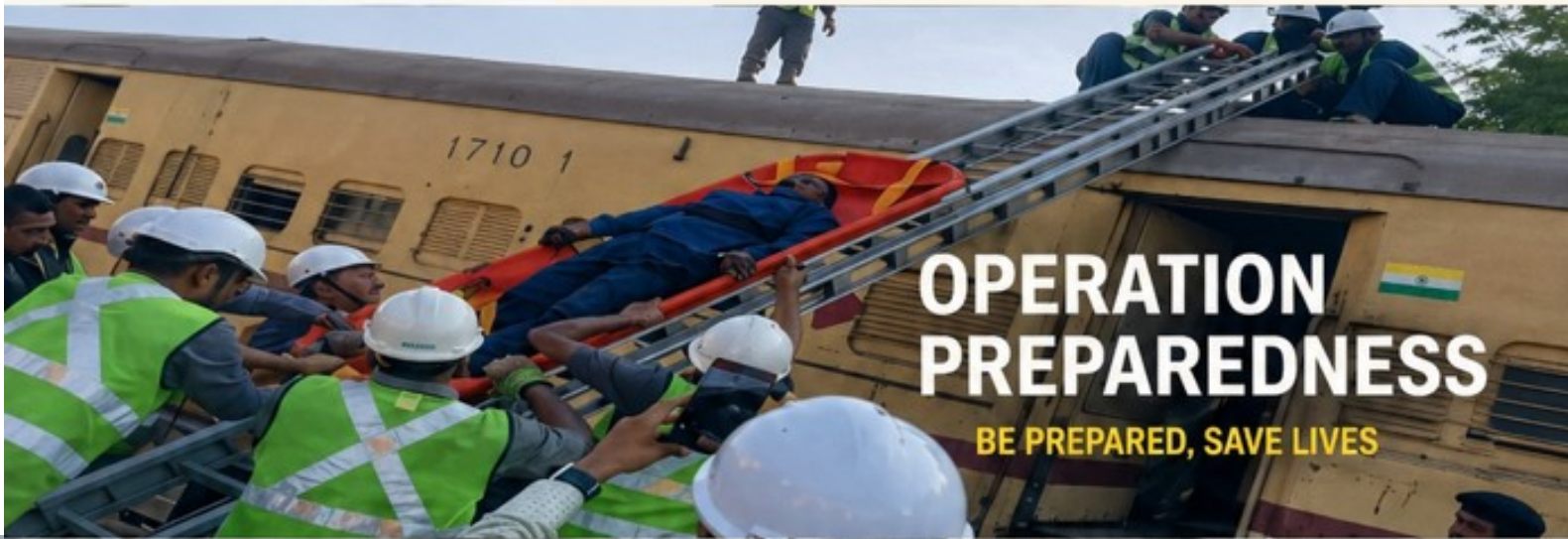




AHMEDABAD DIVISION WESTERN RAILWAY



**OPERATION
PREPAREDNESS**

BE PREPARED, SAVE LIVES



**UPGRADED FLEET &
SAFETY EQUIPMENT**



STAFF TRAINING



PLANING TO PRACTICE

DISASTER MANAGEMENT PLAN 2026

PREPAREDNESS TODAY, SAFETY TOMORROW

PART-I



Disaster Management Plan Part I - 2026 Ahmedabad Division

First to Sixth Edition	:	2005-06, 2008-09, 2012, 2015, 2019, 2023 & 2024-25
Seventh Edition	:	2026
Published by	:	Safety Department, Ahmedabad Division, Western Railway.
Sr DSO-ADI Tel: Auto- 093-44604, M-9724093730		

Seventh Edition has been prepared in two parts as per guidelines of Director Safety (III) Rly Bd's letter no.2009/Safety (DM)/6/14 Dated 09.07.2015, details given below:

- DM Plan for the Zone/Division should be prepared in two parts.
- The first part should contain the general information, duty list, role and responsibility of various departments, guidelines issued by NDMA and Railway Board, etc.
- The second part should contain information about the important telephone numbers of the respective Zone/Division, contact details of para military forces. State administration, hospitals, bus depots, fire service, NGO's, earth moving equipment suppliers etc.
- The first part of the DM Plan should be reviewed and updated as and when fresh instructions were received from NDMA or Railway Board or any other concerned organization. This part need not to be published/printed every year.
- Second part which generally consists of the contact details should be updated annually and the same should be circulated to all concerned. Corrections/additions/deletions to the first part may be incorporated in this as a correction slip.
- Zonal Railways may decide to publish print the first part whenever the necessity is felt.

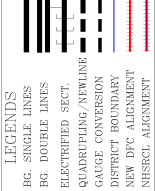
ACKNOWLEDGEMENT

Safety Department of Ahmedabad Division is thankful to State Government of Gujarat, Civil Authorities of Gujarat, Defense establishments, Gujarat State Disaster Management Authority, Revenue Department of Government of Gujarat, National Disaster Response Force, Gujarat Gas Limited, IOC, BPCL and Non-Government organisation for their hearty co-operation in giving valuable information/suggestions for compiling this book.

If an accident/incident declared as disaster, all instructions as contained herein, this Disaster Management Plan would automatically come in force and Officers and Staff of all departments would take action as laid down in this book.

Utmost care has been taken to ensure accuracy, the publisher solicits information on errors, if any.

AHMEDABAD DIVISION



		ART & MFD		ARM & ADM		ADSTE HQ	
		15		16		17	
		SALIENT FEATURES					
		S.No	DESCRIPTION	KG	MG	TOTAL	
ADEN's HQS.....	1	1.	ROUTE KMs.	1480.455	0.0	1480.455	
CPWT's HQS	2	2.	TRACK KMs.	2227.184	0.0	2227.184	
CPWT's HQS	3	3.	TOTAL NO. OF STATION	127	16	143	
CIOW's HQS	4	4.	TOTAL NO. OF LEVEL CROSSING	359+33(Gldng)	02	394	
S. S. E(Sig.)	5	5.	NO. OF BRIDGES	Un Manned	0	0	
T. I.	6	6.	NO. OF BRIDGES	Important	0	0	
GOODS SHEDS.....	7	7.	NO. OF BRIDGES	Major	236	2700	
MAJOR YARDS	8	8.	NO. OF BRIDGES	Minor	2456	0	
DISEL SHED	9	9.	NO. OF BRIDGES	Minor	2456	0	
C & W DEPOT	10	10.	NO. OF BRIDGES	Minor	2456	0	
STORE LOCATION	11	11.	NO. OF BRIDGES	Minor	2456	0	
BRAKE DOWN	12	12.	NO. OF BRIDGES	Minor	2456	0	
ARME	13	13.	NO. OF BRIDGES	Minor	2456	0	
JUNCTION POINTS	14	14.	NO. OF BRIDGES	Minor	2456	0	
ADME HQ	15	15.	NO. OF BRIDGES	Minor	2456	0	

PREAMBLE



The Disaster Management Act, 2005 marked a shift from a relief-centric approach to proactive disaster risk reduction, preparedness, and effective response. In line with Railway Board directives, the Ahmedabad Division has prepared its Disaster Management Plan to address both natural and man-made disasters.

I am pleased to present the Seventh Edition of the Disaster Management Plan, aligned with Western Railway guidelines. The Third World Conference on Disaster Risk Reduction framework, and National Disaster Management Authority (NDMA) guidelines. Updated resources, contact details, and clearly defined roles ensure better coordination and readiness.

This plan will enable a prompt, efficient, and coordinated response to disasters. All officers and staff must familiarize themselves with their roles and remain prepared to act with dedication.

Congratulations to team Safety for their efforts in preparing this comprehensive plan.

A handwritten signature in blue ink that reads "Ved Prakash". The signature is written in a cursive style with a horizontal line underneath.

(Shri Ved Prakash)
Divisional Railway Manager

PREAMBLE



Disaster Management Plan (DMP) for the year 2026 is a comprehensive and systematic framework aimed at ensuring the safety and security of passengers' employees and infrastructure during and after a disaster. This plan outlines strategies and procedures to prevent, respond to and recover from emergencies such as accidents, natural calamities. It involves collaboration between railway authorities, local government bodies and emergency services to minimize risks, protect critical infrastructure and ensure effective and coordinated response during emergency.

This is the Seventh Edition of Disaster Management Plan of Ahmedabad Division for the year 2024 based upon the lines of Sixth Edition of Western Railway Disaster Management Plan. This plan has been also prepared by incorporating the guidelines laid down in the latest Disaster Management Plan of Indian Railways 2018 and Model Schedule of Powers 2018.

The duties of all the departments & individuals are fully explained. All Officers and staff must familiarize themselves with the guidelines in the plan and understand their respective role and responsibility to combat emergencies. Preparedness, quick mobilization, mobility and fast responses from all concerned including Civil Defence, Territorial Army, Scouts and Guides, RPF, Gang Men, On Board Staff from the Railways and Civil Authorities, NDRF, GSDMA, NGOs, Army Organization from outside the Railways are the backbone on which a Disaster Management system rests.

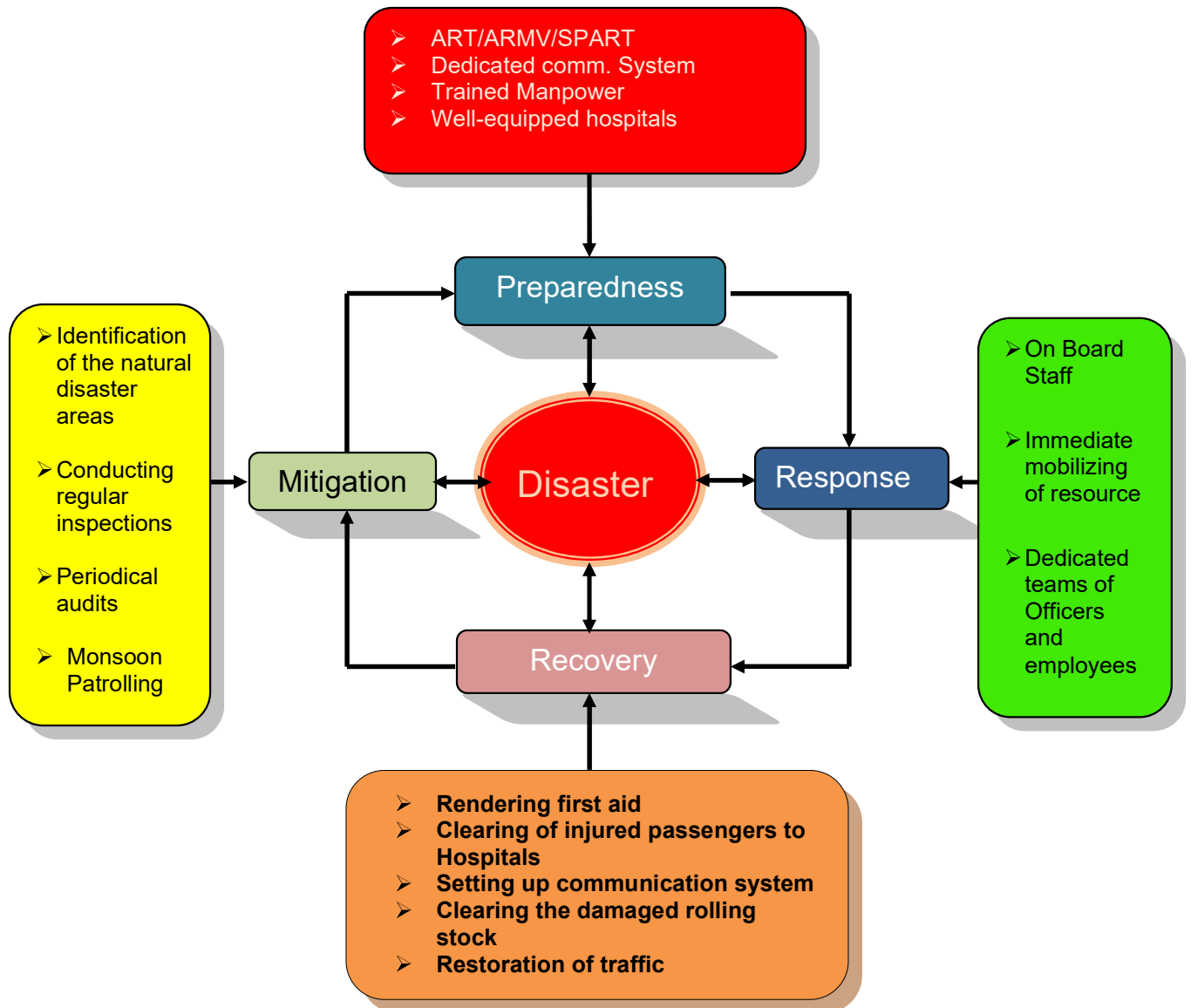
I would like to extend my deepest respect and gratitude to Shri Ved Prakash, DRM/ADI, for his keen interest and guidance in the early completion of the Disaster Management Plan 2026. I sincerely thanks him for his valuable guidance and suggestions.

I would also like to convey my respect and regards to Shri Kushal Singh, PCSO/WR; Shri Vikas Garhwal, ADRM(O)/ADI and Smt Manju Meena, ADRM(Infra)/ADI, for their invaluable suggestions in preparing the DMP booklet.

Furthermore, I express my sincere thanks to all Branch Officers and staff of the ADI Division for their support and guidance. Every effort has been made to ensure the accuracy and completeness of this booklet, there may still be some omissions or errors. I humbly request that any such issues be brought to the notice of Sr.DSO/ADI, and your efforts in this regard will be highly appreciated.

(Arvind Kumar Meena)
Sr. Divisional Safety Officer

DISASTER MANAGEMENT CYCLE IN THE CONTEXT OF RAILWAYS WITH CRITICAL INPUTS



GIST

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)/6/2 Pt. dated 06.01.09 & based on the definition of the Disaster Management Act 2005, Ministry of Railways has adopted).
2. This compendium of instructions has been prepared for dealing with such disaster, and not for normal train accident. 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 neighboring divisions / Zonal Railways, civil authorities, industrial units and Armed Force bases located in their territory. This would enable the Divisions / Zonal Railways to muster the entire local resources in case of a major disaster/natural calamity. Zonal Railways Disaster Management Plan should integrate all divisions and also to take into consideration adjacent railways' framework.
2. **Preparation of Disaster Management Plan:** The Disaster Management Plan must inter-alia include 'who is responsible for what activities in detail for: -
 - (i) Preparation and implementation of disaster management plan is the responsibility of concerned General Manager/Divisional Railway Manager.
 - (ii) Authority to order ART/ARME/SPART/SPARME/Break Down crane - Sr. Divisional Mechanical Engineer/Divisional Mechanical Engineer, etc.
 - (iii) Seniormost railway officer at the site of the accident shall be the designated as Site Manager.
 - (iv) Management of rescue operations - Primarily Mechanical and Medical Departments. Assistance to be provided by all railway men (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 -
Rolling stock- Mechanical Department.
Fixed infrastructure like Track, Over Head Equipment, Signalling system, etc. - departments concerned.
- (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- Departments concerned.
- (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 media needs at site.
- (xiii) Checklist for the officers & supervisors must be issued in the form of a pocket booklet indicating DOs and DON'Ts for the benefit of:
 - (a) First official reaching the site of accident.
 - (b) Senior most officer 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

(C)	-	Coaching
(G)	-	General
(M)	-	Movement
1AC	-	1st Air-Conditioned Coach
2AC	-	2 Tier Air-Conditioned Sleeper Coach
3AC	-	3 Tier Air-Conditioned Sleeper Coach
AAR	-	Adesar station
ABR	-	Abu Road Station
AC	-	Air Conditioned
ADEN	-	Assistant Divisional Engineer
ADG	-	Additional Director General
ADI	-	Ahmedabad Junction
ADME	-	Assistant Divisional Mechanical Engineer
ADMO	-	Assistant Divisional Medical Officer
ADRM	-	Assistant Divisional Railway Manager
ADSO	-	Assistant Divisional Safety Officer
AGM	-	Additional General Manager
All	-	Ajmer Junction
AMC	-	Ahmedabad Municipal Corporation
ARM	-	Area Manager
ARME	-	Accident Relief Medical Equipment
ARMV		Accident Relief Medical Van
ART	-	Accident Relief Train
ASC		Assistant Security Commissioner
Asstt.	-	Assistant
ASTE	-	Assistant Signal & Telecommunication Engineer
ASV	-	Asarva station
BAH	-	Bhabhar station
BCT	-	Mumbai Central Terminus
BCX	-	8-Wheel covered vacuum brake wagon
BD Spl	-	Break Down Special
Bd's	-	Board's
BFR	-	8-wheel open flat vacuum brake wagon
BHRJ	-	Becharaji station
BHU	-	Bhandu Moti station
BIS	-	Bureau of Indian Standards
BKD	-	Bhankoda station
BLDI	-	Bhildi station
BLS	-	Basic Life Support
BRC	-	Vadodara Junction
BRO	-	Border Roads Organization
BSF	-	Border Security Force
BSNL	-	Bharat Sanchar Nigam Limited
BT	-	BIO Terrorism
BUBR	-	Bhutakiya Bhimasar station
BVJ	-	Bhuj
BVP	-	Bhavnagar Junction
BW	-	Biological Warfare

C&W	-	Carriage and Wagon
CAC	-	Combined Assistance Centre
CAG	-	Comptroller and Auditor General
CBE	-	Chief Bridge Engineer
CBO	-	Community Based Organisation
CBRN	-	Chemical, Biological, Radiological and Nuclear
CCG	-	Churchgate
CCM	-	Chief Commercial Manager
CCRS	-	Chief Commissioner of Railway Safety
CCTV	-	Closed Circuit Television
CDM	-	Cyclone Disaster Management
CFTM	-	Chief Freight Transportation Officer
CHC	-	Community Health Centre
Chg	-	Coaching
CHP	-	Chhapi station
CISF	-	Central Industrial Security Force
CLI		Chief Loco Inspector
CMD	-	Chief Medical Director
CME	-	Chief Mechanical Engineer
CMG	-	Crisis Management Group
CMI	-	Commercial Inspector
CMP	-	Crisis Management Plan
CMPE(Diesel)	-	Chief Motive Power Engineer (Diesel)
CMS	-	Chief Medical Superintendent
COFMOW	-	Central Organisation for Modernization of Workshops
COM	-	Chief Operating Manager
Cons.	-	Construction
COS	-	Controller of Stores
CPMF	-	Central Para Military Force
CPO	-	Chief Personnel Officer
CPRO	-	Chief Public Relations Officer
CPTM	-	Chief Passenger Transportation Manager
CRB &CEO	-	Chairman Railway Board & Chief Executive Officer
CRPF	-	Central Reserve Police Force
CRS	-	Commissioner of Railway Safety
CRSE	-	Chief Rolling Stock Engineer
CSE	-	Chief Signal Engineer
CSO	-	Chief Safety Officer
CSTE	-	Chief Signal and Telecom Engineer
CTD	-	Chemical Terrorism Disaster
CTE	-	Chief Track Engineer
CTNL	-	Chief Controller
CUG	-	Closed User Group
CWC	-	Central Water Commission
CWE	-	Chief Workshop Engineer
CWI	-	Carriage & Wagon Inspector
DCM	-	Divisional Commercial Manager
DCMI	-	Divisional Commercial Inspector
DCWI	-	Divisional Carriage and Wagon Inspector
DDMA	-	District Disaster Management Authority

DEE	-	Divisional Electrical Engineer
DEN	-	Divisional Engineer
DEOR	-	Deodar station
DFM	-	Divisional Finance Manager
DG	-	Director General/ Diesel Generator
DM	-	Disaster Management/District Megistrate
DME	-	Divisional Mechanical Engineer
DMM	-	Divisional Material Manager
DMO	-	Divisional Medical Officer
DMT	-	Disaster Manager Team
DMU	-	Diesel Multiple Unit
DOD	-	Department of Ocean Development
DOM	-	Divisional Operations Manager
DOT	-	Department of Telecommunication
DPO	-	Divisional Personnel Officer
DR	-	Disaster Response
DRM	-	Divisional Railway Manager
DSL	-	Diesel
DSO	-	Divisional Safety Officer
DSTE	-	Divisional Signal & Telecommunication Engineer
Dy.	-	Deputy
Dy. CE	-	Deputy Chief Engineer
Dy.CCM	-	Deputy Chief Commercial Manager
Dy.COM	-	Deputy Chief Operations Manager
Dy.TNL	-	Deputy Controller
EC	-	Emergency Control
ED	-	Executive Director
EDPM	-	Electronic Data Processing Manager
E-Mail	-	Electronic Mail
EMR	-	Emergency Medical Response
EMS	-	Electronic Messaging System
EMU	-	Electric Multiple Unit
Engg.	-	Engineering
EOC	-	Emergency Operation Centre
ERC	-	Emergency Response Centre
ESF	-	Emergency Support Function
ESIC		Employees' State Insurance Corporation
ETL	-	Emergency Train Lighting
EWS	-	Early Warning System
FA&CAO	-	Financial Advisor and Chief Account Officer
FF	-	Flood Forecasting
FM	-	Flood Management
FOIS	-	Freight Operation Information System
FR	-	First Responders
G	-	General
G&SR	-	General & Subsidiary Rule
GAIL	-	Gas Authority of India Limited
GEB	-	Gujarat Electricity Board
GER	-	Geratpur station
GIM	-	Gandhidham Station

GIS	-	Geographic Information System
GM	-	General Manager
GNC	-	Gandhinagar station
GRP	-	Govt. Railway Police
GSI	-	Geological Survey of India
Hazchem	-	Hazardous Chemical
HFL	-	Height Flood Level
HLC	-	High Level Committee of Disaster Management
HM	-	Home Minister
HMT	-	Himmatnagar Station
HOD	-	Head of Department
HOR	-	High Official Requisition
HPC	-	Hindustan Petroleum Corporation
HM	-	Home Minister
HQ	-	Head Quarter.
HRD	-	Hydraulic Rescue Device
HRE	-	Hydraulic Rerailing Equipment
HQ	-	Headquarter
HS	-	Home Secretary
HSD	-	High Speed Diesel
IAF	-	Indian Air Force
IAN	-	Integrated Ambulance Network
IAT	-	Instant Action Team
IDSP	-	Integrated Disease Surveillance Programme.
IG	-	Inspector General of Police
IMD	-	Indian Meteorological Department
INCOIS		Indian National Centre for Oceanic Information Services
IOC	-	Indian Oil Corporation, Integrated Operation Centre
IR	-	Indian Railway
IRCM	-	Indian Railway Commercial Manual
IRCTC	-	Indian Railways Catering and Tourism Corporation
IRITM		Indian Railways Institute of Transport Management
IRMM	-	Indian Railway Medical Manual
IRS	-	Incidence Response System
IS	-	Internal Security
ISD	-	International Subscriber Dialing
IT	-	Information Technology
ITBP	-	Indo Tibetan Border Police
ITWC	-	Interim Tsunami Warning Centre
JA	-	Junior Administrative
JCB	-	Jack-cum-Bulldozer
JDN	-	Jagudan station
JE	-	Junior Engineer
Jn.	-	Junction
JS	-	Joint Secretary
JTN	-	Jotana station
KDBM	-	Khedbrahma station
KDLP	-	Kandla Port
KKF	-	Kankariya
KLL	-	Kalol station

KOD	-	Kharaghoda station
KTRD	-	Katosan Road station
LC	-	Level Crossing
LCC	-	Local Command Centre
LI	-	Loco Inspector
LPG	-	Liquefied Petroleum Gas
LR	-	Leave Reserve
MALB	-	MaliyaMiyana Junction
MCE	-	Mass Casualty Evacuation
MCM	-	Mass Casualty Management
MDPT	-	Mundra Port
MFR	-	Medical First Responder
MG	-	Meter Gauge
MHA	-	Ministry of Home Affairs
MOD	-	Ministry of Defence
MOES	-	Ministry of Earth Science
MOH & FW	-	Ministry of Health and Family Welfare
MOR	-	Ministry of Railways
MOSR	-	Minister of State for Railways
MOSRTH	-	Ministry of Shipping, Road Transport and Highways
MOWR	-	Ministry of Water Resources
MPMCM	-	Medical Preparedness and Mass Casualty Management
MR	-	Minister for Railways
MSH	-	Mehsana Junction
NAHI	-	National Association of Home Inspector
NAIR	-	National Academy of Indian Railways
NBC	-	Nuclear, Biological and Chemical
NCMC	-	National Crisis Management Committee
NCRMP	-	National Cyclone Risk Mitigation Project
NDM	-	National Disaster Management
NDMA	-	National Disaster Management Authority
NDRF	-	National Disaster Response Force
NEC	-	National Executive Committee
NFMI	-	National Flood Management Institute
NGO	-	Non-Govt. Organization
NIDM	-	National Institute of Disaster Management
NIO	-	North Indian Ocean
NIOT	-	National Institute of Ocean Technology
NRD	-	Naroda station
NSG	-	National Security Guard
NWR	-	North Western Railway
OC	-	Officer-in-Charge
OFC	-	Optic Fibre Cable
OHE	-	Over Head Equipment
Op.	-	Operations
PA	-	Public Address
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 Material Manager
PCO	-	Public Call Office
PCOM	-	Principal Chief Operations Manger
PCOS	-	Principal Controller of Stores
PCPO	-	Principal Chief Personnel Officer
PCR	-	Power Controller
PCSC	-	Principal Chief Security Commissioner
PHC	-	Public Health Centres
PHOD	-	Principal Head of Department
PNU	-	Palanpur Junction
POL	-	Petroleum & Oil
POM	-	Prime Minister's Office
POMKA	-	Portable Medial Kit for Accidents
PPE	-	Personal Protection Equipment
PR	-	Public Relations
PRO	-	Public Relations Officer
PS	-	Principal Secretary
PSU	-	Public Sector Undertaking
PTN	-	Patan station
PTWC	-	Pacific Tsunami Warning Centre
PWI	-	Permanent Way Inspector
QRT	-	Quick Reaction Team
R&D	-	Research and Development
RAT	-	Railway Affecting Tanks, Remote Administating Tool
RAW	-	Railway Affecting Works, Research and Analysis Wing
RCT	-	Railway Claims Tribunal
RDHP	-	Radhanpur station
RDSO	-	Research, Design and Standards Organization
RE	-	Railway Electrification
RG	-	Rest Giver
RJT	-	Rajkot Junction
RKH	-	Rakhiyal station
Rly.		Railway
RMC	-	Regional meteorological centre
RMS	-	Railway Mail Service
ROB	-	Road Over Bridge
RPF	-	Railway Protection Force
RPFS	-	Railway Protection Special Force
RR	-	Railway Receipt
RTM	-	Ratlam Junction
RUB	-	Road Under Bridge
S&T	-	Signal & Telecommunication
SADL	-	Sadla station
SBI	-	Sabarmati Station (MG)
SBT	-	Sabarmati Station (BG)
SC	-	Safety Counselor
SDGM	-	Senior Deputy General Manager
SDMA	-	State Disaster Management Authority

SDRF	-	State Disaster Response Force
SE	-	Section Engineer
SEC	-	State Executive Committee
Secy.	-	Secretary
SEOC	-	State Emergency Operation Centre
SHO	-	Station House Officer
SI	-	Signal Inspector, Sub-Inspector
SID	-	Siddhapur station
SIOB	-	Samakhiyali station
SLR	-	Second Class-cum-Luggage-cum-Brake Van
SM	-	Station Manager
SO	-	Section Officer
SOP	-	Standard Operative Procedure
SOS	-	International Call for Distress
SP	-	Self-Propelled/ Superintendent of Police
SPARME	-	Self-Propelled Accident Relief Medical Equipment
SPART	-	Self-Propelled Accident Relief Train
Spl.	-	Special
Sr.	-	Senior
Sr. DSC	-	Senior Divisional Security Commissioner
Sr. DSO	-	Senior Divisional Safety Officer
Sr. DCM	-	Senior Divisional Commercial Manager
Sr. DEE	-	Senior Divisional Electrical Engineer
Sr. DFM	-	Senior Divisional Finance Manager
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. DSTE	-	Senior Divisional Signal & Telecommunication Engineer
SS	-	Station Superintendent
SSE	-	Senior Section Engineer
SSE (C&W)	-	Senior Section Engineer (Carriage & Wagon)
ST	-	State Transport
St.JAB	-	St. John Ambulance Brigade
STC	-	Supervisor Training Centre
STD	-	Subscriber Trunk Dialing
STM	-	Senior Transportation Manager
STS	-	System Technical School
SUNR	-	Surendranagar Junction
TA	-	Territorial Army
TCI	-	Telecommunication Inspector
TCM	-	Telecommunication Maintainer
TI	-	Traffic Inspector
TMS	-	Train Management System
TRAH	-	Taranga Hill station
TRD	-	Traction Distribution
TS	-	Train Superintendent
TTE	-	Travelling Ticket Examiner
TXR	-	Train Examiner
UCC	-	Unified Command Centre

UDN	-	Udhna Junction
UMN	-	Ambaliyasan station
UT	-	Union Territory
VG	-	Viramgam Station
VHF	-	Very High Frequency
VJF	-	Vijapur Station
VPU	-	Vehicle Parcel Van
VTa	-	Vatva Station
WCR	-	West Central Railway
WLI	-	Welfare Inspector
WLL	-	Wireless on Local Loop
WTT	-	Working Time Table
ZRTI	-	Zonal Railway Training Institute

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Chapter 1: Introduction and Concept of Disaster

1.1 Background

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, other items of disaster viz. Floods, Earthquakes etc 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 no longer means only a train accident, but its scope has become much wider to include other incidents, terrorism related activity 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 (12% of land) is prone to floods and river erosion; of the 7516 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.

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 accepted 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 Disaster Management 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 with alone by that department 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 required to join hands to extend whatever facilities were available with them to provide relief/rescue and mitigation on the occurrence of a disaster.

In the DM 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 definition 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 gang men 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 along with a few examples, below:

(a) Natural Disaster: -

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 river and coaches falling down, train washed away in cyclone, derailment of a train carrying explosives or highly inflammable material, tunnel collapse on a train, fire or explosion in trains, and other miscellaneous cases etc.

(c) Man made Disasters:-

Acts of Terrorism and Sabotage, i.e. causing deliberate loss of life and/or damage to property, which includes:-

Setting a Train on fire, Railway installations etc., bomb blast at Railway Station/Train, Chemical (Terrorism) Disaster, Biological, Radiological and Nuclear 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:
 - Prevention
 - Mitigation
 - Preparedness
 - Rescue, Relief
 - Rehabilitation

New Philosophy gives more Emphasis on 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 stake holders.
- Pooling of resources of all agencies, e.g. local administration, community, defence, hospitals and other Govt. Organizations.

1.2.6 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.”

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

Disaster Management plan of Ministry of Railways, Zonal and Divisional plans have to be prepared by the safety department in coordination with the concerned departments of the railways and all other stake holders.

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.

1.2.8 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 not only a serious train accident may turn into a Railway disaster, if not handled and managed properly, there may be many more Railway related events which may not even involve human lives but may turn into disasters for which necessary prevention and mitigation measures are to be taken by the Railways beforehand.

Western Railway through this Disaster Management Plan has tried to address prevention, mitigation, preparedness, rescue and relief related issues covering all types of disasters affecting railway system in detail. This should also be appropriately incorporated in the Divisional Disaster Management plans.

Chapter 2: Institutional Framework for Disaster Management

2.1 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. Figure 2-1 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.

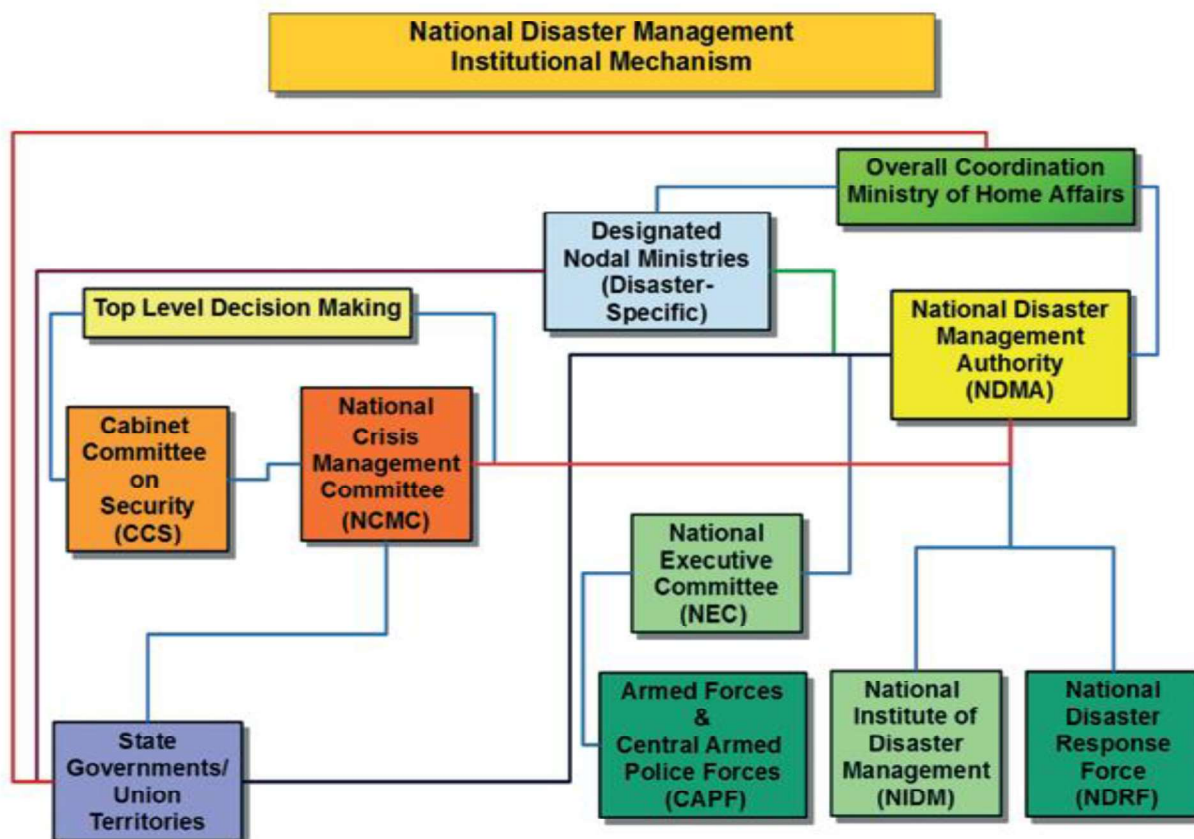


Figure 2-1: National-level disaster management - basic institutional framework

Table 2-1: Key national-level decision-making bodies for disaster management

S.N.	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 and 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 Coordination of the disaster response • Give direction to the Crisis Management Group as deemed necessary • Give direction for specific actions 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

S.N.	Name	Composition	Vital Role
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 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.	- 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 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 SDMA's 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)

S.N.	Name	Composition	Vital Role
			and a number of otherspecialised 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
5.	National Disaster Response Force (NDRF)	Specially trained force headed by a Director General Structured like para military 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 levels scientific, research and technical organizations, besides eminent scholars, scientists and practitioners.	• Human resource development and capacity building for disaster management within thebroad 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 GoI).

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

S N.	Disaster	Nodal Ministry/ Department
1	Biological Emergencies	Min. of Health and family Welfare (MHFW)
2	Industrial and Chemical	Min. of Environment, Forest sand Climate Change (MEFCC)
3	Accident – Air (Civil Aviation)	Min. of Civil Aviation (MoCA)
4	Accident – Road	Min. of Road Transport and Highways (MRTTH)
5	Accident - Rail	Min. of Railways (MoR)
6	Cyclone/Tornado	Min. of Earth Sciences (MoES)
7	Tsunami	Min. of Earth Sciences (MoES)
8	Drought	Min. of Agriculture and Farmers Welfare (MAFW)
9	Earthquake	Min. of Earth Sciences (MoES)
10	Flood	Min. of Jal Shakti (MOJS)
11	Floods Urban	Min. of Housing and Urban Affairs (MHUA)
12	Forest Fire	Min. of Environment, Forests, and Climate Change (MEFCC)
13	Landslides	Min. of Mines (MoM)
14	Avalanche	Min. of Defence (MOD) – Boarder Road Organization (BRO)
15	Nuclear and Radiological Emergencies	Dept. of Atomic Energy (DAE)
16	Cold Wave / Frost / Hailstorm	Min. of Agriculture and Farmers Welfare (MAFW)
17	Oil Spils	Min. of Defence (MOD) – Indian Cost Guard (ICG)
18	Pest Aack	Min. of Agriculture and Farmers Welfare (MAFW)
19	Tsunami	Min. of Earth Science (MOES)

2.2 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 the

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.

2.3 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.

2.4 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.

2.4.1 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.

2.4.2 Location, Constitution and Functions

These 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 are on deputation in NDRF.

Details of NDRF organization/battalion nearby Ahmedabad Division:

S.No.	Name of Officers/Designation and Location of Deployment	STD Code	Tele(O)	Unit Control Room.	Fax Nos.
Hd. Qrs.	Directorate General, NDRF, 6th Floor, NDCC-II Building, Jai Singh Road, New Delhi - 110001	011	23438020 23438119	—	23438091
1.	6 th BN NDRF, Jarod Camp, Teh-Wagodia, Vadodara, Pin - 391510	079	02668-299201 09870006730	02668-299182	

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 required.

2.4.3 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/PCSOs 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 Head quarter 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.

2.5 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. Each state shall prepare its own State Disaster Management Plan.

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.

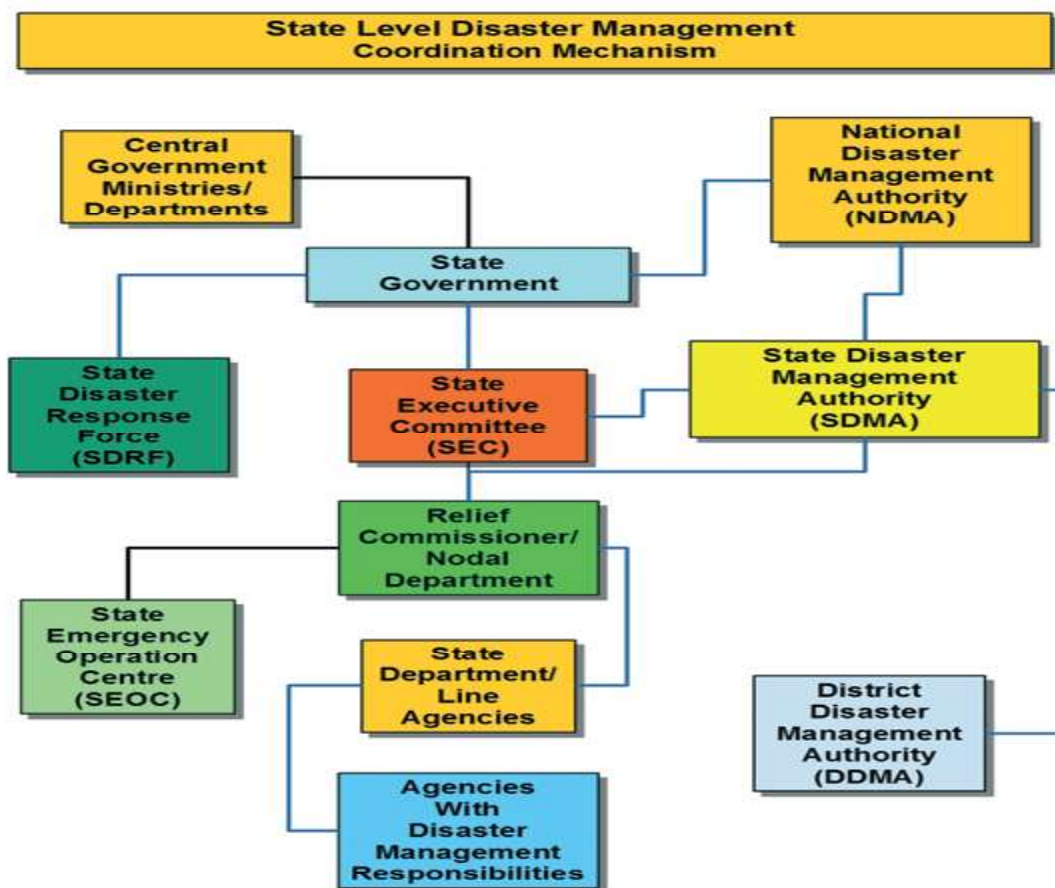


Figure 2.2: State level Disaster Management – Basic Institutional framework

2.6 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 implementation 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.

2.7 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.

2.8 Plan Implementation

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 spellout the responsibilities of the central, state, and local governments with respect 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-stake holder 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 sincere efforts for the implementation of the DM plans.

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 into 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 UNISDR (United Nations International Strategy for Disaster Reduction), 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” are widely used, the latter provides a better recognition of the on-going nature of disaster risks and the on-going 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 integrates the global targets into 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 cascaded 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, 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 four priorities enunciated in the Sendai Framework into 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, a set 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 it 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 carry out 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 instrengthening 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 capability to implement, enforces, and monitors 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 rationalise and augment the existing regulatory framework and infrastructure. For each hazard, in the subsections that follow, themes for action are presented in 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

Western Railway 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 is summarise in section 3.1.7 under the head of Disaster Risk Reduction measures.

3.1.7 Disaster Risk Reduction Measures:

(A) Train Accidents:

S.N	Agency	Responsibility	DRR -Action frame work
1.	Major Theme: Collision of trains - Understanding disaster Risk, Investing, Capacity Development & Mitigation.		
	S&T	Implementation of RB policies and guidelines for reliable signalling system. Proliferation of ATP and its maintenance	Implementation of RB policies and guidelines for reliable signalling system, Proliferation of ATP and its maintenance is being ensured
	Mechanical and Electrical.	Implementation of Board guidelines for reliable maintenance of locomotives. Training and monitoring of crew.	1. The availability and working of all safety items like Head light, flasher light, speedometer (ESMON), Horn, wipers, ACP, Cattle guard, wooden wedges etc are ensured before shed out of locomotives from sheds. 2. Regular training for maintenance of electric locomotives have been given to maintenance staff at training centre& OEM premises. 3. To arrest Accidents/Collisions/Derailments the Safety Drives are launched regularly to enhance the knowledge & alertness of Loco Pilots/ Assistant Loco Pilots & Shunters regarding, (a) Observance of any STOP signals rigidly & carefully. (b) Not to leave locomotive/EMU/MEMU unmanned while on duty. (c) Counseling & educating Loco Pilots in respect of clearing fouling marks. (d) Whistling continuously while passing Unmanned Level crossing Gates. (e) Frequently looking back for detecting any smoke, hot axle etc& safe running of train. (f) Timely detection of Flat wheels/Rail fracture etc. (g) Detecting any un-usual condition of the Track or in the vicinity of Track. 4. The utilization of Simulator for electric locomotives at ZETC, BRC is being monitored regularly. No running staff overdue Technical or Transportation Refresher courses and overdue PME is booked on line. All Loco Pilots having "A" gradation are being booked for working Special trains. They are being adequately given Road learning (TC-310) & practical handling of locomotives before being deployed for working the trains on the section.
	Personnel	Implementation of Board Policies and monitoring	Board Policies being ensued and Performance is being monitored at regular intervals.

S.N	Agency	Responsibility	DRR -Action frame work
		performances of the training centres.	
	Safety	Monitoring and auditing safety systems.	1. Six intra railway safety Audits has been carried out one in each division during the year 2. Two Inter Railway Safety Audits have been carried out in other railway. 3. Conduction of mock drills in all ART/ARMES/(SPART/SPARME) and major divisional /zonal railway hospitals. 4. Bimonthly Divisional safety audits have been conducted.
	Operating	Preparing subsidiary rules and effective implementation of GR & SR during train operations.	1. The Instructions are incorporated vide Para 2704 & 2705 of Operating Manual 2008 and G & SR 14.11. 2. Accident enquiry instructions have been incorporated in Para 1001 to 1039 of Chapter –X of Accident Manual 2009
	Engineering	Training and monitoring of track machine operators. Proper maintenance of track machines	Training schedule of Staff and periodic maintenance schedules of machines are strictly adhered as per Railway norms
	Electrical (TRD)	Implementation of Board guidelines for reliable maintenance of tower wagons. Training and monitoring of tower wagon operators.	Railway Board's guidelines for reliable maintenance of Tower Wagons and training of Tower wagon Drivers are being followed.
	Mechanical and Electrical (TL)	Implementation of Board guidelines for reliable maintenance of coaches/wagons/ EMUs/DEMUs/train sets.	A. Coaching: Proper functioning of brake system and adequate brake power in trains to prevent collision of coaching trains are ensured. B. Wagon: Proper functioning of brake system, adequate brake power in trains and proper under gear examination to prevent collision of goods trains is ensured. C. EMUs: i) Auxiliary Warning System (AWS) has been working satisfactorily over a decade in Mumbai Suburban Section, Western Railway. AWS System to eliminate human error in passing signals at danger. ii) 100% availability & functionality of Brake System in EMU rake is ensured. iii) Rolling in examination and FIT TO RUN

S.N	Agency	Responsibility	DRR -Action frame work
			certificate is ensured in all depots & car sheds. D. DEMUs: Proper functioning of Conventional and EP brake system and 100% break power in DEMU trains to prevent accident of trains. E. Vande Bharat: Proper functioning of brake system and adequate brake power in trains to prevent collision of coaching trains are ensured.
2.	Major Theme: Derailments - Understanding disaster Risk, Investing, Capacity Development& Mitigation.		
	S&T	Implementation of RB policies and guidelines for reliable signalling system.	RB policies and guidelines for reliable signalling system are being ensured
	Mechanical and Electrical.	Implementation of Board guidelines for reliable maintenance of locomotives and tower wagons. Training and monitoring of crew.	1. DPT/MPT and USFD tests have been carried out to detect even hair line crack or flaw at most of the loco equipments like wheel, TM nose stay, Axle, bogie mechanical parts. 2. All brake rigging items are checked during TI to ensure worn out/defective items have been replaced. 3. Regular training for maintenance of electric locomotives has been given to maintenance staff at training centre& OEM premises. 4. In addition to the Simulator training, ALPs after completing their promotional course (for Driver Promotion) at ZETC, are given line training i.e. Loco/Train handling under the supervision of Loco Inspector in accordance with the Railway. Board's letter No. 2004/ M (L)/466/7101 Dated. 31.08.09 before being issued Gradation Card & Competency certificate by Sr.DEE (TRO). The instruction in this regard has been issued to all vide Technical Circular No.270. The revised policy for categorization/gradation of Loco Pilots issued by Railway. Board vide 97/Safety-I/23/15 dtd.29.03.07 has also been circulated to divisions vide Technical circular No. 274 & 307. Instructions have also been issued to Divisions in reference to CRB's letter No. 2009/Safety(A&R)/3/7 dtd.13.08.09 for extensively & adequately monitoring all newly promoted Loco Pilots for a period of 2 to 3 months.
	Personnel	Implementation of Board Policies and monitoring	Board Policies being ensued and Performance is being monitored.

S.N	Agency	Responsibility	DRR -Action frame work
		performances of the training centres.	
	Safety	Monitoring and auditing of safety systems.	1. SAG officers Night foot plate inspections/Ambush checks/Surprise inspections has been carried out throughout the Zone covering all sections once in a month and the corrective actions/Compliance monitored. 2. Safety Drives has been carried out as per Board Guide lines. 3. Safety inspections carried out throughout the Zone by Head Quarter safety officials and the Defects compliance monitor through SIMS inspection Management Module for early Compliance. 4. Safety drives calendar is being issued and defects, deficiencies noted during drive monitored for compliance.
	Operating	Preparing subsidiary rules and effective implementation of GR & SR during train operations.	1. The Instructions are incorporated vide Para 2706 & 2707 of Operating Manual 2008 and SR 3.39 (5) of G & SR 2. Accident enquiry instructions have been incorporated in Para 1001 to 1039 of Chapter –X of Accident Manual 2009
	Commercial	Implementation of Board guidelines regarding loading of commodities.	The Preventive steps Being Taken to avoid any Possible Derailments owing to over Loading-etc including (1) Commodities are loaded as per prescribed Packing conditions.(2) Maximum efforts should be taken to stop damage to commodities
	Engineering	Implementation of RB policies and guidelines for reliable engineering assets.	RBs guidelines for minimum standards of track structure are followed. Wherever these standards are not met with suitable restriction of speed is imposed if applicable.
	Mechanical and Electrical (TL)	Implementation of Board guidelines for reliable maintenance of coaches/wagons/ EMUs/DEMUs/train sets.	A. Coaching: (i) Proper Rolling In/Out Examination (ii) Axle Box feeling/Recording of axle box temperature to avoid “Hot Box” on run (iii) Proper examining of running gear, suspension gear, draw/buffing gear/Brake gear of coaches during PM/SM/Train examination of trains are ensured. (iv) USFD testing of axle is done in coaching stock regularly as stipulated. (v) Adequate and proper manpower and infrastructure for examination of trains are ensured. B. Wagon: (i) Proper Rolling In/Out Examination (ii) Axle Box feeling/Recording of axle box

S.N	Agency	Responsibility	DRR -Action frame work
			temperature to avoid “Hot Box” on run (iii) Proper examining of all under gear components of Wagons during CC, Premium & Intensive examination of goods trains. (iv) USFD testing of axle is done in Wagon stock regularly as stipulated. C. EMU: (i) Monitoring of vital safety inputs in areas like progress of critical safety works, availability of critical safety items, training, availability of infrastructure for maintenance requirement. (ii) USFD testing of axles in EMU coaches is done to detect flaws; this enables exhaustive analysis of defects and identifies those which are growing in size. (iii) Automatic flasher units have been provided on all EMU to enable automatic switching ON of flasher lights in case of train parting/alarm chain pulling. This gives immediate indication to the driver of the train coming from the opposite direction in case of derailments etc. D. DEMU: (i) Proper Rolling in/Out Examination (ii) Axle Box feeling/Recording of axle box temperature to avoid “Hot Box” on run are ensured (iii) Proper examining of running gear, suspension gear, draw/buffing gear/Brake gear and Schaku coupler of DMU coaches during Primary Maintenance examination are ensured. (iv) Adequate and proper manpower and infrastructure for examination. E. Train Set (Vande Bharat): I. Proper Rolling In/Out Examination II. Proper examining of running gear, suspension gear, draw/buffing gear/Brake gear of coaches during PM/SM/Train examination of trains are ensured.
	Security	Implementation of Board guidelines.	Board guide lines being ensured.
3.	Major Theme: Fire - Understanding disaster Risk, Investing, Capacity Development & Mitigation.		
	Mechanical and Electrical.	Implementation of Board guidelines for reliable maintenance of locomotives and tower wagons.	1. 2 nos. of fire extinguishers are provided in each cab of locomotive which are randomly checked and maintained as per schedule. 2. Safety relays for the safety, in working condition are provided for all equipments & circuits. 3. Fire retardant materials like SBGF cleats for cables, resin and rubber grommets have been used at various place

S.N	Agency	Responsibility	DRR -Action frame work
			4. Electrical fire sensing & extinguishing system is available only in Microprocessor based three phase locomotives. 5. Instructions for prevention of fire on electric locomotives has been given vide Technical Circular No. 230 dtd.30.10.06. 6. All the Staff working on electric locomotives has been trained to handle fire related disasters. TRD: All the traction substations and switching posts, OHE depots and PSI depots are provided with DCP type fire extinguishers in accordance to chapter VI of ACTM Vol. I. It is ensured that these fire extinguishers are checked, tested and refilled and the personal were trained for operating of fire extinguishers.
	Personnel	Implementation of Board policies and monitoring performances of the training centres.	Board Policies being ensued and Performance is being monitored.
	Safety	Monitoring and auditing of safety systems.	1. Safety seminars, Nuked Nataks, have been conducted all over the divisions Through Divisional safety officers. 2. Safety poster/Hand bills/ Pamphlets have been distributed in all divisions of Zone through Divisional safety officers
	Commercial	Implementation of Board guidelines regarding loading of commodities.	1. The Preventive steps Being Taken to avoid any Possible fire owing to over Loading-etc including (1) Commodities are loaded as per prescribed Packing conditions. (2) Maximum efforts should be taken to stop damage to commodities 2. Pantry equipment healthiness has being ensured through JPO as per RB Extent guidelines.
	Engineering	Implementation of RB policies and guidelines for reliable engineering assets.	Buildings and structures are constructed and maintained as per railway codes and manuals which yield reliable engineering assets.
	Mechanical and Electrical (TL)	Implementation of Board guidelines for reliable maintenance of coaches/wagons/ EMUs/DEMUs/train sets to minimize fire hazards.	A. Coaching: (i) Use of fire retardant materials in passenger coaches. (ii) Provision of Fire extinguisher in AC/Pantry car/Power car coaches as per norms (iii) Provision of fire detection and suppression systems in LHB power cars/Pantry cars (iv) ACP system should be invariably be in working condition when turned out after

S.N	Agency	Responsibility	DRR -Action frame work
			Primary Maintenance. B. Wagon: (i) Proper checking of tank wagons before loading by competent authority (ii) Certification by competent authority for no leakage of tank wagons after loading. (iii) If leakage of tank wagon detected during Run, quick actions are initiated through control message and allow for further movement after certification by competent authority. (iv) Spark-less tools are used during attention of loaded wagons. C. EMU: (i) Proper maintenance procedures are followed as per RDSO's guide lines (ii) Checking of critical equipments, safety items of driving cab such as fire extinguishers, short circuiting clips, wooden wedges is ensured in night stabling yards. (iii) Replacement & availability of Must change items is ensured during POH schedule. (iv) A special course on Disaster management training covering essential aspects of accidents & Crisis Management is provided to supervisors & Technicians during initial training and refresher training. D. DEMU: (i) Use of fire retardant materials in DEMU coaches. (ii) Provision of Fire extinguisher in DEMU coaches/power car (DPC) coaches as per norms (iii) ACP system in working condition in all DEMU coaches when turned out after Primary Maintenance is ensured.
	Security	Implementation of Board guidelines.	Being ensured as per laid down Railway Board guidelines.
	Operating	Fire Mock Drill	Fire Mock Drill is to be conducted every quarterly as per guidelines issued vide letter No. T1/R/Fire Vol.II dated 04.06.2018 and fire safety registers to be maintained at station.
4.	Major Theme : Manned and unmanned level crossings – Understanding disaster Risk, Investing, Capacity Development & Mitigation.		
	S&T	Implementation of RB policies and guidelines for reliable signalling system at interlocked LCs.	Implementation of RB policies and guidelines for reliable signalling system at interlocked LCs is being ensured
	Mechanical	Implementation of	1. The 'Safety Drives' are conducted from time to

S.N	Agency	Responsibility	DRR -Action frame work
	and Electrical.	Board guidelines of monitoring of crew.	time in which Crew has been counselled to continuously blow the locomotive whistle while passing LC gates to alert road users. Instructions contained in SR 16.03(3)(b) pertaining to “sounding of engine whistle while approaching level crossing”. Ambush checks were also conducted from LC gate or by travelling in the adjacent coach to monitor the crew in this regard. 2. The compliance of the same has been ensured through field inspections by Officers & Loco Inspectors, surprise checks/ambush checks etc. from LC gates or by travelling in the adjacent coach.
	Personnel	Implementation of Board Policies and monitoring performances of the training centres.	Board Policies being ensured and Performance is under monitoring.
	Safety	Monitoring and auditing of safety systems.	1. Safety seminars, Nuked Nataks, have been conducted all over the divisions through Divisional safety officers. 2. Safety poster/Hand bills/ Pamphlets have been distributed in all divisions of Zone through Divisional safety officers. 3. Road users are being counseled to take precaution while using level crossing. 4. International Level Crossing day (ILCAD) is being celebrated to improve awareness every year.
	Operating	Preparing subsidiary rules and effective implementation of GR & SR during train operations.	1. The Instructions are incorporated vide Para 2708 & 2709 of Operating Manual 2008 and Annexure –I, II, III, IV, V of Appendix-A to Chapter XVI of G & SR 2008. 2. Accident enquiry instructions have been incorporated in Para 1001 to 1039 of Chapter – X of Accident Manual 2009
	Engineering	Implementation of RB policies and guidelines for maintenance of LCs.	All the relevant policies for construction, maintenance, elimination of LCs given by RB from time to time is adhered to.

(B) Cyclone and Wind:**(a) Cyclone and Wind : Understanding Risk**

S. No.	Major Theme	Zonal Agency	Zonal Railways - Responsibility	DRR -Action Frame work
1.	Observation Networks, Information Systems, Research Forecasting.	Engineering Department	Support and coordination	Railway Coordinates with IMD for collection of warning Data from IMD local stations
2.	Zoning/ Mapping	Engineering Department	Preparation of detailed maps identifying vulnerable locations	Previous records of cyclone affected areas are used to establish vulnerable locations.
3.	Hazard Risk Vulnerability Assessment	Engineering Department	Preparation of detailed maps identifying vulnerable locations	Previous records of cyclone affected areas are used to establish vulnerable locations.
4.	Dissemination of warnings, data, and information	Engineering Department	To coordinate with state Authorities and to disseminate early warning signals to Divisional Authorities.	Every division has tie up with local weather warning unit meteorological department and/or are informed by offices maintain RAT/RAW in case of any unusual circumstances affecting track due to RAT/RAW. Railway HQ also receives weather data from regional IMD office during rough weather through email.

(b) Cyclone and Wind - Inter-Agency Coordination				
S. No.	Major Theme	Zonal Agency	Zonal Railways - Responsibility	DRR -Action Frame work
1.	Overall Disaster governance	Engineering Department	Implementation of DM plans	Railways have contact details of state authorities at field level and at divisional level and HQ level to be contacted in case of any flood like situation
2.	Response	Engineering Department	Implementation of DM plans	1. Railways keep updated contact details of all concerned district administration and other emergency services at all railway stations, Divisional HQ and railway HQ to be contacted for in case of Cyclone and wind disaster. 2. Repairs to shelters, structures are coordinated with in various departments of railways. 3. Railways have contact details of state authorities at field level and at Divisional level and HQ level for contact in case of flooding/cyclone.
3.	Warnings, Information, Data	Engineering Department	To Coordinate with state Authorities and to disseminate early warning signals to Divisional Authorities.	Railway relies heavily on IMD for information on Cyclone and wind. However IMD through its regional and local weather monitoring station advice railways of adverse whether through e-mail.
4.	Non-structural measures	Engineering Department	Adapting the norms/ codes	Norms and codes are already exists

(c) Cyclone and Wind: Structural Measures				
S. No.	Major Theme	Zonal Agency	Zonal Railways - Responsibility	DRR -Action Frame work
1.	Hazard resistant construction, strengthening, and retrofitting of all lifeline structures and critical infrastructure	Engineering Department	Adapting the norms/ codes	Structures are designed based on the previous data record of rainfall, flood data, catchment affecting the structure, HFL, Linear, Water way and free boards are meticulously considered fro designing the structure.
		Electrical department	Adapting the norms/ codes for TRD	Rly. Board's guidelines for reliable maintenance of Tower Wagons and training of Tower wagon Drivers are being followed.

(d) Cyclone and Wind: Non-Structural Measures				
S. No.	Major Theme	Zonal Agency	Zonal Railways - Responsibility	DRR -Action Frame work
1.	Laws Regulations Enforcement Mechanisms Techno-Legal regimes Institutional Arrangements Codes for disaster risk reduction Compliance Monitoring	Engineering Department	Adapting the norms/ codes	These are the matters of the state. Non structural Disaster Risk reduction codes do not exist for railways. However precautionary track protection measures like patrolling & Deputing bridge guards are done on advice of Disaster warning from IMD
		Electrical department	Adapting the norms/codes for TRD	Rly. Board's guidelines for reliable maintenance of Tower Wagons and training of Tower wagon Drivers are being followed.

(e) Cyclone and Wind : Capacity Development				
S. No.	Major Theme	Zonal Agency	Zonal Railways - Responsibility	DRR -Action Frame work
1	Training	Civil and Personnel departments	Training and orientation of all concerned staff.	No Module so far formulated for Training in Cyclone & Wind by Railways
2.	Mock Drills/ Exercises	Civil Engineering department.	Conducting mock drills.	No mock drill or exercise is yet designed or conducted for Cyclone and Wind

(C) Flood:

(a) Flood - Understanding Disaster Risk				
S. No.	Major Theme	Zonal Agency	Zonal Railways - Responsibility	DRR -Action Frame work
1.	Observation Networks, Information Systems, Monitoring, and Forecasting	Engineering Department	Support and coordination	Flood survey of RAT/RAW is done yearly with state authorities to ensure the health of railway affecting works/tanks. The repairs are then carried out by the state authorities on the affected RAT/RAW
2.	Zoning, mapping, and classification flood prone areas	Engineering Department	Preparation of detailed maps identifying vulnerable locations	Flood affected portion from past history is recorded. Trends from past history is taken as a clue for pre monsoon preparation
3.	Hazard Risk Vulnerability Assessment	Engineering Department	Preparation of detailed maps identifying vulnerable locations	Previous records of cyclone affected areas are used to establish vulnerable locations.
4.	Monitoring, Forecasting and Warning Systems	Engineering Department	Support and coordination	Railway relay on information provided by IMD for risk mitigation. Railway precautionary patrolling of line and stationary bridge guards also supplement in providing information of real time flood position during rains.
5.	Dissemination of warnings, data, and information	Engineering Department	To Coordinate with state Authorities and to disseminate early warning signals to Divisional Authorities.	Every division has tie up with local whether warning unit meteorological department and/or are informed by offices maintain RAT/RAW in case of any unusual circumstances affecting track due to RAT/RAW. Railway HQ also receives weather data from regional IMD office during rough weather through e mail.
(b) Flood Inter-Agency Coordination				
S.No.	Major Theme	Zonal Agency	Zonal Railways -Responsibility	DRR -Action Frame work
1.	Overall disaster governance	Engineering Department	Implementation of DM plans	Norms and codes are already exists
2.	Response	Engineering Department	Implementation of DM plans	Railways have contact details of state authorities at field level and at divisional level and HQ level to be contacted in case of any flood like situation
3.	Warnings,	Engineering	To Coordinate	Railway relies heavily on IMD

(a) Flood - Understanding Disaster Risk				
S. No.	Major Theme	Zonal Agency	Zonal Railways - Responsibility	DRR -Action Frame work
	Information, Data	Department	with state Authorities and to disseminate early warning signals to Divisional Authorities.	for information on Cyclone and wind and floods. However IMD through its regional and local weather monitoring station advice railways of adverse whether through e-mail.
4.	Non- structural measures	Engineering Department	Adapting the norms/ codes	Railways have contact details of state authorities at field level and at divisional level and HQ level to be contacted in case of any flood like situation. No separate norms or codes exist for nonstructural measures.

(c) Flood Structural Measures				
S.No.	Major Theme	Zonal Agency	Zonal Railways -Responsibility	DRR -Action Frame work
1.	Flood control measures such as construction of embankments and levees	Engineering Department	Adapting the norms/ codes	River training works wherever found fit had already been done by railway within its boundary. However control measures to arrest flash floods are not managed within railway boundary due to lack of space.
2	Hazard resistant construction, strengthening, and retrofitting of all lifeline structures and critical infrastructure	Engineering Department	Adapting the norms/ codes	Structures are designed based on the flood data, Rainfall & catchment affecting the structure. HFL, Linear water way and free boards are meticulously considered for designing the structure.

(d) Flood Non-Structural Measures				
S.No.	Major Theme	Zonal Agency	Zonal Railways - Responsibility	DRR - Action Frame work
1.	- Regulation and enforcement of laws, norms, regulations guidelines - Regulation of Reservoirs - Integrated Water Resources Management	Engineering Department	Adapting the norms/ codes	Correspondence & meeting with state authorities prior to monsoon wherever required is conducted for free flow of warning system from weather authorities & agencies maintain RAW/RAT works

(d) Flood Non-Structural Measures				
S.No.	Major Theme	Zonal Agency	Zonal Railways - Responsibility	DRR - Action Frame work
	(IWRM)			
2.	Regulations to promote flood Resilient buildings & infrastructure	Engineering Department	Adapting the norms/ codes	Railways codes and manuals have adequate provision for designing structures considering the past flood data of that area.

(e) Flood- Capacity Development				
S.No.	Major Theme	Zonal Agency	Zonal Railways - Responsibility	DRR -Action Frame work
1.	Training	Civil and Personnel departments	Training and orientation of all concerned staff.	No Module so far formulated for Training in Floods by Railways
2.	Mock Drills/ Exercises	Civil Engineering department	Conducting mock drills.	No mock drill or exercise is yet designed or conducted for Floods

(D) Seismic:

(a) Seismic: Understanding Disaster Risk				
S.No.	Major Theme	Zonal Agency	Zonal Railways -Responsibility	DRR -Action Frame work
1.	- Earthquake Monitoring Services - National Seismological Network - Real Time Seismic Monitoring Network (RTSMN)	Engineering Department	Coordination	Railways are fully dependent on IMD for early warning of seismic risk. Reports from IMD are relayed to railway by local IMD whether monitoring stations.
2.	Earthquake Hazard and Risk Assessment (EHRA)	Engineering Department	Coordination	Railways have its own inspection schedule of structures to determine the health of the structure. EHRA however is not covered under it.
3.	Scientific Seismic Zonation	Engineering Department	Coordination	Contacts of district and state administration for disaster management are maintained by railway at all railway station, divisional HQ controls to coordinate for risk mitigation.
4.	Seismic Micro-zonation	Engineering Department	coordination	Contacts of district and state administration for

(a) Seismic: Understanding Disaster Risk				
S.No.	Major Theme	Zonal Agency	Zonal Railways -Responsibility	DRR -Action Frame work
				disaster management are maintained by railway at all railway station, divisional HQ controls to coordinate for risk mitigation.
5.	Hazard Risk Vulnerability Assessment	Engineering Department	Preparation of detailed maps identifying vulnerable locations	Records of previous seismic affected locations are preserved at divisional levels for identifying vulnerable location.

(b) Seismic Inter-Agency Coordination				
S.No.	Major Theme	Zonal Agency	Zonal Railways -Responsibility	DRR -Action Frame work
1	Overall disaster governance	Engineering Department	Coordination	Coordination effort are put up by railway in tandem district administration on receipt of seismic risk warning from IMD
2	Response	Engineering Department	coordination	Coordination effort are put up by railway in tandem district administration on receipt of seismic risk warning from IMD
3	Non-structural measures	Engineering Department	Adapting the norms/ codes	Railways have contact details of state authorities at field level and at divisional level and HQ level to be contacted in case of any natural disaster like situation. No any Norms or codes exist for nonstructural measures.

(c) Seismic Structural Measures				
S.No.	Major Theme	Zonal Agency	Zonal Railways -Responsibility	DRR -Action Frame work
1.	Hazard resistant construction, strengthening and retrofitting of all lifeline structures and critical infrastructure	Engineering Department	Adapting the norms/ codes	Codal provision exists for designing of structure which are hazard resistant. However depending upon the seismic zone the respective codal provisions applied.

(d) Seismic Non-Structural Measures				
S.No.	Major Theme	Zonal Agency	Zonal Railways - Responsibility	DRR -Action Frame work

(d) Seismic Non-Structural Measures				
S.No.	Major Theme	Zonal Agency	Zonal Railways - Responsibility	DRR -Action Frame work
1.	Regulations and model codes for town planning, civil works and public infrastructure	Engineering Department	Adapting the norms/ codes	Codes and By laws are followed while erecting structures in railway colony.
2.	Structural safety audit of lifeline structures and Buildings Prioritization of lifeline structures and buildings for strengthening and seismic retrofitting	Engineering Department	Adapting the norms/ codes	A constant endive is made by railways to strengthen & replace structures which have outlived its codal life or has to be upgraded to bear additional loads by way of sanctioning various works in PB, LB & even under revenue fund. retrofitting is also adopted in selected bridges based on condition as per norms

(e) Seismic- Capacity Development				
S.No.	Major Theme	Zonal Agency	Zonal Railways - Responsibility	DRR -Action Frame work
1.	Training	Civil and Personnel departments	Training and orientation of all concerned staff.	No Module so far formulated for Training in Seismic Risk Mitigation by Railways
2.	Mock Drills/ Exercises	Civil Engineering department	Conducting mock drills.	No mock drill or exercise is yet designed or conducted for Seismic Risk Mitigation

(E) Tsunami:

(a) Tsunami Capacity Development				
S.No.	Major Theme	Zonal Agency	Zonal Railways - Responsibility	DRR -Action Frame work
1.	Research and Development Efforts	Engineering Department	Coordination	No R & D facility is available with railways for mitigating Tsunami risk
2.	Zoning/Mapping	Engineering Department	Coordination	No zoning or mapping of Tsunami Risk is coordinated in WR
3.	Warning System Components and Instruments	Engineering Department	Coordination	Tsunami warning as provided by IMD is relied upon by railway. IMD warnings are delivered to railway by email from local weather stations.

(a) Tsunami Capacity Development				
S.No.	Major Theme	Zonal Agency	Zonal Railways - Responsibility	DRR -Action Frame work
4.	Dissemination of warnings, data and information	Engineering Department signals to Divisional Authorities	To Coordinate with Local Authorities and to disseminate early warning signals/ Information to last mile.	Railways is fully dependent on IMD for early warning of Tsunami risk. Reports from IMD are relayed to railway by local IMD whether monitoring stations.
5.	Hazard Risk Vulnerability Assessment	Engineering Department	Preparation of detailed maps identifying vulnerable locations	Locations of previous occurrences are referred to identify vulnerable location

(b) Tsunami Inter-Agency Coordination				
S.No.	Major Theme	Zonal Agency	Zonal Railways - Responsibility	DRR -Action Frame work
1.	Overall disaster Governance	Engineering Department	Implementation of DM plans	Railway is coordinating with various departments within itself and other district, state & central admin for overall disaster governance.
2.	Response	Engineering Department	Implementation of DM plans	Railway has no flood response team for deployment. All help is sought from district & state administration
3.	Warnings, Information, Data	Engineering Department	To coordinate with state Authorities and to disseminate early warning signals to Divisional Authorities.	Railways is fully dependent on IMD data for early warning. These warnings are made to HQ & to divisions directly by IMD local weather stations. Additionally railway also convey the early warning received from IMD through its controls to the concerned
4.	Non-structural measures	Engineering Department	Adapting the norms/ codes	Codes and Norms for inter-agency coordination for nonstructural measures do not exist for Tsunami in this railway

(c) Tsunami- Structural Measures				
S.No.	Major Theme	Zonal Agency	Zonal Railways - Responsibility	DRR -Action Frame work
1.	Strengthening of lifeline structures and highpriority buildings	Engineering Department	Adapting the norms/ codes	Standards of loading to be adopted or factors to be considered for Tsunami are yet to be formulated. Strengthening of structure can be considered thereafter only.
2.	Hazard resistant construction, strengthening, and retrofitting of all lifeline structures and critical infrastructure	Engineering Department	Adapting the norms/ codes	Codes and Norms for Hazard resistance construction or strengthening or retrofitting for Tsunami is yet to be formulated

(d) Tsunami Non- Structural Measures				
S.No.	Major Theme	Zonal Agency	Zonal Railways - Responsibility	DRR -Action Frame work
1.	Mainstreaming DM into Development Planning	Engineering Department –	Adapting the norms/ codes	Codes and Norms for Main streaming DM into Development planning for Tsunami is yet to be formulated
2.	Regulation and enforcement of relevant laws	Engineering Department –	Adapting the norms/ codes	Regulation and enforcement laws not formulated under railway for investing in DRR nonstructural measures for Tsunami
3.	Safety audits and evaluation of all lifeline structures and important facilities	Engineering Department –	Adapting the norms/ codes	In the absence of Codal norms for structural design the safety audit and life span evaluation for Tsunami is not feasible.

(e) Tsunami -Capacity Development				
S.No.	Major Theme	Zonal Agency	Zonal Railways - Responsibility	DRR -Action Frame work
1.	Training and Capacity Development of Professionals	Civil and Personnel departments	Training and orientation of all concerned staff.	No Module so far formulated for Training in Tsunami Risk Mitigation by Railways
2.	Mock Drills/ Exercises	Civil Engineering	Conducting mock drills.	No mock drill or exercise is yet designed

(e) Tsunami -Capacity Development				
S.No.	Major Theme	Zonal Agency	Zonal Railways - Responsibility	DRR -Action Frame work
		department		or conducted for Tsunami

(F) Landslides and Snow Avalanches:

(a) Landslides and Snow Avalanches-Understanding Disaster Risk				
S.No.	Major Theme	Zonal Agency	Zonal Railways - Responsibility	DRR -Action Frame work
1.	Hazard Zoning, mapping, geological, and geotechnical Investigations in regions prone to landslides and snow avalanches	Engineering Department	Preparation of detailed maps identifying vulnerable locations.	Previous Records and trends are observed for establishing Vulnerable locations
2.	Dissemination of warnings	Engineering Department.	To Coordinate with Divisional Authorities and to disseminate early warning signals/ Information to state.	Every division has tie up with local whether warning unit meteorological department and/or are informed by offices maintain RAT/RAW in case of any unusual circumstances affecting track due to RAT/RAW. Railway HQ also receives weather data from regional IMD office during rough weather through e-mail.

(b) Landslides and Snow Avalanches- Inter-Agency Coordination				
S.No.	Major Theme	Zonal Agency	Zonal Railways - Responsibility	DRR -Action Frame work
1	Overall disaster governance	Engineering Department	Implementation of DM plans	Railway is coordinating with various departments within itself and other district, state & central admin for overall disaster governance.
2.	Response	Engineering Department	Implementation of DM plans	Regular Coordination meeting & correspondence with state/central departments at divisional level is conducted for preparation & early warning.
3.	Warnings, Information, Data	Engineering Department	To Coordinate with state Authorities and to disseminate early warning	WR is warned for excess rain fall by IMD. Land slide along railway tracks are also reported by patrolman

(b) Landslides and Snow Avalanches- Inter-Agency Coordination				
			signals to Divisional Authorities.	inspecting the track in monsoon season.
4.	Non-structural measures	Engineering Department	Adapting the norms/ codes	Though codes and manuals are followed for doing earth work. Landslides that may be resultant from cloud burst etc has not been provisioned under any codes and norms

(c) Landslides and Snow Avalanches Non-Structural Measures				
Sr. No.	Major Theme	Zonal Agency	Zonal Railways - Responsibility	DRR -Action Frame work
1.	Regulations and building codes	Engineering Department	Adapting the norms/ codes	Codal provision exist for snow load, however norms/codes for Avalanche and other disaster in non-structural measures is nonexistent in Railways

(d)Landslides and Snow Avalanches-Capacity Development				
S.No.	Major Theme	Zonal Agency	Zonal Railways - Responsibility	DRR -Action Frame work
1	Training	Civil and Personnel departments	Training and orientation of all concerned staff.	No module so far is formulated for Landslide; Snow avalanches Risk Mitigation by Railway.
2.	Mock Drills/ Exercises	Civil Engineering department	Conducting mock drills.	No mock drill or exercise is yet designed or conducted for Snow avalanches etc.

Chapter 4: PREPAREDNESS AND RESPONSE

4.1 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 defines response as “the provision of emergency services and public assistance during or immediately after a disaster in order to save lives, reduce 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 Gol, 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 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 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, 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, 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.

4.1.1 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 into 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:

- a) Nodal Central Ministries with disaster-specific responsibilities for national-level coordination of the response and mobilization of all the necessary resources.
- b) Central agencies with disaster-specific responsibilities for Early Warning Systems and alerts
- c) National Disaster Response Force (NDRF)
- d) 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:

- All agencies designated to provide early warning information about hazard events
- State Emergency Operations Centre (SEOC)
- District Emergency Operations Centre (DEOC)
- NDRF
- Integrated Defence Staff (IDS)
- MEA
- CAPFs

4.1.2 National Early Warning System

4.1.2.1 Central Agencies Designated for Natural Hazard-Specific Early Warnings

The GoI has designated specific agencies to monitor the onset of different natural disasters, set up 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:

	Hazard	Agencies
1	Avalanches	Snow and Avalanche Study Establishment (SASE)
2	Cyclone	India Meteorological Department (IMD)
3	Drought	Ministry of Agriculture and Farmers Welfare (MoAFW)
4	Earthquake	India Meteorological Department (IMD)
5	Epidemics	Ministry of Health and Family Welfare (MoHFW)
6	Floods	Central Water Commission (CWC)
7	Landslides	Geological Survey of India (GSI)
8	Tsunami	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.

4.1.2.2 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.

4.1.3 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 standardisation 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

	Disaster	Nodal Ministry/ Dept./ Agency
1.	Biological Disasters	Min. of Health and Family Welfare (MoHFW)
2.	Chemical Disasters and Industrial Accidents	Min. of Environment, Forests and Climate Change (MoEFCC)
3.	Civil Aviation Accidents	Min. of Civil Aviation (MoCA)
4.	Cyclone, Tornado, and Tsunami	Min. of Home Affairs (MHA)
5.	Disasters in Mines	Min. of Coal; Min. of Mines (MoC, MoM)
6.	Drought, Hailstorm, Cold Wave and Frost, Pest Attack	Min. of Agriculture and Farmers Welfare (MoAFW)
7.	Earthquake	Min. of Home Affairs (MHA)
8.	Flood	Min. of Home Affairs (MHA)
9.	Forest Fire	Min. of Environment, Forests and Climate Change (MoEFCC)
10.	Landslides and Avalanche	Min. of Home Affairs (MHA)
11.	Nuclear and Radiological Emergencies	Dept. of Atomic Energy, Min. of Home Affairs (DAE, MHA)
12.	Oil Spills	Min. of Defence/Indian Coast Guard (MoD/ICG)
13.	Rail Accidents	Min. of Railways (MoR)
14.	Road Accidents	Min. of Road Transport and Highways (MoRTH)
15.	Urban Floods	Min. of Urban Development (MoUD)

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 organisation 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.

4.1.4 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.

FES 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.

4.1.5 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.

4.1.6 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 in to 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 will play a major role in handing 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.

4.1.7 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 are:

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 scarcity-hit areas
15. Rehabilitation and Ensuring Safety of Livestock and other Animals, Veterinary Care
16. Data Collation and Management
17. Relief Employment
18. Media relations

4.1.8 Responsibility Matrix for Preparedness and Response of various agencies during disaster tabulated below:

S. N.	Task	Activity	Responsibility
1	Early Warning, Maps, Satellite inputs, Information Dissemination	• Issue forecasts, alerts, warnings. • Provide early warnings (where ever 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	Lead Agencies: IMD, CWC, INCOIS, SASE, GSI, BRO, MoIB, MoES, MoWR, MoAFW, Support Agencies: Sol, NRSC, DoT, MHA, NDMA, MoCIT, hazard specific nodal ministries
		• 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	State/UT, SDMA, Revenue Dept., CoR, SEOC, DDMA, all other relevant Department/Agencies

S. N.	Task	Activity	Responsibility
		scientific methods for risk assessment and forecasting	
		Co-ordination with the Ministries and Railway Zones.	CE Directorate - RB
		To coordinate with state Authorities and to disseminate early warning signals to Divisional Authorities.	Civil Engineering Department- Zone
		To Coordinate with Local Authorities and to disseminate early warning signals/ Information to last mile.	Civil Engineering Department- Division
2	Evacuation of People and Animals	- 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 of inclement weather, landslides, flash floods and avalanches. - Evacuation of fishermen from the high seas in case of a cyclone.	Lead Agency: MHA Support Agencies: MoD, CAPF, MoRTH, MoR, MoCA, ministries/depts. With hazard-specific responsibilities, NDRF, 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 mobilize required resources. - Monitor the situation. - Earmark resources/ units/ 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 into account local conditions and periodically update it.	State/UT, SDMA, Revenue Dept., CoR, SEOC, FES, DDMA, all other relevant Departments/Agencies, SDRF, Civil defence

S. N.	Task	Activity	Responsibility
		- Undertake mock/simulation drills. - Prepare operational checklists. - Prepare list of agencies/ organizations that could assist in evacuation. - Web-based resource inventory and its regular updates	
		Co-ordination with the Ministries and Railway Zones	TT Directorate - RB
		Coordinate with RB and State Authorities	Operating Department -Zone
		Coordinate with HQs and Local Authorities	Operating Department-Division
3	Search and Rescue of People and Animals	- 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	Lead Agencies: MHA, NDMA, NDRF Support Agencies: MoD, CAPF, MoHFW, MHA, MoRTH, MoCA, MoR, ministries/departments with hazard-specific responsibilities, Civil Defence
		- Various positions of IRTs (State, District, Sub-division and Tehsil) are trained and activated for response at their respective administrative jurisdiction. - SDRF teams are trained, equipped and ready to move at a short notice to the affected areas. - Strategic stationing of state of the art equipment for search, rescue and response with dedicated trained manpower. - MoU is in place with suppliers for blankets, tarpaulins, tents, boats, inflatable lights, torches, ropes, etc. with a condition that they will be supplied quickly at short notice (usually within 24 hours). - Nodal officer selected for coordination is in regular touch with MHA/NDMA for additional requirements (including help from other Central Ministries)	State/UT, SDMA, Revenue Dept., CoR, SEOC, SDRF, FES, DDMA, all other relevant Departments/Agencies, Civil Defence
		Coordination with NDRF/NDMA	Safety Directorate - RB

S. N.	Task	Activity	Responsibility
		Policy/ Planning of rescue centric equipment and training of staff.	Mechanical directorate – RB
		Developing and conducting training modules.	Establishment – RB
		Coordination with NDRF/SDRF	Safety Department – Zone
		Upgrading/Maintenance of ARTs/ARMVs rescue equipment, training of ART/ARMV staff in rescue operations.	Mechanical Department – Zone
		Organizing and monitoring rescue centric training to ART/ARMV staff.	Personnel Department – Zone
		Rescue of passengers, Maintenance of ARTs/ARMVs rescue equipment and training of ART/ARMV staff in rescue operations.	Mechanical Department-Division
		Organizing and monitoring rescue centric training to ART/ARMV staff.	Personnel Department-Division
		Coordination with NDRF/SDRF	Safety Department - Division
4	Medical Care	- 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 has 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 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	Lead Agencies: MoHFW. Support Agencies: MoD, CAPF, MoR

S. N.	Task	Activity	Responsibility
		- Health and Family Welfare Dept. works with the logistic section of the state level. - IRT to provide effective services (Medical Unit) to the field level IRTs for response. - District wise repository of hospitals (both Government and Private), availability of beds, doctors, paramedics and other trained staff available along with other infrastructure details and 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 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.	State/UT, SDMA, Revenue Dept., CoR, SEOC, SDRF, FES, DDMA, Health Dept., all other relevant departments, Civil Defence
		- 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.	Health Directorate – RB
		Developing and organizing training modules for Doctors and Paramedics in Trauma Care.	Establishment Directorate – RB
		Upkeep of Hospitals and ARMVs, Implementation of Hospital disaster Management plans and training of Doctors and paramedics.	Medical Department -Zone
		Organizing training modules for Doctors and Paramedics in Trauma Care.	Personnel Department- Zone
		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.	Medical Department-Division
		Organizing training modules for Doctors and Paramedics in Trauma Care.	Personnel Department-Division -

S. N.	Task	Activity	Responsibility
5	Food and essential supplies	• 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 god owns are able to supply required food grains as per requirement of disaster affected areas.	Lead Agencies: MoCAFPD, MoFPISupport Agencies: MoRTH, MoCA, MoR, MoSJE, MHA, FCI
		• Dept. of Food and 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 organizations, trusts, and firms for setting up community kitchens in the affected areas. • Depending upon the requirement, coordinate with the relevant Central. Ministry to make sure that the supplies reach the site on time. • Deploy a dedicated team at the local level to receive the supplies, maintain log (manual or computerized), and distribute them at required locations. • Food godowns have sufficient food materials and not situated at vulnerable location	State/UT, SDMA, Revenue Dept., CoR, SEOC, DDMA, Food and Civil. Supply Dept., all other relevant Departments, Civil Defence
		• Co-ordination with the Ministries and Railway Zones for movement of supplies.	TT Directorate - RB
		• Coordination with Zonal Railways and issue policy guidelines.	TC -RB
		• Coordinate with Divisional authorities.	Commercial department –Zone
		• Coordinate with RB and State Authorities for movement of supplies.	Operating Department – Division
		• Arrangement of food and water to the passengers.	Commercial department – Division
		Coordinate with HQs and Local Authorities for movement of supplies.	Operating Department – Division

S. N.	Task	Activity	Responsibility
6	Communication	- 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	Lead Agencies: MoCIT, DoT Support Agencies: MoR, MoCA, MoD, Telecom Providers
		- Failsafe 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 district 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 24x7 on all days through regular testing.	State/UT, SDMA, Revenue Dept., COR, SEOC, DDMA, Information Dept., all other relevant departments
		Coordination with Zonal Railways and Policy guidelines effective communication at disaster site.	Telecommunication Directorate –RB
		Coordination with division and implementation of RB policy guidelines.	Signaling & Telecom department –Zone
		Provide effective communication, provide and maintain communication equipment in ARTs/ARMVs	Signaling & Telecommunication department – Division
7	Transportation	- 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 earth moving 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	Lead Agencies: MoRTH, MoR, MoCA Support Agencies: MHA, MoD, NHAI, IWAI, NDRF, MoHFW

S. N.	Task	Activity	Responsibility
		heavy 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 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 makeshift 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. • Plan is in place for quick restoration of airport 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.	

S. N.	Task	Activity	Responsibility
		- 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. - 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.	State/UT, SDMA, Revenue Dept., CoR, SEOC, DDMA, Transport Dept., Forest/Environment Dept., PWD, Railways, Airport officer, all other relevant departments
		Co-ordination with Railway Zone for quick restoration of train services and planning for relief trains for stranded passengers.	TT Directorate - RB
		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 – Zone
		Movement of relief trains to Disaster site quickly, Coordinate with HQs for regulation/diversion and cancellation of trains.	Operating Department – Division
8	Relief Logistics and Supply Chain Management	- 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	Lead Agencies: MHA, ministries with hazard specific responsibilities, NDMA Support Agencies: MoD, MoR, MoRTH, MoCA, MoCAFPD, MoFPI, MoAFW

S. N.	Task	Activity	Responsibility
		- Establish a 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/ departments/ agencies. - Arrange alternative means of transportation to send relief supplies to the affected locations if normal transport cannot reach.	State/UT, SDMA, Revenue Dept., CoR, SEOC, DDMA, all other relevant department/ Agencies
		Co-ordination with the Ministries & Railway Zone	TT Directorate -RB
		Coordinate with RB and State Authorities	Operating Dept., - Zone
		Coordinate with HQs and Local Authorities	Operating Dept., - Division
9	Rehabilitation and Ensuring Safety of Livestock and Other Animals, Veterinary Care	- 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	Lead Agency: MoAFW, DoAHDF Support Agencies: MoRTH, MoR
		- Include provisions for evacuation, safety, and rehabilitation of animals in SDMP . - Set up 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	State/UT, SDMA, Revenue Dept., CoR, SEOC, DDMA Forest/ Environment Dept., Agriculture Dept., AHD, Animal Welfare Organizations
		Co-ordination with other Ministries and Railway Zones.	TT Directorate - RB
		Coordinate with RB and State Authorities	Operating Dept- Zone
		Coordinate with HQs and Local Authorities	Operating Dept.- Division

4.2 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. 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.

4.2.1 Resources:

Resources imply 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 Plans of Mumbai Central, Vadodara, Ahmedabad, Ratlam, Rajkot and Bhavnagar Divisions respectively. These are also being put on WR's Web Site (www.wr.railnet.gov.in) for ready access.

Resources available in case of a major accident have 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 depots and elsewhere within the division.
3. Resource Unit III - Railway resources available at ARME/ART depots and elsewhere on adjoining Zones and Divisions.
4. Resource Unit IV - Non-railway resources available within or outside the division.

4.2.2 Resource Unit – I:

4.2.2.1 On trains carrying Passengers following resources are available:

- (a) First Aid Box available with the Guard.
- (b) First Aid Box available with Train Superintendent and in the Pantry Car.
- (c) Portable Telephones.
- (d) Portable Telephones in Locomotives.
- (e) Fire Extinguishers in Brake Van, AC Coaches & Pantry cars.
- (f) Walkie-Talkie/CUG mobile phones with Guard and Loco Pilot.
- (g) Cell Phones/Mobile communications with Passengers.
- (h) Information collected by Train Superintendent/TTE about Medical Practitioners traveling on the train.
- (i) Information collected by TS/TTE about Railway Officers traveling on the train.
- (j) Railway Staff traveling on the train- either on duty or on leave as passengers.
- (k) Passengers traveling on the train who volunteer their help for rescue and relief work.

4.2.2.2 Non-railway resources available nearby:

- (a) Volunteers from nearby villages and towns.
- (b) Transport facilities available at site or passing through nearby LC Gates.
- (c) Tractors with trolleys from nearby villages both for transport purposes and for lighting up the accident site.
- (d) Station staff and local railway administration should requisition help from non-railway sources before railways own rescue team arrives.
- (e) NGOs working in that area.
- (f) Private doctors, hospitals, clinics, PMC's in the vicinity
- (g) Police and other agencies of state Governments
- (h) Army or paramilitary establishments near by
- (i) Coolies and vendors of nearby stations
- (j) Station staff and local Railway administration should requisition help from non-railway resources before railway own rescue team arrives
- (k) Such local networks are most effective in rushing assistance immediately, especially with regard to:
 - Medical succour,
 - Additional manpower,
 - Rescue equipment,
 - Lighting arrangements,
 - transport services,
 - Firefighting tools etc.

4.2.2.3 Railway resources available nearby:

- (a) Engineering gangs.
- (b) OHE staff and signal staff available.
- (c) Other resources such as medical facilities, communication facilities.

4.2.2.4 At adjoining Stations:

- (a) Staff available at adjoining or nearby stations.
(This is available in Divisional DM Plan Part - II)
- (b) Railway resources as given in respective Divisional DM Plans.
- (c) Non-railway resources as given in respective Divisional DM Plans.
- (d) Resources should be mobilized to send medical team at short notice as given in the respective Divisional DM Plans.

4.2.3 Resource Unit – II:

- (i) ARMEs, ARTs with 140T crane are stabled at nominated stations.
- (ii) Railway medical and departmental resources.

4.2.4 Resource Unit – III:

- (i) Location of ARMEs, ARTs with 140T crane based on adjoining Zones/Divisions is as per Para 4.4.2.
- (ii) Resources of men and material available on adjoining Zones/Divisions is as per Para 4.4.4 & 4.4.9)

NOTE: Copies of DM Plans of adjoining divisions shall be available with the Divisional control office.

4.2.5 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.

4.3 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.

4.3.1 Engineering Department:

- Shall identify Risk zones prone for natural disasters like floods, cyclones or earthquakes with the help of meteorological department.
- Shall identify detailed inventory of major infrastructures like tracks, bridges should be kept readily available and analysis of its strength to withstand such disasters.
- The action plan for Weather and Cyclone warnings shall be followed according to the Joint Engineering/ Operating Circular No. W.556/1/Vol. V 2007.
- Shall ensure arrangement of essential items like empty bags, sand, dust, cinders etc. ready to be moved to vulnerable location of needs. Intensified patrolling at vulnerable location.

4.3.1.1 The yardstick for engineering materials:

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

4.3.1.2 Track Material:

Track materials sufficient to lay 500 m of track should be kept loaded on the (BRNHS)/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 to the BFRs/(BRNHS), the following track material should be kept as a reserve stock. These materials should preferably be stacked close to a siding, so that they can be loaded easily for dispatch:

- (a) Track materials for laying 500m of track along with 60 kg sleepers.
- (b) 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.
- (c) One set of fan shaped turnout concrete sleepers for 1 in 12 as well as 1 in 8.5 turnouts.
- (d) One set of SEJ along with the concrete sleepers.
- (e) One set of concrete sleepers for level crossings including check rails & corresponding fittings etc.
- (f) Adequate number of bridge timbers depending upon the type, number and span of the existing bridges in the division.

4.3.1.3 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.

4.3.1.4 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 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 road map 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.

4.3.1.5 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 tent age 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's/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.

4.3.2 Mechanical Department:

- Shall ensure that ART, ARME/ SPART are equipped with sufficient tools to handle cutting of tress etc. and availability of portable generator set, gas lamps etc.
- Shall ensure immediately availability of tank wagons for carrying water at important stations.

4.3.3 Medical Department:

- Shall ensure availability of adequate medicines first 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.

4.3.4 Electrical Department:

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

4.3.5 Telecommunication Department:

- Shall ensure proper communication with adequate facilities like wireless communication, satellite phones etc.

4.3.6 Transportation Department:

- Requirement of essential staff and then deployment shall be assessed by Sr.DOM of respective division.
- SMs of the warned area station shall ensure all station equipment are in good condition in co-ordination with respective department like Generator, Emergency light VHT sets, First Aid equipment etc.
- SMs will also ensure proper securing of stabled coaches/wagons as per extant instructions. This should be informed to control.
- PCOM of the Railway will issue instructions regarding regulation, diversion or cancellation of trains in the warned section with information to CPRO.

4.3.6.1 Ensuring full complements of Brake van 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 by GR &SR and other special instructions.
- (b) The Officers and Senior Subordinates of the Traffic, Mechanical, S&T, Electrical, Civil Engineering Departments must examine these equipment's 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/Asst. Guards of the passenger carrying trains while taking over the charge of this equipment should also ensure that they are in good working condition.

4.3.7 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.

4.3.8 Security Department:

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

4.3.8.1 Disaster Management Team of RPF:

02 Teams consisting of 15 RPF persons in each, 01 team for Ahmedabad area and 01 team for Gandhidham area is available in Ahmedabad division to meet any exigency.

4.3.8.2 Equipment for RPF:

This Disaster Management team of RPF should have the following equipment available with them:

- Torches and other lighting arrangements.
- Nylon ropes and poles for segregating the affected area from unwanted visitors and spectators.
- Loud-hailer for making announcements.
- Stretchers and first aid equipment
- Wireless sets for inter-communication.
- Cameras for photographing the scenes.

4.3.9 Helicopter Requirements:

Zonal Railways have been delegated powers to requisition helicopter/ aero plane 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.

- GMs/DRMs have been delegated the powers to requisition helicopter/aero plane to reach the site of serious accident for rescue operation expeditiously. In addition, powers are also delegated to 72 requisition air support to dispatch the rescue teams to the site of the accident.

It is difficult to stipulate exactly the circumstances under which they may exercise these powers. It has been decided to leave this to the discretion of GMs/DRMs. However, broadly these may cover the following type of cases:

- Where more than 10 casualties (deaths-cum-serious injuries) are feared and it is difficult to these officers to reach the site within reasonable time;
- 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.);

- (c) Where public reaction in case of late arrival of senior officers at site is likely to be highly adverse.

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/aero plane may be requisitioned, if so needed.

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

- (ii) 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.

The above instructions on the subject supersede all the previous instructions issued vide above referred letters.

These issues with the concurrence of the Finance Directorate of the Ministry of Railways. (Railway Board's letter No. 2002/ Safety-1/1/6/6 dated 13.06.2004)(Copy of this letter is available IN this plan at the end of Annex-I)

4.3.10 Railway hospitals:

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, 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.

4.3.11 General:

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

4.4 DISASTER PREPAREDNESS – ARMEs/ARTs/(SPARME/SPART):

4.4.1 ARME Scale I- Equipment stored in Special Medical Relief Vans stabled in separate sidings:

SPARME at Vadodara, Rajkot (Hapa), SPART at Bandra, SPART at Ahmedabad & SPART at Ratlam are now a three coach SPARME cum SPART and is propelled by an in-built Diesel Engine, and is capable of movement in both directions.

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

4.4.2 Location of ARME scale- I:

Ahmedabad Division:

- (i) Ahmedabad (BG) (ii) Sabarmati (MG) [Closed due to GC] (iii) Gandhidham (BG)(iv) Palanpur (BG).

Location of ARME Scale- I	Section Jurisdiction
SPARME cum SPART Ahmedabad	ADI-GIM, ADI-PNU-SIOB
	MSH-VG, ADI-HMT
	MSH-PTN-BLDI
	KHD-GNC-KLL
	MSH-VDG
SPART Gandhidham	GIM-PNU, GIM-BHUJ, GIM-DHG
	GIM-MDPT, GIM-KDLP
ARME-I Palanpur	PNU-MSH
	PNU-SIOB

4.4.3 Locations of ARME/(SPARME) Scale –I on adjoining Zones/ Divisions:

- (a) Ajmer - Ajmer Division– North Western Railway
- (b) Rajkot - Rajkot division
- (c) Bhavnagar –Bhavanagar division
- (d) Vadodara- Vadodara division.

4.4.4 Section wise chart for requisitioning of ARMEs/(SPARMEs) from adjoining Zones/Divisions from both ends:

Ahmedabad Division	Ist	Other end
(i) ADI-BRC	ADI	BRC/UDN(BCT Div)
(ii) ADI-GIM	ADI/BRC	RJT
(iii) ADI-PNU	ADI	All(All DIV.NWR)
(iv) PNU-GIM	PNU	GIM

4.4.5 ARME Scale-II: Equipment stored in boxes in special room on platform at station:

- The medical equipment's are sealed without any lock.
- The scale-II room has duplicate keys.
- One is with Medical Officer and the other is in Station Master's Office.
- These are to be taken out and rushed to the site of an accident by any train or available road vehicle.

4.4.6 Location of ARME scale-II:

Doctors & paramedic staff to reach in 20" after receiving the information. The Scale –II ARMEs on Western Railway are located as follows:

ARME Scale-II	Jurisdiction
Viramgam (BG)	CLDY-SIOB, VG-MSH
Dhrangadhra (BG)	CLDY-SIOB, SIOB-NBVJ
Himmatnagar (BG)	ADI-KDBM [MG] [Under GC]
Vijapur (BG)	UMN-AJM
Katosan Road (BG)	VG-MSH, ADI-KADI-RUJ [MG] [Under GC]
MaliyaMiyana (BG)	CLDY-SIOB, SIOB-NBVJ
Mahesana (BG)	VG-MSH, KHD-PNU, MSH-PTN [BG], MSH-TRAH
Bhildi (BG)	KHD-PNU, PNU-SIOB
Radhanpur (BG)	PNU-SIOB
Bhuj (BG)	SIOB-NBVJ
Palanpur (BG)	PNU-SIOB,PNU-MSH

4.4.7 Accident Relief Train:

- ART Spl. Formation is to be stabled complete on separate siding having double exit for faster movement in both directions.
- Rescue/Restoration equipment's are kept as per Railway Board's instructions.
- 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.
- Crane Supervisors will ensure availability of adequate fuel and water in the crane at all times.
- On getting Emergency call, the Crane Supervisors shall check and ensure:
 - Correct marshalling of Crane according to site requirement.
 - Alert the standby Crane Operator of 140T Crane.
- In case of road approach is faster, prevailing equipment may be moved by road as required.

- (g) 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.

4.4.8 Location of ARTs:

Ahmadabad Division:

- (i) Kankaria (BG) A-class – 140T Crane (ii) Gandhidham (BG) – A-Class. 140T Crane

4.4.9 Location of ART on adjoining Zone/Division:

(i)	Abu road – Ajmer Division (NWR)	– 140T Crane.
(ii)	Ajmer – Ajmer Division (NWR)	– C Class
(iii)	Udaipur city – Ajmer Division (NWR)	– SPART- B Class
(iv)	Rajkot (BG) – A-class	– 140 T Crane.
(v)	Bhavnagar (BG)	– B-class.
(vi)	Vadodara (BG)	– B-class.

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

Ahmedabad Division	Ist	Other end
(i) ADI-BRC	KKF	UDN (BCT Div)
(ii) ADI-GIM	KKF	GIM/RJT
(iii) ADI-PNU	KKF	ABR (All DIV.NWR)
(iv) PNU-GIM(BG)	GIM	--

4.4.11 Use of Accident Alarm Signals- Sounding of Engine Whistle/ Hooter/ Station Bell:

4.4.11.1 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 take out the key and sound the siren.
- The delayed action switch (the tabular lever switch marked 'accident warning') is used to give call of $\frac{3}{4}$ 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 $\frac{3}{4}$ minute duration with half-minute interval between two successive calls for a period of approximately 20 minutes.

4.4.11.2 At stations where electric sirens are 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.

4.4.11.3 Authority to order movement of ARME & ART/ (SPART/SPARME) to site:

- (a) On receipt of information about serious accident involving casualties, ARMEs and ARTs shall be ordered immediately.
- (b) This decision for ordering would be taken by the PCR/Mech. Officer and Dy. CTNL on duty
- (c) After sounding of siren the ARME/SPARME and ART/SPART should be turned out within the stipulated target time.

4.5 DISASTER PREPAREDNESS – ON BOARD RESOURCES:

4.5.1 Portable Telephone:

4.5.1.1 Types of Portable Telephones:

- (a) Portable Telephones are available in Brake van 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) Land line 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.

4.5.1.2 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) Plug in 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).

Note: Location of emergency sockets at various KM Posts is given in Division Disaster Management Plan Part - II.

4.5.2 Walkie-Talkie Sets:

- (a) Ensure that the set is charged.
- (b) Check that the proper channel is selected for communication.
- (c) Do not intervene when the channel is engaged.

Note:

1. 30 Nos of Walkie-Talkie sets & 2 nos. 25 watt VHF sets provided in ART.
2. 06 Nos of Walkie-Talkie sets & 2 nos. 25 watt VHF sets provided in ARME.

4.5.3 Use of BSNL/Cell Phone/Mobile Phones:

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

Note: Details of BSNL/Rly Telephones/CUG of Stations (With STD code) of Ahmedabad Division are provided in Divisional Disaster Management Plan- Part II

4.5.4 Emergency Train Lighting Box:

- (a) This box is available in the Brake Van of Passenger carrying trains.
- (b) Open the box by removing the seal.
- (c) Fix the crocodile clip of hand Torch to the coach power supply terminal and use it for searching/surveying.
- (d) Fix the flood light to the Tripod Stand and connect its crocodile clip to the power supply terminal.

4.6 DISASTER RESPONSE –OVERVIEW:

4.6.1 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 recovering as many critical patients as possible and rushing them to hospital within this period.

4.6.2 Disaster Syndrome:

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

- (i) **Shock stage:** In which victims are stunned, dazed and apathetic.
- (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.

4.6.3 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).

4.6.4 First Aid in Emergency

4.6.4.1 Order of priority for dealing with and helping injured passengers:

- Unconscious.
- Bleeding excessively.
- Having breathing problems.
- Grievously injured.
- In a state of shock.
- Having fractures.
- Simple injured.

4.6.4.2 For assessing and handling injuries, acronym DR ABC 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-AIR WAY:**
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 the mouth and 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 pulse , there may be two possibilities.

- i) If patient is breathing 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. Life 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 up to 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 windpipe. 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.

4.7 DISASTER RESPONSE – INSTANT ACTION TEAM:

4.7.1 Instant Action Team comprises:

- (a) The Guard, Crew, TS, TTEs, AC coach attendant, Asst. Guard, RPF and other railway staff on duty on the accident involved train.
- (b) GRP staff travelling on the train on duty.
- (c) Railway staff travelling by the accident involved train either on duty or on leave as passengers.
- (d) Doctors travelling by the train.
- (e) Passengers travelling on the train who volunteer for rescue and relief work.
- (f) Railway staffs working at site or available near the site of the accident.
- (g) Non-Railway personnel available at or near the accident site.

4.7.2 Duties of Instant Action Team:

Detail duty list of Guard and Loco Pilot are laid down in the Accident Manual of Zonal Railways. Some of the more important ones are enumerated below:

4.7.2.1 Guard:

Guard of the Train Involved in Accident: The duties are given in the sequence in which they have to be performed. On occurrence of an accident to his train, the Guard of the train shall immediately:

- (a) Note the time of accident.
- (b) Make a quick survey of the accident site for casualties, injuries, if any, and for deciding the assistance required.
- (c) Send the first information of accident to the control office and then to the nearest Station Master furnishing the following information, through mobile phone or portable telephone, or walkie-talkie or gate phone, etc.,
- (d) Kilometer etc.
- (e) On the double line section, a train passing on the other line should be stopped and the Loco Pilot and Guard given intimation about the accident.
- (f) Switch on the Flashing Tail Lamp if provided, in, in the rear of brake van.
- (g) Secure the train and prevent escaping of vehicles.
- (h) Protect line of accident and adjacent line/lines if required as per GR 6.03
- (i) Note the time of the accident and the location. Inform Loco pilot/ Station Master on Walkie-talkie set if possible.
- (j) Make a quick survey of accident magnitude and roughly assess casualty, damage and assistance required.
- (k) 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.
- (l) Utilize Emergency Train Lighting box to facilitate medical aid.
- (m) Render First Aid and save lives.
- (n) Call for Doctors and seek their assistance.

- (o) Seek assistance of railway staff and other volunteers from train to rescue injured or entrapped passengers.
- (p) Direct railway staff and other volunteers from train for attending to injured.
- (q) Ensure that railway staff constantly man field telephone.
- (r) Arrange protection of passengers' belongings and railway property with the help of railway staff, volunteers on train, RPF and GRP.
- (s) Stop running trains on adjacent line and utilize resources on that train.
- (t) In electrified section if OHE is affected, take steps to switch off OHE supply.
- (u) Arrange for transportation of injured to hospital.
- (v) Record evidence or statements, if any, given by passengers.
- (w) Preserve all clues and evidences regarding probable cause of the accident and ensure that these do not get disturbed.
- (x) Log your activities. Do not leave the spot unless a competent authority relieves you.

4.7.2.2 Loco Pilot:

Engine Crew of the Train Involved in Accident: On occurrence of an accident to a train, its crew shall:

- (a) Immediately switch on the Flasher Light. If the flasher light is not working, exhibit hand danger signal so as to stop any train coming in the opposite direction on a double line section.
- (b) Give information to Guards about the locomotive (derailed or not), condition of coaches/wagons immediately in rear of the loco and any other information relevant to the accident.
- (c) Note the time of the accident and location.
- (d) Switch ON the 'Flasher Light' and give 4 short whistles.
- (e) Inform Guard on walkie-talkie set.
- (f) Inform Station Master on CUG mobile phone / walkie-talkie set, if possible.
- (g) Protect the obstructed/adjacent line as per GR 6.03.
- (h) Take necessary action to prevent Loco/Vehicles/Wagons from rolling down.
- (i) Make a quick survey of accident magnitude and roughly assess casualty, damage and assistance required.
- (j) 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.
- (k) Render all possible assistance to the guard.
- (l) Preserve all clues and evidence regarding probable cause of the accident.
- (m) Log your activities. Do not leave the spot unless you are relieved by a competent authority.
- (n) If necessary, detach Loco and take it to inform SM.

4.7.2.3 Assistant Loco Pilot:

- (a) 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.
- (b) To provide First Aid to injured. First Aid box is available with Guard.
- (c) If necessary use fire extinguishers of AC coaches/brake van/loco.
- (d) In case if the Loco Pilot is dead or injured, Asst. Loco Pilot will perform all the duties of Loco Pilot.

4.7.2.4 Train Superintendent / Travelling Ticket Examiners/Train Captain:

- (a) Preserve reservation charts of each coach containing names of passengers who actually travelled and in which berth no.
- (b) Avail services of Doctors travelling by the train and render Medical Aid.
- (c) Render First Aid to injure.
- (d) 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/(SPARME) arrives.
- (e) Prepare a separate list of dead passengers with address and ticket particulars, if available.
- (f) Take assistance of local people and other volunteers at site.
- (g) Transport injured passengers by road vehicles, if available, to the nearest hospital.
- (h) Inform stranded passengers about alternative transport arrangement.
- (i) Record Evidences or statement given by passengers / other at site.

4.7.2.5 AC Mechanic / Attendant:

- (a) Switch off the power supply to avoid short-circuiting.
- (b) Assist the TS/TTEs in their duties at the accident site.
- (c) Report to the guard of the train for assistance.
- (d) In case of fire assist the operations by using fire extinguishers provided in the AC coaches.
- (e) Assist in providing lighting in affected coaches.
- (f) 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.

4.7.2.6 RPF/GRP Staff:

- (a) Try and rescue as many passengers as possible from the accident involved coaches.
- (b) Render First Aid to injure.
- (c) Arrange to shift injured persons to the nearest hospital.
- (d) Protect passenger's luggage and railway property.
- (e) Preserve all clues and evidences regarding probable cause of the accident and ensure that these do not get disturbed.

4.7.2.7 Railway staff travelling on the accident affected train:

- (a) 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.
- (b) 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.
- (c) Railway staff on train/at site shall volunteer themselves to render assistance and report to TS/TTE/Guard of the Train.
- (d) The senior most officers travelling on the train will assume charge as Officer-in-Charge Site (OC Site).
- (e) 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 (berth nos. 19-22). In any case the TS/TTE would know whom are the railway officers travelling in 1AC or 2AC.
- (f) 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).
- (g) Similarly, some Group 'D' railway staff may be 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).
- (h) In the absence of any officer, the TS or senior most TTE/Guard will discharge duties listed out for OC site.

4.7.3 Duties of OC Site – Immediately after the accident:

- (a) Note down the time of accident.
- (b) Ensure protection of traffic by Guard and Driver.
- (c) Ensure reporting of accident to nearest Station/Control.
- (d) Roughly assess the extent of damage and likely number of casualties.
- (e) Collect railway staff and volunteers from amongst the passengers and form different groups. Each of these groups should be assigned work.
- (f) Maintain a log of events.
- (g) Till Divisional Officers arrive and take over charge of the situation, continue to discharge duties of OC site.
- (h) After Divisional Officers arrive, fully brief the DRM and hand over charge to him.
- (i) The on-board OC site should ensure issue of a detailed message with following information before leaving the site of the accident.
 - Time/Date of accident.
 - Location Km./between stations.
 - Train number and description.
 - Nature of accident.
 - Approximate number of killed/injured.
 - Extent of damage.
 - Assistance required.

- Condition of the adjacent line, if any.
- Whether OHE is involved.
- From here onwards, the DRM of the accident involved division takes over Charge as OC site.

4.7.4 Formation of Groups comprising members of Instant Action Team:

- (a) OC Site shall immediately collect all Railway staff on train/at site and form separate groups.
- (b) Passengers travelling by the same train that volunteer for rescue and relief work should also be drafted into these groups.
- (c) Passengers from accident-involved coaches should be directed toward their own coach.
- (d) Passengers from coaches, which are not affected, can be distributed amongst other accident-involved coaches.
- (e) In the absence of OC site, TS/TTE shall take steps to form such groups.
- (f) In the absence of TS/TTE the Guard/Assistant Guard shall take steps to form such groups.
- (g) 5 or 6 groups should be formed depending on number of coaches involved.
- (h) Ideally, one group should be formed for handling each coach.
- (i) In case sufficient numbers of officers are present, then one officer should be made in charge of each group.
- (j) Otherwise, Sr. Supervisors travelling by the accident-involved train should be nominated as in-charge of each group to co-ordinate it's working.
- (k) 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.
- (l) Each group should rescue injured, entrapped passengers.

4.7.5 Duties of on board railway staff:

- (a) Don't panic.
- (b) Inform the divisional control office immediately about the accident.
- (c) Observe the position of coach standing upright/ turned upside down/ lying on its side/stopped on bridge/on level ground.
- (d) In case the coach is on a bridge or very high embankment or in case it is raining heavily, then wait for some time.
- (e) Search your coach with your torch and try to determine the general position.
- (f) See that passengers don't panic either. Try to calm them and build up their confidence.
- (g) Ascertain whether passengers are injured/ trapped/ pinned down inside the debris.
- (h) Call out aloud to find out for any doctors present & any railway staff present
- (i) Ask Doctors if available to attend and help injured passengers.
- (j) Ask the Railway staff if available to attend and help other passengers.
- (k) Form a core team comprising of railway staff available, doctors and 3 or 4 uninjured passengers and take the lead in helping remaining passengers.

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

- (a) If a person is bleeding and loosing blood, or if he is unconscious, then in that case you have to act quickly send him to nearest hospital with in golden hour.
- (b) If not possible to send hospital when in golden hour immediately administer First Aid to the injured passenger and try and stop further loss of blood and then as early as possible to nearest hospital.
- (c) Persons trained in first aid may do 'Cardio Pulmonary Resuscitation.'
- (d) If the door is open and is accessible, then uninjured passengers should be helped to come out from the door.
- (e) In AC coaches the windows panes should be broken in order to let in fresh air for the occupants, and thereafter to evacuate them.
- (f) Non-AC coaches have one emergency exit window on each side. The position of this emergency window is 5th 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.
- (g) Special care should be taken while evacuating the old, infant and children in order to ensure that they are not separated from their family.
- (h) Extrication of critically injured should be done under medical supervision as far as possible.
- (i) In case medical supervision is not available, then critically injured passengers should be made to lie down on a bed sheet and thereafter taken out by 4 persons holding the four corners. This will ensure that no further damage takes place (Bed sheets will be available in AC coaches).
- (j) 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.
- (k) Firstly, passengers both injured and uninjured should get preference in this evacuation process.
- (l) After passengers have been evacuated from coach, cross check with the reservation chart and note down injury list.
- (m) After all passengers have been evacuated; water and eatables can be taken out gradually.
- (n) Building up confidence of injured passengers by suitable advice is of great importance.
- (o) After helping evacuate all passengers from one coach go over to the other/unreserved coaches and provide similar help to passengers.
- (p) Railway officials from divisional Headquarters generally arrive at the site of the accident within 2 to 3 hours, depending on the distance of the accident site from the divisional Headquarters. Wait for them to come and make further arrangements.
- (q) Grievously injured passengers who are bleeding or those who are unconscious require immediate hospitalization. In case some local people have arrived by that time, their help should be taken in shifting the grievously injured to the nearest hospital.

- (r) 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.

4.7.7 Duties of the Instant Action Team – In case of a fire:

- (a) In case of fire pull the Alarm Chain and stop the train immediately.
- (b) Try and put out the fire before it becomes a big blaze by using either water or blankets etc.
- (c) More people expire due to suffocation from smoke rather than due to actual burning.
- (d) Advise passengers to take a cloth, wet it in their drinking water and cover their nostrils.
- (e) 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.
- (f) Insist that passengers should save themselves first and not to bother about their luggage which can be retrieved later on.
- (g) Make sure that no passenger lies down on the floor.
- (h) After train has stopped, passengers should come down from the coach immediately.
- (i) Building up confidence of injured passengers by suitable advice is of great importance.

4.7.8 Duties of OC 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.

4.8 DISASTER RESPONSE – FIRST RESPONDERS:

4.8.1 Role of First Responders – Local people:

4.8.1.1 At accident site:

- (a) Tractors, which arrive, should be lined up in a row facing the track with their headlights switched ON for illuminating the accident site.
- (b) 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.
- (c) Rescue and relief work should now be mounted under the available light.
- (d) Villagers arriving for rescue and relief work should be formed into separate groups for handling individual coaches.
- (e) Group leaders of IAT who were earlier conducting rescue and relief work should co-ordinate with the local people and guide them.
- (f) Grievously injured passengers extricated from coaches should be sent to the nearest hospitals in tractor trolleys.
- (g) 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.
- (h) As a thumb rule, any injury requiring hospitalisation of more than 48 hrs. is grievous, hospitalisation of less than 48 hrs. is simple, and any injury not requiring hospitalisation at all is trivial.
- (i) 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,
- (j) Dead bodies, if extricated should be kept alongside the coach but away from the track for proper tagging etc. before being dispatched for preservation.
 - (k) Bodies should be kept in separate lots, coach wise, so that they do not get mixed up.
 - (l) 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).

4.8.1.2 In villages/towns:

- (a) A big building, preferably a school building should be got vacated and made ready for keeping of dead bodies and unclaimed luggage of passengers.
- (b) They should be asked to bring the following to the accident site for train passengers:
 - Tea and refreshments,
 - Warm clothing, if required.
- (c) Look after injured passengers who have been taken to the village.
- (d) 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.

4.8.2 Duties of First Responders – Railway Staff:

4.8.2.1 Gang Staff:

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

4.8.2.2 Gate man:

- (a) Keep gate closed if the train has not cleared the gate.
- (b) He shall arrange to inform SM immediately under exchange of private number regarding the nature of the accident.
- (c) Collect men and material available nearby and direct them to site.
- (d) 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.
- (e) 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.
- (f) He shall immediately fix Red Banner Flag in Daytime and Red Lamp in Night time on wooden stall at both ends of the gate 5 meters away from the obstruction on either side.

- (g) On Double / Multiple line section he shall stop any train approaching the accident area by showing Danger Hand Signals.
- (h) He shall rush with Detonators, Fuses 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.
- (i) On returning to the gate he shall not meddle with the clues and evidences of accident & also not tamper with the interlock system.
- (j) Avail services of road vehicles waiting or passing through LC Gate.
- (k) Send message to nearby village, informing them regarding the accident.
- (l) On double/multiple line section stop any other train approaching the accident area by showing hand danger signal.
- (m) 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 endeavour 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.
- (n) 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.

4.8.2.3 Cabin man/Panel Station Master:

- (a) 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.
- (b) Reverse the points against the train involved in the accident.
- (c) Not tamper with the interlocking system.
- (d) Preserve clues and evidences.
- (e) Keep readily available all the cabin records and do not tamper the entries made in Train passing records.
- (f) Be in close contact with SM/ ASM on duty and strictly obey the orders / instructions.
- (g) Not leave the cabin without reliever and without the permission of the competent authority.
- (h) A JPO No. 01/218 is issued for procedure for use of spare S&T key of relay rooms & other S&T rooms by road side station master to extinguish fire in relay room. (No. SG216/0 Vol. V dated 12.01.2018)

4.8.2.4 Points man:

- (a) In case of an accident he shall be in close contact to follow the instructions of In charge SS or On duty SMs / ASMs.
- (b) He shall help / assist the passengers in every rescue & relief operation.
- (c) He shall report promptly / quickly if any defects is noticed in points, track, S&T gear, rolling stocks involved in the accident which may endanger safety.

- (d) He shall pilot the first train while dispatching on accident as per the instructions given by on duty SS / SM / ASM.
- (e) He shall report the position of the adjacent line whether it is fouled or not and also ensure clearance of fouling mark or not.
- (f) 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.

4.8.2.5 Station Superintendent In charge:

A) Station Master / Station Manager: (The Station Masters on either side of the block section if the accident occurred in the mid-section or the station master of the station where the accident has occurred.)

1. On a double line, immediately stop the trains proceeding into the affected block section in the opposite direction. If any train has already entered such block section, inform the crew and guard to immediately stop their train and tell them to proceed cautiously so as to stop short of any obstruction.
 2. Report the accident to the Section Controller and to the Station Master at the other end of the block section.
 3. Control to be advised regarding—
 - a. Time and nature of accident.
 - b. Brief description of accident.
 - c. Medical Relief van required or not
 - d. The need for ART with or without crane
 - e. Adjacent lines clear or not.
 - f. Number of coaches/wagons derailed, canted, capsized, etc.,
 - g. Availability of road approach to the accident site,
 4. Station Masters of Stations where sirens are provided shall sound the sirens and arrange to move the Medical Relief Van / ART special trains as per the control orders.
 5. Advise the section Traffic Inspector and the officials of other departments by quickest possible means.
 6. Call for off-duty Station Masters and Pointsmen for assistance in operations.
- (a) Quickly & promptly convey all type of information to adjoining stations and section control.
 - (b) Arrange protection of traffic by keeping relative signals at 'ON' position and also arrange to preserve the clues/evidences of accident.
 - (c) Call for the 'On' duty & 'OFF' duty staff at the site of all departments including RPF & GRP staff.
 - (d) Communication with civil authorities, Village, Town, Cities, NGO Representatives/Volunteers for possible relief assistance.

- (e) 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's.
- (f) 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.
- (g) Transport assistance: Arrange transporting injured passengers to nearest hospitals apart from tractors, trolleys, Trucks, Buses passing on the Highways/nearby can be utilised or by hiring road vehicles.
- (h) 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.
- (i) Communication Assistance: Direct passengers to PCO booths available nearby and issue free telegram and make available STD phone to relatives of dead/injured.
- (j) Sending manpower: Proceed to site of the accident by quickest means with trolleys, coolies, lamps, vendors and any other equipment that is considered necessary.
- (k) 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.
- (l) 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.
- (m) Not leave the site of accident till the Traffic Inspector or Divisional Officers relieves.

4.8.2.6 District wise jurisdiction of AHMEDABAD Division:

No.	Name of District	Stations covered
1	Ahmedabad	GER to JN, VG to KTRD, Bhoyani & ASV
2	Surendranagar	SADL to DVY, PTR & KOD
3	Gandhinagar	KHD-KLL, NRD to RKH, GNC, KLL-VJF (Excluding)
4	Sabarkantha	TOD to KDBM
5	Mahesana	JUL to KMLI, MSH to TRAH, VJF to UMN, KLL-Kadi, Jotana, Linch, Bechraji, Khambel, Panchot.
6	Patan	Dhinoj to PTN, PTN to Khambel (Excl), RDHP to PFL, SID, Mitha to RDHP.
7	Banaskantha	Chhapi to PNU, PNU to DEOR
8	Kutch	AAR to GIM, SRBR to Bhuj, Naliya, GIM-KDLP, GIM to MDPT.
9	Rajkot	KHXB to INDR.

4.8.2.7 Concept of Controlling Stations:

A. Section Controller- Immediately when the Section Controller is informed of a serious accident on his section, he shall;

- i) apprise the Deputy Chief Controller of the available particulars of the accident and the nature of assistance required.

- ii) advise the Transportation Inspector, Signal Inspector, Loco Inspector, PWI, etc. through respective controls to proceed to the site of accident by first available means;
- iii) advise the Section Controllers of adjacent sections of the accident and to regulate the train services in suitable places if required ;

B. Deputy Chief Controller

Deputy Chief Controller- Immediately after the Deputy Chief Controller is informed of a serious accident, he shall –

- i) issue order to the concerned SSE/Loco through respective control and Station Master for immediately working out of Accident Relief Medical Equipment and Accident Relief Train as required;
- ii) place demand of ARME immediately without delay, on the division closest/most accessible to the accident site.
NB – The Division on whom the demand of ARME is placed should respond in the quickest possible manner and dispatch the ARME with least possible delay.
- iii) Ensure that the Accident Alarm siren is sounded in time;
- iv) Inform with available details –
 - (a) CHC, Sr.DSO/DSO, DRM, ADRM, Sr. DOM, DOM, AOM, CMS/Sr. DMO;
 - (b) Sr. DEN/DEN, Sr. DCM/DCM, Sr. DEE/DEE, Sr. DME/DME, Sr. DSTE/DSTE;
 - (c) The concerned OC/GRP, OC/RPF, DM, SDO, DC, IRP, DSP, SRP, OC-Local Police, NDRF and nearest Forensic Science Laboratory;
 - (d) Emergency/Central Control at Zonal Headquarters;
 - (e) Civil, Military, public hospitals and available Doctors at the nearest places, in case of casualty/injury;
- v) Advise RMS authorities if a Mail carrying train is involved in the accident;

The station Manager of nominated “controlling stations” should immediately on receiving information of an accident, reach the site with sufficient staff drawn from all departments at his stations and take all the necessary steps for rescue and relief. It should be made clear to everybody that staff of all departments must follow the directions of the controlling station Manager and render all help and assistance necessary for the disaster. Nomination and jurisdictions of controlling Station Manager on ADI Division is as under:

BROAD GAUGE

Sr. No	Section	Nominated Station Manager.
1	GER-KKF	SM-VTAY
2	ADI-SBT	SM-ADI
3	SBT-SAU	SM-SBT

4	SAU-VG	SM-SAU
5	VG-DHG	SM-VG
6	DHG-MALB	SM-DHG
7	MALB-SIOB	SM-MALB
8	SIOB-GIM	SM-SIOB
9	GIM-KDLP-MDPT	SM-GIM
10	GIM-NBVJ	SM-NBVJ
11	CLDY-GNC	SM-KHDB
12	KLL-MSH	SM-KLL
13	MSH-SID	SM-MSH
14	SID-PNU	SM-PNU
15	JN-KOD	SM-JN
16	VG-KTRD	SM-VG
17	KTRD-MSH	SM-MSH
18	PNU-BLDI	SM-PNU
19	BLDI-RDHP	SM-BLDI
20	RDHP-SIOB	SM-RDHP
21	SBI-KLL	SM-SBI
22	MSH-PTN	SM-MSH
23	PTN-BLDI	SM-PTN

METRE GAUGE to BG Gauge Conversion completed

Sr.No	Section	Nominated Station Manager
1	PTN-CSMA	SM-PTN
2	KTRD-CSMA	SM-CSMA
3	KLL-KTRD	SM-KTRD
4	MSH-TRAH	SM-TRAH
5	UMN-VJF-AJM	SM-VJF (Now working-Planned for GC)
6	ASV=HMT	SM-HMT

4.8.2.8 Station Master / Assistant Station Master:

- 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.
- Prepare the relevant Authority to send the first train on occupied section and nominate one Points man to pilot the train / vehicle.
- Call for the 'ON' duty & 'OFF' duty staff at the site of all departments including RPF & GRP.
- Communicate with civil authorities, Village, Town, Cities, NGO Representatives / Volunteers for possible relief assistance.
- 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's.
- 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.

- (h) Transport assistance: Arrange transport to injured passengers to nearest hospitals by available means, passing on the Highways/nearby or by hiring road vehicles.
- (i) 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.
- (j) Communication Assistance: Direct passengers to PCO booths available nearby and issue free telegram and make available STD phone to relatives of dead/injured.
- (k) Sending manpower: Proceed to site of the accident by quickest means with trolleys, coolies, lamps, vendors and any other equipment that is considered necessary.
- (l) 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.
- (m) 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.
- (n) Not leave the site of accident till the Traffic Inspector or Divisional Officers relieves.
- (o) Obey the orders of higher authorities from time to time.
- (p) Work as per the instructions laid down in G&SR, Accident Manual and SWR during accident.

4.8.2.9 Safaiwalla:

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

4.8.2.10 Station Master at adjoining station:

4.8.2.10.1 Conveying of information:

- (a) Arrange protection of traffic by keeping all signals at ON position.
- (b) 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.
- (c) Report the accident to Section Controller.
- (d) 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.
- (e) 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/JE etc.

- TRD Supervisors – SSE/JE etc.
 - C&W Supervisors – SSE/JE etc.
 - S&T Supervisors – SSE/JE etc.
 - SI/RPF, SHO/GRP.
- (f) Nearest Fire Station. Inform civil authorities, village/town/city representatives and volunteers for possible relief assistance.
- (g) Supervisory Station Manager of the nearest Jn. station shall proceed to accident site.

4.8.2.10.2 Medical assistance:

- (a) Call for assistance from local Doctors, St.John's Ambulance, Civil and Army Hospitals, Civil defence, Scouts and guides or any such organization.
- (b) Arrange adequate number of First Aid boxes and stretchers.
- (c) Mobilize local medical team and send it to site to render First Aid to the injured.
- (d) Quickly transport ARME Scale – II equipment to the site of the accident.

4.8.2.10.3 Passenger assistance:

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

4.8.2.10.4 Transport assistance:

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

4.8.2.10.5 Security assistance:

- (a) Advise RPF/GRP/State Police to provide security to passengers, their belongings and railway property.
- (b) They should also be asked to assist in rescue and relief work.

4.8.2.10.6 Communication Assistance:

- (a) Direct passengers to PCO booths available nearby.
- (b) Issue free telegrams and make available STD phone to relatives of dead/injured.

4.8.2.10.7 Sending manpower for site:

- (a) Proceed to the accident site by quickest means with trolleys, coolies, lamps, vendors and any other equipment that is considered necessary.

- (b) Till relieved by a Traffic Inspector or Divisional Officers be in charge of site and carryout rescue/relief operations.

4.8.2.10.8 Preservation of clues and evidences:

- (a) Preserve clues and evidences.
- (b) Secure records related to accident in the Station/Cabin.
- (c) Seal slides, levers, knobs and Relay room, if accident takes place within the Station limit.

4.8.3 Duties of TI/SSE (P.Way)/SSE (Signal)/SSE(C&W)/LI:

4.8.3.9 Rescue and relief:

- (a) Organize maximum number of men to go to the accident site along with their equipment & proceed by quickest available means to the accident site.
- (b) Ensure that the obstructed line is protected.
- (c) Direct all staff to assist in rescue and relief work.
- (d) Work as per directions of OC Site.
- (e) Assess casualties and arrange to render First Aid.
- (f) Shift injured to nearest hospital.

4.8.3.10 Joint measurements and preservation of clues/evidences:

- (a) Collect and record all evidences relating to the accident such as:
 - Condition of track, with special reference to alignment, gauge, cross levels, super elevation, 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.
- (b) Seize and seal the Train Signal Register, Log book, Private Number Book, Line Admission Book, Speed Recorder Chart and other relevant records.
- (c) Note down the position of panel switches, indication, block instrument, condition of relay room, status of data logger, etc.
- (d) Condition of switches, ground connections, point locking, occupancy of track circuit, details of damage to outdoor signal/point gears should be noted down.
- (e) Seize and seal the Speed Recording Graph and all other registers and repair logbook of the locomotive.
- (f) Record details of Brake Power and other aspects of Rolling stock as per Performa.
- (g) 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.
- (h) These can also be recorded on a video or digital camera subject to the availability.
- (i) Details of all readings taken and position of all equipment noted should be jointly signed by supervisors of all 5 departments at accident site.
- (j) Obtain statement of staff involved in the accident.
- (k) CWS/DCWI shall prepare a sketch showing position of Rolling stock.

- (l) JE/SE/SSE (P.Way) 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.
- (m) Survey the situation, assess assistance required and issue message to Divisional Control Office.
- (n) Take charge of the situation pertaining to your own department and remain till Divisional officers arrive at the site.

4.9 DISASTER RESPONSE – OFFICERS AT DIVISION:

4.9.1 General:

4.9.1.1 Intimation of Accident – Divisional Control Office:

- (a) In the Divisional Control Office, information regarding an accident is generally received either by the Section Controller or the TPC.
- (b) 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').
- (c) Accidents involving a passenger carrying train where the first information says that heavy casualties are expected, should prima-facie be treated as a Disaster.
- (d) 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.
- (e) After all on-duty functionaries gather around the section control board, they will be briefly informed about the accident.
- (f) Each functionary will thereafter resume his position and take steps to set in motion activities required of him.
- (g) 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.
- (h) PCR will undertake the following action in the given order of priority:
 - i) Give orders to Loco Foreman for sounding the siren for ARMEs and ARTs / (SPART /SPARME).
 - ii) Order movement of ARME and ART / (SPART /SPARME) (with 140T crane) from adjoining divisions for approaching the accident site from the other end
 - iii) Thereafter he will inform his departmental officers and supervisors.
- (i) Dy. CTNL (Punctuality) will first inform Hospital Casualty. Thereafter he will inform respective controls, officers and supervisors as given below:
- (j) Each departmental functionary will inform divisional officers and supervisors of his department about the accident as detailed below:

Functionary	Officers and Supervisors
Dy. CTNL (Op.)	Operating, Safety, Stores, Personal & Accounts, Civil Defence, Scouts and Guides
Dy. CTNL (Punctuality)	Hospitals casualty, DRM, ADRM, Medical
TPC	Electrical

S&T Control	S&T
Engineering Control	Engineering
PCR	Mechanical
Commercial Control	Commercial , Public Relations
Security Control	RPF

- (k) 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.
- (l) 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.
- (m) Branch Officers will inform their respective PHODs.
- (n) Dy.TNL (Punctuality) will thereafter inform Divisional Emergency Control office regarding running out of 1st special train carrying DRM and other Branch Officers.
- (o) Functionaries of different departments will also inform their respective departmental officers regarding timing of 1st special train carrying DRM and other Branch Officers to the accident site.
- (p) In HQ, after Dy. TNL (Punctuality) has informed GM and Medical Doctors, he will inform Safety Directorate's Emergency Cell in Railway Board.
- (q) GM will inform CRB regarding above accident.
- (r) PHODs will inform their respective Board Members. In case, PHOD is not available in HQ, then the next senior most officer of that department will inform his Board member.
- (s) CSO/Dy. CSO (T) will inform CRS.

4.9.1.2 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 undertake the following:

- (a) Note down time of receiving message.
- (b) Inform CMS, MS, and other Doctors & Para medical staff and instruct them to reach the ARME / (SPARME) immediately.
- (c) Collect necessary Medical team in the hospital.
- (d) Inform CMD about movement of ARME/ (SPARME).
- (e) Alert blood donors, St.JAB, Civil defence, Scouts and guides or any other such organization.
- (f) Bare minimum medical team should remain in the hospital; rest of the doctors should be rushed to the accident site.
- (g) Arrange to move Emergency box from ARME Scale-II locations to the accident site.

4.9.1.3 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 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 PART-II.

4.9.1.4 Divisional Officers required to go to site:

- (a) All concerned divisional officers should proceed to the accident site by the ARME.
- (b) Road vehicles should also be sent to accident site from Divisional Head Quarters.
- (c) Target time for turning out Medical Relief Van from the siding and their dispatch from the stations.

a) In case of double exit siding-

- Time for turning out - 15"
- Time for dispatch - 05"
- Time from ordering to dispatch - 20"

b) In case of Single exit siding-

- Time for turning out - 25"
- Time for dispatch - 05"
- Time from ordering to dispatch - 30"

- (d) Target time for turning out of SPARME CUM SPART- from the siding and their dispatch from the stations.

a) In case of double exit siding-

- Time for turning out - 10"
- Time for dispatch - 10"
- Time from ordering to dispatch - 20"

b) In case of Single exit siding-

- Time for turning out - 20"
- Time for dispatch - 10"
- Time from ordering to dispatch - 30"

- (e) DRM will proceed to the accident site; ADRM shall stay back at divisional Head Quarters for co-ordination work.
- (f) All Branch Officers should proceed to the accident site. Officers heading different branches within the same department are referred as Branch Officers.
- (g) The second senior most officer of each branch should stay back at divisional Head Quarters.

- (h) Of the remaining officers from each branch, a majority of both Senior and Junior scale officers should also proceed to the accident site.
- (i) 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.
- (j) Deployment of Officers and Supervisors of Ahmedabad Division is as under.

Department	Control office	Accompanying ART/ARME & reaching site	
Optg	Sr.DOM(G), DOM, AOM (M)	AOM (M)	AOM(G)/Sectional TI
Safety	---	Sr.DSO/ ADSO	All SCs
Commercial	DCM, DCMI CMI Control	Sr.DCM ACM(PM)	Sectional CMI, TCs, Licensed porters
Mechanical	ADME	Sr.DME, ADME	CWS, DCWI, CWS(Break down)
S&T	DSTE	Sr. DSTE, ADSTE	Sectional SSE (T), SE/JE, TCM (Test room)
Engineering	Sr.DEN (Co) ADEN (W)	Sectional Sr.DEN/DEN, ADEN	CPWI, PWI, Nominated P.Way staff of ART.
Personnel	DPO	Sr.DPO	Sr. WLI/CWLI
Security	RPF control ASC, DSCR	Sr. DSC	IPF, IPF/HQRes.Coy.
Electrical	DEE (Coaching)	Sr.DEE, Sr.DEE(TR) ADEE/TRD ADEE/(P)	CLI/LI, SSE (P), JEE, Nominated SSE, Technician, Khalasi
Medical	DMO	CMS/DMO	DMO of section, Sr. PHR Staff nurse, HI, Peon, Dresser
Public Relations	--	Sr. PRO/PRO	-

- (k) Arrangements of Road Vehicles to proceed to accident site, indicating alternative vehicles as well are indicated at Divisional DM Plan Part-II.

4.9.1.5 Supervisors required going to Accident Site:

- (a) At the divisional level 80% of all supervisors available in divisional Head Quarters should proceed to the accident site.
- (b) All other supervisors available in the field at other stations should also proceed to the accident site.
- (c) 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.

4.9.1.6 Disaster Management Team:

Nominated officials from various departments arriving at site by ARMEs and ARTs / (SPART / SPARME) 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.

4.9.1.6.1 Members of the Disaster Management Team:

Disaster Management Team normally comprises members of following departments:

- (a) Trained railway men from Medical, Commercial, Safety, Electrical, S&T, and Mechanical, Engineering, Security, Personnel and other departments.
- (b) In case of fire accidents, trained fire service personnel shall form part of this unit.
- (c) In case of an accident on water body, divers and naval cadets will also be part of the team.
- (d) In case of sabotage or bomb explosion, bomb disposal squads and GRP/Local Police will also be involved.
- (e) Various rescue units shall accompany ARMEs, ARTs / (SPART / SPARME) or move by road as quickly as possible.
- (f) Identifying railway personnel and they should be supplied with orange coloured armbands to be kept in ARMEs/ARTs/ (SPART / SPARME). Adequate number of armbands, gloves and facemasks should also be provided in the ARMEs/ARTs/ (SPART / SPARME).
- (g) Communicating with railway personnel in the crowd through Microphones/loud speakers provided in ARMEs/ARTs/ (SPART / SPARME). These should be used both for crowd control as also for giving instructions to railway personnel working at accident site.
- (h) 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.
- (i) Spare coaches should be stabled at nearby stations where watering and charging facilities are available for stay of staff.

4.9.1.6.2 Rescue, Relief and Restoration Operation:

DM Team on arrival by ARMEs/ (SPARME) and ARTs / (SPART) shall undertake following actions:

- (a) Crowd Control and Law and Order.
- (b) Rescue operation.
- (c) Relief operation.
- (d) Video coverage of accident site.
- (e) Installation of communication Network.
- (f) Clearance from State Police for restoration.
- (g) Preservation of clues and Evidence.
- (h) Media Management at site.
- (i) Salvage Operation.
- (j) Restoration operation.

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

- (a) 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 8 hrs. to 20 hrs. and from 20 hrs. to 8 hrs.
- (b) PHODs shall be available on duty during the daytime.

- (c) 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 3-4 day stay at the accident site.
- (d) Branch Officers shall be available on duty during the daytime.
- (e) 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 3-4 day stay at the accident site.
- (f) Similarly, the supervisors available from both Head Quarters and divisions shall also be put in two teams.

4.9.1.6.4 Officer-in-charge of Site (OC Site):

On arrival of ARME/ (SPARME) 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 headquarter 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.

4.9.1.6.5 Photography:

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.

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

4.9.1.6.6 OC Site:

- (a) Ensure setting up of UCC, CAC and LCCs at the earliest.
- (b) Collect information from OC site of IAT.
- (c) Take stock of the situation and plan for efficient rescue operation.
- (d) Estimate quantum of assistance required for each department from:
 - Within the division,
 - Adjoining divisions of WR,
 - Adjoining zones,
 - Non-railway agencies,
- (e) Channelize local resources to supplement available railway resources.
- (f) Ensure that duties of various functionaries of different departments as laid down in WR's Zonal DM plan are carried out.
- (g) Ensure co-ordination among all departments for efficient rescue, relief and restoration operation.
- (h) Ensure information to SP Police and District Magistrate.

- (i) In case of sabotage, direct RPF to obtain quick clearance from State Police.
- (j) In case of serious explosions or fire, clearance from Controller of Explosives is to be obtained.
- (k) Give prima facie cause of the accident along with forecast of expected date and time of restoration.
- (l) Ensure timely information on the progress of rescue, relief and restoration work every 3 hrs. 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.
- (m) 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-raiment.
 - Track fitness.
 - OHE fitness.
 - Points and inter-locking.
 - Clearance of section.
 - Movement of first train.

4.9.1.6.7 Duties of Divisional Railway Manager:

- (a) Ensure that functionaries of different branches at the accident site carry out duties assigned to them as per Zonal and Divisional DM Plan.
- (b) Co-ordinate with Divisional Emergency Cell regarding assistance required.
- (c) 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.
- (d) Ensure that proper assistance is rendered by each department.
- (e) 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.
- (f) Immediately decide which officer should go by road/ART/ARME / (SPART/SPARME).
- (g) Nominate the officer to man Control Office.
- (h) Depute ADRM as in charge in Control Office if proceeding to the site.
- (i) 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.
- (j) Function as the senior most officer and as "Accident Manager".
- (k) 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.

- (l) Appoint two officers as reporters of serious accidents.
- (m) Arrange for taking joint observation/ reading by supervisors.

4.9.1.6.8 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:

4.9.2 OPERATING DEPARTMENT:

4.9.2.1 General (on Receipt of Information):

Immediately after getting the information:

- (a) All sectional TIs and Supervisory SSs should be directed to reach the accident site by first available means.
- (b) 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.
- (c) 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.
- (d) Ensure that special trains are sent into the accident affected block section according to the sequence.
- (e) Ensure proper marshalling of crane while proceeding to the accident spot in the block section.
- (f) 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.
- (g) Ensure prompt clearance of standard passengers at the site in coordination with the Divisional Emergency Cell.
- (h) Regarding running of special trains, keep in touch with Divisional Emergency Cell and give requirement from site.

4.9.2.2 Duties of Sr. DOM (At the site):

- (a) Ensure that ARME/ART/ (SPART / SPARME) reach the site without delay.
- (b) Plan for trains for the prompt transport of stranded passenger at site and clearance of passenger held up at other stations.
- (c) Plan for regulation of Passenger, Mail/Express trains, cancellation, diversion, and termination short of destination in consultation with Headquarters.
- (d) Check that information regarding passengers, dead, injured (grievous and simple) is verified by Railway Doctor and approved by senior most officer at the site.
- (e) 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.
- (f) See that chronological log of all items of information and action taken connected directly or indirectly with accident is maintained properly.
- (g) Keep liaison with adjacent Divisions, Site and Headquarters.

4.9.3 SAFETY DEPARTMENT:

Sr. Divisional Safety Officer / Divisional Safety Officer / Asst. Divisional Safety Officer— Safety Branch of the Division should inform the details of accident to the PCSO/Dy.CSO of Zonal Railways through call on landline phone/Mobile and also through message about serious accident. Simultaneously it should also be informed to Safety Control, Railway Board and to be uploaded on SIMS website.

A) Senior Divisional Safety Officer:

- a) Proceed to the site of accident by first available means.
- b) Ensure protection of affected line(s) and adjacent line(s) has been done as per rules or not;
- c) Check proper arrangement is made in rescue and / or relief operation ;
- d) Take all action for preservation of clues ;
- e) See that the assistance, to the extent necessary, is called from all sources
- f) Ensure collection of detailed particulars of the accident ;
- g) Arrangement of videography of the site
- h) Record statement of Guard and Loco pilot and subject them to breathalyzer test and liaison with Medical department to collect blood sample.
- i) Ensure joint measurements etc., are taken in prescribed Proforma. Recover the speedometer chart, data logger statement etc.,
- j) Ensure evidence of train staff, station staff and public is taken on the spot. Addresses of passengers who are willing to give statements later should also be obtained.
- k) If the accident took place within station section, he should arrange to record the knob position on the panels, block instruments position, etc., and seize the relevant station records.
- l) Produce public witnesses and advise Superintendent of Police and District Magistrate in time, issue press notification in local press when advised by Chief Safety Officer, in case of CRS enquiry.

4.9.3.1 Duties of Safety Department:

- (a) Preserve all clues and evidences regarding probable cause of the accident and ensure that these do not get disturbed till police clearance is received.
- (b) Ensure that video/still photographs by digital cameras are taken as required.
- (c) Ensure that joint measurements, observations are recorded in the prescribed Performa before restoration work begins.
- (d) Ensure that unaffected rolling stock is moved away from the site and thereafter stabled at convenient location for further examination during accident inquiry.
- (e) Ensure that evidence of train staff; station staff and public are recorded on the spot.
- (f) Addresses of passengers willing to give statements later should also be obtained.

- (g) Ensure that special trains are sent into the accident affected block section according to the sequence.

4.9.3.2 Duties of Sr.DSO (At the site):

- (a) Proceed to the site of accident by first available means.
- (b) Inform to CSO and NDRF/SDRF after assessment of Requirement.
- (c) Coordination with Sr. DOM and Sr. DME for correct marshaling of the crane before the ART/SPART reaches site.
- (d) Ensure joint measurements etc. in prescribed Performa.
- (e) The required affected vehicles are kept for enquiry as per rules.
- (f) Coordination with Sr. DOM for efficient movement of ART/SPART, engine, tower wagon etc between site and station for quicker restoration.
- (g) Ensure that the log diary at the site is maintained properly with details and that the Field telephone is manned.
- (h) 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.

A. Safety Officer of Zonal Railways:

Reporting of Serious Accident by Zonal Railways to Railway Board
(Reference of L.No. 2020/Safety (A&R)/19/9 dated 21.05.2020)

As per extant instructions, the Zonal Railways (PCSOs) should inform PED (Safety)/ ED (Safety)-II about Serious accidents immediately through Mobile/WhatsApp call/ message. The Dy.CSO should inform Safety Control through phone/ Mobile call/message about serious accident and simultaneously it should also be uploaded on SIMS website. The Zonal Railways should also update the Safety Control / ED (Safety)-II / PED (Safety) about relief, rescue and restoration work due to serious accident on regular basis till normalcy prevails.

B. Safety Directorate Railway Board:

Reporting of Serious Accident at Railway Board
Principal Executive Director-Safety to inform concerned Members and CRB & MR Cell.

4.9.4 MEDICAL DEPARTMENT:

Duties of Medical Officer & Staff: The nearest Railway Medical Officer, on receipt of the report of a serious accident with injury to person, shall –

- A) Reach the site of accident with the Medical Relief Train or by the quickest available means, with all men and material commensurate with the seriousness of the accident, assess and advise further medical assistance necessary;
- B) Obtaining and transmitting the details of persons involved in the accident to the Divisional Control Office and in case of an accident to a passenger-carrying train, reportedly attended with casualties and/or grievous injuries, unless otherwise advised by the Divisional Railway Manager, must proceed to

the site of the accident by the first available means.

- C) One doctor should be deputed to collect blood sample of crew of train.
- D) Render medical aid to the injured carefully as far as possible at site;
- E) Make timely and adequate arrangements for shifting the injured persons to suitable hospitals as considered necessary for further treatment;
- F) Keep detailed particulars of the dead and injured e.g. their name, address etc. as far as available;
- G) Deal with the dead and injured as per extant rules and instruction.
- H) Co-coordinating with Civil/Military/State/Public medical authorities and private practitioners for the purpose of (a) above.
- I) Proper follow up to be done daily for all injured patients admitted in different hospitals for the first two weeks alternate day on third week and then weekly and by weekly. Progress reports to be prepared till all the patients are discharged from the hospitals.
- J) All the bills of non-railway hospitals including private hospitals to be settled in consultation with Commercial department, Personnel department at divisional level as per extant Rules.

4.9.4.1 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 Para medical staff concerned.

4.9.4.2 Formation of two teams:

- (a) 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'.
- (b) Team 'A' – headed by CMS/MS in charge will rush to the accident site by ARME along with Team-A (12-15 doctors and 15-20 paramedics).
- (c) Team 'B' – headed by the senior most doctor amongst them will stay back at the divisional hospital; and perform duties as given below:

4.9.4.3 Duties of Team 'B':

- (a) Establish an Emergency Cell in the Casualty Unit of Railway Hospital.
- (b) Contact adjoining divisions and organise movement of 2 more ARME/ (SPARME) to accident site, one from each end.
- (c) 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.
- (d) Ask them to be in readiness to receive and provide medical treatment to injured passengers.
- (e) 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.

- (f) 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:
- (g) Co-ordinate with MS/CMD of adjoining Divisions/Zones to send their medical teams to the accident site by any means.
- (h) 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.
- (i) 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.
- (j) Prepare Railway Hospital to receive and provide treatment to inured passengers, when they are brought back from accident site.
- (k) Arrange to send anti snake venom 4 vials and other items in cold chain carrier.

4.9.4.4 Duties of CMS/Medical Officer:

- (a) 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/ (SPARME):
- (b) Arrange for a message to be sent to his senior Officer.
- (c) Report his time of arrival to the SM on duty.
- (d) 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.
- (e) Make a note in respect of the log of events and action taken.
- (f) Ensure that a qualified person will accompany the ARME/ (SPARME).
- (g) 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.
- (h) 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.

4.9.4.5 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.

4.9.4.6 General (On Arrival at the Site):

- (a) Ensure collecting blood and urine samples of train crew in case the same is necessary.

- (b) Organize as many road ambulances as possible at the accident site.
- (c) 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.
- (d) Set up Medical Counter in UCC and CAC for passenger assistance.
- (e) Set up First Aid Posts in LCCs.

4.9.4.7 Site Management:

- (a) 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:
- (b) 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.
- (c) One group of doctors will take a round of various hospitals where injured passengers have already been admitted.
- (d) One group consisting of 4-5 teams of doctors and Para-medics will take out injured passengers and dead bodies from accident involved coaches.
- (e) One team will attend to injured passengers and give them First Aid and other medical treatment.
- (f) One team will prepare list of injured passengers, note down details of their injuries and classify them.
- (g) One team would be in-charge of transporting injured passengers to hospitals and getting them admitted.
- (h) One team would be in-charge of post admittance hospital care of the injured.
- (i) One team will deal with dead bodies after these have been extracted from coaches. They will prepare a list and arrange for their preservation.
- (j) In case sufficient doctors are available then more groups should be formed for rescue operations.

4.9.4.8 Taking out injured passengers:

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

4.9.4.9 Attentions to injured passengers:

- (a) One team will be asked to provide medical treatment to injured passengers immediately after their evacuation from coaches.
- (b) Ensure stabilization of condition of injured passengers already taken out from coaches, before they are dispatched to hospitals by road.
- (c) 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.

4.9.4.10 Preparing list of passengers:

- (a) Collect list of injured passengers prepared by TS/TTEs/Train Conductors and assess the situation.
- (b) Separate lists to be prepared coach wise.
- (c) 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.
- (d) Once the preliminary list of injured passengers has been prepared, the list should be signed by the CMS/MS In charge and a copy handed over to Commercial department.
- (e) The list of injured passengers will thereafter be updated periodically, as rescue and relief work continues.

4.9.4.11 Classification of Injuries:

- (a) Injuries are classified as under:
 - (i) 'Grievous' injuries as defined below.
 - (ii) 'Simple', but excluding 'trivial' injuries such as abrasions or bruises
- (b) Following are considered to be grievous injuries (as per section 320 of the Indian Penal Code):
 - (i) Emasculation.
 - (ii) Permanent privation of sight of either eye.
 - (iii) Permanent privation of hearing of either ear.
 - (iv) Privation of any member or joint.
 - (v) Destruction or permanent impairment of powers of any member or joint.
 - (vi) Permanent disfigurement of head or face.
 - (vii) Fracture or dislocation of a bone or tooth
 - (viii) Any hurt which endangers life, or which cause the sufferer to be, during the space of twenty days, in severe bodily pain or unable to follow his ordinary pursuits.
- (c) Injuries other than those defined above are considered to be simple injuries.
- (d) Apart from injuries defined above, there may be cases where a passenger or trespasser receives only petty abrasions or bruises. These are of trivial nature and technically speaking should not be taken as injuries.

- (e) As a thumb rule, any injury requiring hospitalisation of more than 48 hrs. is grievous, hospitalisation of less than 48 hrs. is simple, and any injury not requiring hospitalisation at all is trivial.
- (f) Classify injured passengers into separate categories as grievous or simple.
- (g) Inform Commercial department for arranging ex-gratia payment.

4.9.4.12 Transporting injured passengers to hospitals:

- (a) One team will be asked to arrange transport of injured passengers to nearby hospitals.
- (b) Ensure expeditious transportation of injured either to ARMEs or to nearby hospitals.
- (c) Critically injured passengers should be transported by means of road ambulances and other by means of ordinary road vehicles.
- (d) Commercial staff should also be associated with transfer of injured passengers to hospitals.
- (e) 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.
- (f) Doctors going to different hospitals should have separate vehicles.
- (g) In case sufficient numbers of railway vehicles are not available, they should hire taxis for their movement by withdrawing cash from station earnings.
- (h) Airlifting of Passengers.
- (i) Hiring of Skilled swimmers / Divers for under water rescue.

4.9.4.13 Taking an initial round of hospitals:

- (a) Separate doctors will be deputed to visit each hospital where injured passengers have already been shifted.
- (b) One commercial Officer will also accompany doctors and make a general assessment.
- (c) 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.
- (d) This information should be immediately communicated to CMS/MS at accident site by using PCO/Cell phone etc.
- (e) Prepare a list of person's dead/injured already in hospitals in three copies by using carbon paper.
- (f) 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.
- (g) 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.
- (h) One copy should also be sent to CAC for being fed into the PC provided in the CAC.
- (i) The initial list prepared should be updated at regular intervals, as and when any change occurs.

4.9.4.14 Post admittance hospital care:

- (a) One railway doctor, one commercial supervisor and one welfare inspector should be deputed round the clock at each hospital.
- (b) Normally one doctor should look after one hospital, along with a commercial supervisor and WLI.
- (c) 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.
- (d) 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.
- (e) 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.

4.9.4.15 Dealing with dead bodies:

- (a) Problem faced by rescue teams is regarding dealing of dead bodies.
- (b) In case of a major disaster, the usual complement of medical staff in any ARME / (SPARME) is grossly inadequate for undertaking work of this magnitude.
- (c) Adequate number of Safaiwalas and other health workers who have come to the accident site should be mobilized for this purpose.
- (d) Often rescue and relief operations continue for more than 48 hours.
- (e) Dismembered bodies begin emitting foul odour after two days. Carrying out this task under such circumstances become a real problem.
- (f) Target should be to extricate all dead bodies within 24 hrs.
- (g) Dead bodies should be dealt with coach wise; otherwise bodies taken out from different coaches' get mixed up.
- (h) 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.
- (i) 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.
- (j) Put dead bodies in body bags.
- (k) 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. _____

- (l) 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.

- (m) 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.
- (n) If possible each body should also be video photographed.
- (o) 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.
- (p) After this, bodies will be handed over to GRP or Local Police for safe custody.
- (q) Take necessary steps to handle unhygienic condition that may arise due to decomposed/mutilated bodies.

4.9.4.16 Preservation of dead bodies:

- (a) Numbering and photography of bodies should be done even when relatives are on hand to claim the body.
- (b) 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.
- (c) 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.
- (d) This problem is further compounded in unreserved coaches where no reservation charts are available.
- (e) Identification problems come up in case of mutilated bodies also. In such cases, photographs are better means of identification.
- (f) Arrange for hiring of a couple of big halls, for keeping bodies.
- (g) Rooms should preferably be at a single location so that relatives do not have to go around from mortuary to mortuary.
- (h) A large building having number of rooms would be ideal for storing them. Best option would be to take over a school building temporarily.
- (i) Arrange to move dead bodies to nominate buildings being used as temporary mortuaries. Bodies likely to be hold for more days should be embalmed.
- (j) Bodies should be neatly lined up with their numbers prominently displayed, and kept in different rooms, coach-wise.
- (k) Notice Board outside the building should display the room nos. where bodies extracted from a particular coach have been kept.
- (l) These details should also be posted on a notice board outside each room.
- (m) This will prevent unnecessary handling of bodies, which in any case would be in an advanced state of decomposition.
- (n) For dead bodies whose relatives are not readily available and delay is expected, arrange for their preservation by dry ice etc.
- (o) Procure Shrouds, Polythene bags, Coffins, Dry ice from local market for dealing with dead bodies if required.
- (p) 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.

4.9.5 COMMERCIAL DEPARTMENT:

B) Duties of Commercial Officer at site -

- 1) The Sr. Divisional Commercial Manager or in his absence the Divisional/Assistant Commercial Manager, on receipt of information of a serious accident, shall proceed to the site of accident by first means.
- 2) Ensure that drinking water, tea and snacks are promptly supplied to stranded and injured passengers. Keep the record of the number of passengers served with tea and snacks.
- 3) Take charge of the custody of luggage of the injured persons.
- 4) Luggage of the dead passengers shall be deposited with the Railway Police after proper records and acknowledgement.
- 5) Issue advice to the next kith and kin of the injured and dead and also furnish details to Sr.DOM in Control Office.
- 6) Arrange for sufficient number of Ticket Collectors, Porters and Vendors for assistance of stranded passengers.
- 7) Arrange for ex-gratia payment to the injured and the next kith and kin of the dead.
- 8) Arrange for refunds to the passengers.
- 9) Assist the stranded passengers during transshipment with sufficient number of Porters and TCs.
- 10) Arrange to open enquiry office at the site for replying to the queries regarding disposal of the injured and dead.
- 11) Make inventory of the parcels damaged and advise the CCO/SC.
- 12) Arrange for buses for stranded passengers and keep record of the buses arranged destination-wise with the number of passengers.
- 13) Ensure the making over of the dead bodies to the Police for disposal;
- 14) Assist the Railway Doctors with Ticket Collectors / Porters. He should compile the figures of injured and dead from all sources. (i.e. Police, TTE / SM).
- 15) Issue advice to the Control Office / Stations for issue of free passes to the next of kin of the dead and injured.
- 16) Keep in touch with the progress of patients in hospital and increase the exgratia payment suitably in case simple injuries turn into grievous or patients paid ex-gratia payments for grievous injuries die later in the hospital.

4.9.5.1 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.

4.9.5.2 Duties of Sr. DCM:

- (a) Ensure drinking water, tea and snacks are promptly supplied.
- (b) Take charge of injured person's luggage.
- (c) Luggage of the dead passengers should be deposited with the Railway Police after proper records and acknowledgement.
- (d) Issue advice to the next of kin of the injured and dead and furnish details to control office.
- (e) Arrange for Ticket collectors, Porters and Vendors.
- (f) Arrange for ex-gratia payment as per rules.
- (g) Arrange for refunds to passengers.
- (h) Assist the stranded passengers during transshipment.
- (i) Arrange inventory of the parcels damaged and advise the CCO.
- (j) Arrange buses for stranded passengers and keep record of the buses destination wise with the number of passengers.
- (k) Provide the Railway doctors with assistance of Ticket collectors/Porters. Compile the figures of injured and dead from all sources.
- (l) Issue advice to the Control Office/Stations for issue of free passes to the next kin of the dead and injured.
- (m) Keep in touch with the progress of patients in hospitals and increase the ex-gratia payment suitably in case simple injuries turn grievous/deaths.

4.9.5.3 Duties of DCM & ACM:

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

4.9.5.4 Transportation of men and material to accident site:

- (a) 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 / (SPART / SPARME) should not be detained on this account.
- (b) The on duty commercial supervisor at the station should ensure that they proceed by the ART / (SPART) itself.

- (c) 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.
- (d) 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.
- (e) Sr. DCMs should prepare section nominations of catering agencies both departmental and private for rushing to site. This is available in Divisional DM Plans Part – II.

4.9.5.5 Helpline Enquiry Booths at stations:

4.9.5.5.1 General:

- (a) 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.
- (b) On ADI Division, Helpline Enquiry Booths would normally be opened at following stations, depending on the route of the accident involved train:
 - Ahmedabad, Mehsana, Palanpur, Gandhidham
- (c) 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.
- (d) All Helpline Enquiry Booths shall have DOT phones with STD, dedicated help line **No. 1072**. Railway Telephones with STD/fax, PC with printer & Internet connection. ADI Division has 20 four digit 1072 emergency numbers for accident enquiry. 10 in ADI Control room, 5 at MSH enquiry office and 5 at GIM enquiry office.
- (e) Computer literate Sr. supervisors of commercial department would man Helpline Enquiry Booths round the clock.
- (f) Helpline Enquiry Booths within the accident-affected division should keep in touch with the Ahmedabad Divisional Emergency Cell.
- (g) Ahmedabad 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.
- (h) Such information should be received from UCC by E-Mail and transmitted by E-Mail to all concerned.

- (i) 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.
- (j) 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.
- (k) Helpline Enquiry Booths should not contact the accident site or the UCC directly.

4.9.5.5.2 Accident details to be available:

- (a) Accident details would include number of dead and injured.
- (b) Break up of type of injuries, such as grievous, simple etc.
- (c) Disposal of injured passengers in various hospitals.
- (d) Names of injured passengers.
- (e) Officials in-charge of Helpline Enquiry Booths would display the list of injured passengers on the notice board.
- (f) For this purpose Computer printout of E-Mail received should be taken out and Displayed at number of places at the station.
- (g) 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.
- (h) 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.
- (i) Under such circumstances it is possible to identify dead bodies only when relatives come from their hometown.
- (j) This aspect of identification of dead bodies and reasons for delay should be explained to the public.
- (k) Number of dead bodies identified, and their names should be available.
- (l) This information would continue to be updated once every 3 hours and would continue to be accessed for the next 4 to 5 days.

4.9.5.5.3 Information regarding running of trains:

- (a) Departure of unaffected portions of the accident involved train, its diverted route, and expected time of arrival at destination.
- (b) 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.
- (c) 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.
- (d) 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.

- (e) Above information regarding running of trains would be required for initial 24 hrs. Thereafter, number of enquiries regarding train running would be very few and far between.

4.9.5.5.4 Refunds:

- (a) 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.
- (b) Refund of money should be granted for trains Delayed, Regulated, diverted, rescheduled, Short terminated and cancelled.
- (c) Staff manning Refund counters should be thoroughly familiar with rules for granting of refunds under such circumstances.
- (d) Sufficient amount of cash should be available at these Refund counters for this purpose.

4.9.5.6 Site management:

- (a) At the accident site, handpicked commercial supervisors should be deputed for manning commercial counters in UCC and CAC.
- (b) Each commercial counter in CAC is to be manned by one group.
- (c) 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.
- (d) Separate teams and groups should be formed as detailed below, headed by a commercial officer.
- (e) One team will hire road vehicles for use and other related activities.
- (f) One group will arrange beverages and food both for injured as also for uninjured.
- (g) One team will take an initial round of hospitals along with doctors and assess the situation.
- (h) One group should take care of uninjured passengers who have to be cleared from the accident site.
- (i) One group will assist Medical department in preparing a list of injured passengers input the same into the PC in CAC.
- (j) One group will assist Medical department in shifting injured passengers to hospitals.
- (k) One group will assist the Medical department in preparing a list of dead bodies and looking after them.
- (l) One team will make ex-gratia payment to injured passengers and next of kin of dead.
- (m) One team will deal with refund cases and claims compensation formalities.
- (n) One group will be in-charge of unclaimed luggage and other consignments.
- (o) One group will be in-charge of post admittance hospital care of injured and taking care of relatives under 'Passenger Care'.

4.9.5.7 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 of 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.

4.9.5.7.1 Withdrawal of Cash from station earnings:

Procedure:

- (a) 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).
- (b) 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.
- (c) 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.
- (d) 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.
- (e) 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 Name of Supervisory Official Designation Please arrange to pay from Station Earnings an amount of Rs._____(Rupees _____) towards _____ (Purpose to be indicated). This is one of the authorised items of withdrawal from station Earnings. The expenditure is chargeable to the head_____. Accounting Authority _____ Controlling Officer _____ Designation _____ Station _____ Payment made from Station Earning amount: Signature of SM/SS	To Station Master Station Received an amount of Rs._____ from station earnings Signature: Designation

- (f) 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.
- (g) Any failure by the supervisory official withdrawing cash to follow above instructions or any other irregularity will render him personally responsible and liable for action under Discipline and Appeal Rules.

Account:

- (a) Branch Officer concerned shall forward requisitions received from stations to the Divisional Accounts Office indicating circumstances under which the withdrawal was necessitated.
- (b) 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.
- (c) 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.
- (d) 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
- (e) A monthly return of requisitions issued during the period should be submitted to the Accounts Office by Executive Officers.

4.9.5.7.2 Hiring of Vehicles & Mobile Phones:

- (a) 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.
- (b) For this purpose apart from whatever number of railway vehicles may be available, extra road vehicles should be hired.
- (c) All road vehicles should be hired along with standby drivers for round the clock duty.
- (d) At least 10 road vehicles should be attached to CAC for taking relatives to hospitals, mortuaries etc.
- (e) 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.

- (f) Buses from state transport authorities should also be requisitioned along with extra drivers for round the clock duty.
- (g) 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).
- (h) In case 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.
- (i) All hired vehicles and requisitioned buses should have stickers pasted on their front and rear windscreens indicating "RAILWAY ACCIDENT DUTY".

4.9.5.7.3 Catering arrangement:

- (a) 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.
- (b) Food and beverages should be supplied free of charge.
- (c) These may be arranged from railway sources or outside sources as necessary, including IRCTC or their contractors.
- (d) To supplement Railway catering arrangements nearby dhabas and hotels should be contacted and arrangements made for opening up stalls at the site.

4.9.5.7.4 Clearance of uninjured passengers:

- (a) First of all, arrangements for water and food for stranded passengers should be made.
- (b) Announcement should be made for registering names of safe passengers.
- (c) Clearance of accident-affected passengers from accident site should be planned along with Operating branch that will provide the empty coaching rake.
- (d) 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.
- (e) Arrange adequate coolies for carrying passengers' luggage while they transfer to the new train.
- (f) In case of road bridging, arrange road transport to clear stranded passengers, record details of passengers dispatched and relay particulars to Divisional Emergency Cell.
- (g) 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.

4.9.5.7.5 Preparing list of injured passengers:

- (a) Collect list of injured passengers prepared by TS/TTEs/Train Conductors and assess the situation along with Medical department.
- (b) Separate lists to be prepared coach wise by Medical department.
- (c) 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.
- (d) Once the preliminary list of injured passengers has been prepared, the CMS/MS in charge should sign the list and a copy handed over to commercial department.
 - (e) This list should be input into the PC available in the CAC.
 - (f) The list should also be E-Mailed to the Divisional Emergency Cell and Headquarters' Emergency Cell.
 - (g) The list of dead and injured that is initially fed into the PC will thereafter be updated periodically, as rescue and relief work continues.

4.9.5.7.6 Amount of Ex-Gratia payable:

(Refer Hqtrs letter no T/5/10 dated 10/10/23.

The amount of Ex-gratia relief to be paid to the dependents of dead and injured passengers involved in Train Accident and untoward incidents as defined under section 123 read with section 124 and 124-A of the Railway act. 1989 and to the road users who met with an accident due to Railway's prima facie inability at Manned Level Crossing Gate Accident. The revised rates and compiled instructions are below:

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
1	Train Accident (as defined under Section 124 of the Railways Act, 1989)	Rs. 500000/- (Rupees Five Lakh only)	Rs. 250000/- (Rupees Two Lakh fifty thousand only)	Rs. 50000/- (Rupees Fifty Thousand only)
2	Untoward incident (as defined under Section 124-A of the Railways Act, 1989)	Rs. 150000/- (Rupees One lakh fifty thousand only)	Rs. 50000/- (Rupees Fifty Thousand only)	Rs. 5000/- (Rupees Five Thousand only)
3	Accident at Manned Level Crossing (due to Railway's prima facie liability)	Rs. 500000/- (Rupees Five Lakh only)	Rs. 250000/- (Rupees Two Lakh fifty thousand only)	Rs. 50000/- (Rupees Fifty Thousand only)

2. Additional Ex-gratia relief in case of hospitalization 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	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 hospitalization.
	Thereafter, Rs. 750 per day be released at the end of

earlier.	every 10 day period or date of discharge, whichever is earlier upto further five months of hospitalization.
a) Lump sum amount of ex-gratia for hospitalization of grievously injured passenger's upto first 30 days in 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. DSC/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. 50000/- to be paid in case 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. 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 accident 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 Payment should be sanctioned / arranged preferably on the spot by a Senior Scale Officers 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.

4.9.5.7.7 Refunds and Claims Compensation:

- (a) Refund of fares must be granted in the CAC for unfinished journey as per rules.
- (b) Injured passengers and next of kin of deceased passengers must be supplied with blank claims compensation forms along with Claims Booklet explaining complete procedure.
- (c) 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.

4.9.5.7.8 Luggage and Consignments:

- (a) 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.
- (b) A list of each item with distinguishing marks should be made.
- (c) If possible, the cabin number inside the coach should also be indicated.
- (d) Luggage claimed should be handed over on satisfactory proof of ownership.
- (e) Unclaimed luggage and personal belongings of injured/dead passengers should be taken possession of for safe custody.
- (f) Unclaimed luggage should be stored in a safe place, preferably, part of the same school building which is being used for preserving dead bodies.
- (g) These should be stored in separate rooms coach wise so that it is easy for relatives to identify.
- (h) A list should be displayed outside each room indicating the coach no. Whose luggage is stored there.
- (i) 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.
- (j) 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.
- (k) 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.
- (l) RMS consignments on the train should be shifted to school building for safe custody till Postal Authorities come and take over custody.

4.9.6 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.

A. Senior Divisional Mechanical Engineer:

- 1) Proceed to the site. After site survey, make out a plan of action for quick rescue of injured and trapped passengers. Accordingly call for the equipment, manpower required.
- 2) Supervise rescue operation.

- 3) Ensure that Speedo meters record, engine log Books etc., are seized /sealed.
- 4) Correctly forecast to control as to the sequence of movements required to site.
- 5) Record the details regarding brake power and other aspects of Rolling stock as per prescribed Proforma.
- 6) Have the joint measurements of the rolling stock taken.
- 7) Check the fitness of the stock supposed to move from the site.
- 8) Note down observations; make arrangements to record joint measurements if loco is involved in accident. If it is not possible for all types of measurements to be taken on the spot then these should be taken in the shed. All relevant records should be sealed in shed.

B. Mechanical / Breakdown Staff:

- 1) Proceed to the site of accident. Assist in evacuating passengers if any, trapped in coaches involved in accident.
- 2) Record the details regarding brake power and other aspects of the rolling stock as per prescribed pro-forma.
- 3) Take measurements of the Rolling stock as per the prescribed Proforma /procedure.
- 4) Check the fitness of the stocks which are supposed to move from the accident site and certify their fitness.
- 5) Ensure that locos / coaches / wagons re-railed are in a fit condition to be taken from the accident site.
- 6) Plan for efficient movement of Breakdown Special, engine, tower wagon etc., between site and station for quicker restoration.
- 7) Ensure that the log / diary regarding restoration at the accident site is maintained properly
- 8) Ensure that video of the serious accidents is prepared in systematic and continuous manner specifically showing the position of coaches, engine under gears of coaches and engines, rails, tracks etc. and the clues which may in turn provide some information to the enquiry authority. Similarly, still photographs should also be taken in judicious manner.

4.9.6.1 Rushing of men and material to site:

- (a) 2 ARTs with 140 Crane should be moved to the accident site, one from each end.
- (b) In addition to above, Brake down Special should be sent from other base stations within WR, so that additional rescue equipment such as cutters, spreaders, hydraulic jacks etc. are made available.
- (c) 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.

- (d) The aim should be to ensure one ART with 140T crane along with one BD special at each end of the accident site.
- (e) Provision should be made for availability of standby crane driver on each ART working at site to work round the clock.
- (f) Road cranes of sufficient capacity should be arranged.
- (g) Trucks should be arranged for carrying BD equipment near to accident coaches, so that work centres can be opened up simultaneously from both ends.

4.9.6.2 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/(SPARME), 2 ARTs (SPART) 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 ADME.

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 ADME. The second ADME concerned would also be in-charge of the crane at that end.

- (a) Take precautions in electrified section that power supply is switched off before commencing rescue/relief work.
- (b) Use necessary safety equipment like hand gloves, helmet etc.
- (c) If spillage of inflammable substances is suspected, then only cold cutting equipment should be used.
- (d) In case of suspected sabotage, ensure minimum interference to clues. Safe lives and extricate passengers after video and digital photographs have been taken.
- (e) 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.
- (f) Ensure marshalling of ART/(SPART) according to site requirement before it is sent into the accident involved block section.
- (g) For efficient extrication of entrapped passengers take assistance of Medical/Engineering departments.

- (h) Each team will join up with Medical teams who would also be involved in extracting dead and injured from coaches.
- (i) Maximum number of coaches should be tackled simultaneously, except those that have climbed on top or have telescoped into one another.
- (j) Road cranes of sufficient capacity should be arranged so that these cranes can start working from the centre while the 140 T cranes can continue working from either end.
- (k) 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.
- (l) Examine unaffected or re-railed rolling stock and certify their fitness for further movement.

4.9.7 SECURITY DEPARTMENT:

- I) **First Response** - First Information about serious train accident or unusual incident involving loss of life, grievous injury, serious damage to Railway property etc., is normally received by the nearest RPF Post / Outpost. The person receiving such information should muster maximum available man power within the shortest possible time and dispatch them to the scene of the accident by the quickest means. After dispatching the available man power immediately, the Post / Outpost In charge should arrange additional man power. He should simultaneously pass on the information to the senior supervisors, officers and the control rooms.
- II) **RPF Official in charge of site** - The senior most RPF Officer available will assume Control and immediately start the following action
 - a) Segregate the area of incidence by establishing temporary barriers by use of nylon ropes (if available) or any other make shift device available at the site to protect the area against the entry of spectators into the affected place.
 - b) Luggage of passengers should be isolated and protected and consigned goods are taken care of till they are handed over to claimants or taken over by the Railway.
 - c) RPF personnel should respond to any call for assistance to rescue victims and transport them to nearest Hospital.
 - d) RPF Officers will maintain close liaison and harmony with the Officers of various departments of the Railways, GRP, Local Police and Officers of Civil Administration.

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

4.9.7.1 Duties of DSC (RPF):

- (a) Post adequate number of RPF staff at the accident site and other place where assistance is required.

- (b) Ensure security of passenger's belonging, security of parcels, damaged goods and parcels vans etc.

4.9.7.2 Rushing of men and material:

- (a) 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.
- (b) The Post/Outpost in charge would requisition additional manpower from adjoining RPF posts.
- (c) Pass on the information to Local Police and Police Control Room, local Fire Brigade, Hospitals, local voluntary organisations at the earliest.
- (d) 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.
- (e) If any RPF battalion/Company is located in the vicinity, men can be requisitioned from there for dealing with emergent situations till additional force made available from other sources.
- (f) Additional RPF personnel from Zonal headquarters should be shouldered and sent to accident site.
- (g) 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.
- (h) 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 (1 per person) and other lighting arrangements.
 - ❖ Nylon ropes (1 Km) and poles for segregating the affected area.
 - ❖ 4 loud speakers 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.

4.9.7.3 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.

4.9.7.3.1 General:

- (a) RPF personnel should respond to any call for assistance to rescue victims and transport them to the nearest hospital.
- (b) 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.

- (c) RPF Assistance Post will be established within the CAC so that people needing help can approach RPF.

4.9.7.3.2 Co-ordinate with Local Police:

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

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

4.9.7.3.3 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. Railwaymen who try to undertake any kind of rescue and relief work become victims of mob fury.

- (a) Cordon off the site and prevent unauthorized entry of outsiders.
- (b) 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.
- (c) These barriers should be at quite some distance away from the track, so that UCC, CAC and LCCs are inside the cordoned off area.
- (d) Provided barricade and ask for additional force to control crowd during VIP visit.

4.9.7.3.4 Protection of luggage:

- (a) Protect unclaimed luggage of passengers till these are duly taken over by commercial department for safe custody.
- (b) Unclaimed luggage of passengers should be isolated and stacked coach-wise, with proper labelling indicating coach no., from which recovered.
- (c) If possible, the cabin number inside the coach should also be indicated.
- (d) All such unclaimed luggage should be protected till they are handed over to claimants or taken over by commercial department.
- (e) Unclaimed luggage should be stored in a safe place, preferably, part of the same school building which is being used for preserving dead bodies.

- (f) These should be stored in separate rooms coach wise so that it is easy for relatives to identify.

4.9.7.3.5 Protection of railway property:

- (a) Protect Railway consignments/goods/parcels till these are duly taken over by commercial department and dispatched to nearest station for proper disposal.
- (b) Guard perishables till they are auctioned off at site or till they are dispatched to nearest station for being auctioned.
- (c) RMS consignments on the train should be shifted to school building for safe custody till Postal Authorities come and take over custody.
- (d) Provide security for the cash withdrawn for payment of ex-gratia by the commercial department.
- (e) Preserve all clues and evidences regarding probable cause of the accident and ensure that these do not get disturbed.
- (f) Ensure that no railway staff tampers with any track fittings, or rolling stock parts.
- (g) Anybody found moving under suspicious circumstances should be questioned.
- (h) No railway staff should be allowed to move about near the accident site with loose or piece meal equipment.

4.9.8 ELECTRICAL DEPARTMENT:

On receipt of Information Sr.DEE (G) Sr. DEE/TRS, ADEE (P), DEE/TRO as well as ADEE/TRD should proceed to site of accident.

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

- (a) DEE(Coaching) will be available in Divisional Control Office for providing backup support.
- (b) Maximum number of electrical staff should be send by the 2nd and 3rd special trains for installation and operation of electrical equipment.
- (c) 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.

4.9.8.1 Duties of Sr. DEE:

General

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

TRD:

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

TRO:

- (a) Depute officer in the control office.
- (b) Note down joint observation regarding the Loco/ EMU/DMU/MEMU
- (c) Ensure that measurements of the Loco/ EMU/DMU/MEMU are taken on the spot /wherever possible otherwise in Car/Loco shed.
- (d) Ensure that records for maintenance of Loco/ EMU/DMU/MEMU repairs are sealed in the shed.
- (e) Ensure prompt and sufficient arrangements for clearing the line.
- (f) Ensure that Speedo meters record, engine log Books etc., are seized /sealed.

4.9.8.2 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 / (SPARME), 2 ARTs / (SPART) 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.

Electrical Staff: Power (General): Ensure lighting arrangements, if required, are provided at the site. In case of Fire in coaches, immediately collect / record evidence of passengers with full particulars. If some passengers are willing to give evidence later on, their names and addresses should also be recorded.

4.9.8.2.1 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 ADEE (P).

- (a) Senior most electrical officer at site would make a quick assessment of the electrical requirement of the site.
- (b) 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.

- (c) Thereafter, he would assess the quantity of electrical fittings and generating sets available in ARMEs and ARTs / (SPARME / SPART).
- (d) In order to set up adequate illumination facilities, all generating sets and lighting fixtures available in ARMEs and ARTs / (SPARME / SPART).would be used.
- (e) First priority for lighting would be the accident site along the track where rescue, relief and restoration work is going on.
- (f) Next priority would be given to lighting up of UCC, CAC and LCCs.
- (g) Additional requirements of generators and lighting fixtures, if any, should be called for immediately from other railway sources within the division, well in time.
- (h) In case divisional sources are inadequate, then sources from other divisions should be tapped.
- (i) 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.
- (j) Once generators and lighting fixtures have been setup, efforts should be made to tap direct power supply from some nearby sources, if available.
- (k) 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.

4.9.8.2.2 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 ADEE/TRD.

- (a) In case 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.
- (b) In case 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.
- (c) ADEE/TRD shall arrange movement of 6 Tower Wagons along with men and material from adjacent depots from both sides of accident site.
- (d) In case more tower wagons are required these should also be requisitioned from other depots along with men and material.
- (e) An assessment should also be made of the extent of damage to OHE masts, and other equipment.
- (f) Additional requirement of materials, if any should be called for immediately from other railway sources within the division.
- (g) In case divisional sources are inadequate, then sources from other divisions should be tapped.
- (h) In case other divisional sources are also inadequate, then sources from other zones should be tapped.
- (i) Availability of OHE masts is a long lead item. Requirement of masts should be quickly worked out so that these can be moved immediately.
- (j) Ensure temporary portals are erected without delay.

- (k) In case 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.
- (l) Ensure that the section is earthed before staff starts working near OHE.
- (m) OHE should not be charged until all staff, tower wagons, cranes etc. have cleared the block section.

4.9.9 SIGNAL & TELECOMMUNICATION DEPARTMENT:

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

Main responsibility of S&T Department will be for providing effective and adequate means of communication.

Senior Divisional Signal and Telecommunication Engineer:

- 1) Proceed to site of accident. Make arrangements for installing, Mobile/Railway/BSNL/ Satellite phones at site in sufficient numbers so that communication from site to control office/divisional office/Zonal office/ other stations, outside agencies takes place smoothly and without delay.
- 2) Establish communication between the site and Divisional Head Quarters Office.
- 3) Ensure that a detailed record is made of all evidence bearing on the accident so far as S&T and interlocking are concerned.
- 4) Preserve clues and seal the relevant equipment if required.
- 5) Restore the signaling and interlocking for normal working without delay.

Signal and Telecommunication Staff:

- 1) Proceed to site by quickest means available.
- 2) Ensure portable telephone / emergency telephone set is provided at site.
- 3) Wherever feasible, wireless sets to be installed at accident site for communication with Divisional Headquarters and if possible with Railway Headquarters. Walkie- talkie sets / Megaphones / loud hailer to be deployed as necessary.
- 4) DOT/BSNL telephone with STD facility to be arranged at the temporary enquiry offices opened at site and nearest location wherever possible.
- 5) Render such assistance as required by Guard in attending to the accident victims and stranded passengers.
- 6) Seal Block instruments, Relay rooms and note positions of levers, knob, slides indications etc., as the case may.
- 7) Arrange for early restoration of signaling and telecom equipment as soon as such restoration is permitted.

4.9.9.1 Rushing of men and material to site:

- (a) Sr. DSTE ,ADSTE 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.
- (b) 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.

- (c) 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.

4.9.9.2 Arrangement of communication at site:

- (a) DSTE/ADSTE in the division will immediately come to divisional control office and ensure setting up of all communication arrangements as required.
- (b) DSTE will keep a record of the numbers of Railway telephones, BSNL telephones, INMERSAT 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.
- (c) DSTE/ADSTE 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.
- (d) 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.
- (e) Should have standing arrangement to hire sufficient cell phones and send them to accident site.
- (f) Obtain E-mail addresses of Emergency Cells set up on other Divisional and Zonal headquarters.

4.9.9.3 Communication at Divisional Emergency Cell:

- (a) Communication arrangements are required to be provided at Ahmedabad Division's Emergency Cell immediately.
- (b) One BSNL Telephone having ISD/ and three BSNL telephone having STD facility should be made available in the Ahmedabad Division's 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.
- (c) Four other BSNL telephone numbers (2 with STD facility) and 2 Railway telephone numbers with STD facilities should be made available in Ahmedabad Division's Emergency Cell for use by Chief Emergency Officer. These should be temporarily transferred from officers' chambers.

4.9.9.4 Communication at Helpline Enquiry Booths:

- (a) Helpline Enquiry Booths are to be opened at all important stations en-route of the affected trains.
- (b) Location of these Helpline Enquiry Booths will be on Platform No.1 of their respective stations.
- (c) One BSNL STD phone, 2 Railway Phones, One FAX machine, Photocopier, 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.

- (d) 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.

4.9.9.5 Duties of Sr. DSTE:

- (a) Ensure that a detailed record is made of all evidence bearing on the accident so far as S & T and interlocking are concerned.
- (b) Preserve clues and seal the relevant equipment/documents if required.
- (c) Restore the signaling and interlocking for normal working immediately.

4.9.9.6 Duties of Signal & Telecommunication 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.

4.9.9.6.1 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. (v) Railway telephones. (vi) PA System.

4.9.9.6.2 Numbers to be provided:

- (a) Satellite telephones – 5 to be provided. 2 in UCC, 1 in CAC, 2 for passengers.
- (b) BSNL telephones – 2 in UCC, 3 in CAC and 1 in each hospital.
- (c) Mobiles – as many as can be arranged in UCC and CAC. In addition to above at least 2 in each hospital.
- (d) Walkie – Talkie sets – each functionary should be covered.
- (e) One 25W VHF set shall also be provided in UCC.
- (f) One 25W VHF set shall be installed in a road vehicle so that mobile communication can be set up, upto a range of about 15-20 Kms.
- (g) Railway telephones – each functionary in UCC, CAC and LCCs should be covered.
- (h) 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 utilised for providing communication.
- (i) PA system – at UCC, CAC and LCCs.

4.9.9.6.3 Public Address System:

- (a) PA system should be provided in UCC, CAC and LCCs.
- (b) 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.
- (c) Mega mikes available in ART will also be utilised for twin purpose.
- (d) 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.

4.9.9.6.4 Other accessories:

- (a) Ensure availability of adequate copies of Disaster Management telephone directory containing important telephone numbers.
- (b) Adequate number of Mobile Battery Chargers should be provided in UCC, CAC and LCCs along with number of spare batteries.

4.9.10 ENGINEERING DEPARTMENT:

On Receipt of information: Sr.DEN/DEN concerned will proceed to the site of accident by ARME / (SPARME). 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 / (SPARME).

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

4.9.10.1 Rushing men and material to accident site:

- (a) 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.
- (b) 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 8 ½ 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.
- (c) At least two nos. of JCBs available with the ballast depot contractor shall be immediately moved.
- (d) Sr.DEN(Co)/DENin Divisional Emergency Control will request concerned authority (Army/State Govt. Department) for bulldozer/earthmoving machine in the area.

4.9.10.2 Duties of SR.DEN (NW)/Sr. DEN (W)/DEN (N):

- (a) Ensure joint measurements are taken and sketches of the accident site are accurately drawn out.
- (b) Ensure collection of adequate labor and material and their proper deployment for speedy restoration.
- (c) Depute one DEN/ADEN in control Office for planning, reinforcement of labour, material and staff.

- (d) Ensure that inspection notes and diary of ADEN, JE/SE/SEE(P.Way), gang charts, maintenance records etc., are seized and secured.
- (e) Assistant other Departments in clearance of line and ensure that track is rendered fit and certified at the earliest.

4.9.10.3 Duties of Engineering Department at the site:

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

4.9.10.4 Engineering Staff:

- (a) All Engineering officials shall report to the senior most Officer at site or take charge if he happens to be the senior most. The staff who are not on duty or travelling by train shall assist in rescue and relief operations.
- (b) Render assistance to give medical relief / treatment to injured passengers. Make available all transport facilities to the injured passengers and assist in rescue of trapped passengers.
- (c) Arrange divers with diving equipment for under water rescue.
- (d) Safeguard and preserve clues till Police or RPF personnel arrive at site and take charge. Collect evidence in the form of track readings and rolling stock measurements.
- (e) Ensure water supply at adjoining stations and arrange for supply at accident site.
- (f) Cutting equipment available with the Section Engineers (P.Way) and Section Engineer (Bridges) and workshops to be moved to the site for supplementing the ones available in the B.D. special.
- (g) Assist other departments in establishing communications and power supply at site, including hiring of Diesel generator sets for augmenting the power supply arrangements.

- (h) Assist in transshipment of passengers and their luggage.
- (i) Provide tents and other temporary shelter at site for protection against elements of weather.
- (j) Ensure track is restored for traffic at the earliest.

4.9.11 ACCOUNTS DEPARTMENT:

- (a) Making available sufficient amount of cash for meeting emergent expenses.
- (b) 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.
- (c) Issue of cheques for making of enhanced ex – gratia payment, if so announced at accident site by Honourable MR.

4.9.12 PERSONAL DEPARTMENT:

- (a) Sr.DPO shall proceed to accident site along with all WLIs.
- (b) Assist Doctors in collecting details of injured/dead and shifting them to hospital.
- (c) WLIs shall be available round the clock in shift duty to look after the welfare of injured persons in each hospital.
- (d) Issue complimentary return journey passes to relatives for escorting injured and taking them back home.
- (e) Man personnel branch counters in CAC and discharge duties listed out for those counters.

4.10 DISASTER RESPONSE – CO-ORDINATION CENTERS:

4.10.1 Rushing of ARMEs & ARTs to accident site:

- (a) After ARMEs / (SPARME) and ARTs / (SPART) have been ordered, PCR should locate diesel powers for these ARMEs and ARTs.
- (b) First available diesel powers should be nominated, even by temporarily detaching from a Mail/Express train on run, if necessary.
- (c) 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.
- (d) In case a diesel power is not available on the division, then it should be requisitioned from adjoining division.
- (e) Requisitioning of diesel power should be done from following sections in the given order of priority:

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.

- (f) Movement of ARME/ (SPARME) and ART/ (SPART) should never be clubbed together. ARME should be started first and moved separately for faster movement.
- (g) ARMEs and ARTs should be dispatched from the base station, within the target time stipulated. Departure of ARMEs/ (SPARME) and ARTs/ (SPART) 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.
- (h) 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 utilise facilities of ARME/ (SPARME) after its arrival at site.
- (i) 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 any one.
- (j) 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.
- (k) Freight trains on run towards accident site should be reversed and returned.
- (l) Fresh stabling, if any, should be done beyond 7 stations on either side.
- (m) Even for stabling beyond 7 stations, both up and down loop lines should not be blocked at the same station.
- (n) For stabling beyond 7 stations, up loop and down loop should be blocked, at alternate stations.

4.10.2 Movement of Passenger Trains:

- (a) 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.
- (b) 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.
- (c) Trains should preferably be regulated at stations where food can be arranged.
- (d) Too many trains should not be simultaneously brought to a Jn. station for regulation, since it may create law and order problems.
- (e) 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.
- (f) Passenger trains can be run out to the next convenient location and thereafter terminated so that their rakes are available for use.
- (g) Divisional 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:
- (h) The above decision regarding diversion etc. should be taken in about an hour's time after ARMEs, ARTs / (SPARME/SPART), DRM special have been run out and there is a slight lull in the information flow.
- (i) 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.

- (j) Trains should be diverted from the last possible Jn. station onwards so that maximum number of passengers can detrain at their proper destination stations.
- (k) Sr. DEE/(TRO) would be in charge of co-ordination with operating department regarding requirement and availability of crew.
- (l) Sr. DEE/(TRO) will take into consideration changing traffic requirement and plan crew deployment accordingly.
- (m) Adjoining divisions should be informed about these diverted trains to sent spare crew to interchange points.
- (n) Necessary road learning should be arranged for diverted trains crew.
- (o) Loco Pilots nominated for working these diverted trains should be empanelled for working Mail/Express as per Railway Board's instructions.
- (p) 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.
- (q) A total of about 10 diesel powers would be deployed in the accident-affected section on different special trains at any point of time.
- (r) 3 sets of diesel crews should be planned for each diesel loco deployed at the accident site.
- (s) If required necessary diesel crew should be arranged from adjoining divisions.
- (t) In the absence of Sr. DEE/TRO, DEE/ADEE (TRD) will perform this function.

4.10.3 Running of Special trains:

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

- (a) ARME / (SPARME)
- (b) ARME from the other end.
- (c) Two additional ARMEs / (SPARMEs) from adjoining divisions, one from each end.
- (d) ART /(SPART)
- (e) ART/(SPART) from the other end
- (f) Two additional BD Specials one from each end.
- (g) 1st special train carrying DRM and other officers from Divisional Headquarter and some left over officers from division (in case it passes through the divisional headquarter).
- (h) Unaffected front portion of the accident involved train in case the same can be moved.
- (i) Unaffected rear portion of the accident involved train in case the same can be moved.
- (j) In case the front and rear portions cannot be moved, then they should be left as they are.
- (k) Two empty coaching rakes, one from either end for clearing unaffected passengers of the accident involved train.
- (l) 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 run out 2-3 hours after arrival of ARME carrying DRM and other divisional officers at the accident site.
- (m) 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.

- (n) Two light engines should be stationed, one at each station on either side of the accident involved block section.
- (o) Two Engineering specials, one from each end, carrying engineering material and Gang men from the section.
- (p) 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'-route. This is to be co-ordinated by Divisional Emergency Cell in consultation with Head Quarters.
- (q) 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.
- (r) 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.

4.10.4 Sequence of movement of ARMEs / (SPARME) and ARTs / (SPART) into the accident affected block section:

- (a) The sequence of sending and taking out various trains into and out of the accident affected block section should be planned carefully.
- (b) 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.
- (c) 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.
- (d) 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.
- (e) In case the front and rear portions cannot be pulled out then they should be left as they are.
- (f) After the 1st pair of ARMEs / (SPARME) reaches adjacent stations from either side, they should be sent into the block section, one from each end.
- (g) 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.
- (h) After all equipment's 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.
- (i) The 2nd pair of ARMEs / (SPARME) that has 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.
- (j) In case 2nd pair of ARMEs/ (SPARME) arrive before BD special, then item no (i) should be carried out before item no (g) and (h).
- (k) Both ARTs with 140T cranes should be regulated at least 1 station before so as not to clutter up the adjacent station.

- (l) Empty coaching rakes that have been sent for clearing uninjured passengers should be sent into the block section thereafter, while both ARMEs/ (SPARME) are still there.
- (m) 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.
- (n) After the work of ARMEs/ (SPARME) is over, all of them should be withdrawn and returned back.
- (o) The front and rear portion of the accident-involved train should now be withdrawn by sending diesel light engines into the block section.
- (p) Last of all both ARTs / (SPART) with 140T crane should be marshalled as per site requirement and sent into the block section with crane leading, one from each end.
- (q) Tower wagons should be sent in from each end following the ART/ (SPART).

4.10.5 **Setting of Divisional Emergency Cells:**

- (a) Divisional Emergency Cell shall be opened immediately after receipt of information of the accident at Divisional Control Office.
- (b) This unit will exercise control, co-ordinate and arrange supplementary assistance to the accident site.
- (c) It shall function in a separate cubicle at Divisional Control Office provided with centralised communication networks, hot line to the site and Headquarter.
- (d) Sr.DOM will be over all in charge 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.
- (e) In case Sr.DOM is not available, DOM (G) will be the Divisional Emergency Officer.
- (f) In case both officers are not available, any other officer nominated by DRM will take over charge.
- (g) 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.
- (h) 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.
- (i) 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-II.
 - ❖ Names and phone numbers of hospitals where injured have been admitted/shifted, along with number of patients.
- (j) 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.
- (k) Divisional Emergency Officer on duty shall chronologically record all information and instructions received or given in a logbook.

- (l) For Ahmedabad division, similar Emergency Cell will also be opened at Gandhidham Control Office. ARM-Gandhidham will function as Emergency Officer and discharge all duties listed above respectively.
- (m) 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.
- (n) 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.
- (o) If necessary, similar emergency cells will be opened at other major terminals as decided by Chief Emergency Officer.
- (p) After relief, rescue and restoration work is completed, winding up of Divisional Emergency Cells shall be decided by DRM.

4.10.6 Manning of Divisional Emergency Cell:

- (a) Divisional Emergency Cell shall be manned round the clock by officers.
- (b) 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 Emergency Cell round the clock.
- (c) 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 20 hours to 8 hours night shift).
- (d) Senior most officer of each department who is available in the Division shall be on duty in the Divisional Emergency Cell during the day shift only. (8 hrs. to 20 hrs.)
- (e) Senior most officer of each department shall issue a 12 hours roster for his own department for the night shift. (20 hrs. to 8 hrs.)
- (f) Round the clock roster of 12 hours shift duty should cover both officers and supervisors.
- (g) 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.

4.10.7 Duties of Additional Divisional Railway Manager:

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

4.11 DISASTER RESPONSE – ASSISTANCE FROM ADJOINING DIVISIONS/ZONES:

4.11.1 Necessity of assistance from adjoining Divisions/Zones:

- (a) No division can be equipped to handle a disaster of such a large magnitude like Ferozabad or Gaisal.
- (b) Assistance has to be sought from adjoining Divisions/Zones.
- (c) 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.
- (d) Whenever number of injuries is estimated to go beyond 50, assistance should be sought for from adjoining Divisions/Zones.
- (e) This is to be co-ordinate by the Chief Emergency Officer in Divisional Emergency Cell.

4.11.2 Assessment of assistance from adjoining Divisions/Zones:

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

4.11.3 Scale of assistance from adjoining Divisions/Zones:

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

Threshold level	100 > Injuries > 50	200 > Injuries > 100
No. of teams	1 team	3 teams
ARMEs	2	2 + 2
140 T Crane	2	2 + 2 (Break Down)

- (c) 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

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

Name of Division	No. of Teams
BRC division	2
Rajkot division	1
Ajmer division	1 North Western Railway
Mumbai division	1
Total	5

4.11.4 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.

Details of NDRF battalions covering Ahmedabad Division is as under:

S.N.	Name of the Commandant Location of Deployment	STD Code	Tele(O)	Mobile No.	Fax Nos.	Divisions covered
2.	Shri.R.S.Joon Commandant, 6 th Bn NDRF Chilora Road, Gandhinagar (Gujarat)	079	23202540	09428826445	23202540	BRC, ADI, RJT, BVP, & BCT (Partially)

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

4.11.5 Departmental assistance from adjoining Divisions/Zones:

4.11.5.1 S&T Department:

- Satellite telephones from ARTs of 5 remaining divisions of Western Railway.
- 5 existing Mobile Telephones from 5 remaining divisions (25 Mobiles in all) should be sent to site.

4.11.5.2 Electrical Department:

- Generators from ARTs of adjoining division.
- Lighting equipment's from ARTs of adjoining division.
- Portals and OHE masts.

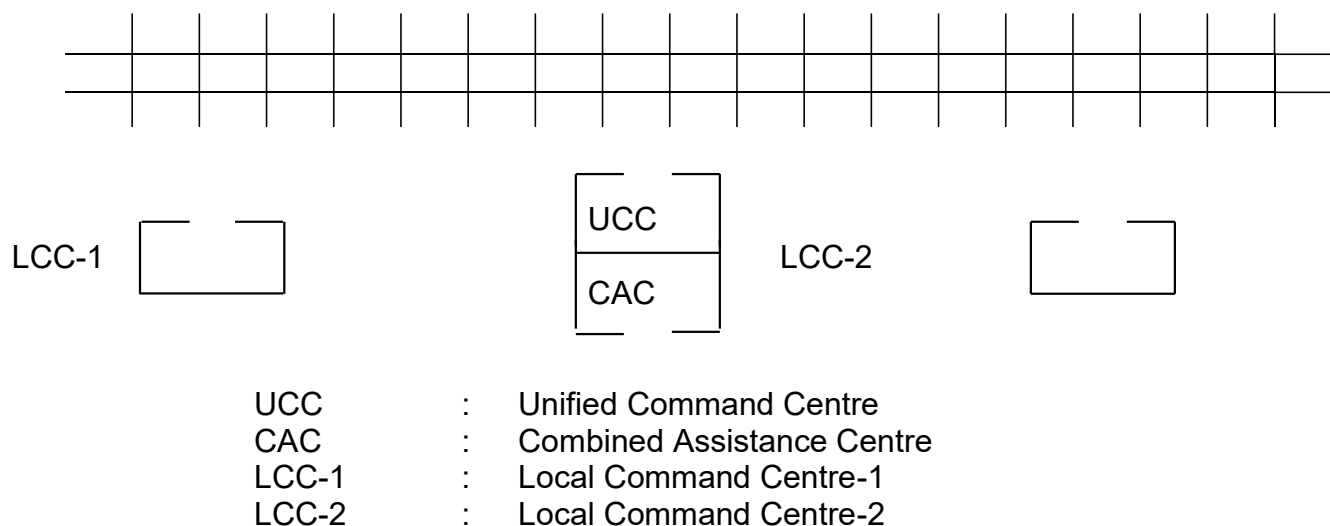
4.11.5.3 Civil Engineering:

- (a) 500 additional workmen are required are to be moved from adjoining divisions/zones.
- (b) Each such division sending assistance should move 250 men along with 5 artisans and 5 SSE (P.Way).
- (c) One DEN and one ADEN each should also move to the site of accident from each such division.

4.12 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 asunder.

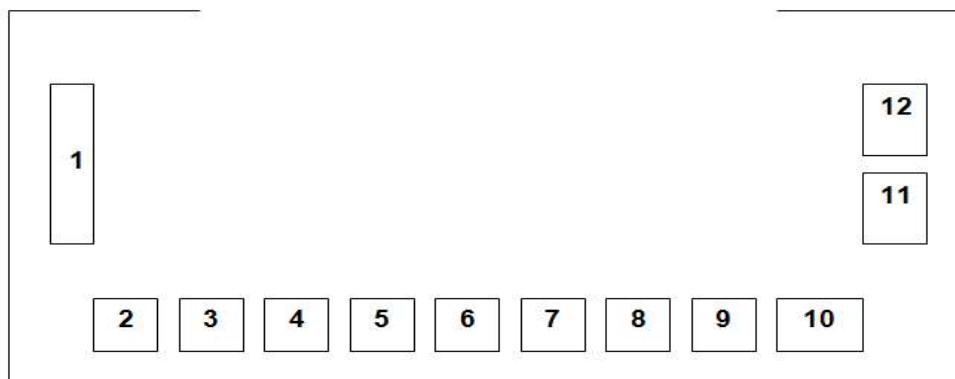
Outline Schematic Plan of UCC/CAC/LCCs



4.12.1 Unified Command Centre (UCC):

- (a) Unified Command Centre (UCC) should be set up at the accident site.
- (b) This will be some kind of a control office to be located near the centre of the accident site.
- (c) This is basically meant for catering to operational needs of railway in rescue, relief and restoration work.
- (d) Detail schematic plan of UCC is given as under. 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.

Detail Schematic Plan of UCC



1. Medical	5. Security	9. Electrical
2. Commercial	6. Public Relations	10. S & T
3. Operating	7. OC Site and Officers	11. Civil
4. Safety	8. Mechanical	12. Spare

- (e) UCC will be provided with all facilities similar to a control office.
- (f) Adequate lighting with generator backup should be provided in the UCC.
- (g) 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.
- (h) Satellite telephone should be installed in the UCC.
- (i) UCC should be provided with FAX, loudspeakers, P.A. system with conference facility for press briefing to be arranged by S&T Deptt. Mech. Deptt should arrange photocopier and PCs. in consultation with Sr. EDPM/Sr.DSTE.
- (j) PC/Laptop should be connected to Internet (if feasible) for E-mailing of details update to all concerned, including Divisional Emergency Cell, Headquarters' Emergency Cell and Helpline Enquiry Booths.
- (k) A big banner displaying 'UNIFIED COMMAND CENTER' should be put up at a prominent place at the entry to the shamiana.
- (l) Similarly there should be sufficient number of signage's indicating the way to UCC on approach roads etc.
- (m) UCC at the site will be manned by Sr. Supervisors on round the clock basis in 12 Hrs. shift duty.
- (n) 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 keep in touch with their departmental functionaries in UCC.
- (o) Various functionaries in the UCC will monitor and co-ordinate the working of their departments, and assistance required by them, if any.
- (p) 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.
- (q) UCC will basically supervise the working of 2 LCCs and co-ordinate with Divisional and Headquarters' Emergency Cell.
- (r) Functionaries of different departments in LCCs should provide updated information regarding progress of work to their counterparts in UCC.

- (s) This updated information should be provided once in every 3 hours starting from 1.00 hrs, throughout the day.

4.12.2 Local Command Centres (LCC):

- (a) Depending on the spread of the accident site, Local Command Centres (LCC) on the same pattern as the UCC should be setup.
- (b) If the site is spread out over 300-400 metres 2 LCCs should be setup.
- (c) Detail schematic plan of LCCs would be similar to that of UCCs as given in Item No. 4.12.1 (d).
- (d) 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.
- (e) LCCs will serve as co-ordination centres for various teams that are working spread out over different geographical locations.
- (f) Each LCC will oversee the working of DM teams at one end of the accident site.
- (g) Jurisdiction of each LCC will extend to all men and materials belonging to 2 ARMEs / (SPARME), BD special and 1 ART / (SPART) at that end of the accident site.
- (h) One SAG officer of Mechanical department will be overall in-charge of each LCC.
- (i) LCCs should be provided with loudspeakers for making announcements.
- (j) LCCs should be provided with direct telephone links to UCC.
- (k) 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 outflow of information from accident site goes out from UCC only.
- (l) 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.
- (m) This updated information should be provided once every 3 hours as detailed at 4.12.1(s) above.

4.12.3 Combined Assistance Centre (CAC):

4.12.3.1 Need for setting up of Combined Assistance Centre:

- (a) Relatives of passengers who arrive at an accident site are already traumatized by the tragedy.
- (b) They arrive at an unknown location with no place to stay, no friend or acquaintances and not knowing whom to turn to.
- (c) The problem is made even more challenging since many relatives and next of kin come from far-flung areas in some other state.
- (d) 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.
- (e) 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.

- (f) For taking care of relatives of passengers, providing them with succour in their hour of agony and for guiding them sympathetically, some kind of an assistance centre is required.

4.12.3.2 Formalities required to be completed by relatives of passengers:

4.12.3.2.1 Sequence of formalities that are required to be completed by relatives of injured passengers includes:

- (a) Locating the name of the passenger on reservation charts, in case passenger was travelling in reserved accommodation.
- (b) Going through the list of injured and dead passengers to find out whether the name appears.
- (c) In case the name is not available in the list, then taking a round of different hospitals to find out whether their relative has been admitted in one of them in an unconscious state.
- (d) Hospitals are generally at separate locations, sometimes even in different towns; and commuting becomes a problem.
- (e) 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.
- (f) Collect the ex – gratia paid by railways.
- (g) Try and locate missing luggage of the injured passenger. For this they have to take a round of the building where all unclaimed luggage have been kept.
- (h) Next, they have to arrange for a place for them to stay.
- (i) Arrange for medicines/diet etc. and payment of hospital bills, if required.
- (j) Thereafter, they have to keep in touch with the hospital and get their relative released.

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

- (a) In case the passenger could not be located in any of the hospitals, then they have to go to the building where unidentified dead bodies have been kept.
- (b) Take a round of various rooms where bodies have been kept, examine each body and try and locate their near and dear one.
- (c) Identify the dead body, if the same has been extracted by then.
- (d) Otherwise, wait for all bodies to be extracted and try and identify their relative.
- (e) In case, they fail to identify the same then they have to go through photographs of unidentified bodies taken at site.
- (f) After the body is finally identified, they have to produce proof of relationship for railways to entertain their claim.
- (g) Obtain medical death certificate from the railway doctor.
- (h) Obtain post mortem report, from the Govt. Doctor who has performed post mortem on the body.
- (i) Obtain official death certificate from the local municipality.
- (j) Accept of ex – gratia payment from railways.
- (k) Collect forms for lodging claim for compensation in RCTs.
- (l) Take over custody of dead body from the local police.
- (m) Perform last rites at the same place or take back the body to their native place, depending on circumstances.

- (n) Make arrangements for their return journey back to their native place.

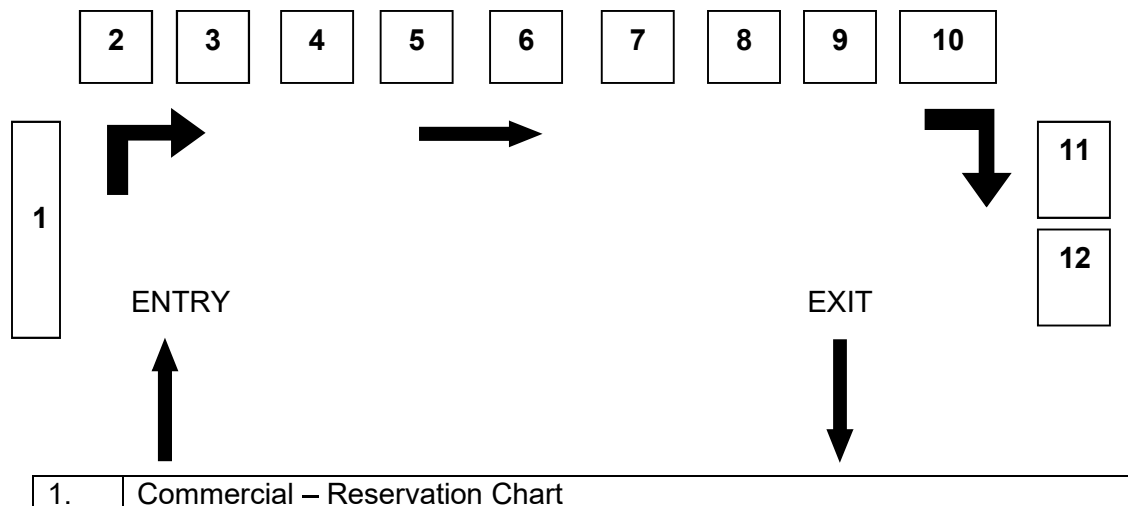
4.12.4 Problems encountered by relatives:

- Each of these formalities are under the jurisdiction of a different agency, either railway or police or civil administration or local administration.
- In such a situation the level of co-ordination between these various agencies leaves much to be desired.
- Sometimes it even takes up to 48 hours before these entire documentary formalities can be completed.
- 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.
- For this purpose a single window clearance system should be available for relatives and next of kin.

4.12.5 Combined Assistance Centre (CAC):

- 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 Item No. 4.12.
- 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.
- Combined Assistance Centre (CAC) should be separate from the UCC so that it does not interfere with normal rescue and relief work.
- Detail schematic plan of CAC is given as under.

Detail Schematic Plan of Combined Assistance Centre



2.	Medical – List of dead and injured
3.	Commercial – Provision of escort and vehicle
4.	Railway Doctor – Issue of Medical Death Certificate
5.	Govt. Doctor – Issue of Post Mortem Report
6.	CAC in-charge and Officers
7.	Municipality Official – Issue of Death certificate
8.	RPF / Local Police – Issue of authority for handing over dead body.
9.	Commercial – Payment of ex-gratia, Issue of Claims forms
10.	Commercial – Assistance for performing of last rites.
11.	Personnel – Issue of Return Journey Pass.
12.	Operating – Arrangement for Return Journey.

- (e) CAC will be manned by staff of relevant departments such as: Operating, Medical, Commercial, Security and Personnel.
- (f) There should be only one such CAC, and all railway resources should be pooled into it.
- (g) LCCs should not have any small CAC located in the rear. It is likely to create logistic problems.
- (h) A big banner displaying 'COMBINED ASSISTANCE CENTRE' should be put up at a prominent place at the entry to the shamiana.
- (i) Similarly there should be sufficient number of signages indicating the way to CAC on approach roads etc.
- (j) Railway staff fluent in the language of relatives should be posted for doing work of interpreters.
- (k) Post mortem formalities should be waived off so that one reduces number of formalities.
- (l) Different counters should be provided in sequence for each of these formalities, so that the entire exercise can be completed in about an hour.
- (m) 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.
- (n) CAC should have different counters for various purposes in following sequence:
 - (i) Reservation Chart for locating the name.
 - (ii) 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.
 - (iii) Counter for providing commercial supervisor or WLI as escort along with a vehicle, for accompanying the relative and going to hospital or mortuary.
 - (iv) Railway doctor for issue of Medical Death Certificate.
 - (v) Govt. Doctor for issue of Post Mortem Certificate, in case the same is necessary.
 - (vi) Municipality official for issue of Official Death Certificate.
 - (vii) Local police for issue of authority for handing over of dead body.
 - (viii) Claims counter – payment of ex-gratia and issue of Claims Compensation form.
 - (ix) Counter for helping performance of last rites in case relatives decided to cremate the body there itself.
 - (x) Pass counter for issue of return journey pass.

- (xi) Return journey facilitation counter for making arrangements for return journey.
- (o) CAC will provide updated information to UCC, initially once every half an hour and later once every hour.

4.12.6 First Aid Posts:

- (a) Medical Posts should be provided in both UCC and CAC.
- (b) 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.
- (c) Medical Post in CAC will keep all records of injured and dead passengers, names of hospitals where they have been admitted etc.
- (d) First Aid posts should be provided in LCCs.
- (e) This will be meant for treating passengers and classifying their injuries before they are sent for admission to various hospitals.

4.12.7 Setting up of UCC, LCC and CAC:

- (a) One SSE/Works shall be exclusively responsible for setting up of these facilities. He shall undertake 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.
- (b) Engineering Staff/Bridge Line staff will assist in setting up tentage and above-mentioned facilities. Dy. CE (Construction/Bridge) will also move to the site and in case, bridge is not involved, he will take full charge of tentage arrangements.
- (c) Bridge Unit will take with them sufficient Manila ropes, wire ropes, survey instruments, binoculars, helmets, life jackets, ladders and other equipment. Nylon ropes should be sufficient in length to ensure barricading at sites and camping areas.
- (d) Sufficient facilities for erecting temporary stage/scaffolding etc. should also be organised, if required at site.
- (e) Few temporary toilets should be provided at one location in addition to number of urinals at 3 or 4 places.
- (f) Water Tankers will be ordered for supplying water at site and arrangements shall also be made for drinking water.
- (g) 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.
- (h) About 100 folding chairs should also be arranged.
- (i) 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.
- (j) Signages for both UCC and CAC should be provided at prominent locations.

4.12.8 Collection and Dissemination of Information – Channel of Communication:

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.

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.

4.12.8.1 Number of dead and injured – Medical Department:

- (a) Medical department at site should confirm the number of dead.
- (b) Doctors in charge of various teams working on different coaches should give 3 hours report to Medical counter in LCC who in turn will inform UCC.
- (c) Number of injured passengers.
- (d) Type of injuries, whether grievous, minor or trivial.
- (e) Names of injured, and names of various hospitals where injured have been sent.

4.12.8.2 Identification of dead bodies – Commercial Department:

- (a) Ex – gratia paid to injured.
- (b) Number of dead bodies identified.
- (c) Ex – gratia paid to next of kin of the dead.
- (d) No. of dead bodies handed over to relatives.

4.12.8.3 Number of coaches dealt with – Mechanical Department:

- (a) No. of coaches thoroughly searched.
- (b) No. of coaches made off track.
- (c) No. of coaches yet to be dealt with.
- (d) Time required for restoring track for traffic use.

4.12.8.4 Track Fit Certificate - Engineering Department

Time required for restoring track for traffic use.

4.13 PASSENGER CARE:**4.13.1 Hospitalisation of the injured:**

- (a) 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 scales are 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.
- (b) 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 misunderstanding, CMS should draw up a list of such private hospitals bearing in mind Railway and non-railway hospitals in existence in the vicinity. CMS should also settle charges to be paid to the hospitals for such cases for each class of accommodation/diet etc.
- (c) Bills by such private hospitals should be submitted through CMS who will certify the correctness of charges payable, before passing for payment by Sr. DFM 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) & Para 712 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.)
- (d) 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.

4.13.2 Catering Arrangements:

- (a) The affected passengers and their relatives are to be treated with utmost courtesy, concern and sympathy to alleviate 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.
- (b) 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.
- (c) 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.
- (d) 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).

4.13.3 Facilities to be made available in hospital:

- (a) 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 patients relatives.
- (b) Commercial staff at the hospital should carry a list indicating the name, address and telephone no, of relatives as given by the patient.
- (c) Arrangements should be made to inform the next of kin or a relative.
- (d) Complete medical care of all passengers including payment of medical bills till their final discharge should be provided.

4.13.4 Communication:

- (a) 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)
- (b) BSNL/Railway Telephones available at adjoining Stations/Cabins/Gates shall be extended to the accident site.
- (c) 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.
- (d) SM 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/1 dtd 12.05.03).

4.13.5 Taking care of relatives:

- (a) A hired vehicle should be provided relatives of affected passenger for carrying them to various hospitals and mortuary.
- (b) 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.
- (c) Thereafter, they should help him in completing all formalities in the CAC.

4.13.6 Single window clearance:

- (a) CAC should have provision of single window clearance for all legal formalities & multiplicity of paper work.
- (b) Counters provided in CAC should have facilities for following items in the given sequence as indicated in Item No. 4.12.5 (d).
 - (i) Reservation chart, for locating the name.
 - (ii) 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.
 - (iii) 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.

- (iv) Railway doctor for issue of Medical Death Certificate.
- (v) Govt. Doctor for issue of Post Mortem Clearance, in case the same is necessary.
- (vi) Municipality official for issue of Official Death Certificate.
- (vii) Local police for issue of authority for handing over of dead body.
- (viii) Claims counter – payment of ex - gratia and issue of Claims Compensation From.
- (ix) Counter for helping performance of last rites in case relatives decide to cremate the body there itself.
- (x) Pass counter for issue of return journey pass.
- (xi) Return Journey facilitation counter will make arrangements for return journey.

4.14 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 into action to save lives and property. In this context, the railway servants are expected to have a basic knowledge on fire and firefighting methods.

Continuous heating due to brake binding, hot axles etc. may also cause a fire. Split liquid fuel can catch fire quickly than the liquid in bulk.

4.14.1 Main causes of fire in Trains:

- (a) Carrying stoves, sigris, gas cylinders, kerosene oil, petrol, fireworks etc. in passenger compartments.
- (b) Making fire/using fire near paper, wood, petrol or such other inflammable articles.
- (c) Lighted match sticks, cigarette ends carelessly thrown.
- (d) Short circuit in electrical wirings.
- (e) Using naked light during authority token delivery to the loco pilot, shunting of inflammable loads, sealing of inflammable wagons.
- (f) Use of open fire, smoking near gas/petrol tank.

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.

4.14.2 In case of fire in Train:

4.14.2.1 In the event of a vehicle on a train being on fire:

- (a) Stop the train immediately.
- (b) Don't panic.
- (c) Evacuate passengers from burning coaches.

- (d) Protect property, valuables & mails.
- (e) Locate fire extinguishing substances viz, water bucket with water/sand, fire extinguishers etc.
- (f) Use fire extinguisher if any and put out the fire.
- (g) Use water from the coaches and extinguish the fire.
- (h) Throw earth or sand, if available, on the fire.
- (i) Ascertain the type of fire viz, dry, oil gaseous, electric and use the right type of extinguishers.
- (j) Isolate the burning vehicle from other vehicle by uncoupling.
- (k) Train to be protected by Loco Pilot and Guard at both ends according to the provision of G&SR 6.03.
- (l) Report it to the nearest station/control/fire station.
- (m) Every effort shall be made to extinguish the fire and to save the wagon labels, seals and contents of the vehicle.
- (n) In case fire is discovered when the train is near a tank or watering station, the Guard and Loco Pilot 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.
- (o) Inform all concerned to assist in extinguishing the fire.
- (p) In case of fire from electrical short circuit switch off the source.

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

- (a) Loco Pilot/Motormen shall immediately switch off the circuit and lower the pantograph. The train shall then be brought to a stop at once.
- (b) After disconnecting the electric supply to affected circuits, Loco Pilot/Motormen shall take necessary action to put out the fire.
- (c) Motorman and Guard to use available on board Fire extinguisher both in motor coach and Driving trailer Coaches.
- (d) 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.
- (e) The guard and any other staff available shall render all possible assistance to the Loco Pilot/Motormen in putting out the fire.
- (f) 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.

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

- (a) 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.
- (b) The Guard shall give all possible assistance to the Loco pilot/Motorman in putting out the fire.
- (c) 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.

4.14.2.4 When a person is on fire:

- (a) Approach him holding the nearest available wrap in front of you.
- (b) Wrap it round him.
- (c) Lay him flat and smother the flames.
- (d) He may roll on the floor, smothering the flames.
- (e) On no account should he rush out in the open air.
- (f) Call for assistance.

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

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

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

- (a) Extinguish by closing the valve or isolating LPG feed to fire by other suitable controls.
- (b) Following steps may be taken if no undue risk is involved:
 - (i) Move unheated cylinders to a safe place after ensuring closing of valves.
 - (ii) 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.
- (c) 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.
- (d) Inform the Chief Controller of Explosives by fax/telephone.
- (e) Inform officer in charge of nearest police station.
- (f) Inform department officers concerned.
- (g) Pending the visit of the Chief Controller of Explosives/his representative, the wreckage and debris shall be left undisturbed except to save lives.
- (h) After getting information from the Chief Controller of Explosives that he does not wish any further investigation, the restoration work may be commenced.

4.14.3 Fire Fighting:

4.14.3.1 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.

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

- (a) Carry to the place of fire and keep it up right.
- (b) Remove the safety clip.
- (c) Strike the knob located in the cap.
- (d) Sealing disk of the cartridge gets broken and allows carbon dioxide gas to escape to the main shell and powder is pushed out.
- (e) Direct the stream of the powder at the base of the flame.
- (f) For effective result stand at about 1.5 to 2.5 metre near the seat of the fire.
- (g) Move forward with moving the nozzle rapidly from side to side in sweeping motion.
- (h) When using on outdoor fires operate from the up wind side for effective spray.

4.14.3.3 Building Evacuation:

When the building fire alarm sounds:

- (a) Immediately evacuate using building emergency plan procedures.
- (b) Walk to nearest exit/stairwell (close doors behind you)
- (c) Don't use elevators.
- (d) Proceed to the designated gathering area outside the building.
- (e) Do not re-enter building until cleared by authority personnel.
- (f) Assist with evacuation of individuals with special needs.

4.14.3.4 Suspicious substance in Railway premises:

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

4.14.4 Other Accidents:

4.14.4.1 Bomb threat/Blast:

Person receiving call regarding bomb threat should:

- (a) 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.
- (b) Inform and alert the disaster management team (Bomb detection squad)
- (c) Alert police, fire brigade and explosive department.
- (d) Pass on the information to all departments concerned.
- (e) Take initiative for evacuation of all persons from premises.
- (f) Persons noticing a bomb like object, should bring it to the notice of the nearest available officer.
- (g) Inform GRP, RPF, and bomb detection squad.

- (h) Ensure all persons are away from the spot and avoid unnecessary crowding near the area.
- (i) Inform control to take further steps for regulating train services.
- (j) Wait for clearance from the police department to restore normal working.
- (k) Utilise “Caller ID” facility if provided to trace the caller.

4.14.4.2 Radiation Emergency:

(a) 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.

(b) 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.

4.14.4.3 What to do upon receipt of suspicious letter/package:

- (a) Handle with care.
- (b) Don't shake or bump.
- (c) Isolate and look for indicators.
- (d) Don't open, smell or taste.
- (e) Treat it as suspect.
- (f) Call Police/Fire service/Bomb squad.

4.14.4.4 If parcel is Open and/or Threat is identified:

(a) For a bomb:

- (i) Evacuate immediately and Call Police/ Fire service/Bomb squad.

(b) For Radiological:

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

(c) For Biological or Chemical:

- (i) Isolate – don't handle and Call Police/ Fire service/Bomb squad.
- (ii) 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.

4.15 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.

4.15.1 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.

As per Annexure to RB letter No.2010/Safety (DM)/6/23 dated 09.03.2017, instructions on Mock Drill and Full Scale Disaster Management Exercises are as under.

1. Aim and Objectives

Mock Drills provide virtually the only means, short of an actual incident, of measuring the state of readiness and of testing the effectiveness of an emergency response plan. The real purpose of mock drill is to make all Railway Staff who have specific duties to perform in case of an accident, to practice their duties regularly and test check the equipment so that in real emergency they perform their duties like a well-rehearsed team. The Aim and objective of Mock drill is to:

- To evaluate response.
- To evaluate readiness of all stake holders.
- To improve coordination within departments.
- To identify the efficacy of SOPs.
- To revise SOPs for enhanced coordination.
- To identify planning gaps.
- To increase emergency preparedness of staff members.
- To enhance the ability to respond faster.

2. Periodicity

Full scale disaster management exercise has to be conducted in a division once in a year as recommended by High Power Committee on disaster Management. However, Mock Drill has to be conducted at a periodicity as directed by HQ/Railway Board

3. Responsibility for conducting the Mock drills and full scale disaster management exercises.

To have an element of surprise mock drills shall be ordered by the DRM and drills shall be conducted under the direct supervision of Sr.DSO /DSO. Secrecy and confidentiality

shall be maintained to extent possible. SrDSO/DSO shall be responsible to conduct full scale disaster Management Exercises.

4. Who has to associate with these exercises?

Doctors, paramedics and the usual break down staff should travel by these trains exactly as they would have to in case of an accident. Railway Ambulance should also be turned out. The officers and staff of such other departments who have specific duties to perform in case of accidents but may not have to accompany such trains should also participate. District administration to the extent required also has to associate with these drills.

5. Activities to be monitored during Mock drill.

- Turning out of relief trains within prescribed time.
- Speed of specials
- Attendance of staff
- Whether correct information given to control particularly in respect of nature of assistance required.
- Action taken to stop any approaching train if any.
- Medical assistance available mustered in full strength and calling out of local ambulances.
- Time at which first ambulance reached the spot.
- Response of the local administration like police, fire brigade etc.,
- Time taken to set up field telephone.
- Time taken to set up rescue equipment.
- Staff conversance in usage of equipment.
- Working of select equipment shall be test checked.
- Logging of events.
- Mockdrill shall be called off by Sr.DSO/DSO after consulting DRM.

6. Procedure for full scale Disaster Management Exercises.

Full scale disaster management exercise is a planned activity to check complete preparedness, response and functioning of all stake holders in case of disaster. Station at which these exercises are planned should be selected in due consultation with DRM and Operating officers to ensure least disturbance to train operations. In these exercises in addition to the activities to be carried out in mock drill indicated in Para 5, the following shall be carried out.

- Accident like situation has to be created like one coach over another so that rescue operations can be similar to an accident site.
- All the stake holders have to be involved in the rescue and relief operations.
- All the activities prescribed in the Accident Manual/Disaster Management plan regarding setting up of UCC, LCC, CAC etc., have to be carried out.

- Railway staff can double up as injured passengers with various types of injuries and handling of such passengers by rescue staff needs to be observed/recorded.
- Time taken to set up rescue equipment and time taken to rescue first person should be recorded.
- All the equipment in ARMV/ART/ (SPARMV/SPART) have to be physically tested for their performance and endurance.
- All the activities need to be video graphed for post analysis and also for training purpose.

7. Reporting and follow up action.

Detailed report of the mock drill and full scale disaster management exercise shall be prepared by SrDSO/DSO duly indicating attendance of nominated staff from each branch, non-attender to be reported by name, deficiencies in the equipment, gap in the disaster management plan and SOPs etc,. The report should also include any improvement or otherwise in the deficiencies observed in the previous drills. SrDSO/DSO shall monitor the action taken on the deficiencies by the respective departments.

Chapter 5: Strengthening Disaster Risk Governance

5.1 Background:

Strengthening disaster risk governance is considered a cornerstone of the efforts to understand, reduce and manage risks in global practices (UNDP 2015). UNDP defines disaster risk governance as follows (UNDP 2013):

“The way in which public authorities, civil servants, media, private sector, and civil society at community, national and regional levels cooperate 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 publically 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 stakeholders 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.

Chapter 6: Disaster Management Plan of Railways – Periodical Review

6.1 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 to be 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.

6.2 HQ Disaster Management Plan:

This Disaster Management Plan 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.

6.3 Divisional Disaster Management Plans:

Divisional Disaster Management Plans will contain division specific information. It will generally contain divisional action plan for dealing with all types of railway disaster. It is not restricted only to detailed inventory of Railway and non-Railway resources as envisaged in High Level Committee's Report on Disaster Management. It should focus mainly on further new developments of sharing of resources with all stake holders. It should also have, thereafter, divisional specific information like road maps, etc. Information common to all divisions of a Western Railway may be replicated uniformly in DM Plans of all divisions. Divisional DM plan should contain information about the following:-

- 1) Role and responsibilities of officers and other stake holders at the accident site and in the divisional control room.
- 2) Site Management plans
- 3) Do's and don'ts in handling various types of accidents involving chemicals, oil and natural gas, nuclear materials etc.,
- 4) Precautions to be taken in case of fire accidents.
- 5) Action plan for Management of Crowd at stations during festivals and events of mass gathering.
- 6) Details of Incidence Response System.
- 7) Passenger care and Managing of Dead Bodies.
- 8) Media Management.
- 9) Vulnerability profile of the division from various natural disasters like Earth Quakes, Tsunami, Floods, Avalanches, Landslides, Cyclones etc.,
- 10) Details of Vulnerable bridges and their location.
- 11) Telephone Nos. including Mobile Nos. of all important railway officials at both Zonal & Divisional level and telephone Nos. of all stations, blocks etc.
- 12) Location of ART&ARME/SPART and of adjoining division and of adjoining Zonal Railways.
- 13) Inventory of medical facilities within Division, Doctors, Hospitals including their specialisation/No of beds, Nursing Home, Ambulances etc.,
- 14) Details of District & State Officials.
- 15) Details of Fire service stations.
- 16) Details of Defence establishment including Army, Navy & Air Force.
- 17) Details of Helipads/location where a small plane or helicopter can land.
- 18) Contact details of Oil and Gas companies and Chemical industries.
- 19) Details of social organisation/NGOs.
- 20) Inventory of agencies with earth moving equipment like road crane, bulldozer, boats, diving equipment etc.
- 21) Details of skilled divers with their name and contact details.
- 22) Details of road transport facilities, distance map superimposed on division map, detailed road maps etc.
- 23) Details of forensic personal.
- 24) List of materials in ART&ARME.
- 25) Details of para-military establishments.
- 26) List of Government and private helicopter service providers/their contact numbers.
- 27) Contact numbers of Scouts and Guides.
- 28) Contact details of St. John Ambulance services

6.4 Periodical Review of Disaster Management Plans:

The DM Plans of divisions to be 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, Western Railway and Railway Board are to be made. The DM Plans of the State Governments and of the Districts need to be gone into periodically and changes incorporated in the respective DM Plans of Divisions.

6.5 Nodal Department for Compilation/Updating of DM Plans:-

Safety department on the Western Railway is responsible for compilation of DM Plans at HQ and Divisional Levels which will be reviewed in January every year. These Plans will also to be 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.

Chapter 7: Capacity Building to Handle Disaster

7.1 Capacity Development – An Overview:

7.2 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 on 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.”

7.3 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 7-1. 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.

Table 7-1: Summary of Broad Capacity Development Themes:

Capacity Development Themes	
Key Aspect	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. • Mainstreaming 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 health care . - Business resilience, and protection of livelihoods and productive assets throughout the supply chains, ensure continuity of services and. - Integrate disaster risk management into 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. - Comprehensive revamping of Fire and Emergency Services with 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.

7.4 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 organise 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.

7.5 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 of rural and urban local bodies. 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 of rural and urban local bodies.

7.6 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.

7.7 National and State Disaster Resource Networks:

India 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, for managing 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.

7.8 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 given below on the basis of proper capacity development needs assessment.

	Task	Central	Activities	Responsibility in Railways
1.	Deploying good resources, advanced technology and equipment	GoI, 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.

	Task	Central	Activities	Responsibility in Railways
2.	Strengthening training institutes for disaster management.	NIDM, MoHRD, MHA, NDMA	- Research and extension support grants - Create/strengthen state level DM institutes.	Establishment directorate.

7.9 National Disaster Response and Mitigation Funds:

7.9.1 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 mainstreaming 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 Planning Commission will give due weight age to these factors while allocating resources.

7.9.2 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.

7.9.3 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.

7.10 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 need 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; TF Exchanges; RRI of Junction Stations, Major Bridges, Tunnels of long lengths, Hospitals etc. are very sensitive/vulnerable locations.

7.11 Terrorist attacks on a freight train carrying inflammables:

Railways have an excellent liaison with the Oil Companies due to the transport of 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 8: Medical Preparedness and Hospital Disaster Management Plan

8.1 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) / (SPRME) – Scale I (Unit of accident relief trains situated at an average distance of every 300kms on main lines and 400 km on branch lines), 320 Accident Relief Medical Equipment (ARME) – Scale II consisting of three sets of Portable Medical Kit for Accidents (POMKA). 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 Ministry of Railway, though this resource may be available in a limited manner for assistance of the district administration for mass casualty management. All Government Hospitals are with MOU in Ahmedabad division.

8.2 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, multidisciplinary 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 health care 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 containerised mobile hospitals will be acquired and attached with hospitals earmarked by states/districts.
- Capacity development will include training of all stakeholders 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-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.

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 into the district DM plans. The major guideline include: -

- 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 Dos 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 stake holder 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 Para medics, 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 Para medics and medical officers for the limited role for your own set up.

8.3 NDMA's Guidelines on Medical Preparedness and MCE:

In the NDMA's Guidelines on Medical Preparedness and MCE, under the head of Medical Preparedness (Page 31) in Item 3.3.3 (i) no. 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, in item (ii) (b), 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 review meeting held with Railway Ministry representatives that the MFR would be NDRF and along with trained personnel of State Governments and District Administration. This may be specifically clarified in the Zonal and Divisional DM Plans as to who is considered as MFR.

8.4 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.

8.5 Hospital DM Plan:

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) referring to "Important Considerations for Developing the Hospital Disaster Management Plan".

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."

8.6 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.

8.7 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.

8.8 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, equipments 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 Institute/s.

8.9 Preparedness of Western Railway:

S.N	RB DMP Guidelines	WR preparedness
1	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).	Western Railway has arranged two rounds of Basic CBRN training of doctors and paramedical staffs in which total 34 persons have been trained so far.
2	Medical preparedness (Preventive and Mitigation measures) viz. upgrading Public health laboratories and establishing an Integrated Disease Surveillance Program (IDSP).	JRH is having in house advanced Laboratory capable of meeting the increased load in case of disaster. In divisional hospitals services are provided from out sourced private laboratories as and when required.
3	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.	The staff nominated for EMR and hospital "A" and "B" team are well trained in mass casualties management and refresher course has carried out regularly. In JRH Emergency Medical Response is done by structured medical teams as per Hospital Disaster Management Plan. Hospital has 3 ambulances. However, there is no Integrated Ambulance Network Services. Defined role of individual medical personnel is to be adopted.
4	Availability of medical logistics in critical care	Availability of medical logistics in critical care available as per provision of Railway Board.
5	Availability of Cold chain system in blood transfusion services	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. JRH is having Blood storage unit which can maintain cold chain. There is list of voluntary blood donors in case of emergency.
6	Specialized facilities for CBRN management	JRH and other divisional hospitals are not equipped with CBRN Disaster Management equipments/ accessories. But persons are being trained in handling such situations.
7	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.
8	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.
9	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.
10	Training to railways Para medics, Medical First Responders and Quick Medical Reaction Teams (QMRTS) 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	The provision of PPE (Personal Protection Equipment) is not available at present to paramedics and medical officers for limited role in case of CBRN attack within the train or platform.
11	Provision of personal protection equipment and other equipment, to Para medics 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 not available at present to paramedics and medical officers for limited role in case of CBRN attack within the train or platform.
12	Training for Trainers of Medical department so that this could be	Training for trainers has been given at NDRF/BRC and subsequently more than

	proliferated to other Doctors and other Para Medical Personnel on all Indian Railways in nominated Railway Training Institute/s.	40% are being trained 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, equipments and disposables etc as per National Plan.	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.
13	Training of Fire detection and suppression system at important installations.	Fire detection and suppression system is in place in JRH and other divisional hospitals and is functional.
14	Identification of sensitive/Vulnerable installations & infrastructure for modernization of Relief/ Rescue during disasters (Ref 7.9 of RB DMP-2017).	JRH is Tertiary Hospital and is suitable for vulnerable installation.

8.10 Hospital Disaster Management Plan of Ahmedabad Division FORMATION OF TEAMS:

1. TEAM 'A':

To accompany ARME or move by road at the outset along with all the sets of POMKA. Team 'A' will be headed by CMS/SBI. He will move with nominated doctors, nursing staff, dresser, H.A., ayahs and safaiwalas.
(Details of Team 'A', 'B', 'C' and for Control Office are in DM Plan Part-II)

2. TEAM 'B':

Nominated doctors, ANO, metrons and all other remaining staff of hospital to remain in hospital.

3. TEAM 'C':

Will work as Reinforcement Team. To move as per the need on the instructions of I/C Hospital Team by any means. The team 'C' consists of nominated doctor, pharmacist, OT assistant, matrons, ayah and safaiwalas.

All the staff residing within the Railway Colony or in the vicinity of the Hospital/Railway Station should report to the Hospital incharge/ARME Incharge on sounding of the hooter/siren as per the alert code within 10 minutes. Team to depart within 20 minutes in case of ARME having double exit and 30 minutes in single exit.

4. CONTROL:

One Doctor/& both pharmacists at KKF H.U. will be deputed to man the control. With one pharmacist is deputed to go to division control, second pharmacist to

remain in control in eventuality of ARME movement towards VTA side when Sr. DMO-KKF & one pharmacist of KKF would try to accompany ARME. Sr. DMO-KKF will maintain a log book of all the information received and details of accident.

ALERT CODE.

1. Siren Hooting :

Four Whistles of 45 Sec Duration Each.

2. Telephonic Information :

- A. From Control.
- B. From Station Master.
- C. From Any Other Source.

RESPONSIBILITIES OF THE MEDICAL STAFF OTHER THAN THOSE INVOLVED DIRECTLY WITH DISASTER MANAGEMENT OF THE DIVISION.

Sr. DMO-KKF and CMP-VTA should be informed about any disaster in the Division. They should remain in touch with the I/c Hospital team and act as per his instructions.

Sr. DMO- KKF and CMP-VTA should ensure that their staff should be available at short notice to participate in any Rescue and Relief Operation of the Division.

Sr. DMO- KKF should be informed about the movement of ARME (BG) when it is ordered towards BRC side and he/she should accompany the ARME IF POSSIBLE

Duties And Responsibilities.

1. PERSON IN THE CONTROL:

- A. Liaise between the team at the site and the hospital.
- B. Coordinate the relief measures and establish effective communication between the accident site, railway hospital and railway administration and civil authorities and ensure that back up measures are taken as per the advice.
- C. Will act as a mediator between the I/C accident site and the I/C Hospital team.
- D. Will establish communication link with the HQ office and UCC.

Duties And Responsibilities Of Hospital Staff.

1. Sister on Duty in Female Ward:

- A. She will gather relevant information from any source i.e. Control, ASM on duty, Doctor I/C of the section, Loco, etc.
- B. She will note the following:
 - a) Date & Time of receiving information/ Hooting of Siren.
 - b) Name & Designation of the person giving information.
 - c) Place of Accident - exact location/ Km no/ LC gate no/ Section, etc.
 - d) Type of Mishap - collision, derailment, fire, blast, etc. The train numbers will be noted.

- e) Time of Mishap.
- f) Estimated number and type of casualties.
- g) Name of other Hospitals being alerted and other Medical Services being called for providing medical relief.
- h) Call for help from the other sister on duty.
- i) Ensure that the Ambulance leaves within the shortest possible time.
- j) Inform the members of the other team.
- k) Keep in touch with the control and gather updated information till some senior person takes over.

2. Sister On Duty In The Male Ward/ ICU:

- A. On hearing the hooter, both the sisters will immediately go to assist the sister in the Female ward.
- B. Sister on duty in ICU will take on the responsibility of informing the members of Team 'A'.
- C. Sister on duty in Male Ward will ensure that POMKA'S along with additional items are taken to the ambulance and loaded. The keys will be taken by her.
- D. Sister on duty in Male Ward along with the available staff will then proceed to catch the ARME at the earliest & ensure that the team reaches within the stipulated time limit of ARME movement --- 15/20 mins during the day & 20 mins during the night from the time of information received/ whistling of hooter.

3. Other Staff On Duty:

They will help the sisters in performing their tasks quickly and effectively.

NOTE: WHEN THE AMBULANCE IS NOT AVAILABLE THE STAFF WILL REACH THE ARME BY WHAT EVER MEANS POSSIBLE.

4. MEMBERS OF TEAM ' A' :

(A) CMS:

- He will be the overall I/C of the Rescue & Relief operations at the site of accident.
- He will liaise with the other Departments working at the site.
- He will coordinate with other Agencies working at the site.
- He will communicate with the Divisional & Zonal HQ's.

(B) ADDL CMS(S) & (ORTHO) :

- He will man the Surgical Post and will do needful.

(C) ADDL CMS (P):

- He will man the Resuscitation Post and will do the needful.

(D) DOCTORS:

- Others than those mentioned above, will be allotted duties by the CMS/ I/C at the site.
- Duties will depend upon nos of Doctors available at the site.

(E) NURSES:

- They will assist the Doctors at the various posts.
- They will provide necessary treatment wherever required.
- Any other work assigned.

(F) PHR'S:

- They will distribute medicines.
- They will man the Reception and Comfort & Dispatch Posts
- They will maintain all records.
- Any other work assigned.
- They will prepare list of all casualties in quadruplicate and will note the following details of the injured:
 - (a) Name of the Injured.
 - (b) Father's / Husband's Name.
 - (c) Age & Sex.
 - (d) Address.
 - (e) Ticket/PNR no.
 - (f) Destination: From-----To-----.
 - (g) Two Marks of Identification.
 - (h) Type of Injury: Trivial / Simple / Grievous.
 - (i) Nature Of Triage : Dead / Critical / Serious /
 - (j) Simple / Sorrowful.
 - (k) Transferred To / Sent Home.
- They will prepare token cards for the critically and seriously injured passengers giving the following information:
 - (a) Name, Age, Sex, Father's/Husband's Name.
 - (b) Address.
 - (c) Ticket/PNR No.
 - (d) Type of Injury.
 - (e) Nature of Triage.
 - (f) Token No.
 - (g) Details Of First Aid Rendered.
- They will ensure that the Tokens are tied to the (R) Wrist of the injured properly.

(G) Health Inspector:

- He will arrange for the cleanliness of the area and the toilets and disinfection.
- He will make announcements about the medical relief being provided if not done.
- He will assist at the Reception / Comfort and Dispatch post as per the need.
- He will ensure that the Dead are properly tagged, covered and kept at a safe place coach wise.
- He will ensure that the Dead are properly handed over to the Police and receipt taken.
- Any other work assigned.

(H) Dresser:

- He will man the First Aid Post in FFD, LCC
- He will do the dressing of the injured.
- He will assist in the Surgical post if needed.
- Any other work assigned.

(I) HA / HA cum S/WALA:

- He will help in transportation of the injured.
- He will help in the respective post as and where needed.
- He will help in the cleanliness of the area.
- Help in erecting the tent.
- Any other work assigned.

(J) Ayah /Safaiwali:

- She will assist in the transportation of the injured.
- She will help in the Resuscitation post.
- She will render all possible help to the injured female passengers.
- She will assist in maintaining the cleanliness of the area.
- Help in erecting the tent.
- Any other work assigned.

Note: All members of team 'A' should be well acquainted with the availability and placement of various items (equipment and medicines) in the POMKA/ARME-I, so that precious time is not lost in searching for the required material at the time of emergency. They should be aware of the various facilities available in the ARME viz light switches, tent, stretchers, linen, emergency drugs, food articles, etc.

MEMBERS OF TEAM 'B':**A. InchargeAddl.CMS.**

- He will take charge of the hospital and establish an emergency cell in the hospital.
- He will collect all information regarding the accident and the casualties.
- He will inform the local hospitals about the occurrence of the accident, to send their ambulances with medical aid and to be in readiness to receive the casualties.
- He will liaise with the medical facilities near the site of accident.
- He will depute one Doctor/Pharmacist to Ahmedabad Control if nominated person has not taken over.
- He will inform the Police control and keep in touch with them to make necessary security arrangements at the site of accident.
- He will inform the nearest Fire Brigade/ other Ambulance services to reach the site.
- He will inform the Blood Banks to keep blood ready.
- He will inform St John Ambulance Brigade.
- He will re allocate duties amongst the medical staff behind in the hospital.
- Ensure that the hospital is ready to receive casualties.
- Keep in constant touch with the accident site Incharge.

- (m) Send back up teams if required.
- (n) Requirement of medicines required at the accident site or the hospitals should be procured and sent whenever required.

B. ANO of the Hospital:

- (a) She will assist Sr DMO in discharging his duties.
- (b) Ensure that adequate man powers are available in the hospital.
- (c) Re allocate duties amongst the hospital staff.
- (d) Ensure that adequate clothes, bed linen and medicines are available.
- (e) Adequate numbers of beds are kept empty for the casualties.

C. Matron I/C Operation Theatre:

- (a) Keep the O.T. ready.
- (b) Ensure all equipment, gases, instruments and linen are in adequate supply.
- (c) Keep Anaesthetist/Surgeon/Orthopaedic Surgeon from outside ready to combat any emergency.

D. CPHR I/C OPD:

- (a) Help the Hospital I/c in re-arranging the hospital services.
- (b) Keep details of patients/casualties treated in the hospital.
- (c) Collect information about injured persons shifted to other local hospitals.
- (d) Ensure sufficient supply of medicines, etc are available in OPD.
- (e) Inform respective Deptts about the injured Rly employees and prepare their necessary certificates.

E. CPHR Stores:

- (a) Ensure that adequate medicines & surgical items are available in the store.
- (b) Cash imprest should be kept ready for purchase of items.
- (c) Should take the initiative to help in organizing the relief measures in the Hospital and also to proceed to the accident site if instructed to do so.

F. CHI:

- (a) Report to hospital
- (b) Coordinate with I/C hospital team, Matron I/C, CPHR I/C.
- (c) Perform duties as advised by I/c Hospital Team.

G. Ambulance Staff:

- (a) Keep the ambulance ready to proceed to accident site at short notice.
- (b) Get all the necessary information about how to reach the site at the earliest.
- (c) Ensure that the Petrol/Diesel Tank is full.
- (d) Emergency kit, drugs, equipment and re enforcements are loaded.
- (e) Some cash imprest amount should be kept separate for procurement of fuel and minor repairs if required.

Action to be taken while on Move:

1. Prepare to deal with the casualties.
2. Distribute action cards and explain duties amongst the staff.
3. All should become familiar with the items in the ARME / POMKA.

4. Wear badges and haversacks.
5. Check all equipment.
6. Sterilize all surgical items.
7. Keep in touch with the control and hospital.
8. Get walkie-talkie operational.
9. Loud speaker should be checked.
10. Stretchers should be readied.
11. Beds in ARME should be prepared.
12. Operation theatre should be ready.
13. Items of comfort should be available and one person nominated to handle it.
14. Toilet items like bedpans, urine pots etc should be ready.

Action to be taken on reaching the Site of Accident:

1. Announcer to make the announcement regarding the arrival of the medical team repeatedly.
2. The teams deputed to checking the train for injured should start from either / both ends and should ensure checking the toilets and the vestibule besides the coaches.
3. Examination of the crew and guard should be done including collection of blood sample for alcohol estimation as per the protocol.
4. Site medical officer should assess the scene of accident and report to the senior most medical officer.
5. Set up the first field dressing station (FFD).
6. Place placards/banners regarding various posts and also make announcement regarding the same.
7. Triage to be done near the coach itself before transfer by the team attending the injured.
8. All the casualties should be directed to the reception post or communication given to it regarding direct transfer to any post or hospital. Triage to be done here also.
9. First aid given as per triage.
10. Respective tags / tokens placed.
11. Evacuation done as per priority.
12. Ensure all casualties are attended promptly.
13. Gather information and progress of injured transferred or taken on their own to various nearby hospitals.
14. Dead bodies should be taken out and kept near the coach itself. Proper documentation and tagging of the dead should be done before handing over to the police and acknowledgement taken.
15. Ensure proper and complete documentation.
16. Talking to media persons done by nominated person only.
17. Ensure establishment of proper communication.
18. After completion of relief and rescue work, necessary certificate to be given.
19. Do not succumb to any pressures.
20. Always keep yourself calm and cool and follow the prescribed protocols adjusted to the demands of the situation.

Action to be taken after return from the Accident Site:

1. Prepare report.
2. Evaluate the work done.
3. Highlight the drawbacks.
4. Do swot analysis.
5. Discuss problems faced.
6. Replan for the future.
7. Suggestions if any should be made.
8. Commendable work done by the staff awarded.

ACTION CARDS**RECEPTION POST.**

Prepare list of all casualties in quadruplicate and note the following details of the injured:

- (a) Name of the injured.
- (b) Father's / husband's name.
- (c) Age & sex.
- (d) Address.
- (e) Ticket/PNR no.
- (f) Destination: from-----to-----.
- (g) Two marks of identification.
- (h) Type of injury: trivial / simple / grievous.
- (i) Nature of triage: dead/critical/serious.
- (j) Simple / sorrowful.
- (k) Transferred to / sent home.

Prepare token cards for the critically and seriously injured passengers giving the following information:

- (l) Name, age, sex, father's/husband's name.
- (m) Address.
- (n) Ticket/PNR no.
- (o) Type of injury.
- (p) Nature of triage.
- (q) Token no.
- (r) Details of first aid rendered.

Ensure that the Tokens are tied to the RIGHT Wrist of the injured properly and send the injured to Respective Post for further treatment.

RESUSCITATION POST.**SURGICAL POST.****DESPATCH & COMFORT POST.**

- Transport injured to home by relief train/ road.
- Transport injured to other hospitals as per the instructions and triage.
- Ensure the injured are comfortable.
- Ensure injured have received water and food.

**FIRST AID POST AT FFD.
 FIRST AID POST AT LOCAL.
 COMMAND CENTRE.
 MORTURARY.
 VISIT HOSPITALS.
 UNIFIED COMMAND CENTRE.
 COMBINED ASSISTANCE CENTRE.
 LOCAL COMMAND CENTRE.
 SEARCH COACHES.**

- Transport Casualties as Per Triage.
- Priority I Red Band : First.
- Priority II Yellow Band : Second.
- Priority III Green Band : Third

DO TRIAGE.

- Priority I : Critically Injured
- Priority II : Seriously Injured
- Priority III : Simple Injury

DEAD BODIES.

Ensure that the Dead are properly tagged, covered and kept at a safe place coach wise. He will ensure that the Dead are properly handed over to the Police and receipt taken. Prepare list as per the proforma and send the list to reception post, UCC, CAC.

ANNOUNCE ARRIVAL MEDICAL TEAM.

Protocol to be followed by Dy. SS-SBI giving information about the movement of the ARME I (MG):

1. Inform ACMS, SBI Stn Dispensary: 9724093513
2. Inform Supervisor I/C ARME : 9724093533
3. Send keys of the ARME kept in Dy. SS Room & Memo of movement of the ARME with any responsible person to the ARME.
4. If no member of medical team is available the keys of the ARME should be handed over to the guard accompanying the ARME.

It should be ensured that the message of movement of ARME is communicated at the earliest as the time schedule of departure of ARME has to be adhered to.

Chapter 9: Role of Security Department in Disaster Management

A three-tier security system of District Police, Government Railway Police (GRP) and Railway Protection Force (RPF) is prevailing over Indian Railways with following roles and responsibilities-

District Police: Security of tracks, bridges and tunnels (Authority: MHA message no. 27/1/72/Poll.II, dated 11.02.1972).

Government Railway Police (GRP): GRP is a wing of State police maintained by respective State Governments for prevention and detection of crime and maintenance of law and order in station premises and trains. Duties of the GRP as regards the areas in their jurisdiction correspond in general to those of the District Police in the areas under their charge. Railways are sharing 50% of the cost on GRPs with respective State Governments.

Railway Protection Force (RPF): RPF is an 'Armed Force of the Union' constituted under the RPF Act for better protection and security of railway property, passenger area and passengers and matters connected therewith.

9.1 Role of RPF in Disasters:

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., RPF will coordinate with other Departments of Railways, Government Railway Police/District Police and various agencies of State and Central Government for speedier relief and rescue operations. Similarly, in cases of CBRN Disasters or a natural calamity affecting Railways, RPF will provide support services in rescue, rehabilitation and mitigation efforts.

RPF will play active role in crowd control in station premises/circulating area in coordination with GRPs of respective States and Commercial Branch staff.

The deployment of the RPF may be done on need basis to provide relief, rescue and rehabilitation consequent upon any disaster situation over Railways.

9.2 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 Ahmedabad 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 equipments 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].

9.3 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

9.4 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 Tranquility) 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 organised 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.

9.5 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.

9.6 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.

9.7 Preparedness of Ahmedabad Division/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.No	Guide lines as per RB DMP	Current Preparedness of ADI Division/WR
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, dated 10.09.2015].	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.	02 Teams consisting of 15 RPF persons in each, 01 team for Ahmedabad area and 01 team for Gandhidham area which are equipped with disaster related equipments viz. Torches and other lighting arrangements, nylon ropes and poles for segregating the affected areas for 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	All post incharges have been directed 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.

S.No	Guide lines as per RB DMP	Current Preparedness of ADI Division/WR
	affecting Railways.	
5	Procurement of modern security related equipment identified along with scale by a Norms Committee.	Disaster management equipments are available at Reserve Company of ADI division.
6	Compliance of MHA guidelines [No. VI-24022/11/2002-PM-I, circulated vide letter 2002/Sec(Cr.)/45/47, dated March 27, 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 of various level.
7	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 of Ahmedabad Division is enclosed at Annexure-III.
8	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.	Ahmedabad station of ADI division is identified for installation of ISS, 109 CCTV cameras (Including 12 FRS) have been installed at Ahmedabad stn. 01 No X-ray baggage scanner has been installed at ADI station. 01 No portable X-ray baggage scanner has been installed at ADI station. 01 set of BDDS equipment consisting of 19 items is available.
9	Sanction for installation of CCTV cameras in A1, A, B & C category stations over Western Railway under 'Nirbhaya Fund' and its progress.	Installation of CCTV Cameras under Nirbhaya fund at 07 Railway Stations (A&B category) of ADI division are as under. (Gandhidham-60, Mahesana-60, Bhuj-60, Palanpur-64, Viramgam-45, Bhachau-38, Samakhiali-38) Presently, 40 CCTVs each at VG, PNU, GIM & Bhuj have been installed under Nirbhaya Fund.
10	'All India Security Help-Line' 182 through Divisional Security Control Rooms of RPF & another Security Helpline 1800111322 from Railway	RPF personnel are being deployed at Security Control Rooms 24x7 for smooth functioning and maintaining of security helpline No. 139.

S.No	Guide lines as per RB DMP	Current Preparedness of ADI Division/WR
	Board, Rail Bhavan, New Delhi to provide round the clock security related assistance to passengers over Western Railway.	
11	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.	109 CCTV cameras under ISS has been Installed at ADI station. Presently 05 stations have been identified for implementation of VSS over ADI division i.e., Mahesana, Palanpur, Viramgam, Gandhidham and Bhuj in phase first. The installation work of 40 nos. IP based CCTV camera has been completed by Railtel at Viramgam, Palanpur, Gandhidham& Bhuj stations.
12	RPF personnel training to develop capacity in bomb detection.	Bomb detection team is working at ADI division and 19 BDDS equipment have been procured and allot to the team.
13	Availability of no. of trackers and sniffer dogs with RPF for detection of explosives and search.	There are 07 sniffer dogs and 02 tracker dog are available over Ahmedabad division.
14	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 are exist over ADI division which is equipped with modern equipments. 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.
15	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 concern authorities and action has to be ensured in accordance with the provisions mentioned in the above plans.
16	Availability of Quick Reaction Teams (QRTs) of RPF	important Railway Stations like Ahmedabad

S.No	Guide lines as per RB DMP	Current Preparedness of ADI Division/WR
	personnel round the clock at bigger stations to tackle terrorist attacks.	is being manned by deploying Armed RPF QRT teams round the clock. The teams immense help to tackle such situations during phases especially in cases of terrorist attacks.
17	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, RPF 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 in co-ordination with GRP and commercial branch staff.

Chapter 10: Disaster Communication System

10.1 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 especially 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.

❖ OFC 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 OFC communication networks have back up / ring protected route diversity on Rail Tel long haul network in most of the sections.

In Ahmedabad Division Palanpur-Samakhiali, Mahesna-Viramgam, Mehsana – Patan, Gandhidham-Kandla Port and Kalol – Ranuj sections are low density Traffic /small Section/Routes where OFC is yet to be provided.

MaliyaMiyana –Samakhiali, Samakhiali-Gandhidham-New Bhuj are the sections where OFC are linear i.e., without route diversity. These sections are either branch lines or with low traffic density.

❖ Satellite based communication system are provided at ARTs of ADI division:

Div.	Location	I-SAT	VSAT (Manual tracking)	VSAT (Auto tracking)
ADI	Ahmedabad Self-Propelled ART (SPART)	Available		-
	Kankariya	Available	Available	
	Gandhidham	-	-	-
	Sabarmati (MG) [closed due to GC]	-	-	-

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.

10.2 Back up Communication on Railways:

To handle any disaster by the Railways and to utilize its resources efficiently, Communication is an essential requirement. Where required, back up (alternatives) should be adequately available. One of the strengths of the Railways to handle a disaster is its own communication network. In handling a crisis or a disaster, reliability of communication has to be cent per cent.

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 back up 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 reconnecting a failed communication by which ever means is of essence.

Further to provide better communication facilities during disaster, it is necessary that either the Rail net, intranet network of IR is extended to every railway station of Indian Railways, Presently Rail net / Internet connections have been extended to Divisional Head quarter and important stations. Rail net/internet network can be extended to disaster location / site with the help of satellite communication when the ARTs reach at site/ location. Alternatively other means of communication is also provided on all the stations. Presently I-SAT are available in ART's, voice, video and data transmission facility can be established at Railway Station with the help of ARTs.

10.3 Backup Communication of Ahmedabad Division:

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. 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 way side stations. Therefore, there are multiple modes of communication between divisional control rooms and stations.

Similarly, the facility is available at all meter gauge sections except non control section i.e. section having one train system of working without any control communication such as Kalol-Ranuj (102 kms).

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.

10.4 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 specialised 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.

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.

10.5 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 representatives of all 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. “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.

Chapter 11: Disaster Information Flows and Alerts of Disaster

11.1 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 manmade 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.

11.2 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.

11.3 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.

11.4 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.**

11.5 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:

11.5.1 SOP and Protocol for Transmitting Alerts:

(a) AVALANCHES:

- **Early Warning / Forecasting agency:** Snow & Avalanche Study Establishment, Chandigarh.
- **Alert Categorization:**
 - Low/Medium danger -Yellow.
 - High -Orange.
 - All Round -Red.

Category	Description	Stage	Alerts transmitted to
Low	Partlyunsafeconditions. Smallsizetriggeringispossibleonfewextr emeslopes. Valley movementsaregenerallysafe. Movementonslopes	Yellow	-
Medium	Unsafe conditions. Triggering is possible from the most avalanche prone slope and may reach the valley in medium size. Avoid movement on slopes. Routes should be selected with care. Valley movement with precaution. Evacuate from unprotected settlements on/near the avalanche paths.	Yellow	• JS(DM)/AS(DM)
High	Highly unsafe condition. Triggering is possible from all avalanche prone slopes and may reach the valley in large size. Suspend all movements. Airborne avalanches likely. Evacuate from all settlements on/near the avalanche paths.	Orange	• AS (DM) / JS (DM)/PS to HM/ PS to MOS. • Nodal Officers of NDMA & NDRF. • Concerned State / UT Governments. • On instruction of JS (DM) be transmitted to HS.
Allround	Extremely unsafe condition. Numerouslargeavalanchesarelikelyfrom all possible avalancheslopesevenonmoderatelyst eepterrain. Airborneavalanchelikelyandmayfollow unexpectedpaths. Evacuate fromavalancheproneareas.	Red	• HS/AS, (DM)/JS (DM)/PS toHM/PS to MOS. • Nodal officers of NDMA & NDRF. • All designated officers inPMO/Cabinet Secretariat. • ESF Ministries/ Departments& concerned States / UTs

MHA Control Room will also communicate Avalanche warning to Border Security Force (BSF), Central Reserve Police Force (CRPF) and Indo-Tibet Border Police (ITBP).

(b) TSUNAMI - INCOIS

- **Early Warning /Forecasting Agency:** Indian Tsunami Early Warning Centre (ITEWC) (of the Earth System Science Organization – Indian National Centre for Ocean Information Services (INCOIS), Hyderabad).
- **Alert Categorization:**
 - o Watch - **Yellow.**
 - o Alert - **Orange.**
 - o Warning - **Red.**

Category	Description	Stage	Alerts to be transmitted to:
Watch	When an undersea or near coast earthquake of greater than or equal to 6.5 is reported and a Tsunami Watch is received from ITWEC, INCOIS, Hyderabad.	Yellow	• JS(DM)&AS(DM). • Nodal Officers of NDMA&NDRF. • Concerned State/UT Governments, with instructions to further transmit the alert to the concerned/District authorities. • On instruction of JS (DM), be transmitted to HS, MHA.
Alert	When an undersea or near coast earthquake of greater than or equal to 6.5 is reported and a Tsunami Alert is received from ITWEC, INCOIS, Hyderabad.	Orange	• HS/AS(DM)/JS(DM)/PStoHM/PStoMOS. • Nodal Officers of NDMA&NDRF. • Concerned State/UT Governments with instructions to further transmit alert to the concerned/District authorities. • All designated officers in PMO/Cabinet Secretariat.
Warning	When an undersea or near coast earthquake of greater than or equal to 6.5 is reported and/or when a change in water level after an earthquake is reported. ITWEC would issue a Tsunami warning as per laid down channels.	Red	• HS/AS(DM)/JS(DM)/PStoHM/PStoMOS, Nodal officers of NDMA&NDRF. • All designated officers in PMO/Cabinet Secretariat. • ESF Ministries/Departments. • Concerned States/UTs with instructions to further transmit alert to the concerned/District authorities.

- ✓ Tsunami alert will be sent to senior officers only when Tsunami is likely to affect India or neighbouring countries.
- ✓ All alert messages will be followed by **Situation Reports (SITREP)** to be sent twice a day or more frequently depending on unfolding events.
- ✓ Alerts falling in **Orange stage** will be communicated with 03 hourly updates.
- ✓ Alerts falling in **Red Stage** will be communicated with hourly updates or at more frequent intervals as warranted by the situation.

(c) LANDSLIDES.

- **Early Warning / Forecasting Agency:** Geological Survey of India.
- **Alert Categorization:**
 - Category-III - **Yellow.**
 - Category-II - **Orange.**
 - Category-I - **Red.**

Category	Description	Stage	Alerts to be sent
III	Landslides (Slides/Falls/Flows) and Subsidence that occur in the vicinity of inhabited areas and/ or any infrastructure that can adversely affect either humans or properties or any infrastructure. Landslides (Slides/Falls/Flows) and Subsidence that block smaller natural drainages and posing insignificant to limited risk to lives and properties. It may pose some amount of threat for future damage.	Yellow	JS (DM).
II	Landslides (Slides/Falls/Flows) and Subsidence that occur and/or have damaging effects on inhabited areas, important and strategic infrastructures such as highways/ roads, pilgrimage routes, rail routes and other civil installations like any appurtenant structures of anyhydroelectric/irrigation/multipurpose projects and that result either loss of lives or damage to any property.	Orange	• JS (DM) & AS (DM) • On instruction of JS (DM), transmitted to HS. • Nodal Officers of NDMA & NDRF • Concerned State/UT
I	Landslides (Slides/Falls/Flows) and Subsidence that occur and/or have effect on inhabited areas, important and strategic infrastructures such as highways/roads, pilgrimage routes, rail routes and other civil installations like any appurtenant structures which result in significant losses of lives and properties. The category also includes large landslides that causes damming and blocking of major rivers leading to the possibility of breaching of dam and flooding of downstream low-lying areas (outcome of Landslide Lake Outburst Flow – LLOF)	Red	• HS/AS (DM)/JS (DM)/PS to HM/PS to MOS, Nodal officers of NDMA & NDRF. • All designated officers in PMO/ Cabinet Secretariat. • Concerned State/UT.

(d) CYCLONE.

- **Early Warning / Forecasting agency:** India Meteorological Department.
- **Alert Categorization:**
 - Cyclone Alert - **Yellow.**
 - Cyclone Warning - **Orange.**
 - Post Landfall Outlook - **Red.**

Category	Description	Stage	Alerts to be Transmitted to
Cyclone Alert	Issued 48 hours before the commencement of bad weather and/or when a cyclonic system is located about 500 km or more away from the coast.	Yellow	• JS (DM) & AS (DM). • Nodal Officers of NDMA & NDRF. • Concerned State/UT Governments, with instructions to further transmit the alerts to the concerned/Districts authorities. • On instruction of JS (DM), be transmitted to HS, MHA.
Cyclone Warning	Issued about 24 hours before commencement of bad weather and are of a “serious nature”. 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.	Orange	• HS/AS (DM)/JS (DM)/PS to HM/PS to MOS. • Nodal Officers of NDMA & NDRF. • Concerned State/UT Governments with instructions to further transmit alerts to the concerned/Districts authorities. • All designated officers in PMO/Cabinet Secretariat.
Post landfall outlook:	Issued about 12 hours before actual landfall, this stage of warning is of a “very serious nature”. Includes details of the likely direction of movement of the cyclone after landfall and the areas expected to be affected.	Red	• HS/AS (DM)/JS (DM)/PS to HM/PS to MOS, Nodal Officers of NDMA & NDRF. • All designated officers in PMO/Cabinet Secretariat. • ESF Ministries/Departments. • Concerned States/UTs with instructions to further transmit alerts to the concerned/Districts authorities.

- All alerts messages will be followed by **Situation Reports (SITREP)** to be sent twice a day or more frequently depending on unfolding events.
- Alerts falling in **Orange stage** will be communicated with 03 hourly updates.
- Alerts falling in **Red stage** will be communicated with 1 hourly updates or at more frequent intervals as warranted by the situation.

(e) EARTHQUAKE (National Centre for Seismology):

- **Warning Agency:** National Centre for Seismology, Ministry of Earth Sciences, Hyderabad.
- **Alert Categorization:**
 - Slight & Moderate - **Yellow.**
 - Strong - **Orange.**
 - Major, Great & Giant - **Red.**

Category	Description	Stage	Alerts to be Transmitted to
Small Moderate	Less than 5.0 5.0 – 5.9	Yellow	• JS (DM) & AS (DM). • Nodal Officers of NDMA & NDRF. • Concerned State/UT Governments, with instructions to further transmit the alerts to the concerned/Districts authorities. • On instruction of JS (DM), be transmitted to HS, MHA.
Strong	6.0 – 6.9	Orange	• HS/AS (DM)/JS (DM)/PS to HM/PS to MOS. • Nodal Officers of NDMA & NDRF. • Concerned State/UT Governments with instructions to further transmit alerts to the concerned/Districts authorities. • All designated officers in PMO/Cabinet Secretariat.
Major Great Giant	7.0 – 7.9 8.0 – 8.9 9.0 and above	Red	• HS/AS (DM)/JS (DM)/PS to HM/PS to MOS, Nodal Officers of NDMA & NDRF. • All designated officers in PMO/Cabinet Secretariat. • ESF Ministries/Departments. • Concerned States/UTs with instructions to further transmit alerts to the concerned/Districts authorities.

- Alert messages will be followed by **Situation Reports (SITREP)** to be sent twice a day or more frequently depending on unfolding events.

(f) FLOOD (Central Water Commission):

- **Early Warning / Forecasting Department:** Central Water Commission
- **Alert Categorization:**
 - Above normal - **Yellow.**
 - Severe - **Orange.**
 - Extreme - **Red.**

Category	Description	Stage	Alerts to be transmitted to
Above normal	Water level between Warning Level and Danger Level	Yellow	• JS (DM) & AS (DM). • Nodal Officers of NDMA & NDRF. • On instruction of JS (DM), be transmitted to HS.
Severe	Water level between Danger	Orange	• HS/AS (DM)/JS (DM)/PS to HM/PS to MOS.

Category	Description	Stage	Alerts to be transmitted to
	Level to the HFL* attained at that location		- Nodal Officers of NDMA & NDRF. - All designated officers in PMO/Cabinet Secretariat. - Concerned State/UT Governments.
Extreme	Water level higher than the HFL* attained at that location	Red	- HS/AS (DM)/JS (DM)/PS to HM/PS to MOS. - Nodal officers of NDMA & NDRF. - All designated officers in PMO/Cabinet Secretariat. - ESF Ministries/ Departments & concerned States / UTs

* Highest Flood Level: - The highest flood level of the river ever recorded at the place.

- Alert messages will be followed by **Situation Reports (SITREP)** to be sent twice a day or more frequently depending on unfolding events.
- Alerts falling in **Orange stage** will be communicated with 03 hourly updates.
- Alerts falling in **Red stage** will be communicated with 1 hourly updates or at more frequent intervals as warranted by the situation.

(g) RAILWAYS (Ministry of Railways):

- **Warning Agency:** Ministry of Railways
- **Alert Categorization:**
 - Minor - **Yellow.**
 - Medium - **Orange.**
 - Major - **Red.**

Category	Description	Stage	Alerts transmitted to
Minor	Consequential Passenger Train Accident not resulting in a casualty.	Yellow	JS (DM), AS (DM) & NDRF
Medium	1-25 casualties/deaths	Orange	- HS/AS (DM)/JS (DM)/PS to HM/PS to MOS. - Nodal Officers of NDMA & NDRF. - All designated officers in PMO/Cabinet Secretariat.
Major	26 or more deaths due to rail accident	Red	- HS/AS (DM)/JS (DM)/PS to HM/PS to MOS. - Nodal Officers of NDMA & NDRF. - All designated officers in PMO/Cabinet Secretariat.

- Alert messages will be followed by **Situation Reports (SITREP)** to be sent twice a day or more frequently depending on unfolding events.

(h) FOREST FIRE:

- **Warning Agency:** Ministry of Environment, Forests & Climate Change
- **Alert Categorization:**
 - Ordinary Fire - **Yellow.**
 - Medium Fire - **Orange.**
 - Major Fire - **Red.**

Category	Description	Stage	Alerts to be transmitted to
Ordinary Fire	Localized fires which can be controlled by the concerned territorial Conservator of Forests.	Yellow	• JS (DM)
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	• HS/AS (DM)/JS (DM)/PS to HM/PS to MOS. • Nodal Officers of NDMA & NDRF.
Major Fire	Large fire, which may result in substantial loss of human lives, massive environmental degradation or loss of wildlife.	Red	• HS/AS (DM)/JS (DM)/PS to HM/PS to MOS. • Nodal Officers of NDMA & NDRF. • All designated officers in PMO/Cabinet Secretariat.

- Alert messages will be followed by **Situation Reports (SITREP)** to be sent twice a day or more frequently depending on unfolding events.
- Alerts falling in **orange stage** will be communicated with 03 hourly updates.
- Alerts falling in **red stage** will be communicated with 1 hourly updates or at more frequent intervals as warranted by the situation.

11.6 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 stake holders 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.

11.7 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 CSO 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.

11.8 Standard Operating Procedure (SOP) on Railways:

(a) 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.

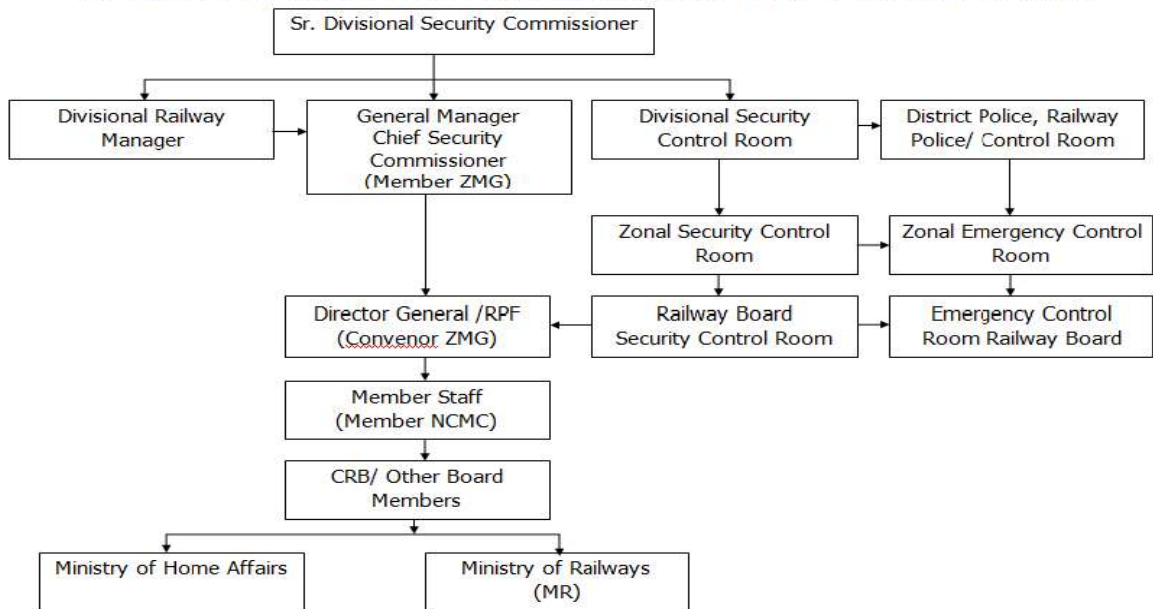
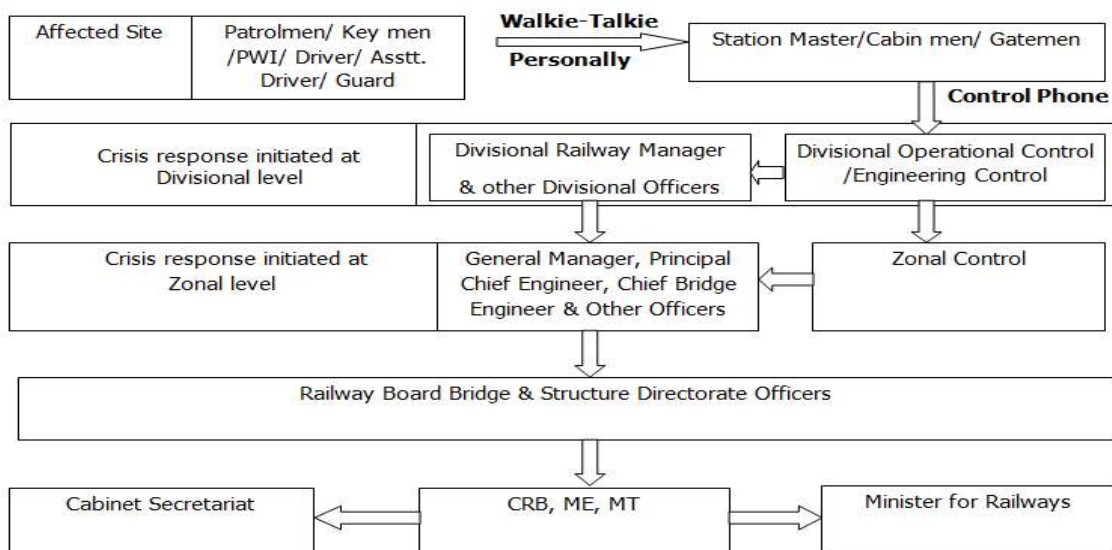
The DRMs on the divisions shall ensure coordination amongst the departments for ensuring running of train services (including relief special trains) as also relief arrangements for the passengers and for the Welfare of Railways own staff. Assistance of other Divisions and from the Zonal Railways would 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.

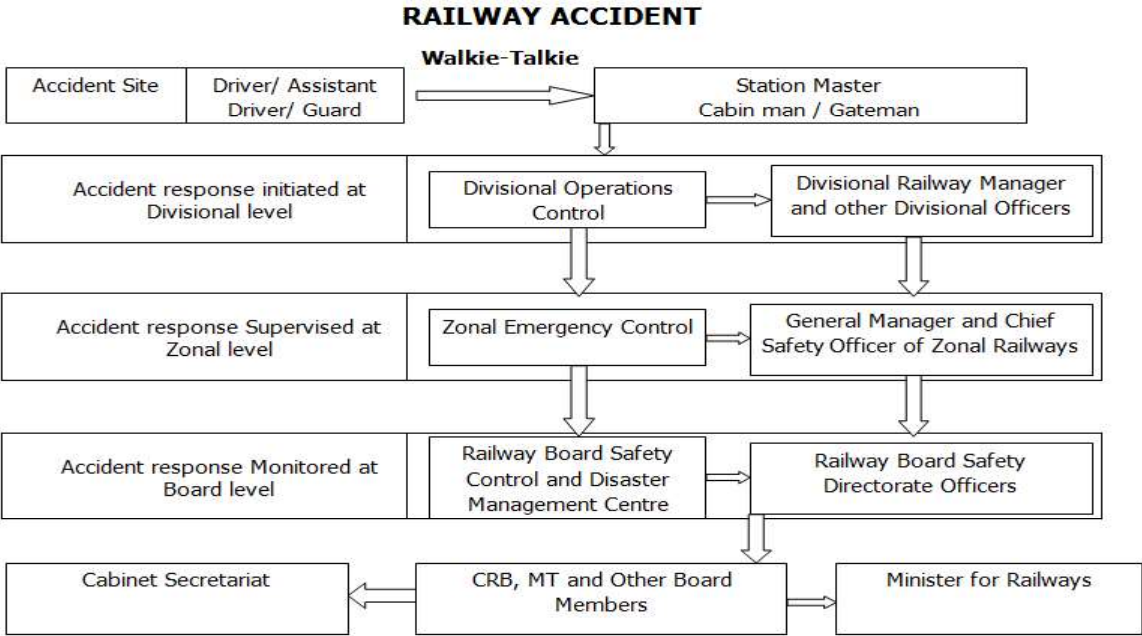
(b) Man-made Disasters:

Different forms of terrorism fall under the ambit of these disasters. A major role has to 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:

REPORTING FLOW CHART FOR TERRORISM/SECURITY RELATED CRISIS**NATURAL FACTOR(S) CRISIS MANAGEMENT INFORMATION FLOW CHART**



Chapter 12: MEDIA MANAGEMENT

12.1 Objective:

- a) To post the public with factual information.
- b) To create a positive public opinion.
- c) To create a healthy relationship with the media.

12.2 Managing Media:

- (a) 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/Sr. PRO/PRO is informed of all the available details.
- (b) Depending on the gravity of the situation, CPRO or his representative will immediately position himself in the Central control.
- (c) Either CPRO/Sr. PRO/PRO or his representative shall proceed to the accident spot, whenever required, to take charge of PR work at the site.
- (d) Meanwhile, PR official stationed at the Central Control will obtain more details from the site for information of media.
- (e) The public relations officer, on arrival at the site of accident shall collect factual 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.
- (f) Railway's endeavor 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.

12.3 The procedure to be followed:

- (b) Only GM, DRM, CPRO, and officer authorized by GM is competent to interact or give interview to media.
- (c) Unconfirmed news having no authentic source shall not be relayed to media.
- (d) No railway men shall express or voice any criticism, opinion or views at any point of time about the accident.
- (e) No one except the PR representative stationed at Control/site shall relay any information to the media.
- (f) The media may be given the following information:
 - (i) Nature of the accident- date, time, place, exact location, train no& Name. Number of coaches involved, Names of dead and injured passengers., etc.
 - (ii) 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.
 - (iii) Names of Hospitals where injured are being treated.
 - (iv) Facilities offered to the kith and kin of the victims-Payments Exgratia.
 - (v) Setting up of passenger assistance booths, tele/fax No., e-mail address etc.
 - (vi) Diversion of trains, road bridging, re-routing etc.
 - (vii) Probable restoration.

- (g) 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.
- (h) 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.

12.4 Extracts of Manual for Public Relation Department, First Edition-2007

12.4.1 AUTHORITY TO DEAL WITH THE MEDIA

12.4.1.1 At the Railway Board level:

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 representative 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.

12.4.1.2 At the Railway/PU Headquarters level:

At the Railway/PU Head quarters 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.

12.4.1.3 At the Divisional Level:

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.

12.4.1.4 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.

12.4.2 PUBLICITY DURING ACCIDENTS/OTHER UNUSUAL OCCURENCES

12.4.2.1 In the event of accidents, resulting in damage/causalities, the image of Railways invariably suffers because of adverse action in public and media. In such situations, Railways must **display greater responsibility** not only in relief and rescue operation but also in interacting with the media with correct and updated information.

12.4.2.2 Sometimes, news papers publish **on contrary versions** relating to any accidents attributing the matter to railway sources. It is, therefore, necessary that only the authorized officers (mentioned in **Para 12.4.1.1 to 12.4.1.3**) interact with the media. Unauthorized person **should not** speak to the media (as mentioned in **para-12.4.1.4**).

12.4.2.3 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. CPROs must deputee an official to monitor and scan through all the print and major electronic media reports, analyze them and take appropriate action immediately to correct any adverse trend for any report aimed at mere sensationalizing the UN toward incident.

12.4.2.4 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 PRD department is fed with the latest information and update at top priority.

12.4.2.5 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**.

12.4.2.6 Sometimes, train services are disrupted badly because of other reasons such as **bandh calls, railrook agitations, etc.** by political/ pressure group etc. For causes many a time not even remotely connected with railway operations.

12.4.2.7 In situations mentioned in **Para-12.4.2.6**, 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. The senior official 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 news—papers, TV and Radio in this regard. Apart from conveying information, such initiatives may also generate opinion against such bandh calls/agitations.

12.4.2.8 A similar action (**as mentioned in para-12.4.2.7**) 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 Administration.

Chapter 13: Guidelines for Management of Disasters

13.1 Management of cyclones:

13.1.1 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.

13.1.2 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.

13.1.3 Coordination by Railways regarding Cyclones Risk Management, Advance Warnings and Mitigation:

The Zonal Railways in the high-risk zone of cyclones (four states – Tamil Nadu, 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.

13.1.4 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 into account for re-construction/replacement/new lines bridges and embankments.
2. All the major and important bridges are designed for maximum runoff during the flood for their catchment area/modified catchment area.
3. All the bridges are marked 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 water level falls and traffic will be restore 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 J 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 immediately after declaring unsafe as a policy.
 6. Necessary specified quantities of materials like boulders, sand/stone dust/moorum/coal ash etc is kept at BVP, Kotharia, Botad, Talala, Wansjaliya, BVC, Jetalsar & Lathi stations of Bhavnagar Division, Hapa, RJT, SUNR & Lakhtar stations of Rajkot Division and GIM, Dhrangdhra & Halvad stations of Ahmedabad Division 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.

13.1.5 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 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.
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.

13.1.6 Action to be taken by Ahmedabad Division on receipt of weather/cyclone warning message:

- (a) CTNL/Dy.TNL: CTNL/Dy.TNL should repeat the message to the SMs/ASMs of the stations, which are likely to be affected. He shall also advise DRM, ADRM, Sr.DSO and Controllers of various branches, who are working in the Control office. The Control staff shall, in turn, advise their Branch officers about the weather warning.
- (b) A register shall be maintained in control office, showing full particulars regarding the date & time of receipt and action taken on the weather/cyclone warning received from the Cyclone Warning Centre.

(c) Action to be taken by SM/ASMs, Driver and Guard:

- i) Intimation to Sr. Subordinates & Staff – The SM on duty on receipt of the message, shall immediately advise SSE/SE of P/Way, works, C&W, OHE, departments and also the other Sr. Subordinates and inspectors like TI, LI etc. In case any ADEN or ADMO is posted at the station, they should also be immediately informed.
- ii) Control of trains – Precautions to be taken by SM, Driver & Guard:
- iii) In case of strong winds, the trains are to be detained till it is considered safe to allow trains to proceed further. The driver of the train should wait till, in his opinion, the intensity of wind has come down to the level that the movement of train is not endangered.
- iv) The guard should be consulted by the driver, after the storm and high winds, for re-start the train.
- v) The train is not to be stopped at places like sharp curves, high embankments, cuttings & bridges, including approaches.
- vi) The guard and driver of the train in co-operation with the railway staff & passengers travelling in the train shall try to see that the doors and windows of the coaches are kept open by the passengers to allow free passage of the wind through the coaches.

(d) Anemometer indications – In case, Anemometer is installed at the station and if it is indicating wind velocity higher than the danger level as prescribed by the special instructions, the SM shall take the following actions:

- i) The SM shall inform the section controller and the SM on other side immediately about the need to control the movement of trains.
- ii) The SM shall not start or allow the movements of trains through his station and also not grant line clear to the trains waiting at the adjacent station for his station.
- iii) He shall resume normal running of trains in consultation with the section controller and the SM at the adjacent station after the wind velocity is again below the danger level as prescribed by the special instructions.

(e) Action to be taken by Engineering Branch:

- 1 Introduce monsoon patrolling. Advise monsoon patrolman/watchman and gang mates to be extra vigilant. Deploy watchman at vulnerable locations and bridges. Continue monsoon patrolling by trolley beyond 48 hrs of warning.
- 2 Guarding vulnerable locations – Stationary watchman should be posted round the clock at every nominated location.
- 3 Inform intermediate gang mates – send two gangmen in either side sections to inform all Gangmen and gang mates in the section about the cyclone/dangerous wind velocity.
- 4 Gang patrol should be carried out by Mate and gang men as per instructions contained in para 1001 (3) of P.Way Manual.

13.2 Management of Floods:

13.2.1 Vulnerability to Floods:

Floods have been a recurrent 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. 1805 crores 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.

13.2.2 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, Civil Aviation, Environment and Forests, Health, 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.

13.2.3 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 heat waves 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 area cyclone warning centres.

13.2.4 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 undertaking 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 Shipping, Road Transport and Highways (MOSRTH), Ministry of Railways, Ministry of Defence, National Highways Authority of India, Border Road Organisation and State governments.

13.2.5 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. Inadequate 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 Shipping, Road Transport and Highways (MOSRTH), 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, NHAI, 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.

13.2.6 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 users 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.

13.2.7 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.

13.2.8 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.

13.2.9 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.

13.2.10 Activities 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 problems of river erosion on this railway being most of non-perennial rivers in western region.

13.2.11 Action Plan and current status:

Sr. No.	Action Plan	Action taken by Western Railway-
1	Flood/weather forecasting in consultation with IMD and other agencies like CWC, State	As soon as any information is received from Indian metrology department and other agencies like CWC, State Government, local bodies etc., advance warning

	Government, local bodies etc.	of flood/weather forecasting can 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. It is also placed on WhatsApp group of CUG of concerned officials.
2	Development of system of collecting data using modern techniques, monitoring of land slides, flood danger to bridges, bridge approaches causing interruption to traffic.	Under water inspection by professional divers has been carried out on important bridges of western railway to check the soundness of foundation and substructure. All the bridges are marked 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 water level falls and physical check against scouring near abutments and piers is done by sounding method. The traffic will be restored only after physical check against the scouring near abutments and piers by sounding method after issue of a safety certificate by competent officer at site.
3	Identification of flood prone areas, RAT, RAW and information prone to erosion/breaches and marking them on railways system map. Monitoring of behaviour of rivers which pose danger to railway embankment.	The data from previous years of such prone areas is compiled by Railway and is well known to the Inspector in charge of the section and is also recorded in the section register. Major/important bridges likely to be affected by Dams on Upstream has been identified and marked in copies of System map for ready reference. River training work of rivers at the Bridge approach is in place in the form of guide bunds, spurs and retaining wall along embankment slopes on vulnerable embankments and bridges.
4	Documentation of records of flood and breaches.	Documentation of records of flood and breaches is being kept at HQ office as well as in relevant divisions and their annual updating.
5	Flood Insurance of Railway properties – A pilot project to be taken by each Railway through help of suitable consultants.	So far no such project is in force with engineering deptt.
6	Mechanism for coordination with State Government and other Central Agencies on flood control and erosion etc.	Important phone number of Maharashtra, Madhya Pradesh, Rajasthan and Gujarat state of all concerned updated and incorporated in Monsoon precaution booklet.
7	Sanction and execution of Anti Erosion works of track, formations, bridges etc.	It is a regular exercise to inspect all the track, formation & bridges before and after monsoon. The result of inspection is materialised to work execution by proposing work in revenue or in capital works for rectification thereafter. Any defect is noticed the same is reflected in bridge register of that particular year. If any major work is required that will be proposed after instructions given by the chief engineer while scrutinizing the bridge register of that year.
8	Improvement to water ways of bridges in track formation (if necessary) including sanction	At many places in Western Railway water ways for bridges have been improved by providing pipes and Box culverts across the tracks by studying flood

	and execution of works.	pattern of the affected area.
9	Development of Flood Shelters for staff and passenger at suitable locations in the areas prone to repeated floods.	This is being done as an interim relief measure by railway on the flood affected location. All the residents i.e. staff and families residing in low lying areas can be taken at safe and higher places like platforms, institute building, other sheds/structures, shelter etc.
10	Implementation of Bye-laws for buildings in flood prone areas including modifications of Works Manual.	Provisions available in works manual are implemented over WR. Alteration to Works manual may be considered by Railway Board.
11	Training on Flood Management to officials in various Railway Training Schools and institutions by devising suitable syllabus.	Special Course on Hydraulic design, Breaches & floods and Restoration & Tunneling is carried out in IRICEN Pune on regular basis.
12	Emergency response team on floods.	Position of monsoon reserve material kept at various locations & Availability of Machines/equipments/trucks/T&Ps are taken stock every year before monsoon. The ART & material train reserves are also replenished to meet with any railway emergency caused by flood.
13	Study of silting pattern resulting in reduction in reservoir/Dam's water holding capacity over years to forecast and extrapolate future impact on track due to over flow and need of additional waterway.	Survey & Construction unit of Engineering department while planning gauge conversion, construction of new line evaluates the linear waterway required for each bridge based on the HFL data, catchment area, data provided by dam authorities etc.
14	Study of changed water catchment area due to construction of highways, Dams.	Survey & Construction unit of Engineering department while planning gauge conversion, construction of new line in very special cases go in for catchment area study where previous railway records of HFL, rainfall and catchment is not available. However river/stream in the upstream is inspected for any possible change of course prior to monsoon.
15	Study of changed rainy season month on a particular region.	This is not done by railway. Railways rely upon the forecast of rains provided by meteorological deptt.
16	Installation of Flood water level monitoring system.	In Western Railway, the flood water level monitoring system has installed at 10 important bridges. The details are as under-Br. No 92,359 of Virar-Surat section of Mumbai division, Br.no. 452,502 of Surat-Vadodara, 624 of Vadodara -Ahmedabad, 65 of Anand-Godhra section of Vadodara division. Br. No. 114 Godhra-Ratlam, Ratlam-Nagda 317, Indore-ujjain 72 & Ratlam-Khandwa of Ratlam Division. However a few of them are yet to be commissioned for online assessment of data through CRIS softwares.

13.2.12 Action to be taken by Division:

Based on the weather forecast warnings regarding impending flood condition following steps should be taken:

- (a) Bridge watchman to be provided at vulnerable points to inform flow into water.
- (b) Shifting all personnel and movable equipment around the bank.
- (c) If time permits sandbag dykes can be constructed to ensure safe passage of trains.
- (d) Regulate train service till flood recedes.
- (e) Evacuate people on train/at station and move them to a safer place.
- (f) Contact Fire brigade, Navel, Army, Air force, Local boatman and arrange divers and boats.
- (g) With the co-ordination of local authority, the Emergency officer/supervisor or other supervisors at that station shall arrange temporary shelter in nearby schools, marriage hall, community centre etc.
- (h) If necessary, arrange coaches to accommodate the affected temporarily.
- (i) Seek assistance from voluntary organization and arrange drinking water, food, medicines etc.
- (j) RPF and GRP in co-ordination with local police shall arrange protection.
- (k) Keep communication with Divisional Control Office.
- (l) When people are marooned by flood, arrange air dropping of food packets, cloths etc., with the assistance of civil administration.
- (m) Contact SJAB, local doctors and provide medical care to the affected.
- (n) Take all necessary action to provide shelter and other assistance to those affected by floods

13.3 Management of Earthquakes:

13.3.1 Earthquake Risk in India:

India's high earthquake risk and vulnerability is evident from the fact that 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 areas hitherto considered safe from earthquakes indicates that the built environment in the country is extremely fragile and our ability 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.

13.3.2 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.

13.3.3 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, recognizing 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.

13.3.4 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 prioritised 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.

13.3.5 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.

13.3.6 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.

13.3.7 Preparedness by Railways:

S.N	Action Plan	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 earth quake. (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, ROBs/RUBs, etc. • Buildings housing signalling 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 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 in vulnerable 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 waterways for adequacy and alignment and measures to modify, if needed. • Status Note on the lessons learnt from the previous flood situations in the past 5 years. • Bye-laws for buildings in flood plains. • Making existing and new buildings and infrastructure capable of withstanding fury of floods.

13.3.8 Preparedness by western railway:

A small region of Gujarat state along the coastal bank and its surrounding area comes in seismic zone V & IV respectively on western railway. All the latest guidelines issued by RDSO for design and construction of bridges and building structures are being followed on Western railway. All new construction of all type structures and bridges are designed for seismic loads in Zone V & IV. Strengthening of major and important bridges is also planned and almost completed except few bridges. Which are under process/progress or otherwise new bridges is being constructed on replacement account

13.3.9 When a train is caught in an Earthquake at mid-section/Station:

- (a) Driver will stop the train immediately and safely, when he feels disturbances due to earth quake.
- (b) 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.
- (c) Station master shall not start any trains in the affected section and he will inform to all concerned.
- (d) 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.
- (e) After certification of railway track, the train can be started in relevant section as per instructions mentioned in the certificate issued by engineering officials.

13.3.10 General instructions for earthquake

During Earthquake

1. Do not panic
2. If already inside, then stay indoors! Get under a heavy desk or table and hang on to it.
3. If fire breaks out, drop on the floor and crawl towards the exist
4. 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.
5. 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
6. If you are in a school, get under a desk or table and hold on

After the Earthquake

1. Do not be afraid of the aftershocks.
2. Listen to radio-TV and other media for Government Announcement.
3. Check for injuries to yourself and those around you. Take first aid where you can
4. Extinguish fire, if any.
5. Examine walls, floors, doors, staircases and windows to make sure that the building is not in danger of collapsing.

6. Do not enter into the unsafe or risky houses or buildings.
7. 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.
8. Do not keep telephone lines busy unnecessarily.
9. Switch off electric lines.

13.3.11 Impact of earth quake on Railway System:

- a) **Damage to track:** Track alignment, Earth formation, sinking of track, Bridges/girders/piers/Trees/structures obstruction in track.
- b) **Damage to service building:** Control, ASM office, Relay rooms, Cabins and gate lodge, Office buildings, Residential buildings.
- c) **Damage to signal & Telecommunication:** Signal posts, Microwave towers, Telephone posts and wires, Cables.
- d) **Damage to OHE:** OHE Masts, Portals, Tower Shed.
- e) **Damage to C&W sick line & Loco shed:** Pit lines, Sicklines and shed structures.

As soon as information is received in control office about earthquake from any source, the following action is to be taken:

13.3.12 Action to be taken by various departments of ADI Division:

(a) Action to be taken by Operating Branch:

- i. Stop all trains.
- ii. Inform P. Way, S&T, and TPC supervisors for checking track, bridges, points, signals & OHE on light engine/push trolley/motor trolley in each section of affected area.
- iii. Inform civil authorities regarding any unusual occurrence.
- iv. Arrange stock and power for moving relief/restoration materials.
- v. Arrange additional operating staff i.e. ASMs, Points men, Guards and cabin men from Un affected areas.

(b) Action to be taken by engineering Branch:

- i. All P.Way supervisors including PWIs, IOWs, BRIs, Gangmen, Key men, and other staff should report to nearest stationmasters who in turn will repeat to control about the availability of P.Way staff & Supervisors.
- ii. Checking of track & Bridges – A team of gangmen, Keymen and PWI/BRI should be sent on either side of each block section for checking the track structure and bridges.
- iii. Protection to damaged site – Checking team should be suitably instructed to protect any damaged track structure or bridge in the section.
- iv. Reporting damage/deficiencies and the requirement of men and material – After checking the whole section, a report about the nature of damage with location, and requirement of men and material, should be submitted to ASM who in turn will repeat to the control.
- v. IOW should check damages to service/residential buildings and accordingly arrange repairs, as per the requirements.

(c) Action to be taken by S&T Branch:

- I. It is likely that overhead & Cable communication may be affected due to earthquake. Immediate efforts should be made to provide alternate means of communications like VHF, Microwave, RE Cable, optic fibre. Communication between the control and stations is to be given highest importance.
- II. Assessment of damage – CSI/SI and ESM/MSM must be available at the stations. After checking all the S&T installations, details should be given to SI (Control) in regard to damage and additional requirement of men and material if any.

(d) Action to be taken by Electrical (TRD) Branch:

- I. On receipt of information about earthquake, OHE supply on the affected section should be shut down at once. All the sections in UP & Down directions should be checked thoroughly by tower wagon. Tower wagon should be run at the restricted speed so that it can be stopped before any obstruction.
- II. After checking each section, feedback is to be given to TPC who in turn will advise the position to Dy.TNL.

(e) Action to be taken by Electrical (P) Branch:

- I. In case power supply fails, DG set should be arranged at important installations like control, stations etc. as per the requirements.

(f) Action to be taken by commercial Branch:

- I. Regular announcements for information of passengers, explaining the calamity and effect on train running are to be made.
- II. Emergency enquiry counters to be opened at major stations and affected stations provided with DOT phone/cell phone facility.
- III. Facilities to stranded passengers like drinking water, foods etc. are to be provided at station where trains are controlled.
- IV. Additional windows for refund of tickets should be opened.

(g) Action to be taken by Mechanical Branch:

- i) Relief coaching goods stock on the system must be ready and should be fit for movement.
- ii) In case of electrified territories, diesel power should be made available in case of OHE failure.

(h) Action to be taken by Personnel Branch:

- i. Form relief cell, consisting CWI/WI and staff to assess losses and damages at stations & in colonies.
- ii. Co-ordinate for assistance and relief with trade unions, Mahila Samities, NGOs to speed up relief.

(i) Action to be taken by RPF branch:

- i. Help Railway Officials/ Employees in relief work at stations and in colonies.
- ii. Protect railway stations, Yards and all vital installations and restrict the entries of outsiders.
- iii. Render necessary assistance to the affected persons to save the human lives.
- iv. Keep close co-ordination with civil police and District administrations.

13.4 Management of Landslides and Snow Avalanches:**13.4.1 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-Yome 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.

13.4.2 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.

13.4.3 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 a part 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.

13.4.4 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.

13.4.5 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	Action taken by Western Railway-
1	Hazard zonation 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 down pour or otherwise all train services should be regulated. ii. Rescue team to be rushed for restoration work.

Chapter 14: Management of Chemical (Industrial) and CBRN Disasters

14.1 Management of Chemical Disasters:

14.1.1 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 and Forests (MoEF; the nodal ministry); Ministry of Home Affairs (MHA); Ministry of Labour and Employment (MoLE); Ministry of Agriculture (MoA); Ministry of Shipping, Road Transport and Highways (MoSRT& 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).

14.1.2 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 Isocyanate, is still fresh in our memories.

14.1.3 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 HAZCHEM. 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 stake holders.
- The need for the development of an efficient pipeline management system.

14.1.4 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.

14.1.5 Railways Red Tariff – Transport of Hazchem:

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. 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 authorised 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.

14.1.6 Rescue Relief and Restoration Operations:

Railway's expertise in dealing with the mis-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 / (SPART / SPARME) 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: (i) All nominated staff of ARTs & ARMEs/(SPART / SPARME) 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.

14.1.7 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 Jhuggies from close to the track (say till at least 50 m away). This is essential as in the case of derailment of a Naptha 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 Jhuggies etc.

14.2 Management of Biological Disasters:

14.2.1 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.

14.2.2 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.

14.2.3 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.

14.2.4 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.

14.2.5 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.

14.3 Management of Chemical (Terrorism) Disasters:

14.3.1 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.

14.3.2 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 :

- i) Security and surveillance measures for installations manufacturing/ using/storing chemicals.
- ii) Strengthening intelligence regarding the movement of chemicals.
- iii) 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.

14.3.3 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, MoEF, Ministry of Railways (MoR), MoL&E (through Employees' State Insurance Corporation (ESIC), MoA 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.

14.3.4 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.

14.3.5 Training for the Responders: -

The Medical Department of the Railways has little or no expertise in the effects of different chemicals. This needs to gradually develop initially in a skeleton number (one or two) of Doctors and Para-medical staff in each Divisional Railway Hospital through training.

14.4 Management of Nuclear and Radiological Emergency (Disaster):**14.4.1 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 an uncontrolled nuclear chain reaction takes place inadvertently, 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.

14.4.2 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 elaborate 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.

14.5 DOs & DONTs for the Disaster Management in the event of CBRN:

Dos and DONTs for the Disaster Management 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-

- a) The Nodal Ministry for chemical disasters i.e. Ministry of Environment, Forest and Climate Change. Contact details: Shri Bishwanath Sinha, Joint Secretary, Tel No. +91-11-24695274(O), Fax No. =91-11-24695277, +91-11-26160515 (R) Mob: 9999711816, or to Shri Manoj Kumar Gangeya, Director, Telephone: +91-11-24695337 (O), +91-11-24695387 (F), +91-11-22246550 (R).
- b) MHA control Room: [1070(Toll Free), 011 23093563, 011 2309366].
- c) NDRF Control Room 011 24363260.

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 (i) epidemic of infectious diseases caused by a microbial agent or toxin in humans, animals or plants (ii) Non-intentional accidental release of microbial agents such as from laboratories or during transportation of samples (iii) Intentional use of microbial agents to cause harm such as use of biological agents or toxins as weapons of mass destruction (biological warfare) or (iv) microbial agents or toxins used by terrorists to cause panic/harm to humans, crops or livestock (bioterrorism/agro-terrorism).

In the event of Biological disasters, the District Magistrates should immediately contact:

- a) The nodal Ministry for Biological disasters i.e the Ministry of Health & Family Welfare. The contact details: Shri Lav Agarawal, Joint Secretary, Tel. No. 011-23061195 (O), 011-26889166 ® mob: 9818778177, or to Dr.P. Ravindran, Addl, DDG & Director EMR. Tel No. 011-23061302 (O), 011-45639559 (R), Control Room-23061469.
- b) MHA control Room: [1070 (Toll Free), 01123093563, 011 2309366].
- c) NDRF Control Room 011 24363260.

3. 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:

- a. AERB will inform the Crisis Management Group (CMG), DAE through DAE Emergency Control Room (DAE-ECR), Contact Details of 24*7 operational DAE-Emergency Control Rooms are – main DAE-ECR [022-22023978, 022-22021714, (Mobile) 09969201364] & alternate DAE-ECR [022-25991070, 022-25515283, (Mobile) 099692013651]. In addition, it is envisaged that the concerned public officials will follow their own SOP & intimate the concerned agencies for ensuring appropriate response.
 - i. MHA Control Room: [1070(Toll Free), 011 23093563, 011 2309366].
 - ii. NDRF Control Room 011 24363260
- b. 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 informing, 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).
- c. 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.
- d. 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.
- e. 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.
- f. 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.
- g. Responsibility of source transportation of radioactive material from incident site to a safe storage place should be undertaken by local police.
- h. 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.
- i. In case required, media briefing will be done by the designated state official. He may seek technical inputs from AERB, if he desires.
- j. 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:

1. Don't send untrained responders/volunteers.
2. Don't send trained responders without proper PPEs and detection equipments.
3. Don't send responders without taking proper guidance from the Nodal Ministry / Department.

Chapter - 15: MANAGING CROWDS

15.1 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.

15.2 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.

- (i) Systematic and complete planning process.
- (ii) Clear cut chain of command.
- (iii) System of accountability for the incident response team members.
- (iv) Well thought out pre-designed roles for each member of the response team.
- (v) Effective resource management.
- (vi) System for effectively integrating agencies into the planning and command structure without infringing on the independence of the concerned agencies;
- (vii) Integration of community resources in the response effect and
- (viii) Proper and coordinated communications set up.

15.3 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 extraordinarily 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.

15.4 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.

15.5 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.

15.6 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 build up.

The following actions should be planned to monitor and manage the crowd:

- 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.
- The flow of crowd should be in unidirectional. There should be no crisscross movement of crowd to avoid stampede like situation.
- 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.
- A holding area should be prepared either in Circulating area or outside station building premises, to monitor access control and movement of crowd.
- Sale of platform tickets should be banned during peak days in order to control unwanted crowd.
- Depending on the magnitude of the event the car & other vehicle parking at stations should be discontinued during the peak days.
- 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.
- 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.
- Ropes, barricades, queue makers etc. should be used extensively at platform entrances, circulating area, FOBs etc. for smooth movement of the crowd.
- 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.
- 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 thelas should be banned.

- The entire station premises should be well lit / illuminated so that miscreant activities are curbed.
- A mini control room which will also act as a 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.

15.7 The Emergency Operations Centre should work as:

- This Centre will by far possible, be near to the vicinity of the area it is going to control.
- 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.
- A Grid Map of the entire area under jurisdiction will be prepared to facilitate accuracy in pinpointing the troubled area and activate appropriate response.
- This map will contain all relevant data like position of volunteers / police, Ambulance, fire services, Medical emergency room, ticket location etc.
- 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.
- This Centre will exercise positive control over the crowd movement to and from the event venue.
- 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.
- The Centre will be the hub for information flow about the crowd movement both inward and outward.
- All emergency support services will be coordinated from this Centre.
- 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.
- 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.
- The Centre will also be responsible for validating the main routes for crowd movement and alternative routes (marked as standby for entry and exit.)
- 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.
- 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.

15.8 Duties of Security Department:

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

15.8.1 Liaison with Civil Police:

- (a) In case of sabotage, liaison with Local Police & officials of district administration and get early clearance.
- (b) Clearance should be obtained as expeditiously as possible, for starting restoration work.
- (c) Additional manpower should be requisitioned from local police officials and district administration for purpose of crowd control.
- (d) Exemption should be obtained from SP of the district for waiving off formalities of Post Mortem of dead bodies.
- (e) Obtain assistance from GRP and Local Police as and when required.

15.8.2 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. Railwaymen who try to undertake any kind of rescue and relief work become victims of mob fury.

- (a) Cordon off the site and prevent unauthorized entry of outsiders.
- (b) 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.
- (c) These barriers should be at quite some distance away from the track, so that UCC, CAC and LCCs are inside the cordoned off area.
- (d) Provided barricade and ask for additional force to control crowd during VIP visit.

15.8.3 Protection of luggage:

- (a) Protect unclaimed luggage of passengers till these are duly taken over by commercial department for safe custody.
- (b) Unclaimed luggage of passengers should be isolated and stacked coach-wise, with proper labelling indicating coach no., from which recovered.
- (c) If possible, the cabin number inside the coach should also be indicated.
- (d) All such unclaimed luggage should be protected till they are handed over to claimants or taken over by commercial department.
- (e) Unclaimed luggage should be stored in a safe place, preferably, part of the same school building which is being used for preserving dead bodies.
- (f) These should be stored in separate rooms coach wise so that it is easy for relatives to identify.

15.8.4 Protection of railway property:

- (a) Protect Railway consignments/goods/parcels till these are duly taken over by commercial department and dispatched to nearest station for proper disposal.

- (b) Guard perishables till they are auctioned off at site or till they are dispatched to nearest station for being auctioned.
- (c) RMS consignments on the train should be shifted to school building for safe custody till Postal Authorities come and take over custody.
- (d) Provide security for the cash withdrawn for payment of ex-gratia by the commercial department.
- (e) Preserve all clues and evidences regarding probable cause of the accident and ensure that these do not get disturbed.
- (f) Ensure that no railway staff tampers with any track fittings, or rolling stock parts.
- (g) Anybody found moving under suspicious circumstances should be questioned.
- (h) No railway staff should be allowed to move about near the accident site with loose or piece meal equipment.

15.8.5 General:

- (i) RPF personnel should respond to any call for assistance to rescue victims and transport them to the nearest hospital.
- (ii) 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.
- (iii) RPF Assistance Post will be established within the CAC so that people needing help can approach RPF.

15.9 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 16: DISASTER MANAGEMENT TRAINING

16.1 Disaster Management Training on the Railways:

16.2 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.

16.3 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 more vast and 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	Compliance
1	Top Level Management (GMs, PHODs, DRMs and other SAG/SG Officers).	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 MDP programmes being delivered at NAIR/BRC, IRITM, LKO is conducting a special module on Disaster Management developed by them.	Middle level management officer will be directed as and when slot for Disaster Management course allotted to this railway from IRITM/LKO or NAIR/BRC.

		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.	
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 officer 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 issued vide RB's letter No. E (MPP) 2009/3/1 sated 20.01.2009 of detailed instructions are to be covered during the regular training programme at NAIR/Vadodara. Frequency of Training: As part of the course.	Probationers officer 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 Comm. & Optg.)	One-week course at ZRTIs Frequency of Training: Once every five years.	Refresher course is conducted at Zonal Training Institute of RPF at Valsad. Wherein all frontline supervisors and staff are being imparted training once in every 5 years. Training of Disaster Management has been given to all supervisory staff of Security Department in initial training and promotion course. Medical department is giving training to all the staff as and when directed by the Department of training.
6	Railway Staff on board passenger carrying train (TS, Dy.TS, TTEs & catering staff	Disaster Management being a multidisciplinary effort during field operations, training in groups of such on board staff is more desirable and efficient than training them category wise. Role of on-board railway staff has been a	- Traffic and commercial supervisors & front-line staff training is being ensured by a 6 days training module at Training institute Udaipur. - Disaster Management

	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 contractor wherever out-sourced).	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.	training given all RPF staffs at the time of their initial and promotion training course. Staff will be directed as and when slot 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.	• Composite training of Mechanical and Medical Staff for relief and rescue operations is will be ensured when disaster management railway institute at Bangalore functional. • 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

		Frequency of Training: Once every three years.	in the railway. • Composite training of Mechanical and Medical Staff for relief and rescue operations has not yet started. Mechanical Department has applied for tie-up with Disaster Management Institute at Bangalore but nothing has finalized yet.
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.	Training of Disaster Management team of RPF comprising about 15 men as per recommendation no. 46 of HLC on disaster management will be directed once in every 3 years as and when vacancies allotted to this railway by JR/RPF Academy, LKO.
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.	Officers/staff are being sent 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.

IRITM/Lucknow has been nominated as the nodal centre for training on general aspects of Disaster Management for the senior and middle level officers (including Senior Management Level Officers).

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 17: NDMA Guidelines on Incident Response System

17.1 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 tsunamis; 68 per cent of the cultivable area is vulnerable to drought and hilly areas are at risk from landslides and avalanches.

17.2 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.

17.3 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 in activating air support for response.

17.4 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.

17.5 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.

Chapter18: Disaster Management System, Strategies, Critical Activities and Available Resources

18.1 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 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 and Accident Relief Cranes their beats, inspection schedules, turnout times, etc. Presently there are 84 Nos. Cranes (74 Nos. of 140 T, 4 Nos. of 120 T and 6 Nos. of 35 T Cranes over Indian Railway system.

Presently in Ahmedabad Division Two nos 140 T Cranes are available. Details of Accident Relief Cranes their beats, inspection schedules, turnout times and locations are given as below:

Details of Accident Relief Crane with capacity, location, beats, inspection Schedule & turnout time								
S. N.	Division	Class of ARTs	Location of ARTs	Crane capacity	Max. Speed (kmph)	Beat	Inspection Schedule	Turn out time
1	Ahmedabad	A	KKF	140T Diesel Hydraulic	75	GER-GNC, CLDY-SIOB, KHD-PNU, PNU-SIOB, VG-MSH, MSH-PTN	Weekly, Quarterly, Monthly, Half yearly & Yearly	During day: 45" During night: 60"
2	Ahmedabad	A	GIM	140T Diesel Hydraulic	100	GIM-PNU, GIM-DSLPL, GIM-DHG, GIM-MDPT, GIM-KDLP, GIM-TUNA Port	Weekly, Quarterly, Monthly, Half yearly & Yearly	During day: 45" During night: 60"

18.2 Areas of Focus on Disaster Management:

The main areas of focus on disaster management are:-

- Faster Response
- Better facilities and equipment's
- Expanding resources to meet requirements in major accidents
- Better customer focus
- Training and Preparedness
- 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.

18.3 Critical Activities for Disaster Management:

- 167 ARMVs and 179 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. 78 of ARTs also have Diesel Hydraulic cranes attached to them.

The details of ARMEs & ARTs of Ahmedabad division with their strategic locations for rushing to accident sites on top priority, along with doctors, para medical staff, rescue workers and engineers is as below:

Details of ARMVs, ARTs of Ahmedabad Division with Rescue workers & Engineer								
Sr. No.	DIVISION	ARMVs			ARTs			
		Location of	Class	Max. Speed (kmph)	Location	Class	Crane capacity	Max. Speed (kmph)
1	Ahmedabad	--	--	--	KKF Loco Shed	A	140 T Diesel	100
		Ahmedabad (BG	SPART (Scale-I ARMV)	110	-	-	-	-
2		Gandhidham (BG)	Scale-I SPARME	110	GIM C&W Depot	A	140 T Diesel	75
3		Palanpur (BG)	Scale-I ARME	110	-	-	--	-
A-Class ARTs are manned with trained staff								

- 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.
- 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.

The details & status of recommended list of Ahmedabad ART tools and equipment as recommended committee is as below:

Details & Status of the 13 additional equipment's for inclusion in ART/ARMVs recommended by the HLC review committee.

Sr. No	Description of equipment	Qty	To be kept in	ADI Divisions	Remarks
1	Life detector	1 No.	ARMV	Not available	COFMOW has been advised to prepare specification of Life detector including estimate cost for centralized procurement vide RB's letter No. 2003/M(M&P)/7/DM (Status) / Pt Dt .21.06.2013. DME P (II)/ Rly. Bd vide letter No 2003 M (M & P)/7/2/Vol. II dated 22.12.15 advised all ZRs to take assistance of NDRF in case of accidents/emergencies, if needed
2	Scene tape	6 Rolls	ART & ARMV	Provided	Already provided as per HLCR No.72 "Barrier Tape"
3	Rope manila Nylon 100m	1 No.	ART & ARMV	Provided	
4	Safety cone	6 Nos.	ART & ARMV	Available	
5	Stretcher folding	9 Nos.	ARMV	Available	
6	MFR Kit with splints	5 Sets	ARMV	---	Board has decided to defer the item at present vide letter no. 2003/M(M&P)/7/DM (Status)/Pt Dt 31.12.2012
7	Breathing apparatus	1 No.	ART	Provided	
8	Suitable portable DG set	1 Set	ART & ARMV	Provided	
9	Abrasive cutting equipment	1 Set	ART & ARMV	Provided	
10	Higher cap. HRD for SS Coaches	6 No.	ART & ARMV	Not available	
11	Portable Plasma Cutting Equipment	6 sets	ART & ARMV	1 set available	1 set under procurement
12	Portable defibrillator	1 No.	ART	Available	
13	Life jackets	100 Nos.	ART	Available	

- 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. 75 SPART/SPARME 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.

The details of self-propelled ART & ARMEs (SPART & SPARME) of Ahmedabad division are as under.

Details of SPART (B-Class ARTs cum Scale-I ARME) of Ahmedabad Division						
Sr. No.	DIVISION	SPART (Scale-I ARME)		SPART (B-Class ART)		
		Location of SPART & SPARME.	Class of ARME.	Location of SPART.	Class of SPART.	Max. Speed of ART (kmph)
1	Ahmedabad	Ahmedabad (BG)	SPART (Scale-I ARME)	SPART (A-Class ART)	A	110
2	Gandhidham	Gandhidham (BG)	Scale-I SPARME	SPART (A-Class ART)	A	110
* Status: Service of all SPARTs & SPARME are up to the level to meet an emergency						

- 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.
- 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.
- 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.
- 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.

- 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:
 1. On board staff eg. Loco Pilot, Assistant Loco Pilot, Guard, Commercial Staff, Pantry staff, Carriage and Wagon/Electric staff etc.
 2. Staff nearby accident site eg. Gang men, Station staff etc.
 3. Help from local people in nearby vicinity.
 4. Local administration eg. Civil administration, Police, Health, Fire etc.
 5. National Disaster Response Force
 6. 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.

- The main activities undertaken by Railway administration at accident site are:
 - The medical team participates in rescue and stabilisation of injured passengers, those seriously injured are transported to nearby hospitals.
 - 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.
 - Railway doctors are deputed to the hospitals where the injured are admitted, to render necessary assistance, including supply of required medicines, etc.
 - 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.
 - 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.
 - 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.
 - Relief trains are arranged for clearing stranded passengers.
 - 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.
 - Once affected passengers are attended, accident site is restored back to normal traffic with the help of break-down cranes, hydraulic rescue equipments, etc.
 - The accident inquiries are conducted within a time frame and preventive/corrective actions are taken accordingly.
 - Timely information is given to the press to avoid misreporting and speculation about the casualties and the cause of the accident.

- Disaster Management at Divisional, Zonal and Ministry level are integrated with each other, and are comprehensive and fully prepared to handle disasters.

18.4 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 information 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.

18.5 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 Railways take their help in major accidents involving passenger trains.

18.6 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 equipments-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:

- i) 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;
- ii) Suggest ways and means for integration of disaster reduction concept into development planning;

- iii) Identify the recommend areas needing development of multi-stakeholder partnership and citizen participation with a view to establish a coordinated mechanism for disaster reduction, response and rehabilitation;
- iv) Study existing statutory provisions for effective disaster management on IR and suggest changes, if any;
- v) Suggest best suited management structure for effective delivery along with enabling tools; and
- vi) Suggest any other measures which committee may consider appropriate within the scope of disaster management.

The Committee gave 106 recommendations, out of which 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.

18.7 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 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 Rail net for the widespread sharing.

18.8 Measures to prevent accidents:

18.8.1 Signalling:

(a) Track Circuiting:

Track Circuit is one of the most important safety aids provided at the stations, which has reduced collisions in station area. A major thrust was given to track circuiting at stations. In the last five years, on an average 1000 locations per year have been provided with track circuits and 99% of the stations on A, B & C routes (100%, 99.8% and 99.5% respectively) and 96.6% of all BG routes have been covered so far. Plan to provide this device at all stations, mostly on Branch lines, is in place.

(b) **Provision of Centralized Operation of Points and Signals** by Electrical/Electronic Interlocking with MACLS is the most important system for safety, efficiency & flexibility in yard operation and for incremental line capacity and has been steadily provided on Indian Railways. Route Relay/Panel/Electronic Interlocking (RRI/PI/EI) along with MACLS have been provided at about 5557 stations (87% of total stations on BG route). Replacement of old out-dated, multi-cabin mechanical signalling equipment are required to be replaced and upgraded by using electrical/electronic interlocking system in a phased manner.

(c) **Elimination of Semaphore Signalling** is necessary for improving visibility and efficiency of signalling system on these stations. There are 382 stations on IR network which are equipped with Semaphore Signalling. Out of these, 194 stations are on BG network. These stations are taken up for elimination of Semaphore Signalling by Colour Light Signalling with Centralized Panel Interlocking.

(d) **Provision of Isolation and Elimination of Rudimentary Interlocking and Up-gradation of Standard Interlocking** has assumed importance with growing traffics and speeds after a few serious accidents took place in recent years. Yard layouts and the corresponding signalling system at some stations require up-gradation. Main line is not isolated for run through trains and complete track circuiting is not available resulting in imposition of speed restrictions in Yard and at times, an unsafe situation is created. Up-gradation of Standard of Interlocking with provision of Standard layout with Isolation will be completed at the earliest.

(e) Token Ball Instruments

Token Ball Instruments are out-dated equipment still in use on Indian Railway network. A decision in this regard has been taken to eliminate Token Ball Instruments by Token less Block Working within a time frame of 3 years (March 2019). There are 513 Block sections having 1026 Block Instruments on BG network which are planned to be eliminated.

(f) Block Proving by Axle Counters

All new works of Panel Interlocking (PI)/(EI) will be provided with Block proving by Axle counters device, to prevent collisions in the block sections due to some 'parted' load being left out. BPAC devices at existing PI/EI/RRI stations are planned to be completed during XII Plan.

(g) Centralized On-line Monitoring, Predictive Maintenance and Asset Management System with Digital Mapping for every signalling installation to improve system availability besides providing event analysis tools and effective train management.

18.8.1.1 Train Management System (TMS)

Train Management System (TMS) is another area of technology up gradation for Centralized Monitoring and Management of Train traffic already functional on Mumbai Suburban section of Western Railway and Central Railway.

18.8.1.2 Train Protection Warning System (TPWS):

To eliminate Signal Passing At Danger (SPAD), an human error, this system has been provided as pilot project on certain stretches of 242 Route Kilometres(RKMs). No TPWS provided in Western Railway.

18.8.1.3 Train Collision Avoidance System (TCAS):

TCAS, a multivendor product is being developed indigenously by RDSO for Collision Prevention as well as Protection against Signal Passing At Danger (SPAD) by loco pilot. RDSO has finalized the specification of TCAS and proof of concept trials have been carried out during October/November, 2012. Extended trials on 250 Kms section on South Central Railway are to be conducted by RDSO. Based on successful conclusion of extended trials and Safety Certification of TCAS by Independent Safety Assessor (ISA), further deployment on Indian Railways will be considered.

18.8.1.4 Continuous Track Circuiting with Automatic Block Signalling:

Continuous track circuiting not only helps in improving the capacity with automatic block signalling where more than one train can be sent in a block section but also improves safety by interlocking all level crossing gates on the section with signals. Since the Golden Quadrilaterals along with its diagonals on the IR carry the maximum traffic, it is proposed to provide continuous track circuiting on priority on these sections.

18.8.2 Mobile Train Radio Communication:

Mobile Train Radio Communication (MTRC) system has an intrinsic potential in enhancing the safety and security in train operations, besides being a valuable aid in providing reliable and secure communication to all those engaged in different facets of railway operations and maintenance functions. MTRC works have already been commissioned on 2461 RKMs on IR and are in progress on 2100 RKMs.

In western railway MTRC for Mumbai Suburban section between Churchgate - Virar, work in Progress. MTRC for Mumbai Central - Nagda & Vadodara - Ahmedabad is approved under mission Raftar.

18.8.3 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.

18.8.4 Wheel Impact Load Detector (WILD):

WILD is used to manage the wheel impact load spectrum for targeted removals of defective wheels from service. The WILD continually monitors locomotives and vehicle wheels health to ensure safe train operations. In WILD system, if any wheel generates a force that exceeds a tailored alarming threshold, a report identifies that wheel for action. A maintenance alarm identifies vehicle for preventive maintenance at the next available opportunity and a critical alarm directs a train to stop as quickly and safely as possible. As on date 15 WILD systems have been installed. However, as on date NO WILD has been installed till date in this railway and no any planning/sanction for installation till date in this railway.

18.8.5 Better and Safer Coaches:

Design of lightweight, stainless steel passenger coaches has been procured through a Transfer of Technology (TOT) contract from M/s 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.

In view of enhanced safety features, passenger comfort and higher speed potential, it is proposed to completely switch over to light weight stainless steel LHB mainline coach production, as on date it is planned to convert 20 trains in the year 2017-18, 19 trains in the year 2018-19 and 15 trains in the year 2019-20 and onwards.

18.8.6 Retro fitment of crash worthy features such as crash buffers and anti-climbing modifications in conventional coaches:

To minimize injury to passengers in case of collision, conventional coaches are to be provided with crash buffers provided at the coach ends which absorb collision energy minimizing damage to passenger area. Provision of anti-climbing modifications in coaches will not allow the coaches to climb over each other in case of an impact as on date 100 coaches' sanction obtained and procurement is in progress through RCF.

18.8.7 Fire detection and suppression system in AC coaches:

To make AC coaches fire resistant, fire detection and suppression system is to be provided to detect fire in AC coaches and take preventive action. Provision of automatic braking of coaches in case of fire shall also be provided. Till date the allotment quantity to western railway is 128 LHB AC coaches, 20 power cars & 20 Pantry cars and the material is under procurement.

18.8.8 Fire detection and suppression in NAC coaches:

To make NAC coaches fire resistant, fire detection and suppression system is to be provided to detect fire in NAC coaches and take preventive action. However this work has not been allotted to western railway.

18.8.9 Automatic door closure mechanism in coaches

Automatic door closure mechanism in EMU coaches to prevent accidental falling off of passengers from trains should be introduced in suburban trains. Automatic AC Component doors with manual trigger shall be provided in newly manufactured LHB AC double-decker coaches for convenience of elderly passengers and children. However this work has not been allotted to western railway.

18.8.10 Redesigning/refurbishing of interior of coaches and interior fittings for better occupant safety:

Coaches shall be provided with fire retardant materials such as Fire retardant curtains & partition panelling, roof ceiling, PVC flooring, cushioning material for seats and berths, Rexine & fabric upholstery for seats and berths, FRP windows & UIC Vestibules, etc. in the interior furnishing. Specifications of these fire retardant materials shall be upgraded as a part of continual improvement in passenger safety.

Coaches are being provided with fire retardant furnishing materials. To minimize injuries during rail travel, coaches are being redesigned without any sharp corners in the interior and dully padding up vulnerable areas.

Manufacturing of Variant AC and non-AC coaches with new design is being planned with provision of emergency exit doors in addition to emergency exit window for faster evacuation of passengers, fire safety measures such as fire barrier coating, luminescent signage's for visibility in the dark, emergency alarm, interface with air brake system for automatic brake application. However this work has not been allotted to western railway.

18.8.11 In-motion Weighbridges:

The in-motion weighbridge 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. Presently 20 nos Electronic in motion way bridges in working condition. 4 nos are planning on replacement account and are under tendering process.

18.8.12 Action Plan for Road Users' Safety:

To reduce accidents at manned and unmanned level crossing gates, IR will adopt following multi-pronged strategy and their planning and progress tabulated below: -

S.N	Action Plan	Progress/Status
1	Existing task force of the Ministry of Railways and State Governments for construction of ROBs/RUBs would be made more effective.	In case of DFC project of western corridor, it has been decided that out of 53 ROBs in lieu of 54 LCs, 27 Nos of complete ROBs (Road portion+ approaches) will be done by DFCCIL & 26 Nos of complete ROBs (Railway portion + approaches) will be done by R&B department, Govt of Gujarat as single entity basis. Otherwise, there are examples that due to lack of coordination either railway portion of ROB is completed ahead of ROB approaches or vice versa. This is beneficial that complete ROB will be constructed by single entity
2	Items to be resolved between the Ministry of Railways and Ministry of Road Transport and Highways.	To expedite the construction of ROBs and closure of level crossings (Falling of national high way) MOU between Railway & Ministry of Road transport & Highways (MORTH) had been executed on 10th Nov 2014 which stated that MORTH/NHAI will replace all LCs on NH corridors on their own cost on single entity basis. MORTH/NHAI shall only deposit token plan and estimate charges @ 5 lakh per ROB in advance at one location i.e. in Northern railway in favour of FA & CAO, thus removing all formalities and expediting of level crossings. Earlier the above stated provision was not there which delayed the process of work sanction and execution of work. Target is 201 in the year 2017-18 and progress is 77 up to Oct 2017.
3	Speed breakers at level crossings, their standards and maintenance.	Maintenance of speed breakers is being done as being integral part of track maintenance in terms of provisions of IRPWM
4	Testing of driving license applicant with regard to thorough knowledge pertaining to level crossings.	Safety poster/Hand bills/ Pamphlets has been carried out in all divisions of Zone through Divisional safety officers
5	Widening of roads at selected high density locations to ease movement.	Widening of road is being done as per standards provided in IRPWM to match requirement of road authority as per their request and cost
6	Training and counselling of road	Gate mitras have been provided at all 738

S.N	Action Plan	Progress/Status
	users.	unmanned LCs on BG & 82 unmanned LCs on MG (as on 15/10/17) in WR to counsel the road users
7	Lifting barriers with retro-reflective markers in lieu of gate leaves shall be provided on double and multiple lines.	It is done in planned manner during interlocking of LCs
8	On manned level crossings, with more than 500 road vehicles per day and where possible, the road width shall be widened in railway land.	Widening of road being done as per standards provided in IRPWM on request of road authorities.
9	Signalling Systems like Interlocking arrangements and provision of telephones at LC gates enhances safety considerably.	Telephone on manned LCs is a basic and compulsory on non-interlocked LCs
10	Of 18672 Manned Level Crossings, 10513 are already interlocked and provided with signals as on 31.03.2015. It is envisaged that another 1320 gates would get interlocked in next 5 years.	Interlocking of qualified LCs is got sectioned and executed. Target for WR for 2017-18 is 15 nos
11	Inclusion of Dos and Don'ts near level crossings in primary school curriculum.	Safety poster/Hand bills/ Pamphlets have been carried out in all divisions of Zone through Divisional safety officers
12	Intensive social awareness campaigns to counter misadventure in front of approaching trains.	Safety seminars, Nuked nataks, have been carried out all over the divisions through Divisional safety officers.
13	Basic infrastructure on all unmanned level crossings will be ensured and it includes provision of adequate width, normal gradient, level surface for 5 m 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.	It has been done as per provisions of IRPWM & maintained.
14	All level crossings, as per revised criteria for manning, falling in the three specified categories, are proposed to be manned in next 5 years.	Gate mitras have been provided at all 738 unmanned LCs on BG & 82 unmanned LCs on MG (as on 15/10/17) in WR to counsel the road users
15	Periodic census of level crossings will be carried out by multi-disciplinary teams.	It is being done as per provisions of IRPWM by multidisciplinary team.

S.N	Action Plan	Progress/Status
16	Compulsory whistling by train drivers by linking loco whistle to the Vigilance Control Device (VCD).	1. The 'Safety Drives' are conducted from time to time in which Crew has been counselled to continuously blow the locomotive whistle while passing LC gates to alert road users. Instructions contained in SR 16.03(3)(b) pertaining to "sounding of engine whistle while approaching level crossing". Ambush checks were also conducted from LC gate or by travelling in the adjacent coach to monitor the crew in this regard. 2. The compliance of the same has been ensured through field inspections by Officers & Loco Inspectors, surprise checks/ambush checks etc. from LC gates or by travelling in the adjacent coach.
17	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.	Being implemented as per specific locations and on availability of NOC from district authorities. The target for elimination of unmanned LCs during 2017-18 by RUB is 105 nos and the progress is 35 nos up to October 2017
18	Checking visibility levels at all unmanned level crossings, and taking corrective action for their improvement.	Being done as regular part of track maintenance system.
19	Appropriate approach road gradients within railway boundary to be ensured.	Being done a regular part of track maintenance system as per IRPWM

18.8.13 Provision of Road Over/Under Bridge:

It has been decided to provide Road Over/Under Bridges in replacement of all level crossings on cost sharing basis where the TVUs (number of trains x number of road vehicles in 24 hours) exceed one lakh. There are 417 level crossings where the TVUs are more than one lakh and have already been sanctioned as on 1.4.2003, for replacement with ROB/RUBs. There are still 1252 level crossings with TVUs of more than one lakh as on 1.4.2003 where the ROB/RUBs are yet to be sanctioned. These will be sanctioned progressively depending upon the response of the State Governments for sharing of the cost and their sponsoring them for the same.

In Western Railway there are 282 LCs where TUVs is more than 1 lakh on WR as on 01.04.17. in current year & 2018-19 the target of ROB to be constructed on cost sharing basis where LC closure is involved is 6. Out of 6 ROB, one ROB is completed in this financial year. There are 14 other accommodation works of different road authorities, which needed new level crossings, have also been targeted for ROB during 2017-18. Out of which 6 have already been completed.

18.8.14 Curbing Fire hazards in Pantry Car:

S.N	Guide lines as per RB DMP 2017	Current Preparedness of WR
1	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.	All the equipments and gadgets are being ensured in working order and in safe condition at the time of departure of trains.
2	Electrical gadgets in Pantry Cars should be operated only by the authorized electrical staff, nobody else.	Is being ensured
3	Zonal Railways have been advised to remove the card board 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.	Card board cartons are being removed at the departure of trains and handed over to the garbage collecting staff en-route.
4	Separate reservation chart of pantry car should be published like reservation chart of other coaches. 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.	IRCTC has been advised to issue instructions to all pantry car licensees to follow all the safety rules and regulations of safety of pantry cars and to submit the list of all catering staff deployed to work in the concerned train to chief reservation supervisor of originating station at least 8 hours before the departure of the train for preparation of separate reservation chart of pantry car.

18.8.15 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 is being provided at such installations. Staff has been trained to use these equipment's.

In Western Railway all the traction substations and switching Posts, OHE depots and PSI depots are provided with DCP type fire extinguishers in accordance to chapter VI (fire precautions) of ACTM vol. I. It is ensured that these fire extinguishers are checked, tested and refilled in accordance to the schedule recommended by OEM. A register is maintained in each installation showing the details of available fire extinguishers, date of inspection and Refilling date.

While commissioning the new Traction Sub-stations it is ensured that 30 MVA Traction transformers are procured as per the latest RDSO specifications having Nitrogen injection Fire prevention system.

18.8.16 Vigilance Control Device:

All electric and Diesel locomotives are equipped with vigilance control devices (VCD) to ensure alertness of Loco pilot.

Chapter 19: Important Letters Pertaining to Disaster Management

No.	Subject	Letter No.	Dated
1	Annual review and Updation of Disaster Management Plan.	2009/Safety(DM)/6/14	09.07.2015
2	Hiring of Helicopter	2002/Safety-1/6/6	13.06.2004
3	Requisitioning of Indian Air Force Aircrafts/Helicopter	2002/Safety-I/6	05.12.2006
4	Co-ordination with NDRF Battalions	2003/Safety/DM/6/3	13.06.2008
5	Enhancement of ex-gratia	2006/TC-III/27/2	20.12.2006
6	MOU between Rajasthan Govt. & Railway's Medical Authority	CD/APD/03/1028	15.12.2003
7	Letter of Directorate of Health Service, M.P.Govt. regarding assistance during passengers train railway accident	111/C-4/07/1533	27.02.2007
8	Assistance of NDMA NDRF to handle railway related Disaster	2003/Safety(DM)6/3	02/05.08.2010
9	Definition of Railway Disaster and co-ordination of Disaster Management plans.	2003/Safety (DM)6/2 pt.	06.01.2009
10	Expeditions clearance by the state police in case of Railway accident.	2002/Sec.(Cr.)45/47	11.12.2002
11	Clearance of state police in case of Railway accidents due to suspected sabotage.	2002/Sec.(Cr.)45/47	27.03.2003
12	Co-ordination with defence service at the time of disaster	2003/Safety(DM)6/4	03.02.2004
13	Preservation of evidence during accident.	2-5(i)B2016/1166	28.12.2016
14	Checklist for the Divisional safety officer subsequent to an Accident	2002/Safety(DM)Misc.	30.01.2017
15	Assessment and evaluation of Disaster Management Exercises/Mock Drills.	<u>2019/Safety(DM)/6/4/CM</u>	25.08.2022
16	Provision of appropriate number/ types of diesel locomotives for use with ARMEs.	<u>2020/Safety(DM)/6/CRS-Part(1)</u>	15.11.2022
17	Sttenghening of the Safety Organization of Indian Railways REg-posting of Safety Counsellrors.	<u>2017/Safety/(DM)/19/1</u>	12.06.2023

Chapter 20: District Profiles

There are nine districts falling in the jurisdiction of Ahmedabad division of W.Rly. Including Ahmedabad, Banaskantha, Gandhinagar, Kutch, Mehsana, Patan, Rajkot, Sabarkantha and Surendranagar. Their brief district profiles are as under.

20.1 Ahmedabad District Profile:

Overview:

1. Ahmedabad district is located in the central Gujarat.
2. Situated between 21.6° to 23.4° N Latitude and 71.6° to 72.9° East (Longitude).
3. Ahmedabad district is surrounded by Gandhinagar and Mehsana districts in north, Gulf of Khambhat (Gulf of Cambay), Botad and Bhavnagar in south, Kheda and Anand districts in east, and Surendranagar district in west.
4. Area- 8086.4 sq. km.
5. Population of the District is 72, 14,225 as per last census 2011.
6. The temperature ranges from 9° C to 45° C.
7. Average rainfall 800 mm.
8. Seismic Zone – III.

Connectivity network of Ahmedabad



District HQ, Talukas, Municipalities:

1. Ahmedabad is the head quarter of the Ahmedabad District.
2. Ahmedabad district has 13 Talukas. These are City (East), City (West), Dholka, Bavla, Viramgam, Detroj-Rampura, Mandal, Dhandhuka, Ranpur, Barwala, Daskroi, Dholera and Sanand.
3. There is one Mega Municipality-Ahmedabad. There are 7 municipalities. Viramgam, Dholka, Bavla, Dhandhuka, Sanand, Bareja and Bopal-Ghuma.

Rivers, Dams and Ports:

1. There are 11 rivers flowing in the district namely Sabarmati, Khari, Meshvo, Bhogavo, Nilka, Uttavali, Sukhbhadar, Mazum, Hathdhari, Vatrak and Sethhi.
2. Moreover, Kharicut canal and Fatehwadi canal and Nal Sarovar are there in the district.
3. There are 44 check dams in the district.
4. The nearest port to the district is Dholera.

Industries:

1. Ahmedabad is one of the industrially developed districts in the state of Gujarat having Large, Micro, Small and medium scale industries of various types.
2. A large number of industries related to textiles, chemicals, machinery, metal products, pharmaceutical, engineering, plastics, electrical appliances, electronics, powerhouse, passenger cars etc. are located in the district.
3. Ahmedabad is the largest supplier of denim and one of the largest exporters of gems and jewellery in the country. Arvind Mill in Ahmedabad is one of the largest textile mills in the country and is one of the three largest producers of denim in the world.
4. Ahmedabad hosts the headquarters of major public-sector banks.
5. Two of the biggest pharmaceutical companies of India - Zydus Cadila and Torrent Pharmaceuticals are located in the city.
6. The city also serves as the corporate headquarters of the Adani Group which is a leading trading and Export Company of India.
7. The Nirma group of industries running a large number of detergent and chemical industrial units in Gujarat also has its corporate headquarters in the city.
8. Nano Plant is located in Sanand town. It's not just Tata Motors. Suzuki, Ford, Honda and Hero MotoCorp operate plants in and around the town in Ahmedabad district, making the region a major automotive hub.
9. The last few years has seen the rise of the Information Technology industry in Ahmedabad.

Roads:

1. National Highway no. 8 towards Mumbai passes through Ahmedabad, Vadodara, and Surat.
2. National Highway no. 8C towards Rajkot, Kutch.
3. There are express highways connecting Ahmedabad-Mehsana and Ahmedabad-Vadodara.
4. Ahmedabad is also connected to Jamnagar, Ankleshwar, Vapi (345 km) and Mehsana.
5. All villages of the district are connected by asphalted roads. Moreover, whole district is connected by district/talukas village roads.

Rail:

1. Ahmedabad is directly connected by rail to several cities of all states of India which includes, Mumbai, Delhi, Kolkata, Chennai, Trivandrum, and Varanasi

Air:

1. Ahmedabad has domestic airport which is well connected to domestic destinations such Delhi, Mumbai, Hyderabad, Bangalore, Chennai, Goa, Coimbatore, Jaipur, and Kolkata.
2. Sardar Vallabhbhai Patel International Airport in Ahmedabad is well connected with several international destinations like with London, Kuwait, New York, Europe, and Dubai, Singapur.

Health:

1. There are more than 300 hospitals, 17 Child welfare centres, 50 maternity homes, 43 primary health centres, 200 primary health sub centres, 383 medical stores, 89 family planning centres, 5 TB cure centres.

Risk analysis:

An overall Composite Risk Index for all hazards (like drought, flood, cyclone, earthquake, tsunami etc.) on a taluka-wise basis has been estimated for prioritization of overall investments, disaster mitigation and related development interventions. The risk index has been computed by stratifying annualized risk estimates by two deciles classes to generate a five point scale (Very High, High, Moderate, Low and Very Low).

Risk analysis of Ahmedabad district Taluka wise:

Overall Composite Risk Index	Talukas of Ahmedabad District
Very High Risk	Ahmedabad City
High Risk	--
Moderate Risk	Dholka
Low Risk	Daskroi, Viramgam
Very Low risk	Mandal, Sanand, Bavla, Detroj

20.2 Banaskantha District Profile:

1. In North part of Gujarat State.
2. Situated between 23.33° to 24.45° N Latitude and 71.03° to 73.02° East Longitude
3. Banaskantha is surrounded by Rajasthan in north, Mehsana in south, Sabarkantha in east and by Patan in west.
4. Area-19575 sq. Km.
5. Population of the District is 3,120,506 as per last census 2011.
6. Very Hot in summer. The temperature ranges from 45 C to 46.8 C in summer. Also, very cold, sometimes 5° C, during winter particularly in the area adjoining to Rann of Kutch.
7. Average rainfall 5" to 25.34".
8. Seismic Zone – IV.

Banaskantha Road/Rail Network



District HQ, Talukas, Municipalities:

1. Palanpur is the head quarter of the district.
2. Banaskantha District has 14 Talukas Palanpur, Disa, Danta, Dhanera, Amirgadh, Kankarej, Diyodar, Bhabhar, Tharad, Vav, Vadgam, Kakhani, Suigam, and Dantivada.
3. There are 6 municipalities

Rivers, Dams and Ports:

1. There are main 3 rivers i.e. Banas, Sipu and Saraswati. Dantiwada dam is built on Banas River, Sipu dam is built on Sipurivere and Mukteshwar dam is built on Saraswati River.
2. The nearest port is Dholera port. The district is also connected to the Kandla port via National Highway 15.

Industries:

1. Major, medium & large scale industries in Banaskantha district are engaged in the production of granite tiles and marble blocks
2. The district has seven small scale industries clusters focused on textile (spinning & weaving of cotton textiles & khadi), diamond processing, and ceramics industry (processed Stone, marble).

Road, Rail & Air Connectivity:**Road:**

1. Palanpur and Disa, the two major cities of Banaskantha district are connected to National Capital Delhi and Jaipur, capital of neighboring State of Rajasthan through National Highway (NH) 27.
2. The State Highway 7 connects the district to important cities of Gujarat like Ahmedabad, Patan & Deesa. Palanpur is connected to Ambaji (significant pilgrimage) via State Highway No 54 and 56.

Rail

1. Banaskantha is connected to Mumbai-Ahmedabad-Delhi through a broad gauge with a major railway station at the district headquarter, Palanpur. Other major cities such as Deesa, Deoder, Dhanera and Bhabhar are also connected with the district headquarter via rail link.

Air:

1. The district has an airstrip at Palanpur.
2. The nearest commercial airport for the district is at Ahmedabad.

Health:

There are 8 community health centres and 64 Primary health centres in the District.

Risk analysis:

An overall Composite Risk Index for all hazards (like drought, flood, cyclone, earthquake, tsunami etc.) on a taluka-wise basis has been estimated for prioritization of overall investments, disaster mitigation and related development interventions. The risk index has been computed by stratifying annualized risk estimates by two deciles classes to generate a five point scale (Very High, High, Moderate, Low and Very Low).

Risk analysis of Banaskantha district Taluka wise:

Overall Composite Risk Index	Talukas of Banaskantha District
Very High Risk	Disa
High Risk	Tharad
Moderate Risk	Palanpur, Dhanera, Vav, Deodar, Kankrej
Low Risk	Bhabhar, Dantiwada, Vadgam
Very Low risk	Amirgadh, Danta

20.3 Gandhinagar District Profile:**Overview:**

1. Gandhinagar, the administrative capital of Gujarat was carved out of Ahmedabad district in late 1960s.
2. Situated between 23.0° to 23.6° North Latitude and 72.3° to 73.7° East Longitude.
3. Gandhinagar district is bounded by the districts of Sabarkantha and Aravalli to the northeast, Kheda to the southeast, Ahmedabad to the southwest, and Mehsana to the northwest.
4. Area- 2,140.69 sq. km.
5. Population- 1,391,753 (As per 2011 Census).

6. Temperature: 45° Centigrade (Maximum) to 7.5° Centigrade (Minimum).
7. Average rain fall: 667 mm.
8. Seismic Zone- Zone III.

Gandhinagar Road & Rail Network



District HQ, Talukas, Municipalities:

The district has four talukas, viz. Gandhinagar, Kalol, Dehgam and Mansa. Gandhinagar, Dehgam, Kalol and Mansa have municipalities. Gandhinagar is District Headquarter.

Rivers, Dams and Ports:

Gandhinagar district has four rivers Sabarmati, Khari, Vatrak and Meshvo. No major Dams in the district.

Industries:

1. Services in the public sector, Electrical & Electronics, Textiles, Food processing, ITITES, Ceramics and Office Stationeries are some of the major vocational and industrial activities in Gandhinagar district.

2. The Food Processing industry of the district is well developed because of the proximity to agricultural districts such as Mehsana, Sabarkantha, Ahmedabad, Kheda and Anand etc.
3. With recent surge in investments in the IT\ITES sector, Gandhinagar is progressively shaping into an attractive destination for IT\ITESs Companies
4. Being the State Capital, most of the State Government Offices are located in Gandhinagar; hence a major section of the working population of the district is employed in Public Sector services.
5. Small scale industry sectors like Textiles, Electronics, and Minerals based, Wood products and Engineering industries are the supporting pillars of the economy of the district. It will directly and indirectly provide employment to over 40,000 people in the district in coming future.
6. There are seven Special Economic Zones (SEZs) namely Electronic SEZ, Raheja SEZ, Shivganga SEZ, DLF SEZ, Gujarat Finance SEZ, TATA SEZ and IT\ITES SEZ, ten Industrial Estates namely Mansa, Dehgam, IFFCO Housing, Bhat, Gandhinagar, Kalol, IFFCO (Kalol), Chhatral, Gandhinagar-2, Gandhinagar (SEZ) and one Industrial Park M/s Creative Infocity (IT Park) constantly propelling the growth engine of the economy.

Health:

1. There are 30 PHCs and 9 CHCs. There is one Civil Hospital in Gandhinagar. There are 306 private hospitals and 25 private laboratories.
2. Gandhinagar hosts some of the best hospitals in the State such as Apollo Hospital, Kanoria Hospital and the Civil Hospital which have the facilities and the expertise to provide excellent health services.
3. The 400-bed Apollo Hospital in Gandhinagar treats an average of 10,000 patients every year and is the only hospital in Gujarat with a 1.5 Tesla MRI scan. Built over 10 acres of land, the hospital has 89 ICU beds and is the largest corporate hospital in Gujarat.

Road, Rail & Air Connectivity:

Road:

1. National Highway (NH) 8 and 8C runs through the district connecting it with major cities of the State as also with the rest of India.
2. It is connected with Ahmedabad by the Sarkhej-Gandhinagar highway (28 km) and with Vadodara by the Ahmedabad-Vadodara expressway (139 km).
3. Distance from major industrial centers in the State: Rajkot (249 km), Jamnagar (337 km), Valsad (373 km), Ankleshwar (223 km), Bhavnagar (228 km), Mehsana (68 km) and Surat (306 km).
4. Distance from major cities in India: Mumbai (573 km), Delhi (943 km), Kolkata (1952 km) and Chennai (1854 km).
5. The city is blessed by one of the cheapest fare tariffs for the national network of cab service providers with a high demand and supply ratio for its auto service.

Rail:

1. Gandhinagar Capital railway station (GNC) is located in Sector 14. Many trains running on the western zones pass through Gandhinagar which provides connectivity with all the major cities and towns of India.

2. Ahmedabad Railway Station in Kalupur Ahmedabad is the nearest rail junction (25 km away)
3. The Governing Body of Gujarat planned for rapid transit in the city by proposing the Metro-Link Express for Gandhinagar and Ahmedabad (MEGA) also known as the Ahmedabad Metro.

Air:

Sardar Vallabhbhai Patel International Airport located in Ahmedabad is 18 km away from Gandhinagar, providing both domestic and international flights.

Risk Analysis

No.	Type of Disaster	RISK ANALYSIS
1	Fire	Medium
2	Terrorist Attack	Low
3	Riots	Low
4	Gas Leakage	Low
5	Structure Collapse	Low
6	Vehicle Accident	Medium
7	Traffic Jam	Medium
8	Medical Emergency	Medium
9	Electrical Failure	Medium
10	Stampede	Medium
11	Chemical Biological Radiation Nuclear (CBRN) Emergency	Low
12	Earthquake	Low
13	Severe Storm	Low
14	Others (if any)	Low

Capacity Analysis:

No	Name of Response Team	Man Power	Equipment/ Vehicle
1	Fire & Emergency Services	162	25
2	Municipal Corporation	40	10
	R.T.O., Gandhinagar	06	02
	Reserve Vehicles Emergency's	30	15
3	Medical Team	114	27
4	N.D.R.F.	70	269
5	Road & Building with Water Division	30	05

20.4 Kutch District profile:**Overview:**

1. Located in the West corner of Gujarat State. Spread between 22.44° to 24.41°North (Latitude) and 68° 07' to 71.45° East (Longitude).
2. Area is 45,674 sq.km.
3. Population of the District is 2,092,371 (As per Census 2011).

4. It is bounded by Rajkot in South and Banaskantha district in East and then Rajasthan state border. Kutch Desert is situated in North and the international border of Pakistan.
5. The temperature ranges from 45.8°C (June) in summer and 2.0°C (January) in winters.
6. Average rainfall 402mm. (Period 1987 to 2016)
7. Seismic Zone – V.

Kutch Road & Rail Network



District HQ, Talukas, Municipalities:

The District has 10 Talukas and six Subdivisions. Districts are Bhuj, Mandvi, Mundra, Anjar, Gandhidham, Bhachau, Rapar, Nakhatrana, Abdasa and Lakhpat. Subdivisions are Bhuj, Mundra (Mandvi), Anjar (Gandhidham), Bhachau (Rapar), Nakhatrana (Lakhpat) and Abdasa.

There are seven Municipalities Bhuj, Mandvi Anjar, Gandhidham, Bhachau and Rapar.

Rivers and Dams:

There are no major dams in the district. There are 20 medium and small dams under the control of state irrigation department.

Ports:

Out of 1600 kms long coastline of Gujarat, Kutch District is blessed with around 750 km of coastline extending from Surajbariya of Bhachau Taluka to Koteshwar of Lakhpat Taluka.

There are five ports in the Kutch District, Deendayal Port (earlier known as Kandla Port) is the oldest one and the Mundra Port is the latest one.

Jakhau is one of the major fisheries harbor of the district and it is one of the five major fisheries harbors of the state. Surajbariya, Bhadreshwar and Mandvi are other fish landing centers in the district. 72 villages in 7 Talukas of the district are fishing villages in Kutch District. Total around 1300 mechanical boats, 180 Non-mechanical boats of different capacity are available

Industries:

1. Mineral (large reserves of limestone, bauxite, lignite and bentonite) based, Port based industries, ceramics, steel, power, wind energy, transports, saw pipe, container terminal, warehousing, cotton industry, solar energy, tourism, handy crafts, etc.
2. The Little Rann of Kutch is known for its traditional salt production.
3. There are good number of small scale and medium scale units registered in the district.
4. Moreover, two Special Economic Zone in Kandla and Mundra are established by the State Government. In which some highly reputed companies like Ms. P.S.L. Holdings Ltd., Indian Pharma & Fertilizers Co. OP. Ltd., Sanghi Industries, Hindustan Lever Ltd., Miltons Ltd, Lakme Ltd. and Parle Products are working there.

Health:

The district has 1 Civil Hospitals, 13 Community Health center, 39 Primary health center, 13 Comprehensive Health Care Units, 5 mobile Units, 35 Dispensaries, 10 mobile units (IPD) and one Ayurvedic hospital in the District to cater the people.

There are some of private and trust run hospitals also in the district like – Jain Hospital and Leva Patel Hospital in Bhuj, Vagad Welfare Society in Bhachau, Sarvodaya Hospital in Bidada, Tolani Hospital in Adipur, Haji Hasan Hospital and Gokal Hospital in Mandvi. Civil Hospital in Bhuj runs on PPP and is one of the key medical facilities in the district. Further, the building of this hospital is also earthquake resistant.

Road, Rail & Air Connectivity:**Road:**

The district has 924 villages and 615 Gram Panchayats. It is well covered by national and state highways. NH-41 is the longest national highway that passes through the district and it connects Narayan Sarovar to Gandhidham. The total length of railway track is 372.42 Kms in the District and Naliya is the last station in the district.

National Highway (325 km), State highway (1727 km), District Main Road (814 km), District other road (722 km) and village road (4609 km).

Rail:

1. There is 372.42 km long railway track in the Kutch district. There are total 14 railway stations.
2. Mundra and Kandla ports are linked by broad gauge rail to the Delhi-Mumbai Industrial Corridor.
3. Bhuj-Gandhidham-Kandla-Ahmedabad broad gauge line provide direct connectivity from Kutch to other parts of country.
4. Kutch Express (Daily) and SayajiNagri Express (Daily) from Mumbai via Surat, Ahmedabad and Gandhidham to Bhuj.
5. Ala Hazrat Express (Daily) from Delhi via Jaipur, Ajmer and Palanpur to Bhuj.

Air:

There are four airports in the district: Naliya, Kandla, Mundra, and Bhuj. Bhuj is well connected with Mumbai airport.

Risk analysis:

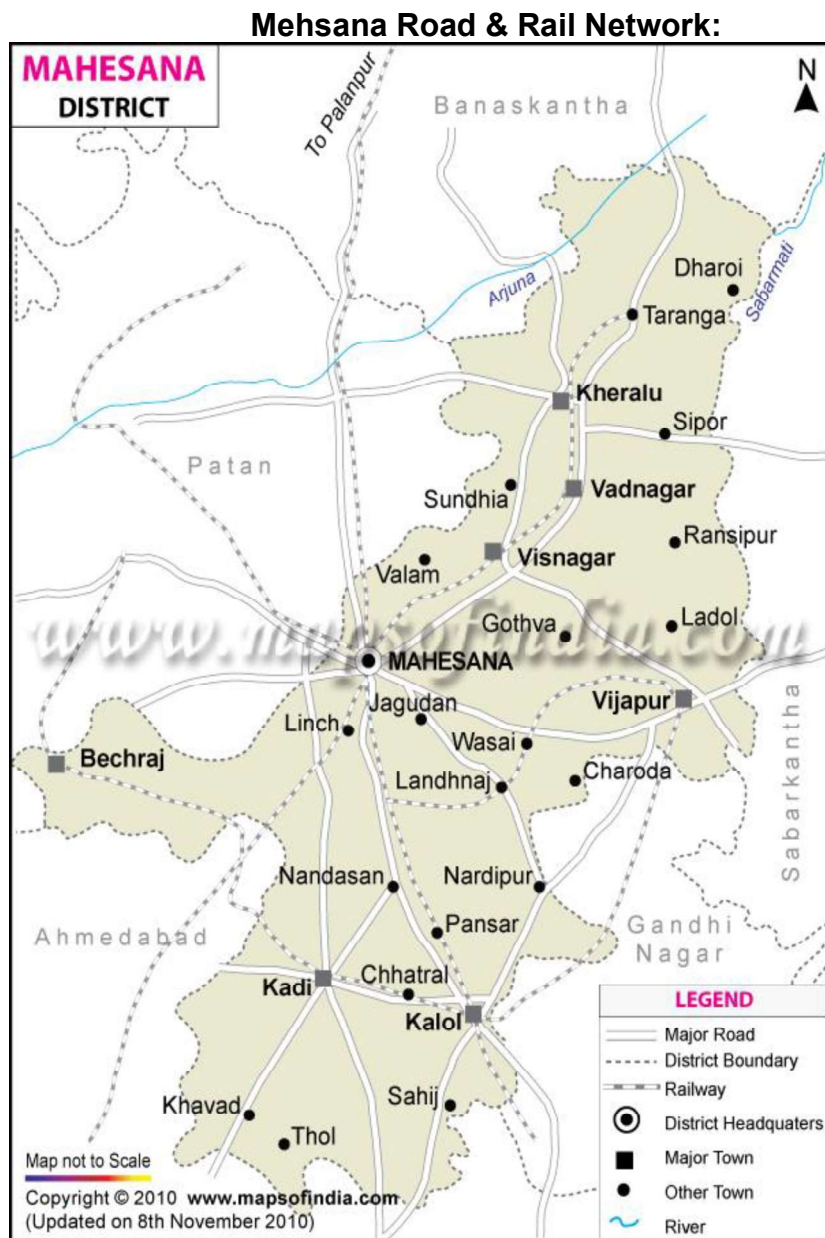
An overall Composite Risk Index for all hazards (like drought, flood, cyclone, earthquake, tsunami etc.) on a taluka-wise basis has been estimated for prioritization of overall investments, disaster mitigation and related development interventions. The risk index has been computed by stratifying annualized risk estimates by two deciles classes to generate a five point scale (Very High, High, Moderate, Low and Very Low).

Risk analysis of Kutch district Taluka wise:

Overall Composite Risk Index	Talukas of Kutch District
Very High Risk	Bhuj
High Risk	Nakhtrana, Anjar, Gandhidham, Bhachau, Rapar
Moderate Risk	Mandvi
Low Risk	Mundra, Abdasa, Lakhpat
Very Low risk	--

20.5 Mahesana District Profile:**Overview:**

1. Mehsana district is situated in the Middle part of Gujarat State.
2. 71.21° to 75.52° East (Longitude), 23.02° to 24.09° North (Latitude).
3. Area-4,494.52 sq. km.
4. Population of the District –2,035,064 (As per 2011 Census).
5. Mahesana district is surrounded by Gandhinagar and Ahmedabad district in south, Patan and Surendranagardistrict in West, Sabarkantha district in East and Banaskanthadistrict in Noronth.
6. The temperature ranges from 15° C minimum to 45° C maximum.
7. Average rainfall 864 mm.
8. Seismic Zone – III.



District HQ, Talukas, Municipalities:

1. Mehasna is the head quarter of the District.
2. Mehsana district consists of 10 talukas. These are Becharaji, Kadi, Kheralu, Mahesana, Vadnagar, Vijapur, Visnagar, Satlasana, Unjha and Jotana.
3. There are seven Municipalities: Kadi, Mehsana, Vijapur, Visnagar, Kheralu, Unjha and Vadnagar.

Rivers, Dams and Ports:

1. There are 5 big rivers Sabarmati, Rupen, Saraswati, Khari, and Pushpawati flowing in the District.
2. There is Dharoi Dam in the village of Satlasana, taluka-Satlasana.

Industries:

There are 16 factories registered under the Indian Factories Act. In the district there are oil fields/gas fields of ONGC. Rice mills and edible oil mills are also located here. Apart from this, the district is famous for dairy industry. There are 7183 registered small-scale industrial units in the district

Road, Rail, Air and Port connectivity:**Road:**

There exists a 51 km four-lane toll road with two service lanes on either side on Ahmedabad – Mehsana route. The district is connected with Ahmedabad (74 km), Gandhinagar (68 km), Vapi (458 km), Palanpur (72 km), Rajkot (299 km) and Surendranagar (143 km).

Rail:

Mehsana is well connected with other districts of the State like Patan, Porbandar and Ahmedabad by rail. It is further connected to Kandla port via a rail network through Ahmedabad and Gandhidham. The district has following rail routes.

Ahmedabad-Mehsana-Palanpur BG line.

Mehsana-Visnagar-Vadnagar-Kheralu-Taranga MG line.(Under gauge conversion)

Mehsana-Patan BG line.Mehsana-Katosan Road-Viramgam BG line.

Becharaji-kadi-Kalal- MG line.(Under gauge conversion)

Ambaliyasan-Vijapur MG line. (Now working –Planned for gauge conversion)

Air:

The nearest airport from Mehsana is the domestic and International airport at Ahmedabad located at a distance of 77 km.

Port:

The nearest Port is at Dholera.

Health:

The district has 4 hospitals, 50 Primary Health Centers and 10 Community Health Centers. Civil Hospital in Mehsana, General Lions Hospital Mahesana, Sai Krishna hospital Mehsana, Nutan General Hospital-Visnagar, Jivandhara hospital-Satlasna etc are big hospitals.

Risk analysis:

An overall Composite Risk Index for all hazards (like drought, flood, cyclone, earthquake, tsunami etc.) on a taluka-wise basis has been estimated for prioritization of overall investments, disaster mitigation and related development interventions. The risk index has been computed by stratifying annualized risk estimates by two deciles classes to generate a five point scale (Very High, High, Moderate, Low and Very Low).

Risk analysis of Mehsana district Taluka wise:

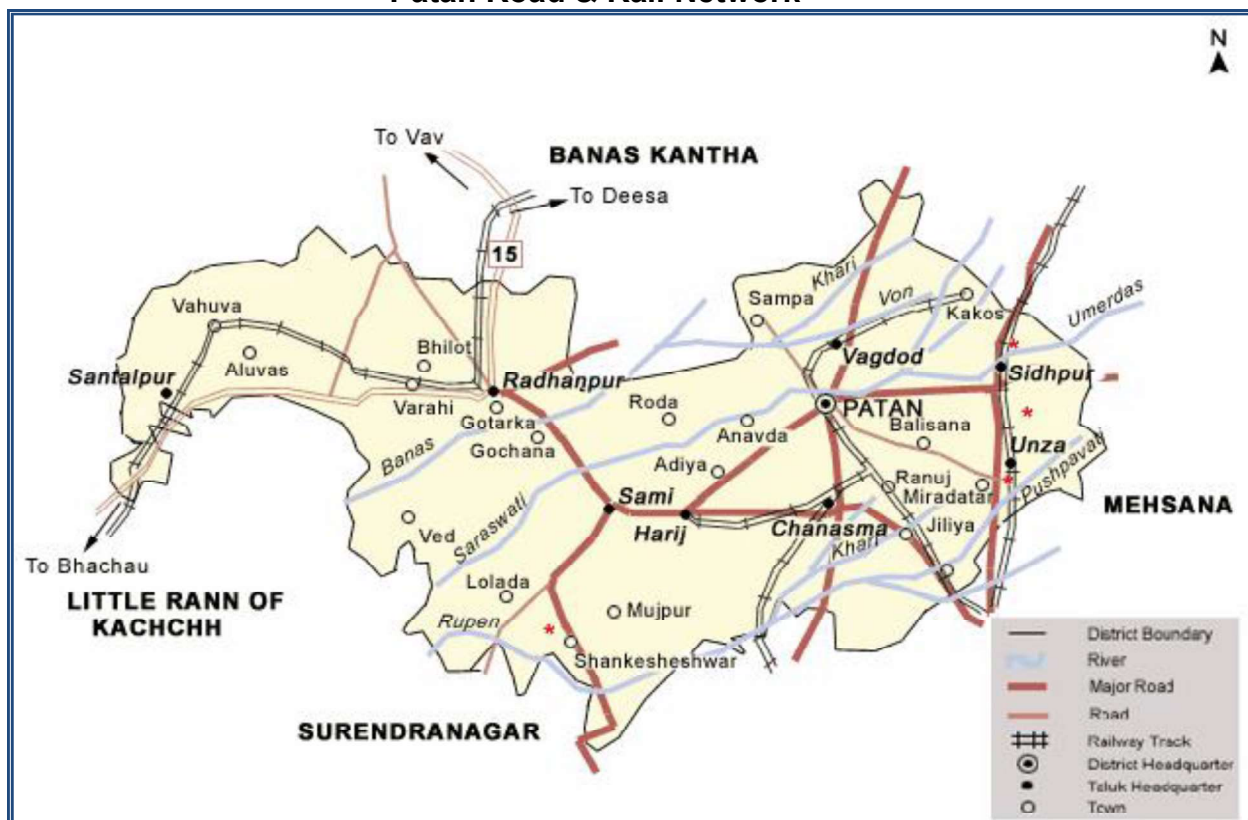
Overall Composite Risk Index	Talukas of Mehsana District
Very High Risk	--
High Risk	Mehsana
Moderate Risk	--
Low Risk	Visanagar, Vijapur, Kadi

Very Low risk

Satlasan, Kheralu, Unja, Bechraji, Vadnagar

20.6 Patan District Profile:**Overview:**

1. Patan district is situated in North part of Gujarat State.
2. 71.31° to 72.20° East (Longitude), 23.41° to 23.55° North (Latitude).
3. Area-5740 sq. Km.
4. Population of the District – 1,343,734 as per last census 2011.
5. Patan district is surrounded by Banaskantha district in the north and northeast, Mehsana district in the east and southeast, Surendranagar district in the south and Kutch District and the *Kutch nu Nanu Ran* (Little Rann of Kutch) in the west
6. The temperature ranges from 20° C minimum to 44° C maximum.
7. Average rainfall 557 mm.
8. Seismic Zone – IV.

Patan Road & Rail Network**District HQ, Talukas, Municipalities:**

1. Patan is the head quarter of the District.
2. There are nine talukas. Patan, Siddhapur, Harij, Chanasma, Radhanpur, Santhalpur, Saraswati, Shankheswar and Sami.
3. There are 5 municipalities. Patan, Siddhapur, Chansma, Harij and Radhanpur.

Rivers, Dams and Ports:

1. The District has no major River, there are seasonal rivers streams. Amongst these are the river Sarashvati, Banas, Rupen, Khari, Pushpavati, and Umerdashi.

2. There are no Major Dams in Patan District. There is One Small Barrage on the Sarashwati River near Patan city.

Industries:

There are very few big industries in this district. In Siddhpur taluka there are Oil Refoils and Cleaning of Isabgul. In Harij taluka there are Cotton ginning and oil refineries and also in Patan, Radhanpur, Balishana and Chanasma there are some small industries approved by industries department in patan district

Roads, Rail, Air and Port:

Rail:

1. Western railways connect Patan with major cities in India such as Delhi and Mumbai via Ahmedabad.

Road:

1. National Highways and State Highways run through the district connecting it with major cities of the state and the rest of India.
2. It is well connected with Ahmedabad (125 km), Banaskantha (58 km) and Kutch (318 km).
3. GSRTC provides bus service connecting all major cities and towns of Gujarat.

Air:

The nearest airport Ahmedabad is located at a distance of 125 km from Patan.

Health:

1. The district has 3 civil hospitals, 46 PHCs and 15 CHCs.
2. Patan is a prominent medical centre in North Gujarat with almost 200 practicing medical professionals. It has a medical college name GMERS Medical College and Hospital at Dharpur on Unjha Highway.
3. Major multi-speciality hospitals include General Hospital, Janta Hospital, Docter House and other Clinics in Patan.

Risk analysis:

An overall Composite Risk Index for all hazards (like drought, flood, cyclone, earthquake, tsunami etc.) on a taluka-wise basis has been estimated for prioritization of overall investments, disaster mitigation and related development interventions. The risk index has been computed by stratifying annualized risk estimates by two deciles classes to generate a five point scale (Very High, High, Moderate, Low and Very Low).

Risk analysis of Patan district Taluka wise:

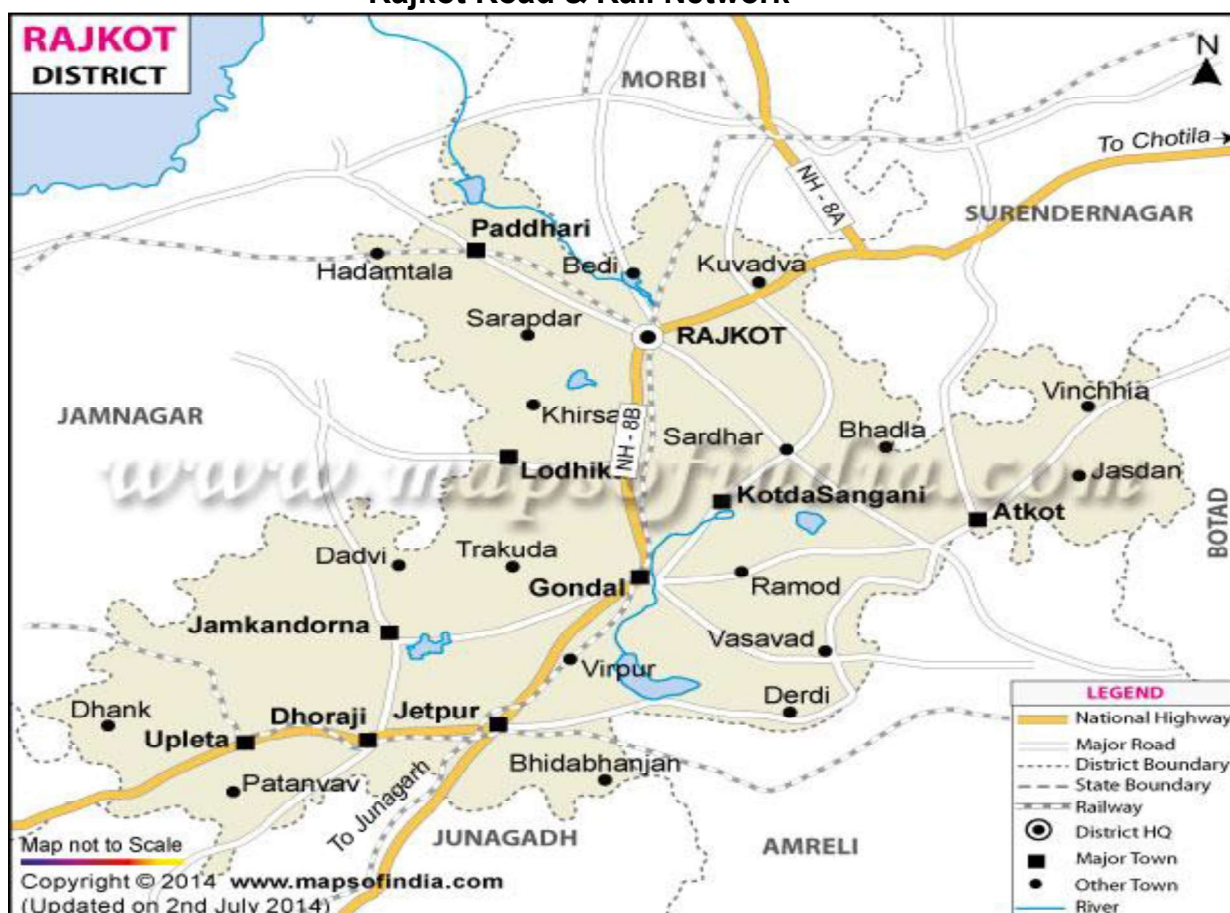
Overall Composite Risk Index	Talukas of Patan District
Very High Risk	--
High Risk	--
Moderate Risk	Sami
Low Risk	Santalpur, Radhanpur, Patan
Very Low risk	Vagdod, Sidhpur, Harij, Chanasma

20.7 Rajkot District Profile:

Overview:

1. Located in Saurashtra peninsula.
2. Mainland extends between 22.58° to 23.18° North latitude and 70.20° to 71.40° East longitude.
3. Bounded by Jamnagar district in the west, Amreli & Junagadh in the south, Morbi and Kutch no Akhatin north and Amreli & Bhavanagar in the east.
4. Area – 11203 sq. kms.
5. Population of Rajkot district – 3,804,558 (As per 2011 census).
6. Rajkot City is District Headquarter.
7. The temperature ranges from 45° C highest in the summer and 0.7° C lowest in the winter.
8. The average annual rainfall is 540 to 600 mm.

Rajkot Road & Rail Network



District HQ, Talukas, Municipalities:

1. Rajkot is the head quarter of the District.
2. There are eleven talukas. Dhoraji, Gondal, Jasdian, Jetpur, Kotdasangani, Lodhika, Padadhari, Rajkot, Upleta and Vichhinya.
3. There is one mega municipality at Rajkot and 6 other municipalities.

Rivers, Dams and Ports:

1. The District has 6 major rivers. These rivers are Dodi, Aji, Demi, Bhadar, Moj and Nyari.
2. There are no major dams in Rajkot district. There are 30 minor dams controlled under state irrigation department and 68 minor dams controlled under the District Panchayat.
3. Out of 1600 kms length of Coastal line of Gujarat, the coastal belt of Rajkot district is blessed with 90 kms in Maliya taluka. There is one port Navlakhi in the Rajkot district.

Industries:

There were more than 30,000 small scale industries. There are approximately 4000 home industries in Rajkot city of foundry, forging, machine tools, bearings, auto component, etc. Major industries of the district are engineering, ceramic, clock, plastic, screen printing and edible oils.

Road, Rail and Air Connectivity:**Road:**

1. The district is connected to Ahmedabad (225 km), Vadodara (294 km), Mehsana (299 km), and Bhavnagar (175 km).
2. The regional network includes links to Kandla, Porbandar and Gandhinagar..

Rail:

1. Rajkot is well connected by rail network to important cities in Gujarat and India like Delhi, Mumbai, Cochin, Coimbatore, and Bhopal.

Air:

The district has a domestic airport at Rajkot city, which operates flights to major cities such as Vadodara, Bhuj, Mumbai, Delhi, Ahmedabad, and Jamnagar.

Health:

The district has 1 district hospital at Rajkot, 4 sub district hospitals 13 CHCs and 54 PHCs with 344 sub centres.

Risk analysis:

An overall Composite Risk Index for all hazards (like drought, flood, cyclone, earthquake, tsunami etc.) on a taluka-wise basis has been estimated for prioritization of overall investments, disaster mitigation and related development interventions. The risk index has been computed by stratifying annualized risk estimates by two deciles classes to generate a five point scale (Very High, High, Moderate, Low and Very Low).

Risk analysis of Rajkot district Taluka wise:

Overall Composite Risk Index	Talukas of Rajkot District
Very High Risk	Rajkot
High Risk	Godal, Jetpur
Moderate Risk	Jasdan, Vankaner, Upleta
Low Risk	Dhoraji, Jamkandorana, KotdaSangani, Padadhari, Tankara
Very Low risk	Lodhika

20.8 Sabarkantha District Profile:

Overview:

1. Sabarkantha District is situated in North Eastern part of Gujarat State. Sabarkantha District is surrounded by Rajasthan state to the northeast, Banaskantha and Mehsana districts to the west, Gandhinagar to the south and Aravalli District to the South - East.
2. Situated between 72.43 ° to 73.39 ° East Longitude and 23.03 ° to 24.23° N Latitude
3. "Tropic of Cancer" is passing through this district.
4. Area-5390 sq. Km.
5. Population of the District – 14,73,673 as per last census 2011.
6. The temperature ranges from 12.0 C minimum to 40.0 maximum.
7. Average rainfall 851 mm.
8. Seismic Zone – III

Sabarkantha Road & Rail Network



District HQ, Talukas, Municipalities:

1. The administrative headquarters of the district is Himmatnagar, about 80 km from Ahmedabad.
2. There are 8 talukas viz Himmatnagar, Idar, Khedbrahma, Prantij, Talod, Vadali, Vijaynagar and Poshina.
3. There are 6 municipalities. Modasa and Himmatnagar are medium category and Idar, Khedbrahma, Talod and Prantij are bureau municipalities.

Rivers, Dams and Ports:

1. River like Sabarmati, Meshwo, Vatrak, Hathmati, Majam, Vaidi, Harnav, Khari are flowing in the District. Many rivers are flowing from ranges of “Aravalli” and after passing through the District. They are all merging in Sabarmati River.
2. There is some medium irrigation Dams in the District like Vanaj dam, Guhai dam, Jawanpura dam and Karol dam.

Industries:

1. Focus Industry Sectors – Agriculture, ceramics, chemicals and milk processing
2. Mainly based on agriculture activities.
3. Sabar Dairy of District is affiliated for marketing system with Amul Dairy of Anand and National Dairy Development Board, Anand.

Road, Rail and Air connectivity:**Road:**

1. NH 8 passes through the district connecting it with major cities of the State and also with the rest of India.
2. NH 8 connects Sabarkantha with Ahmedabad (79 km), Gandhinagar (55 km) and Mumbai (583 km).

Rail:

1. Himmatnagar, Idar and Khedbrahma are important stations in this District.
2. Meter gauge (Now under gauge conversion to broad gauge) Railway lines Ahmedabad to Khedbrahma are passing through District. There is a Broad gauge Railway line from Kapadvanj to Modasa.
3. Twenty-Four railway stations in the district connect Sabarkantha with major cities in the State and with the State Rajasthan.

Air:

Nearest airport in Ahmedabad is 79 km away from Himmatnagar (District Headquarter).

Health:

District has civil hospital in Himmatnagar. Moreover, there are 58- Primary health centres look after by Chief District Health Officer and 18-Community health centres.

Risk analysis:

An overall Composite Risk Index for all hazards (like drought, flood, cyclone, earthquake, tsunami etc.) on a taluka-wise basis has been estimated for prioritization of overall investments, disaster mitigation and related development interventions. The risk index has been computed by stratifying annualized risk estimates by two deciles classes to generate a five point scale (Very High, High, Moderate, Low and Very Low).

Risk analysis of Sabarkantha district Taluka wise:

Overall Composite Risk Index	Talukas of Sabarkantha District
Very High Risk	--
High Risk	--
Moderate Risk	--
Low Risk	Khedbrahma, Bhiloda, Meghraj, Bayad
Very Low risk	Vadali, Vijaynagar, Talod, Dhansura, Prantij, Malpur

20.9 Surendranagar District Profile:**Overview:**

1. In North - West corner of Gujarat state.
2. Mainland extends between 69.45° to 72.15° East (Longitude) and 22.00° to 23.04° North (Latitude).
3. Bounded by the Rann of Kutch, Patan&Mahesana in North,Botad and Rajkot in South, Morbi in the West and again partially bounded by the Ahmedabad in the East.
4. Coastline is Nil.
5. Area – 10488 sq. Kms.
6. Population – 1,756,268 (as per 2011 census).
7. The Climate of Surendranagar District can be regarded as one of extreme kind with hot summers and cold winters except in the coastal region.
8. The temperature ranges from 40 ° C to 47 ° highest in the summer and 8 ° to 10° C in the winter.
9. The average annual rainfall is 855 mm. Average rainfall from 1987 to 2016 was 562 mm.
10. Seismic Zone – III.

Surendranagar Road & Rail Network



District HQ, Talukas, Municipalities:

District Capital is Surendranagar. There are seven Municipalities including Chotila, Dhrangadhra, Limbdi, Patdi, Surendranagar-Dudhrej, Than and Wadhwan. The District has Ten Talukas including Vadhvan, Muli, Sayala, Limbadi, Chotila, Chuda, Lakhtar, Dasada, Halwad and Dhrangadhra.

River, Dams & Ports:

1. The District has no major rivers. There are seasonal rivers streams. These rivers are Bhogavo-1, Bhgavo-2, Rupen, Falku and Umai. Flow of the rivers is towards the Gulf of Kutch in the north and in north-west.
2. There are no major dams in Surendranagar District. There are 12 minor dams controlled under state irrigation department.
3. No coastal boundary so no port available.

Industries:

By and large, the non-farm sector in the district is dominated by enterprises in the unorganized sector. However, the district has also developed as a base for industries like textiles, and chemicals.

Surendranagar is a hub of cotton and ginning activities in India, with a large number of ginning and pressing units. The Surendranagar Cotton Oil and Oilseeds Association Ltd., (Government of India recognized) is a world-famous futures trading exchange for cotton.

Road, Rail and Air connectivity:

Road:

1. National Highway (NH) 8A passes through the district connecting it to Ahmedabad (116 km) and Kutch (258 km).
2. Distance from major cities in the State: Rajkot (111 km), Bhavnagar (154 km), Mehsana (143 km) and Gandhinagar (144 km).
3. National Highway (NH) 8 connecting Ahmedabad Dhrangadhra-Halvad.
4. National Highway (NH) 20 from Dhrangadhra to Surendranagar and towards Dhandhuka.

Rail:

1. Dhrangadhra, Lakhtar and Surendranagar are important Railway Stations.
2. The district has a broad gauge railway line, connecting it with all major cities such as Delhi, Mumbai, Kolkata, Bangalore and Hyderabad.

Health:

1. The district has 2 government hospitals, 10 CHCs and 31 PHCs.
2. Surendranagar has several private specialised hospitals to provide a comprehensive range of tertiary and secondary care services backed by state-of-the-art technology and trained medics.
3. C.U. Shah Hospital provides clinical and super specialty services such as ophthalmology, obstetrics & gynaecology, urology, nephrology and neurology
4. Besides this, several private hospitals such as Unique Cardiac Care, Nathwani Surgical Hospitals, Doctor House Hospital, Gandhi Hospital, Medico Multi Speciality Hospital, Shreyansh Hospital and Shraddha Children Hospital are also present in Surendranagar.

Risk analysis:

An overall Composite Risk Index for all hazards (like drought, flood, cyclone, earthquake, tsunami etc.) on a taluka-wise basis has been estimated for prioritization of overall investments, disaster mitigation and related development interventions. The risk index has been computed by stratifying annualized risk estimates by two deciles classes to generate a five point scale (Very High, High, Moderate, Low and Very Low).

Risk analysis of Surendranagar district Taluka wise:

Overall Composite Risk Index	Talukas of Surendranagar District
Very High Risk	-
High Risk	Halvad
Moderate Risk	Dhrangadhra, Muli, Sayla
Low Risk	Dasada, Wadhwan, Chotila, Limbdi
Very Low risk	Chuda, Lakhtar

Annexure - I: Model SOP of Disaster Management**WESTERN RAILWAY****SCHEDULE OF POWERS
DELEGATED BY THE GENERAL MANAGER
TO HEADS OF DEPARTMENTS
AND OTHER OFFICIALS****(MODEL SOP 2018)****DISASTER MANAGEMENT**

Disclaimer Clause: The users/executives making use of this SOP should also verify with the latest amended copy of SOP issued by DGM (G)-CCG from time to time. SOP in Disaster Management Plan is only for guidance and easy access.

Preamble to Model SOP 2018

Model Schedule of Power (SOP) was issued first time from the Railway Board on October 26, 2018. Subsequently, a need was felt to bring out its revised version, incorporating the correction slips, Railways' best practices and enhanced delegation of power introduced by Railway Board. A revised Model SOP "Model SOP 2018" is therefore being issued.

This Model SOP document is intended to bring in uniformity in delegation of financial and administrative powers across the Zonal Railways, Production Units/NAIR/RDSO (to the extent applicable) and empower PHODs/CHODs & DRMs/CWMs (CWMs include all SAG officers in charge of workshops/depots), including the field officers. GMs could however add further to this delegation in consultation with their PFAs keeping in view the local requirements while being within the overarching powers delegated to them and in accordance with Government of India rules. Chairman RRBs will exercise powers as available to SAG officers (Head Quarter) for items pertaining to them.

This Model SOP 2018 covers Works, Medical, Stores, Commercial, Establishment, RPF and Miscellaneous matters including CTIs, IT, PR. Part G of this document contains the SOP for RPF which includes the latest delegations for RPF in March 2018, over and above those existing in Section C (Miscellaneous) of this SOP. CHODs will exercise same powers as available to PHODs. It may be seen that powers delegated to DRMs are generally same for CWMs (in SAG). Principal Chief Security Commissioners (PCSC) of RPF will exercise the powers available to PHODs for matters concerning them. Similarly, the ADRMs (NFSAG) will exercise same powers as ADRMs (SAG). Also, the branch officers in Senior Scale (Independent Charge) will exercise same powers as available to divisional officers in JAG/SG. A branch officer is an officer in the division who directly reports to DRM and is to be treated as independent incharge for all purposes. Also, wherever CWMs are in SS/JAG/SG,

the CWE or concerned SAG officer in Head Quarter will exercise same powers as applicable to CWMs (in SAG) for matters pertaining to workshop/depots. The Station Directors and the Administrators of the Central Hospitals, both in JAG/SG, will exercise same powers as available to Branch Officers. Proposals submitted for GM's sanction will be cleared by AGM, unless GM's personal sanction/approval is required as per extant rules. Wherever finance concurrence is not required, it has been specifically mentioned. Wherever nothing is mentioned it should be presumed that finance concurrence is required.

The exercise of the powers delegated is subject to the observance of provisions of the existing code, rules and other extant orders. The sanctioning authorities shall pay due regard to the canons of financial propriety which are enumerated in Para 116 of Indian Railway Finance Code Vol – I. The exercise of powers by various authorities is subject to availability of funds against the appropriate head of account under the relevant demand.

Orders/delegations issued by Railway Board, from time to time, shall be applicable, with prospective effect. Railways may issue Correction Slips as and when such orders/delegations are issued.

Dated 23.07.2018

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Annexure-1: Rly. Bd. Ltr. No FX(II)-2015/PW/7 dt. 12.06. 2017 regarding Delegation of Powers to GMs

Annexure-2: Rly. Bd. Ltr. No. 2017/Trans/01 /Policy dt. 18.10.2017 regarding Delegation of Powers to GMs & DRMs

Disaster Management

S. N.	Nature of Powers	PHOD/ HOD	DRM/ ADRM CWM/ SAG Officers in Field Units	Divisional Officers, Extra Divisional Officers & Officers in Headquarters	REMARKS
97	Disaster Management at C71 to C75				

S. N.	Nature of Powers	PHOD/ HOD	DRM/ ADRM CWM/ SAG Officers in Field Units	Divisional Officers, Extra Divisional Officers & Officers in Headquarters	REMARKS
	(A) Procurement of additional life saving drugs from the market by Medical Officers at the site.	Full Powers	Full Powers	Full Powers	1. Full Powers if he is the only Medical Officer available on site. 2. Medical Officers to draw money from station collection. 3. Finance concurrence not required. <i>Authority:</i> Recommendation of High Level Committee on Disaster Management Item No.31
	(B) On the Spot payment to private Hospitals for treatment of injured.	Full Powers	Full Powers	Full Powers	1. Full Powers if he is the only Medical Officer available on site. 2. Medical Officers to draw money from station collection. 3. Finance concurrence not required. <i>Authority:</i> Recommendation of High Level Committee on Disaster Management Item No.32.
	(C) Cash imprest for ARMV in charges – for expeditious procurement of small items like fuel, food materials etc. at accident site	Full Powers	Full Powers	Full Powers	1. Full Powers if he is the Only Medical Officer Available on site. 2. This power to be implemented when the ARMV has to remain at the accident site for a longer period during exigencies. 3. Up to Rs. 5,000/- for food materials, fuel etc., <i>Authority:</i> Recommendation of High Level Committee on Disaster Management Item No.41
	(D) Purchase of items for ARME including First Aid Articles.	Full Powers	Full Powers	Full Powers	Only for emergency purchases and not for normal day to day requirements. <i>Authority:</i> Recommendation of the High Level Committee on Disaster Management Item No. 36.
(E) ART Equipment (HRE, HRD & 140 T cranes and other related equipment). (Authority: Recommendation of High Level Committee on Disaster Management Item No.36)					

S. N.	Nature of Powers	PHOD/ HOD	DRM/ ADRM CWM/ SAG Officers in Field Units	Divisional Officers, Extra Divisional Officers & Officers in Headquarters	REMARKS
	(i) For planned procurement of the spares, consumables, and small tools.	<u>PCME/ PHOD/ CHOD</u> Above Rs.25 Lakhs and up to Rs.2.5 Crores <u>Concerned HOD of Mechanical deptt.</u> above Rs.8 Lakhs and up to Rs. 25 lakhs	Nil	<u>SG/JAG</u> above Rs.1.5 Lakhs and up to Rs.8 Lakhs. <u>Sr. Scale</u> up to Rs. 1.5 lakhs	1. Finance concurrence is necessary 2. Constitution of Tender committee and acceptance as per Stores/Works powers as applicable.
	(ii) For emergency repairs and purchase of spares incidental to such repairs	<u>PCME/ Concerned HOD of Mechanical deptt</u> Up to Rs. 1 Lakh per break down with finance concurrence	Up to Rs. 1 Lakh per break down	<u>Sr DME/ In charge of ARTs</u> Up to Rs. 20,000/- per break down without finance concurrence	1. Finance concurrence is not necessary up to Rs. 50,000/- 2. Single quotation can be resorted to in case of Repair/ Spare from OEM/Authorised dealer 3. Sr DME/In Charge of ART shall certify the emergency. 4. A register showing the details of expenditure incurred on each break down should be maintained. The overall ceiling limit for emergency repairs/purchases of spares should not exceed Rs.20 lakhs per annum
	(iii) Scheduled overhauling/ reconditioning repairs to machines (Schedules not covered under Annual Maintenance contract) and for purchase of spare parts for this equipment	<u>PCME Full powers</u> <u>Concerned HOD of Mechanical deptt</u> Up to Rs. 50,000/- at a time	NIL	<u>Sr. DMEs/ In charge/ART</u> Up to Rs. 30,000/- at a time. <u>DME/In charge of ART</u> Up to Rs. 10,000/- at a time	1. Finance concurrence is necessary. 2. Subject to usual procedure of calling of tender/Quotation etc., being followed as per extant orders

S. N.	Nature of Powers	PHOD/ HOD	DRM/ ADRM CWM/ SAG Officers in Field Units	Divisional Officers, Extra Divisional Officers & Officers in Headquarters	REMARKS
	(F) Hiring of vehicles for rescue and relief operations.	Nil	<u>DRM/ADRM</u> Full powers during accidents	<u>Branch Officers of Medical, Mechanical, Operating Safety and Commercial departments</u> Full Powers.	1. The expenditure can be met from cash imprest/Station earnings without any limitation. 2. Efforts may be made to pool the utilization wherever possible. 3. Finance concurrence not required. <i>Authority:</i> Recommendation of High Level Committee on Disaster Management Item No.30
	(G) Sanction of expenditure incurred during relief and rescue operations.	<u>All Mechanical, Medical, Commercial, Operating, Safety Officers at the site of accident</u> Full powers	Full powers	<u>All Mechanical, Medical, Commercial, Safety, Operating and Electrical Officers at the site of accident</u> Full powers	1. Vouchers/Bills should be submitted within a Week's time. 2. Finance concurrence required at the time of post facto sanction <i>Authority:</i> Recommendation of High Level Committee on Disaster Management Item No.35
	(G)(1) Sanction of expenditure incurred for management of disaster as declared by NDMA	PHOD-full powers	<u>DRM/ADRM /CWM- Full powers MD/JRH</u> Full Powers	<u>Nil</u>	1. Prior finance concurrence is required 2. Vouchers to be kept for record and scrutiny <i>Authority-</i> CS No. 5 for new sub item No.97(G)(1). Sanction of expenditure incurred for management of disaster as declared by NDMA dt 16.06.20
	(H) Procurement of ART/ ARMV equipment.	<u>PCME</u> Full Powers	--	--	1. No item/equipment shall be banned while being purchased for ART/ARMV/Break down Crane. 2. No circulars/orders restricting the purchase procedures/powers for ART/ ARMV/Crane equipment shall be applicable unless issued by Railway Board (MM&FC). <i>Authority:</i> Recommendation of High Level Committee on Disaster Management Item No.37

S. N.	Nature of Powers	PHOD/ HOD	DRM/ ADRM CWM/ SAG Officers in Field Units	Divisional Officers, Extra Divisional Officers & Officers in Headquarters	REMARKS
	(I) Sanction of cash imprest for maintaining ART/ARMVs/ Cranes.	<u>PCME</u> - Full Powers	Nil	Nil	3. Finance concurrence is necessary <i>Authority:</i> Recommendation of High Level Committee on Disaster Management Item No.39
	(J) Purchase of ART/ARMV/ Crane material through imprest cash.	--	--	<u>JAG/Sr. Scale / Jr. Scale in Divisions</u> Full powers to ART In charge officer up to Rs. 10,000/- per item	1. Finance concurrence not required
	(K) (i) Requisition of Helicopter / Airplane to reach the site of serious accident or to evacuate injured and dead in the event of serious accident. (ii) Requisition of Air support to dispatch the rescue teams to the site of accident.				These powers are left to the discretion of GM. 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 these officers 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

S. N.	Nature of Powers	PHOD/ HOD	DRM/ ADRM CWM/ SAG Officers in Field Units	Divisional Officers, Extra Divisional Officers & Officers in Headquarters	REMARKS
					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. <i>Authority:</i> 1. Railway Board's letter No.2002/Safety-1/6/6 dated 13.06.2004.

Annexure-III: Statement of Modern Gadgets of Ahmedabad Division

Station	No. of CCTV		No. of CCTV proposed to be installed			DFMD available			HHMD	
	W&P	Hiring	W&P	ISS	Nirbhaya Fund	Working		Non-Working	Working	Non-Working
						Manned	Un-manned			
Ahmadabad	-	51	-	109	-	6	-	5	40	59
Gandhidham	-	-	-	-	23	2	-	2	15	12
Mehsana	-	-	-	-	28	2	-	2	10	4
Bhuj	-	-	-	-	7	1	-	-	12	7
Palanpur	-	-	-	-	11	2	-	-	11	4
Viramgam	-	-	-	-	15	2	-	-	15	3
Bhachau	-	-	-	-	6	-	-	-	-	-
Samakhiyali	-	-	-	-	10	-	-	-	-	-
Dhangandhra	-	-	-	-	-	1	-	-	9	2
Maninagar	-	-	-	-	-	2	-	1	8	5
Gandhinagar	-	-	-	-	-	-	-	-	5	-
Kalol	-	-	-	-	-	2	-	-	14	8
Patan	-	-	-	-	-	-	-	-	4	2
Sabarmati (BG)	-	-	-	-	-	-	-	-	8	1
Sabarmati(MG)	-	-	-	-	-	3	-	1	14	4
Siddhpur	-	-	-	-	-	-	-	-	4	2
Unjha	-	-	-	-	-	-	-	-	3	3
Bhildi Jn.	-	-	-	-	-	-	-	-	5	3
Randhanpur	-	-	-	-	-	-	-	-	5	3
MaliyaMiyana	-	-	-	-	-	-	-	-	4	1
Vatva	-	-	-	-	-	-	-	-	4	1
Himmatnagar	-	-	-	-	-	1	-	-	2	-
Total	0	51	0	109	100	24	0	11	192	124

[illegible]



SAFETY TODAY SECURE TOMORROW

Ahmedabad Division is committed to building a safe, reliable and efficient railway for passengers, employees and the nation.

OUR SAFETY PLEDGE



SAFETY FIRST

We believe that all accidents are preventable.



FOLLOW PROCEDURES

We follow rules, Standard Operating Procedures and Safe Systems of Work.



BE ALERT

We stay focused, identify hazards and report unsafe conditions.



CARE FOR EACH OTHER

We look out for our colleagues and work as a team.



ZERO HARM

Our goal is a safe workplace with zero injuries and zero accidents.

REPORT UNSAFE ACTS & CONDITIONS

Your alertness can save lives.

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📍 Contact your Supervisor / Safety Officer

ABOUT THIS MAGAZINE

This magazine highlights safety initiatives, learning from incidents, good practices and innovations from across Ahmedabad Division.

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Ahmedabad Division, Western Railway

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“करना है बहुत काम, पर सुरक्षा पर भी हो अपना ध्यान”



पश्चिम रेलवे
WESTERN RAILWAY
सुरक्षा • सेवा • सद्भाव
Safety • Service • Courtesy



STAY SAFE
STAY PROUD

Together, we build
a better Indian Railways.



SAFETY DEPARTMENT, AHMEDABAD DIVISION (W.R.)