



HIGH LEVEL  
COMMITTEE'S  
RECOMMENDATIONS  
ON DISASTER  
MANAGEMENT OVER  
INDIAN RAILWAYS



## *High level committee. Why ?*

- ◆ Major train accidents in Indian Railways involving heavy casualties, need for a re-look at the existing Disaster Management system on the Indian Railways.
- ◆ Foreign Countries,
  - Relief/Rescue by civil authorities.
  - Clearing of track and restoring traffic by Railway systems.



# *High level committee. Why ?*

## ◆ Indian Railways

- Rescue, Relief , Clearing the track and Restoring traffic by Railway System and therefore the Indian Railways has to rise to the expectations of the public.
- Technological advancements in relief and rescue operations.
- Usage of latest relief and rescue equipment, tools and plants and innovative techniques for speedy restorations.



## *High level committee. Why ?*

- ◆ TO REVIEW THE DISASTER MANAGEMENT SYSTEM
- ◆ TO GIVE RECOMMENDATIONS FOR STRENGTHENING AND STREAMLINING THE DISASTER MANAGEMENT SYSTEM



# *OBJECTIVES*

- ◆ TO REVIEW THE EXISTING DISASTER MANAGEMENT SYSTEM OVER INDIAN RAILWAYS TO TRAIN ACCIDENTS AND NATURAL CALAMITIES & 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 MINISTERS, STATE GOVERNMENTS AND ARMED FORCES TO ENABLE QUICK AND SMOOTH RESTORATION OPERATIONS WITHOUT ANY LEGAL OR PROCEDURAL HURDLES.



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PROTECTION FORCE



## *Various Titles Of Recommendations*

- i. Institutionalizing Golden Hour Drill.
- ii. Relief Measures For Injured And Survivors.
- iii. Care For The Dead.
- iv. Technological Inputs In ARMVs/ARTs.
- v. HRD Training.
- vi. Media Management.
- vii. Recommendations For Implementation



## ***WHY THE FIRST HOUR AFTER THE ACCIDENT IS TERMED AS GOLDEN HOUR***

- ◆ MOST TRAUMA PATIENTS CAN BE SAVED IF BLEEDING IS EFFECTIVELY STOPPED AND BLOOD PRESSURE RESTORED WITHIN AN HOUR.
- ◆ IT IS LIKELY THAT PATIENTS , WHO HAHE EXPERIENCED SHOCK AND REMAIN IN THAT STATE OF SHOCK FOR LONG DURATION WILL DIE. SURGICAL INTERVENTION WITHIN THAT FIRST ONE HOUR IS , THERFORE, CRUCIAL FOR INCREASING THE PATIENTS' CHANCES OF SURVIVAL.





*i. GOLDEN HOUR CONCEPT.*

- ◆ THE CONCEPT OF GOLDEN HOUR CAN BE ACHIEVED IN ANY DISASTER UNLESS IT OCCURS IN THE VICINITY OF THE RAILWAY DISASTER MANAGEMENT INFRASTRUCTURE/CITY/CIVIL/ ARMED FORCES ESTABLISHMENTS WITH ADEQUATE MEDICAL INFRASTRUCTURE.



# *TO ACHIEVE GOLDEN HOUR CONCEPT*

- ◆ THE EXISTING DISASTER MANAGEMENT SHOULD BE REVAMPED BY SETTING AN EFFECTIVE DISASTER MANAGEMENT SYATEM ON THE RAILWAYS WITH STRONGER AND APPROPRIATE INFRASTRUCTURE BACKED BY A WELL TRAINED TEAM OF DISCIPLINED AND DEDICATED MANPOWER.



# *AT PRESENT, HELP FROM*

- ◆ FELLOW PASSENGERS, PARTICULARLY THOSE WHO ARE QUALIFIED IN GIVING FIRST AID/DOCTORS ON TRAIN.
- ◆ RAILWAY STAFF/OFFICERS ON BOARD WHO, AS PER RAILWAY SERVICE CONDUCT RULES ,ARE EXPECTED TO ASSIST THE VICTIMS.
- ◆ NEIGHBOURING VILLAGES/TOWNS,CIVIL AUTHORITIES, NGOs,etc.
- ◆ ORGANISED RAILWAY RESCUE AND RELIEF TEAM.



# *REFRAIN OF THE MEDIA*

- ◆ THE USUAL REFRAIN OF THE MEDIA THAT LOCAL HELP WAS IMMEDIATE, WHILE THE RAILWAYS TOOK SOME TIME TO ORGANISE ASSISTANCE IS SOMEWHAT UNCHARITABLE, SINCE IT IS NOT POSSIBLE TO HAVE ORGANISED EFFORTS LOCATED AT EACH AND EVERY REMOTE AREA ANTICIPATION OF AN ACCIDENT/DISASTER.



# *Recommendations of HLC*

- ◆ **NDMA is made responsible for-**
- ◆ 1. Co-ordinating/mandating government policies.
- ◆ 2. Ensuring adequate preparedness at all levels in order to meet disasters.
- ◆ 3. Coordinating response to a disaster when it strikes.
- ◆ 4. Coordination of post disaster relief and rehabilitation



## *SPART*

- ◆ Self Propelled ARTs and ARMVs to be bundled into a three coach train to be called SP-ART.
- ◆ These should be deployed @ one SP-ART per Division.



## *MOU with Civil / Private Hospitals*

- ◆ To improve the response time, feasibility of entering into a tie up with reputed civil / reputed private hospitals may be explored.



## *MOU with State Govts-*

- ◆ It is proposed to enter into an MOU with the State Governments so that Railway and District administration can join hands for mutual assistance in case of railway / non-railway disasters.





## *Rescue Ambulance*

- ◆ Divisions where the road networks are good should procure one disaster management rescue ambulance and base it at their divisional hospitals.



## *Air Support-*

- ◆ The committee recommends that assistance of air support to dispatch the rescue teams to the site of accident and for air lifting of needy, seriously injured passengers to the nearby hospitals.



## ***MOU with armed forces***

- ◆ MOU with armed forces may be finalized to seek assistance as and when the need arises.
- ◆ **MOUs with private air operators.**
- ◆ **Upgrade Speed of ARMVs-**
- ◆ **High Speed ARMVs-** New ARMVs / SPART should be fit for 140 kmph.
- ◆ **Upgrade Speed of ARTs-** Speed of ART's to be increased to 100 kmph



## *Emergency rail-cum-road vehicle*

- ◆ Feasibility of introducing an emergency rail-cum-road vehicle may be explored.



## *Ensure specified minimum running of Dsl. Locos on all Electrified Routes*

- ◆ Delay in loco hauled ARME and ART to reach the site of accident.
- ◆ Delay in relief operations
- ◆ Diversion of trains on diesel routes
- ◆ Delay in dispatching ‘Relatives Specials’ to the accident site.



## *First aid training*

- ◆ mandatory for all railway personnel, especially for on board train staff, gang-men and station staff .
- ◆ **MOU for First Aid Training .**



## *A Manual / Guide for On Board staff-*

- ◆ A guide be made available with train crew like TTEs, AC coach attendants, AC pantry car staff, safaiwala, TXR staff, catering staff, security staff, driver and guard.
- ◆ frontline staff can form the initial core relief and recovery team .



## ***Crack Team of Rail Rescue Experts-***

- ◆ Professionally trained **Crack Team of Rail Rescue Experts** (Medical and Medical officials) and containerized hospitals based at headquarters who can be rushed to any site .





## *Details of Local Resources*

- ◆ All Divisions should be fully aware of the local, civil, army and other resources available for supplementing their disaster management .
- ◆ a ready updated list of names, addresses, telephone numbers and any other relevant information .



## *Disaster management plan-*

- ◆ All Divisions and Zonal Railway headquarters (including Metro Kolkata\* & DMRC\*\*) must devise their disaster management plan.



## *ISO-9000 Certification*

- ◆ : Disaster Management System of each Division / Zonal Railway to be certified ISO-9001: 2000 .



## ***Multi Disaster Resistant Control Rooms:***

- ◆ Zonal/ Divl. Control rooms to be upgraded gradually to become multi disaster resistant and fully equipped with all back up systems for communication, power, drinking water etc. capable of sustaining for a week.



## *Coordination with civil medical authorities:*

- ◆ Data about civil medical / private medical facilities is available on railnet. This should be kept updated.
- ◆ Railway medical officers should remain in touch with civil / private medical institutions for seeking assistance in case of need without any loss of precious time.



## *Leverage St. John Ambulance network*

- ◆ This organisation should be utilized to strengthen the arrangements for transportation of injured / dead from site to hospitals.



## *HLC recommendations*

- ◆ **Assistance of NGOs-**
- ◆ **Assistance from Neighboring Divisions-**
- ◆ **Expeditious clearance by the State police**
- ◆ **Coordination / liaison with state Police & civil authorities-**



## *HLC recommendations contd.*

- ◆ **Gang Men to assist in Rescue operations**
- ◆ **Guide Lines to be displayed in Coaches-**
- ◆ **Road Access to vulnerable locations**
- ◆ **Roof & under floor hatches and emergency windows in Coaches-**
- ◆ **Emergency Automatic Lights**





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- ◆ **Civil engineering agreements**
- ◆ **Hiring of Vehicles for rescue & relief operations**
- ◆ **Powers for procurement of additional life saving drugs**
- ◆ **Power for making on the spot payment to private hospitals**



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- ◆ **Requisitioning the medical assistance from the civil side-**
- ◆ **Withdrawal of money from station earnings**
- ◆ **Delegation of adequate financial powers to DRM and concerned Branch Officers (Mech., Medical and Commercial) to ensure quicker rescue operations.**



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- ◆ **Purchase powers** – Divisional and HQ Mechanical and Medical Officers to be given purchase powers .
- ◆ **Procurement of ART/ARMV equipments**
- ◆ **Standing spot purchase Committee for ART/ARMV-** To avoid any deficiency in keeping the ART/ARMV/Crane equipment in good fettle,



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- ◆ **Full powers for sanctioning cash imprest** for maintaining ART/ARMV/Crane to be given to CME without Finance Concurrence.
- ◆ **Individual purchase ceiling for ART/ARMV/Crane equipment** of Rs. 1000 to be enhanced to 10,000 under normal circumstances and up to Rs. 50,000 with the approval of DRM/CMPE/CRSE without Finance vetting.



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- ◆ **Cash imprest for ARMV incharges-** A monetary imprest is required to be provided at the accident site for expeditious procurement of small items like fuel, food, materials etc .
- ◆ **Cash Imprest with ART incharges-** The imprest with all ART incharges should be raised to Rs. 25,000/- as also recommended by RSRC.



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- ◆ **Satellite phones** – All Divisional and HQs control rooms have been provided with one satellite phone each .
- ◆ **One ISD connection at Each Zonal HQ control and Division control** should be provided to establish communication with accident site through satellite phone.



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- ◆ **Specific DOT telephone No. For Railway Accident Information.**
- ◆ **Powers to hire Cell phones-** In case of a passenger train accident, at a station, which has a cell phone connectivity.
- ◆ **Alphabetical list of passengers on board** with their current status must be available and displayed and enquiry counters



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- ◆ **Disaster Management Team of RPF-**  
There should be a Disaster Management Team of RPF on each Division of IR comprising about 15 men in different ranks.
- ◆ **Equipments for RPF.**
- ◆ **Luminous jackets:** RPF personnel at site should wear luminous jackets of distinct colour.





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- ◆ **Crowd control:** Area of accident site should be cordoned off by the RPF so that by-standers (onlookers) and unwanted crowd do not disrupt the rescue operations.



*ii. Relief measures for injured and survivors*

- ◆ **Safe custody & appropriate disposal of the luggage.**
- ◆ **Accident Claims Compensation Booklet**
- ◆ **No payment of meal charges at accident site**



*iii. Care for the dead.....*

- ◆ Nos. of Collapsible coffins must be kept at each Divisional hospital,
- ◆ Air-conditioned mortuaries
- ◆ Embalming Gun and Chemicals



#### **iv. Technological Inputs in** **ARMVs/ART**

- ◆ **Review, rationalization and relocation of ARTs and ARMVs .**
- ◆ **Nominated staff for ARMV and ART**
- ◆ **Air Brake ARTs**
- ◆ **Rebuilt Coaches for ARTs/ARMVs**
- ◆ **Provision of EMERGENCY  
INFLATABLE LIGHTING TOWERS**



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- ◆ **Charging Facilities:** Charging facilities for Laptop, cell phones and cameras etc. may be provided in all SPARTs and A & B class ARTs/ARMVs.
- ◆ **Provision of Inflatable tents** in 16 SPART's initially.
- ◆ **Provision of Synthetic packings** in all ART's



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- ◆ **Provision of one set of re-railing ramps .**
- ◆ **New ARMV and ART coaches should be manufactured / rebuilt on the pattern of Swiss Federal Railways.**
- ◆ **Provision of luminescent barrier tapes .**
- ◆ **Livery of ART/ARMV staff**



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- ◆ **Provision of 20 stackable plastic chairs in each ART and ARMV/SPARTs.**
- ◆ **Provision of nylon slings of capacity up to 70 ton.**
- ◆ **TRIFOR-** Induction of wire rope lifting and pulling machines known as Trifor.
- ◆ **Introduction of automatic and spring-loaded measuring gauges for the measurement of track and rolling stock parameters.**



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- ◆ **Steam cranes attached to Accident Relief Trains may be phased out.**
- ◆ **POH Periodicity of ART/ARMV Coaches-** ART/ARMV coaches may be given POH in 3 ½ years instead of 2 years as at present.
- ◆ **Ten coffins and body bags may be provided in each ARMV's**





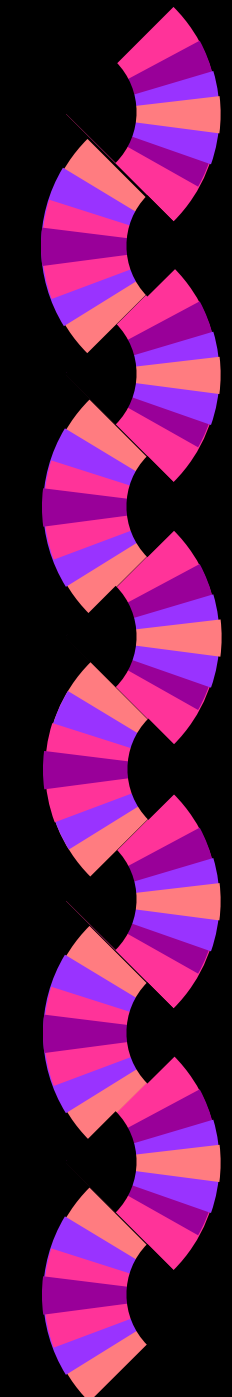
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- ◆ **Wrist bands** may be provided in ARMVs to identify the injured and dead.
- ◆ **Lightweight foldable ladders** of adequate length may be provided in each ART/ARMV.
- ◆ **140 Tonnes Break Down Crane-** There should be a minimum of one 140 tonne breakdown crane in each BG division over Indian Railways.



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- ◆ **Rescue platform for 140T crane:** RDSO should finalize a design of a platform, which can be hooked on, with the jib of the 140 tonne crane to assist the rescuers .
- ◆ **Revised List of ARMV Equipments**
- ◆ **Breakdown staff** should be handpicked and there should not be any fixed tenure .

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- ◆ **Duty list of all ARMV/ART staff and supervisors .**
  - ◆ **All ARMV/ART coaches should have a standby arrangement of generator.**
  - ◆ **A portable rail trolley.**
  - ◆ **Standby Driver for 140 Tonne Crane.**



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- ◆ **Specialised tunnel rescue equipment .**
- ◆ **Ramps-** Each ART must have ramps for re-railment of rolling stock.
- ◆ **Concrete pathway for approach to ART/ARMV-**
- ◆ **AMCs for critical equipments- Railways may enter into Annual Maintenance Contracts**



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- ◆ Critical spares from approved sources only .
- ◆ Walkie-Talkie & VHF sets- **ARTs at Divisional Headquarters to be provided with 30 Walkie-Talkie sets and two 25 W VHF sets.**
- ◆ WLL exchange having 50 line capacity- **ARTs at Divisional Headquarters to be provided with one WLL exchange having 50 line capacity.**



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- ◆ **Video Conferencing facilities from the site of accident-**
- ◆ It is proposed to provide Video conferencing facility from disaster site to Railway Board and Zonal Railway Head quarter,
- ◆ Divisional ARTs to be provided with one PC along with high-speed satellite modem



## *v. HRD Training*

- ◆ **Railway Disaster Management Institute with a special focus on Rescue, Extrication, Medical relief and relief and restoration techniques.**
- ◆ **Basic training in search and rescue .**
- ◆ **Manual on rescue, relief and restoration management**



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- ◆ **Human Resource Development: NDMA proposes to train the local administration in the basics of search, rescue and relief.**
- ◆ **Around 5 to 10 disaster management – training films covering various types of accidents / disasters may be prepared and given to all divisions over Indian Railways.**





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- ◆ Periodic training on disaster management for front line staff- **Frontline staff such as RPF, TTEs, catering staff, TXR, AC attendants, safaiwalas, guard, driver / assistant driver, PWIs, gangman, etc. are usually the first responders in case of an accident .**



- ◆ **Full scale disaster management exercise –**  
Each division should conduct one full scale disaster management exercise on the similar exercise as army exercises are conducted once in a year.
- ◆ **Training to handle Fire Related Disasters**



## *vi. Media management*

- ◆ **Training in crisis communication-** During the last decade, electronic and IT revolution has brought about a significant improvement in the media coverage .



*vii. Recommendations for implementation*

- ◆ **Monitoring Implementation of the Accepted Recommendations:**
- ◆ **Monitoring implementation and addressing left out issues:**



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- ◆ **Adopt latest techniques / equipments for rescue and relief used by developed countries:**
- ◆ further necessary inputs to strengthen the IR disaster management system, keeping in mind the NDMA's plans and the new technologies that are adopted, may be finalized.



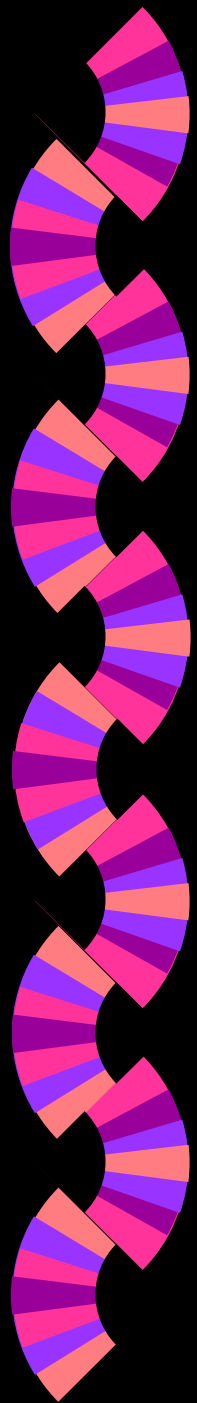
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- ◆ **Oxy Fuel Cutting Equipments.**
- ◆ **Portable electrically operated cutting and boring tools.**
- ◆ **Provision of self-contained breathing apparatus.**
- ◆ **Inflatable Air Bags-** Provision of inflatable Air Bags in all SPARTs.



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- ◆ **One digital video and still camera** each with 5-6 floppy discs may be provided in each Division to be kept for each ART/ARMV/SPART.
- ◆ **Provision of a laptop computer** for accident relief operations (with Sr.DME/DME) (one per Division)



THANK YOU