

CHAPTER – XI

DISASTER MANAGEMENT

Introduction :

Till now, Disaster implies to cover only cases of serious rail/train accidents duly following the instructions mentioned in the Accident Manual. But now, 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. In order to handle all these accidents in coordinated manner between various departments, Disaster Management Plan has been prepared mentioning relief, rescue, mitigation and preparedness of railways. Whenever, an accident, terrorism related crisis or natural calamity arises is declared as a Disaster, all the instructions mentioned in DM Plans shall come into force and act accordingly. All Officers and Supervisors concerned should be fully conversant with their roles listed in the DM Plans and carry them in an efficient manner. However, a brief outlines on the Disaster Management is discussed below for information of Disaster Management Team members.

11.01 Definition of Disaster in Railways:

Railway Disaster is a serious train accident or an untoward event of grave nature, either on 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 etc, necessitating large scale help from other Government, Non-government and Private Organizations.

With the adoption of the above definition of railway disaster, 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. Zonal Railways will ensure that prevention, mitigation, preparedness, rescue and relief related issues covering all types of disasters affecting railway system are addressed and their details are also appropriately incorporated in their Disaster Management plans.

11.02 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 man made disasters. Different types of disasters are described along with a few examples, below:

- a) Natural Disaster :** Example : Earthquakes, Floods, Cyclones, Land Slides, Tsunami etc.

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, and 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 Incidental Command System (ICS). 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.

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 staff. Assistance from other Divisions and Zonal Railways would be taken through the Headquarter of the Zonal Railways. Coordination with the Integrated Operation Centre (IOC) of MHA and NDMA/NDRF would be through the Emergency Control of each zonal Headquarter.

b) Train Accident related Disaster : Example : Collisions (with a huge number of casualties), Train marooned (flash floods), derailments at 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.

A major train accident leading to serious casualties, long duration interruption to traffic and cannot be tackled with its own resources but requires help from other non-railway

resources. Dealing with such disasters is mentioned in detail in Divisional and Zonal Disaster Management Plan.

c) Man made Disasters : Example : Acts of Terrorism and Sabotage, i.e. causing deliberate loss of life and/or damage to Property, which includes Setting fire to a Train, Railway installations etc., bomb blast at Railway Station/Train, Chemical (Terrorism) Disaster, Biological and Nuclear Disaster.

Different forms of terrorism fall under this category. A major role has to be played by the Security Department of the Railways who will coordinate with the State Governments and when required the Para-military and other forces. The Security Control of the division will act as the Incident Command System (ICS). The Headquarter Security Control will coordinate with the Integrated Operation Centre (IOC) of MHA.

11.03 Authority to declare a Disaster in Railways :

In case of a serious accident, the Administration would take a conscious decision whether the situation is to be classified as a Disaster or not. GMs, AGMs or CSOs (when GM/AGM are not available) are authorized to declare an untoward incident as Railway Disaster. Such declaration shall have to be issued to all concerned with the approval of competent authority. Once, the accident is declared as Disaster, all instructions as contained in Disaster Management Plan would automatically come into force.

11.04 Disaster Management Plan :

All Divisions and Zonal Railway HQ must devise their DM Plans as per the provisions of Disaster Management Act, 2005 and DM Plan of Indian Railway taking into consideration

of the resources available with them, their neighbouring divisions/Zonal Railways, Civil Authorities, industrial units and Armed Force bases located in their territory. This would enable the Divisions/Zonal Railways to muster the entire local resources in case of a major disaster/natural calamity. Zonal Railways DM Plan should integrate all divisions and also to take into consideration adjacent Railways' framework. These DM Plans will help the relief teams to distribute their work and mandated duties. ISO 9000 certification is to be obtained initially for HQ and later for the Divisional DM Plans.

a) Divisional Disaster Management Plan : This will generally contain specific information regarding divisional action plan for dealing with all types of railway disaster. It should focus mainly on further new developments of sharing of resources with all stake holders. It should also have, divisional specific information like road maps, etc. Information common to all divisions of a Zonal Railway may be replicated uniformly in DM Plans of all divisions of the Zonal Railway. Divisional Specific information need not be contained in headquarter DM Plan.

b) Headquarter level Disaster Management Plan : This will have information common to all divisions of Zonal Railway. It will generally contain Railway's action plan for dealing with all types of railway disaster. Action items along with their progress will be detailed for all type railway disasters. Contrary to the divisional Plan this will be 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 Management, Duties of various officers/officials etc. in addition to the information specific to headquarter will be contained in this plan. Information common to all divisions of a Zonal Railway may be replicated uniformly in DM Plans of all divisions of Zonal Railway. The Plan of HQ should detail for all types of disasters, the preventive, mitigation and preparedness measures being taken by the railways and also the rescue, relief and restoration systems in place to meet with them.

11.05 Nodal Department for Compilation, updating and review of Disaster Management Plans :

Safety department on the Zonal Railways is responsible for compilation of DM Plans at HQ and Divisional Levels. The DM Plans are to be prepared with coordination of other departments, NGOs, Private Agencies, etc. These Plans are to be reviewed and updated at least once a year, i.e. January on the basis of Disaster Management Plans issued by Indian Railways and National Disaster Management Authority (NDMA). The DM Plans of the "State Governments" also need to be considered periodically and changes incorporated in the respective DM Plans of Zonal Railways/ Divisions. These Plans are also to be hosted on the rail net server of the zonal railways.

11.06 Handling of a Disaster :

a) Railway Agencies : In handling disasters, Railways should utilize its resources efficiently viz., Communication Network, Territorial Army Units, Uniformed force of RPF/RPSF, Medical Infrastructure, Civil Defence Organization, Scouts and Guides, Dedicated Rescue/Restoration Equipment.

b) Intermediate Agencies : A list of Contractors and Suppliers having emergency equipments like Earth Moving Machineries, Generatos, Pumps, etc., of adequate size is to be maintained by each division with their contact numbers and locations to be drafted at the time of need.

c) Outside Agencies : Assistance from following agencies can be obtained.

- National Disaster Management Authority (NDMA)
- State Disaster Management Authority of Orissa, Andhra Pradesh and Chhattisgarh,
- Orissa Disaster Rapid Action Force,
- National Disaster Response Force (NDRF)
- Army, Navy and Airforce through NDMA,
- Non-Government Organisations (NGOs) as per their capacity and need.

11.07 Disaster Preparedness :

Availability of Resources are generally self-reliant in carrying out rescue and relief operations as a result of having a well organized set up including ARMVs 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 by mobilizing non- Railway resources also.

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. 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 Khurda, Waltair and Sambalpur divisions.

11.08 Management of Disaster :

There are two aspects of Disaster Management work at an accident site. Firstly Rescue, Relief and Restoration which is carried out by one set of functionaries. Second aspect pertains rehabilitation of accident involved passengers, taking care of dead bodies, dealing with their relatives, transportation of stranded passengers, etc., which is carried out by a different set of functionaries.

a) Golden Hour Rule :

The basic principle of Trauma Management is speed and expediency - "Most Trauma patients die of shock, which comes from sluggish or non-existent circulation and the resulting chemical changes in the body" Therefore critical trauma patients should be given medical care within one hour from the time of accident, chances of recovery/survival reduce drastically, even with best medical attention given thereafter. This period of one hour is known as "The Golden Hour". During golden hour period patients should be provided with treatment to arrest bleeding, shock relieving and artificial respiration and keeping them in recovery position."

b) Management to save lives :

While rescuing the injured/dead, it is necessary to take firm and quick decision to save lives. Mechanical Department shall discharge dual responsibility of extricating injured passengers and dead bodies from coaches and toppling those coaches whose search has been completed. They will join up with Medical teams in extracting the injured/dead.

The basic steps for quick and effective rescue and relief operations are :

- i) Rapid access to the site of accident for searching of victims.
- ii) Quick extrication of victims and effective on-site medical management.
- iii) Expeditious extraction and shifting to rescue vehicle(s).
- iv) Speedy transportation to hospital.

c) Site Management :

In order to expedite the restoration of traffic and rehabilitation of affected passengers and their relatives, it is necessary to provide counters at the site of accident viz., UCC, LCC and CAC. Counters of UCC and LCC will assist in restoration process and CAC will assist the ill fated passengers and relatives.

i) Unified Command Centre (UCC) : Unified Command Center (UCC) should be set up at the accident site under the overall coordination of Mechanical Department. This is some kind of a control office to be located near the center of

the accident site. This is basically meant for catering to operational needs of Railway in rescue, relief and restoration work. UCC shall be manned by Sr. Supervisors of various departments such as Medical, Commercial, Personnel, Operating, Safety, Security, Public Relations, Mechanical, Electrical, S&T and Engineering round the clock basis in 12hrs. shift duty. They assist and co-ordinate with other departments. Each functionary at the UCC will maintain a log book. Flow of information both incoming and outgoing would be recorded along with the time and names of officers/staff who were given the message.

UCC will basically supervise the working of 2 Local Command Centres (LCC) and coordinate with Divisional and HQ Emergency Cells. Functionaries of different departments in LCCs should provide updated information regarding progress of work to their counterparts in UCC. It should have facilities like lighting with generator backup, communication with Divisional Emergency Cell and HQ Emergency Cell along with other communication, satellite telephone, fax, photo copier, PCs, loud speaker, etc. Detail schematic plan of UCC is given at Annexure - 2 of Zonal Disaster Management Plan.

ii) Local Command Centre (LCC) : Depending on the spread of the accident site, Local Command Centres (LCC) on the same pattern as the UCC should be set up for easy flow of information and coordinate between Disaster Management Team and UCC. 2 LCCs should be set up, if the site is spread over 300 - 400 mts. Detail schematic plan of LCCs would be similar to that of UCCs as given at Annex- 2 of Zonal Disaster Management Plan. Representatives of same departments as

in UCC should be present in LCCs. One SAG officer of Mechanical department will be overall in charge of each LCC with loud speaker for making announcements and direct telephone link with UCC.

iii) Combined Assistance Centre (CAC) : The UCC should have a Central Passenger Assistance Center (CPAC) with different counters for various purposes located towards the rear side away from the track for rendering help to passengers and their relatives. Outline schematic plan of UCC/ CAC is given at Annexure-2 of Zonal Disaster Management Plan. This is basically meant for catering to requirements of passengers and their relatives/next of kin to provide a single window clearance for all types of formalities like tracing of injured/dead, issue of Medical and Official Death Certificate, Payment of ex-gratia and Compensation, issue of Claims Compensation form, Pass counter for issue of return journey pass, etc.

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 at Annexure-3 of Zonal Disaster Management Plan. CAC will be manned by staff of concerned departments such as Operating, Medical, Commercial, Security & Personnel. A big banner displaying 'COMBINED ASSISTANCE CENTER' should be put up at a prominent place at the entry to the Tent. Different counters should be provided in sequence for each of these formalities, so that the entire exercise can be completed in about an hour. Functionary concerned from the local Municipality who issues Official Death

Certificates should be made to come and sit in the CAC so that these certificates can be issued immediately without any delay.

11.09 Disaster Preparedness and Rehabilitation:

Rehabilitary action in case of Disaster and Preparedness for handling such situation shall be done as per Disaster Management Plan (DMP) of the Railway. Telephone number of some of the agencies to be contacted at the time of Disaster is given at Appendix -14.

11.10 Disaster Management Training :

Subsequent to enactment of the Disaster Management Act, 2005, Railway Board has directed the Zonal Railways to impart training on Disaster Management at all levels to know disaster management related issues, to strengthen and upgrade the knowledge in respective spheres of the management through respective railway training institutes as per the module mentioned in Director (MPP)/RB/NDLS Ir no. E(MPP)/2009/3/1, dated 20.01.09.

11.11 National Disaster Response Force (NDRF) :

National Disaster Response Force is a defence agency dealing with relief and rescue operation related to all types of disasters i.e., state as well as railway disasters under the control of Sr. Commandant.. Assistance from the NDRF will be very much helpful for the Railway Administration for prompt relief and rescue operation in case of railway disaster. Board has empowered DRMs to directly requisition the nearest NDRF battalion for relief and rescue operation at the time of major railway disaster without loss of time. East Coast Railway's nearest NDRF is 3rd Battalion CISF(NDRF) at Mundali, Cuttack

(Tele-0671-2879709 and Fax. 0671-2879710). Requisition of NDRF should be judicious.

National Disaster Management (NDM) control room (Tel No. 011-23092885, Fax. 23093750), Security Control Room (Tel No. 011-23387981, Fax. 23303983) and Safety Cell (Tele Fax No. 011-23382638) in the office of Railway Board must be informed as and when requisition is made.

(a) Function of NDRF :

Apart from general rescue operation capability, the battalion has the specialization of handling flood and cyclone situation along with basic medical equipment with few medical officers who move to the site with the team. The battalion has 3 teams of 36 forces each with 3 buses and 3 trucks loaded with equipment. On requisition from CSO/DRM, NDRF will move for rescue after getting permission from DG/NDRF, NDLS. Normal response time is 45 minutes. For alerting staff, siren is sounded by their control room and a flag code system is followed to monitor dispatch. The control room is manned round the clock to receive information and respond accordingly. The battalion can move by road with their own vehicles. For longer distances (say more than 200 kms), rail transportation may be arranged, if possible. Railway has to assist them in reaching site by least possible time by arranging self propelled vehicles, trolleys, etc.

(b) Units of NDRF :

At present there are five Orissa Disaster Rapid Action Force bases available at Cuttack, Jharsguda, Balasore, Koraput and Chatrapur. Division has to contact with the above units for

necessary help at the time of need. Board has also directed that ODRAF units are to be called for association during annual full scale Disaster Management Drill of Railways. Further Railway also has to associate NDRF in their full scale exercise drill held once every year.

CRISIS MANAGEMENT

11.12 Definition :

What Is a Crisis ?

A "crisis" is an unstable time for an organization, with a distinct possibility for an undesirable outcome. This undesirable outcome could interfere with the normal operations of the organization, it could damage the bottom line or it could jeopardize the positive public image. In railways crisis is discussed which arises out of fires, floods, tornadoes, earthquakes, bombings, etc.

Crisis Management : Crisis Management is the process by which an organization deals with a major event that threatens to harm the organization, its stakeholders, or the general public. Three elements are common to most definitions of crisis: (a) a threat to the organization, (b) the element of surprise, and (c) a short decision time.

In contrast to risk management, which involves assessing potential threats and finding the best ways to avoid those threats, crisis management involves dealing with threats after they have occurred. It is a discipline within the broader context of management consisting of skills and techniques required to identify, assess, understand, and cope with a serious

situation, especially from the moment it first occurs to the point that recovery procedures start.

Crisis Management consists of :

- Methods used to respond to both the reality and perception of crises.
- Establishing metrics to define what scenarios constitute a crisis and should consequently trigger the necessary response mechanisms.
- Communication that occurs within the response phase of emergency management scenarios.

Crisis management methods of an organization are called Crisis Management Plan.

11.13 Difference between a Crisis and Disaster :

A Crisis medicates either an impending calamity or the occurrence of an incident which would adversely affect the society and human population. A Disaster is a much bigger occurrence of an event which would cause large scale devastation, damage to property and loss of human life etc. While a Crisis may or may not turn into a Disaster, the opposite is normally true, but with the condition the crises situation is more in the initial stages.

11.14 Types of Crisis :

There can be broadly 4 types of crisis situation which the Ministry of Railways may be confronted with:

- (a) National level crisis developed in the Railways and is specific to a railway which is to be managed with the help and assistance of other Ministries. All India Railway Strike is only such crisis for which Ministry of Railways is the Nodal Ministry.
- (b) National level crisis affects the country including Railways and different Ministries/Departments have to help and assist each other based on their strengths. Cyclone, Earthquake etc. can be such crisis where railways have to assist by running special trains. Ministry of Home Affairs is the Nodal Ministry but Railways have to maintain liaison and flow of information for assistance to restore the affected railway system. Further for Terrorism/Security related Crisis, Ministry of Home Affairs has to assist railways.
- (c) Crisis situation which is not a national level crisis affects railway system which is to be managed with the help and assistance of other Ministries/departments. Chemical explosion in train, fire in train, train falling in river, etc may be such situations.
- (d) Crisis situation which is not a national level crisis affects railway system which can be managed with the help of internal resources from the railways only. In such crisis where railways have to help other ministries by way of rail transport. Ministries concerned will make their own Crisis Management Plan bringing out the assistance that the Railways will be required to provide to them.

11.15 Drill for handling Crisis :

The Crisis Management Plan (CMP) is intended to deal with the afore mentioned crisis situations only. The drill to be followed in the Ministry of Railways (Railway Board) as well as on the Zonal Railways in respect of crisis group Functioning of Control room, communication etc., are basically the same for all crisis situations and the same general drill will follow and to be supplemented by the special instructions depending upon the nature of the crisis.

11.16 Coordination of Incident Command System of Railways with Integrated Operations Centre of Ministry of Home Affairs :

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.

(a) 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.

(b) 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.

Category	Description	Stage
Minor	50 or more casualties (inclusive of death and injuries)	Yellow
Medium	51-99 deaths.	Orange
Major	100 or more deaths, or where additional assistance is sought by the Ministry of Railways.	Red

As soon as alerts are issued, Emergency Cell in the control room of the affected divisions on the Railways will start function and act as the "Incident Command System" (ICS) to monitor information of the Disaster and to coordinate the organization of various emergency functions, (rescue, relief, mitigation etc) in the disaster areas. The ICS of the Divisions will coordinate with the "Zonal ICS" where a similar emergency cell exists in the Headquarters of each Zonal Railway. The "Zonal ICS" will establish liaison with the Integrated Operation Centre (IOC) of the Ministry of Home Affairs 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 ICS will constantly update the position periodically to Railway Board.

★★★