

District Disaster Management Plan Morena

Prepared by
Sayantan Chattopadhyay,
Indian Institute of Technology, Roorkee

In Consultation with:
District Administration, Morena

Administrative Assistance:
School of Good Governance & Policy Analysis,
Government of Madhya Pradesh,
Bhopal

Technical Consultant:
SEEDS Technical Services,
15a, Institutional Area,
Sector 4, R.K.Puram,
New Delhi

Acknowledgements

I am grateful to School of Good Governance and Policy Analysis, Bhopal for entrusting me with this opportunity of preparing the District Disaster Management Plan for the district of Morena.

The preparation of this disaster management plan would not have been possible without the help and support of the district administration of Morena, School of Good Governance and Policy Analysis and Seeds Technical Services.

I am highly thankful to Shri D.D. Agarwal, District Collector of Morena for supporting this project and providing me with administrative help. I thank Shri A.B. Singh, Joint Collector for his help and administrative support. I thank Shri R.K. Sinha, SLR Land Records, for his valuable inputs and support in preparing this plan. I thank Shri Rajesh Sharma, Revenue Inspector, and Shri M.M. Baig, Account Officer, Zila Panchayat, for their insightful help. My special thanks to the respective department heads of Health, Food, Police, Irrigation, PWD, PHE and others for their co-operation and information sharing.

I am highly thankful Dr. Bhadoria, Chief Soil Scientist in Zonal Agriculture Research Centre, for his valuable sessions regarding the challenges faced by the district. I am extremely thankful to the School of Good Governance and Policy Analysis, Bhopal for their Administrative Assistance and support throughout the project. I am extremely thankful to Seeds Technical Services for their consultation and help in the technical aspects of preparation of this plan.

I am thankful to my colleagues working in other districts for sharing their experiences and providing valuable inputs.

Preface

Disasters disrupt progress and destroy the hard-earned fruits of painstaking developmental efforts, often pushing nations, in quest for progress, back by several decades. Thus, efficient management of disasters, rather than mere response to their occurrence has, in recent times, received increased attention both within India and abroad. This is as much a result of the recognition of the increasing frequency and intensity of disasters as it is an acknowledgement that good governance, in a caring and civilized society, needs to deal effectively with the devastating impact of disasters.

The national vision is to build a safer and disaster resilient India by developing a holistic, proactive, multi-disaster and technology driven strategy for DM. This will be achieved through a culture of prevention, mitigation and preparedness to reduce the impact of disasters on people. The entire process will centre stage the community and will be provided momentum and sustenance through the collective efforts of all government agencies supported by Non-Governmental Organizations.

The Government of Madhya Pradesh (GoMP) recognizes the need to have a proactive, comprehensive, and sustained approach to disaster management to reduce the detrimental effects of disasters on overall socio-economic development of the state. GoMP believes that there is a need for a policy that articulates its vision and strategy for disaster management in the state.

In the present structure of India, the district administration is bestowed with the nodal responsibility of implementing a major portion of all disaster management activities. The increasingly shifting paradigm from a reactive response orientation to a proactive prevention mechanism has put the pressure to build a fool-proof as well as fail-proof system, including, within its ambit, the components of prevention, mitigation, rescue, relief and rehabilitation. The purpose of this District Disaster Management Plan is to assess the risks and vulnerabilities of the district associated with various disasters and develop appropriate mitigation, preparedness and response strategies. This plan is based on the guidelines provided by the National Policy on Disaster Management, Madhya Pradesh Policy on Disaster Management and DM Act of 2005.

Abbreviations

APL: Above Poverty Line
ASHA: Accredited Social Health Activists
BPL: Below Poverty Line
DM: Disaster Management
CHC: Community Health Centre
CMHO: Chief Medical & Health Officer
DDMO: District Disaster Management Officer
DDMA: District Disaster Management Authority
DDMC: District Disaster Management Committee
DCR: District Control Room
DEOC: District Emergency Operation Centre
GoMP: Government of Madhya Pradesh
GP: Gram Panchayat
ICS: Incident Command System
IAY: Indira Awaas Yojana
JNNURM: Jawahar Lal National Urban Renewal Mission
NREGS: National Rural Employment Guarantee Scheme
NRHM: National Rural Health Mission
PHC: Primary Health Centre
PWD: Public Work Department
SSA: Sarva Shiksha Abhiyaan
RD: Rural Development
SDMA: State Disaster Management Authority, MP
SOP: Standard Operating Procedure
TERI: The Energy and Resources Institute
UD: Urban Development

Contents

Tables 7

Lists 8

Maps 8

Structure of District Disaster Management Plan (DDMP) 9

A. GENERAL 9

A 1 Overview 9

 A 1.1 District Profile 9

 A 1.2 Scope and Ownership of District Disaster Management Plan 20

 A 1.3 Purpose of the Plan 21

 A 1.4 Key Objectives 21

 A 1.5 District Plan Approach 22

A 2. Institutional Arrangements 23

 A 2.1 District Disaster Management Authority (DDMA) 24

 A 2.2 District Disaster Management Committee (DDMC) 25

 A 2.3 District Emergency Operations Centre (DEOC) 26

 A 2.4 District Disaster Information Management System 27

 A 2.5 Urban Area Disaster Management Committee 28

 A 2.6 Tehsil Level Disaster Management Committee 29

 A 2.7 Gram Panchayat Disaster Management Committee 30

 A 2.8 Village Disaster Management Committee 31

B. HAZARD, VULNERABILITY ASSESSMENT AND RISK PROFILING (HVRC) 32

B 1. Hazard Assessment 32

 B.1.1 Major applicable hazards 34

 B.1.2 History of past disasters 35

 B.1.3 Seasonality of hazards 37

B 2 Vulnerability Analysis 37

B 3. Capacity Analysis 42

 B 3.1 Resource inventory, Block wise 42

B 4. Risks Assessment 45

 B.4.1 Potential impact of applicable hazards and existing vulnerabilities 45

 B 4.2 Risk profiling of the district 47

C . DISTRICT DISASTER MANAGEMENT FRAMEWORK 49

C 1 District Action Plans 49

 C 1.1 Mitigation Plan 49

 C 1.2 Preparedness Plan 55

 C 1.3 Response Plan..... 60

 C 1.4 Recovery and Reconstruction Plan 87

 C 1.5 Cross cutting elements 90

C 2 Standard Operating Procedures (and Checklists)..... 93

 C 2.1 SOPs for all concerned Line Departments 93

 C 2.2 Hazard specific SOPs for designated Departments and Teams 111

C 3 Financial Provisions for Disaster Management..... 116

 C 3.1 District Disaster Response Fund..... 116

 C 3.2 District Disaster Mitigation Fund 116

C 4 Coordination mechanisms with other stakeholders 116

 C 4.1 Mapping of stakeholders in the District..... 116

 C 4.2 Responsibilities of the stakeholders..... 119

C 5 Inter- District Coordination Mechanisms – [Standard Operating Procedures / Protocols] 120

C 6 Intra- District Coordination Mechanisms – [with Block Headquarters] 121

C 7 Dissemination of DM Plan..... 122

 C 7.1 Plan Evaluation..... 122

 C 7.2 Plan Update..... 122

C 8 Annexure..... 123

 C 8.1 District profile..... 123

 C 8.2 Resources..... 130

 C 8.3 Media and information management 131

 C 8.4 Important Contact numbers 131

 C 8.5 Do’s and don’ts of all possible hazards 137

 C 8.6 Detailed Maps..... 139

Tables

Table A.1.1 1 Location and administrative divisions	10
Table A.1.1 2 Geography and Topography	11
Table A.1.1 3 Demographic and socio economics	11
Table A.1.1 4 Climate and weather	12
Table A.1.1 5 Health Details	13
Table A.1.1 6 Education	15
Table A.1.1 7 Agriculture and Land use	16
Table A.1.1 8 Housing Pattern	17
Table A.1.1 9 Industrial set ups	18
Table A.1.1 10 Transport and communication network	19
Table A.1.1 11 Power stations and electricity installations	19
Table A.1.1 12 Major historical, religious places, tourist spots	20
Table A.2. 1 District Disaster Management Authority (DDMA)	24
Table A.2. 2 District Disaster Management Committee (DDMC)	25
Table A.2. 3 District Emergency Operations Centre (DEOC)	26
Table A.2. 4 District Disaster Information Management System	27
Table A.2. 5 Urban Area Disaster Management Committee	29
Table A.2. 6 Tehsil Level Disaster Management Committee	29
Table A.2. 7 Gram Panchayat Disaster Management Committee	30
Table A.2. 8 Village Disaster Management Committee	31
Table B.1. 1 Major applicable hazards	34
Table B.1. 2 History of past disasters (last 30 years / as many years of data as possible)	35
Table B.1. 3 Seasonality of hazards	37
Table B.1. 4 Block wise vulnerability	37
Table B.3. 1 Resource inventory, Block wise	42
Table B.4. 1 Potential impact of applicable hazards and existing vulnerabilities	45
Table B.4. 2 Risk profiling of the district	48
Table C.1.2.2. 1 Pre-Disaster Warning, Alerts	58
Table C.1.3.17. 1 NGOs & Voluntary organizations	85

Lists

List 1 Medical response	75
List 2 Combat team of Noorabad	75
List 3 Combat team of Kailaras	75
List 4 Combat team of Pahargarh	76
List 5 Combat team of Porsa.....	76
List 6 Combat team of Sabalgarh.....	76
List 7 Combat team of Joura.....	76
List 8 Logistics available	77
List 9 Veterinary Hospitals in the district	82
List 10 Fire Safety Equipments available with Private Sector	117
List 11 Search and Rescue, Clearance equipments and Fire fighting equipments	126
List 12 Key news channels and journalists	131
List 13 Revenue officers and other department heads	131
List 14 Doctors in-charge of health institutions.....	133
List 15 Police officers and police stations	134
List 16 Active NGOs	135
List 17 Swimmers of Home Guard	136

Maps

Map 8.1.1 District Map of Morena	140
Map 8.1.2 Land-use/Land-cover Map of Morena.....	141
Map 8.1.3 Showing the Chambal River and Kota dam and barrage.....	141
Map 8.1.4 Soil profile map of Morena	142
Map 8.1.5 Elevation map of Morena	142
Map 8.1.6 Showing population density, PHCs and Sub Centres in Morena	143
Map 8.1.7 Showing the Police Thanas in Morena district.....	144
Map 8.6.1 Showing the flood affected districts of Madhya Pradesh.....	145
Map 8.6.2 Vulnerability map of Madhya Pradesh.....	146
Map 8.6.3 Map showing flood affected villages in Morena district.....	147
Map 8.6.4 Earth quake hazard map of India - Morena lies in Earth quake Zone II.	148
Map 8.6.5 Morena district lies in the High Damage Risk Zone from Wind and Cyclone hazard....	149
Map 8.6.6 Showing Prachi Gas Bottling Plant and Banmore and Morena industrial areas	150

Structure of District Disaster Management Plan (DDMP)

A. GENERAL

A 1 Overview

A 1.1 District Profile

Morena district covers an area of around 5 lakh hectares of which around 1.93 lakh hectares consists of Ravine. The district is situated about 150 m to 300 m above sea level. Morena forms the northern boundary of the state and its main river Chambal marks the natural dividing line between Madhya Pradesh, Uttar Pradesh and Rajasthan. The district touches Dholpur (Rajasthan) in the North-West and Pinahat (Uttar Pradesh) in the North-East. The neighboring districts are Bhind, Gwalior, Shivpuri and Sheopur. The northern central railway line and famous Agra- Bombay road passes through the district capital. The distance between the farthest places in the district – Porsa and Sabalgarh is about 140 km. The district has four rivers namely Chambal, Kuwari, Sank and Asan.

According to 2011 Census, population of the district was 1965137. Sex ratio of the district has increased from 822 in 2001 to 839 in 2011. The poor sex ratio of the district is alarming. The literacy rate of the district was 72.1% in 2011. The main occupation of the people is agriculture – the major crops being pearl millet, wheat and mustard. There are two industrial areas – Banmore and Morena. Some of the major industries include Prachi Gas Bottling Plant, J.K. Tyres and Punj Lloyd.

There are quite a few tourist spots in the district including Chambal ravines and Sun temple in Eiti. Some of the monuments date back to the medieval era. The Chambal River is home to Gharials. The Gharial breeding centre in Morena is worth a visit.

A 1.1.1 Location and administrative divisions

Morena is part of Chambal division. The district comprises of four sub-divisions: Morena, Ambah, Joura and Sabalgarh. There are six tehsils and seven blocks in the district.

Table A.1.1 1 Location and administrative divisions

Location (in degrees) -	Latitude – 25.15 to 26.52 North Longitude – 76.22 to 78.42 East		
District Area (in sq. kms.) -	5017 square kilometer		
Administrative information-			
No. of sub divisions:	4 - Morena, Ambah, Joura, Sabalgarh		
No. of Tehsils:	6 - Morena, Ambah, Porsa), Joura, Sabalgarh, Kailaras		
No. of Municipal Boards	8 - Porsha, Ambah, Morena, Banmore, Joura, Kailaras, Jhundpura, Sabalgarh		
No. of Blocks:	7 - Morena, Ambah, Porsa, Joura, Pahadgarh, Sabalgarh, Kailaras		
No. of Gram Panchayats:	489		
No. of Villages:	820		
Year of district formation:	1956		
Name of adjacent districts:	Madhya Pradesh - Bhind, Gwalior, Sheopur, Shivpuri Rajasthan – Dholpur, Karauli Uttar Pradesh – Agra		
Block Name	No. of Police Stations	No. of Police Chowkees	No. of Post offices
Morena	11	1	7
Ambah	3	1	2
Porsa	1	0	1
Joura	3	1	1
Pahadgarh	1	0	1
Sabalgarh	3	0	2
Kailaras	3	3	1

Source: Land Record Dept, www.morena.nic.in, SP office, Year: 2012

A 1.1.2 Geography and Topography

The district has four rivers and three dams. The dams Pillowa and Kotwal are situated in the Morena block and are over the rivers Sank and Asan respectively. The dam Pagara is situated in Joura and is over the river Asan.

Table A.1.1 2 Geography and Topography

Name of rivers:	Chambal, Kunwari, Asan and Sank
No. of dams, embankments:	3 – Pillowa dam, Kotwal dam, Pagara dam
Name of existing mountains:	NA
Highest elevation (in meters):	300 m (approx)
Forest cover in the district:	506.69 sq km

Source: Irrigation department, Forest department

A 1.1.3 Demographic and socio economics

Population of the district has increased from 1592714 in 2001 to 1965137 in 2011. Sex ratio in the district was 822 in 2001 and it marginally increased to 839 in 2011. Nominal GDP, at current price, of the district has increased from Rs 155794 in 1999-2000 to Rs 259371 lakh in 2007-08. The per capita calculated using nominal GDP of 2007-08 is Rs. 131999.

Table A.1.1 3 Demographic and socio economics

Total household:	3,62,309
Total population:	1965137
Male:	1068337
Female:	896773
Population density:	394
Income -	
Per capita income:	Rs 13199 (approx.)

Total APL, BPL families:	BPL families - 75614
Occupation -	
Main occupation of people:	Agriculture
Secondary occupation of people:	Agricultural labor

Source: 2011 Census data, <http://mp.gov.in>

A 1.1.4 Climate and weather

Average rainfall in Morena district is 650mm. The years in which the district experienced below average rainfall are 1989, 1997, 2002, 2005 and 2006. All these years, rainfall was less than 500mm. Most of these years were El Nino years. There have also been years of heavy rainfall – 1971 and 1996. Both of these years, the district suffered from flood. The district experiences extreme low and high temperature. Minimum temperature in January was recorded at 3.8 degree Celsius in 2010. Maximum temperature was recorded at 41.1 degree Celsius in the month of May. The district experiences hailstorm almost every year.

Table A.1.1 4 Climate and weather

Rainfall	Year	Rainfall in mm						
		Porsa	Ambah	Morena	Joura	Kailaras	Sabalgarh	Morena District
	2002-03	530	511	455.5	345.5	284.7	413.7	423.4
	2003-04	540.6	668.6	816.5	614	577.2	539	626
	2004-05	733	525	678.2	568	509	642.8	609.3
	2005-06	503.06	897	573	582	598	801	659
	2006-07	333.3	496	493.5	295	384.5	352.1	392.4
	2007-08	388.3	524	507.05	303	386	354	410.4
	2008-09	1062.4	1338	904	854	887.8	960	1001
	2009-10	832	833	959	805	808	939	862.6
	2010-11	812	823	948	781	731	930	837.5
	2011-12	832	683	1068	758	771	547	776.5
	Average	656.6	729.8	740.3	590.5	593.7	647.9	659.8
Temperature-								

Average Maximum Temperature:	42 degree Celsius
Average Minimum Temperature:	5 degree Celsius
Demarcation of crucial seasons-	
Months of excess rainfall, leading to flood situation:	July to September
Months of water scarcity, leading to drought situation:	July to September

Source: Statistical Handbook 2010, Land Records department

A 1.1.5 Health (Medical)

The district hospital situated in Morena town is equipped with 300 beds and 2 ambulances. It is only hospital in the district with a blood bank. There are 8 CHCs in the district one each in Noorabad, Ambha, Khadiahar, Porsa, Porsa, Joura, Pahargarh, Sabalgarh, Jhundpura, Kailaras. There are 17 PHCs in the district one each in Bamore, Nayakpur, Rithora, Deemni, Joha, Mahua, Parikshitpura, Sumawali, Galaitha, Devgarh, Bagchini, Bara, Pachokhara, Rampurkala, Tetra, Mangrol, Sujrama. There are total 8 government owned ambulances in the district with 2 ambulances in district hospital. There are 7 ambulances of Red Cross – two in Morena and one each in the rest 5 tehsils. There is a **blood bank** in district hospital. There is **no trauma centre** in the district as of July 2012.

Table A.1.1 5 Health Details

Block name	Porsa	Ambah	Morena	Joura	Pahargarh	Kailaras	Sabalgarh	TOTAL
No of Health Facilities	42	38	60	40	28	26	33	267
No of Allopathic	0	1	1	0	0	0	0	2

hospitals								
No of Govt. Ambulances	0	0	2	1	1	2	1	7
No of Ayurvedic / Unani Dispensaries	8	5	7	4	5	3	5	37
No of Maternity Homes	0	0	2	0	0	0	0	2
No of Child care centers	0	0	2	0	0	0	0	2
No. of Primary Health Centers (PHCs)	2	2	3	4	2	1	3	6
No. of sub health centers	31	29	31	31	22	21	23	188
No of Nursing Homes	0	0	13	0	0	0	0	13
No of Certified Medical Practitioners	7	11	39	7	2	6	14	86
No. of Community Health Centers (CHCs)	1	1	1	1	1	1	2	8

Source: CHMO's office

A 1.1.6 Education

Literacy rate of Morena in 2001 was 64.74% with male literacy at 79.89% and female literacy at 46.24. In 2011, overall literacy rate stands at 72.07 with male literacy at 84.22 and female literacy at 57.64.

Table A.1.1 6 Education

Block Name	Literacy rate	Total male	Total female	No. of primary schools	No. of Middle schools	No. of high schools
Porsa	70.5	73320	40588	364	97	22
Ambah	70.9	82254	44641	351	113	26
Morena	66.8	175781	86494	519	251	60
Joura	49.17	76945	31787	381	104	19
Pahargarh	45.8	44433	17212	299	74	07
Kailaras	58.2	52541	20126	270	71	09
Sabalgarh	62.5	63200	28506	319	99	23
No. of Anganwaris:		2058				
No. of ITI training Centres:		2 (Morena, Sabalgarh)				
No. of Engineering colleges:		0				
No. of Medical colleges:		0				
No. of Other colleges:		6 - GOVT. P.G. COLLEGE OF EXCELLENCE(MORENA), GOVT. GIRLS COLLEGE(MORENA), AMBAH P.G. COLLEGE(AMBAH), GOVT. COLLEGE(PORSA), GOVT. NEHRU COLLEGE(SABALGARH), GOVT. COLLEGE(JOURA)				
Total (Aprox.) Students Strength in all the educational institutions:		(Govt. + Private entities) 531367 (2009-10)				
Total (Aprox.) Staff Strength in all the educational institutions:		11545 (2009-10)				

Source: Statistical Handbook 2010, www.mp.gov.in**A 1.1.7 Agriculture and Land use**

Net cultivated land in the district is 268173 hectares. Major Kharif crops cultivated are Pearl Millet, Sesamum and Pigeon Pea. Total area where Kharif crops are cultivated is 82100 hectares. While, major Rabi crops are Wheat and Mustard. Total area used for cultivation of Rabi crops is 238200 hectares.

Table A.1.1 7 Agriculture and Land use

Cropping pattern -	Mixed (Jowar/Paddy/Pulses/Bajra followed by Wheat/Mustard/Barley)
Type of major crops:	Kharif - Bajra, Paddy, Jowar, Maize, Pulses, Oilseed crops Rabi - Wheat, Gram, Peas, lentil, Mustard
Cropping seasons:	Kharif and Rabi
Land classifications-	
Forest land:	50669 hectares
Barren & Uncultivated land:	41154 hectares
Cultivated land:	268173 hectares
Pasture land:	10901 hectares
Soil classifications	
Saline:	500 hectares (approx.)
Water logging:	Negligible
Recurrent flood hit area:	Porsa – 5 villages, Ambah – 13 villages, Morena – 8 villages, Joura – 12 villages, Sabalgarh – 15 villages
Drought hit area:	Entire district

Source: Agriculture department, Krishi Vigyan Kendra, Land Records, year: 2012

A 1.1.8 Housing Pattern:

In the district, there is a need to build more houses of burnt brick or concrete building material as houses built of most other materials have a high risk of damage from wind. This has to be kept in mind by the PWD and Rural and Urban development authorities. Percentage of houses with Mud, un-burnt brick wall is 17.5% and those of stone wall are 21%. Burnt brick wall comprises around 58.6% of total number of households.

Table A.1.1 8 Housing Pattern

Housing pattern-	Type of material used in wall / roof	No. of households		Level of Risk from Earth Quake (EQ zone II)	Level of Risk from wind (wind velocity – 47 m/s)
		Rural	Urban		
	Mud, Un-burnt brick wall	48744	3062	Low	High
	Stone wall	57364	5686	Low	Medium
	Burnt Brick Wall	118821	54322	Very Low	Medium
	Concrete Wall	181	575	Very Low	Very Low
	Wood wall	788	129	Very Low	High
	Other Materials	4926	610	Very Low	High
	Light Weight Sloping Roof	37395	2843	Very Low	Very High
	Heavy Weight Sloping Roof	9546	551	Very Low	Medium
	Flat Roof	183883	60940	As per that of wall	

Source: Vulnerability Atlas 2007

A 1.1.9 Industrial set ups

There is only one major hazardous industry in the district – Prachi Gas Bottling plant in Banmore. Another major hazardous industry which is being set up is the Gail plant in Kailaras. There has been no incident of hazard from any industries in the district in the past. Details of Prachi Gas Bottling plant is given below.

Table A.1.1 9 Industrial set ups

Total no. of industries (Govt., Semi Govt. and Pvt)	No govt or semi govt industry present
No. of Major Accident Hazard Units:	1 (Prachi Gas Bottling Plant, Banmore, Morena)
Total workforce involved in these industrial units:	10
No. of other large scale industries:	2
Total workforce involved in these industrial units:	2000
No. of Medium, small scale and micro industries :	77
Total manpower involved in these units:	3112
Any major accident occurred in any of the industrial units (Loss of life >10, or Financial loss > 1 Crore).	None

Source: Industrial Health and Safety Department (Gwalior), Prachi Corporate Office (Gwalior)

Factory	Prachi Gas Bottling Plant
Factory Address	KHNO – 503, Village Banmore
Finished product	LPG cylinders
Capacity	2400 cylinders per day
Factory Manager and Contact No.	Mr. Roop Narayan Shah 9301294369, 93035733152
Number of employees	10

Source: Prachi Gas Corporate Office, Gwalior

Map showing Hazardous industry is enclosed in Annexure 8.6 - Map 8.6.6

A 1.1.10 Transport and communication network

Morena, the headquarters of the Chambal division stands at the Agra-Bombay National Highway between Gwalior and Agra. The northern central railway line passes through the district capital of Morena. Morena Railway station is on the Delhi-Mumbai railway route. Railway connectivity is available in four blocks.

Table A.1.1 10 Transport and communication network

<p>Transport Connectivity of each block with respect to following networks:</p> <p>By Road</p> <p>By Rail</p> <p>By Air</p> <p>Waterways</p>	<p>All 7 blocks are connected</p> <p>4 blocks – Morena, Kailaras, Joura, Sabalgarh</p> <p>Airport in Gwalior 35kms from Morena</p> <p>Ferry goes across the river Chambal from two ghats one each in Sabalgarh and Ambah named Atar and Usedh respectively</p>
<p>Communication network</p> <p>No. of wireless stations in the respective blocks</p> <p>Availability of telephone, mobile services in each block</p> <p>Availability of internet facility in the blocks</p> <p>No. of HAM Radio Stations in the blocks</p>	<p>25 wireless stations in the district</p> <p>Available in all blocks</p> <p>Available in all blocks</p> <p>Not available</p>

Source: Land Records, NIC, Police department

Major road and rail network map is enclosed in Annexure 8.6

A 1.1.11 Power stations and electricity installations

There are no power generation units in the district. According to 2011 census, out of 362309 households, 131486 households have access to electricity, 227377 households use Kerosene and 1007 use other oil. 774 households use solar energy and 1099 households have no lighting.

Table A.1.1 11 Power stations and electricity installations

<p>List of power stations in the district:</p>	<p>Power distribution units – 44 including 220 KV sub-station in Sabalgarh and 132 KV sub-stations in Morena, Joura, Banmore, Ambah,</p>
---	--

	Porsah rest are 33/11 KV units
Electricity outreach in the district:	166 villages are yet to received electricity (mostly in Sabalgarh)
Available sources of electricity in district, like DG sets etc:	Kerosene, other oil and solar energy

Source: Power Department, year 2012

A 1.1.12 Major historical, religious places, tourist spots

Morena has a few archeological spots with some monuments from the Mahabharat era to the medieval age. Chambal ravines were home to some of the famous dacoits including Phoolan devi. Sun temple in Eiti is a very famous temple and attracts a lot of devotees from nearby areas.

Table A.1.1 12 Major historical, religious places, tourist spots

	Average presence of visitors per day
List of historical places in the district:	
1. Fortress, Padhawali	15
2. Fortress, Sumawali	15
List of religious Centres in the district:	
1. Sun temple, Eiti	20
List of the tourist spots in the district:	
1. Chambal Ravines, Morena	15

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 1.3 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 1.4 Key Objectives

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

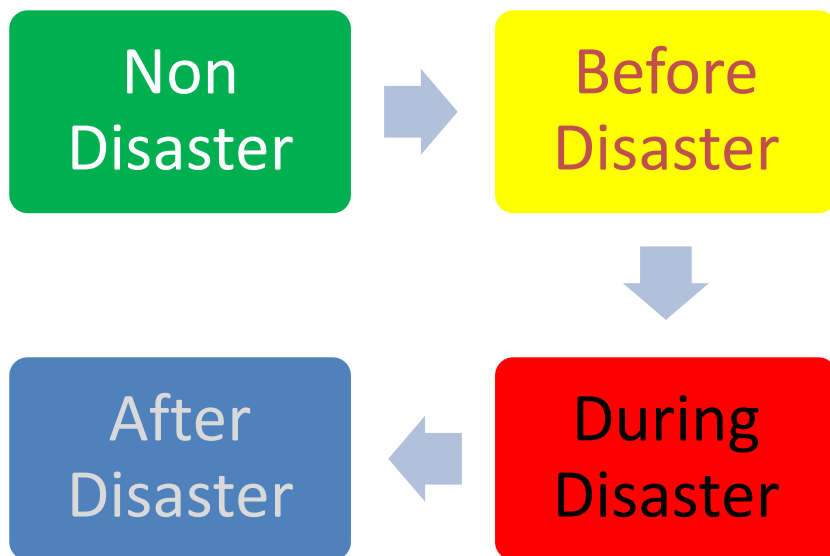
- Assess all risks and vulnerabilities associated with various disasters in the district
- Promoting prevention and preparedness by ensuring that Disaster Management (DM) receives the highest priority at all levels in the district.
- Prevention and minimization of loss of human lives and property by 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 1.5 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

As stipulated in DM Act, at the State level, State Government has constituted the State Disaster Management Authority under the chairmanship of honourable Chief Minister of the State. Likewise State Executive Committee (SEC) of SDMA under the chairmanship of Chief Secretary of the State. At the district level District Disaster Management Authority (DDMA) under the chairmanship of District collector and co-chaired by the chairman of Zila Parishad is to be formed. There shall be a

district disaster management officer who will coordinate all activities in the district and shall in charge of Emergency Operation Centres.

A 2.1 District Disaster Management Authority (DDMA)

According to subsection 1 of section 25 of DM Act, after the notification for State Disaster Management Authority is issued in the Official Gazette, it is mandatory to establish a District Disaster Management Authority for every district in the State with such name as may be specified in that notification. DDMA is yet to be formed in Morena.

According to the DM Act, the District Disaster Management Authority shall consist of the chairperson and six other members. The Collector or the District Magistrate shall be the ex-officio Chairperson and the Chairperson of the Zila Panchayat shall be the co-Chairperson of the District Authority. The CEO of the District Authority shall be an officer not below the rank of Additional Collector or Additional District Magistrate or Additional Deputy Commissioner. The other members of the DA will be the Superintendent of Police, the Chief Medical Officer and two other district level officers.

Table A.2. 1 District Disaster Management Authority (DDMA)

Members of DDMA, their name, along with actual designations, and current position in DDMA like Chairman, Secretary or Member etc	Designation	Current position in DDMA
	District Collector	Chairman
	Chairman, Zila Panchayat	Co-Chairman
	Additional District Magistrate	CEO
	Superintendent of Police	Member
	C.M.H.O	Member
	Superintendent of Land Records	Member
	Executive Engineer, Irrigation	Member
Roles and responsibilities of DDMA	<ul style="list-style-type: none"> • To act as the district planning, coordinating and implementing body for DM in accordance with the guidelines laid down by NDMA and SDMA. • Prepare district disaster management including response plan. • Coordinate implementation of national policies, state policies, national plan, state plan and district plan. • Take measures for prevention of disaster and mitigation of its effects through departments at district level and local authorities. 	

	<ul style="list-style-type: none"> Examine construction standards; ensure communication systems; involve NGOs and take all operational measures.
--	---

A 2.2 District Disaster Management Committee (DDMC)

The District Disaster Management Committee is formed every year to prepare, manage, respond, control and provide relief during flood. The members are listed below.

Table A.2. 2 District Disaster Management Committee (DDMC)

Functionaries	Designation	Address	Office contact	Residence contact
District Collector Shri D.D. Agarwal	Chairman, DDMC	Office of Collector	07532223500	9425078735
District SP Shri Santosh Kumar Singh	Member Secretary, DDMC	Office of SP	07532232200	9425156769
Commandant SAF	Member, DDMC	Office of Commandant SAF	07532224415	9425760300
CEO Zilla Panchayat	Member, DDMC	Collectorate	07532222500	9425116338
Additional Collector	Member, DDMC	Collectorate	07532222191	
District Forest Officer	Member, DDMC	Forrest office	07532234742	9424791800
Land Records Officer	Member, DDMC	Collectorate		9425617670
District Medical Officer	Member, DDMC	District Hospital	07532225760	9425334465
District Soil Officer	Member, DDMC	Collectorate	07532226363	9827232011
Officer of PWD	Member, DDMC	PWD	07532226361	9826229155
Irrigation officer	Member,	Irrigation	07532234352	

	DDMC	department		
Officer of Public Health Engineering Department	Member, DDMC	PHE department	07532233393	
Deputy Director Agriculture	Member, DDMC	Agriculture Department	07532226450	9826334387
District Planning Officer	Member, DDMC	District Planning Office	07532227789	7879808100
Deputy Director Veterinary Department	Member, DDMC	Veterinary Department	07532234342	9300763751
Commandant Home Guard Morena	Member, DDMA	District Commandant Office	07532230466	8349750470
Flood Relief Officer	Member, DDMA	Flood Relief Office, Bhopal		8989154494

Source: Land Records Department

A 2.3 District Emergency Operations Centre (DEOC)

The District Emergency Operations Centre (District Control Room) does all the activities related to disaster response. It keeps track of the situation and manages the disaster situation by operating round the clock and co-ordinating with other departments like Police, Home Guards, and NGOs and manages the disaster response process.

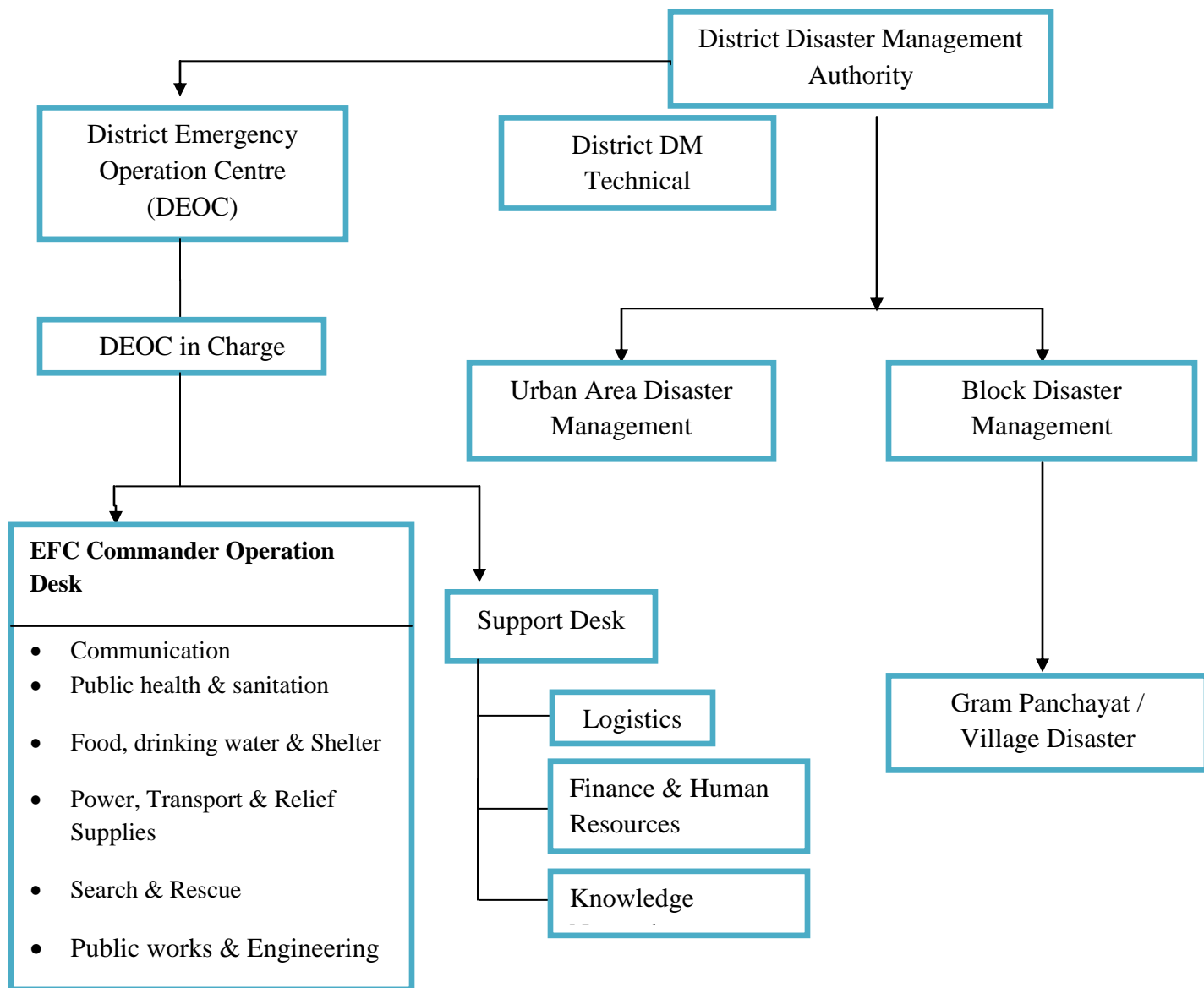
Table A.2. 3 District Emergency Operations Centre (DEOC)

Location of the DEOC:	Morena district headquarter
Involved agencies in DEOC, Roles and responsibilities of the officials / nodal persons (phase wise):	<p>14 members are as follows:</p> <ol style="list-style-type: none"> 1. Shri Samantlal Khagar (Land Records) 2. Shri Mulayam Singh Tomar, helper (Irrigation Department) 3. Ramprakash Baghal, Peon (Agriculture Department) 4. Shri Pratabrao Morekar, Tracer (Land Management) 5. Shri Raghuvveer Adhivasi, Peon (Land Management) 6. Shri Ravindra Singh Chauhan, Tracer (Land Management) 7. Shri Kesab Prasad Sharma, Tracer (Land Management) 8. Shri Manoj Kumar Gupta, Helper (Irrigation Department) 9. Shri Ramjilal Yadav, Revenue Inspector (Land Management) 10. Shri Rajesh Saxena, Helper (PWD) 11. Shri Deepak, Revenue Inspector (Land Management) 12. Shri Harilal, Helper (PWD) 13. Shri Prakash Chandra Sharma, Revenue Department (Land Management) 14. Shri Surya Kumar Srivastava, Helper (PWD)
Equipments installed (software and hardware):	Telephone

Source: Land Records Department

A 2.4 District Disaster Information Management System

Table A.2. 4 District Disaster Information Management System



A 2.5 Urban Area Disaster Management Committee

Urban Area agencies play significant role in disaster management. Presently, *no committee* exists at Urban level. Below mentioned can be taken as guidelines/suggestions for preparation of Block Level Disaster Management Committee

Table A.2. 5 Urban Area Disaster Management Committee

Date of inception of Urban DDMC, Location	Yet to be formed	
Members of Urban DDMC, their name, along with actual designations, and current position in DDMC like Chairman, Secretary or Member etc	Designation	Position in UADMC
	Nagar Palika CMO	Chairman
	Sub Divisional Officer, Revenue	Co-Chairman
	Sub Divisional Police Officer	Member
	Block Medical Officer	Member
	Assistant/Sub-Assistant Engineer, Electricity	Member
	Assistant Engineer, PWD	Member
Roles and responsibilities of Urban DDMC	<ul style="list-style-type: none"> • Development and implementation of their respective urban area disaster management plans • Ensuring uninterrupted information flow to and from the control rooms to the higher authorities. • Controlling, coordinating and managing the relief team. 	

A 2.6 Tehsil Level Disaster Management Committee

Tehsil level Disaster Management Committee plays an important role in co-ordinating the mitigation, preparedness and relief activities at the block level. Following are the members:

Table A.2. 6 Tehsil Level Disaster Management Committee

Location of Tehsil level DMC,	Morena, Porsa, Ambah, Joura, Kailaras, Sabalgarh
-------------------------------	--

Members of Tehsil level DDMC, their name, along with the actual designations, and current position in Tehsil DMC like Chairman, Secretary or Member etc	Chairman – Teshsildar	Tehsil	Contact Number
	Shri Bhawan Kumar	Porsa	07538254227
	Shri Mansingh Pawak	Ambah	07538256348
	Shri Bhupendra Singh	Morena	07532226220
	Shri Neeraj Sharma	Joura	07537245984
	Shri Pradeep Sharma	Kailaras	07536287048
	Shri S.L.Saika	Sabalgah	07536252335
	Members: <ul style="list-style-type: none"> • Chief Officer of Panchayat • Police Daroga • Medical Officer • Representative of NGOs • Chief Municipality Officer 		
Roles and responsibilities of Tehsil level DMC	<ul style="list-style-type: none"> • Development and implementation of their respective tehsil disaster management plans • Ensuring uninterrupted information flow to and from the control rooms to the higher authorities. • Controlling, coordinating and managing the relief team. 		

Source: Land Records Department

A 2.7 Gram Panchayat Disaster Management Committee

Gram Panchayat Disaster Management Committee plays a vital role in performing the disaster management activities at the Gram Panchayat level. The members of the committees so formed are mentioned below.

Table A.2. 7 Gram Panchayat Disaster Management Committee

Location of Gram Panchayat level DMC	All flood affected Gram Panchayats
Members of Gram Panchayat level DMC, their name, along with actual designations, and current position in GP level DMC like Chairman, Secretary or Member etc	<ul style="list-style-type: none"> • Sarpanch (Chairman) • Patwari (Member) • Gram Sevak (Member) • Gram Patel (Member) • Kotwar (Member) • Teacher (Member)

	<ul style="list-style-type: none"> • Panchayat Secretary (Member) • Representative of NGO (Member) • Medical Officer (Member)
Roles and responsibilities of Gram Panchayat DDMC	<ul style="list-style-type: none"> • Organizing Resources and maintain resource inventory. • Creating Awareness • Training and Capacity Building • Relief Preparation • Updating District authorities and DDMA

Source: Land Records Department

A 2.8 Village Disaster Management Committee

Local people are the first ones to respond to disaster in terms for rescue and relief. Thus, initiatives and awareness at ground level is must. Village Disaster management committee serves that purpose by efficiently managing and planning for the situation.

Table A.2. 8 Village Disaster Management Committee

Date of inception of Village level DMC, Location	Not yet formed
Members of Village level DMC (Proposed)	<ul style="list-style-type: none"> • Gram Patel (Chairperson) • Gram Sevak (Member) • Kotwar (Member)
Roles and responsibilities of Village DDMC	<ul style="list-style-type: none"> • Identifying vulnerable areas in the village • Search and rescue operation • First Aid • Awareness • Temporary Shelter management

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

Flood has occurred in the district six times between 1980 and 2012. The severity of the last flood that took place in 1996 can be gauged by the fact that around 8000 families were affected across tehsils in Morena. Apart from flood, draught has affected the district in the years 2000, 2002, 2006, 2007 and 2009. 2006 was a severe draught year. Prachi LPG bottling plant in Banmore, which has been re-opened in 2011, is a major hazardous industry. Also, the district suffers from hailstorm almost every year.

B 1. Hazard Assessment

The major applicable hazards in the Morena district are listed below:

Flood – Flood has occurred six times between 1980 and 2012. After 1996 there has not been a flood like situation. Flood in this region is caused by the overflowing of Chambal River.

Chambal River is an inter-state river flowing through Madhya Pradesh, Rajasthan and Uttar Pradesh. It originates from the northern slopes of Vindhyan range about 14.4 km south-west of Mhow town in Indore district. Initially, it flows north-ward in M.P. for a distance of 320 km, and after passing by the historic fort of Chaurasigarh, it flows North-East for about 286 km through Rajasthan. In Kota, Rajasthan, a dam and a barrage has been built on Chambal River. Continuing in the same direction further, it forms the boundary between Rajasthan and M.P. along Sheopur and Morena districts for a length of 216 km. (Refer Map 8.1.3). When Kota Barrage releases excess water into the Chambal River, due to increase in water level of Chambal River, villages nearby the River valley may get flooded. Fifty three villages have been identified along the Chambal River valley as hazard prone areas. These have been listed below. Flood can cause huge damage to life, property and livestock and hence proper mitigation and preparedness measures are to be taken.

Draught – The last major draught occurred in 2006. It resulted in considerable decrease in yield of Kharif crop. The entire district has been identified as draught prone area. The rainfall in the district has decreased considerably in the last decade. The average rainfall during last decade has reduced to 650mm from more than 700mm a decade ago.

Industrial and Chemical disasters – Prachi Gas Bottling plant is a major hazardous industry in Banmore, Morena. Prachi fills LPG in cylinders. It has a capacity of 2400 cylinders per day. Liquefied Petroleum Gases are classified as hazardous material because of their extremely flammable property and explosive property when stored under pressure. The following

considerations are to be taken into account in accordance with the hazardous properties of these compressed gases:

Fire or explosion

- Extremely flammable
- May be ignited by heat, sparks and flames
- Flammable vapours may rapidly spread away from leaks
- Vapour or gas explosion hazard indoor or outdoor

Health Hazards

- Vapour may cause suffocation or dizziness
- Contact can cause severe frostbite
- Fire may produce irritation or poisonous gases

Hailstorm – Hailstorm causes lot of damage to Rabi crops. The main Rabi crop which is destroyed by hailstorm is Mustard. Almost every year hailstorm destroys hundreds of acres of crops in different places in the district.

Forest Fire – Forest fire has taken place in Rukher in Morena. It took place in Rajpur, Jhiniya, Navalpura and other places in Pahargarh. Forest fire is an environmental hazard and it can give rise to climate change.

Road Accident – Road accidents occurs mostly in the NH3 which passes through Morena block. Otherwise SH2 which connects Morena to other blocks is also prone to accident.

Epidemic – Outbreak of Malaria took place in 2008, 2010 and 2011. Noorabad, Kailaras and Pahargarh blocks are prone to outbreak of malaria. In 2011, there were outbreaks of measles which affected 37 individuals in Khadiyahaar, Noorabad, and Sabalgarh blocks which resulted in death of a nine year old. In 2010, there was an outbreak of Gastroenteritis in Khadiyahaar which affected 24 people. There was outbreak of chickengunia and measles in Noorabad which affected 10 people and 9 people respectively. In-order to deal with epidemics the health department forms combat teams every year. These combat teams have one medical officer each and has three to five other members.

Violence – Morena district has been classified as a high risk district from Socio Economic Vulnerability. Law and order problem is present in almost all blocks of the district. Illiteracy and unemployment are the root causes of violence and riots. Overall literacy rate, according to 2011 census, was 72.1% while female literacy rate is only 57.6%. There is a need to foster higher education among men and primary education among female. Work participation rate, according to 2001 census, is only 37.1 percent in the district with 39.9 percent in rural areas and 26.6 percent in urban areas which shows that there is a need to create employment opportunities.

Earthquake – Entire district lies in Earthquake zone II which is a low risk zone. Thus Earthquake has not been considered as a major hazard.

B.1.1 Major applicable hazards

Table B.1. 1 Major applicable hazards

Type of applicable hazards	Hazard Prone Areas	
	Blocks	Gram Panchayats (Name of villages which belong to the GP)
Flood	Porsa	Rattan basai, Rudhaoli, Useth, Raipur, Nagara Porsha
	Ambah	Easah, Jonha, Kuthiana, Beelpur, Khirenta, Aroli (Gosbasai), Malbasai (Kisroli), Goonj, Rithona (Kakrari), Dandoli
	Morena	Kanthri, Bhanpur (Jayatpur), Bhanpur, Nayakpura, Gadora (Deopuri), Rithorakhurd (Gorkha), Jakhona,
	Joura	Barandn, Singroli, Chinnoni Chambal, Didonkhar (Uttampura), Brijgadi, Chinvara (Gurja), Tajpur, Sarseni, Guda Chambal, Khandoli
	Sabalgarh,	Barotha (Khanchida), Kemarakala, Kemarakhurd (Banthar, Gadhula), Gondoli, Atar, Digwar, Rahu Ka Gaon, Kheron (Kalarghadi), Norawalikraworen, Jhundpura (Nagar panchayat)
Drought	Porsa, Ambah, Morena, Joura, Sabalgarh and Kailaras Tehsils	
Industrial & Chemical disasters	Banmore in Morena	
Hailstorm	Porsa, Ambah, Morena, Joura, Sabalgarh and Kailaras Tehsils	
Forest Fire	Morena and Pahargarh Blocks	
Road Accident	Morena block – NH3, All blocks – SH2	
Epidemic	Malaria outbreak - Noorabad (Morena block) and Pahargarh block. Other outbreaks – Entire district	
Violence	Entire district. Ambah and Porsa are the most affected blocks.	
Mining blasts	Morena Block - Banmore, Rathora, Noorabad	

B.1.2 History of past disasters

Table B.1. 2 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																	
Flood	1971	Porsa, Ambah, Morena, Joura, Sabalgarh	Almost entire district was affected	Loss of houses and property	Loss of cattle	Porsa, Ambah, Morena, Joura, Sabalgarh blocks.																	
Flood	1996	Porsa, Ambah, Morena, Joura, Sabalgarh	8000 families affected	loss of houses and property	Loss of cattle	Porsa, Ambah, Morena, Joura, Sabalgarh blocks.																	
Draught	2006 , 2007	Entire district was affected. Between 15/6/2006 and 30/9/2006, i.e. 107 days, the average days of draught were 80.	No loss of life reported	Yield of Jowar and Bajra decreased considerably across the district. In years 2005-06 and 2008-09 the yield of both these crops was normal whereas in the years 2006-07 and 2007-08 the yield decreased due to draught. <table border="1" data-bbox="846 1465 1094 1854"> <thead> <tr> <th rowspan="2">Year</th> <th colspan="2">Per hectare yield</th> </tr> <tr> <th>Bajra</th> <th>Jowar</th> </tr> </thead> <tbody> <tr> <td>05-06</td> <td>1263</td> <td>1002</td> </tr> <tr> <td>06-07</td> <td>769</td> <td>976</td> </tr> <tr> <td>07-08</td> <td>1000</td> <td>977</td> </tr> <tr> <td>08-09</td> <td>1000</td> <td>1148</td> </tr> </tbody> </table>	Year	Per hectare yield		Bajra	Jowar	05-06	1263	1002	06-07	769	976	07-08	1000	977	08-09	1000	1148	No loss of livestock reported	Porsa, Ambah, Morena, Joura, Sabalgarh and Kailaras Tehsils
Year	Per hectare yield																						
	Bajra	Jowar																					
05-06	1263	1002																					
06-07	769	976																					
07-08	1000	977																					
08-09	1000	1148																					

Outbreak – Malaria	2008	Noorabad and Pahargarh blocks	Around 400 people were affected. No loss of life reported.	No loss of livelihood	No loss of livestock	Rithorakala in Noorabad block and Pahargarh block
	2010	Noorabad Pahargarh, and Kailaras blocks	Around 100 people were affected, no loss of life reported.	No loss of livelihood	No loss of livestock	Rithorakala in Noorabad block Pachokara in Pahargarh, and Sujrama in Kailaras blocks
Outbreak – Gastroenteritis	2009	Porsa, Joura, Sabalgarh and Pahargarh blocks	Around 150 were affected and 5 died – all of them were female kids between 1 to 7 years of age.	No loss reported	No loss reported	Silwali village in Porsa, Kanha and Khera in Joura, Garh ka pura and Jabrol in Sabalgarh, Vedpura and Saharana in Pahargarh

Sources: <http://www.mp.gov.in/relief/Dr.%20affected%20districts.htm>, Land Records Department, http://www.mpkrishi.org/krishinet/Compendium/othermissl_districtaffected.asp, Malaria Department, Statistical Handbook 2010, CHMO's office

B.1.3 Seasonality of hazards

Table B.1. 3 Seasonality of hazards

Hazard	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
Flood							X	X	X			
Drought							X	X	X			
Hailstorm		X	X	X								
Outbreak – Malaria							X	X	X			
Other Outbreaks	X	X	X	X	X	X	X	X	X	X	X	X
Industrial and Chemical disasters	X	X	X	X	X	X	X	X	X	X	X	X
Rail or road accidents	X	X	X	X	X	X	X	X	X	X	X	X

B 2 Vulnerability Analysis

Table B.1. 4 Block wise vulnerability

Name of Block	Physical/Infrastructural Vulnerability	Environmental/ Natural vulnerability	Social vulnerability	Economic vulnerability	Institutional vulnerability
Morena	1. The NH3 that passes through Morena and Rajghat bridge connecting Morena to Dholpur across Chambal River are prone to accident 2. During flood, the Rajghat bridge may get	1. Around 15000 people live in flood affected gram Panchayats 2. Draught affects Kharif crop yield	1. Alarmingly Poor sex ratio at 788 2. Alcoholism is a major problem 3. Low female literacy rate	1. Interruption in Power supply in the district capital for 7 to 8 hours a day affects economy	1. Absence of communication technologies like Satellite phone and HAM radio 2. Absence of trauma centre

	<p>submerged in Chambal River water (last reported in 1996 flood)</p> <p>3. Kuccha houses in the block are vulnerable to damage by wind.</p> <p>4. Prachi LPG bottling plant is a Major Accident Hazardous industry situated in Banmore, Morena</p>	<p>3. Conversion of cultivable land into wasteland due to soil erosion affects livelihood</p>	<p>4. work participation rate is only 34%</p> <p>5. Lack of awareness in people regarding mitigation of outbreak like malaria</p>	<p>2. 26% of the population depends on rain-feed agriculture</p> <p>3. Farmers lose their land due to ravine formation and are rendered unemployed</p>	<p>in the District Hospital</p> <p>3. Need for community based disaster management</p> <p>4. DDMA is yet to be formed</p>
Porsa	<p>1. Around 77,900 people live in kuccha houses. These are vulnerable to damage by wind.</p> <p>2. Road conditions need to be improved. Road connecting Ram Ka Pura to Satho is in poor condition. This could cause hindrance when flood takes place as most of these roads become in-accessible due to water-logging</p>	<p>1. Around 18000 people live in flood affected gram Panchayats in the block</p> <p>2. Draught affects Kharif crop yield</p> <p>3. Conversion of cultivable land into wasteland due to soil erosion affects livelihood</p>	<p>1. Sex ratio is very poor at 848</p> <p>2. Alcoholism is a major problem among urban and rural population</p> <p>3. Low female literacy rate</p> <p>4. work participation rate is only 38%</p> <p>5. lack of awareness in farmers about draught mitigation</p>	<p>1. Power supply shortage affects livelihood</p> <p>2. 26% of the population depends on rain-feed agriculture</p> <p>3. Farmers lose their land due to ravine formation and are rendered unemployed</p>	<p>1. Porsa CHC has following problems:</p> <p>i. No Ambulance is available</p> <p>ii. No power supply</p> <p>2. Law and order problem</p> <p>3. Gram Panchayat DMC at Useth needs to do capacity building (lifebuoy and life-jacket) to tackle boat capsizing</p>
Joura	<p>1. Around 140000 people live in kuccha houses. These are vulnerable to damage by wind as wind velocity in Morena district can get as high as 47m/s</p>	<p>1. Around 28000 people live in flood affected gram Panchayats in the block</p> <p>2. Draught affects Kharif crop yield</p> <p>3. Conversion of cultivable</p>	<p>1. Alarmingly poor sex ratio of 800</p> <p>2. Alcoholism is a major problem</p> <p>3. Low female literacy rate</p> <p>4. work participation rate is only</p>	<p>1. Power supply shortage affects livelihood</p> <p>2. 30% of the population depends on rain-feed agriculture</p> <p>3. Farmers</p>	<p>1. Need for community based disaster management</p> <p>2. Low seed replacement rate and poor access to improved seeds</p> <p>3. Agro advisory based on IMD</p>

		land into wasteland due to soil erosion affects livelihood	39% 5. lack of awareness in farmers about draught mitigation	lose their land due to ravine formation and are rendered unemployed	weather forecast and block weather observatory needed
Sabalgarh	<p>1. Around 76,500 people live in kuccha houses. Kuccha houses are vulnerable to damage by wind.</p> <p>2. Jhundpura is a flood prone place of the district and it has a CHC. The CHC must be fortified.</p> <p>3. Unavailability of water. Banwara and surrounding villages have severe shortage of water. This can lead to outbreaks and could be a major bottleneck at the time of disaster relief</p>	<p>1. Around 30000 people live in flood affected gram Panchayats in the block</p> <p>2. Draught affects Kharif crop yield</p> <p>3. Conversion of cultivable land into wasteland due to soil erosion affects livelihood</p>	<p>1. Sex ratio is very poor at 848</p> <p>2. Alcoholism in rural and urban areas is a concern</p> <p>3. Low female literacy rate</p> <p>4. work participation rate is only 37%</p> <p>5. Good percentage of the population migrates leaving behind only the children and the elderly.</p>	<p>1. A good percentage of people migrate to other places due to lack of employment</p> <p>2. Electricity is not available in around 20 gram panchayats</p> <p>3. 29% of the population depends on rain-feed agriculture</p>	<p>1. Jhundpura CHC suffers from severe power supply shortage</p> <p>2. Need for community based disaster management</p> <p>3. Gram Panchayat DMC at Atar needs to do capacity building (lifebuoy and life-jacket) to tackle boat capsizing</p>
Kailaras	<p>1. Kuccha houses are vulnerable to damage by wind.</p> <p>2. GAIL's Dadri-Bawana-Nangal pipeline passes through Kailaras and GAIL is also going to set compressor station at Kailaras. The pipeline will be used to transport LNG which is highly flammable and the compressor station to be set up will be a major hazardous industry.</p>	<p>1. Draught affects Kharif crop yield. Around 32% of the population depends on agriculture.</p>	<p>1. Sex ratio is very poor at 830</p> <p>2. Alcoholism is a major problem</p> <p>3. Low female literacy rate</p> <p>4. work participation rate is only 44% although better than all other blocks</p>	<p>1. Road connectivity between Kailaras and Sikroda and Kailaras and Naypura is poor which affects business</p> <p>2. 32% of the population depends on rain-feed agriculture</p> <p>3. Power</p>	<p>1. Community based disaster Management is required</p> <p>2. Poor access to livestock services</p> <p>3. Fire brigade needs to be upgraded keeping in mind that GAIL's project is being built in Kailaras</p>

				supply shortage	
Ambah	<p>1. Poor road condition in the block. The road connecting Ambah to Aroli is in very bad condition and this affects transportation in 8 to 10 nearby villages. Aroli is a flood prone gram panchayat.</p> <p>2. Around 90,000 people live in Kuccha houses. Kuccha houses are vulnerable to damage by wind.</p>	<p>1. Around 31000 people live in flood affected gram Panchayats in the block</p> <p>2. Draught affects Kharif crop yield</p> <p>3. Conversion of fertile land into wasteland</p>	<p>1. Sex ratio is very poor at 824</p> <p>2. Alcoholism is a problem</p> <p>3. Low female literacy rate</p> <p>4. work participation rate is only 36%</p>	<p>1. 29% of the population depends on rain-feed agriculture</p> <p>2. Power supply shortage affects livelihood</p>	<p>1. No government ambulance is present in Civil hospital</p> <p>2. Law and order problem</p> <p>3. Community based disaster management needs to be activated</p>
Pahargarh	<p>1. PHCs at Pachokhara and Bara are difficult to access due to poor connectivity</p> <p>2. Many people live in Kuccha houses. These are vulnerable to damage by wind.</p>	<p>1. Draught affects Kharif crop yield</p> <p>2. Forest Fire has occurred twice in 2012 and is a threat to the forest cover in the block.</p>	<p>1. Sex ratio is very poor at 813</p> <p>2. Alcoholism is a problem</p> <p>3. Low female literacy rate</p> <p>4. lack of awareness among farmers about draught mitigation techniques</p>	<p>1. Dependency of agriculture on monsoon</p> <p>2. Severe power supply shortage in the block. Around 60 gram panchayats have no access to electricity.</p>	<p>1. Severe water supply problem</p> <p>2. Pahargarh CHC has the following problems:</p> <p>i. Unavailability of water</p> <p>ii. Severe electricity supply shortage</p> <p>3. Poor access to livestock services</p> <p>4. Block level DMC is not present</p>

Table showing level of vulnerability in different blocks based on the data above:

Blocks	Physical/ Infrastructural Vulnerability	Environmental/ Natural vulnerability	Social vulnerability	Economic vulnerability	Institutional vulnerability
Morena	High	Moderate	High	Moderate	High
Porsa	Moderate	Moderate	High	Moderate	High
Joura	Low	Moderate	High	Moderate	Moderate
Sabalgarh	Moderate	Moderate	High	High	Moderate
Kailaras	Moderate	Low	Moderate	Moderate	Moderate
Ambah	Moderate	Moderate	Moderate	Moderate	High
Pahargarh	Moderate	Moderate	Moderate	Moderate	High

Physical vulnerability: Morena district has 52,067 houses with Mud or un-burnt brick wall and around 8000 other vulnerable houses. Since wind velocity in this area could get as high as 47m/s, these houses need to be fortified. Approximate population living in kuccha houses in each block has been calculated by multiplying the percentage of kuccha houses in the district (39%) by the population of the block. Road condition in many parts of the district, mainly Ambah and Porsa, is poor. Prachi LPG bottling plant is a major hazardous industry in Banmore. Industry department, Morena, and Industrial Health and Safety department, Gwalior must ensure that proper safety measures are taken by this industry.

Social Vulnerability: The sex ratio of Morena district in 2011 was alarmingly low at 839. While child sex ratio (0 to 6 years) was only 825. Overall literacy rate of the district in 2011 was 72.1% where female literacy rate was only 57.6%. Apart from these another social concerns is alcoholism. The work participation rate of the district is one of the poorest in Madhya Pradesh at 36%, according to 2001 census.

Economic vulnerability: The farming population of the district is dependent on rain-fed agriculture. So a delay in rainfall or flood during monsoon can have serious impact on the livelihood of the people. There is a severe shortage of power supply in the district which affects livelihood. Sabalgarh faces employment problem due to which a good percentage of people migrate away every year.

Environmental/natural vulnerability: Villages lying along the Chambal valley area are prone to flood. Almost all parts of the district is prone to drought. The district has around 2 lakh hectares of ravines. Ravines represent the most degraded form of once cultivated fertile land. Formation of such land takes place every year due to soil erosion by run-off water making it almost completely unsuitable for agricultural production. To reclaim these ravines, water-shed management is essential. There is forest cover in Pahargarh which leads to forest fire.

Institutional vulnerability: There is a need for community based disaster management as communities act as first response to any disaster. There is lack of institutional arrangements like ambulances in many blocks. Also there is unavailability of water supply in blocks as well as Community Health Centre. Apart from these, there is law and order problem in a major issue in this district. Institutional arrangements must be made to tackle this problem. Some of the vulnerabilities identified by Central Research Institute for Dryland Agriculture are:

- Low seed replacement rate and poor access to improved seeds
- Poor access to farm implements
- Poor access to livestock services
- Losses due to highly uncertain weather

B 3. Capacity Analysis

B 3.1 Resource inventory, Block wise

Table B.3. 1 Resource inventory, Block wise

Resource Type	Details	Number	Govt, Private	Contact no. of nodal person/s
Equipments used for Search & Rescue	Search Light See List 11 in section C 8.1	2	Govt	Shri S.K. Mishra, Commandant Home Guard 8349750470 (m) 07532230466 (o)
Trained manpower, professionals available in specific domain like S&R, First Aid, Response Warning, Swimming etc.	Swimmers list is given List 17 in section C 8.1 Search and Rescue team is listed in List 11 in section C 8.1 Medical Response Team is listed in List 1 in section C 1.3.6	36	Govt	Shri S.K. Mishra, Commandant Home Guard 8349750470 (m) 07532230466 (o) Dr. G.S. Rajpoot, CHMO 9893554085

First Aid / Medical emergency requirements, equipments to be used	First Aid Kit, X-Ray	All Blocks, 7	Govt.	Dr. G.S. Rajpoot, CHMO 9893554085	
Location of key hospitals, blood banks, Doctors, medical stores	Blood Bank (in District Hospital) List of doctors and hospitals is present in Annexure	1	Govt.	Dr. Rakesh Upadhyay 9826246293	
Availability of equipments like Bulldozers, Hydra, Crane, for clearance, JCB	Nagar Palika	JCBs	5	Govt.	Nagarpalika Banmore (Shri R.Sharma 9826214119) Nagarpalika Morena (Shri K.K.Sharma 9425031812) Nagarpalika Ambah (Shri J. Pare 9669230213) Nagarpalika Sabalgarh (Shri M. Karosia 9425779370)
	Banmore	1			
	Morena	2			
	Ambah	1			
	Sabalgarh	1			
Transportation(Fit Vehicles available with nodal agencies, in emergency)	See Section C 1.3.7	64	Govt	Shri Manavendra Singh 07532250350 (o) 9425474185 (m)	
Total no. of boats (with info about capacity, size, contacts of owner)	Boat/Country Boat		28	Pvt, Govt	<u>Nagarpalika Sabalgarh</u> Shri M. Karosia 9425779370 Tehsildar Porsa Shri Mansingh Pawk 9893583584 <u>Tehsildar Ambah</u> Shri N. Gupta 9826976846 <u>Tehsildar Sabalgarh</u> Shri B.P. Srivastava 9425164591 <u>Forest Department</u> 07532-234742 <u>Home Guard Office</u> 07532-230466
	Nagarpalika Sabalgarh – 7				
	Tehsildar Porsa – 2				
	Tehsildar Ambah – 4				
	Tehsildar Sabalgarh – 6				
	Forest Department – 3				
	Motor Boat				
	Forest Department – 4				
	Home Guard Office – 2				
Availability of fire fighting equipments, Fire tenders	Fire Brigade Nagarpalika Porsa – 1 Nagarpalika Banmore – 1 Nagarpalika Morena – 3	10	Govt	Nagarpalika Porsa 9826278833 Nagarpalika Banmore 9826214119 Nagarpalika Morena	

	Nagarpalika Ambah – 1 Nagarpalika Kailaras – 1 Nagarpalika Sabalgarh – 1 Nagarpalika Joura – 1 Nagarpalika Jhundpura – 1				9425031812 Nagarpalika Ambah 9669230213 Nagarpalika Kailaras 9893466985 Nagarpalika Sabalgarh 9425779370 Nagarpalika Joura 9893412660 Nagarpalika Jhundpura 9827539393	
	Refer List 10 in section C.4.1.1 for list of fire fighting and safety equipments with private industries					
List of PDS Shops	Block Name	No. of resources in block		295	Govt	Porsa and Ambah – Shri M.L. Sisodhia 07538 255800 <u>Morena and Banmore</u> Shri D.K. Kamthan 07532 228900 <u>Joura and Pahargarh</u> Shri M.K. Jain 07537 245068 <u>Kailaras, Sabalgarh and Jhundpura</u> 07536 268254
		Nagar	Grameen			
	Porsa	15	24			
	Amba	13	26			
	Morena and Banmore	73	37			
	Joura	9	20			
	Pahargarh	0	19			
	Kailaras	8	17			
Sabalgarh and Jhundpura	11	23				
List of NGOs / CBOs	See List 16 in section C 8.1		51	Pvt	Miss Manju Shah, Jan Abhiyan Parishad, 9425175250	
Veterinary Hospitals	See List 9 in section C.1.3.13		9	Govt	Dr. R.P. Sharma, District Veterinary Hospital, 9425335924	
Telephone Exchange	Present in all blocks			Govt	<u>Ambah, Porsa</u> Mr Maan Singh 9425418617 <u>Morena, Joura</u> Mr B.K. Rawat 9425001044 <u>Sabalgarh, Pahargarh, Kailaras</u> Mr S.S. Sengar 9425418511	
List of petrol pumps	Tehsil	Petrol Pump + LPG		9	Govt	Food Department 07532226363
	Porsha	6 + 1 (LPG)				
	Amba	5 + 1 (LPG)				
	Morena	18 + 3 (LPG)				

	Joura	5 + 1 (LPG)			
	Kailaras	5 + 1 (LPG)			
	Sabalgarh	6 + 1 (LPG)			

B 4. Risks Assessment

B.4.1 Potential impact of applicable hazards and existing vulnerabilities

Table B.4. 1 Potential impact of applicable hazards and existing vulnerabilities

Type of hazard	Vulnerable areas – Gram Panchayats with affected villages in bracket	Vulnerability	Potential Impact	Identified safer places
Flood	Porsa Block - Rattan Basai, Usedh, Rundhaoli, Nagara Porsha, Raipur.	1. Population at risk Block (Total population in flood affected Gram Panchayats)	1. Loss of human lives 2. Loss of livestock 3. Damage to crop area 4. Damage to houses 5. Damage to public utilities	Rahuor near Rattan Basai, Rached near Usedh and Rundhaoli, Mahua near Raipur and Nagaraporsha. Mahua has sector PHC and police thana.
	Ambah Block - Sesah, Jonha, Kuthiana, Bilpur, khiretha, Aroli (Gosbasai, Malbasai (Kisroli), Gunj, Rithona (Kakrari), Dandoli	Porsa (18168) Ambah (31501) Morena (14792) Joura (28092) Sabalgarh (30007)		
	Morena Block- Kethri, Jyotpur, Manpur, Nayakpura, Deopura Gadora, Rithorakhurd (Gorkha), Jakhona	(above data is in accordance with 2001 census) Refer to annexure for details.		Jarha near Kethri, Masudpur near Jyotpur and Manpur, Husanepura near Nayakpura, Methana near Deopura Gadora and Rithorakhurd (Gorkha), Gospur near Jakhona.
	Joura Block- Barod, Singroli, Chinnoni Chambal, Tidonkhar, Brijgathi, Jhinwara (Gurna), Uttampura, Tajpur, Sarsoni, Guda Chambal, Khandoli	2. Drinking water problem 3. Communication failure, 4. Livestock		Pachokhara near Barod, Singroli, Tidonkhar and Chinnoni Chambal. Husenpur near Brijgathi. Sukhpura near Uttampura, Tajpur and Sarsoni. Sihora and Galetha near Khandoli. Pachakhara has PHC and Galetha has sector PHC.

	Sabalgarh Block– Kemarak, Kemarakhu (Banthar, Gandula) Godoli, Atar, Digwar, Rhu Ka Gaon, Rawreen (Kalarghadi), Jhundpura, Norawaliraworen	safety issues		Dodra near Kemarak, Kemarakhu and Godoli. Mangrol near Atar, Digwar and Rhu Ka Gaon. Gurena and Herapur near Rawreen, Norawaliraworen and Jhundpura. Dodra has police thana.
Drought	Entire district is affected. Around 451,530 people depend on Agriculture for their livelihood.	Livestock safety issues and loss of livelihood due to reduced yield of crops.	Reduced yield of Kharif crops. Loss of livestock due to unavailabili ty of fodder or drinking water.	
Hailstorm	Entire district is affected. Around 451,530 people depend on Agriculture for their livelihood.	Hailstorm affects the districts at the time of Rabi crop harvesting. It destroys Mustard crop.	Loss of Rabi crops. In 2011, Rs 2 crore was spent on relief.	
Industrial and Chemical disaster	Banmore and Morena industrial areas. Major hazardous industry Prachi Gas Bottling Plant in Banmore.	Fire hazard - especially when highly flammable chemical is used (e.g. LPG)	Loss of lives and property	Away from the factory building
Forest Fire	Forest cover in Pahargarh and Morena blocks	Forest fire has taken place in Rukher in Morena. It took place in Rajpur, Jhiniya, Navalpura and other places in Pahargarh.	Loss of forest cover is an environme ntal hazard and it could give rise to climate change.	

B 4.2 Risk profiling of the district

Morena district has been classified to have moderate to high vulnerability. Blocks Ambah and Porsa have high **Socio Economic Vulnerability** and Kailaras has low environmental vulnerability.

Flood: The district has suffered from flood six times between 1980 and 2012. The flood affected years were 1982, 1986, 1990, 1991, 1995 and 1996. Flood condition arises primarily due to south-west monsoon rainfall during the months of July to September. In the last fifteen years, there has not been flood due to rainfall in the district. However, villages by the Chambal river valley get flooded whenever Kota barrage releases excess water into the Chambal River. Fifty three such villages have been identified in five of the blocks namely Morena, Porsa, Jaura, Ambah and Sabalgarh.

Draught: The district suffered from a severe draught in 2006. Even after that, due to the un-even distribution of rainfall and prolonged dry spell between showers, many parts of the district have suffered from draught-like situation. This has led to reduced yield of farmers. The period between July to September could result in draught if rainfall distribution is un-even.

Industrial and Chemical Hazard: Till date there has not been any incident of disaster in any of the industries in Morena. Prachi LPG bottling plant in Banmore is a major hazardous plant which has been re-opened in 2011. LPG has extremely flammable properties and explosive potential when stored under pressure. Another hazardous industry that is being set-up is the GAIL plant in Kailaras.

Hailstorm: Almost every year different places of the district suffer from hailstorm. Hailstorm occurs between February and April. This destroys the crops of the farmers. The predominant crop during that time is Mustard.

Epidemic: Malaria outbreak in Noorabad and Pahargarh areas during July to September. Other outbreaks are of that of Measles, Gastroenteritis and Chickengunia. In 2011, 117 positive cases of Chickengunia were found in Noorabad. In 2009, there was an outbreak of gastroenteritis which affected around 150. Among them, 5 kids lost their lives.

Violence: Violence is a major hazard in Morena. Ambah and Porsa are most vulnerable areas. The literacy rate in 2011 was low at 72.1%. Education and employment must be given priority in-order to reduce the risk of this vulnerability.

Forest Fire: In the last 20 years, Forest fire has taken place 9 times of which 8 were in Pahargarh block. In May 2012 forest fire took place in Rukher in Morena. It took place in Rajpur and Jhiniya in Pahargarh in April and March 2012 respectively. Forest fire is an environmental hazard and it can give rise to climate change.

Table B.4. 2 Risk profiling of the district

Block	Risk Profile
Porsa	5 villages with an approx. population of 18200 are vulnerable to flood. Entire block is vulnerable to draught. Ravine formation is taking place at fast pace. It is also vulnerable to law and order problems. Literacy rate and sex ratio are low. Absence of govt ambulance in the block. Based on the various vulnerabilities applicable to the block and its ability to handle them, this block has moderate environmental vulnerability and high socio economic vulnerability .
Ambah	13 villages with approx. Population of 31500 vulnerable to flood. Entire block is vulnerable to draught. Law and order problems like violence are major vulnerability in this block. Lack of govt ambulance in the block. This block is equally at risk as Porsa. Based on the various vulnerabilities applicable to the block and its ability to handle them, this block has moderate environmental vulnerability and high socio economic vulnerability .
Morena	Morena block has a major hazardous industry. Approximately 15000 people in 8 villages are vulnerable to flood. Outbreaks of Malaria and Chickengunia have also affected the block. There has been only one incident of Forest fire in last 10 years. Based on the various vulnerabilities applicable to the block and its ability to handle them, the block has moderate environmental vulnerability and moderate socio economic vulnerability .
Joura	12 villages with approx. 28000 people are vulnerable to flood. Entire block is vulnerable to draught. Ravine formation is taking place at fast pace. Based on the various vulnerabilities applicable to the block and its ability to handle them, the block is at lower risk level than Morena. This block has moderate environmental vulnerability and moderate socio economic vulnerability . This block is equally at risk as Morena.
Pahargarh	Pahargarh block is vulnerable to draught. There have been 8 forest fire incidents in last 20 years. 2 of them were in 2012. Based on the various vulnerabilities applicable to the block and its ability to handle them, the block has moderate environmental vulnerability and moderate socio economic vulnerability . This block is equally at risk as Morena and Joura.
Kailaras	Kailaras block is affected by draught. Based on the various vulnerabilities applicable to the block and its ability to handle them, the block is at lower risk level than all other blocks. This block has low environmental vulnerability and moderate socio economic vulnerability .
Sabargarh	15 villages with an approx. population of 30000 are flood affected. Entire block is draught affected. Considering the various vulnerabilities applicable to the block and its ability to cope up, the block is at same risk level as Morena. This block has moderate environmental vulnerability and moderate socio economic vulnerability . This block is equally at risk as Morena, Joura and Pahargarh.

With around 30,000 people living in flood affected villages, law and order problems and other vulnerabilities, Ambah is the most vulnerable block in the district and Kailaras is the least vulnerable block in the district.

C . DISTRICT DISASTER MANAGEMENT FRAMEWORK

C 1 District Action Plans

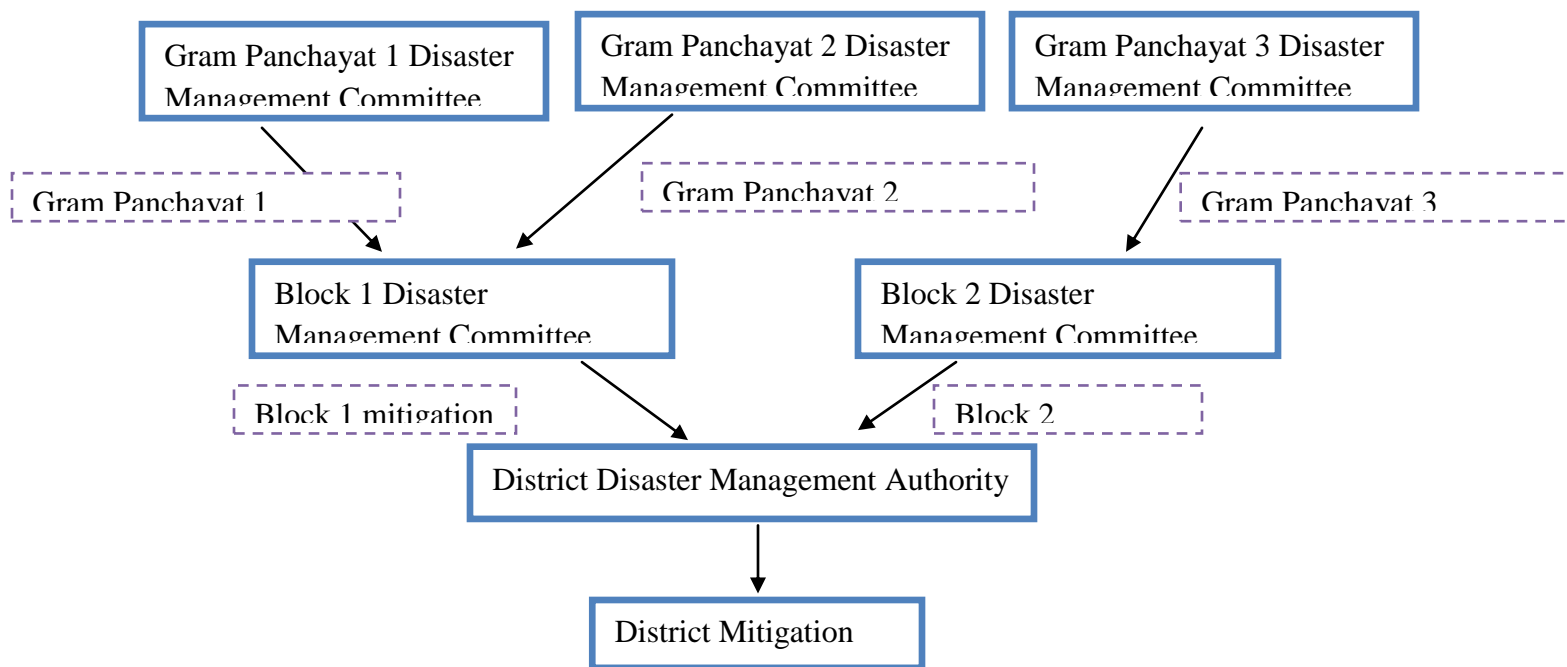
C 1.1 Mitigation Plan

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.

The Identification of various departments, along with nodal officers, to coordinate the mitigation activities, including PRI and ULBs for implementing mitigation strategies will be the key. Community mitigation measures will be identified and implementation modalities formulated. A Training Strategy will be formulated for training major government and non-governmental cadres in the state who can aid in disaster management.

Mitigation Plans form the foundation for a community's long-term strategy to reduce disaster losses and break the cycle of disaster damage, reconstruction, and repeated damage. The planning process is as important as the plan itself. It creates a framework for risk-based decision making to reduce damages to lives, property, and the economy from future disasters. Hazard mitigation is sustained action taken to reduce or eliminate long-term risk to people and their property from hazards.

Mitigation strategies need to ensure the higher level of community involvement and participation. For this, 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.



Vulnerability analysis and risk assessment are essential for developing mitigation strategies and this analysis needs to come from the ground level to understand the locale specific situation.

C 1.1.1 Scope of Integrating Risk Reduction in Development Schemes

The following activities are to be performed in-order to ensure proper disaster mitigation:

Sectors / Line Departments	Integrating Risk Reduction in Development Schemes
Integrated Watershed Management Program (Zila Panchayat)	<ul style="list-style-type: none"> • Harnessing, conserving and developing degraded natural resources such as soil, vegetative cover and water by creation of structures like stop dams, check dams, Gabion structures and other watershed management techniques • Make communities aware of Rainwater harvesting techniques • Water-shed Management can check the formation of ravine and could help in reclaiming ravine land. The major cause of ravine formation is soil erosion and
Agriculture department with the help of Krishi	<ul style="list-style-type: none"> • Facilitating farmers in doing insurance on Crop and Livestock and Crop diversification as per the agro-climatic zone

Vigyan Kendra	<ul style="list-style-type: none"> • Localized weather data through community radio and farmers • Make farmers aware and train them in climate resilient farming techniques
Zila Panchayat, Gram Panchayat, Krishi Vigyan Kendra, Jan Abhiyan Parishad	<ul style="list-style-type: none"> • Every year huge area of land gets converted into ravine. To use the ravine land and check further soil erosion and formation of ravine, Jatropha plantation could be done in the wasteland area • For Jatropha plantation, Zila Panchayat could • Use labor under MNREGA • Direct Gram Panchayats to form co-operative societies by employing unemployed youth with help of Jan Abhiyan Parishad • Scientists from Krishi Vigyan Kendra could help in the plantation process of Jatropha or Bharat Renewable Energy Limited (BREL) could work for this purpose • Use of mycorrhized Jatropha developed by TERI to improve yield • This model has worked in Uttar Pradesh, where Jatropha plantation is being carried out under the scheme Jevan Joyti Pariyojna spread over 1,000 hectares in Bahraich district
Jawaharlal Nehru National Solar Mission	<ul style="list-style-type: none"> • In-order to perform medical treatment properly, all medical institutions need un-interrupted power supply • Use of solar power in CHCs and PHCs where there is severe power supply shortage e.g. Porsa and Jhundpura CHCs • Use of solar power in villages of Sabalgarh, Pahargarh and other blocks where electricity supply is not available
Industrial Health and Safety (Gwalior) and Department of Industry (Morena)	<ul style="list-style-type: none"> • Ensure that all major hazardous industries make proper safety arrangements by following Indian Standards at the time of set-up • Conduct regular inspection to ensure that all safety equipments are in working condition and all safety precautions and instructions are being followed well
Indira Awaas Yojna(Gram Panchyat)	<ul style="list-style-type: none"> • To provide housing for the rural poor. Sanitary latrine and smokeless chullah are required to be constructed along with each IAY house for which additional financial assistance is provided from Total Sanitation Campaign and Rajiv Gandhi Grameen Vidyutikaran Yojana respectively. This scheme will help during the preparedness phase as the people will be well equipped in infrastructure.
Sarve Shiksha Abhiyaan (Gram Panchayat)	<ul style="list-style-type: none"> • Open schools in those habitations which do not have schooling facilities and strengthen existing school infrastructure through provision of additional class rooms, toilets, drinking water, maintenance grant and school improvement grants. This program will

	help in capacity building.
MGNREGA (Zila Panchayat and RES)	<ul style="list-style-type: none"> • Facilitate advocacy on special planning with focus in employment generation and asset creation in disaster prone areas. • Creation of assets and infrastructure (road, culvert, escape route, raised tube well for pure drinking water, irrigation structure) and get it approved at the district. • Providing gainful employment to populace with sustainable development as the major theme based on the vulnerabilities found in areas
NRHM	<ul style="list-style-type: none"> • Design of training curriculum for ASHA incorporating DRR. • Conduction of Training for ASHA, paramedics, ANM and others health staff on DRR. • Improving hygiene and sanitation infrastructure
DUDA, RES & PWD	<ul style="list-style-type: none"> • Facilitate adaptation measures in drainage pattern / sewerage treatment in flood • Training of engineers/ masons • Advocacies in schools and hospital safety program
Animal Husbandry	<ul style="list-style-type: none"> • Make farmers aware about various vaccines for cattle and keeping reserve fodder for times of crisis
Forestry and Environment	<ul style="list-style-type: none"> • Generating public awareness on importance to social forestry and preservation of biodiversity that works as carbon sink • Public awareness on greenhouse gas emission and its impact on disaster frequency
Education	<ul style="list-style-type: none"> • Coordinate with MP State board to incorporate DRR basics into curriculum • Exposure of students and teachers to DRR best practices in their agro-climatic zone

C 1.1.2 Training & Capacity Building

The following training and capacity building activities are to be performed:

- National Disaster Response Force (NDRF) team of Gandhinagar, Gujarat had visited Morena in 2012 and worked towards spreading awareness and familiarization in public regarding disaster response. Activities like this could be conducted at a regular basis.

- Disaster Management Institute of Bhopal is a leading institute for imparting professional training and conducting consultancy services on natural and man-made disasters management. They organize programs like
 - Disaster Preparedness and Response Program for Home Department
 - Training of Trainer Program for Home Department
 - Incident Command System for Home Department
 - Training Program on Mass Casualty Management in Emergency Situation for Medical Officers for Public Health and Family Welfare Department
 - Disaster Management Course for Development Professionals UAD, Panchayat and Rural Development Department
 - Multi Hazard Disaster Management Training Program for Engineers for PWD, H & E, WRD, PHED, RES.

District Collector must ensure participation of the respective departments in such training sessions.

- Zonal Agriculture Research Center undertakes community training initiatives on the following topics:
 - Resource Conservation technologies
 - Water management
 - Protective cultivation (Green Houses, Shade Net etc.)
 - Soil and Water Conservation
 - Installation and maintenance of micro irrigation systems
 - Irrigation management in rabi crop

Since Morena district suffers from draught frequently, all the above training are of importance for Disaster Management. NGOs and CBOs must come forward and undertake such training initiatives. They could also spread awareness among community regarding mitigation and preparedness against other hazards.

Gram Panchayat Disaster Management Committee must perform the following in preparing for flood:

- Capacity building – all flood prone Gram Panchayats must keep stock of Life jacket and life buoy
- Training of volunteers for performing search and rescue operations. Such trainings could be conducted by the trainer of Home Guards

C 1.1.3 Community Initiatives

Communities are always the first responders and hence the DDMA will ensure Community participation through initiatives like Community Based Disaster Management (CBDM) to promote local ownership, address local needs, and promote volunteerism.

Unless the disaster management efforts are sustainable at individual and community level, it is difficult to reduce the losses and scale of the tragedy. There needs to be an opportunity where people can be involved from the initial programming stage of disaster management activities. Community involvement can be gauged from the fact that every year a number of expert swimmers volunteer to participate in search and rescue operation.

- Community training and awareness initiatives should be undertaken by NGOs, CBOs, and DDMA to empower the community.
- Spread awareness among communities on how to mitigate, prepare and respond to hazards depending on vulnerability of the particular place.
- Community empowerment for disaster risk management demands their participation in risk assessment, mitigation planning, capacity building, participation in implementation and development of system for monitoring which ensures their stake.
- In specific places specific training should be given depending on the hazard risk profile of the region. E.g. in flood affected areas, communities must be trained in swimming, search and rescue operations.
- Communities must be trained for protecting their livestock and crops in hazardous conditions. They must be made aware to keep reserve fodder for their livestock so as to cope during draught. They must be trained in rainwater harvesting techniques including roof-water harvesting for better mitigation in draught situation.

C 1.1.4 Risk Management Funding

DM Act 2005 has provision for the creation of National Disaster Mitigation Fund by the Central Government for projects exclusively for the purpose of disaster mitigation. Following are the directions for the state government:

- DM Act, Clause 48 – The State Governments shall establish State Disaster Mitigation Fund and District Disaster Mitigation Fund immediately after the notifications constituting the State and District Authorities are issued. Therefore constitution of the Disaster Mitigation Fund at the State and the District levels are mandatory requirements of law immediately after the State and District Authorities are set up.

- DM Act, Clause 49 – The state government shall make provisions in its annual budget for funds for the purpose of carrying out the activities and programs set out in the disaster management plan.

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 Centre and State Emergency Operation Centre for further actions.

Disasters can also take place without any warning such as Earthquakes, accidents and fire. The preparedness action plan is crucial in order to safeguard the lives and properties. During non disaster time, the SEC will ensure that the following activities are being carried out in coordination with the concern line departments.

Various departments prepare the disaster management preparedness plan every year. They share these plans with the Collector in the DDMC meetings. SP office prepares crisis management plan every year.

C.1.2.1 Preparedness before response

Brief steps about the preparedness plans of respective departments, including Home, Health, R&R, Police, Civil Defence, Municipal Board etc.

Preparedness of various departments:

Irrigation department

- Every year starting in June, Irrigation department sets up a control room in Morena town for the next five months.

- The sub engineer, in-charge, in Rajghat sends across data about water level in the dam to the district control room at regular intervals.
- In case water is released from the Kota barrage over Chambal River, they inform the Superintendent Engineer, Irrigation department as well the Collector of Morena district. This helps irrigation department remain alert.

Health Department

- Make medicines available in every CHC and PHC especially in those blocks which are vulnerable to hazards
- Make provisions for temporary medical Centres to be set in flood affected areas
- Make additional beds available in the district hospital (last year 50 additional beds were made available in the hospital for preparedness against flood)
- Prepare combat teams for handling of crisis situation
- Communication channel is set with private doctors and private hospitals
- Coordination is done with Revenue, Forest, Police departments and PHE
- Control room will have medicines, combat team and medical van available at all times

Home Guards Department

- Home guards remains prepared to handle disasters round the year.
- They should ensure that the necessary tools and equipments are in working condition.
- They should perform periodic drills so that the swimmers and search and rescue team be in good form.

District Control Room

- Control rooms must operate 24 hours a day for 7 days a week
- Certain officers at district and block level are to be given responsibilities for disaster management
- District control room must communicate with transport officer to make transportation facilities available
- District control room must communicate with NGOs and CBOs and ensure their readiness in case of disaster
- All data received from different sources like data regarding level of water in Rajghat must be well documented
- All villages situated in the bank of the river Chambal must be warned in time about adverse rise in water level
- Arrange for the meetings of District Disaster Management Committee
- Arrange for mock drill

Nagar Palika

- Arranging for fire tenders and keeping them in ready to go condition.
- Clean the town and make provisions for sanitation facilities
- Make arrangement for clean drinking water.
- Clear the nallahs
- De-silting and sanitizing the nallahs
- Make arrangements for resources to clear the town of debris in case of earthquake, water drainage in case of floods, spraying with disinfectant in case of epidemic like malaria and water facilities in case of drought.

C.1.2.2 Pre-Disaster Warning, Alerts

When the district authorities receive alerts on likelihood of disaster such as Flood, Forest Fire, Epidemics (Human/Animal), Earthquake or major accident, DDMC should carry out carry out following activities:

- Activate DEOC
- Based on early warning received, prepare initial information report with estimation of likely severity and scale of disaster.
- The ESF will be asked to conduct a review of the preparedness level of the districts likely to be affected by the disaster, by calling a meeting of District DMCs.
- Prepare a team for deployment to assess damage and need.
- Inform respective departments to activate respective SOPs
- Provide appropriate warning to public.
- Coordinate with district authorities on dissemination of warning to general public and if necessary, carry out evacuation.
- Request Home Department to be on standby for rescue and relief operations.
- If required, declare de-warning.

Important Elements for warning

- The following aspects may be considered for dissemination of warning:
- All warning systems and equipments are maintained in good working condition and checked regularly
- Communities in disaster prone areas are made aware of the warning systems and the Gram Panchayat Disaster Management Committees and their Taskforces are trained in dissemination of warning to the communities
- Alternate warning systems must be kept in readiness in case of technical failure (e.g., power failure)

- Only the designated agencies/officers will issue the warning.
- Multiple warning systems should be used to ensure the maximum spread.
- The warning should, to the extent possible, be clear about the severity, the time frame, area that may be affected.
- Warning statements should be conveyed in a simple, direct and non-technical language, and incorporate day-to-day usage patterns.
- The do’s and don’ts should be clearly communicated to the community to ensure appropriate responses.
- Warning statements should not evoke curiosity or panic behavior. This should be in a professional language devoid of emotions.
- Rumour control mechanisms should be activated.
- All relevant agencies and organizations should be alerted.
- Wherever possible, assistance of Gram Panchayat Disaster Management Committees and task forces, community leaders and organized groups should be sought in explaining the threat at local level.
- Once a warning is issued, it should be followed-up by subsequent warnings in order to keep the people informed of the latest situations.

Table C.1.2.2. 1 Pre-Disaster Warning, Alerts

The table below shows the mode of communication for pre-disaster warnings. In case of Flood and Draught, IMD could play a major role by forecasting rainfall in Morena region. It has also been found that in most of the El Nino years, rainfall which is predominantly due to south-west monsoon has been lower than average. Since El Nino occurs in December, it could be used as an early warning to prepare for draught condition.

Hazards	Agencies involved	Mode of communication, info. dissemination at district level
Flood	IMD, Irrigation Department, Revenue, Land Record	Irrigation department monitors the water level in Chambal River. Sub-engineer gauges the water level in Rajghat and inform the control room at frequent interval during the monsoon months. Also when excess water is released from the Kota barrage, the superintendent engineer of Irrigation department and Collector is informed in advance. Also IMD informs

Drought	Revenue, Zonal Agriculture Research Centre, Land Records, IMD	about the possibility of heavy rainfall beforehand. Patwari informs Revenue Inspector of draught like situation. RI informs the Tehsildar. Tehsildar informs the Collector.
Forest Fire	Forest department	Forest monitoring system at Bhopal alerts the forest officer in case of forest fire
Epidemic	Health Department	PHC, CHC and district hospital monitors the disease trends and updates CHMO about the number of cases on weekly basis. In case it exceeds the threshold, CHMO declares it as epidemic and communicate district authorities for preparedness planning.
Fire	Public	Public informs Fire brigade

C.1.2.3 Evacuation preparedness

Evacuation of affected communities can be one of the most difficult response operations, especially, when it involves large population, thus necessitating preparedness measures. Evacuation needs to be carried out as a precautionary measure based on warning indicators, prior to impact, in order to protect threatened persons from the full effects of the disasters. The procedural steps for evacuation of people under threat or likely to be affected by the disasters are as follows:

It is important to understand the nature of threat and the procedures to be adopted and must be incorporated as part of the evacuation plan in the Gram Panchayat, Block and Urban areas evacuation plans.

Safe routes and safe shelters need to be marked for each Gram Panchayat, Block and Urban areas. Safe routes and safe shelters needs to be marked in relation to specific hazards, as in case of floods shelters at higher elevations are a must, but for earthquakes even the shelters in lower lying areas will do.

All agencies involved in evacuation must have a common understanding of their roles and responsibilities in order to avoid confusion and panic in affected community.

Different situations demand different priorities and hence the responsibility for ordering evacuation is assigned to different agencies.

All evacuations will be ordered only by the Designated Officer appoint by DDMA/Deputy Commissioner.

For appropriate security, law and order, evacuation should be undertaken with assistance from home department, community leaders/Village Panchayat Disaster Management Committee and Task Forces responsible for evacuation.

C.1.2.3 Organizing mock drills

Mock drill is an integral part of the disaster management plan, as it is a preparedness drill to keep the community alert, activate DM Teams across the district and review & modification of DM plan.

Mock drills are to be organized once in every six months. All teams that perform response activities like Incident Command Team, Home Guards, Police Department and Health Department must strictly perform the mock drills twice in a year. In order to ensure this, the CEO of DDMA must enforce this requirement. Mock drills must also be organized by all major industries like JK tyres, Prachi Gas Bottling Plant, Punj Llyod, Sanchi Milk, KS Oil etc to ensure safety systems are working well.

C 1.3 Response Plan

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

C 1.3.1 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:

- Command
- Operations
- Logistics
- Planning
- 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.

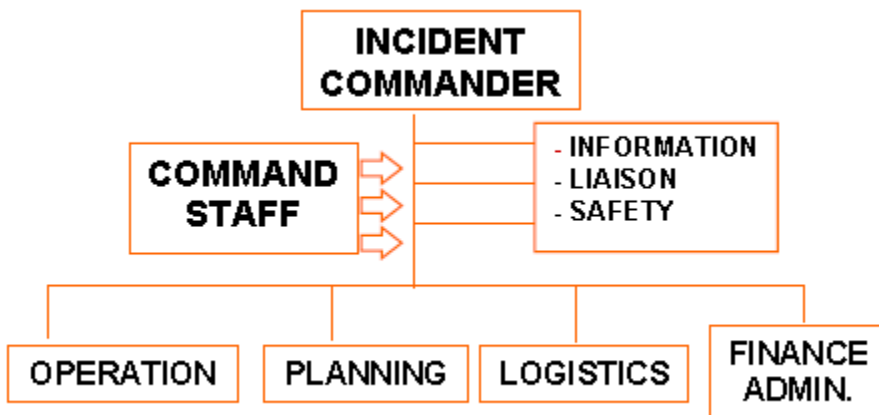
District Level Incident Response

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 fulfil 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

- a. Assesses the situation and/or obtain a briefing from the prior Incident Commander.
- b. Determine incident objectives and strategy.
- c. Establish the immediate priorities.
- d. Establish an incident command post.
- e. Establish an appropriate organization ensure planning meetings are scheduled as required.
- f. Approve and authorize the implementation of an Incident Action Plan.
- g. Ensure that adequate safety measures are in place.
- h. Co-ordinate activity for all Command and General Staff.
- i. Coordinate with key people and officials.
- j. Approve requests for additional resources or for the release of resources.
- k. Keep agency administrator informed of incident status.
- l. Approve the use of students, volunteers, and auxiliary personnel.
- m. Authorize release of information to the news media.
- n. 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.

- Release all hostages safely with no further casualties.
- Stop any further flow of toxic material to riverbed.
- Contain fire within existing structures.
- 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.

- Public Information and media relations

- Maintaining liaison with assisting and co-operating agencies
- 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

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

- When several agencies send, or plan to send, agency representatives to an incident in support of their resources.
- When the IC can no longer provide the time for individual co-ordination with each agency representative.
- 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.

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

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:

- Single Resources
- Task Forces
- 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

- Chemist
- Hydrologist
- Geologist
- Meteorologist
- Training Specialist

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

- Resources Unit
- Situation Unit
- Documentation Unit
- 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:

- Overseeing the check-in of all resources
- Maintaining a status-keeping system indicating current location and status of all the resources.

- Maintenance of a master list of all the resources, e.g. key supervisory personnel, primary and support resources, etc.

2. Situation Unit

- 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
- Display Processor – maintains incident status information obtained from
- Field Observers, resource status reports, etc. information is posted on maps and status boards as appropriate.
- Field Observer – Collects and reports on situation information from the field.
- 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:

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

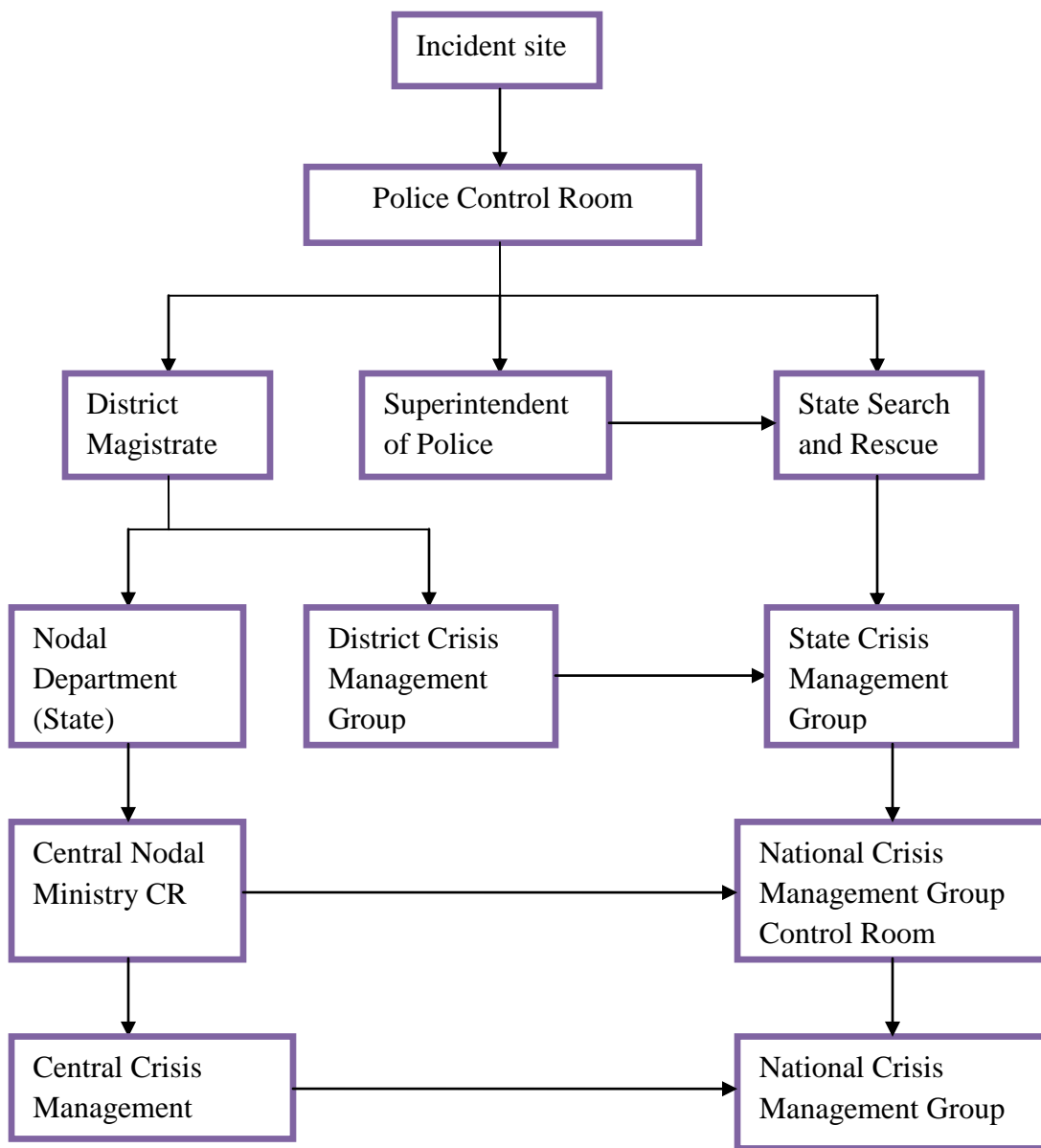
Six Units may be established within the Logistics Section:

- Supply Unit
- Facilities Unit
- Ground Support Unit
- Communications Unit
- Food Unit
- Medical Unit

C 1.3.2 Crisis management direction & coordination

First responder to any crisis situation will be the Quick Response Team which is self contained with primary activity material, survival kits, satellite phone, HF Radio and other communication equipments.

Flow Chart for Crisis / Emergency Situation



Source: Crises Management Document, SP office

District Crisis Management Group is headed by the District Magistrate. Following are the members:

- Senior Superintendent of Police or Superintendent of Police
- Chief Municipal Officer, Nagar Palika
- Additional District Magistrate or Chief Execution Officer Zila Parishad
- Civil Surgeon or Chief Medical and Health Officer

- A representative of intelligence bureau

C 1.3.3 Disaster Emergency Response Force

The State is expected to create response capabilities from its existing resources by equipping and training at least one battalion equivalent force for effective management of disasters and necessary training arrangement aligned with disaster management skills in consultation with the National Disaster Response Force. The District Commandants, Home Guards will be in charge of the force at the district level.

As of now, **Police department** undertakes the responsibility of emergency response. A team of fifteen to twenty policemen are available with the Reserved Inspector to be deployed during an emergency.

C 1.3.4 Rapid damage assessment & reporting

Rapid Damage Assessment Team to be set up immediately after disaster. It should include Z.P. members, agricultural officer to assess the crop damage, executive engineer of PWD to assess the damaged houses, S.P to maintain the law and order situation, NGOs and volunteer organizations, Tahsildar, etc.

This team may immediately assess the damage undergone due to disaster and report it to the concerned department to get the immediate relief material from the government and also the foreign aid. Damage assessment procedures are required to avoid litigations and delays in gratuitous relief and compensation, including insurance.

Table C 1.3.4 Rapid damage assessment and reporting format

INITIAL ASSESSMENT REPORT								
1	NATURE OF DISASTER:							
2	DATE OF OCCURRENCE:					TIME:		
3	<i>DAMAGE AND LOSS ASTIMATES</i>							
	Name of the Site (Village, Block,	Total Populat ion	People missin g	People injured	Severity	Immedia te needs	Houses Damag ed	Actio n taken

	Tehsil)	Affecte d				H L			L	M	H
4	<i>INFRASTRUCTURE DAMAGE</i>										
	Name of the Site (Village, Block, Tehsil)	Ho usi ng	Ag ric ult ure	Ani mals	Water source	Road and bridg e	Pow er	Commu nication	Govt Buildin g	Other s	
5	NEED ESTIMATES										
	Name of the Site (Village, Block Tehsil)	Medical Needs	Population requiring shelter	Clot hes	Foo d	Water	Sanitati on	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

Dedicated teams to be formed to lead the search and rescue operations. Team members have to be periodically trained, retrained on the elements of collapsed structure, confined space search & rescue, and rope rescue etc.

The Search and Rescue Team is deployed by the Police Department. Currently, it is a five member team of Home Guard sainiks. They are trained in swimming. All these team members are aged. They have not received any special training. Most of the search and rescue operations are done by the volunteers who are expert swimmers. They live in the villages nearby Chambal River. Gram Panchayat Disaster Management Committee must ensure that some of these volunteers receive proper training from Home Guard Trainer or elsewhere. Also some of these GPs could maintain some resources for search and rescue operation like life-jacket and life-buoy. This would ensure that volunteers perform the search and rescue operation more efficiently.

Table C.1.3.5 1 District Search & rescue Team

S.No.	Name and designation of trained S&R Team member
1	Jagdish Baghel, Sainik
2	Radha Raman Sharma, Sainik
3	Dinesh Sharma, Sainik
4	Sabha Ram, Sainik
5	Lakhan, Sainik

C 1.3.6 Medical response

Health department ensures that prompt response is available for medical emergencies. A list of nine medical officers is provided below who are to be informed if a medical emergency takes place. There are Combat teams who cover each and every village of the district. A list of combat teams has been mentioned below. The teams are of four to six members including one medical officer, a pharmacist, a nurse and a ward-boy. They can be contacted any time of the day and they quickly respond by reaching the place of emergency using medical vans and perform their medical duties.

Following is lists of medical officers who are to be informed in-case of any medical emergency:

List 1 Medical response

S.No.	Name of medical officer	Designation	Contact no (off.)	Contact no (Res.)
1	Dr. Mahesh Chand	CS, Morena	07532-226318	94253-13682
2	Dr. M.P. Gupta	BMO, Sabalgarh	07536-253324	94254-57242
3	Dr. S.R. Mishra	BMO, Kailaras	07536-287007	98930-73717
4	Dr. R.S. Sikharwar	BMO, Pahargarh	07536-286338	98265-86340
5	Dr. R.S. Semil Dr. S. Soni	BMO, Joura	07532-245130	94257-35100 91651-55100
6	Dr. L.R. Kishaniya	BMO, Noorabad	07532-239246	99933-22272
7	Dr. J.C. Karkur	BMO, Khadiyahaar	07532-239136	98272-39638
8	Dr. D.S. Yadav	MO, Ambah	07538-255846	94257-52199
9	Dr. S.N. Mewafarosh	BMO, Porsa	07538-254166	98265-27568

List of Combat teams**List 2 Combat team of Noorabad**

S.No.	Name of medical officer/ staff	Designation	Contact Number
1	Dr. L.R. Kishaniya	Medical officer	9993322272
2	Shri J. Singh	Helper	
3	Shri Rakesh Bathom	Ward Boy	
4	Smt Renu Jain	A.N.S	

List 3 Combat team of Kailaras

S.No.	Name of medical officer/ staff	Designation	Contact Number
1	Dr. S.R. Mishra	Medical officer	9893073717
2	Shri Omankar Upadhyay	Compounder	
3	Shri Suresh Sharma	Dresser	
4	Smt Kusum Srivastava	A.N.S	
5	Shri K. Singh	Ward boy	
6-	Shri Managal Singh Chauhan	Driver	

List 4 Combat team of Pahargarh

S.No.	Name of medical officer/ staff	Designation	Contact Number
1	Dr. R.S. Sikharwar	Medical officer	9826586340
2	Shri Mahendra Singh	Compounder	
3	Shri Kailas Jadav	Ward boy	
4	Smt Meera Nayak	L.H.W	
5	Shri Mukesh	Driver	

List 5 Combat team of Porsa

S.No.	Name of medical officer/ staff	Designation	Contact Number
1	Dr. S.N. Mewafarosh	Medical officer	9526527568
2	Shri Jitendra Narvaria	Compounder	
3	Smt Saira Banu	L.H.W	
4	Shri Rajkumar	Ward boy	

List 6 Combat team of Sabalgarh

S.No.	Name of medical officer/ staff	Designation	Contact Number
1	Dr. M.P. Gupta	Medical officer	9425457242
2	Shri Lokendra Singh Kusba	Compounder	
3	Shri D. Bathom	Ward boy	
4	Shri Gopal Saria	Dresser	
5	Shri Vinod Bihari	Driver	

List 7 Combat team of Joura

S.No.	Name of medical officer/ staff	Designation	Contact Number
1	Dr. R.S. Semil	Medical officer	9425735100
2	Shri Vinod Sharma	Compounder	
3	Shri D. Khan	Dresser	
4	Shri Balkisan	Ward boy	
5	Shri Banbari Lal Naigi	Driver	

C 1.3.7 Logistic arrangements

Following are the vehicles available with the police department for disaster response activities:

List 8 Logistics available

Type of Vehicle	Capacity	No. of Units
Light Vehicle, Jeep	6-9	54
Tata 407	15	10
Truck	30-35	3
Bus	34	2

C 1.3.8 Communications

The District Emergency Operations Centre does the following activities:

- data collection and record keeping
- maintaining IN-message and OUT-message register

In-order to perform these activities, the following are to be made available with the DEOC:

- Telephones
- Fax
- VSAT connection
- PC
- Mobiles and Wireless

Assistance in locating missing persons is to be done by Incident Command Team with the help of the DEOC. Currently, this activity is done by the Police department along with the Home Guard team.

C 1.3.9 Temporary shelter management

Temporary shelters are to be managed by the **Revenue Department**. Arrangement of food is to be done by Food department in consultation with NGOs and Nagar Palikas and Gram Panchayats. Nagar Palikas have water-tankers which could be used to bring drinking water from nearby places.

Table C.1.3.9. 1 Temporary Shelter

Block Name	Name of GP	Name of Temporary Shelter	Arrangement of food
Porsa	Barbai	GOVT.P.S. BARBAI GOVT.M.S.BARBAI	To be arranged by the Food department with the help of Incident command team and NGOs
	Roorar	GOVT.P.S.ROOAR GOVT.G.P.S. ROOAR	
	Rudhawali	GOVT.P.S – RUNDHAWALI GOVT.P.S - G.RUNDHAWALI GOVT.M.S.RUDHABALI MANOHAR BHAWAN	
	Useth	GOVT.P.S.(EGS) USETH KA PURA GOVT.P.S.BOYS USETH GOVT.G.P.S.USETH KA PURA GOVT.M.S.USETH HSS TANWAR GHAR POST OFFICE	
	Raipur	GOVT.P.S.KHURD RAIPUR GOVT.P.S.RAIPUR NAVEEN GOVT.M.S.GADIYA RAIPUR PRIVT. HSS INDIRA GANDHI	
	Nagara Porsa	GOVT.M.S.NAGRA PORSA GOVT.M.S.NAGRA PORSA PRIVT. HS SMT BAIKUNTHI DEVI MEMORIAL, NAGRA	
	Dhorra	GOVT.P.S DHORRA	
	Silabali	GOVT.P.S.SILABALI GOVT.M.S.ADARSH NAGAR, SILABALI	
	Bindva	GOVT.P.S. BINDVA	
Ambah	Malbasai	GOVT.P.S.MALVASAI GOVT.M.S.MALVASAI GOVT. HS MALBASAI, AMBAH PRIVT. HS BALAJI GARI, MALBASAI	
	Kisroli	GOVT.P.S.KISROLI	
	Vilpur	GOVT.P.S.VILPUR	
	Kuthiana	GOVT.P.S. KUTHIYANA GOVT M.S. KUTHIYANA GOVT. HS KUTHIYANA	
	Jonha	GOVT. HS JONHA, AMBAH PRIVT. HS DD SWAMI, JONHA	
	khiretha,	GOVT. HS NAYAPURA KHIRENTA, AMBAH GOVT.P.S.KHIRENTA, POST OFFICE	
	Rithona,	GOVT. HS RITHONA, AMBAH	

		GOVT.P.S.RITHONA POST OFFICE
	Kakrari	GOVT.M.S.KAKRARI GOVT.P.S.KAKRARI
	Esah	GOVT.P.S.ESAH GOVT M.S. ESAH
	Dandoli	GOVT.P.S.DANDOLI GOVT.M.S.DANDOLI GOVT. HS DANDOLI, AMBAH
Morena	Bhanpur	POST OFFICE
	Nayakpura	GOVT. HSS NAYAKPURA, MORENA
	Rithorakhurd	GOVT.P.S. RITHORA KHURD M.S.RITHORA KHURD
	Jakhona	GOVT.P.S. JAKHONA GADHI GOVT M.S. JAKHONAGADHI
	Piprai	PATWARI TRAINING CENTRE
Joura	Guda Chambal	GOVT.M.S.GUDA CHAMBAL GOVT.P.S.GUDA CHAMBAL GOVT. HS GUDACHAMBAL, JOURA
	Khandoli	GOVT P.S. KHANDOLI GOVT P.S. AMOL KA PURA (KHANDOLI) GOVT.M.S.KHANDOLI POST OFFICE
	Nandpura	GOVT.P.S. NANDPURA GOVT.M.S.NANDPURA
	Sihori	GOVT.M.S.G.SIHORI GOVT P.S. SIHORI
	Chinnoni Chambal	POST OFFICE
Sabalgarh	Kemarak	GOVT.M.S.KEMARA KALAN
	Kemarakhu	GOVT. SATELITE SCHOOL BANTHAR
	Godoli	GOVT.P.S.GODOLI HAR GOVT.P.S.GONDOLI DHURRI
	Atar	GOVT.M.S.ATAR GOVT.P.S.ATAR KA PURA
	Digwar	GOVT.M.S.KHEDA DIGBAR GOVT.P.S.DIGBAR
	Rhu Ka Gaon	GOVT.P.S.RAHU KAGAUN
	Jhundpura	GOVT.P.S.JHUNDPURA GOVT.B.M.S.JHUNDPURA GOVT GIRLS M.S. JHUNDPURA POST OFFICE
	Norawali	GOVT.P.S.NORAVALI SEMAI

C 1.3.10 Water and Sanitation (WATSAN)

Water and Sanitation is a very important element, which needs to be addressed on the top priority, as it is directly related to the basic needs, especially in case of the affected population. The required provisions are to be made by respective **Nagar Palikas**, for supply of pure drinking water, and to meet the other needs of water as well as timely addressing of sanitation requirements. This also includes the maintenance of hygiene, in & around emergency shelters, periodic monitoring and inspection of storm water drainage, nallah, adherence of the cleaning schedule of the camps and other places. In Morena district, out of 3,62,309 households, 26,702 households have access to tap-water from treated source and 2,58,890 households have access to hand-pump. There are a total of 22 water tankers with the eight Nagar Palikas of Morena. Nagar Palikas must ensure safe drinking water and safe sanitation measures which will nullify the possibility of massive health hazards, especially diarrheal epidemic. In-order to ensure proper sanitation, the following measures should be taken:

- a. Construction of field latrines and soak pit latrines at relief camps and final disposal of excreta.
- b. Design and commissioning of drainage facilities.
- c. Cleaning and de-silting of nallahs
- d. Fogging the affected area to avoid spread of malaria
- e. Medicating the area with Phenol, insecticides etc.

C 1.3.11 Law & order, Police and Fire Services

Maintaining law & order is major responsibility of Police; apart from it other stakeholders are also involved in it. This section will throw light on the coordination amongst the key functionaries and the necessary arrangements to be made at the district level, for maintaining the law & order.

The **Police** Forces and the **Fire Services** are crucial responders to disasters. The police force will be trained in disaster management skills and the Fire Services will be upgraded to acquire multi-hazard rescue capability.

Disaster response is primarily done by the reserve inspector. He coordinates with the Home Guard Department and the affect block or tehsil officers and makes sure that Rescue Team reaches the affected place with minimum response time. Some of the law and order related challenges faced during Relief and Rescue operations are as follows:

- I. Rumours may spread which could trigger panic among the village community or the adjacent villages leading to road blockages and hartals
- II. Antisocial people become part of the rescue team and do criminal activities

III. Psychologically disturbed by disaster, some villagers may do criminal offenses

Fire brigade is available with every **Nagar Palika** in the district. (See Map in Annexure showing the availability of fire brigade in the district). Fire extinguishers and other equipments are available with private companies like **Prachi Gas Bottling plant** and **JK Tyres**, see List 10.

C 1.3.12 Public grievances/missing person search/media management

Incident Command Team along with Home Guards and Police department will coordinate search and rescue operations. District Emergency Operations Centre will keep record of missing person informed by the local community. Public grievances will be handled by the Incident Command Post or the DEOC.

Media management will be handled by District Public Relationship Officer, who would communicate authentic and authorized information to public media. In case, wrong information is broadcasted by public media, Public Relationship Officer will investigate the issue and take timely action to correct the information to avoid panic and public outcry.

C 1.3.13 Animal care

The **veterinary hospitals** in the district should keep a good stock of antibiotics, B-complex, liver tonic, anti-inflammatory drugs, anti-stress drugs, vaccines etc for proper animal care. They must ensure regular vaccination of PPR, HS, BQ and FMD.

Type of Disaster	Treatment of cattle
Drought	<ul style="list-style-type: none"> • Use of reserved fodder, stored silage or unconventional feed • Use urea treated roughage • Balanced ration • Drinking water treated with quick lime • Vaccination & de-worming • Isolation and treatment of sick animals • Culling of sick animal
Flood	<ul style="list-style-type: none"> • Untie tied cattle so that their lives could be saved • Use unconventional feed and reserved fodder • Balance ration • Use of roughages processed with mild acid and alkali • Transportation of fodder from ad-joining places • Arrangement of shelters at heights • Drinking water after boiling / alum treatment

	<ul style="list-style-type: none"> • Treatment of sick animals • Use of antidote in poisoning case • Culling of sick animal
Cold wave	<ul style="list-style-type: none"> • House of animal should be in N-S direction • availability of full sun rays in animal shed, keep animal body warm • Use of gunny bags to cover the windows during night hours • Inhalation of Eucalyptus water • Vaccination & de-worming

During draught, goat and sheep may be killed by Peste des Petits Ruminants (PPR) disease. During flood, Cattle, bovines and Buffalo may be killed by Haemorrhagic Septicaemia (HS), Black Quarter (BQ) or Foot and Mouth Disease (FMD). Animals so killed by these diseases are properly buried. ‘

List 9 Veterinary Hospitals in the district

Block Name	Contact Person	Contact number
District Veterinary Hospital, Morena	Dr. R.P. Sharma	9425335924
Rithorakala	Dr. Avneesh Sharma	9926288390
Bichola	Dr. Naveen	9926427499
Banmore	Dr. Vivek Srivastava	9826510918
Porsha	Dr. B.P. Sharma	9826503473
Ambah	Dr. Praveen Upadhyay	9425407662
Dimni	Dr. G.P. Giri	9993478919
Joura	Dr. N.P. Sharma	9329431172
Somaoli	Dr. D.S. Tomar	8120764564
Sabalgarh, Jhundpura and Rampurkala	Dr. K.P. Gupta	9893288328
Pahargarh	Dr. K.P. Gupta	9893208106
Kailaras	Dr. Deepak Tiwari	9425464632

C 1.3.14 Management of deceased

There are 4 major functions for the **Carcass disposal team** in case of mass casualties:

- Identification of Deceased and informing the family members
- Post Mortem and Legal Formalities
- Quick disposal
- Mortuary Facilities

Care should be taken while disposing bodies so as not to affect the religious sentiments of the public. Care should be taken while disposing bodies and should be preferred to be done in mortuary facilities of district or place which is at sufficient distance from the relief camp.

For unidentified/unclaimed bodies, body disposal fund under RBC 6-4 can be used for proper disposal of bodies after taking sufficient information about the deceased.

C 1.3.15 Civil Defence and Home Guards

The Civil Defence and the Home Guards will be deployed for emergency response, community preparedness and public awareness. At district level, a culture of voluntary reporting to duty stations in the event of any disasters will be promoted.

Home Guards

The Home Guards serve is an auxiliary arm of the police force and support the district administration. They will be trained for carrying out search, rescue and relief operations on occurrence of disasters. Home Guards would be the prime agency to initiate the emergency response under the guidance of District Commandant, who would also be the DDMO.

The Search and Rescue team formed by Home Guard consists of mostly aged sainiks who have not received any special training for such operation. New sainiks are to be recruited and provided proper training.

Civil Defence

The community has a major role to play both as a victim and necessarily as a first responder. Integration of the CD organisation into disaster management can work as a great catalyst for organising community capacity building. CD has been authorised in 225 designated towns in the country out of which 121 have already been activated where volunteers have been recruited and trained. According to the proposal for revamping, the primary role of CD will be community capacity building and creating public awareness in pre-disaster phase. The proposal envisages converting the town specific setup of CD to a district specific set up. It is proposed to have 18 persons employed on full time basis in each district-specific set up, out of which eight will be the trainers and their duty will be to train volunteers.

The Police Department of the district has formed Gram Evom Nagar Raksha Samithi in accordance with the 1899 Security Committee Law (section 8). These Samithis have volunteers from the age group 20 to 45.

Following is cumulative details of Samithis formed and members.

- Urban areas – 87 Samithis – 552 members
- Rural areas – 415 Samithis – 5024 members

The members of these Samithis have the following responsibility:

- Provide crime related information to Police
- Provide security
- Crowd management
- Help in Management of Natural Disasters

In order to provide help in Natural Disasters, the members of these Samithis are to be trained in Search and Rescue operations. They could be trained and used for spreading awareness among their communities regarding disaster mitigation, preparedness and response.

C 1.3.16 Role of Private Security

As per the recent private security bill introduced by the State Govt, the private guards and security agencies have to play a very vital role in disaster management, and especially in the disaster response stage.

As of now, private security doesn't play any role in disaster response. Provisions should be made to track the presence of private security in the district. Depending on the training they have undergone, they could be used in disaster response under the guidance of disaster response force.

C 1.3.17 NGOs & Voluntary organizations

The role of NGOs and voluntary organizations, in response situation, will be mentioned here. The responsibility of CSOs and the concept of Citizen Volunteering will also be highlighted here in detail.

Red Cross deals with health management during disasters. They have 7 ambulances in Morena district and 70 beds. They have worked proactively during outbreaks like Malaria, Chickengunia etc. Dr. M.L. Mittar has acquired training in disaster management.

Chandan Vasundhara Gram Utthan Evom Sahavagiye Gramin Vikhas Samithi works with the agriculture department in spreading awareness and training farmers. They work in training them in using climate resilient farming.

Every year expert swimmers from villages nearby Chambal River volunteer to perform disaster response activities. Also young men volunteer to work with Red Cross in relief activities.

Some Community based organizations are listed below who work in flood affected villages. These organizations could be used to spread awareness and train the community in disaster mitigation, preparedness and management.

Table C.1.3.17. 1 NGOs & Voluntary organizations

Block	Name of NGO	Contact Person	Contact No.
Morena	Red Cross Society	Dr. M.L. Mittar	9907658258
	Chandan Vasundhara Gram Utthan Evom Sahavagiye Gramin Vikhas Samithi	V.S. Tomar	9826842360

Block	Name of CBO	Contact Person	Contact No.
Porsha	Durg Jan Kalyan Gram Vikas Samithi, Ludhaoli	Sraban Upadhyay	9752873241
Ambah	Kuthiana Yuva Mandal, Kuthiana	S. Singh Tomar	
Morena	Samagra Gram Vikas Samuh, Manpur	R. Srivastava	9993302714
Sabalgarh	Samagra Gram Vikas Samuh, Kishorgarh, Jhundpura	Sudhir Sharma	9425703934

C 1.3.18 Relief management planning

Relief management planning will clearly specify and address the issues of relief, while serving the people in disaster hit areas. This will include the functions of infrastructure desk, logistics, health, operations, communication and information.

Many issues in the post-disaster phase are required to be addressed. Relief management should be done carefully so that all the victims will be benefited from the limited resources and manpower. In this regard the following activities must be assigned to related desks while serving the people in disaster hit areas. The specific functions of the various desks are given below:

Functions of Infrastructure Desk

- Temporary structure for storage and Protection
- Shelters for affected people
- Sanitation facilities
- Medical facilities

- Education facility
- Food Preparation and distribution
- Recreational facility
- Postal facility
- Communication Facilities
- Temporary repairs to damaged infrastructure
- Removal of debris and reconstruction

Functions of Logistics Desk

- 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
- Mobilize and co-ordinate the work of the volunteers ensuring community participation
- Organize facilities for staff and volunteers.

Functions of Health Desk

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

Functions of Communication and Information Management Desk

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

C 1.3.19 Media Management

Media plays a vital role in mass communicating information regarding disaster to public. It provides district authority platform to disseminate information to affected populace about the impact of disaster, rescue and relief measures adopted by the authorities and attract other government and non government agencies to respond to relief measures. Thus, media management is of utmost importance for timely communicating authentic and authorized information and avoid mass commotion due circulation to inaccurate information or hype.

Public Relationship Officer would be in-charge of managing media and communicating right information to people. PRO would receive information from the DDMA or the DEOC and the information needs to be approved by Collector. PRO communicates with news agencies and ensures the easy movement of information. PRO must ensure that information regarding disaster is not over sensitized by the media.

C 1.3.20 Fire Services

Fire services are vital to deal with forest fire as well as man-made disasters. Fire brigade is available with every **Nagarpalika** in Morena. In case of fire related disaster, immediate response is required to prevent large damage to property and save life. Fire department needs to be prepared at all times and respond in least possible time. They need to coordinate with nearby fire agencies for quick response. Fire department should keep fire proof jackets and blankets for protecting life. Fire tenders should also carry basic equipments for rescue operations and operators should have proper training for extinguishing fire, rescue operation and basic first aid. A quick and well coordinated response is required from the departments in case of fire accident. While responding to fire accident, saving life should be first priority followed by saving property.

C 1.4 Recovery and Reconstruction Plan

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 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, restoration of basic infrastructure, 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 re-dressal and social rehabilitation etc.

C 1.4.1 Restoration of basic infrastructure

After the assessment of the damage due to the disaster, the restoration of infrastructure should be taken up in order to bring normalcy in the affected area. As per the existing laws and regulations, compensation shall be paid to the victims to support their restoration of infrastructure and to help them get back to normal life. Basic Public infrastructure should be quickly reconstructed in affected area and it should take into account DRR techniques.

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:

- Owner Driven Reconstruction
- Public Private Partnership Program (PPPP)
- Insurance.
- Financial, technical and material assistance provided by the government.
- The designs for seismic reconstruction of houses provided by the government.
- The material assistance provided through material banks at subsidized rates.

Details regarding government relief measures can be found in below table.

Revised List of Items and Norms of Assistance from Calamity Relief Fund (CRF) and National Calamity Contingency Fund (NCCF) for the Period 2005-10 (MHA Letter No. 32-34/2007-Ndm -I dated the 27th June, 2007)

C 1.4.3 Restoration of livelihoods

Restoration of livelihood of the disaster victims should take place through direct and indirect support from Govt., NGOs and the civil society. Govt. can assist the victims to restart their businesses, provide incentives in purchasing seeds and other farming equipment necessary for agriculture, and it even may consider relaxing certain norms in order to take the burden off the victims and to support their livelihoods for a period of time. Calamity relief Fund and National Calamity Contingency

Fund(MHA Letter No. 32-34/2007-Ndm -I dated the 27th June, 2007) can provide assistance to disaster affected populace for restoration.

C 1.4.4 Psycho-social interventions

Disasters, conflicts and health problems have severe psychosocial consequences. The psychological and social impacts of emergencies may be acute in the short term, but they can also undermine the long-term mental health and psychosocial well-being of the affected population. These impacts may threaten peace, human rights and development. One of the priorities in emergencies is thus to protect and improve people's mental health and psychosocial well-being. In-order to perform such psychosocial services, mental health professionals are to be contacted. Train and supervise primary health care and community health care workers in basic psychological support. Following are some advantages of early and adequate psychological support:

- prevent distress and suffering developing into something more severe
- help people cope better and become reconciled to everyday life
- help beneficiaries to resume their normal lives

All sub-groups of a population can potentially be at risk, depending on the nature of the crisis. The following are groups of people who frequently have been shown to be at increased risk of various problems in diverse emergencies:

- Women (e.g. pregnant women, mothers, single mothers, widows and, in some cultures, unmarried adult women and teenage girls)
- Men (e.g. ex-combatants, idle men who have lost the means to take care of their families, young men at risk of detention, abduction or being targets of violence);
- Children (from newborn infants to young people 18 years of age)
- Elderly people (especially when they have lost family members who were care-givers);
- Extremely poor people;

According to WHO guidelines for mental health and psychological support, an intervention pyramid should be implemented as follows:

1. *Basic services and security*: The well-being of all people should be protected through the (re)establishment of security, adequate governance and services that address basic physical needs (food, shelter, water, basic health care, control of communicable diseases).
2. *Community and family supports*: The second layer represents the emergency response for a smaller number of people who are able to maintain their mental health and

psychosocial well-being if they receive help in accessing key community and family supports.

3. *Focused, non-specialized supports:* The third layer represents the supports necessary for the still smaller number of people who additionally require more focused individual, family or group interventions by trained and supervised workers (but who may not have had years of training in specialized care). For example, survivors of gender-based violence might need a mixture of emotional and livelihood support from community workers. This layer also includes psychological first aid (PFA) and basic mental health care by primary health care workers.
4. *Specialized services:* The top layer of the pyramid represents the additional support required for the small percentage of the population whose suffering, despite the supports already mentioned, is intolerable and who may have significant difficulties in basic daily functioning. This assistance should include psychological or psychiatric supports for people with severe mental disorders whenever their needs exceed the capacities of existing primary/general health services. Such problems require either (a) referral to specialised services if they exist, or (b) initiation of longer-term training and supervision of primary/general health care providers.

Currently, **there is no trauma center in the district.**

C 1.5 Cross cutting elements

C 1.5.1 Community Based Disaster Management

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

Currently there are around 30 CBOs in every block of the district. Each CBO consists of 5-11 members from the locality and work towards the development of the locality. The activities undertaken by the CBOs are as follows:

- Spreading awareness about water conservation by performing skits, painting on walls etc
- Tree planting in villages
- Organizing health camps
- Reducing electricity consumption by use of CFL

- Use of biogas
- Spreading awareness among communities about alcoholism and helping them in getting rid of this habit
- Spreading awareness against the use of polythene
- Repairing of roads

Presently, disaster management is not part of initiatives by Jan Abhiyan Parishad. It should be included for mitigation, preparedness, capacity building and empowering of the communities to deal with local disaster situations.

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.

Children

- Child help lines to perform search operation for missing children
- Orphanages are to be established
- Access to medical facility and understanding medical needs of children.
- Avoid trafficking and exploitation of children after emergencies when the family, community and school's protective frame work weakens.

Women

- Easy and preferential access to medical facility and food.
- Maternal health, menstrual hygiene.
- Employment and reconstruction schemes for affected women

Disabled persons

- Easy and preferential access to medical facility and food.
- Wheelchairs, supportive devices need to be arranged.
- Rescue team needs to identify specific needs of disabled person and made specific arrangements for their basic needs.

Senior citizens

- Easy and preferential access to medical facility and food.

- Arranging for recommended and prescribed medical needs of elderly to avoid complications
- Construction of old age homes or community Centres for old age.

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.

Due to climate change, the following problems are being faced by the district:

1. Sudden change in temperature: In Feb 16th 2011, the night-time temperature suddenly plummeted in northern parts of Madhya Pradesh. This resulted in hailstorm in and around n Morena district. Hailstorm affects crops adversely. The Rabi crop that is cultivated during this time is mainly Mustard. Around Rs. 2 crore was spent in relief from hailstorm alone in that year.
2. Increase in difference between maximum and minimum temperature. Summers are getting warmer and winters are getting cooler. This is affecting the natural habitat as well as agricultural pattern of the district.
3. The average rainfall of Morena has decreased from 700mm to 650mm in the last decade. This decrease in rainfall, if continues, could result in Morena becoming a serious draught prone area.
4. There have been 9 incidents of forest fire in Morena and Pahargarh blocks between May 1995 and May 2012. 6 of these incidents took place between 2008 and 2012. These incidents could be related to climate change. Such incidents may affect the environment adversely by reducing the forest cover. (Source: <http://www.mpforest.org>)

In-order to help the farmers cope with climate change, National Initiative on Climate Resilient Agriculture (NICRA) provides fund to the Krishi Vigyan Kendra of Morena to undertake training of farmers and provide them with climate resilient seed.

C 2 Standard Operating Procedures (and Checklists)

C 2.1 SOPs for all concerned Line Departments

Table C 2.1.1 Revenue Department

The Department of Revenue plays a critical role in the implementation of the disaster management action plans. The department will be the nodal agency for the activities of the DEOC and also the primary agency in the case of Information and Planning, Relief supplies, Shelter, Help lines and donations emergency support functions.

Non Disaster Time

Mitigation

- 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.

Preparedness

- 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 synchronize 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.
- Arrange for meetings of District Disaster Management Committee
- Facilitate community training and awareness programs for mitigation of disaster with the support of local authorities, governmental and non-governmental organizations

- Setup, maintain, review and upgrade the mechanism for early warning and dissemination of proper information to public
- Establish stockpiles of relief and rescue materials or ensure preparedness to make such material available at short notice

Warning Time – Alert and Warning

- Maintain contact with forecasting agencies and gather all possible information regarding the alert.
- Ensure activation of District EOC in standby mode.
- 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 – Response

- Monitor and control the situation at block level, gram panchayat level as well as village level and ensure proper communication right from the Kotwar of a village to the Collector of the district.
- Ensure proper round the clock functioning of the district control room and block-level control rooms
- Ensure timely response by relief and rescue teams and other related teams for evacuation and crisis management purposes
- 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 - Recovery and rehabilitation

- Assessing damages and financial and economic losses, preparing report and declaring level of disaster
- Keep the DDMA informed of the situation.
- Arranging the finance for necessary rehabilitation purposes.
- Implement recovery and reconstruction plan for restoration of livelihood
- Visit and coordinate the implement of various rehabilitation programmes.
- Coordinate the activities of NGOs in relief and rehabilitation programmes.
- Ensure proper management of deceased

Table C 2.1.2 Irrigation and Public Health Engineering Department:

These departments are involved in disaster management in relation to drought and floods, as they affect agricultural production, irrigation systems and water supply and management. It is primary agency for Drinking water & sanitation and secondary agency for Information & planning, relief supplies, shelter and transport emergency support functions for DEOC.

<p>Non Disaster Time</p> <p>Mitigation</p> <ul style="list-style-type: none"> • Make departmental mitigation plan and ensure its implementation. • Identify the areas which have irrigation problem and notify the DDMA and assist them in construction of tube well and lakes. • Construct wells in strategic location to replenish water tables. • Perform development work for the purpose of mitigation of risk of disaster like creating stop dams in canals or rivers to facilitate replenishing of ground water • Implement safe and recommended construction of sanitation facilities in the district. <p>Preparedness</p> <ul style="list-style-type: none"> • Designate one Liaison Officer in the department as the Disaster Preparedness Focal Point. • Ensure efficient management of flood forecasting and warning Centres and improve procedure of flood forecasts and intimation to appropriate authorities. • Identify flood prone rivers and areas and activate flood monitoring mechanisms in all flood prone areas. • Marking the danger levels of rivers and embankments. • Make water provision for drought prone areas. • Arranging Sandbags for places which are prone to flood • Ensure all devices, instruments and communication facilities are in working conditions • Form teams and allocate them specific tasks to be done during times of emergency
<p>Warning Time</p> <ul style="list-style-type: none"> • A control room is set up to collect and record the data about water level at regular interval and any adverse situation is reported to the District control room set up by the Revenue department • Gauge and inform the Control Room about the level of water in Chambal River at regular intervals. This is done by the sub engineer stationed at Rajghat.
<p>During Disaster</p> <ul style="list-style-type: none"> • Inspection of flood condition • At frequent intervals, the level of water at Rajghat is informed to the irrigation control room which determines how much time is available for evacuation and rescue operation and informs the district control room set up by Revenue department

<ul style="list-style-type: none"> • Transportation of water with minimum wastage (in coordination with the transport department). • Locate drinking water facilities separate from sewer and drainage facilities • Ensure that remaining or unaffected sources of water do not get contaminated and the distribution of water is equal to all victims in the area. • Identify and mark damaged water pipelines and contaminated water bodies and inform disaster victims against using them. • Construct temporary toilets in relief camps and mobile toilet facilities for affected areas. • Ensure hygiene and sanitation of the relief camps and affected areas through disasters.
After Disaster
<ul style="list-style-type: none"> • Take up sustained programs for rehabilitation of flood protection works and canals. • Restore drinking water supplies for the affected areas. • Inspection and preserve of Irrigation equipments used during disaster • Inspection of major strategically important location to assess the aftermath effects.

Table C 2.1.3 Power Department

Non Disaster Time
<ul style="list-style-type: none"> • Identification of necessary resources for temporary work during disaster • Organising Training program for Electrical Mechanic and ensuring that the established Standards and norms are followed for installation of electrical equipments. • Establishing necessary standards in order to prevent hazards due to snapping of electrical conductors and inspecting the same at regular intervals. • Formulation of necessary plans in order to ensure minimum damage to high tension wires during any disasters. • Conducting Mass-Awareness program to ensure minimum damage of lives due to electricity during any natural or manmade disaster. • Formulation of plan to provide quick electrical connection to important and sensitive places.
Warning Time
<ul style="list-style-type: none"> • Shutting down all the electric supply if flood warning message is received
During Disaster
<ul style="list-style-type: none"> • Ensuring that no electrical casualty during any disaster.
After Disaster

- Necessary cooperation in inspection of damaged electrical appliances.
- Observe the damage caused to electrical appliance and infrastructure
- Ensuring quick repairing and replacement of electrical appliances such as electric poles, transformers etc and hence restoration of electricity to the place of disaster.

Table C 2.1.4 Health Department

The department is primary agency for public health emergency support function for DEOC and is responsible for prevention, protection and control of health related problems of the disaster affected community of natural disasters and man-made disasters, as well as for investigation and response to outbreak of communicable diseases

Non Disaster Time
<ul style="list-style-type: none"> • Form a list of places prone to outbreaks or epidemics or other disasters • Coordination with private doctors and hospitals • Form Combat teams for performing emergency medical services and train the members for disaster management • Capacity building – make sure enough medical vans, beds, first-aid kits and medical supply is available • Communicate with other health departments of the state and health institutions of the nation to check for outbreak of new diseases and their cure • Ensure DMPs are developed in health centres, hospitals. • Ensure that all hospital staffs have been informed about possible disasters in the district, likely damages and effects, and information about ways to protect life, equipment and property. • Ensure that orientation and training for disaster response plans and procedures are undertaken. • Ensure adequate availability of Emergency Health Kits in high risk areas. • Prepare a list of medical and Para-medical personnel in the district and disseminate it to DDMA, DEOC and all block disaster management committees. • Establish and operate an early warning system for health threats based on the routine health information and in collaboration with other departments.
Warning Time
<ul style="list-style-type: none"> • Life saving medicines are stocked in CHCs and PHCs. Bleaching powder, ORS, Chlorine tablet, Paracetamol tablet, Metrogyl tablet etc are made available. • Distribution of Anti-Snake venom • Make NGOs and CBOs alert • To prepare and keep ready Mobile Hospitals and stock them with emergency equipment that may be required after the disaster.

- Assess likely health impacts and share with DEOC for planning purpose
- To ensure pre-positioning of Emergency Health Kits and Personnel in all the areas under the disaster threat.
- Direct the activation of health/medical personnel, supplies and equipment as required.

During Disaster

- Appoint one personnel as Nodal Health Officer for the affected area.
- Mobilize medical teams, Para-medical personnel to go to affected areas as part of Rapid Assessment and Quick Response Teams
- Provide medical assistance to the affected population
- Provide chlorine tablets to people in affected area
- Special care for women with infants and pregnant women
- Carry out technical assessment on health infrastructure availability and need.
- Vaccination to prevent contagious diseases.
- Arrangement of IRS and other life saving drugs at the places affected by disaster.
- Strengthening the medicine supply and distribution at the places affected by disaster.
- Take help from private doctors and hospitals and NGOs to make sure enough resources are available at the place of disaster
- Post-Mortem of dead bodies with the consent of family members and Government bodies.
- Set up temporary medical camps to treat the sick and ensure hygiene in such camps
- Continuously communicate all happenings to DEOC
- Building local capacities, supporting self-help and strengthening the resources already present

After Disaster

- Impact analysis and monitoring of intensity of diseases.
- Determine the extent of loss in health institutions.
- Prepare respective plans for their rehabilitation.
- Share learning which will help in the improvised Hospital DM planning and preparedness.
- Psychological Counselling of traumatized individuals – those affected highly should be handled by mental health professionals

Table C 2.1.5 Police Department

Non Disaster Time
<ul style="list-style-type: none"> • Training of District Crisis Management Group and Search and Rescue Team • Capacity Building to ensure sophisticated resources are available to tackle any disaster or crisis situation • Keep track of disaster management resources available with government and private entities • Get lists of trained individuals in Home Guard Department for Search and Rescue operations and community volunteers • Gather intelligence about impending terrorist attack or internal disturbances • Organize mock-drills twice a year to assess the efficacy of contingency plans • Ensure all communication equipments in all Police Stations and Chowkies are in order • Ensure all resources required for Search and Rescue and Quick Response are in proper condition
Warning Time
<ul style="list-style-type: none"> • Activate control room and alert Quick Response Team • Ensure transportation and resources required by Response team and Search and Rescue team are available • Reserve Inspector communicates with Home Guards, Revenue, Irrigation, Health and other departments and ensures proper co-ordination
During Disaster
<ul style="list-style-type: none"> • Ensure evacuation of people and livestock with minimum damage to life • Ensure health and safety of relocated people • Coordinate with NGOs, CBOs and other volunteers working for relief along with the police and Home Guards • All happenings in the site of incident must be reported to the control room
After Disaster
<ul style="list-style-type: none"> • Temporary arrangement of communication at the disaster affected places. • Ensuring strict law and order situation at the affected places. • Cooperating with District Administration to prevent Black-marketing.

Table C 2.1.6 Home Department

Department of Home has an important role of providing security, logistics, and if necessary, assistance in distribution of relief items and provision of equipment for emergency response. It is also the primary agency for Search and rescue.

Non Disaster Time

Mitigation

- Make departmental mitigation plan and ensure its implementation.
- Organize road safety and fire and festival safety awareness programs for schools and community.

Preparedness

- Prepare an operational Plan for responding to any type of disaster.
- Establish, maintain and train district level search and rescue response team.
- Impart training to the members of Police Force in first aid, evacuation, rescue and relief operations.
- To conduct Search and Rescue training to gram panchayat task forces.
- Prepare an inventory of all man power and equipment available.
- To prepare an inventory of volunteers who have already completed training courses successfully and can be utilized in the search and rescue operations.
- Identify the 'High Risk' and 'Risk' areas for different disasters and instruct the existing police installations located in those areas for keeping themselves in readiness for undertaking emergency rescue, evacuation relief operations.
- Maintain and operate the DEOC throughout the year in preparedness mode during non-disaster times and in emergency mode during disaster times.
- Arrange drills for fire extinguishing, rescue, evacuation and transportation of injured persons and prepare coordinated Action Plans in cooperation with District administration and concerned local agencies
- Hold annual drills on disaster preparedness and response.

Before Disaster – Alert and Warning

- Depute one liaison officer for disaster management within the department.
- Representative to be positioned at the DEOC.
- Maintain communications with the police installations in the areas likely to be affected by disaster.
- Inform nearest police station (from the likely disaster affected area) for dissemination of warning.
- Instruct all concerned to accord priority to disaster related wireless messages, if required by appropriate officials.
- On receipt of directives from the DEOC for evacuation - organize personnel and equipment for evacuation and undertake evacuation operations.
- Earmark reserve task forces, if needed.
- Move task forces to the convenient positions, if needed.

During Disaster – Response

- Send task forces in disaster affected areas.
- Carry out search & rescue operations.

<ul style="list-style-type: none"> • Maintain law and order. • Keep close watch for any criminal and anti-state activity in the area. • Keep direct contact with different officers like District EOC and Incident command • Assist local administration in removing the dead bodies and debris in affected areas. • Set up field hospital if required. • Coordinate with other offices for traffic management in and around damaged areas.
<p>After Disaster – Recovery and rehabilitation</p>
<ul style="list-style-type: none"> • Maintain law and order, especially during relief distribution. • Assist the local administration in putting a stop to theft and misuse in relief operation. • Arrange security of government property and installations damaged in a disaster.

Table C 2.1.7 PWD and RES

Department of Public Works and RES play a vital role in provision and maintenance of vital public infrastructure. They play the role of primary agency for engineering emergency support function at the DEOC. The departments will also act as secondary agency for Transport, Information & Planning, and Relief supplies and shelter emergency support functions.

<p>Non Disaster Time</p>
<p>Mitigation</p> <ul style="list-style-type: none"> • 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. • Perform development work in accordance with BIS • For buildings with more than G + 3 floors, fire system must be implemented • Providing expansion and contraction guidelines • 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 flood, road accidents. <p>Preparedness</p> <ul style="list-style-type: none"> • Designate one Liaison Officer in the department as the Disaster Preparedness Focal Point. • 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.
- Collection of major utilities which can be used during disaster.

Warning Time

- Precaution boards must be provided near nalas, pulias and bridges to spread awareness
- 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.
- Establish a priority listing of roads which will be opened first. Among the most important are the roads to hospitals and main trunk routes.
- Work under construction should be secured with ropes, sandbags, and covered with tarpaulins if necessary.

During Disaster

- Involving local community to clean the debris from the road to remove blockages.
- Filling up the big holes in roads, removing the debris and cutting the branches of the trees to restore the mobility on the main roads.
- Identification of alternative roads for access to disaster affected areas
- 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 gram panchayat 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.

<ul style="list-style-type: none"> • As per the decisions of the District Emergency Operations Centre undertake construction of temporary structures required, for organizing relief work and construction of relief camps, feeding Centres, medical facilities, cattle camps and Incident Command Posts. • If people are evacuating an area, the evacuation routes should be checked and people assisted. • Provide sites for rehabilitation of affected population
After Disaster
<ul style="list-style-type: none"> • Cleaning the roads and make connection with other roads. • Repairing of damaged roads, culverts and bridges. • Make arrangements for the movement of big vehicles carrying relief and other necessary materials to the affected places. • Strengthening the structures and removing the weakness within the structures. • 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. • Valuation of the work done and maintaining its official records

Table C 2.1.8 Agriculture Department

Agriculture Department has a role in assessment of damage to agricultural crops. Their main role is to provide seeds and necessary planting material and other inputs to assist in early recovery.

Non Disaster Time – Mitigation
<ul style="list-style-type: none"> • Designate a focal point for disaster management within the department. • Identify areas likely to be affected. • Arrange for keeping stock of seeds, fertilizers and pesticides. • A pests and disease monitoring system should be developed to ensure that a full.
Before Disaster – Alert and Warning

<ul style="list-style-type: none"> • Provide timely warning to DEOC/DDMA about droughts. • Check available stocks of equipments and materials which are likely to be most needed after the disaster. • Stock agricultural equipments which may be required after a disaster • Determine what damage, pests or diseases may be expected, and what drugs and other insecticide items will be required, in addition to requirements of setting up extension teams for crop protection, and accordingly ensure that extra supplies and materials, be obtained quickly. • Provide information to all concerned, about disasters, likely damages to crops and plantations, and information about ways to protect the same. • All valuable equipments and instruments should be packed in protective coverings and stored in room the most damage-proof.
<p>During Disaster – Response</p> <ul style="list-style-type: none"> • Monitor damage to crops and identify steps for early recovery • Ensure that adequate conditions through cleaning operations are maintained to avoid water-logging in flooded areas.
<p>After Disaster – Recovery and rehabilitation</p> <ul style="list-style-type: none"> • Quantify the loss and damage within the quickest possible time and finalizes 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.

Table C 2.1.9 Panchyati Raj Department

It plays a major role in development of the district through implementation of various government schemes. It should implement these schemes with DM as background tone for sustainable development.

<p>Non Disaster Time</p> <p>Mitigation</p> <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. <p>Preparedness</p> <ul style="list-style-type: none"> • Develop a disaster management plan for the department at district level & update it annually. • Analyse the training needs of the department’s personnel, which include its officials

<p>and elected representatives of Gram panchayat, panchayat samiti's and zila panchayat and organise trainings with the help of HIDM or other agencies.</p> <ul style="list-style-type: none"> • Conduct gram panchayat level mock drills as part of preparedness. Helping other departments to get cooperation from local communities.
During Disaster – Response
<ul style="list-style-type: none"> • Coordinate with local authorities and support the response efforts • Coordinate the support from unaffected gram panchayats.
After Disaster – Recovery and rehabilitation
<ul style="list-style-type: none"> • Ensure proper distribution of reconstruction schemes and monitoring of the same during Block development committee and zila panchayat meetings

Table C 2.1.10 Forest Department

Non Disaster Time
<ul style="list-style-type: none"> • Encouragement of plantation of trees in areas where community people reside. • Conducting Awareness drive publication of Information booklet regarding the Forest Land, and soil utility of forest area, and its benefit to the local community. • Acquiring modern sophisticated instrument and upgradation of existing equipments to protect forest from forest fire, illegal poacher and other natural and manmade disasters. • Acquiring and utilizing modernized GPS system and Satellite based images to monitor the condition of the forest.
Warning Time
<ul style="list-style-type: none"> • Preparing the Hand saw and Mechanized saw to meet the potential disaster needs. • Preparing of vehicle, trucks and personnel for the disaster. • Identifying the intensity and expansion rate of forest fire and other disasters.
During Disaster
<ul style="list-style-type: none"> • Mobilization of the machinery and personnel to the disaster affected places. • Drawing Fire Line to check the rate of spreading of forest fire. • Using Sand and soil to extinguish the fire. • Cooperation with other relief teams carrying out mitigation activities. • Proper Coordination and communication with Government functionaries.
After Disaster
<ul style="list-style-type: none"> • Root Cause analysis of the forest fire and other disaster. • Examining the damaged caused by disaster. • Plantation of trees after removing the debris.

- Imparting training to the personnel keeping in view of the needs.

Table C 2.1.11 Food Department

Non Disaster Time
<ul style="list-style-type: none"> • Keep food grain reserve for future • Keep reserve of petrol and diesel for transportation during crisis. In 2011, reserve of 2000 liters of diesel and 1000 liters of petrol was kept. Also reserve of Kerosene is to be maintained. • Appoint nodal officers and send across their list to the DDMA, Revenue department and police department
Warning Time
<ul style="list-style-type: none"> • Communicate will all nodal officers and make sure that all reserves are available
During Disaster
<ul style="list-style-type: none"> • Establishing a Control room and keep track of food grain and other requirements of the disaster affected places • Ensure quick transportation of food grains to the place of incident • Co-ordinate with other departments – DDMA, Revenue and Police Department • Make petrol and diesel available to the DDMA, Revenue or Police department
After Disaster
<ul style="list-style-type: none"> • Analyze the impact of the disaster and gauge the food grain reserve required to deal with such disaster • Find ways to reduce loss of perishable food items due to keeping them in reserve for long time and while transportation.

Table C 2.1.12 Transport Department

It would need to take steps to arrange for sending personnel and relief material to the disaster affected area, relocate the affected people, keep access routes operational and inform about alternate routes.

Non Disaster Time
Mitigation
<ul style="list-style-type: none"> • Make departmental mitigation plan and ensure its implementation. • Organize departmental awareness programs for the same. • Strictly observing the safety norms under all circumstances. • Ensure the rules for overcrowding are made and communicated to all public transport

<p>operators. Strict penalties should be enforced to offenders.</p> <ul style="list-style-type: none"> • Organising Mass-Awareness camp to spread the Road Safety norms. • Conducting School awareness program to teach students the basics of road safety. <p>Preparedness</p> <ul style="list-style-type: none"> • Develop and implement disaster management plan for the department. • Preparing the list of vehicles that can be utilized during disaster.
<p>Before Disaster – Alert and Warning</p> <ul style="list-style-type: none"> • Ensure availability of fuel, recovery vehicles and equipment. • Take steps for arrangement of vehicles for possible evacuation of people.
<p>During Disaster – Response</p> <ul style="list-style-type: none"> • Take steps for transportation of relief personnel and material to affected areas. • Take steps for movement of affected population to safer areas. • Collect 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.
<p>After Disaster - Recovery and rehabilitation</p> <ul style="list-style-type: none"> • Assess damage to transportation infrastructure. • Maintenance of vehicles to make them roadworthy.

Table C 2.1.13 Fire Service Department

<p>Non Disaster Time – Preparedness</p> <ul style="list-style-type: none"> • Observing strictly the Fire Safety rules and regulations. • Strengthening the Fire Extinguishing structures and procurement of modern sophisticated instruments. • Identification of Fire prone Structures and areas and inflammable articles like petrol bunks. • Conducting Mass Awareness program regarding Fire Safety and Security. • Imparting training to local people to handle the Fire hazards. • Imparting training to Electrical Workmen regarding Fire Retardant technology. • Not approving the building plans violating Fire Safety norms.
<p>Before Disaster – Alert and Warning</p> <ul style="list-style-type: none"> • Checking of alternative escape plan. • Evacuation of people from potentially dangerous places. • Shutting down of all electrical connection. • Keeping Fire Tenders and Fire Fighting personnel ready for operation.

During Disaster – Response
<ul style="list-style-type: none"> • Rescue of persons trapped by fire in various places such as damaged building, transport, restaurants and public places. • Controlling of fire by specified means to minimize the damage. • Controlling and protection of potentially dangerous and inflammable articles.
After Disaster – Recovery
<ul style="list-style-type: none"> • Identification of the cause of fire such as Short-circuit, illegal storage of inflammable articles, use of mobile phones or electrical equipment near petrol bunks. • Restoration of normal life. • Checking of re-observance of fire Safety rules and regulations.

Table C 2.1.14 Information & Public Relation Department

It has to play a major role in education and awareness programmes for better organized preparedness and response at government and community levels. It also plays a main role to collect reliable information on the status of the disaster and disaster victims for effective coordination of relief work at district level. It is the primary agency for Media emergency support function for DEOC.

Non Disaster Time
<p>Mitigation</p> <ul style="list-style-type: none"> • Creating awareness among local community and media by involving them into various types of disaster management policies and works. • Providing feedback to the community regarding various procedures followed or to be followed during disaster. <p>Preparedness</p> <ul style="list-style-type: none"> • Popularize the techniques for preparedness and survival during pre-disaster, disaster and post-disaster period through television, radio and other publicity media. • Ensure strict performance of the allotted duties by radio, television, news media, films and publications related departments. • Take proper and adequate security steps for the protection of own installations and properties. • Prepare guidelines / policy for necessary action by mass media on reporting disasters.
Before Disaster – Alert and Warning
<ul style="list-style-type: none"> • Acquire accurate scientific information from the Scientific and technology department • Disseminate information to all victims in the affected area • Curb the spread of rumors. • Caution the victims about the dos and don'ts during a disaster.
During Disaster – Recovery and Rehabilitation

<ul style="list-style-type: none"> • Coordinate with the DEOCs for required information for relief workers. • Provide information of emergency numbers and other key contact numbers on television, through newspapers, loudspeakers and radio networks. • Ensure that the news to be broadcasted reflects the true and clear presentation of the actual position and does not create panic in the minds of the people and also advises them to desist from taking unreasonable steps. • Take steps for publicity of news and directives relating to the situation issued by the DDMA. • Arrange visit to the affected area by the local and foreign journalists in the interest of publication of accurate and true report in the news. • Inform unaffected population about hospitals where they can find victims and where assistance is required.
<p>After Disaster – Recovery and rehabilitation</p>
<ul style="list-style-type: none"> • Informing local people regarding various reliefs and rehabilitation help provided by Government and other agencies. • Arrange dissemination of information of the short and long term measures of different ministries, Departments/Agencies for relief and rehabilitation of the affected people.

Preparedness Checklist for the District Collector

- Preparation of the DDMP with the assistance of DDMC after setting up the DDMA for the district.
- Establishment of various committees – UADMC, BDMC, GPDMC
- 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.
- The Collector would ensure the development of community based disaster management.

Preparedness Checklist for All Departments

<p>Common to All department</p>	<ul style="list-style-type: none"> ○ The department is familiar with the disaster response plan and disaster response procedures are clearly defined. ○ An Officer has been designated as Nodal Officer for Disaster Management. ○ Sources of materials required for response operations have been identified. ○ Orientation and training for disaster response plan and procedures undertaken. ○ Special skills required during emergency operations imparted to the officials and the staff. ○ Reviewed and updated the precautionary measures and procedures, the
---------------------------------	--

	precautions to be taken to protect equipment, the post-disaster procedures to be followed
Department Specific Preparedness Checklist	
Police	<ul style="list-style-type: none"> ○ Search and Rescue team in good form and schedules trainings have been undertaken ○ Adequate warning mechanisms established for evacuation.
Health	<ul style="list-style-type: none"> ○ 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. ○ Hospital staff is aware of which hospital rooms / buildings are damage proof. ○ 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. ○ An area of hospital identified for receiving large number for casualties. ○ Emergency admission procedures with adequate record keeping developed. ○ Field staff oriented about DDMP, standards of services, and procedures for tagging. ○ Setting up of Integrated Disease Surveillance Project to monitor the epidemic situation.
Irrigation	<ul style="list-style-type: none"> ○ Flood monitoring mechanisms can be activated in all flood prone areas ○ All staff is well aware of the precautions to be taken to protect their lives and personal property. ○ Each technical assistant has instructions and knows operating procedures for disaster conditions. ○ Methods of monitoring and impounding the levels in the tanks evolved. ○ Methods of alerting officers on other dam sites and the district control room, established. ○ Mechanisms evolved for forewarning settlements in the downstream, evacuation, coordination with other dam authorities.
PWD	<ul style="list-style-type: none"> ○ All officers are familiar with pre-disaster precautions and post-disaster procedures for road clearing and for defining safe evacuation routes where necessary.
Agriculture	<ul style="list-style-type: none"> ○ Information provided to all concerned officers about the disasters, likely damages to crops and plantations, and information about ways to protect the same.
Veterinary	<ul style="list-style-type: none"> ○ 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. ○ An area of the hospital identified for receiving large number of

	livestock. <ul style="list-style-type: none"> ○ Emergency admission procedures with adequate record keeping developed.
--	---

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.

Table C 2.2.1 Flood

Structural Work
<ul style="list-style-type: none"> ● Water and soil conservation techniques could be implemented ● Embankments should be formed with sandbags at villages where the water level remains low ● Construction of safety wall and embankment for identified villages and places where the flood water reaches first ● Development of Natural Detention Basin for flood prone rivers in the district. ● Construction of Check-Dam, Stop-Dam and Reservoir primarily in the flood prone areas as and when required. ● Construction of drainage system for flood prone and other areas of the district. ● Construction of structures to divert flood water in villages and areas which are prone to it. ● Plantation of trees to reduce soil erosion in flood affected places. ● Establishment of water level measurement apparatus in all rivers flowing through the district
Non-Structural Work

- Create maps indicating flood prone areas
- In all flood prone villages community based disaster management should be advocated
- Volunteers who want to work during flood for search and rescue operation need to be trained
- Gram Panchayats close to flood prone areas are to be identified
- Sarpanch in those areas are to be provided with a few life jackets and life buoys
- Volunteers could use those resources during first response
- Informing people, living in flood prone areas, regarding various types of available Insurance policies.
- Communicating various aspects of flood to the people residing in flood prone areas through various techniques of IEC.
- Identification of places affected by floods previously.
- Drafting of special type of Map indicating flood prone areas, direction of river flow, drainage system and all the metallic and gravel roads.

Table C 2.2.2 Draught

Structural Work
<ul style="list-style-type: none"> • Rain Water Harvesting, Watershed management – Check Dam, Stop Dam in nallahs and roof-water harvesting could help in conserving rain water • Climate-resilient farming – In order to reduce the effect of flood on the livelihood of farmers, they must be trained and provided with climate-resilient seeds. This is being done by Krishi Vigyan Kendra. • Deepening and Digging of Water bodies – In order to store more rain water the cleaning of water bodies, deepening and digging activities is to be carried out. • Tree Plantation – In order to prevent draught tree plantation activities are to be carried out and necessary policies are to be formulated in this effect.
Non-Structural Work

- NGOs, CBOs must spread awareness among the villagers regarding rainwater harvesting and how it could help them minimize loss due to draught
- NGOs, CBOs must spread awareness among the farmers regarding climate-resilient seeds and farming
- Farmers need to be more efficient in their use of water
- District level arrangement is to be developed in order to ensure efficient utilization of water resources.
- Encouraging farmers to take up insurance related to agriculture.
- In order to spread awareness regarding agricultural insurance several camps is to be organized throughout the district in coordination with insurance companies.
- Mass Awareness program is to be conducted for better maintenance of water resources.
- Encouraging and imparting training to the farmers relating to crops which requires less water.
- Cooperative organization is to be formed and mobilized.

Table C 2.2.3 Industrial and Chemical Accident

Structural Work
<ul style="list-style-type: none"> • Use of fire system and other safety systems • Maintaining all the critical facilities at the best safety conditions • In case of LPG bottling plant, use of Ethyl Mercaptan as an odorant and the container for LPG must be thoroughly checked for internal structural weakness • All storage containers must be stored under a roof • All material must be stored in such a way that there is always sufficient space for fire-fighting access
Non-Structural Work
<ul style="list-style-type: none"> • Hazardous industries must ensure proper safety measures and strictly follow the standards by Bureau of Indian Standards • Industrial Health and Safety and Department of Industry must conduct periodic review of safety measures of hazardous industries and give necessary suggestions. If safety measures are not proper, IHS should cancel the license of that industry • NO SMOKING and HIGHLY FLAMMABLE signs must be placed on the security fence and on storage structure • Management must ensure that fire-fighting equipment is adequate and regularly serviced • Routine training of staff in Hazard Management and First Aid procedures must be conducted on a regular basis • A suitable, properly calibrated combustible gas indicator (explosimeter) may be used for testing the concentration of LPG in air (in case of leakage)

Table C 2.2.4 Epidemic

Structural Work
<ul style="list-style-type: none"> • Ensuring proper drainage system and proper removal of dirty and polluted water. • Establishing waste disposal system and construction of dustbin at required places. • Arrangement of purified drinking water source and construction of lavatory. • Spraying of D.D. T and bleaching powder from time to time. • Establishing Primary Health Centres. • Identifying places for disposal of dead animals and carcass.
Non-Structural Work
<ul style="list-style-type: none"> • Capacity building by Health Department to ensure enough resources are available during outbreaks • Health Department must communicate and cooperate with NGOs like Red Cross • Ensure vaccination in places where outbreak happens e.g. following the outbreak of Chickengunia in Noorabad, Health Department must ensure that children around the place must be vaccinated against it. • Arrangement of special Health Camp from time to time at sensitive places. • Conducting awareness program to convey the reasons for spreading of epidemics. • Proper arrangement of vaccination. • Conducting special Education and Information campaigning program such as Wall Painting, Folk Songs etc. to aware people regarding various aspects of Health and Hygiene.

Table C 2.2.5 Festival and Fair Related Accident

Structural Work
<ul style="list-style-type: none"> • Rides like Merry-go-round need to be properly checked before use • Construction of Two Lanes in the pre-identified places of accidents. • Construction of Sign Boards at the accident prone zone. • Ensuring necessary activities to displace the markets form main roads, State Highways and National Highways. • Construction of Side Railings of the culverts and repairing thereto. • Marking on the surface of the roads. • In order to ensure better and fast medical aid arrangement of Mobile Trauma Vehicle at the accident prone zone. • Construction of Ramble Strip at the accident prone places and junctions to reduce the speed of the vehicles plying on the roads. • Construction of Sign-Boards before two Km. of unmanned Railway Crossings.
Non-Structural Work

- Proper crowd management by traffic police and volunteers
- Community based disaster management
- Continuous patrolling on Highways.
- Establishment of Pickets at all accident prone zones.
- Activation of Mobile Medical Team.
- Imparting training of Emergency First Aid Relief to Police personnel posted at accident prone zone.
- Ensuring strict observance of the rules of Seat Belt and helmet.
- Continuous monitoring and supervision to ensure that all the free roaming animals on the Highways are removed.
- Imparting proper Training to the families and communities living on the both sides of main roads, State Highways and National Highways.
- Trying to convert all the unmanned crossings into manned crossings by discussion with railways.

Table C 2.2.6 Road and Other Accidents

Structural Work
<ul style="list-style-type: none"> • Construction of Two Lanes in the pre-identified places of accidents. • Construction of Sign Boards at the accident prone zone. • Ensuring necessary activities to displace the markets form main roads, State Highways and National Highways. • Construction of Side Railings of the culverts and repairing thereto. • Marking on the surface of the roads. • In order to ensure better and fast medical aid arrangement of Mobile Trauma Vehicle at the accident prone zone. • Construction of Ramble Strip at the accident prone places and junctions to reduce the speed of the vehicles plying on the roads. • Construction of Sign-Boards before two Km. of unmanned Railway Crossings.
Non-Structural Work
<ul style="list-style-type: none"> • Ensure that bridges and roads which remain busy are in good condition • Ensure road rules are properly followed by alerting the traffic police • Highway police must be alert so that anyone who breaks the road-rules could be caught • Capacity building of traffic police and highway police • Continuous patrolling on Highways. • Establishment of Pickets at all accident prone zones. • Activation of Mobile Medical Team. • Imparting training of Emergency First Aid Relief to Police personnel posted at accident prone zone. • Ensuring strict observance of the rules of Seat Belt and helmet.

- Continuous monitoring and supervision to ensure that all the free roaming animals on the Highways are removed.
- Imparting proper Training to the families and communities living on the both sides of main roads, State Highways and National Highways.
- Trying to convert all the unmanned crossings into manned crossings by discussion with railways.

C 3 Financial Provisions for Disaster Management

As Stated in the section (48) of the DM Act 2005, the State Government shall establish for the purposes of the Act the following funds:

C 3.1 District Disaster Response Fund

This fund will be constituted and made available to the District Disaster Management Authority for meeting the expenses for emergency response, relief and rehabilitation.

C 3.2 District Disaster Mitigation Fund

This fund will be constituted and made available to the District Disaster Management Authority for meeting the expenses on mitigation activities.

By Ministries & Departments of Government of India & State Government: As per the section (49) of the Disaster Management Act, 2005, the every ministry or department of government of India and the state government shall make provisions in their annual budget for carrying out the activities & programs set out in their disaster management plans. The State Disaster Response Fund (SDRF) and Chief Minister's Relief Funds are also available to meet any emergency requirement, at the district level.

C 4 Coordination mechanisms with other stakeholders

C 4.1 Mapping of stakeholders in the District

C 4.1.1 Private and Public Sectors

There are no public sector undertakings in Morena. Private sector enterprises could help the district administration with their safety resources during disaster. Following is a list of resources available with two major private sector undertakings – JK tyres and Prachi Gas Bottling Plant.

List 10 Fire Safety Equipments available with Private Sector

Name and address	Contact Person and Number	Resources available	
JK Tyres, Banmore	Mr. A.R. Shinde, Unit Head, JK Tyres, Banmore	Equipment (Mobile / Fixed)	No. of units
		Mech. Foam Generator (Mobile)	3
		Fire Extinguisher DCP (Mobile)	161
		Fire Extinguisher Carbon dioxide (Mobile)	155
		Fire Extinguisher Mech. Foam (Mobile)	29
		Fire Extinguisher water and carbon dioxide (Mobile)	6
		Sand buckets (Mobile)	90
		Automatic Sprinkler system (Fixed)	5
		Hydrant posts (Fixed)	101
Prachi Gas Bottling Plant, Banmore	Mr. Roop Narayan Shah, 09301294369/ 09303573152	Equipment (Mobile / Fixed)	No. Of units
		First Aid Box (Mobile)	2
		Sand Bucket (Mobile)	12
		Fire Extinguisher dry powder (Mobile)	4
		Fire Extinguisher Carbon dioxide (Mobile)	3
		Water sprinkle system (Fixed)	5
		Fire hydrant point with hoses (Fixed)	4

Source: JK Tyres Safety Plan and Prachi Gas Safety Plan

C 4.1.2 Non Governmental Organizations and Community Based Organisations:

Local NGOs and CBOs, due to their proximity to the community, can act as a vital link between government and the community particularly during emergencies. They are in a better position to

appreciate the area and time specific problems of the people and their flexibility in approach makes them more acceptable in the community. The Role of NGOs and CBOs in disaster management will be in three stages:

<p>Preparedness</p> <ul style="list-style-type: none"> ○ Community awareness and capacity building ○ Community Based Disaster Management Planning. ○ Assisting and participating in preparation of disaster management plans at Block, district, municipal and gram panchayat levels. ○ Support in vulnerability assessment and mapping ○ Support in preparing mitigation strategy and plans; assessments for structural and non-structural mitigation. ○ Support in policy review on disaster management ○ Reviewing and upgrading DM Plans ○ Documentation
<p>Emergency Response</p> <ul style="list-style-type: none"> ○ Dissemination of warning ○ Evacuation, Search and Rescue ○ Relief distribution ○ Medical aid ○ Emergency shelter ○ Immediate restoration ○ Women and Child care ○ Trauma Counselling ○ Coordination of Volunteers ○ Community mobilization ○ Documentation
<p>Recovery</p> <ul style="list-style-type: none"> ○ Restoration of damaged community structures (schools, etc.) ○ Construction and management of MCS ○ Restoration of livelihood ○ Rehabilitation of vulnerable groups ○ Restoration of environment ○ Managing emergent group activities ○ Recovery planning, coordination, evaluation ○ Documentation

C 4.1.3 Religious Institutions:

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

C 4.1.4 Academic Institutions:

Academic institutions within the district and also outside the district could help with subject specific expertise for disaster management planning. This section will document all those relevant information which will be used as reference in future.

Schools and colleges premises can be used as relief Centres and temporary shelter during flood or any other disaster.

The Disaster management Institute, Bhopal can act as the provider of subject specific expertise for disaster management planning. The following agency can be contacted for further expertise:

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

The only prominent International Humanitarian Organization active in Morena is Red Cross society. Indian Red Cross Society Red Cross Bhavan Shivaji Nagar Bhopal- 462016. Code: 0755 (O) 07552550441. Fax- 0755 2552475

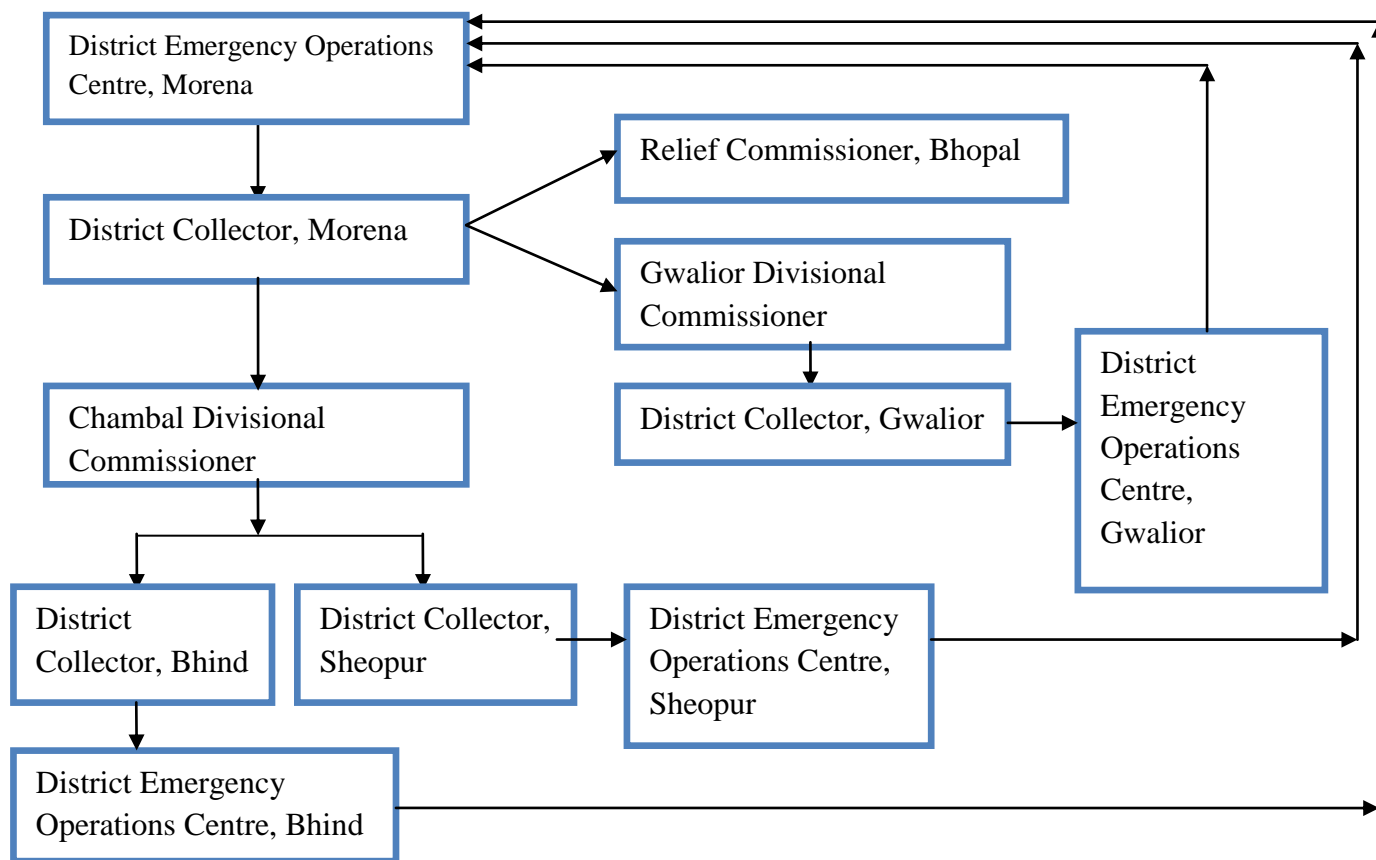
C 4.2 Responsibilities of the stakeholders

Key responsibilities of the stakeholders are:

- Informing the district authorities about the specific vulnerability of the area.
- Assisting the district authorities in implement mitigation strategies for the vulnerability.
- Coordinating with the Search and rescue team.
- Providing district authorities the required resources at subsidized rates during the disaster.
- Providing all the available facilities with them to the disaster affected victims
- Volunteering to organize and maintain the relief Centres.
- Working with the Disaster team in restoration of livelihoods
- Getting funds for relief measures.
- Arranging for resources needed in health institutions to deal with emergency.
- 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 DEOC head can seek help from other districts through Divisional Commissioner.

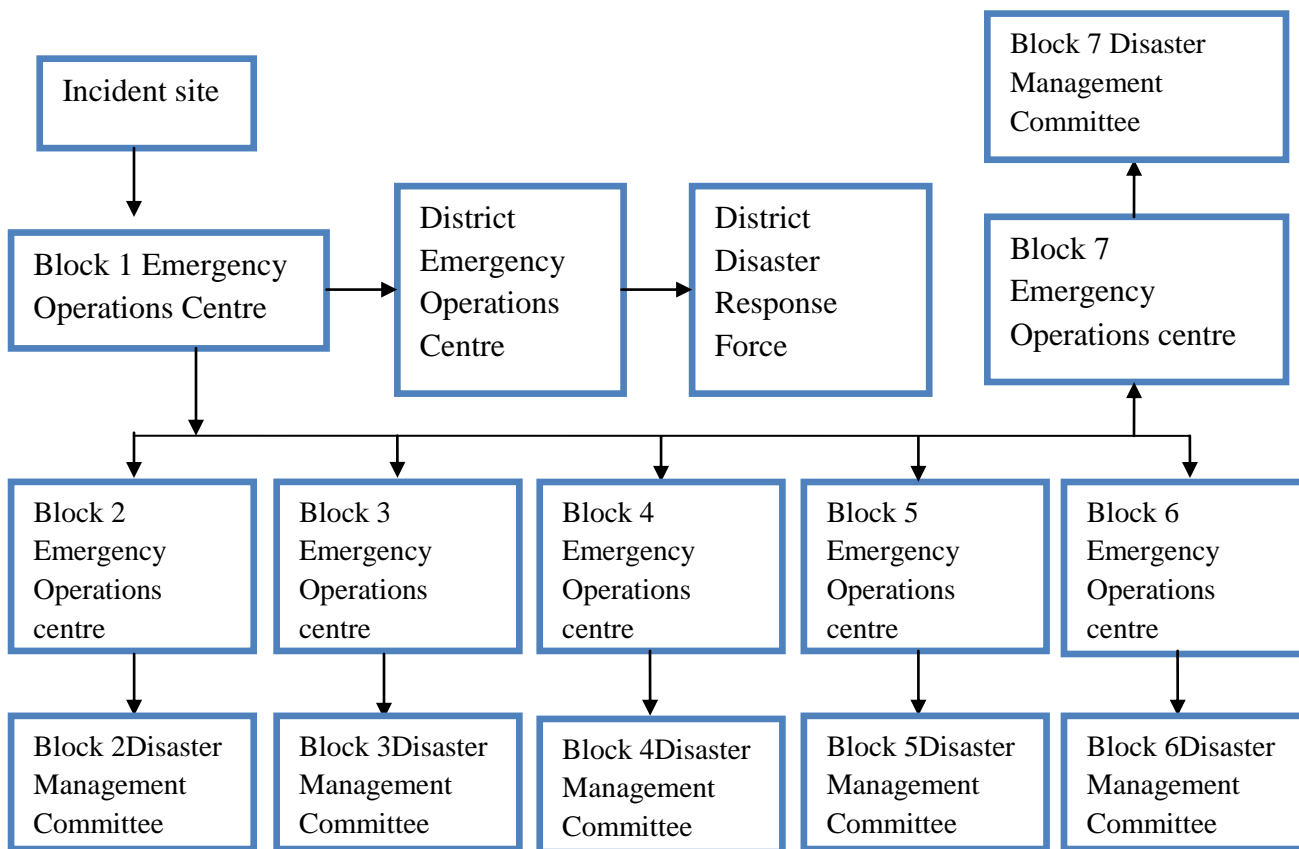


Important Contact Numbers

District	Name and Designation	Office number	Mobile number
Bhind	Shri Akhilesh Kumar Srivastav, District Collector	07534 234200	9425137428
	SP	07534 234300	
	Dr. N.C.Gupta, CHMO		9425130631
Sheopur	Shri G.B. Patil, District Collector	07530 220058	9425171409
	SP	07530 222400	

	Dr. Ashok Kumar Mudgal, CHMO		9826329494
Gwalior	Shri P. Narahri, District Collector	0751 2446200	9424734500
	SP	0751 2445200	
	Dr. Archana Singhrekar, CHMO	0751 2452994	

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



In the flowchart above, the intra-district co-ordination mechanism is shown. All the block level DMCs will co-ordinate with each other as shown above during disaster situation.

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 defence services.
- To the district authorities, government departments, NGOs and other agencies and institutions within the district
- Through mass media to the general public.

C 7.1 Plan Evaluation

The purpose of monitoring & evaluation of DDMP is to determine the adequacy of resources, co-ordination between various agencies, community participation, partnership with NGOs and other entities, Post-disaster evaluation mechanism, Periodic uploading of plans at India Disaster Knowledge Network (IDKN) and resources on India Disaster Resource Network (IDRN), Conducting periodic mock drills, Checking whether all the personnel involved in execution of DDMP are trained and updated on the latest skills necessary in line with updated plans.

C 7.2 Plan Update

DDMA will update the district disaster management plan every year with inputs from all the updated block disaster management plans and also from the plans of line departments of the district. The plan will be updated for the resource requirements, updates on human resources, technology and coordination purposes.

A system would be in place to update the plan on an annual basis to ensure that the items requiring updating are considered and are current. This will involve:

- Submission of annually updated disaster management plans by all the block disaster management committees and urban disaster management committees to DDMA.
- Copies of the received updated plans from the block disaster management committees and urban disaster management committees to be given to the

Technical committees, which will be formed as sub-committees of the DDMA and District Disaster Management Advisory Committee for review and suggestions.

- Final annual meeting to be organized by the DDMA, which will be participated by DDMA members and district disaster management advisory committee.
- The updated plan will be placed before SDMA for approval.

When an amendment is made to a plan, the amendment date would be noted on the updated page of the plan.

- Copies of the amendments made & approved by the SDMA needs to be circulated to all the concerned government departments, block & urban bodies disaster management committees & other relevant agencies.
- All the disaster management liaison officials in every agency would be designated to ensure that all plan-holders are notified of changes as soon as possible.

C 8 Annexure

C 8.1 District profile

Comprehensive list of block-wise health facilities in Morena district is given below:

Block name : Morena	No. of Hospitals: 1 (District Hospital)	No. of medical officers: 25 No. of nurses, compounders: 55 No. of available ambulances: 2 No. of beds: 300
	No. of dispensaries/sub health centres: 42 sub health centres and 1 civil dispensary	No. of medical officers: 1 (in civil dispensary) No. of nurses, compounders: 79 No. of available ambulances: 0 No. of beds: 0
	No. of Primary Health Centres (PHCs): 3 (Bamore, Nayakpur, Rithora)	No. of medical officers: 4 No. of nurses, compounders: 7 No. of available ambulances: 0 No. of beds: 20
	No. of Community Health Centres (CHCs): 1 (Noorabad)	No. of medical officers: 9 No. of nurses, compounders: 4 No. of available ambulances: 1 No. of beds: 30

Block name : Ambah	<p>No. of Hospitals: 1 (Civil Hospital)</p> <p>No. of sub health centres: 29</p> <p>No. of Primary Health Centres (PHCs): 2 (Deemni, Joha)</p> <p>No. of Community Health Centres (CHCs): 1 (Khadiahar)</p>	<p>No. of medical officers: 7 No. of nurses, compounders: 12 No. of available ambulances: 0 No. of beds: 58</p> <p>No. of medical officers: 0 No. of nurses, compounders: 49 No. of available ambulances: 0 No. of beds: 0</p> <p>No. of medical officers: 3 No. of nurses, compounders: 7 No. of available ambulances: 0 No. of beds: 0</p> <p>No. of medical officers: 1 No. of nurses, compounders : 4 No. of available ambulances: 0 No. of beds: 30</p>
Block name : Joura	<p>No. of sub health centres: 31 sub health Centres</p> <p>No. of Primary Health Centres (PHCs): 4 (Sumawali, Galaitha, Devgarh, Bagchini)</p> <p>No. of Community Health Centres (CHCs): 1 (Joura)</p>	<p>No. of medical officers: 0 No. of nurses, compounders: 59 No. of available ambulances: 0 No. of beds: 0</p> <p>No. of medical officers: 3 No. of nurses, compounders: 11 No. of available ambulances: 0 No. of beds: 0</p> <p>No. of medical officers: 4 No. of nurses, compounders: 10 No. of available ambulances: 1 No. of beds: 30</p>
Block name : Porsa	<p>No. of sub health centres: 31</p> <p>No. of Primary Health Centres (PHCs): 2 (Mahua, Parikshitpura)</p> <p>No. of Community Health</p>	<p>No. of medical officers: 0 No. of nurses, compounders: 54 No. of available ambulances: 0 No. of beds: 0</p> <p>No. of medical officers: 2 No. of nurses, compounders: 4 No. of available ambulances: 0 No. of beds: 0</p> <p>No. of medical officers: 4 No. of nurses, compounders: 5</p>

	Centres (CHCs): 1 (Porsa)	No. of available ambulances: 0 No. of beds: 30
Block name : Sabalgarh	No. of sub health centres: 23 sub health Centres No. of Primary Health Centres (PHCs): 3 (Rampurkala, Tetra, Mangrol) No. of Community Health Centres (CHCs): 2 (Sabalgarh, Jhundpura)	No. of medical officers: 0 No. of nurses, compounders: 30 No. of available ambulances: 0 No. of beds: 0 No. of medical officers: 2 No. of nurses, compounders: 4 No. of available ambulances: 0 No. of beds: 20 No. of medical officers: 12 No. of nurses, compounders: 11 No. of available ambulances: 1 No. of beds: 30 + 30
Block name : Pahargarh	No. of sub health centres: 22 sub health Centres No. of Primary Health Centres (PHCs): 2 (Bara, Pachokharal) No. of Community Health Centres (CHCs): 1 (Pahargarh)	No. of medical officers: 0 No. of nurses, compounders: 32 No. of available ambulances: 0 No. of beds: 0 No. of medical officers: 1 No. of nurses, compounders: 3 No. of available ambulances: 0 No. of beds: 0 No. of medical officers: 1 No. of nurses, compounders: 3 No. of available ambulances: 1 No. of beds: 30
Block name : Kailaras	No. of sub health centres: 21 No. of Primary Health Centres (PHCs): 1 (Sujrama) No. of Community Health Centres (CHCs): 1 (Kailaras)	No. of medical officers: 0 No. of nurses, compounders: 29 No. of available ambulances: 0 No. of beds: 0 No. of medical officers: 1 No. of nurses, compounders: 3 No. of available ambulances: 0 No. of beds: 20 No. of medical officers: 5 No. of nurses, compounders: 7 No. of available ambulances: 2 No. of beds: 30

Source: CHMO's office

List 11 Search and Rescue, Clearance equipments and Fire fighting equipments

Departments (CMO - contact number)	Fire Brigade	Tractor	Boat / Country Boat	Steamer	Diesel Pump	Life Jacket	Motor Boat	JCB	Water Tanker	Dumper	Loader	Search Light	Anchor
Nagarpalika Porsa (Shri Y.S.Tomar 9826278833)	1	1			1				2				
Nagarpalika Banmore (Shri R.Sharma 9826214119)	1	1						1	2				
Nagarpalika Morena (Shri K.K.Sharma 9425031812)	3							2	4	4	2		
Nagarpalika Ambah (Shri J. Pare 9669230213)	1							1	2				
Nagarpalika Kailaras (Shri J.S. Khusba 9893466985)	1								3				
Nagarpalika Sabalgarh (Shri M. Kariosia 9425779370)	1	2	7					1	6				
Nagarpalika Joura (Shri K. Gani 9893412660)	1								2				

Departments (CMO contact number)	Fire Brigade	Tractor	Boat / Country Boat	Steamer	Diesel Pump	Life Jacket	Motor Boat	JCB	Water Tanker	Dumper	Loader	Search Light	Anchor
Nagarpalika Jhundpura (Shri A.K. Bansar 9827539393)	1								1				
Tehsildar Porsa Shri Mansingh Pawk 9893583584			2	1									
Tehsildar Ambah Shri N. Gupta 9826976846			4										
Tehsildar Sabalgarh Shri B.P. Srivastava – 9425164591			6	1									
Forest Department 07532-234742			3			25	4						
Home Guard Office 07532- 230466						70	2					2	2

Detailed list of population of Gram Panchayats in flood hazard prone areas of Morena district is given below:

Block Porsa

Gram Panchayats / Villages	Population
Rattan basai	4,283
Rudhaoli	4,311
Useth	4,326
Raipur	2,082
Nagara Porsha	3,166
Total Population Affected	18,168

Block Ambah

Gram Panchayats / Villages	Population
Easah	4,283
Jonha	4,863
Kuthiana	2,905
Beelpur	2,050
Khirenta	5,535
Aroli	1,744
Malbasai	1,073
Goonj	1,506
Kakrari	2,049
Dandoli	1,732
Rithona	2,799
Kisroli	672
Gosbasai	290
Total Affected Population	31,501

Block Morena

Gram Panchayats / Villages	Population
Bhanpur	1,366
Nayakpura Magra	1224
Deopura Gadora	1,291
Gorkha	879
Rithorakhurd Magra	864
Jakhona Magra	5,214
Total Affected Population	10,838

Block Joura

Gram Panchayats / Villages	Population
Singroli,	3,129
Chinnoni Chambal	3,466
Didonkhar	577
Uttampura	1,638
Brijgadi	3,244
Chinvara	1,328
Gurja	748
Tajpur	1,239
Sarseni	3,130
Guda Chambal	2,556
Khandoli	7,037
Total Affected Population	28092

Block Sabalgarh

Gram Panchayats / Villages	Population
Barotha	1,241
Khanchida	192
Kemarakala	4,527
Kemarakhurd	865
Banthar	291
Gadhula	256
Gondoli	2,535
Atar	2,702
Digwar	1,536
Rahu Ka Gaon	3,063
Kheron	978
Kalarghadi	413
Norawalikraworen	3,314
Jhundpura	8094
Total Population	30,007

C 8.2 Resources

External links used while preparing this document are as follows:

1. <http://www.censusindia.gov.in>
2. <http://www.mpforest.org/intranet/fire2009/firerpt2.aspx?div=MORENA&dt1=19%20Jun%201995&dt2=19%20Jun%202012&fl=yzymuvee.xml>
3. <http://www.nicra-icar.in/nicrarevised/images/Books/Action%20Plan%20100%20Vulnerable%20Districts%20with%20title%20for%20NET.pdf>
4. <http://saarc-sdmc.nic.in/pdf/india/file4.pdf>
5. http://mp.gov.in/spb/dist%20plan/district%20profile/DI_Profile/DI%20Profile%20-%20Morena%20-%2010112010.pdf
6. <http://www.educationportal.mp.gov.in/>
7. <http://www.doe.gov.bz/documents/services/Guidelines%20for%20LPG%20Industry.pdf>
8. <http://www.nidm.net/b>
9. http://www.teriin.org/events/icom/files/mycorrhized_jatropha.pdf
10. <http://www.teriin.org/upfiles/projects/ES/jatropha.pdf>
11. <http://india.gov.in/allimpfrms/alldocs/15657.pdf>
12. http://www.mpkrishi.org/krishinet/Compendium/othermissl_districtaffected.asp

List of resources for disaster management available in the district can be found in the following places:

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>.

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 environment 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.

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

C 8.3 Media and information management

Media and information management is primarily done by the District Public Relations officer. A list of key new channels and journalists is given below:

List 12 Key news channels and journalists

Name	News Agency	Address	Contact Number
Shri Chandra Prakash Shivre	Hindustan Express	D.I.D, Morena	9425126025
Shri Upendra Gautam	Aakash Bani	Mill Road, Morena	9425418456
Shri Mukesh Sharma	Bharat Samachar	Gayatri Colony, Morena	9926216943
Shri Debakar Sharma	Hindustan News Agency	Morena	9425795030
Shri K.S. Rajput	Sahara Samay	Gopalpura	9826371880
Shri Manoj Sharma	Sadhna Channel	Behind rest house	9425128895

C 8.4 Important Contact numbers

List 13 Revenue officers and other department heads

Designation and Name	Address	Office contact	Residence contact
District Collector - Shri D.D.Agarwal	Office of Collector	07532223500	9425078735
District SP - Shri Santosh Kumar Singh	Office of SP	07532232200	9425156769
CEO Zilla Panchayat Shri Vinod Sharma	Collectorate	07532222500	9425116338
Additional District Magistrate Shri Ashok Kumar Bajpayee	Collectorate	07532222191	9425381037
District Forest Officer Shri R.S. Sikharwar	Forrest office	07532234742	9424791800

CHMO Dr. G.S. Rajput	Health Department, Commissioner Office building	07532225760	9893554085
District Food Officer Shri R.S. Dhakre	Collectorate	07532226363	9827232011
Executive Engineer, Irrigation Shri R.P. Jha	Irrigation Department, Chambal Colony	07532234352	9826627710
Executive Engineer, PWD Shri R.K. Gupta	PWD	07532226361	9826229155
Executive Engineer, RES Shri K. Grewal	RES	07532234784	9479479014
Officer of Public Health Engineering Department	PHE department	07532233393	
Deputy Director Agriculture Shri S.K. Dhruvey	Agriculture Department	07532226450	9826334387
District Planning Officer	District Planning Office	07532227789	7879808100
Deputy Director Veterinary Department	Veterinary Department	07532234342	9300763751
Commandant Home Guard Morena	District Commandant Office	07532230466	8349750470
Tehsildar Porsa Shri Mansingh Pawk	Porsa		9893583584
Tehsildar Ambah Shri Naresh Gupta	Ambah		9826976846

Tehsildar Sabalgarh Shri B.P. Srivastava	Sabalgarh		9425164591
Tehsildar Joura Shri Niraj Sharma	Joura		9826248644
Tehsildar Morena Shri Bhupendra Singh Khusba	Morena		9039012629
Tehsildar Kailaras Shri Pradeep Sharma	Kailaras		9425129303

List 14 Doctors in-charge of health institutions

Place of institution	Name of institution	Name of in-charge doctor	Contact number
Morena	District Hospital	Dr. Mahesh Chand	07532226318 (office) 9425313682
Ambah	Civil Hospital	Dr. D.S. Yadav	07538255846 (office) 9425752199
Sabalgarh	CHC	Dr. M.P. Gupta	07536 253324 (office) 9425457242
Kailaras	CHC	Dr. S.R. Mishra	07536 287007 (office) 9893073717
Pahargarh	CHC	Dr. R.S. Sikarwar	07536 286338 (office) 9826586340
Joura	CHC	Dr. R.S. Semil	07532 245130 (office) 9425735100
Porsa	CHC	Dr. S.N. Mewafarosh	07538 254166 (office) 9826527568
Khadiyahaar	CHC	Dr. J.C. Karkur	07532 239136 (office) 9827212571
Jhundpura	CHC	Dr. B.K. Sakya	07536 251404 (office) 9300481988
Banmore	PHC	Dr. Virendra Mungi	07532 255738 (office) 9827239628
Sujarma	PHC	Dr. Nikhil Jain	07536 259748 (office) 9898475472

Rampurkala	PHC	Dr. N.K. Sakya	07536 255400 (office) 9893938722
Sumawali	PHC	Dr. Atul Tomar	07532 238777 (office) 9893476134
Dimni	PHC	Dr. Narendra Upadhyay	07538 285352 (office) 9981690450
Pachokhara	PHC		07536 281151 (office)

List 15 Police officers and police stations

Rank/Region	Name	STD	Telephone	Mobile
Inspector General of Police	Shri S.W. Nakwi	0751	2445250	9425151652
D.I.G	Shri D.P. Gupta	0751	2445207	9425811100
Superintendent of Police	Shri Sanjay Kumar	07532	232200	9425156769
A.S.P	Shri S. Satish	07532	250786	9406808111
	Shri Amit			9425119280
C.S.P	Shri S.K. Burma	07532	250270	9425195955
Reserve Inspector	Shri Manavendra Singh	07532	250350	9425474185
Communication	Shri Mahendra Thombare			9407077444 / 9993476500
Thana Kotwali	Shri J.P. Bhatut	07532	259423	9479996002
Thana Civil Line	Shri Rakesh Gupta	07532	234360	
Thana Sahaijhola	Shri P.N. Pal	07532		9425489871
Thana Dimni	Shri H.S. Chauhan	07538	285222	9000911229
Thana Matabsoya	Shri Ajit	07532	238322	9425119280
Thana Sihoniya	Shri B.S. Yadav	07538	239022	9425381239
SDOP Ambah	Shri Sunil Pathidar	07538	256100	9926412100
Thana Ambah	Shri R.S. Rathod	07538	256101	8120937009
Thana Porsa	Shri Rakesh Jain	07538	254022	9425694822
Thana Mahua	Shri R.S. Gaur	07538	283322	9425336421
Thana Nagra	Shri D.S. Marabi	07538	227518	9424731631
SDOP Banmore	Shri Sunil Kumar	07532	255355	9827275538
Thana Banmore	Shri Rajesh Tiwari	07532	255555	9009688200
Thana Noorabad	Shri S.S. Tomar	07532	239399	9993280900
Thana Sumawali	Shri P.S. Rathod	07532	238722	9926619079
Thana Rithora	Shri S. Yadav			9926215080
SDOP Joura	Shri S.P. Agarwal	07537	245036	9425002839
Thana Joura	Shri B.K. Parasar	07537	245100	9425120185
Thana Bagchini	Shri Balmukand	07532	237484	9755295177
Thana Devgarh	Shri S. Rayamdar	07537	294100	9425617310
SDOP Kailaras	Shri S.P. Agarwal	07536	287022	9425002839
Thana Kailaras	Shri G. Singh			9753733476
Thana Sabalgarh	Shri K.K. Awasthy			9893531239
Thana Chinnoni	Shri H. Rathod			9039615441

Thana Nirar	Shri S.S. Sikharwar			9753203576
SDOP Sabalgarh	Shri P. Ikka	07536	252709	9479995112
Thana Sabalgarh	Shri Raghuwansi	07536	252100	9479996080
Thana Rampur	Shri H. Bawriya	07536	255222	9827310876
Thana Tetra	Shri B. Singh			9300156309
Police Control Room	Shri Pradeep Kumar – 9754444777	07532	233700/ 234567	9479995911

List 16 Active NGOs

Block	Name of NGO	Contact Person	Contact No.
Morena	Red Cross Society	Dr. M.L. Mittar	9907658258
	Chandan Vasundhara Gram Utthan Evom Sahavagiye Gramin Vikhas Samithi	V.S. Tomar	9826842360
	Dharti Sanstha	Devendra Badoria	9425115714
	Moti Sangstha	Virendra Gupta	9893017185
	Bandi Yuva mandal	Devendra Sharma	9301508434
	Sanskrit Sangstha	Devendra Tomar	9827679982
	Lahar Jan Jagriti	Akhikesh	9817110930
	Vasundra Sangstha	Bikam Singh	9826842630
	Sarojini Samajik	Lokendra Tomar	9425078688
	Karan Kasi Sangstha	Sanjay Dandotia	9977613122
	Pratha Samaj Seva Samithi	Nitin Shivhare	9425750842
	Barokar Yuva Sangstha	Mewaram	9981747277
	Kisan Khadi evam gram-o-udyog sangstha	Devendra Gujar	9827202466
	Jai Devi Sikhsha Prasar Samithi	Harpal Singh Sengar	8109487986
	Society For the protection of environment	Shri N. Nigam	9829510720
	Avtar Smriti Samaj Kalyan Sangstha	Virendra Harsana	9300651633
	Morena Khadi Evam Gram Udyog Sang	Gajendra Gujar	9827259772
	Ratan Welfare Society	Satyendra Vidyarthi	9893064987
	Sujagriti Sangstha	Jakir Hussain	9826538808
	Sarva Pitya Kul Devi Siksha Evam samaj seva	Shiv Kumar Garg	9827089062
Bajrang Siksha Prasar Samaj Kalyan Samithi	Harendra Tomar	9826269862	
Satyavati Pariyavaran Jyagrukta evam samjik sangstha	Yogendra Jadon	9907052818	
Karan Kachi Gloria Society	Sanjay Dandotia	9977613122	
Pahargarh	Devsthal Shiksha Prasar Samithi	Lakhan Singh	9754255311
	Syamdev Shiksha Samaj Kalyan Samithi	Kuldeep Bhardwaj	9977320917
Sabalgarh	Bhairo shiksha prasar samithi	Raghuraj Singh Jatab	9301194799
	Patiram Sikhsha Prasar samithi	Sunil Sharma	9425703934
Ambah	Sanjeevani Sangstha	Sudhir Acharya	9826419439
	Biddi Chand Sikhsha Samithi	Naredra Ojha	9907617068
	Sree Ram Chikitsa seva samiti	Dr. Ramesh Srivastava	9329162152

	Purabas Yuva Mandal, Amba	Ram Kiran Sharma	9926746711
Joura	Bikas Silpi	Girish Tiwari	9977022403
	Atma Gandhi Seva, Ajam	P. Srivastava	9425740166
	Shiksha Prasar Samithi, Cholelal	Naresh Agarwal	9826870865
	Disha Sangstha	Ravi Charan Tiwari	9301239793
	Samgha Vikas Sangstha	Lakshmikant Sharma	9425740610
	Samta Sikhsha Prasar	Suresh Kumar Jha	9826879085
	Sonu Samaj Kalyan	Mamta Sharma	9893429263
	Smt Adha Sikhsha Prasar	Kiran Singh	9977245161
	Seva Sikhsha Prasar Samithi	Girja Sankar Sharma	9826879760
	Diya Sikhsha Prasar Samithi	Mukesh Sharma	9300064455
Porsa	Alp Sankhya Kalyan Samithi	Dileep Jain	9754741694
	Poonam Samaj Seva Samithi	Omesh Agarwal	9826240942
	Hiralal Samaj Sikhsha Samithi	Ramkumar Ojha	9826244577
Kailaras	Insur Mahadev Sangstha	Ashok Sikharwar	9425127671
	Gayatri Sikhsha Prasar Samithi	Radhakishan Singhal	9329348105
	Satya Seva Samithi	Bhar Singh Rai	9826802997
	Mahila Bhau Uddesh Samithi	Suresh Sharma	9893516459
	Indra Prath Sikhsha Samithi	Kuldeep Singh	9893269108
	Rajya Bardhan Welfare	Ashok	9589310036
	Garma Anchal Samithi	Suresh Jha	9098591654

List 17 Swimmers of Home Guard

Sl no.	Sainik Number	Name
01	81	Jagdish
02	162	Radharaman
03	173	Ramdhan
04	168	Shripal
05	65	Kedar Singh
06	165	Sabaram
07	132	Rabindra Singh
08	107	Lakhan Singh
09	123	Rajendra Singh
10	13	Surendra Sharma
11	37	Sobaran Singh
12	112	Dilip Boragi
13	7	Lakshmi Narayan
14	149	Jasram Singh
15	159	Mahesh Swami
16	58	Pan Singh
17	153	Saudan Singh
18	167	Ram Naresh
19	135	Barelal

20	142	Ramsevak
21	163	Devendra Sharma
22	83	Lajja Ram
23	152	Hiralal
24	72	Ramavatar
25	117	Amar Singh
26	73	Vishnu Singh
27	136	Maharaj Singh
28	116	Dashrath Singh
29	43	Duwarika Prasad
30	141	Ramswarup
31	115	Gajendra Singh
32	77	Purushottam
33	86	Kamal Singh
34	121	Ram Bhajan
35	31	Shivnath
36	26	Raghuraj Singh

C 8.5 Do's and don'ts of all possible hazards

Do's - Before Flood

- Avoid building in a flood prone area unless you elevate and reinforce your home.
- Elevate the furnace, water heater, and electric panel if susceptible to flooding.
- Install "check valves" in sewer traps to prevent floodwater from backing up into the drains of your home.
- Contact community officials to find out if they are planning to construct barriers (levees, beams, floodwalls) to stop floodwater from entering the homes in your area.
- Seal the walls in your basement with waterproofing compounds to avoid seepage.

Do's - During a Flood

If a flood is likely in your area, you should

- Listen to the radio or television for information.
- Be aware that flash flooding can occur. If there is any possibility of a flash flood, move immediately to higher ground. Do not wait for instructions to move.
- Be aware of streams, drainage channels, canyons, and other areas known to flood suddenly. Flash floods can occur in these areas with or without such typical warnings as rain clouds or heavy rain.

If you must prepare to evacuate, you should do the following:

- Secure your home. If you have time, bring in outdoor furniture. Move essential items to an upper floor.
- Turn off utilities at the main switches or valves if instructed to do so. Disconnect electrical appliances. Do not touch electrical equipment if you are wet or standing in water.

If you have to leave your home, remember these evacuation tips:

- Do not walk through moving water. Six inches of moving water can make you fall. If you have to walk in water, walk where the water is not moving. Use a stick to check the firmness of the ground in front of you.
- Do not drive into flooded areas. If floodwaters rise around your car, abandon the car and move to higher ground if you can do so safely. You and the vehicle can be quickly swept away.

Do's - After a Flood

The following are guidelines for the period following a flood:

- Listen for news reports to learn whether the community's water supply is safe to drink.
- Avoid floodwaters; water may be contaminated by oil, gasoline, or raw sewage. Water may also be electrically charged from underground or downed power lines.
- Avoid moving water.
- Be aware of areas where floodwaters have receded. Roads may have weakened and could collapse under the weight of a vehicle.
- Stay away from downed power lines, and report them to the power company.
- Return home only when authorities indicate it is safe.
- Stay out of any building if it is surrounded by floodwaters.
- Use extreme caution when entering buildings; there may be hidden damage, particularly in foundations.
- Service damaged septic tanks, cesspools, pits, and leaching systems as soon as possible. Damaged sewage systems are serious health hazards.
- Clean and disinfect everything that got wet. Mud left from floodwater can contain sewage and chemicals.

Familiarize yourself with these terms to help identify a flood hazard:

- **Flood Watch:** Flooding is possible. Tune in to Local Radio for Weather Services, commercial radio, or television for information.
- **Flash Flood Watch:** Flash flooding is possible. Be prepared to move to higher ground; listen to Local Radio for Weather Services, commercial radio, or television for information.
- **Flood Warning:** Flooding is occurring or will occur soon; if advised to evacuate, do so immediately.
- **Flash Flood Warning:** A flash flood is occurring; seek higher ground on foot immediately.

Do's - You and Your Family

- Educate your children wife and other family member in respect of natural and manmade disasters and other crises. In case of your being unaware, take help of Civil Defense and Home Guard organization and other NGOs. Develop habit in you and your children to spare 1% of you busy time to think about Individual security and security interests.
- Keep the phone numbers of the local police station, police control rooms, fire stations, and schools, colleges, TV station, All India Radio, ambulance services and Chemists for emergency use.
- Guide children to remain at schools in emergency.

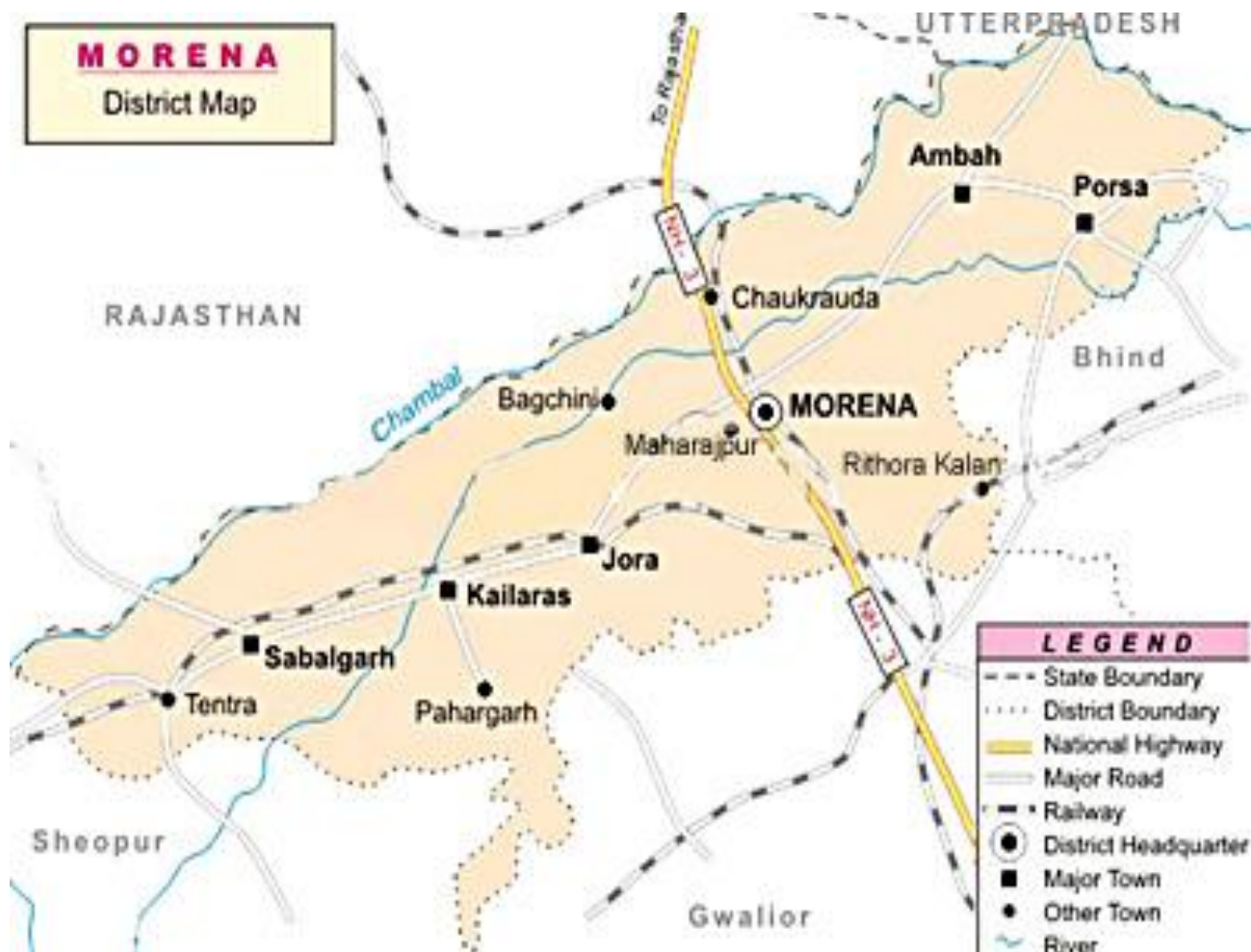
- Prepare an emergency kit of items and essentials in the house including essential documents and valuables.
- Store food and water for survival in case you had a pre-warning.
- Any suspicious incidents observed be reported to police on 100. Callers do not have to give their identity on the phone. Information of immediate use be conveyed to control rooms to help early relief.
- Carry your identity card, residential telephone number or address or personal card with you. Have your blood group and any medical allergies recorded with you.
- Check information in case of disasters and crises from Ward, Civil Defense / Home Guard, and BMC, TV and All India Radio Control room.
- Learn to fight such emergencies untidily.
- Support authorities and NGOs.
- Identify scooters, cars, vehicles parked in society and identify vehicles which are unknown and parked for long.
- Organize societies and muhalla committees to educate people.

Don'ts

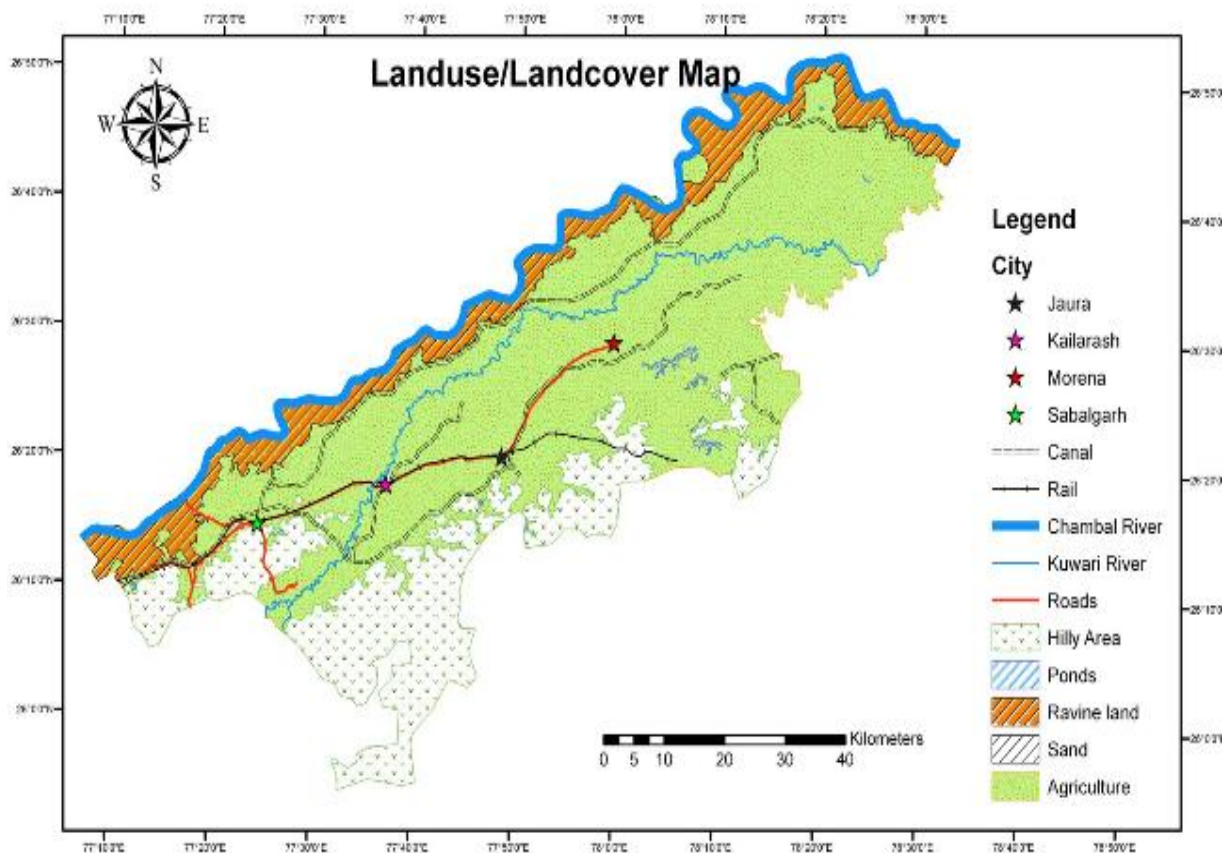
- Do not encourage rumors.
- Do not blame any community for any crises.
- Do not encourage communal hatred in such situations.
- Don't get back in to the cordoned off area till final clearance with protective gears

C 8.6 Detailed Maps

This section contains detailed maps of the district including road map, map of hazard prone areas and map showing the major hazardous industries in the district along with the fire-brigades.



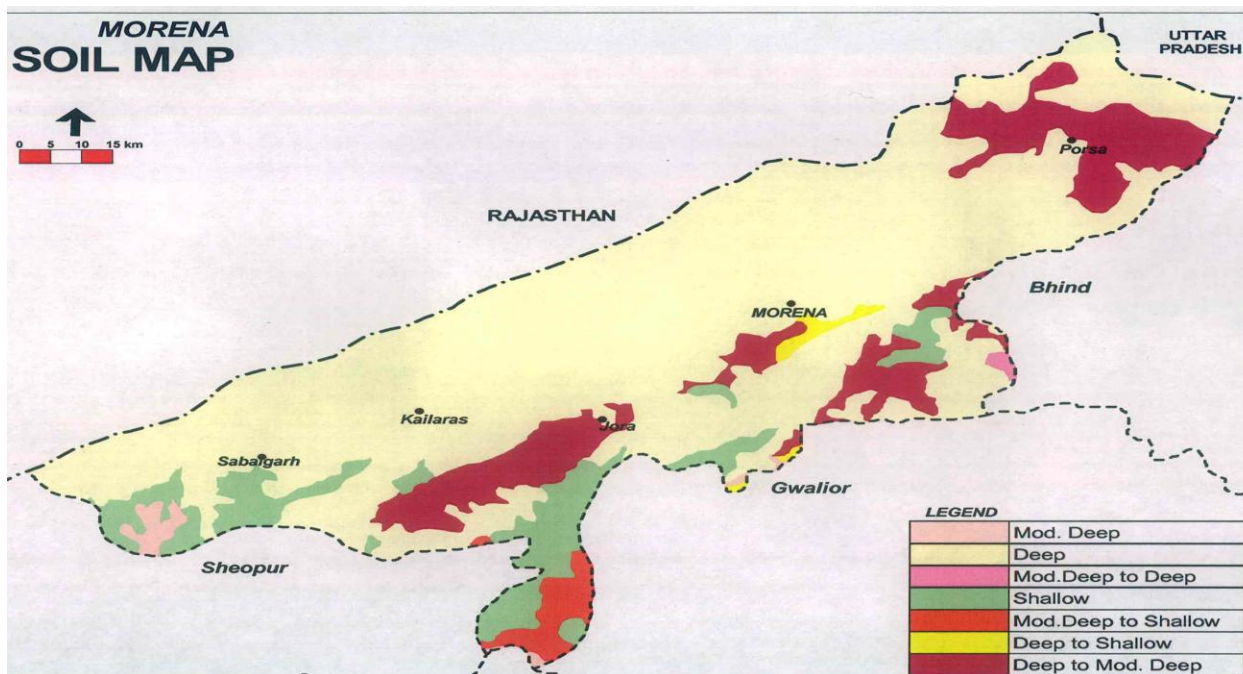
Map 8.1.1 District Map of Morena



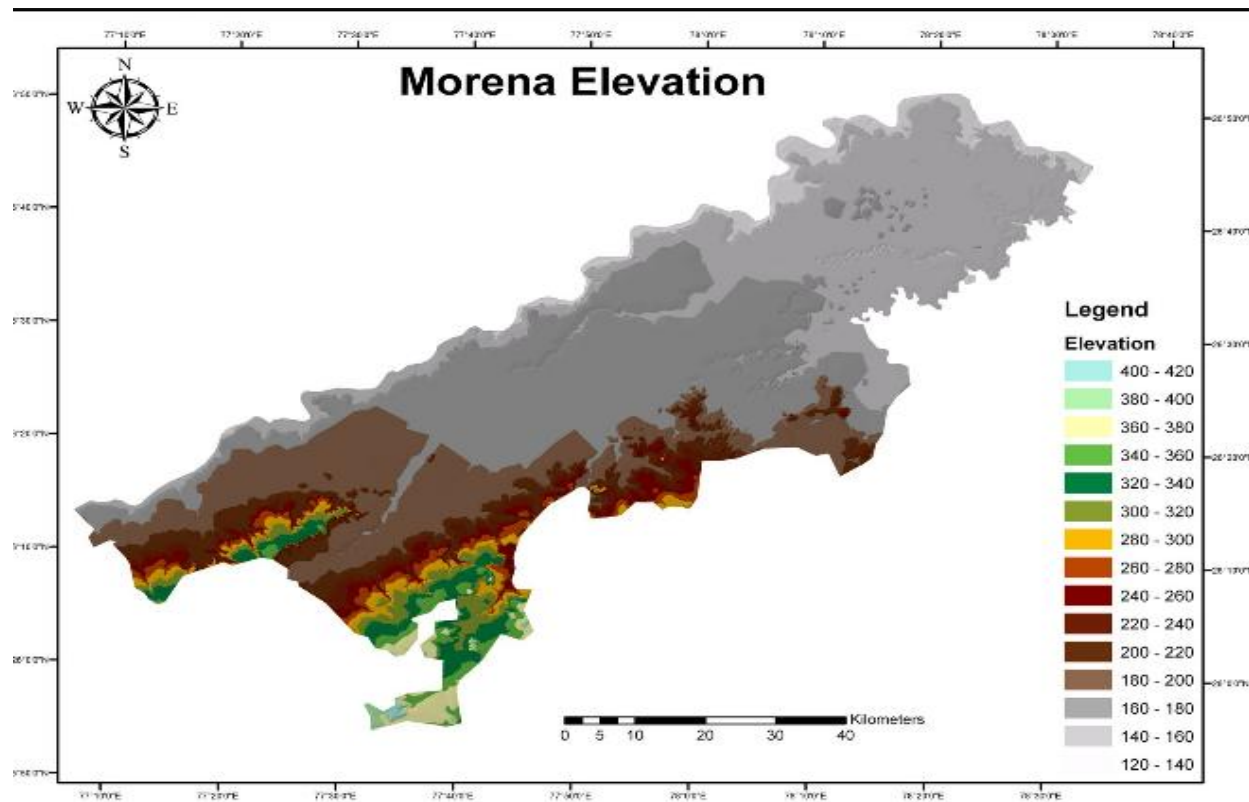
Map 8.1.2 Land-use/Land-cover Map of Morena



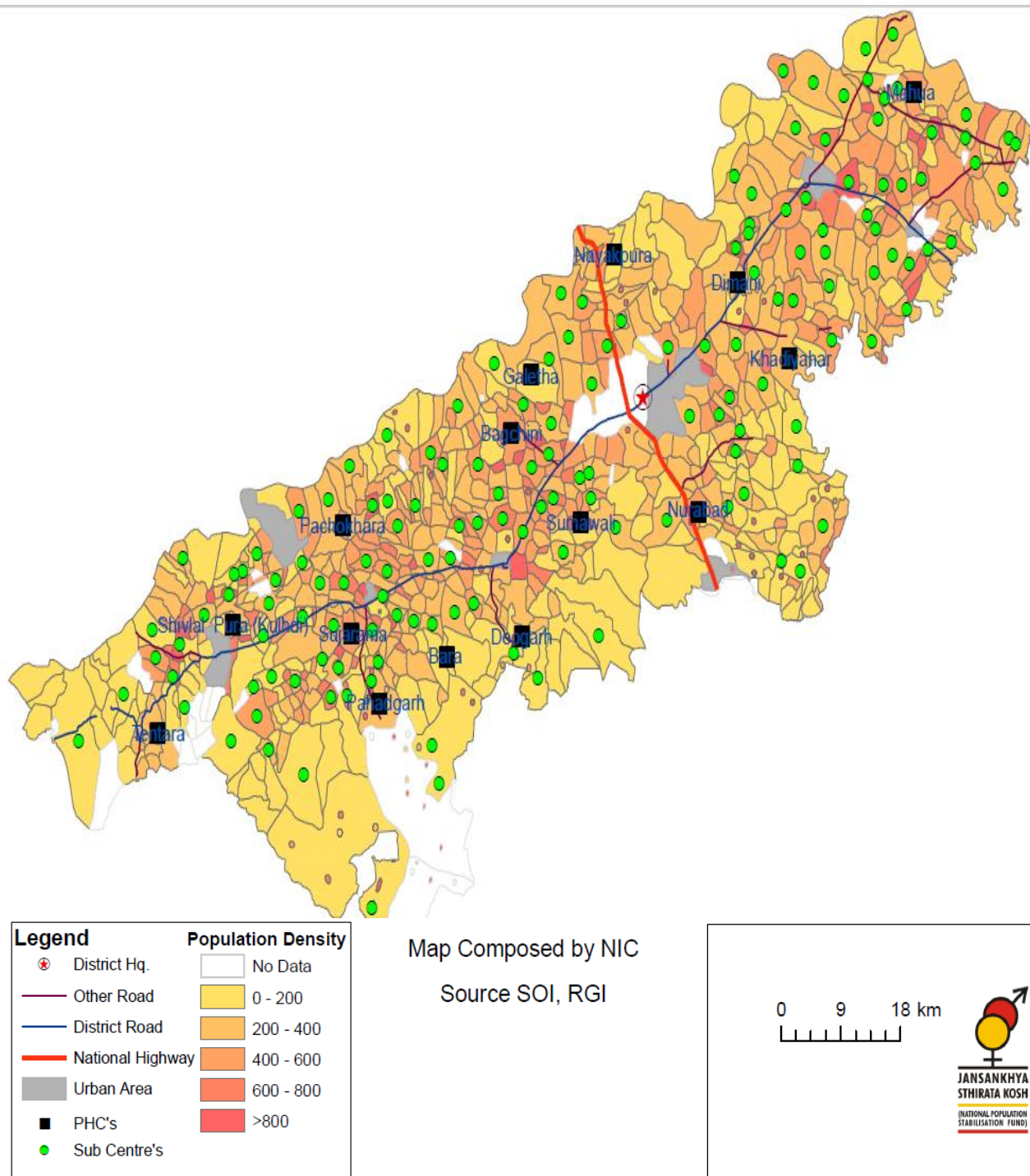
Map 8.1.3 Showing the Chambal River, National Chambal Sanctuary and Kota dam and barrage – flood in the Chambal River valley areas occurs when Chambal River overflows due to release of excess water into the river by the Kota barrage



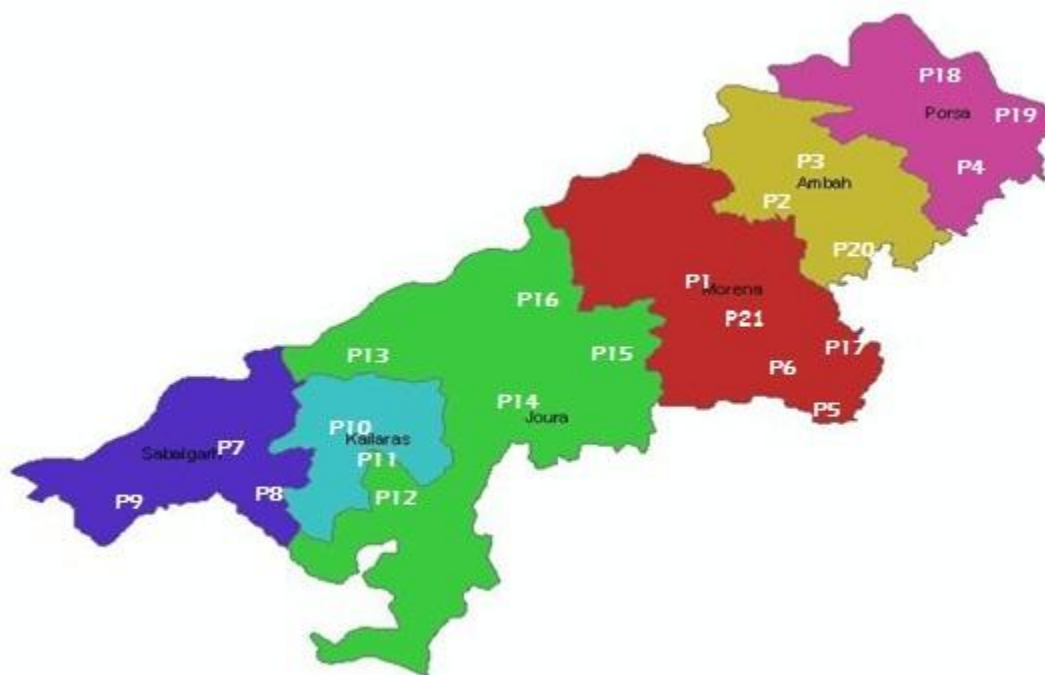
Map 8.1.4 Soil profile map of Morena



Map 8.1.5 Elevation map of Morena



Map 8.1.6 showing population density, PHCs and Sub Centres in Morena, Blood bank is present in the District Headquarter shown above

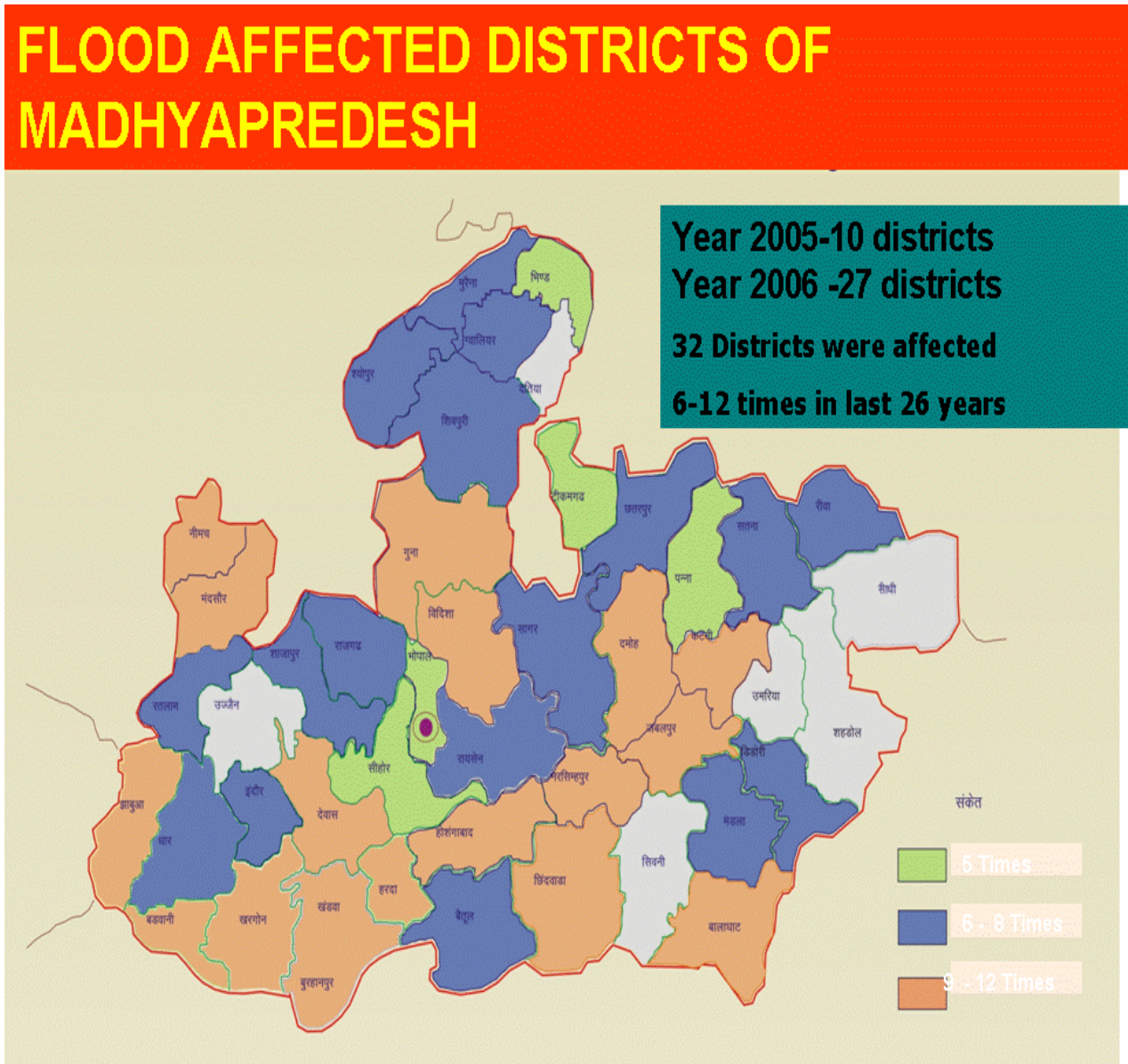


Legend

P1	Morena (Kotwali and Civil Lines)	P11	Nirar
		P12	Pahargarh
P2	Dimni	P13	Chinnoni
P3	Ambah	P14	Joura
P4	Porsa	P15	Sumawali
P5	Banmore	P16	Bagchini
P6	Noorabad	P17	Rithora
P7	Sabalgarh	P18	Mahua
P8	Rampur	P19	Nagara
P9	Tentra	P20	Sithonia
P10	Kailaras	P21	Matabasoi

Map 8.1.7 Showing the Police Thanas in Morena district

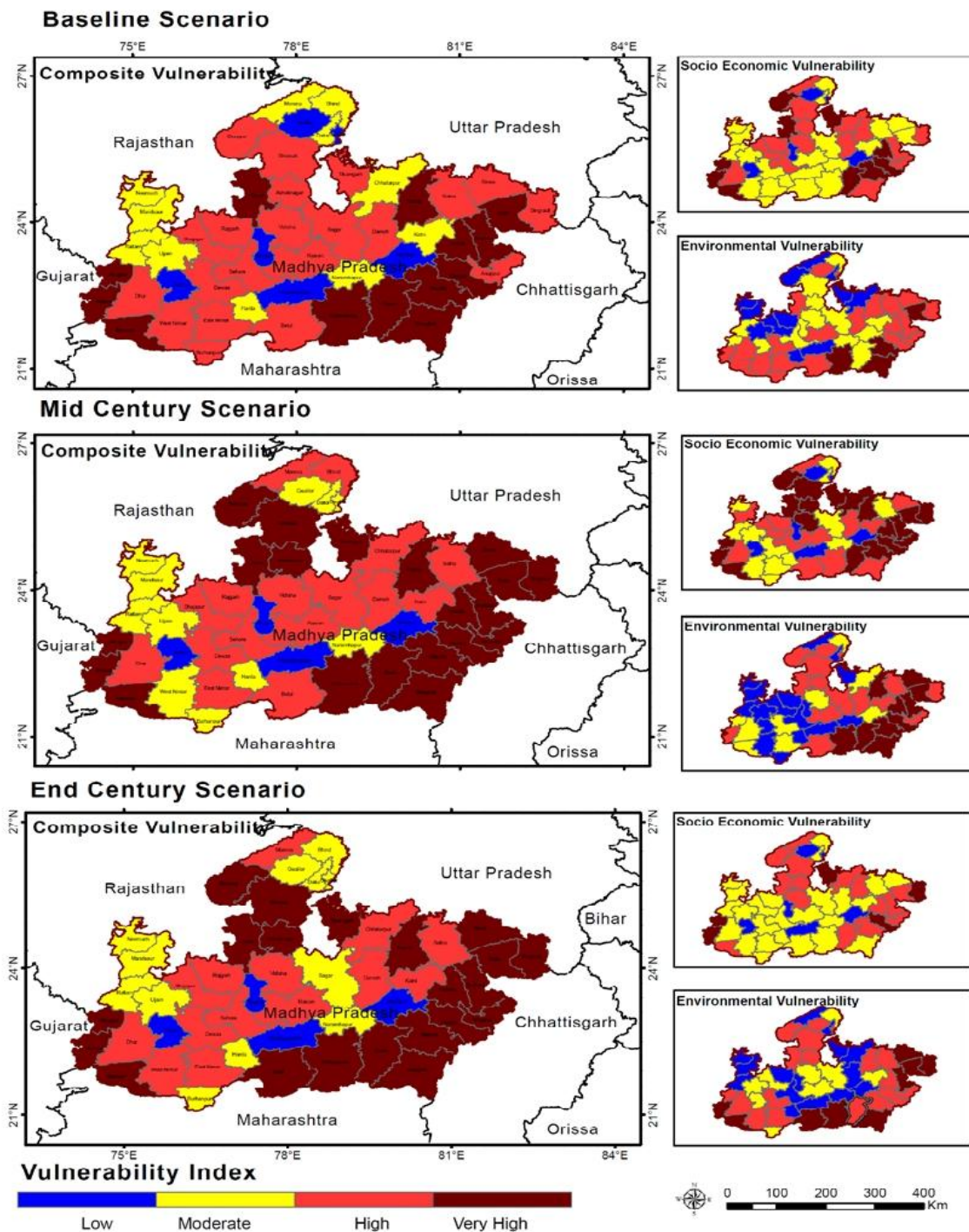
Vulnerabilities of Morena district



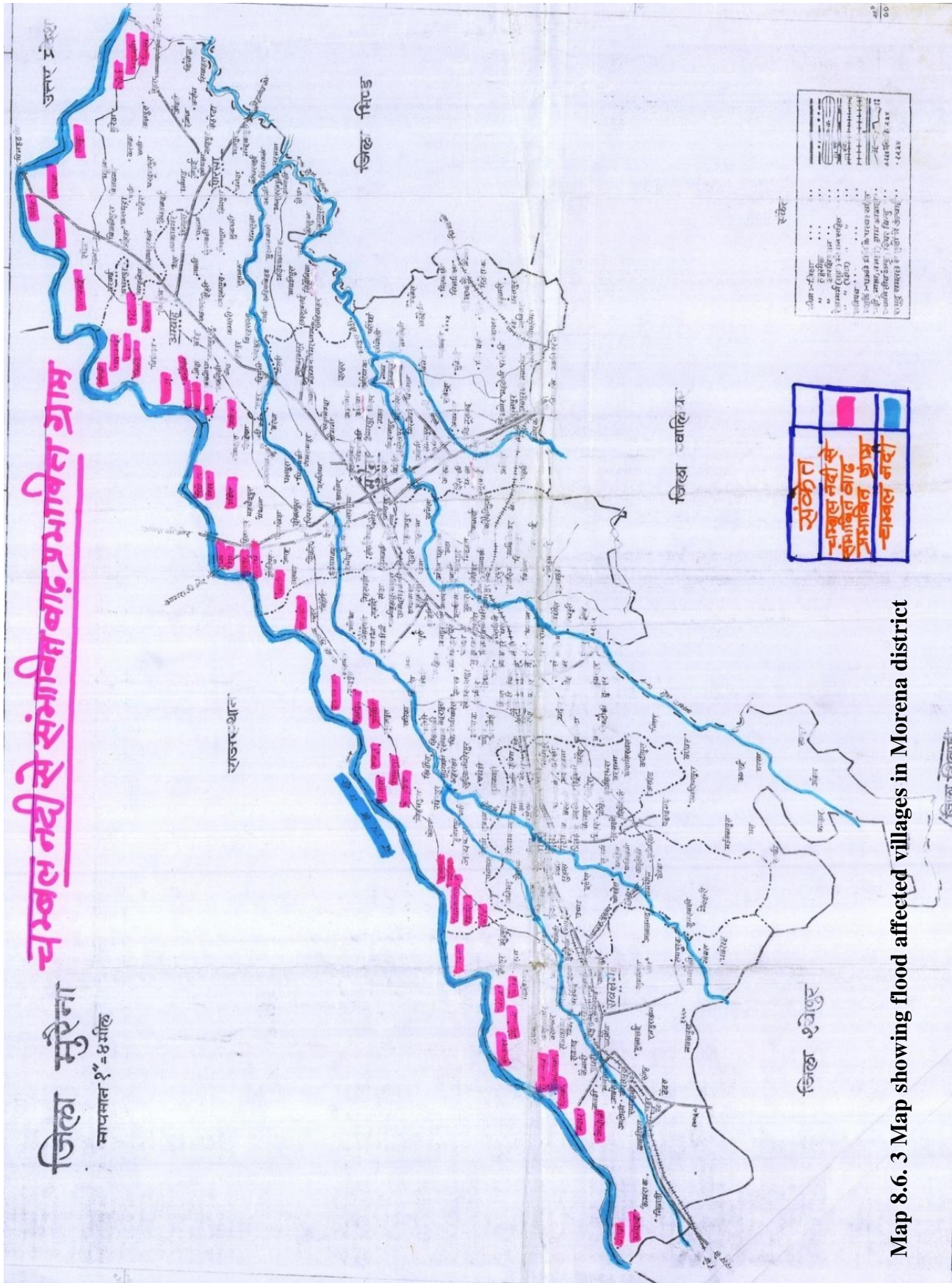
Source: www.mpsdma.gov.in

Map 8.6. 1 showing the flood affected districts of Madhya Pradesh - Morena was affected with 6-8 flood situation in last 26 years.

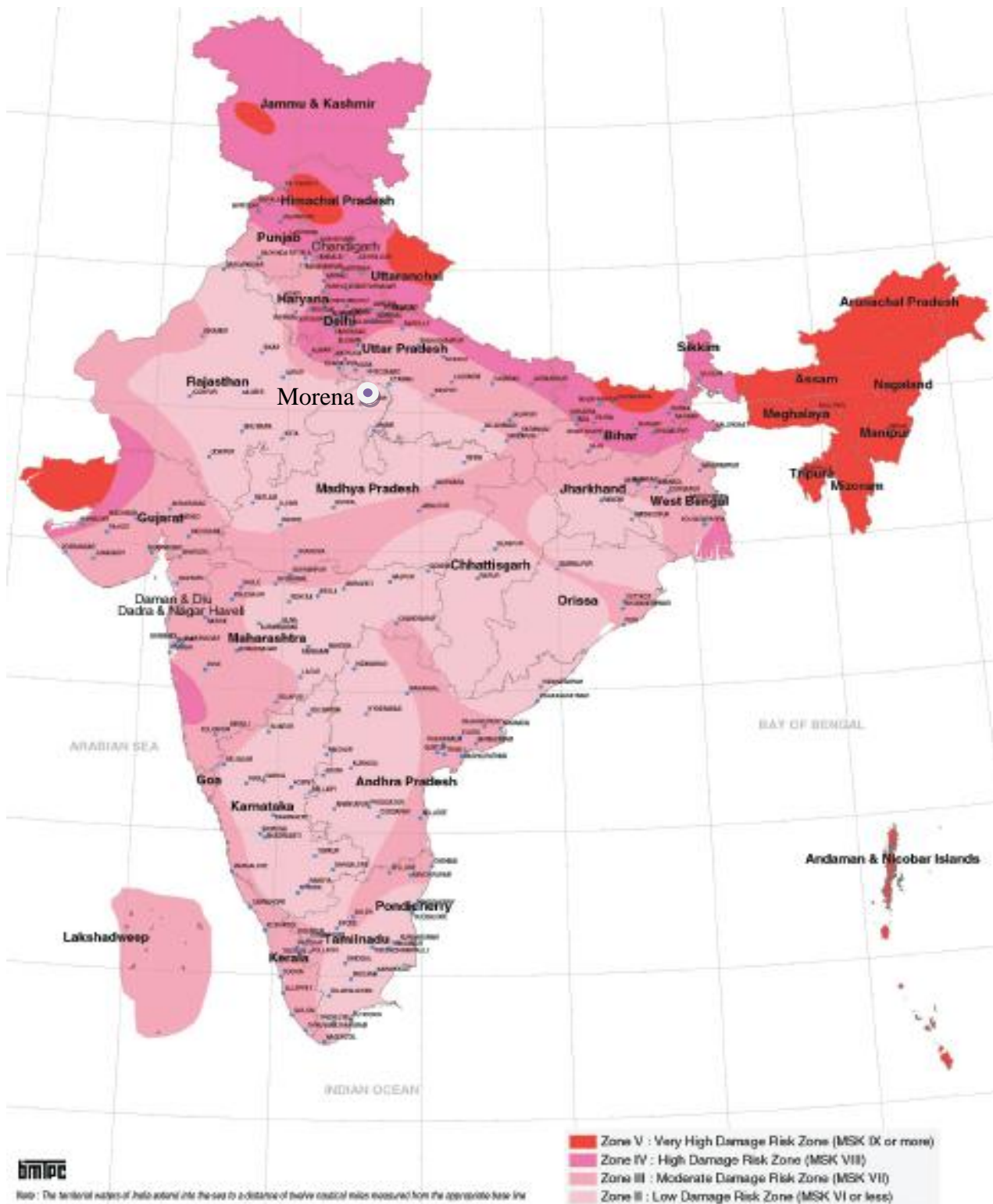
Vulnerability Map of Madhya Pradesh



Map 8.6. 2 Vulnerability map of Madhya Pradesh - As seen in this Vulnerability Map, Morena has low Environmental vulnerability but high Socio Economic vulnerability

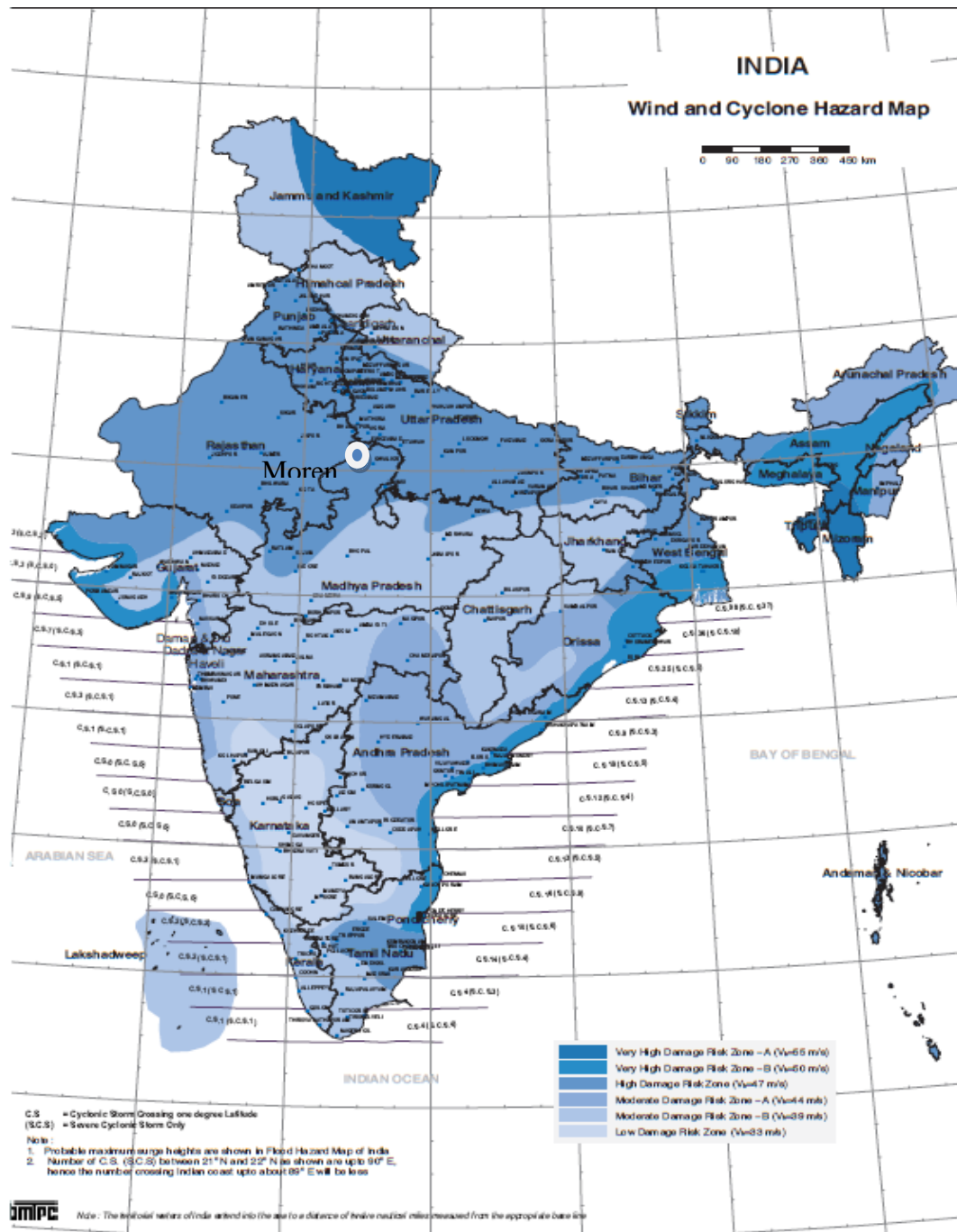


Map 8.6. 3 Map showing flood affected villages in Morena district



Source: National Policy on Disaster Management

Map 8.6. 4 Earth quake hazard map of India - Morena lies in Earth quake Zone II.



Source: National Policy on Disaster Management

Map 8.6. 5 Morena district lies in the High Damage Risk Zone from Wind and Cyclone hazard



Legend	
	Industry
	Firebrigade

Map 8.6. 6 showing Prachi Gas Bottling Plant and Banmore and Morena industrial areas and places where fire-brigade is available in the district: Blood bank is present in Morena town as shown in the map