DISASTER MANAGEMENT PLAN

OF CONCOR

Issued by: CONCOR

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CHAPTER-1

INTRODUCTION

1. Background

Container Corporation of India Ltd. (CONCOR) was incorporated in March 1988 under the Companies Act, 1956, as a Public Sector Enterprise under the Ministry of Railways. The Company was set up with the prime objective of developing multimodal transport and logistics infrastructure for handling marine containers in the country. The company commenced operations on 1st November 1989. At present CONCOR has a total of 63 terminals offering multi modal logistics services. These include Inland Container Depots (ICD), Container Freight Stations (CFS) and Domestic Container Terminals (DCT).

2. Core Business

CONCOR is in the business of providing terminal services and facilities for container traffic, and providing inland transport of containerized cargo. Inland transport is provided mainly by rail, though CONCOR does provide road transport on certain sectors, either as an alternative option to Rail or as an operationally superior mode of transport. Movement by rail however forms the predominant mode.

The business consists mainly of two kinds of traffic: transport to and from gateway ports for import and export, termed as international or Exim traffic, and domestic movement within the country. CONCOR provides a single-window facility coordinating with all the different agencies and services-Customs, Gateway Ports, Railways, road haulers, consolidators, Forwarders, Custom House Agents and shipping lines.

CONCOR currently owns its own fleet of over 10,600 container flat wagons operating on the Indian Railways system. CONCOR presently operates a fleet of over 15,500 containers owned or leased by it for operations in the Domestic business segment.

Some of the facilities offered are dedicated domestic terminals dealing only with internal trade movements. Some terminals handle both domestic and international trade. The terminals provide a varying gamut of facilities in terms of warehousing, container parking, repair facilities, office complexes for shipping lines, transport operators and so on.

3. Growth Strategy

CONCOR's overall strategy is to transform the Company from an operational entity into a marketing – driven organization, focused on both EXIM and Domestic segments of its business depending on their relative growth potentials and profitability. It is slowly growing from a predominantly rail container transportation company to a Logistics Service Provider for both export-import and domestic trade and industry in the country.

While it continues to build on its own areas of expertise and experience, it also draws on the strengths of its partners and any potential associates through Joint Ventures/Associates/ Agreements/MOU, so as to grow its business and profitabilities in related areas.

4. Approval of the Disaster Management Plan of CONCOR

The Disaster Management Plan of CONCOR will be submitted to the Ministry of Railways, Government of India for onward submission to NDMA for comments, suggestions and approval and subsequent updating for effective Disaster Management.

CHAPTER-2

DISASTER MANAGEMENT ACT-2005

2.0 National Disaster Management Act 2005: The parliament of India enacted the National Disaster Management Act 2005 and notified in Gazette of India in December 2005. The act provides for the legal and institutional frame work for the effective management of disasters. The legislation is in the concurrent list of constitution thus having the advantage that it will permit the States also to enact their own legislation on disaster management.

2.1 Disaster has been defined in this Act as under:

"Disaster means a catastrophe, mishap, calamity or grave occurrence in any area, arising from natural or man- made causes, or by accident or negligence which results in substantial loss of life or human suffering or damage to, and destruction of, property, or damage to, or degradation of, environment, and is of such a nature or magnitude as to be beyond the coping capacity of the community of the affected area"

Disaster Management has been explained in this Act as under:

"Disaster Management means a continuous and integrated process of planning, organising, coordinating and implementing measures which are necessary or expedient for-

- prevention of danger or threat of any disaster;
- mitigation or reduction of risk of any disaster or its severity or consequences
- capacity-building;
- preparedness to deal with any disaster;
- prompt response to any threatening disaster situation or disaster;
- assessing the severity or magnitude of effects of any disaster;
- evacuation, rescue and relief;
- rehabilitation and reconstruction"

The act mandates creation of new institutions and assignment of specific roles for Central, State and Local Government. The Act provides for establishment of:

- National Disaster Management Authority (NDMA)
- State Disaster Management Authority (SDMA)
- District Disaster Management Authority (DDMA)

Act also provides for: -

- Constitution of Disaster Response Fund and Disaster Mitigation Fund at National, State and District levels.
- Establishment of National Institute of Disaster Management (NIDM) and National Disaster Response Force (NDRF).
- Provides penalties for obstruction, false claims, misappropriation etc.
- It states that there shall be no discrimination on the ground of sex, caste, community, descent or religion in providing compensation and relief National Disaster Management Authority (NDMA)

National Disaster Management Authority (NDMA): The Prime Minister of India is the Chairperson, helped by a Vice Chairperson along with up to a maximum of nine members nominated by Prime Minister. The Authority may constitute an Advisory Committee consisting of experts in the field of disaster management. NDMA shall be assisted by a **National Executive Committee (NEC)** of Central Government Secretaries to assist the NDMA in the performance of its functions. NDMA shall recommend guidelines for the minimum standards of relief provided to persons affected by disaster. The **National Policy on Disaster Management (NPDM)** has been approved in October'2009. NPDM envisages a holistic approach to disaster management for

prevention, mitigation, preparedness, relief, response, rehabilitation and reconstruction. It addresses all aspects of disaster management covering institutional, legal and financial arrangements, capacity building, knowledge management, research and development. It focuses of the areas where action is needed and the institutional mechanism through which such action can be channelised.

2.2 SALIENT FEATURES OF NATIONAL POLICY DISASTER MANAGEMENT 2009 are as follows: -

- A holistic and pro-active approach for prevention, mitigation and preparedness will be adopted for disaster management.
- Each Ministry/Department of the Central/State Government will set apart an appropriate quantum of funds under the Plan for specific schemes/projects addressing vulnerability reduction and preparedness
- Where there is a shelf of projects, projects addressing mitigation will be given priority. Mitigation measures shall be built into the on-going schemes/ programmes.
- Each project in a hazard prone area will have mitigation as an essential term of reference. The project report will include a statement as to how the project addresses vulnerability reduction.
- Community involvement and awareness generation, particularly that of the vulnerable segments of population and women has been emphasized as necessary for sustainable disaster risk reduction. This is a critical component of the policy since communities are the first responders to disasters and therefore, unless they are empowered and made capable of managing disasters, any amount of external support cannot lead to optimal results.
- There will be close interaction with the corporate sector, nongovernmental organizations and the media in the national efforts for disaster prevention/ vulnerability reduction.
- Institutional structures/appropriate chain of command will be built up and appropriate training imparted to disaster managers at various levels to ensure coordinated and quick response at all levels; and development of inter-State arrangements for sharing of resources during emergencies.
- A culture of planning and preparedness is to be inculcated at all levels for capacity building measures.
- Standard operating procedures and disaster management plans at state and district levels as well as by relevant central government departments for handling specific disasters will be laid down.
- Construction designs must correspond to the requirements as laid down in relevant Indian Standards.
- All lifeline buildings in seismic zones III, IV & V – hospitals, railway stations, airports/airport control towers, fire station buildings, bus stands major administrative centre will need to be evaluated and, if necessary, retro-fitted.
- The existing relief codes in the States will be revised to develop them into disaster management codes/manuals for institutionalizing the planning process with particular attention to mitigation and preparedness.

State Disaster Management Authority (SDMA) at state level coordinating all activities which comprises of eight members to be nominated by the Chief Minister and the Chairperson of the State Executive Committee. One of the members may be designated as the Vice-Chairperson of the State Authority by the Chief Minister. SDMA may constitute an Advisory Committee of experts, as and when necessary. The **State Government** shall establish a **District Disaster Management Authority (DDMA)** in each district. The District Authority will be headed by District Magistrate and shall consist of members, not exceeding seven, as may be prescribed by the State Government. The District Authority shall act as the district planning, coordinating and implementing body for disaster management.

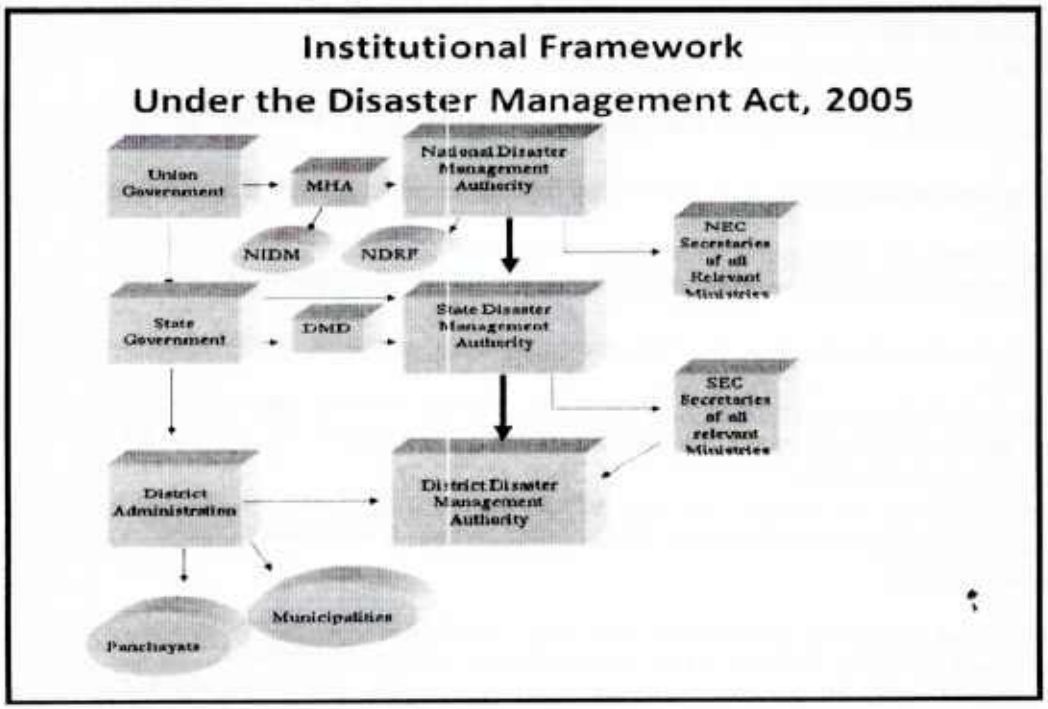
The Local Authority shall ensure training of its officers and employees and maintenance of resources so as to be readily available for use in the event of a disaster. It ensures that all construction projects under it conform to the standards and specifications lay down. It carries out relief, rehabilitation and reconstruction activities in the affected area within its jurisdiction.

The **National Institute of Disaster Management (NIDM)** constituted under the Disaster Management Act 2005 in the Ministry of Home Affairs has been entrusted with the nodal national responsibility for human resource development, capacity building, training, research, documentation and policy advocacy in the field of disaster management.

National Disaster Response Force (NDRF): Creation of Para-military forces has begun, to serve as Disaster Management Response Force (NDRF). It is proposed to establish four training centers in different parts of the country by respective paramilitary forces. A National Disaster Mitigation Fund and a National Disaster Response Fund are proposed to be created.

The Government of India has also constituted Cabinet Committee on Management of Natural Calamities and Cabinet committee on Security. Besides above there are High Level Cabinet Committee and Inter Ministerial Group in place.

Sections 35, 36 & 37 of the DM Act, 2005 detail the responsibilities of Ministries and Departments of Central Govt. as per which a number of measures/actions are to be taken either on their own or in consultation with NDMA. Drawing up mitigation, preparedness and response plans, capacity building, data collection and identification and training of personnel in relation to Disaster Management is one of the key responsibilities.



2.3 Definition of disaster in CONCOR

Based on the definition of the Disaster Management Act 2005, the following definition is adopted in context of CONCOR:

"CONCOR disaster is a serious incident/accident 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 due to natural or man-made causes necessitating large scale help from Government/Non-government and Private Organizations".

While this Disaster Management Plan is a comprehensive Document, more detailed guidelines wherever required will be laid down by region/terminal on specific topics under the overall philosophy of Disaster Management laid down in this document.

2.4 Types of Disaster

Types of disaster in CONCOR context are:

(a) Natural Disaster :-

Earthquakes, Floods, Cyclones, Landslides, Tsunami etc.

(b) Man-made disaster :-

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

Setting fire to a container train at terminals/warehouse/cargo, CONCOR installations, Bomb blast, Chemical (Terrorism) disaster, Biological and Nuclear disaster.

Although CONCOR Terminals are well guarded by way of provisions contained under the Custom act and protected by high boundary wall provided with Barbed wire fencing yet, it is proposed that all Terminals should be provided coiled barbed wire fencing above the boundary wall to avoid sabotage.

CHAPTER-3

NATIONAL DISASTER MANAGEMENT AUTHORITY (NDMA)

3.0 Guidelines for minimum standards of relief:

The National Authority shall recommend guidelines for the minimum standards of relief to be provided to persons affected by disaster, which shall include the minimum requirements to the provided in the relief camps in addition to shelter, food, drinking water, medical cover and sanitation;

3.1 Role of the Nodal and other Central Ministries and Departments etc:-

For various types of disasters, the nodal Ministry concerned will chart out detailed Response Plans which will be integrated into the National Response Plan. The NEC may coordinate response in the event of any threatening disaster situation or disaster.

• Role of Central Ministries and Departments

As disaster management is a multi-disciplinary process, the National Policy on Disaster Management lays down that all Central Ministries and Departments will have a key role in the field of disaster management. The nodal Ministries and Departments of Government of India (i.e. the Ministries of Agriculture, Atomic Energy, Civil Aviation, Earth Sciences, Environment and Forests, Home Affairs, Health, Mines, Railways, Space, Water Resources etc.) will continue to address specific disasters as assigned to them.

• Institutional Arrangements of Central Government

- **Armed Forces:**

Conceptually, the Armed Forces are called upon to assist the civil administration only when the situation is beyond their coping capability. In practice, however, the armed forces form an important part of the Government's response capacity and are immediate responders in all serious disaster situations. The armed forces will participate in imparting training to trainers and DM managers, especially in CBRN aspects, heli-insertion, high altitude rescue, waterman ship and training of paramedics. At the national level, the Chief of the Integrated Defense Staff and the Chairman Chiefs of Staff Committee has already been included in the NEC. Similarly, at the State and District levels, the local representatives of the armed forces may be included in their executive committees to ensure closer coordination and cohesion.

- **Central Para Military Forces:**

The Central Paramilitary forces, which are also the armed forces of the Union, play a key role at the time of immediate response to disasters. Besides contributing to the NDRF, they will develop adequate disaster management capability within their own forces and respond to disasters which may occur in the areas where they are posted. The local representatives of the CPMFs may be co-opted/invited in the executive committee at the State level.

- **State Police Forces and Fire Services :**

The State Police forces and the Fire Services are crucial immediate responders to Disasters. The police force will be trained and the Fire Services upgraded to acquire multi-hazard rescue capability.

- **Civil Defence and Home Guards:**

The mandate of the Civil Defense and the Home Guards will be redefined to assign an effective role in the field of disaster management. They will be deployed for community preparedness and

public awareness. A culture of voluntary reporting to duty stations in the event of any disasters will be promoted.

- **State Disaster Response Force (SDRF):**

States will be encouraged to create response capabilities from within their existing resources. To start with, each state may aim at equipping and training one battalion equivalent force. They will also include women members for looking after the needs of women and children. NDRF battalions and their training institutions will assist the States/UTs in this effort. The States/UTs will also be encouraged to include DM training in their respective Police Training Colleges and basic and in-service courses, for gazetted and non-gazetted officers.

3.2 *Guidelines issued by NDMA and Action thereon*

Guidelines have been issued by NDMA on Cyclone, Earthquake, Flood, Landslide, Biological disaster, Chemical Disaster for Incident Response System Management, Nuclear & Radiological & emergency, Fire Guidelines, Management of Tsunami, Drought guidelines, Medical Preparedness and Mass Casualty Management, Chemical (Terrorism) Disaster, and Snow Avalanches and Preparation of State Disaster Management Plans etc. including Do's and Don'ts. These Guidelines are statutory and mandate all the stake-holders including CONCOR to take necessary measures for prevention and mitigation of all types of disasters possible on their system and also to have mechanism in place for rescue, relief and restoration, if these happen. These guidelines are available on the under mentioned websites and can be downloaded:

- http://www.ndmindia.nic.in
- http://www.ndma.gov.in
- http://www.nidm.gov.in
- http://www.ddma.delhigovt.nic.in
- http://www.undp.org.in
- http://www.bmtpc.org
- http://www.imd.ernet.in
- http://www.cwc.nic.in
- http://www.gsi.gov.in

National Disaster Management Hand Book for Training and Capacity Building deals with involving effected local community of Civil Defence and Sister Organizations, NDMA, NGO, NCC, NSS, NYKS; Volunteer Management in Disasters, Engaging Civil Society Organization, Involving Organization of Youth Volunteers in disaster management.

Directory of Institutions and Resource Persons in Disaster Management, published by NIDM deals with all the relevant institutes and personal responsible for executing Disaster Management Plan.

Activity Book of Disaster Management issued by NIDM briefly introduces to Flood, cyclone, Drought, Landslide, Seismic Vulnerable area of the country. Talks about the survival/disaster emergency kit.

CHAPTER-4

NATIONAL DISASTER RESPONSE FORCE

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 (18 teams per battalion), 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 Defense, 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. However, Armed Forces would be deployed only when the situation is beyond the coping capacity of State Government and NDRF.

4.2 Location, Constitution and Functions

These have been formed under the Disaster Management Act at 10 selected locations in the country for dealing with relief and rescue operations related to all types of disasters. The headquarters of NDRF in New Delhi is headed by a Director General level officer. There is a control room in the HQ for co-ordination with all concerned. At present there are 10 Battalion (BT) based in Guwahati, Barasat (Kolkata), Cuttack (Odisha), Vellore (Tamilnadu), Pune (Maharashtra), Gandhinagar (Gujarat), Bhatinda (Punjab), Greater Noida, (Utter Pradesh), Patna (Bihar), Vijaywara (Andhre Pradesh). The contact details are available on website and in the Directory of Institutions and Resource Persons in Disaster Management issued by NIDM. 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 staffs are on deputation in NDRF. Further details are as under:

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 will invariably be required by CONCOR for prompt relief and rescue operation in case of disasters affecting CONCOR and therefore, assistance of NDRF could be of great help to CONCOR. In most cases of a disaster, the State Governments as well as the Regional Office would, therefore, requisition the NDRF simultaneously (for the same disaster).

4.3 Coordination with NDRF

CONCOR 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 CONCOR related disaster situations and expose them to the issues relevant to the rescue and relief of people during an accident at CONCOR Terminals. Terminal Managers are empowered 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. The need for the services of the NDRF shall be communicated in a centralized manner by the Regional Heads through the NDMA only.

CHAPTER–5

DISASTER MANAGEMENT PLAN OF CONCOR

5.1 Nodal department for policy formulation on DM on CONCOR:

Nodal department in CONCOR will be Operation department at Corporate Office (CO).

5.2 Authority to declare a Disaster on CONCOR:

With the adoption of definition of disaster, CONCOR Corporate office has nominated ED's/CGM's heading the Regions and Terminal Managers for declaring an untoward incident as CONCOR disaster and can intimate all concerned authorities at local level during disasters.

5.3 Preparation of DM plan in Region

Region will prepare Disaster Management Plan at region level and terminal level as per the provision of Disaster Management Act, 2005 as detailed in the earlier chapters and DM plan of CONCOR (prepared by CO). These plans must be dovetailed with the State and The District Disaster Management Plan. Region/Terminal will keep their focus on the development happening in their local area in the government, non-government and private sector to build on the expertise based on inclusive approach as envisaged in the Disaster Management Act, 2005.

Various types of disasters have already been listed under **Chapter-2.** While drafting the detailed management plan for these disasters specific action plan should be drawn covering the following aspects by Terminals/Regions as per the local conditions and guidelines issued by disaster management authorities.

- Prevention of danger or threat of any disaster;
- Mitigation or reduction of risk of any disaster or its severity or consequences
- Capacity-building;
- Preparedness to deal with any disaster;
- Prompt response to any threatening disaster situation or disaster;
- Assessing the severity or magnitude of effects of any disaster;
- Evacuation, rescue and relief;
- Rehabilitation and reconstruction

While the Terminal Plan should be specific with information/action plan like roadmaps, contact numbers of hospitals, police station, district administration, Railway authorities etc. for rescue & relief, the Region Plan should be more centric towards prevention, mitigation and preparedness.

Every Terminal/Region should have preparedness for Emergency Medical Response (EMR) for the management of mass casualty at the incident site and their quick and safe evacuation by ambulance service etc.

CHAPTER-6

DISASTER INFORMATION FLOWS AND ALERTS OF DISASTERS

6.1 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.

6.2 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.

6.3 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.**

6.4 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/Organizations/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).

6.5 Difference between a Crisis and Disaster:-

A Crisis indicates either an impending calamity, or the occurrence of an incident which would adversely affect the society and human population.

A Disaster is a much bigger occurrence of an event which would cause large scale devastation, damage to property and loss of human life etc.

While a Crisis may or may not turn into a Disaster, the opposite is normally true, but with the condition the crises situation is more in the initial stages.

6.6 Crisis - Types:-

CONCOR may be confronted with any of the following:-

(A) Ministry of Home Affairs has to assist CONCOR under security related crisis situations like sabotage, bomb blasts, etc.

(B) Crisis situation which is not a national level crisis & mainly affects CONCOR, has to be managed with the help and assistance of other Ministries/departments.

(C) Crisis situation which is not a national level crisis affects CONCOR which can be managed with the help of internal resources from the CONCOR only.

6.7 Drill for handling Crises:-

The Crisis Management Plan (CMP) is intended to deal with the crisis situations only. The drill to be followed on the Terminal/Region level in respect of crisis group, functioning of the Control room, communication etc., are basically the same for all crisis situations and the same general drill will be applicable & will be supplemented by the special instructions depending upon the nature of the crisis.

6.8 Monitoring/Reporting of Effects of Disaster:

Corporate office would be given information regarding Orange/Red Alerts. On the declaration of an incident as a Disaster by a Region or Terminal the updates of situation would be given to the operation Control room of corporate office.

6.9 STANDARD OPERATING PROCEDURES (SOPS)

The disaster management plan drawn by the region/terminal should clearly spell out the Standard Operating Procedures (SOP) for dealing with any disaster. The Ministry of Home Affairs (MHA) have already prepared the SOP for handling man-made disasters. The SOP of terminal/region should be based on the guidelines issued by MHA. The SOPs should broadly cover the following aspects:-

i. Official on duty who detects the incident first will inform the Control rooms functional round the clock and control room in turn will further inform immediately to NDRF local units, Local authorities like local Police, Fire Brigade, Hospitals and other local authorities. Simultaneously informing all senior officials who in turn will inform all the concerned Ministries for seeking assistance.
ii. Segregating the affected areas should be done immediately to avoid further damage.
iii. Loud – Hailer should be provided at the terminal for making announcements.
iv. Wireless sets to be used for prompt communication.
v. Ambulance equipped with life support system and minimum first aid facility should be stationed for transportation of injured/ causalities.
vi. Prompt action including assistance frcm locals to evacuate stranded officials in operational area should be taken.
vii. Operation and manning of the disaster control room
viii. Coordination amongst various stake holders through advance warnings
ix. Communication system with back ups to be in readiness for immediate use when required

The DM plan is required to be reviewed and updated atleast once in a year. In the review changes in policy issued by NDMA/NEC, Corporate Office, state government, district authorities should be incorporated in the respective DM plans of region & terminals. Operation department in the region will be responsible for compilation of DM plans at the region & terminal level.

CHAPTER- 7

CAPACITY BUILDING TO HANDLE DISASTER

7.1 Disaster Resilient Specifications to be inbuilt in Developmental Plans:

On the lines of policy issued by NDMA, CONCOR will ensure mainstreaming of disaster risk reduction in developmental agenda in all existing and new developmental programmes and project by incorporating disaster resilient specifications in the design and construction.

Region should identify vulnerable buildings, locations etc. where strengthening works would need to be undertaken by prioritizing the existing infrastructure also.

7.2 Disaster Response and Mitigation Funds:

Budget provision for capital expenditure to create infrastructure for capacity building and rescue and relief is required. Provision of ambulance equipped with first-aid medical facility and trained staff may be positioned at major terminals like TKD, DER, DDL & KHDB.

Regional heads should have full financial powers for rescue and relief including requisition of helicopters.

7.3 Role of Security in Disaster Management

7.3.1 CONCOR terminal are secured by security personnel deployed after approval of DGR and in large terminal like TKD CISF has been deployed.

7.3.2 Security personnel play a major role in crowd control in any disaster for stream lining relief, rescue and rehabilitation. A core team may be formed in each terminal/region equipped with following equipments:

I. Torches and other lighting arrangements.
II. Nylon ropes and poles for segregating the affected areas from unwanted visitors and spectators.
III. Loud-hailer for making announcement. (Same in page-10)
IV. Stretchers and first aid equipment.
V. Wireless sets for inter-communication.
VI. Cameras for photography of clues.
VII. Luminous jackets.

Members of this core team should be trained in providing basic level support in crowd control and functional support in case of disaster.

CHAPTER-8

DISASTER MANAGEMENT TRAINING

8.0 Disaster Management Training on the Railways

8.1 National Institute of Disaster Management (NIDM)

National Institute of Disaster Management (NIDM) has been envisaged as apex body on Disaster Management training & research in the country under the Disaster Management Act, 2005. NIDM runs several multi-disciplinary training programmes including the programmes on transportation related disasters in which railway officers have also been invited to attend. Services of NIDM may be made use of, if required, for training CONCOR officers in Disaster Management at IRITM, Lucknow. Most of the States also have DM Training Institutes funded by the Centre.

8.2 DM Training in Regions and Terminals

CONCOR officers and staff can be imparted training at the following training institutes after proper coordination with these institutes.

S.No.	**Categories of Officials New Training methodology and schedule**
(i)	Top Level Management, (GGMs and above) 3-day Disaster Management Modules to be conducted at IRITM/LKO @ once every 3 months. **Frequency of Training:** Once every five years for GGMs and above level Officers.
(ii)	Middle Level Management (E-5 to E-7) Some of the latest and relevant topics are to be included in the AMP and MDP programmes being delivered at RSC/BRC. At IRITM, LKO Special module is being developed by them every month. **Frequency of Training:** Every E5 to E-7 officer needs to under go the training once every five years either at special DM module at IRITM.
(iii)	Lower Level Management Upto AM level Disaster management training to be imparted at IRITM/LKO @ one Course every month **Frequency of Training:** Once every five years.
(iv)	Supervisors of all frontline departments (Commercial & Operations, Technical, Engineering) One-week course at ZRTIs in the Region once in 5 years.
(v)	Other staff to be imparted training by their respective terminal managers & supervisors, once every year.

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). Training modules are being developed at ZRTI at Udaipur and Bhuli for Disaster Management training of other railway officials. Respective Training Institutions on each zonal railway will ensure that the modules prescribed above are institutionalized and officials are imparted training to build the capacity on disaster management on human resource front.

CHAPTER-9

MANAGEMENT OF FLOOD

Some of the important aspects of Flood Management have been issued by NIDM/NDMA in a crisp manner under the heading of Do's and Don'ts. In addition NDMA has issued guidelines for Management of Floods in 2008 & Management of Urban Flooding in 2010.

Ministry of Home Affairs (MHA) will be the Nodal Ministry for Management of Flood.
Ministry of Urban Development will be the Nodal Ministry for Urban Flooding

9.1 Pre-Flood Arrangements

9.1.1 Role of Management

- Convening a meeting of the District Level Committee on Natural Calamities. It consists of Deputy Commissioner/Collector as Chairman with districts line department heads like electricity, police, revenue, home guard, irrigation, telephone, medical, rural development etc as members, to review the arrangements.
- Check composition and functioning of the Control Room.
- Closure of past breaches in rivers and canal embankments and guarding of weak points;
- Rain-recording and submission of rainfall reports;
- Communication of gauge-readings and preparation of maps and charts;
- Dissemination of weather reports and flood bulletins issued by the Meteorological Centres, Central Water Commission, Flood Forecasting Organisation;
- Deployment of boats at desired points;
- Use of power boats at strategic stations;
- Installation of temporary police wireless stations and temporary telephones in flood-prone areas;
- Arrangements for keeping telephone and telegraph lines in order;
- Storage of food in interior, vulnerable, strategic and key areas;
- Arrangements of dry food stuff and other necessities of life;
- Arrangements of keeping the drainage system de silted and properly maintained;
- Agricultural measures;
- Health measures;
- Veterinary measures;
- Selection of flood shelters;
- Advance arrangements for army assistance;
- Training in flood relief work;
- Organisation of relief parties;
- Other precautionary measures; and
- Alternative drinking water supply arrangements.

9.1.2 Role of Individual

- Find out if you live in a flood-prone area and identify earthen, irrigation, hydroelectric etc. dams that are upstream from your area, and could be the source of potential problems.
- Ask your local emergency manager about official flood warning signals.
- Know the terms "Flood Watch", "Flood Warning", and "Urban and Small Stream Warning".
- Plan for evacuation.
- Consider purchasing flood insurance.
- Take steps to flood proof your home. Call your local building department or emergency management office for information.
- Keep all insurance policies and your household inventory in a safe place.

9.2 During floods

9.2.1 Role of Management

- Organising shelter for the people in distress. In case the efforts of civil authorities are found inadequate, Army, Para Military Force assistance should be requisitioned;

- Relief measures by non-official and voluntary organizations may be enlisted as far as possible Organise relief camps;
- Provision of basic amenities like drinking water, sanitation and public health care and arrangements of cooked food in the relief camps;
- Making necessary arrangements for air dropping of food packets in the marooned villages through helicopters;
- Organising enough relief parties to rescue the marooned people within a reasonable time limit;
- Disposal of dead bodies and animal carcasses;
- Establish alternate communication links to have effective communication with marooned areas;
- Organising controlled kitchens to supply food initially at least for 3 days;
- Organising cattle camps, if necessary and provide veterinary care, fodder and cattle feed for the affected animals for atleast 3 days;
- Grant of emergency relief to all the affected people;
- Submission of daily situation reports and disseminate correct information through mass media to avoid rumors.;
- Rehabilitation of homeless;
- Commencement of agricultural activities - desiltation, resowing;
- Repairs and reconstruction of infrastructure facilities such as roads, embankments, resettlement of flood prone areas;
- Health measures;
- Relief for economic reconstruction.

9.2.2 Role of Individual

- Listen to All India Radio, local radio or television stations for local information.
- Be aware of streams, drainage channels and areas known to flood suddenly.
- If local authorities issue a flood watch, prepare to evacuate.
- Secure your home. If time permit3, secure items located outside the house.
- If instructed, turn of utilities at the main switches or valves.
- Fill your car fuel tank.
- Fill the bathtub with water in case water becomes contaminated or services are cut off. Sterilize the bathtub first.
- Stay away from floodwaters.
- When deep flooding is likely, permit the floodwaters to flow freely into your basement to avoid structural damage to the foundation and the house.
- Do not attempt to drive over flooded roads. The depth of water is not always obvious. The roadbed may be washed out under the water, and you could be stranded or trapped.

9.3 Post Flood Management

9.3.1 Role of Management

- Speedy restoration of roads, rail routes and the postal services;
- Normal water supply in the affected areas either by arranging tankers or fire tenders;
- Repair of power, telephone and sewerage lines on priority basis;
- Proper arrangements for the supply of food, shelter and clothing to the marooned people;
- Ensuring adequate supply of POL and kerosene oil to keep the supply line moving
- Constitution of a survey team to assess the loss and compensation to be given to the affected population;
- Assistance to people in getting insurance claim, who have taken 'crop' and 'house' insurance;
- Assistance for repair/rebuilding of private properties; and
- Desilting and dewatering of the inundated areas.

9.3.2 Role of Individual

- Stay away from floodwaters.
- Stay away from moving water. Moving water six inches deep can sweep you off your feet.
- Be aware of areas where floodwaters have receded and may have weakened road surfaces.
- Stay away from and report downed power lines.
- Stay away from disaster areas unless authorities ask for volunteers.

- Consider health and safety needs. Wash your hands frequently with soap and clean water it you come in contact with floodwaters.
- Throwaway food that has come in contact with floodwaters.
- Call your insurance agent.
- Take photos of or videotape your belongings and your home.
- Don't throwaway damaged goods until an official inventory has been taken.
- Remember floodwaters can be extremely dangerous. The best protection during a flood is to leave the area and go to shelter on higher ground.
- Listen for news reports to learn whether the community's water supply is safe to drink.
- Use extreme caution when entering buildings; there may be hidden damage, particularly in foundations.
- Service damaged septic tanks, cesspools, pits, and leaching systems as soon as possible. Damaged sewage systems are serious health hazards.
- Clean and disinfect everything that got wet. Mud left from floodwater can contain sewage and chemicals.

If you must prepare to evacuate, you should do the following

- Secure your home. If you have time, bring in outdoor furniture. Move essential items to an upper floor.
- Turn off utilities at the main switches or valves if instructed to do so. Disconnect electrical appliances. Do not touch electrical equipment if you are wet or standing in water

If you have to leave your home, remember these evacuation tips

- Do not walk through moving water. Six inches of moving water can make you fall. If you have to walk in water, walk where the water is not moving. Use a stick to check the firmness of the ground in front of you
- Do not drive into flooded areas. If floodwaters rise around your car, abandon the car and move to higher ground if you can do so safely. You and the vehicle can be quickly swept away

9.4 Flood: Know Your Terms

Familiarize yourself with these terms to help identify a flood hazard:

- **Flood Watch:** Flooding is possible. Tune in to Local Radio for Weather Services, commercial radio, or television for information.
- **Flash Flood Watch:** Flash flooding is possible. Be prepared to move to higher ground; listen to Local Radio for Weather Services, commercial radio, or television for information.
- **Flood Warning:** Flooding is occurring or will occur soon; if advised to evacuate, do so immediately.
- **Flash** Flood **Warning**: A flash flood is occurring; seek higher ground on foot immediately.

CHAPTER-10

MANAGEMENT OF EARTHQUAKE

Some of the important aspects of Earthquake Management have been issued by NIDM/NDMA in a crisp manner under the heading of Do's and Don'ts. In addition NDMA has issued guidelines for Management of Earthquake in 2007.

NDMA has nominated The Ministry of Earth Sciences (MoES) as Nodal Ministry for Management of Earthquake.

10.1 Pre Earthquake Arrangements

- Identify safe spots and danger zones in each room.
- Consider buying earthquake insurance.
- Be sure your house is firmly anchored to its foundation.
- Anchor overhead lighting fixtures.
- Store bottled foods, glass, china and other breakables on low shelves or in cabinets that can fasten shut.
- Fasten shelves to walls. Brace high and top-heavy objects.
- Repair deep plaster cracks in ceilings and foundations. Get expert advice if there are signs of structural defects.
- Anchor overhead lighting fixtures to the ceiling.
- Follow BIS codes relevant to your area for building standards
- Fasten shelves securely to walls.
- Place large or heavy objects on lower shelves.
- Store breakable items such as bottled foods, glass & china in low, closed cabinets with latches.
- Hang heavy items such as pictures & mirrors away from beds, settees, & anywhere people sit.
- Brace overhead light and fan fixtures.
- Repair defective electrical wiring and leaky gas connections. These are potential fire risks.
- Secure a water heater, LPG cylinder etc., by strapping it to the wall studs and bolting it to the floor.
- Store weed killers, pesticides, and flammable products securely in closed cabinets with latches and on bottom shelves.
- Identify safe places indoors/outdoors. Under strong dining table, bed against an inside wall Away from where glass could shatter around windows, mirrors, pictures, or where heavy book-cases or other furniture could fall over In the open, away from buildings, trees, telephone and electrical lines, flyovers, bridges
- Educate yourself and family members
- Know emergency telephone numbers (doctor, hospital, police, etc)
- Have a disaster emergency kit ready: Battery operated torch, Extra batteries, Battery operated radio, First aid kit and manual, Emergency food (dry items) and water (packed and sealed), Candles/matches in a waterproof container, Knife, Chlorine tablets or powdered water purifiers, Can opener, Essential medicines, Cash & credit cards, Thick ropes & cords and Sturdy shoes

Develop an emergency communication plan

1. Develop a plan for reuniting In case family members are separated after the disaster.
2. Ask an out-of-state relative or friend to serve as the 'family contact' After a disaster, it's often easier to call long distance.

Work together in your community to apply your knowledge to building codes, retrofitting programmes, hazard hunts, and neighborhood and family emergency plans.

10.2 During Earthquake Arrangements

Stay as safe as possible during an earthquake. Be aware that some earthquakes are actually foreshocks and a larger earthquake might occur. Minimize your movements to a few steps to a nearby safe place and stay indoors until the shaking has stopped and you are sure exiting is safe.

If indoors

- **DROP** to the ground; take COVER by getting under a sturdy table or other piece of furniture;
- Protect yourself by staying under the lintel of an inner door, in the corner of a room, under a table or even under a bed. Stay away from glass, windows, outside doors and walls, and anything that could fall, such as lighting fixtures or furniture.
- Stay in bed if you are there when the earthquake strikes. Hold on and protect your head with a pillow, unless you are under a heavy light fixture that could fall.
- Use a doorway for shelter only if it is in close proximity to you and if you know it is a strongly supported, load bearing doorway.
- Stay inside until the shaking stops and it is safe to go outside. Research has shown that most injuries occur when people inside buildings attempt to move to a different location inside the building or try to leave.
- Be aware that the electricity may go out or the sprinkler systems or fire alarms may turn on.
- DO NOT use the elevators.
- **If outdoors** - Move away from buildings, trees, streetlights, and utility wires.
- Once in the open, stay there until the shaking stops. The greatest danger exists directly outside buildings, at exits, and alongside exterior walls. Most earthquake-related casualties result from collapsing walls, flying glass, and falling objects.
- **If in a moving vehicle** - Stop as quickly as safety permits and stay in the vehicle. Avoid stopping near or under buildings, trees, overpasses, and utility wires.
- Proceed cautiously once the earthquake has stopped. Avoid roads, bridges, or ramps that might have been damaged by the earthquake.
- **If trapped under debris - Do not light a match.**
- Do not move about or kick up dust.
- Cover your mouth with a handkerchief or clothing.
- Tap on a pipe or wall so rescuers can locate you. Use a whistle if one is available. Shout only as a last resort. Shouting can cause you to inhale dangerous amounts of dust.

10.3 Post Earthquake Arrangements

- Be prepared for aftershocks.
- Wear study shoes in areas covered with fallen debris and broken glass.
- If the electricity is out-use flashlights or battery powered lanterns.
- Check the main control panel.
- If you smell gas or hear a hissing sound open a window and leave the building. Shout off the main gas valve outside.
- If water pipes are damaged shut off the water supply at the main valve.
- Clean up spilled medicines, bleaches, gasoline and other flammable liquids.
- Visually inspect utility lines and appliances for damage.
- Do not flush toilets until you know that sewage lines are intact.
- Open cabinets cautiously. Beware of objects that can fall off shelves.
- Use the phone only to report a life threatening emergency
- Listen to news reports for the latest emergency information.
- Stay off the streets.
- Stay away from damaged areas, unless proper authorities have specifically requested your assistance.
- Keep away from beaches and low banks of rivers. Huge waves may sweep in.
- Turn off the water, gas and electricity.
- Use a torch.
- If people are seriously injured, do not move them unless they are in danger.
- If you know that people have been buried, tell the rescue teams.
- Avoid places where there are loose electric wires and do not touch any metal object in contact with them.
- Do not drink water from open containers without having examined it and filtered it through a sieve, a filter or an ordinary clean cloth.
- If your home is badly damaged, you will have to leave it. Collect water containers, food, and ordinary and special medicines (for persons with heart complaints, diabetes, etc.)

CHAPTER-11

MANAGEMENT OF FIRE

Some of the important aspects of Fire Management have been issued by NIDM/NDMA in a crisp manner under the heading of Do's and Don'ts. NDMA has issued guidelines for Scaling, Type of Equipment and Training of Fire Services in 2012. In addition, instructions has been issued by this office vide letter no.CON/CO/OPS/FFA dated 28/05/2010 with regard to prevention/preparedness, rescue and relief, administrative action & long term measures regarding fire-fighting arrangement is quite detailed and comprehensive and can be dovetailed in the DM plan of the terminal & region.

NDMA has nominated ..... as Nodal Ministry for Management of Fire.

11.1 FIRE SAFETY TIPS

What to do before a Fire

The following are things you can do to protect yourself, your family, and your property in the event of a fire:

Smoke Alarms

- Install smoke alarms. Properly working smoke alarms decrease your chances of dying in a fire by half.
- Place smoke alarms on every level of your residence. Place them outside bedrooms on the ceiling or high on the wall (4 to 12 inches from ceiling), at the top of open stairways, or at the bottom of enclosed stairs and near (but not in) the kitchen.
- Test and clean smoke alarms once a month and replace batteries at least once a year. Replace smoke alarms once every 10 years.
- Escaping the Fire
- Review escapes routes with your family. Practice escaping from each room.
- Make sure windows are not nailed or painted shut. Make sure security gratings on windows have a fire safety-opening feature so they can be easily opened from the inside.
- Consider escape ladders if your residence has more than one level, and ensure that burglar bars and other antitheft mechanisms that block outside window entry are easily opened from the inside.
- Teach family members to stay low to the floor (where the air is safer in a fire) when escaping from a fire.
- Clean out storage areas. Do not let trash, such as old newspapers and magazines, accumulate. Flammable Items
- Never use gasoline, benzene, naphtha, or similar flammable liquids indoors.
- Store flammable liquids in approved containers in well-ventilated storage areas.
- Never smoke near flammable liquids.
- Discard all rags or materials that have been soaked in flammable liquids after you have used them. Safely discard them outdoors in a metal container.
- Insulate chimneys and place spark arresters on top. The chimney should be at least three feet higher than the roof. Remove branches hanging above and around the chimney.

Heating Sources

- Be careful when using alternative heating sources.
- Check with your local fire department on the legality of using kerosene heaters in your community. Be sure to fill kerosene heaters outside, and be sure they have cooled.
- Place heaters at least three feet away from flammable materials. Make sure the floor and nearby walls are properly insulated.
- Use only the type of fuel designated for your unit and follow manufacturer's instructions.
- Store ashes in a metal container outside and away from your residence.
- Keep open flames away from walls, furniture, drapery, and flammable items.
- Keep a screen in front of the fireplace.

- Have heating units inspected and cleaned annually by a certified specialist.
- Matches and Smoking
- Keep matches and lighters up high, away from children, and, if possible, in a locked cabinet.
- Never smoke in bed or when drowsy or medicated. Provide smokers with deep, sturdy ashtrays. Douse cigarette and cigar butts with water before disposal.

Electrical Wiring

- Have the electrical wiring in your residence checked by an electrician.
- Inspect extension cords for frayed or exposed wires or loose plugs.
- Make sure outlets have cover plates and no exposed wiring.
- Make sure wiring does not run under rugs, over nails, or across high-traffic areas.
- Do not overload extension cords or outlets. If you need to plug in two or three appliances, get a UL-approved unit with built-in circuit breakers to prevent sparks and short circuits.
- Make sure insulation does not touch bare electrical wiring.

Other

- Sleep with your door closed.
- Install A-B-C-type fire extinguishers in your residence and teach family members how to use them.
- Consider installing an automatic fire sprinkler system in your residence.
- Ask your local fire department to inspect your residence for fire safety and prevention.

11.2 What to do During a Fire

If your clothes catch on fire, you should:

- Stop, drop, and roll - until the fire is extinguished. Running only makes the fire burn faster.
- To escape a fire, you should:
- Check closed doors for heat before you open them. If you are escaping through a closed door, use the back of your hand to feel the top of the door, the doorknob, and the crack between the door and door frame before you open it. Never use the palm of your hand or fingers to test for heat – burning those areas could impair your ability to escape a fire (i.e., ladders and crawling).
- Crawl low under any smoke to your exit - heavy smoke and poisonous gases collect first along the ceiling.
- Close doors behind you as you escape to delay the spread of the fire.
- Stay out once you are safely out. Do not reenter. Call 9-1-1.

Hot Door	Cool Door
Do not open. Escape through a window. If you cannot escape, hang a white or light-colored sheet outside the window, alerting fire fighters to your presence	Open slowly and ensure fire and/or smoke is not blocking your escape route. If your escape route is blocked, shut the door immediately and use an alternate escape route, such as a window. If clear, leave immediately through the door and close it behind you. Be prepared to crawl. Smoke and heat rise. The air is clearer and cooler near the floor.

11.3 What to do After a Fire

The following are guidelines for different circumstances in the period following a fire:

- If you are with burn victims, or are a burn victim yourself, call 101, cool and cover burns to reduce chance of further injury or infection.
- If you detect heat or smoke when entering a damaged building, evacuate immediately.
- If you are a tenant, contact the landlord.
- If you have a safe or strong box, do not try to open it. It can hold intense heat for several hours. If the door is opened before the box has cooled, the contents could burst into flames.
- If you must leave your home because a building inspector says the building is unsafe, ask someone you trust to watch the property during your absence.

CHPATER-12

MANAGEMENT OF CYCLONE

Some of the important aspects of Cyclone Management have been issued by NIDM/NDMA in a crisp manner under the heading of Do's and Don'ts. In addition NDMA has issued guidelines for Management of cyclone in 2008.

It was recommended that Ministry of Home Affairs (MHA) will be notified as the nodal ministry for overall management of disasters which was finally done in 2002. (page 9 of guidelines issued by NDMA)

The actions that need to be taken in the event of a cyclone threat can broadly be divided into four classes, viz., *(i)* immediately before the cyclone season; *(ii)* when cyclone alerts and warnings are on; *(iii)* when evacuations are advised; and *(iv)* when the cyclone has crossed the coast.

12.1 Before the Cyclone season:

- Check the house; secure loose tiles, carry out repair works for doors and windows
- Remove dead woods or dying trees close to the house; anchor removable objects like lumber piles, loose tin sheds, loose bricks, garbage cans, sign-boards etc. which can fly in strong winds
- Keep some wooden boards ready so that glass windows can be boarded if needeD
- Keep a hurricane lantern filled with kerosene, battery operated torches and enough dry cells
- Demolish condemned buildings
- Keep some extra batteries for transistors
- Keep some dry non-perishable food always ready for emergency use

12.2 When the Cyclone starts

- Listen to the radio (All India Radio stations give weather warnings)
- Keep monitoring the warnings. This will help you to prepare for a cyclone emergency
- Pass on the information to others
- Ignore rumors and do not spread them; this will help to avoid panic situations
- Believe in the official information
- When a cyclone alert is on for your area continue normal working but stay alert to the radio warnings.
- Remember that a cyclone alert means that the danger is within 24 hours. Stay alert.
- When your area is under cyclone warning get away from low-lying beaches or other low-lying areas close to the coast
- Leave early before your way to high ground or shelter gets flooded
- Do not delay and run the risk of being marooned
- If your house is securely built on high ground take shelter in the safer part of the house. However, if asked to evacuate do not hesitate to leave the place.
- Board up glass windows or put storm shutters in place.
- Provide strong suitable support for outside doors.
- If you do not have wooden boards handy, paste paper strips on glasses to prevent splinters. However, this may not avoid breaking windows.
- Get extra food, which can be eaten without cooking. Store extra drinking water in suitably covered vessels.
- If you are to evacuate the house move your valuable articles to upper floors to minimize flood damage.
- Have hurricane lantern, torches or other emergency lights in working conditions and keep them handy.
- Small and loose things, which can fly in strong winds, should be stored safely in a room.
- Be sure that a window and door can be opened only on the side opposite to the one facing the wind.
- Make provision for children and adults requiring special diets.

- If the centre of the cyclone is passing directly over your house there will be a lull in the wind and rain lasting for half and hour or so. During this time do not go out; because immediately after that very strong winds will blow from the opposite direction.
- Switch off electrical mains in your house.
- Remain calm.

12.3 When Evacuation is instructed

- Pack essentials for yourself and your family to last you a few days, including medicines, special foods for babies and children or elders.
- Head for the proper shelter or evacuation points indicated for your area.
- Do not worry about your property
- At the shelter follow instructions of the person in charge.
- Remain in the shelter until you have been informed to leave

12.4 Post-cyclone measures

- You should remain in the shelter until informed that you can return to your home.
- You must get inoculated against diseases immediately.
- Strictly avoid any loose and dangling wires from the lamp posts.
- If you are to drive, drive carefully.
- Clear debris from your premises immediately.
- Report the correct loss to appropriate authorities.

CHAPTER-13

MANAGEMENT OF LANDSLIDE

Some of the important aspects of Landslide Training Module on Comprehensive Landslides Risk Management issued by NIDM in a crisp manner under the heading of Do's and Don'ts.

NDMA has nominated Ministry of Home affairs is the Nodal Ministry for coordination of relief and response and overall disaster management and Geological Survey of India, an attached office of the Ministry of Mines, declared as nodal agency for landslides by the GoI in January'04. (page 227)

Protection from Landslide

Practice in the dark and To be a good rescue worker you should master all skills outlined in this booklet. One should be able to do them in the dark. Practice tying knots blindfolded and in cramped quarters. Response to Landslide Disasters

13.1 What should be done before an emergency

- Volunteer to get involved with one's municipality's implementation of an Emergency Plan.
- Make a family emergency plan and emergency kit.
- Get first aid training. Keep a list of emergency telephone numbers.
- Get all safety equipments-gloves, safety glasses, helmet, work boots, anti-dust mask etc.

13.2 What to do

- Warn or have somebody warn the authorities about the damages and the number of casualties
- Do a reconnaissance before starting the work.
- Walk as closely to the wall as possible when on damaged stairs and upper floors.
- Use gloves when removing debris by hand. Be careful how you move debris from the vicinity of a casualty. Protect a casualty from falling debris & dust by using blankets etc.
- Keep off wreckage as much as possible; leave it undisturbed or destroy the neutral voids by further collapse.
- Exercise great care when using sharp tools in debris.
- It is often necessary to use props or struts to strengthen a floor loaded with debris before passing over or working underneath it.
- In situations where the number of casualties is greater than the help available, do not waste time, use resources wisely.
- Examine a casualty before removal and give first aid only for life threatening conditions
- Free the nose and mouth of a casualty from dust and grit to ease breathing.
- Keep the casualty warm to slow the progress of shock.
- Make sure that the stretcher is properly blanketed so that the casualty has maximum warmth and comfort.
- Use appropriate procedures to carry a stretcher over debris and obstacles. Keep a list of all casualties handled.

13.3 Don't

- Move an injured person without rendering first aid unless the casualty is in immediate danger.
- Smoke or light a match stick in case there is a gas leak.
- Crawl over debris or disturb parts of the damaged structure unless you are compelled by circumstances.
- Pull timber out of the wreckage indiscriminately to cause further collapse.
- Enter any site without informing the other members of your party or, if possible, without a companion to help in case of an accident.
- Touch loose electrical wiring.
- Throw debris aimlessly – one may have to move it again.

Chapter-14

MANAGEMENT OF TSUNAMIS

Some of the important aspects of Tsunamis Management have been issued by NIDM/NDMA in a crisp manner under the heading of Do's and Don'ts. NDMA has issued guidelines for Management of Tsunamis in 2010.

NDMA has nominated Ministry of Earth Sciences (MoES) as Nodal Ministry for Management of Tsunamis.

14.1 Pre Tsunami Arrangements

- You should find out if your home, school, workplace, or other frequently visited locations are in tsunami hazard areas.
- Know the height of your street above sea level and the distance of your street from the coast or other high risk waters.
- Plan evacuation routes from your home, school, workplace, or any other place you could be where tsunamis present a risk. After a disaster, roads may become blocked or unusable. Local emergency management officials can advise the best route to safety & likely shelter locations.
- If your children's school is in an identified inundation zone, find out what the school evacuation plan.
- Practice your evacuation routes. Familiarity may save your life. Be able to follow your escape route at night and during inclement weather.
- Use a Weather Radio or stay tuned to a local radio or television
- Talk to your insurance agent. Homeowners' policies may not cover flooding from a tsunami.
- Discuss tsunamis with your family. Everyone should know what to do in a tsunami situation. It is important to know designated escape routes before a warning is issued. One of the early warning signals of a tsunami is that the sea water recedes several metres, exposing fish on shallow waters or on the beaches.
- Make a list of items to bring inside in the event of a tsunami.
- Elevate coastal homes. Most tsunami waves are less than 3 mtrs.
- Have an engineer check your home and advise about ways to make it more resistant to tsunami water.

14.2 What to do after a Tsunami

- You should continue using a Weather Radio or staying tuned to a Coast Guard emergency frequency station or a local radio or television station for updated emergency information.
- If someone needs to be rescued, call professionals with the right equipment.
- Use the telephone only for emergency calls.
- Stay out of a building if water remains around it. Tsunami water, like floodwater, can undermine foundations, causing buildings to sink, floors to crack, or walls to collapse.
- Wear long pants, a long-sleeved shirt, and sturdy shoes. The most common injury following a disaster is cut feet.
- Use battery-powered lanterns or flashlights when examining buildings. Battery-powered lighting is the safest and easiest to use, and it does not present a fire hazard for the user, occupants, or building. **DO NOT USE CANDLES.**
- Inspect foundations for cracks or other damage. Examine walls, floors, doors, staircases, and windows to make sure that the building is not in danger of collapsing.
- Look for fire hazards. Under the earthquake action there may be broken or leaking gas lines, and under the tsunami flooded electrical circuits, or submerged furnaces or electrical appliances. Flammable or explosive materials may have come from upstream. Fire is the most frequent hazard following floods.
- Check for gas leaks. If you smell gas or hear a blowing or hissing noise, open a window and get everyone outside quickly. Turn off the gas using the outside main valve if you can, and call the gas company from a neighbour's home.

- Look for electrical system damage. If you see sparks or broken or frayed wires, or if you smell burning insulation, turn off the electricity at the main fuse box or circuit breaker. If you have to step in water to get to the fuse box or circuit breaker, call an electrician first for advice. Electrical equipment should be checked and dried before being returned to service.
- Check for damage to sewage and water lines. If you suspect sewage lines are damaged under the quake, avoid using the toilets and call a plumber. If water pipes are damaged, contact the water company and avoid using water from the tap. You can obtain safe water from undamaged water heaters or by melting ice cubes that were made before the tsunami hit. Turn off the main water valve before draining water from these sources. Use tap water only if local health officials advise it is safe.
- Watch out for wild animals, especially poisonous snakes that may have come into buildings with the water. Use a stick to poke through debris. Tsunami floodwater flushes snakes and animals out of their homes.
- Watch for loose plaster, drywall, and ceilings that could fall.
- Take pictures of the damage, both of the building and its contents, for insurance claims. Open the windows and doors to help dry the building.
- Shovel mud before it solidifies.
- Check food supplies. Any food that has come in contact with floodwater may be contaminated and should be thrown out.
- Expect aftershocks If the earthquake is of large magnitude (magnitude 8 to 9+ on the Richter scale) and located nearby, some aftershocks could be as large as magnitude 7+ and capable of generating another tsunami. The number of aftershocks will decrease over the course of several days, weeks, or months depending on how large the main shock was.
- Watch your animals closely. Keep all your animals under your direct control. Hazardous materials abound in flooded areas. Your pets may be able to escape from your home or through a broken fence. Pets may become disoriented, particularly because flooding usually affects scent markers that normally allow them to find their homes. The behavior of pets may change dramatically after any disruption, becoming aggressive or defensive, so be aware of their wellbeing and take measures to protect them from hazards, including displaced wild animals, and to ensure the safety of other people and animals.

CHAPTER 15

MANAGEMENT OF BIOLOGICAL DISASTERS

Some of the important aspects of Biological Disaster Management have been issued by NIDM/NDMA in a crisp manner under the heading of Do's and Don'ts. NDMA has issued guidelines for Management of Biological Disasters in 2008.

15.1 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 civilizations since the dawn of history.

15.2 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 mobilization 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 organisms. The mechanism required however, to face both can be similar if the service providers are adequately sensitized.

15.3 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 Defense, 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.

Chapter-16

MANAGEMENT OF CHEMICAL DISASTERS

Some of the important aspects of Chemical Disaster Management have been issued by NIDM/NDMA in a crisp manner under the heading of Do's and Don'ts. NDMA has issued guidelines for Management of Chemical Disaster in 2007.

16.1 Guidelines by NDMA:

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 Defense (MoD); Ministry of Chemicals and Fertilizers (MoC&F); Ministry of Petroleum and Natural Gas (MoP &NG). Department of Atomic Energy (DAE);

16.2 Salient features of NDMA Guidelines:

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.

CHAPTER – 17

MANAGEMENT OF CHEMICAL (TERRORISM) DISASTERS

17.1 Introduction:-

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 aerosolized material to contamination of food and water.

17.2 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 organizations. The approach followed in the NDMA's Guidelines lays emphasis on:

1. Security and surveillance measures for installations manufacturing/ using/storing chemicals.
2. Strengthening intelligence regarding the movement of chemicals.
3. 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, infrastructure development.
d. Community-centric mechanism for the management of chemical (terrorism) disasters.

17.3 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. 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.

17.4 Preparedness for Emergency Response:-

Preparedness for an emergency response at the incident site requires protection, detection, and decontamination. CISF/CONCOR Security 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 Regional DM Plan as the respective Terminal on the Region where CTD has occurred. SOPs will be included for field decontamination.

CHAPTER-18

MANAGEMENT OF NUCLEAR AND RADIOLOGICAL EMERGENCY (DISASTER)

Some of the important aspects of Nuclear and Radiologial Emergency (Disaster) have been issued by NIDM/NDMA in a crisp manner under the heading of Do's and Don'ts. NDMA has issued guidelines for Management of Management of Nuclear and Radiological Emergencies in 2009.

NDMA has nominated Departments of Atomic Energy (DAE) as Nodal Ministry for Management of Biological Disasters.

18.1 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 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.

18.2 Vulnerability of Nuclear Facilities:

Identification of a CONCOR Terminal close to a nuclear facility needs to be done by the Region. 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 devise 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. A network of 18 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.