

District Disaster Management Plan [DDMP]

For School of Good Governance & Policy Analysis,
Government of Madhya Pradesh, Bhopal

Prepared by
Ankita Singh
PGDFM 2011-2013
Indian Institute of Forest Management



*15a, Institutional Area,
4, R.K.Puram,*

*SEEDS Technical Services,
Sector
New
Delhi*

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Structure of District Disaster Management Plan (DDMP)

A . GENERAL

A 1 District Disaster Management Plan

A 1.1 District Profile

Gwalior City is a District in Madhya Pradesh State near Agra. The new section of the city called Lashkar. Lashkar is few miles South from the old city. It is the site of factories producing cotton, yarn, paint, ceramics, chemicals, and leather products. The nucleus of Gwalior is a citadel crowning an isolated rock about 91 m (300 ft) high, 3.2 km (2 mi) long, and 823 m (2700 ft) wide. The rock is said to have been a strong hold for more than Ten Centuries and Old city is located in the Eastern base of the rock. The old city is covered with white sandstone Mosque, Palaces, rock temples and statues of archaeological and architectural interest. The Jiwaji University was built in Gwalior in the year 1964. Gwalior City was the Capital of the princely State of Gwalior until 1948 and the summer Capital of Madhya Bharat State from 1948 to 1956. When Madhya Bharat became part of Madhya Pradesh, it become separate District.

The district is divided into 3 Tehsils and four blocks the district is predominantly a rural district there are 428 villages.

A 1.1.1 Location and administrative divisions

Table A 1.1.1

Location (in degrees) -	Latitude – 26°13'17"N Longitude - 78.178024°E
District Area (in sq. kms.) -	5214.00
Administrative information-	
No. of sub divisions:	02 (Gwalior n Dabra)
No. of Tehsils:	03 (Gwalior, Bhitwar, Dabra)
No. of Blocks:	04 (Ghatigaon, Murar, Dabra, Bhitwar)
No. of Gram Panchayats:	299
No. of Villages:	428
No. of Police Stations, Police Chowkees	34
No. of Post Offices(Block wise):	43

Year of district formation:	1857
Name of adjacent districts:	East- Datia West- Sheopur North- Murena,Bhind South- Shivpuri

Source: District Statistical handbook 2011

A 1.1.2 Geography and Topography

Gwalior is located at 26°13'17"N 78.178024°E .It has an average elevation of 197 metres (646 feet). Gwalior is an historic Indian city located on the periphery of Madhya Pradesh Stand, 300 km (186 Miles) from Delhi.

Table A 1.1.2

Name of rivers and lakes:	Chambal, Sindh, Saank, Harsi, Tighra, Kaketo, Pehsari
No. of dams, embankments:	05,main dam is Tigra dam on sindh river
Name of existing mountains:	Griddhraj parvat, Amara
Highest elevation (in meters):	196(643 foot)
Forest cover in the district:	1091.79

A 1.1.3 Demographic and socio economics

As of 2011 India Census Gwalior had a population of 2030543. Males constitute 53% of the population and females 47%. Gwalior has an average literacy rate of 85.20%, higher than the national average of 74%: male literacy is 90.85%, and female literacy is 78.82%. In Gwalior, 13% of the population is under 6 years of age.

Hindi is the main language spoken in Gwalior. There is a strong Marathi influence because of the Maratha rule, and Marathi's have played important roles in the development of the city. Hinduism is the main religion of the city.99% people is the followers of Hinduism in Gwalior. Janis, Muslims, Sikhs and Christians also have small community here.

Table A 1.1.3

Total household:	209.12 thousands
Total population:	2030543
Male:	1090647
Female:	939896
Population density:	270.93 Sq. Km.
Income - Per capita income:	13456
Total APL, BPL families:	BPL families-38880
Occupation - Main occupation of people:	Agriculture
Secondary occupation of people:	Dairy & Manufacturing

Source: District Statistical handbook 2011

A 1.1.4 Climate and weather

Gwalior has a sub-tropical climate with hot summers from late March to early July, the humid monsoon season from late June to early October and a cool dry winter from early November to late February. Under Koppen's climate classification the city has a humid subtropical climate. The highest recorded temperature was 48 °C and the lowest was -1 °C.

Summers start in late March, and along with other cities like Nagpur and Delhi are among the hottest in India and the world. They peak in May and June with average daily temperatures being around 33–35 °C (93–95 °F), and end in late June with the onset of the monsoon. Gwalior gets 970 mm (39 in) of rain every year, most of which is concentrated in the monsoon months from late June to early October. August is the wettest month with about 310 mm (12 in) of rain. Winter in Gwalior starts in late October, and is generally very mild with daily temperatures averaging in the 14–16 °C (58–62 °F) range, and mostly dry and sunny conditions. January is the coldest month with average lows in the 5–7 °C range (40–45 °F) and occasional cold snaps that plummet temperatures to close to freezing.

Table A 1.1.4

Rainfall-	
Total annual rainfall of last year:	626.1
Average rainfall (last 10 years):	781.65

Temperature-	
Average Maximum Temperature:	42.6
Average Minimum Temperature:	0.65
Demarcation of crucial seasons-	
Months of access rainfall, leading to flood situation:	August but not leading to flood situation
Months of water scarcity, leading to drought situation:	May but not leading to drought situation

Source: District Statistical handbook 2011

A 1.1.5 Health (Medical)

No. of hospitals, PHCs, CHCs/ mini dispensaries (marked with the location), total beds, medical equipments medicines available, plot the location of Bock/ GPs w.r.t. PHCs, CHCs, trained manpower, first aid volunteers (check, if any record is available).

Gwalior district has the following number of health centers:

1. No. of Primary Health Centers: 14
2. No. of Community Health Centers: 02
3. No. of District Hospitals: 2
4. No. of Sub centers: 101
5. Number of Nursing Homes: **150**
6. Number of Clinics-184
7. Number of Homoeopathic/Dental Clinics:49
8. Number of pathologies-84
9. Number of Ayurvedic Clinics:47

Table A 1.1.5

List of health centers in Gwalior			
Sr.No	Name of development block	Community health centers	Primary health centers
1	Dabra	0	5
2	Murar	0	3

3	Ghatigaon	1	3
4	Bhitarwar	1	3
Total		2	14

B. Number of beds:

Sr. No.	Name of development block	Name of Institute	Number of Beds
1	Bhitarwar	CHC Bhitarwar	30 Beds
		PHC Mohangarh	6 Beds
		PHC Chinor	6 Beds
		PHC Aatri	6 Beds
2	Ghatigaon	PHC Barai	6 Beds
		CHC Mohana	30 Beds
			6 Beds
		PHC Veerpur	6 Beds
		PHC Kulaith	6 Beds
3	Murar (Hastinapur)	PHC Hastinapur	6 Beds
		PHC Paarsen	6 Beds
		PHC Utila	6 Beds
4	Dabra	Civil Hospital Dabra	60 Beds
		PHC Kariyavati	6 Beds
		PHC Shuklahari	6 Beds
		PHC Salwai	6 Beds
		PHC Pichor	6 Beds
		PHC Billauwa	6 Beds

C. Allocation of Health centers:

One PHC is provided for a population of 20,000 people in tribal areas and 30,000 people in Non-Tribal Area. Similarly, one CHC is provided for a population of 80,000 people in tribal areas and 180,000 people in Non-Tribal Area

D. Types of PHCs

PHCs are of two types:

1. General PHCs and

2. RHC(Reproductive and Child health) –Bimonc PHCs

E. Medical Officers:

The RHC(Reproductive and Child health) –Bimonc PHCs have 2 Medical officers while rest of the PHCs have 1 medical officer per hospital.

F. First Aid Kits

The first aid kits (at least one in every village) are with

- 1) Depot Holders
- 2) MLV (Malaria Linked Volunteers)
- 3) ASHA

These kits have all the needed material for first aid and Medicines

G. Ambulances and Mobile Units:

1. List of Ambulances:

Sr. no.	Health Unit	No. of ambulances
1	District Hospital	1
2.	CHCs	9 (1 per block)

A 1.1.6 Education

Gwalior has Seven universities - Amity university Madhya pradesh, Jiwaji University, Lakshmi Bai National University for Physical education, Atal Bihari Vajpayee - Indian Institute of Information Technology and Management, Gwalior (ABV-IIITM) {an institute of national importance}, R.V.S. Agriculture University, Raja Maan Singh Music and Arts University. Some esteemed colleges and institutes includes Madhav Institute of Technology and Science (a autonomous body and one of good engineering colleges in M.P), institute of professional studies (IPS Gwalior), Rustamji Institute of Technology (first Engineering College in India established by a Para Military Forces); Indian Institute of Tourism and Travel Management and Indian institute of Hotel management.

Table A 1.1.6

Literacy rate:	Ghatigoun, Murar, Dabra,Bhitarwar
Total Male:	54451, 40148, 55835, 59197
Total Female:	11734, 26046, 23693, 25574

No. of Secondary schools:	2532
No. of High/Middle schools:	296
No. of Primary schools:	2271
No. of Anganwaris:	783
No. of it is/ training centers:	186
No. of Engineering colleges, Medical colleges & Other colleges:	197
Total (Aprox.) Students Strength in all the educational institutions:	828225
Total (Aprox.) Staff Strength in all the educational institutions:	14549

Source: Census 2011,GOI and Education portal

A 1.1.7 Agriculture and Land use

In the district, there are five types of soils namely Black soil, Morand soil, Matbarra soils, Bardi soil Sihar and retard soils. The southern central and eastern part of the district is covered by black cotton soil.

Table A 1.1.7

Cropping pattern -	Wheat-Bajra, Rice-Gram
Type of major crops:	Wheat, Rice, Jowar, Gram, Soyabean, Alsi, Bajra, Sugarcane, Tuar, Urad, Vegetables, Penuts, Tobacco
Cropping seasons:	October-November & June-July
Land classifications-	
Forest land:	209456

Barren & Uncultivated land:	37897
Cultivated land:	456449
Pasture land:	82648
Soil classifications-	
Water logging:	Water logging in some Lower areas Of Gwalior
Recurrent flood hit area:	No flood hit area
Drought hit area:	No drought hit area

A 1.1.8 Housing Pattern:

The houses built in the district are of flat roofs as the rains are not heavy, in heavy rainfall areas, slopping roofs are found so as to drain off water. There are also R.C.C. buildings constructed in this area. In rural areas, mostly the houses are of mud or Stones.

There are also some Burnt Brick houses in the rural areas. According to the **Distribution of houses by predominant Materials of Roof and Wall and level of damage risk** Gwalior comes in **EQ Zone II** which is low damage risk zone.

Table A 1.8

Housing pattern-	
Type of housing construction:	Kuccha as well as pucca houses
Type of material used:	RCC / Brick- pucca house Stone/Mud/wood
Flooring types: (Ground and above)	Maximum: G level houses followed by G+1 and G+2 level construction. G+3 and above constructions are very rare to find. High rise buildings in the district are very less and scattered over a large area

* **Distribution of houses by predominant Materials of Roof and Wall and level of damage risk in Annexure**

A 1.1.9 Industrial set ups

Gwalior industries have earned the status of a counter magnet in NCR in India. Gwalior is one of the vibrant industrial bases that are known for its strategic location. The industries at Gwalior are emerging as industrial estates

that are managed by independent industrial development corporations. The independent industrial development corporations are working towards developing the industries of Gwalior. In fact, any development that is conceived for strengthening the counter magnet role of Gwalior would lead to the industrial development of Gwalior as a potential sector.

The industries at Gwalior include the textile mills and the artificial silk manufacturing plants. The handicraft and hand loom industry also form an important part of the industries in Gwalior. Morar is said to be the center of local trade. It is also known to house the tanning industry in Gwalior.

Table A 1.1.9

Total no. of industries (Govt., Semi Govt. and Pvt), Block wise	04
a) No. of Major Accident Hazard Units/ Polluting industries/ Industrial Areas:	02
Total workforce involved in these industrial units:	4538
b) No. of Medium and small scale industries :	270
Total manpower involved in these units:	3199
Any major accident occurred in any of the industrial units (Loss of life >10, or Financial loss > 1 Crore).	There is no such Hazard found in which the financial loss is greater than 1 Crore or loss of life >10

There are two major industries by which Hazard occurred in past is **Rail Spring Kharkhana, Central Railway, Sitholi** and **J.B. Mlangharam Foods Ltd.**The main chemical which cause Hazard is **LPG.**The quantity lost is around 40 unit and 30 unit

A 1.1.10 Transport and communication network

The Gwalior Junction GWL is part of the North Central Railways. Gwalior's main station is one of the major commercial railway stations of the North Central Railway of Indian Railways whose zonal headquarters is in Jhansi . The station has won awards from Indian Railways for clean infrastructure in 1987, 1988, 1989, 1990, and 1992.

Gwalior Airport is also called Rajmata Vijya Raje Scindia Vimantal.Gwalior's public transport system consists of tempos, auto rickshaw taxis and tata magics. Municipal Corporation Gwalior City Bus covering some routes in the city. The *tempos* and auto-rickshaws are often cited as a cause of pollution and road congestion, and the local

government has plans to replace the tempos with vans that shall run on Liquefied Petroleum Gas. However, taken in itself, this solution ignores the congestion and pollution caused by private cars, which is far more significant especially considering that the impact of private cars is actually caused for the benefit of a very small section of the city's population. Radio Taxi is going to introduce in the city in next few months.

Table A 1.1.10

<p>1) Transport Connectivity of each block w.r.t. following networks:</p> <p>a) By Road</p> <p>b) By Rail</p> <p>c) By Air</p> <p>d) Waterways</p>	<p>There are 3 main national high ways connected to Gwalior is Golden Quadrilateral Highway,NH-3,NH-75</p> <p>By rail Gwalior is connected to Mumbai,Delhi,Kolkata,Chennai, Indore,Jaipur,Trivendraum,Udaipur,Ahemdabad, Banglore,Bhopal,Lucknow,Pune,Jammu,Jhasi Amritsar,Nagpur,Haidrabad,Shirdi,Kanpur, Varanasi,Allahabad</p> <p>By Air it is connected to Delhi, Mumbai, Jabalpur Bhopal, Indore</p> <p>No Waterways Connectivity</p>
<p>2) Communication network</p> <p>i) Availability of telephone, mobile services in each block</p> <p>ii) Availability of internet facility in the blocks</p>	<p>08</p> <p>05</p>

A 1.1.11 Power stations and electricity installations

Table A 1.1.11

<p>List of power stations in the district:</p>	<p>01</p>
<p>Electricity outreach in the district:</p>	<p>643195</p>

A 1.1.12 Major historical, religious places, tourist spots

Gwalior may have been held by the Guptas or some of their subordinates, but the oldest historical evidence shows the fort was conquered by the Hunas in the early sixth century. The evidence for this is a stone inscription of the time of Mihirakula recording the construction of a temple to the sun god. It is now in India Museum, Calcutta.^[3] Subsequently, the Gwalior was taken by Gurjar Pratiharas of Kannauj. From inscription found such as Rakhetra stone inscription, scholars assert that Gwalior was under the possession of Gurjara Pratiharas till at least 942-43 AD^[5] In the 10th century, after Gurjara Pratiharas, Gwalior was taken by the Kachwaha Rajputs. Qutb-ud-din Aybak captured the city in 1196. Shamsud-din Altamsh took control of the area in 1232. By the 15th century the city had a noted singing school which was attended by Tansen. It first fell to the British in 1780, but was one of the cities taken during the Sepoy Rebellion.

Table A 1.1.12

<p>List of historical places in the district: 11</p>	<p>Average presence of visitors per day during peak season / festival season 425</p>
<p>List of religious centers in the district: 24</p>	<p>634</p>
<p>List of the tourist spots in the district: 29</p>	<p>1125</p>

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.

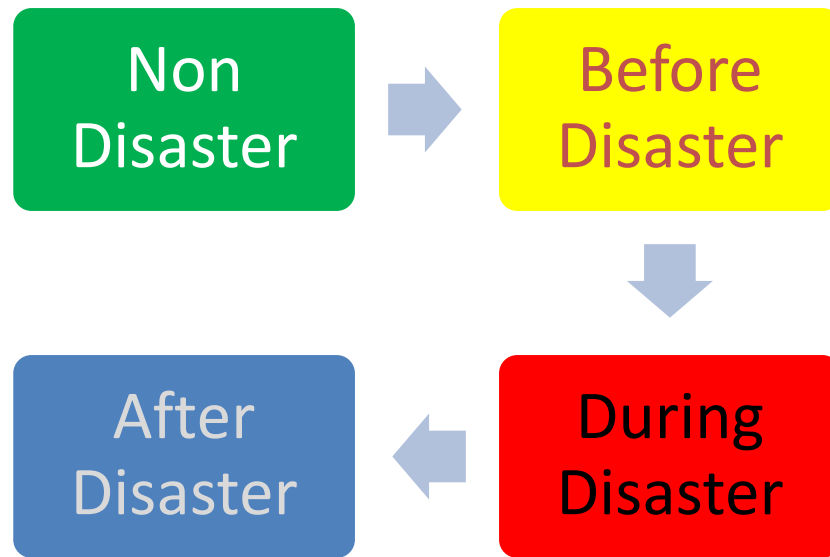
- To establish and maintain a proactive programme of risk reduction, this programme being implemented through existing sectoral and inter-sectoral development programmes and
- Mainstreaming DM concerns into the developmental planning process.
- Encouraging mitigation measures based on state-of-the-art 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

A DDMA for every district in the State of Madhya Pradesh has to be constituted, consisting of the following members:

1. Collector
2. Superintend Of Police (Member)
3. Chief Medical Officer (Member)
4. Executive engineer (PWD) (Member)
5. Executive Engineer (Irrigation) (Member)
6. Executive Engineer (PH) (Member)
7. Chief Engineer (MPEB)/ Executive engineer Member (Member)

8. Chairperson of the Zila Parishad (Member)

A 2.1 District Disaster Management Authority (DDMA)

District level Disaster Management Advisory Committee will be appointed by the District Disaster Management Authority *to take advice on various subject specific fields* within the overall context of disaster management.

The committee will comprise of disaster management experts, which may be from government departments, research institutes or NGO's. The proposed District Disaster Management Advisory Committee for Gwalior district will comprise of following:

1. Collector
2. Superintendent of Police
3. District forest officer
4. CEO, Zilla Panchayat
5. Additional Collector
6. Commissioner/ CMO (Chief municipal officer)Municipal Corporation
7. Chief Medical Officer
8. Executive Engg. (PHE)
9. Executive Engg. (PWD)
10. Executive Engg. (I)
11. District Food officer
12. Commandant, Home Guards
13. Road and Transport officer
14. Fire Officer
15. Telecom officer ITS
16. District Revenue Officer
17. Executive engineer (Rural engineering)
18. CEO, Housing board
19. From two prominent NGO's working in the district in the field of Disaster Management

Block Disaster Management Committee will comprise of the following:

1. Block Development Officer Chairperson
2. SHO (town inspector), Police Station Member
3. Chairperson, Panchayat Samiti-Block Member
4. Medical Officer In charge, Dispensaries Member
5. Assistant Engineer/ Sub engineer, I&PH Member
6. Assistant Engineer/ Sub engineer, PWD Member

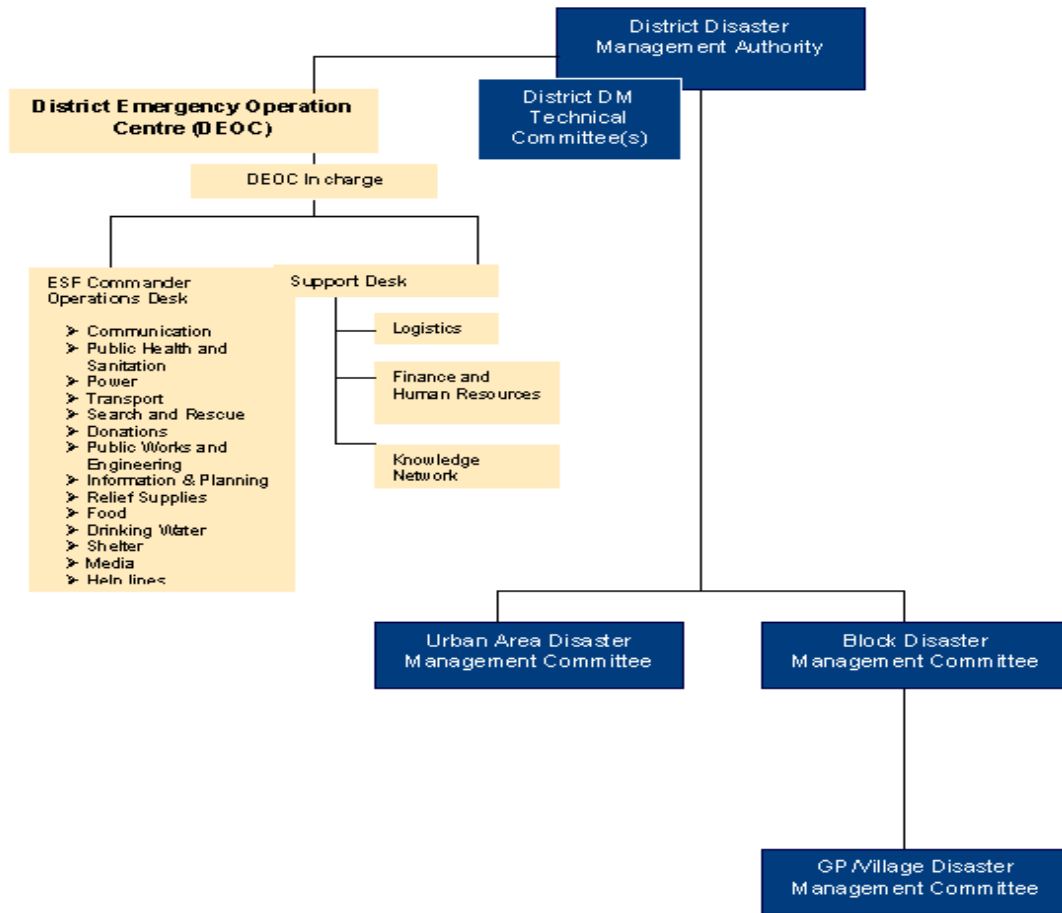
7. Assistant Engineer, MPEB Member
8. Inspector, Food & Supplies Member
9. Platoon Commander, Home Guards Member
10. Range Officer, Forests Member
11. In charge, Fire Station Member
12. Junior Engineer (JTO), Telecom Member
13. Rural engineering (sub engineer) Member
14. From two prominent NGO's working in the block in the field of Disaster Management

Gram Panchayat/Village Disaster Management Committee

Subject to the directions of the District Authority, the *Gram Panchayat* Disaster Management committees will be responsible for the development and implementation of GP level disaster management plans.

1. Gram Sahayak
2. RES (Rural engineering Services)
3. Line man (Electricity and telecommunication)
4. Maintenance officer/ Incharge (PHE, PWD, Irrigation)
5. ASHA (Health Department)
- 6 Sainik of home guards
- 7 Kotwal

The following Structure of DDMA is recommended for the district which will be integrated with ICS to deal with disasters holistically



A 2.2 District Disaster Management Committee/ Advisory Committee (DDMC/ DDMAC)

District level Disaster Management Advisory Committee will be appointed by the District Disaster Management Authority to take advice on various subject specific fields within the overall context of disaster management. The committee will comprise of disaster management experts, which may be from government departments, research institutes or NGO's. The proposed District Disaster Management Advisory Committee for Gwalior district will comprise of following:

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

The District Emergency Operation Centre (DEOC) will be hub of all the activities related with disaster response in the District. During non-disaster times, the DEOC will work under the supervision of the official not below the rank of Additional District Magistrate and as designated by the DDMA and during the emergencies, DEOC will come under the direct control of Deputy Commissioner or a person designated by him as Chief of Operations.

A 2.4 Urban Area Disaster Management Committee

Subject to the directions of the District Authority, the Urban Area disaster management committees will be responsible for the development and implementation of their respective urban area disaster management plans.

A 2.5 Block Level Disaster Management Committee

Subject to the directions of the District Authority, the block disaster management committee will be responsible for the development and implementation of block level disaster management plans.

A 2.6 Gram Panchayat / Village Disaster Management Committee

Subject to the directions of the District Authority, the Gram Panchayat Disaster Management committees will be responsible for the development and implementation of GP level disaster management plans.

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

Gwalior, the District of Madhya Pradesh is not very vulnerable to the natural and manmade disasters. The district is vulnerable to 7 types of hazards out of 33 identified by the High Powered Committee (HPC) of Government of India.

B 1. Hazard Assessment

Table B.1.1 History of past disasters (last 30 years / as many years of data as possible)

Type of hazard	Year of occurrence	Area affected	Impact on life	Livelihood	Livestock	Hazard prone zone in district
Fire	2008	Bare	Market affected	Economic Loss	Loss of Material	Bare
Earthquake	1997	Gwalior	No	No	No	Entire Gwalior district comes under earthquake zone
Accidents	2007-2010	Gwalior	6354	Economic Loss	There is no loss of livestock	Gwalior, Muraina, Bhitwar, Dabra, Ghatigaon
Flood	1982	Gwalior	No	No	No	Lower line areas of district i.e. Bhitwar, Raimal
Stamede	1980	Gwalior	28 Dead	Economic Loss	Loss of material	Gwalior Fair and Musical consult
Drought	2005,07,08,09,2010	Gwalior	5 Dead	Economic Loss	Loss of material	Basota ,Bakari

History of past disasters

The following is the history of past disasters:

A. Floods

Flash floods bring about disasters. There was a critical situation in some parts of the district during 1982 in the Morar. Sindh rivers was overflowing and there was a loss of life and property. The river water entered the standing crops and the farmers suffered a huge loss. Most of the livestock also was flown away in this flood. Some people were shifted to safe shelters but there was very less rehabilitation. And source of flood in the district is Canal which flows from the main central part of the district. In the rainy season it overflows and cause Flood situation. Though the loss of life and Property is less.

B. Road and Rail Accidents

There is a good network of pucca and kaccha road in the district . National highway 75,3 and 92 is passing through the district.The information from the police and RTO reveals that road accidents take place on this highway, which are related to tankers carrying hazardous and inflammable materials. No road side settlements and villages are affected by these accidents till date.

So, to cope with such disasters in the future some safety measures must be followed.

C. Drought

According to Agriculture development division **Gwalior** as one of the drought prone areas of M.P.

D. Earthquake:

There is a possibility of earthquake in the district because it comes in the Intensity VII,Zone III.Hence the possibility of an earthquake cannot be ruled out. There is smaller history of earthquakes in this district which comes in 1992 only for 2 seconds.

E. Fire

There is very less possibility of fire in the district but in 2008 fire takes place in the main market of Gwalior district and there was a loss of life and property. . Most of the livestock also was Burn in this fire. Some people were shifted to safe shelters but there was very less rehabilitation.

F. Stampede

There is only two main cases of stampede found in the district.One in the Gwalior fair in 1980 and another in Musical consult of Kishore Kumar in 1985.There was a loss of life and property occurred.

Table B.1.2 Major applicable hazards

Type of applicable hazards	Hazard prone districts
Flood, Earthquake, Fire	Salwal,Railmal Gwalior Areas near Forest and nearly anywhere in district Like in Bare
Industrial & chemical disasters, rail/ road accidents, violence, Stampede Drought	Near Major industries Highways and generally anywhere Gujra, Basota Gwalior Basota ,Barkari

Table B.1.3 Seasonality of hazards

Hazard	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
Flood							*	*	*			
Earthquake				*	*							
Accidents	*	*	*	*	*	*	*	*	*	*	*	*
Fire					*	*						

Stampede	*	*	*	*	*	*	*	*	*	*	*	*
Industrial Disaster	*	*	*	*	*	*	*	*	*	*	*	*

B 2 Vulnerability Analysis

- Physical vulnerability (Ex: roads, bridges, hospitals, houses embankments)
- Social Vulnerability (Ex: population, inclusion)
- Economic vulnerability (Ex: poverty, agriculture, and livelihood)
- Environmental vulnerability (Ex: rivers, canals, animals, minerals)
- Institutional vulnerability (Ex; lack of institutional support, absence of DDMCs etc.

- Physical vulnerability

Gwalior has 3 National highways running through it. The highways used by the oil containers running through and fro the Bangrod Indian Oil Corporations Oil Depot are especially vulnerable for a fire hazard.

Gwalior has 1 large size dam Tigra Dam.

The PWD is following the required earthquake codes for making earthquake resistant government buildings.

- Social Vulnerability

Gwalior city recently had a rail accident at Badarwas station in Gwalior Intercity Express, 28 Dead, 40 were injured and the peace and harmony of the city was disturbed.

Gwalior district does not have any sizeable areas with tribal population and hence is not vulnerable on the inclusion front.

- Economic vulnerability

Gwalior has 2 blocks which have been declared drought prone for the last 6 years and have suffered a drought every one of these 6 years. The water table in these 2 blocks is also in the red zone.

Migration Pattern:

i. Migration Pattern:

The Gwalior Distt. having 4 blocks out of which Morar block are the heavy migration affected block. The intensity of migration is on an average is 65% where as it reaches to 72% in summer season particularly in June. Reason behind the migration is highly undulating terrain with degraded land quality and high runoff of monsoon water. Small land holding and low productivity of crops does not satisfy the need of the families which in turn promotes the migration. The migration in other block is very little and entirely different in nature in comparison to Morar. The study have been made are based on these two blocks.

ii. Seasons of Migration:

It is been observed that the migration start with the crop cutting season which start from September – October month for Wheat crop cutting and March- April month for Gram crop cutting. These people generally do not come back to their home till month of June. After the agricultural work these people stay in towns for construction activity and other works. The migration intensified after April in want of job for earning. They also moved to

other places with their cattle for grass and fodder. They generally come back before the monsoon for preparation of their agriculture land.

iii. Rural to Urban Migration:

The general trend of migration here is from rural areas to urban areas though it starts from nearby rural areas to big city. These labour move from their area to Gwalior, Ujjain and Indore in Madhya Pradesh. They also move to Banswara, Chitorgarh, Kota in Rajasthan and Baroda, Dahod in Gujrat.

iv. Urban to Rural Areas Migration:

Urban to Rural area migration by the public is not seen in the Gwalior Distt. area.

v. Migration within district:

Migration within the district by the village people is normal practice but it is found to be comparatively in less quantity than the migration outside the distt.

vi. Migration outside district:

It is a general trend and mentioned in above paragraphs. Migration outside the district is almost 90%. During the migration period only old members of the family and children left to their home places to keep care of each other and to their cattles.

- Environmental vulnerability

Gwalior though is very less vulnerable to climate change while considering Composite VI,its environmental vulnerability is high.

The presence of the Gwalior – Rail Sprinh Karkhana, Indian oil Corporation Depot. and the possibility of an industrial disaster however is always impending. There needs to be more research conducted in enumerating the list of chemicals being used in this area, the wind directions, such research needs to be taken up by the Divisional Pollution Control board, Ujjain.

- Institutional vulnerability

Gwalior does not have a robust administration in place to deal with disasters. The DDMA, DDMC is not established. There is a lack of institutional support.)

**Table B.2
Block wise vulnerability**

Name of Block	Physical/Infrastructural Vulnerability/Social	Environmental/Natural vulnerability	Economic vulnerability	Institutional vulnerability
Bhitarwar	lack of economic support for facing problems like drought,Flood	Increase in temperature during summer and increase in GHG gases.	None	Need of CBDM
Ghatigaon	Lack of awareness among people	Flood	Overall Literacy rate is very low	Lack of training for various operations and

	about hazards		i.e, 49.5% and female literacy rate is very less 18.5%.	no criteria for meetings of various committees
Dabra	Poor Drainage system in few colonies,Millions of devotees visit Sindh Palace	Lack of water during summer season	None	None
Murar	Poor Drainage system in few colonies,Millions of devotees visit Sindh Palace	Decrease in water level on earth surface in May due to heat,	Farmers are unaware of agricultural practices which has to be used in drought prone areas	Lack of training for various operations and no criteria for meetings of various committees

B 3. Capacity Analysis

Table B 3.1 Resource inventory, Block wise

Resource Type	Number	Govt, Private	Contact no. of nodal person/s
Equipments used for cutting, Search & Rescue (S&R), grinding m/c etc-Bolt Cutters	03	Govt.	2438301
Total number of cranes	05	Govt.	0751 2322192,0751 2320171
Trained manpower, professionals available in specific domain like S&R ,First Aid, Response Warning, Swimming etc.	55	Govt.	751-2438300,2438301
First Aid / Medical emergency requirements, equipments used	148	Govt.+Private	751-4030097, 2320171, 2452994,
No. Of Life jackets	10	Govt.	0751 2322192,0751 2320171
Rescue Back Boards	03	Govt.	0751 2322192,0751 2320171
Total no. of boats (with info about capacity, size, contacts of Orgn./owner etc)	01	Govt.	0751 2322192,0751 2320171
Number of walki talki sets	10	Govt.	2438300,2438301
Total number of search lights	05	Govt.	2438300,2438301

B 4. Risks Assessment

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

Type of hazard	Vulnerable areas	Vulnerability	Potential Impact	Identified safer places
Flood	Gwalior	Population at risk, Communication failure,	Loss of Livestock, Loss of Crop, Loss of water resources,	Jivaji University,Devi ka Mandir
Earthquake	Gwalior	Population at risk,Communication failure,	Loss of Livestock, Loss of Crop, Loss of water resources, Livelihood impact	New Collectrate,Gargaj Hunuman Mandir
Accidents,	On highways or for that matter anywhere.	People travelling in the vehicles, people in the vicinity of the accident	Loss of lives or severe impact on health.	Deokhoh,Pawata
Industrial disaster,	No such record.	People who work in the factories, people who live around the factory, water and air around.	Loss of lives, poisonous gases spread around the place leading to genetic impairments for the future generations, water and other resource pollution.Loss of lives, severe injuries.	Imaliya

B 4. Risks Assessment

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

Type of hazard	Vulnerable areas	Vulnerability	Potential Impact	Identified safer places
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Flood	Gwalior	Population at risk, Communication failure,	Loss of Livestock, Loss of Crop, Loss of water resources,	MARC hospital
Earthquake	Gwalior	Population at risk, Communication failure,	Loss of Livestock, Loss of Crop, Loss of water resources, Livelihood impact	Birla Institute, Jama Maszid
Accidents,	On highways or for that matter anywhere.	People travelling in the vehicles, people in the vicinity of the accident	Loss of lives or severe impact on health.	
Industrial disaster,	Sitholi	People who work in the factories, people who live around the factory, water and air around.	Loss of lives, poisonous gases spread around the place leading to genetic impairments for the future generations, water and other resource pollution. Loss of lives, severe injuries.	Tora, Imaliya, Gurudwara Saheb
Fire	Bareilly	Lives of people who live in thatched houses, livestock and property.	Loss of lives, severe injuries, loss of livestock and property.	Ayurvedic College

B 4.2 Risk profiling of the district

The district of Gwalior is apparently “safe” in terms of disaster.

One of the major reasons is the sparse population in the area as compared to other parts of the country.

There are very less high rise buildings which are to be taken special care of during the situations such as earthquakes.

The only disaster that is stressed upon is ‘Flood’ and a proper Flood relief cell is working in the district.

However no special measures in terms of disasters like droughts are currently in place except reserve stock of food at fair price shops and there are water tankers for provision of water.

So, the district needs an “Integrated Disaster Management Plan’ which incorporates all the probable disasters as well as ensures a smooth co-ordination in the affected area so as to minimize the damage to human life as well as other loss.

In the subsequent section, a new plan is recommended for Gwalior which integrates ICS system considering all the disasters as well as abides by the guidelines of Disaster Management Act 2005.

C . DISTRICT LEVEL DISASTER MANAGEMENT PLANNING

C 1 District Action Plans

As per Article 5 of the Law, the following activities would be carried out for any emergency situation or disaster:

1. Prevention of disasters;
2. Assessment and Mitigation of the causes of disasters;
3. Rescue of people during a disaster;
4. Reconstruction and people's return to normal life;
5. Conduction community awareness programmes and training personnel to be prepared to cope with disasters;

For efficient execution of the National Disaster Management Plan, the five activities have been allocated to four stages of the Disaster Cycle. The Plan has been organised as per these four stages of the Disaster Cycle.

C 1.1 Mitigation Plan

This part will mainly focus on various ways and means of reducing the impacts of disasters on the communities through damage prevention. Major focus will be given to disaster mitigation owing to its importance in reducing the losses. The mitigation plans will be specific for different kinds of hazards identified in HRVC section. Mitigation plans will be sector specific, and will deal with both aspects, structural & non-structural.



Different parts of the Gwalior district are vulnerable to different sets of hazards. Mitigation plans will be developed and adapted locally. Mitigation strategies need to ensure the higher level of community involvement and participation. For this, Gwalior District Disaster Management Authority follows a “Bottom to Top” approach in preparation of the plan. The inputs for preparing the District level mitigation plan will come from the Gram Panchayat level, Block level and in the case of urban areas from municipal corporation or Nagar Panchayats level.

The institutional arrangement to ensure the planning, coordination, implementation and monitoring of the Gwalior district mitigation strategy will be as follows:

- The Gwalior DDMA with inputs from the district technical committee(s) will plan and coordinate all the mitigation activities at the district level. All the concerned departments will develop and implement their respective mitigation plans. The departments will identify a nodal officer within their respective departments to coordinate the mitigation activities and who will also be responsible for communicating the status of the department's efforts to the DDMA.
- All the Gram Panchayats of the districts will prepare their Gram Panchayat Disaster Management Plan, which includes the mitigation plan. The responsibility of preparation of these plans will be of the Gram Panchayat Disaster Management Committee. The plans will be submitted by the Gram Panchayat Disaster management Committees to the respective Block Disaster Management Committees, which in turn will prepare its own Block Disaster Management Plan using the information from all the Gram Panchayats falling under its jurisdiction. The Block level plans from all the blocks will be finally submitted to the Gwalior District Disaster Management Authority, which will then using the information from the block level plans will prepare the district mitigation plan. Similarly, for the Urban Areas of the district, the disaster management plans including the mitigation plan will be prepared by the respective Municipalities or Nagar panchayats and will be submitted to Gwalior DDMA.
- Vulnerability analysis and risk assessment are essential for developing mitigation strategies and these analysis needs to come from the ground level to understand the locale specific situation. The gram panchayat, block level and urban bodies' disaster management plans will help in getting this information.

The mitigation measures proposed have been categorized into six major headings:

1. Risk assessment
2. Construction work
3. Repair and maintenance
4. Research and technology transfer
5. Training and capacity building
6. Land Use Planning and Regulations
7. Resources for Mitigation

In rural areas, characterized by inadequate infrastructure and poverty groups, all mitigation efforts will have to be backed up by a strong and committed programme of social development for the communities. Constant re-examination, therefore of development policies and programmes, leading to equity and social justice, will be a pre-requisite to ensure the success of mitigation efforts that are being proposed.

The roles of training, education, and information dissemination will be key areas of intervention in order to ensure the implementation and sustainability of the mitigation strategies.

C 1.1.1 Scope of Integrating Risk Reduction in Development Schemes

It will address and align the pertinent issues of construction (structural & non-structural elements), infrastructure, repair & maintenance, transport, sanitation, research & technology transfer and land use planning.

- Under the National Rural Employment Guarantee Act, provide for strengthening and maintenance of such physical features that may vitally protect/help in rescue of communities during disaster situations. Under this

act maintenance and strengthen of dam, ponds etc. will take place and also it will provide the job to unemployed youth. Especially under the construction of smaller dam, stop dam, rural road rural youth can work under MNREGA and reduced the vulnerability. Addition to this during the time of disaster like flood or drought if any plan has been taken by Zila Panchayat for relief and construction of drains for reducing the impact of flood so this job can be implemented under MNREGA. Apart from this Unemployed youth can also work during disaster for relief work under MNREGA so that rescue & relief will be fast.

- Under Indira Awaas Yojana (IAY) all the houses should be advised and instructed to construct earthquake resistant. Special instruction should be provided by district administration to block level and block will guide and instruct to Gram Panchayat for the construction of houses under Indira Awaas Yojana (IAY) for earthquake resistant house construction. Three training should be provided at gram Panchayat level for construction of small earthquake resistant houses under this scheme. This vulnerability due earthquake can be reduced.
- Under SSA (Sewa Siksha Abhiyan) whatever schools are being constructed should be earthquake resistant by following the proper guidelines. This should be instructed from the district SSA office. Also awareness should be spread at Gram Panchayat level about earthquake-resistant house by education department.
- PDS system should be made very efficient and should play a critical role during the time of disaster. As the PDS have sufficient foods in stock for providing food during crisis.
- Under NRHM special attention should be given to the diseases like Falaria, Dengu, Chickengunia and jaundice in umaria district so that epidemics can be avoided. Under this scheme proper vaccination should be carried out by the district health administration through CHC and PHC. Apart from Special camp should be arranged at block level or Gram Panchayat level about awareness of diseases and how to be safe. Doctors should be trained to tackle the epidemic in that region. Under this scheme there should be doctors and stock of medicines related to the epidemics by which generally people of these areas are affected.
- The same way, under PMGSY (Pradhanmantri gram Sadak Yojna), proper communication should be established in Akash Koh area of Manpur block where transportation become vulnerable during rainy seasons. It should give special attention to the water logging area which is more affected during the rainy seasons. Roads should be constructed under this scheme in rural area for the proper communication from village to block. There are some areas more affected during rainy seasons transportation become very difficult so these areas should get priority.
- In order to deal with the severe cases of Drought, the components of National Food Security Mission (NFSM) should also be linked based on the relevance and according to the needs of the sufferers, in line with the criteria of the mission.

C 1.1.2 Training & Capacity Building

It is proposed the establishment of a Madhya Pradesh Disaster Management Institution as part of overall mitigation strategy. The Institute will organize training for state level and district level officials, officials from line departments, as well as the private sector organizations.

The MPIDM will be the primary agency for conducting training to all government officials involved in the planning and implementation of the mitigation strategies at the state and district level. At the district level, training programmes will be conducted in coordination with NGOs, and government training/research institutions.

Mode	Agency responsible
Training Programme for Rescue & Relief	SP, Dist. Fire Officer, Civil Defence, NGOs, CBOs
Training for common people on Health Care, Sanitation & First Aid	CDMO, BDOs & CBOs
Disaster Orientation Training of Police/ Fire Personnel/ Medical Teams	OSDMA/ ODMA/ UNDP/ SRC

SETTING UP OF DISASTER VOLUNTER FORCE - IDENTIFICAITON & TRAINING

	<u>Warning Group</u> - Warn the community of the impending danger.
Block level Task force	<u>Rescue & Evacuation Group</u> - To be put into task immediately after abatement of calamity.
G.P. Level Task force	<u>Water & Sanitation Group</u> - Ensured safe drinking water in the shelter camps, MCS <u>Shelter management Group</u> - Shall remains overall charge of managing the evacuees in shelter camps.
Village Level Task force	<u>First Aid & Medical Group</u> - Shall take care of the minor elements in the rescue camp. <u>Patrolling and Liaison Group</u> - Shall watch & Word belongings of the inmates in the shelter camps & keep liaison with Govt.

Field	Capacity Building	Department.
Information Education Centre (IEC) activities	Improving Information Education and communication activities through walling ,posters, street play,volunteers training , village task force training. Mass rallies during normal period.	Leading NGOs
Road	Repair/ Restoration of vulnerable points on Roads before unset of monsoon.	PWD / Rural Development/ Panchayat Samiti.
Embankment	Repair of vulnerable points in river/ canal Embankment during free flood period.	Irrigation / Minor Irrigation.
Bridge	Repair/ Restoration of vulnerable points on bridge before unset of monsoon.	PWD / concern village committee.
Safe shelters	Ensuring proper maintainance of shelter places constructed by default agencies.	Block / concern village committee.
Communication	Ensure maintainance and proper functioning of electronic communication system	BSNL Deptt.
Drinking water and sanitation	Immediate Response for repair/ replacement of tube wells / Pipe water supply system.	Public Health Engineering / Rural Water Supply and Sanitation
Power	Immediate response for repair of electric line and supply	Electric Deptt.
IEC activities	By way of IEC activities through walling posters, street play, village task force/volunteers training, during normal period.	By leading NGOs, Chief Medical and Health Officer, Agriculture and Rural Development Department
Vaccination	Adequate stock piling of vaccines should be ensured for vaccination before disaster.	NGOs,Chief Medical and Health Officer, Agriculture and Rural Development Department

Training	Training programme of common people should be programmed for health care, sanitation and first aid from village level to district level	NGOs, Chief Medical and Health Officer, Agriculture and Rural Development Department
Awareness	Creating awareness among general public during normal time to insured human life.	Leading NGOs.
Agriculture	To reduce adverse impact on agriculture farmers should be advised alternating cropping pattern/flood resistance crops.	Dy. Director Agriculture.
Horticulture	Drought resistance short duration paddy seeds be made available to farmers.	Dy . Director Horticulturist
Infrastructure	Improving information education and communication activities through walling, posters, street play, volunteers training	—
Life	Creating awareness among general public during normal time to insured human life.	Leading NGOs.

The capacity building and the departments involved

C 1.1.3 Community Initiatives

The community awareness and training activities will basically be carried out in the form of training programmes through NGOs, Private Sector, and Government Training Institutions. Apart from spreading awareness of

disasters, the focus will essentially be on community capacity building. Special focused will be given to local contractors and masons, who are the prime responsible for construction work. Training programmes will target the informal construction sector by building their capacities on safe construction practices and retrofitting of existing structures. An institutional arrangement is required to ensure that in the long term, contractors and mason ensure safe construction practices.

Primary agencies for community level training and public awareness are:

- Environment, scientific & technology department
- Technical Education Department
- NGO
- Private sectors

The NGOs, private sector organisations and other government training institutions will, in turn, organise training and simulation exercises at the district and community level, in order to ensure preparedness from the grass-roots.

Land Use Planning and Regulations

The department of Town and Country planning will be primary agency to encourage new development to occur in locations avoiding or minimizing exposure to hazards or enhance design requirements to improve resiliency in future disasters. This office should also ensure proper enforcement of existing regulations and acts.

C 1.1.4 Risk Management Funding

This section addresses the short & long term funding provisions for proposed mitigation activities, under the overall objective of risk management at district level.

Short term provisions are expected to cover the immediate loss, incurred due to disasters. Whereas long term provisions include the set up of fire stations, watershed management, planting trees along the river etc.

Short term provisions are expected to cover the immediate loss, incurred due to disasters. Whereas long term provisions include the set up of fire stations, watershed management, planting trees along the river etc.

Insurance schemes are important source of funds for restoration of private business enterprises. The Collector will coordinate with Insurance Companies to speed up settlement of insurance claims. It will help in restoration of private business enterprises. He will also coordinate with commercial banks for ensuring smooth flow of financial assistance from commercial banks for restoration of private business enterprises.

Agriculture department shall provide seeds and the required finance as loans through local banks for the resumption of agriculture activities. The district administration shall elicit the support funding of agencies like Care, CRS etc. for the resumption of agriculture and livelihood activities.

Revenue/Book Circulars contains standing instructions of the Government for distribution of ex-gratia payments to poor families, who suffer from disasters to initiate their recovery process. This assistance will be provided very promptly to the poor families by the functionaries of the Revenue Department.

Long term: Fire equipments should be purchased as required and as per new technology. For eg: multistoried buildings (masks aren't available), equipments for fire extinguishing in slum areas where fire brigade cannot enter. Only 3 fire brigades are available in the district that too in Ratlam which might pose a problem in case of incidence of fire in distant places.

Eco friendly watershed interventions to deal with drought situations, check dams for mitigating soil erosion should be established.

Planting trees on banks of rivers to prevent soil erosion and act as shelter belts.

C 1.2 Preparedness Plan

In most disaster situations, the experience has shown that loss of life and property could be significantly reduced because of preparedness measures and appropriate warning systems. It is therefore necessary that with respect to every disaster a responsible officer is designated to issue the warnings.

- The District Disaster Management Authority will be the prime agency responsible for issuing the disaster warning at the district level through the District Emergency Operation Centre.
- Additionally the technical agencies authorized to issue warning will also communicate the same to the District Emergency Operation Center and State Emergency Operation Centre for further actions.

C.1.2.1 Preparedness before response

General Preparedness Measures

1. Establishment of the Control Rooms

The district administration should ensure the operation of control rooms. The control rooms are presently run by major line departments at revenue, police, MSED, Hospital, etc. at taluka and district level should be functional.

2. Plan Updation

Disaster Management Plan needs updation at every interval. It includes the skilled manpower, their addresses and contact numbers, necessary equipments, medicinal stock, daily necessities, list of flood prone villages etc. All these things have to be updated after a certain interval of time.

3. Communication System

Training is given for search and rescue teams, first aid teams disaster management teams at village, taluka and district level. These teams will provide timely help during any type of disaster. Provision of wireless sets at all Sub-division and Taluka Offices for effective communication of cyclone/heavy rainfall/flood warning should be provided. Fire Brigades at all the Municipal Offices. Setting up of a special Highway Safety Patrol along the Nagpur-Bhopal highway will be acted upon. Effective and stricter implementation of flood zone regulations disallowing construction within 200 m of river banks. Widespread community awareness programmes in flood prone villages so that villages are sensitized about the flood hazard and there are no problems when there is need for evacuation.

4. Training for Disaster Management Team Members

Each of the DMTs comprise of groups of women and men volunteers and are assigned with a special task. The Search and Rescue Teams, First Aid Teams formed at the three levels should be provided training from time to time so that their timely help can be used during disaster.

5. Organization of Mock Drills

Mock drill is an integral part of the Community based disaster management plan, as it is a preparedness drill to keep the community alert. Mock drills are organized in all the villages of the district to activate the DMTs and modification of the DM plan. Mock drill is organized once in six months as per the seasonality calendar of natural disaster events that is likely to occur.

6. Community Awareness on Various Disasters

1. Construction of Earthquake Resistant Structures
2. Retrofitting the weak structures
3. House insurance
4. Construction of embankments for flood control
5. Rehabilitation of people in safe lands
6. Development of plans for shifting people from vulnerable area to safer area

C.1.2.2 Pre-Disaster Warning, Alerts

The existing control rooms for flood relief can be used for disasters like cloud bursts or hail storms with little or no modifications. Here the information desk of the ICS system will play an important role. It should be ensured that the warning system is easy to operate, reaches a large number of people simultaneously and take little or no maintenance at all. If any electrical equipment is involved, power supply should be ensured and there should be provisions for backup supply. Also, it should be checked at regular interval to ensure its working at the time of need. Often animals exhibit different kind of behavioral patterns prior to the onset of disasters like flood and earthquake. These patterns should be studied and integrated in the awareness program for communities.

Table C. 1.2.2

Hazards	Agencies
Flood	Indian Meteorological Department, Central Water Commission, Irrigation Department
Drought	Indian Meteorological Department, Revenue Department

Industrial	Dept. of Industry, SPCB
Fires	Fire Brigade, Police, Forest Department
Hot & Cold Waves	Indian Meteorological Department,
Road Accidents	Police
Human Epidemics	Health Department
Animal Epidemics	Animal Husbandry

C.1.2.3 Evacuation stage

The following steps are recommended for evacuation:

A special Search and Rescue team consisting of the police department personnel, Home guards, PWD workers and the person having past experience in dealing with disasters should be constituted.

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 1.3 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 and alternative communication.

C 1.3.1 Incident Command System (ICS)

There is no ICS system in place for the district currently, however the following plan is proposed:

The Incident Command System (ICS) is a management system and an on-scene, all risk, flexible modular system adaptable for natural as well as man-made disasters. The ICS has a number of attributes or system features. Because of these features, ICS has the flexibility and adaptability to be applied to a wide variety of incidents and events both large and small. The primary ICS management functions include:

1. Command
2. Operations

3. Logistics
4. Planning
5. Finance / Administration

The ICS seeks to strengthen the existing disaster response management system by ensuring that the designated controlling/responsible authorities at different levels are backed by trained Incident Command Teams (ICTs) whose members have been trained in the different facets of disaster response management.

The five command functions in the Incident Command System are as follows:

1. Incident Commander

The Incident Commander is responsible for all incident activity. Although other functions may be left unfilled, there will always be an Incident Commander.

2. Operations Section

Develops tactical organization and directs all the resources to carry out the Incident Action Plan.

3. Planning Section

It is responsible for the collection, evaluation, and display of incident information, maintaining status of resources, and preparing the Incident Action Plan and incident related documentation.

4. Logistics Section

It provides resources and all other services needed to support the organization.

5. Finance / Administration Section

Monitors costs related to the incident, provides accounting, procurement, time recording, cost analysis, and overall fiscal guidance.

District Level Incident Response

At the district level, there will be one District Headquarters Team with the primary function of assisting the District Collector in handling tasks like general co-ordination, distribution of relief materials, media management and the overall logistics. Suitable officers from the district administration will be carefully selected and professionally trained for the different ICS positions in order to constitute the District Level Incident Command Teams. (DICTs). The teams will focus on the operational aspects of response management, duly supported by other functions in ICS, e.g. Planning, Logistics, Finance/Administration, etc. The officers drawn for this assignment will be carefully selected by the District Collector depending upon their fitness, ability and aptitude for any of the DICT positions and they will be professionally trained to fulfill their assigned roles.

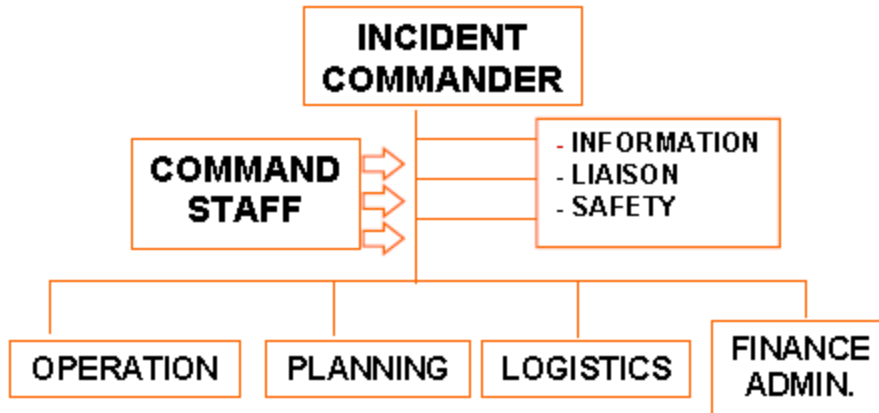
Arrangements will also be made for ensuring their mobilization in a time-bound manner for their deployment to the trouble spot. Due consideration for the appropriate level of seniority will be given while constituting the teams. The team personnel may be selected from the General

Administration / Revenue Department which traditionally handles disaster response in our country, the option to pick up willing and capable personnel from any other department for taking up specific positions in the DICT will be left open. For some positions, a suitable number of additional personnel will be trained as reserve for taking care of contingencies like transfers, promotions, etc.

For the position of the Incident commander, a suitable officer of the rank of Additional District magistrate will be preferred. The District Level Incident Command Teams will function under the overall control of the Collector / District Magistrate. The State governments can also deploy the DICTs to other districts depending upon the magnitude of the disaster.

ICS Organization in Detail

The ICS organization is built around five major functions that are applied to any incident whether it is large or small. Unified Command, which is a management method to use for multi jurisdictional and /or multi-agency events, is a major feature of ICS.



Role and Responsibilities of ICS Staff

The following represents the major responsibilities and duties of the Incident Commander.

The incident commander's responsibility is the overall management of the incident. The Incident Commander may have a deputy who may be from the same agency, or from an assisting agency.

Incident Commander

Major responsibilities and duties of Incident Commander

1. Assesses the situation and/or obtain a briefing from the prior Incident Commander.
2. Determine incident objectives and strategy.
3. Establish the immediate priorities.
4. Establish an incident command post.
5. Establish an appropriate organization ensure planning meetings are scheduled as required.
6. Approve and authorize the implementation of an Incident Action Plan.
7. Ensure that adequate safety measures are in place.
8. Co-ordinate activity for all Command and General Staff.
9. Coordinate with key people and officials.
10. Approve requests for additional resources or for the release of resources.
11. Keep agency administrator informed of incident status.
12. Approve the use of students, volunteers, and auxiliary personnel.
13. Authorize release of information to the news media.
14. Order the demobilization of the incident when appropriate.

1. Establish an Incident Command Post (ICP)/ DEOC (District Emergency Operations Centre):

The ICP will be wherever the Incident Commander is located. As the incident grows, it is important for the Commander to establish a fixed location for the ICP and to work from that location. The ICP provides a central coordination point from which the Incident Commander, Command Staff and Planning functions will normally operate.

The ICP can be any type of facility that is available and appropriate, e.g., vehicle, trailer, tent, an open area or a room in a building. The ICP may be located at the Incident Base if that facility has been established. Once established, the ICP should not be moved unless absolutely necessary.

It is proposed that the DEOC be established with the Department of Home since the Civil Defense and Police for Disaster Preparedness is a dedicated department suited to the logistical management of an EOC. The DEOC will be set up with the entire infrastructure as per the given layout.

1. The Chief of operations will initiate the activation of emergency services of the DEOC as established.
2. Activation of the DEOC should immediately follow the declaration of a District Level Emergency.

3. The Individuals staffing the DEOC are responsible for establishing communications with their respective departments through radio and telephone etc.
4. The DEOC Chief or designee will determine what staff he/she deems necessary to effectively operate the DEOC apart from the prescribed staff.
5. The designated officers of the Police will provide security at the DEOC

2. Establish the Immediate Priorities

First Priority is always safety of:

1. People involved in the incident
2. Responders
3. Other emergency workers
4. Bystanders

Second Priority: Incident Stabilization.

Stabilization is normally tied directly to incident complexity.

When considering stabilizing the Incident Commander must:

1. Ensure life safety
2. Ensure Protection of life and property
3. Stay in Command
4. Manage resources efficiently and cost effectively

3. Determine Incident Objectives, Strategy, and Tactical Direction

It is safe to say that all agencies employ some sequence of steps to meet incident-related goals and objectives. Several different approaches have been suggested. Some of these offered below:

A. Know Agency Policy

The Incident Commander may not always be an employee of the agency or jurisdiction experiencing an incident. Therefore he must be fully aware of agency policy.

This includes any operating or environmental restrictions, and any limits of authority.

Agencies will vary on how this policy is made known to the Incident Commander.

Agency policy can affect the establishment of incident objectives.

B. Establish Incident Objectives

Incident Objectives are statements of intent related to the overall incident. For some kinds of incidents the time to achieve the objectives is critical. The following are some single examples of Incident Objectives for several different kinds of incidents.

1. Release all hostages safely with no further casualties.
2. Stop any further flow of toxic material to riverbed.
3. Contain fire within existing structures.
4. Search all structures for casualties.

C. Develop Appropriate Strategy

Strategy describes the general method that should be used either singly or in combination that will result in achieving the incident objective.

D. Execute Tactical Direction

Tactical Direction describes what must be accomplished within the selected strategies in order to achieve the incident objectives.

Tactical Direction consists of the following steps:

1. Establish Tactics

Determine the tactics that are to be used appropriate to the strategy. The tactics are normally established to be conducted within an operational period.

2. Assign Resources

Determine and assign the kind and type of resources appropriate for the selected tactics.

3. Monitor Performance

Performance monitoring will determine if the tactics and resources selected for the various strategies are both valid and adequate.

4. Monitor Scene Safety

Public safety at the scene of an incident is always the top priority. If the incident is complex, or the Incident Commander is not tactical expert in all the hazards present, a Safety Officer should be assigned. Hazardous materials incident requires the assignment of a Safety Officer

5. Establish and Monitor Incident Organization

One of the primary duty of the Incident Commander is overseeing the Management organization. The organization needs to be large enough to do the job at hand, yet resource used must be cost effective.

6. Manage Planning Meetings as Required

Planning meetings and the overall planning process are essential to achieving the incident objectives. On many incidents, the time factor does not allow prolonged planning. On the other hand, lack of planning can be more disastrous. Proactive planning is essential to consider future needs.

7. Approve and Authorize the Implementation of an Incident Action Plan

Plans can be oral or written. Written plans should be provided for multi-jurisdiction or multi-agency incidents, or when the incident will continue for more than one Operational Period.

8. Approve Requests for Additional Resources or for the Release of Resources

On small incidents, the IC will personally determine additional resources needed and order them. As the incident grows in size and complexity, the ordering responsibility for required resources will shift to the Logistics Section Chief and to the Supply Unit if those elements of the organization have been established.

9. Authorize Release of Information to the News Media

The sophistication of modern news gathering methods and equipment make it very important that all incidents have procedures in place for managing the release of information to the media, as well as responding appropriately to media inquiries.

There are three important staff functions that are the responsibility of the Incident Commander unless Command Staff positions are established.

1. Public Information and media relations
2. Maintaining liaison with assisting and co-operating agencies
3. Ensuring safety

Information Officer

The information officer is responsible for developing and releasing information about the incident to the news media, to incident personnel, and to other appropriate agencies and organizations.

Reasons for the IC to designate an Information Officer

1. An obvious high visibility or sensitive incident media demands for information may obstruct IC effectiveness.
2. Media capabilities to acquire their own information are increasing.
3. Reduces the risk of multiple sources releasing information.
4. Need to alert, warn or instruct the public
5. The Information Officer should consider the following when determining a location to work at the incident.
6. Be separate from the Command Post, but close enough to have access to information.
7. An area for media relations and press/media briefings must be established.
8. Information displays and press handouts may be required.
9. Tours and photo opportunities may have to be arranged.

Liaison Officer

Incidents that are multi-jurisdictional, or have several Agencies involved, may require the establishment of the Liaison Officer position on the Command Staff.

The Liaison Officer is the contact for Agency Representatives assigned to the incident by assisting or co-operating agencies. These are personnel other than those on direct tactical assignments or those involved in an Unified Command.

Reasons for the IC to designate a Liaison Officer

1. When several agencies send, or plan to send, agency representatives to an incident in support of their resources.
2. When the IC can no longer provide the time for individual co-ordination with each agency representative.
3. When it appears that two or more jurisdictions may become involved in the incident and the incident will require on-site liaison.

Safety Officer

The Safety Officer's function on the Command Staff is to develop and recommend measures for assuring personnel safety, and to assess and/or anticipate hazardous and unsafe situations.

Only one Safety Officer will be assigned for each incident. The Safety Officer may have assistants as necessary, and the assistants may also represent assisting agencies or jurisdictions. Safety assistants may have specific responsibilities such as air operations, hazardous materials, etc. The Safety Officer will **correct unsafe** situations by working through the chain of command. However, the Safety Officer may exercise emergency authority to directly stop unsafe acts if personnel are in imminent life-threatening danger.

C 1.3.2: Crisis management direction & coordination

In contrast to risk management, which involves assessing potential threats and finding the best ways to avoid those threats, crisis management involves dealing with threats before, during, and after they have occurred. That is, crisis management is proactive, not merely reactive. It is a discipline within the broader context of management consisting of skills and techniques required to identify, assess, understand, and cope with a serious situation, especially from the moment it first occurs to the point that recovery procedures start.

Following are the key disaster management team at district level:

- Warning Dissemination Team
- Shelter Management Team
- Evacuation and Rescue Team
- First-Aid and Health Team
- Sanitation and Carcass disposal Team
- Counselling Team
- Damage Assessment Team
- Team for collection, storage and distribution of Relief materials.

C 1.3.3: Incident Command System (ICS)

Role and Responsibilities of ICS General Staff (Proposed)

The General Staff consists of the following positions :

1. Operations Section Chief
2. Planning Section Chief
3. Logistics Section Chief
4. Finance/Administration Section Chief

Operations Section

The Operations Section is responsible for managing all tactical operations at an incident. The build-up of the Operations Section is generally dictated by the number of tactical resources involved and span of control considerations.

The Operations Section consists of the following components:

1. Ground or surface-based tactical resources
2. Staging Areas

1. Ground or Surface-based Tactical Resources

There are three ways of organizing tactical resources on an incident. The determination of how resources will be used will be determined on the application area and the tactical requirement. Resources can be used as:

1. Single Resources
2. Task Forces
3. Strike Teams

2. Staging Areas

The second component of the Operations Section is the Staging Area.

An ICS Staging Area is a temporary location for placing resources available for incident assignments. All resources within the Staging Area belong to the incident.

Resources assigned to a Staging Area are available on a three minute basis to take on active assignment.

Staging Area are temporary facilities. They can be set up at any appropriate location in the incident area and moved or deactivated as needed.

The Staging Area Managers report to the Operations Section Chief or to the Incident Commander.

Planning Section

In ICS, the Planning Section is responsible for managing all information relevant to an incident. When activated, the Planning Section Chief who is a member of the General Staff manages the Section.

The Planning Section collects, evaluates, processes, and disseminates information for use at the incident.

Dissemination can be in the form of the Incident Action Plan, formal briefings, or through map and status board displays.

Some incidents may require personnel with specialized skills to be temporarily assigned to the Planning Section. These persons are called Technical Specialists such as

1. Chemist
2. Hydrologist
3. Geologist
4. Meteorologist
5. Training Specialist

There are four units within the Planning Section that can be activated as necessary

1. Resources Unit
2. Situation Unit
3. Documentation Unit
4. Demobilization Unit

Common responsibilities of Unit Leaders are listed below:

- Obtain briefing from the Section Chief
- Participate in incident
- Determine current status of unit activities
- Confirm dispatch and estimated time of arrival of staff and supplies
- Assign specific duties to staff, supervise staff
- Develop and implement accountability, safety, and security measures for personnel and resources
- Supervise demobilization of the unit, including storage of supplies
- Provide Supply Unit Leader with a list of supplies to be replenished

- Maintain unit records, including Unit Log

1. Resources Unit

This Unit is responsible for maintaining the status of all assigned resources at an incident. It achieves this through:

1. Overseeing the check-in of all resources
2. Maintaining a status-keeping system indicating current location and status of all the resources.
3. Maintenance of a master list of all the resources, e.g. key supervisory personnel, primary and support resources, etc.

2. Situation Unit

1. The collection, processing, and organizing of all incident information takes place within the Situation Unit. The Situation Unit may prepare future projections of incident growth, maps, and intelligence information. Three positions report directly to the Situation Unit Leader
2. Display Processor – maintains incident status information obtained from
3. Field Observers, resource status reports, etc. information is posted on maps and status boards as appropriate.
4. Field Observer – Collects and reports on situation information from the field.
5. Weather Observer – Collects current weather information from the weather service or an assigned meteorologist.

3. Documentation Unit

The Documentation Unit is responsible for the maintenance of accurate, up-to-date incident files. Duplication services will also be provided by the Documentation Unit. Incident files will be stored for legal, analytical, and historical purposes.

4. Demobilization Unit

The Demobilization Unit is responsible for developing the Incident Demobilization Plan. On large incidents, demobilization can be quite complex, requiring a separate planning activity. Planning for demobilization should begin at the early stages of an incident, particularly in the development of rosters of personnel and resources, thus ensuring the efficient and safe demobilization of all the resources.

5. Technical Specialists

Certain incidents or events may require the use of Technical Specialists who have specialized knowledge and expertise. Technical Specialists may function within the Planning Section, or be assigned wherever their services are required. In the Planning Section, Technical Specialists may report to the following:

- Planning Section Chief
- A designated Unit Leader

Some examples of the more commonly used specialists are :

1. Meteorologist
2. Environmental Impact Specialist
3. Flood Control Specialist
4. Water Use Specialist
5. Fuels and Flammable Specialist
6. Hazardous Substance Specialist
7. Fire Behavior Specialist
8. Structural Engineer
9. Training Specialist

Logistics Section

The Logistics Section is responsible for the following:

1. Facilities
2. Transportation
3. Communications
4. Supplies
5. Equipment maintenance and fueling
6. Food Services

7. Medical Services
8. Ordering Resources

The Logistics Section Chief manages the Logistics Section. On very large incidents, or on incidents requiring a great deal of equipment or facilities, the Logistics Section may be divided into two branches – Service Branch and Support Branch. This is most often done for span of control reasons, resulting in a more manageable organization.

Six Units may be established within the Logistics Section:

1. Supply Unit
2. Facilities Unit
3. Ground Support Unit
4. Communications Unit
5. Food Unit
6. Medical Unit

C 1.3.4: Rapid damage assessment & reporting

The Rapid Assessment Teams will be multi-disciplinary teams comprising four or five members. They will mainly comprise senior level specialized officers from the field of health, engineering, search and rescue, communication and one who have knowledge of disaster affected area, physical characteristic of the region, language etc. These officials should share a common interest and commitment. There should be a clear allocation of responsibilities among team members. To make a first / preliminary assessment of damage, the assessment report will contain the following basic elements or activities

- Human and material damage
- Resource availability and local response capacity
- Options for relief assistance and recovery
- Needs for national / international assistance

Deployment of search and rescue teams can help in reducing the numbers of deaths. A quick response to urgent needs must never be delayed for the reason that a comprehensive assessment has yet to be completed. The following teams must be sent to disaster site or disaster affected area as early as possible, even prior to First Information Report.

- First Aid Team
- Search and Rescue team
- Communication Teams
- Power Team
- Relief Teams
- Rehabilitation teams
- Transport Team

All other focal departments will keep ready their response teams, which may be deployed after receiving the first information report.

Representative of the affected community directly informs either the nearest district administration office, police station or any government official or an NGO, who will then inform either the Sub-Divisional Officer/SDM or his office or directly to the DEOC on the toll free numbers. All the information coming to the SDM or DEOC will be communicated to the Deputy Commissioner, who based on the available information, if deems fit, will activate DEOC in the emergency mode.

A clear and concise assessment of damages and needs in the aftermath of a disaster is a pre-requisite for effective planning and implementation of relief and recovery measures. The objectives of damage and needs assessment are to determine:

- Nature and extent of disaster
- Damage and secondary threats
- Needs of the population

Two types of assessment that may have to be carried out are:

1. Initial Assessment
2. Technical Assessment

Rapid Assessment Teams will carry out the Initial Assessment

Table 1: Initial Assessment Report

Table 2: 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: District Search & rescue Team

It is the duty of the DDMA to provide specialized life saving assistance to district and local authorities. In the event of a major disaster or emergency its operational activities include locating, extricating and providing on site medical treatment to victims trapped in collapsed structures. In the event of any disaster the **Home Guards** along with the support of the Police dept. form teams to locate injured and dead and try to rescue the ones in need. There are other bodies too that help these departments in this work, like the PWD, Health dept, Fire dept and also the people that voluntarily form teams to help the ones in need. Proper training for search and rescue process needs to be undertaken so as to minimize the time taken in rescuing someone. Also proper methodology and resources are needed to carry out a search & rescue mission.

The tactics used in the search & rescue process vary accordingly with the type of disaster that we are dealing with. In case of flood, a boat and trained swimmers are a must while in case of an earthquake sniffer dogs and cutting tools with trained manpower is a binding requirement. The household register that is maintained by the warden should be maintained for every village as it proves to be of great help in case of a disaster like an earthquake. Because in case of the aforementioned disaster people get trapped in the debris of buildings and houses and it becomes difficult to estimate how many people are present in the debris. But if a household register is maintained then the task becomes quite easy and effective to find out almost correctly that how many people would be present in any building/house at any given time. Thus the resources can be justifiably distributed and more lives can be saved. This kind of process is highly recommended in this particular district which lies in moderate earthquake prone region.

For flood it is recommended that the boats that are used should be light weight and the motor should be of 'luma' type, so that it becomes easy for the rescue team to lift the boat and carry it to the spot. Also a heavy boat needs deep water to float and as the basin of river Narmada is filled with huge boulders so it might not allow the boat to float or may even damage the boat, hence hampering the entire process in midway.

Table 3: District Search & rescue Team

S.No.	Name and designation of trained S&R Team member
	<p><i>The Search & Rescue team is formed as and when required and the members & equipments are taken according to the nature of the disaster (and also on their availability).</i></p> <ul style="list-style-type: none"> ● Police Officers (2 or more) ● Home guards (2 or more) ● Swimmers (In case of flood) ● A construction engineer (From P.W.D.)

	<ul style="list-style-type: none"> • Driver (For Every vehicle) • Any person with the prior experience of the disaster (From Home Guard/Police Dept.) • A doctor or nurse or at least a person having first aid training • A Class IV Officer (Health Dept.)
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<Source: Home Guards Office, Gwalior>

C 1.3.6: Medical response

Medical preparedness is a crucial component for any DM Plan. The DDMA, in close coordination with the CM&HO, **Health Department**, will formulate policy guidelines to enhance our capacity in emergency medical response and mass casualty management. DM plans for hospitals will include developing and training of medical teams and paramedics, capacity building, trauma and psycho-social care, mass casualty management and triage. The surge and casualty handling capacity of all hospitals, at the time of disasters, will be worked out and recorded through a consultative process, by the district of Gwalior in the pre-disaster phase. The District authorities will be encouraged to formulate appropriate procedures for treatment of casualties by the private hospitals during the disasters. This plan will also address post-disaster disease surveillance systems, networking with hospitals, referral institutions and accessing services and facilities such as availability of ambulances and blood banks.

Medical response has to be quick and effective. The execution of medical response plans and deployment of medical resources warrant special attention at the District level in most of the situations. The voluntary deployment of the nearest medical resources to the disaster site, irrespective of the administrative boundaries, should be emphasized. Mobile medical hospitals and other resources available with the State should also be provided to the district in a proactive manner. Post-disaster management of health, sanitation and hygiene services is crucial to prevent an outbreak of epidemics. Therefore a constant monitoring of any such possibilities is necessary.

Table 4: Medical Response Team

S.No.	Name of team member & Designation
	<ul style="list-style-type: none"> • A Child Specialist • A Medical Expert • A Medical officer (Dresser) • Epidemic Duty Doctor and compounder (As per rooster) • Driver (For Every vehicle) • A Class IV Officer (Health Dept.)

<Source: Health Dept., Gwalior>

C 1.3.7: Logistic arrangements

As per the data available, district has a total of 194 load carrying and 202 passenger vehicles. In addition to it, it also keeps a list of Heavy goods vehicles, Light goods vehicles, tractors, etc.

A separate list should be compiled of those vehicles that are in working condition, and are easily available at the time of disaster, so that it can be called for by the search and rescue team during emergency.

An emergency stock of fuel for disasters is usually maintained at petrol pumps and this should be made mandatory. The Logistics Section is responsible for the following:

- Facilities
- Transportation
- Communications
- Supplies
- Equipment maintenance and fueling
- Food Services
- Medical Services
- Ordering Resources

The **Logistics Section** Head manages the Logistics Section. On very large incidents, or on incidents requiring a great deal of equipment or facilities, the Logistics Section may be divided into two branches – Service Branch and Support Branch. This is most often done for span of control reasons, resulting in a more manageable organization. Six Units may be established within the Logistics Section:

1. Supply Unit
2. Facilities Unit
3. Ground Support Unit
4. Communications Unit
5. Food Unit
6. Medical Unit

C 1.3.8: Communications

The **communication dept.** Has the following duties like sending all out-messages on behalf of camp officer of the relief camp, data collection, record keeping, assistance in locating missing persons, information center, organization of information for site operations center and on specific demands, maintaining in-message and out-message register. In addition to it the following facilities are available in the communication room:

- Telephones
- Fax
- Intercom units
- VSAT connection
- PC with modem and printer
- Mobiles
- Photocopying machine
- Wireless

The media should handle such sensitive situation carefully as it may affect the victims mentally. It should issue authenticated and verified information as far as possible rumors should not be spread and should also be prevented from spreading. Correct data should be published after well quantifying it so that the public is not ill-advised.

C 1.3.9: Temporary shelter management

Pl refer annexure for detailed information pertaining to identified temporary shelters.

C 1.3.10: Water and Sanitation (WATSAN)

Restoring Water and Sanitation Services: roles and responsibilities of **Municipal deptt.**

- Work under the team leader of restoration of essential services and supervise functions of all groups
- Attend planning meetings of the section
- Brief team members about the objectives and strategy to achieve the goal
- Project requirement of Task Forces, Strike Teams and Single Resource for water and sanitation services, if required
- Repair water lines or supply water tanks of the affected sites
- Supply drinking water tank to inaccessible area
- Repair tube wells
- Check contamination of water and provide facilities for water purification
- *Involve employees of Notified Area Committee, Municipality or Corporation for sanitation services and ensure that work is in progress*
- Involve community
- Maintain the record of important activities performed

C 1.3.11: Law & order

Maintaining law & order is major responsibility of the Police dept. and apart from this other stakeholders are also involved in it. The Police Department along with the Home Guards moves the affected people to safer places. They also help the Revenue Department to carry out relief work without any encumbrance or hindrance during the disaster period. And it is their duty to safeguard the property of the victims.

The Police dept. maintains law and order in such a panic struck situation and safeguards the people (especially women and old) from theft, teasing or molestation in the disaster struck and the relief camp area. It also co-ordinates 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 and makes due arrangements for post mortem of dead bodies, and hastens legal procedure for speedy disposal. It specially protects the children, women, old and the physically challenged at the shelter places.

C 1.3.12: Public grievances/missing person's search/media management

A **Public Grievance Redressal Committee** at the district level has to be constituted under the chairmanship of the District Collector to address the grievances of the public regarding missing persons. It is the duty of the search and rescue team to search for the missing people, live or dead.

The media should handle such sensitive situation carefully as it may affect the victims mentally. It should issue authenticated and verified information as far as possible rumors should not be spread and should also be prevented from spreading. Correct data should be published after well quantifying it so that the public is not ill-advised.

C 1.3.13: Animal care

Animals, both domestic as well as wild are exposed to the effects of natural and man-made disasters and thus it is the *duty of the Veterinary department to take care of them*. It is necessary to devise appropriate measures to protect animals and find means to shelter and feed them during disasters and their aftermath, through a community effort, to the extent possible. It is pertinent to note that many communities have shown compassion to animals during disasters, and these efforts need to be formalized in the preparedness plans. The Departments/Ministries of the GoI such as Animal Husbandry and Dairy Department, Social Justice & Empowerment and the district has devised such measures at all levels.

C 1.3.14: Management of deceased

The Carcass Disposal team is responsible for the clearance of carcasses after the disaster. The team should put in all efforts to prevent the spread of any kind of disease by disposing off the carcasses at the earliest and in the manner that they are supposed to. The unclaimed bodies need to be burnt or buried accordingly. And before that they need to be kept in a morgue or on ice in a separate location.

The health department will immediately start the procedure for post mortem of the dead bodies, if required, as per the rules. Disposal of dead bodies should be carried out in a way that such it does not hurts the sentiments of anyone. And also great care should be taken that the dead bodies should not become the brooding ground for pathogens, which may cause illness or maybe become a reason for some epidemic. Arrangement should be made to issue death certificates of the deceased to the relatives.

C 1.3.15: Civil Defense and Home Guards

The mandate of the Civil Defense (CD) and the Home Guards should be redefined to assign an effective role in the field of disaster management. They will be deployed for community preparedness and public awareness. A culture of voluntary reporting to duty stations in the event of any disaster should be promoted. A proper Civil Defense set up in every District would be a boon for disaster response as the neighborhood community is always the first responder in any disaster. The proposal to make Civil Defense District centric and be involved in disaster response has already been approved by the GoI. Its phase wise implementation has also begun. State Governments should ensure it's operationalization in their respective districts.

C 1.3.16: Role of Private Security

The guards of private companies can be called for assistance if required but for that purpose they need to be trained well enough for the occasion well in advance. So this training can be carried out in the Home Guard dept. or in the Police Line training grounds by the officers designated by the district authorities for the purpose.

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. These guards would act as an extra helping hand and thus would hasten the process of relief work.

C 1.3.17: NGOs & Voluntary organizations

NGOs and voluntary organizations are the first to respond before any outside assistance can reach the disaster site. In certain disaster prone areas a group of young volunteers are being formed and trained to undertake essential tasks which would reduce loss of life and property.

C 1.3.18: Relief management planning

Functions of infrastructure desk, logistics, health, operations, communication and information Dept. are as stated below.

Functions of Infrastructure Desk

- Shelters for affected people with sanitation facilities
- Temporary structure for storage
- Kitchens
- Medical facilities
- Education facility
- Recreational facility
- Postal facility
- Temporary repairs to damaged infrastructure

Functions of Logistics Desk

- Issue Village relief tickets to the affected families
- Organize distribution of Relief Supplies
- Receive, store, secure, relief materials for relief camps and affected villages
- Co-ordinate supplies distributed directly by NGOs and other organizations including private donors
- Ensure proper maintenance of vehicles and equipment
- Ensure optimum utilization of resources such as fuel, food, and other relief materials
- Mobilize and co-ordinate the work of the volunteers ensuring community participation
- Organize facilities for staff and volunteers

Functions of Health Desk

- Disposal of dead bodies
- Disposal of carcasses
- Disposal of waste and waste water
- Treatment of the injured and the sick
- Preventive medicine and anti-epidemic actions
- Inspection of food, water supplies, sanitation and disposal of waste

Functions of Communication and Information Management Desk

- Data collection
- Record keeping
- Assistance in locating missing persons
- Information center
- Organization of information for Site Operations Center and on specific Demands
- Maintaining In-Message and Out-Message Register
- Sending all Out-Messages on behalf of Camp Officer of the Relief Camp

Functions of Operation Desk

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

C 1.3.19: Media Management

The media is responsible for collecting reliable information on the status of disaster and disaster victims and broadcasting it for effective coordination of relief work at every level.

A strategy needs to be formulated 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. The nodal person will act as the Public relations officer and the person will coordinate with the local media to publicize the right information

C 1.3.20: Fire Services

Fire Service has always been discharging duties round the clock & gets themselves ready to responds in any emergent nature of calls. ***The Fire and Emergency Services are crucial and most immediate responders to disasters.*** The staff of Fire Services should be trained and 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.

The Police will be trained and the Fire and Emergency Services upgraded to acquire multi-hazard rescue capability. Home Guards volunteers will be trained in disaster preparedness, emergency response, community mobilization, etc. The district may take the help of the State Government for capacity building and sensitization of their forces.

As the roles and responsibilities of the Fire dept are more than clear to them, hence the Fire dept. can itself be considered as a quick response team for this particular purpose.

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.

Rehabilitation and reconstruction comes under recovery phase immediately after relief and rescue operation of the disaster. This post disaster phase continues until the life of the affected people comes to normal. This phase mainly covers damage assessment, disposal of debris, disbursement of assistance for houses, formulation of assistance packages, monitoring and review, cases of non-starters, rejected cases, non-occupancy of houses, relocation, town planning and development plans, awareness and capacity building, housing insurance, grievance redressal and social rehabilitation etc.

Post Disaster Reconstruction and Rehabilitation

Post disaster reconstruction and rehabilitation should pay attention to the following activities for speedy recovery in disaster hit areas. The contribution of both governments as well as affected people is significant to deal with all the issues properly.

1. Damage assessment
2. Disposal of debris
3. Disbursement of assistance for houses
4. Formulation of assistance packages
5. Monitoring and review
6. Cases of non-starters, rejected cases, non-occupancy of houses
7. Relocation
8. Town planning and development plans
9. Reconstruction as Housing Replacement Policy
10. Awareness and capacity building
11. Housing insurance
12. Grievance redressal

C 1.4.1 Restoration of basic infrastructure

Based on the degree of damage to the existing structures of houses and other infrastructure, the victim will be issued funds for carrying out the restoration activity.

The PWD will be the nodal agency and also the 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

Reconstruction of damaged buildings will be addressed and supported through the advance tools like Insurance, Short-term Loans, and by any other important means, which are affordable.

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

1. Owner Driven Reconstruction
2. Public Private Partnership Program (PPPP)
3. Under the PPPP the houses are reconstructed by the NGOs for the beneficiaries to be registered in the joint names of the husband and wife.
4. All the houses should be insured.
5. Owner Driven Reconstruction
6. Financial, technical and material assistance provided by the government.
7. The designs for seismic reconstruction of houses provided by the government.
8. The material assistance provided through material banks at subsidized rates.
9. Design of 20 model houses provided to the public to choose from with an option to have one's own design.

C 1.4.3 Restoration of livelihoods

Restoration of livelihoods in post disaster phase will be taken care of by the NGO's , Forest department (specifically in tribal areas, agriculture department by providing them with various incentives in form of free seeds and fertilizers. The relief fund can also be used constructively so that the lives of people are back to normal as soon as possible by floating various schemes, offering less interest on loans, etc

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 in the after disaster recovery plan.

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. This 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

- Orphaned children are fostered.
- Day centres set up
- Orphanages established.
- Child help lines established.

Paraplegics

- Pension scheme introduced for paraplegics.

- Physiotherapy under continuous supervision of doctors.

Old Persons

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

Women

- Pension sanctioned
- 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. Based on the available data and analytical research, list of climate induced anthropogenic events will be prepared, and the concerned issues will be addressed through adaptation strategies.

Further, a report published by the Ministry of Environment & forestry stated that the GHG emission in Gwalior is increasing (CO₂ gas emission is >5 MT) which can lead to drought, like situations in many places.

Nodal Agencies:**Environmental Planning and Coordination Organisation (EPCO)**

Paryavaran Parisar, E- 5, Arera Colony,

Bhopal, Madhya Pradesh,

PIN 462016, India

Phone: +91 755 2466859 , 2466970

Fax: +91 755 2462136

E-mail: epcobpl@sancharnet.ins

C 2 Standard Operating Procedures (and Checklists)

C. 2 Standard Operating Procedures with checklist

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 causalities 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.
- ✚ Advise 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

- ✚ 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.

Warning Time

- ✚ 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.

During Disaster

- ✚ 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.

After Disaster

- ✚ 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

Non Disaster Time

- ✚ 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)

Warning Time

- ✚ 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

During Disaster

- ✚ 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.

After Disaster

- ✚ 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

Non Disaster Time

- ✚ 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

- ✚ 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

- ✚ 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.
- ✚ Launch recovery missions for stranded vehicles.

After Disaster

- ✚ Assess damage to transportation infrastructure.
- ✚ Take steps to ensure speedy repair and restoration of transport links.

Department of Public Works

Non Disaster Time

- ✚ 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.
- ✦ 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

- ✦ 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

Non Disaster Time

- + 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

- + 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.
- + Inventories for the case of breakage of dam/embankments like sand sacks, rocks, etc need to be brought and checked well in advance.

During Disaster

- + 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.

After Disaster

- + 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

Non Disaster Time

- ✚ 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.

Warning Time

- ✚ 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.
- ✚ All valuable equipments and instruments should be packed in protective coverings and stored in room the most damage-proof

During Disaster

- ✚ 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

- ✚ 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

Non Disaster Time

- ✚ Provide clean drinking water in all areas rural/urban.
- ✚ Regular cleaning of nals and prevent them from choking.
- ✚ Facilitate proper drainage in all areas to prevent diseases.

Warning Time

- ✚ 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

- ✚ 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.
- ✚ Repair of damaged water sources to be carried out.
- ✚ Aware people about how to keep the hand pumps free of microbial infections.

After Disaster

- ✚ 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

Non Disaster Time

- ✚ 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

- ✚ 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

- ✚ 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

- ✚ 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

Non Disaster Time

- ✚ 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.

Warning Time

- ✚ 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

During Disaster

- ✚ 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.

After Disaster

- ✚ 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

Non Disaster Time

- + 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

- + 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

- + Standby arrangements for temporary electric supply or generators.
- + Inspection and repair of poles etc.
- + Identification of materials required for response operations.

After Disaster

- + 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.

Department of Food & Civil Supplies

Non Disaster Time

- + 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 rot/spoil.

Warning Time

- + 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

- + Proper keeping of resources.
- + Arrangements made for the distribution like vehicles through help from DDMA or other departments.
- + Make an inventory according to the prevailing needs and the estimated time and hence procure the needful.

After Disaster

- + 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.

Home Guards

Non Disaster Time

- ✚ 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.
- ✚ 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.

Warning Time

- ✚ 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.

During Disaster

- ✚ 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

After Disaster

- ✚ 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

Rural Development Department

Non Disaster Time

- ✚ 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.

Warning Time

- ✚ 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
- ✚ Ensure formation of committee for rescue, relief and rehabilitation work and local volunteer teams.

During Disaster

- ✚ 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

<ul style="list-style-type: none"> ✚ 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

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

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. ✚ 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.

<ul style="list-style-type: none"> ✚ 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

Electricity Department

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. <ul style="list-style-type: none"> • Restore the electricity facility in affected areas.
After Disaster – Recovery and Rehabilitation

- + 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

Non Disaster Time – Preparedness

- + 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

Non Disaster Time –Mitigation

- + 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.

During Disaster – Response

- + 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.

After Disaster – Recovery and Rehabilitation

- + Determine the extent of loss in educational institutions and submit the report to DDMA and state education department.

**Department of
Industrial Health and Safety**

Non Disaster Time –

- + 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

During Disaster

- + Evacuation of the workers from the Industrial area 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.

After Disaster

- + Take steps to plan for rehabilitation of industries adversely affected by disasters.

Department of Urban Development

Non Disaster Time

- ✚ 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

- ✚ 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

- ✚ 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

- ✚ 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

- ✚ Implement recovery & rehabilitation schemes through municipalities for urban areas.

Indian Red Cross and NGOs

Non Disaster Time

- ✚ 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.

Alert and Warning Stage

- ✚ 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.

During Disaster :

- ✚ 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.

After Disaster

- ✚ 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.

Checklist of Various Departments

Preparedness Checklist for the District Collector

1. Prepare of the DDMAP with the assistance of DDMC after setting up the DDMA for the district.
2. Set up District Control Room.
3. Under the DDMP, district level agencies would be responsible for directing field interventions through various agencies right from the stage of warning to relief and rehabilitation.
4. At the disaster site, specific tasks to manage the disaster will be performed.
5. Collector will be assisted by SOC (site operation control).
6. SOC will be headed by a Site Manager.
7. Site Manager will co-ordinate the activities at various camp sites and affected areas.
8. The site Operations Centre will report to the District Control Room.
9. The Collector will co-ordinate all the field responses which include, setting up Transit Camps, Relief Camps and Cattle Camps.

Preparedness Checklist for the Police Department

1. The department is familiar with the disaster response plan and disaster response procedures are clearly defined.
2. Adequate warning mechanisms established for evacuation.
3. An Officer has been designated as Nodal Officer for Disaster Management.
4. Sources of materials required for response operations have been identified.
5. Orientation and training for disaster response plan and procedures undertaken.
6. Special skills required during emergency operations imparted to the officials and the staff.
7. Reviewed and updated the precautionary measures and procedures, the precautions to be taken to protect equipment, the post-disaster procedures to be followed

Preparedness Checklist for the Health Department

1. The department is familiar with the disaster response plan and disaster response procedures are clearly defined.
2. Orientation and training for disaster response plan and procedures undertaken.
3. Special skills required during emergency operations imparted to the officials and the staff.
4. Reviewed and updated the precautionary measures and procedures, the precautions to be taken to protect equipment, the post-disaster procedures to be followed.
5. A hospital plan for the facilities, equipment and staff of that particular hospital based on "The Guide to Health Management in Disasters" has been developed.
6. Hospital staff is aware of which hospital rooms / buildings are damage proof.
7. All the staff of the hospital has been informed about the possible disasters in the district, likely damages and effects, and information about ways to protect life, equipment and property.
8. An area of hospital identified for receiving large number for casualties.
9. Emergency admission procedures with adequate record keeping developed.
10. Field staff oriented about DDMP, standards of services, and procedures for tagging.
11. An Officer has been designated as Nodal Officer for Disaster Management.
12. Sources of materials required for response operations have been identified.

Preparedness Checklist for MP.S.E.D.C

1. The department is familiar with the disaster response plan and disaster response procedures are clearly defined.
2. Orientation and training for disaster response plan and procedures undertaken.

3. Special skills required during emergency operations imparted to the officials and the staff.
4. Reviewed and updated the precautionary measures and procedures, the precautions to be taken to protect equipment, the post-disaster procedures to be followed.
5. An Officer has been designated as Nodal Officer for Disaster Management.
6. Sources of materials required for response operations have been identified.

Preparedness Checklist for Water Supply Department

1. The department is familiar with the disaster response plan and disaster response procedures are clearly defined.
2. Orientation and training for disaster response plan and procedures undertaken.
3. Special skills required during emergency operations imparted to the officials and the staff.
4. Reviewed and updated the precautionary measures and procedures, the precautions to be taken to protect equipment, the post-disaster procedures to be followed.
5. Adequate warning mechanisms for informing people to store an emergency supply of water have been developed.
6. Procedures established for the emergency distribution of water if existing supply is disrupted.
7. An Officer has been designated as Nodal Officer for Disaster Management.
8. Sources of materials required for response operations have been identified.

Preparedness Checklist for Irrigation Department

1. The department is familiar with the disaster response plan and disaster response procedures are clearly defined.
2. Orientation and training for disaster response plan and procedures undertaken.
3. Special skills required during emergency operations imparted to the officials and the staff.
4. Reviewed and updated the precautionary measures and procedures, the precautions to be taken to protect equipment, the post-disaster procedures to be followed.
5. Flood monitoring mechanisms can be activated in all flood prone areas
6. All staff is well aware of the precautions to be taken to protect their lives and personal property.
7. Each technical assistant has instructions and knows operating procedures for disaster conditions.
8. Methods of monitoring and impounding the levels in the tanks evolved.
9. Methods of alerting officers on other dam sites and the district control room, established.
10. Mechanisms evolved for forewarning settlements in the downstream, evacuation, coordination with other dam authorities.
11. An Officer has been designated as Nodal Officer for Disaster Management.
12. Sources of materials required for response operations have been identified.

Preparedness Checklist for Telephone Department

1. The department is familiar with the disaster response plan and disaster response procedures are clearly defined.
2. Orientation and training for disaster response plan and procedures undertaken.
3. Special skills required during emergency operations imparted to the officials and the staff.
4. Reviewed and updated the precautionary measures and procedures, the precautions to be taken to protect equipment, the post-disaster procedures to be followed.
5. An Officer has been designated as Nodal Officer for Disaster Management.
6. Sources of materials required for response operations have been identified.

Preparedness Checklist for PWD

1. The department is familiar with the disaster response plan and disaster response procedures are clearly defined.
2. Orientation and training for disaster response plan and procedures undertaken.
3. Special skills required during emergency operations imparted to the officials and the staff.
4. Reviewed and updated the precautionary measures and procedures, the precautions to be taken to protect equipment, the post-disaster procedures to be followed.

5. All officers are familiar with pre-disaster precautions and post-disaster procedures for road clearing and for defining safe evacuation routes where necessary.
6. An Officer has been designated as Nodal Officer for Disaster Management.
7. Sources of materials required for response operations have been identified.

Preparedness Checklist for Agriculture Department

1. The department is familiar with the disaster response plan and disaster response procedures are clearly defined.
2. Orientation and training for disaster response plan and procedures undertaken.
3. Special skills required during emergency operations imparted to the officials and the staff.
4. Reviewed and updated the precautionary measures and procedures, the precautions to be taken to protect equipment, the post-disaster procedures to be followed.
5. Information provided to all concerned officers about the disasters, likely damages to crops and plantations, and information about ways to protect the same.
6. The NGOs and the other relief organizations are informed about the resources of the department.
7. An Officer has been designated as Nodal Officer for Disaster Management.
8. Sources of materials required for response operations have been identified.

Preparedness Checklist for Animal Husbandry Department

1. The department is familiar with the disaster response plan and disaster response procedures are clearly defined.
2. Orientation and training for disaster response plan and procedures undertaken.
3. Special skills required during emergency operations imparted to the officials and the staff.
4. Reviewed and updated the precautionary measures and procedures, the precautions to be taken to protect equipment, the post-disaster procedures to be followed.
5. Hospital staff is aware of which hospital rooms / buildings are damage-proof.
6. All the staff of the veterinary hospitals and centres have been informed about the possible disasters, likely damages and effects, and information about the ways to protect life, equipment and property.
7. An area of the hospital identified for receiving large number of livestock.
8. Emergency admission procedures with adequate record keeping developed.
9. An Officer has been designated as Nodal Officer for Disaster Management.
10. Sources of materials required for response operations have been identified.

C 2.2 Hazard specific SOPs for designated Departments and Teams

Hazard Specific SOPs and checklists for all concerned departments, authorities, designated disaster management teams, committees and the sub committees at district and sub district level, will be prepared and maintained.

C 3 Financial Provisions for Disaster Management

(According to ACT No. 53 of 2005 – the Disaster Management Act, 2005, Chapter IX, Finance, Account and Audit.)

The following Funds are recommended to be established for fulfilling the needs during disasters:

Establishment of funds by the State Government

The State Government shall immediately after notifications issued for constituting the State Authority and the District Authorities, establish for the purposes of this Act the following funds, namely:-

- a) The fund to be called the District Disaster Response Fund;
- b) The fund to be called the District Disaster Mitigation Fund;

Emergency procurement and accounting

Where by reason of any threatening disaster situation or disaster, the National Authority or the District Authority is satisfied that immediate procurement of provisions or materials or the immediate application of resources are necessary for rescue or relief, -

- a) it may authorize the concerned department or authority to make the emergency procurement and in such case, the standard procedure requiring inviting of tenders shall be deemed to be waived;
- b) a certificate about utilization of provisions or materials by the controlling officer authorized by the National Authority, State Authority or District Authority, as the case may be, shall be deemed to be a valid document or voucher for the purpose of accounting of emergency, procurement of such provisions or materials.

C 4 Coordination mechanisms with other stakeholders

C 4.1 Mapping of stakeholders in the District

The following Stakeholders for the disaster management plan have been outlined:

1. Private and Public Sectors
2. Governmental Organizations and Community Based Organisations
3. Religious Institutions
4. Academic Institutions
5. International Humanitarian organizations

C 4.1.1 Private and Public Sectors:

Public Sector: *The Indian Railways* has a strong Disaster Management System in place which can be looked upon as a model for the accident prevention in the district.

Also, it is recommended that coordination with the Railway Department for the District Disaster management plan will give it a more holistic view and a lead to better implementation of the plan.

Private Sectors: Media along with the Public Relation officer who is an important part of the information desk in ICS is recommended to play an important role during time of disasters to provide important information as well as stop rumors.

Hospitals in private sectors can act as essential stakeholders due to their infrastructure and speciality. MARC Hospital for instance is identified as a major stakeholder in this area.

The following is the list of Private contractors having equipments which can be useful in the face of disaster or for post disaster reconstruction works:

Sr. no.	Name of contractor	Details of Machine	Number of equipments
1	M/s Reliable Associate Bhopal	1. Pocklene 2. Water Tanker 3. Tractor	1 2 2
2	M/s Bhawati Enterprises House Riwa	1. Pocklene 2. Water Tanker 3. Tractor 4. Dumper 5. Vibrator	1 1 4 2 2
3	M/s B.R. Civil Cont. Gangve House, riwa	-	

4	M/s Shraddha Cont, Betul	1. Pocklene 2. Water pump 3. Tractor 4. Truck 5. JCB	2 4 10 1 2
5	M/s Harshidi Cont 222 C.P.Mission Jhanshi	1. Mixer 2. Water Tanker 3. Tractor 4. JCB 5. Pocklene 200	4 6 3 3 2
6	M/s Kailash Singh, Balaganj	1. Pocklene 2. Water Tanker 3. Dumper 4. JCB	1 2 5 1
7	Shri Mangal Das Cont. Chinoni	1. Pocklene 2. Dumper 3. Water Tanker 4. JCB	1 5 2 1

Source: Irrigation Department

C 4.1.2 Non Governmental Organizations and Community Based Organisations:

As per the information received, there are no NGO's or CBO's working exclusively in the area of disaster management. However, promotion of such local NGO's forms one of the major Non-disaster time activities of this plan. Due to their proximity to community, they can act as a vital link between government and community particularly during emergencies. The list of other working NGO's are given in the annexure.

C 4.1.3 Religious Institutions:

The Famous temple of Teli ka mandir, situated in Gwalior, build in 1881. The Telikā Mandir is the loftiest temple among all the buildings in Gwalior fort with a height of about 30m, can act as a relief center during the time of disasters owing to the large area it is built upon.

C 4.1.4 Academic Institutions:

The flood cell enlists many of the schools as relief centers for flood prone areas. 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:

Sr. No.	Name of the organization
1.	Indian Red Cross Society
2.	Gwalior Children Charity
3.	Physician Crossroads

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.

This will be ensured at the disaster management plan formation stage itself by comparing the resource inventories and the vulnerability of the area.

The DDMA's of adjoining districts or of all the districts in one subdivision should later integrate their disaster plans so as to have a joint approach when dealing with disasters

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

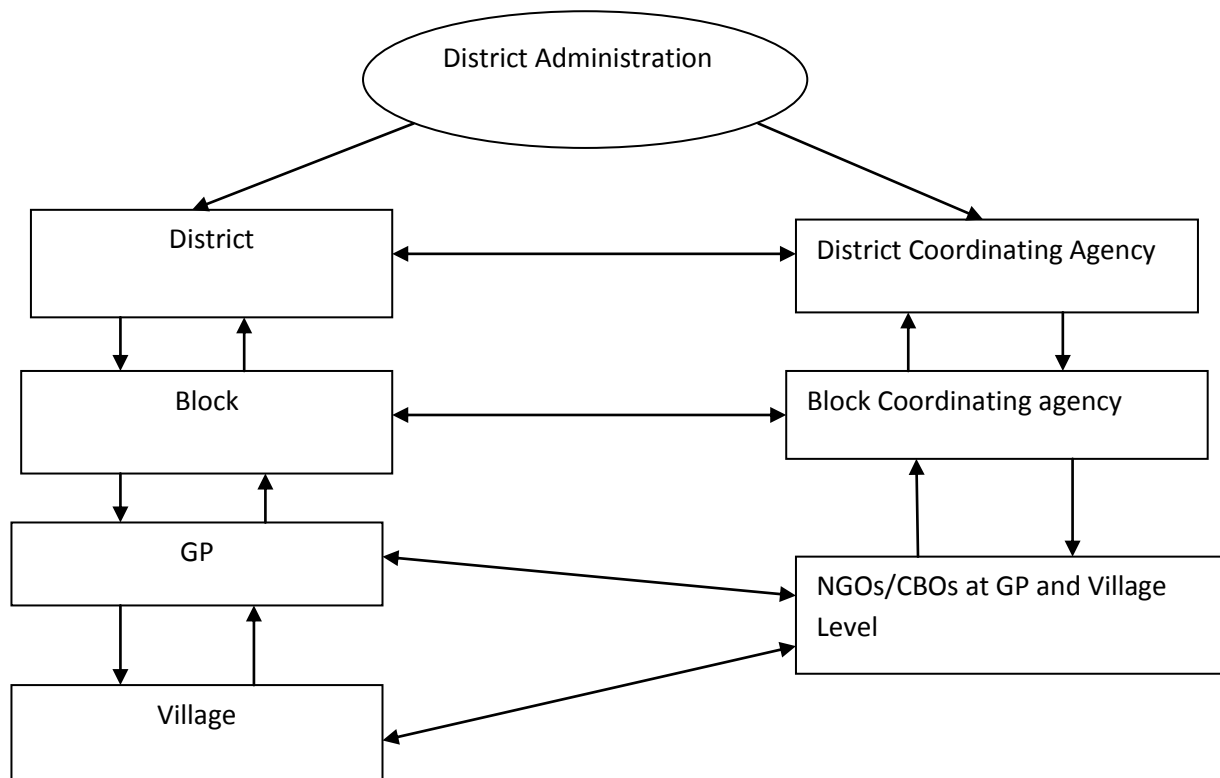
The recommended "integrated disaster management plan" follows 'Top to Bottom' approach i.e the communities are the first one to respond.

Then there are disaster management committees on gram panchayat level and block level upto the district level.

On each stage, the nodal contact people are appointed who will ensure the adequacy of resources in dealing with disasters.

The roles and responsibilities of various officers are clearly mentioned upon activation of the ICS in the Response planning section.

Intra District Flow Diagram is given below:



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.

The content of the plan should be explained through well designed and focused awareness programmes. The awareness programmes should be prepared in the local language to ensure widespread dissemination.

Media should be extensively used for public awareness programs. These will include

- newspapers, TV
- local cable networks
- radio
- publicity material

Schools, colleges and other public institutions should be specifically targeted.

C 7.1 Plan Evaluation

The purpose of evaluation of DDMP is to determine

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

The plan will be updated when shortcomings are observed in

1. Organizational structures
2. Technological changes render information obsolete
3. Response mechanism following reports on drills or exercises
4. Assignments of state agencies

Individuals and agencies assigned specific responsibilities within this Plan will prepare appropriate supporting plans and related standard operating procedures, periodically review and update alerting procedures and resource listings, and maintain an acceptable level of preparedness.

C 7.2 Plan Update

The DDMP is a “living document” and the Collector along with all line departments will update it every year taking into consideration

- The resource requirements
- Update of human resources
- Technology to be used
- Co-ordination issues

An annual conference for DDMP update will be organized by the Collector. All concerned departments and agencies would participate and give recommendations on specific issues. The new plan should be handy and precise. It should be so designed that it will definitely help the officials to take quick actions during the disaster. Apart from it, the plan will be updated when shortcomings are observed in Organizational structures; Technological changes, Response mechanism following reports on drills or periodic exercises, and specific assignments of state agencies.

C 8 Annexure**C 8.1 District profile**

Latest data on the geography, demography, agriculture, climate and weather, roads, railways etc that describes the district will be provided. However, adequate care will be taken to summarize the data so as to not make the plan document bulky.

List of schools given below:

SCHOOL AND COLLEGES		
Sr. No.	Name of Institute	Telephone No.
1.	Bhagwat Sahay Govt. College, T- Road, Gwalior-2	2423412
2.	Central Technical Inst. , Ji Road, Gwalior – 9	2320790
3.	Central Technical Inst. , Res	2324987
4.	Gajara Raja Kanya H.S. School Jiwaji Chowk-1	2420171
5.	Gajara Raja Medical Coll , Procession Road, Gwalior – 9	2321400
6.	Gorkhi H.S. School	2332878
7.	Govt. Girls Degree Coll, Morar-6	2368329
8.	Govt. Girls Degree Coll Res	2340334
9.	Govt. Girls H.S. School Mama Ka Bazar, Gwalior – 1	2334144
10.	Govt. Girls High School, Gwalior – 3	2365116
11.	Govt. Girls High School , Thatipur – 11	2341309
12.	Govt. College of Education, T-Rd, Gwalior- 2	2423191
13.	Govt. College of Education , Res	2340132
14.	Govt. High School , Mall Rd- 6	2368760
15.	Govt. High School J Ganj	2425748
16.	Govt. High School -2 Mall Rd – 6	2368034
17.	Govt. High School -2 , Tilak Nagar – 2	2426334
18.	Govt. Inst Fine Arts, SDM Rd – 9	2323169
19.	Govt. Kanya H.S. School Rly Coly-2	2334566
20.	Govt. Music College,SDM road-9	2323169
21.	Govt. Patel H.S. School, Hazira-4	2365484
22.	Govt. PET Coll , 307 Jiwaji Nagar -11	2342461
23.	Govt. Sanskrit Coll SDM Rd -9	2320964
24.	Govt. Science Coll Morar-6	2368380

25.	Govt. Science Coll Jhansi Rd. -9	2323169
26.	Kendriya Vidyalaya No. 1 Gandhi Rd.	2341208
27.	Kendriya Vidyalaya No. 2 Airforce MPRA -20	2368227
28.	Kendriya Vidyalaya No. 3 Morar Cantt-6	2368250
29.	Kendriya Vidyalaya No. 4 Resy 5	2368011
30.	Kendriya Vidyalaya No. 5 Shastri Nagar – 11	2344069
31.	MLB Arts & Commerce Coll , Procession Rd.-9	2322199
32.	MLB Arts & Commerce Coll , Jhansi Rd.-9	2320725
33.	Naveen Govt. Girls Coll T Rd-2	2426831
32.	Women Polytechnic MLB Rd – 2	2331192
33.	Women BTI T. Rd – 2	2426782
34.	Vidya Bharti School , Mpra – 20	2368909
35.	Sind Govt. High School, Gadve Goth – 1	2427537
36.	Padma Raja Multipurpose H.S. School Kampoo-1	2362177
37.	Scindia Kanya Vidyalay	2320570
38.	Scindia School Fort 8	2325751
39.	Kamla Raja Girls Postgraduate Coll Kampoo-1	2322373
40.	Hari Darshan H.S. School Jhansi Rd.-9	2320964
41.	Laxmibai National Instt. Of Physical Education, Race Course Rd. Gwalior	2340286 Fax- 2340553
42.	Wendy High School Gandhi Road Gwalior	2341873
43.	Ayurvedic College, Amkho Gwalior-9	2322802

OTHER INSTITUTIONAL FACILITIES	
1.	IITTM- Indian Institute of Tourism & Travel Management
2.	MITS - Madhav Institute of Technology and Sciences.
3.	Agriculture College , Race Corse Road
4.	Gajra Raja Medical College (GRMC)
5.	LNPIE - Laxmi Bai National Institute of Physical Education.
6.	SOS - School of Studies, Jiwaji University Gwalior. Etc.

List of temperature according to year 2010 given below:

Sr. no.	Month	Avg. Max	Max. of Month	Avg. Min.	Min. of Month
1	January	20.9	27.4	5.2	0.4
2.	February	25.8	33.0	9.9	5.8
3.	March	32.4	39.2	13.7	7.8
4.	April	37.8	43.0	19.6	15.0
5.	May	42.6	45.8	28.1	19.2
6.	June	38.7	47.0	26.7	22.6
7.	July	33.6	37.5	26.1	23.4
8.	August	33.2	36.1	25.6	24.1
9.	September	33.4	35.1	24.7	23.7
10.	October	34.9	37.0	18.3	12.8
11.	November	30.5	35.0	13.2	8.8
12.	December	25.4	30.6	.065	1.5

List of NGO's

Name	Address
Late Pt Suryadev Sharma Manav Utthan Evam Jan Sewa	7 new assistant line birla nagar gwalior 474004
Mangalam Charitable Trust	14, Hospital Road, Gwalior PIN 474009
Avtar Foundation	44, Anupam Nagar Ext., near Jiwaji University, Pin - 474011
Pusimargya Balabh Sewa Kandra Samati	pusimargya balabh sewa kandra samati c/o raviti raman rastogi nimaal kar ki ghot naya bazar gwalior474009
Krati Paras Social Society	304 anoop ganj near marketing society seondha distt.datia pin -475682
Bhu Sanjivini Jaiv Avam Krishi Anusandhan Kendra	Kamal Vihar, Danaooli, Laskar, Gwalior-474001
Parashuram Vidhyalay Samiti	Parashu Ram Vidhyalaya Samiti B-13, Vasant Vihar, Gwalior 474007 M.P
H O M E S Home Of Millenium Empowerment Society	C 50,Govind Puri, Gwalior-474011(MP)
Abhilasha Social Action And Development	Abhilasha Social Action and Development Society GH-977, Deen Dayal Nagar, Gwalior- 474020,

Society	(M.P.)
Kalpitaru Vikas Samiti	64-65 Barah beegha colony near gorishankar school Vinay nagar Gwalior pin 474012
Harshita Social Welfare Society	A- 8, R. K. PURI, THATIPUR, OPP JILA PANCHAYAT, MORAR
Forum For Environment And Economic Development Fee	GL 1031 DEENDAYAL NAGAR
Manav Aman Mangal India	deepak jain, new block - 473551
Pdtri	52 SGWALIOR VIHAR, CITY CENTER, GWALIOR (M.P.)-474001
Bal Mahila Vikas Samiti	BAL-MAHILA VIKAS SAMITI. H.O. C-9, Maharana Pratap Nagar, Near Jiwaji Club, Gwalior-474 009 (M.P) TELEPHONE: 0751-2457438, MOBILE: 98262-99566
Abhinav Gramotthan Samiti Dabra	Abhinav Gramotthan Samiti Dabra, Abhinav convent School Jangipura Road ward No.08 DABRA, Dist. Gwalior (M.P.) Pin. 475110
The Earth Savior Society	GL-4, ABHIYANK ESTATE, UNIVERSITY ROAD, THATIPUR, GWALIOR PIN-474011 M.
Rehnuma Welfare Foundetion	Rehnuma Welfare Foundation B-131 Harishankar Puram Jhansi Road Gwalior
Subhlaxmi Social Welfare Samiti	85/2 BALA BAI KA BAZAR, LASHKAR
Vandna Social Welfare Society	A-368, Anand Nagar, Near Tikoniya Park, Bahodapur
Yadav Mahila Mandal	115, Rajya karmchari nigam colony mahalgaon,
Human Health And Education Lifelong Program Samiti Help Sansthan	HELP sansthan, kanak jewellers ,ii floor, kanak tiraha, darugar ki puliya, datia (M.P) 475661 mob: 9425118651
Navodaya Foundation For Education Health And Social Welfare	(1) SHIV SHAKTI NAGAR T V TOWER ROAD SHIVPURI (2) TRIVEDI BHAWAN BHATNAWER SHIVPURI
Janprena Foundation	95-Shrivastava Bhavan, New Narsingh Nagar , Char Shahar Ka naka, Gwalior (m.p.) 474003
Ek Koshish Education And Welfare Society	1, ASTUTE CAREER CONSULTANCY OPP. GDA OFFICE PHOOLBAGH GWALIOR. (M.P) PIN 474002
Helpline Samiti	Gandhi road, thatipur, gwalior 474002 (mp)

Saraswati Shakti Peeth Shiksha Samiti	59, Vivek Nagar, Dist-Gwalior, Pin-474001
Dev Vishal Mahila Evam Bal Kalyan Tatha Shiksha Prasar Samiti	Shri Ram Lal Jain Ka Makan Morena Talkies Gali Morena Dist Morena M P
Usha Kiran Shiksha Prasar Evam Samaj Kalyan Samiti	G-2 Health Campus, City Center
Abhitabh Kushwah Shiksha Evm Samaj Kalyan Samiti	JAGANAPURA NO 2 GWALIOR
Takshashila Samaj Sevi Sanstha	64-A,Ankit society,vinay nagar sector No-2,Gwalior-474012
Arif Memorial Welfare Society Guna	3/391 Hayat Manzil Colonelganj In front of GPO Guna 473001 M.P.
Sans Samajik Adhikar Avam Navnirman Sansthan	33, Gaytri Vihar, Thatipur, Gwalior, MP pin-474011
Nischya Samaj Sewa Samity	LASHKAR GWALIOR.474001

- centre for integrated development, *age care*, Gwalior
- centre for integrated development, *child welfare*, Gwalior
- centre for integrated development, *environment*, Gwalior
- Sajag public charitable trust, *health, education, environment protection*, Gwalior
- Sambhav social service organization, *poverty*, Gwalior
- Sambhav social service organization, *civil liberties*, Gwalior
- Sambhav social service organization, *human rights*, Gwalior
- Sambhav social service organization, *environment*, Gwalior
- Society for environmental awareness and research on culture and heritage, *environment*, gwalior
- Sajag public charitable trust, *health, education, environment protection*, Gwalior
- Sambhav social service organization, *poverty*, Gwalior
- Sambhav social service organization, *human rights*, Gwalior
- Sambhav social service organization, *civil liberties*, Gwalior
- Sambhav social service organization, *environment*, Gwalior
- Society for environmental awareness and research on culture and heritage, *environment*, Gwalior

Vulnerability Analysis Table

Table 9: CVI District Ranks (Cluster) for the baseline, mid century and end century scenarios

Districts	Baseline	Mid Century	End Century	Districts	Baseline	Mid Century	End Century
Alirajpur	47 (4)	42 (4)	45 (4)	Mandla	48 (4)	46 (4)	40 (4)
Anuppur	35 (3)	34 (4)	38 (4)	Mandsaur	9 (2)	12 (2)	15 (2)
Ashoknagar	34 (3)	33 (4)	31 (4)	Morena	14 (2)	23 (3)	24 (3)
Balaghat	42 (4)	41 (4)	41 (4)	Narsimhapur	12 (2)	8 (2)	6 (2)
Barwani	46 (4)	37 (4)	42 (4)	Neemuch	6 (2)	6 (2)	7 (2)
Betul	26 (3)	30 (3)	30 (4)	Panna	41 (4)	44 (4)	39 (4)
Bhind	13 (2)	15 (3)	13 (2)	Raisen	31 (3)	27 (3)	17 (3)
Bhopal	2 (1)	1 (1)	1 (1)	Rajgarh	17 (3)	19 (3)	23 (3)
Burhanpur	19 (3)	13 (2)	12 (2)	Ratlam	11 (2)	14 (2)	10 (2)
Chhatarpur	16 (2)	25 (3)	28 (3)	Rewa	37 (3)	39 (4)	44 (4)
Chhindwara	39 (4)	40 (4)	33 (4)	Sagar	22 (3)	21 (3)	13 (2)
Damoh	30 (3)	26 (3)	16 (3)	Satna	20 (3)	24 (3)	26 (3)
Datia	10 (2)	10 (2)	11 (2)	Sehore	23 (3)	17 (3)	22 (3)
Dewas	27 (3)	16 (3)	20 (3)	Seoni	38 (4)	45 (4)	43 (4)
Dhar	32 (3)	28 (3)	29 (3)	Shahdol	40 (4)	47 (4)	46 (4)
Dindori	50 (4)	50 (4)	50 (4)	Shajapur	18 (3)	20 (3)	25 (3)
East Nimar	25 (3)	18 (3)	21 (3)	Sheopur	24 (3)	32 (4)	34 (4)
Guna	44 (4)	35 (4)	35 (4)	Shivpuri	28 (3)	36 (4)	32 (4)
Gwalior	5 (1)	7 (2)	5 (2)	Sidhi	43 (4)	49 (4)	49 (4)
Harda	8 (2)	5 (2)	8 (2)	Singrauli	36 (3)	43 (4)	47 (4)
Hoshangabad	4 (1)	3 (1)	2 (1)	Tikamgarh	33 (3)	31 (4)	36 (4)
Indore	1 (1)	2 (1)	3 (1)	Ujjain	7 (2)	9 (2)	9 (2)
Jabalpur	3 (1)	4 (1)	4 (1)	Umaria	45 (4)	38 (4)	37 (4)
Jhabua	49 (4)	48 (4)	48 (4)	Vidisha	29 (3)	29 (3)	27 (3)
Katni	15 (2)	22 (3)	19 (3)	West Nimar	21 (3)	11 (2)	18 (3)

C 8.2 Resources

1. India Disaster Resource Network (IDRN) :

India Disaster Resource Network is an online inventory designed as a decision making tool for the Government administrators and crisis managers to coordinate effective emergency response operations in the shortest possible time.

The Ministry of Home Affairs, Government of India has developed a web-based database of resource named India Disaster Resource Network (IDRN). This database contains information about equipments (such as boats, bulldozers, chain saw, etc), manpower (divers, swimmers, etc) and critical supplies (oxygen cylinder, fire fighting foams, etc) required during response.

It can be accessed by anyone and its direct link is

<http://idrn.gov.in/publicaccess/countryquerypublic.asp>. One can also access it by clicking on the Quick link to inventory of disaster response resources on the IDRN site (idrn.gov.in)

2. India Disaster Knowledge Network (IDKN):

India Disaster Knowledge Network (IDKN) is a web portal, that offers a broad array of resources and services, such as knowledge collaboration, networking, maps, emergency contact information system and several other valuable information related to natural disasters. It provides a platform to share knowledge and create an environ

ment to learn about disaster management through interactive process. The main goal of IDKN is to create an easy to use unified point of access to disaster management knowledge and services and facilitate in accelerated and improved quality of disaster mitigation and response. IDKN is a part of South Asian Disaster Knowledge Network (SADKN).

For more details please visit <http://saarc-sadkn.org/countries/india/default.aspx>

And <http://nidm.gov.in/idkn.asp>

C 8.3 Media and information management

1. www.idrn.gov.in India disaster Resource Network
2. www.gwalior.nic.in
3. www.ndmindia.nic Natural Disaster management India. Provides current news on Flood, Drought and Cyclones, Weather Links from NIC and weather conditions/temperatures on Indian Ocean
4. www.nicee.org The National Information Center of Earthquake Engineering
5. www.imd.ernet.in Indian Meteorological Department
6. www.asc-india.org Amateur Seismic Centre
7. <http://www.csre.ittb.ac.in/rn/resume/landslide/lsl.htm> Landslide Information
8. System - Center of Studies in Resource Engineering, IIT, Mumbai
9. <http://landslides.usgs.gov> USGS National landslide Hazards Program
10. www.cwc.nic.in Central Water Commission of India
11. <http://www.envfor.nic.in> Ministry of Environment and Forests
<http://www.iifm.org/databank/index.html> Forest Information Service – a comprehensive Internet information bank on forest and related resources in India and around the world, prepared by Indian Institute of Forest Management, Bhopal.
12. www.ipaindia.org Loss Prevention Association of India Ltd. (LPA) is engaged in promoting safety and loss control through education, training and consultancy.
13. www.dmibpl.org Disaster Management Institute
14. <http://www.nidm.net> National Institute of Disaster Management

15. <http://dst.gov.in> Department of Science and Technology
16. <http://www.icar.org.in/> Indian Council for Agriculture and Research
17. <http://www.iirs-nrsa.org/> Indian Institute of Remote Sensing
18. <http://www.bis.org.in> Bureau of Indian Standards
19. <http://www.gsi.gov.in/> Geological Survey of India
20. <http://gov.ua.nic.in/dmmc/> Disaster Mitigation and Management Centre
21. <http://ncdcnagpur.nic.in/> National Civil Defence College

C 8.4 Important Contact numbers

List of Important Telephone numbers

Air-Ways	
Booking & Enquiry	2326872 , City Office
Airport	2470272 / 2470124

Railway Station	
Regional Manager	2422500
Station Manager	2340706(O) 2346250(R)
Railway Reservation	135, 136
Enquiry	131,132,133, 2346903
Parcel	2340591

Bus Stand	
New Bus Stand	2340192
Enquiry (Depot)	2341350

Police	
Police Control Room	2445222 , 100
Bahodapur	2445236
Gola ka Mandir	2445240
Gwalior	2445233
Harijan Kalyan	2325202
Huzrat Kotwali	2445225
Inderganj	2445230
Janak Ganj	2445229
Jhansi Road	2445231
Kampoo	2445232
Madhav Ganj	2445227
Maharaj Pur	2445241
Mahila Thana Padav	2445242

Morar	2445237
Padav	2445234
Purani Chhavni	2445235
Tighra	2577263
University	2445237
Traffic Police	
Dabra	07524-222900

M.P.E.B.	
Control Room	2320303
Chawari Bazar	2421802
Dullpur	2341917
Gwalior	2365237
J.C. Mills, B. Nagar	2364124
Kampoo	2325226
Lala ka Bazar	2424711
Mahalgaon	2341320
Motijheel	2333170
Maharajpur	2368223
Morar	2368316
PhoolBagh	2324934
Shinde ki Chhavni	2421002
Tansen road	2423154
Thatipur	2341299
Dabra	957524-222133

Cooking Gas Service	
Deo Gas Service	2324650
Ganesh Gas Service	2368706
Gwalior Gas Service	2320045
Laxmi Gas Service	2326845
Modern Gas Service	2424444
Raja Gas Service	2325018
Sahakari Bazar Gas Service	2423937
Samidha Gas Service	2420102
Dabra Goyal Gas Service	957524-222554
Kailash gas Agency	2340825

Water Supply	
Control Room	2320146
Inderganj	2320897
Thatipur	2340180
Dabra	957524-222777

Administrative Officers	
Divisional Commissioner	2452800 (O), 2340100(R)
Divisional Dy. Commissioner	2424125 (O), 2343601(R)
I.G. Gwalior Division	2445201 (O), 2445301(R)
I.G. Chamble Division	2445206 (O), 2445306(R)
District Collector	2446200 (O), 2446300(R)
A.D.M.	2446400 (O), 2446401(R)
Suprintandent Of Police	2445200 (O), 2445300(R)....

Municipal Officers	
Mayor	2326251 (O), 2320900(R)
Chair Person	2326253 (O), 2434555(R)
Commissioner	2326550 (O), 2460370(R)
Dy. Commissioner	2454401 (O), 2347746(R)
Municipal Office	2322233 (O),

Daily News Paper (Local)	
Dainik Bhasker	2323965 (O), 2323965 (Fax)
Nav Bharat	2343903 (O), 5010492 (Fax)
Swadesh / Sandhya Vaarta	2324671 (O), 5071915 (Fax)
Achran	5011560 (O), 2340176 (Fax)
Dainik Jagran	5052601 (O), 2334701 (Fax)
Amar Ujala	2323350 (O), 2329944 (Fax)
Sandhya Samachar	2328851 (O), 2326849 (Fax)
Navprabhat	2326264 (O), 5010929 (Fax)
Hindu	2336980 (O), 5085424 (Fax)....

Electronic Media	
Doordarshan Centre	2342905
Aakashvani	2341700, 2341222
Aaj Tak	5080777
Sahara Samay M.P. & C.G. Gwalior	2345468, 2345467 , 9425116757-Mobile -B.I.Gwalior
City Cable	2426252, 2420598

G.N.T.	5010017, 5011017
Gwalior Halchal	2311806
Komal Combined	5085849, 2424849
E.T.V.	2338471

Telecom Officers	
General Manager	2331000 (O), 2331001(R)
Dy. General Manager	2332300 (O), 2346500(R)
Dy. General Manager, Planning	2433000 (O), 2232000(R)
Dy. General Manager	2320000 (O), 2232100(R)
Chief Account Officer	2347500 (O), 2346000 (R)
Divisional Engineer	2328800 (O), 2454000 (R)
Commercial Officer	2323250 (O), 2331700 (R)
Dy.Divisional Engineer I	2320200 (O), 2320201(R)
Dy.Divisional Engineer II	2329200 (O), 2327201(R)
Dy.Divisional Engineer III	2343700 (O), 2333700 (R)
Dy.Divisional Engineer IV	2368100 (O), 2343400 (R)
P.R.O.	2329900 (O), 2321200 (R)

Other Important Phone Numbers	
Municipal Corporation	2322233
Fire Brigade	101, 2342101
Police Control Room	100 , 2323030
J.A. Hospital	102 , 2323950
Dabra Fire Brigade	957524-222777
Bus Stand Gwalior	2340192
Dabra Bus Stand	957524-222760
Dabra Railway Station	957524-222544
Circuit House Gandhi Road	2341596
Circuit House VIP Morar	2368690

C 8.5 Detailed Maps

Hazardous Places in District Gwalior



Safer Places in District –

Hazardous Places -

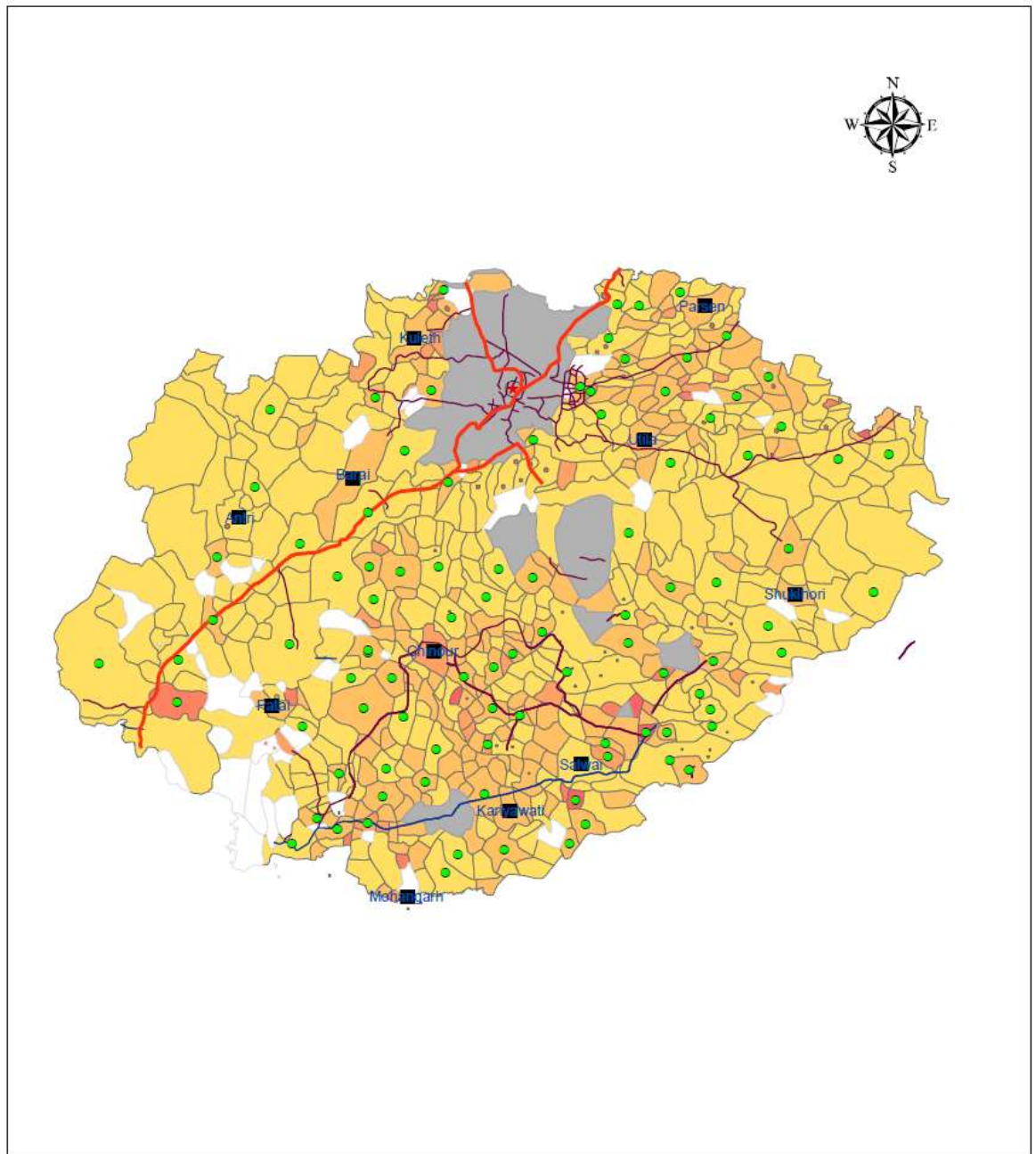
Safer Places in the district



Road Map



Population Density of Gwalior, MADHYA PRADESH



Legend		Population Density	
	District Hq.		No Data
	Other Road		0 - 200
	District Road		200 - 400
	National Highway		400 - 600
	Urban Area		600 - 800
	PHC's		>800
	Sub Centre's		

Map Composed by NIC

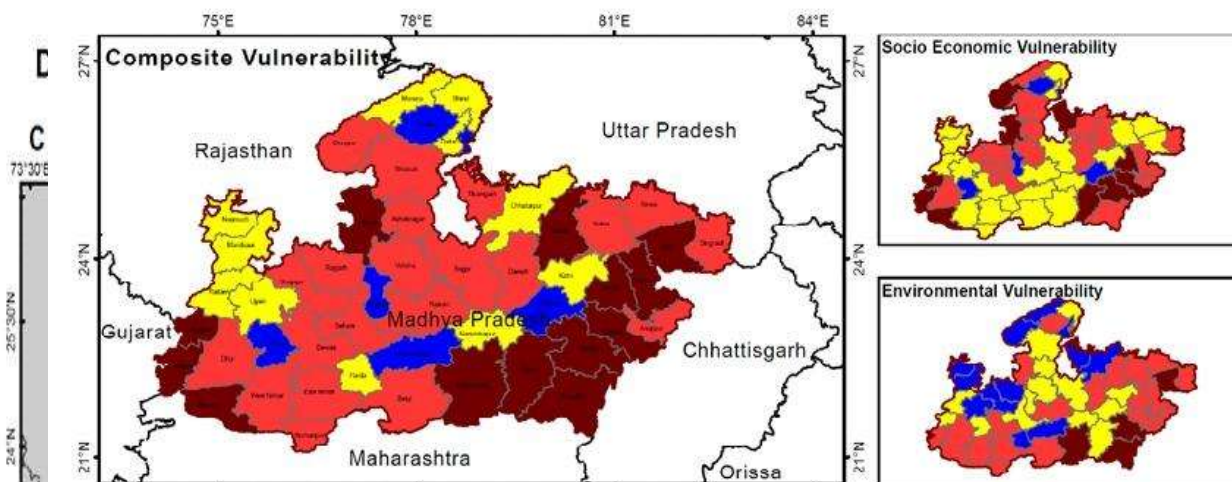
Source SOI, RGI

0 3.5 7 14 km

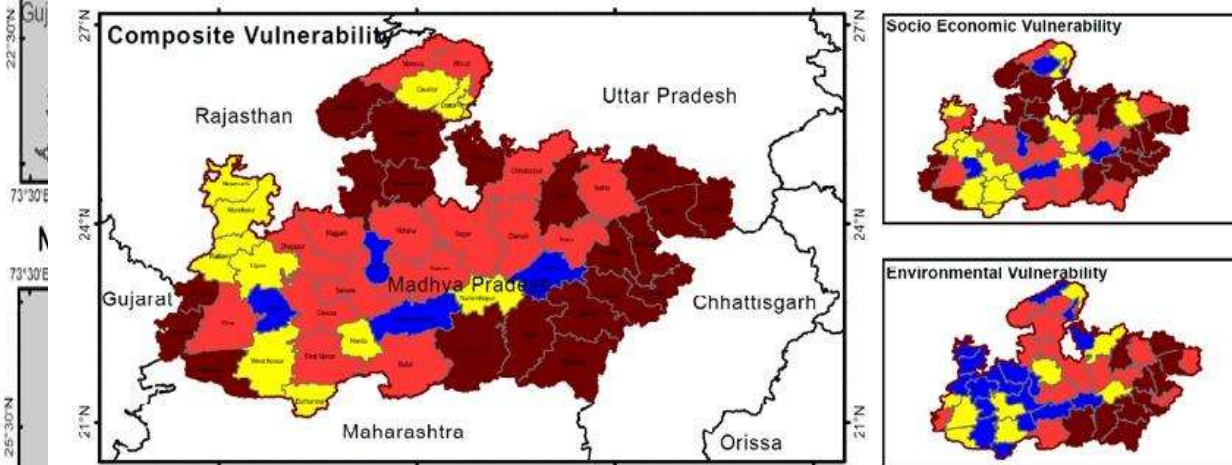


Vulnerability Map of Madhya Pradesh

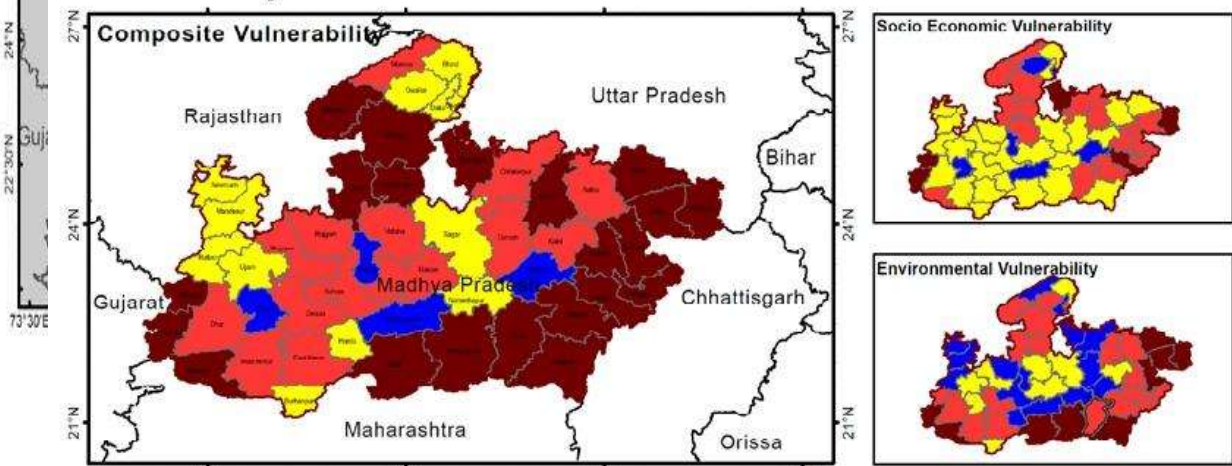
Baseline Scenario



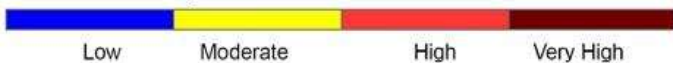
Mid Century Scenario



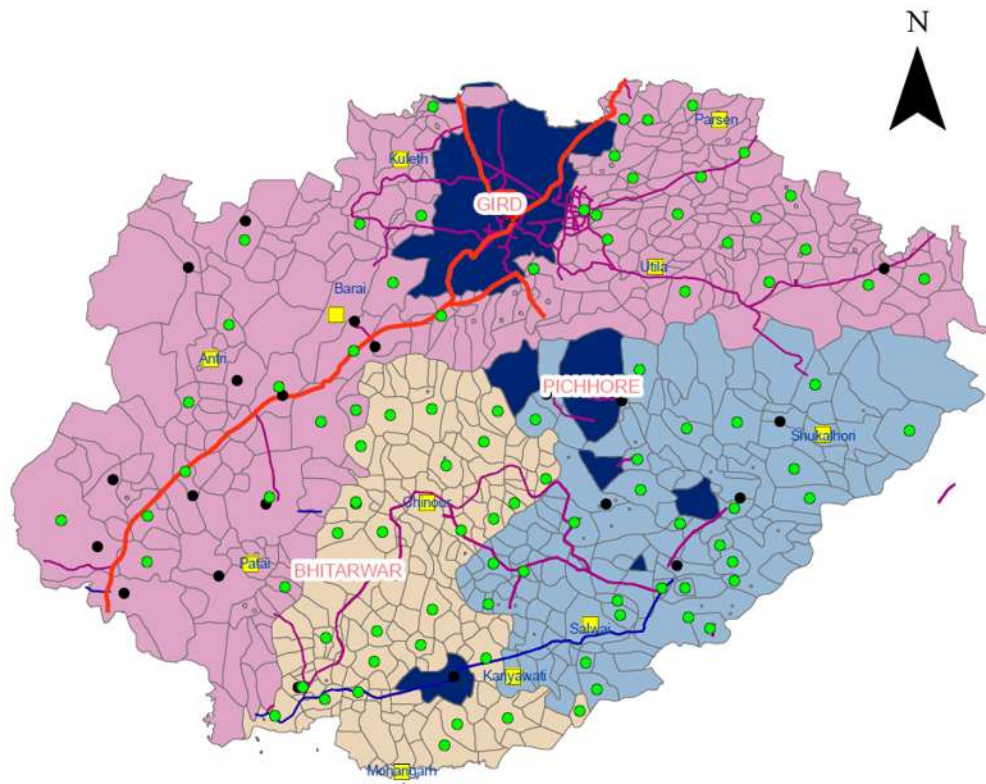
End Century Scenario



Vulnerability Index






Health Facilities in District Gwalior MP



Legend

-  District Hq
-  Towns
-  National Highway
-  District Roads
-  Other Roads
-  Urban Area
-  PHC's
-  Sub Centres

TALUK NAME

-  BHITARWAR
-  GIRD
-  PICHHORE

0 5 10 20 Kilometers

