



ଓଡ଼ିଶା ରାଜ୍ୟ ମୁକ୍ତ ବିଶ୍ୱବିଦ୍ୟାଳୟ, ସମ୍ବଲପୁର, ଓଡ଼ିଶା
Odisha State Open University, Sambalpur, Odisha
Established by an Act of Government of Odisha.

DIPLOMA in DISASTER MANAGEMENT (DDM)

DDM-4 Disaster Preparedness and Response

Block – 1

Unit – I : Disaster preparedness : Concept and significance

Unit –II : Disaster preparedness Measures

Unit – III : Institutional Mechanism for Disaster Preparedness

Unit – IV : Disaster preparedness with special needs / vulnerable groups

Unit – IV : Disaster Preparedness



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DIPLOMA IN DISASTER MANAGEMENT

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Block – 1 Disaster Preparedness

Objectives

After completion of this unit, you should be able to:

- ☛ *Have basic understanding on concept of Disaster Preparedness and significance.*
- ☛ *Understand the dimension and activities needed to measure effective preparedness.*
- ☛ *Understand the basic institutional mechanism for Disaster Preparedness.*
- ☛ *To know about the special needs or vulnerable population groups and meeting needs to manage this kind of population during crisis.*
- ☛ *Have an in depth understanding of Disaster Preparedness Policies and Programme in India*

Structure

4.0 Introduction

Unit – I Disaster Preparedness: Concept & Significance

- 1.1 Working Definition of Disaster Preparedness
- 1.2 Conceptual Model of Disaster Preparedness
- 1.3 Significance of Disaster Preparedness

Unit – II Disaster Preparedness Measure

Unit – III Institutional Mechanism for Disaster Preparedness

- 3.1 Institutional Mechanism at National Level
- 3.2 Institutional Mechanism at State Level
- 3.3 Institutional Mechanism at District Level
- 3.4 International Bodies involved in Disaster Management

Unit – IV Disaster Preparedness with special needs/vulnerable groups

- 4.1 Meeting the needs of Vulnerable or Special Need Population

Unit – V Disaster Preparedness; Policies and Programme

- 5.1 Disaster Preparedness policies in India
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- 4.1 Let Us Sum Up
- 4.2 Key Words
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- 4.4 Check Your Progress – Possible Answers

4.0 Introduction

A disaster is an unplanned event in which the needs of the affected community outweigh the available resources. A disaster occurs somewhere in the world almost daily, but these events vary considerably in scope, size, and context. The numbers of recorded disasters have increased from 200 to 400 per year in last two decades but economic damages have tripled in last 30 years. Further, 9 out of 10 disasters are induced by climate change. Human driven climate change will increase the frequency and intensity of extreme events in coming days will kill one million people around the world each decade and leave millions more homeless each year. The country like India is throwing million of population and infrastructure to occupy hazardous area. It is because of 58.6% of the landmass is prone to earthquakes of moderate to very high intensity; over 40 million hectares (12%) is prone to floods and river erosion; of the 7,516 km long coastline, close to 5,700 km is prone to cyclones and tsunamis; 68 per cent of the cultivable area is vulnerable to drought and hilly areas are at risk from landslides and avalanches (NDMA, 2009). Increasing urbanization, including growing concentrations of people in unplanned and unsafe urban settlements and exposed coastal areas, poverty, and inadequate attention to changing risk patterns, is placing more and more people in disaster-prone locations. Large scale disasters like 2014 Nepal Earthquake, Indian Tsunami, 2004 and Super cyclone, 1999 causing heavy casualties and economic damage are widely publicized highlighting the people attention on disaster planning and preparedness. The disaster preparedness policies have changed from reactive approach to proactive approach and also realized that the investment on preparedness, prevention and mitigation is more cost-effective compared to expenditure on relief and rehabilitation alone. Thus all we can do is to prepare ourselves to minimize the damage caused by these extreme events.

The practical significance of disaster preparedness are not only preventing a bad situation becoming worse but also saving life, economic damage and other hardships through timely disaster response activities. Preparedness for reducing the risk should be planned with conformity with social and cultural characteristics of each place. Thus, preparedness is a term which is often used to show the capacity of the communities to respond to disaster. The measurement includes vulnerability and risk assessment, awareness raising, education, safety messages, structural and non-situation activities as part of development plan. The term preparedness should not be confined to key policy and decision maker in disaster management but should percolate to lowest community level i.e. family and individuals to remote hazard prone areas. Thus, disaster preparedness education not only teach us about disaster but also how to live in harmony with nature and other creatures and collaborative with each other to build sustainable society. This block provide learners with basic information about disaster preparedness, measure, institutional mechanism, vulnerable or special need population and also highlights about disaster policies and programmes. If people keep the concept of disaster preparedness in their mind and act calmly with spirit of cooperation, economic damage should not only decrease drastically and many precious lives will be saved. In peace time, human being think that they live by themselves but in reality all human beings depend on each other, nature and other creature for their sustenance. The complicated interconnected relationship between human being and others should be core component of disaster preparedness. I hope this block will not only help learner's knowledge about

disaster preparedness but also help learner to be self sustainable with spirit of cooperation and collaboration to build disaster resilient, sustainable and peaceful society.

Unit – I Disaster Preparedness: Concept and Significance

Preparedness refers to a very concrete research based set of actions that are taken as precautionary measures in the face of potential disasters. The action include physical preparation, training of official and population at risk, the training intervention team, establishment of policies, organizational arrangements and operation plan to minimize the potential loss of life and physical damage. It is believed that prevention is better than cure. Preparedness is typically understood as consisting of measures that enable different units of analysis—individuals, households, organizations, communities, and societies—to respond effectively and recover more quickly when disasters strike. Further, disaster preparedness is better than disaster management.

The **United Nations Disaster Relief Office (UNDRO)** defines ‘Disaster Preparedness’ as:

“It may be described as (a series of) measures designed to organize and facilitate timely and effective rescue, relief and rehabilitation operations in cases of disaster.... Measures of preparedness include among others, setting up disaster relief machinery, formulation of emergency relief plans, training of specific groups (and vulnerable communities) to undertake rescue and relief, stockpiling supplies and earmarking funds for relief operations”.

1.1. Working Definition of Disaster Preparedness

Disaster preparedness minimizes the adverse effects of a hazard through effective precautionary actions, rehabilitation and recovery to ensure the timely, appropriate and effective organization and delivery of relief and assistance following a disaster – **Kent, 1994.**

Analyzing some of the points made in this definition are as follows

“minimizes the adverse effects of a hazard-”

Long-term risk reduction measures are intended to minimize the adverse effects of a hazard by eliminating the vulnerabilities which hazards would otherwise expose. These measures directly reduce the potential impact of a hazard before it strikes.

Disaster preparedness assumes that certain groups of people or property will nevertheless remain vulnerable, and that preparedness will have to address the consequences of a disaster's impact.

“through effective precautionary actions-”

The end products of disaster preparedness are precautionary actions which are “active” and “passive” in content. Passive aspects of disaster preparedness include the preparation of disaster manuals, stockpiling of relief goods and the development of computer lists of resources and personnel. “Active” disaster preparedness would include developing comprehensive response plans, monitoring hazard threats, training emergency personnel, and training members of the communities at risk. Preparedness plans are dynamic ventures which need to be reviewed, modified, updated and tested on a regular basis.

“to ensure timely appropriate and effective delivery of relief-”

Speed and timeliness are critical component of disaster management. Speed and timeliness are often treated synonymously, causing serious problems in the relationship between relief inputs and their effects. There are certain basic needs required immediately such as shelter, clothing and medical attention to alleviate immediate distress where speed will be essential. . However, there are other forms of relief that, under certain circumstances, may be disruptive unless delayed. Rushing in excessive amounts of food aid before a clear assessment of local market conditions and agricultural prospects are known to create dependency and undermine local economies. Timeliness, not speed, should be the preparedness criterion.

Defining Disaster Preparedness

“Preparedness as to make ready, put together and equip things and people” – **Oxford Dictionary**

"Forecasting and taking precautionary measures prior to an imminent threat when advance warnings are possible" - **Kent, 1994.**

“Preparedness is defined in terms of standardized lists of goods, material and services aimed at preparing for a variety of disasters” - **FEMA, 2000.**

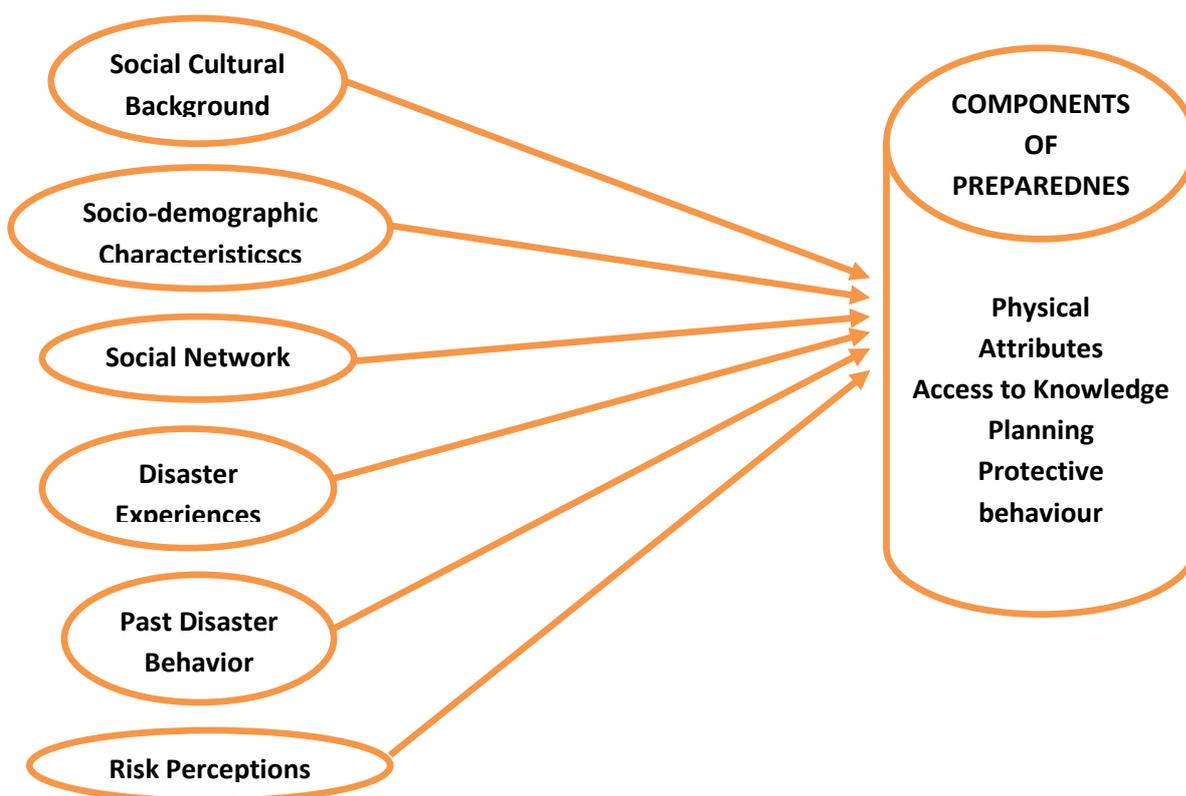
“Planning for worst case scenarios as synonymous with preparedness” – **Link, 2000.**

“Initiating predisaster activities (simulation/training/exercises) an mitigating the sources of disasters” – **Tarn, David and Wen, 1998.**

1.2 Conceptual Model of Disaster Preparedness

Disaster Preparedness has multiple definitions and can be mapped in different ways. A working conceptual model will help to construct preparedness using facet as access to technology, communication networks, socio-physical perception and so on. Disaster preparedness include planning, establishing resources, developing warning systems, skills in training and practicing action designed to save lives and damage of property. According to **Kirschenbaum, 2002**, the theoretical working models of preparedness are shown in figure1.1 below. The major components of disaster preparedness are as 1) Physical attributes, 2) Emphasis of Knowledge, 3) Planning Component and 4) Aspect of protective behavior. The sub-categories are Social Cultural Background setting, Socio-demographic Characteristics, Social Networks, Disaster Experiences, Past Disaster Behavior and Risk Perception.

Fig. 1.1 Conceptual Working Model of Disaster Preparedness



Source: Kirschenbaum, 2002, Disaster Preparedness; pp 09

1.3. Significance of Disaster Preparedness

1. From storms, floods and even pandemic contagion all disasters have one thing in common: they remind us of the importance of pre-disaster preparedness. But good intentions need to turn into tangible deeds.
2. Disaster preparedness provides a platform to design effective, realistic and coordinated planning, reduces duplication of efforts and increase the overall effectiveness of National Societies, household and community members' disaster preparedness and response efforts.
3. Preparedness activities embedded with risk reduction measures can prevent disaster situations and also result in saving maximum lives and livelihoods during any disaster situation, enabling the affected population to get back to normalcy within a short time period.
4. It reduces the panic feelings and helps communities and families know where to take refuge and how to care for basic medical issues. It can also help alleviate some of the devastation by reducing the impact of a disaster.
5. A bottom-up approach needs to be adopted for better understanding and operationalisation of the plans prepared at various levels from block to district up to Center at the top. Community participation ensures local ownership, addresses local needs, and promotes volunteerism and mutual help to prevent and minimize damage. Disasters are not confined to boundaries, be it country or state.
6. It is most essential to establish, upgrade and modernize the forecasting and early warning systems for all types of disasters. Warning systems are the core component of disaster preparedness.
7. Dams, roads, bridges, flyovers, railway lines, power stations, water storage towers, irrigation canals, delta water distribution networks, river and coastal embankments, ports and other civic utilities are the critical infrastructures. Disaster preparedness all about structures are to be constant monitor for safety standards in consonance with worldwide safety benchmarks and strengthened where deficient.
8. The establishment of Emergency Operations Centres at the National, State, Metro and District level and equipping them with contemporary technologies and communication facilities and their periodic upgradation, shall be accorded priority of disaster preparedness.
9. Environmental considerations and developmental efforts, need to go hand in hand for ensuring sustainability with help of effective disaster preparedness plan.
10. Medical preparedness is a crucial component of any disaster preparedness plan. Creation of mobile surgical teams, mobile hospitals and heli-ambulances for evacuation of patients is a crucial component of DM efforts.
11. Efficacy of plans and Standard Operating Procedures (SOPs) are tested and refined through training, seminars and mock drills. Various Disaster Management Authorities must be encouraged to generate a culture of preparedness and quick response.
12. Civil Defence, NCC, NYKS, NSS and local Non-Governmental Organisations (NGOs) need to be encouraged to empower the community and generate awareness through their respective institutional mechanisms.

Individual Disaster Preparedness



Nobody Left Behind
Disaster Preparedness for Persons with Mobility Impairments

Disaster Do's and Don'ts Checklist

- ✓ Do create an individualized emergency plan.
- ✗ Don't wait until it happens to you.
- ✓ Do assemble a "to go" kit which includes a week's supply of meds.
- ✗ Don't forget to conduct quarterly drills of your personal plan.
- ✓ Do register with or form a registry with emergency responders.
- ✗ Don't leave out those who can assist you in the planning process.
- ✓ Do develop a network of family, friends, and neighbors to assist.
- ✗ Don't forget a flashlight, radio and two routes for exiting your home.
- ✓ Do check out accessibility of local shelters and hotels.
- ✗ Don't put yourself in a dangerous situation when the power goes out.
- ✓ Do have a portable generator or adaptor and car battery for power.
- ✗ Don't think it won't happen to you.
- ✓ Do have adequate rental or home insurance.
- ✗ Don't forget small details, including having extra ready cash.
- ✓ Do get training on and then direct others to turn off gas and water.
- ✗ Don't procrastinate with safety.
- ✓ Do heed early warnings to allow time for evacuation or taking cover.

visit www.nobodyleftbehind2.org for more info

Created by the Research and Training Center on Independent Living at the University of Kansas by a grant from the Centers of Disease Control and Prevention through the Association of Teachers of Preventive Medicine (ATPM) in 1998. This poster's contents are from persons with mobility limitations who submitted an on-line computer survey that pertained to their disaster or emergency experiences and do not necessarily reflect the views of the researchers, funders, or the University of Kansas. For more information: 785- 864-4035 or 785-864-7164 (TDD) © Research and Training Center on Independent Living at the University of Kansas.

Community Disaster Preparedness



Nobody Left Behind
Disaster Preparedness for Persons with Mobility Impairments

Disaster Do's and Don'ts Checklist

- ✓ Do get involved at work, housing unit & in public disaster planning.
- ✗ Don't wait until a disaster, and people with disabilities are left behind.
- ✓ Do get prepared at home and expand preparedness to public settings.
- ✗ Don't assume evacuation plans exist for persons with disabilities.
- ✓ Do form an 'Accessibility Committee' at work and other public places.
- ✗ Don't assume you'll be evacuating with everyone else.
- ✓ Do explore evacuation options with emergency managers & others.
- ✗ Don't overlook alternatives, such as evacuation chairs.
- ✓ Do share the plan with all those in the building and then practice it.
- ✗ Don't wait until the disaster to raise awareness on disability issues.
- ✓ Do learn about disasters and disabilities and share that knowledge.
- ✗ Don't forget to check shelter accessibility & service animal provisions.
- ✓ Do talk to local emergency managers and Red Cross about ADA.
- ✗ Don't wait to train and educate others about the plan procedures.
- ✓ Do initiate talking to emergency managers, responders, and Red Cross.
- ✗ Don't forget to develop a network of supporters who can assist you.
- ✓ Do remember getting involved so that "Nobody Is Left Behind".

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Unit – II Disaster Preparedness Measures

Disaster Preparedness is defined as the measures that enable different units of analysis—individuals, households, organizations, communities, and societies—to respond effectively and recover more quickly when disasters strike. These are measures that minimize the adverse effects of a hazard including loss of life and property and disruption of livelihoods. Further, it includes actions designed to enhance the ability to undertake emergency actions in order to protect property and contain disaster damage and disruption, as well as the ability to engage in post-disaster restoration and early recovery activities. A disaster is a state or conditions that disrupt a normal function of social systems. Disaster manifests itself in malfunctioning, disruption or total destruction of connection and communication between the elements of social systems. Therefore, communities require extra ordinary counter measures to reestablish stability in a disaster. A prepared community is likely to demonstrate resilience (successful recovery) in face of disaster. The important core processes of disaster preparedness are shown in table 1.1.

Table 1.1 Five core process of Disaster Preparedness

Core Process	Definition
Hazard Analysis	The process of quantifying the probability of extreme events harming human settlements in a given geographic area during specific period.
Surveillance	The process of collecting, collating and interpreting data to produce useful information
Warning	The process of detecting imminent disaster and distributing that information to people at risk.
Rehearsal	The process of simulating disaster for the purpose of measuring, assessing and improving the a social unit's future performance in a real disaster.
Logistics	The totality of resource mobilization process planned in anticipation of imminent disaster.

Source: Maragaret O' Leary, 2004; pp 6

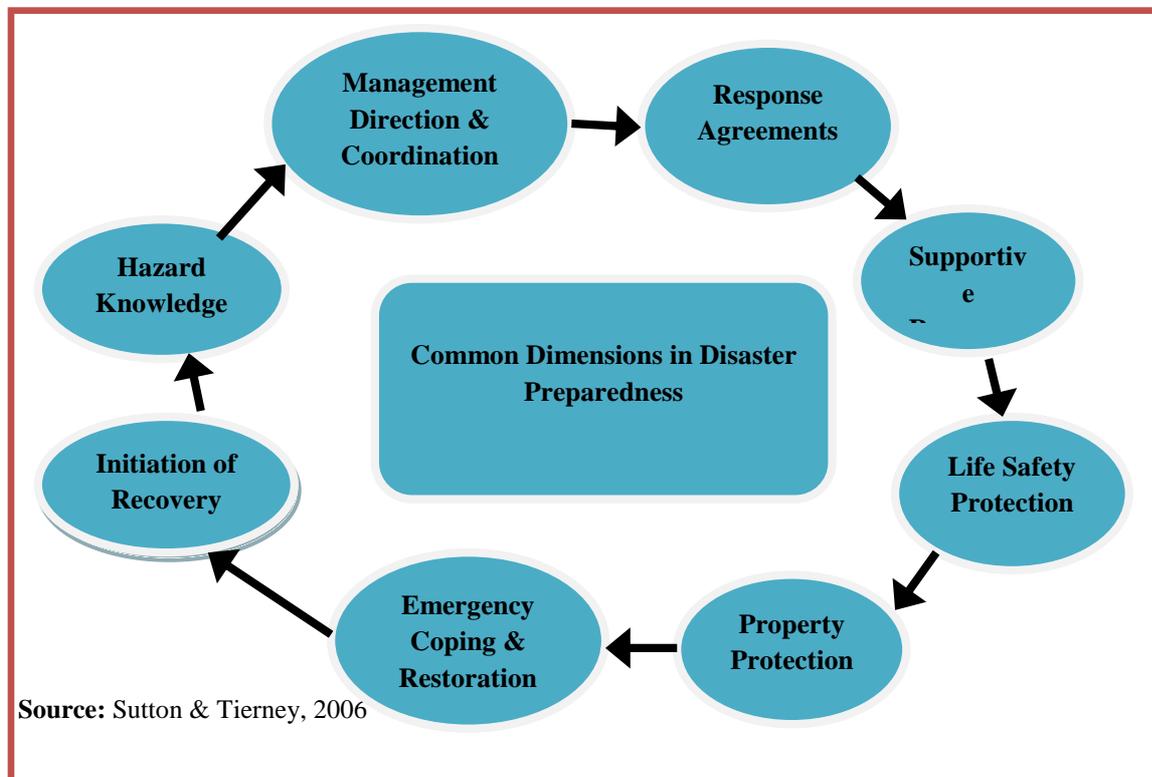
The concept of disaster preparedness has variety of dimension to measure and followed by a number of activities. Dimensions of preparedness consist of the various goals or end-states that preparedness seeks to achieve. Activities are concrete actions that need to be taken in order to meet those goals. Various agencies have defined dimension and activities for preparedness mapping. The Capability Assessment for Readiness (CAR) developed by Federal Emergency Management Association (FEMA) and the National Emergency Management Association (NEMA) identifies thirteen elements that should be addresses by states in their preparedness efforts shown in **table .** Further, **Sutton and Tierney (2006)** from University of Colorado identified eight dimensions or desired end-states for preparedness activities: (1) hazard knowledge; (2) management, direction, and co-ordination of emergency operations; (3) formal and informal response agreements; (4) resource acquisition aimed at ensuring that emergency functions can be carried out smoothly; (5) life safety protection; (6) property protection; (7) emergency coping and restoration of key functions; and (8) initiation of recovery activities. The key dimensions are shown in Fig 1.2. and associated activities are described in table 1.2.

Table 1.2 Elements of Disaster Preparedness by FEMA

1. Laws and Authorities	2. Hazard Identification and Risk Assessment	3. Hazard Mitigation
4. Resource Management	5. Direction, Control, and Coordination	6. Communications and Warning
7. Communications and Warning	8. Operations and Procedures	9. Logistics and Facilities
10. Training	11. Exercises, Evaluations, and Corrective Actions	12. Crisis Communications, Public Education, and Information
13. Finance and Administration		

Source: Sutton & Tierney, 2006

Fig. 1.2 Dimension of Disaster Preparedness



Source: Sutton & Tierney, 2006

Table 1.3 Preparedness Dimensions and Activities

Dimensions of Preparedness	Associated Activities
Hazard Knowledge	Conducting hazard, impact, and vulnerability assessments; Using loss estimation software, scenarios, census data; Understanding potential impacts on facilities, structures, infrastructure, populations; Providing hazard information to diverse stakeholders.
Management, Direction and Coordination	Assigning responsibilities; Developing a division of labor and a common vision of response-related roles and responsibilities; Forming preparedness committees, networks; Adopting required and recommended management procedures (e.g., National Incident Management System); Providing training experiences, conducting drills, educating the public.
Formal and Informal Response Plans and Agreements	Developing disaster plans, evacuation plans, memoranda of understanding, mutual aid agreements, collaborative partnerships, resource sharing agreements; Participating in broader and more general planning arrangements (e.g., neighborhood and community preparedness groups, Urban Area Security Initiative regional plans, industry-wide preparedness initiatives).
Supportive Resources	Acquiring equipment and supplies to support response activities; Ensuring coping capacity; Recruiting staff; Identifying previously unrecognized resources; Developing logistics capabilities.
Life Safety Protection	Preparing family members, employees, others to take immediate action to prevent death and injury, e.g., through evacuating, sheltering in place, using “safe spaces” within structures, taking emergency actions to lessen disaster impacts on health and safety; Containing secondary threats, e.g. fire following earthquakes.
Property Protection	Acting expediently to prevent loss or damage of property; protecting inventories, securing critical records; Ensuring that critical functions can be maintained during disaster; Containing secondary threats.
Emergency Coping and Restoration of Key Functions	Developing the capacity to improvise and innovate; Developing the ability to be self-sustaining during disasters; Ensuring the capacity to undertake emergency restoration and early recovery measures.
Initiation of Recovery	Preparing recovery plans; developing ordinances and other legal measures to be put into place following disasters; Acquiring adequate insurance; Identifying sources of recovery aid.

Source: Sutton and Tierney, Fritz Institute Assessing Disaster Preparedness Conference Sebastopol, California, November 3 and 4, 2006; pp 08

Unit – III. Institutional Mechanism for Disaster Preparedness

Disaster preparedness and mitigation in India has evolved from an activity-based reactive setup to a proactive institutionalized structure; from single faculty domain to a multi-stakeholder setup; and from a relief-based approach to a ‘multi-dimensional pro-active holistic approach for reducing risk’. Over the last two decades, the disaster preparedness and mitigation in India has undergone substantive changes in its composition, nature and policy by enacting **National Disaster Management Act 2005, National Policy on Disaster Management 2009 and National Disaster Management Plan 2016**. Further, these act, policies and plan helped in creation of the National Disaster Management Authority (NDMA), headed by the Prime Minister, State Disaster Management Authorities (SDMAs) headed by the Chief Ministers, and District Disaster management Authorities (DDMAs) headed by the District Collector or District Magistrate or Deputy Commissioner as the case may be to spearhead and adopt a holistic and integrated approach to disaster preparedness. Thus, there is a paradigm shift, from the erstwhile relief – centric response to a proactive prevention, mitigation and preparedness – driven approach for conserving development gains and to minimize loss of life, livelihood and property. The institution structures for disaster preparedness are shown in Fig. 1.3 & Fig 1.4 The main function of national, state and district level organization are discussed below

3. 1. Institutional Mechanism at National Level

National Disaster Management Authority (NDMA):

1. NDMA is the apex body for disaster management, headed by the Prime Minister and has the responsibility for laying down policies, plans and guidelines for DM and coordinating their enforcement and implementation for ensuring timely and effective response to disasters.
2. It approves the National Disaster Management Plans and DM plans of the Central Ministries/Departments. It has authority to take such other measures, for the prevention of disasters, or mitigation, or preparedness and capacity building, for dealing with a threatening disaster situation or disaster.
3. Lay down guidelines to be followed by the different Ministries or Departments of the Government of India for the purpose of integrating the measures for prevention of disaster or the mitigation of its effects in their development plans and project and also coordinate the enforcement and implementation of the policy
4. NDMA has the power to authorize the Departments or authorities concerned, to make emergency procurement of provisions or materials for rescue and relief in disaster.
5. The National Institute of Disaster Management (NIDM) works within the framework of broad policies and guidelines laid down by the NDMA and also has general superintendence, direction and control of the National Disaster Response Force (NDRF).

Fig. 1.3 National Structure for Disaster Preparedness in India

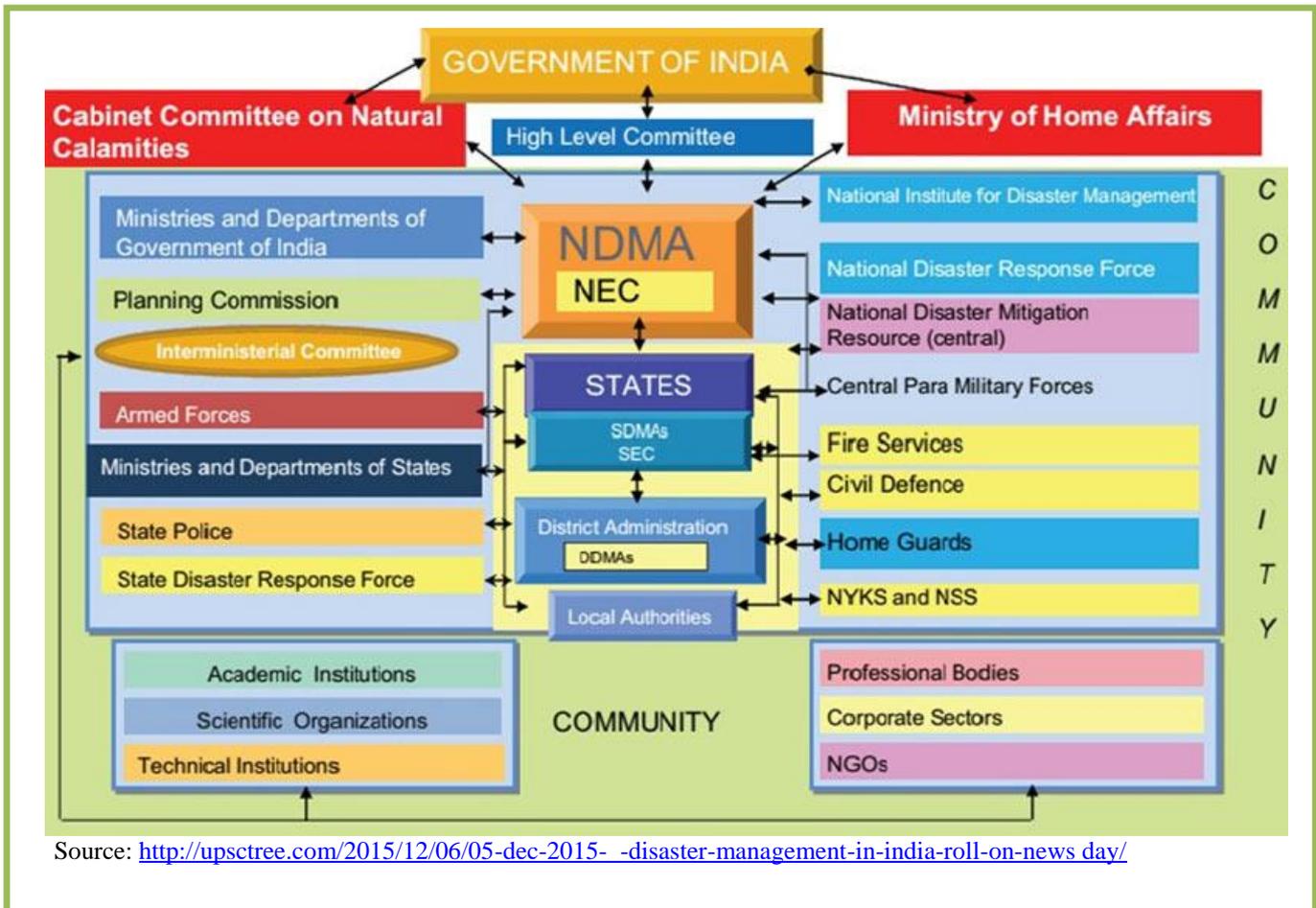
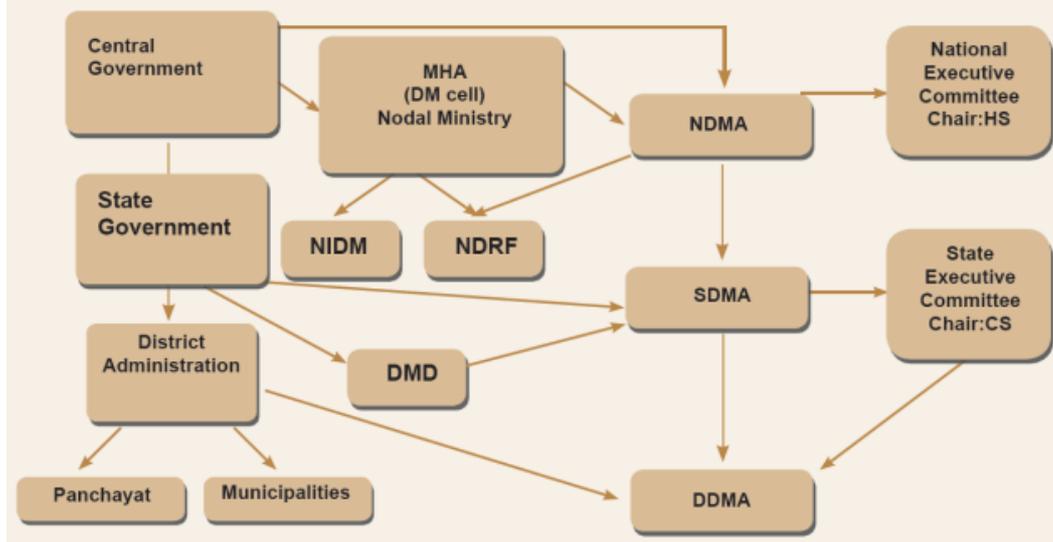


Fig. 1.4

**LEGAL-INSTITUTIONAL FRAMEWORK
Disaster Management Act 2005**



Source: <http://upsctree.com/2015/12/06/05-dec-2015--disaster-management-in-india-roll-on-news-day/>

National Executive Committee (NEC)

1. The NEC comprises the Union Home Secretary as Chairperson, and the Secretaries to the Government of India in the Ministries/Departments of Agriculture, Atomic Energy, Defense, Drinking Water Supply, Environment and Forests, Finance (Expenditure), Health, Power, Rural Development, Science & Technology, Space, Telecommunications, Urban Development, Water Resources and the Chief of the Integrated Defense Staff of the Chiefs of Staff Committee as members.
2. Secretaries in the Ministry of External Affairs, Earth Sciences, Human Resource Development, Mines, Shipping, Road Transport & Highways, and the Secretary, NDMA are special invitees to the meetings of the NEC.
3. NEC assists NDMA in the discharge of its functions and also ensures compliance of the directions issued by the Central Government.
4. NEC is tasked to prepare the National Plan for Disaster Management based on the National Policy on Disaster Management.
5. It also monitors the implementation of guidelines issued by NDMA.

3.2. Institutional Mechanism at State Level

State Disaster Management Authority (SDMA)

1. At the State level, the SDMA, headed by the Chief Minister, lays down policies and plans for DM in the State.
2. Approve the disaster management plans prepared by the departments of the Government of the State;
3. Lay down guidelines to be followed by the departments of the Government of the State for the purposes of integration of measures for prevention of disasters and mitigation in their development plans and projects and provide necessary technical assistance there for;
4. Recommend provision of funds for mitigation and preparedness measures
5. Review the measures being taken for mitigation, capacity building and preparedness by the departments of the Government of the State and issue such guidelines as may be necessary.

State Executive Committee (SEC)

1. The SEC is headed by the Chief Secretary to the State Government, and assists the SDMA in the performance of its functions.
2. It coordinates and monitors the implementation of the National Policy, the National Plan and the State Plan.
3. The SEC also provides information to the NDMA relating to different aspects of DM.

Fig 1.4 Structure of Odisha State Disaster Management Authority

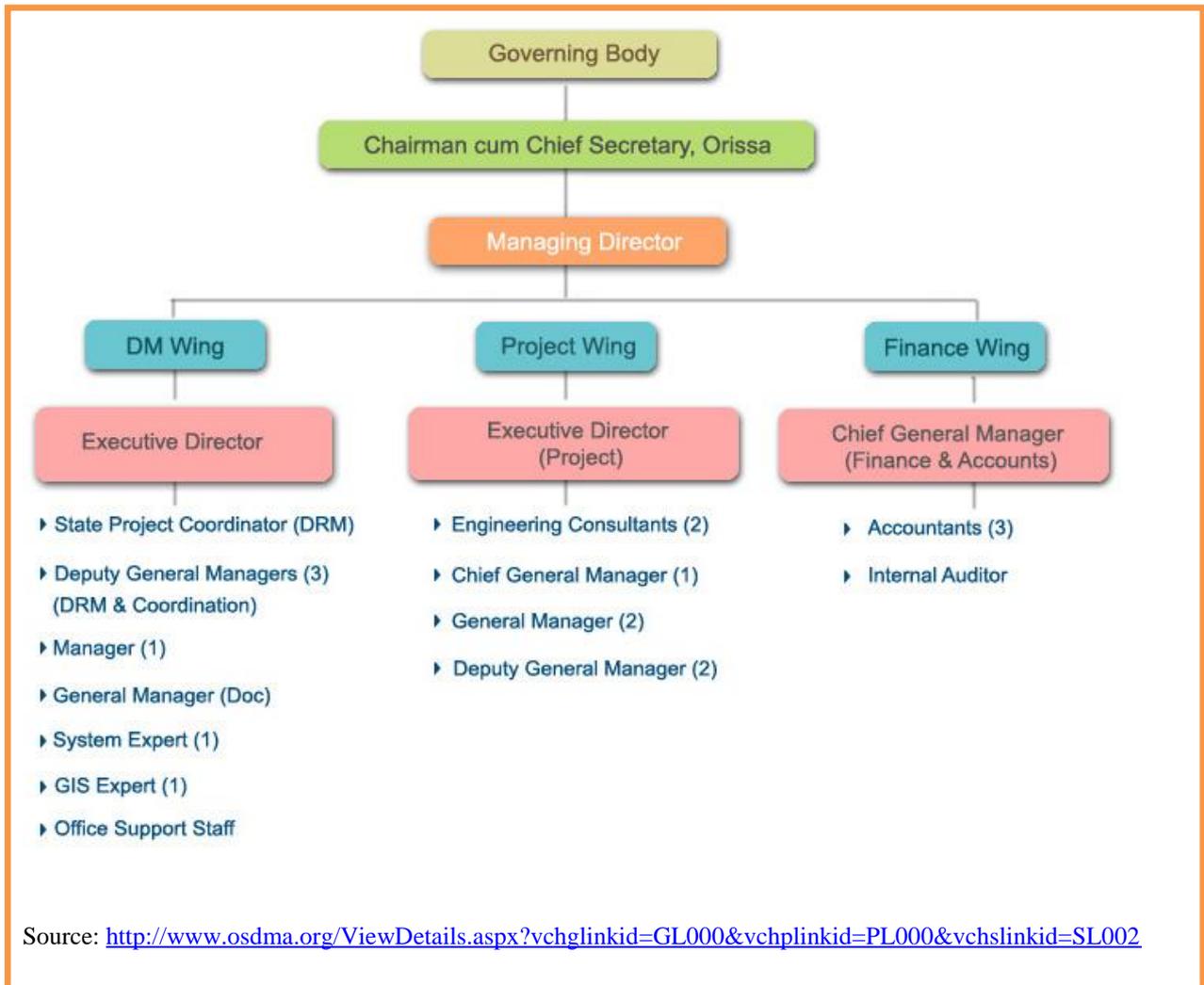
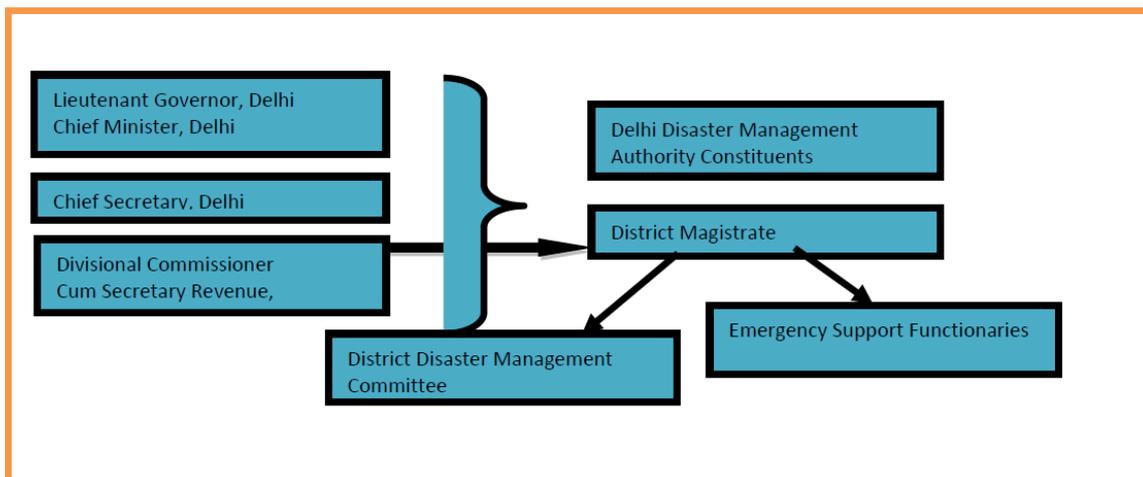


Fig. 1.5 Institutional arrangement for Disaster Preparedness (Delhi)



Source: Institutional arrangement for Disaster Management, Chapter 3 Delhi Disaster Management Report

3.3. Institutional Mechanism at District Level

District Disaster Management Authority (DDMA)

1. The DDMA is headed by the District Collector, Deputy Commissioner or District Magistrate as the case may be, with the elected representative of the local authority as the Co-Chairperson.
2. It is the planning, coordinating and implementing body for DM at the District level and takes all necessary measures for the purposes of DM in accordance with the guidelines laid down by the NDMA and SDMA.
3. It is responsible for preparing district DM plan.

Local Authorities

1. Capacity building and implementation of relief work are assigned to the local self-governing bodies such as Panchayati Raj Institutions, Municipalities and Municipal Corporations, Town Planning Authorities, District and Cantonment Board.
2. These bodies are responsible for ensuring capacity building of their officers and employees for managing disasters, carry out relief, rehabilitation and reconstruction activities in the affected areas.

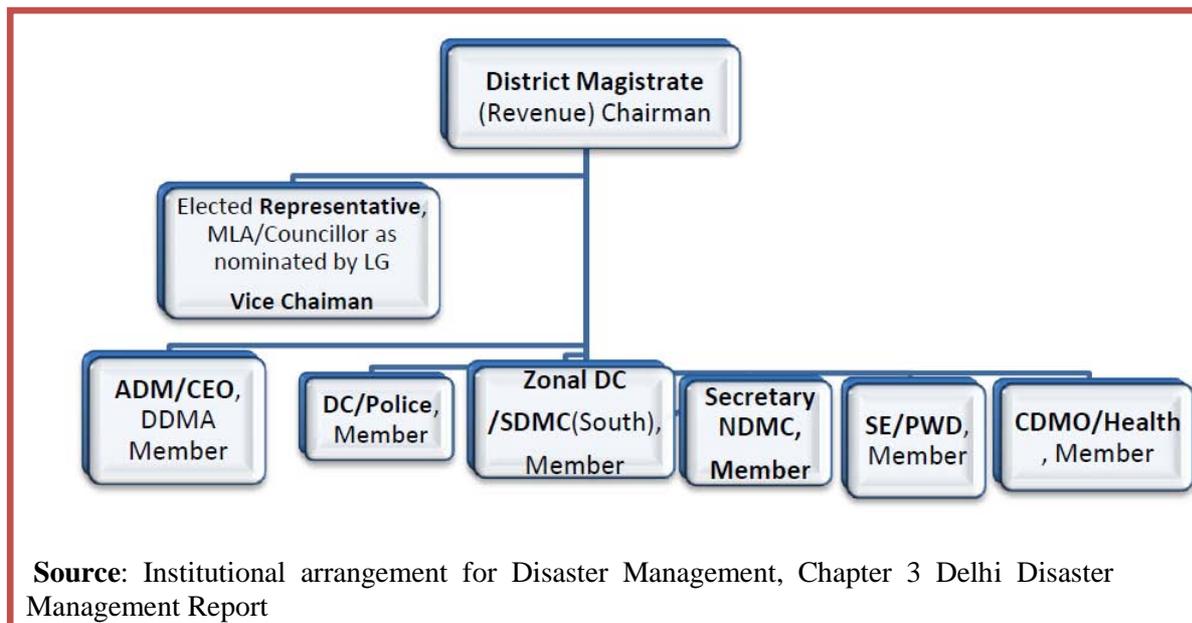
Financial Arrangements for Disaster Management

1. The NEC is tasked to apply National Disaster Response Fund towards meeting expenses for emergency response, relief and rehabilitation, in accordance with the guidelines laid down by the Central Government in consultation with the NDMA.
2. Finance Commission recommends the merging of National Calamity Contingency Fund with the National Disaster Response fund and accordingly funds are allotted.
3. The States are responsible for constitution of the Disaster Mitigation and Response Funds at the State as well as District levels.
4. The modalities for the application of these funds are to be worked out in accordance with the provisions of the National Disaster Management Act.

3.4. International Bodies Involved in Disaster Management

1. **Hyogo Framework of Action-** The Hyogo Framework of Action (HFA) 2005-2015 was adapted to work globally towards sustainable reduction of disaster losses in lives and in the social, economic and environmental assets of communities and countries.
2. **United Nations International Strategy for Disaster Reduction (UNISDR)-**In order to build the resilience of nations and communities to disasters through the implementation of the HFA , the UNISDR strives to catalyze, facilitate and mobilise the commitment and resources of national, regional and international stakeholders of the ISDR system.

Fig. 1.6 Structure of District Disaster Management Authority

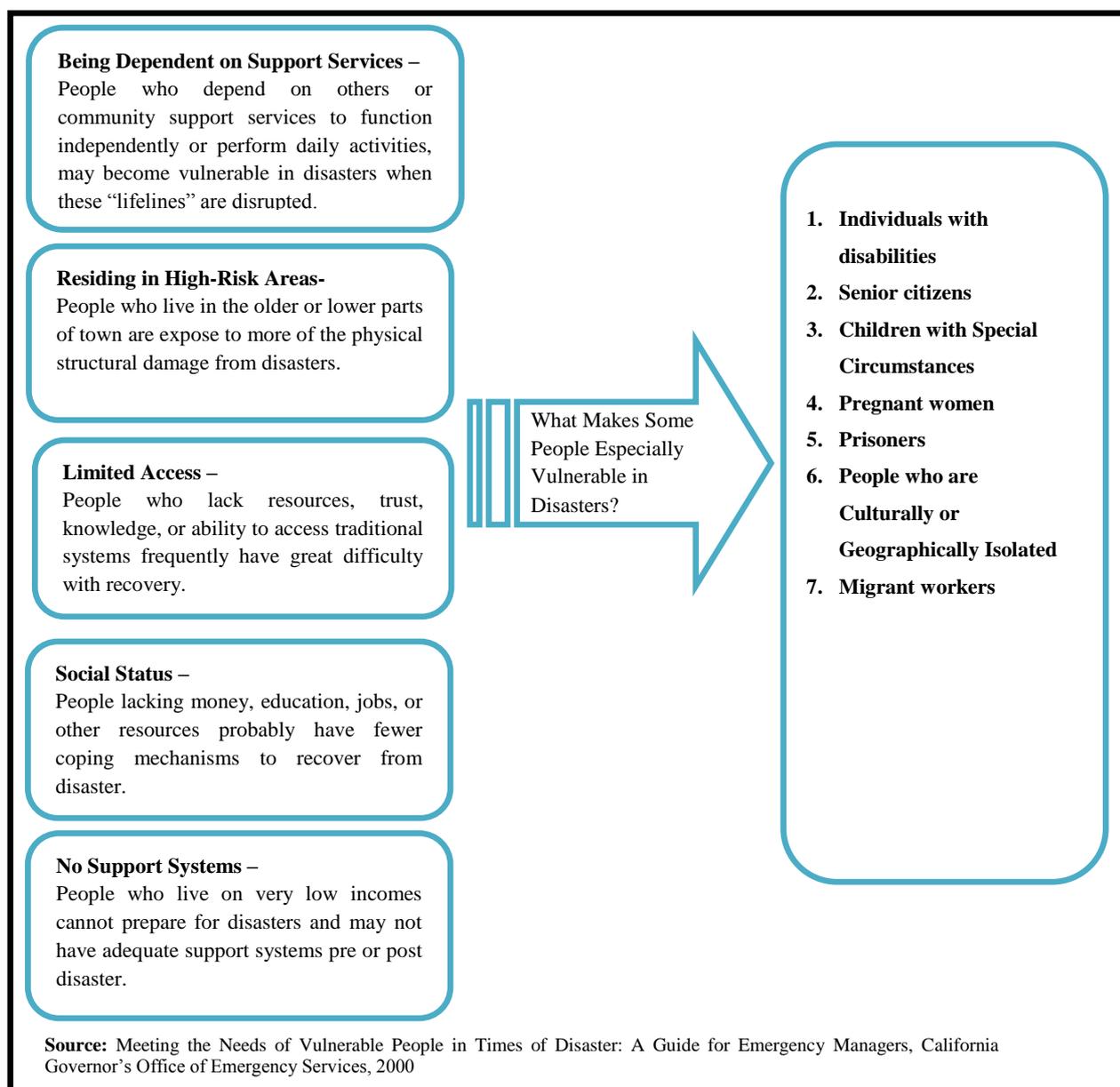


3. **United Nation Disaster Management Team (UNDMT)** – To coordinate all disaster-related activities, technical advice and material assistance provided by UN agencies, as well as to take steps for optimal utilisation of resources by UN agencies.
4. **Global Facility for Disaster Risk Reduction (GFDRR)** - GFDRR was set up in September 2006 jointly by the World Bank, donor partners (21 countries and four international organizations), and key stakeholders of the International Strategy for Disaster Reduction (UN-ISDR). It is a long-term global partnership under the ISDR system established to develop and implement the HFA through a coordinated programme for reversing the trend in disaster losses by 2015.
5. **Program for Enhancement of Emergency Response (PEER)** - The Program for Enhancement of Emergency Response (PEER) is a regional training programme initiated in 1998 by the United States Agency for International Development's, Office of U.S Foreign Disaster Assistance (USAID/OFDA) to strengthen disaster response capacities in Asia.
6. **Asian Disaster Reduction Centre (ADRC)** - The Asian Disaster Reduction Center was established in Kobe, Hyogo prefecture, in 1998, with mission to enhance disaster resilience of the member countries, to build safe communities, and to create a society where sustainable development is possible.
7. **SAARC Disaster Management Centre (SDMC)** - The SAARC Disaster Management Centre would serve the Member Countries by providing policy advice and facilitating capacity building services including strategic learning, research, training, system development, expertise promotion and exchange of information for effective disaster risk reduction and for planning and coordinating a rapid regional response mechanism to disasters within the region.

Unit –IV. Disaster preparedness with special needs/ vulnerable groups

In disaster preparedness, “**vulnerable groups**” or “**special needs**” population are those that are at risk of poor physical, psychological, or social health” after a disaster. It can also define as individuals or groups whose needs are not fully addressed by traditional service provider offered in disaster preparedness, response, and recovery. They have additional needs before, during, and after extreme events in functional areas, including but not limited to: maintaining independence, communication, transportation, supervision, and medical care. Thus, vulnerable means special dependence of particular group of population. The different groups of population vulnerable to disaster are shown in figure 1.6. The different groups of potential vulnerable to disaster are 1) Individuals with disabilities; 2) Senior citizens; 3) Children; 4) Pregnant women; 5) Prisoners 6) Socially economically disadvantaged population; 6) Migrant workers

Fig. 1.6 Vulnerability Profile of special need population



Individuals with Disabilities

Individual with physical and mental disabilities are helpless during a large scale disaster with limited Government assistance. Accessible transportation may be unavailable to evacuate the wheelchair-bound, and shelters may not have accessible entrances, restrooms, and dining areas or adequate medical care. Individuals with disabilities are lower priority than others for health care providers because treatments for them are more difficult and complicated. The evacuations of disabled person are mismanaged by emergency responders who misunderstand their behavior or are uncomfortable with them, and shelters may refuse to accept them or be ill equipped to meet their needs. Some of physical and mental disabled person are treated roughly because they are unable to follow the instruction during emergency time. More challenges and difficulties are faced aftermath the disaster to secure accessible apartments or trailers, health care, appropriate schooling, and employment in areas that have been devastated. These special groups require specialized attention and support during and after disaster.

Senior Citizens

Senior citizens are persons who are sixty or older are more likely to suffer from chronic diseases, including arthritis, hypertension, heart disease, diabetes, and respiratory ailments. Further, 80 percent of these age groups are affected by at least one chronic illness, and 50 percent have two or more chronic conditions. Again, they suffer from mobility, cognitive, sensory, social, and economic limitations that can impede their adaptability and ability to function in disasters. The health of older adult can deteriorate during emergency and aftermath because of poor nutrition, extreme temperatures, exposure to infection, interruptions in medical treatment, and emotional distress. Our senior citizens require particular attention and support during disaster.

Pregnant Women

Pregnant women are special need group of population and face the risks of premature deliveries, underweight infants, and infant mortality during a disaster. These group of population are potential vulnerable during evacuation because these women don't have accesses to prenatal vitamins or other essential medication and also medical records containing information critical to their welfare or that of their fetuses. The pandemic outbreaks aftermath the disasters are life threatening for pregnant women or their unborn children, and exposure to other illnesses, such as viruses, in crowded shelters could constitute a further hazard. Therefore, these group populations are to be taken care during the disaster.

Children

Children are vulnerable to disaster because of their susceptibility to injury and their dependence on others for livelihood, decision making, and emotional support. Moreover, the physiological differences between children and adults are numerous, relating to head and tongue size in proportion to other body parts, nerve conduction, ventilation, and oxygen demand, circulating blood flow, vulnerability of the liver and spleen, and skin thickness. Therefore, caring for children in an emergency involves psychological and social challenges stemming from their level

of cognitive ability, emotional vulnerability, and dependence upon the support of family members.

Prisoners

The prisoners are vulnerable to disaster because of their entire dependent upon governmental authorities for their welfare. Further, these population cannot evacuate on their own seek medical care, or obtain food, shelter, and supplies unless authorities provide these to them. Therefore, there are chances of chaos during emergency because, inmates could be subject to attacks by fellow prisoners or poorly trained, panicked guards

Socially economically disadvantaged population and Migrant workers

Discrimination on basis of caste, class, color and religion plays major increasing vulnerability of the marginal section of the society. These demographic population are disadvantaged individuals are likely to suffer disproportionate harm from disasters because they lack resources and adequate support systems. Economic disadvantaged populations are more vulnerable to any kind of disaster because they have less saving to spend preventative measures, emergency supplies, and recovery efforts. Migrant landless works represent a high-risk population with respect to health factors, poor housing, the nature of their work, a lack of social networks, and language barriers. These workers migrate to devastated area with a hope to find long-term, lucrative work assignments during the rebuilding process. Further, they were exploited and also not trained to these extreme condition making them vulnerable. Thus, social vulnerability of these communities is driven by structure of family, social cohesiveness among the community, social capital and social networking.

4.1. Meeting the needs of Vulnerable or Special Need Population

Vulnerable group or special need populations are challenges for disaster managers during the emergency. Past evidences shows that significant numbers of any population fail to respond or act upon warnings of imminent disaster. Additionally, tourists, recent immigrants, and refugees face challenges when confronted with disaster in unfamiliar locations, linguistically isolated, and in need of assimilating lifesaving guidance quickly. There historical evidence that these population suffered from death tolls because they are unable to evacuate the catastrophic place. Preparation for the needs of vulnerable groups is most likely to occur if it is statutorily mandated because they have weak political voices. Response and recovery efforts will be optimized only if decision makers have carefully prepared for emergencies at a time when they have the leisure to contemplate options and establish responsible policies. However, planning and production of planning documents alone are not sufficient to achieve comprehensive and effective disaster readiness. Rather, at a minimum, planners must identify at-risk individuals through registries, delegate authority and responsibility to appropriate governmental officials, collect supplies, and allocate resources, among other steps.

A cooperative relationship between government and Community Based Organization (CBOs) provides the best assurance that the needs of under-served people and the needs of the community for long-term recovery will be fully addressed.

A community-based organization (CBO) is a local organization (which may or may not be an affiliate of a national organization) with a primary mission to provide services to specific groups of people.

The CBOs provide an ongoing human service infrastructure to people in the community; they are often the best barometers of post-disaster needs. The CBOs that can continue and possibly expand services following a disaster will be at the front lines providing many of the necessary services to disaster victims. They are critical in helping with the recovery of people who are most vulnerable.

Advantages to having CBOs in Disaster Preparedness

Network

Service Strengths – CBOs have expertise in outreach, information referral, volunteer management, and special services, and offer you the opportunity for collaborating or contracting for specific disaster services.

Language and Cultural Sensitivity – CBOs can deal with the people they serve in their own language and in a culturally appropriate manner.

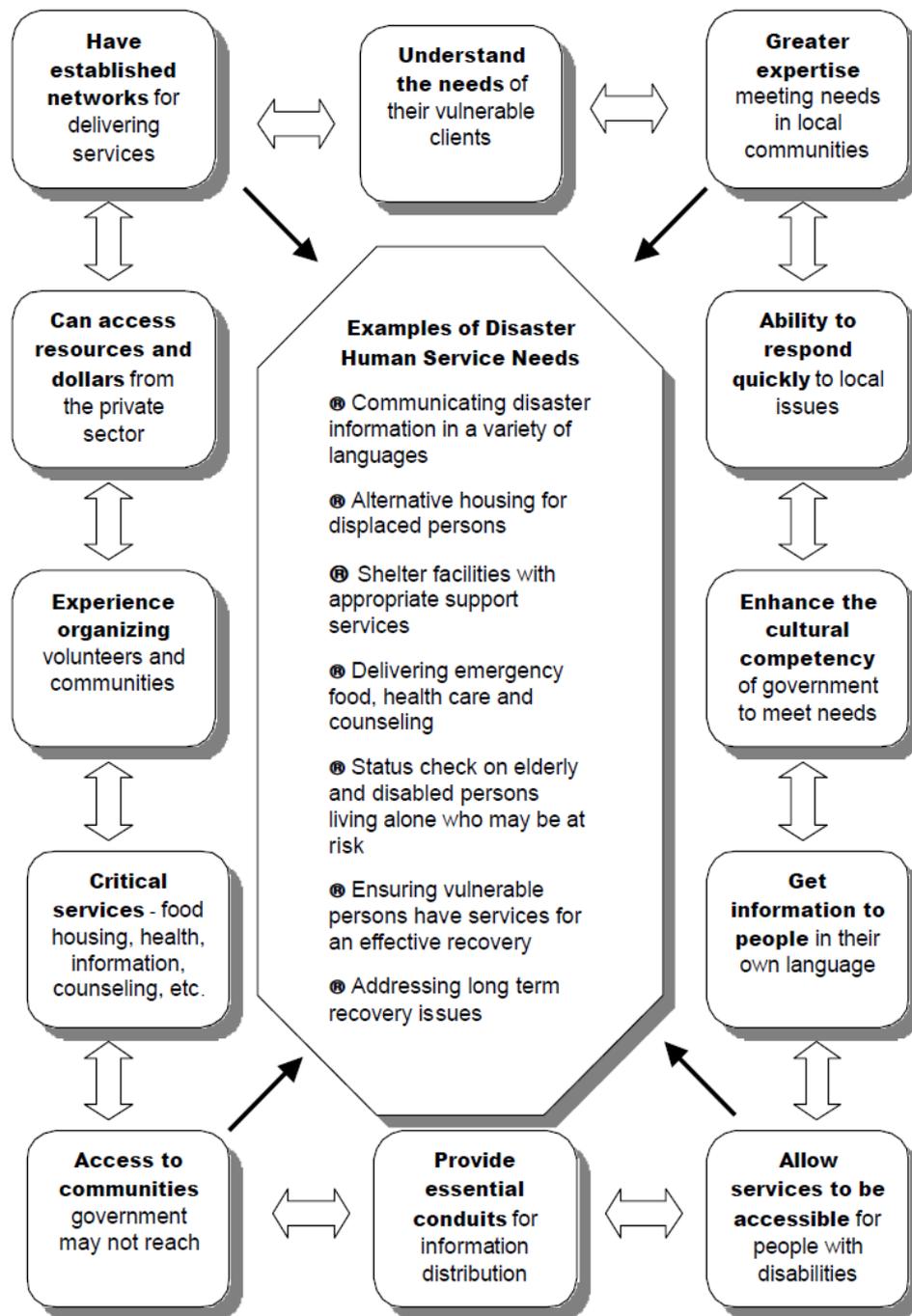
Support on Accessibility Issues – CBOs can help make disaster services accessible (ADA-compliant) for people in the community who are mobility impaired, Deaf, blind, or have other disabilities.

Neighborhood Connections – CBOs offer community connections and local resources that can enhance response and recovery effectiveness.

Community Trust – CBOs maintain daily relationships with ethnic communities and vulnerable people. They provide a bridge for communication, service provision and problem solving.

Fig. 1.7

WHAT CBOs BRING TO EMERGENCY MANAGEMENT



Source: Meeting the Needs of Vulnerable People in Times of Disaster: A Guide for Emergency Managers, California Governor’s Office of Emergency Services, 2000

Unit-V. Disaster Preparedness: Policies & Programme

Development of civilizations along with technological initiatives has created infrastructures and permanent assets which are always vulnerable to hazards either natural or man-made, leading to disasters. Further, there is observation that human vulnerability to natural hazard have increased in last couple of decades leading to human toll and economic loss. The increase in loss of life, property and adverse impact on environment due to disaster forced international community to think in a new way. It was in this background that the United Nations General Assembly, in 1989, declared the decade 1990-1999 as the International Decade for Natural Disaster Reduction (IDNDR) with the objective to reduce loss of lives and property and restrict socio-economic damage through concerted international action, especially in developing countries. Again reviews of global scenario carried out in the year 1990s in form of “Yokohama Strategy” (UN-WCDR, 1994) brought home the fact that economic losses caused by natural disasters were increasing and that there is a need for an emphatic shift in the strategy for disaster mitigation. The new millennium began with the launch of International Strategy for Disaster Reduction (ISDR)(UN-ISDR,2005).). In January 2005, 168 governments met in Kobe, Japan and agreed on a ten year plan of action, the “Hyogo Framework for Action 2005 - 2015: Building the Resilience of Nations and Communities to Disasters”, with the goal to substantially reduce disaster risks over that decade (UN-ISDR, 2005). The Hyogo Framework for Action 2005-2015: Building the Resilience of Nations and Communities to Disasters (HFA) is the first plan to explain, describe and detail the work that is required from all different sectors and actions to reduce disaster losses. The HFA outlines five priorities for action, and offers guiding principles and practical means for achieving disaster resilience by substantially reducing disaster losses by 2015. The summary about HFA shown in Fig 1.8. The Sendai Framework is the successor instrument to the Hyogo Framework for Action (HFA) 2005-2015 is a 10-year, voluntary, non-binding agreement which recognizes that the State has the primary role to reduce disaster risk but that responsibility should be shared with other stakeholders including local government, the private sector and other stakeholders.

SUMMARY of the Hyogo Framework for Action 2005-2015: Building the Resilience of Nations and Communities to Disasters (Hyogo Framework)

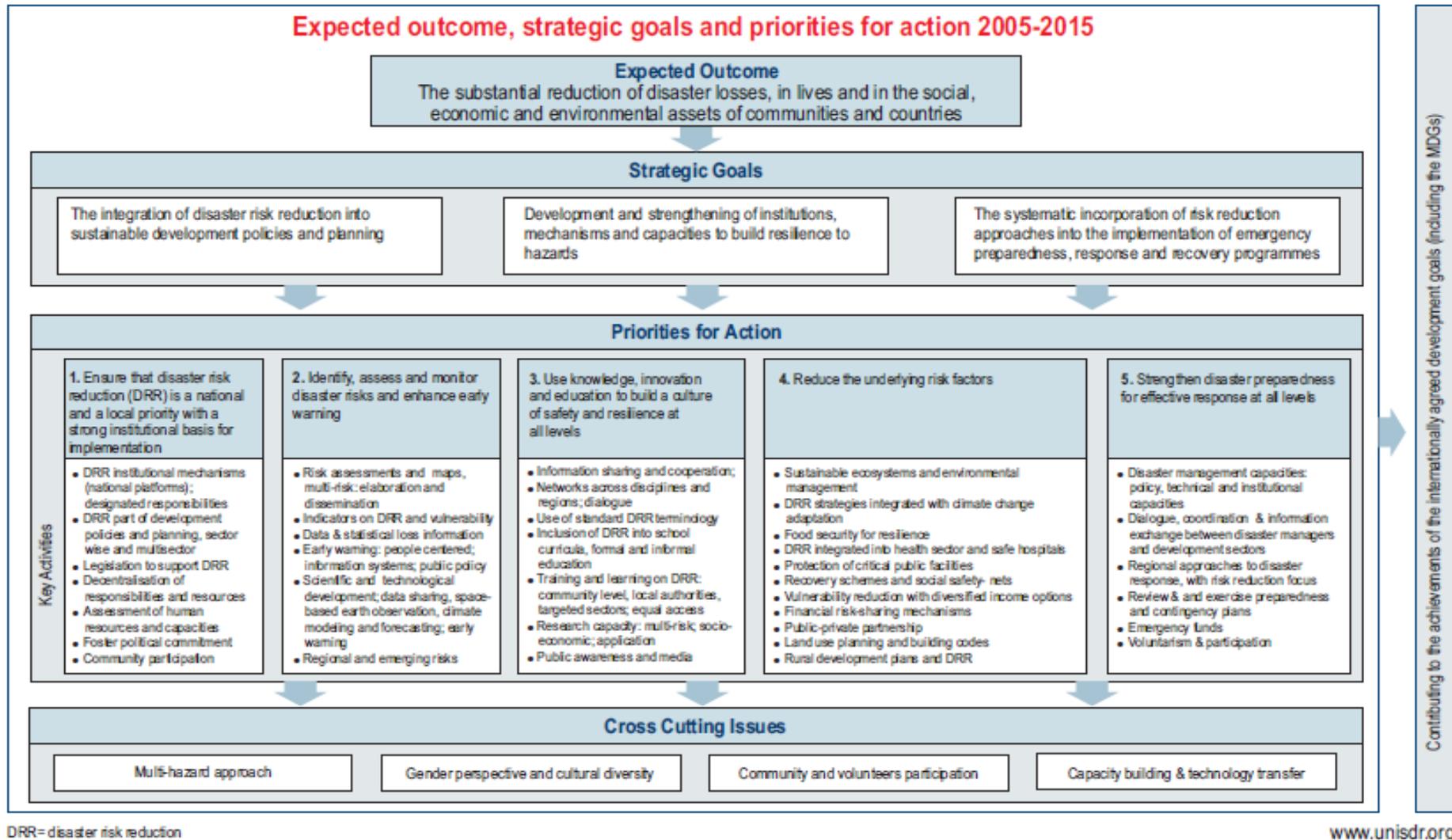


Fig. 1.8 Summary of Hyogo Framework for Action 2005 - 2015

Chart of the Sendai Framework for Disaster Risk Reduction 2015-2030

Scope and purpose

The present framework will apply to the risk of small-scale and large-scale, frequent and infrequent, sudden and slow-onset disasters, caused by natural or manmade hazards as well as related environmental, technological and biological hazards and risks. It aims to guide the multi-hazard management of disaster risk in development at all levels as well as within and across all sectors

Expected outcome

The substantial reduction of disaster risk and losses in lives, livelihoods and health and in the economic, physical, social, cultural and environmental assets of persons, businesses, communities and countries

Goal

Prevent new and reduce existing disaster risk through the implementation of integrated and inclusive economic, structural, legal, social, health, cultural, educational, environmental, technological, political and institutional measures that prevent and reduce hazard exposure and vulnerability to disaster, increase preparedness for response and recovery, and thus strengthen resilience

Targets

Substantially reduce global disaster mortality by 2030, aiming to lower average per 100,000 global mortality between 2020-2030 compared to 2005-2015

Substantially reduce the number of affected people globally by 2030, aiming to lower the average global figure per 100,000 between 2020-2030 compared to 2005-2015

Reduce direct disaster economic loss in relation to global gross domestic product (GDP) by 2030

Substantially reduce disaster damage to critical infrastructure and disruption of basic services, among them health and educational facilities, including through developing their resilience by 2030

Substantially increase the number of countries with national and local disaster risk reduction strategies by 2020

Substantially enhance international cooperation to developing countries through adequate and sustainable support to complement their national actions for implementation of this framework by 2030

Substantially increase the availability of and access to multi-hazard early warning systems and disaster risk information and assessments to people by 2030

Priorities for Action

There is a need for focused action within and across sectors by States at local, national, regional and global levels in the following four priority areas.

Priority 1 Understanding disaster risk

Disaster risk management needs to be based on an understanding of disaster risk in all its dimensions of vulnerability, capacity, exposure of persons and assets, hazard characteristics and the environment

Priority 2 Strengthening disaster risk governance to manage disaster risk

Disaster risk governance at the national, regional and global levels is vital to the management of disaster risk reduction in all sectors and ensuring the coherence of national and local frameworks of laws, regulations and public policies that, by defining roles and responsibilities, guide, encourage and incentivize the public and private sectors to take action and address disaster risk

Priority 3 Investing in disaster risk reduction for resilience

Public and private investment in disaster risk prevention and reduction through structural and non-structural measures are essential to enhance the economic, social, health and cultural resilience of persons, communities, countries and their assets, as well as the environment. These can be drivers of innovation, growth and job creation. Such measures are cost-effective and instrumental to save lives, prevent and reduce losses and ensure effective recovery and rehabilitation

Priority 4 Enhancing disaster preparedness for effective response, and to «Build Back Better» in recovery, rehabilitation and reconstruction

Experience indicates that disaster preparedness needs to be strengthened for more effective response and ensure capacities are in place for effective recovery. Disasters have also demonstrated that the recovery, rehabilitation and reconstruction phase, which needs to be prepared ahead of the disaster, is an opportunity to «Build Back Better» through integrating disaster risk reduction measures. Women and persons with disabilities should publicly lead and promote gender-equitable and universally accessible approaches during the response and reconstruction phases

Guiding Principles

Primary responsibility of States to prevent and reduce disaster risk, including through cooperation

Shared responsibility between central government and national authorities, sectors and stakeholders as appropriate to national circumstances

Protection of persons and their assets while promoting and protecting all human rights including the right to development

Engagement from all of society

Full engagement of all State institutions of an executive and legislative nature at national and local levels

Empowerment of local authorities and communities through resources, incentives and decision-making responsibilities as appropriate

Decision-making to be inclusive and risk-informed while using a multi-hazard approach

Coherence of disaster risk reduction and sustainable development policies, plans, practices and mechanisms, across different sectors

Accounting of local and specific characteristics of disaster risks when determining measures to reduce risk

Addressing underlying risk factors cost-effectively through investment versus relying primarily on post-disaster response and recovery

«Build Back Better» for preventing the creation of, and reducing existing, disaster risk

The quality of global partnership and international cooperation to be effective, meaningful and strong

Support from developed countries and partners to developing countries to be tailored according to needs and priorities as identified by them

5.1. Disaster Preparedness Policies in India

India probably has the world's oldest disaster relief code which started in 1880 which provides details of the relief to be given by the government to the affected people. The predominance of famine relief actions, where the Central Government was called upon to assist, was the main reason why the Department of Agriculture was given the lead role of disaster management in India prior to 2003. The Tenth Five-Year Plan 2002-2007 for the first time had a detailed chapter entitled Disaster Management: The Development Perspective. The plan emphasized the fact that development cannot be sustainable without mitigation being built into the development process. The Eleventh Five Year Plan 2007-2012 (Planning Commission 2008) states,

“The development process needs to be sensitive towards disaster prevention, preparedness and mitigation. Disaster management has therefore emerged as a high priority for the country. Going beyond the historical focus on relief and rehabilitation after the event, there is a need to look ahead and plan for disaster preparedness and mitigation in order to ensure that periodic shocks to our development efforts are minimized.”

The Eleventh Five Year Plan aims at consolidating the process by giving impetus to projects and programs that develop and nurture the culture of safety and the integration of disaster prevention and mitigation into the development process. The guidance and direction to achieve this paradigm shift will need to flow from **National Disaster Management Authority (NDMA)**, and in the true spirit of the **Disaster Management Act, 2005** to all stakeholders including State Governments and Union Territories, right up to the Panchyat Raj Institutions. The national Disaster Management Plan 2016 incorporated National Disaster Management Act 2005, National Policy on Disaster Management 2009 and national commitment towards the Sendai Framework are discussed below.

Salient Features of National Disaster Management Act 2005

1. Central Government set up National Disaster Management Authority (NDMA) as nodal authority with Prime Minister as chairperson.
2. National Executive Committee (NEC). Comprising Secretaries of 14 Ministries and Chief of Integrated Defense Staff to Function as Executive Committee of the NDMA.
3. Disaster Management Structure at three levels i.e. National, States and Districts (23 States have set up State Authorities).
4. National Disaster Response Force (NDRF) were established
5. National Institute of Disaster Management (NIDM) was established.
6. Creation of National Disaster Mitigation Fund and National Disaster Response Fund.

Salient Features of National Policy on Disaster Management 2009

1. Promoting a culture of prevention, preparedness and resilience at all levels through knowledge, innovation and education.
2. Encouraging mitigation measures based on technology, traditional wisdom and environmental sustainability.
3. Mainstreaming disaster management into the developmental planning process.
4. Establishing institutional and techno-legal frameworks to create an enabling regulatory environment and a compliance regime.
5. Ensuring efficient mechanism for identification, assessment and monitoring of disaster risks.
6. Developing contemporary forecasting and early warning systems backed by responsive and fail-safe communication with information technology support.
7. Ensuring efficient response and relief with a caring approach towards the needs of the vulnerable sections of the society.
8. Undertaking reconstruction as an opportunity to build disaster resilient structures and habitat for ensuring safer living.
9. Promoting a productive and proactive partnership with the media for disaster management.

Salient Features of National Disaster Management Plan 2016

1. Improve the understanding of disaster risk, hazards, and vulnerabilities.
2. Strengthen disaster risk governance at all levels from local to centre.
3. Invest in disaster risk reduction for resilience through structural, non-structural and financial measures, as well as comprehensive capacity development.
4. Enhance disaster preparedness for effective response.
5. Promote “Build Back Better” in recovery, rehabilitation and reconstruction.
6. Prevent disasters and achieve substantial reduction of disaster risk and losses in lives, livelihoods, health, and assets (economic, physical, social, cultural and environmental).
7. Increase resilience and prevent the emergence of new disaster risks and reduce the existing risks
8. Promote the implementation of integrated and inclusive economic, structural, legal, social, health, cultural, educational, environmental, technological, political and institutional measures to prevent and reduce hazard exposure and vulnerabilities to disaster.
9. Empower both local authorities and communities as partners to reduce and manage disaster risks.
10. Strengthen scientific and technical capabilities in all aspects of disaster management.
11. Capacity development at all levels to effectively respond to multiple hazards and for community-based disaster management.
12. Provide clarity on roles and responsibilities of various Ministries and Departments involved in different aspects of disaster management.
13. Promote the culture of disaster risk prevention and mitigation at all levels
14. Facilitate the mainstreaming of disaster management concerns into the developmental planning and processes

5.2. Disaster Preparedness Programme in India

The **India Meteorological Department (IMD)** is responsible for cyclone tracking and warning to the concerned user agencies. There is a special **Disaster Warning System (DWS)** for the dissemination of cyclone warning in local languages through INSAT to designated addresses in isolated places in coastal areas. The **Central Water Commission (CWC)** has a flood forecasting system covering 62 major rivers in 13 States to monitor the possibility of floods. Further, **National Crop Weather Watch Group** monitors drought conditions using inputs from the IMD and CWC on the rainfall behavior and water levels. In the event of severe drought, State Governments are expected to introduce appropriate policy packages to support vulnerable populations through **food for work programmes** and other **employment-generation and income-generation activities**. Most of the food for work programmes are supposed to be undertaken to desilt the existing water tanks, deepen the tanks, and carry out the construction of water harvesting structures. The **Drought Prone Areas Programme (DPAP)** has been implemented since 1973 in 149 districts in 14 States, and the **Desert Development Programme (DDP)** has been implemented in 36 districts across 7 States. A programme titled **National Watershed Development Project for Rainfed Areas (NWDPA)** has been under implementation in drought-prone areas. The objectives of this programme are to achieve conservation of rainwater, control of soil erosion, regeneration of green cover and promotion of dry land farming systems including horticulture, agro-forestry, pasture development and livestock management etc. A **National Wasteland Development Board** has been constituted to promote integrated wasteland development. The purpose of integrated wasteland development is to protect, regenerate and restore the degraded land, the pressure on remaining land, forests and pastures can be reduced. The **Jawahar Rozgar Yojana (JRY)** has been the largest programme in the country to provide wage employment in disaster affected areas. **Employment Assurance Schemes (EAS)** have also been pursued to provide employment opportunities mostly in drought-prone areas. Post disaster reconstruction projects, taken up in areas affected by major calamities, have tried to incorporate structural mitigation measures. Such reconstruction activities have consisted of construction of housing and public infrastructure, drainage and rural water supply, expansion of road and communication networks, and shelterbelt plantations, etc. Reconstruction of buildings and houses in the earthquake-hit areas has tried to incorporate quake-resistant measures and the relevant technical specifications.

Mainstreaming of Disaster Risk Reduction in Developmental Strategy-Prevention and mitigation contribute to lasting improvement in safety and should be integrated in the disaster management. The Government of India has adopted mitigation and prevention as essential components of their development strategy are discussed below

National Flood Risk Mitigation Project (NFRMP)

NDMA has formulated a National Flood Risk Mitigation Project (NFRMP) as a comprehensive project for strengthening flood preparedness, mitigation and management in the country. The NFRMP aims to assist the Central Ministries/Departments and State Govts to address the issues of preparedness and mitigation of floods with a view to minimize vulnerability to floods and consequent loss of lives, livelihood systems, property and damage to infrastructure and public utilities. Currently, NDMA is engaged in the process of selection of a lead consultant for preparation of DPR for NFRMP.

National Cyclone Risk Mitigation Project (NCRMP)

It has been drawn up with World Bank Assistance for about USD 350 million to cover all 13 Cyclone -prone Coastal States & Union Territories. The main objectives are to strengthen the structural and non-structural cyclone mitigation efforts and it has three main components:

Component-A: Improvement of early warning dissemination system.

Component-B: Investments on mitigation measures, such as construction of cyclone shelters, roads and bridges, saline embankments, shelterbelt plantation, mangrove regeneration etc.

Component-C: Technical assistance for hazard risk management and capacity building.

National Earthquake Risk Mitigation Project (NERMP)

It covers 22 high seismic risk States and Union Territories with over 229 districts in seismic zones IV and V for structural measures; and for capacity building, all the districts in zones II to V will be covered. NERMP aims at creating greater earthquake preparedness in the country through training and capacity building of over 90,000 engineers, 25,000 architects and over 300,000 lead masons and masons, launching public awareness campaigns on earthquake risk and vulnerability, strengthening the techno-legal regime and carrying out structural safety audit of critical lifeline infrastructure and seismic strengthening and retrofitting of one hospital building in each district in zones IV and V.

National Disaster Information and Communication Network (NDICN)

It aims at providing fail safe communication channels with multiple redundancy and last mile connectivity for assured information and IT dissemination to disaster-prone communities/districts.

National Disaster Response Reserves

These are proposed to cater for the emergency relief needs of 400,000 persons, including 150,000 persons in the hilly regions in the wake of grave disasters.

National School Safety Pilot Project

It is proposed to be launched to strengthen the earthquake preparedness of schools in high seismic risk districts in zones IV and V. Herein it is proposed to formulate a National School Safety Policy and prepare manual with checklists and formats for school safety, carry out training and capacity building of critical stakeholders on school safety, and undertake structural safety audit of all school buildings from the selected districts and carry out retrofitting of selected school buildings, etc. It also lays down emphasis on non-structural measures like evacuation drills etc.

National Landslide Risk Mitigation Project (NLRMP)

In order to evolve a comprehensive strategy for landslide hazard risk mitigation, NDMA has drawn up a National Landslide Risk Mitigation Project (NLRMP). Important activities under NLRMP encompass developing a strategy and plan for mapping and assessing landslides, proposing a monitoring mechanism for active landslides, modalities for assessment of loss including compiling and evaluating information on economic impacts of landslide hazards etc. The other components will include capacity development and awareness generation among the stakeholders/affected communities

Medical Preparedness

NDMA has taken the following initiatives in the field of medical preparedness:

1. An International workshop on "Pandemic Preparedness beyond Health" in April 2008 was held in collaboration with the United Nations Disaster Management Team (UNDMT), Pandemic Influenza Contingency Team (PIC) and Office for the Coordination of Humanitarian Affairs (OCHA).
2. Training programmes on Basic Life Support (BLS) and Advanced Trauma Life Support (ATLS) for the Medical Officers have been conducted on a regular and periodic basis in collaboration with MOH & FW and Trauma Centre, AIIMS.
3. Training on Medical Preparedness for Emergency Medical Response to CBRN Casualties for Medical Officers has been initiated in collaboration with Defense Research and Development Organization (DRDO), Ministry of Defence (MOD), and Bhabha Atomic Research Centre (BARQ).

Mock Drills and Exercises

NDMA has been coordinating mock exercises in the States, in cooperation with State Governments and other stakeholder groups, to prepare them for efficient response in the event of disasters. These drills also emphasize and ensure the coordination aspects in disaster management. The mock exercises pertain to Earthquakes, Floods, Cyclones, Chemical (Industrial) Disasters, Terrorist attacks including scenarios of Gas Leakage and Firing (like in Metro Stations and Industrial areas) and Urban Fire in high rise buildings/malls.

Check Your Progress I

Note: a) Use the space provided for your answers.

b) Check your answers with the possible answers provided at the end of this unit.

1) Define the term Disaster Preparedness? Name the major component of Disaster Preparedness.

Ans.

2) Discuss about core process about Disaster Preparedness.

Ans.

3) Write the name of the dimension defined by FEMA for measuring Disaster Preparedness.

4) Discuss about institutional mechanism of disaster preparedness at district level.

5) What are the names of international bodies involved in Disaster Management in India?

6) Who are special need population? Why they require special attention during disaster?.

7) Define Community Base Organization. Write down the advantage having CBO in disaster preparedness network.

8) Write the down the salient features of Disaster Management Act 2005.

9) Discuss any two important disaster preparedness programme at national level.

4.1. Let Us Sum Up

This block covers topics on disaster preparedness (working definition, conceptual model and their significance), dimension and activities for measuring preparedness, institutional mechanism for handling disaster in India, vulnerable or special need population and also highlights about disaster preparedness policies and programme in India. Learners will learn about basic concept of disaster preparedness and how it has been evolved to the present level and its importance of preparedness in peace time to unplanned extreme events in real world. The concept of disaster preparedness has variety of dimension to measure and followed by a number of activities. Further, it also highlight about actions designed to enhance the ability to undertake emergency actions in order to protect property and contain disaster damage and disruption, as well as the ability to engage in post-disaster restoration and early recovery activities in all organization. Disaster preparedness and mitigation in India has undergone substantive changes in its composition, nature and policy by enacting National Disaster Management Act 2005, National Policy on Disaster Management 2009 and National Disaster Management Plan 2016. These act, policies and plan helped in creation of the National Disaster Management Authority (NDMA), headed by the Prime Minister, State Disaster Management Authorities (SDMAs) headed by the Chief Ministers, and District Disaster management Authorities (DDMAs) headed by the District Collector or District Magistrate or Deputy Commissioner as the case may be to spearhead and adopt a holistic and integrated approach to disaster preparedness. There are individuals or groups whose needs are not fully addressed by traditional service provider offered in disaster preparedness, response, and recovery. Thus a cooperative relationship between government and Community Based Organization (CBOs) provides the best assurance that the needs of under-served people and the needs of the community for long-term recovery will be fully addressed. The Government of India has adopted mitigation and prevention as essential components of their development strategy in policy and programmes to reduce the risk and impact of disaster and to build disaster resilient, sustainable and peaceful country.

4.2. Key Words

Disaster Preparedness: It refers to a very concrete research based set of actions that are taken as precautionary measures in the face of potential disasters.

Hazard Analysis: The process of quantifying the probability of extreme events that is harming human settlements in a given geographic area during specific period.

Special Need Population: It can be defined as individuals or groups whose needs are not fully addressed by traditional service provider offered in disaster preparedness, response, and recovery.

CBO: A community-based organization (CBO) is a local organization (which may or may not be an affiliate of a national organization) with a primary mission to provide services to specific groups of people.

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4.4. CHECK YOUR PROGRESS – POSSIBLE ANSWERS

Check Your Progress I

- 1) **Disaster preparedness** minimizes the adverse effects of a hazard through effective precautionary actions, rehabilitation and recovery to ensure the timely, appropriate and effective organization and delivery of relief and assistance following a disaster.

The major components of disaster preparedness are i) physical attributes ii) emphasis of knowledge iii) planning component iv) aspect of protective behavior.

- 2) The **core process of Disaster Preparedness** are

Hazard Analysis

The process of quantifying the probability of extreme events harming human settlements in a given geographic area during specific period.

Surveillance

The process of collecting, collating and interpreting data to produce useful information

Warning

The process of detecting imminent disaster and distributing that information to people at risk.

Rehearsal

The process of simulating disaster for the purpose of measuring, assessing and improving the a social unit's future performance in a real disaster.

Logistics

The totality of resource mobilization process planned in anticipation of imminent disaster.

- 3) The **dimension defined by FEMA for measuring Disaster Preparedness** are

- Laws and Authorities
- Hazard Identification and Risk Assessment
- Hazard Mitigation
- Resource Management
- Direction, Control, and Coordination
- Communications and Warning
- Communications and Warning
- Operations and Procedures
- Logistics and Facilities
- Training
- Exercises, Evaluations, and Corrective Actions
- Crisis Communications, Public Education, and Information
- Finance and Administration

- 4) **Institutional mechanism** of disaster preparedness at district level are as follows

- The District Disaster Management Authority is headed by the District Collector, Deputy Commissioner or District Magistrate as the case

may be, with the elected representative of the local authority as the Co-Chairperson.

- It is the planning, coordinating and implementing body for DM at the District level and takes all necessary measures for the purposes of DM in accordance with the guidelines laid down by the NDMA and SDMA.
- It is responsible for preparing district DM plan.

5) The **international bodies** involved in Disaster Management in India are

- United Nations International Strategy for Disaster Reduction (**UNISDR**).
- United Nation Disaster Management Team (**UNDMT**).
- Global Facility for Disaster Risk Reduction (**GFDRR**).
- Program for Enhancement of Emergency Response (**PEER**)
- Asian Disaster Reduction Center (**ADRC**)

6) **Special need populations** are individuals and groups whose needs are not fully addressed by traditional service provider offered in disaster preparedness. These groups required special attention because these people are lack of resource, knowledge, ability to accesses traditional systems frequently and also greater difficulty during recovery time.

7) **Community Base Organization** is a local organization (which may or may not be an affiliate of a national organization) with a primary mission to provide services to specific groups of people.

The advantage having **CBO in Disaster Preparedness Network** is

- **Service Strengths** – CBOs have expertise in outreach, information referral, volunteer management, and special services, and offer you the opportunity for collaborating or contracting for specific disaster services.
- **Language and Cultural Sensitivity** – CBOs can deal with the people they serve in their own language and in a culturally appropriate manner.
- **Support on Accessibility Issues** – CBOs can help make disaster services accessible (ADA-compliant) for people in the community who are mobility impaired, Deaf, blind, or have other disabilities.
- **Neighborhood Connections** – CBOs offer community connections and local resources that can enhance response and recovery effectiveness.
- **Community Trust** – CBOs maintain daily relationships with ethnic communities and vulnerable people. They provide a bridge for communication, service provision and problem solving.
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8) The salient features of Disaster Management Act 2005 are as follows

- Central Government set up National Disaster Management Authority (NDMA) as nodal authority with Prime Minister as chairperson.
- National Executive Committee (NEC). Comprising Secretaries of 14 Ministries and Chief of Integrated Defense Staff to Function as Executive Committee of the NDMA.
- Disaster Management Structure at three levels i.e. National, States and Districts (23 States have set up State Authorities).
- National Disaster Response Force (NDRF) were established
- National Institute of Disaster Management (NIDM) was established.

9) National Flood Risk Mitigation Project (NFRMP)

The NFRMP aims to assist the Central Ministries/Departments and State Govts to address the issues of preparedness and mitigation of floods with a view to minimize vulnerability to floods and consequent loss of lives, livelihood systems, property and damage to infrastructure and public utilities. Currently, NDMA is engaged in the process of selection of a lead consultant for preparation of DPR for NFRMP.

National School Safety Pilot Project

It is proposed to be launched to strengthen the earthquake preparedness of schools in high seismic risk districts in zones IV and V. Herein it is proposed to formulate a National School Safety Policy and prepare manual with checklists and formats for school safety, carry out training and capacity building of critical stakeholders on school safety, and undertake structural safety audit of all school buildings from the selected districts and carryout retrofitting of selected school buildings, etc. It also lays down emphasis on non-structural measures like evacuation drills etc.

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