CHAPTER-1
INTRODUCTION

Public Administration is an activity common to all countries and all levels of government. The global expansion of public related functions and services has made the role of Public Administration as highly important and significances, thus making it a complex and specialized discipline of enquiry.

The basic concern of public administration as a study includes: administrative process, structure of public organization, decision of bureaucratic etc. However, in present global scenario public administration is operating in challenging of global and national issues like environmental, marketing decision, and disaster issues.

Public Administration of any country & state has a responsibility of disaster management mechanism. In modern research scenario, disaster management is an integral part of public administration and University of Grant Commission has also included a subject of research in public administration.

1.0 DISASTER - CONCEPTUAL FRAMEWORK

The term 'disaster' owes its origin to the French word 'disaster' which is a combination of two words 'dis' meaning bad and ‘aster’ meaning star. Thus, the term 'disaster' refers to 'bad or evil star'. In earlier day’s disaster were considered to be an outcome or outburst of some unfavorable star.\(^1\)

A disaster may be defined as- “a serious disruption of the functioning of society, coursing widespread human, material and
environment metal losses which exceeds the ability of the affected material to cope using its own resources”.

The United Nations of Organization define as - “The occurrence of a sudden or major misfortune which disputes the basic fabric and normal functioning of a society. It is an event or a serious of events which gives rise to casualties and damage or loss of property, infrastructure essential service or means of livelihood on a scale that is beyond the normal capacity of the affected communities to cope with unaided”.

Disasters pose a serious threat to the normal life as well as the process of development and strike with sudden violence, tearing bodies a destroying lives and structures and throwing apart families. Natural disaster and Man-Made which are both sudden and powerful, damage national economy and cause hardships to a large section of the society.

The report of High Powered Committee of the Government of India (October, 2001) defines Disaster as “an occurrence of a severity and magnitude that normally results in deaths, injuries and property damage and that cannot be managed through the routine procedures and resources of government. It usually develops suddenly and unexpectedly and requires immediate, coordinated and effective response by multiple government and private sector organizations to meet human needs and speedy recovery”.

The Disaster Management Act 2005 defines disaster as “a catastrophe, mishap, calamity or grave occurrence affecting any area, arising from natural or manmade 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 magnitude as beyond the coping capacity of the community of the affected area”.

Disaster is a serious disruption of the functioning of society, posing a significant, widespread threat to human life, health, property and/or the environment, whether caused by accident, nature or human activity and whether developing suddenly or as a result of complex, long term processes.

Thus, the impacts of disasters are the multidimensional, affecting it in all aspects - domestic, social, economic and environment etc. A disaster is a product of hazards such as earthquake, flood or windstorm coinciding with a vulnerable situation, which might include communities, cities or villages. There are four main components in this definition- hazard, vulnerability, Risk and Capacity Building:

\[
\text{Hazard} \times \text{Vulnerability} \times \text{Risk} \times \text{Capacity Building} = \text{Disaster}
\]

From the above equation it is clear that quantum of disaster is directly proportionate to Hazard, Vulnerability and Risk, where as it is indirectly related to capacity building.

Hazards

Hazards are defined as - “Phenomena that pose a threat to people, structure or economic assets and which cause a disaster. They could be either man made or naturally occurring in our environment”.

3
**Vulnerability**

It is defined as – “the extent to which a community, structure, service and geographic area is likely to be damaged or disrupted by the impact of a particular hazard, on account of their nature, construction and proximity to hazardous terrain or a disaster prone area”.

**Risk**

Risk is defined as – “Risk is a measure of expected losses (death, injuries, assets, economic activities etc.) due to a potential hazard (of a particular magnitude) occurring in a given area over a specific period of time. Risk analysis involves determining the probability of event happening and the level of vulnerability of the people that may be affected by the event. Disaster is the realization of a risk”.

**Capacity Building**

Capacity Building are defined as - Capacities are strengths and resources, which exist or are present in individuals, households and in the community and which enable them to cope with, withstand, prepare for, prevent, mitigate, or quickly recover from a disaster.

The capacity of a community to withstand disaster is a function of:

- Awareness of the risk associated with disasters,
- Understanding of appropriate responses to disasters,
- Possessing the capacity to respond (training, research, availability of resources, skilled cadres).
• Setting up emergency response mechanisms that mobilize and deploy these trained resources in quick, efficient and systematic manner.

Thus, with capacity building the disaster risk can be brought down.\(^6\)

1.1 DISASTER MANAGEMENT

Disaster Management Act, 2005 defines disaster management as a continuous and integrated process of planning, organizing, coordinating and implementing measures which are necessary or expedient for (1) prevention of danger or threat of any disaster (2) mitigation or reduction of risk of any disaster or its severity or consequences (3) capacity building (4) preparedness to deal with any disaster (5) prompt response to any threatening disaster situation or disaster (6) assessing severity or magnitude of effects of any disaster (7) evacuation rescue and relief and (8) rehabilitation and reconstruction.\(^7\)

Disaster management as an activity involves measures to:

• Reduce the risks associated with disasters through timely measures, short-term and long-term policies;

• Provide required assistance to communities during and after the disasters; and

• Ensure rapid and sustained recovery and rehabilitation after the occurrence of disasters.

The new vision adopted for disaster management focuses on:

• Preparedness rather than post-crisis management

• Coordinated participatory approach
- Technology up gradation and deployment
- Information as a tool of disaster management
- Recognition of linkages between disasters and development
- Connecting specific programmes for management of natural disasters
- Forecasting and warning using latest technology; and
- Disaster management as a continuous and integrated part of development process.  

The High Powered Committee defined as “a collective term encompassing all aspects of planning for and responding to disasters, including both pre and post disaster activities. It may refer to the management of both the risks and consequences of disasters”.

It can be defined as the body of policy, administrative decisions and operational activities which pertain to the various stages of a disaster at all levels. Broadly disaster management can be divided into pre-disaster, during disaster and post-disaster contexts. These three stages of activity are taken up within disaster management:

1.2 STAGES OF DISASTER MANAGEMENT:

1. Pre-Disaster

Activities taken to reduce human and property losses caused by the hazard and ensure that these losses are also minimized when the disaster strikers. Risk reduction activities are taken under this stage and they are termed as mitigation and preparedness activities.
2. During disaster

Activities taken to ensure that the need and provisions of victims are met and suffering is minimized. Activities taken under this stage are called as emergency activities.

3. Post-disaster

The activities taken to achieve rapid and durable recovery which does not reproduce the earlier vulnerable conditions. Activities taken under this stage are called as response and recovery activities.9

1.3 TYPES OF DISASTER: A CLASSIFICATION

A classification of natural and man made and their further sub category as disasters identified by the HPC (2001) is depicted in fig. 1. below:

Fig. 1: A classification of disaster
1. Natural Disaster

A ‘natural disaster’ is one that emerges in the environmental settings be natural, managed or civilized. In understanding the origin of a ‘natural disaster’ the term ‘natural’ implies to ‘nature’ of an event, process, condition or material (a hazard) that is responsible for causing catastrophe, damage or major lose. It may be related to one or more of geological, hydro-meteorological, industrial, urban or other natural environments.

2. Man-Made Disaster

A ‘man-made’ disaster is the direct creation/activity of human being(s) with direct/indirect knowledge of the risk/resultant catastrophe/damage loss or due to serious human/technical failure and ‘hazard(s)’ are created or utilized to generate the outcome. These are mostly related to disciplinary performance or security failure, defense/war and mass management/ law & order aspects.\(^\text{10}\)

1.4 DISASTER MANAGEMENT ACT, 2005

The Act lays down institutional, legal, financial and coordinating mechanism at the national, state, district and local level. These institutions have not parallel structures but will work in close harmony. The new institutional framework is expected to usher in a paradigm shift in DM from relief-centric approach to a proactive regime that lays greater emphasis on preparedness, prevention and mitigation.

Legal Institutional Framework- Disaster Management Act, 2005

The NDMA, as the apex body for disaster management, is 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). The guidelines will assist the Central Ministries, Departments and States to formulate their respective DM plans. It will approve the National Disaster Management and DM plans of the Central Ministries/Departments.

The Four level of Institutional Framework under the Disaster Management Act, 2005

Level I: National Disaster Management Authority (NDMA)

It will take such other measures as it may consider necessary, for the prevention of disasters, mitigation, preparedness and capacity building, for dealing with a threatening disaster situation or disaster. Central Ministries/departments and State Governments will extend necessary
cooperation and assistance to NDMA for carrying out its mandate. It will oversee the provision and application of funds for mitigation and preparedness measures. NDMA has the power to authorize the Departments or authorities concerned, to make emergency procurement of provisions or materials for rescue and relief in a threatening disaster situation or disaster. The general superintendents, direction and control of National Disaster Response Force (NDRF) are vested in and will be exercised by NDMA. The National Institute of Disaster Management (NIDM) works within the framework of broad policies and guidelines laid down by NDMA.

The National Disaster Management Authority shall consist of such numbers, not exceeding ten, as may be prescribed the Central Government and, unless the rules otherwise provide, the National Authority shall consist of the following:

(a) The Prime Minister of India, who shall be Chairperson, ex-officio;

(b) Nine other members to be nominated by the Prime Minister;

(c) The Chairperson of the National Disaster Management Authority may designate one of the members nominated under sub-clause (b) of sub-section (2) to be the Vice-Chairperson of the Authority.

The NDMA is mandated to deal with all types of disasters, natural or man-made. Whereas, such other emergencies including those requiring close involvement of the security forces and/or intelligences such as terrorism (counter-insurgency), law and order situation, serial bomb blasts, hijacking, air accidents,
Chemical, Biological, Radiological and Nuclear (CBRN) weapon system, mine disasters, ports and harbor emergencies, forest fires, oil field fires, and oil spills will continue to be handled by the extant mechanism i.e., National Crises Management Committee (NCMC).

NDMA may, however, formulate guidelines and facilitate training and preparedness activities in a respect of Chemical, Biological, Radiological and Nuclear (CBRN) emergencies. Cross cutting themes like medical preparedness, psycho-social care and trauma, community based disaster preparedness, information & communication technology, training, preparedness, awareness generation etc. for natural and man-made disasters will also engage the attention of NDMA in partnership with the stakeholders concerned. Resources available with the disaster management authorities at all level, which are capable of discharging emergency support functions, will be made available to the nodal Ministries/Agencies dealing with the emergencies at times of impending disasters.¹¹

**Level II: State Disaster Management Authority (SDMA)**

At the state level, the SDMA, headed by the Chief Minister, will lay down policies and plans for DM in the State. It will, inter alia approve the State Plan in accordance with the guidelines laid down by the NDMA, coordinate the implementation of the State Plan, recommended provision of funds for mitigation and preparedness measures and review the developmental plans of the different departments of the State to ensure integration of prevention, preparedness and mitigation measures.
The State Government shall constitute a State Executive Committee (SEC) to assist the SDMA in the performance of its functions. The SEC will be headed by the Chief Secretary to the State Government and coordinate and monitor the implementation of the National Policy, the National Plan and the State Plan. The SEC will also provide information to the NDMA relating to different aspects of DM.

Level III: District Disaster Management Authority (DDMA)

The DDMA will be headed by the District Collector, Deputy Commissioner or District Magistrate as the case may be, with the elected representative of the Zila Parishad as the Co-Chairperson. DDMA will act as the planning, coordinating and implementing body for DM at District level and take all necessary measures for the purposes of DM in accordance with the guidelines laid down by the NDMA and SDMA. It will inter alia prepare the District DM plan for the district and monitor the implementation of the National Policy, the State Policy, the National Plan, the State Plan and the District Plan. DDMA will also ensure that the guidelines for prevention, mitigation, preparedness and response measures lay down by the NDMA and the SDMA are followed by all Departments of the State Government at the District level and the local authorities in the district.

Level IV: Local Authorities

For the purpose of this policy, local authorities would include Panchayati Raj Institutions (PRI), Municipalities, District and Cantonment Boards and Town Planning Authorities which
control and manage civic services. These bodies will ensure capacity building of their officers and employees for managing disasters, carry out relief, rehabilitation and reconstruction activities in the affected areas and will prepare DM plans in consonance with guidelines of the NDMA, SDMA and DDMAs. Specific institutional framework for dealing with disasters management issues in mega cities will be put in place.\textsuperscript{12}

1.5 DISASTER MANAGEMENT: THE INDIAN CONTEXT

India has been traditionally vulnerable to natural disasters on account of its unique geo-climatic conditions as floods, droughts, cyclones, earthquakes and landslides have been recurrent phenomena. About 60\% of the landmass is prone to earthquakes of various intensities; over 40 million hectares is prone to flood; about 8\% of the total area is prone to cyclones and 68\% of the area is susceptible to drought. In the decade 30 Million people were affected by disasters every year. The loss in terms of private, community and public assets has been astronomical.\textsuperscript{13}

(A) Disaster Management at the Central Level

In accordance with the provisions of the DM Act 2005, the Central Government will take all such measures, as it seems necessary or expedient, for the purpose of DM and will coordinate actions of all agencies. The Central Ministries and Departments will take into consideration the recommendations of the State Governments while deciding upon the various pre-disaster requirements and for deciding upon the measures for the prevention and mitigation of disasters. It will ensure that the
Central Ministries and departments integrate measures for the prevention and mitigation of disasters into their developmental plans and projects, make appropriate allocation of funds for pre-disaster requirements and take necessary measures for preparedness and to effectively respond to any disaster situation or disaster. It will have the power to issue directions to NEC, State Governments/SDMAs, SECs or any of their officers or employees, to facilitate or assist in DM, and these bodies and officials will be bound to comply with such directions. The Central Government will extend cooperation and assistance to the State Governments as required by them or otherwise deemed appropriate by it. It will take measures for the deployment of the Armed Forces for DM if required. The role of the Armed Forces will be governed by the instructions laid out in Instructions on Aid to Civil Authorities 1970. The Central Government will also facilitate coordination with the UN Agencies, other International organisations and Governments of foreign countries in the field of DM. Ministry of External Affairs, in co-ordination with MHA, will facilitate external co-ordination and cooperation.\(^{14}\)

**(B)  Disaster Management at the State level**

The responsibility to cope with natural disasters is essentially that of the state government. The role of the Central Government is supportive in terms of supplementation of physical and financial resources. The Chief Secretary of the state heads a state level committee which is overall in charge of the relief operation in the state and rehabilitation measures in the wake of natural disasters in their states functions under the
overall direction and control of the state level committee. In many states, Secretary, Department of Revenue is also in charge of relief. States Governments usually have relief manuals and the districts have their contingency plan that is updated from time to time. Haryana State has also adopted the same procedure. In the Haryana state the chief Secretary is the overall in charge of Haryana Disaster Management Committee. In case of disasters, the Haryana State Government also invites NGOs, National and International relief organizations to join in the efforts to reach out the victims.\textsuperscript{15}

(C) **Disaster Management at the District level**

The District Collector will be responsible for coordinating all disaster management activities at the district level. There shall be a District Disaster Management Authority headed by Collector. The District Disaster Management Authority shall approve a district disaster management planning and review all measures relating to preparedness and response to various hazards. The District Disaster Management Committee comprises members from Zilla Panchayat, Zilla Parishad, different line departments, NGOs, District Red Cross and others to be notified by the Department of Disaster Management from time to time. In times of disasters, District Collector shall constitute a District Relief Committee to oversee the management of relief. This will be in accordance with the instructions issued by the Department of Disaster Management from time to time and will take all measures for the purpose of disaster management in the district in accordance with the guidelines laid by NDMA and SDMA.\textsuperscript{16}
(D) **Disaster Management at Local Level**

Disasters always occur at the local level. For some types of natural disasters, like slow rising floods or approaching hurricanes, warning is available. Other disasters, like earthquakes, happen with little or no warning. The citizens in the area where the event occurs and their local governments and voluntary agencies are the first to have to cope with the damage. The local government maintains control of all assets used in the response and recovery efforts, regardless of the source of those assets. Local governments must plan and prepare for this role with the support of the State and Federal governments.

(i) **Urban Areas**

The responsibility to manage disasters in the urban areas will rest with the Municipal Commissioner and Chief Executive Officer under the overall supervision of District Collector. The urban local body will be responsible for putting in place technological regime and its compliance, training and capacity building of municipal staff, State Disaster Management Plan, awareness raising in the urban areas, functioning of fire services, setting up of search and rescue teams and such other activities to be notified by State Department of Disaster Management from time to time.

(ii) **Blocks and Tehsil Level**

Block and Tehsil level Disaster Management Committees will be constituted and headed by SDO and tehsildars as the case may be. Officers from different departments and representatives of local panchayat body will be members of this Committee. The Committee will look into all the aspects of disaster management including mitigation, preparedness, response and relief.
(iii) Panchayat Level

In each Panchayat, there shall be a Disaster Management Committee which will oversee all activities in disaster management. The Panchayat will also constitute a Panchayat Disaster Management Team consisting of officials/non-officials and organize training for them to be able to discharge their duties properly.

(iv) Village Level

Each village shall have a Disaster Management Committee consisting of officials and non-officials. The Committee will be constituted to oversee by the Gram Sabha. The Committee will be responsible for awareness generation, warning dissemination, community preparedness plan, adoption of safe housing practices and organizing and cooperating relief in post disaster situations.17

1.6 GEOGRAPHICAL INTRODUCTION OF HARYANA

Haryana is located in the Northern part of India, bound by Uttar Pradesh in the east, Punjab in the west, Himachal Pradesh in the north and Rajasthan in the South. The national capital territory of Delhi is next to Haryana. Haryana is situated between the latitude 30.30° North and longitude 74.60° East. Most of Haryana is in the plains with the Aravali mountain range starting its westward journey from here. The Yamuna is the only major river that passes through this small state, which is one of the greenest in the country. There is a very good network of canals throughout the state, giving it the much-needed impetus for agriculture, the mainstay of Haryana’s economy.
Haryana has four main geographical features:

- Shivalik Hills to the north-east
- Ghaggar Yamuna Plain forming the largest part of the state
- Semi-desert sandy plain in the south-west
- Aravalli hills in the south.

Haryana is covering 44212 sq km area, representing 1.4% of total area of the country. Total population of state stands at 253.53 lakhs (2011 Census), which represents 2% of country’s population, out of this 165.31 lakhs is rural Haryana has about 0.40 crore of Schedule Caste population, while the state has no tribal population. The sex ratio in Haryana is 877/1000 (2011 Census). State has an overall literacy rate of 76.64%, for males is 85.38% and for females is 66.77%, respectively.

Administratively, Haryana is divided into 4 divisions, 21 districts, 54 sub-divisions, 119 blocks and 6955 villages.

1.7 DISASTER MANAGEMENT IN HARYANA CONTEXT

Haryana state is vulnerable to a multitude of disasters and is categorized as a multi-hazard prone state. The state experiences various kinds of disasters of recurrent nature which result in loss of life, livelihood and property (public and private), and disruption of economic activity. The following hazards in Haryana state:

(a) Floods:

According to assessment of Rashtriya Barh Ayog and as reported by states to the 11th plan working group, the flood prone area in Haryana is 23.50 lakh hectares. Devastating floods hit
Haryana in 1977, ‘78, ‘80, ‘83, ‘88, ‘93, ‘95, and 2010. The problem of floods is further accentuated by the existence of human-made barriers like the networks of roads and canals, which obstruct the natural flow of water and sometimes, drainage systems back up because they cannot cope with the volume of water, or are blocked by rubbish and garbage. On the other hand, indiscriminate use of water for irrigation and development of low-lying areas and depressions has also led to drainage congestion and water logging. This, in turn, causes havoc inducing floods in the state.
(b) **Droughts:**

Whereas some parts of Haryana state are prone to flooding, some areas have been prone to drought as well. According to the October 1994 guidelines, about 1/3 of the state [9 Blocks of Districts Mahendergarh and Rewari and 28 Blocks of Bhiwani, Rohtak, Hisar and Sirsa], fall in the DDAP/DDP region. The reason behind this is the topography of the South-Western parts of the state which has sand dunes and the Aravalli hills and hence, is unsuitable for gravity flow. As per IMD, sub division Haryana, the state expenditure drought once every three-year.

(c) **Earthquakes:**

The state of Haryana falls within the seismic zones IV, III, & II and therefore, is vulnerable to earthquakes.
Although in the recent past, no major earthquakes have occurred in Haryana, tremors have been felt whenever there has been an earthquake in the Himalayan foot-hills. The various faults identified in the region are:

1. The hidden Moradabad fault
2. The Sohna fault
3. The Mathura fault
4. The Delhi-Haridwar fault

(d) **Hailstorms:**

Hailstorms are also common phenomena in Haryana. In addition, the state experiences gusty winds, dust storms and thunderstorms during March to June.

(e) **Health Epidemics:**

Haryana has suffered from health epidemics from time to time. The Mewat district is an integral part of the traditionally known malaria epidemic belt of the North-Western plains of India. This belt is associated with unusual monsoon rains and other socio-economic factors, changing the malaria scenario at an interval of 7-9 years. Other human epidemics like cholera, hepatitis B, dengue fever, encephalitis also plague Haryana. A major dengue epidemic was recorded in 2006 at a tertiary centre in the state.

(f) **Others:**

High pollution levels, Contamination of ground water and surface water, and heavy metals and pesticide contamination of soil etc. are emerging classes of man-made and environmental
hazards. Haryana has also a history of chemical, industrial and road/rail/air accidents such as Air Accident (Charkhi-Dadri 1995), Rail Accident at Ballabgarh, Dabwali Fire (1995), Sonipat Fire (1998), the explosion-induced fire in the Samjhota Express in 2007, etc.

As far as industrial hazards are concerned, almost all districts of Haryana have small or large industries. The most industrially dense among them are Gurgaon, Rewari, Panipat, Sonepat and Faridabad. However, this does not exclude the other districts of the state from the risk of being affected by an industrial disaster, either directly or indirectly. Industrial and chemical disasters expose people to various dangers such as:-

1. Chemical gas leak (poisonous)

2. Combustion of various inflammable products and resulting heat waves

3. Low oxygen levels

4. Falling of infrastructure and machinery

5. Contamination of the nearby environment (land, water, and air)

In addition to this the threat of Global Warming and its resultant climatic variations such as inter seasonal variations in rainfall; environmental issues and effect on wheat and rice production increase the vulnerability of the state. Issues related to rapid urbanization and waste disposal are assuming a gigantic proportion.

In summation, Haryana is chiefly prone to the following disasters:-
• Floods
• Drought
• Earthquake
• Industrial & Chemical Disaster
• Accidents (Road, Rail and Air)
• Fire

As far as vulnerability to disasters is concerned, those most affected are the ones who belong to socially and economically weaker sections of the population in Haryana. The Government of Haryana recognises that vulnerability is a complex phenomenon and not always visible at first glance, and hence the policy seeks to broaden its approach towards vulnerability by considering children, women, the elderly, and persons with disability among other categories. Heightened vulnerability leads to increased risk, and it follows that certain categories of Haryana's population, already vulnerable during normal times, become even more vulnerable when disasters occur. The policy will therefore address such complex vulnerability as well.18

1.8 REVIEW OF LITERATURE

Narayan (2000) his study entitled “Anthropology of Disaster Management” focused at the close of millennium and to equip itself for the 21st century with disaster management techniques. He has discussed disaster in all parts of world including India especially tribal belt where drought, floods, epidemics, mysteries diseases regularly occurs leading to depopulation, migration and other allied problems.19
Siromony (2000) in his book entitled “District Disaster Management” has focused on the district administration as its customer in equipping and enabling them to prepare the District Disaster Management Plan according to the vulnerability of the district. His study would help in identifying various resources within the district, neighboring districts and also the state and national level. The shortages and the deficits would also be identified in handling disasters and accordingly, the district will gradually attain preparedness for disaster mitigation.20

Sharma & Agrawal (2001) aimed at bringing general awareness about earthquakes and earthquake resistant features of a building among Engineers, Architects and general public. They also discussed the earthquake resistant design and construction of buildings provisions of Indian standards. It also mentioned uniform building, and national building code of Canada and Mexico Federal district code.21

Joshi (2004) presents his views in his book on various forms of environmental misuse from the perspective of the potential that they hold for various disasters. The discussions on the various environmental concerns are carried out three broad categories- the magnitude of the concern, the causes for the same and the possible ways of avoiding such concerns. Environmental policies of the government and the efforts by civil society organizations to address the environmental concerns are touched upon briefly. Finally the author examines the Gandhian approach to deal with environmental problems.22

Mishra, Choudhary and Dash (2005), their study provides an overview of the incident command system including, its
principles, structure and application. It begins with an introductory chapter that gives a brief background, context and strategy envisioned for ICS institutionalization in India. Rest of the chapters elaborate the five components around which incident command system operates. These components/functions are command staff, planning, operation, logistics and finance. The book draws largely from the basic/intermediate ICS course material developed by United States Forest Services (USFS) though substantial modification have been made and appropriate examples relevant to Indian condition have been included. The centre is also undertaking research work for further modification based on feedback received through practical application.23

**Goel (2006)** has critically analyzed and come out with concrete suggestions to overcome the problems of Disaster Management in his study entitled “Encyclopedia of Disaster Management”. He has formulated the concept and theoretical framework essential for prevention, relief, mitigation, preparedness and rehabilitation. These have been supplemented with framework to avoid the impact of man-made and natural disasters.24

**Menon (2006)** has tried to capture the key elements of the post-tsunami situation (Dec. 26, 2004) in the study entitled “Hopes and Fears, Frontline”. He has suggested that rehabilitation process can be strengthened only through a continued commitment by communities, the state and the NGO sector.25

**Smith (1982)** stressed that natural hazards can be reduced if government and other non-government organizations pay full
attention and committee to awareness programmes at grass root level.\textsuperscript{26}

\underline{Gandhi (2007)} divided his study “Disaster Mitigation and Management Post-Tsunami Perspective” into six parts- Disaster Dynamic; An overview, Post-Tsunami Scenario: Diagnostic studies, Socio-Economic Dimensions: Focal issues, Relief and Rehabilitation. He has discussed proactive role of NGOs, Disaster Preparedness, policy and programmes.\textsuperscript{27}

\underline{Gaur & Chandrasekhar (2006)} presents the role of environmental management in disaster risk reduction, the book examines principally three themes: the nature of environmental dilapidation, the roles that NGOs have played and have the potential to play, the risk perception within the society given the environmental mismanagement and the response of the people to the environmental threats. The environmental threats get discussed within the book include the scarcity of fresh water resources, the food security crisis and increasing fuel needs. Regional institutions are becoming an important component of the global architecture for environmental governance. In this context a section within the book seeks to answer the questions about the role that regional institutions can and do play in managing environmental concerns, the parameters that could be used for gauging their effectiveness and the manner in which they relate to other actors such as the State, NGOs in managing the environment. Even while acknowledging the potential risk that any area poses in respect of disaster occurrence, the human responses to it greatly vary. A section in the book presents a
typology of human adjustments and the factors determining the same. The various theoretical perspectives explain the risk perception of communities is also explored. Finally, the methods or approaches of dealing with the present ecological dilemmas are also examined for their respective potential in addressing this issue.  

Samal et al. (2005) examines the impact and response of government and non-government organizations in relief, construction, reconstruction and rehabilitation after the Orissa Super Cyclone of 1999. Two major research studies relating to the super cyclones have contributed to the book. The studies have covered three districts of Orissa, i.e. Jagatsinghpur, Kendrapada and Puri. While the selection of these districts was done purposively since they constituted the most severely affected districts but thereafter multi-stage sampling was used for the purposes of drawing out the sample households from within these districts. A total of 200 households were covered of which a major percentage identified as poor and vulnerable. Only 9% of the households were above the poverty line. The study objectives included understanding the immediate and long term impact of the cyclone on the livelihood of poor and vulnerable groups, examining the manner in which the government and NGO programmes affected and strengthened the livelihood options for the poor and vulnerable groups, assessing the regional disparities in the distribution of livelihood support. In addition the studies also looked at the role of government, donors, NGOs, Gram Panchayats and other local bodies in relief and rehabilitation, the
coping strategies adopted by the weaker sections, particularly dalits and women in the aftermath of a disaster. Finally the studies aimed to make recommendations for future policies and plans to prepare for and mitigate disasters of a similar kind. Data for the study was collected both through primary and secondary sources.\textsuperscript{29}

Sethi (2006) his book \textit{(Disaster Management)} bases itself on the premise that a proactive stance is required to reduce the toll of disasters. This would entail a comprehensive approach that encompasses both pre-disaster risk reduction and post disaster recovery. The natures of the activities need to be undertaken to this and have been detailed out. The broad measures find place in the book is risk analysis to identify the kinds of potential impacts on people, preventive measures could be taken to reduce the impact of the disaster if it were to occur and post disaster rehabilitation and reconstruction to support effective recovery and to safeguard against future disasters. The book also provides specific insights on the steps being taken by the Indian Government to deal with disasters. Various international policy guidelines mention at different places in the book.\textsuperscript{30}

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Ahmed (2006) draws an attention to the differential ability of men, women, elders, children, and those from marginalized communities, to respond to disaster situation. Several factors determine the vulnerability of a population group such as spatial, physical, financial, and socio-political. Amongst these different vulnerabilities, the author through the means of this paper
explores the gender dimension. The paper points out some gendered impacts of disaster such as access to land, water, labor, education and participation in decision making. It derives that despite some progress being made in recent years towards linking gender with disaster and development, disaster management is still largely engendered. In the above context, the paper argues that not only we need to be better equipped to define and measure vulnerability, but also focus on enabling vulnerable communities, especially women, to cope with or adapt to recurring annual disasters (drought, floods and coastal storms). This requires a multifaceted approach focusing on livelihood diversification, resource mobilization, infrastructure development, technological innovation and strengthening participatory decentralized governance.\textsuperscript{31}

\textbf{Andharia (2002)\textsuperscript{31}} briefly discusses in his paper the need and scope of participatory approaches in disaster management practices emphasizing the contradictions of institutionalized participation. The role of Panchayati Raj Institutions and the significance of devolution of power are stressed. The paper argues for a need to reduce the gap between policy statements and actual practices.\textsuperscript{32}

\textbf{Das (2002)} focuses in his article entitled “Some Aspects of Disaster Mitigation and Management in India” on approaches to manage and mitigate disasters. There is a reference to the efforts at the level of United Nations and the attempts made to carry them forward at the national level. The author expresses dismay at the gap between what is decided at the policy level and what is
translated into practices. In the light of this, specific suggestions are offered for transforming the field reality. An emphasis within them is laid on critical and scientific analysis of disaster related data for making preparedness and response plans. The author also carries out a discussion on minute details of interventions during the various phases.\textsuperscript{33}

Desai (2008) discusses in his article “Disasters and Social Work Response” about the contribution made by the profession of social work in natural and human induced disasters and its unique role in a multi-disciplinary effort. Using the framework of the integrated social work practice model, steps for intervention are detailed with examples of work with those affected by the Disaster as well as other actors such as the government, donors, NGOs, and academic institutions. The assessment of impacts is discussed on rehabilitation policies, institutions for social work education and the students.\textsuperscript{34}

Sahni & Dhameja (2001) begins their article “Managing Disasters in the New Millennium” by offering a description of the factors contributing to increased vulnerabilities to disasters. It brings out the differentiation between the terms ‘hazard’ and ‘disaster’. India’s recent encounters with disasters also find mention to build up the context for further discussion. The major part of the article focuses on a description of the various phases in the disaster management cycle. The article also provides a detailed description of the interventions that are of critical importance in disaster management. Disaster Mapping, Sustainable Development, Target Oriented Training Modules, Involvement of Informed Community, Research on Strategies to
combat Disasters and Proactive Role of Media in Disaster Education are some of the strategies that have been deliberated for their usefulness in disaster management.³⁵

Srivastava et.al. (2007) describes that disaster risk reduction begins with information and its appropriate dissemination. The advances in information and communication technologies (ICT) that have emerged over the last two decades lend themselves to greater possibilities of integration of different communication systems. The effective application of these technologies depends greatly upon their appropriateness for the social and economic context in which they are applied. Community-owned ICT-based approaches appear to have greater impacts as well as enhanced sustainability. The article describes the emerging role of ICT for disaster-risk reduction, especially in the context of fisheries sector. The emerging challenges in making the application of these technologies more effective are also highlighted. The demonstration project of M.S. Swaminathan Research Foundation is also used as a case to forward the argument. The authors state that if such technological interventions are used as an integral part of building up the livelihood systems of farmers and fishermen they have a great acceptability. The article also explores other variables which contribute to community acceptance and use of such technology and finally concludes by stating that a community owned strategy makes it possible to work in support of the poor and marginal fishermen community.³⁶

REPORTS

World Disaster Report (1996) The report covers key issues of global food security and population movements,
methodologies for developmental relief and organization of food aid and disaster in year 1995.37

**World Disaster Report (1997)** The report offers a unique perspective on crisis issues and delivers a high value package of information and analysis on all aspects of contemporary emergencies, especially their impact on millions of vulnerable people.38

**Sri Lanka Presidential Task Force Report (1998)** The report presents the human dimensions of circumstances which have adversely hurt the nation, and has recommended stable strategies for managing disasters trends and developing new courses which can sustains personal safety, integrity, growth and nation prosperity.39

**World Disaster Report (2002)** The report argues that risk reduction is an essential condition for sustainable development. It examines preparedness and mitigation initiatives for disaster prone countries across the globe and discusses who should take responsibility for protecting vulnerable populations from the disaster.40

**United Nations Development Programme (2003)** The report mainly concludes that while re-allocating and mobilizing more domestic resources towards targets related to the goals, strengthening governance and institutions adopting sound social and economic policies are essential in achieving the goals.41

**World Disaster Report (2005)** The report has highlighted that people need information as much as water, food, shelter and
medicine. Information can save lives, livelihoods and resources and may be the only form of disaster preparedness that the most vulnerable can afford. The right kind of information leads to deeper understanding of needs and ways to respond.42

1.9 STATEMENT OF THE PROBLEM

Haryana state has been facing widespread and extensive damages almost every year due to natural calamities and man-made disaster as droughts, floods large fires, road accidents, and swine-flu etc. Due to these problems human life becomes very hard and hazardous.

The losses sustained are so severe that relief and restoration operations without adequate financial resources are not possible despite best efforts of the state to cope up with the emergent situation out of the available scanty resources.

1.10 SIGNIFICANCE OF THE STUDY

The concept of disaster reduction and sustainable development has complex relationships requiring people-centered approach. Natural disaster reduction is gaining importance with many national and international organizations; governments and the entire UN system have an increasing number of programmes that contribute to disaster prevention in general. Integration of disaster management with the other community activities and programmes contributes to the sustained development. In any disaster management activity, community participation is of primary importance. The present study should be a rewarding exercise in providing insights into the methods and mechanism adopted by the community, Media, PRIs, NGOs & CBOs. The study should also be useful in pointing/identifying, existing
gaps/lacunas in planning policy formulation and implementation of disaster management programmes/activities.

1.11 OBJECTIVES OF THE STUDY

The study has the following objectives:

- To study the institutional structure and coordination of mechanism for Disaster Management in Haryana.
- To evaluate & analyze the role of government and non-government officials in Disaster Management at State Level.
- To evaluate the level of satisfaction of affected community in Disaster Management in the Haryana.
- To make suggestions for future policy & strategies to improve the Disaster Management in Haryana.

1.12 HYPOTHESES OF THE STUDY

The study has the following hypotheses:

- The organisation structure of Disaster Management in Haryana is quite satisfactory to deal with natural & man-made disasters calamities and exigencies.
- Level of cooperation and coordination between different government departments dealing with disaster management is upto the mark.
- The role of state government officials in Disaster Management is quite satisfactory.
- The role of state non-government officials in Disaster Management is adequate.
- The level of satisfaction among individuals from affected villages does not varies from village to village.
In addition to above main hypothesis some more hypotheses are examined in this study which will be discussed later on.

**1.13 UNIVERSE OF THE STUDY**

The state is an important constituent of Indian federation and a common domain of local and central government activities. Haryana State is one of the disaster prone states in India. So it was decided to study Disaster Management in this state as a fair representative of disaster management in India.

**1.14 RESEARCH METHODOLOGY**

The study has used both the analytical and empirical methods in the course of its investigation and both primary and secondary data was used.

**Selection of the Sample**

To collect the requisite primary information, the study has made use of a multistage, stratified purposive random sampling technique.

The sampling scheme is based on the following two observations: First, all the districts/areas in the state is not equally disaster prone i.e. some districts/areas are more disaster prone than others. Therefore the sampling has been purposive, so as to include only the disaster prone districts/blocks in the sampling frame. Secondly, the Disaster Management Act envisages a vital role for the administration at different level in disaster management. This fact should also be given due consideration in any stratification of the state for sampling purposes.
We have accordingly adopted the following existing administrative divisions of the state as the basis of stratification for sampling:

<table>
<thead>
<tr>
<th>STRATA</th>
<th>ADMINISTRATIVE DIVISIONS</th>
<th>DISTRICTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Ambala Division</td>
<td>Panchkula, Ambala, Yamunanagar, Kurukshetra &amp; Kaithal</td>
</tr>
<tr>
<td>II</td>
<td>Rohtak Division</td>
<td>Panipat, Sonipat, Karnal, Rohtak &amp; Jhajjar</td>
</tr>
<tr>
<td>III</td>
<td>Hisar Division</td>
<td>Jind, Hisar, Fatehabad &amp; Sirsa</td>
</tr>
<tr>
<td>IV</td>
<td>Gurgaon Division</td>
<td>Bhiwani, Mahendargarh, Gurgaon, Faridabad, Mewat &amp; Rewari</td>
</tr>
</tbody>
</table>

With this background a brief outline of the proposed multistage stratified random sampling technique is as follows:

**Stage I:** One District from each of the four administrative divisions randomly selected amongst from the disaster prone districts of the divisions.

**Stage II:** Two blocks from each of the four districts selected at stage I, were randomly selected amongst from the most disaster prone blocks of the districts.

**Stage III:** From each of the eight blocks selected at stage II, one village was randomly selected for studying the disaster management at the micro level.
The details of the selected districts, blocks and villages are as follows:

<table>
<thead>
<tr>
<th>DISTRICTS</th>
<th>BLOCKS</th>
<th>VILLAGES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kurukshetra</td>
<td>Thanesar, Pehowa</td>
<td>Kirmich, Nikimpura</td>
</tr>
<tr>
<td>Karnal</td>
<td>Nilokheri, Assandh</td>
<td>Sikari, Balha</td>
</tr>
<tr>
<td>Jind</td>
<td>Alewa, Julana</td>
<td>Dalamwala, Ramrai</td>
</tr>
<tr>
<td>Faridabad</td>
<td>Ballabhgar, Tigaon</td>
<td>Khandwali, Kheripull</td>
</tr>
</tbody>
</table>

The primary data has been collected through a well structured Interview Schedule. The Interview Schedule has three distinct parts, one each for state officials/functionaries, Non-officials (NGOs, CBOs) and the general public/community. The Interview Schedule was personally administered by the investigator to the above three groups of respondents.

**Sample Size**

The Interview Schedule was personally administrated to respondents of three distinct categories as per the details given below:

<table>
<thead>
<tr>
<th>Category</th>
<th>Respondents</th>
<th>No. of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Category -I</td>
<td>Government Officials</td>
<td>48</td>
</tr>
<tr>
<td>Category -II</td>
<td>Non Government Officials</td>
<td>48</td>
</tr>
<tr>
<td>Category -III</td>
<td>Individuals from affected villages</td>
<td>200</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>296</td>
</tr>
</tbody>
</table>
Secondary data for the study was obtained from official records, reports, relief manuals, action plans and memorandum of the State and Districts Revenue Department. The other sources of data such as newspapers, magazines, journals, books, articles and websites was also tapped.

1.15 CHAPTERISATION

The present study is organized into the following chapters:

Chapter 1- Introduction
Chapter 2- Organizational Structure and Policy Framework for Disaster Management in Haryana
Chapter 3- Evaluation of Disaster Management in Haryana: Government and Non Government Officials’ Views
Chapter 4- Evaluation Of Disaster Management in Haryana: Affected Individuals’ Views
Chapter 5- Main Findings and Suggestions

Bibliography
REFERENCES


