

Disaster Response in India: An Overview

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I am compelled to utter a truism in asserting that physical catastrophes have their inevitable and exclusive origin in certain combinations of physical facts.

Rabindranath Tagore

ABSTRACT: Disaster has been mankind's constant though inconvenient companion since time immemorial. The fury of nature can be as disastrously beautiful as the gifts of nature received gratis. Natural disasters continue to strike unabated and without notice and are perceived to be on the increase in their magnitude, complexity, frequency and economic impact. These hazards pose a threat to people, structures and economic assets and assume disastrous proportions when they occur in areas of dense human habitations. Increasing population and various other socio-politico-economic considerations have forced people to live in areas that are considered uninhabitable like flood prone areas of major river systems and the low lying areas along the sea and islands, which are often inundated. Be it an 'act of God' or 'act of man' a mind-boggling spectrum of disasters wreak havoc in the Indian subcontinent.

1. DISASTERS: INDIAN CONTEXT

The unique geo-climatic conditions of India make this region particularly vulnerable to natural disasters. Disasters occur with unfailing regularity and despite better preparedness to meet all such contingencies, the economic and the social costs on account of losses caused by the natural disasters continue to mount year after year. Orissa has a history of recurring natural disasters. While the coastal districts of Orissa are exposed to flood and cyclones, western Orissa is prone to acute droughts; and a large section of the state is also prone to earthquakes. In addition the State is also affected by disasters like heat waves, epidemics, forest fire, road accidents etc. The two successive cyclones in October 1999 ---- in Ganjam and the super cyclone that hit the 14 coastal districts of the state damaged the infrastructure and disrupted public life. The 1999 Super Cyclone changed people's respective, Government policies and approaches towards management of Disasters. The vulnerability of the state to disaster necessitates the preparation of comprehensive disaster management plans. The history of Disasters substantiates the fact that about 80% of the State is prone to one or more forms of natural disasters.

The International Decade for Natural Disaster Reduction (IDNDR) has made an effort to mitigate disaster worldwide. Recognizing the rapid rising world wide toll of human and economic losses due to natural disasters, the UN General Assembly in 1989 took a decision to launch a far reaching global understanding during the nineties to save human lives and reduce the impact of natural disasters. With this aim in mind, the decade 1990-2000 was declared as the '**International Decade for Natural Disaster Reduction**' [IDNDR]. The main objective of the [IDNDR] is to reduce, through concerted international action, especially in the developing countries, loss of life, property damage and social and economic disruptions caused by natural disasters such as earthquakes, floods, cyclones etc.

The IDNDR workshop in Yokohama in May 1994, a plan of action for disaster reduction called the Yokohama Strategy was evolved.

The Yokohama Strategy gave guidelines for Natural Disaster Prevention, Preparedness and Mitigation, shifting the focus and emphasis from disaster management to disaster prevention and preparedness.

II. DISASTER TERMINOLOGY

"A serious disruption of the functioning of society, causing widespread human, material or environmental losses which exceed the ability of the affected society to cope using its own resources."

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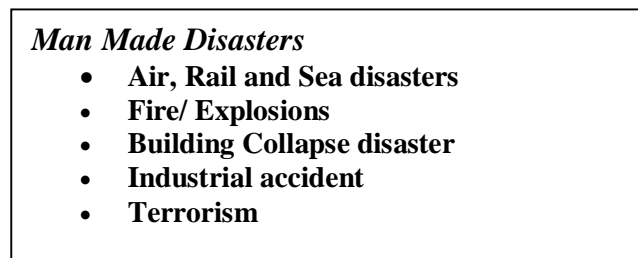
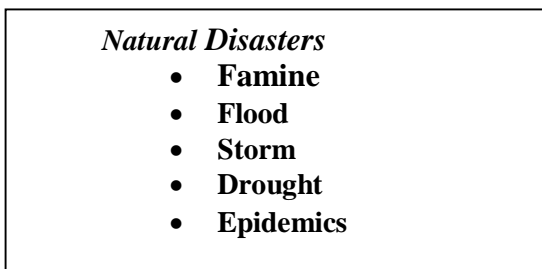
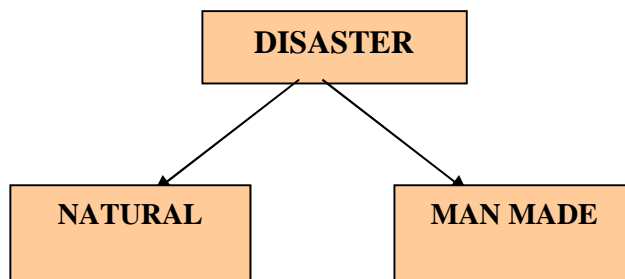
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The United Nations defines disaster as "... the occurrence of a sudden or major misfortune which disrupts the basic fabric and normal functioning of a society (community). It is an event or a series of events which gives rise to casualties and /or damage or loss of property, infrastructure, essential services or means of livelihood on a scale that is beyond the normal capacity of the affected communities to cope with unaided.

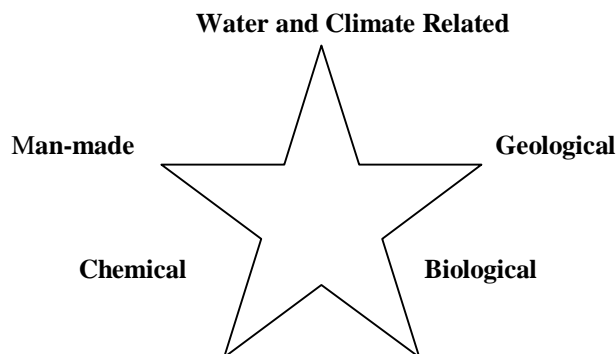
Thus a disaster has the following main features:-

- ❖ Unpredictability
- ❖ Unfamiliarity
- ❖ Speed
- ❖ Urgency
- ❖ Uncertainty
- ❖ Threat

III. TYPES OF DISASTER

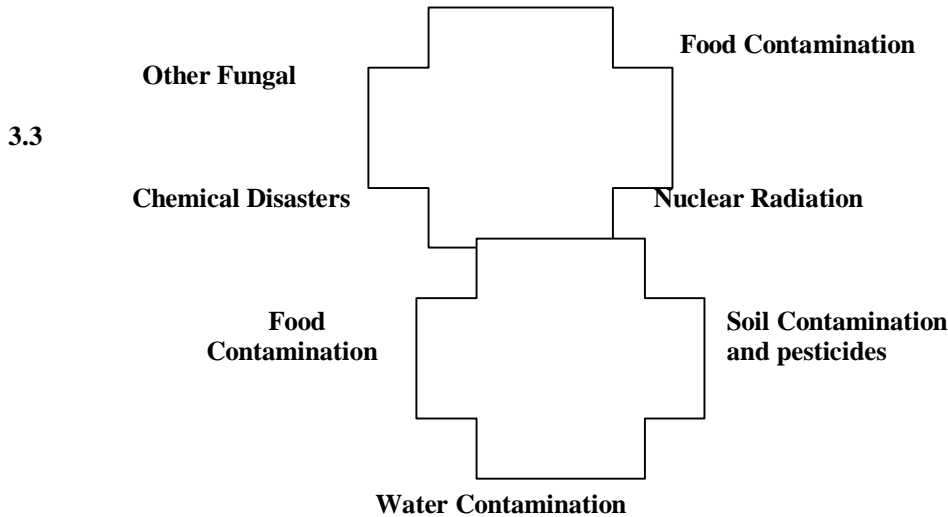


3.1 Following charts will give a better account of the classification



3.2 Biological Disaster

Bacteria Related



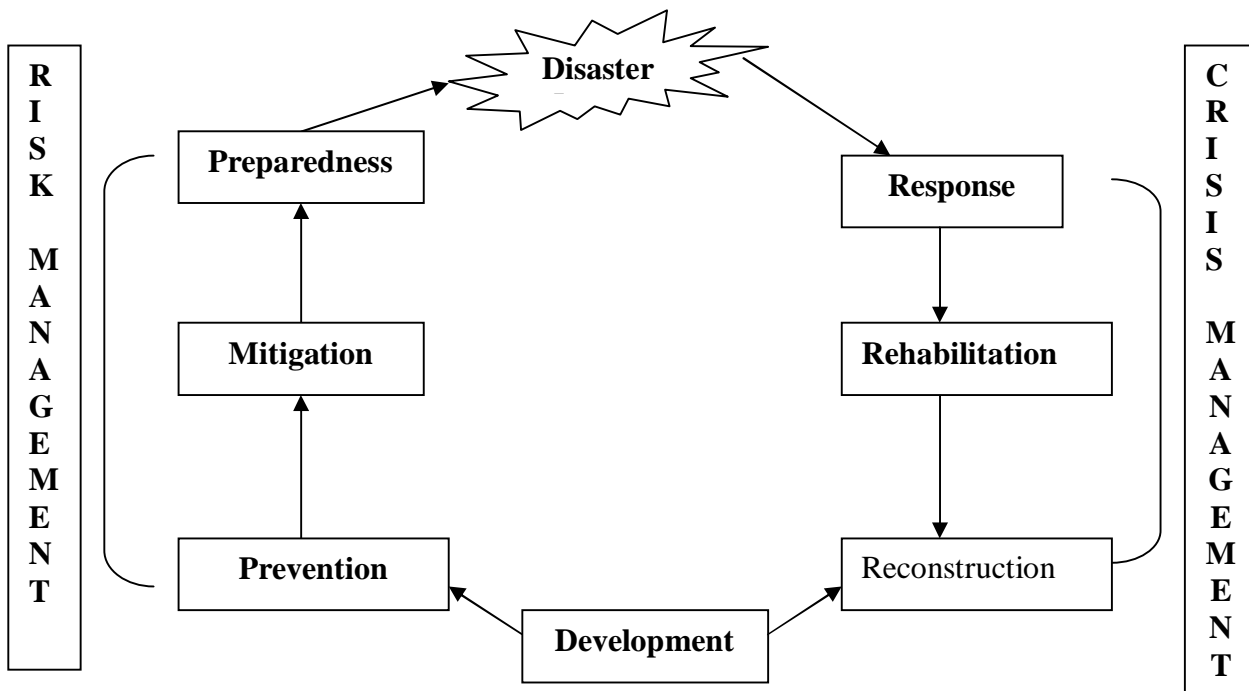
4.0 Socio- economic Vulnerability: This relates to the degree to which a population is affected by the calamity in relation to the prevailing social and economic conditions. The impact of a disaster is determined by the event, its effects on people and their environment, as well as the consequential effect on human activities within a given society.

5.0 Relief: It refers to a period immediately following the occurrence of a disaster when steps are taken to meet the needs of survivors with respect to shelter, water, food and medical care.

6.0 Rehabilitation: It includes activities that are undertaken to support the victims' return to 'normal' life and re-integration into regular community functions.

7.0 Disaster Mitigation: is a collective term used to encompass all activities undertaken in anticipation of the occurrence of a potentially disastrous event, including preparedness and long-term risk reduction measures. It involves measures to reduce the effects of disaster causing phenomena. It includes scientific analysis or risk assessment, social, economic, legal and technical processes in development of suggestive measures and administrative and political processes in application of these measures. Mitigation is often not given the same priority as preparedness or recovery. This is because there is a tendency to view disasters and development in terms of "trade – offs" with needed resources being diverted from development towards disaster mitigation.

8.0 The Disaster Management Cycle



The Disaster Management Cycle consists of the following broad strategy.

The Disaster Event:

- If disaster planning is restricted to only preparedness plan, then the full benefits of disaster planning sequence for disaster management tool.



10.1 Disaster has been mankind's constant though inconvenient companion since time immemorial. The fury of nature can be as disastrously beautiful as the gifts of nature received gratis. Natural disasters continue to strike unabated and without notice and are perceived to be on the increase in their magnitude, complexity, frequency and economic impact. These hazards pose to threat to people, structures and economic assets and assume disastrous proportions when they occur in areas of dense human habitations. Increasing population

and various other socio-politico-economic considerations have forced people to live in areas that are considered uninhabitable like flood prone areas of major river systems and the low lying areas along the sea and islands, which are often inundated.

10.2 Disasters: In Indian Context

- The unique geo-climatic conditions of India make this region particularly vulnerable to natural disasters. Disasters occur with unfailing regularity and despite better preparedness to meet all such contingencies, the economic and the social costs on account of losses caused by the natural disasters continue to mound year after year.
- Orissa has a history of recurring natural disasters. While the coastal districts of Orissa are exposed to flood and cyclones, western Orissa is prone to acute droughts; and a large section of the state is also prone to earthquakes. In addition the State is also affected by disasters like heat waves, epidemics, forest fire, road accidents etc. The two successive cyclones in October 1999 ---- in Ganjam and the super cyclone that hit the 14 coastal districts of the state damaged the infrastructure and disrupted public life. The 1999 Super Cyclone changed people's respective, Government policies and approaches towards management of Disasters. The vulnerability of the state to disaster necessitates the preparation of comprehensive disaster management plans. The history of Disasters substantiates the fact that about 80% of the State is prone to one or more forms of natural disasters.
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10.3. Disaster Terminology:

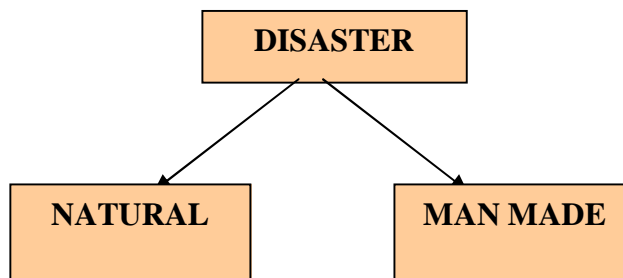
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Thus a disaster has the following main features:-

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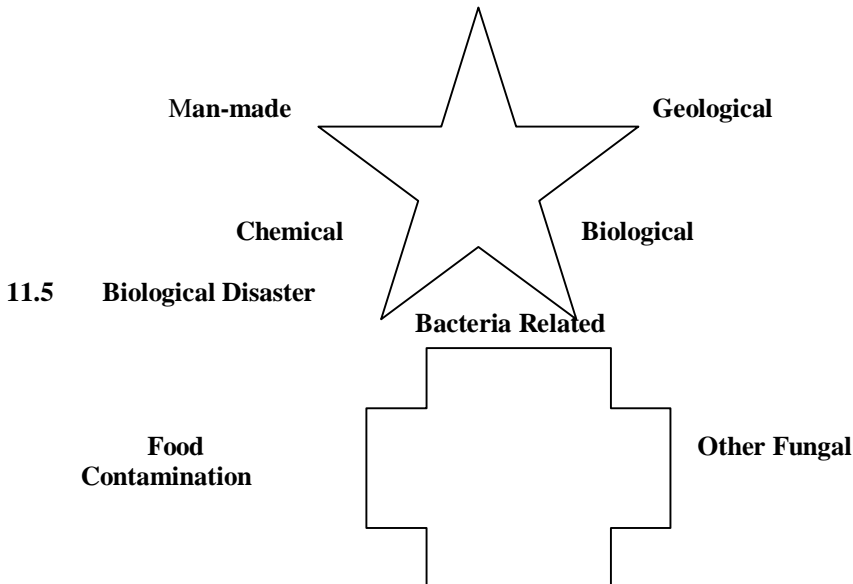
10.4 Types of Disaster:



- Natural Disasters:-**
- *Famines*
 - *Floods*
 - *Storms*
 - *Drought*
 - *Epidemics*

- Man Made Disasters:-**
- *Air, Rail and Sea disasters*
 - *Fire/ Explosions*
 - *Building Collapse disaster*
 - *Industrial accident*
 - *Terrorism*

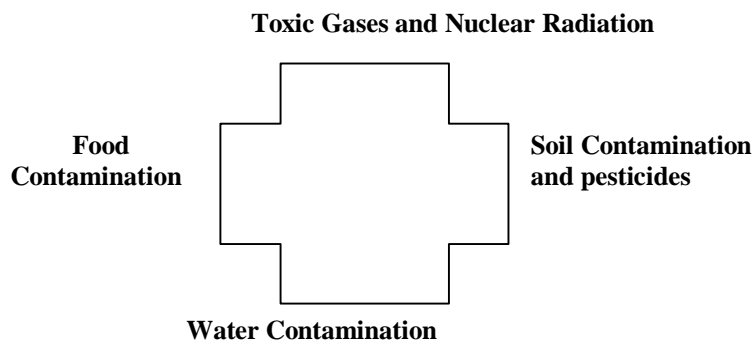
10.5 Water and Climate Related



11.5 Biological Disaster

Virus Related

11.6 Chemical Disasters



11.7 Socio- economic Vulnerability:

This relates to the degree to which a population is affected by the calamity in relation to the prevailing social and economic conditions. The impact of a disaster is determined by the event, its effects on people and their environment, as well as the consequential effect on human activities within a given society.

11.8 Relief:

It refers to a period immediately following the occurrence of a disaster when steps are taken to meet the needs of survivors with respect to shelter, water, food and medical care.

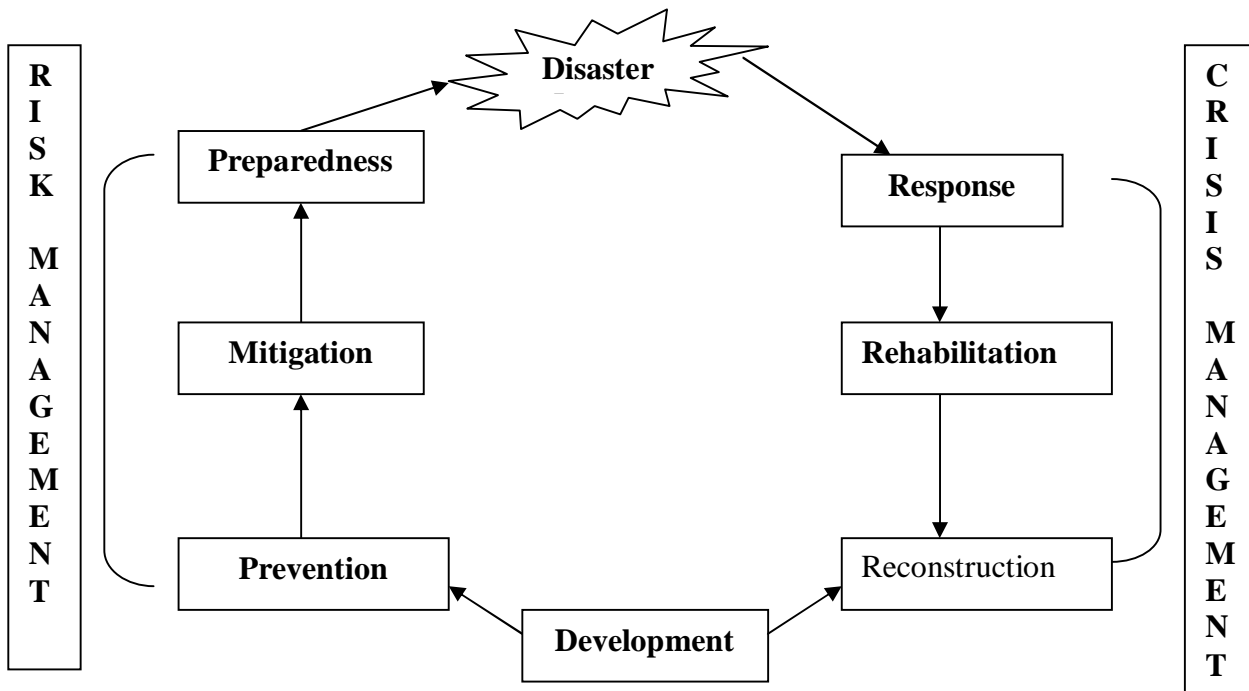
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It is a collective term used to encompass all activities undertaken in anticipation of the occurrence of a potentially disastrous event, including preparedness and long-term risk reduction measures. It involves measures to reduce the effects of disaster causing phenomena. It includes scientific analysis or risk assessment, social, economic, legal and technical processes in development of suggestive measures and administrative and political processes in application of these measures. Mitigation is often not given the same priority as preparedness or recovery. This is because there is a tendency to view disasters and development in terms of "trade – offs" with needed resources being diverted from development towards disaster mitigation.

12.13 The Disaster Management Cycle



12.14. The Disaster Event: Disaster Management Cycle consists of the following broad stages:

If disaster planning is restricted to only preparedness plan, then the full benefits of disaster planning sequence for disaster management tool. If disaster planning is restricted to only preparedness plan, then the full benefits of disaster planning sequence for disaster management





12.15 : Responsibilities of The Control Room:

The Control room has the following responsibilities:

The operational procedures of the control room can be divided into two parts:

i) Normal Time activities of a control room:

- To identify vulnerable places through mapping procedure
- To encourage the district officers to prepare the disaster management plans
- To operationalise the communication equipments
- To constitute research groups and the task force to look into the details of Disaster Management.
- To give warning signals as per the need of the hour

ii) Control room at the time of disaster:

- To receive and record messages authentic information round the clock. It should be manned for 24 hours
- Collect and transmit information concerning natural calamities and relief.
- Keep close contact with the local government and also at the state level which is affected by the calamity
- Keeps regular contact with the metrological department
- To make arrangements to disseminate information to all concerned agencies and vulnerable places

iii) Needs of well-set control room should have:

- Separate house/room
- Telephone (with STD facility)
- FAX
- VHF/HF
- Computer with Internet facility
- Radio/ TV set
- Generator
- Notice Board
- Maximum – Minimum thermometer
- Rain gauge
- A vehicle with a driver and a Loud speakers
- Maps
- Demographic details

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- List of important telephone numbers of various departments
 - Resources available – boats, godowns, whole sale dealers, tarpaulins/ tents
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- List of important telephone numbers of various departments
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12.16 Desk Management in a Control room

In the Control Room all the major activities will be distributed among different government officials to ensure accountability, proper information, assimilation and record keeping. This will also help in easy coordination and reporting to the District /State Disaster Manager.

12.17 Operation Desk:

The officials will be responsible for ensuring adequate supplies of food and water.

- Monitoring rescue and evacuation operations.
- Monitoring Salvage operations.
- Monitoring disposal of dead/carcasses.
- Transportation for medical aid to needy.
- Proper function of transits and feeding centers.

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- Co-coordinating with NGOs, Civil Society members and District Control Room.
- Dissemination of Information.
- Maintenance of records in the Control Room.
- Requisition of accommodation, transport and other necessary equipments for relief groups.
- Providing badges and stickers for volunteers and vehicles.
- Regular updates to the Disaster Managers at various levels.

12.18 Communication and information Desk: The officers will be responsible for

- Monitoring the weather reports and sharing the information
- Keep the Contingency plans along with all necessary maps in hand.
- Maintenance of important telephone numbers, database on available resources, list of key persons.
- Send and receive message in their respective records.
- Maintain information of damage, materials sent and ongoing activities for immediate sharing with District Control Room.

12.19 Desk Management in a Control room

In the Control Room all the major activities will be distributed among different government officials to ensure accountability, proper information, assimilation and record keeping. This will also help in easy coordination and reporting to the District /State Disaster Manager.

Operation Desk:

The officials managing this desk will be responsible for

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Logistics Desk

The officers in charge will

- Assess the need in terms of manpower and resources and ensure regular supply
- Ensure proper storage and transport facilities for relief materials.
- Maintain adequate supply of necessary transport and equipments.
- Coordinate with private transport associations and boat association for emergency requirement.
- Organize transportation for rescue party, evacuated people medical terms and injured or sick people.

Health Desk:

The officers is responsible to ensure

- Organize treatment of injured and sick, disposal of carcasses.
- Preventive Medicine and anti-epidemic measures are taken.
- Maintain record of all activities.
- Assess and ensure setting up medical relief camps.
- Maintain adequate supply of medicines, equipments and personnel.
- Monitor maintenance of health measures in all camps and provision of safe drinking water.

Service desk:

The officers in charge will be responsible for

- Assessing the relief, search and rescue and cash compensation requirements.
- Organize and co-ordinate setting up of transit, relief and cattle camps.
- Ensure adequate supplies to these camps.
- Maintain law and order.
- Coordinate identified NGO activities to ensure community participation.
- Reporting the procurement and disbursement of relief material received from all sources.
- Organize and clear debris and temporary repair of communication facilities, power supply and water supply.
- Construction of temporary shelters, school buildings, medical facilities etc.

Resource Desk:

The officers will be responsible for

- Maintenance of cash and disbursements receipts, issue of relief materials, personnel T.A. & D.A. of relief duty staff, daily wages, cash and credit vouchers, Gratuitous and compensation paid, etc.
- Issuing of all cash and material receipts.
- Reimbursement of all expenses approved.
- Issue of cash vouchers for petrol and diesel.