead/ injured already in hospitals in three copies by using carbon paper.
- vi) The list thus prepared is to be signed by railway doctor on duty in the hospital. One copy is to be handed over to the Commercial department.
- vii) 2nd copy to be kept with the doctor in charge as office copy and the 3rd copy to be given to paramedical staff to get multiple photocopies for further distribution.
- viii) One copy should also be sent to CAC for being fed into the PC provided in the CAC.

- ix) The initial list prepared should be updated at regular intervals, as and when any change occurs.

4.8.4.14 Post Admittance Hospital Care:

- i) One railway doctor, one commercial supervisor and one welfare inspector should be deputed round the clock at each hospital.
- ii) Normally one doctor should look after one hospital, along with a commercial supervisor and WLI.
- iii) If large no. of hospitals are involved 2/3 hospitals may be given to one doctor. In that case, the doctor, in consultation with CMS/MS should station himself at the hospital where maximum no. of patients are admitted.
- iv) Make an assessment about capabilities of the hospital to handle the injured persons. Decide whether the patient needs to be shifted to other hospital with better facilities and arrange to shift the patient.
- v) In case any injured passenger succumbs to his injuries in the hospital, then the doctor in charge of that hospital should update this fact to the medical counter at CAC.

4.8.4.15 Dealing with Dead Bodies:

- i) Problem faced by rescue teams is regarding dealing of dead bodies.
- ii) In case of a major disaster, the usual complement of medical staff in any ARME is grossly inadequate for undertaking work of this magnitude.
- iii) Adequate number of Safaiwalas and other health workers who have come to the accident site should be mobilized for this purpose.
- iv) Often rescue and relief operations continue for more than 48 hours.
- v) Dismembered bodies begin emitting foul odor after two days. Carrying out this task under such circumstances become a real problem.
- vi) Target should be to extricate all dead bodies within 24 hrs.
- vii) Dead bodies should be dealt with coach wise; otherwise bodies taken out from different coaches' get mixed up.
- viii) Bodies taken out from coaches should be stacked at quite some distance from the track in front of respective coaches, in separate lots, coach wise. While this may slow down the work initially, in the long run it is more systematic since bodies don't get mixed up.
- ix) Shift dead bodies from coaches to a nominated place at the accident site with the help of paramedical staff, SJAB, Scouts, Civil Defence personnel, other railway staff and non-railway volunteers available at site.
- x) Put dead bodies in body bags.
- xi) Put label written by Marker pen on each dead body in the pocket provided in body bag.
 - Date _____
 - Dead body Serial No. _____
 - Name _____
 - Age _____ Sex _____
 - Coach No. _____
- xii) In case of unidentified dead bodies, against the item 'name' it should be written as unidentified -1 / unidentified-2 etc. Approximate age should be estimated from the appearance, such as between 35-45 years.
- xiii) 5 Photographs preferably by digital camera should be taken of each dead body. Two should be close up of face from in front and sideways, third should be of full length of the body.
- xiv) If possible, each body should also be video photographed.
- xv) After photographs have been taken, each body should be placed inside a plastic bag with zip having proper labelling system where same information is also to be provided.
- xvi) After this, bodies will be handed over to GRP or Local Police for safe custody.
- xvii) Take necessary steps to handle unhygienic condition that may arise due to decomposed/ mutilated bodies.

4.8.4.16**Preservation of Dead Bodies:**

- i) Numbering and photography of bodies should be done even when relatives are on hand to claim the body.
- ii) Arrangements have to be made for a more permanent location for them till such time as the next of kin arrive to claim these bodies.
- iii) In all such accidents passengers are invariably separated from their belongings. As such in many cases there are no tickets or other identification papers on their persons.
- iv) This problem is further compounded in unreserved coaches where no reservation charts are available.
- v) Identification problems come up in case of mutilated bodies also. In such cases, photographs are better means of identification.
- vi) Arrange for hiring of a couple of big halls, for keeping bodies.
- vii) Rooms should preferably be at a single location so that relatives do not have to go around from mortuary to mortuary.
- viii) A large building having number of rooms would be ideal for storing them. Best option would be to takeover a school building temporarily.
- ix) Arrange to move dead bodies to nominate buildings being used as temporary mortuaries. Bodies likely to be held for more days should be embalmed.
- x) Bodies should be neatly lined up with their numbers prominently displayed, and kept in different rooms, coach-wise.
- xi) Notice Board outside the building should display the room nos. where bodies extracted from a particular coach have been kept.
- xii) These details should also be posted on a notice board outside each room.
- xiii) This will prevent unnecessary handling of bodies, which in any case would be in an advanced state of decomposition.
 - a) For dead bodies whose relatives are not readily available and delay is expected, arrange for their preservation by dry ice etc.
 - b) Procure Shrouds, Polythene bags, Coffins, Dry ice from local market for dealing with dead bodies if required.
 - c) 4 Commercial supervisors should be put on round the clock duty in the building housing the temporary mortuary for guiding relatives as and when they come.

4.8.5 COMMERCIAL-DEPARTMENT:**4.8.5.1**

General (on Receipt of Information): Sr. DCM should proceed to accident site along with all other Commercial Officers by withdrawing sufficient money from station earnings. DCM will be available in Divisional Control Office for providing backup support.

4.8.5.2 Duties of SR.DCM:

- 1) Ensure drinking water, tea and snacks are promptly supplied.
- 2) Take charge of injured person's luggage.
- 3) Luggage of the dead passengers should be deposited with the Railway Police after proper records and acknowledgement.
- 4) Issue advice to the next of kin of the injured and dead and furnish details to control office.
- 5) Arrange for Ticket collectors, Porters and Vendors.
- 6) Arrange for ex-gratia payment as per rules.
- 7) Arrange for refunds to passengers.
- 8) Assist the stranded passengers during transshipment.
- 9) Arrange inventory of the parcels damaged and advise the CCO.
- 10) Arrange buses for stranded passengers and keep record of the buses destination wise with the number of passengers.
- 11) Provide the Railway doctors with assistance of Ticket collectors/ Porters. Compile the figures of injured and dead from all sources.
- 12) Issue advice to the Control Office/ Stations for issue of free passes to the next kin of the dead and injured.
- 13) Keep in touch with the progress of patients in hospitals and increase the ex-gratia payment suitably in case simple injuries turn grievous / deaths.

4.8.5.3 Duties of DCM & ACM:

- 1) Send sufficient Ticket Collectors, Porters, and RPF to the site.
- 2) Arrange drinking water, tea snacks quickly.
- 3) Arrange for refund at important stations.
- 4) Issue press handouts after prior approval of the DRM.
- 5) Open Enquiry offices with proper staff at important stations.
- 6) Arrange for buses if required.
- 7) Arrange for reservation of stranded passengers by advising the stations. Concerned and CCM (PM) where Other Railways/ Divisions are involved.
- 8) Arrange labour for loading/ unloading of luggage/ parcels/ goods.

4.8.5.4 Transportation of Men and Material to Accident Site:

- (i) As soon as the ARME/ ART siren sounds, Available TTE/ TC & Licence Porters (preferably each 50 TTEs/ TCs and licensed porters) in uniform should be collected together and rushed to the accident site either by ART or first available means. ART/ ARME should not be detained on this account.
- (ii) The on duty commercial supervisor at the station should ensure that they proceed by the ART itself.
- (iii) The 2nd and 3rd Special trains carrying backup logistic support to accident site, from each end, can send more TTEs/TCs (80% TCs/ TTEs from the entire division) also by utilising from the Divisional squad if required.
- (iv) 2nd and 3rd Special trains should carry Sufficient cooks and catering staff from departmental catering/ catering contractor (including IRCTC) with 2 Gas stoves, 4 gas cylinders, 1000 mineral water bottles, provisions for making puries, vegetables, tea, etc. would be rushed to the site for arranging tea, biscuits, packed meals to the stranded passengers, railways working force and other officials at site.
- (v) Sr.DCMs should prepare section nominations of catering agencies both departmental and private for rushing to site. This should be available in Divisional DM Plans.

4.8.5.5 Helpline Enquiry Booths at Stations:**4.8.5.5.1 General:**

- (i) Helpline Enquiry Booths within WR would be opened as below:
 - Originating and destination stations of the accident involved train.
 - All junction stations within the jurisdiction of WR falling on the route of the train.
 - Divisional Head Quarters.
 - Zonal Head Quarters.
 - Any other station as may be decided.
- (ii) Helpline Enquiry Booths would normally be opened at following stations, depending on the route of the accident involved train:
 - Mumbai Central-Surat, Nandurbar.
 - Vadodara-Anand, Godhra, Bharuch
 - Ahmedabad, Mehsana, Palanpur, Gandhidham
 - Ratlam-Indore, Ujjain, Nagda, Neemuch,
 - Rajkot, Surendranagar, Okha
 - **Bhavnagar, Porbandar, Veraval, Junagadh**

- (i) **Helpline Enquiry Booths on other Zonal Railways would also be opened as follows:**
 - Originating and destination stations of the accident involved train.
 - All junction stations falling on the route of the train.
 - Divisional Head Quarters of originating and terminating divisions.
 - Zonal Head Quarters of originating and terminating Zonal Railways.
 - Any other station as may be decided.
- (ii) All Helpline Enquiry Booths shall have DOT phones with STD, dedicated helpline **No. 1072**. Railway Telephones with STD/fax, PC with printer & Internet connection.
- (iii) Computer literate Sr. Supervisors of commercial department would man Helpline Enquiry Booths round the clock.
- (iv) Helpline Enquiry Booths within the accident-affected division should keep in touch with the Divisional Emergency Cell.
- (v) Divisional Emergency Cell will collect updated information of the accident from the UCC and pass on the same to: All Help line Enquiry Booths within the division, Emergency Cells of other divisions of WR & Head Quarters Emergency Cell.
- (viii) Such information should be received from UCC by E-Mail and transmitted by E-Mail to all concerned.
- (ix) Similarly, Helpline Enquiry Booths outside the accident affected division, but within WR jurisdiction should keep in touch with Divisional Emergency Cell of their respective divisions.
- (x) Headquarters' Emergency Cell will collect updated information regarding all aspects of the accident from the UCC and pass on the same to: Emergency Cells opened on other division of WR, Emergency Cells opened on originating and terminating Zonal railways & Safety Directorate's Emergency Cell in Railway Board.
- (xi) Helpline Enquiry Booths should not contact the accident site or the UCC directly.

4.8.5.5.2 Accident Details to be available:

- (i) Accident details would include number of dead and injured.
- (ii) Breakup of type of injuries, such as grievous, simple etc.
- (iii) Disposal of injured passengers in various hospitals.
- (iv) Names of injured passengers.
- (v) Officials in-charge of Helpline Enquiry Booths would display the list of injured passengers on the notice board.
- (vi) For this purpose, Computer printout of E-Mail received should be taken out and Displayed at number of places at the station.
- (viii) Normally, list of injured passengers is available quickly since most injured passengers are conscious and are in a position to give details of their names, addresses etc.
- (ix) Identification of dead bodies takes much longer since either:
 - They were travelling alone, or
 - Their companions are injured and are not in a position to identify them; or
 - Their companions have also perished.
- (ix) Under such circumstances it is possible to identify dead bodies only when relatives come from their hometown.
- (x) This aspect of identification of dead bodies and reasons for delay should be explained to the public.
- (xi) Number of dead bodies identified, and their names should be available.
- (xii) This information would continue to be updated once every 3 hours and would continue to be accessed for the next 4 to 5 days.

4.8.5.5.3 Information Regarding Running of Trains:

- (i) Departure of unaffected portions of the accident involved train, its diverted route, and expected time of arrival at destination.
- (ii) Expected date and time of starting of relatives special from originating and destination stations of the accident involved train, its stoppage en-route and its expected time of arrival at intermediate stations.
- (iii) Free passes to be given to relatives of dead and injured for going to the accident site. These passes will be issued by WLI who should be drafted into Helpline Enquiry Booths.
- (iv) Details of other trains that were scheduled to run on the accident affected section, but have been Delayed, Regulated, Diverted, Rescheduled, Short terminated and cancelled.
- (v) Above information regarding running of trains would be required for initial 24hrs. Thereafter, number of enquiries regarding train running would be very few and far between.

4.8.5.5.4 Refunds:

- (i) Booking counters at stations should be augmented for granting of refund to large number of passengers who have been unable to either complete or commence their journey as a result of the accident.
- (ii) Refund of money should be granted for trains Delayed, Regulated, diverted, rescheduled, Short terminated and cancelled.
- (iii) Staff manning Refund counters should be thoroughly familiar with rules for granting of refunds under such circumstances.
- (iv) Sufficient amount of cash should be available at these Refund counters for this purpose.

4.8.5.6 Site Management:

- i) At the accident site, handpicked commercial supervisors should be deputed for manning commercial counters in UCC and CAC.
- ii) Each commercial counter in CAC is to be manned by one group.
- iii) Different teams and groups will be formed for discharging various duties of the commercial department. Each team should consist of 4-6 members and each group should consist of 3-5 teams, depending upon requirement.
- iv) Separate teams and groups should be formed as detailed below, headed by a commercial officer.
- v) One team will hire road vehicles for use and other related activities.
- vi) One group will arrange beverages and food both for injured as also for uninjured.
- vii) One team will take an initial round of hospitals along with doctors and assess the situation.
- viii) One group should take care of uninjured passengers who have to be cleared from the accident site.
- ix) One group will assist Medical department in preparing a list of injured passengers input the same in to the PC in CAC.
- x) One group will assist Medical department in shifting injured passengers to hospitals.
- xi) One group will assist the Medical department in preparing a list of dead bodies and looking after them.
- xii) One team will make ex-gratia payment to injured passengers and next of kin of dead.

- xiii) One team will deal with refund cases and claims compensation formalities.
- xiv) One group will be in-charge of unclaimed luggage and other consignments.
- xv) One group will be in-charge of post admittance hospital care of injured and taking care of relatives under 'Passenger Care'.

4.8.5.7 Main Functions of Commercial Department at the Site:

Main functions of the Commercial department can be broadly classified as:

- a) Withdrawal of cash from station earnings.
- b) Hiring of road vehicles.
- c) Catering to injured and uninjured passengers.
- d) Initial round of hospitals and assessment of situation.
- e) Preparing list of injured passengers.
- f) Transporting them to hospitals and getting them admitted.
- g) Payment to ex-gratia to injured and next to kin of dead.
- h) Dealing with refund and claims compensation formalities.
- i) Taking charge of luggage and consignments.
- j) Post admittance hospital care of the injured.
- k) Taking care of relatives.
- l) Payment to staff if required.

4.8.5.7.1 Withdrawal of Cash from Station Earnings: Procedure:

- i) In order to meet accident related expenditure, officers can withdraw money from station earnings duly following the procedure incorporated in **Commercial Manual Vol. II Rule No. 2425**.
 - Departmental expenditure necessitated by floods, accidents or earthquakes, etc. (sub rule 8).
 - Ex-gratia payments to persons involved in train accidents. (**Sub rule 22**).
- ii) Before SR. DCM leaves for accident site, should withdraw sufficiently large amount of cash from station earnings to meet with immediate requirements at the site.
- iii) A Commercial supervisor should be nominated for this purpose and he should withdraw Rs. 5 lakhs and carry it with him, duly escorted by RPF personnel.
- iv) The nominated supervisor in charge of the department concerned may alone withdraw from station earnings through a requisition in respect of the above items specified in **rule 2425 of the IRCM**.
- v) This requisition should be made in the form appended below indicating the officials making such withdrawal, the departmental officer concerned and also the purpose of withdrawal.

From	To
Name of Supervisory Official	Station Master
Designation	Station

Please arrange to pay from Station Earnings an amount of Rs. _____ (Rupees _____) towards _____ (Purpose to be indicated). This is one of the authorized items of withdrawal from station Earnings. The expenditure is chargeable to the _____ head.

Accounting Authority _____
 Controlling Officer _____
 Designation _____
 Station _____

Payment made from Station Received an amount of Rs. _____
 Earning amount: from station earnings

Signature of SM/ SS	Signature: _____ Designation _____
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- iv) Requisition is required to be prepared in triplicate. 1st to be kept as record, 2nd to be presented to SM for arranging payment against proper acknowledgement and 3rd should be sent to Sr. DAO concerned duly countersigned personally by the Divisional Officer of the department.
- v) Any failure by the supervisory official with drawing cash to follow above instructions or any other irregularity will render him personally responsible and liable for action under Discipline and Appeal Rules.

Account:

- i) Branch Officer concerned shall forward requisitions received from stations to the Divisional Accounts Office indicating circumstances under which the withdrawal was necessitated.
- ii) The countersigned requisition shall be accompanied by relevant supporting paid vouchers. The Branch Officers shall monitor timely submission so that they reach Accounts Office within 15 days from the date of withdrawal.
- iii) Executive Officer concerned shall furnish full particulars of the amount withdrawn, details of payments made, reasons for the payment, the rate and period for which payment is made and the total amount paid with the acquaintance of the payee with necessary revenue stamp wherever due to Sr.DFM.
- iv) Sr. DCM will compile a monthly statement of all withdrawals pertaining to his division obtaining a statement from various executives in his division and send it to CCM
- v) A monthly return of requisitions issued during the period should be submitted to the Accounts Office by Executive Officers.

4.8.5.7.2 Hiring of Vehicles & Mobile Phones:

- i) A large number of road vehicles are required at an accident site for following purposes:
 - Taking injured passengers to hospitals.
 - Taking doctors and other railway officials to hospitals.
 - Clearance of uninjured passengers.
 - Taking dead bodies to mortuaries.
 - Bringing men and materials, etc.to accident site.
 - Taking unclaimed luggage for being kept in safe custody.
 - Taking relatives to hospitals and mortuary.
- ii) For this purpose, apart from whatever number of railway vehicles may be available, extra road vehicles should be hired.
- iii) All road vehicles should be hired along with standby drivers for round the clock duty.
- iv) At least 10 road vehicles should be attached to CAC for taking relatives to hospitals, mortuaries etc.
- v) Nominated railway staff to be attached to each hired vehicle round the clock (even group 'D' would suffice) so that optimum use can be made of the vehicle.
- vi) Buses from state transport authorities should also be requisitioned along with extra drivers for round the clock duty.
- vii) One railway staff should be put in charge of each bus on round the clock duty, who will accompany the bus wherever it goes and bring it back in time (even group 'D' would suffice).
- viii) Incase hospitals are in different towns, then road transport buses should be put on fixed time round trip schedule for shuttling relatives from CAC to various locations and back to CAC.
- ix) All hired vehicles and requisitioned buses should have stickers pasted on their front and rear wind screens indicating "RAILWAY ACCIDENT DUTY".

4.8.5.7.3 Catering Arrangement:

- i) Arrangements for supply of food and beverages to not only injured but also to other passengers of the accident-involved train should be swiftly organized.
- ii) Food and beverages should be supplied free of charge.
- iii) These may be arranged from railway sources or outside sources as necessary, including IRCTC or their contractors.
- iv) To supplement Railway catering arrangements nearby dhabas and hotels should be contacted and arrangements made for opening up stalls at the site.

4.8.5.7.4 Clearance of Uninjured Passengers:

- i) First of all, arrangements for water and food for stranded passengers should be made.
- ii) Announcement should be made for registering names of safe passengers.
- iii) Clearance of accident-affected passengers from accident site should be planned along with Operating branch that will provide the empty coaching rake.
- iv) Make announcement through PA System informing passengers regarding their clearance from site either by:
 - Front portion of the accident involved train.
 - Rear portion of the accident involved train.
 - Empty coaching rakes that have been brought to the accident site.
 - Road bridging that has been arranged.
- v) Arrange adequate coolies for carrying passengers' luggage while they transfer to the new train.
- vi) In case of road bridging, arrange road transport to clear stranded passengers, record details of passengers dispatched and relay particulars to Divisional Emergency Cell.
- vii) Senior-most official at site shall have powers to arrange conveyance for affected passengers free of charge by any available mode of transport and also incur expenditure for carriage of passengers 'luggage, etc.

4.8.5.7.5 Preparing List of Injured Passengers:

- i) Collect list of injured passengers prepared by TS/TTEs/Train Conductors and assess the situation along with Medical department.
- ii) Separate lists to be prepared coach wise by Medical department.
- iii) The list should contain following details:
 - If found Conscious: Name, sex, age, identification marks, and ticket number, originating and destination station.
 - If found Unconscious: Approximate age, sex, identification marks, ticket number and other particulars if relatives and friend are available.
- iv) Once the preliminary list of injured passengers has been prepared, the CMS/ MS incharge should sign the list and a copy handed over to commercial department.
- v) This list should be in put in to the PC available in the CAC.
- vi) The list should also be E-Mailed to the Divisional Emergency Cell and Headquarters' Emergency Cell.
- vii) The list of dead and injured that is initially fed into the PC will thereafter be updated periodically, as rescue and relief work continue.

4.8.5.7.6 Amount of Ex-Gratia Payable:**1. Amount of Ex-Gratia for train accidents, untoward incidents and manned level crossing gate accidents**

Sr. No.	Type of accident	Amount of ex-gratia for Death	Amount of ex- gratia for Grievous Injury	Amount of ex- Gratia for Simple Injury
1	In case of Train Accident (as defined under Section 124 of the Railways Act 1989)	Rs.5,00,000/- (Rupees Five Lakhs Only)	Rs.2,50,000/- (Rupees Two Lakhs and Fifty Thousand Only)	Rs.50,000/- (Rupees Fifty Thousand Only)
2	In case of untoward incident (as defined under Section 124 - A of the Railways Act 1989)	Rs.1,50,000/- (Rupees One Lakh and Fifty Thousand Only)	Rs.50,000/- (Rupees Fifty Thousand Only)	Rs.5,000/- (Rupees Five Thousand Only)
3	In case of Accident at Manned Level Crossing (due to Railway's prima Facie liability)	Rs.5,00,000/- (Rupees Five Lakhs Only)	Rs.2,50,000/- (Rupees Two Lakhs and Fifty Thousand Only)	Rs.50,000/- (Rupees Fifty Thousand Only)

2. Additional Ex-gratia relief in case of hospitalisation of grievously injured passengers beyond 30 days.

In case of train accident	In case of untoward incident
Rs. 3000/- per day to be released at the end of every 10-day period or date of discharge, whichever is earlier.	Rs. 1500/- per day to be released at the end of every 10-day period or date of discharge, whichever is earlier upto further six months of hospitalisation.
	Thereafter, Rs. 750 per day be released at the end of every 10-day period or date of discharge, whichever is earlier upto further five months of hospitalisation.

a) Lump sum amount of ex-gratia for hospitalisation of grievously injured passengers upto first 30 days is as mentioned in table at para (1) above.

b) The maximum period for which ex-gratia is payable to the grievously injured passenger will be 12 months.

2.1 This ex-gratia relief will be exclusively for passengers who are grievously injured in train accidents or untoward incidents as defined under section 123, read with section 124 /124-A, of the Railways act, 1989.

2.2 The period for treatment as indoor patient for more than 30 days would need to be certified by a Railway Doctor for the purpose of further ex-gratia payment upto the period of remaining 11 months. In case where the injured is taking treatment in other than Railway Hospital, the treatment has to be certified by Railway Doctor.

2.3 Sr. Divisional Medical Officers shall also keep track of such injured person taking treatment in other than Railway hospitals. Sr.DCM/DCM shall keep co-ordination with Sr.DMO for the purpose and arrange payment of ex-gratia as per the prescribed schedule mentioned in the table in para 2 above at the doorstep of injured person. Every care shall be taken by Sr.DCM/DCM to avoid any inconvenience to injured person in such cases.

3. Mode of payment of ex-gratia/enhanced ex-gratia

3.1 Maximum amount of upto Rs.50,000/- to be paid in cash as an immediate relief for taking care of initial expenses.

3.2 Remaining amount to be paid by Account Payee cheque / RTGS / NEFT/ any other online payment mode.

3.3 Notwithstanding anything contained in para 3.1 and 3.2 above, Railways may disburse the entire amount of ex-gratia / enhanced ex-gratia by Account Payee Cheque/RTGS/NEFT/ any other online payment mode, if deemed appropriate.

4.0 Other terms and conditions

4.1 No ex-gratia relief would be admissible to road users in case of accident at Unmanned Level Crossing, trespassers, persons electrocuted by OHE (Over Head Equipment).

4.2 Ex-gratia payment in case of train accidents and untoward incident are not to be taken into account at the time of final claim for compensation.

4.3 The amount of ex-gratia relief admissible to road users who meet with an accident due to Railway's prima facie liability at Manned Level Crossing Gate Accident, will be counted towards the amount of compensation payable, if action is tenable against the Railways under the Law of Torts and an award is actually granted by a Court of Law.

4.4 Ex-gratia payment should also be made to railway servants killed or injured by a moving train while performing their duty, for example, gangman working on track run over accidentally by a moving train.

4.5 Payments should be sanctioned / arranged preferably on the spot by a Senior Scale Officer nominated by the General Manager after making such enquiries as can be reasonably made on the spot after the immediate needs by way of medical attendance etc. to injured persons are attended to.

- **Refunds and Claims Compensation:**

- i) Refund of fares must be granted in the CAC for unfinished journey as per rules.
- ii) Injured passengers and next of kin of deceased passengers must be supplied with blank claims compensation forms along with Claims Booklet explaining complete procedure.
- iii) Photocopy of a filled-up Claims Compensation form may also be given along with the blank form so as to help them in filling it up.

- **Luggage and Consignments:**

- i) As and when unclaimed luggage and personal belongings are taken out from coaches, a list should be made coach wise, and each item should be tagged with coach no.
- ii) A list of each item with distinguishing marks should be made.
- iii) If possible, the cabin number inside the coach should also be indicated.
- iv) Luggage claimed should be handed over on satisfactory proof of ownership.
- v) Unclaimed luggage and personal belongings of injured/ dead passengers should be taken possession of for safe custody.
- vi) Unclaimed luggage should be stored in a safe place, preferably, part of the same School building which is being used for preserving dead bodies.
- vii) These should be stored in separate rooms coach wise so that it is easy for relatives to identify.
- viii) A list should be displayed outside each room indicating the coach no. whose luggage is stored there.
- ix) It is the responsibility of Commercial department to take charge of all unclaimed luggage etc. These should be taken over from the charge of RPF.
- x) Booked luggage, parcels and consignments available in SLRs, VPUs etc. should be taken out and sent by road to nearest Jn. Station for safe custody.
- xi) Booked perishables available in SLRs, VPUs should be taken out and either auctioned at site or sent by road to nearest Jn. Station for being auctioned.
- xii) RMS consignments on the train should be shifted to school building for safe custody till Postal Authorities come and takeover custody.

- **MECHANICAL-DEPARTMENT:**

On Receipt of Information, Sr. DME as well as ADME should proceed to site of

accident. DME will be available in Divisional Control Office for providing backup support.
CME, CRSE (F&O) from Headquarters will proceed to accident site.

- **Duties of Sr.DME:**

- 1) Proceed to the site of accident by first means.
- 2) Supervise working of cranes and clearance / rescue operation.
- 3) Ensure that Speedo graphs, engine repair Books etc. Are seized/ sealed.
- 4) Note down observations, make arrangements to record measurements if loco is involved in accident. If it is not possible for all types of measurement to be taken on the spot then these should be taken to the shed. All relevant records should be sealed in shed.
- 5) Record the details regarding brake power and other aspects of Rollingstock as per prescribed Performa.
- 6) Ensure the joint measurements of the rolling stock taken.
- 7) Check the fitness of the stock supposed to move from the site.
- 8) Assisting clearance/ Rescue operation.
- 9) Ensure that ARME/ ART start to the site at earliest with Supervisor HRD Operations.
- 10) Ensure that co-ordination with other department and help to passengers for distributing water and beverages in ARME.

- **Rushing of Men and Material to Site:**

- (i) 2 ARTs with 140 Crane should be moved to the accident site, one from each end.
- (ii) In addition to above, Brake down Special should be sent from other base stations with in WR, so that additional rescue equipment such as cutters, spreaders, hydraulic jacks etc. are made available.
- (iii) BD Special without Crane should be requisitioned from adjoining divisions also so that additional rescue equipment such as cutters, spreaders, hydraulic jacks, generators, lighting equipment etc. are available.
- (iv) The aim should be to ensure one ART with 140T crane along with one BD special at each end of the accident site.
- (iv) Provision should be made for availability of standby crane driver on each ART working at site to work round the clock.
- (v) Road cranes of sufficient capacity should be arranged.
- (vi) Trucks should be arranged for carrying BD equipment near to accident coaches, so that work centres can be opened up simultaneously from both ends.

• **Duties of Mechanical Department On arrival at Site:**

Restoration is the prime responsibility of Mechanical Deptt. For discharging the dual responsibility of extricating injured passengers and dead bodies from coaches and toppling those coaches whose search has been completed, 2 separate groups will be formed at each end for purposes of 'search and rescue' and 'off tracking of coaches'.

Once 4 ARMEs, 2 ARTs and 2 Break Down specials have arrived at the accident site from both ends, normally no more mechanical equipment will be required from anywhere else. The main work will then consist of using of these resources effectively and efficiently.

Different teams and groups will be formed for discharging the dual responsibilities of the Mechanical department. Each team should consist of 4-6 members and each group should consist of 3-5 teams, depending upon requirement.

One Sr. Supervisor should be in-charge of each team conducting 'search and rescue' at the site. All such 'search and rescue' groups at each end of the accident site, would function under directions of an AME.

Similarly, one Sr. Supervisor should be in-charge of each team working on 'off tracking of coaches' at the site. All such 'off tracking of coaches' groups at each end of the accident site, would function under directions of another AME. The second AME concerned would also be in-charge of the crane at that end.

- (i) Take precautions in electrified section that power supply is switched off before commencing rescue/ relief work.
- (ii) Use necessary safety equipment like hand gloves, helmet etc.
- (iii) If spillage of inflammable substances is suspected, then only cold cutting equipment should be used.
- (iv) In case of suspected sabotage, ensure minimum interference to clues. Safe lives and extricate passengers after video and digital photographs have been taken.
- (v) Be cautious in using rescue tools like gas cutters, cold cutters, spreaders, hydraulic jacks etc. so that passengers trapped inside or buried under the debris do not get hurt.
- (vi) Ensure marshalling of ART according to site requirement before it is sent into the accident involved block section.
- (vii) For efficient extrication of entrapped passengers take assistance of Medical/ Engineering departments.
- (viii) Each team will join up with Medical teams who would also be involved in extracting dead and injured from coaches.
- (ix) Maximum number of coaches should be tackled simultaneously, except those that have climbed on top or have telescoped into one another.
- (x) Road cranes of sufficient capacity should be arranged so that these cranes can start working from the centre while the 140T cranes can continue working from either end.
- (xi) Trucks should be arranged for carrying BD equipment near to accident involved coaches, so that number of coaches can be simultaneously approached and more work centres can be opened up.
- (xii) Examine unaffected or re-railed rolling stock and certify their fitness for further movement.

- **SECURITY- DEPARTMENT:**

On receipt of Information Sr.DSC will proceed to the site by ARME along with maximum number of RPF personnel, only one officer will stay back at divisional Head Quarters.

CSC/RPF will also proceed to the accident site along with Dy.CSC. CSC/RPF will assume control and take necessary steps for discharging duties allotted to security department.

- **Duties of DSC (RPF):**

- 1) Post adequate number of RPF staff at the accident site and other place where assistance is required.
- 2) Ensure security of passenger's belonging, security of parcels, damaged goods and parcels vans etc.
- 3) Proceed to the site of accident by the quickest available means.
- 4) Liaison with the local police etc.

- **Rushing of Men and Material:**

- (i) On receipt of first information the nearest RPF Post should muster maximum available manpower within the shortest possible time and dispatch them to the accident site by fastest available means.
- (ii) The Post/ Out post incharge would requisition additional manpower from adjoining RPF posts.
- (iii) Pass on the information to Local Police and Police Control Room, local Fire Brigade, Hospitals, local voluntary organisations at the earliest.
- (iv) Divisional Security Control shall get reinforcement from neighbouring posts /outposts, reserve line, divisional headquarters or Zonal reserve and send them by the ART. If they could not be sent by the ART then definitely send them by the 2nd and 3rd Special trains carrying backup logistic support to the accident site.
- (v) If any RPF battalion/ Company is located in the vicinity, men can be requisitioned from the refer dealing with emergent situation still additional force made available from other sources.
- (vi) Additional RPF personnel from Zonal headquarters should be shouldered and sent to accident site.
- (vii) Additional RPF personnel available throughout the division should be alerted and sent to the accident site by the 2nd and 3rd special trains carrying backup logistic support of men and material.
- (viii) While sending reinforcement, the divisional Security Control shall ensure that the necessary equipment required for rescue, recovery and protection of the scene of incident are provided as follows:
 - Torches (1per person) and other lighting arrangements.
 - Nylon ropes (1Km) and poles for segregating the affected area.
 - 4 loudspeakers for making announcements.
 - 10 stretchers and first aid equipment.
 - 10 wireless for inter-communication.
 - Digital Camera for photographing the scene (both on negative/ slide films).
 - Video recording of rescue and salvage operations and connected arrangements.

- **Duties of Security Department on arrival at Site:**

Main functions of the Security Department can be broadly classified as:

- (a) Co-ordination with GRP and Local Police.
- (b) Crowd management.
- (c) Protection of luggage.
- (d) Protection of railway property.

- **General:**

- RPF personnel should respond to any call for assistance to rescue victims and transport them to the nearest hospital.
- 3 - hourly Satraps will be updated by field personnel at the scene of incident to the RPF functionary in the UCC giving the latest situation.
- RPF Assistance Post will be established within the CAC so that people needing help can approach RPF.

- **Co-ordinate with Local Police:**

Maintain constant liaison with IG/ GRP and ADG/ GRP for following.

- Rushing all available GRP personnel to the accident site.
- Obtain additional manpower from the local police for purpose of crowd control.
- Issue necessary instructions to local police for expeditious clearance & Restoration.
- Issue necessary instructions to SP of the district for waiving off formalities of Post Mortem on dead bodies.
- In case of sabotage, liaison with Local Police & officials of district administration and get early clearance.
- Clearance should be obtained as expeditiously as possible, for starting restoration work.
- Additional manpower should be requisitioned from local police officials and district administration for purpose of crowd control.
- Exemption should be obtained from SP of the district for waiving off formalities of Post Mortem of dead bodies.
- Obtain assistance from GRP and Local Police as and when required.

- **Crowd Management:**

The first problem at an accident site is that of surging crowd. Carrying out any kind of rescue and relief operation becomes next to impossible. Railway men who try to undertake any kind of rescue and relief work become victims of mob fury.

- Cordon off the site and prevent unauthorized entry of outsiders.
- Segregate the area of accident by putting up temporary barriers using nylon ropes or any other makeshift device available at the scene so that outsiders do not disturb the site or hamper rescue operations.
- These barriers should be at quite some distance away from the track, so that UCC, CAC and LCCs are inside the cordoned off area.
- Provide barricade and ask for additional force to control crowd during VIP visit.

- **Protection of Luggage:**
 - Protect unclaimed luggage of passengers till these are duly taken over by commercial department for safe custody.
 - Unclaimed luggage of passengers should be isolated and stacked coach-wise, with proper labeling indicating coach no., from which recovered.
 - If possible, the cabin number inside the coach should also be indicated.
 - All such unclaimed luggage should be protected till they are handed over to claimants or taken over by commercial department.
 - Unclaimed luggage should be stored in a safe place, preferably, part of the same school building which is being used for preserving dead bodies.
 - These should be stored in separate rooms coach wise so that it is easy for relatives to identify.
- **Protection of Railway Property:**
 - Protect Railway consignments/goods/parcels till these are duly taken over by commercial department and dispatched to nearest station for proper disposal.
 - Guard perishables till they are auctioned off at site or till they are dispatched to nearest station for being auctioned.
 - RMS consignments on the train should be shifted to school building for safe custody till Postal Authorities come and take over custody.
 - Provide security for the cash withdrawn for payment of ex-gratia by the commercial department.
 - Preserve all clues and evidences regarding probable cause of the accident and ensure that these do not get disturbed.
 - Ensure that no railway staff tampers with any track fittings, or rolling stock parts.
 - Anybody found moving under suspicious circumstances should be questioned.
 - No railway staff should be allowed to move about near the accident site with loose or piece meal equipment.
- **ELECTRICAL-DEPARTMENT:**

On receipt of Information: Sr.DEE(P), AEE(P), Sr.DEE/TRD as well as AEE/TRD should proceed to site of accident.

CEE and CEDE and other JAG officers from Head Quarters will proceed to accident site.

If EMU/DMU/MEMU or Electrical Locomotive is involved, SrDEE(TRO)should proceed to the site with adequate number of breakdown staff by quickest available means.(Call the relief train, if required)

 - DEE(P)and DEE/TRD will be available in Divisional Control Office for providing backup support.
 - Maximum number of electrical staff should be send by the 2nd and 3rd special trains for installation and operation of electrical equipment.
 - Officers staying back in divisional headquarters shall maintain constant liaison with site and arrange assistance required by way of men and material from Railway sources within the division, from adjoining divisions and zones and from Non-Railway sources within the division.

4.8.8.1 Duties of Sr.DEE (Power):

- 1) Arrange for adequate illumination at the accident site.
- 2) In case of fire in coaches, immediately arrange to collect/record evidence of passengers.
- 3) Jointly examine the coach to ascertain the cause and damage.

4.8.8.2 Duties of Sr.DEE (TRD):

- 1) Arrange for adequate number of OHE breakdown staff, tower wagon and proceed to accident site by the quickest available means.
- 2) Ensure that OHE is made dead and OHE is slewed as per requirement.
- 3) Arrange and supervise restoration of OHE, expeditiously.
- 4) Record all relevant information concerning the accident.

4.8.8.3 Duties of Sr.DEE (TRO):

- 1) Depute officer in the control office.
- 2) Note down joint observation regarding the Loco/ EMU/ DMU/ MEMU.
- 3) Ensure that measurements of the Loco/ EMU/ DMU/ MEMU are taken on the spot/ wherever possible otherwise in Car/ Loco shed.
- 4) Ensure that records for maintenance of Loco/ EMU/ DMU/ MEMU repairs are sealed in the shed.
- 5) Ensure prompt and sufficient arrangements for clearing the line.

4.8.8.4 Duties of Electric Department on Arrival at site:

For discharging the dual responsibility of providing illumination at site and managing the OHE, 2 separate units will be formed at each end of the accident site consisting of 'General Branch' officers & staff and TRD officers & staff.

Once 4 ARMEs, 2 ARTs and 2 BD specials have arrived at the accident site from both ends, normally no more electrical equipment will be required from anywhere else. The main work will then consist of using of these resources effectively and efficiently.

Different teams and groups will be formed for discharging various duties of the Electrical Department. Each team should consist of 4-6 members and each group should consist of 3-5 teams, depending upon requirement.

4.8.8.4.1 Site illumination:

One Sr. Supervisor should be in-charge of each group working at the site. All 'General Branch' teams at each end of the accident site would function under directions of an AEE (P).

- (i) Senior most electrical officer at site would make a quick assessment of the electrical requirement of the site.
- (ii) This would be done keeping in mind the geographical spread of the site, the size of UCC, LCCs, CAC and any other requirement as necessary.
- (iii) Thereafter, he would assess the quantity of electrical fittings and generating sets available in ARMEs and ARTs.
- (iv) In order to setup adequate illumination facilities, all generating sets and lighting fixtures available in ARMEs and ARTs would be used.
- (v) First priority for lighting would be the accident site along the track where rescue, relief and restoration work is going on.

- (vi) Next priority would be given to lighting up of UCC, CAC and LCCs.
- (vii) Additional requirements of generators and lighting fixtures, if any, should be called for immediately from other railway sources within the division, well in time.
- (viii) In case divisional sources are inadequate, then sources from other divisions should be tapped.
- (ix) Officer at site should hire additional generating sets, lighting fixtures etc. as required from non-railway sources available nearby. List of such sources are given in Divisional DM Plan.
- (x) Once generators and lighting fixtures have been setup, efforts should be made to tap direct power supply from some nearby sources, if available.
- (xi) In case power supply is not available nearby and illumination has to continue on generator supply, then sufficient quantity of petrol and diesel should be procured and kept in stock.

4.8.8.4.2 OHE at Site:

One Sr.Supervisor should be in-charge of each group working at the site. All TRD teams at each end of the accident site would function under directions of an AEE/TRD.

- (i) Incase OHE is to be brought down, then the same should be done immediately so that working of crane does not get held up on account of OHE.
- (ii) Incase slewing of OHE suffices for some sections, then the same should be done quickly so that working of crane does not get held up on account of OHE.
- (iii) Sr.DEE/TRD shall arrange movement of 6 Tower Wagons along with men and material from adjacent depots from both sides of accident site.
- (iv) In case more tower wagons are required these should also be requisitioned from other depots along with men and material.
- (v) An assessment should also be made of the extent of damage to OHE masts, and other equipment.
- (vi) Additional requirement of materials, if any should be called for immediately from other railway sources within the division.
- (vii) In case divisional sources are inadequate, then sources from other divisions should be tapped.
- (viii) In case other divisional sources are also inadequate, then sources from other zones should be tapped.
- (ix) Availability of OHE masts is a long lead item. Requirement of masts should be quickly worked out so that these can be moved immediately.
- (x) Ensure temporary portals are erected without delay.
- (xi) Incase damage to OHE is extensive and a wiring train is considered to be more efficient, then the same should be arranged for from other zone after discussion with RE organisation.
- (xii) Ensure that the section is earthed before staff starts working near OHE.
- (xiii) OHE should not be charged until all staff, tower wagons, cranes etc. have cleared the block section.

• SIGNAL & TELE COMMUNICATION DEPARTMENT:

On receipt of Information Sr. DSTE as well as ASTEs should proceed to site of accident. DSTE will be available in Divisional Control Office for providing backup support.

CSTE along with HODs and other JAG officers from Head quarter will proceed to accident site.

- (i) Main responsibility of S&T Department will be for providing effective and adequate means of communication.
- (ii) Rushing of men and material to site.
- (iii) Arrangement of communication at site.
- (iv) Communication at Headquarters and Divisional Emergency Cell.
- (v) Communication at Helpline Enquiry Booths.

- **Rushing of Men and Material to Site:**

- (i) Sr.DSTE, ASTE along with two TCI and two TCM will carry the Satellite phone, FAX, Two 25W VHF sets along with antenna and battery, 10 numbers 5W walkie-talkie sets to the accident site.
- (ii) 6 more TCI/TCM, SIs of the section and maximum number of telecom staff should be sent for installation and operation of telecom equipment by either ART or latest by 2nd or 3rd special trains to the accident site for carrying backup logistic at the accident site.
- (iii) Satellite phones of HQ and Mumbai Central division and one FAX machine will be carried in GM special by at least two TCI and two TCM of Mumbai division.
- (iv) All mobile phones along with sufficient number of spare batteries and chargers available with the Division should also be rushed to site for emergency use.

- **Arrangement of Communication at Site:**

- (i) DSTE/ASTE in the division will immediately come to divisional control office and ensure setting up of all communication arrangements as required.
- (ii) DSTE will keep a record of the numbers of Railway telephones, BSNL telephones, INMER SAT phones provided at site and telephones provided at Helpline Enquiry Booths. This information shall be passed on to the Divisional Emergency Cell. All satellite telephone no. should be displayed at Divisional control and Central Emergency Control.
- (iii) DSTE/ASTE should liaison with BSNL officials in the area for immediate provision of additional BSNL telephone at the accident spot, nearest station and at Helpline Enquiry Booths duly utilising assets under his disposal.
- (iv) Map of the division showing areas where cell phone connectivity is operative is available in Divisional DM plan. This should also be displayed in divisional control.
- (v) Should have standing arrangement to hire sufficient cell phones and send them to accident site.
- (vi) Obtain E-mail addresses of Emergency Cells set up on other Divisional and Zonal headquarters.

- **Communication at Headquarters and Divisional Emergency Cell:**

- (i) Communication arrangements are required to be provided at Western Railway headquarters 'Emergency Cell immediately'.
- (ii) One BSNL Telephone having ISD/ and three BSNL telephone having STD facility should be made available in the Headquarters' Emergency Control. Dynamic locking code of the telephone should be available with CTNL/ Emergency. FAX machine should also be provided on one BSNL telephone in the Emergency control.

- (iii) Four other BSNL telephone numbers (2 with STD facility) and 2 Railway telephone numbers with STD facilities should be made available in headquarters' Emergency Cell for use by Chief Emergency Officer. These should be temporarily transferred from officers' chambers.
- (iv) Similar Communication arrangements should also be provided in the Divisional Emergency Cell.

- **Communication at Helpline Enquiry Booths:**

- (i) Helpline Enquiry Booths are to be opened at all important stations en-route of the affected trains.
- (ii) Location of these Helpline Enquiry Booths will be on Platform No.1 of their respective stations.
- (iii) One BSNL STD phone, 2 Railway Phones, One FAX machine, Photo copier, PC with Internet connection (if feasible) and printer should be identified and kept pre-wired to the Helpline Enquiry Booths so that this can be energised at short notice. A especially dedicated no. of 1072 should also be provided at such identified station.
- (iv) Stations at which such arrangements are to be made and telephones, which are to be utilised, should be identified by Sr.DSTE with approval of DRM.

- **Duties of Sr.DSTE:**

- 1) Proceed to the site of accident by first means.
- 2) Ensure that a detailed record is made of all evidence bearing on the accident so far as S&T and interlocking are concerned.
- 3) Preserve clues and seal the relevant equipment/ documents if required.
- 4) Restore the signaling and interlocking for normal working immediately.
- 5) Ensure that establish communication between the site and Division /HQ office and manned continuously.

- **Duties of Signal & Tele communication Department at Accident Site:**

Duties of S&T department consist of providing sufficient and reliable means of communication at the accident site and other work centres.

- **Types of communication facilities & Locations:**

The communication facilities to be provided at (i) UCC, (ii) CAC, (iii)LCCs, (iv)Hospitals, (v) Mortuary, and any other locations as decided and facilities to be are (i)Satellite telephones. (ii) BSNL telephones. (iii) Mobiles, in case the area is under mobile coverage. (iv) Walkie-Talkie sets. (vi) (v) Railway telephones. (VI) PA System.

- **Numbers to be Provided:**

- Satellite telephones - 5 to be provided. 2 in UCC, 1 in CAC, 2 for passengers.
- BSNL telephones - 2 in UCC, 3 in CAC and 1 in each hospital.
- Mobiles-as many as can be arranged in UCC and CAC. In addition to above at least 2 in each hospital.
- Walkie-Talkie sets-each functionary should be covered.
- One 25W VHF set shall also be provided in UCC.
- One 25W VHF set shall be installed in a road vehicle so that mobile communication can be setup, up to a range of about 15-20 Kms.
- Railway telephones-each functionary in UCC, CAC and LCCs should be covered.

- In RE area emergency sockets will be utilised for extending communication to the accident site and in non-RE area where 6 Quad cables is available the same will be utilized for providing communication.
- PA system -at UCC, CAC and LCCs.
- **Public Address System:**
- PA system should be provided in UCC, CAC and LCCs.
- These are also to be provided for communicating with passengers and for giving directions to railway staff. For this purpose, additional PA systems may become necessary depending upon the requirements at accident site.
- Mega mikes available in ART will also be utilized for twin purpose.
- Volume of PA system in UCC, CAC and LCCs should be so adjusted that announcements made over one of them reaches only those areas which are under its jurisdiction. It should not interfere with announcements being made by other PA system.
- **Other Accessories:**
- Ensure availability of adequate copies of Disaster Management telephone directory containing important telephone numbers.
- Adequate number of Mobile Battery Chargers should be provided in UCC, CAC and LCCs along with number of spare batteries.
- **ENGINEERING-DEPARTMENT**
- On Receipt of information: Sr.DEN/DEN concerned will proceed to the site of accident by ARME. In the absence of Sr.DEN (HQ), the next senior most Sr.DEN/DEN of the division will proceed along with the concerned DEN. In the absence of Sr.DEN/DEN of the section, Sr.DEN/DEN of the adjoining section will proceed by ARME.

PCE along with HODs and other JAG officers from Head quarter will proceed to accident site.

It is expected that ADEN and Permanent Way Inspector of the Section would have already reached the accident site before arrival of ARME. In case, where the Permanent Way Inspector and ADEN are based at divisional headquarter, they should move along with staff by ART. At least, 2 SSE/Works and 1 SSE/Bridge should move along with their staff by the ART.

- **Rushing Men and Material to Accident Site:**
- 4.8.10.2**
- (i) 1000 nos. of workmen are required to reach the site of the accident. The Division shall arrange 500 nos. along with 10 PWIs and 10 Black Smiths. For this purpose, labour specials will be run from the specified destination as decided by the Divisional Emergency Control.
 - (ii) ½ KM of rails, sleepers and fittings and one set of 1 in 12 and 1 in 8 ½ turnouts are available in the ART. The mechanical and Operating Departments will ensure that part 'C' of ART (consisting of additional Engineering Material Wagons) shall follow the ART. The additional half km. of matching materials and one set of 1 in 8½ and 1 in 12 turnouts shall be kept in the Track Depot of the Division. For loading of this material, 2 BFRs and 2 BCX wagons should be immediately placed in the Track Depot. This material should be loaded within 3 hours and dispatched to the site of accident. This will be ensured by the SSE

(P.Way) Track Depot and Divisional Engineering Control.

- (iii) At least two nos. of JCBs available with the ballast depot contractor shall be immediately moved.
- (iv) Sr.DEN/DEN in Divisional Emergency Control will request concerned authority (Army/State Govt. Department) for bulldozer/earthmoving machine in the area.

4.8.10.3 Duties of SR.DENs/DENs:

- 1) Proceed to the site of accident by first means.
- 2) Ensure joint measurements are taken and sketches of the accident site are accurately drawn-out.
- 3) Ensure collection of adequate labor and material and their proper deployment for speedy restoration.
- 4) Depute one DEN/AEN in control Office for planning, reinforcement of labour, material and staff.
- 5) Ensure that inspection notes and diary of AEN, PWI, gang charts, maintenance records etc., are seized and secured.
- 6) Assistant other Departments in clearance of line and ensure that track is rendered fit and certified at the earliest.

4.8.10.4 Duties of Engineering Department at the Site:

- (i) AEN/SSE (P. Way /Bridge) shall collect men, rescue tools and arrive at site by fastest means possible.
- (ii) Setup UCC, CAC and LCCs at the accident site.
- (iii) Assist medical/ Mechanical Department in rescue work.
- (iv) If necessary, contact Army/Navy/Air Base and collect required personnel like Divers for rescue operation.
- (v) If necessary, hire Private Road Cranes, Bulldozers, Earthmovers etc.
- (vi) 2 Engineering specials, one from each end, carrying engineering material and Gang men from the section.
- (vii) Additional requirement of track materials, if any, should be called for immediately from other railway sources within the division, well in time.
- (viii) In case divisional sources are inadequate, then sources from other divisions should be tapped.
- (ix) 500 additional workmen are required who are to be moved from adjoining divisions/ zones.
- (x) Each such division sending assistance should move 250 men along with 5 artisans and 5 PWIs.
- (xi) One DEN and one AEN each should also move to the site of accident from each such division.
- (xii) Plan for co-ordinated working and movement of track machine for quick restoration in consultation with TRD and operating officials.

• IT-DEPARTMENT:

The following should be arranged by Sr.EDPM/ EDPM in HQ:-

- (i) Disaster Management Cell, which will be used as Headquarters' Emergency Cell, should be provided with additional PCs and should be connected to Railnet and the E-Mail addresses already configured into them should be activated.
- (ii) Similarly, additional PCs in divisional control office nominated for being used in Divisional Emergency Cell should also be shifted and should be connected to Rail net and the E-mail addresses already configured into them should be activated.

- (iii) PCs in various Helpline Enquiry Booths at different stations should all be made functional, connected to Railnet and made ready for receiving and sending E-mails.
- (vi) Sr. EDPM in association with PRO should be uploaded below information onto Western Railway's Website www.westernrailwayindia.com as quickly as possible:
 - List of injured and deceased passengers.
 - Names of stations where Helpline Enquiry Booths have been opened along with their telephone numbers.
 - Accident details would include number of injured passengers rescued.
 - Break up of type of injuries, such as grievous, simple etc.
 - Disposal of injured passengers in various hospitals.
 - Names of injured passengers-coach wise.
 - Number of dead bodies recovered.
 - Number of dead bodies identified.
 - Names of deceased passengers.
 - Details of diverted, regulated, short terminated, cancelled or rescheduled trains.
 - Details of Passenger special trains for passengers to be run: (a) front portion of accident involved train. (b) rear portion of accident involved train. And (c) Relatives special from originating and terminating station of the accident involved train.
- **ACCOUNTS-DEPARTMENT:**
 - (i) Making available sufficient amount of cash for meeting emergent expenses.
 - (ii) Opening of current account in a local bank and getting permission for over draft facilities so that large amount of cash is not required to be carried from far off stations.
 - (iii) Issue of cheques for making of enhanced ex-gratia payment, if so, announced at accident site by Honorable MR.
- **PERSONAL-DEPARTMENT:**
 - (i) Sr.DPO shall proceed to accident site along with all WLIs.
 - (ii) Assist Doctors in collecting details of injured/ dead and shifting them to hospital.
 - (iii) WLIs shall be available round the clock in shift duty to look after the welfare of injured persons in each hospital.
 - (iv) Issue complimentary return journey passes to relatives for escorting injured and taking them back home.
 - (v) Man, personnel branch counters in CAC and discharge duties listed out for those counters.

4.9 DISASTER RESPONSE-CO-ORDINATION CENTERS:**4.9.1 Rushing of ARMEs & ARTs to Accident Site:**

- (i) After ARMEs and ARTs have been ordered, PCR should locate diesel powers for these ARMEs and ARTs.
- (ii) First available diesel powers should be nominated, even by temporarily detaching from a Mail/Express train on run, if necessary.
- (iii) If diesel power is not readily available and OHE is functional up to the next junction station, then ARMEs and ARTs should be moved out by Electric loco and diesel powers can be changed en-route.
- (iv) In case a diesel power is not available on the division, then it should be requisitioned from adjoining division.
- (v) Requisitioning of diesel power should be done from following sections in the given order of priority:
 - (a) **Mumbai Central Division:**
 - Mainline sections of Mumbai Central division.
 - Mumbai division of Central Railway.
 - Bhusaval division of Central Railway.
 - Vadodara division.
 - Ratlam division.
 - Ahmedabad division.
 - (b) **Vadodara Division:**
 - Mainline section of Vadodara division.
 - Anand-Godhara section.
 - Ratlam division.
 - Ahmedabad division.
 - Mumbai Central division.
 - (c) **Ahmedabad Division:**
 - Ahmedabad-Viramgam section.
 - Vatva Diesel shed.
 - Ahmedabad-Nadiad section.
 - Other sections of Ahmedabad division.
 - Rajkot division.
 - Ajmer division(NWR)
 - Vadodara division.
 - Ratlam division.
 - (d) **Ratlam Division:**
 - Godhara-Ratlam section.
 - Ratlam-Nagda section.
 - Nagda-Ujjain-Indore section.
 - Ujjain-Bhopal section.
 - Ratlam Diesel Shed.
 - Vadodara division.
 - Kota division(WCR)
 - Bhopal division(WCR)

(e) Rajkot Division:

- Rajkot-Viramgam section.Rajkot-Okha section.
- Wankaner-Dahinsara-Gandhidham section.
- Bhavnagar division.
- Ahmedabad division.
- Vadodara division.
- Ajmer division(NWR)

(f) Bhavnagar division:

- Surendranagar-Bhavnagar section.
- Dholra-Pipavav section.
- Rajkot-Veraval section.
- Porbandar-Lalpurjam section.
- Rajkot division.
- Ahmedabad division.

- (vi) **Movement of ARME and ART should never be clubbed together. ARME should be started first and moved separately for faster movement.**
- (vii) ARMEs and ARTs should be dispatched from the base station, within the target time stipulated. Departure of ARMEs and ARTs should not be delayed on any account including arrival of doctors or officers. Anybody who is left behind can proceed later on either by GM special or by next special train or even by road.
- (viii) ARMEs must be run out within the target time, even without full complement of doctors, if necessary. This will ensure that other doctors who are available at accident site can utilize facilities of ARME after its arrival at site.
- (ix) ARMEs and ARTs should be moved on top priority taking precedence over all other trains. They should not be stopped anywhere en-route for picking up anyone.
- (x) Running lines at 7 stations on either side of the accident affected block section should be kept clear of all trains. In case there are any stabled loads, the same should be lifted.
- (xi) Freight trains on run towards accident site should be reversed and returned.
- (xii) Fresh stabling, if any, should be done beyond 7 stations on either side.
- (xiii) Even for stabling beyond 7 stations, both up and down loop lines should not be blocked at the same station.
- (xiv) For stabling beyond 7 stations, up loop and down loop should be blocked, at alternate stations.

4.9.2. Movement of Passenger Trains:

- (i) The moment information is received about the accident, all Mail/Express trains on run towards the accident involved section should be stopped. They should not be advanced beyond the last Jn. from where they can be diverted.
- (ii) They should be regulated at convenient stations before a decision is taken regarding their further movement. This decision should normally be taken within the next one hour.
- (iii) Trains should preferably be regulated at stations where food can be arranged.
- (iv) Too many trains should not be simultaneously brought to a Jn. station for regulation, since it may create law and order problems.
- (v) Keep them moving slowly so that passengers do not agitate. In such cases, a caution order may be served to the driver to proceed at 30 KMPH.
- (vi) Passenger trains can be run out to the next convenient location and thereafter terminated so that their rakes are available for use.

- (vii) Head quarter's Emergency Cell shall decide the Diversion, Regulation, Short termination, Cancellation and Rescheduling of trains in consultation with adjoining Railway and Coaching Directorate of Railway Board:
- (viii) The above decision regarding diversion etc. should be taken in about an hour's time after ARMEs, ARTs, GM special have been run out and there is a slight lull in the information flow.
- (ix) As far as possible, trains, which are already on run, should be diverted. They should not be short terminated, since this will create problem of dispersal of passengers.
- (x) Trains should be diverted from the last possible Jn. station onwards so that maximum number of passengers can detrain at their proper destination stations.
- (xi) Sr. DEE/TRO would be in charge of co-ordination with operating department regarding requirement and availability of crew.
- (xii) Sr. DEE/TRO will take into consideration changing traffic requirement and plan crew deployment accordingly.
- (xiii) Adjoining divisions should be informed about these diverted trains to sent spare crew to inter change points.
- (xiv) Necessary road learning should be arranged for diverted trains crew.
- (xv) Drivers nominated for working these diverted trains should be empanelled for working Mail/Express as per Railway Board's instructions.
- (xvi) Crews should also be planned for diesel engines sent to the accident site working ARMEs, ARTs, other special trains and likely to be held up there for next 2-3 days.
- (xvii) A total of about 10 diesel powers would be deployed in the accident-affected section on different special trains at any point of time.
- (xviii) 3 sets of diesel crews should be planned for each diesel loco deployed at the accident site.
- (xix) If required necessary diesel crew should be arranged from adjoining divisions.
- (xx) In the absence of Sr.DEE /TRO, DEE/AEE (TRO) will perform this function.

4.9.3. Running of Special Trains:

Following special trains will be required to be run in the given order of priority:

- (i) ARME
- (ii) ARME from the other end.
- (iii) Two additional ARMEs from adjoining divisions, one from each end.
- (iv) ART.
- (v) ART from the other end.
- (vi) Two additional BD Specials one from each end.
- (vii) 1st special train carrying GM and other officers from Headquarter and some leftover officers from division (in case it passes through the divisional headquarter).
- (viii) Unaffected front portion of the accident involved train in case the same can be moved.
- (ix) Unaffected rear portion of the accident involved train in case the same can be moved.
- (x) In case the front and rear portions cannot be moved, then they should be left as they are.
- (xi) Two empty coaching rakes, one from either end for clearing unaffected passengers of the accident involved train.
- (xii) 2nd and 3rd special trains for accident site, one from each end, carrying logistic backup support, material and additional manpower from junction stations. These should normally be runout 2-3 hours after arrival of ARME carrying DRM and other divisional officers at the accident site.

- (xiii) Before these 2nd and 3rd special trains run from each end, railway staff at all stations en-route should be informed regarding running of these trains so that supervisory staff of all departments, from Jn. stations can go to the accident site on these trains.
- (xiv) Two light engines should be stationed, one at each station on either side of the accident involved block section.
- (xv) Two Engineering specials, one from each end, carrying engineering material and Gang men from the section.
- (xvi) Running of 2 passenger specials for carrying relatives to the site of accident. These trains will be started from the originating and destination stations of the accident involved train and will be given same stoppages as the accident involved train for picking up relatives' en-route. This is to be co-ordinated by Headquarters' Emergency Cell in consultation with Railway Board.
- (x) Arrangement for the visit of MR/MOSR, CRB and other Board Members to the accident site should be made in coordination with the Safety Directorate and Secretary, Railway Board.
- (xi) Two empty coaching rakes, one from either end for being stabled at convenient locations where watering and charging facilities are available. These stabled rakes will be used for housing the staff working at accident site.

4.9.4 Sequence of movement of ARMEs and ARTs into the accident affected block section:

- (i) The sequence of sending and taking out various trains into and out of the accident affected block section should be planned carefully.
- (ii) Except for 140T cranes and Engineering specials, all other trains should be sent into the block section with engine leading so that they can reach faster.
- (iii) If the unaffected front and rear portions of the accident involved train can be pulled out, then these should be withdrawn before sending in ARMEs into the block section.
- (iv) After the unaffected front and rear portions have been pulled out, both portions should be augmented by being patched up with extra coaches at the first Jn. station en-route.
- (v) In case the front and rear portions cannot be pulled out then they should be left as they are.
- (vi) After the 1st pair of ARMEs reaches adjacent stations from either side, they should be sent into the block section, one from each end.
- (vii) BD specials without cranes that have arrived should be pushed into the block section after the ARME so that additional cutters, spreaders, hydraulic jacks etc. can be made use of.
- (viii) After all equipment from BD specials have been unloaded at accident site and staff has detrained, both BD specials should be withdrawn. These should then be kept 4 stations beyond.
- (ix) The 2nd pair of ARMEs that have been requisitioned should also be moved on top priority. After BD specials have been withdrawn, these ARMEs should be sent into the block section while the first ones are still there.
- (x) In case 2nd pair of ARMEs arrive before BD special, then item no (ix) should be carried out before item no.(vii) and (viii).
- (xi) Both ARTs with 140T cranes should be regulated at least 1 station before so as not to clutter up the adjacent station.
- (xii) Empty coaching rakes that have been sent for clearing uninjured passengers should be sent into the block section thereafter, while both ARMEs are still there.
- (xiii) After transshipment of passengers, both empty coaching rakes should be pulled out and run out as passenger special to the original destination of the accident involved train.

- (xiv) After the work of ARMEs is over, all of them should be withdrawn and returned back.
- (xv) The front and rear portion of the accident-involved train should now be withdrawn by sending diesel light engines into the block section.
- (xvi) Last of all both ARTs with 140T crane should be marshaled as per site requirement and sent into the block section with crane leading, one from each end.
- (xvii) Tower wagons should be sent in from each end following the ART.

4.9.5. Setting of Divisional Emergency Cells:

- (i) Divisional Emergency Cell shall be opened immediately after receipt of information of the accident at Divisional Control Office.
- (ii) This unit will exercise control, co-ordinate and arrange supplementary assistance to the accident site.
- (iii) It shall function in a separate cubicle at Divisional Control Office provided with centralised communication networks, hotline to the site and Headquarter.
- (iv) Sr.DOM will be over all incharge of the Divisional Emergency Cell and will function as the Divisional Emergency Officer for the purpose of managing relief and restoration operations from divisional level.
- (v) In case Sr.DOM is not available; DOM will be the Divisional Emergency Officer.
- (vi) In case both officers are not available, any other officer nominated by DRM will take overcharge.
- (vii) Requirements of all departments for movement of men and materials to the accident site shall be conveyed to the Divisional Emergency Officer, who shall arrange their movement.
- (viii) Timings of 2nd and 3rd special trains to be moved from each end to the accident site, carrying backup logistic support will be conveyed to all concerned beforehand.
- (ix) Divisional Emergency Cell will maintain:
 - Telephone and FAX numbers, functionary wise available in UCC.
 - Telephone and FAX numbers, functionaries available in CAC.
 - Telephone and FAX numbers of Helpline Enquiry Booths at various stations on the division.
 - E-Mail addresses of UCC, CAC, Helpline Enquiry Booths and Headquarters 'Emergency Cell. E-Mail addresses of some of them are given in Annexure- 5.
 - Names and phone numbers of hospitals where injured have been admitted/ shifted, along with number of patients.
- (x) Divisional Emergency Cell will collect updated information regarding all aspects of the accident and pass on the same either telephonically or by E-Mail to:
 - All Helpline Enquiry Booths within the division.
 - Headquarters 'Emergency Cell.
- (xi) Divisional Emergency Officer on duty shall chronologically record all information and instructions received or given in a logbook.
- (xii) For Mumbai Central and Ahmedabad divisions similar Emergency Cell will also be opened at Valsad / Gandhidham / Mehasana Control Office. ARM- Valsad, ARM-Gandhidham and ARO-Mehasana will function as Emergency Officer and discharge all duties listed above respectively.
- (xiii) In addition to the Division where accident has taken place similar Emergency Cells will be opened in other Divisional Control Offices of Western Railway that are involved in restoration and relief operations. Chief Emergency Officer will decide divisions where Emergency Cells are to be opened.

(xiv) Helpline Enquiry Booths outside the accident affected division, but within Western Railway jurisdiction should keep in touch with Divisional Emergency Cell of their respective division.

(xv) If necessary, similar emergency cells will be opened at other major terminals as decided by Chief Emergency Officer. After relief, rescue and restoration work is completed, winding up of Divisional Emergency Cells shall be decided by DRM.

4.9.6. Setting of Headquarter Emergency Cell:

(i) Headquarters' Emergency Cell shall be opened immediately after receipt of information of the accident at HQ office.

(ii) This unit will exercise control, co-ordinate and arrange supplementary assistance to the accident site.

(iii) It shall function from a separate room in Western Railway HQ office provided with centralized communication network.

(iv) COM's room in Western Railway HQ office should be converted into Headquarters 'Emergency Cell for the duration of the disaster'.

(v) CFTM will be over all incharge of the Headquarters' Emergency Cell and will function as Chief Emergency Officer for the purpose of managing relief and restoration operations from HQ level.

(vi) In case CFTM is not available, Dy.COM/Goods will be Chief Emergency Officer.

(vii) In case both officers are not available, any other officer nominated by COM will take overcharge.

(viii) Requirements of all departments for movement of men and materials to the accident site from adjoining zones and division shall be conveyed to the Chief Emergency Officer, who shall arrange their movement.

(ix) Headquarters' Emergency Cell will maintain:

- Telephone and FAX numbers, functionary wise available in UCC.
- Telephone and FAX numbers, functionary wise available in CAC.
- Telephone and FAX numbers of Helpline Enquiry Booths at various stations on adjoining zones.
- E-Mail addresses of UCC, CAC and Helpline Enquiry Booths and Divisional Emergency Cell setup on other Divisions of WR.
- E-Mail addresses of some of them are given in Annexure-5.
- E-Mail addresses of Emergency Cells opened on train originating/terminating Divisions & Zones and Safety Directorate Emergency Cell in Railway Board.
- Names and phone numbers of hospitals where injured have been admitted/shifted along with number of patients.

(x) Headquarters' Emergency Cell will collect updated information regarding all aspects of the accident and pass on the same either telephonically or by E-Mail to:

- Emergency Cells opened on other divisions of WR.
- Emergency Cells opened on originating and terminating Zonal Railway.
- Safety Directorate's Emergency Cell in Railway Board.

(xi) Headquarters / Divisional Headquarters' Emergency Cell will monitor movement of ARMEs /ARTs etc. coming from adjoining Zones/ divisions.

(xii) Assistance from Defence, Para military establishments, State Govt. should be coordinated by Headquarters 'Emergency Cell as and when required'.

(xiii) Chief Emergency Officer on duty shall chronologically record all information and instructions received or given in a logbook.

- (xiv) Chief Emergency Officer shall monitor various important media channels to keep track of media reporting. Suitable corrections/clarifications may also be issued, if required.
- (xv) After relief, rescue and restoration work is completed, winding up of all Emergency Cells on WR shall be decided by COM.

4.9.7. Manning of Divisional /Headquarters 'Emergency Cell':

- (i) Divisional/Headquarters 'Emergency Cell' shall be manned round the clock by officers.
- (ii) In addition to officers of the Operating Department, there will be officers of Engineering, Mechanical, S&T, Electrical, Commercial, Medical, Security, Safety and Personnel departments in the Divisional/ Headquarters' Emergency Cell round the clock.
- (iii) Divisional Emergency Cell will be manned by Senior Scale/Junior Scale officers of all departments in 12 hours shift duties round the clock (8 hours to 20 hours day shift and 20hours to 8hours night shift).
- (iv) Headquarters' Emergency Cell will be manned by JA grade/ SeniorScale officers of all departments in 12hours shift duties round the clock.
- (v) Senior most officer of each department who is available in the Division /Headquarters' shall be on duty in the Divisional/Headquarters' Emergency Cell during the day shift only. (8hrs. to 20hrs.)
- (vi) Senior most officer of each department shall issue a 12 hours roster for his own department for the night shift. (20hrs. to 8hrs.)
- (vii) Round the clock roster of 12 hours shift duty should cover both officers and supervisors.
- (viii) Same officers and supervisors should be repeated each day without any change or rotation, for the next 4-5 days. This will maintain continuity and will ensure that experience gained on the first day can be gainfully used on subsequent days.

4.9.8. Liaison with Railway Board:

Headquarters 'Emergency Cell' will maintain constant liaison with Safety Directorate's Emergency Cell in Railway Board regarding following activities:

- (i) Movement of additional ARMES and ARTs from adjoining zones.
- (ii) Movement of additional diesel powers from adjoining zones.
- (iii) Diversion, Regulation, Short termination, Cancellation and Rescheduling of Mail/Express trains.
- (iv) Arrangement of men and material as required from adjoining zones and their expeditious movement.
- (v) Opening of Helpline Enquiry Booths on other Zonal Railways at:
 - Originating and destination stations of the accident involved train.
 - All junction stations falling on the route of the train.
 - Divisional Headquarter of originating and terminating divisions.
 - Zonal Headquarter of originating and terminating Zonal Railway.
 - Any other station as may be decided.
- (vi) Movement program for visit of MR/MOSR, CRB and other Board Members to the accident site.
- (vii) Assistance required from Defence, Para military organisation, State Govt. should be conveyed to Railway Board who shall coordinate the same.
- (viii) 3 hourly progress report on the rescue and relief work shall be communicated to Safety Directorate's Emergency Cell in Railway Board.

4.9.9. Duties of Additional Divisional Railway Manager (ADRM):

- (i) Undertake making of announcements over local TV channel and Cable network for all supervisory staff to rush to the accident site.
- (ii) Ensure that functionaries of different departments in Divisional Emergency Cell carry out duties assigned to them as per Zonal DM plan.
- (iii) Monitor movement of assistance from other division/zones.
- (iv) Co-ordinate with State Govt.
- (v) Co-ordinate with Defence and Para Military authorities.
- (vi) Monitor various important media channels to keep track of media reporting. Suitable corrections/ clarifications may also be issued, if required.

4.10 DISASTER RESPONSE–ASSISTANCE FROM ADJOINING DIVISIONS/ZONES**4.10.1 Necessity of assistance from adjoining Divisions/Zones:**

- (i) No division can be equipped to handle a disaster of such a large magnitude like Ferozabad or Gaisal.
- (ii) Assistance has to be sought from adjoining Divisions/Zones.
- (iii) A division is normally expected to handle an accident of the magnitude involving up to 50 injuries (Grievous). Threshold levels have been given in terms of injuries, because initially it is difficult to estimate number of casualties.
- (iv) Whenever number of injuries is estimated to go beyond 50, assistance should be sought from adjoining Divisions/Zones.
- (v) This is to be co-ordinate by the Chief Emergency Officer in Head Quarter's Emergency Cell.

4.10.2. Assessment of assistance from adjoining Divisions/Zones:

- (i) DRM after reaching the accident site should make an immediate assessment of likely injuries.
- (ii) Quick assessment is an absolute must in order to ensure that assistance from adjoining divisions can be rushed at the shortest possible time.
- (iii) Assessment made by DRM should be based on number of coaches involved.
- (iv) As a thumb rule, for each coach that has capsized, 30 injuries should be estimated.
- (v) Total injuries estimated would be (no. of coaches) x 30.
- (vi) This should be conveyed to Sr.DOM in Divisional Emergency Cell and Chief Emergency Officer in HeadQuarter's Emergency Cell.
- (vii) Based on the above figures, decision should be taken and assistance rushed from adjoining division and zones.

4.10.3. Scale of assistance from adjoining Divisions/Zones:

- (i) As a thumb rule, assistance of 1 team should be sought from adjoining division for every 50 additional injuries, beyond 50 injuries.
- (ii) In case of all disasters, following should be used as an approximate guideline for deciding level of assistance required:

	<u>100 > Injuries > 50</u>	<u>200 > Injuries > 100</u>
• Threshold level	1 team	3 teams
• No. of teams	2	2 + 2
• ARMEs	2	2 + 2 (Break Down)
• 140 TCrane	2	

- (iii) Complement of staff in each team sent by adjoining divisions/ zones will be as per norms given below:

Officer in charge	Senior Scale
□ Doctors	5
□ Para-medical Staff	10
□ Commercial Officers	2
□ Commercial Supervisors	10
□ Commercial Staff	20
□ Personnel Supervisors	5
□ Group 'D' Staff	20
□ RPF	1 Platoon

- (v) In case of Mumbai Central division, assistance should be sought from following divisions in the given order of priority:

<u>Name of Division</u>	<u>No. of Teams</u>
• BRC division	2
• Mumbai division	1 Central Railway
• ADI division	1
• Bhusaval division	1 Central Railway
• Ratlam division	1
6 Total	

- (v) In case of BRC division, assistance should be sought from following divisions in the given order of priority:

<u>Name of Division</u>	<u>No. of Teams</u>
□ ADI division	2
□ Mumbai division	1
□ Ratlam division	1
□ Kota division	1 West Central Railway
□ Rajkot division	1
6 Total	

- (vi) In case of RTM division, assistance should be sought from following divisions in the given order of priority:

<u>Name of Division</u>	<u>No. of Teams</u>
□ BRC division	2
□ KOTA division	1 West Central Railway
□ Bhopal division	1 West Central Railway
□ Ajmer division	1 North Western Railway
5 Total	

- (vii) In case of ADI division, assistance should be sought from following divisions in the given order of priority:

<u>Name of Division</u>	<u>No. of Teams</u>
□ BRC division	2
□ Rajkot division	1
□ Ajmer division	1 North Western Railway
□ Mumbai division	1
5 Total	

- (viii) In case of RJT division, assistance should be sought from following divisions in the given order of priority:

<u>Name of Division</u>	<u>No. of Teams</u>
• ADI division	2
• BVP division	1
• BRC division	1
• Ajmer division	1 North Western Railway
5 Total	

- (ix) In case of BVP division, assistance should be sought from following divisions in the given order of priority:

<u>Name of Division</u>	<u>No. of Teams</u>
• RJT division	2
□ ADI division	1
□ BRC division	1
□ Ajmer division	1 North Western Railway
5 Total	

4.10.4. Assistance from Defence & Para Military Forces:

As per Disaster Management Act 2005, various Ministries and departments under Government of India, should join hands for mutual assistance in case of Disaster. Assistance from Local Government and Non- Government agencies is invariably required by the Railway Administration for prompt relief and rescue operation in case of Disasters affecting Railways. Assistance of NDRF could be of great help to the Railways in major Railway Disasters.

- (i) Assistance should be sought from nearest army & Para-military establishments.
- (ii) Railway staff no matter how dedicated and loyal, are not experts in extricating dead bodies, handling injured passengers, their evacuation etc.
- (iii) Army has the necessary expertise and are trained and equipped to handle such a warlike situation.
- (iv) Therefore, divisional/ Zonal headquarters should get in touch with the nearest NDRF commandant and request for necessary assistance. As per Boards letter No. 2003/Safety (DM)/6/3 dated 05.08.2010.
- (v) Select telephone numbers of Army and Paramilitary establishments are given in Zonal Disaster Management Plan Part-II.
- (vi) Additional telephone numbers of Army are given in Divisional DM plan.

4.11 SITE MANAGEMENT PLAN

There are 2 aspects of Disaster Management work at an accident site. Firstly, rescue, relief and restoration operation, which is carried out by one set of functionaries. Second aspect pertains to rehabilitation of accident involved passengers, taking care of dead bodies, dealing with their relatives etc. for which a different set of functionaries are required. For managing these 2 distinct aspects of DM work that are required to be discharged by railways, two separate establishments should be setup at an accident site. The outline schematic plan of accident site is given at **Annexure-I**.

4.11.1. Unified Command Centre (UCC):

- (i) Unified Command Centre (UCC) should be setup at the accident site.
- (ii) This will be some kind of a control office to be located near the centre of the accident site.
- (iii) This is basically meant for catering to operational needs of railway in rescue, relief and restoration work.
- (iv) Detail schematic plan of UCC is given at **Annexure-II**. UCC is to be manned by staff of relevant departments such as: Medical, Commercial, Operating, Safety, Security, Public Relations, Mechanical, Electrical, S&T and Civil.
- (vi) UCC will be provided with all facilities similar to a control office.
- (vii) Adequate lighting with generator backup should be provided in the UCC.
- (viii) Adequate number of telephonic links to Divisional Emergency Cell and Headquarters. Emergency Cell should be provided. Preferably each department in the UCC should be given an independent telephone.
- (ix) Satellite telephone should be installed in the UCC.
- (x) UCC should be provided with FAX, loudspeakers, P.A. system with conference facility or press briefing to be arranged by S&T Dept. Mech. Dept. should arrange photocopier and PCs. in coordination with Sr.EDPM.
- (xi) PC/Laptop should be connected to Internet for E-mailing of details update to all concerned, including Divisional Emergency Cell, Headquarters' Emergency Cell and Helpline Enquiry Booths.
- (xii) A big banner displaying 'UNIFIED COMMAND CENTER' should be put up at a prominent place at the entry to the shamiana.
- (xiii) Similarly, there should be sufficient number of signage's indicating the way to UCC on approach roads etc.
- (xiv) UCC at the site will be manned by Sr.Supervisors on round the clock basis in 12 Hrs. shift duty.
- (xv) Officers will not be permanently stationed in UCC. They will move about the entire accident site supervising and monitoring working of their department at different activity centres. However, they will keep coming to the UCC off and on and will kept in touch with their departmental functionaries in UCC.
- (xvi) Various functionaries in the UCC will monitor and co-ordinate the working of their departments, and assistance required by them, if any.
- (xvii) Each functionary at the UCC will maintain a logbook. Flow of information both incoming and outgoing would be recorded along with the time and names of officers/staff that were given the message.
- (xviii) UCC will basically supervise the working of 2 LCCs and co-ordinate with Divisional and Headquarters' Emergency Cell.
- (xix) Functionaries of different departments in LCCs should provide updated information regarding progress of work to their counter parts in UCC.
- (xx) This updated information should be updated periodically at least once in every 3 hours or as per the demands of the situation.

4.11.2. Local Command Centres (LCC):

- (i) Depending on the spread of the accident site, Local Command Centres (LCC) on the same pattern as the UCC should be setup.
- (ii) If the site is spread out over 300-400 metres 2 LCCs should be setup.
- (iii) Detail schematic plan of LCCs would be similar to that of UCCs as given at **Annexure-II.**
- (iv) Representatives of same departments as in UCC should be present in LCCs also. However, they should be either one or at most 2 men per department.
- (v) LCCs will serve as co-ordination centres for various teams that are working spread out over different geographical locations.
- (vi) Each LCC will oversee the working of DM teams at each end of the accident site.
- (vii) Jurisdiction of each LCC will extend to all men and materials belonging to 2 ARMEs, BD special and 1 ART at that end of the accident site.
- (viii) One SAG officer of Mechanical department will be overall incharge of each LCC.
- (ix) LCCs should be provided with loudspeakers for making announcements.
- (x) LCCs should be provided with direct telephone links to UCC.
- (xi) However, LCCs should not be provided with telephone links to either Divisional Emergency Cell or Headquarters' Emergency Cell. This will ensure that there is minimum telephonic disturbance from outside to teams, which are actually working at the accident site. It will also ensure that out flow of information from accident site goes out from UCC only.
- (xii) Members of different teams of each department working at the accident site in rescue, relief and restoration work should provide updated information regarding progress of work to their respective functionaries at the LCC.
- (xii) This updated information should be updated periodically at least once in every 3 hours or as per the demands of the situation.

4.11.3. Combined Assistance Centre (CAC):**4.11.3.1 Need for setting up of Combined Assistance Centre:**

- (i) Relatives of passengers who arrive at an accident site are already traumatized by the tragedy.
- (ii) They arrive at an unknown location with no place to stay, no friend or acquaintances and not knowing whom to turn to.
- (iii) The problem is made even more challenging since many relatives and next of kin come from far-flung areas in some other state.
- (iv) Being semi-literate and from different parts of the country some of them are not even familiar with the local language. For them even communicating becomes a problem.
- (v) In addition to above, complex legal formalities & multiplicity of paper work is required to be completed before dead bodies are handed over to their next of kin.
- (vi) For taking care of relatives of passengers, providing them with succor in their hour of a gony and for guiding them sympathetically, some kind of an assistance centre is required.

4.11.3.2 Formalities required to be completed by relatives of passengers:**4.11.3.2.1 Sequence of formalities that are required to be completed by relatives of injured passengers includes:**

- (i) Locating the name of the passenger on reservation charts, incase passenger was travelling in reserved accommodation.

- (ii) Going through the list of injured and dead passengers to find out whether the name appears.
- (iii) In case the name is not available in the list, then taking around of different hospitals to find out whether their relative has been admitted in one of them in an unconscious state.
- (iv) Hospitals are generally at separate locations, sometimes even in different towns; and commuting becomes a problem.
- (v) In case the passenger can be located in one of the hospitals, they have to find out the severity of injuries, likely period of hospitalisation, etc.
- (vi) Collect the ex-gratia paid by railways.
- (vii) Try and locate missing luggage of the injured passenger. For this they have to take around of the building where all unclaimed luggage have been kept.
- (viii) Next, they have to arrange for a place for them to stay.
- (ix) Arrange for medicines/diet etc. and payment of hospital bills, if required.
- (x) Thereafter, they have to keep in touch with the hospital and get their relative released.

4.11.3.2.2 Additional formalities that are required to be completed by next of kin of dead passengers include:

- (i) In case the passenger could not be located in any of the hospitals, and then they have to go to the building where unidentified dead bodies have been kept.
- (ii) Take around of various rooms where bodies have been kept, examine each body and try and locate their near and dear one.
- (iii) Identify the dead body, if the same has been extricated by them.
- (iv) Otherwise wait for all bodies to be extricated and try and identify their relative.
- (v) In case they fail to identify the same then they have to go through photographs of unidentified bodies taken at site.
- (vi) After the body is finally identified, they have to produce proof of relationship for railways to entertain their claim.
- (vii) Obtain medical death certificate from the railway doctor.
- (viii) Obtain postmortem report, from the Govt. Doctor who has performed post mortem on the body.
- (ix) Obtain official death certificate from the local municipality.
- (x) Accept of ex-gratia payment from railways.
- (xi) Collect forms for lodging claim for compensation in RCTs.
- (xii) Takeover custody of dead body from the local police.
- (xiii) Perform last rites at the same place or take back the body to their native place, depending on circumstances.
- (xiv) Make arrangements for their return journey back to their native place.

4.11.4 Problems encountered by relatives:

- (i) Each of these formalities are under the jurisdiction of a different agency, either railway or police or civil administration or local administration.
- (ii) In such a situation the level of co-ordination between these various agencies leaves much to be desired.
- (iii) Sometimes it even takes up to 48 hours before these entire documentary formalities can be completed
- (iv) In most cases relatives have to run from pillar to post for completing all these formalities and the bitter experience leaves them permanently antagonised towards railways.
- (v) For this purpose, a single window clearance system should be available for relatives and next of kin.

4.11.5 Combined Assistance Centre (CAC):

- (i) The UCC should have a Combined Assistance Centre (CAC) located towards the rear side, away from the track, for rendering help to passengers and their relatives. Outline schematic plan of UCC/ CAC is given at **Annexure-I.**
- (ii) This is basically meant for catering to requirements of passengers and their relatives/next of kin, and for providing a single window clearance for all types of formalities.
- (iii) Combined Assistance Centre (CAC) should be separate from the UCC so that it does not interfere with normal rescue and relief work.
- (iv) Detail schematic plan of CAC is given at **Annexure-III.**
- (v) CAC will be manned by staff of relevant departments such as: Operating, Medical, Commercial, Security and Personnel.
- (vi) There should be only one such CAC, and all railway resources should be pooled in to it.
- (vii) LCCs should not have any small CAC located in the rear. It is likely to create logistic problems.
- (viii) A big banner displaying 'COMBINED ASSISTANCE CENTRE' should be put up at a prominent place at the entry to the shamiana.
- (ix) Similarly, there should be sufficient number of signage's indicating the way to CAC on approach roads etc.
- (x) Railway staff fluent in the language of relatives should be posted for doing work of interpreters.
- (xi) Post mortem formalities should be waived off so that one reduces number of formalities.
- (xii) Different counters should be provided in sequence for each of these formalities, so that the entire exercise can be completed in about an hour.
- (xiii) Functionary concerned from the local Municipality who issues Official Death Certificate should be made to come and sit in the CAC so that these certificates can be issued immediately without any delay.
- (xiv) CAC should have different counters for various purposes in following sequence:
 - (a) Reservation Chart for locating the name.
 - (b) List of dead and injured along with name of hospital. The name of passenger involved should be checked up from the list of dead or injured if available, and their current status informed.
 - (c) Counter for providing commercial supervisor or WLI as escort along with a vehicle, for accompanying the relative and going to hospital or mortuary.
 - (d) Railway doctor for issue of Medical Death Certificate.
 - (e) Govt. Doctor for issue of Post Mortem Certificate, in case the same is necessary.
 - (f) Municipality official for issue of Official Death Certificate.
 - (g) Local police for issue of authority for handing over of dead body.
 - (h) Claims counter-payment of ex-gratia and issue of Claims Compensation form.
 - (i) Counter for helping performance of last rites incase relatives decided to cremate the body there itself.
 - (j) Pass counter for issue of return journey pass.
 - (k) Return journey facilitation counter for making arrangements for return journey.
- (xv) CAC will provide updated information to UCC, initially once every half an hour and later once every hour.

4.11.6. First Aid Posts:

- (i) Medical Posts should be provided in both UCC and CAC.
- (ii) Medical Post in UCC will provide first aid to injured passengers after extrication, assess their injuries and make arrangements for sending them to nearby hospitals.
- (iii) Medical Post in CAC will keep all records of injured and dead passengers, names of hospitals where they have been admitted etc.
- (iv) First Aid posts should be provided in LCCs.
- (v) This will be meant for treating passengers and classifying their injuries before they are sent for admission to various hospitals.

4.11.7. Setting up of UCC, LCC and CAC:

- (i) One SSE/Works shall be exclusively responsible for setting up of these facilities. He shall under take the following:
 - Move along with sufficient staff for setting up of these facilities.
 - Immediately start setting up of the tentage accommodation after taking out tents and shamianas provided in ARTs.
 - In addition, he should also requisition agencies, which provide tentage accommodation on contract. Details of such agencies have been given in Divisional Disaster Management Plan.
- (ii) Bridge Line staff will assist in setting up tentage and above-mentioned facilities. Dy. CE/Bridge will also move to the site and in case, bridge is not involved, he will take full charge of tentage arrangements.
- (iii) Bridge Unit will take with them sufficient Manila ropes, wire ropes, survey instruments, binoculars, helmets, lifejackets, ladders and other equipment. Nylon ropes should be sufficient in length to ensure barricading at sites and camping areas.
- (iv) Sufficient facilities for erecting temporary stage/scaffolding etc. should also be organised, if required at site.
- (v) Few temporary toilets should be provided at one location in addition to number of urinals at 3 or 4 places.
- (vi) Water Tankers will be ordered for supplying water at site and arrangements shall also be made for drinking water.
- (vii) Temporary kitchen in tents/shamianas is to be setup so that catering unit or IRCTC can provide cooked food to staff working at accident site.
- (viii) About 100 folding chairs should also be arranged.
- (ix) Bridge Line staff will have list of divers who in case of emergency can be hired for rescue or restoration operations wherever site is surrounded by deep water.
- (x) Signage's for both UCC and CAC should be provided at prominent locations.

4.11.8. Collection and Dissemination of Information–Channel of Communication:

- (i) The following would be the responsibility and channel both for collection as also dissemination of information. Before each shift goes off duty, details of work done should be updated in the LCC.
- (ii) The LCC should in turn update the UCC regarding the latest progress. This updated information would be conveyed to Divisional Emergency Cell every 3 hours or as per the situation demands.

4.11.8.1 *Number of dead and injured–Medical Department:*

- (i) Medical department at site should confirm the number of dead.
- (ii) Doctors incharge of various teams working on different coaches should give 3 hours or lesser periodic reports to Medical counter in LCC who in turn will inform UCC.
- (iii) Number of injured passengers.
- (iv) Type of injuries, whether grievous, minor or trivial.
- (v) Names of injured, and names of various hospitals where injured have been sent.

4.11.8.2 *Identification of dead bodies–Commercial Department:*

- (i) Ex-gratia paid to injured.
- (ii) Number of dead bodies identified.
- (iii) Ex -gratia paid to dead.
- (vi) No. of bodies handed over to relatives.

4.11.8.3 *Number of coaches dealt with–Mechanical Department:*

- (i) No. of coaches thoroughly searched.
- (ii) No. of coaches made off track.
- (iii) No. of coaches yet to be dealt with.
- (iv) Time required for restoring track for traffic use.

4.12 PASSENGER CARE

The most important function after a railway accident is taking care of the passengers. It begins with evacuation of injured passengers and rushing them to hospitals, the basic functions of passenger care are listed below.

4.12.1 *Hospitalisation of the injured:*

- (i) General policy in case of railway accidents in which casualties occur is that of rapid evacuation to railway hospital after rendering immediate and necessary first-aid treatment. In following cases, injured may be taken to a Private Hospital.
 - When there is no railway or Govt. hospital available within a radius of say 8 Kms. of the site of accident or,
 - When the attending doctor certifies in writing that the treatment in private hospital is necessary in the interest of the patient,
 - Except where railway doctor certifies, such injured passenger should normally be eligible to the lowest class of accommodation in private hospitals where different scale sare available,
 - Where the family of the injured person desires to be provided with a higher-class accommodation, the family should give in writing to pay the extra cost involved directly to hospital authorities.
- (ii) For this purpose, each division should make out a working arrangement with such private hospitals as may be necessary in areas served by them so that in an emergency injury cases can be referred without loss of time to the hospitals concerned. To facilitate matters and to avoid mis understanding, CMD should draw up a list of such private hospitals bearing in mind Railway and non-railway hospitals in existence in the vicinity. CMD should also settle charges to be paid to the hospitals for such cases for each class of accommodation /diet etc.
- (iii) Bills by such private hospitals should be submitted through CMD who will certify the correctness of charges payable, before passing for payment by FA&CAO. Payments to private hospitals under this Para can be arranged locally by the Railway and Ministry of Railway approval is not necessary. (Extract of Para 701(1) & Para712 of Chapter VII of IRMM and Para 1421 of Indian Railway Establishment Manual and M.O.R's letter No.MH.59/MES/96/Medical dated 18.12.1959.)
- (iv) When injured are admitted in non-railway hospitals, railway doctors should be deputed to these hospitals to render necessary assistance, including supply of medicines as required which may not be available in these hospitals. They should also carefully monitor the condition of injured and maintain an updated list with all details, If more than one hospital is involved, apart from deputing doctors to individual hospitals, a railway doctor should also be deputed to coordinate and maintain centralised updated position.

4.12.2 *Catering Arrangements:*

- (i) The affected passengers and their relatives are to be treated without most courtesy, concern and sympathy to all eviate their trauma and discomfort. Commercial officers and supervisors should be assigned to talk to injured to ascertain from them whether they wish to call relatives. Free passes can also be given to the relatives.
- ii) Arrangements for supply of meals, drinking water, tea, coffee etc., to not only the injured but also to other passengers of the affected train/ trains should be swiftly organized. In this connection, Boards instructions vide their letter No. 89/safety-I/4/3, dated 22.09.89 is reproduced.
- iii) Refreshments, food and beverages may be supplied free of charge to the affected passengers, injured/or stranded. These may be arranged from the railway and/ or outside sources as necessary.

(iv) The senior most official at the site shall have the powers to arrange conveyance of the affected passengers free of charge by any available mode of transport and also incur expenditure for carriage of passengers, luggage, etc. (Boards letter No.93/safety-I/6/1, dtd 02.11.93).

4.12.3. Facilities to be made available in Hospital:

- (i) A reception counter with a chart (ward, name, bed no., coach number of patient) should be manned by commercial supervisor/ WLI at the hospital for dealing with patient's relatives.
- (ii) Commercial staff at the hospital should carry a list indicating the name, address and telephone no, of relatives as given by the patient.
- (iii) Arrangements should be made to inform the next of kin or relative.
- (iv) Complete medical care of all passengers including payment of medical bill still their final discharge should be provided.

4.12.4. Communication:

- (i) STD equipped telephone should be made available to passengers to communicate with their relatives. (Boards letter No.93/Safety-I/6/1 dtd.02.11.93)
- (ii) BSNL/ Railway Telephones available at adjoining Stations/ Cabins/ Gates shall be extended to the accident site.
- (iii) If feasible PCO telephones and other BSNL phones in nearby localities/ villages/ towns shall also be extended to the accident site by persuading owners of these phones.
- (iv) SM should can hire a few mobile phones in case passenger train accidents to meet the needs of stranded passengers wherever cellular phone connectivity available. Stranded passengers should be permitted to use these phones free of charge. Boards letter No.2002/Tele/TN/1dtd12.05.03).

4.12.5 Taking care of relatives:

- (i) A hired vehicle should be provided relatives of affected passenger for carrying them to various hospitals and mortuary.
- (ii) The commercial supervisor or WLI should stay with the relative until he has been able to either find the injured passenger or identify the dead body
- (iii) Thereafter, they should help him in completing all formalities in the CAC

4.12.6 Single window clearance:

- (i) CAC should have provision of single window clearance for all legal formalities & multiplicity of paper work.
- (ii) Counters provided in CAC should have facilities for following items in the given sequence as indicated in

Annexure –C:

- (a) Reservation chart, for locating the name.
- (b) List of dead and injured along with name of hospital. The name of passengers involved should be checked up from the list of dead or injured, if available, and their current status informed.
- (c) Counter for providing commercial supervisor or WLI as escort along with a vehicle, for accompanying the relative and going around to various hospitals or mortuary.
- (d) Railway doctor for issue of Medical Death Certificate.
- (e) Govt. Doctor for issue of Post Mortem Clearance, in case the same is necessary.
- (f) Municipality official for issue of Official Death Certificate.
- (g) Local police for issue of authority for handing over of dead body.
- (h) Claims counter-payment of ex-gratia and issue of Claims Compensation From.
- (i) Counter for helping performance of last rites incase relatives decide to cremate the body there itself.
- (j) Pass counter for issue of return journey pass.
- (k) Return Journey facilitation counter will make arrangements for return journey.

4.13 MANAGEMENT OF FIRE IN TRAINS

Fire on a running train is more catastrophic than on a static one, because the fanning effect may spread the fire very quickly to other coaches and in panic the passengers may jump out of a running train as it had happened in past train accidents. Under such situation, every railway servant available on the train or at the site shall immediately try and stop the train and plunge in to action to save lives and property. In this context, the railway servants are expected to have a basic knowledge on fire and firefighting methods.

4.13.1 Main causes of fire in Trains:

- (i) Carrying stoves, sigris, gas cylinders, kerosene oil, petrol, fireworks etc. in passenger compartments.
- (ii) Making fire/ using fire near paper, wood, petrol or such other inflammable articles.
- (iii) Lighted match sticks, cigarette ends carelessly thrown.
- (iv) Short circuit in electrical wirings.
- (v) Using naked light during authority token delivery to the driver, shunting of inflammable loads, sealing of inflammable wagons.
- (vi) Use of open fire, smoking near gas/petrol tank.
- (vi) Continuous heating due to brake binding, hot axles, etc.
- (vii) Split/leaking of liquid chemical/ fuel.
- (viii) Pantry cars/ Power cars

All railway staff and passengers should take all possible precautions to avoid any of the above mistakes so that possibility of fire breaking out can be minimized. In general fire originates in a small level. When burning materials with adequate supply of air surround it, fire spreads.

4.13.2 ACTION TO BE TAKEN IN CASE OF FIRE IN TRAIN:

- (i) First and foremost, immediately summon the fire brigade.
 - (ii) Secondly, if you smell gas or vapor, or even in case of excessive smoke, hold a wet cloth loosely over your nose & mouth and breathe through it in as normal a manner as possible.
- a) **In case of fire in a passenger train:**
- (i) In case of fire pull the Alarm, Chain and stop the train immediately.
 - (ii) Try and put out the fire before it becomes a big blaze by using either water or blankets etc.
 - (iii) More people expire due to suffocation from smoke rather than due to actual burning.
 - (iv) Advise passengers to take a cloth, wet it in their drinking water and cover their nostrils.
 - (v) Instruct Passenger to go to the other end of the coach, which is away from the fire, and if possible cross over to the next coach through the vestibule.
 - (vi) Insist that passengers should save themselves first and not to bother about their luggage which can be retrieved later on.
 - (vii) Make sure that no passenger lies down on the floor.
 - (viii) After train has stopped, passengers should come down from the coach immediately.
 - (ix) Building up confidence of injured passengers by suitable advice is of great importance.

b) In the event of a vehicle on a train being on fire:

- (i) Stop the train immediately.
- (ii) Don't panic.
- (iii) Evacuate passengers from burning coaches.
- (iv) Protect property, valuables & mails.
- (v) Locate fire extinguishing substances viz, water bucket with water/sand, fire extinguishers etc.
- (vi) Use fire extinguisher if any and put out the fire.
- (vii) Use water from the coaches and extinguish the fire.
- (viii) Throw earth or sand, if available, on the fire.
- (ix) Ascertain the type of fire viz, dry, oil gaseous, electric and use the right type of extinguishers.
- (x) Isolate the burning vehicle from other vehicle by uncoupling.
- (xi) Train to be protected by Driver and Guard at both ends according to the provision of **G&SR 6.03**.
- (xii) Report it to the nearest station/ control/ fire station.
- (xiii) Every effort shall be made to extinguish the fire and to save the wagon labels, seals and contents of the vehicle.
- (xiv) In case fire is discovered when the train is near a tank or watering station, the Guard and Driver shall use their discretion to proceed there but no such attempt shall be made until the portion of the train in rear of burning vehicle has been detached.
- (xv) Inform all concerned to assist in extinguishing the fire.
- (xvi) In case of fire from electrical short circuit switch off the source.

4.13.3 In the event of fire on an Electric engine/ EMU:

- (i) Loco Pilot/Motormen shall immediately switch off the circuit and lower the pantograph. The train shall then be brought to a stop at once.
- (ii) After disconnecting the electric supply to affected circuits, Loco Pilot/Motormen shall take necessary action to put out the fire.
- (iii) If fire cannot be extinguished by the above means Loco Pilot/Motormen shall advise TPC through emergency telephone to arrange for the affected section OHE to be made dead.
- (iv) The guard and any other staff available shall render all possible assistance to the Loco Pilot/Motormen in putting out the fire.
- (v) Ordinary fire extinguishers or water from a hosepipe shall on no account be used to extinguish fire on live wire or electrical equipment. If services of fire brigade are required, fire brigade shall not be allowed to commence operation until all electrical equipment in the vicinity of the fire has been made dead.

4.13.4 In the event of a fire on a Diesel Engine/ DMU stock:

- (i) The Loco pilot/Motorman shall immediately switch off the circuit breaker and shut down the engine. The train shall be brought to stop at once.
- (ii) The Guard shall give all possible assistance to the Loco pilot/Motorman in putting out the fire.
- (iii) Fire extinguishers of approved type shall be provided on each diesel locomotive and motor coach of DMU when these are turned out from the home shed. The Foreman/ CWS in charge of the shed shall inspect the fire extinguishers and ensure that these are in good working condition.

4.13.5 When a person is on fire:

- (i) Approach him holding the nearest available wrap in front of you.
- (ii) Wrap it round him.
- (iii) Lay him flat and smother the flames.
- (iv) He may roll on the floor, smothering the flames.
- (v) On no account should he rush out in the open air.
- (vi) Call for assistance.

4.13.6 Fire caused by Petrol or other inflammable liquids, acids or gases:

- (i) Segregate the affected wagon, coach or area involved.
- (ii) On opening a wagon do not enter it immediately. You would thus, avoid fumes, which may be dangerous.
- (iii) Use foam type fire extinguishers and sand and not water or soda acid type fire extinguishers.
- (iv) Do not bring naked lights near the site of fire.
- (v) Warn the people living in the surrounding areas within one Km. Radius.
- (vi) Stay away from ends of tanks, as tanks normally burst from the ends.
- (vii) Cool tanks that are exposed to flames with water from the sides only after the fire is put out.
- (viii) With draw immediately in case of rising sound from venting safety device or any discolouration of tank due to fire.
- (ix) Inform the nearest Fire Station intimating that Petrol or any other inflammable liquids, acids or gases, have caused the fire.

4.13.7 In case of fire due to Explosives/ Inflammables/ Dangerous Goods:

- (i) Extinguish by closing the valve or isolating LPG feed to fire by other suitable controls.
- (ii) Following steps may be taken if no undue risk is involved:
 - (a) Move unheated cylinders to a safe place after ensuring closing of valves.
 - (b) Cool the hot cylinders by spraying water from a safe position. The person directing the spray should take up a position where he would be protected from possible explosion.
- (iii) If cylinder containing inflammable/ toxic gas develops leak during transportation, remove it to an isolated open place away from any source of ignition and advise the filler or consigner as required.
- (iv) Inform the Chief Controller of Explosives by fax / telephone.
- (v) Inform officer incharge of nearest police station.
- (vi) Inform department officers concerned.
- (vii) Pending the visit of the Chief Controller of Explosives/his representative, the wreckage and debris shall be left undisturbed except to save lives.
- (viii) After getting information from the Chief Controller of Explosives that he does not wish any further investigation, the restoration work may be commenced.

4.13.8 FIRE FIGHTING:**4.13.8.1. Dry chemical powder type fire extinguisher (DCP):**

These types are suitable for tackling petroleum, gas, electrical fire and controlling fires of textile fibres. Sodium based chemical powder is used on a fire which undergo chemical reaction.

4.13.8.2. How to Use Dry chemical powder type fire extinguisher (DCP):

- (i) Carry to the place of fire and keep it upright.
- (ii) Remove the safety clip.
- (iii) Strike the knob located in the cap.
- (iv) Sealing disk of the cartridge gets broken and allows carbon dioxide gas to escape to the main shell and powder is pushed out.
- (v) Direct the stream of the powder at the base of the flame.
- (vi) For effective result stand at about 1.5 to 2.5 metre near the seat of the fire.
- (vii) Move forward with moving the nozzle rapidly from side to side in sweeping motion.
- (viii) When using on outdoor fires operate from the upwind side for effective spray.

4.13.8.3 Building Evacuation:

When the building fire alarm sounds:

- (i) Immediately evacuate using building emergency plan procedures.
- (ii) Walk to nearest exit/ stair well (close doors behind you)
- (iii) Don't use elevators.
- (iv) Proceed to the designated gathering area outside the building.
- (v) Do not re-enter building until cleared by authority personnel.
- (vi) Assist with evacuation of individuals with special needs.

Fire Safety: Precaution to be taken in case of fire accident**Do's:**

- Buy Fireworks from the licensed shop.
- Keep fireworks in a closed box.
- Store crackers away from source of fire or inflammation.
- Follow all safety precautions issued with the fireworks.
- Go to open spaces like play grounds, fields.
- Light the marm's length using taper.
- Stand back while lighting the crackers.
- Discard used fireworks in a bucket of water.
- Keep buckets of water and blankets ready, in case a fire breaks out.
- Wear thick cotton clothes for maximum safety from fire.
- If clothes catch fire, Stop, Drop and Roll.
- In case of uncontrolled fire wrap the victim in a blanket, till it stops.
- In case of burns splash tap water (notice water), the process may be repeated till the burning sensation reduces.
- If fingers or toes are burned, separate them with dry, sterile, non-adhesive dressings.
- Make sure the burn victim is breathing, if breathing has stopped or if the victim's airway is blocked then open the airway and if necessary, begin rescue breathing.
- Elevate the burned area and protect it from pressure and friction.
- Cover the area of the burn with a moist sterile bandage, of clean cloth (do not use blanket or towel for healing burns).
- Consult the doctor as soon as possible for the proper medication.
- Consult an ophthalmologist immediately in case of eye injuries.
- Do contact at the Fire Brigade (Tel.No. 101), for getting the details of the doctors on duty during the festival.

Don'ts:

- Don't burn crackers in crowded, congested places, narrow lanes or inside the house.
- Don't let children burst crackers unaccompanied by an adult.
- Don't put fireworks in your pocket or throw them.
- Don't cover crackers within containers or glass bottles for extra sound effect.
- Don't dare to examine sunbursts crackers...leave it!! Light a new cracker.
- Don't show the Dare-devilry of lighting crackers on own hands.
- Don't use fireworks inside a vehicle
- Avoid long loose clothes, as they are fast in catching fire.
- Don't remove burnt clothing (unless it comes off easily), but do ensure that the victim is not still in contact with smoldering materials.
- Don't apply adhesive dressing on the burnt area.
- Don't break the burst blister

4.13.8.5. Suspicious substance in Railway premises:

- (i) Clear and isolate the contaminated area. Do not touch or disturb anything.
- (ii) Call police/ fire service/ bomb squad.
- (iii) Wash your hands with soap and water.
- (iv) Identify individuals who may have been exposed to the material.
- (v) Do not leave premises until disposed by authority.

4.14 Other Accidents**4.14.1****Bomb Threat/ Blast:**

Person receiving call regarding bomb threat should:

- (i) Attempt to gain as much information as possible from the caller like type of device, time set, location, reason/ purpose of the act, dialect mannerism and identity of the caller.
- (ii) Inform and alert the disaster management team (Bomb detection squad)
- (iii) Alert police, fire brigade and explosive department.
- (iv) Pass on the information to all departments concerned.
- (v) Take initiative for evacuation of all persons from premises.
- (vi) Persons noticing a bomb like object, should bring it to the notice of the nearest available officer.
- (vii) Inform GRP, RPF, and bomb detection squad.
- (viii) Ensure all persons are away from the spot and avoid unnecessary crowding near the area.
- (ix) Inform control to take further steps for regulating train services.
- (x) Wait for clearance from the police department to restore normal working.
- (xi) Utilise "Caller ID" facility if provided to trace the caller.

4.14.2.**Radiation Emergency:****4.14.2.1****Personal Injury Involving Radioactive Material Contamination:**

- (i) Render first aid immediately for serious injuries, as trained.
- (ii) Call bomb squad, fire station.
- (iii) If possible, without causing harm to the victim, monitor the injured; remove contaminated clothing and gross personal contamination.

4.14.2.2**Radioactive Contamination of Personnel:**

- (i) Remove and bag all contaminated clothing.
- (ii) Call fire station, bomb squad, and police.
- (iii) Skin contamination should be cleaned using mild soap and tepid water. Use portable survey meter to monitor for remaining contamination. If not free of contamination, re-wash and re-survey.

4.14.3**What to do upon Receipt of Suspicious Letter/ Package:**

- (i) Handle with care.
- (ii) Don't shake or bump.
- (iii) Isolate and look for indicators.
- (iv) Don't open, smell or taste.
- (v) Treat it as suspect.
- (vi) Call Police/ Fire service/ Bomb squad.

4.14.4**If Parcel is open and/ or Threat is Identified:****4.14.4.1****For a bomb:**

□

Evacuate immediately and Call Police/Fire service/Bomb squad.

4.14.4.2**For Radiological:**

- Limit exposure-don't handle and Evacuate area.
- Shield yourself from the object and Call Police/ Fire service/ Bomb squad.

4.14.4.3**For Biological or Chemical:**

- Isolate-don't handle and Call Police/ Fire service/ Bomb squad.
- Wash your hands with soap and water.

4.14.4.5.**Tampering of Railway fittings causing accident & placing of foreign particle on track to cause disruption to traffic:**

- (i) A staunch vigil should be kept by introduction of special patrolling over the area as and when warranted.

- (ii) Some persons to be trained specially and to be drafted for duty over the area if required.

4.14.5 ACTION PLAN FOR BOMB THREAT & TERRORIST ATTACK

Bomb Explosion and Mitigation Process: -

A bomb is an explosive device that generates and releases its energy very rapidly. The explosion creates a violent, destructive shock wave.

Cause of Bomb Explosion: -

1. Terrorist/Anti-social element.
2. Due to war between two countries.
3. Atomic and Nuclear reactors.

Risk Involved

1. Mass destruction of human being and object.
2. Lifelong injury.
3. Huge financial loss.
4. Genetic disorder.
5. Environmental pollution.

Person Receiving Call Regarding Bomb Threat Should:

1. Remain calm and talk to the person as long as he can.
2. Try to keep the caller on the line, obtaining as much information as possible.
3. Ask for specifics such as time of detonation, description of bomb, location, reason/ purpose of the act, dialect mannerism and identity of the caller.
4. Inform and alert the authorities.
5. Alert police, fire brigade and explosive department and bomb detection squad.
6. Pass on the information to all departments concerned.
7. Take initiative for evacuation of all persons from premises and avoid unnecessary crowding near the area.
8. Persons noticing a bomb like object, should bring it to the notice of the near available officer.
9. Inform control to take further steps for regulating train services.
10. Stop the train movement immediately and detrain the passengers and move them away from the premises.
11. Wait for clearance from the police department to restore normal working.
12. Utilize "Caller ID" facility if providing to trace the caller.

In case of Explosion following steps to be followed:

1. Remain Calm and keep an eye on suspicious movement.
2. Evacuate the building immediately.
3. Information to the fire brigade, Police, Control and Divisional officers.
4. Assist the injured and disabled persons.
5. Call the Ambulance and other emergency services.

In case of Threat of Terrorist Attack:

Precautions:

1. Keep the possibility of entrapment in mind.
2. Avoid obvious means of entry.
3. Avoid hand movement of suspicious objects.
4. Look for things out of place.

5. Avoid development of fixed daily personal or group habits.
6. Provide 24-hour security for assembly points.
7. Be particularly alert to entrapment situations when changing shifts.
8. Avoid predictable pattern of patrol.
9. Don't panic if the vehicle is struck by petrol bomb.
10. If fire bombed, don't Panic. It only seems more dangerous than it actually is.
11. If a suspicious container or package is found, immediately alert all officers and security and get out.
12. Insist that the person desiring to leave the package should open it and display the contents.
13. Conduct a careful visual inspection.
14. Never attempt to open or inspect the suspicious package on your own.
15. If a suspicious package is found abandoned, clear the area and notify the bomb squad.
16. If a vehicle is found in an abandoned state, visually inspect any package found inside the vehicle.
17. In case of abandoned vehicle, do not flip switches, turn knobs, release hand brakes, blows the horn, step on the brake or perform other operations until you are sure that no bomb is located in or under the vehicle.
18. Upon arrival, security staff, as rapidly as possible conduct a thorough search of the area surrounding the bomb scene.
19. A security staff must remember to completely search the area even when a second bomb is found. He must lookout for the third and fourth bomb.
20. Security staff must check those areas that lead to the bomb scene as well as vehicle parking areas.

Prevention:

1. Leave undisturbed any suspicious, abandoned articles encountered.
2. Leave undisturbed any bomb encountered even if it is "DUD".
3. If a suspected bomb is found, clear the area to a minimum distance of 300 meters.
4. Request for bomb squad assistance.
5. If the bomb is to be moved, use remote means.

Role of Civil Police, GRP, RPF Staff etc.

1. Immediately reach at the site and cordon off the area.
2. Clear the suspected place of the public.
3. Should not allow any unauthorized person to the minimum distance of 300 meters if any suspicious object suspected to be bomb is found.
4. They will rush to the site with the sniffer dogs.
5. Special bomb squad will reach at the site to diffuse the suspected bomb.
6. In case of terrorist attack, the police will cordon the area.
7. Message of not to panic to be circulated among the public.
8. The police officials should carry a special visual inspection to remove any sign of suspicion.
9. The police even after a bomb being blast should lookout for the other bomb still they are satisfied.

Mock Drill:

The mock drill for bomb or terrorist attack may not be done in the manner as other mock drills are conducted as it may create panic. It may be conducted in such a manner so that alertness and readiness of RPF/GRP staff may be checked.

CHAPTER-5**STRENGTHENING DISASTER RISK GOVERNANCE****5.1 Background:**

Strengthening disaster risk governance is considered a corner stone of the efforts to understand, reduce and manage risks in global practices (UNDP 2015). UNDP defines disaster risk governance as follows (UNDP2013):

“The way in which public authorities, civil servants, media, private sector, and civil society at community, national and region a level cooperates in order to manage and reduce disaster and climate related risks. This means ensuring that sufficient levels of capacity and resources are made available to prevent, prepare for, manage and recover from disasters. It also entails mechanisms, institutions and processes for citizens to articulate their interests, exercise their legal rights and obligations, and mediate their differences.”

The concept has evolved over the last decade and the current thinking acknowledges that one cannot separate governance of disaster risk from the governance of other types of risks, including those associated with global climate change, environmental degradation, financial crises, and conflict situations (UNDP 2015). From the mid-2000s onwards, governance was commonly accepted as the crux of DRR, with comprehensive efforts underway to increase the DRR capacity of national and local institutions; to strengthen policy, legal and planning frameworks; to develop human and financial capacities; and to promote multi-stakeholder and multi-disciplinary approaches. There is now greater emphasis on accountability, transparency, responsiveness to the needs of those most at risk, and ensuring the rule of law/compliance with legal provisions. These are of crucial importance in disaster risk governance.

5.2 Sendai Framework and Strengthening Disaster Risk Governance:

The Sendai Framework states that disaster risk governance at different levels is of great importance for an effective and efficient management of disaster risk. It also requires clear vision, plans, competence, guidance, and coordination within and across sectors, as well as participation of relevant stakeholders. Strengthening disaster risk governance is necessary to foster collaboration and partnerships for the implementation of disaster risk reduction and sustainable development. The Sendai Framework lays emphasis on the following to strengthen disaster risk governance:

- a) Mainstream and integrate disaster risk reduction within and across all sectors and promote the coherence and development of relevant laws, regulations, and public policies. It must guide both the public and private sectors through the legal framework that clearly spells out the roles and responsibilities. It must address disaster risk in publicly owned, managed, or regulated services and infrastructures. It must encourage actions by persons, households, communities, and businesses. It has to enhance relevant mechanisms and initiatives for disaster risk transparency. It must put in place coordination and organizational structures.
- b) Adopt and implement disaster risk reduction strategies and plans, across different levels (local to national) and timescales, aimed at preventing the creation of risk, the reduction of existing risk and the strengthening resilience-economic, social, health and environmental.
- c) Carry out assessment of the technical, financial and administrative disaster risk management capacity to deal with the identified risks at different levels.

- d) Promote necessary mechanisms and incentives to ensure high levels of compliance with the safety-enhancing provisions of sectorial laws and regulations, including those addressing land use, urban planning, building codes, environment, resource management, health and safety standards, and update them, where needed, for better disaster risk management
- e) Develop and strengthen mechanisms to periodically review and assess the progress on various DM plans as well as encourage institutional debates, including by parliamentarians and relevant officials, on DRR plans.
- f) Assign clear roles and tasks to community representatives within disaster risk management institutions and processes and decision-making through relevant legal frameworks, and undertake comprehensive public and community consultations during the development of such laws and regulations to support their implementation.
- g) Establish and strengthen government coordination forums composed of relevant stake holders at the national and local levels, such as national and local platforms for disaster risk reduction.
- h) Empower local authorities, as appropriate, through regulatory and financial mechanism to work and coordinate with civil society, communities and indigenous people and migrants in disaster risk management at the local level
- i) Work with parliamentarians for disaster risk reduction by developing or amending relevant legislation and setting budget allocations
- j) Promote the development of quality standards, such as certifications and awards for disaster risk management, with the participation of the private sector, civil society, professional associations, scientific organizations and the United Nations
- k) Formulate relevant public policies and laws aimed at addressing issues of prevention or relocation, where possible, of human settlements in disaster risk-prone zones.

5.3 Initiatives taken by Ministry of Railways for Strengthening Disaster Risk Governance:

Ministry of Railways has taken a number of initiatives for strengthening Disaster Risk

Governance as per Sendai Framework for Disaster Risk Reduction. Some of the important initiatives taken to reduce the accidents and improve safety are as under:

5.3.1 Measures to Improve Safety:

- **Safety Focus-** To reduce accidents caused by human errors, a multi-pronged approach with focus on introduction of newer technologies, mechanization of maintenance, early detection of flaws, etc.to reduce human dependence in the first place, along with upgrading the skills of the human resources were the prime drivers for accident prevention.
- **Periodical Safety Audits-** Periodical Safety Audits of different Divisions by multidisciplinary teams of Zonal Railways as well as Inter-Railway Safety Inspections were conducted on regular basis. During the year 2018, 83 Internal Safety Audits and 29 Inter-Railway Safety Inspections were carried out.
- **Training facilities** - Special emphasis is being laid on training of Railway Officials specially those looking after areas connected with safety. Training was imparted to 1,55,337 (Provisional figures) Non-Gazetted safety staff during 2018-19.

5.3.2 Infrastructural Inputs:

'Rashtriya Rail Sanraksha Kosh (RRSK)' has been introduced in 2017-18 for replacement / renewal / upgradation of critical safety assets, with a corpus of Rs.1 lakh crore over a period of five years, having annual outlay of Rs.20,000 crore. In the first year of its inception, expenditure of Rs.16091 crore was made out of the Fund for safety works. In 2018-19 also, a provision of Rs.20,000 crore was made, against which expenditure of approximately Rs.18,000 crore has been incurred.

The Funds under RRSK are utilised for safety works relating to Traffic Facilities, Rolling Stock, Level

Crossings, Road Over/Under Bridges, Track Renewal, Bridge Works, Signal and Telecommunication Works, other Electrical Works, TRD Works, Machinery and Plant, Workshops, Training/HRD, Passenger Amenities and Other Specified Works.

Ministry of Finance has issued 'Guidelines for Operation of Rashtriya Rail Sanraksha Kosh (RRSK)', which inter alia, includes Monitoring Framework for RRSK. It stipulates setting up of Monitoring Committee headed by CEO/ NITI Aayog to examine performance. It is also laid down that the progress will be reviewed annually by Cabinet Committee on Economic Affairs headed by Hon'ble Prime Minister.

5.3.3 Measures to avoid Collisions:

To increase efficiency and to enhance safety in train operations, Advanced Signaling System with Panel Interlocking/ Route Relay interlocking/ Electronic Interlocking (PI/RRI/EI) along with Multi Aspect Colour Light Signals have been progressively provided at 94% of the interlocked Broad-Gauge stations on Indian Railways, replacing the obsolete Multi Cabin Mechanical Signaling System, that involved a large amount of human intervention. Route Relay Interlocking (RRI) have been provided on every major yard of Indian Railways for efficient and safe movement of trains.

To avoid collisions technological aids are briefly enumerated below:-

- **Complete Track Circuiting at stations:** - Track Circuit is one of the most important safety aids provided at the stations, which has reduced collisions in station area. A major thrust has been given to track circuiting at stations.
- **Block Proving Axle Counter (BPAC):** -To enhance safety, for automatic verification of complete arrival of train at a station, Block Proving by Axle Counter (BPAC) is being provided at stations having centralized operation of points and signals. Now a days HADAC, which is an improved version of BPAC with dual detection system, or DUALBPAC is being provided for improved system reliability.
- **Automatic Block Signalling:** - For augmenting Line Capacity and reducing headway on existing High-Density Routes on Indian Railways, Automatic Block Signalling is being provided. This results in track circuiting of large portion of the track which leads to enhanced safety.
- **Automatic Train Protection (ATP) System:** In order to enhance safety in Train operations, Indian Railways has decided to provide Automatic Train Protection (ATP) System using a mix of proven European Train Control System (ETCS) level 2 and an indigenously developed Train Collision Avoidance System (TCAS). The system will be an aid to Loco Pilot, which will help to eliminate accidents due to Signal Passing at Danger (SPAD) and over speeding, ensure visibility of signals in foggy weather in addition to increasing line capacity.
 - **ETCS Level 2** on limited lengths on High Density Networks have been taken up before going for large scale implementation.
 - **Train Collision Avoidance System (TCAS) :-**Indigenous TCAS is under trials and once developed, it will be provided on low density routes.
- **Centralized Traffic Control (CTC) in Indian Railways:** - Centralized Traffic Control is a computer-based system which facilitates the control and management of multiple Signalling installations at various stations from a single location. It also provides a real time simulation of railway traffic in a section at a single location. The CTC operator can directly see the train's locations on an electronic display panel and efficiently control the train's movements by operating signals and points centrally.
- **Train Management System (TMS):** - It is another area of technology upgradation for Centralized Monitoring and Management of Train traffic already functional on Mumbai Suburban section of Western Railway and Central Railway, provides live train movements in the Control Centre.

5.3.4 Measures to Reduce Derailments:

- To improve safety, Indian Railways (IR) has been using Pre-stressed Concrete sleepers (PSC) which are economical and functionally best suited for high speed and heavy density traffic. PSC sleepers are being used for all renewals, newlines, doubling, gauge conversion, etc.
- A new design of wider sleeper has been developed and adopted. The new design is considered to be functionally better than the present design. The wider and heavier sleeper offers higher frame resistance, less stress on ballast and rail pad, improving reliability and maintainability of track.
- Upgradation of Track Structure consisting of pre-stressed Concrete (PSC) sleepers, 60Kg high strength 90UTS (90N/mm² Ultimate Tensile Strength) rails on concrete sleepers, fan shaped layout on PSC sleepers, Steel Channel Sleepers on girder bridges has been adopted on most of the routes.
- Standardization of track structure with 60Kg Rails and PSC Sleepers: Track structure is being standardized with 60 kg rails and PSC sleepers on all the Broad-Gauge routes, especially on high-density routes to reduce fatigue of rails under higher axle-load traffic. New track construction and replacement of over-aged tracks is being done by PSC sleepers only.
- **Rail Fracture Detection System-** Rail / weld failures are potential safety hazards. Advanced Railway systems are using the systems, which alerts all concerned in case of failures and train operations are controlled to prevent consequential train accidents. No such system is available on IR. Suitable technology will be developed in association with advanced railway systems for use on IR. A trial of broken rail detection system on NR & NCR on 25 Kms track length in each has been undertaken. After successful trial, this system will be progressively installed on other important routes.
- **In-motion Weighbridges** - The in-motion weigh bridge helps detect overloading in wagons. This reduces fatigue of rail/welds and, therefore, reduces chances of fracture. Installation of in-motion weighbridges is done as and when required as per changes in traffic pattern and emergent requirements and is a continuous process.
- **Long welded rails:** For improving maintenance and better asset reliability, Railways are consistently eliminating fish plated joints on tracks by welding the joints to convert all single rails into long welded rails to the extent possible. During relaying/construction of new lines/gauge conversion also, long welded rails are laid on concrete sleepers to the extent possible. Mobile Flash Butt welding is being done on priority in construction projects.
- **Flash Butt Welding:**
 - o Flash Butt Welding of rails on IR is carried out by using Stationary plants and Mobile machines.
 - o FBW is done using electrical current and enough heat is generated by using the resistance of rails. No external material is used and Welding takes place by fusion of parent rail metal.
 - o Approval of Quality Assurance Plan and Welding Parameters are Standardized by RDSO for both Stationary and mobile plants before execution of Work.
 - o FB Welding is carried out as per Indian Railways Manual for flash Butt Welding of Rails, 2012(FBWM).
- **Direct supply of 260 m long rail panels from steel plants:** Railway has started production of 260m long rail panels (having only one flash Butt weld at middle) at steel plant, which are being transported directly to relaying sites. Now onwards 80% of total requirement of rails will be supplied in 260 m long panels and remaining 20% in form of free rails (10% of 13m length and 10% of 26m length). With the help of these panels numbers of welded joints will reduce substantially. This will reduce potential of Rail/ Weld failures.

5.3.5 Measures Taken to Prevent Fire in Trains:

Instructions have been issued for provision of the following items in coaches during manufacturing at Production Units to improve the safety features of these coaches:

- o Fire detection and suppression system in all newly manufactured Power Cars and Pantry Cars.
- o Fire and Smoke detection system in all newly manufactured AC coaches.
- o Double Acting AC compartment doors in all newly manufactured AC coaches.
- o Fire extinguishers in all newly manufactured non-AC coaches.
- o Automatic plug type doors in all newly manufactured Humsafar and Uday train coaches.

Apart from this, the existing AC coaches are being retro fitted with Fire and Smoke detection system and existing Power Cars & Pantry Cars are being provided with Fire detection and suppression system.

5.3.5.1 Curbing Fire hazards in Pantry Car:

- o With a view to curb fire hazards in pantry car, Board has issued guidelines for upkeep of pantry car equipment to ensure that all equipment and gadgets are in working order and in safe condition.
- o Electrical gadgets in Pantry Cars should be operated only by the authorized electrical staff, nobody else.
- o Zonal Railways have been advised to remove the cardboard cartons after loading the food articles and they are to be kept in containers made up of fire-retardant materials such as insulated metallic boxes.
- o Ticket checking staff should permit only those persons in Pantry Car & Power Car (Railway Staff and Pantry Car Staff) whose names are appearing in reservation chart of pantry car and Power Car and having valid travel authority.

5.3.5.2 Fire Detection and Suppression System at Important Installations:

Fire at vital installations paralyses the train movements. Fire detection system is being provided at vital installations. Firefighting equipment are being provided at such installations. Staff have been trained to use these equipment's.

5.3.6 Measures to Curb Accidents at Level Crossings:

Various measures taken by Indian Railways to prevent accidents at level crossings are as under:

- (a) **Elimination of Level Crossing:** Level crossings are meant to facilitate the smooth running of traffic in regulated manner governed by specific rules & conditions. Indian Railway has decided to progressively eliminate the level crossings for the safety of Road users and train passengers. During the year 2018-19, 3479 Nos. of unmanned level crossings and 631 Nos. of manned level crossings have been eliminated. As of September 2019, all unmanned Level Crossings on Broad Gauge have been eliminated.
- (b) **Provision of Road Over/Under Bridges:** To improve safety of train operations and reduce in convenience to road users, level crossings are being replaced by Road Over/ Under Bridges/ Subways (ROBs/ RUBs) in a phased manner based on the quantum of traffic. During the year 2018-19, 172 ROBs and 1305 RUBs/Subways have been constructed under cost sharing, railway cost, Depos it / BOT term and by NHA over Indian Railway. Works for construction of 1581 ROBs and 5751 RUBs/Subways have been sanctioned. These are at various stages of planning and execution.
- (c) **Interlocking of Level Crossing Gates:** Western Railways has provided interlocking with Signals at 885 Level Crossing Gates as on 31.03.2020, to enhance the safety at Level Crossings.
- (d) **Action Plan for Road Users' Safety:** To reduce accidents at manned and unmanned level crossing gates will adopt following multi-pronged strategy: -
 - Existing task force of the Ministry of Railways and State Governments for construction of ROBs / RUBs would be made more effective.
 - Items to be resolved between the Ministry of Railways and Ministry of Road Transport and Highways.
 - Sliding booms are additionally being provided at interlocked level crossing gates to enhance safety and reliability.
 - Speed breakers at level crossings, their standards and maintenance.
 - Testing of driving license applicant by RTOs, with regard to thorough knowledge pertaining to level crossings.
 - Widening of roads at selected high-density locations to ease movement.
 - Training and counseling of road users.
 - Lifting barriers with retro -reflective markers in lieu of gate leaves shall be provided on double and multiple lines.
 - On manned level crossings, with more than 500 road vehicles per day and where possible, the road width shall be widened in railway land.

- Signalling Systems like Interlocking arrangements and provision of telephone sat LC gates enhances safety considerably.
- Inclusion of Do's and Don'ts near level crossings in primary school curriculum.
- Intensive social awareness campaigns to counter misadventure in front of approaching trains.
- Basic infrastructure on all unmanned level crossings will be ensured and it includes provision of adequate width, normal gradient, level surface for 5m from centre of the nearest track, Whistle Boards in retro-reflective sheets, specified Road Warning Boards, road surface in good condition and speed breakers/ rumble strips etc.
- Periodic census of level crossings will be carried out by multi-disciplinary teams.
- Compulsory whistling by train drivers by linking loco whistle to the Vigilance Control Device (VCD).
- On sections where there are a number of unmanned level crossings, at close proximity, RUBs may be constructed at a convenient location and the remaining level crossings closed.
- Checking visibility levels at all unmanned level crossings, and taking corrective action for their improvement.
- Appropriate approach road gradients within railway boundary to be ensured.
- Gate Mitras have been deployed on unmanned LCs on Meter Gauge, Narrow gauge and on private sidings in BG.

5.3.7 Better and Safer Coaches:

Design of lightweight, stainless steel passenger coaches has been procured through a Transfer of Technology (TOT) contract from M/s Linke Hofmann Busch (LHB) of Germany. The coach provides better ride index at higher speeds. The design provides a higher safety level as a result of modern technology in use in the design of high-speed bogies.

LHB coaches have better riding, aesthetics, higher passenger capacity and safety features as compared to conventional Integral Coaches Factory (ICF) coaches. The Production of LHB coaches in production Units has continuously increased over the years. Only LHB coaches are being manufactured from April 2018 onwards.

5.3.8 Prevention of Accident Due to Fog:

Zonal Railways should ensure that the staff be advised and counselled regarding provisions in the General & Subsidiary Rules (G&SRs). Every Crew to be imparted necessary training for up to two days about the system of working of trains during fog. With the use of fog devices in locomotives, the maximum permissible speed during foggy/ inclement weather condition be enhanced from 60 KMPH to 75 KMPH subject to the judgement of the Loco Pilots. Zonal Railways should comply instructions issued from Railway Board on fog from time to time. As per latest instructions on foggy/inclement weather, major precautions to be taken by Zonal Railways for safe train operations are briefly described below:

- Provision of Fog Safe Device: Reliable Fog Safe Devices may be provided to the Loco Pilots in all locomotives running in fog affected areas during foggy weather. Placement of detonators under conditions as contained in Railway Board's letter No.98/Safety(A&R)/19/16 dated 23.10.2018 shall be dispensed with.
- Necessary works like adequate supply of detonators, fitting of LED flasher tail light, painting of Signal sighting Boards, fog signal posts, whistle boards etc. Should be completed before onset of winter/foggy season.
- Reduced movements in the coaching yards, approach to terminals and at/near terminals etc. has to be done to reduce pressure on congested areas.
- Fog affected Railways should review the crew changing location.
- Placement of Visibility Test Object (VTO).

Precautions to be taken by Loco Pilot during Fog:

- When Loco Pilot feels that visibility is restricted due to fog, the speed shall in any case not be more than 75 KMPH. In case Fog device is not available in locomotives or the device fails enroute the maximum speed of 75kmph as indicated above shall be reduced to 60kmph or less subject to judgement of Loco Pilot (Railway Board's letter No.98/Safety(A&R)/19/16dte.25.10.2019)
- LP to whistle frequently to warn gateman and road users at level crossings.
- In Automatic Block territory the speed will be subject to the judgement of the LP i.e. after passing Automatic Stop Signaling Green, Double yellow and at Yellow the speed not to exceed 75 Kmph, 30 Kmph and at a further restricted speed so as to be prepared to stop at next stop signal respectively.

5.3.9 Other Measures:

- **Constant Review of Safety Performance at Board's apex level**-Safety performance is invariably reviewed as a first item on Agenda of Board Meeting at the apex level. All accidents are analysed in detail so that remedial measures can be initiated.
- **Safety Review meeting with Zonal Railways**– Chairman and Board members have conducted Safety Review Meetings with General Managers and PHODs of zonal railways during their visits as well as through video conference.
- **Intensive Footplate Night Inspections**-Intensive Footplate Inspections including night inspections have been conducted at the level of SAG, branch officers and supervisors in the field.
- **Regular Safety Drives & awareness campaigns** –Safety drives and awareness campaigns have been launched from time to time, covering the lessons learnt from recent train accidents so as to prevent similar accidents in future.
- **Bridge Inspection and Management System**: Modern Bridge Inspection techniques have been adopted, which includes testing by non-destructive testing equipment, under water inspections, monitoring the water level with the help of water level system etc.
- **Patrolling of Railway Tracks**: During adverse weather conditions patrolling of railway tracks including night patrolling is carried out at vulnerable locations regularly.
- **Vigilance Control Device**-All electric and Diesel locomotives are equipped with vigilance control devices (VCD) to ensure alertness of Loco Pilot.

Chapter-6

CAPACITY BUILDING TO HANDLE DISASTER

6. Capacity Development–An Overview:

6.1 Background:

Capacity development covers strengthening of institutions, mechanisms, and capacities at all levels of all stakeholders. The United Nations International Strategy for Disaster Reduction (UNISDR) defines 'Capacity Development' for DRR as follows:

“The process by which people, organisations and society systematically stimulate and develop their capability over time to achieve social and economic goals, including through improvement of knowledge, skills, systems, and institutions - within a wider social and cultural enabling environment.” (UNISDR, 2009)

It is an important component of investing in disaster risk reduction. In the domain of disaster risk management, the Sendai Framework emphasizes the need for enhancing the technical, financial, and administrative capabilities of institutions, governments, and communities to deal with the identified risks at different levels. The framework calls for reinforcing the capacity to implement, and enforce risk reduction measures. Capacity development commonly refers to a process that is driven from the inside and starts from existing capacity assets. The framework underlines the need for capacity development of women in disaster management and building their ability to participate effectively in managing disaster risk.

Investing in capacity development for DRR will be a continuing process to enhance the capability of individuals, agencies, and communities to improve the performance of their DM functions. The process of capacity building will include elements of human resource development, i.e., individual training, organizational development such as improving the functioning of groups, and the strengthening of organizations, regulations, and institutions. Involving stakeholders through participatory approaches is essential to establish ownership and commitment. The sustainability of capacity development initiatives increases in direct relation to the level of participation and ownership of the internal partners. In order for capacity development for disaster risk reduction to be effective, it must be clear in its purpose.

As capacity development entails activities at various levels, i.e. legal and institutional frameworks, systems of organisations, organisation and human and material resources, it is necessary to address challenges on all of them by implementing a mix of activities, on short and long term. The reason for this is that changes at one level often require changes at other levels too, as the levels are interdependent. Therefore, the focus of many capacity development efforts for DRR must go beyond human resource development and pay enough attention to organisational and institutional issues. Public and private investment in disaster risk prevention and reduction through structural and non- structural measures are essential to enhance the resilience to disasters. Investing in capacity development is the cost-effective way to save lives, prevent or reduce losses and ensure effective recovery and rehabilitation.

The NPDM 2009 underlines the need for a strategic approach to capacity development and notes that the active and enthusiastic participation of various stakeholders is necessary for it to be effective. The national policy notes that capacity development must address the challenge of “putting in place appropriate institutional framework, management systems and allocation of resources for efficient prevention and handling of disasters.”

6.2 Capacity Development Themes:

The capacity development covers all aspects of disaster management. The key aspects and broad thematic areas for capacity development applicable to these dimensions of DM are summarized in Table 6-1. The hazard-specific capacity development needs for prevention and response are given in the plan matrix of the Chapter-3 and Chapter-4. The list is indicative, illustrative, and not exhaustive. Further, those chapters provide certain extent of detailing. Even those are indicative and in consonance with national, regional, and global practices, there will be changes, which will be incorporated in the periodic revisions of the plan and during its implementation. The effort will be to follow the emerging best practices.

Table6-1: Summary of Broad Capacity Development Themes:

Capacity Development Themes	
KeyAspect	Thematic Areas
Prevention or mitigation for disaster risk reduction	Hazards, Risk and Vulnerability Assessment • Human resource development • Institutional strengthening • Launching demonstration projects • Safety education in educational institutions • Improve the awareness and preparedness of stakeholders at all levels • Documenting lessons from previous disasters and ensuring their wide dissemination • Preparing DM plans, regular updating, and mock drills • Institutional arrangements, policies, legal support, and regulatory framework • Developing appropriate risk transfer instruments by collaborating with insurance companies and financial Institutions • Strengthening early warning systems • Main streaming of disaster risk assessment, mapping and management into development plans and programs • Revision of building codes and standards for rehabilitation reconstruction practices both for urban and rural areas • Retrofitting techniques • Rapid visual surveys for safety evaluation of buildings • Training and skill development for masons and other artisans. • Reinforce systems to implement, monitor, and enforce regulations for DRR to promote disaster-resistant built environment • Promoting community-based DM taking into account specific needs, regional diversities and multi-hazard vulnerabilities • Design and implement social safety-net mechanisms, including community-based systems • Disaster resilience of health care systems by integrating disaster risk management into primary, secondary and tertiary healthcare. • Business resilience, and protection of livelihoods and productive assets throughout the supply chains, ensure continuity of service sand • Integrate disaster risk management in to business models and practices • Preparedness and response plans at all levels. • Community-based DRR and DM

Effective preparedness and response	Emergency Response Capabilities —EOCs, infrastructure, equipment upgrades and adoption of best available technologies • Strengthening of the Fire and Emergency Service through revamping, institutional reforms, and modernization • Adoption and adaptation of emerging global good practices • Rigorous training and HRD of first responders • Early warnings, maps/satellite data/effective dissemination of information • Table-top exercises, simulations, and mock drills to improve operational readiness of the plans • Rescue equipment at all levels • Systems to provide basic services in emergencies • Housing and Temporary shelters • Medical care for casualties, health care and sanitation • Power and fuel supply management • Transportation systems and network • Logistics and supply chain management • Media relations • Managing the dead, disposal of animal carcasses, and debris • Collection and management of data • Legal services/ support
Recovery and Build Back Better	• Post-Disaster Needs Assessment systems and expertise • Credible damage assessment mechanisms and expertise • Planning capabilities to ensuring coherence of BBB with overall development efforts and goals • Studies and research for incorporating resilience into BBB models. • Studies on past disasters and recovery to draw useful lessons.

The NPDM 2009 envisages a pivotal role for the National Institute of Disaster Management (NIDM) in the area of capacity building. Similarly, the State Disaster Management Institutes and ATIs should play a lead role in the States/ UTs. The NPDM envisages capacity development in the domain of DM at all levels of government and across various autonomous institutions. It also stresses the importance of capacity development efforts to promote community-based DM efforts. The policy notes that to sustain DRR, it is necessary to undertake capacity development across the education sector covering schools to professional institutions. It recognizes that skill development in all sectors to incorporate multi- hazard resistant features along with strengthening of relevant licensing, certification, and standards.

6.3 National Institute of Disaster Management (NIDM) and other Institutions:

The NIDM, in partnership with other research institutions has capacity development as one of its major responsibilities, along with training, research, documentation and development of a National level information base. It will network with other knowledge-based institutions and function within the broad policies and guidelines laid down by the NDMA. It will organize training for trainers, DM officials and other stakeholders. The NIDM will strive to emerge as a 'Centre of Excellence' in the field of Disaster Management. The NIDM will play an important role in developing and facilitating the implementation of a National training schedule for DM. It will also be the nodal institution for Regional and International cooperation for training. There are a number of renowned institutes in various States, which are imparting training in DM. These will be strengthened with financial assistance and such efforts will be replicated by other States/UTs. Also, the DM cells in all Administrative Training Institutes, Police Academies, State Institutes of Rural Development, Training centres of five CAPFs from where NDRF is drawn up (BSF, CRPF, CISF, ITBP, and SSB) and the NDRF Academy, Nagpur will contribute most significantly in developing DM related skills. The capacity of existing institutes needs to be upgraded in accordance with regional and local requirements.

6.4 Capacity Development of Local Bodies–Rural and Urban:

The capacities of Panchayats and ULBs have to be developed in the sphere of disaster management. Without adequate capacity development; the local bodies cannot contribute effectively to disaster management or in ensuring the proper implementation of DM plans. Capacity development is also necessary for true empowerment of the bodies of local self-governance. The elected leaders and officials of Panchayats and ULBs should be trained to competently handle different types of crises, contribute to disaster preparedness, make proper use of available warnings, organize operations such as search, rescue, relief, medical assistance, and carry out damage assessment. They should also have sound understanding of the needs of proper post-disaster rehabilitation. The local leadership can play a big role in disaster management in all stages and in DM planning. Capacity development must aim at increasing the competence of local bodies in all aspects of disaster management, mainstreaming DRR, and in promoting a culture of disaster prevention and DRR. The capabilities of the local bodies have to be developed in financial, technical, and managerial spheres. The state level training institutes (ATI, SIDM, and others) will develop need-based training programs for the capacity development to rural and urban local bodies.

6.5 Training Communities:

Enhancing the capacity of communities, as they are the first responders to disasters, is a significant part of the capacity development process. The Sendai Framework notes the need to build the knowledge of civil society, communities, and volunteers on disaster risk reduction. Capacity building has to include awareness, sensitisation, orientation, and developing skills of communities and community leaders. Assistance from NDRF, Civil Defence, civil society organisations, local community-based organizations, and Self-Help Groups will be encouraged. The overall responsibility to give impetus to leadership and motivation will rest with local authorities, PRIs and ULBs under the overall guidance of State and District authorities.

6.6 National and State Disaster Resource Networks:

Indian Disaster Resource Network (IDRN) is a portal providing nation-wide inventory of DM-related resources covering almost all the basic needs. It is a web-based platform, form an aging the inventory of equipment, skilled human resources and critical supplies for emergency response. Primary focus of IDRN portal is to enable the decision makers to find answers on availability of equipment and human resources required to combat any emergency situation. At the State-level, Government of India has encouraged each state to establish its own State Disaster Resource Network (SDRN) portal on the pattern of IDRN.

6.7 Capacity Development-Ministries and States:

The Central Ministries, departments and agencies as well as the State Governments will take actions for capacity development of different stakeholders as shown in Table 6-2 given below on the basis of proper capacity development needs assessment.

Table 6.2 Summary of Capacity Development

Sr No	Task	Central	Activities	Responsibility In Railways
1.	Deploying good resources, advanced technology and equipment	Gol, NDMA, MHA, All Nodal Min./Dept.	- Identifying existing ones - Identification of gap between existing ones and those required on the basis of hazard risk and vulnerability and lessons learnt from recent past disasters. - Procurements of additional equipment with advanced Technologies	Respective Directorates to identify gaps and initiate action.
2.	Strengthening training institutes for disaster management.	NIDM, MoHRD, MHA, NDMA	- Research and extension support grants - Create/strengthen state level DM institutes.	Establishment Directorate.

6.8 National Disaster Response and Mitigation Funds:

6.8.1 Disaster Management to be inbuilt in Developmental Plans:

The National Policy on Disaster Management provides for development of the Disaster Management handling capability by each Ministry/ Department of the Central Government as also by the State Government. As per the policy, NDMA will ensure main streaming of disaster risk reduction in developmental agenda in all existing and new developmental programmes and projects shall incorporate disaster resilient specifications in the design and construction. The Neeti Aayog will give due weightage to these factors while allocating resources.

6.8.2 Responsibilities of the Central Ministries and Departments:

The National Policy on Disaster Management lays down that all Central Ministries and Departments will prepare their DM Plans and where funds are being asked for to improve Disaster Management capability including the financial projections to support these plans. The necessary budgetary allocations will be made as part of the Five Year and Annual Plans.

6.8.3 National Disaster Response and Mitigation Funds:

As per the National Policy on Disaster Management, a National Disaster Response Fund may be constituted as mandated in the Act. The National Response Fund will be applied by the National Executive Committee (NEC) towards meeting the expenses for emergency response, relief and rehabilitation, in accordance with the guidelines laid down by the Central Government in consultation with the NDMA. The proposal of merger of National Calamity Contingency Fund (NCCF) with the National Disaster Response Fund shall be as recommended by the Finance Commission from time to time. Similarly, as mandated by the Act, the National Disaster Mitigation Fund (NDMF) may be created for projects exclusively for the purpose of mitigation.

In the case of Ministry of Railways, all the maintenance activities related to rolling stock, track, civil infrastructure, signal and telecommunication, traction, operations as well as the capital expenditure incurred on these are for upkeep and improvement of safety of train operations. There is no specific allocation head for providing/capturing expenditure relating to disaster Management activities on Indian Railways. However, disasters do happen in form of train accidents, breaches, natural calamities, etc which affect operations on railways. The expenditure incurred as a result is, however, accounted for under safety related revenue and capital heads. Thus, the mitigation funds are part and parcel of the expenditure of Railways.

6.9 Modernization of Relief/ Rescue during Disasters:

The National Policy on Disaster Management provides that all Central Ministries and Departments of the Central Government and of the States will build capacity to handle different types of Disasters based on guidelines issued by the NDMA. Helicopter based relief rescue missions on par with similar arrangements existing in Western world can also be used extensively for Mass Casualty Evacuation and for providing relief where required. For Railways own Disaster situation like a major train accident where the site is not approachable by rail or by other road vehicles this would be the only means of relief. All Zonal Railways may obtain details of Government and Private Helicopter service and the contact numbers of their operators to be contacted in advance. The Disaster Management Plan of the Zonal Railway and the Divisions should make a mention of the helicopter service providers. If these services are not available on one Zonal Railway, they may contact the nearest Zonal Railway where they are available to be called upon in a Disaster situation.

We have to have a total paradigm shift in the manner in which serious train accident relief is to be managed in the second decade of the 21st century. A much more radical approach would be gradually needed to be introduced that what is existing on date.

Sensitive installations of Railways need to be identified. All Zonal Railways need to define sensitive installations and infrastructure. These should be ones which would cripple the Railways primary objective of transportation. For instance, Control Rooms; Microwave Towers; Telephone Exchanges; PI/EI/RRI of Junction Stations, Major Bridges, Tunnels of long lengths, Hospitals etc. are very sensitive/vulnerable locations.

6.10 Terrorist Attacks on a Freight Train carrying Inflammables:

Railways have an excellent liaison with the Oil Companies due to the transport to their commodities viz. Motor Spirit, HSD, Naphtha etc. Traditionally we have always made use of their firefighting equipment along with the expertise in fire control available with them. Gradually, Railways have to develop both the expertise through training in the Railways Rescue, Relief Training Institute being set up at Bangalore and also procure latest technology firefighting equipment.

CHAPTER-7**MEDICAL PREPAREDNESS & HOSPITAL DISASTER MANAGEMENT PLAN****7.1 Network of Mobile Medical Infrastructure:**

Indian Railways has an established network system capable of handling train accidents along with emergency medical response and casualty evacuation. The system is based on an infrastructure consisting of 161 Accident Relief medical Vans (ARMV) — Scale I (Unit of accident relief trains situated at an average distance of every 300 kms on mainlines and 400 kms on branch lines), 320 Accident Relief Medical Equipment (ARME) — Scale II consisting of three sets of Portable Medical Kit for Accidents (POMKA). **Western Railway's medical infrastructure consists of 16 Accident Relief medical Vans (ARMV)–Scale-I out of which 7 are SPART, and 45 Accident Relief Medical Equipment (ARME)–Scale II.** POMKAs are also available at all health units, sub-divisional and divisional/ zonal hospitals. Trained manpower of medical and all other departments of the Indian Railways provide first aid, immediate and necessary emergency medical treatment to save the life and limbs of persons involved in train accidents and arrange rapid evacuation to the nearest government/ private hospital by the first available means of transport. There is a well-rehearsed action plan to handle railway accidents.

The system is committed to the primary goal of meeting the needs of the Western of Railway, though this resource may be available in a limited manner for assistance of the district administration for mass casualty management. The details of Government & private Hospitals with MOU in Western Railway Jurisdiction are listed in ZDMP-II.

7.2 Responsibility of Stake Holders:

Medical Response: Medical Response has to be quick and effective. The execution of medical response plans and deployment of medical resources warrant special attention at the State and District level in most of the situations. The voluntary deployment of the nearest medical resources to the disaster site, irrespective of the administrative boundaries, will be emphasized. Mobile medical hospitals and other resources available with the centre will also be provided to the States/UTs in a proactive manner. Post-disaster management of health, sanitation and hygiene services is crucial to prevent an outbreak of epidemics. Therefore, a constant monitoring of any such possibilities will be necessary.

The main stakeholders in the Medical Preparedness and Mass Casualty Management (MPMCM) are the Ministry of Health and Family Welfare, Ministry of Labour and Employment, Employees State Insurance Corporation, Ministry of Defence, Ministry of Railways, State Governments and Union Territories and private health care providers.

NDMA's guidelines on Mass Casualty Management (MCM) have been prepared to provide directions to the Central Ministries, Departments and State Authorities for the preparation of their detailed Medical Preparedness Plans. These guidelines call for a proactive, participatory, well-structured, fail-safe, multi-disciplinary and multi-sectoral approach at various levels.

Each organization of the government may be made aware of risks, vulnerabilities and effects of various natural and man-made disasters including peripheral emergencies in terms of mortality and morbidity; short and long-term health effects including the socio-economic problems faced by the community during, and in the aftermath of MCE. The need for creation of an institutional mechanism and system is essential. This would result in enhancing capacities and capabilities of hospital and healthcare workers.

So also, is the need for strengthening existing procedures that allow emergent activities to meet the challenge of surge capacity because of mass casualty events. The different mass casualty events and other potential disasters including Chemical, Biological, Radiological and Nuclear (CBRN) emergencies which may lead to Mass Casualty Evacuation are to be made aware of to the Medical Management of the concerned departments which have their own medical establishments; Railways falls within the ambit of this item; this can be achieved only through specialized training initially to a few select Doctors in each Divisional Hospital (and the Zonal Hospitals).

A review of the existing health framework, preparedness of the Ministry of Health and Family Welfare, Ministry of Defence, Ministry of Railways and Ministry of Labour and Employment in relation to their capacity for handling casualties caused by various disasters is to be done so as to share each other's strengths and capabilities. Ministry of Health and Family Welfare is assigned with legislative capacity for a number of subjects including all matters relating to the medical, dental, nursing and pharmacy professions and education; mental health; standards for drugs; prevention of food adulteration; and prevention and control of epidemics.

Medical preparedness of Ministry of Defence, Ministry of Railways and ESIC have also been elaborated in the NDMA's guidelines. A brief outline of the arrangements with the state health departments is enumerated there is also a bird's eye view of the health care infrastructure of the private sector, Indian Red Cross Society, certain Non-Governmental Organisations and various laboratories. Among the various International initiatives, the role of the recently operationalised International Health Regulations in limiting the spread of epidemics and other public health emergencies by the Member States has been highlighted in the guidelines.

Medical preparedness aims at preventive and mitigation measures. Preventive measures include upgrading public health laboratories and establishing an integrated Disease Surveillance Programme (IDSP). Preparedness for Emergency Medical Response (EMR) for the management of mass casualties at the incident site and, their quick and safe evacuation by ambulance services is an important step in this direction. The need for hospital disaster preparedness plans along with the non-availability of medical logistics in critical care has been highlighted by NDMA in their guidelines which need to be followed up. The cold chain system in blood transfusion services needs to be established all across the country. The requirement of specialised facilities for CBRN management has also been highlighted by NDMA.

NDMA's guidelines are comprehensively given for a legislative and regulatory framework, preventive measures, preparedness, capacity development, hospital preparedness, specialised health care and laboratory facilities, role of alternative systems of medicine and identification of the dead, psychosocial care and mental health services and Research and Development for MPMCM. The roles and responsibilities of various stakeholders at the centre state and district levels are also described. The salient highlights in the guidelines include:

- Preventive measures like strengthening of epidemic control programmes, immunisation, HIV control etc., development of minimum standards of food and water; IDSP and its integration at all levels converged to develop an effective Early Warning System (EWS) operable at all levels.
- The Medical First Responders (MFRs) of mobile medical teams will be fully trained in triage and resuscitation; well-equipped and supported by all emergency services and material logistics.
- Emergency medical evacuation requires development of an Integrated Ambulance Network (IAN) including road, aerial and water ambulance networks integrated with special trains for MCE and not only self-propelled Accident Relief medical Vans (SP-ARMVs) of the railways as mentioned in the guidelines. As the evacuation of large number of casualties cannot be done by an ARME (or SP-ARMVs) the Railways shall mobilize special train for MCE whenever required. It will work in conjunction with Emergency Response Centres (ERCs), ESIC medical services and related emergency functionaries with laid down Standard Operative Procedures (SOPs) for all stakeholders.

- Full- fledged containerized mobile hospitals will be acquired and attached with hospitals earmarked by states/ districts.
- Capacity development will include training of all stake holders including doctors, nurses, paramedics and other resource persons in triage and Basic Life Support (BLS), and development of specialists.
- Hospital preparedness should aim at planning the use of hospital resources in a well-co-ordinated and simple way with defined roles for all medical personnel. Such activities will be drafted in the hospital DM plan. The plan will be rehearsed once a year using mock drills.

NDMA's guidelines include items related to response, rehabilitation and recovery, PPP, post-disaster documentation, media management and important medical management aspects which need to be integrated in to the district DM plans. The major guideline includes:-

- Mock drills will be based on the simulation of worst scenario in the identified vulnerable areas to check the preparedness level of the MFRs.
- A specific reference in NDMA's guidelines include item for medical preparedness for handling CBRN emergencies besides the basic aspects of medical preparedness. It covers the following areas: -
- Specific education and skill-based training of MFRs and necessary community awareness about various Do's and Don'ts to deal with CBRN incidences in a participative approach.
- SOPs for CBRN management at the incident site, triage, personal protection, decontamination, resuscitation, and casualty evacuation followed by management of victims at the hospital level.
- The necessary resource inventory in terms of Personal Protective Equipment (PPE), various detectors, decontamination and de-corporation agents, antidotes, essential medicines, specialised mobile laboratories and ambulances fitted with CBRN filters. Special CBRN stores and necessary laboratory facilities will be established at various levels.

Zonal Railways have to arrange special trains consisting of AC and/or non-AC coaches to run from the nearest coaching terminal to the site for evacuation especially for large scale casualties. Railway and non-Railway Medical Teams may be deployed in these special trains along with a portable kit of medicines, etc. (POMKA) to attend to the injured during the process of evacuation. In these special trains casualties even in hundreds can be evacuated; the medical attention, however, would be limited vis-à-vis what can be provided in the ARMVs.

Each different type of casualty requires a specialized training to handle it. The Railway Medical Department neither has the training nor can they digress from their principle function of providing medical care to the railway men and their families including to retired staff/ families. During a Chemical Disaster, as the public areas are far away from station premises it may not be possible to run the ARME or a special train to the location close to the site. In some situations, due to effect of Chemical Gases (as was the case in Bhopal Gas tragedy of Union Carbide) even the Loco Pilot/Guard and the Medical Teams may not find it possible to reach the site in the immediate period of post-Disaster.

Railways is not expected to be a main stakeholder in the DM Plan of CBRN disasters. They can at best be involved in the evacuation of casualties by a special train (A/c and non-A/c coaches) from the nearest station closer to site to a station serving Hospital, nearby. Skeleton First Aid facility can be extended by the Railways Medical Team in this special train. In any case it would take a maximum of 5/6 hours for the special train to evacuate the casualties once it reaches near the site to reach the station serving the Hospital.

The medical and para-medical staff of Railways need to be imparted training for management of CBRN disasters, till the specialist force arrives at the disaster site. As an alternative zonal railway must cater in their own plans to arrange special trains consists of AC and non- AC coaches for the

purpose of evacuation of large number of casualties in a mass casualty event whenever the railways may be called upon to help the district and state authorities. Railways may not be the main stakeholder in disaster management for CBRN disasters but railways should also train their Paramedics, Medical First Responders and Quick Medical Reaction Teams (QMRTS) and train them to provide pre hospital care in case of CBRN attack within the trains or platforms and should be able to respond till such time specialized teams of NDRF/SDRF mobilized to reach the site. Therefore, it is essential to provide personal protection equipment and other equipment, training to Paramedics and Medical officers for the limited role for your own setup.

- 7.3** In the NDMA's Guidelines on Medical Preparedness and MCE, under the head of Medical Preparedness number of duties are defined to be done by the Medical First Responder (MFR). It is specifically mentioned that adequate no. of Personnel, Protection Equipment (PPE) should be available with the mobile teams, various first responders and rescue services. Further, it is mentioned for evacuation of CBRN victims the use of Rail Ambulances is currently non-existent.

As the different MFR's are neither defined nor separately listed in the NDMA's guidelines, it is clarified that the Railways are not to be treated as MFR. NDMA has clarified in a view meeting held with Railway Ministry representatives that the MFR would be NDRF as also the trained personnel of State Governments and District Administration.

7.4 Aim of Hospital Disaster Management Plan:

The aim of a Hospital Disaster Management Plan is to provide prompt and effective medical care to the maximum possible, in order to minimize morbidity and mortality resulting from any MCE.

7.5 Hospital DM Plan:

There shall be Hospital Disaster Management Plan for each Railway Hospital of Indian Railways which will be prepared by Dy.CMS/MD of the Divisional/ Zonal/Workshop Hospital of the Zonal Railway. This shall be based on the NDMA Guidelines on Medical Preparedness and Mass Casualty Management (Annex.I page 104 of NDMA Guidelines) referring to "Important Considerations for Developing the Hospital Disaster Management Plan".

On Western Railway the (Zonal Hospital) Jagjivan Ram Hospital each Division Hospital & Sub Division Hospital has prepared and updated its Disaster Management Plan based on NDMA guidelines.

The Hospital DM Plan should incorporate relevant items given in the DM Plan of the Railways. It should be clarified that: -

"The Hospital DM Plan comes into effect only if the competent authority so authorized declares on the Zonal Railways an incident as a disaster. It can also come into effect if any Central/State Govt. agency declares a major incident a Disaster, and where the Medical facility of the Railways shall be required to give assistance."

7.6 Objective and Goals of a Hospital Disaster Management Plan:

The hospital disaster management plans should address not only mass casualties that has occurred away from the hospital, but should also address a situation where the hospital itself has been affected by a disaster—fire, explosion, flooding or earthquake, etc.

The role of the Railway Hospital will be of a general hospital only. After assessment of the hospital resources, treatment capacity and surgical capacity (refer Annex-1 of Chap 4, Page 105 of NDMA Guidelines on Medical Preparedness and Mass Casualty Management), its Hospital Disaster Management Plan should be available to the Divisional/Zonal Railway Administration and also to the district administration.

7.7 Disaster Drills:

As a part of the emergency management plan, every hospital is required to have structure in place to respond to emergencies, this structure is routinely tested during drills.

Continuous revisions should be made in the hospital disaster management plan taking leads from the regular disaster drills in the hospitals. In these drills it should be tested if the Hospital is equipped to respond effectively to the disposal of a large no. of dead etc. i.e. role of mortuary services and forensic departments. Hospital Disaster Management Plan should be tested once a year by mock drills for updation.

7.8 Training of Health Care Personnel of Indian Railways:

It is desired by the National Plan that the Railways should train their Doctors in the treatment of specific injury from CBRN disasters as also keep medicines, the vaccines, equipment and disposables etc., for the same in their hospitals. Railways may alternatively get the Training for Trainers of Medical department so that this could be proliferated to other Doctors and other Para Medical Personnel on all Indian Railways in nominated Railway Training Institutes.

7.9 Preparedness of Western Railway:

S.N	RB DMP Guidelines	WR preparedness
1	There shall be Hospital Disaster Management Plan for each Railway Hospital of Indian Railways which will be prepared by CMS/MD of the Divisional/ Zonal/ Workshop Hospital of the Zonal Railway. This shall be Based on the NDMA Guidelines on Medical Preparedness and Mass Casualty Management (Annex.I Page 104 of NDMA Guidelines)	On Western Railway the (Zonal Hospital) Jagjivan Ram Hospital, each Division Hospital & Sub Division Hospital has prepared and updated its Disaster Management Plan based on NDMA guidelines.
2	Specialized training initially to a few select Doctors in each Divisional Hospital and the Zonal Hospitals to cater the requirement of NDMA guidelines on Medical Preparedness on Mass Casualty Management (MPMCM).	30 doctors and 67 paramedics have received basic training on CBRN at NDRF camp, Jarod near Vadodara. They have been trained in Mass Casualty management
3	Medical preparedness (Preventive and Mitigation measures) viz. upgrading Public health laboratories and establishing an Integrated Disease Surveillance Program (IDSP).)	Zonal hospital and DRHs have laboratory facilities. Disease surveillance is done by public health department of railways.

4	Preparedness for Emergency Medical Response (EMR) for the management of mass casualties at the incidents team and their Quick and safe evacuation by ambulance services.	At Zonal hospital, divisional level doctors and paramedics have been nominated for EMR. Team "A" moves with ARMV and "B" team moves by Road to reach accident. Team members are trained in mass casualties management. Each hospital has Ambulance facility. Role of individual Medical personnel is defined as per IRMM 2000, Vol II, Chapter VII
5	Availability of medical logistics in critical care	Critical care facilities are available in zonal hospital, divisional hospitals and empanelled hospitals.
6	Availability of Cold chain system in blood transfusion services	JRH has well equipped Blood bank with storage capacity of 2000 blood units. There is no separate arrangement for Blood Transfusion services in divisional hospitals. However, in case of accident, there is tie-up With private blood bank and their services can be utilized by the railways.
7	Specialized facilities for CBRN management	Zonal hospitals and divisional hospitals are not well equipped to manage CBRN Disaster situation. Hospitals are equipped, to some extent to handle Chemical and biological situation.
8	Capacity development initiatives such as training of all stakeholders including doctors, nurses, Paramedics and other resource persons in triage and Basic Life Support (BLS), and development of specialists.	Detailed regular training is being rendered to the medical officers, staff nurse, Paramedics in triages and Basic Life Support System.
9	Hospital preparedness in planning the use of hospital resources in a well-coordinated and simple way with defined roles for all medical personnel. Such activities will be drafted in the hospital DM plan which will be a part of the Zonal/Divisional DM plan. The plan will be rehearsed once a year using mock drills.	Disaster Management Plan is well coordinated and regular rehearsals are being done by the hospitals using mock drills 2-3 times in a year. Rehearsals/mock drills have been conducted in association with NDRF/SDRF team.
10	Mock drills will be based on the simulation of worst scenario in the identified vulnerable areas to check the preparedness level of the MFRs.	Mock drills are based on simulation of worst scenario and to check the preparedness. Mock drills are being carried out 2-3 times in a year.
11	Training to railways Paramedics, Medical First Responders and Quick Medical Reaction Teams (QMRTS) to provide pre hospital care In case of CBRN attack with in the trains or platforms and should be able to respond till such time specialized teams of NDRF/SDRF mobilized to reach the site	The provision of PPE (Personal Protection Equipment) is now made available at present to paramedics and medical officers for combating COVID19 situations. They have limited role in case of CBRN attack within the train or platform. Additional measures in the form of Sensitization and training of station/ frontline staff will minimise Impact of CBRN attack in the train and platform. Training Centres can develop modules. Upcoming Multi-disciplinary zonal and divisional training centres can be utilized for sensitizing and training of Staff in CBRN incidences.

12	Provision of personal protection equipment and other equipment, to Paramedics and Medical officers for the limited role in case of CBRN attack within the trains or platforms.	The provision of PPE (Personal Protection Equipment) is now made available at present to paramedics and medical officer for biological agents. For CRN situation PPEs are not available. PPEs for CRN situation will be procured.
13	Training for Trainers of Medical department so that this could be proliferated to other Doctors and other Para Medical Personnel on all Indian Railways in nominated Railway Training Institute/s.	Training for trainers has been given at NDRF/BRC and subsequently more than 40% are sensitised by these trainers in the divisions.
13	Training to the Doctors in the treatment of specific injury from CBRN disasters and also keep medicines, the vaccines, equipment and disposables etc as per National Plan.	CBRN training have been provided to selected doctors and paramedics. Medicines and equipment will be arranged. However, there is no separate institute available at present for CBRN related training in the railway.
14	Training of Fire detection and suppression system at important installations.	Fire detection and suppression system is in place in JRH and other divisional hospitals.
15	Identification of sensitive/ Vulnerable installations & infrastructure for modernization of Relief/ Rescue during disasters (Ref 7.9 of RB DMP-2017).	Hospitals are vulnerable for fire incidences Hence; fire safety audit is done in all the hospitals. Any deficit found in audit will be complied.

CHAPTER-8**ROLE OF SECURITY DEPARTMENT IN DISASTER MANAGEMENT****8.1 Security Setup over Indian Railways**

At present, a three-tier security system of **District Police**, **Government Railway Police (GRP)** and **Railway Protection Force (RPF)** is prevailing over Indian Railways-

- **GRP**: GRP is a wing of the State Police responsible for prevention and detection of crime and maintenance of law and order in station premises, circulating area and trains. 50% of the cost on GRPs is shared by Railways with respective States.
- **District Police**: Security of tracks and bridges.
- **RPF**: Protection and security of railway property, passenger area, passengers and matters connected there with. RPF functions under the Ministry of Railways.

8.2 Role of RPF in Disasters:

First information about any disaster related to train or railway premises is usually received by nearby RPF post or outpost. First of all, the person who received such information will collect the maximum number of manpower as soon as possible and send them to the accident site by available means. RPF personnel who reaches spot first will be First Responder.

In case of any disaster affecting Railways viz. serious train accidents, fire incidents, explosion in trains or on railway premises, terrorist acts, hijacking of train, etc., as also natural disasters, RPF will coordinate with other Departments of Railways, GRP/District Police and various Central and State authorities for speedier relief and rescue operations.

- After sending the immediate force available without delay, collect additional manpower from the post or outpost.
- Information will be sent to the Senior Supervisory Officers and the control room of the Board/ Regional Headquarters immediately.
- Information will be sent to the Regional Police and Police Control Room as soon as possible.
- He will seek more force from the nearby Post/ Outpost. Reserve Line, Divisional headquarters or Zonal Reserve. If there is a Railway Protection Special Force (RPSF) battalion or company located nearby, to cope with such an emergency situation, unless additional force is obtained from other sources, it can be asked to supply force members.
- When sending additional force, it will be ensured that they have been given necessary equipment available for the rescue, relief and security of the incident site, which is as follows: -
 - I. Torch, dragon searchlight or other equipment for lighting.
 - II. Nylon ropes and plastic pillars to keep the unwanted crowd away from the affected area and keep them separate.
 - III. Loudspeakers to make announcements.
 - IV. Stretcher and First Aid Equipment.
 - V. Wireless set to maintain dialogue.
 - VI. Camera to take photos of event site.
 - VII. Video recording of rescue and relief operations and related administrative arrangements.
 - VIII. In cases of Chemical, Biological, Radiological & Nuclear (CBRN) Disasters or a natural calamity, RPF will provide support services in rescue, rehabilitation and mitigation efforts.
 - IX. RPF will play an active role in crowd control along with GRP/ District Police personnel and Commercial Department of Railways at disaster site.
 - X. The deployment of the RPF may be done on need basis to provide relief, rescue and rehabilitation consequent to any disaster situation over railways.

8.2.1 Current Preparedness:

Role of RPF in the event of railway accidents and other calamities has been outlined in Standing Order No. 34 as under:

- Arranging maximum available RPF manpower within the shortest possible time and dispatching of the same to scene of accident by the quickest means.
- Segregation of the area of incident by establishing temporary barriers by use of nylon ropes to ensure that on-lookers and spectators do not enter the affected area to disturb the scene or hamper the rescue operations.
- Baggage of passengers should be isolated and protected and consigned goods should be taken care of till they are handed over to claimants or taken over by railway authorities.
- Respond to any call for assistance in rescue of victims and transporting them to the nearest hospital.

Coordination with State Police and civil authorities is ensured at the divisional and zonal level by concerned RPF officials. An SOP on "Coordination and Flow of Information between RPF and State Agencies" has also been circulated to all zonal railways for information and necessary action [2014/Sec(Spl)/200/10, dated 10.09.2015].

As per recommendations of the High Level Committee, a Disaster Management Team of 15 RPF personnel has been constituted on each Division with provision of necessary equipment viz. torches and other lighting arrangements, nylon ropes and poles for segregating the affected areas from unwanted visitors and spectators, loud-hailer, stretchers and first aid equipment, wireless sets for inter-communication, cameras for photography of scene of incident, luminous jackets, etc.

Guidelines also exist for ensuring availability of off duty RPF staff for dispatching them to place of occurrence in case of major disasters affecting Railways.

Thirty (30) categories of modern security related equipment have been identified along with scale by a Norms Committee. Zonal Railways need to ensure procurement of these equipment as per laid down scale.

Home Secretaries of all the States have been advised by the Min. of Home Affairs regarding initiation of action for expeditious clearance by the State Police in case of railway accident involving loss of human lives or injuries to the passengers, etc. [No. VI-24022/11/2002-PM-I, dated 24th December, 2002]. This letter of the Ministry of Home Affairs has also been circulated to all the General Managers for information and necessary action [2002/Sec(Cr.)/45/47, dated March 27, 2003].

8.3 Integrated Security System:

An Integrated Security Scheme has been approved for 202 railway stations of Indian Railways. The system envisages multi-layered surveillance of vehicles, luggage and passengers in station premises. The system comprises of following four broad categories:

- CCTV surveillance system
- Access control (under vehicle scanning system)
- Personal and baggage screening system (HHMD, DFMD & Baggage Scanner)
- Bomb Detection and Disposal System

8.4 Crowd Control and Management:

For effective crowd control, RPF, GRP and District Police have to act in a synchronized manner in coordination with civil authorities. Chapter 10 (Maintenance of Public Order and Tranquillity) of the Code of Criminal Procedure Code (Cr.P.C.) Part-A deals with 'Unlawful Assemblies'. Legal procedures are outlined in Sections 129 to 132 of the Cr.P.C. for dealing with Unlawful Assemblies. These provisions empower officers of Armed Forces to deal with Unlawful Assemblies. Enabling provisions are also available under rule 243 of the RPF Rules 1987 empowering superior officers of the Force to disburse unlawful assembly.

Existing CCTV surveillance system at the railway stations needs to be upgraded to incorporate intelligent video analytics to get timely information when heavy crowd builds up within station premises and plan follow-up action. Pictures stored on CCTV system will be of immense help in identifying miscreants and in initiating legal action against such elements. One of the intelligent video analytics envisaged for CCTV surveillance under the Integrated Security System is 'crowd management' to signal for crowd density within station premises when it exceeds the prescribed limit.

It is, however, essential that the District Magistrate (Dy. Commissioner) or the Civil Police (Senior Superintendent of Police) provide advance information to the Railways (DRM) of the dates of expected rush; and also the volumes of rush (including some rough assessment of direction wise destination).

On Western Railway the recommendations of the Committee in this regard is being followed by the Division. A training programme has also been organized in the Divisional level regarding steps to be taken by RPF. All IPFs of Posts and Outposts have been instructed to act according to the recommendations. RPF staff have been briefed and trained to effectively control mobs at the accident sites by using nylon ropes, luminous jackets and human chains and also to keep the luggage of the victims under safe custody at the accident sites and guard it till its return to the victims' relatives. They have also been briefed to treat the VIPs and Media persons effectively.

8.5 Explosion in Trains and Railway Premises:

At present, Railways have to rely upon the existing expertise with States and Central Security Agencies for bomb detection/disposal over railways.

Explosive detection and disposal is a highly skilled and challenging job. Bomb detection system has been envisaged under Integrated Security System. It provides for development of detection capability with RPF. RPF personnel are being trained in phased manner to develop capability in bomb detection on each zonal railway.

Preventive measures to be taken in such situations have been separately circulated vide Security Directorate Secret letter No.2003/Sec(Spl.)200/14 dated 16.01.2008.

8.6 Terrorist Acts & Hijacking of trains:

Procedures have been outlined in the Crisis Management Plans of the Government of India, of the Ministry of Home Affairs and of the Ministry of Railways to tackle such situations. Above mentioned secret documents are available with concerned Authorities and action has to be ensured in accordance with the provisions mentioned in the above-mentioned plans.

Ministry of Home Affairs is the Central Nodal Ministry to tackle hostage or terrorist situations requiring specialized handling. National Security Guard (NSG) has to be requisitioned in such situations. Crisis Management Plan of the Ministry of Railways envisages management of such crisis by the National Crisis Management Committee (NCMC) and Crisis Management Group (CMG) at the Railway Board Level and by the zonal management group at the zonal level.

Coordinated efforts have to be ensured by all security agencies present at the spot. Senior most officials available at the spot shall handle situations in accordance with conditions of the crisis at local level and instructions received from concerned Crisis Management Groups at Zonal and National levels. Quick Reaction Teams (QRTs) of RPF personnel should be available round the clock at bigger stations which will be of immense help to tackle such situations during initial phases especially in cases of terrorist attacks.

8.7 Preparedness of Western Railway:

The compliance of Railway Board Disaster management plan Guide lines, regarding current preparedness, integrated security system, Explosion in trains and railway premises & Terrorist act & Hijacking of trains is summarized below:

S.N.	Guidelines RB DMP	WR Preparedness
1	Compliance of Standing Order No. 34 In the event of railway accidents and other calamities.	Standing order No. 34 is being complied.
2	Implementation of SOP on “Co-ordination and Flow of Information between RPF and State Agencies” as per letter[2014/Sec.(Spl.)/200/10,dated10.09.2015].	SOP on “Co-ordination and Flow of Information between RPF and State Agencies” is being complied over WR.
3	Constitution of a Disaster Management Team of 15 RPF personnel and provision of necessary equipment.	Team of RPF consisting 15 staff of various ranks for disaster management have already been formed at all divisions over WR and equipped with disaster related equipment viz. Torches and other lighting arrangements, nylon ropes and poles for segregating the affected areas from unwanted visitors and spectators, loud-hailer, stretchers and first aid equipment, wireless sets for inter- communication, cameras for photography of scene of incident, luminous jackets, etc.
4	Implementation of Guidelines for ensuring availability of off duty RPF staff for dispatching them to place of occurrence in case of major disasters affecting Railways.	All Sr.DSCs/ DSCs have been directed to instruct all IPFs to ensure availability of off duty RPF staff in case of major disaster affecting Railways and Dispatching them to place of incidence by quickest means.
5	Compliance of MHA guidelines [No.VI-24022/11/2002-PM-I, dated 24 th December, 2002] circulated vide letter 2002/Sec(Cr.)/45/47, dated March27,2003] for expeditious clearance by the State Police in case of railway accident involving loss of human lives or injuries to the passengers.	Initiation of action for expeditious clearance by the State Police in case of Railway Accident involving loss of human lives or injuries to the passengers are being complied by making co- ordination at various level.
6	Provision of Integrated Security Scheme at railway stations over Western Railway.	Status of CCTV Surveillance System, Access control (under vehicle scanning system, Personal and baggage scanning system (HHMD, DFMD & Baggage Scanner & Bomb detection and disposal system. The details of the stations having this system are detailed in the Divisional Disaster Management Plans.

S.N	Guidelines RB DMP	WR Preparedness
7	Provision of CCTV Surveillance system, baggage scanners, Under Vehicle Scanning System (UVSS) and bomb detection & disposal equipment over Western Railway under ISS scheme and in overall including ISS.	35 stations of WR identified for installation of ISS, are equipped with 2988 CCTV cameras. 03 Baggage scanners are proposed for important stations of WR under ISS works. One set of BDDS equipment consisting of 19 items is available in each of 06 division of WR. The work of provision of the system is in progress and the details are available in the Divisional Disaster Management Plan.
8	Sanction for installation of CCTV cameras in A1, A, B & C category stations over Western Railway under 'Nirbhaya Fund' and its progress.	Installation of 1626 CCTV Cameras under Nirbhaya fund in 170 Railway Stations i.e. A1-09, A-20, B-20, C-36, D-25, E-37 & F-23 category are proposed.
9	'All India Security Help-Line' 182 through Divisional Security Control Rooms of RPF & another Security Helpline 1800111322 from Railway Board, Rail Bhavan, New Delhi to provide round the clock security related assistance to passengers over Western Railway.	RPF personnel are being deployed at Security Control Rooms 24x7 for smooth functioning and maintaining of security helpline No. 182. There are total 21 lines available at Divisional Security Control Rooms i.e. BCT-06, BRC-03, ADI-03, RTM-03, RJT-03 & BVP-03. All calls are being attended and no calls lie on waiting.
10	Up-gradation of existing CCTV surveillance system at the Railway Stations for incorporating intelligent video analysis to get timely information when heavy crowd builds up within station premises and plan follow-up action.	1806 CCTV cameras have been installed at important stations over Western Railway. A survey has been conducted in coordination with GRP, SSE/Tele and SSs and it has been contemplated to install 2815 Nos. (2729 CCG-VR & 86 ST) high-resolution CCTV cameras incorporating latest technology. Installation of 2729 CCTV cameras under ISS work in CCG-VR is in progress, work likely to be completed in FY 2020-21. Proposal for installation of CCTV cameras at 50 Railway Stations over Western Railway under Nirbhaya Fund is under process through Rail Tel Corporation LTD. Existing CCTV surveillance system at the railway intelligent stations needs to be upgraded to incorporate video analytics to get timely information when heavy crowd builds up within station premises and plan follow-up action. Pictures stored on CCTV system will be of immense help in identifying miscreants and in initiating legal action against such elements. One of the intelligent video analytics envisaged for CCTV surveillance under the Integrated Security System is 'Crowd Management' to signal for crowd density within station premises when it exceeds the prescribed limit.

S.N	Guidelines RB DMP	WR Preparedness
11	RPF personnel training to develop capacity in bomb detection.	Bomb detection teams have been formed in every division and 19 BDDS equipment have been procured and allotted to the teams. Till date 37 staff of this railway have successfully undergone BDDS course in different training centres. More Staff will be directed as and when slots are allotted to this railway.
12	Availability of no. of trackers and sniffer dogs with RPF for detection of explosives and search.	There are 25 explosive detection, 03 narcotics detection and 06 tracker dogs to a total of 34 dogs are available over Western Railway. 08 are undertraining at ZDTC / Podadur / SR and 07 pups will be procured soon.
13	Compliance of Security Directorate Secret letter No.2003/Sec(Spl.)200/14, dated 16.01.2008.	As per Security Directorate's Secret letter, preventive measures are being taken. RPF bomb detection and disposal squad teams exist overall 06 divisions of Western Railway which is equipped with modern equipment. Trained RPF personnel and sniffer dogs are being utilized during bomb threat call, hoax call with the help of GRP and City Police. Explosive detection and disposal is a highly skilled and challenging job. Bomb detection system has been envisaged under Integrated Security System. RPF personnel are being trained in phased manner to develop capability in bomb detection over Western Railway.
14	Compliance of Procedures outlined in the Crisis Management Plans of the GOI, of the MHA and of the Ministry of Railways to tackle such situations of Terrorist acts & Hijacking of trains.	Above mentioned secret documents are available with concerned authorities and action has to be ensured in accordance with the provisions mentioned in the above plans.
15	Availability of Quick Reaction Teams (QRTs) of RPF personnel round the clock at bigger stations to tackle terrorist attacks.	All-important Railway Stations are being manned by deploying Armed RPF QRT teams round the clock. The teams immense help to tackle such situations during initial phases especially in cases of terrorist attacks.
16	Fire detection and suppression system at important installations.	In case of any fire disaster affecting railway viz. Serious train accidents caused by accidental, human error or manmade, as also natural disasters, RPF is geared up to co-ordinate with Fire Brigade, other departments of Railways, GRP, District Police and various agencies of State and Central Government to speed relief and rescue operation and provides support service in rescue, rehabilitation and mitigation efforts. RPF plays active role in crowd control at the accident site Inco-ordination with GRP and commercial branch staff.

CHAPTER-9**DISASTER COMMUNICATION SYSTEM****9.1 Communication on Railways for Disaster Management:**

Railways have their own extensive communication systems which would be used for Disaster Management too. However, we need to have back-ups specially to ensure 100% communication availability in case of any type of man-made or natural disasters. Sharing of OFC network, where required with others may be ensured by tie-ups in advance. This will be also inter-linked with the communication system with outside agencies of the concerned Central and State Governments, IMD etc.

Preparatory work may be done for quick installation of communication system (satellite system) between Railway control set up for flood and affected locations/station. This can even be on make shift raft, boat etc. Similar arrangements can also be made in earthquake affected areas.

Preparedness of Western Railway:**❖ Optic Fibre Communication System:**

Western Railway has its own captive Optic fibre communication network for Railway operations. Railway communication networks are not being shared by any other service providers/outside central or State agencies etc. These of communication networks have backup/ring protected route diversity on Rail Tel long-haul network in most of the sections. The details of Communication System are as below:-

❖ OFC Communication System:

Sections shown in table - A are low density Traffic/small Section/Route where OFC is yet to be provided.

Table-A			
S.N	Division	Gauge	Section
1	Vadodara	BG	Pratapnagar - Chhota Udaipur
2	Vadodara	BG	Nadiad-Modasa
3	Vadodara	BG	Ankleshwar-Rajpipla
4	Vadodara	BG	Kanjari Boriyavi-Vadtal Swaminarayan
5	Ratlam	MG	DADN (Mhow)-Nimarkheri
6	Ahmedabad	BG	Radhanpur-Samakhiyali
7	Ahmedabad	BG	Mehsana –Patan
8	Ahmedabad	BG	Gandhidham-KandlaPort
9	Ahmedabad	MG	Kallol–Ranuj

Sections shown in table –B are the sections where OFC is linear i.e. without route diversity. These sections are either branch lines or with low traffic density.

Table-B			
Sr. No.	Division	Gauge	Section
1	Vadodara	BG	Vasad-Kathana
2	Vadodara	BG	Anand-Khambhat
3	Vadodara	BG	Bharuch-Dahej
4	Vadodara	BG	Chotta udepur-Alirajpur
5	Ratlam	BG	Indore-Mhow
6	Ratlam	BG	Rau-Tihi
7	Ratlam	BG	Nimarkheri-Khandwabypass-Mathela
8	Ahmedabad	BG	Maliya Miyana-Samakhiali
9	Ahmedabad	BG	Samakhiali-Gandhidham-NewBhuj
10	Ahmedabad	BG	Palanpur-Radhanpur
11	Ahmedabad	BG	Patan-Bhildi
12	Ahmedabad	BG	Gandhidham-Serva
13	Rajkot	BG	Rajkot-Okha
14	Rajkot	BG	Kanalus-Sikka
15	Rajkot	BG	Dahinsara-Navlakhi
16	Bhavnagar	BG	Sihore Jn.-Palitana
17	Bhavnagar	MG	Prachi Road-Kodinar
18	Bhavnagar	MG	Talala-Delvada
19	Bhavnagar	BG	Dhasa-pipava
20	Bhavnagar	BG	Bhavnagar-Dhola
21	Bhavnagar	BG	Rajula-Mahuva
22	Bhavnagar	BG	Porbandar-Ranavav
23	Bhavnagar	BG	Veraval-Somnath

♦ **Satellite based communication system are provided at ARTs:-**

S.N	Div.	Location	I-SAT	VSAT (Manual tracking)	VSAT (auto tracking)
1	BCT	BandraTerminus	Available	-	-
		Valsad	-	-	Available
		Udhana	Available	-	-
2	BRC	Vadodara(Y)	Available	-	Available
3	RTM	Ratlam	Available	-	Available
		Ujjain	Available	-	-
		Mhow	Available	-	-
		Chittaurgarh	Available	-	-
4	ADI	Ahmedabad (SPART)	Available	-	-
		Kankaria	Available	Available	-
		Gandhidham	Available	-	-
		Sabarmati (MG)	-	-	-
5	RJT	Rajkot	Available	Available	-
6	BVP	Bhavnagar Terminus	Available	Available	-
		Veraval	Available	-	-

♦ **Satellite based communication system are provided other than ARTs:**

Sr.	Division	Location	I-SAT
1	BCT	ARME/MumbaiCentral	Available
2	BRC	ARME/Vadodara(P)	Available
		NOCC(TestRoom) Pratapnagar	Available
		Disaster Room(Divisional office Pratapnagar)	Available
3	RTM	SPART/Ratlam	Available
		ARME/Ujjain	Available
		ARME/Mhow	Available
		ARME/Chittaurgarh	Available
4	RJT	NOCC(Test Room)Rajkot	Available
		ARME/Rajkot	Available
		SPART/Hapa	Available
5	BVP	NOCC/Bhavnagar Para	Available
		SPRME/Bhavnagar Terminus	Available
		ARME/Veraval	Available
		SPRME/Porbandar	Available

Wherever possible, communication at the relief camps is being provided if the relief camps are located near the Railway Stations and it is physically possible as per the prevailing conditions at site. At other locations, communication is possible through CUG mobile phones wherever the coverage exists.

9.2 Backup Communication on Railways:

To handle any disaster by the Railways and to utilize its resources efficiently, Communication is an essential requirement. Where required, backup (alternatives) should be adequately available. One of the strengths of the Railways to handle a disaster is shown communication network. In handling a crisis or a disaster, reliability of communication has to be cent percent.

At the Divisional level, the control rooms have to communicate with the stations, the telephone exchange have to function and the OFC and Quad cable network has to have reliable backups to be able to be effective.

Where there is no backup of the Railways owned OFC network, an arrangement of sharing with Government/Non-Government organization and other service providers has to be planned in advance or else, the alternative of satellite communication be resorted to. However, the speed of re connecting a failed communication by whichever means is of essence.

Further to provide better communication facilities during disaster, it is necessary that either the Rail net internet network of IR is extended to every railway station of Indian Railways. Alternatively, other means of communication is provided on all the stations. This will ensure quick setup of voice, video and data transmission facility at stations during any eventuality since IR's own V-Sat Hub is now established at Thomson Road, New Delhi, voice/ data/video communication facilities from this center to different railways and divisions need to be planned and catered to.

Backup Communication of Western Railway:

The captive communication system of Western Railway has backups available on most of the routes through channels provided by RCIL (a PSU under the Ministry of Railways). The divisional control rooms are able to communicate with all the stations through control phones except SASG, VSW, KANS and DVA and currently AE-DARI closed for gauge conversion. Communication at major stations, where telephone exchanges are provided, is also possible through auto telephones. In addition to this BSNL phones are also provided at the control rooms and wayside stations. Therefore, there are multiple modes of communication between divisional control rooms and stations. These modes of communication are available in all Broad Gauge except Nadiad — Modasa

(104 Rkm) and Ankleshwar- Rajpipla (63RKM) which are non-control sections i.e. section having

one train system of working without any control communication. Similarly, the facility is available at all meter gauge sections except non control sections i.e. section having one train system of working without any control communication such as Kalol-Ranuj(102kms).The narrow gauge sections on Western Railway such as Billimora-Waghai (63kms),Choranda-Motikoral (19Kms),Jambusar-Pratapnagar (51Kms),Miyagam-Malsar(38Km),Nadiad-Bhadran(60Kms),Kosamba-Umarpada62Kms), Miyagam-Chandod (48Kms) are having one train system of working without any control communication.

Wherever Railway owned OFC networks are not available, backup channels are being hired from service provider like BSNL. Railnet may be extended to those stations where Railway exchange are provided and stations where OFC route and POP available. V-SAT communication can be established after the arrival of ART at the site as these sets are provided in the divisional ART only using IR's own V-SAT hubs established at Thomson Road, New Delhi.

9.3 Incident Response System (IRS):

The National Policy on Disaster Management lays down guidelines for a chain of command in a structured unit to handle various types of Disasters as under: -

A traditional command structure exists in the Railway hierarchy which manages disasters in Indian Railways. It has been planned to strengthen and professionalize the same by drawing upon the principles of the IRS with suitable modifications. The IRS is essentially a management system to organize various emergency functions in a standardized manner while responding to any disaster. It will provide for specialized incident management teams with an incident commander and officers trained in different aspects of incident management, such as logistics, operations planning, safety, media management, etc. This will facilitate optimum utilization of resources.

The Railways have their own IRS as they have had to deal with crises like situations and mini-disasters in the day to day operational working and especially with handling of train accidents.

9.4 Coordination–Integrated Command System of Railways with Integrated Operations Centre of MHA:

Traditionally the Control Room in each Division monitors on a "Real Time" basis the train operations. This Control Room is manned round the clock and has representative so fall the departments concerned with train operations as also with abnormalities which may affect train running. The "Command and Control" of the Divisions Control Room is with the operating department who plan, execute and monitor the running of trains (both freight and coaching trains). Assistance of other departments, viz. Mechanical (Power), Electrical (Power and OHE Traction Distribution), Mechanical (Carriage and Wagon), Civil Engineering (track maintenance and monitoring), Commercial (passenger information interface), Signal and Telecom (through a 'Test Room'), Security (RPF) etc. is provided round the clock in the Operations Control Room.

This control room of the affected divisions on the Railways will monitor the activities post Disaster and coordinates with the various organizations (rescue, relief, mitigation etc.) in the disaster areas. The Divisional control will coordinate with the "Zonal Control" where a similar control room exists, called the Emergency Control in the Headquarters of each Zonal Railway. However, unlike divisions the controls of respective departments are not in one place or building, being situated near the offices of their departments. But this does not result in any disadvantage as main liaison is required at the level of divisions. "Zonal Control will establish liaison with the Disaster Management Centre in the Railway Board which in turn coordinate with the IOC of the MHA right from the stage of receipt and issue of "Orange or Red Alerts" and also for providing/requesting help in relief/rescue/mitigation to other departments (or State Government) or from them respectively. The

Zonal Control will constantly update the position to Railway Board.

9.5 Preparedness of Western Railway:

S.N.	RB DMP	WR Preparedness
1	Need and availability of backup communication to ensure 100% communication availability in case of any man-made or natural disasters.	- In case of Man-made Disasters: - - Railways have their own extensive communication systems which would be used for Disaster Management too. - Most of the circuits working on OFC network over Western Railway are in Ring protection with 100% communication availability. 100% communication availability during any disaster in areas / location where W. Rly OFC is not in Ring protection can be ensured by hiring leased wired/wireless circuits from other Telecom service providers. - In case of Natural Disasters: - - I-SAT and V-Sat in ART can be used for communication.
2	Need and availability of sharing of OFC & Quad cable network, where required with others.	OFC & Quad cable Network is not shared by Railway with others (Central and State Governments, other agencies)
3	Need and requirement of inter-linking the communication system without side agencies of the concerned central and state Governments, IMD etc.	Communication system with outside agencies is not inter-linked by Railway (Central, State Governments, IMD & other agencies).
4	Preparation for quick installation of communication system (satellite system) between Railway control setup for flood & earthquake affected areas and affected locations/station.	- All ARTs over Western Railway are equipped with Satellite Communication (I-Sat phone and V- Sat) facility. - The communication system can be setup from the Railway Track (location up to which ART can be reached).
5	Availability of Railnet/internet network of IR to every railway station of Western Railway.	- Presently Railnet/Internet connections have been extended to Divisional Headquarter and important stations. - Railnet/internet network can be extended to disaster location/site with the help of V-Sat communication when the ARTs reach at site/location.
6	Planning & progress of voice /data / video communication facilities from IR's own V-SAT hub established at Thomas Road, New Delhi, to different railway stations of all divisions of Western Railway.	Voice / Data/ Video communication can be established through VSAT hub at disaster location after arrival of ART.

CHAPTER-10**DISASTER INFORMATION FLOWS AND ALERTS OF DISASTER****1.1 Standard Operating Procedures (SOPs):**

The Ministry of Home Affairs (MHA), as the nodal Ministry is responsible for coordinating response and relief efforts with various Ministries/Departments of the Government of India, State Governments and District Authorities. They have prepared the Standard Operating Procedures (SOPs) for handling man-made disasters (for eq. Terrorism related disasters) for which they are earmarked as the lead Ministry for disaster response, relief and mitigation.

All Central Ministries, State Governments, District Authorities and other stakeholders will prepare SOPs in consonance with the National and State Plans. The SOPs will be prescribed for activities like search and rescue, medical assistance and casualty management, evacuation, restoration of essential services and communication at disaster sites, etc. the other important activities are provision of food, drinking water, sanitation, clothing and management of relief camps. Detailed SOPs will also be devised by all concerned for dispatch, receipt and deployment of central resources.

1.2 Levels of Disasters:

The Standard Operating Procedures (SOPs) will determine the levels of disasters and for issuing alerts to electronic messaging systems to various agencies about disasters have been formulated by Ministry of Home Affairs. These SOPs will be reviewed periodically for disaster response management in case of natural and man-made disasters.

1.3 Integrated Operation Centre of MHA:

Integrated Operation Centre (IOC) has been set up in the Ministry of Home Affairs to handle disaster situations on a 24X7 basis. IOC is responsible for initiating incident alert messages when a disaster is likely to occur or when it has actually taken place.

1.4 Categorization of Alerts:

A Standard Operating Procedure has been prepared for alerts of events of different types and identifies the situations when alerts are to be sent by the IOC.

Specific hazards have different categories of alerts. Accordingly, a uniform system has been devised by categorizing each type of alert in stages –**Yellow, Orange and Red**.

1.5 Action Plan for Communication of Alert Messages:

Whenever a crisis is about to be faced, Government of India has laid down systems for warning its respective departments through an 'Alert'. It should be understood that mere issue of an 'Alert' (Yellow or Orange) is not an indication of the occurrence of a Disaster. This only signifies the existence of a crisis for which provisions of the Crisis Management Plan would come into operation. The Action Plan for Alert Messages lays down as under:

- (i) All concerned Ministries/Departments/Organisations /Agencies will report events to IOC, MHA.
- (ii) While generating and transmitting alerts to IOC (MHA), the concerned agency, will indicate the category of the event as well as its corresponding stage (Red/Orange/Yellow).
- (iii) For natural calamities and other crisis situations categorization of Alerts is as under:

(a) AVALANCHES (Defence Research & Development Organisation):

Category	Description	Stage
Low	Generally, favourable condition. Triggering is generally possible only with high additional loads and on very few extreme slopes. Only stuffs possible and reach valley in small sizes. Valley movement is safe. Movement on slopes with care.	Yellow
Medium	Partly un-favourable condition. Triggering is possible on most avalanche prone slopes with low additional loads and may reach the valley in medium size. Movement on slopes with extreme care. Valley movements with caution. Avoid steep slopes. Routes should be selected with care.	Yellow
High	Unfavourable condition. Triggering possible from all avalanche prone slopes even with low additional loads and reach the valley in large size. Suspend all movements. Airborne avalanches likely.	Orange
All round	Very unfavourable condition. Numerous large avalanches are likely from all possible avalanche slopes even on moderately steeper rain. Suspend all movements. Airborne avalanches likely.	Red

(b) TSUNAMI (Department of Ocean Development):

Category	Description	Stage
No Yellow Stage		
Moderate	When an earthquake of greater than 6.0 is reported and /or a Tsunami Watch alert is received from JMA/PTWC.	Orange
Great	When change in water level after an earthquake is reported by National Institute of Ocean Technology, ITWC would issue a Tsunami Warning *as per laid down channels.	Red

*The warning may be withdrawn after a better assessment of the level of rise in water level.

(c) LAND SLIDES (Geological Survey of India):

Category	Description	Stage
IV	Landslides of small dimensions that occur away from habitations and do not affect either humans or their possessions. These may occur near infrastructural installations, agricultural and forest lands and may not affect them in a significant manner. These slides may include small incidents that block communication routes for short periods or do not affect the society in a significant manner.	Yellow
III	Landslides which are fairly large and affect infrastructural installations like strategic and important highways and roads rail routes and other civil installations like various appurtenant structures of hydroelectric and irrigation projects. The landslides that enter large water bodies like reservoirs of hydroelectric projects and could damage some of components of these projects.	Orange

II	The landslides that may occur on the fringes of inhabited areas and result in limited loss of life and property. Landslides, which result in blockade of courses of relatively smaller natural drainages. If the blockade is of relatively smaller dimensions its impact would be of a lower order. Although a threat potential is there, it may not be immediate.	Orange
I	Landslides of large dimensions that are located over or in close vicinity of inhabited areas like urban settlements or fairly large rural settlements. Activity on these slides can result in loss of human lives, dwellings on largescale. These slides may also inflict heavy losses on urban infrastructure. The slides that block busy pilgrimage routes during peak times resulting in hardships to thousands of pilgrims and sometimes resulting in loss of human life. Landslides which result in blockade of course so relatively large natural drainages. If the blockade is fairly large it could lead to formation of a very large reservoir of water behind it. Formation of a large landslide dam could result in sudden flooding of areas located upstream. Abrupt breaching of landslide dam would suddenly release enormous quantities of water in the downstream areas leading to flash floods that could result in loss of life and damage to property on large scale.	Red

(d) CYCLONE (India Meteorological Department):

Category	Description	Stage
Cyclone Alert	Issued 48hrs. before the commencement of bad weather when a system is located about 500 km or more away from the coast. The forecast may not contain information about landfall and hence it is still of informatory type but at the same time meant to trigger preparatory actions. During this stage, Disaster Managers plans on the course of action required to be initiated once the system moves closer to the coast.	Yellow
Cyclone Warning	These messages are issued 24 hours before commencement of bad weather and are of a “ serious nature ”. During this stage the system is monitored closely and the expected place & time of landfall and the districts along the coastal areas likely to be affected are clearly indicated in the warning messages. The location of the system at this stage may still be 300 km — 500 km away from the coast. Disaster Management Machinery is expected to be geared up fully during this phase.	Orange

Post landfall outlook:	During this phase warning messages are issued about 12 hours before actual landfall and are of a “very serious nature”. At this stage, it is expected that the Disaster Management machinery is in full operational mode to face the impending disaster. All preparedness action should have been completed by this time. MHA would be closely monitoring steps taken by the concerned State Governments regarding evacuation and relief activities like food, sanitation etc. This phase is fit to be classified as “Great Danger” and all warning messages issued to MHA Control Room are required to be forwarded to senior officials of the PMO.	Red
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(e) EARTHQUAKE (India Meteorological Department):

Category	Description	Stage
Slight	$M \leq 5.0$	Yellow
Moderate	$5.0 \leq M \leq 6.9$	Orange
Great	$M \geq 7.0$	Red

(f) FLOOD (Central Water Commission):

Category	Description	Stage
IV	Low Flood (Water level between Warning Level and Danger Level).	Yellow
III	Moderate Flood (Water level below 0.50m less than HF Land above Danger Level).	Yellow
II	High Flood (Water level less than Highest Flood Level but still with in 0.50m of the HFL).	Orange
I	Un precededent Flood (Water level equal and above Highest Flood Level (HFL).	Red

(g) RAILWAYS (Ministry of Railways):

Category	Description	Stage
Minor	Consequential Passenger Train Accident not resulting to casualty.	Yellow
Medium	1-25 casualties.	Orange
Major	26 or more casualties.	Red

(h) FOREST FIRE (Ministry of Environment & Forests):

Category	Description	Stage
Ordinary Fire	Localised fires which can be controlled by the concerned territorial Conservator of Forests.	Yellow
Medium Fire	Where large forest area is under fire, which can be controlled by the State Government and no Central intervention is sought by the State Government.	Orange
Major Fire	Large fire, which may result in substantial loss of human lives, massive environmental degradation or loss of wildlife.	Red

1.6 Action on Division/ Zones on Orange/ Red Alert:

On the issue of an Orange Alert (or of a higher level) the Responders have to be activated as required for rescue and relief etc. as under:

- Mobilisation of Gang men.
- Hospitals to mobilize Doctors and Para-medical staff.
- Civil Defence units to be activated.
- RPF and RPSF deployment.
- Scouts and Guides for colony care and passenger guidance.

- Operation and manning of the disaster control room.
- Coordination amongst various stakeholders through advance warnings.
- Communication system to be ensured and backups to be in readiness for immediate use when required.
- TA Units Deployment; In case the existing railway staff may not be able to maintain train services to be operational, the TA units have to be mobilized. (It takes 2-3 days for the deployment of the TA unit after issue of their mobilization order; hence advance warning is of essence).

1.7 Monitoring/ Reporting of Effects of Disaster:

On the declaration of an incident as a Disaster by a State Government or District Administrator or even by the GM/ AGM of the Zonal Railway, the PCSO would give time to time updates to the Safety Control in Railway Board of the Situation. Assistance of other departments would be made available by the GM to the Safety Department on the zonal Railways.

1.8 Standard Operating Procedure (SOP) on Railways:

10.8.1 National Disasters:

The Civil Engineering Department at the field level and on the Divisions gets information through advance warning sent by the respective Government Departments on the possibility of Floods, Cyclones, Earthquakes, Landslides etc. Depending on the gravity of the disaster/crises/calamity expected the information would be passed on to the Divisional officers through the Emergency Control which will act as the IRS. Where train operations have to be suspended or regulated the operating departments would be suitably advised. After making the train regulation plan the divisional control would advise the commercial and security departments for management of the welfare of passengers. Alerts to the passengers would be issued through the PR Department of the Railway in the Print and Electronic Media.

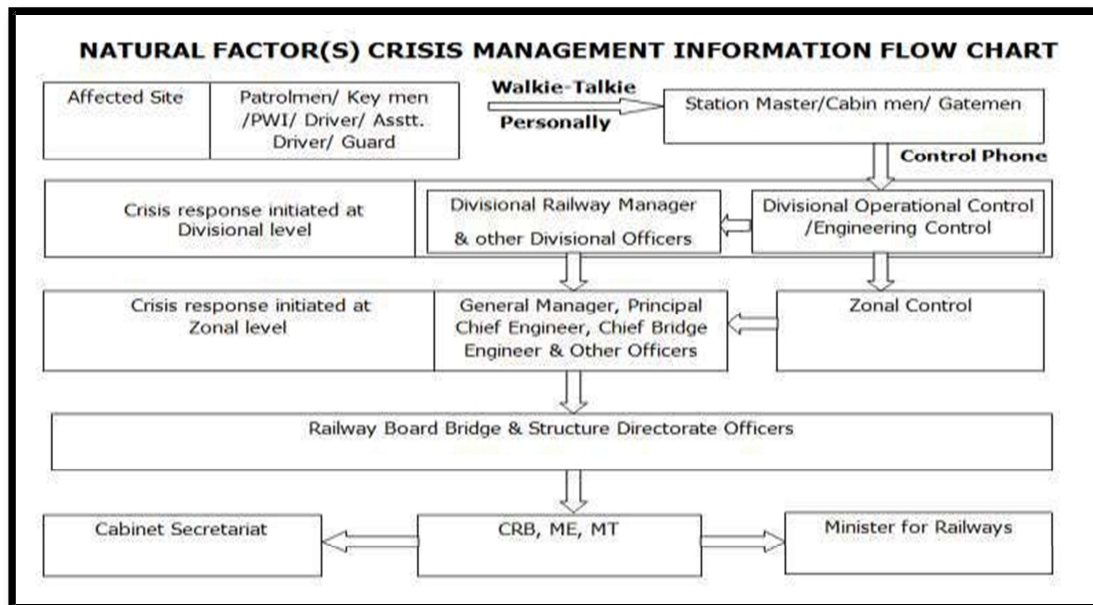
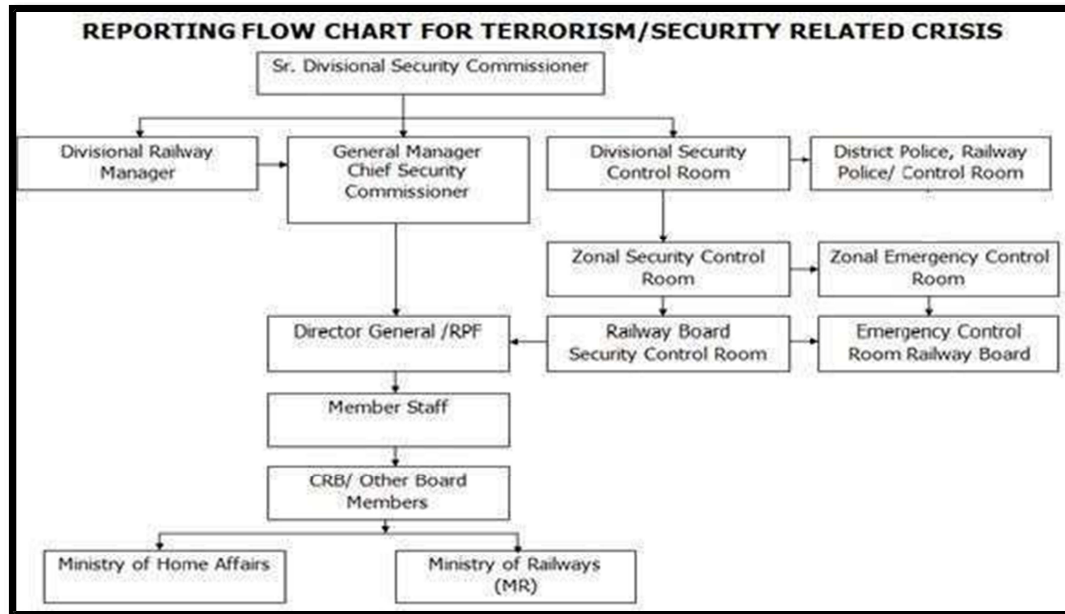
The DRMs on the divisions shall ensure coordination amongst the departments for ensuring running of train services (including relief special trains) as also relief arrangements for the passengers and for the Welfare of Railways own staff. Assistance of other Divisions and from the Zonal Railways would be taken through the Headquarter of the Zonal Railways (i.e. by involving the General Manager). Coordination with the IOC of MHA and NDMA/NDRF would be through the Emergency Control of each zonal Headquarter.

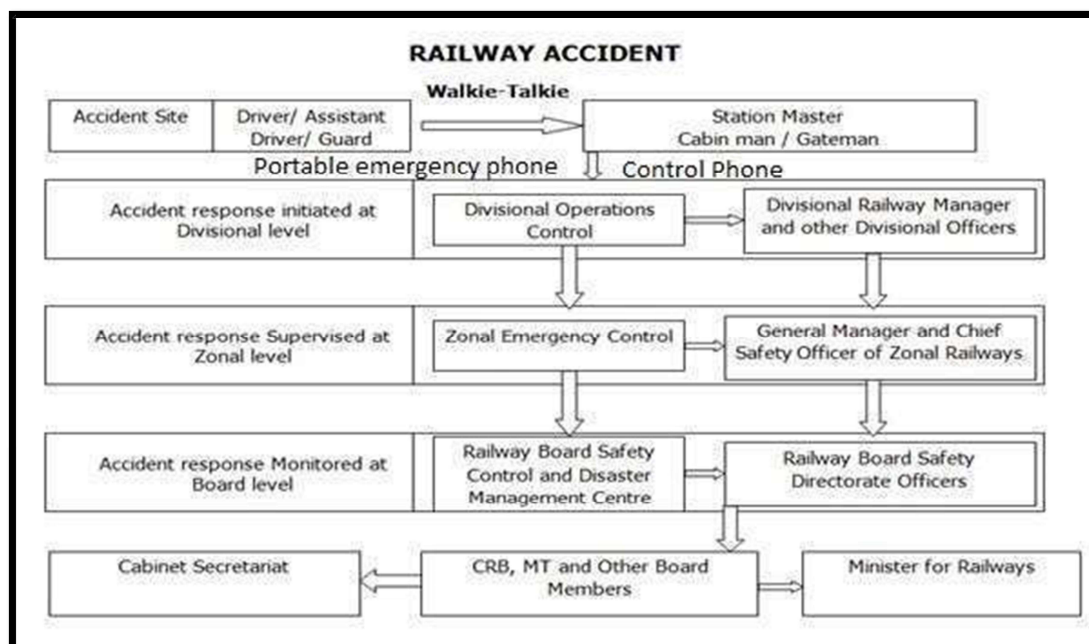
10.8.2 Man-made Disasters:

Different forms of terrorism fall under the ambit of these disasters. A major role has to be played by the Security Department of the Railways who will coordinate with the State Governments and when required the Para-military and other forces. The Security Control of the division will act as the IRS. The Headquarter Security Control will coordinate with the IOC of MHA.

A similar system would be followed as above in organizing regulation of train services by the operating department at the divisional, zonal level and also in the Railway Board.

The Disaster information flow charts for Terrorism and security related disasters, Natural calamities and a railway accident is as below:





10.9. Vulnerability profile of the division from various natural disasters
Like Earth Quakes, Tsunami, Floods, Avalanches, Landslides, Cyclones etc.,

1	Earthquake	Whole Bhavnagar is prone to earthquake lies in Zone-IV where is richter scale 1.02 to 5.0
2	Tsunami	Veraval (VRL), Porbandar (PBR) is most Tsunami prone location in Bhavnagar division.
3	Floods	Junagadh (JND), Veraval (VRL), Porbandar (PBR), Liliya Mota (LMO), Gondal (GDL), Upleta (UA). etc are flood prone location in Bhavnagar division.
4	Avalanches	No location in Bhavnagar division
5	Landslides	No location in Bhavnagar division
6	Cyclones	Bhavnagar (BVP), Mahuva (MHV), Rajula City (RJU), Una (UNA), Veraval (VRL), Porbandar (PBR)

10.10 Details of Vulnerable bridges and their location.

Sr. No.	Division	Name of Route /Section	Between Stations	Location KM/TP	Bridge No	Spans and type	Nature of Vulnerability	No of Watchmen and whether stationery/ Mobile Watchmen	Remarks
1	2	3	4	5	6	7	8	9	10
NOTES: 1. If bridge is Major bridge/Important bridge, it should be so mentioned in the remarks column									
	2. Nature of vulnerability be brought out in the relevant column including its history of vulnerability if any								
1	BHAVNAGAR	RAJKOT-VERAVAL (BG)	Vadal-Junagadh	98/0-1	16	5X12.20, PSC GIRDFER	Situated near RAT	1-stationary watchman during heavy rainfall, need base	Major Bridge
2	BHAVNAGAR	RAJKOT-VERAVAL (BG)	Vadal-Junagadh	98/4-5	17	4X12.20, PSC GIRDFER	Situated near RAT	1-stationary watchman during heavy rainfall, need base	Major Bridge
3	BHAVNAGAR	RAJKOT-VERAVAL (BG)	Vadal-Junagadh	101/1-2	18	3x12.20, PSC GIRDER	Situated near RAT	1-stationary watchman during heavy rainfall, need base	Major Bridge
4	BHAVNAGAR	RAJKOT-VERAVAL (BG)	Shahpur-Lushala	116/2-6	27	11X30.48, Steel Girder	Situated near RAT	2-stationary watchman during heavy rainfall, need base	Important bridge (Ozat)
5	BHAVNAGAR	SURENDRANAGAR-BHAVNAGAR (BG)	Surenranagar-Wadhvan	3/7-4/1	124	9 X 30.48 PSC BOX GIRDER	Due to important bridge and high bank approach.	1-stationary watchman during heavy rainfall, need base	Important bridge.
6	BHAVNAGAR	SURENDRANAGAR-BHAVNAGAR (BG)	Ranpur-Kundaly	56/0-3	139	9 X30.68 PSC BOX GIRDER	Due to important bridge and high bank approach.	1-stationary watchman during heavy rainfall, need base	Important bridge. Bhadar (Ranpur)
7	BHAVNAGAR	SURENDRANAGAR-BHAVNAGAR (BG)	Nigala-Alampar	96/8-9	153	9 X 12.20m ARCH	Due to important bridge and high bank approach.	1-stationary watchman during heavy rainfall, need base	Due to DAM of BHIMRAJ
8	BHAVNAGAR	SURENDRANAGAR-BHAVNAGAR (BG)	Nigala-Alampar	101/5-6	155	11 X 12.20 m PSC GIRDER	Due to important bridge and high bank approach.	1-stationary watchman during heavy rainfall, need base	DUE to DAM of itrea and somnath
9	BHAVNAGAR	SURENDRANAGAR-PIPAVAV (BG)	Dhola-Ujalvav	116/1-4	159	18x12.2 ARCH	NORMAL FLOODING	2-stationary watchman during heavy rainfall, need base	Due to DAM of KALUBAR
10	BHAVNAGAR	SURENDRANAGAR-PIPAVAV (BG)	LMO-SVKD	40/4-8	26	8 x12.80+6 x12.20+1x1 1.80 PSC-1 & Arch	Due to important bridge and high bank. Both approach of bridge washout in year 2015.	2-stationary watchman during heavy rainfall, need base	Important bridge. (Nariyela)

Sr. No.	Division	Name of Route /Section	Between Stations	Location KM/TP	Bridge No	Spans and type	Nature of Vulnerability	No of Watchmen and whether stationery/ Mobile Watchmen	Remarks
1	2	3	4	5	6	7	8	9	10
11	BHAVNAGAR	KHIJADIYA - VERAVAL (MG)	Amreli- Chalala	27/9-28/0	43	6 x 6.10 STEEL GIRDERS	Bridge was heavily damaged during floods in 2015	1-stationary watchman during heavy rainfall, need base	Major Bridge
12	BHAVNAGAR	KHIJADIYA - VERAVAL (MG)	Amreli- Chalala	28/1-2	43/B	2 X 6.10 STEEL GIRDERS	Bridge was heavily damaged during floods in 2015	1-stationary watchman during heavy rainfall, need base	Minor Bridge
13	BHAVNAGAR	KHIJADIYA - VERAVAL (MG)	Amreli- Chalala	28/1-2	44	1 X 8.68 STEEL GIRDER	Bridge was heavily damaged during floods in 2015		Minor Bridge
14	BHAVNAGAR	KHIJADIYA - VERAVAL (MG)	Amreli- Chalala	37/3-4	53/B	1 X 3.66 STEEL GIRDER	Bridge was heavily damaged during floods in 2015	1-stationary watchman during heavy rainfall, need base	Minor Bridge
15	BHAVNAGAR	KHIJADIYA - VERAVAL (MG)	Chalala-Dhari	Km. 51/0-1	69	3 x 6.10 G.B.	Flooding of track during heavy rains in past	1-stationary watchman during heavy rainfall, need base	Major Bridge
16	BHAVNAGAR	RaJKOT-VERAVAL (BG)	VRR-JLR	70/0-70/4	9	14X18.30 M	Due to important bridge & high bank approach	2 nos stationary watchman during heavy rainfall, need base.	Important bridge (Bhadar)
17	BHAVNAGAR	RaJKOT-VERAVAL (BG)	VRR-JLR	69/9-70/0	10	1X18.30 M	Due to major bridge & high bank approach and adjoining to Imp. Br. No.9.	2 nos stationary watchman during heavy rainfall, need base.	Major Bridge
18	BHAVNAGAR	DHOLA-BHAVNAGAR (BG)	SOA-SGD	132/3-4	165/A	LHS at LC No. 192	Normal flooding	1-stationary watchman during heavy rainfall, need base	New LHS Prepared and water may be accumulated due to natural water drain crossing LHS
19	BHAVNAGAR	Sihor - Palitana (BG)	SOJN-PIT	21/4-6	35	6.1X11 extended arch bridge	Normal flooding	1-stationary watchman during heavy rainfall, need base	--
20	BHAVNAGAR	DHASA-RAJULA (BG)	LMO-SVKD	41/1-4	27	12.8 PCC/PSC Girder	Due to important bridge and high bank. Both approach of bridge washout in year 2015.	1-stationary watchman during heavy rainfall, need base	water level above RL HFL 1982 (Shetrunji)

Sr. No.	Division	Name of Route /Section	Between Stations	Location KM/TP	Bridge No	Spans and type	Nature of Vulnerability	No of Watchmen and whether stationery/ Mobile Watchmen	Remarks
1	2	3	4	5	6	7	8	9	10
21	BHAVNAGAR	SURENDRANAGAR- BOTAD(BG)	LM-CDA	30/2-6	134	12.9 Arch	Due to important bridge and high bank.	1-stationary watchman during heavy rainfall, need base	water level above RL HFL 1970 (Bhogavo)
22	BHAVNAGAR	SBI-BTD	LHBK-HLB	93/4-5	114	12X18.30 STEEL GIRDER	Due to important bridge and high bank.	1-stationary watchman during heavy rainfall, need base	Important Bridge
23	BHAVNAGAR	SBI-BTD	LHBK-HLB	95/1-2	114A	13X18.30 STEEL GIRDER	Due to important bridge and high bank.	1-stationary watchman during heavy rainfall, need base	The Bridge Constructed in Dip location
24	BHAVNAGAR	SBI-BTD	LHBK-HLB	99/5-6	117B1	3X6.10 PSC SLAB	Due to newly constructed Major Bridge.	1-stationary watchman during heavy rainfall, need base	The Bridge Constructed in Dip location
25	BHAVNAGAR	SBI-BTD	DCK-TID	129/7-8	139C	4X6.10 PSC SLAB	Due to newly constructed Major Bridge.	1-stationary watchman during heavy rainfall, need base	The Bridge Constructed in Dip location
26	BHAVNAGAR	SBI-BTD	DCK-TID	130/5-6	139D	6X12.20 PSC SLAB	Due to newly constructed Major Bridge.	1-stationary watchman during heavy rainfall, need base	The Bridge Constructed in Dip location
27	BHAVNAGAR	SBI-BTD	DCK-TID	131/2-3	140	4x6.10 PSC Slab	Bridge Connected with RAT	1-stationary watchman during heavy rainfall, need base	Connected with RAT
28	BHAVNAGAR	SBI-BTD	BNH-JIL	144/7-8	147C	4X6.10 PSC SLAB	Due to newly constructed Major Bridge.	1-stationary watchman during heavy rainfall, need base	The Bridge Constructed in Dip location
29	BHAVNAGAR	SBI-BTD	BNH-JIL	145/6-7	147D	4X6.10 PSC SLAB	Due to newly constructed Major Bridge.	1-stationary watchman during heavy rainfall, need base	The Bridge Constructed in Dip location
30	BHAVNAGAR	SBI-BTD	BNH-JIL	148/9-149/0	147F	4X6.10 PSC SLAB	Due to newly constructed Major Bridge.	1-stationary watchman during heavy rainfall, need base	The Bridge Constructed in Dip location
31	BHAVNAGAR	SBI-BTD	SAPR-AAZ	159/3-4	158	6x18.30 Steel Girder	Bridge Connected with RAT	1-stationary watchman during heavy rainfall, need base	Connected with RAT
32	BHAVNAGAR	DAS-JLR	VDV-JTP	117/1-2	49	7X12.20 PSC SLAB	Bridge Connected with RAW	1-stationary watchman during heavy rainfall, need base	

Chapter-11**MEDIA MANAGEMENT****(Extracts of Manual for Public Relation Department, First Edition - 2007)****11.1 Authority to Deal with The Media**

11.1.1 At the Railway Board level, only Ministers, Chairman, Members, Secretary Railway Board, Director Public Relations (DPR), Director Information & Publicity (DIP) or any other Officer(s) especially authorized by the Minister of Railways may give information or be accessible to the representatives of the media. Any other officer, if approached by the representatives of the media is to refer them to the DPR (***the official Spokesperson for the Ministry of Railways***) or in his absence to the Information Officer. The Chairman is to be kept informed of the press conferences, if any, being held by any Member of the Board.

11.1.2 At the Railway/PU Headquarters level, the General Managers and the CPROs are authorized to meet the media in a formal Press Conference or informally depending upon the importance of the nature of the information to be given. However, the General Managers may especially authorize the PHODs to give information or be accessible to the representatives of the media. Any other officer, if approached, by the media, is to refer them to the CPRO.

11.1.3 At the Divisional Level: Divisional Railway Managers (DRMs) are permitted to meet the representatives of the media approaching them for factual information on specific subjects. They may also send news items concerning the working of the Railways (particularly in their Division and other matters of local interest) to the media directly or through the local office of Press Information Bureau (if available). DRMs may also hold press conferences **occasionally**. However, in respect of queries on wider policy matters concerning the Zonal Railway or the Indian Railways, the representatives of the media may politely be directed to GM/CPRO or DPR/Railway Board. In order to ensure that no unauthorized information/material is supplied to the press, the DRMs should **generally not** delegate this work to a Divisional Officer except to ADRMs. All such information/material should have **DRMs approval** before it is supplied to the press. Services of PROs (wherever positioned) may be utilized for the purpose.

11.1.4 It is made clear that **no unauthorized person should speak to or interact with the media**, as it may amount to un-becoming of a railway servant. In this connection, the provisions relating to official documents and responsibility of railway servants (contained in **Rule-11** of Railway Servants (Conduct) Rules, 1966) may also be kept in view.

11.2 PUBLICITY DURING ACCIDENTS/ OTHER UNUSUAL OCCURENCES

11.2.1 In the event of accidents, resulting in damage/causalities, the image of Railways invariably suffers because of adverse reactions in public and media. In such situations, Railways must **display greater responsibility** not only in relief and rescue operations but also in interacting with the media with correct and updated information.

11.2.2 Sometimes, newspapers publish **contrary versions** relating to any accidents attributing them to railway sources. It is, therefore, necessary that only the authorized officers (mentioned in **para 12.1.1 to 12.1.3**) interact with the media. Unauthorized person **should not** speak to the media (as mentioned in **para - 12.1.4**).

11.2.3 It has **to be ensured that the media is kept informed** of the relief and rescue measures, passengers injured and dead, restorations of the traffic, etc. to avoid breeding of gossip, rumours and sensational reporting in the absence of authentic information.

11.2.4 The media persons must be **briefed** at the accident site and if necessary, **at least once every day** at the Divisional/Zonal Headquarters on regular basis. For this purpose, the executive departments should ensure that the PR Department is fed with the latest information and update at top priority.

CPRO will deploy a suitable personnel/ team to scan the news on Electronic/ print/ Social media, so as to identify adverse reporting, contradictory reporting or similar, which require clarifications to be issued. Similar action will be taken at Divisional level.

11.2.5 Appropriate **rejoinders and contradictions** must be issued and copies thereof should be sent to DPR, Railway Board for briefing the media at the national level. During such emergencies, a **close contact should be established with DPR, Ministry of Railways**. It is of prime importance that PR activities have a **common strategy and one voice**.

11.2.6 Sometimes, train services are disrupted badly because of other reasons such as **bandh calls, rail rook agitations, etc.** by political/pressure groups etc. for causes many a time not even remotely connected with railway operations.

11.2.7 In situations where **advance information** of such agitations is available, zonal railways must publicize about the possibility of train services getting affected from the relevant date through suitable press notifications. These notifications must make it amply clear that the agitations and bandh calls are responsible for the cancellations /diversions of the train services, if any. Wherever necessary advertisements can also be brought out in the newspapers, TV and Radio in this regard. Apart from conveying information, such initiatives may also generate opinion against such bandh calls/agitations.

11.2.8 A similar action may be taken for **publicizing disruption of traffic due to floods, fog etc.** regretting inconvenience caused to the passengers and stating clearly that the reasons for such disruptions are beyond the control of Railway Administrations.

11.3 MEDIA MANAGEMENT PLAN:

11.3.1. Objective:

- (i) To post the public with actual information.
- (ii) To create a positive public opinion.
- (iii) To create a healthy relationship with the media.

11.3.2 Managing Media:

- Any accident which may reflect in the media shall be reported to Public relations branch by central control. The safety officials available in the control shall personally ensure that CPRO/PRO is informed of all the available details.
- Depending on the gravity of the situation, CPRO or his representative will immediately position himself in the Central control.
- Either CPRO or his representative shall proceed to the accident spot, whenever required, to take charge of PR work at the site.

- Meanwhile, PR official stationed at the Central Control will obtain more details from the site for information of media.
- The public relations officer, on arrival at the site of accident shall collect actual information from the officer-in-charge of the accident site and then relay the same to the media men at site and also to PR representatives in the control. Thus, an on-line communication channel will be established to keep media informed of all-important details.
- Railway's endeavour shall be to ensure that only factually correct and confirmed information is relayed to the media and no inflated or exaggerated version of the fact reported in the press.

11.4 The procedure to be followed:

- (i) Only GM, DRM, CPRO, and officer authorized by GM is competent to interact or give interview to media.
- (ii) Unconfirmed news having no authentic source shall not be relayed to media.
- (iii) No railway men shall express or voice any criticism, opinion or views at any point of time about the accident.
- (iv) No one except the PR representative stationed at Control / site shall relay any information to the media.
- (v) The media may be given the following information:
- (vi) Nature of the accident-date, time, place, exact location, train no. & Name. Number of coaches involved, Names of dead and injured passengers, etc.
- (vii) Prima- facie cause of the accident will be relayed to Media only with the approval of GM. Sabotage, even if suspected, will not be relayed to Media, without approval of Railway Board.
- (viii) Names of Hospitals where injured are being treated.
- (ix) Facilities offered to the kith and kin of the victims - Payments Ex-gratia.
- (x) Setting up of passenger assistance booths, tele/ fax No., e-mail address etc.
- (xi) Diversion of trains, road bridging, re-routing etc.
- (xii) Probable restoration.
- (xiii) Convenience and conveyance of media shall be taken care of by PR personal with assistance of Commercial representatives at the site. The media persons must be conducted to the hospitals where injured are being treated.
- (xiv) Commercial department must ensure that list of passengers who travelled by the accident involved train along with the list of dead and injured in the accident reach the PR officials in control/site by the fastest possible means.

11.5 Preparedness of Western Railway:

S.N.	RB DMP	WR Preparedness
1	Interaction with media at HQ level	General Manager & CPRO
2	Interaction with media at Divisional Level	DRM of concerned division and PRO
3	No unauthorized person to speak to media	All PHODs and DRMs to regularly sensitize officers and staff that only authorized persons as per DMP & PR manual can speak to media. PHODs & DRMs may take action against any unauthorized person speaking to media
4	Monitoring of News channels & Print media	HQ & Divisional PR officials are equipped with televisions and scan newspapers to monitor the news being reported on media and any incorrect reporting would be immediately countered
5	Media Briefing	GM/CPRO brief media at accident site or at any other suitable location in an organized manner in addition to phone and video briefing.
6	Updates on Social Media	PR Department posts updates on social media handles of WR and also shares the posts of divisional handles.

Chapter-12**GUIDELINES FOR MANAGEMENT OF DISASTERS (NATURAL HAZARDS)****12.1 Background**

India is the seventh-largest country by area, the second-most populous country with over 1.38 billion people and the most populous democracy in the World. Bounded by the Indian Ocean on the south, the Arabian Sea on the south-west, and the Bay of Bengal on the south-east, it shares land borders with Pakistan to the west; China, Nepal, and Bhutan to the north-east; and Burma and Bangladesh to the east. In the Indian Ocean, India's neighbours are Sri Lanka and Maldives. Andaman and Nicobar Islands share a maritime border with Thailand and Indonesia.

12.2 Disaster Risks in India:

India is vulnerable, in varying degrees, to a large number of natural as well as man-made disasters. 59% of the landmass is prone to earthquakes of moderate to very high intensity; over 40 million hectares (12% of land) is prone to floods and river erosion; of the 7500 km long coastline, close to 5700 km is prone to cyclones and tsunamis; 68% of the cultivable area is vulnerable to drought and hilly areas are at risk from landslides and avalanches. Vulnerability to disasters/ emergencies of Chemical, Biological, Radiological and Nuclear (CBRN) origin also exists. Heightened vulnerabilities to disaster risks can be related to expanding population, urbanization and industrialization, development within high-risk zones, environmental degradation and climate change.

12.3 Management of Cyclones:**12.3.1 Cyclone vulnerability in India:**

A long coastline of about 7,516 km of flat coastal terrain, shallow continental shelf, high population density, geographical location, and land physiological features of its coastal areas makes India, in the North Indian Ocean (NIO) Basin, extremely vulnerable to cyclones and its associated hazards like storm tide (the combined effects of storm surge and astronomical tide), high velocity wind and heavy rains.

Though the frequency of Tropical Cyclones (TCs) in the NIO covering the Bay of Bengal and the Arabian Sea is the least in the world (7% of the global total), their impact on the east coast of India as well as the Bangladesh coast is relatively more devastating. This is evident from the fact that in the last 270 years, 21 of the 23 major cyclones (with a loss of about 10,000 lives or more) worldwide occurred over the area surrounding the Indian subcontinent (India and Bangladesh). This is primarily due to the serious storm tide effect in the area.

Thirteen coastal states and Union Territories (UTs) in the country, encompassing 84 coastal districts, are affected by tropical cyclones. Four states (Tamil Nadu, Andhra Pradesh, Orissa and West Bengal) and one UT (Puducherry) on the east coast and one state (Gujarat) on the west coast are more vulnerable to hazards associated with cyclones.

About 8% of the area in the country is prone to cyclone-related disasters. Recurring cyclones account for large number of deaths, loss of livelihood opportunities, loss of public and private property and severe damage to rail infrastructure.

12.3.2 National Cyclone Risk Mitigation Project:

The National Cyclone Risk Mitigation Project (NCRMP), to be implemented with financial assistance from the World Bank, is envisaged to have four major components:

- **Component- A:** Improvement of early warning dissemination system by strengthening the Last Mile Connectivity (LMC) of cyclone warnings and advisories. Railways need to obtain advance warnings from the systems developed.
- **Component -B:** Cyclone risk mitigation investments. On the Railways, along the high-risk coastal rail infrastructure lengths, a similar protection needs to be planned where required.
- **Component- C:** Technical assistance for hazard risk management and capacity-building, where required on the railway infrastructure.
- **Component-D:** Project management and institutional support by advance coordination by the Sr. DEN/PCEs of the Divisions and Zonal Railways is essential to be able to obtain it at short notice.

Early warning to station masters and passengers is the key to informing concerned stake-holders in the DM Plan. Coastal *a forestation*, construction of protection walls, cyclone shelters near railway stations where required and strengthening of bridges and rail tracks are some of the mitigation measures which Indian Railways can play to undertake, in a phased manner, as per the mitigation plan. Zonal Railways should identify the affected places and put up mitigation projects for consideration and fund allocation. Not only floods, but management of all types of disasters is the basic responsibility of the States and Central Govt. role is restricted to that of support in terms of coordination, resource allocation and making available requisite funds.

12.3.3 Coordination by Railways regarding Cyclones Risk Management, Advance Warnings and Mitigation:

The Zonal Railways in the high-risk zone of cyclones (four states–Tamilnadu, Andhra Pradesh, Orissa and West Bengal), one UT (Puducherry) on the east coast; and one state on the west coast (Gujarat) have to be in close coordination with the respective Government departments for handling all phases of the cyclones. These include:

- Cyclone risk mitigation investments on rail track, colonies in the vicinity of high-risk area.
- Capacity building on rail tracks / bridges and important rail installations both for reducing devastation from a cyclone, and for relief, restoration etc.
- Advance warning of a cyclone. Action for regulation mainly of Passenger trains follows thereafter.

The Railway infrastructure located in the vulnerable States in part either in a densely populated area or alternately where no significant population exists. While in the former case the resources of the District/ State Government would also be concentrated for rescue/relief/mitigation, in the latter case the Railways would have to depend mostly on their own resources for restoration of Railway track.

12.3.3.1 Preparedness of Western Railway:

Coastal area of Gujarat state is prone to cyclone in western region and three divisions i.e. Bhavnagar, Rajkot and Ahmadabad come in cyclone prone region.

All the divisions and Western Railway Head Quarter office is having close coordination with state governments of Gujarat, Maharashtra & Madhya Pradesh for handling all phases of the cyclones. The following issues have been taken care of:

1. All the railway bridges and embankments on Western Railway are safely designed against flood and stability to bear cyclone effect. These parameters are also taken in to account for re-construction/replacement/newlines bridges and embankments.
2. All the major and important bridges are designed for maximum run off during the flood for their catchment area/modified catchment area.
3. All the bridges are marked with high flood level (HFL) with year and danger level (DL) in red colour. In case of any water flow crossing danger level, the train movement will be suspended in the section till, inspected by responsible official and permitted or after water level falls and traffic will be restored only after physical check against the scouring near abutments and piers by sounding method and a safety certificate is issued by competent officer at site.
4. To avoid fly/falling of GI/Aluminium/AC sheets used in station platform sheds and other structures, the necessary bolts are provided in more quantities with wind ties.
5. The roof of old staff quarters having AC/GI sheets have been replaced with RCC and abandoned structures are dismantled after declaring unsafe as a policy.
6. Necessary specified quantities of materials like boulders, sand/stone dust/moorum/coal ash etc. is kept at nominated stations/locations in the Divisions to attend post effects of cyclone i.e. washouts, breaches immediately in cases of small cyclones.
7. Capacity building on rail tracks/bridges and important rail installations both for reducing devastation from a cyclone and for relief/restoration etc is completed in coastal region of all three divisions coming in Gujarat state.
8. As soon as any information is received from Indian metrology department and other agencies like CWC, State Government, local bodies etc., advance warning of a cyclone should be communicated in affected area through Railway's own telecom and control lines through on duty station masters (24 hours) and various offices and installations.
9. All the residents i.e. staff and families residing in low lying areas should be taken at safe and higher places like platforms, institute building, other sheds/structures, shelter etc available at stations.

12.3.3.2 When a train is caught in a Cyclone Storm at mid-section/ station:

1. Driver to stop the train clear of vulnerable cuttings, bridges and high embankments.
2. Guard, Driver and other Railway staff on train shall open all doors and windows of all coaches.
3. Station Master shall not start trains when the wind velocity exceeds the permitted level as stipulated in Station working rules based on the wind velocity measured by anemometer installed at the station.
4. Make announcement frequently to warn the public about the storm/ cyclone.
5. Take all necessary action to provide shelter and other assistance to those affected by cyclone and storm.
6. There are stations on Western Railway where anemometers have been installed for measurement of wind speeds. The details of these locations and action to be taken are included in the Divisional Disaster Management Plan.

DO's and DON'Ts**What to do before and during a Cyclone.**

- Have your dwellings checked before a cyclone season starts and carryout whatever repairs that are needed.
- Talk to children and explain about cyclones without scaring them.
- Create storm awareness by discussing effects of a cyclonic storm with family members so that everyone knows what one can and should do in an emergency. This helps to remove fear and anxiety and prepares everyone to respond to emergencies quickly.
- Keep your valuables and documents in containers, which cannot be damaged by water.
- Keep information about your blood group.
- Keep lanterns filled with kerosene, torches and spare batteries. These must be kept in secure places and handy.
- Make plans for people who are either sick, suffer from disabilities, aged and children.
- Store up at leasts even-day stock of essential food articles, medicines and water supply.
- Keep blankets & clothes ready for making beds. Also keep cotton bandages and several copies of photographs of family members in case they are needed for identification purposes after the storm.
- Store some wooden boards so that they can be used to cover windows.
- Keep trees and shrubs trimmed. Remove damaged and decayed parts of trees to make them resist wind and reduce the potential for damage. Cut weak branches and make winds blow through.
- All doors, windows and openings should be secured.
- Continue to listen to warning bulletins and keep in touch with local officials. Keep radio sets in working condition. Battery powered radio sets are desirable.
- Evacuate people to places of safety when advised.
- Take steps to protect our assets.
- Store extra drinking water in covered vessels.
- Remain calm.

What one should not do during a Cyclone attack?

- During the storm do not venture out unless advised to evacuate.
- If you have a vehicle and wish to move out of your house, leave early before the onset of a cyclone. It is often best to stay at home
- Avoid remaining on the top floor of dwellings. Stay close to the ground.

12.4 Management of Floods:**12.4.1 Vulnerability to Floods:**

Floods have been our current phenomenon in India and cause huge losses to lives, properties, livelihood systems, infrastructure and public utilities. India's high risk and vulnerability is highlighted by the fact that 40 million hectares out of a geographical area of 3290 lakh hectares is prone to floods. On an average every year, 75 lakh hectares of land is affected, 1600 lives are lost and the damage caused to crops, houses and public utilities is Rs.1805crores due to floods.

Eighty percent of the precipitation takes place in the monsoon months from June to September. The rivers bring heavy sediment load from the catchments. These, coupled with inadequate carrying capacity of the rivers are responsible for causing floods, drainage congestion and erosion of river-banks. Cyclones, cyclonic circulations and cloud bursts cause flash floods and lead to huge losses. The fact that some of the rivers causing damage in India originate in neighbouring countries, adds another complex dimension to the problem.

12.4.2 Institutional Framework:

As per the constitutional provision, Flood Management (FM) is a state subject and as such the primary responsibility for flood management lies with the states.

The Ministry of Water Resources is responsible for the technical aspects of Flood Management. The Ministries of Agriculture and Farmers Welfare, Civil Aviation, Environment, Forest and Climate Change, Health and Family Welfare, Space, Earth Sciences, Mines, Railways etc. also have important role in management of floods in their respective fields.

Not only floods, but management of all types of disasters is the basic responsibility of the States and Central Govt. role is restricted to that of support in terms of coordination, resource allocation and making available requisite funds.

12.4.3 India Meteorological Department:

The IMD established in 1875, is responsible for the National Meteorological Services and the principal government agency in all matters relating to meteorology, seismology and allied subjects. The IMD is mandated as follows:

To warn against severe weather phenomena like tropical cyclones, north-westerly dust storms, heavy rains and snow, cold and heatwaves etc., which cause destruction of life and property.

For the convenience of administrative and technical control, there are six Regional Meteorological Centres (RMCs) located at Mumbai, Chennai, New Delhi, Kolkata, Nagpur and Guwahati. Under each RMC, there are different types of operational units such as meteorological centres at state capitals, forecasting offices, agro-meteorological advisory service centres, flood meteorological offices (FMOs) and are a cyclone warning centres.

12.4.4 Activities for Minimizing Flood Risk and Losses:**(a) By Central / State Governments:**

These activities include identification and marking of flood prone areas on maps, preparation of close contour and flood vulnerability maps, formulating plans for expansion and modernization of flood forecasting and warning systems, identification of priority flood protection and drainage improvement works, identification of reservoirs for review and modification of operation manuals and rule curves and under taking special studies on problems of river erosion.

(b) Increase in Water Ways:

Examining adequacy and if required, increasing the water ways of bridges/culverts under roads railway embankments by the Ministry of Port, Shipping and Waterways (MOPSW), Ministry of Road Transport and Highways (MORTH), Ministry of Railways, Ministry of Defence, National Highways Authority of India, Border Road Organisation and State governments.

12.4.5 Action Plan for Alignment, Location, Design and Provision of Waterway on Railways Embankments:

Roads and Railway embankments cut across the drainage lines and may lead to increase in vulnerability of the area, through which they pass and to flooding and drainage congestion, if they are not properly aligned, located and designated. In-adequate waterway in the form of vents/culverts/bridges/ causeways is another cause of increase in vulnerability to floods. Further, breaches in them may result in huge loss of life and properties. Insufficient height of rail embankments may result in overtopping and breaches.

The Ministry of Port, Shipping and Waterways (MOPSW), Ministry of Road Transport and Highways (MORTH), MOR, MOD, NAHI, BRO, State Governments/SDMAs will ensure that national highways, state highways, district and other roads are aligned, located and designed properly with respect to height and width and provided with adequate waterway in the form of vents, culverts, bridges and causeways so as to make them flood safe and not increase the vulnerability of the area to flooding and drainage congestion. The safety of existing roads/railway embankments against floods will also be checked by the MOSRTH, MOR, MOD, NHA, BRO and state governments/SDMAs/DDMAs and if found inadequate, measures by way of increasing height and width and augmenting water way by constructing additional bridges/ culverts/ causeways or by adding more spans to existing ones, will be taken up.

12.4.6 Flood Forecast:

Forecasts (stage/inflow) are issued whenever the river stage at the Flash Flood site exceeds or is likely to exceed a specified level called warning level of the site which is fixed in consultation with the concerned state government. The warning level is generally 1 m below the danger level of the site, although there is no-common format designed for issuing flood forecasts by various fields divisions, as forecasts are issued according to the user's convenience. In the forecast, the current date and time of issue of forecast, present water level/ inflow and anticipated water level/ inflow with corresponding date and time are normally included.

12.4.7 Dissemination of Flood Forecasts and Warnings:

On reaching a critical point, the final flood forecasts are then communicated to the user agencies such as the concerned administrative and engineering authorities of the state/central governments including railways, defence and other agencies connected with flood protection and DM by special messenger/telegram/wireless/ telephone/fax/e-mail.

12.4.8 The Central Water Commission's Flood Forecasting Network in India:

The CWC's FF network covers most of the flood prone inter-state river basins in the country. The CWC is presently issuing flood forecasts for 175 stations of which 147 stations are for river stage forecast and 28 for inflow forecast.

Role of CWC to be given out in detail as their warnings are more relevant for flood forecast and effecting evacuation. For Railways, early warnings are important for smooth movement of trains.

12.4.9 Flood Preparedness:

Railway Board has advised RDSO to compile the Flood vulnerable areas in Formation, Cutting Bridges and Buildings etc. along with a questionnaire.

Ministry of Railways has asked RDSO to coordinate IR activities for implementation of National Disaster Management Authority's guidelines on 'Management of floods (Jan.08) by zonal railways and production units. NDMA Guidelines have been made available to all zonal railway and production units.

12.4.9.1 Actions Taken by Western railway for minimizing flood risk and losses:

The activities proposed to be undertaken aimed at minimizing the flood risk and losses are implemented on Western Railway.

These activities include identification and marking of flood prone area on maps, preparation of close contour and flood vulnerability maps, formulating plans for expansion and modernization of flood forecasting and warning system, identification of priority flood protection and drainage improvement works, identification of reservoirs for review and modification of operation manuals and rule curves and undertaking special studies on problems of river erosion.

However, integration with state government and Survey of India department to procure contour plans is regular practice. Design of linear water way of bridges is based on catchment area and contour maps. There are no major issues of river erosion on this railway.

Stipulations and procedure for allowing the train by Engineering Department as prescribed in Chapter No. 7 on Actions during accidents including breaches & Pre-monsoon Precautionary measures of IRPWM-2019. Further, the speed of rolling stock will be as prescribed for different rolling stocks, but in no case shall exceed the stipulations of IRPWM. However, Officer at site may have to take a decision due to peculiar circumstances to move the train to a safer place violating the above provisions. He/She would be authorized to take such decision in consultation concerned officials of Headquarter/ Division.

Do's and Don'ts after flood

- There is a possibility of spread of water borne diseases after flood, and hence medical treatment should be taken immediately.
- Do not enter deep, unknown waters.
- Do not go near the riverbank even after the flood water has receded.
- Sprinkle medicines in the stagnant dirty water.
- Inspect your house for any cracks or other damage. Check all the walls, floor, ceiling, doors and windows, so that any chance of house falling down can be known and you can be aware about the immediate danger.
- If the floodwater has entered the house or has surrounded the house, then it is advisable not to enter such house.
- Keep listening to weather forecast on radio and television. Move to your residence only when instructed by the competent authority. It is not safe to believe that the problems have ended after the flood water have receded
- Inform the competent authority/officer for restoration of the necessary connections like gas, electricity, telephone, drainage, etc.
- Beware of the various insects or poisonous snakes that may have been dragged inside the house along with the flood water.
- Destroy the food commodities that have been affected by flood water.
- Check properly all the electric circuits, floor level furnace, boilers, gas cylinders, or electric equipments like motor pump etc. Check whether any inflammable or explosive item has not entered along with the flood water.
- Switch off the main electric supply, if any damage is noticed to the electric equipments.
- If you find any breakage in the drainage systems stop using latrines and do not use tap water.
- Do not use polluted water.
- Sewerage system should be checked and any damage should be repaired immediately so as to curtail spread of diseases.
- Empty the water clogged in the basement slowly with help of water pump so that damage to infrastructure can be minimized
- Check gas leakage which can be known by smell of gas or by hearing the sound of leakage; immediately open all windows and leave the house.
- Boil drinking water before usage and drink chlorinated water.
- Eat safe food.
- Rescue work should be under taken immediately after flood situation as per the instruction. Do not follow any shortcut for rescue work.
- Do not try to leave the safe shelter to go back home until the local officials declare normalcy after flood and instruction to return home are not given.

12.5 Management of Earthquakes:**12.5.1 Earthquake Risk in India:**

India's high earthquake risk and vulnerability is evident from the fact at about 59 percent of India's land area could face moderate to severe earthquakes. During the period 1990 to 2006, more than 23,000 lives were lost due to 6 major earthquakes in India, which also caused enormous damage to property and public infrastructure. The occurrence of several devastating earthquakes in are as hitherto considered safe from earthquakes indicates that the built environment in the country is extremely fragile a dourability to prepare ourselves and effectively respond to earthquakes is inadequate. India witnessed several earthquakes like the Uttarkashi earthquake of 1991, the Latur earthquake of 1993, the Jabalpur earthquake of 1997, and the Chamoli earthquake of 1999. These were followed by the Bhuj earthquake of 26 January 2001 and the Jammu & Kashmir earthquake of 8 October 2005.

12.5.2 Nodal Ministry:

The Ministry of Earth Sciences (MOES), as the nodal ministry will prepare the Earthquake Management Plan covering all aspects like earthquake preparedness, mitigation, public awareness, capacity building, training, education, Research and Development (R&D), documentation earthquake response, rehabilitation and recovery.

12.5.3 Monitoring Seismic Activity and Safety Codes:

The Indian Meteorological Department (IMD) will be the nodal agency for the monitoring of seismic activity. The Bureau of Indian Standards (BIS) will be the nodal agency for preparing earthquake-resistant building codes and other safety codes. All such key stakeholders, including central ministries, departments and State Governments/SDMAs will develop detailed DM plans, recognising the seismic risk in their respective jurisdictions based on the Guidelines of NDMA.

Given the high seismic risk the earthquake vulnerability in India, the NDMA Guidelines require the Railways along with all other stakeholders to ensure that, hereafter, all new structures are built in compliance of earthquake-resistant building codes and town planning bye-laws. This will be taken up as a national resolve.

12.5.4 Structural Safety Audit and Strengthening:

The NDMA Guidelines emphasize the need for carrying out the structural safety audit of existing lifeline structures and other critical structures in earthquake-prone areas and carrying out selective seismic strengthening and retrofitting.

The critical factors responsible for the high seismic risk in India and consequently the prioritized six sets of critical interventions have been presented as the six pillars of earthquake management. They will help to: -

1. Ensure the incorporation of earthquake-resistant design features for the construction of new structures.
2. Facilitate selective strengthening and seismic retrofitting of existing priority and lifeline structures in earthquake-prone areas.
3. Improve the compliance regime through appropriate regulations and enforcement.

4. Improve the awareness and preparedness of all stakeholders.
5. Introduce appropriate capacity development interventions for effective earthquake management (including education, training, R&D, and documentation).
6. Strengthen the emergency response capability in earthquake-prone areas.

12.5.5 Institutionalization Earthquake-Resistant Design and Construction:

The Railways along with all central ministries and departments and State Governments will facilitate the implementation and enforcement of relevant standards for seismically safe design and construction of buildings, bridges, flyovers, ports and harbours, and other lifeline and operationally important structures including track infrastructure etc. falling within their administrative control.

12.5.6 Need for Seismic Strengthening of Existing Structures:

There are approximately 12 crores buildings in the country in seismic Zones III, IV and V. A review of the vulnerable buildings on the Railways needs to be similarly done. Out of these how many are critical to Railways operational needs have to be separately identified. As it is not practically feasible or financially viable to retrofit all the existing buildings, these Guidelines recommend the structural safety audit and retrofitting of select critical lifeline structures and high priority buildings. Such selection will be based on considerations such as the degree of risk, the potential loss of life and the estimated financial implications for each structure, especially in high-risk areas, i.e. in seismic Zones III, IV and V, where structures have to conform to IS-1893 specifications. All the Railway buildings and bridges are designed as per relevant latest seismic provisions.

12.5.6.1 Preparedness by Railways:

S.N.	Action Plan (IRDMP)	Action taken by Western Railway-
1	Identification of existing structures Which need retrofitment	No bridges are pending to be retrofitted over WR.
2	Gist of RDSO action plan for implementation in a year time frame	All the latest guidelines issued by RDSO for design and construction of bridges and building structures are being followed on Western railway.
3	Action to be taken by the field staff post earthquake with regard to train operation and inspection of track/bridges	(i) Driver will stop the train immediately and safely, when he feels disturbances due to earthquake. (ii) Both driver and guard will inspect the track on either side and try to clear train away from vulnerable cuttings, bridges and embankment if possible. (iii) Station master shall not start any trains in the affected section and he will inform to all concerned. (iv) Concerned engineering officers/ supervisors will immediately move to inspect the section by trolley and light engine for any defects created in structures of bridges, cuttings, tunnels etc. and certify the track for inspected block section from one end to the other. (v) After certification of railway track, the train can be started in relevant section as per instructions mentioned in the certificate issued by engineering officials.

Summary of NDMA Guidelines on Earthquakes and Floods:

Railway Infrastructure	Earthquake Proneness Review	Flood Proneness Review
- Railway Track Formation (incl. Station Yards, bridges/culverts, ROB/RUBs, etc. - Buildings housing signaling gears like RRI, SSI etc. - Buildings in open line maintenance work centres like loco sheds Coaching depots etc. - Station buildings - Control room, other important office building, etc. - High-rise residential buildings, other important residential buildings - Railway hospitals	- New Construction: - Must be earthquake resistant. - Existing Infrastructure - Identify existing railway infrastructure falling under various seismic zones. - Review for earthquake resistant adequacy based on age, foundation and other details. - Retrofit/rebuild to make it earthquake resistant. - Training of Engineers (at various levels). - Associated with design and construction of railway infrastructure.	New Construction: - Railway Station building should be located in such a fashion that they are above the levels corresponding to a 50/100-year frequency or the maximum observed flood levels. Similarly, they should also be above the levels corresponding to a 50-year rainfall and the likely subversion due to drainage congestion. - Government offices buildings should be above a level corresponding to a 25-year flood or a 10-year rainfall with stipulation that all buildings invulnerable zones should be constructed on columns or stilts. - Railway track at levels well above the likely flood levels. Existing Infrastructure: - - Co-ordination with flood/rain forecasting agencies to get early warning so as to introduce patrolling. Speed restriction etc. as per the provisions in Railway's SR. - Inspections of Railway Affecting Works—to be streamlined and timely ensured. - Review of water ways for adequacy and alignment and measures to modify, if needed.
		- Status Note on the lessons learnt from the previous flood situations in the past 5years. - Bye-laws for buildings in flood plains. - Making existing and new buildings and infrastructure capable of withstanding fury of floods.

12.5.6.2 Action when a train is caught in an Earthquake at Mid-Section/ Station:

- (i) Driver will stop the train immediately and safely, when he feels disturbances due to earthquake.
- (ii) Both driver and guard will inspect the track on either side and try to clear train away from vulnerable cuttings, bridges and embankment, if possible.
- (iii) Station master shall not start any trains in the affected section and he will inform to all concerned.
- (iv) Concerned engineering officers/supervisors will immediately move to inspect the section by trolley and light engine for any defects created in structures of bridges, cuttings, tunnels etc. and certify the track for inspected block section from one end to the other.
- (v) After certification of railway track, the train can be started in relevant section as per instructions mentioned in the certificate issued by engineering officials.

Earthquake safety:

- Tell the facts about earthquake to your family members.
- Construct new buildings with earthquake resistant method and strengthen the old buildings.
- Insure your house and family members.
- Take the training for first aid and firefighting.
- Do not keep cots near the glass window.
- Do not keep heavy and fragile things in the selves.
- Do not hang photo frames, mirrors, or glasses up your bed
- Keep your important documents, some cash and necessary articles ready in a bag.
- Get your house insured before the earthquake
- Identify special skills of neighbor (medical, technical) so that it can be utilized in emergency during earthquake.
- Do not panic.
- If already inside, then stay indoors, get under a heavy desk or table and hold to it.
- If fire breaks out, drop on the floor and crawl towards the exist
- If you are out doors during the quake, keep away from buildings, trees and electricity lines, walk towards open places, in a calm and composed manner.
- If you are driving, quickly but carefully move your car as far out of traffic as possible and stop, do not stop on or under a bridge or overpass or under trees, light posts, power lines, or signs. Stay inside the car until shaking stops.
- If you are in a school, get under a desk or table and hold on, after the earthquake.
- Do not be afraid of the aftershocks.
- Listen to radio-TV and other media for Government Announcement.
- Check for injuries to yourself and those around you. Take first aid where you can.
- Extinguish fire, if any.
- Examine walls, floors, doors, stair cases and windows to make sure that the building is not in danger of collapsing.
- Do not enter into the unsafe or risky houses or buildings.
- Inspect for Gas leaks-If you smell gas or hear blowing or hissing noises, open a window and quickly leave the building. Don't light your kitchen stove if you suspect a gas leak.
- Do not keep telephone lines busy unnecessarily.
- Switch off electric lines.

12.6 Management of Landslides and Snow Avalanches:**12.6.1 Landslide Risk:**

Landslides are one of the natural hazards that affect at least 15 percent of the land area of our country- an area which exceeds 0.49 million km. Landslides of different types are frequent in geo-dynamically active domains in the Himalayan and Arakan-Yom belt of the North-Eastern parts of the country as well as in the relatively stable domains of the Meghalaya Plateau, Western Ghats and Nilgiri Hills. In all, 22 states and parts of the Union Territory of Puducherry and Andaman and Nicobar Islands are affected by this hazard. The phenomenon of landslides is more pronounced during the monsoon period.

12.6.2 Nodal agency of Government of India:

The Geological Survey of India was declared the nodal agency for landslides by the Government in January 2004. The responsibilities of the Ministry of Mines/Geological Survey of India as the nodal ministry/agency include coordinating all the activities related to landslide hazard mitigation, and monitoring the occurrence of landslide in the country.

As per the Disaster management Act, the responsibility to cope with natural disasters is essentially that of state governments and the role of the central government is a supportive one in terms of supplementing physical and financial resources.

12.6.3 Monitoring and Forecasting of Landslides:

The monitoring and forecasting of landslides, which are two of the least developed fields of landslide management practice will be given special attention as apart of mitigating the risk arising from landslide hazard. Monitoring of landslides includes:

- (i) Surface measurements of landslide activity.
- (ii) Sub-surface measurements of landslide activity.

12.6.4 Management of Snow Avalanches:

The recording of avalanche data and their clearance is carried out by the Border Roads Organisation. The forecasting and control of snow avalanches are generally dealt with by the Snow and Avalanche Studies Establishment. According to the management of this hazard will be a collaborative work of the National Disaster Management Authority, District Administration, Border Roads Organisation, Snow and Avalanche Studies Establishment, and academic institutions active in carrying out research in this field.

Till the Kashmir Project is fully completed the Railway infrastructure is not likely to be affected by this except at a few locations in Himachal Pradesh. The Nilgiri Hills and Western Ghats are additional likely areas which may be affected by landslides and should be included in the DM Plan as vulnerable areas.

12.6.5 Action Plan:

Although management of landslides requires coordinated and multi-faceted activities among many stakeholders in the total disaster management cycle, one important recommendation for follow up by Civil Engineering Directorate of Railway Board is -

S.N	Action Plan (IR-DMP)	Action taken by Western Railway-
1	Hazards on ation mapping in macro and micro scales after identification and prioritization of areas in consultation with Border Road Organization, state governments and local communities.	There is no problem of landslides and snow avalanches on Western Railway in any section however in case of any such incidents the following action to be taken; i) Whenever landslide/boulder falling is expected /experienced due to heavy downpour or otherwise all train services should be regulated. ii) Rescue team to be rushed for restoration work.

12.6.6 MANAGEMENT OF DISASTER IN CUTTINGS, TUNNELS & IN WATER BODIES:

12.6.6.1 Expertise to handle Rail Disasters in Tunnels etc.:

The Railways have no expertise or infrastructure to handle a train disaster if it occurs in a tunnel or in a deep cutting not approachable by land. No machinery or earthmoving equipment is available on the Indian Railways which would be mobilized for this job. Help of other stakeholders or of NDRF has to be taken for this.

12.6.6.2 Ventilation arrangements in Tunnels:

Adequacy of ventilation arrangement and its efficient operation is always a matter of concern especially in very long tunnels. There are ventilation systems installed with alarms to warn the control rooms in case of a mishap. In case a train falls in long tunnel due to derailment / fire or any unusual condition, automatically alarm will be sounded in the control room to alert the Ventilation Operator/Controller or if Guard/Driver of a train or any other person gives such call on 'Emergency' Telephone the Ventilation Operator should control the ventilation in tunnel as per the procedure given.

12.6.6.3 Lighting Systems in Tunnels for use in emergency:

Depending on length of a tunnel, emergency lighting arrangements may be provided to give immediate assistance in handling a disaster.

12.6.6.4 Rail Disasters in a Lake, River, Sea etc.

The Railways neither has the equipment (cranes operated from barges) nor trained man power to extricate bodies from a train or coaches fallen down from a bridge on to a water body, viz lake, river or sea etc. Help of the NDRF has to be taken in such a situation.

12.7 Management of Lightning / Thunderstorm:

12.7.1 Lightning/ Thunderstorm Risk

In India, on an average, more than 2,500 deaths are recorded due to thunder storm and lightning every year (Source: Annual Report, NCRB). It accounted for about 39 percent of deaths from natural disasters in the country from 1967 to 2012. Rura land forest areas are the most vulnerable due to presence of tall trees and water bodies. A majority of the lightning victims are people working in the fields in rural areas. Lightning is also a major cause of electrical power breakdowns and forest fires. It can also damage communication and computer equipment.

A severe thunderstorm can damage power and communication lines as well as roads, besides flooding of escape routes, breaking of tree branches, uprooting of large trees, etc.

Indian Institute of Tropical Meteorology (IITM), Pune, under the Ministry of Earth Sciences, has initiated a project to study the characteristics of lightning by using Lightning Location Network (LLN). This network can accurately detect the location of occurrence of a lightning strike and can help for warn the public at least 1-2 hours before the occurrence of a thunderstorm.

12.7.2 Definition & Classification of Lightning

Lightning is a high-energy luminous electrical discharge accompanied by thunder. It is of three types:

- 1) Thunder cloudor Intra-cloud lightning (IC)
- 2) Cloud-to-cloudor Inter-cloud lightning (CC)
- 3) Cloud-to-ground lightning (CG)

The third type of lightning takes a toll on lives and property, and therefore, is of more concern to us. However, inter-cloud and intra-cloud lightning may hit aircrafts. These are also the precursor to cloud-to-ground lightning.

Lightning has a total path length of a few kilometres. It speaks power and total energy are very high, with the peak power discharge in the order of 100 million watts per meter of the channel and the peak channel temperature approaching 30,000°C. Peak currents in a lightning discharge range up to hundreds of kiloamperes (kA) with its typical value being 40 kA. Predicting the precise time and location of lightning is very difficult. However, a season or a period of lightning occurrence is known for many regions.

12.7.3 Early Warning of Lightning

India Meteorological Department (IMD), Ministry of Earth Sciences, is the nodal agency for providing current weather information and forecast, including warnings for all weather-related hazards. Besides, States should establish their own independent early warning and monitoring systems to supplement warnings from the IMD.

A thunderstorm is a small-scale phenomenon and has a life cycle of about three hours. It has a dimension of 2 km to 20 km, and therefore, its detection is difficult. Geostationary Weather Satellite captures images from a height of 36,000 km above the earth. It takes about half an hour to capture the image and another half an hour to process the data. So, by the time someone sees the satellite imagery on IMD's website, it is already one hour late. Due to the short life cycle of thunder storms, a satellite cannot capture its initiation unless it is a large-scale thunderstorm activity. Lightning incidents can be detected by the ground-based Lightning Detection Network in real time. There is a need to create a high-density network in regions vulnerable to lightning strikes.

12.7.4 Roles and Responsibilities to deal with Lightning

All the stakeholder Ministries/ Departments and agencies should work under a unified command to ensure effective implementation of prevention, preparedness and mitigation measures.

The Chief of Operations (Chief Secretary) will spell out the priorities and issue policy guidelines. The Relief Commissioner will coordinate the services of various stakeholders, including national/State agencies, and central government agencies.

The State Emergency operation centre (SEOC) is the nerve centre to support, coordinate and monitor disaster management activities at the State level, including training and research. It will, under normal circumstances, work under the supervision of the Relief Commissioner. During an emergency situation, it will work as the centre for decision making as long as the need for emergency relief operations continues or until the long-term plans for rehabilitation are finalised.

12.7.5 Action Plan of Ministry of Railways: All essential establishments of railway's network viz. track distribution system, Signal & telecommunication equipment etc. are properly grounded. However, installation of lightning arrestors and sound earthing for each building is essential. Lightning shields are the most commonly employed structural protection measure for buildings and other structures. Alighting shield consists of the installation of a lightning conductor at a suitably high location at the top of the structure. The conductor is grounded using a metal strip of suitable conductance. The grounding of the conductor is also specially designed to ensure rapid dissipation of the electrical charge of a lightning strike into the ground.

12.7.5.1 Preparedness by Western Railways:

S.N.	Action Plan (IRDMP)	Action taken by Western Railway-
1	All essential establishments of railway's network viz. track distribution system, S&T equipment etc. are properly grounded	All Signalling and Telecom equipment in the electrified section are properly earthed/ grounded.
2	Installation of lightning arrestor and sound earthing for each building	Equipment earthing is done in accordance with the RE manual.
3	Provision of Lightning shields protection measure for buildings and other structures	In EI installation, Class A Lightning arrestors are installed on the top of building and these arrestors are properly earthed. Grounding of building installations and lightning arresters for buildings is installed as per the codal provisions.
4	The conductor is grounded using a metal strip of suitable conductance. The grounding of the conductor is also specially designed to ensure rapid dissipation of the electrical charge of a lightning strike into the ground	Ensured in signaling installations of electrified area.

CHAPTER-13**MANAGEMENT OF CBRN DISASTERS (HUMAN INDUCED DISASTERS)****13.1 Background:**

The NPDM notes that rise in population, rapid urbanization and industrialization, development within high-risk zones, environmental degradation, and climate change aggravates the vulnerabilities to various kinds of disasters. Due to inadequate disaster preparedness, communities, and animals are at increased risk from many kinds of human-induced hazards arising from accidents (industrial, road, air, rail, on river or sea, building collapse, fires, mine flooding, oil spills, etc.). Chemical, Biological, Radiological, and Nuclear (CBRN) hazards rank very high in among the human-induced risks. Terrorist activities and secondary incidents add to these risks and call for adequate preparedness and planning.

13.2 Management of Chemical Disasters:**13.2.1 Guidelines by NDMA:**

National Disaster Management Authority (NDMA) has issued guidelines on the management of chemical disasters. These guidelines are directed more towards their prevention and mitigation of their effects, if these happen than on rescue and relief operations afterwards.

The main stakeholders in the management of chemical disasters are Ministry of Environment, Forest and Climate Change (MEFCC); the nodal ministry; Ministry of Home Affairs (MHA); Ministry of Labour and Employment (MOL&E); Ministry of Agriculture and Farmers Welfare (MAFW); Ministry of Ports, Shipping and Waterways (MOPSW); Ministry of Road Transport and Highways (MORT&H); Ministry of Defence (MOD); Ministry of Chemicals and Fertilizers (MOC&F); Ministry of Petroleum and Natural Gas (MOP&NG). Department of Atomic Energy (DAE).

13.2.2 Salient features of NDMA Guidelines:

The growth of chemical industries has led to an increase in the risk of occurrence of incidents associated with hazardous chemicals (HAZCHEM). With their proliferation, the demands on its transportation by rail have gone up significantly. Common causes for chemical accidents are deficiencies in safety management systems and human errors, or they may occur as a consequence of natural calamities or sabotage activities. Chemical accidents result in fire, explosion and/or toxic release. The nature of chemical agents and their concentration during exposure ultimately decides the toxicity and damaging effects on living organism in the form of symptoms and signs like irreversible pain, suffering, and death. Meteorological conditions such as wind speed, wind direction, height of inversion layer, stability class etc. also play an important role by affecting the dispersion pattern on toxic gas clouds. The Bhopal Gas tragedy of 1984 – the worst chemical disaster in history, where over 2000 people died due to the accidental release of the toxic gas Methyl Iso-cyanate, is still fresh in our memories.

13.2.3 Genesis of NDMA's Guidelines on Chemical Disasters:

Effective Chemical Disaster Management (CDM) is possible by the adoption of preventive and mitigation strategies as most chemical disasters are preventable in comparison to natural disasters that are difficult to predict and prevent.

In the NDMA's Guidelines comprehensive instructions for installations and storages (including isolated storages of HAZCHEM) that contain good engineering practices for safety, accident reporting, investigation and analysis checklists and safety promotional activities as important tools for effective CDM, are provided.

In the guidelines are instructions related to chemical accidents during transportation of ZHAZCHEM. The areas covered include:

Preparation of a highway DM plan.

Modification of rules pertaining to transport emergencies. Specific roles and responsibilities of MAH units, transporters, drivers, authorities and aspects related to emergency communication systems and training of various stakeholders.

The need for the development of an efficient pipeline management system.

13.2.4 Guidelines on Chemical Disasters: -

Railway's guidelines/ instructions relevant to the zonal railways have been issued separately in detail for taking necessary action and incorporating suitable provisions in their respective DM Plans. These guidelines will add to the existing safeguards listed in the Red Tariff on handling, storage and transportation of hazardous material.

13.2.5 Railways Red Tariff – Transport of Hazchem:

Soft Copy at: <http://www.indianrailways.gov.in/railwayboard/uploads/Download%20File.pdf>

Indian Railways have also been transporting chemicals and hazardous materials e .g. petroleum products (petrol, Naphtha, HSD, etc.), Caustic soda, Alcohol, compressed gases (LPG gas etc.) Chemical manures, Acids, Matches etc. These goods are carried either in the SLRs or in the Parcel Vans or in the goods wagons or in containers. Quantum and type of transportation of such hazardous material varies from railway to railway and different zonal railways need to prepare themselves based on the type and extent of hazardous material being handled and transported by them.

Indian Railway's Rules for carrying dangerous (hazardous goods) by rail have been legislated in the Railway Red Tariff Rule 2000 as per which dangerous goods have been classified into following 8 classes:

- I Explosives
- II Gases, Compressed, liquefied or dissolved under pressure
- III Petroleum & other inflammable liquids
- IV Inflammable solids
- V Oxidising substance
- VI Poisonous (Toxic Substances)
- VII Radio – active substances
- VIII Acids & other Corrosives.

Chapter I to VIII deal with the above classes of dangerous goods which include General rules governing acceptance, handling, Carriage, storage, delivery and the list of commodities included in that class. Carriage of Goods of a hazardous nature other than those specified in these chapters shall not be accepted for transport by rail unless specially authorized by the railway administration as provided under these Rules.

Out of the above 8 classes of dangerous goods, classes II (Gases, Compressed, Liquefied or dissolved under pressure), III (Petroleum and other inflammable liquids) and VIII (Acids and other corrosives) are dealt in bulk on the railways whereas other classes of dangerous goods are dealt in piecemeal/small quantities in parcel vans/SLRs. Railways may refer to the specific paras pertaining to all these classes of dangerous goods.

13.2.6 Emergency Response Guidebook 2016 - Transport of Hazardous Materials

Soft copy available at <https://www.phmsa.dot.gov/sites/phmsa.dot.gov/files/docs/ERG2016.pdf>

Apart from Railways Red Tariff which contains detailed guidelines on transportation of Chemicals and Hazardous Materials, Ministry of Railways has also published Emergency Response Guidebook 2016 (ERG2016) which is intended for use by first responders during the initial phase of a transportation incident involving dangerous goods/hazardous materials. Copies of ERG2016 have been distributed to all Zonal Railways which will further help in transporting hazardous materials safely.

ERG 2016 was prepared by the staff of Transport Canada, the U.S. Department of Transportation and the secretariat of Communications and Transport of Mexico with the assistance of many interested parties from government and industry including the collaboration of CIQUIME of Argentina.

13.2.7 Rescue Relief and Restoration Operations:

Railway's expertise in dealing with them is-happenings like spillage, catching fire etc. of these dangerous goods is very limited. It is therefore imperative that the respective zonal railways will develop and nurture coordination with those agencies and Organisations on their system that has expertise in dealing with the hazardous material being handled and transported on the respective zonal railways.

Contact details e.g. Name, Designation, Telephone Nos., Mobile Nos. etc. of such agencies should be available in the Divisional and Zonal Railway Disaster Management Plan so that these agencies can be called for without any delay during any untoward incident. Nominated staff of ARMVs, ARTs and few of the staff maintaining the rolling stock which is used for transportation of hazardous material may be trained and equipped with the equipment used for dealing with such material.

Preparedness of Western Railway:

- All nominated staff of ARTs & ARMEs are being trained for dealing with transportation of hazardous materials & maintain the rolling stock.

On Western Railway, CMS will be instructed to coordinate with Sr.DME of the divisions for such exposure training soon.

13.2.8 Preventive Action in the Rail Route of Movement of Hazchem:

Divisions located on the "Hazchem Rail Transportation Highways" have to be in close touch with specialized services available with IOC/GAIL and Pvt. Chemical Factories and NGOs to be able to call upon their men and firefighting fire extinguishers etc at short notices.

Vulnerability on this Highway needs to be reduced by the removal of Jhuggis from close to the track (say till at least 50 m away). This is essential as in the case of derailment of a Naphtha loaded (or even POL Tank Wagon etc) train, there is a high possibility of spillage of the dangerous products and its spread over a wide area. These products are highly prone to catch fire and even explode, resulting in fire in the Jhuggis etc.

13.2.8.1 Preparedness by Western Railways:

S.N	Action Plan (IRDMP)	Action taken by Western Railway-
1	Develop and nurture coordination with those agencies and Organisations on their system that has expertise in dealing with the hazardous material being handled and transported on the respective zonal railways	Co-ordination with IOCL, BPCL, HPCL, GAIL & ONGC is done for better preparedness of Railway to deal with hazardous material by Commercial Department. Firefighting units, Chemical units, NGOs and state administration are co-ordinate for their utilized during toward incident of fire etc.
2	Divisions located on the “Hazchem Rail Transportation Highways” have to be in close touch with specialized services available with IOC/GAIL and Pvt. Chemical Factories and NGOs to be able to call upon their men and firefighting fire extinguishers etc at short notices.	
3	Vulnerability on this Highway needs to be reduced by the removal of Jhuggis from close to the track (say till at least 50m away). This is essential as in the case of derailment of a Naphtha loaded (or even POL Tank Wagon etc) train, there is a high possibility of spillage of the dangerous products and its spread over a wide area. These products are highly prone to catch fire and even explode, resulting in fire in the Jhuggis etc.	Sr.DEN in-charge of the land and assets is conducting regular drives for marking and removal of jhuggis from close to the track. All possible assistance is rendered by RPF in co-ordination with State Police.
4	Contact details e.g. Name, Designation, Telephone Nos., Mobile Nos. etc. of such agencies should be available in the Divisional and Zonal Railway Disaster Management Plan so that these agencies can be called for without any delay during any untoward incident.	The details of Disaster Management related information are available at all Divisional Control and Disaster Management team available over Western Railway. This information is Included in ZDMP-II as well as Divisional Disaster Management Plans.
5	Nominated staff of ARMVs, ARTs and few of the staff maintaining the rollingstock which is used for transportation of hazardous material may be trained and equipped with the equipment used for dealing with such material.	Staff are trained and utilized as per requirement. Mock Drills are conducted to refresh Railway staff for their role during such incidents.
6.	Medical	30 doctors and 67 paramedics have received basic training on CBRN at NDRF camp, Jarod near BRC. More training will be arranged for doctors and paramedics. Hospitals are equipped, to some extent to handle Chemical and biological situation.

13.3 Management of Biological Disasters:

13.3.1 Causes of Biological Disasters:

Biological disasters might be caused by epidemics, accidental release of virulent microorganism(s) or Bioterrorism (BT) with the use of biological agents such as anthrax, smallpox, etc. The existences of infectious diseases have been known among human communities and civilisations since the dawn of history.

In recent times travelling has become easier for which Railways have made a significant contribution. More and more people are travelling all over the world which exposes the whole world to epidemics. As our society is in a state of flux, novel pathogens emerge to pose challenges not only at the point of primary contact but in far removed locations. The Marburg virus illustrates this. The increased interaction between humans and animals has increased the possibilities of zoonotic diseases emerging in epidemic form.

13.3.2 Biological Warfare (BW) and Bio-Terrorism (BT):

The historical association between military action and outbreaks of infections suggest a strategic role for biological agents. The advances in bacteriology, virology and immunology in the late 19th century and early 20th century enabled nations to develop biological weapons. The Biological and Toxin Weapons Convention, however, resolved to eliminate these weapons of mass destruction. Despite considerable enthusiasm, the convention has been a non-starter.

13.3.3 Mitigation:

The essential protection against natural and artificial outbreaks of disease (bio-terrorism) will include the development of mechanisms for prompt detection of incipient outbreaks, isolation of the infected persons and the people they have been in contact with and mobilisation of investigational and therapeutic countermeasures. In the case of deliberately generated outbreaks (bio-terrorism) the spectrum of possible pathogens is narrow, while natural outbreaks can have a wide range of pathogens. The mechanism required however, to face both can be similar if the service providers are adequately sensitized.

13.3.4 Nodal Ministry and support of other Ministries:

The response to these challenges will be coordinated by the nodal ministry-Ministry of Health and Family Welfare (MOH&FW) with inputs from the Ministry of Agriculture for agents affecting animals and crops. The support and input of other ministries like Ministry of Home Affairs, Ministry of Defence, Ministry of Railways and Ministry of Labour and Employment, who have their own medical care infrastructure with capability of casualty evacuation and treatment, have an important role to play. With a proper surveillance mechanism and response system in place, epidemics can be detected at the beginning stage of their outbreak and controlled.

13.3.5 Handling CBRN Disaster –Training:

For handling and to provide medical relief for all CBRN disaster which (include a Biological Disaster) and mitigation of BW and BT affected Railway staff, need to be incorporated in the Hospital DM Plan. Training of a skeleton numbers of Medical Doctors in each Divisional Railway Hospital to manage CBRN casualties is to be organised.

13.4 Management of Chemical (Terrorism) Disasters:

13.4.1 Introduction:

A terrorist attack involving chemical agents differs from a normal terrorist attack as it results in specific effects on health and can cause fatal injuries, create panic, and affect the morale of the community. The targets of terrorists include market places, densely populated areas, public functions, important dignitaries, water and electricity supplies, restaurants/food plazas, malls, places of entertainment, busy railway stations in metros and critical and sensitive military, civil and economic institutions.

Chemical terrorism is an act of violence to achieve professed aims using chemical agents. These chemical agents include poisonous gases, liquids or solids that have a deleterious effect on the biotic and non-biotic environment. Due to the relatively easy availability of hazardous chemicals in Major Accident Hazard units, storages and during transportation, terrorists can procure chemicals or even try to sabotage the facilities or transport vehicles as it offers them an easier and often more catastrophic method of anti-national activity. The mode of dispersal used for chemical agents would range from dissemination of aerosolised material to contamination of food and water.

13.4.2 NDMA's Guidelines:

The possibility of a chemical terrorism attack can be minimized by spreading general awareness and building the capacity of the community, institutions, and governmental and non-governmental organisations.

The approach followed in the NDMA's Guidelines lays emphasis on:

Security and surveillance measures for installations manufacturing/ using/ storing chemicals.

Strengthening intelligence regarding the movement of chemicals.

- Preparedness for counter-terrorism measures:
 - (a) Issues regarding the safety of chemicals and risk reduction strategies etc.
 - (b) Strengthening of response through rescue and emergency medical resources.
 - (c) Preparedness of all emergency functionaries in terms of protection, detection, decontamination, de-corporation, capacity building and infrastructure development.
 - (d) Community-centric mechanism for the management of chemical (terrorism) disasters.

13.4.3 CTD Preparedness Plan:

Implementation of the Guidelines at the national level shall begin with the preparation of a detailed action plan (involving programmes and activities) by the nodal ministry (MHA) that shall promote coherence among different CTD management practices and strengthen mass casualty management capacities at various levels. The concerned ministries like MOD, MECC, Ministry of Railways (MOR), MOL&E (through Employees' State Insurance Corporation (ESIC), MAFW etc., will also prepare their respective CTD preparedness plan as a part of all hazard DM Plans. The Railways has an important role in the management of mass casualties in the event of national calamities, they should also cater for developing additional capacities besides meeting their own requirements in their preparedness plan.

Railway Board has issued guidelines on precautions in handling, storage and transportation of chemicals. These are to supplement the guidelines laid down in the Red Tariff. The Commercial Department may keep the RPF official updated on the Goods Sheds which handle Hazchem so that adequate security systems can be strengthened. This may be a part of the Divisional DM Plans.

13.4.4 Preparedness for Emergency Response:

Preparedness for an emergency response at the incident site requires protection, detection, and decontamination. RPF and the Medical Department have a role to play in the relief and mitigation efforts. SOPs are required for all the emergency responders working under the overall supervision of the incident commander. This may be identified in the zonal DM Plan as the DRM of the respective division on the Railways where CTD has occurred. SOPs will be included for field decontamination. A well-orchestrated medical response to CTD will be possible only by having a command and control function at the divisional level by the Medical Department. The CMO/CMS will be the main coordinator for the management of CTD.

13.5 Management of Nuclear and Radiological Emergency (Disaster):**13.5.1 Nuclear / Radiological Emergency:**

Any radiation incident resulting in or having a potential to result in exposure and/or contamination of the workers or the public in excess of the respective permissible limits can lead to a nuclear/radiological emergency.

After due consideration of the nature and consequences of the nature and consequences of all the possible scenarios, these radiological emergencies have been broadly classified into the following five categories:

- (i) An accident taking place in any nuclear facility of the nuclear fuel cycle including the nuclear reactor, or in a facility using radioactive sources, leading to a large-scale release of radioactivity in the environment.
- (ii) A 'criticality' accident in a nuclear fuel cycle facility where a non-controlled nuclear chain reaction takes place in advertently, leading to bursts of neutrons and gamma radiations
- (iii) An accident during the transportation of radioactive material.
- (iv) The malevolent use of radioactive material as a Radiological Dispersal Device by terrorists for dispersing radioactive material in the environment.
- (v) A large-scale nuclear disaster, resulting from a nuclear weapon attack (as had happened at Hiroshima and Nagasaki) which would lead to mass casualties and destruction of large areas and property.

Normally, nuclear or radiological emergencies (referred to in points (i) to (iv) above) are within the coping capability of the plant/facility authorities. A nuclear emergency that can arise in nuclear fuel cycle facilities, including nuclear reactors, and the radiological emergency due to malevolent acts of using Radiological Dispersal Devices are the two scenarios that are of major concern. The impact of a nuclear disaster (scenario at (v)) will be well beyond the coping capability of the local authorities and it calls for handling at the national level.

13.5.2 Vulnerability of Nuclear Facilities:

Identification of a Rail network close to a nuclear facility needs to be done by the zonal Railways. As regards the vulnerability of various nuclear fuel cycle facilities to terrorists' attacks, these facilities have elaborated physical protection arrangements in place to ensure their security. The structural design of these facilities ensures that even in the event of a physical attack, the structural barriers prevent the release of any radioactivity outside the plant area itself and hence the public are not likely to be exposed to radiation.

While their radioactive strength is in itself a deterrent to pilferage, the radioactive sources can still be stolen and used in a Radiological Dispersal Device or Improvised Nuclear Device. Essentially, a Radiological Dispersal Device is a conventional explosive device in which the radioactive material has been so added that, on its being exploded, there would be dispersal of radioactivity in the environment.

A Radiological Dispersal Device is not a Weapon of Mass Destruction. Normally, the use of a Radiological Dispersal Device by itself would not result in fatalities due to radiation. The fatalities, if any, would primarily be due to the explosion. However, it may contaminate a reasonably large area, besides its main potential of causing panic and disruption.

Accidents during the transportation of radioactive materials are of low probability due to the special design features of the containers in which they are transported and special safety and security measures (to take care of all possible threats/eventualities, including the threat from misguided elements) which are laid down to be followed during actual transportation.

A network of Emergency Response Centres has presently been established by the Bhabha Atomic Research Centre to cope with radiological emergencies in the public domain, like transport accidents, handling of orphan sources, explosion of Radiological Dispersal Devices etc. The task of these Emergency Response Centres is to monitor and detect radiation sources, train the stakeholders, maintain adequate inventory of monitoring instruments and protective gear, and provide technical advice to first responders and local authorities.

- 13.6 DOs & DONTs for the Disaster Magistrates in the event of CBRN (Chemical, Biological, Radiological & Nuclear) disasters issued by Ministry of Home Affairs, Disaster Management Division vide letter no.32-35/2003 NDM-II dated 21.07.2017.

DOs:

1. Chemical Disaster:

In case of accidental release of a quantity of toxic chemicals into environment, resulting in death or injury to workers or members of nearby communities, then it is a case of chemical disaster. In the event of a chemical disaster, the District Magistrate should immediately contact, the Nodal Ministry for chemical disasters i.e. Ministry of Environment, Forest and Climate Change. Contact details are given in DDMP- Part-II.

2. Biological Disaster:

Biological disasters are events caused by microbial agent or its toxin in humans, animals or plants that is beyond the coping ability of the State. Such an event may occur due to epidemic of infectious diseases caused by a microbial agent or toxin in humans, animals or plants Non-intentional accidental release of microbial agents such as from laboratories or during transportation of samples Intentional use of microbial agents to cause harm such as use of biological agents or toxins as weapons of mass destruction (biological warfare) or microbial agents or toxins used by terrorists to cause panic/harm to humans, crops or livestock (bio-terrorism/ agro-terrorism).

In the event of Biological disasters, the District Magistrates should immediately contact the nodal Ministry for Biological disasters i.e. the Ministry of Health & Family Welfare. The contact details are given in DDMP- Part-II.

• **Nuclear / Radiological disasters:**

Any radiation incident resulting in or having a potential to result in exposures and/ or contamination of the workers public or environment in excess of the respective permissible limit can lead to a nuclear/radiological emergency.

In case of theft/loss of radioactive source from the institution/ industrial unit/hospital premises/during transportation, it would normally be noticed first by the field person responsible for handling the same. The head of the concerned organization would be next person to get this information from his own field person. He in turn, would bring the incident to the notice of the local police station as well as to the Atomic Energy Regulatory Board (AERB) who is the regulator (as per Radiation Protection Rule 2004 under the Atomic Energy Act) for transportation, storage and use of radiation sources in the public domain. This will be the trigger mechanism for initiating any mitigation process by state agencies.

Further, in case of loss/theft of radioactive sources, the recommended response plan/SOP for recovery/retrieval and disposal of the radiological source would be as follow:

- (vi) AERB will inform the Crisis Management Group (CMG), DAE (Department of Atomic Energy) through DAE Emergency Control Room (DAE-ECR), Contact Details of 24*7 operational DAE-Emergency Control Rooms are given in ZDMP Part-II. In addition, it is envisaged that the concerned public officials will follow their own SOP & intimate the concerned agencies for ensuring appropriate response.
- (vii) Expert response agencies (police/NDRF/relevant state authorities) after reaching the incident spot, if feel that they need an expert advice or technical support from nodal ministry (DAE); they should contact CMG, DAE through DAE-Emergency Control Room. While in forming, they are requested to provide exact location, contract numbers of concerned DM/SP/local police station and details of incident with brief description of the object (if possible, along with photograph taken from the distance).
- (viii) Upon receipt of such information, the CMG, DAE will get activated and will get in touch with the local authorities to decide about further course of actions.
- (iv) CMG will decide and constitute a team of experts as per requirements. The team of experts will be dispatched to the site by quickest means possible.
- (v) Member Secretary, CMG (who is also the designated Nodal Officer of DAE) will get regular updates from concerned DAE experts/field agencies and will keep concerned authorities informed and as per scenario, will also keep MHA Control Room updated.
- (vi) DAE experts on recovery/ retrieval of the source will examine the integrity of the radiation source & accordingly, AERB will decide about further course of action regarding safe keeping/ disposal of the material.
- (vii) Responsibility of source transportation of radioactive material from incident site to a safe storage place should be undertaken by local police.
- (viii) If there is local contamination due to radioactive material, decontamination activities should be taken up by expert response agencies like NDRF and/ or be performed under guidance of DAE's technical experts. Local district authorities should provide adequate resources for handling and transportation of the contaminated material to the safe disposal site.
- (ix) In case required, media briefing will be done by the designated state official. He may seek technical inputs from AERB, if he desires.
- (x) After recovery/retrieval of the source and after completing of activities related with decontamination and safe disposal (as per scenario requirements), with due concurrence of AERB, the closure of radiological emergency scenario will be declared by the concerned DM/SP.

DON'Ts

- For response to CBRN Emergency:
- Don't send untrained responders/ volunteers.
- Don't send trained responders without proper PPEs and detection equipment.
- Don't send responders without taking proper guidance from the Nodal Ministry/ Department.

Do's and Don'ts:**NUCLEAR ACCIDENT****DO's:**

- o Go indoors. Stay inside.
- o Switch on the radio/television and look out for public announcements from your local authority.
- o Close doors/windows.
- o Cover all food, water and consume only such covered items.
- o If in the open, cover your face and body with a wet handkerchief, towel, dhoti or sari. Return home, change/remove clothes. Have a complete wash and use fresh clothing.
- o Extend full cooperation to local authorities and obey their instructions completely -- be it for taking medication, evacuation, etc.
- o You must be aware of nuclear radiation hazard. Discuss on Nuclear radiation safety among children and family members, to reduce their fear of radiation.

Don'ts:

- o Do not panic.
- o Do not believe in rumours passed on by word of mouth from one person to another.
- o Do not stay outside/or go outside.
- o As far as possible, AVOID water from open wells/ponds; exposed crops and vegetables; food, water or milk from outside.
- o Do not disobey any instruction of the district or civil defence authorities who would be doing their best to ensure the safety of you, your family and your property.

Precautions to be taken during and after the Chemical (Industrial) Accidents:

- 13 Do not panic, evacuate calmly and quickly perpendicular to wind direction through the designated escape route
- 14 Keep a wet handkerchief or piece of cloth/ sari on face during evacuation.
- 15 Keep the sick, elderly, weak, handicapped and other people who are unable to evacuate inside house and close all the doors and windows tightly.
- 16 Do not consume the uncovered food/ water etc open to the air, drink only from bottle.
- 17 Change into fresh clothing after reaching safe place/ shelter, and wash hands properly.
- 18 Inform Fire & Emergency Services, Police and medical services from safe location by calling 101, 100 and 108 respectively.
- 19 Listen to PA (Public Addressal) System of the plant/ factory, local radio/ TV channels for advice from district administration/ fire/ health/ police and other concerned authorities.
- 20 Provide correct and accurate information to government official.
- 21 Inform others on occurrence of event at public gathering places (like school, shopping centre, theatre etc.).
- 22 Don't pay attention to the rumours and don't spread rumours.

General Precautions during Normal Time

- Do not smoke, lit fire or spark in the identified hazardous area.
- Sensitize the community living near the industrial units and they should be more vigilant about the nature of industrial units and associated risks.
- Keep the contact numbers of nearest hazardous industry, fire station, police station, control room, health services and district control room, for emergency use.
- Avoid housing near the industries producing or processing the hazardous chemicals, if possible.
- Participate in all the capacity building programmes organized by the government/ voluntary organizations / industrial units.
- Take part in preparing disaster management plan for the community and identify safe shelter along with safe and easy access routes.
- Prepare a family disaster management plan and explain it to all the family members.
- Make the family/ neighbours aware of the basic characteristics of various poisonous/ hazardous chemicals and the first aid required to treat them.
- Adequate number of personal protective equipments needs to be made available, to deal with emergency situation.
- Prepare an emergency kit of items and essentials in the house, including medicines, documents and valuables.

CHAPTER-14

MANAGING CROWDS

14.0 Guidelines by NDMA:

National Disaster Management Authority (NDMA) has issued a guide for administrators and organizers of events and venues for managing crowds in 2014. The scope of the guidelines involves study of past crowd disasters, framework for administrators to plan and manage events better, to provide practical guidelines to venue managers and event organizers etc.

14.1 Salient features of NDMA guidelines:

Important aspects of planning for events/places of mass gathering includes understanding the visitors, various stake holders and their needs, crowd management strategies, risk analysis and preparedness, information management and dissemination, safety and security measures, facilities and emergency planning, transportation and traffic management. One of the important points to be kept in mind is the demand and supply gaps. Depending on the type of event, venue and type of crowd expected proper signage have to be planned. Specific focus should be on fire, electrical and structural safety. NDMA has suggested the following guidelines on Incidence Response System.

- 23 Systematic and complete planning process.
- 24 Clear cut chain of command.
- 25 System of accountability for the incident response team members.
- 26 Well thought out pre-designed roles for each member of the response team.
- 27 Effective resource management.
- 28 System for effectively integrating agencies into the planning and command structure without infringing on the independence of the concerned agencies;
- 29 Integration of community resources in the response effect and
- 30 Proper and coordinated communications setup.

14.2 Crowd control and management:

For effectiveness RPF, GRP and District Police have to act in a synchronized manner in consultation with magisterial authorities. Chapter 10 (Maintenance of Public Order and Tranquillity) of the Criminal Procedure Code (Cr.P.C.) Part-A deals with 'Unlawful Assemblies'. Legal procedures are outlined in Sections 129 to 132 of the Cr.P.C. for dealing with Unlawful Assemblies. These provisions empower Members and Officers of Armed Forces (RPF is an Armed Force of the Union) to deal with Unlawful Assemblies.

One of the intelligent video analytics to be incorporated in the Integrated Security System is related to signal for crowd density within station premises when it exceeds the prescribed limit. This will enable RPF personnel and railway authorities to get timely information when heavy crowd builds up within station premises and plan follow-up action. Pictures stored on CCTV system will be of immense help in identifying miscreants and in ensuring effective legal action.

We should prescribe preventive protocols, when laid down footfalls defined separately for important stations become extra ordinarily high, as during Melas or other exceptional situations. It may

not be out of place to ban all commercial vending and parcel handling on such occasions, supplement exists if possible, and bring more area under illumination.

It is important to press upon the District Magistrate (Dy. Commissioner) or the Civil Police (Senior Superintendent of Police) to give an approximate indication of the number of persons likely to reach Railway stations in the days when rush is expected. Even more important is the number of such persons reaching each Railway station within a one to two-hour time slots. Unless this information is given, it would not be possible for Railways to plan special trains. The OD flow of the passenger is very important to plan destination wise running of special trains. It may be kept in mind that often the Inward and outward passenger traffic is not equal; there are wide variations. Further the inward rush comes in a staggered and spaced interval; the outward rush goes back at one go. It would be essential for the Zonal Railway or Division to impress upon the State Government (or the District Magistrate) in writing of their peak capacity to clear rush, as also they can do so only direction wise. The District Administration has to regulate and control the entry of more than this number beyond which (in 1-2 hourly slots) the Railway would be unable to evacuate.

14.3 Role of responsibility of Zonal Railways / Divisions:

Depending upon the past experience, Zonal Railways/divisions should identify events of mass gathering over their system. The events can be of periodic in nature or onetime events where mass gathering of passengers is expected in the station which is beyond the normal capacity that can be handled at that station.

Concerned Zonal Railway/division should have a close coordination with the organizers and law enforcement agencies to understand crowd arrival and departure, their numbers for each such event. Railway administration should identify the threats, assess the risk and plan accordingly. Based on the past experience, a coordinating officer should be nominated for better planning and execution crowd management at the station. He should be designated as incident commander and shall be overall in charge of that particular station. He shall be assisted by staff drawn from the respective departments to discharge his/her functioning.

14.4 Crowd control and Management of rush at Railway Stations:

Specific defined areas of jurisdiction for crowd control and duties assigned to GRP/RPF and the city Police needs to be placed on record much before the expected days of rush. Close coordination has to be maintained between the 3 wings of security personnel Railway Protection Force, Civil Police and GRP with well-defined areas of responsibilities.

The car and other vehicle parking facility at a station may be discontinued; sale of Platform Tickets can also be banned for short period of time. RPF and GRP personnel deployed on each platform will monitor crowds and rush build up in the circulating areas, booking windows, station platforms and mainly on the FOBs. Special teams of commercial staff will liaise with the RPF/GRP and relay 2/4 hourly position to a centralized location viz. commercial control who will advise the need for running of special trains to specified destination to the operating departments control room.

14.5 Action to be taken for crowd management on Western Railway:

Adequate deployment of RPF & GRP personnel to be deployed at circulating area, holding area, platforms, booking window, FOBs, extras to monitor the crowd and rush buildup.

The following actions should be planned to monitor and manage the crowd:

- 31 There should be separate entry and exit for smooth movement of crowd. It should be ensured that stairs should be used in one direction i.e. ingoing & outgoing crowd should not share the same stairs.
 - 32 The flow of crowd should be in unidirectional. There should be no crisscross movement of crowd to avoid stampede like situation.
 - 33 Emergency exits should be planned in advance. Preventive protocols, when laid down footfalls defined separately for important stations become extraordinarily high, as during Melas or other exceptional situations, should be prescribed.
 - 34 A holding area should be prepared either in Circulating area or outside station building premises, to monitor access control and movement of crowd.
 - 35 Sale of platform tickets should be banned during peak days in order to control unwanted crowd.
 - 36 Depending on the magnitude of the event the car & other vehicle parking at stations should be discontinued during the peak days.
 - 37 The berthing of the train should be planned well in advance and all relevant information should be displayed in holding area, circulating area and at important visible places in the station building. The empty rakes should be placed on platform in locked condition, so that the passengers waiting on the platform do not run / rush to enter in open coaches.
 - 38 There should be no change in platform under any circumstances in order to avoid confusion and stampede like situation. Platform should be designated and earmarked for departure of special trains. Regular announcement should be made before placement of empty rake on the platform.
 - 39 Ropes, barricades, queue makers etc. should be used extensively at platform entrances, circulating area, FOBs etc. for smooth movement of the crowd.
 - 40 Intelligent video analytics should be used in CCTV surveillance to signal crowd density within station premises when it exceeds a prescribed limit. This will enable RPF personnel and railway authorities to get timely information when heavy crowd builds up within station premises and plan follow-up action. Pictures stored on CCTV system will be of immense help in identifying miscreants and in ensuring effective legal action.
 - 41 During peak days, parcel handling including loading, unloading and stacking on platforms should be stopped. The loading / unloading may be done in yard / side areas in case of emergency. Movement of handcarts and they as should be banned.
 - 42 The entire station premises should be well lit / illuminated so that miscreant activities are curbed.
 - 43 A mini control room which will also act as an Emergency Response Centre should be established close to the premises / area where the crowd is to be monitored. The representatives of RPF, GRP / Police, Commercial, Electrical, Mechanical, Medical and Operating department should monitor the Control room round the clock.
- 14.6 The Emergency Operations Centre should act asunder:
- 44 This Centre will by far possible, be near to the vicinity of the area it is going to control.
 - 45 The Centre should be in a safe area where it is not affected by any type of disasters, both man- made and natural, so that it can exercise control over its tasks under all circumstances.
 - 46 A Grid Map of the entire area under jurisdiction will be prepared to facilitate accuracy in pin pointing the troubled area and activate appropriate response.
 - 47 This map will contain all relevant data like position of volunteers / police, Ambulance, fire services, Medical emergency room, ticket location etc.
 - 48 All the staff involved in this activity will have a particular call sign and the grid map person. This will give them leverage in pre-empting a particular activity that ensures safety of the crowd or if they are nearest to the spot. It will aid them in initiating corrective action and feedback to the control centre.
 - 49 This Centre will exercise positive control over the crowd movement to and from the event venue.

- 50 This Centre will not act under pressure of any sort from any individual or agency requesting speedy access to event / venue. It will exercise total discretion in allowing the same only if doing so may lead to safety and security concerns.
- 51 The Centre will be the hub for information flow about the crowd movement both inward and outward.
- 52 All emergency support services will be coordinated from this Centre.
- 53 This Centre will exercise direct control over the already parked ambulances, fire services and regulating their movement, in and out of the disaster-prone area.
- 54 This Centre will pre-validate and decide the level & distance of accessibility of emergency services in the disaster area to avoid congestion and quick turnaround, there by speeding up movement of aid and vehicles.
- 55 The Centre will also be responsible for validating the main routes for crowd movement and alternative routes (marked as standby for entry and exit.)
- 56 The Centre will exercise/regulate the positioning of food stalls, public facilities, watering points, rest areas and display systems for easing the flow of crowd and their anxiety level.
- 57 The entire communication network i.e. the public address system, wireless setup, display system etc. will be controlled by a dedicated team under the supervision of one competent person, who will in turn report to the Incident commander.

14.7 Duties of Security Department:

Main functions of the Security Department can be broadly classified as:

14.7.1 Liaison with Civil Police:

- 58 In case of sabotage, liaison with Local Police & officials of district administration and get early clearance.
- 59 Clearance should be obtained as expeditiously as possible, for starting restoration work.
- 60 Additional manpower should be requisitioned from local police officials and district administration for purpose of crowd control.
- 61 Exemption should be obtained from SP of the district for waiving off formalities of Post Mortem of dead bodies.
- 62 Obtain assistance from GRP and Local Police as and when required.

14.7.2 Crowd Management:

The first problem at an accident site is that of surging crowds. Carrying out any kind of rescue and relief operation becomes next to impossible. Railway men who try to undertake any kind of rescue and relief work become victims of mob fury.

- 63 Cordon off the site and prevent unauthorized entry of outsiders.
- 64 Segregate the area of accident by putting up temporary barriers using nylon ropes or any other make shift device available at the scene so that outsiders do not disturb the site or hamper rescue operations.
- 65 These barriers should be at quite some distance away from the track, so that UCC, CAC and LCCs are inside the cordoned off area.
- 66 Provided barricade and ask for additional force to control crowd during VIP visit.

14.7.3 Protection of luggage:

- 67 Protect unclaimed luggage of passengers till these are duly taken over by commercial department for safe custody.
- 68 Unclaimed luggage of passengers should be isolated and stacked coach-wise, with proper labelling indicating coach no., from which recovered.
- 69 If possible, the cabin number inside the coach should also be indicated.
- 70 All such unclaimed luggage should be protected till they are handed over to claimants or taken over by commercial department.
- 71 Unclaimed luggage should be stored in a SafePlace, preferably, part of the same school building which is being used for preserving dead bodies.
- 72 These should be stored in separate rooms coach wise so that it is easy for relatives to identify.

14.7.4 Protection of railway property:

- 73 Protect Railway consignments/goods/parcels till these are duly taken over by commercial department and dispatched to nearest station for proper disposal.
- 74 Guard perishables till they are auctioned off at site or till they are dispatched to nearest station for being auctioned.
- 75 RMS consignments on the train should be shifted to school building for safe custody till Postal Authorities come and take over custody.
- 76 Provide security for the cash withdrawn for payment of ex-gratia by the commercial department.
- 77 Preserve all clues and evidences regarding probable cause of the accident and ensure that these do not get disturbed.
- 78 Ensure that no railway staff tampers with any track fittings, or rolling stock parts.
- 79 Anybody found moving under suspicious circumstances should be questioned.
- 80 No railway staff should be allowed to move about near the accident site with loose or piecemeal equipment.

14.7.5 General:

- 81 RPF personnel should respond to any call for assistance to rescue victims and transport them to the nearest hospital.
- 82 3 – hourly bulletins will be updated by field personnel at the scene of incident to the RPF functionary in the UCC giving the latest situation.
- 83 RPF Assistance Post will be established within the CAC so that people needing help can approach RPF.

14.8 Security arrangements Mock Drill:

Regular mock drill must be conducted to check the preparedness and iron out the deficiencies, if any, in the role of responsibility mentioned above.

CHAPTER-15**DISASTER MANAGEMENT TRAINING****15.0 Disaster Management Training on the Railways:****15.1 National Institute of Disaster Management (NIDM):**

National Institute of Disaster Management (NIDM) has been envisaged as apex body on Disaster Management training & research in the country under the Disaster Management Act, 2005. NIDM runs several multi-disciplinary training programmes including the programmes on transportation related disasters in which railway officers have also been invited to attend. Services of NIDM may be made use of, if required, for training railway officials in Disaster Management at IRITM, Lucknow. Most of the States also have DM Training Institutes funded by the Centre.

15.2 Training Institutes of Railways

Indian Railway Institute of Disaster Management, Hejalla, Bangaluru has been set up and inaugurated in 2019 to play a crucial role in curbing train-related accidents across the country. The Disaster Management Institute and Safety Village in Hejalla, a first such initiative by the Indian Railways, is a unique Virtual Reality Centre, which will simulate real-life disasters. The institute will train railway officials in responding to any disaster situation using the right techniques. Virtual Reality software is also being installed which will enable officials to evaluate the result of the actions taken by them in an emergency situation. This will enable officials undergoing training to experiment with the various methods and means available to tackle an emergency situation and decide the best course of action to handle it. An action plan has been approved by Railway Board that IRIDM, Bangaluru will impart safety training to all working officers. Each officer would have to undergo training at IRIDM to update and upgrade their disaster management skills.

In view of the utmost importance being given to safety, senior officers of Railways are already being imparted special training on “Safety Management” through regular courses conducted by Indian Railways Institute of Transport Management (IRITM), Lucknow to enhance the safety skills and knowledge. IRITM is conducting this course regularly since January, 2018.

Apart from these, Indian Railways have many Central Training Institute (CTIs), Zonal Training Institute (ZRTIs), Supervisor Training Centres etc. where officers, supervisors and staff are imparted training on different specialised subjects.

15.2 DM Training on Zonal Railways and Divisions:

With the enactment of the Disaster Management Act, Indian Railways have also taken several initiatives to revamp Disaster Management training. Presently, training on disaster management of various tiers of railway officials does not envisage newer concepts like integration of disaster management into developmental planning, leveraging on the strengths of other non-railway agencies etc. Till now any training on the subject of Disaster Management implied subjects connected with Train Accidents only. There was no training given for natural calamities or for terrorism related items. With the adoption of this concept the training requirements for Lower, Middle and Higher Management officials of the Railways needs to be re-oriented to cover these concepts. Hence the subjects of Disaster Management are vaster and more varied. With a view to strengthen and revamp the Training on Disaster Management being imparted to several tiers of railway officials through Railway Training Institutes, Board has decided the following training schedule:

S.N.	Categories of Officials	New Training methodology and schedule	Action taken
1	Top Level Management (GMs, PHODs, DRMs and other SAG/S4Officers).	5 – day Disaster Management Modules are to be delivered at IRITM/LKO @ once every 3 months. Frequency of Training: Once every five years for SG/SAG Officers and above.	Top level management officers will be directed as and when slot for Disaster Management course allotted to this railway from IRITM/LKO.
2	Middle Level Management (SG & JAG officers)	Some of the latest and relevant topics are included in the AMP and MD Pprogrammes being delivered at NAIR/BRCIRITM, LKO is conducting a special module on Disaster Management developed by them Frequency of Training: Every SG/JAG officer need to undergo the module once every five years either at NAIR as regular MDP/AMP course or special DM module at IRITM.	Middle level management officers will be directed as and when slot for Disaster Management course allotted to this railway from IRITM/LKO. Or NAIR/BRC.
3	Lower Level Management (SS & JS officers including serving Group 'B' officers).	Disaster management training to be imparted at IRITM/LKO. Frequency of Training: Once every five years.	Lower level management officers will be directed as and when slot for Disaster Management course allotted to this railway from IRITM/LKO, NAIR BRC & IRIMEE/JMP.
4	Probationers and Group 'B' officers attending induction courses	Topics listed in annexure 4 of detailed instructions are to be covered during the regular training programme at NAIR/Vadodara. Frequency of Training: As part of the course.	Probationers officers including group 'B' will be directed as and when slot for Disaster Management course allotted to this railway from IRITM/LKO, NAIR BRC & IRIMEE/JMP.
5	Supervisors of all frontline departments (Mechanical, Electrical, Engg., S&T, Traffic Comml. & Optg.)	One-week course at ZRTIs. Frequency of Training: Once every five years.	All front-line supervisors and staff are being imparted training once in every 5years. Training of Disaster Management has been given to all supervisory staff of Security Department in initial training and promotion course. Disaster Management training will be given to the supervisory staff once in a five year. Medical department is giving training to all the staff as and when directed by the Department of training.

S.N.	Categories of Officials	New Training methodology and schedule	Action taken
6	Railway Staff on board passenger carrying train (TS,Dy.TS,TTEs & Catering staff of Commercial Department, Coach attendants and AC Mechanics from Electrical Departments, some of the selected coach cleaners of Mechanical Departments, some of the RPF escorting staff and catering staff of contract or wherever out-sourced).	Disaster Management being a multidisciplinary effort during field operations, training in groups of such onboard staff is more desirable and efficient then training them category wise. Role of on-board railway staff has been a matter of great criticism in most of the serious train accidents. On board staff are the first railway representatives to respond to any untoward incident and their empowerment will improve railways response in a big way. Such staff is to be trained in appropriate multidisciplinary groups at such locations in the divisions where there is concentration of such staff to obviate the need for their hostel accommodation, non-availability for longer periods, etc. Such training can be imparted at the selected country- wide locations to cover maximum number of staff in short period of time. This training can also be imparted in the Customer Care Institute. Only few select staff of Mechanical, Electrical (AC), RPF is to undergo this training who are deputed to escort trains. This training will be made mandatory in a phased manner for any staff to go on-board a passenger train. The staff of catering contractor is also to be imparted this training in Phase 2 to leverage their physical presence. Frequency of Training: Once every three years.	Traffic and commercial supervisors & front-line staff training is being ensured by a 6 days training module at Training institute Udaipur. Disaster Management training given all RPF staffs at the time of their initial and promotion training course. Staff will be directed as and when slots are allotted to this railway. All Electrical/ Mechanical on board railway staff are being imparted training once in every 3 years.
7	Nominated ARMV and ART staff of Mechanical and Medical departments	Composite training of Mechanical and Medical Staff for relief and rescue operations is planned to be given at upcoming disaster management railway institute at Bangalore. Doctors and paramedics nominated for ARMVs and other rescue operations should be exclusively trained on trauma care management either at some nominated specialised institutions or in-house. IRITM is one of the Training Institutes under consideration. Frequency of Training: Once every three years.	Composite training of Mechanical and Medical Staff for relief and rescue operations is being ensured at Indian Railway Institute of Disaster Management (IRIDM) Bangalore. All medical officers, paramedics who are nominated for ARMV are well trained in Trauma Care Management. However, there is no separate institute available at present for such training in the railway.

S.N.	Categories of Officials	New Training methodology and schedule	Action taken
8.	Disaster management team of RPF staff & other RPF personnel associated with relief rescue operations.	As per recommendation no. 46 of HLC on disaster management there should be a disaster management team of RPF on each division comprising about 15 men in different ranks. Such teams should be trained in providing necessary support on relief rescue operations. The existing 5-day training module should be appropriately revised to make it suitable to achieve the above objective. Each of the above teams should be trained on this module at RPF Academy at Lucknow. In addition, training module may be appropriately developed separately for RPF Officers and staff and should be imparted at RPF Academy at Lucknow. The respective training modules should include role of RPF at the accident site, security at the railway premises like railway stations, trains etc. Frequency of Training: Once every three years for disaster management team of RPF. Once every five years for other subordinate officers and staff (other than disaster management team members. In addition, (i) At least 10% of the RPF personnel may be got trained in a training module of a minimum duration of 15 days with NDRF by GMs/Zonal Railways. (ii) All outdoor instructors of RPF zonal training centres and RPF Academy, Lucknow, may be trained in training of trainers (ToT) course in disaster management over a period of 2 years by a national training institute nominated as nodal training institute for disaster management like NISA, Hyderabad. Coordination may also be done with NDRF to obtain the list of necessary resources and equipment along with their Quality Regulations & Trial Directives (QR/TD). The RPF Disaster Management Team will be equipped with this equipment and will be imparted the know-how to operate and maintain this equipment in association with NDRF.	Training of Disaster Management team of RPF comprising about 15 men as per recommendation no. 46 of HLC on disaster management are being directed once in every 3 years as and when vacancies allotted to this railway by JR/RPF Academy, LKO.

S.N.	Categories of Officials	New Training methodology and schedule	Action taken
9	RPF Officers	Disaster Management training for RPF officers may be also organized in IRITM till such time the capability in RPF academy is developed. Frequency of Training: Once every five years for other RPF officers and staff.	09 RPF Personnel's have already attended Disaster Management course. Officers are being directed as and when nomination for Disaster Management course received from IRITM/LKO and JR/RPF Academy, LKO.

Mechanical (Traction) is the Nodal Directorate in Railway Board for Train Accident Management which includes all aspects of Policy on ART/ARME/Cranes and rescue, extrication, firefighting equipment etc. A nodal Training Institute for specialized rescue/extrication etc. for officers and for subordinates and a Safety Village are being set up in Bengaluru; the work on this Institute is being coordinated by Mechanical (Traction) Dte. Railway Board.

Respective Training Institutions on each zonal railway will ensure that the modules prescribed above are institutionalized and officials are imparted training to build capacity of human resource in disaster management.

CHAPTER-16

NDMA GUIDELINES ON INCIDENT RESPONSE SYSTEM

16.1 DISASTER RISK IN INDIA:

India is vulnerable, in varying degrees, to a large number of natural as well as man-made disasters. As stated in the National Policy on Disaster Management, 2009, in India, 58.6 per cent of the landmass is prone to earthquakes of moderate to very high intensity; over 40 million hectares is prone to floods and river erosion; of the 7516 Kms long coastline, close to 5,700 kms is prone to cyclones and tsunami; 68 per cent of the cultivable area is vulnerable to drought and hilly areas are at risk from landslides and avalanches.

16.2 OVERVIEW OF INCIDENT RESPONSE SYSTEM:

The Incident Response System (IRS) is an effective mechanism for reducing the scope for ad-hoc measures in response. It incorporates all the tasks that may be performed during DM irrespective of their level of complexity. The main purpose of these Guidelines is to lay down the roles and responsibilities of different functionaries and stakeholders, at State and District levels and how coordinates with the multi-tiered institutional mechanisms at the National, State and District level will be done. It also emphasizes the need for proper documentation of various activities for better planning, accountability and analysis. It will also help new responders to immediately get a comprehensive picture of the situation and go in for immediate action.

16.3 IRS ORGANISATION:

The IRS Organization functions through Incident Response Teams (IRTs) in the field. In line with our administrative structure and DM Act 2005, Responsible Officers (ROs) have been designated at the State and District level as overall in charge of the incident response management. The RO may however delegate responsibilities to the incident Commander (IC), who in turn will manage the incident through IRTs. The IRTs will be pre-designated at all levels; State, District, Sub-Division and Tehsil/Block. On receipt of Early Warnings, the RO will activate them. In case a disaster occurs without any warning, the local IRT will respond and contact RO for further support, if required. A Nodal Officer (NO) has to be designated for proper coordination between the District, State and National level inactivating air support for response.

16.4 FEATURES OF IRS:

IRS is categorized with features like management by objectives, unity of command and Chain of command, Organizational flexibility, span of control, unified command, accountability, Resource management, etc.

16.5 SUMMARY OF ACTION POINTS:

IRS constitutes an important part of the Disaster Response at the State and District level. These Guidelines will help the States and the Districts in their disaster response. It will also help to reduce chaos and confusion during response. Everyone will know all has to be done and who is in command. The important thing is to get the team members trained in their respective roles. A time bound strategy with fixed responsibilities is essential to achieve this objective.

CHAPTER-17**DISASTER MANAGEMENT SYSTEM, STRATEGIES, CRITICAL ACTIVITIES AND RESOURCES****17.0. Rescue and Relief System on Indian Railways:**

The Indian Railways is having an organized system of rescue and relief operations for managing accidents with its own resources. Details of procedures and systems have been laid down in the Accident Manuals of the respective Zonal Railways. Each Zonal Railway has its own Accident Manual for dealing with Railway accidents and unusual occurrences. The manual contains various definitions of the terms used in accident management. Accidents have been classified into various types and categories depending upon the seriousness of the accident. Preparedness to manage accidents is also detailed in the Accident Manual by way of details of Accident Relief Medical vans (ARMVs) and Accident Relief Trains (ARTs), equipment contained therein, their beats, inspection schedules, turnout times, etc. The Accident Manual also lists the information to be maintained at the stations, like names, addresses and telephone numbers of nearby hospitals, local police, fire brigade etc. It also details various records and information to be maintained in the Divisional Control, like railway and non-railway hospitals, ambulance services, firefighting arrangement, contact in formation of officials of Civil Administration, road maps etc. for ensuring expeditious mustering of resources at the time of accidents. It also prescribes in details the duties of various railway officials and concerned departments to be discharged in managing accidents. The types of accident inquiries, their procedure and timeframe etc. for holding the inquiry are also detailed. It also prescribes the methodology of acceptance and disposal of the accident inquiry reports.

Steps are taken to provide prompt and effective relief to the affected passengers in the event of any serious train accident involving deaths. The senior-most officer at the accident site takes full charge of the situation, and supervises the overall relief operations. Special inquiry booths are opened at originating, terminating and important stations en-route. The affected passengers and their relatives are treated in order to alleviate their trauma and discomfort. Railway doctors are deputed to the hospitals where the injured are admitted, to render necessary assistance, including supply of required medicines, etc. Arrangements for supply of meals, drinking water, and beverages etc. to not only the injured, but also to other passengers of the affected trains are organized. STD-equipped telephones are made available to passengers, to enable them to communicate with their relatives. Officers and Inspectors are also deputed to contact the affected passengers and assist them in their onward travel. Special care is exercised to collect and provide security to the belongings of all passengers. Relief trains are arranged for clearing stranded passengers. A thorough and unbiased investigation into the adequacy of the relief measures is made after every serious accident. Crash courses on 'Disaster Management' for officers and staff at all levels are organized to sustain awareness of the importance of the situation. Timely information is given to the press to avoid misreporting and speculation about the casualties and the cause of the accident.

17.1 Disaster Management system and strategies on Indian Railways:

The Indian Railways is having an organized system of relief for managing accidents with its own resources. Details of procedures and systems have been laid down in the Accident Manuals of the respective Zonal Railways. Each Zonal Railway has its own Accident Manual for dealing with Railway accidents and unusual occurrences. The manual contains various definitions of the terms used in accident management. Accidents have been classified in to various types and categories depending upon the seriousness of the accident. Preparedness to manage accidents is also detailed in the Accident Manual by way of details and Accident Relief Cranes their beats, inspection schedules, turnout times, etc. Presently there are 96 Nos. Cranes (73 Nos. of 140 T, 5 Nos. of 120 T and 18 Nos. of 35 T Cranes over Indian Railway system. Presently in Western Railway there are 4 Nos. of 140T Cranes are available Details of Accident Relief Cranes their beats, inspection schedules, turnout times and locations all over western railway is given in ZDMP-Part II.

17.2 Areas of Focus on Disaster Management:

The main areas of focus on disaster management are: -

- (i) Faster Response.
- (ii) Better facilities and equipment.
- (iii) Expanding resources to meet requirements in major accidents.
- (iv) Better customer focus.
- (v) Training and Preparedness.
- (vi) ART management to undergo major changes covering rolling stock management, status of equipment, monitoring of utilization of assets and availability and consumption of stores etc.

17.3.1 Critical Activities for Disaster Management:

- (vii) 161 ARMVs and 241 Accident Relief trains ARTs, are positioned at strategic locations which cover the entire rail network of Indian Railways for rushing to accident sites on top priority, along with doctors, para medical staff, rescue workers and engineers. 97 of ARTs also have Diesel Hydraulic cranes attached to them.
- (viii) 16 ARMVs including 7 SPARTs and 14 Accident Relief trains ARTs, are positioned at strategic locations which cover the entire rail network of Indian Railways.
- (ix) The details of ARMEs & ARTs with their strategic locations which cover entire network of Western Railway for rushing to accident sites on top priority, along with doctors, paramedical staff, rescue workers and engineers in ZDMP-Part II.
- (x) ARTs and ARMVs are equipped with rescue and relief equipment. These are located so as to cover an area not beyond a distance of 150 to 200 kms within 2 to 3 hours normally. Sometimes, the ARMV may take up to 4 hours to reach the accident site in a remote area. In addition, there are 320 stationary Accident Relief Medical Equipment (ARME)–Scale-II consisting of three sets of Portable Medical Kit for Accidents (POMKA) units positioned at identified stations, placed 80-100 kms apart in between ARMVs.
- (xi) In addition to the recommended list of ART Tools and Equipment, 13 additional items have been recommended by a Committee for adding to the ARMV/ART which includes Life Detector, Scene Tape, Rope manila Nylon, Safety cone, stretcher folding, MFR Kit with Splints, Breathing apparatus set, Portable DG sets, Higher capacity hydraulic, Portable Plasma cutting equipment for cutting stainless steel coaches, Portable Defibrillator, Abrasive cutting equipment and Life Jackets, etc.
- (xii) On receiving information of an accident, the ARTs and ARMVs are dispatched to the accident site along with personnel trained in rescue and relief operations. ARMVs and ARTs are powered by locomotives brought from line in case of accidents/ derailments. To avoid delay in arranging locomotives, Self-Propelled ART was developed first time in 2001 indigenously by Rail Coach Factory (RCF), Kapurthala. This concept has been extended to Self-Propelled ARMV also. 52 Self Propelled ARTs and 11 Self Propelled ARMVs (manufactured at RCF, Kapurthala and ICF, Chennai), are working on IR network and more are being manufactured at ICF, Chennai so as to provide one per division as per High Level Committee on Disaster Management.
- (xiii) Unlike many other countries where local bodies such as Fire Brigade, Police, Health Services and Civil Defence Organizations etc. are responsible completely for rescue and relief operations during railway accidents, Indian Railways has an organized system of relief and rescue operations for managing accidents mainly with its own resources. The local administrations; however, has the responsibility to support Railways.
- (xiv) Preparedness to manage accidents is detailed in the Accident Manual of each Zonal Railway. It also contains detailed procedures, duties of various Railway Officials, details of rail-mounted relief and rescue equipment i.e., Accident Relief Medical vans (ARMVs) and Accident Relief Trains (ARTs) along with items contained therein, their beats, inspection schedules, turnout times, etc.
- (xv) ARTs and ARMVs are rail mounted and located at stations where Railways have suitably trained staff. Movement to the site depends upon operational conditions. Many a time Railway doctors, para- medics and other officials reach site of the accident by road, earlier than ART/ARMV.
- (xvi) Target time for dispatch of ARMVs is a maximum 20 minutes from double exit siding and 30" from single exit siding after their ordering. Target time for dispatch of ARTs is a maximum of 60 minutes from their ordering.
- (xvii) As Accident Relief Train may take up to 3 hours to reach a remote accident site, the resources available near the accident site are very important and pooled for immediate relief and rescue:

- (a) On board staff e.g. Loco Pilot, Assistant Loco Pilot, Guard, Commercial Staff, Pantry staff, Carriage and Wagon/Electric staff etc.
- (b) Staff nearby accident site e.g. Gang men, Station staff etc.
- (c) Help from local people in nearby vicinity.
- (d) Local administration e.g. Civil administration, Police, Health, Fire etc.
- (e) National Disaster Response. Force.
- (f) Air Force/Military services.

It is seen that by pooling the resources of local, state and central government and help from local people, effective disaster management can be done during the Golden Hour. Casualties/injuries is reduced effectively with integration of resources belonging to all the stakeholders for managing disasters.

(xii) The main activities undertaken by Railway administration at accident site are:

- a. The medical team participates in rescue and stabilization of injured passengers, those seriously injured are transported to nearby hospitals.
- b. The cost of such treatment is borne by the Railways. Deaths are certified by doctors and dead bodies are handed over to Police for further action such as autopsy etc. for medico-legal purpose.
- c. Railway doctors are deputed to the hospitals where the injured are admitted, to render necessary assistance, including supply of required medicines, etc.
- d. In addition to the above own resources, nearby ambulances and doctors with paramedics, fire brigades; other necessary resources are also requisitioned as per need for expeditious operations.
- e. Information like names, addresses and telephone numbers of nearby hospitals, local police, fire brigade, officials of Civil Administration etc are available at Stations/Divisional controls and immediate relief is sought at the time of accident.
- f. In case of serious accidents involving passengers, National Disaster Response Force (NDRF) is also requisitioned. 24X7 control room of Ministry of Home Affairs (MHA) or the control room of concerned ministry is contacted for mustering help from defence services including help of Air Force.
- g. Relief trains are arranged for clearing stranded passengers.
- h. Arrangements for supply of meals, drinking water, and beverages etc. are made not only for the injured, but also to other passengers of the affected trains.
- i. Once affected passengers are attended, accident site is restored back to normal traffic with the help of break-down cranes, hydraulic rescue equipment, etc.
- j. The accident inquiries are conducted within a time frame and preventive/corrective actions are taken accordingly.
- k. Timely information is given to the press to avoid misreporting and speculation about the casualties and the cause of the accident.

(xiii) Disaster Management at Divisional, Zonal and Ministry level are integrated with each other, and are comprehensive and fully prepared to handle disasters.

17.4 Responsibility for Rescue and relief Operations:

Unlike India, in many countries, local bodies such as Fire Brigade, Police, Health Services and Civil Defence Organizations etc. are responsible for rescue and relief operations during railway accidents. The Indian Railways has occasionally been criticized that the railway rescue teams reach the accident site later than the local people. As the railways are spread out over a vast geographical area, it is humanly not possible to maintain rescue and relief equipment and teams at every station. ARMVs can only be located at stations having adequate medical back-up facilities. At times it takes some time for the relief teams and equipment to reach the accident site from the nearest railway rescue facility, depending upon the accessibility to the accident site. Further, consequent to the Disaster Management (DM) Act coming into force, National Disaster Response Force (NDRF) has been constituted at different locations throughout the country. NDRF is a force specialized in handling rescue and relief operations in all types of disasters in the country and Railway stake their help in major accidents involving passenger trains.

17.5 High Level Committees on Disaster Management on Indian Railways:

- Constituted by the Ministry of Railway in September 2002.
 - To review the existing DM system over IR related to train accidents and natural calamities and to suggest improvements.
 - To identify additional technological and managerial inputs to quicken pace of relief and rescue operations.
 - To institute a standing arrangement with other central Ministries, State government and armed forces to enable quick and smooth restoration operations without any legal or procedural hurdles.
- All 111 recommendations have been accepted by MR in March, 2003.
- The financial implications of implementing these recommendations were estimated to be around Rs. 400 crores.
- 8 recommendations have been dropped by appropriate authority. 104 recommendations have been implemented.
- Balance 07 are under implementation.
- 111 recommendations can be broadly grouped in 5 groups.
 - Faster response.
 - Better facilities and equipment-technological inputs.
 - Expanding resources.
 - HRD.
 - Other logistics.

Another Disaster management review committee was appointed on 27.02.07 under the chairmanship of Shri Gajendra Narain, an ex-IPS officer with the following terms of reference:

1. Comprehensive study and audit of current preparedness and management practices referring to all types of disasters/hazards for different phases of disaster management i.e. prevention, mitigation, rescue, relief and rehabilitation;
2. Suggest ways and means for integration of disaster reduction concept into development planning;
3. Identify the recommended areas needing development of multi-stakeholder partnership and citizen participation with a view to establish a coordinated mechanism for disaster reduction, response and rehabilitation;
4. Study existing statutory provisions for effective disaster management on IR and suggest changes, if any;
5. Suggest best suited management structure for effective delivery along with enabling tools; and,
6. Suggest any other measures which committee may consider appropriate within the scope of disaster management.

The Committee gave 106 recommendations, recommendation no. 2 has three parts (A, B & C), thus actually there are 108 recommendations, out of which 41 recommendations have been accepted and 67 have not been accepted. Out of the 41 accepted recommendations, 40 have already been implemented and only 1 is under implementation.

An Expert Group committee for Modernization of Indian Railways was constituted by Ministry of Railways which submitted its report in February, 2012. The Committee recommended for up gradation of Disaster Management facilities which inter-alia included provision of high-speed self-propelled Accident Relief Trains and Medical Vans, Road Cum Rail Vehicles for accident relief, 175 T cranes, setting up of Disaster Management and other Training Centres.

17.6 Disaster Management Plans:

The High-Level Committee on Disaster management over Indian Railway stipulated that each Zonal Railway and Division must write its disaster Management Plan dovetailing the same with concerned State Government/District. The Disaster Management Plans are to be prepared to ensure proper coordination and mutual co-operation among Divisions and Zonal Railway Authorities with the state/District authorities in managing severe accidents in the Indian Railways and disasters in general. The Railway should also be fully aware of the local, civil, army and other resources available for supplementing the Disaster Management efforts as and when required. The Disaster Management Plan must include who is responsible for what activities in detail, to ensure the basis steps as below:

- Rapid access to the site of the accident.
- Effective site management by making best use of on-board and locally available resources.
- Quick extrication of victims.
- Speedy transportation of victims to hospital.
- Proper communication system both for assisting the stranded passengers as well as giving out timely information to the relatives of passengers in the train involved in the accident and also to the media.

In compliance to the above instructions of the Railway Board, all 17 Zonal railway Headquarters and 68 divisions have prepared their respective Disaster Management Plans. Zonal Railways have also hosted their Disaster Management Plans on the Railnet site and also uploaded the same on Safety Information Management System (SIMS) site of Railway board for the wide spread sharing.

CHAPTER-18**DISASTER MANAGEMENT PLAN OF RAILWAYS – PERIODICAL REVIEW****18.0 Background**

Regular maintenance is critical to ensure the relevance and effectiveness of the DM plans. Plan maintenance is the dynamic process. The plan must be periodically updated to make it consistent with the changes in Government policies, initiatives, and priorities as well as to incorporate technological changes and global experiences. Development in Railways, Location of Relief trains contact details etc should also be updated. Evaluating the effectiveness of plans involves a combination of training events, exercises, and real-world incidents to determine whether the goals, objectives, decisions, actions, and timing outlined in the plan led to a successful response. In this way, the emergency preparedness exercises become an integral part of the planning process. The DM planners must be aware of lessons and practices from various parts of India as well as lessons from across the world. The trainings, mock drills and exercises are crucial. Mock Drills conducted with NDRF/Local bodies and lessons learnt from actual train accidents will help in evaluating the operational aspects of the plan, rectify gaps, and improving the efficiency of the plan. The likelihoods of emergencies and actual occurrences are also occasions for evaluating the plan, making innovations, and for updating the plan, SOPs and guidelines. At times, operations experience setbacks due to outdated information, ineffective procedures, incorrect role assignments, and outdated norms. Further, the priorities for a jurisdiction may change over time as the makeup of the included communities change, as resources expand or contract, and as capabilities evolve.

18.1 Preparation of DM Plans on Zonal Railways:

Western Railway prepared Disaster Management Plan at HQ and Divisional Level as per the provision of Disaster Management Act, 2005 as detailed in the earlier chapters and the DM Plan of the Indian Railway (prepared by Railway Board). These Plans will encompass the National Policy of Disaster Management (NPDM) and Guidelines issued by NDMA; as also all types of disasters that can occur on the Railway system. It is reiterated that the High-Level Committee on Disaster Management Constituted in 2003 had mainly dealt with the up gradation of Railways relief/rescue facilities to handle train accidents. These are, therefore, only of limited use and relevance in the DM plan now DMP framed based on the new concept of a Disaster as given in the DM Act, 2005. The Plan of the Western Railway details for all types of disasters, the preventive, and mitigation and preparedness measures being taken by this railway and also the rescue, relief and restoration systems in place to meet with them.

NDMA guidelines, instructions issued by the Boards office from time to time and the action plan framed by Western railway will form the backbone of the DM Plan. This plan will be dovetailed with the State and District Disaster Management Plans wherever the same have been prepared.

18.2 Zonal Disaster Management Plan is incorporated information common to all divisions of Western Railway. Western Railway's action plan is incorporated for dealing with all types of Railway disaster. Action items along with their progress detailed for all type Railway disasters. Contrary to the divisional Plan this is more centric towards prevention, mitigation and preparedness than rescue and relief. Information like formation of relief and rescue teams at the accident site, Disaster Management Control Cell, Duties of various officers/officials etc. in addition to the information specific to headquarter is incorporated in this plan. Information common to all divisions of western Railway may be replicated uniformly in DM Plans of all divisions. Divisional Specific information not incorporated in this DM Plan.

18.3 Preparation of DM Plans on Western Railways (Zonal & Divisional)

Western Railway has prepared Disaster Management Plan at Zonal and Divisional Level as per the provision of Disaster Management Act, 2005 as detailed in the earlier chapters and the Disaster Management Plan of the Indian Railways (prepared by Railway Board). These Plans will encompass the National Policy of Disaster Management (NPDM) and Guidelines issued by NDMA; as also all types of disasters that can occur on the Railway system. It is reiterated that the High-Level Committee on Disaster Management Constituted in 2003 had mainly dealt with the up gradation of Railways relief/rescue facilities to handle train accidents. These are, therefore, only of limited use and relevance in the Disaster Management plan and have now been framed based on the new concept of a Disaster as given in the DM Act, 2005. These Plan of the Western Railway detail all types of disasters, the preventive, and mitigation and preparedness measures being taken by this railway both at Zonal & Divisional level, and also the rescue, relief and restoration systems in place to meet with them.

NDMA guidelines, instructions issued by the Boards office from time to time and the action plan framed by Western railway form the backbone of these Disaster Management Plans. further, these plans have been dovetailed with the State and District Disaster Management Plans wherever the same have been prepared.

Western Railway has focused on the developments happening in their local area in the Government, non-govt. and private sector and bullet in the expertise-based all-inclusive approach as envisaged in the Disaster Management Act, 2005.

For ensuring the uniformity and best possible use of the information, Western Railway has made an effort to broadly format these plans as under:

- 18.3.1 Divisional Disaster Management Plans on Western Railway:** Divisional Disaster Management Plans will contain division specific information. It contains divisional action plan for dealing with all types of railway disaster and is not restricted only to detailed inventory of Railway and non-Railway resources as envisaged in. These Divisional Disaster Management Plans focus mainly on further new developments of sharing of resources with all stake holders. Further, it contains divisional specific information like road maps, etc. Information common to all divisions of Western Railway are replicated uniformly in all Divisional Disaster Management Plans. Divisional Disaster Management on Western Railway contains information about the following: -
- 18.3.1.1** Role and responsibilities of officials and other stakeholders at the accident site and in the divisional control room.
 - 18.3.1.2** Site Management plans
 - 18.3.1.3** Do's and don'ts in handling various types of accidents involving chemicals, oil and natural gas, nuclear materials etc.,
 - 18.3.1.4** Precautions to be taken in case of fire accidents.
 - 18.3.1.5** Action plan for Management of Crowd at stations during festivals and events of mass gathering.
 - 18.3.1.6** Details of Incidence Response System
 - 18.3.1.7** Passenger care and Managing of Dead Bodies.
 - 18.3.1.8** Media Management
 - 18.3.1.9** Vulnerability profile of the division from various natural disasters like Earth Quakes, Tsunami, Floods, Avalanches, Landslides, Cyclones etc.,
 - 18.3.1.10** Details of Vulnerable bridges and their location.
 - 18.3.1.11** Telephone Nos. including Mobile Nos. of all-important railway officials at both Zonal & Divisional level and telephone Nos. of all stations, blocks etc.
 - 18.3.1.12** Location of ART & ARME/SPART and of adjoining division and of adjoining Zonal Railways.
 - 18.3.1.13** Inventory of medical facilities within Division, Doctors, Hospitals including their specialization/ No. of beds, Nursing Home, Ambulances etc.,
 - 18.3.1.14** Details of District & State Officials

- 18.3.1.15 Details of Fire service stations.
- 18.3.1.16 Details of Defence establishment including Army, Navy & Air Force.
- 18.3.1.17 Details of Helipads/ location where a small plane or helicopter can land.
- 18.3.1.18 Contact details of Oil and Gas companies and Chemical industries.
- 18.3.1.19 Details of social organization/ NGOs.
- 18.3.1.20 Inventory of agencies with earthmoving equipment like road crane, bulldozer, boats, diving equipment etc.
- 18.3.1.21 Details of skilled divers with their name and contact details.
- 18.3.1.22 Details of road transport facilities, distance map super imposed on division map, detailed road maps etc.
- 18.3.1.23 Details of forensic personal.
- 18.3.1.24 List of materials in ART & ARME.
- 18.3.1.25 Details of paramilitary establishments.
- 18.3.1.26 List of Government and private helicopter service providers/ their contact numbers.
- 18.3.1.27 Contact numbers of Scouts and Guides.
- 18.3.1.28 Contact details of St. John Ambulance services

18.4 Periodical Review of Disaster Management Plans:

This step closes the loop in the planning process. It focuses on adding the information gained by subjecting the plan to the lessons learnt while executing, and start the planning cycle all over again. All the relevant stakeholders should establish a process for reviewing and revising the plan. Reviews should be a recurring activity. It should also be reviewed and updated as indicated below:

- Major review and revisions after each major incident.
- After significant change in operational resources (e.g., policy, personnel, organizational structures, management processes, facilities, equipment).
- Subsequent to any notification or formal update of planning guidance or standards.
- After every case of plan activation in anticipation of an emergency.
- After the completion of major exercises.
- A change in the district's demographics or hazard or threat profile.
- Enactment of new or amended rules, laws or ordinances.

On Western Railway the Disaster Management Plans both at Zonal & Divisional level are reviewed and updated at least once a year, i.e. January. In the review changes in policy (including the NPDM) issued by NDMA/NEC and by the Central Governments, Disaster Management Plans of Western Railway and Railway Board are being made. The changes in the Disaster Management Plans of the State Governments and of the Districts are incorporated in the respective Divisional Disaster Management plans.

18.5 Nodal Department for Policy Formulation and Updation of Disaster Management plan:

Disaster Management plan of Ministry of Railways, Zonal and Divisional plans has to be prepared by the safety department in coordination with the concerned departments of the railways and all other stakeholders. **Each Disaster Management plan must be reviewed at least once in a year i.e. in January.**

The Hospital DM plans and the Security arrangements (drills etc.) shall be prepared and coordinated by the Medical and the Security department respectively.

The Management of Floods, Cyclones, Earthquakes, Landslides, etc., and preventive action/ mitigation shall be coordinated by the Civil Engineering Department.

The Rescue and Restoration centric DM including preparation of plans and procurement of specialized equipment and rescue centric training of personnel has to be coordinated by the Mechanical Department.

On Western Railway Safety department is responsible for compilation of Disaster Management Plans at HQ and Divisional Levels which are reviewed in January every year. These Plans are also hosted on the rail-net server of the Western Railway and on Safety Information Management System (SIMS) in an interactive format so that the information can be shared and its retrieval is simpler.

18.6 Mock Drills/ Exercises and Training

For coordination and management during Disaster/major train accident, Indian Railways conducts mock drills with NDRF and each NDRF battalion carry out at least one or two exercises/coordination meeting with each Zonal Railways every year. Coordinating DIG/NDRF and ED/Safety(M), Railway Board finalise the calendar and circulate to concerned Zones/Divisions for conducting Full Scale Disaster Management Exercise with NDRF. Such programs are crucial to ensure full preparedness and to maintain operational readiness of the disaster response operation teams, institutional mechanisms, and the equipment. These drills are organized to test their readiness to deploy within the shortest possible time. Various courses on Safety and Disaster management are also conducted at training institutes of Railways. The trainings are crucial because they go beyond concepts and guidelines into inculcating in the individuals the critical importance of working as a coherent team for emergency response with a clear chain of command. The workshops and drills will also provide an opportunity to practice SOPs.

Zonal Railways also conduct Mock drills quarterly in each division utilising the resources of Railways i.e. accident Relief Train (ART), Accident Relief Medical Van (ARMV) etc. Shortcomings noticed and lessons learnt during the mock drill should be documented for corrective action and to improve SOPs.

18.7 MOCK DRILL:

Trained manpower is an essential ingredient of any DM system. Mere provision of sophisticated equipment without trained manpower is futile. For handling an unforeseen situation like managing a Disaster, training of all railway personnel concerned is an inevitable input. To acquire necessary knowledge and skill, all relevant officials should be given periodic training regarding their duties and that of their department.

18.7.1. Full Scale Mock Drill:

Disaster Management essentially necessitates a state of preparedness under all circumstances and only conducting periodical full-scale mock drills therein, can assess the efficacy of arrangements. As per Bd's letter 2003/Safety (DM)/6/3 dated 13.06.08. **Railways may also associate NDRF in full scale exercise held once a year.**

- (i) Objective of the full-scale mock drill would be to:
 - Gauge the preparedness of DM system including detailed planning and keeping of all equipment in good fettle.
 - Integrate the operational response to measure overall performance of the exercise.
 - Measure performance with regard to accident restoration.
- (ii) On a division, the first mock drill should be conducted within 3 months of issue of the Zonal DM plan.
- (iii) On a division, the second mock drill should be conducted 3 months after the first one, in order to correct all short comings noticed during the first mock drill.
- (iv) Thereafter, mock drills shall be conducted once every year.
- (v) It should be conducted during the day and in a branch line section.
- (vi) 6 hours traffic block shall be taken and the ARME/ART run out to the accident site.
- (vii) UCC and CAC should be setup and each department will post their functionaries in the Control Office as also in UCC and CAC.
- (viii) All facilities should be provided in UCC and CAC by departments concerned.
- (ix) During these full-scale mock drills, following aspects shall be closely watched:
 - Turning out of ARME/ART within the prescribed time.
 - Speed of the specials.
 - Assembly of staff.
 - Handling of ART, HRDs, HREs and other rescue equipment.
 - Logging of events.
 - Functioning of field telephones and communication network.
 - Functioning of generators ets, lighting equipment.
 - Preparedness of first-aides and availability of medical equipment.
 - Preparedness of commercial department to mobilise adequate manpower.
- (x) On completion of the drill, a detailed report shall be prepared detailing deficiencies noticed, corrective

measures initiated and improvements required.

18.7.2 Testing the Plan and Learning to Improve

Evaluating the effectiveness of a plan involves a combination of training events, exercises and real-time incidents to determine whether the goals, objectives, decisions, actions and timings outlined in the plan led to a successful response. The purpose of exercises and drills is to promote preparedness by testing the plan with equal participation of all relevant stakeholders. The process of evaluation and remedial actions will identify, illuminate, and correct problems with the DMP. This process must capture information from exercises, post disaster critiques, self-assessments, audits, administrative reviews, or lessons-learned processes that may indicate that deficiencies exist. Members of the planning team should reconvene to discuss the problem and to consider and assign responsibility for generating remedies across all mission areas. Remedial actions may involve revising planning assumptions and operational concepts, changing organizational tasks, or modifying organizational implementing instructions (i.e., the SOPs/SOGs). Remedial actions may also involve reassessment of capabilities, revisiting assumptions made in the DMP, and finding solutions to overcome the deficiencies. The final component of a remedial action process is a mechanism for tracking and following up on the assigned actions. As appropriate, significant issues and problems identified through a remedial action process and/or the annual review should provide the information needed to allow the planning team to make the necessary revision(s) to the plan.

CHAPTER-19**HEAD QUARTER DISASTER MANAGEMENT CELL & CRISIS MANAGEMENT****19.1 Functioning of Disaster Management Cell:**

The Disaster Management Cell will operate at HQ and shall be attended by nominated Officers. BSNL Telephone no. of Disaster Management Cell, HQ - CCG is 022-22067391 & 22067392. The departmental wise nodal officers along with their duties are listed below:

19.1.1 Safety Department: Nodal Officer- Dy. CSO (Mech.)

The Officer representing Safety Department shall co-ordinate the functioning of Disaster Management Cell. He shall report the accident to Railway Board/CRS/GM and update the restoration details from time to time. He shall also monitor ordering of Relief Train for evacuation of involved passengers from the site of accident. The officers attending the Disaster Management Cells shall obtain the full details of the accident from Divisional Control/Site of accident and shall monitor the movement of Breakdown Train and Relief Train. Top-most priority is to be given for rescue and relief operations, for transferring the injured passengers from the site of accident to the nearest hospitals and for sending medical aid from Civil/Military/private hospitals.

19.1.2 Medical department: Nodal Officer- ACMD (IH)

The Officer representing Medical Department shall ensure utmost medical care and attention to the injured passengers. He shall ensure all medical assistance from the nearby resources. He shall obtain all details regarding casualties/injuries to passengers involved in the accident and shall maintain liaison with the Accident Site/Referral Hospitals and Dispensaries, and shall consolidate the list of injured/casualties in minimum time so that the same can be faxed to concerned station/division for display in Emergency Control and Emergency Information Booths.

19.1.3 Commercial department: Nodal Officer- Dy. CCM (G)

The Officer representing Commercial Department shall ensure ordering of refreshment for the passengers of involved train, payment of ex-gratia to the injured and to the next-of-kin of the dead passengers, arrange for transshipment of goods and passengers luggage, and hire private buses for transport of passengers from site of accident to the nearest Rail Head. He shall also ensure transmission of details information regarding injured/casualties to originating/destination stations, to Railway Board, and to headquarters of the originating/destination Railways. He shall also ensure opening of Emergency Information Booths at important junction stations enroute within the Railways.

19.1.4 Operating department: Nodal Officer- Dy. COM(R)

The Officer representing Operating Department shall manage relief and restoration operations at headquarters level. He shall record all events related to the accident chronologically. He shall ensure regulation and diversions of train keeping in view the likely time of restoration at accident site. He shall ensure that the passenger carrying trains are regulated at such stations where water and catering facilities are available. He shall also monitor the movement of ARTs /ARMVs/ SPART/ SPARME/ Labour Special trains ordered from the adjoining divisions and zones.

19.1.5 Mechanical department: Nodal Officer- Dy. CME(R)

The Officer representing Mechanical Department shall monitor and assess the requirement of additional Medical Vans/Break down train and shall liaison with adjoining Railway/Division for ordering the same. He shall also monitor the movement of break down trains. He shall obtain the details of rolling stock involved in the accident and its PRO particulars. He shall obtain the restoration details regarding rerailment/toppling wagons/coaches done by each individual Breakdown Train. He shall obtain the bio-data of the crew involved in the accident.

19.1.6 Engineering department: Nodal Officer - Dy.CE(G)-II

The Officer representing Engineering Department shall obtain the information regarding damage to track and shall ensure ordering of material train if required. The details of track structure and other relevant details such as USFD particulars, last inspections profile of the track, etc. shall be obtained within minimum time. He shall organize ordering of additional Labour and material Specials, as per the requirement at site, from the adjoining divisions/zones.

19.1.7 Electrical department: Nodal Officer - Dy.CEE (L/OP)

The Officer representing Electrical Department shall obtain the details of extent damage to OHE/Loco. He shall obtain the bio-data of crew involved in the accident. He shall assess the requirement of additional material at the site and shall organize movement of Tower Wagon/Material-Special to the site of accident and also the arrangement of lighting at the site.

19.1.8 S&T department: Nodal Officer - CCE

The Officer representing S&T Department shall ensure efficient communication. A line should be dedicated for the emergency transmission from site of accident/division control to Disaster Management Cell at HQ. He shall ensure installation of BSNL Phone/Railway Phone at the site of accident involving passenger train and establishing the communication and data link with the site to get information and video feed in real time. He shall obtain the details of S&T gears involved, if any, in the accident.

19.1.9 Security department: Nodal Officer SO to PCSC

PCSC/Dy.CSC co-ordinate with State police for formalities for the dead, managing the crowds and maintaining law and order. He will ensure protection of the belongings of affected passengers and render assistance to them. Maintain and protect railway properties during public agitation. Maintain liaison and Co-ordinate Army/Paramilitary forces for assistance.

19.2 Liaison with Railway Board:

Western Railway Disaster Management Cell will maintain constant liaison with the Emergency Cell, Safety Directorate at Railway Board for following activities:

- (1) Movement of ARTS/ ARMVs/ SPART/ SPARME from adjoining Zones.
- (2) Diversion, regulation, cancellation, rescheduling etc. of Mail/Express trains.
- (3) Movement of men and material from adjoining Zones/Divisions.
- (4) Opening of Helpline enquiry booths on other Zonal Railways and at;
- (5) Originating and destination station of the accident involved train and at all Major/Junction stations falling on the route of the train and at Divisional headquarters of originating and terminating divisions.
- (6) Movement program for visit of MR/MOSR, CRB and other Railway Board Members to the accident site.
- (7) Assistance required from Armed Forces, para-military forces, State Govt. should be conveyed to Railway Board.
- (8) Progress of rescue and restoration operation.
- (9) Prima-facie cause of the accident.

19.3 Duties of Quick Response Team:

This team shall meet immediately to stock the situation and monitor rescue, relief and restoration works. The team may arrange several sittings to monitor the progress. The committee shall be responsible for -

- (1) Keeping in regular touch with the division as well as the accident site, to monitor the rescue, relief and restoration works.
- (2) Taking stock of the position to Railway Board and convey information to GM/ AGM and nominated officer of the Railway Board, and Ministry of Home affairs for assistance as needed in all respect.
- (3) Keeping in touch with Army, Air Force, Navy or other higher authorities for rendering assistance.

19.4 Telephone Numbers for Railway Accident Information:

HQ of WR and BCT, BRC, RTM, ADI, RJT & BVP Divisions of Western Railway are allotted 4 digits DOT telephone No. 1077 for giving Railway Accident Information. Normally this telephone will be manned by punctuality controllers. During railway passenger train accident, the phones will be manned by multi-disaster resistance control cell to provide information to public regarding type of train accident, place and time of accident, train/trains involved, affected Coach Nos. injuries/causalities etc.

19.5 Difference between a Crisis and Disaster:

A Crisis indicates either an impending calamity, or the occurrence of an incident which would adversely affect the society and human population. A Disaster is a much bigger occurrence of an event which would cause large scale devastation, damage to property and loss of human life etc. While a Crisis may or may not turn into a Disaster, the opposite is normally true, but with the condition the crises situation is more in the initial stages.

19.6 Crisis Types:

There can be broadly 4 types of crisis situation which the Ministry of Railways may be confronted with:

- (i) National level crisis developed in the Railways and is specific to railways, which is to be managed with the help and assistance of other Ministries. All India Railway Strike is only such crisis identified in the CMP 2019 for which Ministry of Railways is the nodal ministry.
- (ii) National level crisis affects the country including Railways and different ministries/departments have to help and assist each other based on their strengths. Cyclone, Earthquake etc. can be such crisis where Railways have to assist by running special trains. Ministry of Home Affairs has to assist railways under security related crisis situations like sabotage, bomb blasts, etc.
- (iii) Crisis situation which is not a national level crisis affects Railway system, which is to be managed with the help and assistance of other Ministries/departments. Chemical explosion in train, fire in train, train falling in river, etc may be such situations.
- (iv) Crisis situation which is not a national level crisis affects Railway system, which can be managed with the help of internal resources from the Railways only.

19.7 National Level Crisis: -

The Crisis Management Plan deals with National level crisis situations as under:

- (i) **All India Railway Strike** - Ministry of Railways is the nodal ministry.
- (ii) **Terrorism/Security related Crisis** - Ministry of Home Affairs is the nodal ministry but Railways have to maintain liaison and flow of information.
- (iii) **Natural Factor(s) related Crisis leading to traffic disruption**-Ministry of Home Affairs is the nodal ministry but Railways have to maintain liaison and flow of information for assistance to restore the affected railway system.
- (iv) **Crisis where Railways have to help other ministries** by way of rail transport. Ministries concerned will make their own Crisis Management Plans bringing out the assistance that the Railways will be required to provide to them.

19.8 National Crisis Management Committee (NCMC):

The NCMC is the apex body comprising senior officials of the Government of India to deliberate on the problems at national level. The following officers will represent the Ministry of Railways (Railway Board) in NCMC for the various crisis situations: -

(i) All India Railway Strike	Member Staff Member Rolling Stock (Alternate)
(ii) Terrorism/Security related Crisis	Member Staff Member Traffic (Alternate)
(iii) Natural Factor(s) related Crisis	Member Engineering Member Traffic (Alternate)
(iv) Major Train Accidents	Member Traffic Member Rolling Stock (Alternate)
(v) Crisis where railways have to help other ministries	Member Traffic Member Staff (Alternate)

19.9 Zonal Management Group/ Quick Response team of WR:

There is high level monitoring committee at Zonal Headquarter called as Quick Response Team (QRT) of Western Railway, Churchgate comprising of: -

Additional General Manager	Convenor
Principal Chief Engineer/ Chief Engineer (Co)	Member/Alternate Convenor
Principal Chief Security Commissioner	Member
Principal Chief Personnel Officer	Member
Principal Chief Operations Manager	Member
Principal Chief Mechanical Engineer	Member
Principal Chief Electrical Engineer	Member
Principal Chief Signal & Telecommunication Engineer	Member
Principal Chief Safety Officer	Member
Chief Public Relations Officer	Member

19.10. Drill for handling Crisis:

The Crisis Management Plan (CMP) is intended to deal with the afore-mentioned crisis situations only. The drill to be followed in the Ministry of Railways (Railway Board) as well as on the Zonal Railways in respect of crisis group, functioning of the Control room, communication etc., are basically the same for all crisis situations and the same general drill will follow, to be supplemented by the special instructions depending upon the nature of the crisis.

CHAPTER-20**SOP—for ART, ARME, SPART & SPARME**

Headquarters Office
Churchgate Mumbai– 400020
Email: crsefo1@gmail.com

No.M426/4/3

Date:-15.06.2020

DRM:-BCT/BRC/RTM/ADI/RJT/BVP

Sub: Standard Operation procedure to be followed during movement of ARTs, ARME and SPARTs/ SPARME in case of Accidents.

Ref: 1.This office letter No. dated 22.02.2020.
2.Dieector Mech. Eegg. (P)l – Railway Boaed's letter No. 2012/ M(M&P)/RSP/7/RB/Pt. dated 22.02.2020.
3.Mieistey of Home Afaies (MHA) lettee o. 20-3/2020-DM.1(A) dated 25.03.2020, 07.02.2020, 13.02.2020, 12.02.2020 aed 15.02.2020.

In supersession to ref. (1) the following SOP - Standard Operating procedure to be followed during movement of ARTs, ARMEs and SPARTs/SPARME in case of Accidents, is appended below for strict compliance, to prevent the spread of COVID- 19, some precautionary measures are to be undertaken by the local management and all the employees of concerned department. **All guidelines issued by MoHFW have to be followed by all units.** The following guidelines are meant to promote healthy and safe movement/operation of ART/ARME/SPART/SPARME to worksite/ at site.

SPECIAL GUIDELINES

1. In case the Road ART/MFD Van is to be sent, the number of staff sent should be kept to minimum with unskilled/ skilled helping hands arranged from the location of accident (with prior decision before sending MFD), if feasible, to avoid crowding in the Road Truck.
2. For ART the complement of staff is stipulated but exception can be made by Sr. DME/DME to reduce the number depending on the nature and magnitude of accident/incident till the issue of Covid-19 is present.
3. In 'A' class ARTs additional GS/ SLR/ GSCN may be provided to ensure social distancing.
4. Develop/procure the hands-free sanitization arrangement in the ART/ARME, which can be used in depot/ at site.

GENERAL GUIDELINES

1. Download 'Aarogya-Setu'
 - This App is an important step in fight against Covid-19. By leveraging the technology, it provides information of nearest Covid +ve person. As more and more people use it, its effectiveness will increase.
 - Install the app in your smartphone as well as in your family members' smartphone
 - Switch on blue tooth and location. Set location sharing to 'Always'.
 - Update your status in 'Aarogya-Setu' Mobile App, whenever your condition changes.
2. Take a dose of Homeopathic /Ayurveda Medicine prescribed by Ministry of Ayush for yourself and give it to your family members.
3. If you are feeling fatigued for no reason, having dry cough or sneezing or difficulty in breathing, report to your supervisor about health status over telephone and seek medical advice.
4. If you are in containment zone, inform your reporting official at the first opportunity.
5. Always wear facemask once you step out of your home.
6. Wash hands frequently using soap and water or use alcohol-based hand sanitizer.
7. Avoid touching things and surface unnecessarily. Be aware about habit of touching as we often do these unconsciously. Sanitize the surfaces you are required to compulsorily touch.
8. Don't share the things like pen, mobile, water bottle, ear phone and other objects and sanitize before use, if unavoidable.
9. Do regular exercise/Yoga or other health enhancing practices.
10. Avoid crowds and maintain social distancing.
11. Avoid spitting in public and use either a dustbin or wash basin if you have to.
12. Smoking/Chewing Tobacco is dangerous for you and others. Quit if you consume it or at least don't do it in public places and offices.
13. Use the approved/ acceptable/ proven disinfectants etc. for sanitization.
14. Reduce the use of cash and switch over to e-payments.
15. Read the guidelines issued by Ministry of health and other ministries on this subject from time to time apart from being updated on the guidelines issued by Railway Board, HQ and the division.

BEFORE STARTING FROM HOME

2. Start for workplace only if you feel well.
3. Before leaving home for office, please ensure that you wear face-mask, and have soap & sanitizer with you.
4. Please don't share these items with anyone else. Keep one or two extra face-masks with you.
5. Keep a torch fully charged/with good and strong cells as you may be stuck-up/leave at night.

Supervisors to permit working from home depending on requirement-

- To personnel having morbidities causing severity in case of COVID-19.
- Pregnant Women employees.

TRAVEL FROM HOME TO WORK PLACE

1. Continue wearing mask. Avoid touching it. Do not put it down.
2. Use your personal vehicle to commute between home and office, as far as possible.
3. Using common transport, follow MHA guidelines, which presently are: One driver and two passengers in four-wheeler.
4. Only driver in two-wheeler.
5. Avoid crowding the boarding door of the vehicle.
6. Maintain social distancing of 6 feet (do Gaz kidoori) from fellow travellers or any human being by staggered seating etc.
7. Do not accept anything from others and share anything with fellow travellers. Not even water bottle, mobile, earphones, pens and cigarettes.
8. Avoid touching any surface unnecessarily (use hand gloves, if you have to). Sanitize the handlebars and handles if you have to hold on to it in the vehicle. Don't venture into crowded areas

ON ARRIVAL AT ART/ ARME/ SPART

1. No handshakes, only 'Namaste' greetings or 'aankho hi ankhon mein dua salaam'.
2. Body temperature taken using remote thermometer at the entrance of ART/ARME/SPART. If temperature > 98.6°F/37°C, leave the workplace immediately and seek medical advice.
3. No staff will be allowed to enter into ART/ARME/SPART without face-mask.
4. Declare health status in prescribed format as requested.
5. Wash hands thoroughly with soap immediately after entering, without touching any surfaces unnecessarily. It is preferable to have a hands-free wash basin/sanitization arrangement installed.
6. Maintain social distancing of 6 feet from human beings at all times. No hugging/touching/patting the back of colleagues on meeting and during work.
7. Maintain queue wherever one has to wait or pass through narrow areas like doors/corridor etc. to follow social distancing.
8. Staff shall continue to wear face-mask all the time at the ART/ARME/SPART.
9. Silence is Golden. Talk only when essential. Practice this for the duration you are out of home. And silence at home is equally helpful.

WHILE DEPARTING IN ART/ARME/SPART TRAINS TO SITE OF ACCIDENT

1. Disinfect the coach surfaces to be used/touched, before start/during run, using prescribed chemical solutions.
2. Sufficient quantity of hand wash soap in bathroom & alcohol-based sanitizer should be available at prominent locations.
3. Maintain social distancing of 6 feet, while sitting in the coach. Avoid more than 2 occupants per seat as far as feasible.
4. Use your arm/elbow/foot, not your hand to open washroom's door.
5. Flush commode before and after use.
6. Don't spit or spoil the basin at drinking water place.
7. Don't share Glass bottle/utensils for drinking water. Disposable type cups should be made available.
8. Use the washroom, if you feel the urge to spit. Wash the washbasin after spitting.
9. Don't use used linen (bed sheet, blanket, pillows). Use only freshly washed & packed linen.

WHILE WORKING AT ACCIDENT SITE

1. Disinfect the equipment and work area likely to be touched using prescribed chemical solutions and at regular interval thereafter, when using these; such as handles of equipment/tools, shutters, machine levers etc. Take care to clean the electrical switch board so that the liquid cleans the surface only and does not go inside.
2. Personal protective clothing like Helmets, Jackets, Welding Apron, and Welding Hand Gloves etc. should be available for individuals and should not be shared between staff. For this it is advisable that these items have name/notation of individual marked on it. In case this leads to shortfall, additional should be procured.
3. Provide isolated hooks (with mini social distance) for hanging dresses in change room/area.
4. Commonly used equipment like walkie-talkie, torch, bucket, etc. to be sanitized after use by each person - the person picking up for use shall sanitize it - that way he will be sure.
5. Staff to keep separate water bottles/flask for drinking water.
6. Each ART/ARME should have adequate stock of sanitizer, disinfectant liquid, face-masks & hand gloves for staff as well as passengers.
7. Operation theatre table, other medical equipment, stretcher etc. of ARME should be sanitized frequently.
8. No lunch in groups and no sharing of food. Organize staggered lunch break.
9. Maintain social distance of at least 6 feet for all kind of activities including loading/unloading equipment/Jacks, packing material like wooden sleeper etc. Handling of heavy items is likely to cause infringement of social distances. Please take care to avoid physical contact and ensure the duration of infringement is as little as possible. The corollary to this is that such works should be, as far as possible, be done by younger staff and those not having morbidities.
10. Use trolley for transporting these materials from coach to site.
11. Staff should continue to wear face-mask all the time.
12. Maintain queue to have social distance wherever one has to wait for use of facilities like water cooler, locker, having food.

13. Do not touch the machines or any objects unnecessarily.
14. Wash hands at regular intervals.
15. After the work is over, wash the hands and exposed parts of the body with soap and water.
16. Observe the above precautions while going back to the HQ station and then to your home.

AFTER REACHING HOME

1. Leave your shoes/umbrella outside and do not touch any object/person/surface.
2. Dispose the mask in closed dustbin (if disposable) or put in your pocket and wash it while you take bath.
3. Try to go to the bathroom for a wash of exposed parts of your body or take bath (preferable).
4. Sanitize/wash with soap and water the keys, key ring, spectacles, pen etc. you use. Sanitize the items which can't be washed. Clean the currency notes collected on making purchases, if any, with soap and water (or hot iron them).
5. Drop your clothes for laundry or wash them as you take bath.
6. Preferably do not eat anything till you wash/take bath.
7. Follow guidelines issued by Ministry of health and other ministries on this subject from time to time apart from being updated on the guidelines issued by Railway Board, HQ and the division.

HOW TO USE FACE-MASK

1. Before wearing a mask, wash your hands with an alcohol based (more than 60% alcohol content) sanitizer or with soap and water.
2. Cover your mouth and nose with the mask and make sure the mask is firmly pressed against your face. Do not share face mask & hand gloves with anyone, even with other family members.
3. Don't touch front portion of face-mask while wearing/taking out.
4. Take off mask by pulling straps and wash your hand immediately.
5. Replace the mask as soon as it gets wet.
6. Do not reuse disposable masks. Discard a disposable mask in closed dustbin and then wash your hands.
7. Put reusable face-mask in boiling water or soap solution pot. After washing thoroughly, dry face-mask in sun or iron it for 05 minutes.
8. Keep at least two face-masks at home per person. Use one while another is in washing/drying.
9. While sneezing always cover mouth with handkerchief or cough in to the arm.

ARUN RAMCHANDRA TUPE

Digitally signed by

ARUN RAMCHANDRA TUPE

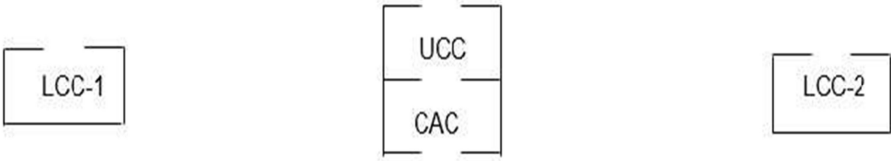
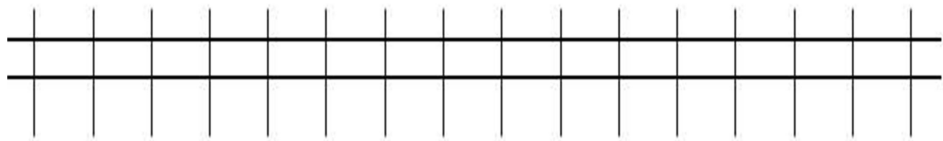
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(A.R. Tupe) CRSE (F&O)

C:- PCSO- For kind information please

Annexure – 1

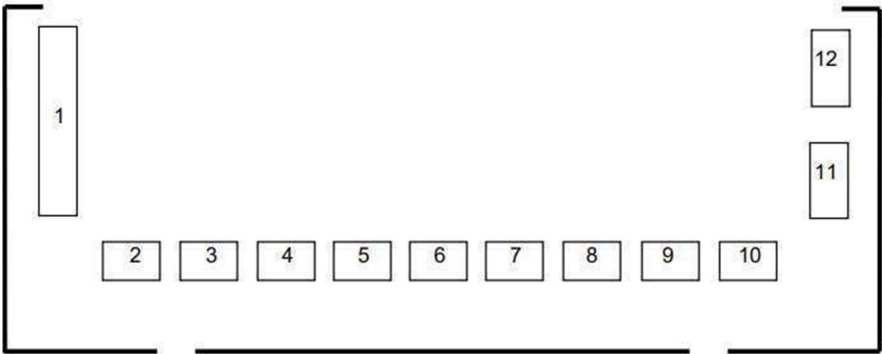
OUTLINE SCHEMATIC PLAN OF UCC/CAC/LCCs



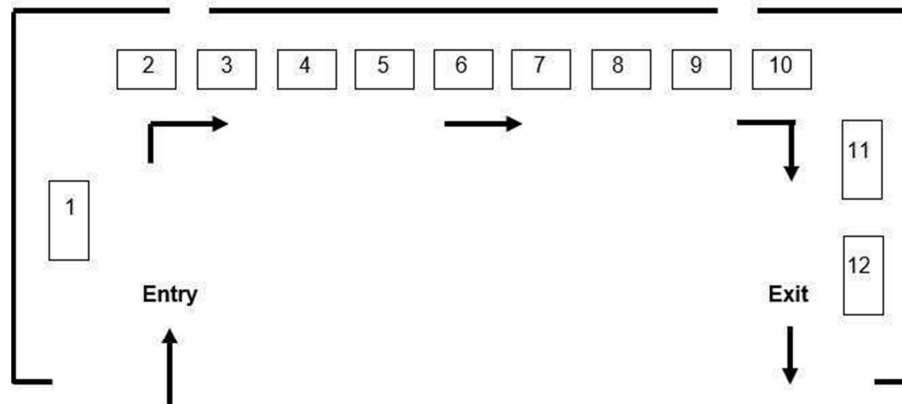
- UCC : Unified Command Centre
- CAC : Combined Assistance Centre
- LCC-1 : Local Command Centre-1
- LCC-2 : Local Command Centre-2

Annexure – 2

DETAIL SCHEMATIC PLAN OF UCC



- | | |
|---------------------|-------------------------|
| 1. Medical | 7. OC Site and Officers |
| 2. Commercial | 8. Mechanical |
| 3. Operating | 9. Electrical |
| 4. Safety | 10. S & T |
| 5. Security | 11. Civil |
| 6. Public Relations | 12. Spare |

Annexure – 3**DETAIL SCHEMATIC PLAN OF CAC**

- | | |
|--|--|
| 1. Commercial – Reservation Chart Official | 7. Municipality Official – Issue of Death Certificate. |
| 2. Medical – List of dead and injured. Authority for handing over dead body. | 8. RPF/Local Police – Issue of |
| 3. Commercial – Provision of escort and vehicle. | 9. Commercial – Payment of Ex-gratia, Issue of Claims Forms. |
| 4. Railway Doctor – Issue of Medical Death Certificate. | 10. Commercial – Assistance for Performing of last rites. |
| 5. Govt. Doctor – Issue of Post Mortem Report. | 11. Personnel – Issue of Return Journey pass. |
| 6. CAC in-Charge and Officers. | 12. Operating–Arrangement for Return Journey. |

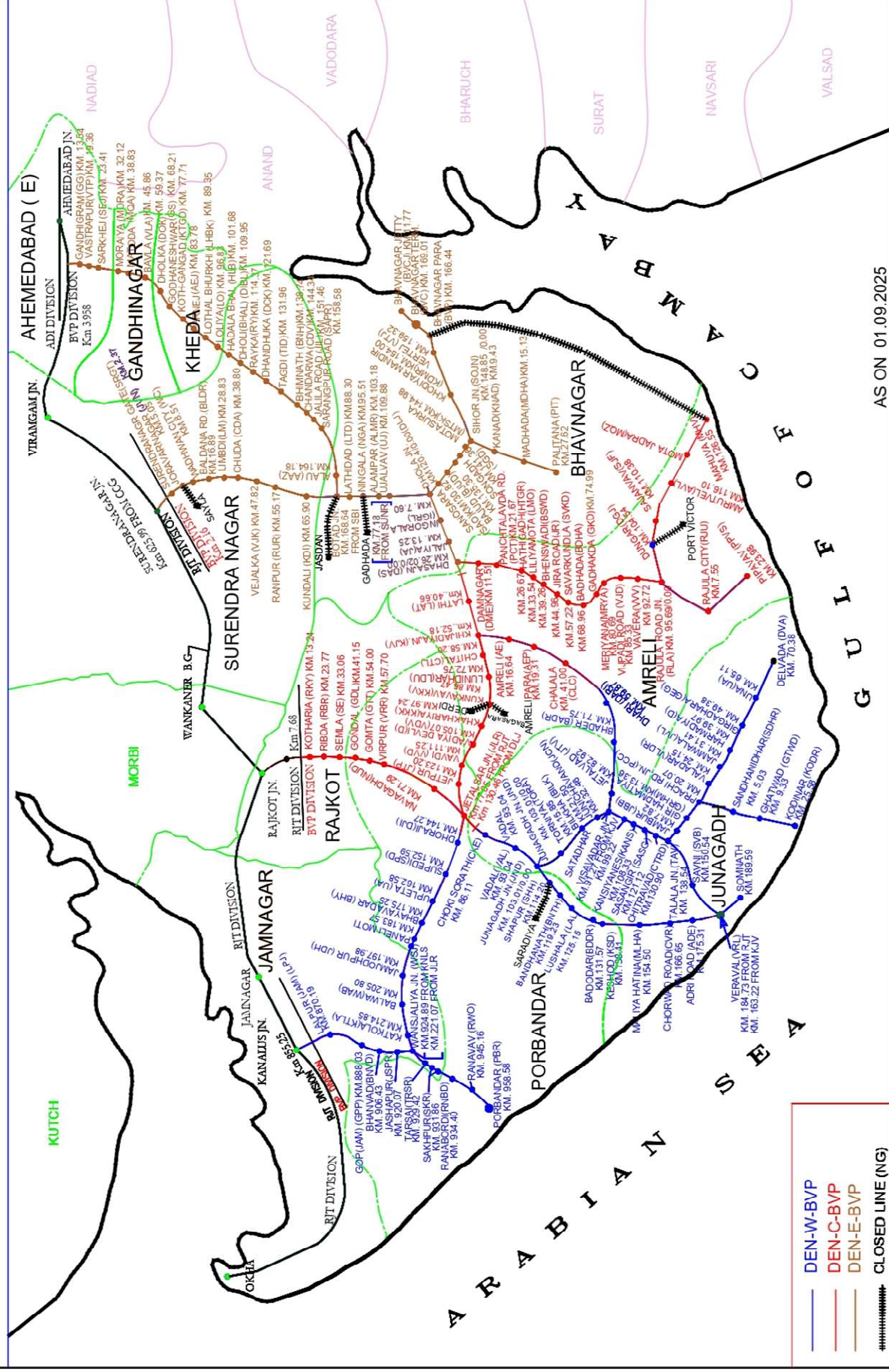
LIST OF CORRECTION SLIPS

[illegible]





WESTERN RAILWAY BHAVNAGAR DIVISION



AS ON 01.09.2025