

DISTRICT DISASTER MANAGEMENT PLAN

KHARGONE

MADHYA PRADESH

Plan Prepared by Shri Chandan Raut(Intern) in the guidance of District Administration, Khargone according to the module provided by Seeds Technical Services through School of Good Governance and Policy Analysis, Bhopal- M.P

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A . GENERAL

A 1 Overview

A 1.1 District Profile

Khargone district, formerly known as West Nimar district, is a district of Madhya Pradesh state in central India. The district lies in Nimar region, and is part of Indore Division. Khargone town is the headquarters of this district. The district has a long history. In ancient period, the Haihayas of Mahishmati (present-day Maheshwar) ruled this region. In early medieval age, the area was under the Paramaras of Malwa and the Ahirs of Asirgarh. In late medieval age, the area was under Malwa Sultanate of Mandu. In 1531, Gujarat sultan Bahadur Shah brought this area under his control. In 1562, Akbar annexed this territory along with the whole Malwa to Mughal empire. In 1740 Marathas under the Peshwa brought the area under their control. In 1778, Peshwa distributed this territory to the Maratha rulers, Holkars of Indore, Sindhias of Gwalior and Ponwars of Dhar. After the independence and merger of the Princely states with Union of India in 1948, this territory became West Nimar district of Madhya Bharat. On November 1, this district became part of the newly formed state of Madhya Pradesh. On May 25, 1998 West Nimar district was bifurcated into two districts: Khargone and Barwani.

A 1.1.1 Location and administrative divisions

Khargone district was formed in 1956. This district was earlier known by the name West Nimar. In 1998 this district was later bifurcated into khargone & barwani. Nearby district i.e barwani is situated 90 kms from the district, burhanpur is 130 kms away from the district, dewas is 150 kms away, indore is 143 kms away & khandwa is 90 kms away. The nearest station is khandwa & nearest airport is indore.

Below table provides the details of the geographical location of the district, its area, administrative information like number of sub divisions, tehsils, municipal boards, blocks, gram panchayats, villages, post offices.

Table A 1.1.1

| | |
|--------------------------------------|----------------------------------------------------------------------------|
| Location (in degrees) - | Latitude – 21 ° 49'18 "(A) Longitude - 75 ° 37'10" (East) |
| District Area (in sq. kms.) - | 8030 sq km |
| Administrative information- | |

| | |
|------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| No. of sub divisions: | 5 |
| No. of Tehsils: | 9 |
| No. of Municipal Boards | 3 |
| No. of Blocks: | 9 |
| No. of Gram Panchayats: | 600 |
| No. of Villages: | 1070(Refer Annexure 1)) |
| No. of Police Stations: | 16 |
| No. of Post Offices: | 223 |
| Year of district formation: | After formation of state in 1956 this district came to be known as west nimar which was later bifurcated into khargone & barwani in 1998. |
| Name of adjacent districts: | Barwani,Khandwa,Burhanpur,Dewas,Torrent,Indore,Ujjain |

(Source: District statistical handbook & district's nic website)

A 1.1.2 Geography and Topography

- Below table provides details of names of rivers & lakes, number of dams & embankments, names of existing mountains & forest cover area in the district. As such in the district there are three major hydroelectric & irrigation schemes. Below mentioned information is obtained from the district stastical handbook & district's nic website.

Table A 1.1.2

| | |
|---------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| Name of rivers and lakes: | Narmada, Veda, Kunda |
| No. of dams, embankments: | 3 major hydroelectric & irrigation schemes |
| Name of existing mountains: | Prwatsrenian Vindhyachal & Satpura in the South |
| Highest elevation (in meters): | Haven't been able to find highest elevation but found that city is 283 metres above sea level +/- 9m at an altitude. |
| Forest cover in the district: | 76163 hectare |

(Source: District statistical handbook & district's nic website)

A 1.1.3 Demographic and socio economics

- Below table provides information about Total Population & population of male & female separately., Population density, number of APL & BPL families and main occupation of the people. As such Khargone district has a sex ratio of 963 women per 1000 males.

Table A 1.1.3

| | |
|----------------------------------------------------|------------------------------------|
| Total household: | |
| Total population: | 1872413(2011) |
| Male: | 953617 |
| Female: | 918796 |
| Population density: | 233 people per square meter(2011) |
| Total APL, BPL families: | APL:210075 & BPL:162428 |
| Occupation - Main occupation of people: | Agriculture Agriculture |

(Source: District statistical handbook, census website & food department)

A 1.1.4 Climate and weather

- Below table provides information about average maximum & minimum temperature of the district, average annual rainfall of last year & last four years. Details of the average rainfall of the last four years separately is provided in the annexure.

Table A 1.1.4

| | |
|--------------------------------------------|-------------------------------------------|
| Temperature- | |
| Average Maximum Temperature: | 32.8(last year) |
| Average Minimum Temperature: | 18.6(last year) |
| Rainfall- | |
| Total annual rainfall of last year: | 843 mm |
| Average rainfall (last 4 years): | 821.26 mm(last 4 years) –Refer annexure 2 |

(Source: District stastical handbook & agricultural research centre)

A 1.1.5 Health (Medical)

- Below table provides information about the number of hospitals, number of mini hospitals/dispensaries, number of Primary health centres(PHC) & Community health centres(CHC), medical officers, nurses & compounders, beds. This information is given block wise. There is one blood bank in main hospital, khargone. Dr.Ratnesh Mahajan is the head of this blood bank.

| SR NO | Block Name | No of Hospitals | No of dispensaries | No of PHC's | No of CHC's | No of medical officers | No of nurses, compounders | No of beds |
|-------|-------------|-----------------|--------------------|-------------|-------------|------------------------|---------------------------|------------|
| 1 | Barwaha | 1 | 1 | 9 | 1 | 8 | 57 | 108 |
| 2 | Maheshwar | 0 | 2 | 11 | 2 | 16 | 56 | 71 |
| 3 | Kasrawad | 0 | 1 | 5 | 1 | 7 | 37 | 60 |
| 4 | Seganv | 0 | 1 | 2 | 1 | 2 | 28 | 30 |
| 5 | Bhikangaon | 0 | 1 | 5 | 1 | 4 | 35 | 12 |
| 6 | Khargone | 1 | 1 | 6 | 1 | 25 | 169 | 252 |
| 7 | Gogava | 0 | 1 | 6 | 1 | 4 | 38 | 34 |
| 8 | Bhagvanpura | 0 | 1 | 6 | 1 | 4 | 54 | 26 |
| 9 | Jhiranya | 0 | 1 | 4 | 1 | 1 | 47 | 15 |

(Source: District stastical handbook & health department)

A 1.1.6 Education

- Below table provides information about the education details I.e literacy rate (separately for male & female also), number of secondary schools, number of high/middle schools, primary schools, anganwaris, it/is training centres, engineering colleges, medical colleges & other colleges. Total student strength & total staff strength is also provided.

Table A 1.1.6

| | |
|------------------------------------------------------------------------------|-----------------------------------------------------------|
| Literacy rate: | Try to get all the information Block wise. 64% |
| Total Male: | 74 |
| Total Female: | 53.7 |
| No. of Secondary schools: | (Govt. + Private entities) 100 |
| No. of High/Middle schools: | 917(Refer to annexure 3) |
| No. of Primary schools: | 2715 |
| No. of Anganwaris: | 1837 |
| No. of Engineering colleges: | 1 |
| No. of Medical colleges: | 0 |
| No. of Other colleges: | 14 |
| Total (Aprox.) Students Strength in all the educational institutions: | 337481 |
| Total (Aprox.) Staff Strength in all the educational institutions: | 10545 |

(Source: District stastical handbook, census website & district's nic website.)

A 1.1.7 Agriculture and Land use

- Below table provides information about main crops, land classifications (forest land, barren & uncultivated land, cultivated land, pasture land). Below mentioned information is obtained from the agriculture department.

Table A 1.1.7

| | |
|----------------------------------------|--------------------------------------------------|
| Cropping pattern - | Rotated crops |
| Type of major crops: | Cotton, Maize, Jowar, Soyabean, Groundnut, Wheat |
| Cropping seasons: | Rabi & Kharif |
| Land classifications- | |
| Forest land: | 76163 hectare |
| Barren & Uncultivated land: | 10282 hectare |
| Cultivated land: | 403640 hectares |
| Pasture land: | 6486 hectares |

(Source: Agriculture department)

A 1.1.8 Housing Pattern:

- Below table provides information about type of housing construction, material used in housing, types of flooring etc. There are total of 348098 buildings out of which 46.4 percent buildings have unburnt brick wall, 0.3 percent buildings have stone wall, 32.8 percent buildings have burnt bricks wall, 0.8 percent buildings have concrete wall, 1.7 percent buildings have wood walls & 18.1 percent use other materials. In addition to this regarding roof which these buildings use 38 percent buildings use light weight sloping roof, 48.7 percent buildings use heavy weight sloping roof & 13.2 percent buildings use flat roof. The above mentioned information is taken from BMTPC vulnerability map for khargone district.

Table A 1.8

| | |
|-----------------------------------------------|------------------------------|
| Housing pattern- | |
| Type of housing construction: | Pucca houses |
| Type of material used: | RCC |
| Flooring types: (Ground and above) | G, G+1, G+2, G+3, etc |

(Source: Vulnerability map for khargone district, BMTPC)

A 1.1.9 Industrial set ups

- Below table provides information about total no. of industries (Govt., Semi Govt. and Pvt), details of the industrial establishments, total work force involved, no. of major accident hazard/ industrial units and polluting industries. As such till now there has not been any major accident in any of the industrial units in the district.

Table A 1.1.9

| | |
|-------------------------------------------------------------|-------------------------------------------------------------------|
| Total no. of industries (Govt., Semi Govt. and Pvt), | |
| a) No. of Major Industrial Units | 79(Total no of industries with bulk of them being private) |
| Total workforce involved in these industrial units: | 6992 |
| b) No. of Medium and small scale industries : | 2 (Medium) & 35 (Small) |
| Total manpower involved in these units: | 982(Medium),873(Small) |

(Source: Industries department)

A 1.1.10 Transport and communication network

There is no rail, water & air connectivity available in the district. There are nine blocks in the district. All the blocks are well connected by road. Continuous bus facility is available. Agra-Bombay National Highway no 3 passes through the district. Nearby districts are well connected by road. There were 1504 telephones per lac population as per 2005-06 data. This information is obtained from the district stastical office & district's nic website.

A 1.1.11 Power stations and electricity installations

- Below table provides information about number of power stations available in the district & electricity outreach in the district.

(Source: Electricity department)

Table A 1.1.11

| | |
|------------------------------------------------|-----------------------------------------|
| List of power stations in the district: | 93 substations |
| Electricity outreach in the district | 98.47 % villages are electrified |

A 1.1.12 Major historical, religious places, tourist spots

Khargone-the city block on the banks of the river, the oldest temple of nine planets is famous for. the city of Indore (Railway / Airport) to 150km, 90km from Barwani)If you are coming from Gujarat - State Highway (26, 70km from Sendhava)If you are coming from Mumbai - Agra Mumbai National Highway No. (.3, 65km from Dhamnod)If you are coming from Indore - Agra Mumbai National Highway No. (.3, Edge to 130km, 90km from Khandwa , Burhanpur, 130 km And 150kms from Bhusaval Distances. The city is a major center of cotton and ginning factories.

- **Maheshwar** - The city sahastrraajun Hahyvanshi king, who had defeated Ravana, is the capital. Rishi Jamadagni sahastrraajun torture due to the slaughter of his son God had Prsuram. Over time is also the capital of the Great Goddess Ahilyabai Holkar. Situated on the banks of the Narmada River, the city is very beautiful and gorgeous in its mooring and is famous for Maheshwari sarees. On the pier of the most artistic temples including Rajarajeshvara shrine. Eristic of the famous seer and Pt alloys Adiguru Mndn was here. It is the district headquarters of the tehsil.Popular tourist destination. 60kms from Khargone.
- **Mandleshwar** 10 -km from Maheshwar The city is located just off the banks of the Narmada. Narmada on the hydro-electric project and the dam is built. From here the bodice, a place near an ancient Shiva - Shiva temple where a grand - is gender. 50kms from Khargone.

- **Wool** 18 -kms from Khargone this place Distances. Parmar - carpet Shiva - The place is famous for temples and Jain temples. A very ancient Mahalaxmi - Narayan Temple is also located here. More of the same Parmar Khajuraho - ancient temples carpet.
- **Bkawan and Raverkedi** -Raverkedi mausoleum is located in the great Baji Rao. North India, a campaign around the time of his death was along the Narmada. Bkawan cut stones of the Narmada and Shiva - gender are created.
- **Dejla - Deora** -handle a large dam on the river which is about 8, 000ha under irrigation.
- **Sirvel Mahadev** 55 -kms from Khargone About this place from Shiva Mahadeva his ten heads of Ravana recognize that this offer was made. So it is named. This place is so near the border of Maharashtra. Mahashivratri in on. MP Many pilgrims come here to see and Maharashtra.
- **Nanheshwar** 20 -kms from Khargone This ancient Shiva away places - is famous for the temple. When the place is in the way of Khargone Sirvel Mahadev.
- **Barwah and Sanawad** -The Twin Cities are settled on both sides of the Narmada. Sanawad Barwah the north and south. Uᳵkareshwar go from here to be revered. Punasa Indira Sagar hydro-electric project of the pass too Sanawad. Barwah the Mndleshhwar, Maheshwar and Dhamnood can be taken. Mandi's famous red chilli Badia, near Sanawad.

Table A 1.1.12

| | Average presence of visitors per day during peak season / festival season |
|------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|
| List of historical places in the district: Bkawan, Raverkedi | Approx 50000 people |
| List of religious centers in the district: Nanheshwar, sirvel mahadev, wool | Approx 40000 people |
| List of the tourist spots in the district: Mandaleshwar, Maheshwar | Approx 45000 people |

(Source: District’s nic website)

A 1.2 Scope and Ownership of District Disaster Management Plan

Any type of disaster, be it natural or manmade, leads to immense loss of life, and also causes damage to the property and the surrounding environment, to such an extent that the normal social and economic mechanism available to the society, gets disturbed.

The Govt. of India, recognized the need to of a proactive, comprehensive, and sustained approach to disaster management to reduce detrimental effects of disasters on overall socio-economic development of country, and came out with Disaster Management (DM) Act 2005, and highlighted the role and importance of District Disaster Management Plan. The Govt. of Madhya Pradesh (GoMP) also believes that there is a need for a Disaster Management Plan in every district that articulates its vision and strategy for disaster management in the state. In this context the Madhya Pradesh State Disaster Management Authority (MPSDMA) provides guidelines to various entities involved in disaster management in the state to discharge their responsibilities more effectively.

Further, as per the DM Act, the District Disaster Management Authority to be formed in each district and it will be the nodal agency for preparation, functioning and review of the District Disaster Management Plan (DDMP).

The scope of district disaster management plan is very wide, and it is applicable in all the stages of disasters (before, during, after & non disaster time). The DDMPs can help officials in taking important decisions and also provide guidance to direct subordinates in emergency. The DDMP helps in saving the precious time, which might be lost in the consultations, and getting approval from authorities.

It will be the responsibility of the District Disaster Management Authority members to look after the district and sub district level institutionalization activities pertaining to the disaster management, including the periodic review of district disaster management plan and allied functions.

DDMP is an operational module for district administration (owned by the DDMA) and it helps to effectively mitigate the different types of disasters with locally available persons and resources. It also ensures a checklist for all the stakeholders for an action oriented response structure and to study their preparedness level.

A 1.2 Purpose of the Plan

To make the district safer, and respond promptly in a coordinated manner in a disaster situation, mitigate potential impact of disasters in order to save lives of people and property of the respective district.

A 1.3 Key Objectives

Complying with the DM Act 2005, the objectives guiding the formulation of the plan are:

- Assess all risks and vulnerabilities associated with various disasters in the district

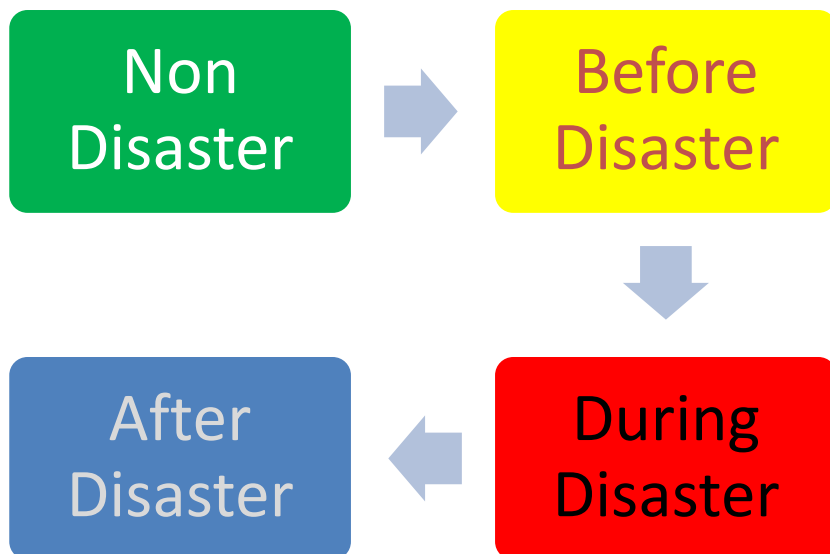
- Promoting prevention and preparedness by ensuring that Disaster Management (DM) receives the highest priority at all levels in the district.
- Prevention and minimization of loss of human lives and property by gearing up preparedness, prevention & mitigation of disasters
- To provide clarity on roles and responsibilities for all stakeholders concerned with disaster management so that disasters can be managed more effectively
- Assisting the line departments, Block administration, urban bodies and community in developing coping skills for disaster management & Ensuring that community is the most important stakeholder in the DM process.
- To strengthen the capacities of the community and establish and maintain effective systems for responding to disasters
- Developing convergence of action in addressing, preventing and mitigating disasters and to equip with maximum possible relief measures and to resort to pre-disaster, during and post-disaster steps.
- To establish and maintain a proactive programme of risk reduction, this programme being implemented through existing sectoral and inter-sectoral development programmes and
- Mainstreaming DM concerns into the developmental planning process.
- Encouraging mitigation measures based on state-of-the-art technology and environmental sustainability.
- To address gender issues in disaster management with special thrust on empowerment of women towards long term disaster mitigation
- Developing contemporary forecasting and early warning systems backed by responsive and fail-safe communications and Information Technology support.
- Encourage training and create awareness, rehearsals, dissemination of knowledge, and information on DM among all the citizens living in the district.
- Ensuring relief/assistance to the affected with care, without any discrimination of caste, creed, community or sex
- Undertaking reconstruction as an opportunity to build disaster resilient structures and habitat.
- Undertaking recovery to bring back the community to a better and safer level than the pre-disaster stage
- To develop disaster management as a distinct management discipline and creation of a systematic and streamlined disaster management cadre

A 1.4 District Plan Approach

The aim of the plan is to establish necessary systems, structures, programs, resources, capabilities and guiding principles for reducing disaster risks and preparing for and responding to disasters and threats of disasters in respective district, in order to save lives and property, avoid disruption of economic activity and damage to environment and to ensure the continuity and sustainability of development.

The district disaster management plan has a holistic and integrated approach with emphasis on prevention, mitigation and preparedness by ensuring that Disaster Management receives the highest priority at all levels in the district. It has a paradigm shift, similar to the lines of national and state level, from reactive and relief centric approach to disasters. The approach is aimed to conserve developmental gains and also minimize losses to lives, livelihood and property.

For efficient execution of the District Disaster Management Plan, the Plan has been organized as per these four stages of the Disaster Cycle.



Non disaster stage: Activities include disaster mitigation, leading to prevention & risk reduction.

Before disaster stage: Activities include preparedness to face likely disasters, dissemination of early warnings.

During disaster stage: Activities include quick response, relief, mobilization of search & rescue, damage assessment.

After disaster stage: Activities include recovery & rehabilitation programs in disaster affected areas.

A 2. Institutional Arrangements

Institutional arrangements cover details about district disaster management authority(DDMA) & district disaster management committee(DDMC) I.e it provides the list of members. It also gives details about the roles & responsibilities of DDMA. The details of district emergency operations centre/district control room is also provided. Details of disaster management committees at Village

& Tehsil level is also given. Institutional arrangement details have been collected from minutes of last year meeting.

A 2.1 District Disaster Management Authority (DDMA)

As such there is a DDMC existing in the district. There was no DDMA on paper which is present. Below is the recommended DDMA.

District Disaster Management Authority (DDMA):

There are eight officials in DDMA. List is given below:

| SR.NO | Name | Designation | Position |
|-------|-----------------------|----------------------|-----------|
| 1 | Navneet Mohan Kothari | Collector | Head |
| 2 | Jagdish Patel | Zilla Panchayat head | Cooficio |
| 3 | S.R.Yadav | Municipality Head | Cooficio |
| 4 | Rajeshwar Singh | S.P. | Member |
| 5 | Viraj Bhalke | CMHO | Member |
| 6 | R K Jain | PWD Head | Member |
| 7 | P.C.Sharma | CEO, Zilla Panchayat | Member |
| 8 | Anand Jain | ADM | Secretary |

Roles & Responsibilities of DDMA:

1.DDMA will be the main agency in planning, coordinating & implementing of disaster management plans as directed by NDMA & SDMA. The agency will have the following roles & responsibilities.

2)DDMA will prepare the disaster management plan of the district & will update it from time to time.

3)Coordination & mitigation of various national state policies & plans related to disaster management will be done by DDMA.

4)It will ensure that the identified vulnerable areas of the district will have sufficient mitigation plans by various departments & local authorities.

5)It will ensure that various departments & local authorities will adhere to the NDMA & SDMA guidelines regarding mitigation, preparedness & risk reduction of disasters

6)It will issue guidelines to different district departments & authorities for mitigation & prevention of disasters

7)It will monitor the implementation part of disaster management plan by various district departments & authorities.

8)DDMA will issue the guidelines to the various departments to integrate the mitigation & prevention plans of disaster management in the various ongoing developmental plans & schemes at the district level.

9)DDMA will monitor the integration of prevention plans of disaster management in ongoing developmental projects & schemes

10)DDMA will also assess the capacities of different departments to fight with the disasters

11)DDMA will also assess the preparedness of different departments & authorities to fight with disasters & will help in providing proper facilities to make them fully prepared

12)DDMA will organize special training camps & workshops of different officials, ngos related to disaster management & will coordinate among them.12)DDMA will organize training & awareness camps for the community with the help of local authorities, govt & non govt organizations in order to mitigate & prevent disasters.

13)In order to inform the community before the disaster happens the DDMA will take the responsibility of establishing & execution of proper information & communication system.

14)District level response plan & its execution will be done by DDMA.

15)DDMA will ensure that response plan is prepared by local authorities as per the district requirements

16)DDMA will provide the technical assistance, advice to all the authorities & departments working during the disasters & after disasters.

17)DDMA will identify the buildings which can be used as relief camps in the vulnerable areas & it will also make the buildings clean with safe drinking facility and other basic amenities.

18)For relief & rescue the materials, equipments & machineries used will have to be kept in the proper number so that whenever it is needed it can be made available at the earliest.

19)DDMA will report all the aspects of the disaster to SDMA as & when it comes.

20)DDMA will encourage the NGO's & VO's to work in the field of disaster management at the village level.

21)DDMA will ensure that the information communication systems works properly & it will exercise its functioning from time to time.

22)Beside above the DDMA will perform all other duties given by SDMA

A 2.2 District Disaster Management Committee(DDMC)

DDMC Members:

| SR.NO | Designation | Position |
|-------|-----------------------------------------------------------|-----------|
| 1 | Collector | Head |
| 2 | S.P. | Member |
| 3 | Chief executive engg, PWD Khargone | Member |
| 4 | Chief executive engg, PWD Mandaleshwar | Member |
| 5 | Chief executive engg, PWD Dhanmod | Member |
| 6 | Chief executive engg, water resources dept Khargone | Member |
| 7 | Chief executive engg, water resources dept Mandleshwar | Member |
| 8 | Dy director, Panchayat & family welfare, Khargone | Member |
| 9 | Dy Commissioner, Tribal Welfare | Member |
| 10 | CMHO | Member |
| 11 | Dy Director, Veterinary dept | Member |
| 12 | Dy Director, Print Media | Member |
| 13 | Food dept head | Member |
| 14 | SDM Khargone | Member |
| 15 | SDM Mandaleshwar | Member |
| 16 | SDOP Khargone | Member |
| 17 | SDOP Mandaleshwar | Member |
| 18 | Municipal Corp Head | Member |
| 19 | Urban development dept head | Member |
| 20 | Lions club head | Member |
| 21 | Rotary club had | Member |
| 22 | HOD, relief dept | Secretary |

(Source: Relief department & disaster cell)

A 2.3 District Emergency Operations Center (DEOC) / District Control Room (DCR)

Table A 2.3

| | |
|-------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| Location of the DEOC / DCR: | Police station, Khargone(DCR). A separate control room is also functional in collectorate office during disaster for which collector is the head. |
| Involved agencies in DEOC / DCR, Roles and responsibilities of the officials / nodal persons (phase wise): | Police & Collectorate office during disaster time |
| Equipments installed (software and hardware): | Wireless set,telephone,mobile,fax |

A 2.6 Tehsil Level Disaster Management Committee

Members:

1. Tehsildar-Head
2. CEO, Janpad Panchayat-Member
3. Police station incharge-Member
4. Local govt doctor-Member
5. Representative of NGO's-Member
6. Chief Municipal Officer-Secretary

A 2.7 Village level Disaster Management Committee

Members:

1. Sarpanch, Gram Panchayat-Head
2. Patwari-Secretary
3. Gramsevak-Member
4. Revenue Inspector-Member
5. Headmaster-Member
6. Panchayat Secretary-Member
7. Representative of NGO's-Member

B. HAZARD, VULNERABILITY ASSESSMENT AND RISK PROFILING (HVRC)

Hazard, Vulnerability, Risk & Capacity analysis (HVRC) is the most important part of the plan as the entire planning process will be based on its outcome. Essentially it identifies all the possible hazards I,e it identifies the disasters which have already come & the other possible disasters which might hit the district. Khargone district has been hit by only one disaster I,e flood. HVRC analysis gives details about the seasonality of hazards, vulnerability analysis (i,e Physical vulnerability, Social Vulnerability, Economic vulnerability, Environmental vulnerability & Institutional vulnerability). This analysis also covers details about existing resource inventory. In the end it addresses the most important aspect i,e risk assessment. In risk assessment detailed analysis for each hazard is carried out. For every hazard analysis of vulnerable areas, vulnerability & potential impact is carried out. HVRC details have been collected from minutes of last year meeting & some details have also been collected by discussing with relief department officials.

B 1. Hazard Assessment

Table B.1.1 History of past disasters

In the year 2006 district was affected by flood. Due to excessive nearby rainfall in nearby districts of hoshangabad, khandwa water level in narmada river rised to alarming levels. Due to this water levels in district local rivers i,e veda, bakud, kunda also rose & as a result of this 91 villages were affected by flood. In all four blocks were affected. Monsoon fury was at its worst in Khargone district, where a 42-year-old bridge on the Kunda river was damaged, while 10,000 people from 30 low-lying villages had been shifted to relief camps. Few hundred people had been stranded due to snapping of road link with other districts. There is no other major disaster which has occurred in the district till now.

| Type of hazard | Year of occurrence | Area affected | Impact on life | Livelihood | Livestock | Hazard prone zone in district |
|----------------|--------------------|---------------|----------------------------------------------------------------|-----------------------------------------------------------------------------|-------------------------------------------------------------------|-----------------------------------------------------------------------|
| Flood | 6 years back | 91 villages | People were displaced due to floods. Many houses were damaged. | Loss of livelihood as fields got submerged & consequently crops got damaged | Due to floods many animals which were kept by families got killed | 91 villages in four blocks i,e barwaha, maheshwar, kasrawad, khargone |

List of all villages affected by past disaster:

1.Barwaha block: Below table shows the list of villages

| SR.NO | Village name | SR.NO | Village name |
|-------|---------------|-------|--------------|
| 1 | Navghatkhedhi | 10 | Raver |
| 2 | Deorihia | 11 | Nagava |
| 3 | Sasilia | 12 | Padva |
| 4 | Katgada | 13 | Updi |
| 5 | Ramgad | 14 | Kakariya |
| 6 | Sematla | 15 | Pitnagar |
| 7 | Ratanpur | 16 | Alibajur |
| 8 | Bakava | 17 | Badu |
| 9 | Mardana | | |

2.Maheshwar block: Below table shows the list of villages

| SR.NO | Village name | SR.NO | Village name |
|-------|--------------|-------|--------------|
| 1 | Jalkoti | 12 | Chiravan |
| 2 | Limbadet | 13 | Behgaon |
| 3 | Maheshwar | 14 | Patardbajurg |
| 4 | Ladvi | 15 | Naandra |
| 5 | Kharwadi | 16 | Katargaon |
| 6 | Matanda | 17 | Gogava |
| 7 | Jalud | 18 | Pitamli |
| 8 | Mandaleshwar | 19 | Kavdia |
| 9 | Sulgaon | 20 | Segava |
| 10 | Tangaon | 21 | Setoka |
| 11 | Patradkhurd | 22 | Karhi |

3. Kasrawad block: Below table shows the list of villages

| SR.NO | Village name | SR.NO | Village name | SR.NO | Village name |
|-------|--------------|-------|--------------|-------|--------------|
| 1 | Bhatvan | 14 | Mirzapur | 26 | Adalpura |
| 2 | Makheda | 15 | Baslamud | 27 | Chinchli |
| 3 | Telyav | 16 | Katkat | 28 | Kalbu |
| 4 | Katara | 17 | Bulgaon | 29 | Nagarla |
| 5 | Badgaon | 18 | Dalkheda | 30 | Jaroli |
| 6 | Lakhangaon | 19 | Pagakhandi | 31 | Dedgaon |
| 7 | Sayata | 20 | Peepri | 32 | Septaon |

| | | | | | |
|----|-------------|----|----------|----|------------|
| 8 | Mubarakbaud | 21 | Lepa | 33 | Dharampuri |
| 9 | Rahmatpura | 22 | Saatkat | 34 | Anwarkach |
| 10 | Bot | 23 | Jaanpur | 35 | Sulgaon |
| 11 | Katora | 24 | Ambarpur | 36 | Nagarla |
| 12 | Rangaon | 25 | Khulkurd | 37 | Jaroli |
| 13 | Kakarigaon | | | | |

4. Khargone block: Below table shows the list of villages

| SR.NO | Village name | SR.NO | Village name |
|-------|--------------|-------|--------------|
| 1 | Gogava | 9 | Imlipura |
| 2 | Bilkhed | 10 | Khargone |
| 3 | Tamarni | 11 | Jalgone |
| 4 | Lonara | 12 | Imlipura |
| 5 | Ghegava | 13 | Umarchali |
| 6 | Chandvad | 14 | Kaamarkheda |
| 7 | Lekhi | 15 | Sukhpuri |
| 8 | Jalgon | | |

(Data taken from relief department & minutes of last year meeting)

Table B.1.2 Major applicable hazards

1. Flood is a major hazard in this district. This district was affected by floods six years back. In all 91 villages were affected out of which

- a) 17 villages are in barwaha block
- b) 22 villages are in maheshwar block
- c) 37 villages are in kasrawad block
- d) 15 villages are in khargone block.

The details of the villages are provided in the annexure.

2. Earthquake is the second hazard. Though the district has not been affected by earthquake till now its neighbouring district I.e khandwa wa affected once. As per BMTPC website khargone district falls in moderate zone.

3. Industrial & chemical disaster is also a major hazard. There has not been any major accident till now. The reason it is considered as hazard is because there are number of industries in this district. Industrial area in khargone has few industries in nimrani village tehsil kasrawad. Some are Maral overseas ltd, Century Yarn, Century Denim, Kahitan Chemicals, Liberty fertilizers. Villagers of nimrani, satrati & panva village used to make complaint that their crop effects & they have drinking problems due to effected underground water.

4. Fire is also a major hazard. It has been observed that there are large incidents of fire occurring in fields.

| Type of applicable hazards | Hazard prone blocks (and also if possible GPs) |
|--------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| Flood | 91 villages in four blocks I,e barwaha, maheshwar, khargone & kasrawad. Details of villages are provided in the previous sub section |
| Earthquake | As on today's date no earthquake has hit the district & that's why no area has been identified Any place in the district |
| Fire | Places where industries are located. Nimarni village in kasrawad block where industries are located |
| Industrial & chemical disasters | |

Table B.1.3 Seasonality of hazards

Below table provides details about seasonality of hazards i,e the season at which disaster is likely to hit the district. In the below table seasonality for all four identified hazards i,e flood, earthquake, fire, industrial & chemical accidents is given. As of now the only major district which has occurred in the district is flood. That's why seasonality for only this disaster is known. For rest of the hazards as the exact season is not known the seasonality for the same is not shown in the table.

| Hazard | Jan | Feb | Mar | Apr | May | June | July | Aug | Sept | Oct | Nov | Dec |
|------------|-----|-----|-----|-----|-----|------|------|-----|------|-----|-----|-----|
| Flood | | | | | | Yes | Yes | | | | | |
| Earthquake | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| FIRE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |

B 2 Vulnerability Analysis

Vulnerability refers to the susceptibility of a community to a hazard and the prevailing condition, including physical, socio-economic and political factors that adversely affect its ability to respond to hazards or disaster events. The community and its members may or may not be contributing intentionally or directly to the prevailing conditions. However, altogether, they create factors and situations that define the vulnerability of the community. Vulnerabilities can be manifested as physical, social, economic, environmental & institutional vulnerability. The disruption of a community can be reduced if it is better prepared, e.g. if there is suitable infrastructure and human systems and coordination. Poor countries and citizens are always more prone to disasters through their greater vulnerability to hazard and risk than higher income countries and citizens. For example, epidemics within poor communities often increases during and after hazardous events such as floods, droughts and cyclones.

Physical vulnerability:

Physical vulnerability refers to the vulnerability created due to the damage of physical infrastructure like roads, bridges, hospitals, houses, embankments etc. It has been observed that all the four blocks which were affected by past disaster i.e flood is vulnerable to this. Last time during floods it was observed that there was a lot of damage to infrastructure like houses, bridges. People didn't even had a proper place to live. They had to be shifted to safer places.

As per BMTPC's vulnerability map for khargone district 46.4 percent of the houses with unburnt brick wall fall in moderate risk category, 0.3 percent of the houses with stone wall fall in moderate risk category. There are 32.8 percent of the houses with burnt bricks wall which fall in the low risk category. In addition to this 0.8 percent of the houses with concrete wall & 1.7 percent of the houses with wood wall fall in the very low risk category. There are 18.1 percent of houses with other materials wall which fall in the very low risk category.

Social Vulnerability

In its broadest sense, social vulnerability is one dimension of [vulnerability](#) to multiple [stressors](#) and [shocks](#), including [abuse](#), [social exclusion](#) and [natural hazards](#). Social vulnerability refers to the inability of people, organizations, and societies to withstand adverse impacts from multiple stressors to which they are exposed. These impacts are due in part to characteristics inherent in social interactions, institutions, and systems of cultural values. It is not completely seen.

Economic vulnerability

Economic vulnerability refers to the vulnerability created due to poverty, damage to agriculture & loss of livelihood. It is observed that whenever there is a major natural calamity like floods then

there is a loss of livelihood. At the same time it is observed that all the crops get damaged due to inundation of water during floods & people are left with nothing to eat. After such a disaster of such a large scale people take a lot of time to return to normalcy. This vulnerability is observed in all flood affected blocks.

Environmental vulnerability

Environmental vulnerability refers to the vulnerability created due to inundation of canals, rivers i,e in short environmental factors. This is one of the most important vulnerabilities. Last time when flood came because the local rivers got inundated due to excessive rainfall. Many rivers & canals had crosses danger zone & national highways also got inundated because of this. The families who stay close to such places are most vulnerable to this.

Institutional vulnerability

Institutional vulnerability refers to the vulnerability created due to lack of institutional support i,e in short absence of DDMC’s. In the district DDMC was formed after flood. Every year disaster management meetings are held so as to be better prepared for the disaster if it occurs. Currently this vulnerability is not there in the district as the institutional mechanism is already formed in the district.

Table B.2

- **Block wise vulnerability**

| Name of Block | Physical/Infrastructural Vulnerability | Environmental / Natural vulnerability | Social vulnerability | Economic vulnerability | Institutional vulnerability |
|---------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Barwaha | Physical/infrastructural vulnerability is there in this block. One major reason is that whenever any disaster on a large scale occurs then infrastructure like houses, public buildings gets damaged the most. As a result of this people don’t have a proper place to stay & this situation makes them | Environmental/natural vulnerability is the most important vulnerability for this block. One major reason is that this block is flood prone the history of which is explained in the | Social vulnerability cant be said exactly as to whether it is present or not everywhere. Normally when disaster occurs this kind of vulnerability is seen in some areas. | This vulnerability is also present in this block. As this block is a flood prone area normally it is seen that livelihood gets affected. One reason is that fields & crops get | When disaster i,e flood struck in 2006 this vulnerability was present but after the disaster due to proactiveness of district administration this vulnerability |

| | | | | | |
|-----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | more vulnerable | above subsections. Other reason is that last time when floods came rivers and canals got inundated due to excessive rainfall & a result of this there was a lot of collateral damage. These two reasons make them more vulnerable. | | damaged due to water inundation. As a result of this people are forced into poverty stage. | has diminished. After the disaster meeting to form disaster management committees at various levels. That's the reason why this vulnerability is not present in this block. |
| Maheshwar | Physical/infrastructural vulnerability is there in this block too. The reason for this is same as mentioned in the above point. All the blocks are vulnerable to floods but this block is found to be the most vulnerable. | Environmental/natural vulnerability is the most important for this block. One reason is same as mentioned above. Other reason is that there are many natural greenery like lakes & rivers which makes them more vulnerable. | Social vulnerability cant be said exactly as to whether it is present or not everywhere. Normally when disaster occurs this kind of vulnerability is seen in some areas. | This vulnerability is also present in this block. As this block is a flood prone area normally it is seen that livelihood gets affected. One reason is that fields & crops get damaged due to water inundation. As a result of this people are forced into poverty stage. | When disaster i.e flood struck in 2006 this vulnerability was present but after the disaster due to proactiveness of district administration this vulnerability has diminished. After the disaster meeting to form disaster management committees at various |

| | | | | | |
|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | | | | levels. That's the reason why this vulnerability is not present in this block. |
| Kasrawad | This is also the most vulnerable area because a large number of villages (37) were affected. Physical/infrastructural vulnerability is there in this block too. | Environmental/natural vulnerability is the most important vulnerability for this block. The reason is the same i.e whenever floods come nearby rivers & lakes overflow. As a result of this people lose their source of livelihood | Social vulnerability cant be said exactly as to whether it is present or not everywhere. Normally when disaster occurs this kind of vulnerability is seen in some areas. | This vulnerability is present in this block too because there is loss of livelihood. | As of now this vulnerability is not present because after the disaster a meeting was held where it was decided that various disaster management committees need to be formed at the district, block & village level. |
| Khargone | Physical/infrastructural vulnerability is there in this block too. The reason is that there is a large scale damage to physical infrastructure. | Environmental/natural vulnerability is the most important vulnerability for this block because river flows through this block. | Social vulnerability cant be said exactly as to whether it is present or not everywhere. | Economic vulnerability is also present in this block. The reason is same as mentioned above. | As of now this vulnerability is not present. The reason is same as mentioned in the above rows. |

B 3. Capacity Analysis

Table B 3.1 Resource inventory, Block wise

| Resource Type | Details | Number | Govt, Private | Contact no. of nodal person/s |
|------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|----------------------------------|---------------|------------------------------------------------------|
| Trained manpower, professionals available in specific domain like S&R ,First Aid, Response Warning, Swimming etc. | 40 home guard personnel trained in swimming | 40 | Govt | A.P.Tripathi District Commandant Homeguards |
| Location of blood banks | Blood bank is located in main hospital khargone | 1 | Govt | Dr.Ratnesh Mahajan |
| Availability of fire fighting equipments, Fire tenders | 9 fire brigades & 2 fire tenders | 9 fire brigades & 2 fire tenders | Govt | Lasit Khan Head Fire Department |
| List of PDS Shops | 56 urban PDS & 418 urban PDS | Total 474 | Govt | R.K.Viekar Food dept |
| List of NGOs / CBOs | 140 NGO's | 140 | Pvt | Zilla Panchayat Office |
| Veterinary Hospitals | Total 19 veterinary hospitals | 19 | govt | Dr.Wilson dower |
| List of petrol pumps (if possible) | 55 petrol pumps | 55 | | Food dept |

B 4. Risks Assessment

Table B.4.1 Potential impact of applicable hazards and existing vulnerabilities

| Type of hazard | Vulnerable areas | Vulnerability | Potential Impact |
|----------------|---------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------|-----------------------------------------------------------------------|
| Flood | 17 villages in barwaha block, 22 villages in maheshwar block,37 villages in kasrawad block,15 villages in khargone block. | People who live in the affected areas, livestock, houses & infrastructure | Loss of human life & livestock. Large scale damage of infrastructure. |

| | | | |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|
| Industrial & chemical disaster | Places where industries are located nearby. Nimarni village tehsil kasrawad is one vulnerable area as there are major industries located in this area | People who work in the factories, people who live nearby, drinking water & air | Losses of lives, severe injuries, air and other resource pollution, contamination of drinking water. |
| Earthquake | No place recognized yet | People & livestock, houses which are lying on the earthquake zone | Loss of human life, livestock, livelihood & damage to property. |
| Fire | Any place in the area where fields are located or industries | People who own the fields & people who work in the industries | Loss of human lives & livelihood |

* Vulnerable areas and identified safer places to be showed in the detailed maps in Annexure 8.6

B 4.2 Risk profiling of the district

The major disaster in khargone district till now is only flood which occurred six years back. This happened because of excessive rainfall & release of water by nearby dam. As of now district administration is only equipped to deal with floods. A control room for the same is also setup just before the start of the rainy season. Disaster management meeting is also held every year before the start of the rainy season so as to chalk out a strategy as to how to deal with floods. In this meeting all the concerned line departments heads attend this meeting. All the roles & responsibilities of the line departments are meted out in this meeting. Necessary directions for forming the respective teams are given. The reason why the district administration is concentrated only on floods is because it is the only major disaster that occurred six years back. Perhaps district administration should concentrate on other disasters also. Usually it is observed that unless & until disaster strikes no one thinks about this. If the district administration adopts a holistic approach for disaster management then it can go a long way in minimizing losses to life & livelihood.

Of all the blocks mentioned in the vulnerability assessment all blocks are found to be vulnerable but of all the four blocks mentioned above kasrawad & maheshwar were found to be most vulnerable because more number of villages were affected.

C 1.1 Mitigation Plan

Flood Mitigation Strategies:

There are two different ways to mitigate floods: -

1. Structural
2. Non- Structural

Structural measures are in the nature of physical measures and help in “modifying the floods”, while non- structural measures are in the nature of planning and help in “modifying the losses due to floods”.

In the structural measures we keep the *water away from people* and in the non-structural measures to try to keep *the people away from water*. All of these works can be individually divided into long term and short-term measures.

Structural Measures:

- a) **Embankments:** Embankments have been extensively used for protection against floods of important towns and lands. However, the embankments are now the best means of communication in the flood-prone areas and are being recklessly used for transportation of materials by tractors and other heavy vehicles. During floods, people shift to the embankments for temporary shelter and often settle down there for good. Thus, embankments and their slopes become permanent settlements to flood victims and their livestock. It messes up proper maintenance, and embankments become susceptible to breaches during floods. Whenever there are lapses in maintenance, the protected areas are exposed to serious flood hazards.
- b) **Water Shed Management:** Timely cleaning, de-silting and deepening of natural water reservoir and drainage channels (both urban and rural) must be taken up.
- c) **Reservoirs:** The entire natural water storage place should be cleaned on a regular basis. Encroachments on tanks and ponds or natural drainage channel share to be removed well before the onset of monsoon.
- d) **Natural water retention Basins:** Construction and protection of all the flood protection embankments, ring bunds and other bunds. Dams and levees can also be constructed which can be used as temporarily storing space which reduces the chances of lower plains getting flooded.
- e) **Buildings on elevated area:** The buildings in flood prone areas should be constructed on an elevated area and if necessary on stilts and platform. However, complete flood control in terms of structural methods of flood protection are neither economically viable nor these are environment friendly. Therefore, non-structural methods are becoming popular in mitigating flood disaster.

Non Structural Measures:

- a) **Flood Plain Zoning:** Flood plain zoning, which places restrictions on the use of land on flood plains, can reduce the cost of flood damage. Local governments may pass laws that prevent uncontrolled building or development on flood plains to limit flood risks and

to protect nearby property. Landowners in areas that adopt local ordinances or laws to limit development on flood plains can purchase flood insurance to help cover the cost of damage from floods.

b) Flood Forecasting and warning: These are issued for different areas mostly by the Central water Commission/ Meteorological department and by the State Irrigation/ Flood Department. However, an effective Warning System is one that can release warning in advance, i.e. 72hrs, 48hrs and 24hrs. It can change the existing scenario substantially and render informed decision making in adopting proper measures towards disaster preparedness, mitigation, control, planning and management. This kind of advance warning can help the authorities for better flood preparedness and also effective flood mitigation. Therefore, initiatives have to be taken to modernize the operation of Flood Forecasting & Warning by adopting the state of art technology and integrating it into the forecast and warning dissemination process.

Household Fire

Structural Measures

- Training of housewives on safe use of gas cylinders and electric heaters
- Public buildings where large number of people gather like Theatre, Hotels, Marriage Halls and assembly halls etc must be equipped with fire extinguisher cylinders and sufficient stored water
- The above buildings must have well marked fire exits
- All the warehouses must have sufficient stored water and fire extinguishing cylinders
- Farmers must be discouraged to lit fire on their trashes in the fields itself
- Farmers must be encouraged to dispose the trashes and stubbles in compost pit for decomposition

In addition to this below subsection gives details about how risk reduction is integrated in development schemes, training & capacity building of government officials, community initiatives & risk management funding

C 1.1.1 Scope of Integrating Risk Reduction in Development Schemes

All the buildings which are constructed (both govt & private) follow the required norms & conditions. They are built keeping in mind the disasters like earthquake so that they can withstand it. All private buildings take permission from municipal body. All these requisite regulations & acts are incorporated into developmental schemes like NREGA, IAY & SSA also. The construction for these schemes & construction of public buildings is usually carried out by Rural Engineering Services. They are usually given the responsibility for construction. They follow the required norms & hand it over to the respective agency to whom this building belongs. Periodic buildings assessment & retrofitting of buildings is usually carried out by respective agencies to whom this building belongs.

There is no specific agency to look into this. Periodic building assessment is strictly not followed in all buildings.

| Development Schemes | Integration with Disaster Management |
|---------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| IAY | <ul style="list-style-type: none"> • In all the flood affected regions the construction of housings under IAY must have the layout with raised plinth level. • Use of Earthquake resistant Technique |
| JNNURM | <ul style="list-style-type: none"> • All the buildings must be constructed with Earthquake resistant technique • Construction of covered drains to avoid epidemics • Preservation of water bodies • Construction and improvement of drains and storm-water drainage system • Solid waste management including hospital waste management |
| MGNREGA | <ul style="list-style-type: none"> • Construction of Earthen dams, Check boulder dam, plantation in the flood prone villages • Construction of drains for easy disposal of water • Plantation on the banks of rivers can be under MGNREGA • Incorporating flood control & protection such as construction & repair of embankments • Incorporating other disaster mitigation measures like afforestation • Ensuring that all code & safety standards are followed in building or roads & infrastructure so that workers don't get hurt in any accident |
| PWD | <ul style="list-style-type: none"> • Marking of roads with proper message • Marking accident prone areas |
| NRHM | <ul style="list-style-type: none"> • Training of volunteers for first aid teams • Generating awareness among people for hygiene • Convergence with NRHM has to be established under Emergency Health Management, Mass Casualty Management and on other allied aspects. • Regular training of ANM's on first aid • Maintaining Logistics: Supply of essential drugs, both allopathic and AYUSH, to the Sub-centres. • Infrastructure strengthening by implementation of Indian Public Health Standards (IPHS) standards • Postings of Additional ANMs wherever needed |
| SSA | <ul style="list-style-type: none"> • Disaster mitigation initiatives to be established while constructing school buildings which are also used as relief camps with SSA (for |

| | |
|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | <p>safe schools), JNNURM (for Infrastructure support) and with the other national and state level schemes.</p> <ul style="list-style-type: none"> • Ensuring that school buildings which are constructed under SSA follows all the required norms for construction. • Ensuring that all the safety standards are followed while constructing schools • Ensuring that all basic facilities like drinking water are available so that they can be used as shelters during disaster. • Children can be given some basic precautions regarding disasters. If this is done at very young age child is likely to retain these things the most & he will never question the things unlike an adult. |
|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

In addition to this various structural measures are already followed like

a) Water Shed Management: Timely cleaning, de-silting and deepening of natural water reservoir and drainage channels (both urban and rural) are already done

b) Reservoirs: The entire natural water storage place should be cleaned on a regular basis. Encroachments on tanks and ponds or natural drainage channel share are removed well before the onset of monsoon.

C 1.1.2 Training & Capacity Building

Adequate homeguard personnel are trained in swimming & driving boats. Around 35-40 personnel are trained in this. In addition to this 10 trained personnel each of homeguards are deployed in four blocks/tehsil i.e khargone, kasrawad, mandaleshwar, barwaha. In addition to this home guard personnel are sent to DMI for regular training. Fire dept personnel are also trained as & when directions come. Similarly other line departments related to disaster must also be trained.

C 1.1.3 Community Initiatives

During any disaster, communities are not only the first to be affected but also the first and foremost responders. Community participation ensures local ownership, addresses local needs, and promotes volunteerism and mutual help to prevent and minimise damage. Therefore, the efforts of district administration in this regard need to be encouraged so that envisaged vision can be achieved.

The needs of the elderly, women, children and differently abled persons require special attention. Women, Youth club, NCC & NSS shall be encouraged to participate in decision making committees and action groups for management of disasters. As first responders to any disaster, communities will be trained in the various aspects of response such as first aid, search and rescue, management of community shelters, psycho-social counselling, distribution of relief and accessing support from government/agencies etc.

C 1.1.4 Risk Management Funding

Short term funding provisions are usually expected to cover the immediate loss, incurred due to disasters. Funds for this are not currently available at the district level. Normally whenever disaster happens in the district money comes to the district comes from the state after the request is made by district authorities. Then this money is disbursed accordingly. Similar is the case for long term funding provisions. No such fund is available separately for this. Whenever the district administration requires money for this they make a request to the centre.

Calamity Relief Fund (CRF) shall be able to provide for the natural disaster included in this policy. Additional resources required for this purpose may be requisitioned in terms of the recommendations of the Eleventh Finance Commission, as accepted by the GOI. Financing of damage due to industrial or chemical disasters shall be done by the concerned unit, which is responsible for the disaster.

Collectors shall be permitted to accept contributions from the public for meeting immediate expenditure for providing relief to the affected population. The amount so collected shall be kept in a separate account in the banks. A financial statement of the accruals and dispersals from this account shall be rendered to the State Relief Commissioner every year.

C 1.2 Preparedness Plan

This section will primarily focus on preparedness of the communities and local authorities in order to safeguard lives, protecting assets and efficiently utilize resources by taking appropriate actions in the face of any disaster. The preparedness plan will further ensure that agencies are able to respond to the potential damage zones in a prompt and coordinated manner. In most disaster situations the loss of life and property could be significantly reduced through appropriate preparedness measures and warning system. In addition to this this section also focuses on predisaster warning alerts to be issued by respective departments. It also focuses on evacuation plans deployed by the district administration.

C.1.2.1 Preparedness before response

General Preparedness Measures:

1. In all gram panchayats provision for petromax must be there. Provision for the same will be made available by janpad panchayats.
2. Adequate provisions must be made to clear the drainage. Whenever it is being cleaned whatever dirt or garbage coming out should be disposed immediately. If dirt or garbage is still lying nearby then chances are that these will get in & it might create water logging problems in the low lying areas. The responsibility for the same will be beared by chief municipal officer

3. In the district flood affected rivers are veda,kunda,bakud & narmada river & there are other lakes which might get affected are dejla devada,gadgiltar. At the same time one official should be deputed to look after water levels in these lakes & that person is usually a technical one. During rains whenever there is overflow then action is taken & informed to the higher authorities. Department responsible for the same is water resources department, rural engineering services & agri department.
4. Water resources department should also look after dams & report if there is any dangerous department
5. In the lakes if there is anything obstructing the flow of water it should be removed immediately. The responsibility for the same will be shared by Deputy director Agriculture department & SDM.
6. Disaster management textbook should be available at the district level to all officials concerned.
7. Essential services like electricity, roads & bridges maintenance should be done properly. The responsibility for the same is with electricity department & PWD.
8. During floods food items are required in ample quantities. To safeguard against the shortage of stock necessary amounts of food is procured & kept at safe locations before the start of the rainy season. The details of the same must be available at collectorate office. The responsibility for the same is with food department
9. During floods medicines are also required to control the diseases or epidemic cause by the disaster. To safeguard against the shortage of stock necessary amounts of medicine is procured & kept at safe locations before the start of the rainy season. The details of the same must be available at collectorate office. Their expiry also needs to be checked. The responsibility for the same is with chief medical health officer. (CMHO)
10. Wheat & seeds also needs to be stored at safer places. Agriculture department will take responsibility for the same.
11. Sufficient food (fodder & other stuff) & medicines must be made available in ample quantities for animals. Veterinary department head will take responsibility for the same.
12. For cleanliness purposes bleaching powder, chlorine tablets & lime powder should be procured & made available. Municipal board will make sure that it is available.
13. As per directions of ADM technical people must be deployed at lakes & dams. In addition to this PWD should also depute technical personnel at bridges i,e pools. Water resources department & PWD will take responsibility for the same.
14. In flood affected areas details of all the private & public vehicles must be available. Details of the owners must be available.
15. Inspection of all equipments or facilities available must be done. The same should be made available on collector website & the instruction should be given by ADM.
16. At the district & SDM level no of motor boats & details of the owners must be available in the setup control room.
17. Home guard District Commandant must train atleast ten people to drive motorboat & who at the same time are trained in swimming also.

18. District Commandant Home Guards should prepare all facilities available with him & make available to relief dept & related departments.
19. PWD khargone should take responsibility of the equipments it has & should look after its maintenance from time to time.
20. During rainy season motor boat, row boat & soft boat must be in the running condition. In addition to this responsibility for selection of the people who are trained in driving boats & fuel availability is taken care by HOD,PWD & these people must be in contact with Control Room.
21. When the rainy season starts 10 homeguard personnel(each) must be deployed at each of four blocks/tehsils i,e khargone, kasrawad, mandaleshwar, barwaha. This is done so that there is no delay in sending out the personnel to the flood affected areas. In addition to this 5 additional personnel of home guards must be deployed in the control room setup in the collectorate office during disaster.
22. During the rainy season control room will be setup in the collectorate office khargone which will look after flood related information. This is done so that there is seamless flow of information.

C.1.2.2 Pre-Disaster Warning, Alerts

During rains whenever water is released from upper veda dam the relevant information needs to be passed on by the respective department(irrigation) to SDM khargone & Bhikangaon, Tehsildar Bhikangaon, jhiranya & gogava atleast 30 mins in advance. If water level in the narmada river rises then it needs to be informed to the respective uthorities. Danger level for narmada river is 538 feet & if it reaches 563 ft then there is a high chance of flood.

Table C. 1.2.2

| Hazards | Agencies |
|-----------------------------|------------------------------------------------------------------------------------|
| Flood | Irrigation Department, water resources department and the flood relief cell |
| Industrial accidents | Department. of Industry, SPCB |
| Fire | Fire Brigade |

C.1.2.3 Evacuation stage

Whenever there is warning of flood people of the likely to be affected villages are shifted to safer areas. For this temporary shelters are required to be setup in safe places. All the families of three villages namely sound, paldhakurd & khamid are shifted to a safe place during floods. Three villages of tehsil jhiranya were coming under submergence due to upper veda project during 2011. People of

this village were not willing to shift elsewhere. Contingent plan for the same was prepared for three camps at village gaval kheda & kharwa.

The procedural steps for evacuation of people under threat or likely to be affected by the disasters are as follows:

1. Evacuation team should separate into smaller groups targeting individually on different level of casualties.
2. The unconscious and severely hurt will given the top most priority and sent for in the ambulances
3. The people needing first aid come next who should be treated promptly.
4. Activate all the emergency communication mechanisms
5. Logistics should be contacted immediately for making the provisions for transportation.
6. Temporary relief centers should be set up as soon as possible to house all the affected people or they should be immediately sent for the existing relief centers.

C.1.2.3 Organizing mock drills

As of now no mock drills are conducted for disaster. Mock drills were conducted for fire fighting only. Mock drills should be conducted by district administration so as to gauge the preparedness mechanism of the district during disaster.

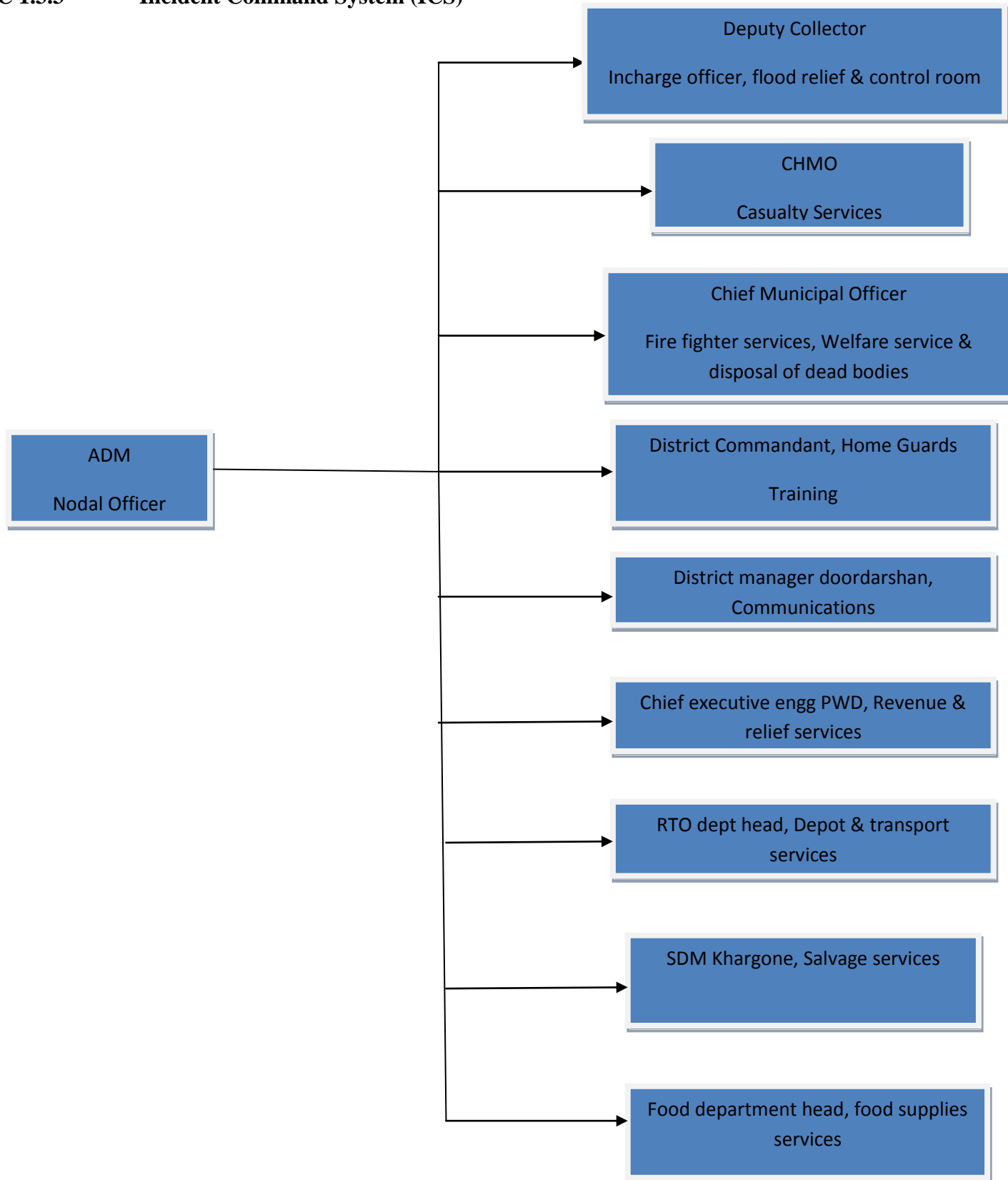
C 1.3 Response Plan

Effective response planning requires realistic identification of likely response functions, assignment of specific tasks to individual response agencies, identification of equipment, supplies and personnel required by the response agencies for performing the assigned tasks. A response plan essentially outlines the strategy and resources needed for search and rescue, evacuation, etc. A response plan will be supplemented by relief management planning activities, including relief needs, transportation routes, coordination with local police, District, State, national and international relief teams, transport vehicles, alternative communication like HAM radios (in case of communication failures).

C 1.3.1 Disaster Emergency Response Force

In last years disaster management meeting it was decided that atleast 40 personnel of homeguards should be trained in swimming & driving of boats. Out of these 10 personnel would be deputed in each of four blocks i.e khargone, kasrawad, mandaleshwar, barwaha. This is done so that there is no delay in reaching out to the affected people. This also shows that district administration has taken a lesson from previous disaster. The District Commandants, Home Guards will be in charge of the force at the district level.

C 1.3.3 Incident Command System (ICS)



The main function of these members of ICS is to prepare a draft of planning, operation, logistic & financial needs for the work which has been assigned to them.

C 1.3.4 Rapid damage assessment & reporting

Rapid Damage Assessment Team is usually set up immediately after disaster. This team includes all the technical personnel like agricultural officer to assess the crop damage, executive engineer of PWD to assess the damaged houses & administrative personnel like Z.P. members, S.P to maintain the law and order situation, Tahsildar. In addition it should also include NGO's & community based organizations. In short it includes atleast one key personnel of every line department associated with it. The team will immediately assess the damage & report it to the concerned department which inturn reports to the district administration. District administration places this request to the centre so as to get funds quickly. The above mentioned procedures are required to avoid unnecessary delays in relief & compensation.

Table C 1.3.4

Table 1: Initial Assessment Report

| INITIAL ASSESSMENT REPORT | | | | | | | | | | | |
|---------------------------|-------------------------------------------|---------------------------|------------------------------|----------------|--------------|-----------------|-----------------|----------------|----------------|--------|--------------|
| 1 | NATURE OF DISASTER: | | | | | | | | | | |
| 2 | DATE OF OCCURRENCE: | | | | | | TIME: | | | | |
| 3 | DAMAGE AND LOSS ESTIMATES | | | | | | | | | | |
| | Name of the Site (Village, Block, Tehsil) | Total Population Affected | People missing | People injured | Severity | | Immediate needs | Houses Damaged | | | Action taken |
| | | | | | H | L | | L | M | H | |
| | | | | | | | | | | | |
| 4 | INFRASTRUCTURE DAMAGE | | | | | | | | | | |
| | Name of the Site (Village, Block, Tehsil) | Housing | Agriculture | Animals | Water source | Road and bridge | Power | Communication | Govt. Building | Others | |
| | | | | | | | | | | | |
| 5 | NEED ESTIMATES | | | | | | | | | | |
| | Name of the Site (Village, Block Tehsil) | Medical Needs | Population requiring shelter | Clothes | Food | Water | Sanitation | Any Other | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| 6 | ANY OTHER VITAL INFORMATION | | | | | | | | | | |
| | | | | | | | | | | | |
| 7 | SPECIFY IMMEDIATE NEEDS: (With quantity) | | | | | | | | | | |
| | Food | | | | | | | | | | |
| | First aid | | | | | | | | | | |
| | Machinery | | | | | | | | | | |
| 8 | Possible Secondary Affects: | | | | | | | | | | |

| | | |
|---------------|-------------------------------------|-------------|
| . | | |
| 9 | NAME THE CONTACT PERSON: | |
| 10 | AGENCY/ADDRESS: TELEPHONE NUMBER | |
| | DATE: | SIGNATURE: |
| | FOR OFFICE PURPOSE: | REPORT NO.: |
| ACTION TAKEN: | | |

C 1.3.5 Distt. Search & rescue Team

Usually in the district every year disaster management is held. In this meeting the instructions for forming the team are given by the collectorate. This meeting is usually held before the start of the rainy season so as to be better prepared for floods. Team members have to be periodically trained, retrained on the elements of collapsed structure, confined space search & rescue, and rope rescue etc.

District & search rescue team needs to be formed immediately by the police department & home guards department during disaster. They should map out a strategy to rescue affected people immediately.

C 1.3.6 Medical response

Medical response team is usually formed during disasters only. Every year in the district disaster management is held among which CHMO also attends the meeting. Here the directions are given that medical response team should be formed as & when required. In this meeting other directions are also given like stocking of all essential medicines should be done & their expiry should be checked. This meeting is usually done before the start of the rainy season so that there is no outbreak of disease. The medical response team which is formed should include doctors, nurse & pathologists. At the same time mobile medical vans with emergency requirements also needs to be identified. Members whosoever is included in this team are well trained on necessary services like advance life support, first aid response etc.

Medical response team needs to be formed by the chief medical health officer during disaster. This team should be immediately dispatched to the affected areas with all the medicine stock so as to prevent the outbreak of the disease.

C 1.3.7 Logistic arrangements

Details of the good working condition vehicles & its allied equipments needs to be displayed by RTO department on line, for reference in case of any type of emergency. If possible mobile nos of all the concerned owners should be noted down. Public vehicles can come in quite handy during emergency. RTO is the dept which has got such details. They need to keep their records updated so that exact estimate of the vehicles required can be found out. As of now there are 681 light commercial vehicles & 199 heavy commercial vehicles registered with khargone district.

Usually during disaster it is witnessed that there is shortage of vehicles. If the details of all these are made available then their services can be availed. Details of all these during emergency should be made available by RTO office Khargone.

C 1.3.8 Communications

- Control room is equipped with all necessary communication equipment like Telephones, fax, VSAT connection, PC, Mobiles. This type of equipment aids in locating missing persons & also helps to assess the damage. It also acts as a source of communication as normally during disaster all the telephone lines are cut off. This centre acts as a vital source during this time. It also acts as a source of communication with nearby districts & other departments. It helps to keep a tab on the current position.

In the district control room is setup in the collectorate before the start of the rain season. This control room is equipped with all necessary equipment for communication. All the information related to the releasing of water by the dams & related information is available at this control room.

C 1.3.9 Temporary shelter management

Details of temporary shelter are not available but when disaster comes temporary relief camps are required to be setup. They should be setup at safer places where it is no flood affected. Usually whenever disaster occurs district administration identifies & marks safer places where there is no disaster. At the same time safety & security of affected families must also be taken as the first priority of SDM.

C 1.3.10 Water and Sanitation (WATSAN)

WATSAN is also a very important element, which needs to be addressed on the top priority, as it is directly related to the basic needs, especially in case of the affected population. The Required provisions to be made by respective municipalities, for supply of pure drinking water, and to meet the other needs of water as well as timely addressal of sanitation requirements. This also includes the maintenance of hygiene, in & around emergency shelters, periodic monitoring and inspection of storm water drainage, nallah, adherence of the cleaning schedule of the camps and other places.

Municipal board should ensure the same & make sure that drinking water facility is available to all. At the same time cleaning of drains & inspection of storm water drainage must well be completed before the start of the rainy season.

C 1.3.11 Law & order

The Police Department shifts the people to the safer places. It helps the Revenue Department to carry out relief work without any hindrance during disaster period and safeguard the properties of the victim. It will arrange law and order against theft in the disaster-affected area and co-ordinate with the search and rescue operation through NCC/VTF/NGO. It will also arrange for security at the

relief camps/relief material storages. It is also responsible to maintain law and order at the time of distribution of relief material. It assists the authorities for evacuation of people to the safe places. It makes due arrangements for post mortem of dead persons, and legal procedure for speedy disposal. It specially protects the children and the women at the shelter places.

Law & order is one of the most important functions during disaster. It is the duty of the police department to ensure this. In addition to this it should also ensure safety & security of all affected people.

C 1.3.12 Public grievances/missing persons search/media management

A district level committee will be formed under the DM / DC. It will address the grievances of the public, including the missing persons issue, search & rescue team role etc. The search and rescue team should search for the missing persons. Media is an important source of information for the general public, especially in a disaster situation. Even the Government officials get a lot of useful information about the field situation from the media reports. Since the disaster management involves fast communication of information to the community relating to warning of a likely event and the arrangements for emergency response. The administration must utilize the local media resources for communicating with the local community. In a disaster situation, not only the people directly affected but their relatives and friends are also anxious to know about the welfare of their acquaintances. In such a situation, the media is able to inform the people about the welfare of the people.

C 1.3.13 Animal care

During an earthquake and flood, not only the human beings but also the domestic cattle / animals are also affected and need to be taken care of simultaneously. The Animal Husbandry Department will organize special animal relief camps in coordination with Revenue Department, Nagar Nigam and allied support work services. The following services will be provided in the camps:

- To provide shelter to the affected animals by erecting temporary sheds
- To provide feed, fodder and potable drinking water
- Treatment of injured and sick animals by establishing a Veterinary Treatment Post to ensure effective treatment of animals
- List of animals would be prepared with details of their owners and distinguished marking will be made
- Arrangement for proper disposal of animals excreta
- Disposal of carcasses from the affected area shall be done immediately
- To prepare a list of dead animals

- Arrangements for grazing and milking of cows will be undertaken as per existing regulations
- To provide adequate veterinary cover, mobile and static hospitals will be established
- Pre monsoon vaccinations can be administered to prevent diseases and hence outbreak of epidemics.

The animal husbandry department will take care of disposal of carcass with necessary equipments in case of cattle death are there in the affected areas with a view to restoration of public life and result oriented work. They should make arrangements to treat the injured cattle. They should also vaccinate the animals against various diseases. Arrangement for pets and cattle should be made separately.

C 1.3.14 Management of deceased

The Carcasses Disposal team is responsible for the clearing of carcasses after the disaster. The team should put in all efforts to check spread of diseases by disposing off the carcasses at the earliest and in the right manner. The health department will immediately start the procedure for post mortem of the dead persons as per the rules. Disposal of dead bodies is to be carried to prevent the outbreak of epidemics. Arrangement should be made to issue death certificates of the deceased to the relatives.

Identification & disposal of dead bodies needs to be done quickly to prevent the outbreak of the disease. The responsibility for the same is Chief Municipal Officer & CEO Janpad Pnachayat.

C 1.3.15 Civil Defense and Home Guards

The Civil Defense and the Home Guards will be deployed for emergency response, community preparedness and public awareness. Homeguards are one of the key departments in these situations. They are the first in line of action. Whenever any disaster happens in the district they are the first ones to reach the spot. If the situation gets out of hand then only army is called in. It has been observed in the past that they have responded quite effectively to disasters & this is the prime reason why they have been deployed for emergency response, community preparedness & public awareness.

C 1.3.16 Role of Private Security

As per the recent private security bill introduced by the State Govt, the private guards and security agencies have to play a very vital role in disaster management, and especially in the disaster response stage. Private security can be established during disaster if any shortage of personnel occurs. There might be some private security who are well trained enough to handle the situations & their services can be of quite help.

C 1.3.17 NGOs & Voluntary organizations

As such no NGO in the district are involved in disaster management. They can be involved in giving training to the communities which were affected earlier. Last disaster occurred in the district 6 years back & that's why their role could not be ascertained.

NGOs and Voluntary organizations can contribute in the following areas:

- Ensuring communication links both within the community and with the administration.
- Controlling rumors and panic behavior and undertaking confidence building activities.
- Organizing local work teams for immediate rescue, and relief e.g. cooked food, first aid, and assistance in law and order.
- Assisting the handicapped that need special help.
- Guarding major installations and evacuated properties till the administration takes over.

C 1.3.18 Relief management planning

Relief management planning faces a lot of problems while serving the people in disaster hit areas. It has been observed that relief equipment does not reach quickly because of lack of proper connectivity. It has also been observed that whenever relief equipment is distributed to the people there is a fight or stampede kind of situation among them. Other problem is mismatch in estimation of demand & supply of relief material.

Relief department should have all the details of necessary items like tent, rod, bag & boats. The owners of the same needs to be noted immediately so as to better prepared at the time of disaster.

The specific functions of the various desks are given below:

Functions of Infrastructure Desk

- Shelters for affected people with sanitation facilities
- Temporary structure for storage
- Kitchens
- Medical facilities
- Education facility

Functions of Logistics Desk

1. Issue Village relief tickets to the affected families
2. Organize distribution of Relief Supplies
3. Co-ordinate supplies distributed directly by NGOs and other organizations including private donors
4. Mobilize and co-ordinate the work of the volunteers ensuring community participation
5. Organize facilities for staff and volunteers

Functions of Health Desk

1. Disposal of dead bodies
2. Disposal of carcasses
3. Disposal of waste and waste water
4. Treatment of the injured and the sick
5. Preventive medicine and anti-epidemic actions
6. Inspection of food, water supplies, sanitation and disposal of waste

Functions of Communication and Information Management Desk

1. Data collection

2. Record keeping
3. Assistance in locating missing persons
4. Information center
5. Organization of information for Site Operations Center and on specific Demands
6. Maintaining In-Message and Out-Message Register
7. Sending all Out-Messages on behalf of Camp Officer of the Relief Camp

Functions of Operation Desk

1. Salvage operations
2. Feeding centers for two weeks to be set-up at the earliest

C 1.3.19 Media Management

Provide strategy for managing mass media such as newspapers and television in terms of dissemination of information at the wake of disasters. Clear guidelines would help the administration in avoiding communication of wrong information and creating panic. Public relation officer would be responsible for disseminating of information.

This plan has recognized the power of the media in keeping the people and the administration informed and seeks to utilize the media for the following purposes:

- The nature of the likely hazards, which may affect the lives of the people of the district and the ways to protect their lives and properties from the hazard;
- Increasing community awareness about the mitigation measures that can protect the lives and properties from the hazards;
- Communicating an advance warning of impending disaster to the people in order to give them time to take any protective action required;
- Identity of the people affected by the disaster and the nature of the effect;
- Arrangements made by the administration for the relief to disaster victims;
- Raising the awareness of the community to include mitigating measures for the recovery process;
- Keeping a watch over the relief operations and to keep the Government and the people informed about the same.

Thus, this plan provides for using the reach of the media with the people through all the four phases of disaster management. In Madhya Pradesh, District Collector interacts with the media through Public Relations Officer. The same arrangement will work even in relation to disaster management. In the absence of the Collector, Officer-in-charge of DECR will issue the press release through PRO.

C 1.3.20 Fire Services

The Department of Fire Services is one of the crucial responders to disasters. The staff of Fire Services are trained, retrained in disaster management skills, and will be further upgraded to acquire multi-hazard rescue capability, in order to tackle any emergency related to fire or the allied

substances. One problem which is observed is that rural areas are deprived of this service. Facility for fire brigade must also be available in rural areas so as to bridge the gap.

Whenever there is a fire incident in residential homes, fields, industrial units or any place then it is the duty of fire department to reach that place immediately & make sure that fire is doused & at the same time ensuring that all people in the affected area are evacuated immediately.

C 1.4 Recovery and Reconstruction Plan

This section will restore normalcy to the lives and livelihoods of the affected population, by short and long term measures. Short-term recovery will return the vital life support systems to minimum operating standards while long term rehabilitation will continue till complete redevelopment of the area takes place.

C 1.4.1 Restoration of basic infrastructure

Depending on the extent of the damage to buildings & other infrastructure funds are released to the affected families. After the disaster rapid assessment team conducts a study & tries to assess the damage. They make preliminary estimate based on their findings. Then accordingly funds will be release based on the estimates. Housing board will take care of the reconstruction plans. Adherence to the zoning laws and other necessary precautions depending on the type and degree of disaster will ensured while the infrastructure is being restored.

C 1.4.2 Reconstruction of damaged buildings/social infrastructure

Usually reconstruction of damaged buildings is addresses by the funds received from the govt. Reconstruction of damaged buildings can also be addressed and supported through the advance tools like Insurance, Short-term Loans, and by any other important means, which are affordable.

Houses can be reconstructed in the disaster hit areas according to the following instructions:

1. Owner Driven Reconstruction
2. Public Private Partnership Program (PPPP)
3. All the houses should be insured.
4. Owner Driven Reconstruction
5. Financial, technical and material assistance provided by the government.
6. The designs for seismic reconstruction of houses provided by the government.
7. The material assistance provided through material banks at subsidized rates.

C 1.4.3 Restoration of livelihoods

-Restoration of livelihoods should be taken care of by Grants, outside assistance and by other means. NGO's can come in quite handy. They can be roped in to provide training on alternative livelihood resources.

C 1.4.4 Psycho-social interventions

Psycho social needs of the affected victims, including women and children will be taken care by special teams in the health department. The provision of trauma handling and social rehabilitation is very necessary from the point of view of restoration to normal life and should be specifically given priority.

C 1.5 Cross cutting elements

C 1.5.1 Community Based Disaster Management

Communities are always the first responders and hence the initiatives pertaining to Community participation, promote local ownership, address local needs, and promote volunteerism, will be captured. The district level plan will be prepared, by incorporating the information, needs and local vulnerability, keeping in view the community participation at the sub district level.

C 1.5.2 Needs of the Special vulnerability Groups

Special needs of highly vulnerable groups including differently able persons, aged, children and women, will be taken care of, while addressing the preparedness and relief requirements of the disaster victims. A specific strategy for addressing the risk reduction needs of these vulnerable groups will be developed by every line department in the district. These include:

Disabled persons

- Artificial limbs fitted to affected persons.
- Modern wheelchairs, supportive devices provided.

Children

- Day centres set up
- Orphanages established.
- Child help lines established.

Old Persons

- Aged persons given pensions.
- Old Age Homes established.

Women

- Women's Livelihood Restoration Project started.
- Self-employment Schemes for Women.

C 1.5.3 Addressing climate induced anthropogenic issues

Climate change has resulted in the increase in frequency and intensity of many natural disasters and induced anthropogenic effects and hence priority will be given to promote understanding of climate change adaptation strategies, energy efficiency and natural conservation for the mitigation. Now a days because of the change in climate dynamics due to global warming the demarcation is not proper. Because of this flood, the preparedness should change with respect to this climatic change. The changing monsoon pattern and intensity of rains should bring in resistant varieties of crops which can withstand these changes. Awareness regarding these crops should be brought in farmer community. Since some disasters like hailstorms cannot be predicted, crop insurance should be ensured for all the farmers.

C 2 Standard Operating Procedures

Standard Operating Procedures will be prepared with objective of making the concerned agencies / persons understand their duties and responsibilities regarding disaster management at all levels. All concerned departments, divisions and agencies shall prepare their own action plans in respect of their responsibilities. Emergency response teams will be kept ready by each department so that they can move to disaster site/affected area on short notice.

Standard Operating Procedures will be modified and improved upon in light of changing circumstances. The District Magistrate will encourage all the departments to suggest changes in these procedures with a view to enhance the effectiveness of the District Emergency Management Plan

The Standard operating procedure shall be followed during normal times (Non Disaster Stage), warning stage (Before Disaster Stage), disaster stage (During Disaster Stage) and post disaster stage (After Disaster Stage).

- **Non Disaster Stage– Mitigation:** To identify the existing and potential risks and to reduce potential casualties and damage from disasters.
- **Before Disaster Stage– Preparedness:** To build the capacities of local communities in order to safeguard their lives and assets by taking appropriate action in the face of any disaster and to ensure response agencies are able to reach out to potential damage zones in a prompt and coordinated manner.
- **During Disaster Stage-Response:** To attend the immediate need of the affected population in the minimum time possible.
- **After Disaster Stage- Recovery and Rehabilitation:** To build back better.

Department of Revenue and Relief

Non Disaster Time

- To appoint a nodal officer in the DEOC.
- Establish infrastructure for DEOC and maintain in state of readiness with all equipment in working order and all inventories updated.
- Train personnel on operations of DEOC.
- Ensure basic facilities for personnel who will work at district level for disaster response.
- To coordinate the preparedness functions of all line departments.
- Establish disaster management funding mechanisms to ensure adequate resources for preparedness work, and quick availability of resources for relief and rehabilitation when required.
- Ensure that all the Gram Panchayats, urban bodies and blocks prepare their disaster management plan.
- Coordinate with other state departments of state and centre for their disaster management plan at the district level and synchronise the same with the district disaster management plan.
- Help District Administrators with additional resources for disaster preparedness, if necessary.
- On annual basis report to the SEC of the preparedness activities.
- To ensure that funds are being allocated under the District Disaster Mitigation Fund.
- To ensure that structural and non-structural mitigation measures are taken by all its department offices.

Warning Time

- Maintain contact with forecasting agencies and gather all possible information regarding the alert.
- Ensure activation of District EOC in standby mode.
- Instruct all ESFs remain in readiness for responding to the emergency.
- Advice concerned District collectors to carry out evacuations where required, and to keep transport, relief and medical teams ready to move to the affected areas at a short notice.
- Dispatch field assessment teams, if required.
- Provide assessment report to the DDMA.

During Disaster

- Activate DEOC in full form.
- To coordinate and plan all activities with the ESFs.
- Conduct Rapid Assessment and launch Quick Response.
- Conduct survey in affected areas and assess requirements of relief.
- Distribute emergency relief material to affected population.
- Coordinate all activities involved with emergency provisions of temporary shelters, emergency mass feeding, and bulk distribution of coordinated relief supplies for victims of disasters.
- Coordinate NGO, INGO and international agencies interventions/support.

After Disaster

- Organise initial and subsequent technical assessments of disaster affected areas and determine the extent of loss and damage and volume and nature of relief required.

- Keep the DDMA informed of the situation.
- Ensure supply of food, drinking water, medical supplies and other emergency items to the affected population.
- Visit and coordinate the implement of various rehabilitation programmes.
- Coordinate the activities of NGOs in relief and rehabilitation programmes.
- Allocate funds for the repair, reconstruction of damaged infrastructure after considering their overall loss and damage

Department of Home

| |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Non Disaster Time |
| <ul style="list-style-type: none"> • Vulnerability map of the block / Tehsil • Resource Inventory, Capacity analysis. • List of cut off areas with safe route map for communication. • Formulation/ Updation of Disaster Plan for the District. |
| <ul style="list-style-type: none"> • Warning Time |
| <ul style="list-style-type: none"> • List of storage facilities, dealers of food. • Control room setup/assignment of control room duty. • Pre-positioning of staff for site operation centres. • Pre-arrangements to be made as per the demand of various departments. |
| <ul style="list-style-type: none"> • During Disaster |
| <ul style="list-style-type: none"> • Arrangement of alternative communication/generator sets etc. • Arrangement of vehicles/boats of for evacuation. • Dissemination of warning/coordination with District Control room. • Monitor the working of various departments and make frequent visits to disaster struck areas to cross-check. |
| <ul style="list-style-type: none"> • After Disaster |
| <ul style="list-style-type: none"> • Estimating the loss and damage and keep a record. • Share experiences with all the departments. • Continuous aid & proper arrangements till situation is under control. • Monitor that the Repair & Restoration work is in progress as planned. • Examine the performance reports of various departments. • Examine the reports in order to make amendments and prepare a better strategy by taking inputs from all departments. |

Department of Health

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| <ul style="list-style-type: none"> ● Non Disaster Time |
| <ul style="list-style-type: none"> ● Check on the tasks done at Zila, Tehsil & Block level ● Demarcate areas prone to epidemics and other similar disasters. ● Coordination with private health organisations ● Demarcate areas where medical camps can be set. ● Take regular inputs from Swastha Kendras about any unwanted/hostile conditions in terms of endemic/epidemic diseases. ● Awareness among people about diseases & how can they be prevented from spreading. ● Generators to be made available in all major hospitals. ● Prepare a list of inventories required in case of disaster(vehicles/equipments/medicines) |
| <p>Warning Time</p> |
| <ul style="list-style-type: none"> ● Construction & repair of IEC inventory. ● ORS & other important medicines to be procured as requirement. ● Training of employees and people regarding the basic treatment in case of flood/loo/minor bruises etc. ● Procure necessary medicines for cases that are otherwise rare like snake bite, chlorine for cleaning water etc. ● Prepare mobile units for sensitive & prone to be hit areas. ● Identification of sites in probable disaster areas for site operation areas |
| <p>During Disaster</p> |
| <ul style="list-style-type: none"> ● Send task force with necessary medicines to affected areas. ● Procure required medical equipments & medicines in case they fall short of it. ● Strong emphasis to be given to sensitive areas. ● Ensure that appropriate no of Staff/Doctors are present at the affected areas. ● Ensure cleanliness at the medical camps. ● Frequent checks on the Staff/Doctors on duty. ● Postmortem of dead bodies. |
| <p>After Disaster</p> |
| <ul style="list-style-type: none"> ● Monitoring against spreading of diseases ● Continuous medical aid & proper arrangements till situation is under control ● Dead/Injured counselling |

- Injured/handicapped to be treated and arrangement for healthy living facilities
- Provide healthy rehabilitation to disaster affected people.

Department of Transport

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| Non Disaster Time |
| <ul style="list-style-type: none">• Designate one Liaison Officer of the department as the Focal Point and inform all concerned.• Develop and implement disaster management plan for the department.• Carry out survey of condition of all highway systems at state and district level.• Identify and inventories transport vehicles available with the department and ensure that they are all in good working condition.• Identify and inventories transport vehicles available with the private operators in the district.• Allocate additional force to possible Disaster prone roads/routes identified• Ensure that the force so allocated are aware of the possible disaster prone spots on these routes along with the possible type of disaster which may happen, as in the case of Petrol and Diesel transport vehicles leading to and from the IOC depot.• Make departmental mitigation plan and ensure its implementation.• Enforce the speed limits in the government vehicles regulated by the department and organize departmental awareness programs for the same |
| Warning Time |
| <ul style="list-style-type: none">• Depute an officer at the DEOC.• Ensure availability of fuel, recovery vehicles and equipment.• Take steps for arrangement of vehicles for possible evacuation of people |
| During Disaster |
| <ul style="list-style-type: none">• Establish contact with the DEOC.• Take steps for transportation of relief personnel and material to affected areas.• Take steps for movement of affected population to safer areas.• Collate and disseminate information regarding operational and safe routes and alternate routes, fuel availability etc. to personnel operating in the field. |

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| <ul style="list-style-type: none">• Launch recovery missions for stranded vehicles. |
| After Disaster |
| <ul style="list-style-type: none">• Assess damage to transportation infrastructure.• Take steps to ensure speedy repair and restoration of transport links. |

Department of Public Works

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| Non Disaster Time |
| <ul style="list-style-type: none">• Designate one Liaison Officer in the department as the Disaster Preparedness Focal Point. The Chief Executive Engineer will be the liaison.• Take precautionary steps for the protection of government property against possible loss and damage during disaster.• Formulate guidelines for safe construction of public works.• Prepare list, with specifications and position, of heavy construction equipment within the district.• Organize periodic training of engineers and other construction personnel on disaster resistant construction technologies.• Inspect all roads, road bridges by a bridge engineer, including underwater inspection of foundations and piers. A full check should be made on all concrete and steel works.• Inspect all buildings and structures of the state government (including hospital buildings) by a senior engineer and identify structures which are endangered by the impending disaster.• Emergency tool kits should be assembled for each division, and should include:• The designation of routes strategic to evacuation and relief should be identified and marked, in close coordination with police and district control room.• Prepare mitigation plan for the department and enforce the same.• Advise the district disaster management authority on structural mitigation measures for the district.• Repair, Maintenance and retrofitting of public infrastructure.• Identify / prioritize mitigation activities of lifeline buildings and critical infrastructure and coordinate with the DDMA for its implementation.• Place danger sign boards in the areas highly prone to specific type of disasters, such as road accidents etc. |

Warning Time

- Establish radio communications with DEOC.
- Depute one representative at the DEOC as per the directions from DDMA.
- Instruct all officials at construction sites to keep manpower and materials prepared for protection and repair of public works.
- Direct construction authorities and companies to preposition necessary workers and materials in or near areas likely to be affected by disaster.
- Vehicles should be inspected, fuel tanks filled and batteries and electrical wiring covered as necessary.
- Extra transport vehicles should be dispatched from district headquarters and stationed at safe strategic spots along routes likely to be affected.
- Heavy equipments, such as front-end loaders, should be moved to areas likely to be damaged and secured in a safe place.
- Establish a priority listing of roads which will be opened first. Among the most important are the roads to hospitals and main trunk routes.
- Give priority attention to urgent repair works that need to be undertaken in disaster affected areas.
- Work under construction should be secured with ropes, sandbags, and covered with tarpaulins if necessary.
- Emergency inspection by mechanical engineer of all plant and equipment in the district workshops.

During Disaster

- Provide assistance to the damage assessment teams for survey of damage to buildings and infrastructure.
- Adequate road signs should be installed to guide and assist the drivers.
- Begin clearing roads. Assemble casual laborers to work with experienced staff and divide into work-gangs.
- Mobilize community assistance for road clearing by contacting community organizations and village disaster management committees.
- Undertake cleaning of ditches, grass cutting, burning or removal of debris, and the cutting of dangerous trees along the roadside in the affected area.
- Undertake construction of temporary roads to serve as access to temporary transit and relief camps, and medical facilities for disaster victims.
- As per the decisions of the District Emergency Operations Center undertake construction of temporary structures required, for organizing relief work and construction of relief camps, feeding centers, medical facilities, cattle camps and Incident Command Posts.
- If possible, a review of the extent of damage (by helicopter) should be arranged for the field Officer-in-Charge, in order to dispatch most efficiently road clearing crews, and determine the equipments needed.
- If people are evacuating an area, the evacuation routes should be checked and people assisted.

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| <ul style="list-style-type: none"> • Identify locations for setting up transit and relief camps, feeding centers and quantity of construction materials and inform DEOC accordingly. • Take steps to clear debris and assist search and rescue teams. • Provide sites for rehabilitation of affected population |
| After Disaster |
| <ul style="list-style-type: none"> • Carry out detailed technical assessment of damage to public works. • Assist in construction of temporary shelters. • Organize repairs of buildings damaged in the disaster • Prepare detailed programs for rehabilitation of damaged public works. • Arrange technical assistance and supervision for reconstruction works as per request. |

Department of Irrigation and Water Resources

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| Non Disaster Time |
| <ul style="list-style-type: none"> • Communication establishment with District and Block/ Tehsil Control Rooms and departmental offices within the district. • An officer to be appointed as nodal officer. • Activation of flood monitoring mechanism • Methods/communication arrangement of alerting officers on various sites established • Check the preparation level of the department. • Identify the areas that face the maximum flow of the major rivers and also make the locals aware about it. • Identify the flood prone areas and demarcate them and also send a flood surveillance team to such areas. • Mark the maximum safe level of water at all the embankments of rivers, reservoirs and dams. |
| Warning Time |
| <ul style="list-style-type: none"> • Mechanism evolved for forewarning settlements in the down stream/evacuation/coordination with other dam authority. • Identification of materials required for response operations • Repairs/ under construction activity are well secured • Water level gauges marked • Inlet and outlet to tanks are cleared • Watch and ward of weak embankments & stock piling of repair materials at vulnerable points • Guarding of weak embankments • All staff informed about the disasters, likely damages and effects. • Procure necessary inventory for flood situations and keep it properly maintained. |

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| <ul style="list-style-type: none"> • Inventories for the case of breakage of dam/embankments like sand sacks, rocks, etc need to be brought and checked well in advance. |
| <p>During Disaster</p> <ul style="list-style-type: none"> • Surveillance of flood hit/susceptible areas. • Make announcements about the coming flood. • Usage of advanced technology like GPS to calculate damage and the areas where maximum damage would occur. • Safety of equipments of the Irrigation department to be maintained. • Survey of major dams, embankments, bridges, channels etc is done. • Emergency help services to areas where bank got broken. |
| <p>After Disaster</p> <ul style="list-style-type: none"> • Estimating the loss and damage and keep a record. • Surveillance for protection of people. • Share experiences with the department. • Formulate a checklist and re-prepare an emergency plan. • Training of staff to minimize the loss of life/property. |

Department of Agriculture

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| <p>Non Disaster Time</p> <ul style="list-style-type: none"> • Designate a focal point for disaster management within the department. • Identify areas likely to be affected. • Arrange for keeping stock of seeds, fertilizers and pesticides. • A pests and disease monitoring system should be developed to ensure that a full picture of risks is maintained. • Historical data to be gathered on the drought prone areas. |
| <p>Warning Time</p> <ul style="list-style-type: none"> • Provide timely warning to DEOC/DDMA about droughts. • Check available stocks of equipments and materials which are likely to be most needed after the disaster. • Stock agricultural equipments which may be required after a disaster • Determine what damage, pests or diseases may be expected, and what drugs and other insecticide items will be required, in addition to requirements of setting up extension teams for crop protection, and accordingly ensure that extra supplies and materials, be obtained quickly. • Provide information to all concerned, about disasters, likely damages to crops and plantations, and information about ways to protect the same. |

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| <ul style="list-style-type: none"> All valuable equipments and instruments should be packed in protective coverings and stored in room the most damage-proof |
| During Disaster |
| <ul style="list-style-type: none"> Depute one liaison officer to the DEOC. Monitor damage to crops and identify steps for early recovery. Estimate the requirement of Seeds Fertilizers Pesticides, and Labour. Organize transport, storage and distribution of the above with adequate record keeping procedures. Ensure that adequate conditions through cleaning operations are maintained to avoid water-logging in flooded areas. |
| After Disaster |
| <ul style="list-style-type: none"> Quantify the loss and damage within the quickest possible time and finalize planning of agriculture rehabilitation. Ensure availability of adequate supply of seeds, seedlings, fertilizers, pesticides and agricultural implements. Assist farmers to re-establish their contacts with agriculture produce market and ensure that appropriate prices be offered to them. |

Department of Rural Water Supply & Sanitation

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| Non Disaster Time |
| <ul style="list-style-type: none"> Provide clean drinking water in all areas rural/urban. Regular cleaning of nalas and prevent them from choking. Facilitate proper drainage in all areas to prevent diseases. |
| Warning Time |
| <ul style="list-style-type: none"> Proper arrangement of water tankers in good condition. Arrange for generators in advance. Make necessary arrangements of chlorine tablets for disaster prone/expected areas. Repair the platforms of tube wells if required and any other necessary repairs if required to avoid damage. |
| During Disaster |
| <ul style="list-style-type: none"> Cleaning water sources and continuous monitoring. Supply of clean water at hospitals and medical camps. Provide water through water tankers wherever required. Provide emergency help to clean and start tube wells & other water sources. |

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| <ul style="list-style-type: none"> • Repair of damaged water sources to be carried out. • Aware people about how to keep the hand pumps free of microbial infections. |
| After Disaster |
| <ul style="list-style-type: none"> • Reinforcement & reconstruction of damaged sources and to keep records. • Share experiences with the department. • Training of employees. • Formulate a checklist and re-prepare an emergency plan. |

Department of Veterinary

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| Non Disaster Time |
| <ul style="list-style-type: none"> • Communication establishment with district and Block / Tehsil control rooms and departmental offices within the division. • Listing of club houses, schools, community centers that can be used as shelter for animals. |
| Warning Time |
| <ul style="list-style-type: none"> • Collect information from different areas and to act accordingly (Assignment of duties). • Preparation of shelters in clubs, Schools, Halls etc, for animals and shifting them if necessary. • Tagging the animals to avoid mix up and chaos. • Getting proper stock of fodder for cattle. |
| During Disaster |
| <ul style="list-style-type: none"> • Veterinary Hospital & Veterinary Dispensary at every important place (thickly cattle populated areas) headed by the Veterinary Assistant/ Surgeon. • Regular collection of situation report of the risk and vulnerable areas from the officers assign for the purpose. • Replacement of affected cattle in the shelters/camps, collection of fecal waste and cleaning etc. • Feeding the animals. |
| After Disaster |
| <ul style="list-style-type: none"> • Veterinary First Aid centre/stockman sub-centre at most of the areas to me made and all the wings should be ready to combat the situation. • Getting the animals back to their owners and returning the stray ones to Nagar Maha Palika. • Cleaning of temporary shelters. |

Department of Fire Service

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| <p>Non Disaster Time</p> <ul style="list-style-type: none"> • Strict enforcement of laws made for the security of Fire squad and proper proceedings to be done in case the law is violated. • Regular check of equipments and procuring new ones as and when necessary. • Demarcating Industries and areas susceptible to fire, events that are susceptible to fire etc. • Aware people about their safety how to mitigate fire & its effects. • Training of employees keeping their safety in mind. • The blueprint of any building/house should not be accepted without proper Fire Safety measures. |
| <p>Warning Time</p> <ul style="list-style-type: none"> • Train people how to mitigate fire in early stages and foremost how to avoid it. • Training of people on how to react in an emergency situation. • Train staff and Raj Mistri’s about latest Fire Fighting techniques |
| <p>During Disaster</p> <ul style="list-style-type: none"> • Find a safe way to save people trapped in fire in a house/ building/ aero plane/ train/ industry/ boiler etc. • Get control over fire and minimize damage in case of an explosion. • Control the situation in case of gas leak or leakage of some dangerous chemical. |
| <p>After Disaster</p> <ul style="list-style-type: none"> • Help other departments in search & rescue and estimation of damage. • Share experiences with the department. • Training of employees about new disasters (related to fire) that can occur. • Formulate a checklist and re-prepare an emergency plan. |

Department of Telecommunications

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| Non Disaster Time |
| <ul style="list-style-type: none"> • Communication establishment with District and Block /Tehsil Control Rooms and departmental offices within the division. • An officer to be appointed as nodal officer. • Continuous training of staff on the usage of new equipments that are procured. |
| Warning Time |
| <ul style="list-style-type: none"> • Prepare an inventory of resources that would be required and procure the material based on estimation. • Train staff on quick response to restore the Tele-connectivity of the district. |
| During Disaster |
| <ul style="list-style-type: none"> • Standby arrangements for temporary electric supply or generators. • Inspection and repair of poles etc. • Identification of materials required for response operations. |
| After Disaster |
| <ul style="list-style-type: none"> • Repair of damaged poles & lines etc as soon as possible to restore Tele-connectivity in the district. • Share experiences with the department. • Training of employees for better performance. |

Home Guards

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| Non Disaster Time |
| <ul style="list-style-type: none"> • Get details of the staff with their address and phone numbers • Arrange for details of fuel arrangement for ships-mechanized launches at the time of emergency. • Do's and Don'ts to be observed during emergencies and details of priorities should be given to the staff. • Set up for evacuation of people from affected area of the river side area. • Details of buildings, vehicles and equipments and list of contractors with vehicles and equipments should be procured. • Prepare map showing rivers and the important routes • Maintain communication equipments, telephone line, telex lines, megaphone and amplifiers with statistical data. • Make a list of details of important telephone numbers of water supplies, control room, hospitals, drainage system, railway stations, bus depots, strategically important places, Army Air force Navy camps and other sensitive places, major industrial units, and other communication channels which can be used during emergency. |

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| <ul style="list-style-type: none"> • Ensure the arrangement for transportation & evacuation of people from the affected areas. • Prepare the action plan regarding repairs and alternative ways in case of disruption of transportation. • Prepare plan showing the alternative routes and arrangement for transportation of goods etc; during emergencies. • Inspect the garages and control point etc; which are damage prone. • Make due arrangement for materials to restore the facilities in case the movement of the materials and goods on the ports are damaged. • Prepare an action plan to avail on temporary bases, the technical personnel from the nearby district which is not affected. • Collect the details of swimmers in the district. • Make arrangement for sufficient fuel during emergency. |
| <p>Warning Time</p> <ul style="list-style-type: none"> • Maintain the equipments available such as cranes, diesel generator, earth mover machines, de-dusting pumps, cutters, tree cutters, ladders, ropes, flood lights, shovels, axes, hammers, RCC cutters, etc. which can be used during emergency and will ensure that those are in the working conditions. • Take due care to see that the transportation at shelters and emergency hospital is not disrupted during calamities. • Prepare a list of public properties related to transport department, which are in the damage prone area and will arrange in advance to minimize the damage. • Specifically take action to ensure that the fishermen do not move out for fishing as well as sailing during the final warnings of flood, etc. • Evacuate the fishermen to a safe place and if they deny, to get it done forcefully. • Ensure that the warning signals are received in time and shown immediately to the people. |
| <p>During Disaster</p> <ul style="list-style-type: none"> • Undertake the work of search and rescue and also the relief work • Set up a temporary special control room and information centre at the main bus station. • Immediately contact the district control room and will assist in the work • Ensure that the staff is on duty at the headquarters. • Assign the work to be done by the subordinate officers and staff regarding transportation under DDMP and to send them to their sites. • Ensure the availability of resources included in the DDMP and will make due arrangements to get those during emergency. • Consult the liaison officer to close the ports and sailing in the rivers, which is damage prone or dangerous for the safety of the people as well as the property. • Assist the administration to send the messages regarding warning to the remote area |

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| <p>After Disaster</p> <ul style="list-style-type: none"> • Follow the instructions of District Liaison Officer. • Carry out the duty assigned for search and rescue work. • Engage the resources and manpower available to manage the disaster. • Review the matters regarding closing of movement at the port for safety measures and will ensure that it is restarted very soon. • To contact the district control room if additional equipments, vehicles, manpower, technical personnel are necessary to restore the port related activities. • Prepare a primary survey report of damage and send it to the District Control Room and to the administrative head. • Collect the details of approach roads connecting the damaged area and get them repaired in co-ordination with the competent authority |
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Rural Development Department

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| <p>Non Disaster Time</p> <ul style="list-style-type: none"> • Designate one Liaison Officer in the department and the district as the Disaster Management Focal Point. • Develop a district disaster management plan for the department. • Prepare maps showing population concentration and distribution of resources. • Encourage disaster resistant technological practices in buildings and infrastructure. • Encourage the people in earthquake prone areas to adopt earthquake resistant technologies. • Report activities in periodic meetings of the district disaster management advisory committee and to DDMA. • In coordination with PWD conduct regular training to the engineers of the department. • Appoint one officer as focal point for mitigation activities • On the basis of its developmental responsibility, liaise with other line departments and agencies for a coordinated mitigation approach. • In coordination with the DDMA, conduct building assessments, identification of structural and non structural mitigation activities. • Organize awareness programmes for BDO's, Panchayat secretaries and Gram Pradhans on structural and no-structural mitigation activities. |
| <p>Warning Time</p> <ul style="list-style-type: none"> • Focal Point in department to keep in touch with the DEOC. • Alert all concerned about impending disaster. • Ensure safety of establishments, structures and equipment in the field |

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| <ul style="list-style-type: none"> • Ensure formation of committee for rescue, relief and rehabilitation work and local volunteer teams. |
| During Disaster |
| <ul style="list-style-type: none"> • Ensure information flow from affected Gram Panchayats and maintain regular contact with DEOC (24 hrs). • Support revenue department in establishing ICP's in the affected areas • Ensure availability of drinking water at times of need. • Provide necessary infrastructure to carry out relief works • Assess initial damage |
| After Disaster |
| <ul style="list-style-type: none"> • Quantify the loss/damage • Organize reconstruction of damaged houses on self help basis with local assets and materials received from the government. • Take up repair/reconstruction work of infrastructure damaged by disaster |

Panchayat Raj

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| Non Disaster Time |
| <ul style="list-style-type: none"> • Develop a disaster management plan for the department at district level & update it annually. • Analyze the training needs of the department's personnel, which include its officials and elected representatives of Gram Panchayat, Panchayat samiti's and Zila Panchayat and organize trainings with the help of HIDM or other agencies. • Conduct gram Panchayat level mock drills as part of preparedness. |
| Warning Time |
| <ul style="list-style-type: none"> • Prepare & implement department's mitigation plan • Ensure that all the development schemes of the department have a mitigation component as an integral part |
| During Disaster |
| <ul style="list-style-type: none"> • Coordinate with local authorities and support the response efforts. • Coordinate the support from unaffected gram Panchayats. |
| After Disaster |
| <ul style="list-style-type: none"> • Ensure proper distribution of reconstruction schemes and monitoring of the same during Block development committee and Zila Parishad meetings |

Forest Department

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| Non Disaster Time |
| <ul style="list-style-type: none"> • Prepare a department disaster management plan for the district. • Depute one liaison officer for disaster management. |

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| <ul style="list-style-type: none"> • Forest Fire prone areas should be identified and extra vigilance be ensured in such cases. • Depute one liaison officer within the department, who will be in contact with the SEOC during disasters. • Every year pre-fire season meetings should be organized to take the stock of the preparedness at Range level • Prepare & maintain forest lines • Organize community awareness programs • Train the Gram Panchayat disaster management committees in forest fire prevention, protection and control, especially in those gram Panchayat which are located at the fringes of forest areas. • Prepare mitigation plan for the department buildings and infrastructure. |
| Warning Time |
| <ul style="list-style-type: none"> • A rapid response team will be established at division/sub-division/range level, which will have all tools and equipments readily available. • Information regarding issue alerts to nearby population |
| During Disaster |
| <ul style="list-style-type: none"> • Respond within the department as per the department disaster management plan • The liaison officer will coordinate with DEOC for information exchange & also for requirements of resources to & from DEOC |
| After Disaster |
| <ul style="list-style-type: none"> • Damage assessment and sharing of reports with DEOC |

Department of Food & Civil Supplies

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| Non Disaster Time |
| <ul style="list-style-type: none"> • Make go downs in disaster prone areas in advance. • Collect necessary resources keeping the type and intensity of disasters that have previously occurred or are expected to occur. • Make proper arrangements so that the stock in the go downs does not rots/spoils. |
| Warning Time |
| <ul style="list-style-type: none"> • Make necessary arrangements according to the expected requirements and procure the material which the department is short off. • Form teams and train them on how to ration resources. |
| During Disaster |
| <ul style="list-style-type: none"> • Proper keeping of resources. • Arrangements made for the distribution like vehicles through help from DDMA or other departments. |

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| <ul style="list-style-type: none"> • Make an inventory according to the prevailing needs and the estimated time and hence procure the needful. |
| After Disaster |
| <ul style="list-style-type: none"> • Use the equipments/resources from time to time so that they remain in working condition. • Strict monitoring to keep a check on unauthorized using of resources and legal proceedings to be carried out if required. |

Electricity Department

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| Non Disaster Time |
| <ul style="list-style-type: none"> • Prepare and manage inventory for emergency operations. • Training of electricity department workers and make sure that proper norms are being followed at the time of installation of various electric units/instruments. • Make various applicable and implementable schemes regarding the setup and examination of electrical units/instruments. • Make people aware so as to minimize the damage to life/limb caused due to electricity. |
| Warning Time |
| <ul style="list-style-type: none"> • Make provisions for providing electricity to rehabilitation centers in disaster hit areas & to cut off electric supply from risky areas in case of emergency. • Follow proper regulations monitor continuously so that in case of wire breakage the current does not spreads. • Make proper arrangements and follow stringent norms such that in case of a natural calamity, (like earthquake, flood, cyclone etc) the high tension line does not get damaged. |
| During Disaster – Response |
| <ul style="list-style-type: none"> • Cut off electricity immediately after receiving information about any disaster so as to minimize the damage caused. • Survey the spot and estimate (also help in estimation) the damage caused. • Be ready to provide electricity in areas where it is needed and can be provided safely. • Make a plan about how to re supply electricity to important areas, site operation centers, Industries, etc. • Examine and repair major poles, transformers & wires necessary for getting electricity supply back to areas needed. • Minimize the damage caused to life by demarcating dangerous areas and cutting electricity in time. • Restore the electricity facility in affected areas. |
| After Disaster – Recovery and Rehabilitation |
| <ul style="list-style-type: none"> • Repair of damaged poles, transformers and conductors etc as soon as possible to restore electricity in the district. • Surveillance for protection of people. • Share experiences with the department. • Formulate a checklist and re-prepare an emergency plan. |

Department of Education

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| <p>Non Disaster Time – Preparedness</p> <ul style="list-style-type: none"> • Identify one Liaison Officer in the department at district level as Disaster Management Focal Point. • Develop district level disaster management plan for the department • In consultation with DDMA, state education directorate and state education board include disaster related subjects in the curricula in schools, and colleges. • Arrange for training of teachers and students on Dm and school safety activities. • Ensure that all schools and colleges develop their disaster management plans. • Ensure that construction of all educational institutions in earthquake zones is earthquake resistant. • Conduct regular mock drills in the educational institutes |
| <p>Non Disaster Time –Mitigation</p> <ul style="list-style-type: none"> • Identify structural and non structural mitigation measures and get them implemented. • In coordination with the SSA &/or Public works department assess schools and colleges buildings conditions and place the proposal of retrofitting of the structurally unsafe buildings with the state education department and/or DDMA. • Make departmental mitigation plan and ensure its implementation. • Ensure that earthquake resistant features are included in new school buildings. |
| <p>During Disaster – Response</p> <ul style="list-style-type: none"> • In the event of disaster, place required number of education institutions and their buildings, under the DEOC for use as emergency shelter and relief centre, if necessary. • Students and staff trained as task forces as part of the school disaster management planning’s can provide local voluntary assistance for distribution of relief material and assistance to special needy people in the locality. |
| <p>After Disaster – Recovery and Rehabilitation</p> <ul style="list-style-type: none"> • Determine the extent of loss in educational institutions and submit the report to DDMA and state education department. |

Department of Industrial Health and Safety

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| <p>Non Disaster Time –</p> <ul style="list-style-type: none"> • Designate one Liaison Officer in the Department as the Disaster Management Focal Point at district level. • Ensure all possible steps for the security of manpower, implements, stock, installations/factories etc. • Prepare listing and locations of industries and establishments for possible sourcing of relief material during disasters in the district. • Ensure training on preparedness programmes to be adopted at different levels for all manpower employed in factories and establishments in disaster vulnerable areas. • Issue disaster management guidelines to all the industries and ensure on-site and off-site plans for all industries. • Prepare and disseminate guidelines for the labor security and safety. • Prepare and implement rules and regulations for industrial safety and hazardous waste management. • Support the State Pollution Control Board to enforce the law for preventing environmental disaster in chemical industry or industries emitting toxic gases and effluents. • Issue detailed instructions to the employees about their duties and responsibilities in precautionary, disaster and post-disaster stages of normal disaster. • Prepare and disseminate public awareness material related to chemical accidents. • Prepare & implement department’s mitigation plan for the district |
| <p>During Disaster</p> <ul style="list-style-type: none"> • Evacuation o the workers from the Industrial are vicinity • Request industries to provide emergency relief material such as food products, temporary shelter, medicines and medical equipment and search & rescue equipment. • During any industrial disaster, respond as per the disaster management plan of the respective industry or as per the guidelines for the specific hazard involved in the event. |
| <p>After Disaster</p> <ul style="list-style-type: none"> • Take steps to plan for rehabilitation of industries adversely affected by disasters. |

Department of Urban Development

| |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Non Disaster Time |
| <ul style="list-style-type: none"> • Designate one Liaison Officer in the department at district level as the Disaster management Focal Point. • Develop a disaster management plan for the department, including the identification of location of camps for different type of disasters, existing locations that can be used as shelters, inventories of agencies that can be used for tent establishment. • To conduct regular training the staff on minimum standards for shelter, relief camps and tent structures. • Prepare department’s disaster management plan. • Develop alternative arrangements for population living in structures that might be affected after the disaster. |
| Mitigation |
| <ul style="list-style-type: none"> • Designate one Liaison Officer in the department as focal point for the mitigation activities. • Coordinate with the DDMA for implementation of mitigation activities in the urban areas. • Prepare & implement department’s mitigation plan |
| Alert and Warning Stage |
| <ul style="list-style-type: none"> • In case of damage to offices, assist local authorities to establish and house important telecom equipment and officials at the earliest • Setting up water point in key locations and in relief camps |
| Response |
| <ul style="list-style-type: none"> • Quick assessment of damaged areas and areas that can be used for relief camps for the displaced population • Locate adequate relief camps based on survey of damage • Clear areas for setting up relief camps • Locate relief camps close to open traffic and transport links • Set up relief camps and tents using innovative methods that save time • Provide adequate and appropriate shelter to the entire population • Coordinate with other ESFs in equipping shelter and relief sites with basic needs of communication and sanitation. • Maintaining and providing clean water • Procurement of clean drinking water. • Coordinate with DEOC & ICP’s for proper disposal of dead bodies in the urban areas. |
| Recovery and rehabilitation |
| <ul style="list-style-type: none"> • Implement recovery & rehabilitation schemes through municipalities for urban areas. |

Indian Red Cross and NGOs

| |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>Non Disaster Time</p> <ul style="list-style-type: none"> • Take steps for preparing community based disaster management plans with facilitation from DDMA. • Identify volunteers in disaster prone areas and arrange for their training. • Awareness raising programs, seminars and meetings with the people for improving their capacity to face disasters. • Maintain contacts with District Administrators on its activities. • Ensure road communication and pre-positioning of relief material as close as possible to disaster prone communities. |
| <p>Alert and Warning Stage</p> <ul style="list-style-type: none"> • Issue warning notice to all concerned including the preparedness programs Designate a liaison officer for maintaining link with the DEOC of the District. • Keep the survey and relief team of head quarters on stand-by in readiness with required transport and equipment. • Mobilise volunteers and issue instructions for sending them to potential disaster affected areas. • Take part in evacuation programme of population with close cooperation of volunteers • Coordinate with pre identified NGOs for possible joint operations. |
| <p>During Disaster :</p> <ul style="list-style-type: none"> • Ensure survey of loss and damage in affected areas and dispatch of relief teams from concerned Red Crescent Society Units. • Assist the Province Government to determine loss, damage and needs related information. • Give emergency assistance to disaster affected people especially in the following cases: • Help in rescue and evacuation work, temporary shelter, first aid, food and clothing, • Arrange for distribution of relief material received from Red Crescent Unit of areas not affected by disaster and from headquarters. • Send request for requirement of relief and rehabilitation to the International Federation of Red Cross and Crescent Societies (IFRC) after informing about loss and damage due to disaster. |
| <p>After Disaster</p> <ul style="list-style-type: none"> • Participate in reconstruction and rehabilitation programmes in special circumstances. • Take steps for correct and effective evaluation of preparedness work and for correcting errors/weakness in such work. • Extend Cooperation to the district EOC for disaster documentation. |

C 3 Financial Provisions for Disaster Management

C 3.1 District Disaster Response Fund will basically cover the disaster response, relief, and rehabilitation part.

C 3.2 District Disaster Mitigation Fund will basically cover the disaster mitigation and preparedness activities

The State Disaster Response Fund (SDRF) and Chief Minister's Relief Funds are also available to meet any emergency requirement, at the district level. As such in the district there is no reserve fund created. Whenever funds are required the request for the same is made by district administration to the State govt.

The various measures for FM recommended in the guidelines will be funded respectively by the central ministries and departments and state governments concerned by making provisions in their annual and Five Year plans. Funding will also be available through special mitigation projects to be formulated and implemented by the state governments/SDMAs under the overall guidance and supervision of the NDMA. In addition 10 per cent of Calamity Relief Fund (CRF) can also be utilised for purchase of equipment for flood preparedness ,mitigation, rescue and relief .

Compensation to victims of road accidents from motor vehicles is available under the provisions of the Motor Vehicles Act. However, immediate relief, financial, medical or otherwise, has to be provided by the State. A fund shall be established for providing immediate relief to victims of motor vehicle accidents. Contributions to this fund shall be made by owners of motor vehicles through a suitable levy. This fund shall be kept in the public account of the State. Information about schemes under which relief is provided to the victims of accidents will be widely disseminated. An enactment will be prepared to regulate traffic on waterways to ensure safety, and to prescribe safety norms for motorised as well as all other kinds of boats.

C 4 Coordination mechanisms with other stakeholders

C 4.1 Mapping of stakeholders in the District

C 4.1.1 Private and Public Sectors:

Many private and public sector units have equipments and skilled human resource, which could be used during response and recovery phase. At the same there are many private contractors in the district who own equipment like water tanker, tractor, road roller & many other equipment. Their mobile nos needs to be noted so that their services can be used during emergency.

C 4.1.2 Non Governmental Organizations and Community Based Organisations:

Local NGOs and CBOs, due to their proximity to community, can act as a vital link between government and community particularly during emergencies. As such there is no NGO which is involved in disaster management. There are 137 ngo's working in khargone district. There are some NGO's who have been working since a long time like aastha gram trust. NGO's like this can be roped in to provide training to community members. The Role of NGOs and CBOs in disaster management will be in three stages:

Preparedness

- ✚ Community awareness and capacity building.
- ✚ Community Based Disaster Management Planning.
- ✚ Assisting and participating in preparation of disaster management plans at Block, district, municipal and gram panchayat levels.
- ✚ Support in vulnerability assessment and mapping
- ✚ Support in preparing mitigation strategy and plans; assessments for structural and non-structural mitigation.
- ✚ Support in policy review on disaster management
- ✚ Reviewing and upgrading DM Plans
- ✚ Documentation

Emergency Response

- ✚ Dissemination of warning
- ✚ Evacuation, Search and Rescue
- ✚ Relief distribution
- ✚ Medical aid
- ✚ Emergency shelter
- ✚ Immediate restoration
- ✚ Women and Child care
- ✚ Trauma Counselling
- ✚ Coordination of Volunteers
- ✚ Community mobilization
- ✚ Documentation

Recovery

- ✚ Restoration of damaged community structures (schools, etc.)
- ✚ Construction and management of MCS
- ✚ Restoration of livelihood
- ✚ Rehabilitation of vulnerable groups
- ✚ Restoration of environment
- ✚ Managing emergent group activities
- ✚ Recovery planning, coordination, evaluation

C 4.1.3 Religious Institutions:

There are number of religious institutions with infrastructural facilities and committed work force. These facilities can be used as shelters during disasters and the work force could be used as volunteers during response and recovery activities.

C 4.1.4 Academic Institutions:

Academic institutions within the district and also outside the district could help with subject specific expertise for disaster management planning. The **Disaster management Institute, Bhopal** can act as the provider of subject specific expertise for disaster management planning. The following agencies can be contacted for further expertise:

1. Disaster Management Institute,
Prayavaran Parisar, E-5, Arera Colony,
PB No. 563 Bhopal-462016, MP (India)
Tel:+91-755-2466715, 2461538, 2461348, 293592, Fax: +91-755-2466653,
E-mail:dmi@dmibhopal.nic.in

C 4.1.5 International Humanitarian Organizations:

There are many international humanitarian organizations that support government agencies worldwide during emergencies. These agencies as per their mandates support during the different phases of the disaster management cycle.

C 4.2 Responsibilities of the stakeholders

The responsibilities of all the key stakeholders include:

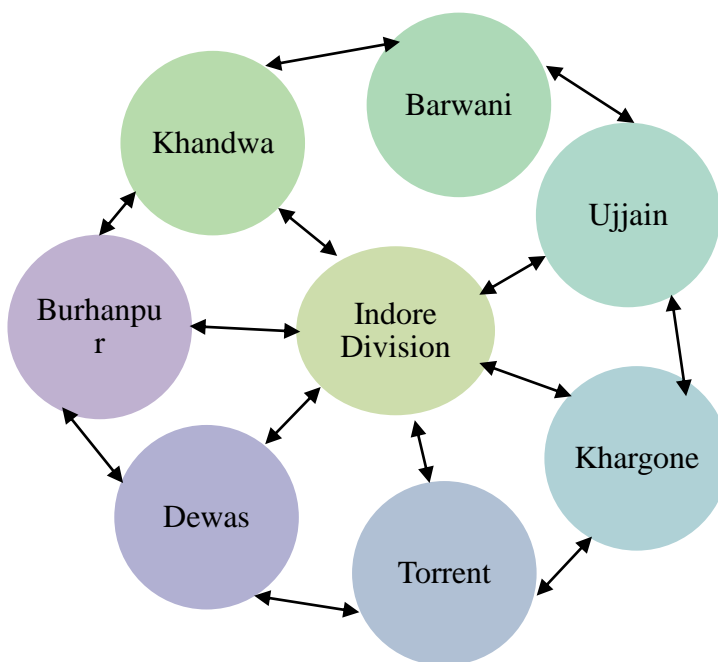
1. Coordinating with the Search and rescue team

2. Providing all the available facilities with them to the disaster affected victims
3. Volunteering to organize and maintain the relief centers
4. Working with the Disaster team in restoration of livelihoods
5. Being actively connected with the restoration and reconstruction process

C 5 Inter- District Coordination Mechanisms – [Standard Operating Procedures / Protocols]

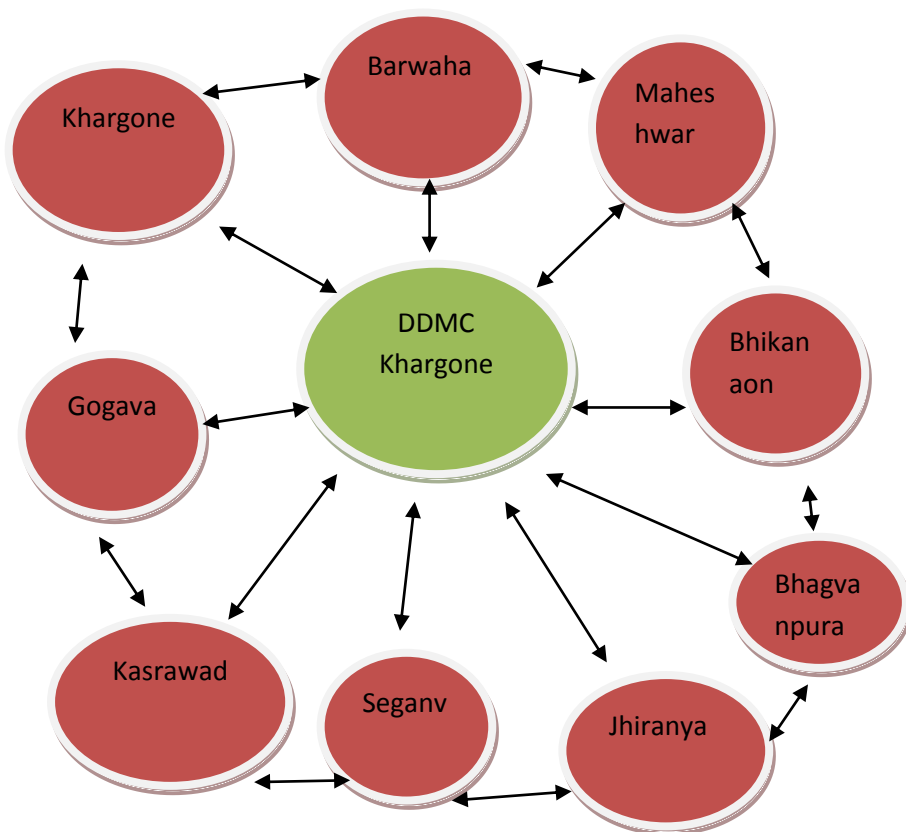
During emergencies district may require support from other adjoining districts, which are not affected by disasters. For this the Distt. EOC head can seek help from other districts through Divisional Commissioner or State EOC.

Upon enquiry with district commandant homeguards it was found that the district has got quite coordination with adjoining districts like badwah, burhanpur & indore. There is continuous flow of information sharing among them through wireless & other communication equipment. As shown in the below diagram indore is the sub division of the district & it can also be seen that khargone district has got quite coordination with adjoining districts i.e khandwa, burhanpur, torrent, Ujjain, dewas, barwani, indore. There is two flow of information between all districts



C 6 Intra- District Coordination Mechanisms – [with Block Headquarters]

Within the district coordination is quite good. Every year disaster management meetings are held & roles, responsibilities are made clear to every line department by ADM. In the meeting it is made quite clear that all the departments have to work in tandem. As this district has been hit by disaster six years back this district is now well equipped to handle disasters. That’s the reason why meetings are called every year so that all the head of departments of concerned line departments get to interact with each other. District has also got good coordination with blocks within the district.



During rains whenever water is released from upper veda dam the relevant information is passed on by the respective department(irrigation) to SDM khargone & Bhikangaon, Tehsildar Bhikangaon, jhiranya & gogava atleast 30 mins in advance. This clearly shows the strong coordination among the respective blocks. The above diagram shows the coordination mechanism with nearby blocks.

C 7 Dissemination of DM Plan

After the approval of plan by SDMA, the concerned DDMA will be responsible for dissemination of the plan.

The district disaster management plan must be disseminated at three levels;

- National disaster Management Authority (NDMA), multilateral agencies (aid agencies), SDMA/SEC, state line departments and defense services.
- To the district authorities, government departments, NGOs and other agencies and institutions within the district
- Through mass media to the general public.

C 7.1 Plan Evaluation

The purpose of monitoring & evaluation of DDMP is to determine

1. the adequacy of resources
2. co-ordination between various agencies
3. community participation,
4. partnership with NGOs and other entities

In the IDRN website it was found that updation is not done for all resources available.

Periodic uploading of plans at India Disaster Knowledge Network (IDKN) and resources on India Disaster Resource Network (IDRN) needs to be done. Periodic mock drills must be conducted & all the personnel involved in execution of DDMP should be trained & updated on the latest skills necessary in line with updated plans.

C 7.2 Plan Update

As meetings related to disaster management are held every year before the start of the rainy season the plan should also be discussed over there itself. All the concerned line line departments should discuss & update the plan if required.

Annexures:

1. Annexure for villages:

| Year/Tehsil | Gram Panchayat | | |
|-------------|----------------|----------|--------|
| | Number | Villages | Income |
| 1 | 2 | 3 | 4 |
| 2006-07 | 600 | 1190 | N.A. |
| 2007-08 | 600 | 1190 | N.A. |
| 2008-09 | 600 | 1190 | N.A. |
| 2009-10 | 600 | 1070 | N.A. |
| Tehsil | | | N.A. |
| Barwaha | 114 | 227 | N.A. |
| Maheshwar | 71 | 156 | N.A. |
| Kasrawad | 83 | 176 | N.A. |
| Seganv | 37 | 53 | N.A. |
| Bhikangaon | 65 | 128 | N.A. |
| Khargone | 47 | 93 | N.A. |
| Gogava | 46 | 81 | N.A. |
| Bhagvanpura | 61 | 63 | N.A. |
| Jhiranya | 76 | 93 | N.A. |

2. Annexure for rainfall (in mm)

| Year | Khargone District | Tehsil | | | | | | | | |
|---------|-------------------|---------|------------|----------|-------------|-----------|---------|---------|---------------|-----------|
| | | Barwaha | Mahe shwar | Kasrawad | Bhika ngaon | Khar gone | Goga va | Segan v | Bhag vanpu ra | Jhira nya |
| 2005-06 | 541.23 | 553 | 715.6 | 720 | 584.6 | 415.3 | 405 | 423 | 521.3 | 533.3 |
| 2006-07 | 1023.2 | 1245.9 | 850.5 | 762.9 | 949.8 | 1010.7 | 699.7 | 1302.4 | 1498.4 | 888.7 |
| 2007-08 | 963.5 | 854.2 | 1111.1 | 1114.3 | 835.5 | 819.5 | 850.1 | 738 | 666.8 | 999 |
| 208-09 | 757.1 | 576.8 | 969.6 | 862 | 739 | 736.3 | 736 | 623 | 805.5 | 766 |
| 2009-10 | 843 | 792.8 | 525.3 | 570 | 970 | 837.1 | 769 | 779 | 1255.7 | 1088 |

3.Education:

| Year | Primary School | High/Middle Schools | Secondary Schools | Colleges |
|---------------|----------------|---------------------|-------------------|----------|
| 2006-07 | 2605 | 814 | 83 | 10 |
| 2007-08 | 2605 | 857 | 90 | 10 |
| 2008-09 | 2683 | 893 | 92 | 15 |
| 2009-10 | 2715 | 917 | 100 | 15 |
| Tehsil | | | | |
| 1.Barwaha | 474 | 161 | 24 | 3 |
| 2.Maheshwar | 302 | 111 | 24 | 4 |
| 3.Kasrawad | 349 | 137 | 11 | 1 |
| 4.Seganv | 186 | 56 | 4 | 0 |
| 5.Bhikangaon | 271 | 108 | 7 | 1 |
| 6.Khargone | 180 | 105 | 21 | 6 |
| 7.Gogava | 152 | 60 | 4 | 0 |
| 8.Bhagvanpura | 449 | 103 | 3 | 0 |
| 9.Jhiranya | 352 | 77 | 2 | 0 |

Contact nos of key officials related to disaster management:

| SR.NO | Name of the Official | Office no | Residence no | Mobile no | Roles & Responsibility |
|-------|---------------------------------------------------------------------------------|-----------|--------------|------------|------------------------------------------------------------------------------|
| 1 | Anand Jain, ADM Khargone | 235697 | 234066 | 9827037575 | Nodal Officer, Flood & relief work |
| 2 | B.L.Nanama, Deputy Collector & Incharge officer, Flood relief Khargone | 231668 | - | 9826767985 | Incharge control room |
| 3 | Dr.Viraj Bhalke, CMHO Khargone | 250702 | 231550 | 9425088008 | Casualty Services |
| 4 | S.R.Yadav, Chief Municipal Officer Khargone | 232863 | 232039 | 9425674146 | 1.Fire fighter services 2.Welfare service 3.Dead bodies disposal |
| 5 | A.P.Tripathi, District Commandant, Home Guards Khargone | 231387 | 231467 | 9425468732 | Training |
| 6 | Rajkumar Chanena, District manager | 233600 | 233700 | 9425001219 | Communications |

| | | | | | |
|----|--------------------------------------------------|--------|--------|------------|----------------------------|
| | doordarshan, Khargone | | | | |
| 7 | R.K.Jain, Chief executive engineer, PWD Khargone | 231213 | 232221 | 9425034058 | Revenue & relief work |
| 8 | Hemant Mudgal, RTO Khargone | 232022 | - | 9425058618 | Depot & transport services |
| 9 | S.P.S.Chouhan, SDM Khargone | 231254 | 231390 | 9425192001 | Salvage services |
| 10 | R.K.Viekar, Food department | 232885 | - | 9826078160 | Supplies Services |

List of Schools & Colleges:

Public Schools

The district has three Kendriya Vidyalays (central schools). These include: Kendriya Vidyalaya (Khargone), Kendriya Vidyalaya (Barwah), and Navoday Vidyalay Sanawad.

There are also several high schools. Among these, the most-prominent schools include:

1. Gokuldas Public School (CBSE Affiliation Number: 1030212)
2. St. Judes School(CBSE Affiliation Number: 1030166)
3. Aaditya Vidya Vihar.
4. Maharishi Vidya Mandir.(CBSE affiliation Number: 1030219)
5. Saraswati Vidya Mandir
6. Priyadarshani Shikshaniketan.
7. Bal Shiksha Niketan

Technical Institutes

The various technical educational institutes include:

- Indian Computers an Education & Retails. E-22 Radha Vallabh Market, Khargone
- Osker gift, New Radha Vallabh Market, Khargone
- Shri ji Institute of Technology and science
- Jawaharlal Institute of Technology (JIT), Vidya Vihar, Borawan, Khargone
- GRY Institute of Pharmacy, Vidya Vihar, Borawan, Khargone
- Government Women's Polytechnic, Khargone
- Industrial Training Institute (ITI), Khargone
- GRY College of Education, Vidya Vihar, Borawan, Khargone

- Government Polytechnic, Sanawad
- Vision Beyond, Khargone
- Devi Rukmani vidyalay, Khargone
- Nit Infotech, Khargone

Colleges

There are various colleges in the district. These are affiliated with Devi Ahilya Vishwavidyalay, Indore (University of Indore) and offer several graduate and postgraduate-level courses. The list includes:






- Jawaharlal Nehru Mahavidyalaya
- Government Post Graduate Degree College
- Government Girls Degree College
- Jawaharlal Nehru Government Post Graduate Degree College, Barwah
- Government Degree College, Sanawad
- Government Degree College, Bhikangaon
- Government Degree College, Mandleshwar
- Ma Umiya Private Degree College, Mandleshwar
- District Institute of Educational Training (DIET)
- Central Industrial Security Force Training School, Barwah
- Pilot Training College
- Subhishi Paramedical College
- JawaharLal Institute of Technology and Management Borawan


Temperature data of last year:

| No | Month | Temp. | |
|----|-----------|----------|------|
| | | 2011 Max | Min |
| 1 | January | 26.3 | 7.6 |
| 2 | February | 30.2 | 11.8 |
| 3 | March | 47.2 | 21.0 |
| 4 | April | 27.2 | 16.6 |
| 5 | May | 40.9 | 27.6 |
| 6 | June | 36.1 | 26.3 |
| 7 | July | 28.5 | 22.7 |
| 8 | August | 29.6 | 23.5 |
| 9 | September | 31.6 | 22.5 |
| 11 | October | 34.3 | 18.0 |
| 11 | November | 32.4 | 15.3 |
| 12 | December | 29.1 | 10.7 |

Map 1








| | | |
|---------------|-------------------|--------------------------------------------------------------------------------------|
| वन | Forest |  |
| नदी | River |  |
| तहसील की सीमा | Tehsil Boundary |  |
| जिले की सीमा | District Boundary |  |
| प्रमुख रास्ते | Main Roads |  |

Fire stations 

Map 2



| | | |
|---------------|-------------------|-------------------------------------------------------------------------------------|
| वन | Forest |  |
| नदी | River |  |
| तहसील की सीमा | Tehsil Boundary |  |
| जिले की सीमा | District Boundary |  |
| प्रमुख रास्ते | Main Roads |  |

Vulnerable areas 