

JEHANABAD

DISTRICT

DISASTER MANAGEMENT PLAN

2022

by

DDMA, JEHANABAD,
BIHAR

JEHANABAD DDMP

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Abbreviations and Acronyms

AAR	After Action Report
ADC	Additional Deputy Commissioner
AIR	All India Radio
AH&VO	Animal Husbandry & Veterinary Officer
ANM	Auxiliary Nursing Midwifery
ARES	Amateur Radio Emergency Services
ARWSP	Accelerated Rural Water Supply Programme
AWW	Anganwadi Workers
BLD	Baseline Database
BDO	Block Development Officer
BIS	Bureau of Indian Standards
CBDP	Community Based Disaster Preparedness
CBOs	Community Based Organizations
CCA	Climate Change Adaptation
CCG	Central Crisis Group
CD&HG	Civil Defence & Home Guards
CEO	Chief Executive Officer
CHC	Community Health Centre
CISD	Critical Incident Stress Debriefing
CM	Chief Minister
CMG	Crisis Management Group
CMP	Crisis Management Plan
Com. UL	Communication Unit Leader
Com./CUL	Compensation/Claims Unit Leader
CPWD	Central Public Works Department
C&RD	Community & Rural Development
CRF	Calamity Relief Fund
CS	Chief Secretary
CSR	Corporate Social Responsibility
CWC	Central Water Commission
DA	District Administration
DCMG	District Crisis Management Group
DDC	District Disaster Coordinator
DDCC	District Disaster Coordination Centre
DCG	District Crisis Group
DDMA	District Disaster Management Authority
DM Act	Disaster Management Act 2005, by Govt
DM	Disaster Management
DMC	Disaster Management Cell
DMP	Disaster Management Plan

DDMG	District Disaster Management Group
DDMP	District Disaster Management Plan
DDMF	District Disaster Mitigation Fund
DDRF	District Disaster Response Fund
DEOC	District Emergency Operations Centre
DM&HO	District Medical & Health Officer
DPO	District Planning Officer
DRR	Disaster Risk Reduction
DWS	Drinking Water and Sanitation
EMA	Emergency Management Agency
EMS	Environmental Management System
EWS	Early Warning System
EOC	Emergency Operations Centre
ESF	Emergency Support Function
FC	Finance Commission
FCS	Food and Civil Supplies
FGD	Focused Group Discussion
FIR	Field Investigations and Response Team
FMIS	Flood Management Information System
FOG	Field Operation Guidelines
GP	Gram Panchayat
GIS	Geographic Information System
GoI	Government of India
GPS	Global Positioning System
GSI	Geological Survey of India
HQ	Head Quarter
HRVCA	Hazard, Risk, Vulnerability, Capacity Analysis
IAY	Indira AwasYojana
IAP	Incident Action Plan
IC	Incident Commander
ICP	Incident Command Post
ICS	Incident Command System
ICP	Incident Command Post
ICT	Information and Communication Technology
IDP	Incident Demobilization Plan
IEC	Information, Education & Communication
IRS	Incident Response System
IRCS	Indian Red Cross Society
IGD	Informal Group Discussion
KII	Key Informant Interviews
LDCC	Local Disaster Coordination Centre
LDMG	Local Disaster Management Group

LDMP	Local Disaster Management Plan
MNREGA	Mahatma Gandhi National Rural Employment Guarantee Act
M&E	Monitoring and Evaluation
MHA	Ministry of Home Affairs
MORD	Ministry of Rural Development
MOUD	Ministry of Urban Development
MPLADS	Member of Parliament Local Area Development Scheme
NBC	Nuclear, Biological and Chemical
NCC	National Cadet Corps
NCCF	National Calamity Contingency Fund
NDEM	National Database for Emergency Management
NDMA	National Disaster Management Authority
NDRF	National Disaster Response Force
NEC	National Executive Committee
NEOC	National Emergency Operation Centre
NH	National Highways
NHAI	National Highway Authority of India
NIC	National Informatics Centre
NDMP	National Disaster Management Plan
NIDM	National Institute of Disaster Management
NGO	Non Government Organizations
NO	Nodal Officer
NSS	National Service Scheme
NYKS	Nehru Yuva Kendra Sangathan
OS	Operations Section
OSC	Operations Section Chief
QRS	Oral Rehydration Solution
PHC	Public Health Centre
PHED	Public Health Engineering Department
PLA	Participatory Learning and Action
PRA	Participatory Rural Appraisal
PRIs	Panchayati Raj Institutions
PWD	Public Works Department
PWDs	People with Disabilities
QRT	Quick Response Team
RC	Relief Camp
RD	Rural Development
RO	Responsible Officer
RR&DM	Relief Rehabilitation and Rural Development
SAR	Search and Rescue
SCMG	State Crisis Management Group
SDO	Sub Divisional Officer

SDMP	State Disaster Management Plan
SDRF	State Disaster Response Force
SDMA	State Disaster Management Authority
SDMF	State Disaster Mitigation Fund
SEC	State Executive Committee
SEOC	State Emergency Operations Centre
SOP	Standard Operating Procedure
SO	Safety Officer
SP	Superintendent of Police
SDMG	State Disaster Management Group
SDMP	State Disaster Management Plan
SOG	Standard Operating Guidelines
SOW	Scope of Work
SWAN	State Wide Area Network
TOR	Terms of Reference
ToT	Training of Trainers
TL	Team Leader
TS	Technical Specialists
TUL	Time Unit Leader
UC	Unified Command
UHC	Urban Health Officer
ULB	Urban Level Body
URR	Urban Risk Reduction
UN	United Nations
UNISDR	United Nations International Strategy for Disaster Reduction
VDMC	Village Disaster Management Committee
VRC	Veterinary Reserve Corp
WASH	Water, Sanitation and Hygiene promotion
WR	Water Resources

EXECUTIVE SUMMARY

Disaster is a part of our earth which effects directly on citizen and governance at various level depending on its magnitude, vulnerability and level of preparedness. It's globally accepted that to reduce increasing disaster risks communities need to be resilient. The Govt. of India also recognized the need 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 a **framework Disaster Management (DM) Act 2005**.

Disaster Management (DM) Act 2005 highlighted the importance, strategies, methodologies, role and guiding principles of District level Disaster Management Plan under **Chapter IV**, section 25-1. Under **Section 31** it is **mandatory to prepare a DDMP** for the protection of life and property from the effects of hazardous events within the district. **Section 48 on funds** to be created at the State & District Levels and would be used by the DDMA towards meeting expenses for emergency response, relief, rehabilitation in accordance with the guidelines **Chapter X, describes offences and penalties** in the discharge of District Authority functions under this Act refuses to comply with any direction given by or on behalf of shall on conviction be punishable with imprisonment for a term which may extend to one year or with fine, or with both and if such obstruction or refusal to comply with directions results in loss of lives or imminent danger thereof, shall on conviction be punishable with imprisonment for a term which may extend to two years.

Bihar DRR Roadmap 2015-2030 in line with the DM Act 2005 and BSDMA's Constitution, BSDMA has taken up the roles, responsibilities and facilitate the processes for implementation of the DRR Roadmap 2015-2030 especially pertaining to disaster and climate change induced risk analyses, formulation of disaster management plans, capacity enhancement, and strengthening public awareness and communication on the induced risks **while the District Disaster Management Authority (DDMA) has been created at district level specifically for disaster management** and mandated to inform policy and focus on coordinated responses to DRR. DRR Roadmap aims to steer the policy and strengthening DRR by creating an enabling environment of funds, functions and functionaries for DRR as well as mainstreaming DRR in development incorporating "**Bihar Development Mission**". The framework for this DRR Roadmap explains DRR actions to safeguarding development gains from multiple shocks and stressors. One of the guiding principles for this roadmap, 'resilience in development' (विकास ऐसा हो जो आफत सबचाए, विकास ऐसा न जो आफत बन जाए) is organising principle for the actions within the Roadmap.

Jehanabad DDMP is an **operational tool** for district administration (owned by the DDMA) aim to establish necessary systems, structures, strategies and programs, resources, capabilities and guiding principles for reducing disaster risks and preparing for and responding to disasters and threats of disasters in the 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 Jehanabad DDMP also **ensures a checklist** for all the stakeholders and concerned line departments in the district for a realization of their responsibilities and action oriented mitigation structure. DDMA should be aware of their powers and strategies as mentioned in the DDMP and the District Collector will exercise his powers in case of a disaster and to study disaster preparedness level. This DDMP comprises of **10 chapters** in addition to executive summary, Coordination Mechanism for Implementation and Checklist; directory of key officials & institutions, appendix and maps as following:

CHAPTER 1: Introduction

This introductory chapter contents in this chapter includes importance of DDMP in Jehanabad, DM mainstreaming into sustainable development, reference of 2005 DM Act relevant sections and Bihar DRR Roadmap 2015-2030, Objectives, Scope, Methodology, Implementation, review and updation of DDMP and Main Stakeholders and their responsibilities

CHAPTER 2: District Profile

The contents in this chapter includes Geographical features Climate Weather profile including respective Maps/ graphs etc., Cultural and Historical Perspective Demographic profile, Administrative structure, Natural resources, Main occupation etc.

CHAPTER 3: HAZARD, RISK, VULNERABILITY AND CAPACITY ANALYSIS

The areas in the district vulnerable to different forms of disasters are essential to understand and the contents in this chapter include the districts Hazard Profile, Vulnerability-risk analysis-Capacity analysis.

CHAPTER 4: INSTITUTIONAL ARRANGEMENT

The contents in this chapter includes institutional and functional capacities, the roles and responsibilities for different government departments and for different stakeholders such as DDMA, PRIs, CBOs, District EOC and their Coordination mechanism during different disasters including early warning system and further response for district level different disasters.

CHAPTER 5: PREVENTION, MITIGATION & PREPAREDNESS MEASURES

The measures to be taken, for prevention and mitigation of disaster, by the Departments of the Government at the district level and local authorities in the District and the content in this chapter include key powers & functions of all departments/ agencies in the event of any threatening disaster situation or disaster area. Also explains the how the preparedness measures at the district have to be operational checked up by the DDMA.

CHAPTER 6: CAPACITY BUILDING AND TRAINING

The capacity-building and preparedness measures required to be taken by the Departments of the Government at the district level and the local authorities in the district to respond to any threatening disaster situation or disaster and the contents in this chapter includes approaches of awareness generation and institutional capacity building of officials, policy makers, engineers, architects, masons, doctors, nurses, teachers, police, fire personnel, drivers, NGOs and volunteers (NYK, NCC, NSS), schools and colleges and other stakeholders like CBOs, Communities and PRIs/ULBs, Professionals including training institutes and other facilities.

CHAPTER 7: RESPONSE PLANNING

The response plans and procedures, in the event of a disaster, providing for (i) Allocation of responsibilities to the Departments of the Government at the District level and the local authorities in the district and the contents in this chapter describe in details how effectively the disaster response planning can provide rapid and disciplined incident assessment to ensure a quickly scalable, adaptable and flexible response. It also defines the roles and responsibilities for incident response across all levels of the government and private sectors.

CHAPTER 8: RECONSTRUCTION, REHABILITATION AND RECOVERY

The contents include the process, strategies and technical details for the DDMA and for all line departments on Reconstruction, Rehabilitation & Recovery measures to build back better than before the activities in the post-disaster phase.

CHAPTER 9: BUDGET AND FINANCIAL RESOURCES

Procurement of essential resources are important for DDMA and the contents in this chapter includes how funds to be created at various level and would be used by the DDMA towards meeting expenses for emergency response, relief, rehabilitation in accordance with the guidelines.

CHAPTER 10: MONITORING, EVALUATION and UPDATION OF DDMP

The content in this chapter includes essential guidelines for monitoring and evaluation of the DDMP. It also involves a combination of training events, exercises etc. to determine whether the goals, objectives, decisions, actions and timing outlined in the plan will result in an effective response.

ANNEXURE LIST: RESOURCE INVENTORY

The contents include relevant annexure of the chapters mentioned in the DDMP

Definitions

The contents include the technical words and terminology used in the DDMP as per DM Act 2005, UNISDR terminology- 2009 and 2016.

Abbreviations and Acronyms

The contents include various short forms of the words used in the DDMP.

References

The contents include the various details used in the DDMP as per BSDMA, NDMA and central and state government sources.

Approval and Review Mechanism of DDMP is as per Section 30 and Section 31 (4) of DM Act 2005. As per Section 31 (4), DDMA acts as the district planning; coordinating and implementing body for disaster management and take all measures for the purpose of DM in the district in accordance with the guidelines laid down by the National Authority and the State Authority. Accordingly, the District Plan is prepared by the DDMA, after consultation with the local authorities and having regard to the NDMP and the SDMP. The District Plan shall be reviewed and updated annually as per Section 31 (4) of the DM Act 2005.

The DDMP is user friendly as per Section 31 of DM Act 2005 the District Collector as the chairman of DDMA has the power of overall supervision and direction control as may be specified under State Government Rules/SDMP guidelines.

- The DEOC will be staffed and operated as the situation dictates. When activated, operations will be supported by senior officers from line departments and central government agencies; private sector and volunteer organizations may be used to provide information, data and resources to cope with the situation.
- Facilities vital to operation administration functions have been identified.
- The DC/RO or designee will coordinate and control resources of the District.
- Emergency public information will be disseminated by all available media outlets through the designated media and information officer.
- Prior planning and training of personnel are prerequisites to effective emergency operations and must be considered as integral parts of disaster preparations.
- Coordination with surrounding districts is essential when events occurs that impact beyond district boundaries. Procedure should be established and exercised for inter district collaboration.
- Institutions assigned either primary or supporting responsibilities in this DDMP must develop implementation strategies to support this DDMP.
- When local resources prove to be inadequate during emergency operations, request for assistance will be made to the State or higher levels of government and other agencies in accordance with set rules and procedures.
- District authority will use normal channel for requesting assistance and/or resources, i.e., through the DEOC to the SEOC. If state resources have been exhausted, the state will arrange to provide the needed resources through central assistance.

- The DEOC will coordinate with the SEOC, Agencies of the Govt. of India like IMD/CWC to update information concerning potential flooding, cyclones etc. As appropriate, such information will be provided to the citizens of the affected areas in the district.
- On receipt of potential problems in these areas, DEOC/designated official will appropriately issue alert and notify action to be taken by the residents.
- Disaster occurrence could result in disruption of government functions therefore; local government must ensure continuity of Government action.

CHAPTER 1: INTRODUCTION

There is a paradigm shift in Disaster Management approach from the earlier focus of response and relief to prevention and preparedness. It is certainly possible to reduce the impact of Disasters by evolving appropriate preparedness, mitigation and response plans. These processes are to be incorporated in the development of different plan of different stakeholders and preparedness to meet the disaster response, rescue and relief, rehabilitation thereafter to minimize loss to be suffered by the communities.

Under Section 31 of National Disaster Management Act, 2005 it is mandatory to prepare a District Disaster Management Plan (DDMP).The District Disaster Management Plan shall be prepared by the District Authority, after consultation with the local authorities and having regard to the National Plan and the State Plan, to be approved by the State Authority.

All the stake holders and concerned line departments in the district should refer to the DDMP for a realization of their responsibilities towards disaster management in the district.Members of DDMA should be aware of their powers and responsibilities as mentioned in the DDMP and the District Collector should exercise his powers in case of a disaster.It is mandatory on the part of DDMA to adopt a continuous and integrated DDMP and its implementation for prevention and mitigation of disasters.

In the light of the Sendai Framework for Action (SFA), **Bihar Disaster Risk Reduction Roadmap 2015-2030** that ensures

- Meet all the challenges of natural calamities, especially earthquakes
- Reduce economic losses caused by disasters by 50%, and the loss of lives by 75%.
- Ensures all buildings of public gather such as schools, hospitals, offices and government buildings should be built to be earthquake-resistant, and older buildings should be reinforced to be stable in the event of a disaster.
- Ensures that all the safety norms stipulated therein are adhered to by people as well as the government machinery.

This Disaster Management Plan incorporates both DM Act 2005 and Bihar DRR Road Map 2015-2030 arrangements within the Jehanabad District to provide whole-of-government planning and coordination capability to support local governments in disaster management.

1.1 : Objectives

Objectives of this DDMP comply with the **DM Act, 2005 (section 30 and 31)**:

- To identify the areas vulnerable to major types of the hazards in the district.
- To adopt proactive measures at district level by all the govt. departments to prevent disaster and mitigate its effects.
- To define and assign the different tasks and responsibilities to stakeholders during the pre-disaster and post-disaster phases of the disaster.
- To enhance disaster resilience of the people in the district by way of capacity building.
- Reduce the loss of public and private property, especially critical facilities and infrastructure, through proper planning.
- Manage future development to mitigate the effect of natural hazards in the district.
- To set up an Emergency Operations Centre at the District level to function effectively in search, rescue, response.
- To develop the standardized mechanism to respond to disaster situation to manage the disaster efficiently.
- To set up an early warning system so as to prepare the community to deal with the disaster and responsive communication system based upon fail-proof proven technology.
- To prepare a response plan based upon the guidelines issued in the State Disaster Management Plan so as to provide prompt relief, rescue and search support in the disaster affected areas.
- To adopt disaster resilient construction mechanism in the district by way of using Information, Education and Communication for making the community aware of the need of disaster resilient future development.
- To make the use of media in disaster management.
- Rehabilitation plan of the affected people and reconstruction measures to be taken by different govt. departments at district level and local authority.
- Assess all risks and vulnerabilities associated with disasters in the district.
- To provide clarity on roles and responsibilities for all stakeholders concerned with disaster management to manage disaster more effectively.
- Mainstreaming disaster management concerns into the developmental planning process as well as into climate change adaptation.
- 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

1.2: Scope of the Plan:

The DDMA are set up by state government via a notification in the state budget. The emergency planning process has evolved significantly and taken centre stage in the last few years as a result of emergencies and disasters having a greater impact on government infrastructure, district economy, citizen's life-property and agriculture.

A comprehensive disaster management plan on account of potential natural and manmade threats and involves key personnel in the planning process which can assist the government to systematically manage emergencies in an effective and efficient manner.

- Define a system of coordination at the district level.
- Identify all the responder agencies at the district level, and assign functional responsibilities to each of them.
- Establishment of a central facility in the district, which enables all the responder's agencies to interact and coordinate their efforts.
- Suggest hazard specific preparedness, response and mitigation measures.
- Plan resource requirements and coordinate with state government for requisitioning more resources.
- Provide an inventory of resources, key facilities and addresses for deployment and assistance towards preparedness and mitigation.

1.3: Plan Development Methodology

Planning and Consultation Conference on the DDMP approaches, DDMP framework including Review of the District Disaster Management Plan framework, stakeholder engagement process and information analysis tools

- Deciding relevant policies
- Review Critical Service Functions
- Institutional Arrangements for DM
- Coordination Mechanism for implementation of DDMP

Table-1.1: Plan Development Methodology

Steps	Methods
Step-1	Collection and analysis of secondary data available about the district
Step-2	Preliminary visit of district and setting up of local office
Step-3	Preparation of Inception Report and submission to DDMA & BSDMA
Step-4	Inception Workshop at BSDMA
Step-5	Planning Workshop with all stakeholders (Including Gram Pradhans, Line Departments etc) at District HQ
Step-6	Ground Work for collection of primary data from field (HRVCA)

Step-7	Department Wise One-to-One Meeting for collection of data and various information for HRVCA
Step-8	One to One Meeting with other Stakeholders for collection of data and various information for HRVCA
Step-9	PRA (Participatory Rural Appraisal) exercise with communities
Step-10	Compilation & Analysis of Data Collected and development of HRVCA report
Step-11	HRVCA Workshop at District HQ with all stakeholders (Including Gram Pradhans, Line Departments) to fill the gaps in study, if any
Step-12	Progress cum HRVCA workshop at BSDMA for inputs on study gaps
Step-13	Field Work to collect data as per the gaps identified during HRVCA workshop at DDMA & BSDMA
Step-14	One to One Meeting with District Magistrate about inputs & presentation of DDMP's various chapters and Response Plan
Step-15	Development of Draft DDMP
Step-16	Submission of Draft DDMP to DDMA for input
Step-17	One to One meeting with ApdaPrabhari on draft plan
Step-18	Correction/modification in draft plan based on inputs obtained from DDMA
Step-19	Submission of Draft Plan to BSDMA for their inputs
Step-20	Final Consultation on Draft DDMP
Step-21	Revision of DDMP & submission to DDMA for approval with copy to BSDMA
Step-22	Approval/acceptance of DDMP by DDMA

1.4: Implementing DDMP: Main Stakeholders and responsibilities

- Section 51 describes Imprisonment for a term upto one year/penalty or both for obstruction etc. to any officer/person authorized without reasonable cause.
- if such obstruction results in loss of lives or imminent danger thereof, shall on conviction be punishable with imprisonment for a term upto two years

Sec 26 Of 2005 DM Act describes powers of Chairperson of DDMA

- Presiding over the meetings of the DDMA
- Exercise and discharge powers and functions of the DDMA as the District Authority may delegate to Chairperson
- In emergencies, have power to exercise all or any of the powers of the DDMA subject to ex post facto ratification of the DDMA
- Chairperson in writing, delegate such of its powers and functions, under sub-section or to the Chief Executive Officer of the DDMA

District key authorities and departments

- DDMA
- EOC
- DDMC
- Line departments etc.

DDMA responsibilities:

- Implementation of all NDMA guidelines and SDMA policies and plans
- Section 33 states that the DDMA may by order require any officer/Department at the district/local authority to take such measures for the prevention or mitigation of disaster or to effectively respond to it and such officer/department shall be bound to carry out such order.
- Implementation/updation/ revision of the DDMP.
- To facilitate and coordinate with local Governmentbodies to ensure that pre and post disaster managementactivities in the district are carried out.
- To assist community training, awareness programs
- Installation of emergency facilities with the supportof local administration, non-governmentalorganizations and the private sector
- Section 50describes emergency procurement and accounting

Other stakeholders

- Gram Panchayat committees
- key non-government organizations

Their primary responsibility includes conserve prioritize disaster preparedness, developmental gains and minimize losses to lives, livelihood and property.

1.5: Plan review and update

Section 31 (sub-sections 2 and 4) the copies of the DDMP shall be made available to the Departments of the district to review from time to time, implement the DDMP and issue instructions to line departments.

DDMP Review and updatemethodology

- DDMA should review, evaluate and updatethe after consultation with local authorities at the district level
- Review and update should be done annually and based on need

DDMP reviewing and updating processcircumstances:

- A major incident
- A change in operational resources (e.g., policy, personnel, organizational structures, Management processes, facilities, equipment)
- A formal update of planning guidance or standards
- Each activation
- Major exercises
- A change in the district's demographics or hazard or threat profile.
- The enactment of new or amended laws or ordinances

CHAPTER 2: DISTRICT PROFILE

Jehanabad district's Latitude-25.1981°N and Longitude- 84.9859°E. The territory of the present-day district became Jehanabad sub-division of Gaya district in 1872. The district came into existence on 1 August 1986. This district is 45 km from Patna, the capital of Bihar and 43 km from Gaya. Jehanabad district has only one sub-division which is Jehanabad and 7 CD Blocks, which are Jehanabad, Kako, Ghosi, Modanganj, Hulasganj, Ratni-Faridpur and Makhdumpur. There are four towns as well within the Jehanabad district, Jehanabad (Nagar Parshad), Makhdumpur (Nagar Panchayat), Ghosi (Nagar Panchayat) and Kako (Nagar Panchayat). The whole district is drained by a number of streams such as Phalgu, Dardha, Punpun and Morhar. The Falgu River is also known for its religious importance where Hindu offers 'PIND DAN' to their forefather's. Jehanabad is located on the confluence of two small rivers called Dardha and Yamunaiya. It is the heartland of Magadha and the local dialect is called Magahi. Once considered a poor district, the area is however developing now and the services sector is gaining ground in the district.

2.1. Geographical features

Geomorphologically, the district consists of a flat alluvial terrain; however, it is punctuated with few inselbergs of which the most prominent one is the Barabar hills with maximum elevation of 312 m msl. The soil in the district is old alluvian, sandy loam to clayey, slightly alkaline in patches. Fertile alluvial soil locally called "Kewal" supports the District's predominantly agricultural economy and is currently region is rich for cultivating cereals and vegetables.

Table 2.1: District Land coverage

Area under forest:	637 ha
Barren & uncultivable land:	3270 ha
Land put to non-agril use:	14695 ha
Permanent pastures:	82 ha
Other fallow land:	231 ha
Current fallow:	583 ha
Net sown area:	73700 ha
Gross cropped area;	109872 ha
Area sown more than once:	36172 ha
Net area irrigated:	59000 ha
Gross Irrigated area;	93000 ha

(Source: Directorate of Economics & Statistics, Govt. of Bihar)

The district of Jehanabad is located at 113 meters height above mean sea level. Jehanabad district fall in agro-climatic Sub-Zone III. On its north, it is bounded by Patna District, on its east lies Nalanda, on its south it shares its boundaries with Gaya and on its west lies Arwal. The district spreads over the area of 931sq.km.

2.2. Climate Weather profile

The climate of Jehanabad is of extreme nature, i.e. very hot in the summers and biting cold in the winter climate embraces the area. The difference in precipitation between the driest month and the wettest month is 240 mm. The average temperatures vary during the year by 15.9 °C. The monsoon sets in the end of June. The months of July and August are the rainiest months; the annual normal rainfall of the district is 1052 mm.

Figure 1.1: Jehanabad weather by month/ weather average

	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
Avg. Temperature (°C)	17.6	20.3	26.1	30.2	33.5	32.6	30	29.4	29.3	27.3	22.4	18.2
Min. Temperature (°C)	11.2	13.8	18.8	24	26.8	27.6	26.5	26.5	26	22.6	15.8	11.5
Max. Temperature (°C)	24	26.9	33.5	36.4	40.3	37.7	33.6	32.3	32.6	32.1	29	25
Avg. Temperature (°F)	63.7	68.5	79.0	86.4	92.3	90.7	86.0	84.9	84.7	81.1	72.3	64.8
Min. Temperature (°F)	52.2	56.8	65.8	75.2	80.2	81.7	79.7	79.7	78.8	72.7	60.4	52.7
Max. Temperature (°F)	75.2	80.4	92.3	97.5	104.5	99.9	92.5	90.1	90.7	89.8	84.2	77.0
Precipitation / Rainfall (mm)	20	7	8	5	19	118	231	242	204	49	6	2

The difference in precipitation between the driest month and the wettest month is 240 mm. The average temperatures vary during the year by 15.9 °C.

2.3 Cultural and Historical Perspective

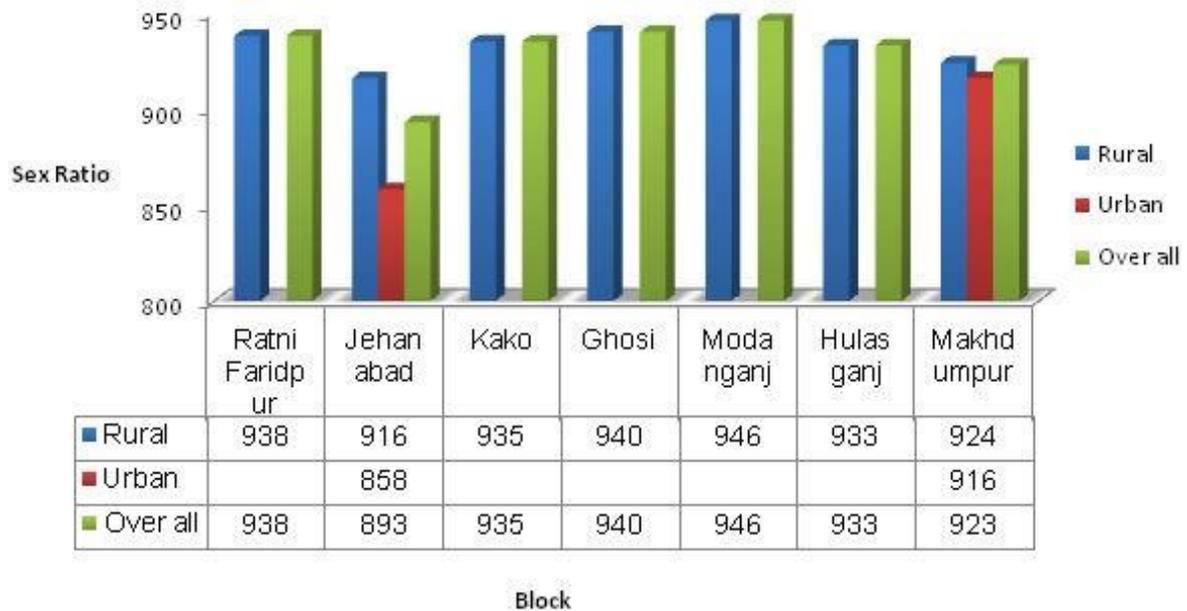
Jehanabad has been occupying an important place in the history of culture of the region. It has a rich heritage such as the famous Barabar Caves are located in the Jehanabad District. They are the oldest surviving rock-cut caves in India, mostly dating from the Mauryan period (322–185 BCE), and some with Ashokan inscriptions. Sharma Landlords (zamindars) brahmins and Yadavs are the two most dominant community here and They have a stronghold in Local Politics. Jehanabad has a long history of caste wars between Sharma Brahmins and Yadav communities but the situation has improved a lot with

Increase in Education facilities and Economy of the region. Generally spoken language in Jehanabadis “MAGAHI”, a dialect of Hindi. The staple food of the people in Jehanabadare Rice, Dal, Chapaties, Vegetables, Non-Vegetarian items, Items of Gram Flour;Litti, and Chura-Dahi (Curd) in Mithila.Important festivals of Hindus are Diwali, Holi, MahaShivratri, Chhath Puja, Teej and MakarSankratiHoli, Saraswati Puja, Durga Puja or Dusserahetc. are celebrated in the district.

2.4. Demography

According to the 2011 census Jehanabad district has a population of 1,125,313 densities of 1,209 inhabitants per square kilometre (3,120/sq mi) and population growth rate over the decade 2001-2011 was 21.34%.Jehanabad has a sex ratio of 922 females for every 1000 malesand a literacy rate of 66.80%.

Figure 1.2: Sex Ratio on Block and Urban-Rural localities wise



135,196 people (12.01%) lives in urban and 990,117 (87.99%) lives in rural regions of the district.Total Number of Households 1,81,646.

Out of total 618,881 (66.80%)Literates, Male Literacy 374,412 (77.66%) Female Literacy 244,469 (55.01%)as per 2011 census.

Table 2.2- male-female on cast and age wise

	Male	Female	Total
AdultPopulation	585,582	539,731	1,125,313
Children (Age 0-6)	103,452	95,333	198,785
Schedule Caste	115,034	107,940	222,974
Schedule Tribe	667	618	1285

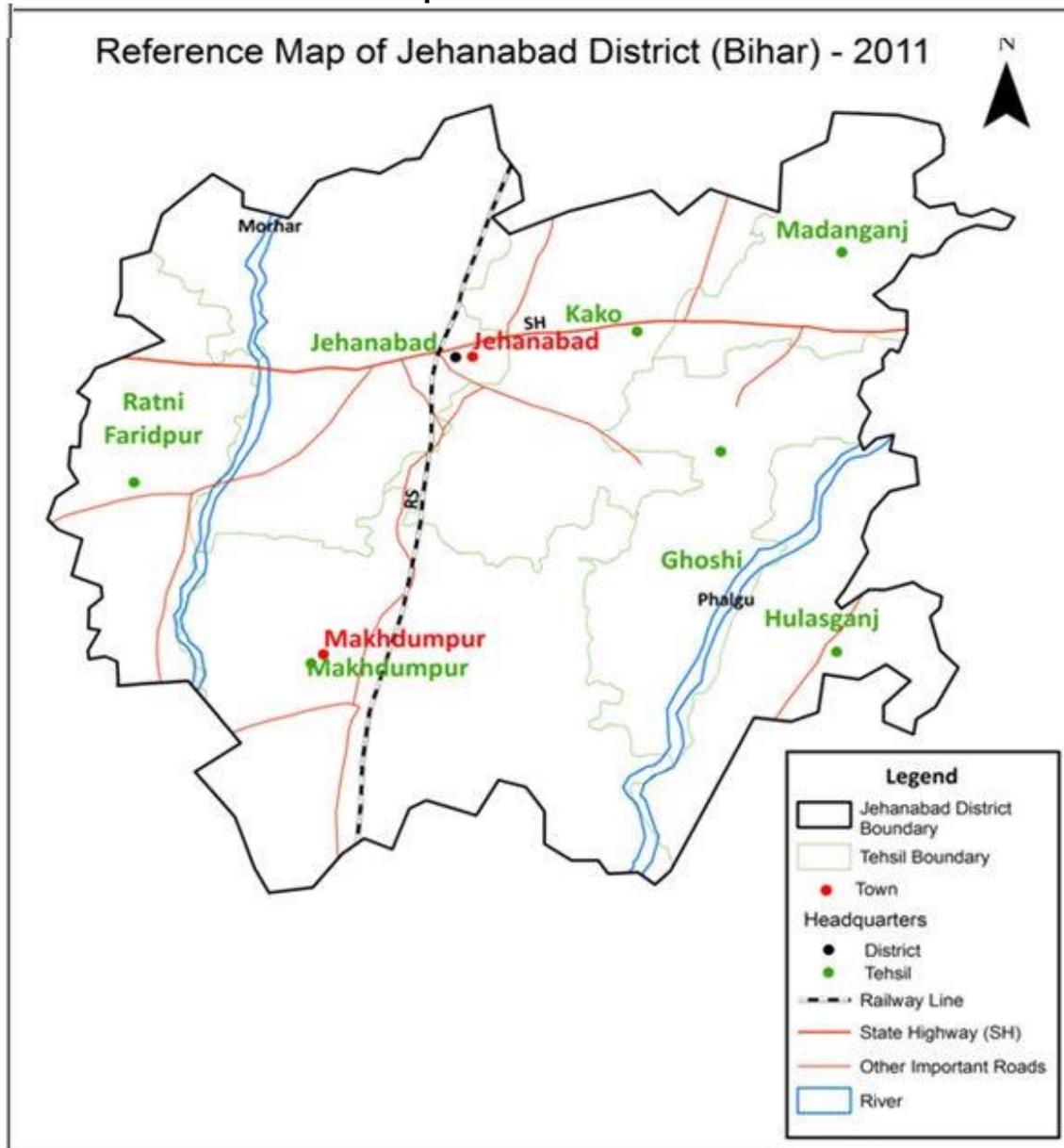
<https://indikosh.com/dist/265926/Jehanabad>

2.5. Administrative structure

The Administrative set up of Jehanabad District is decentralised into 01 Sub-division: Jehanabad Sadar, 07 Blocks, 07 Circles, 88 Panchayats, 01 Nagar Parishad, 07 Panchayat Samitis, 611 Villages and 15 Police Stations (5 Police outputs)

The Collectorate plays a pivotal role in District administration. Collector in the Cadre of I.A.S heads the District.

Jehanabad Administrative Map



Source: District Factbook

2.6. Natural Resources.

The rivers that flow through the district are Dardha, Phalgu, Jamuna, Morhar and Punpun. Most of these rivers remain dry for the major part of the year. Only Phalgu River is intercepting the Jehanabad District. Total length of the river in the district is approximately 20 KM.

The sand available with the river beds in the major part of the year is collected and transported to other parts of the district besides to the adjoining districts and is useful in construction work. A detached body of the quartzite, granite gneiss is found in Makhdumpur Block. Mining of quartzite, granite gneiss is restricted by Archaeological Survey of India due to Barabar Hill. It extends 3.2 KM having an average width of 300 m.

There are 140 operative brick kilns/bhattha and 16 sand ghats in the district. Culturable Wasteland 151 (ha) which is 0.17%.

The **forest** cover of the district is small- 637 hectares, which is mainly concentrated near the Barabar Hills. They belong to the category of reserve forests. The important Tree species of this region are Sal (Shorearobusta), Shisham, Teak, Gamhar, Kadamb, Semal, NeemPeepalBargad, Arjun, Asan, Haldu, Mahua and Kend etc.

Main occupation

Agriculture is the major sector and employer of the district of Jehanabad. The district's soil is highly fertile alluvial soil locally called "Kewal" supports the District's predominantly agricultural economy and is currently being tilled for production of paddy, wheat, cane, potato, pulses, vegetables.

There is an industrial area in the district of Jehanabad which is spread in the area of six acres on Jehanabad-Kako Road. The district has maximum number of small scale industries which is 1793 in number followed by cottage industries which is 1075 in number.

Table 2.3: Occupation List

Total	Total	Male	Female
Main Workers	251,690	200,878	50,812
Cultivators	70,026	59,990	10,036
Agriculture Labourer	109,146	81,359	27,787
Household Industries	8,874	6,126	2,748
Other Workers	63,644	53,403	10,241
Marginal Workers	113,688	65,545	48,143
Non Working	759,935	319,159	440,776

CHAPTER 3 : HRVC ANALYSIS

The importance of (Hazard Risk Vulnerability and Capacity Analysis) HRVC is necessary for DM planning and the methodology adopted to carry out this exercise in the district to developing understanding of trends of key hazards, vulnerabilities, challenges, (non) availability of capacities or resources, local practices to cope with season and region wise risks and disasters et through the technical process of PRA exercises, participatory approaches. Based on history of occurrence and probability of occurrence of hazard sin various Panchayat/Blocks in Jehanabad district hazard profile developed.

Primary hazards of Jehanabad district responsible for disaster are:

Flood
Drought
Fire
Earthquake
Lightning
Drowning

Hazard Seasonality analysis

The hazards seasonality map of Jehanabad district is made based on the history and also on the possibility of occurrence of hazards in future. The table also differentiates month-wise occurrence of these hazards by a scale of high, moderate and low/negligible probability.

Table 3.1: Jehanabad District Seasonality analysis of the Hazards

Hazard	Month of the Year											
	J	F	M	A	M	J	J	A	S	O	N	D
Flood	High	High	Moderate	Moderate	Moderate	Low	Low	Low	Low	Low	Low	Low
Drought	High	High	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low
Fire	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low
Earthquake	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low
Lightning	High	High	High	High	High	Low	Low	Low	Low	Low	High	High
Drowning	High	High	High	High	Low	Low	Low	Low	Low	Low	Low	Low
Cold waves	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low
Heat Wave	High	High	High	Low	Low	Low	Low	High	High	High	High	High
Lightening	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low
Road accident	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low
Stampede	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low
Civil Unrest	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low
Nilgai Menace	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low
Forest Fire	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low
Legends	High Probability			Low	Moderate Probability			Low	Low/negligible probability			High

3.1 Hazard Profile

Hazards Analysis

The Jehanabad district is prone to multiple hazards like drought and earthquake (Zone III). A hazard risk assessment matrix was prepared based on the probability and frequency of occurrence of hazard in the district and accordingly priority ranking was done.

Table 3.2 : Common hazards through a matrix and priority ranking the district.

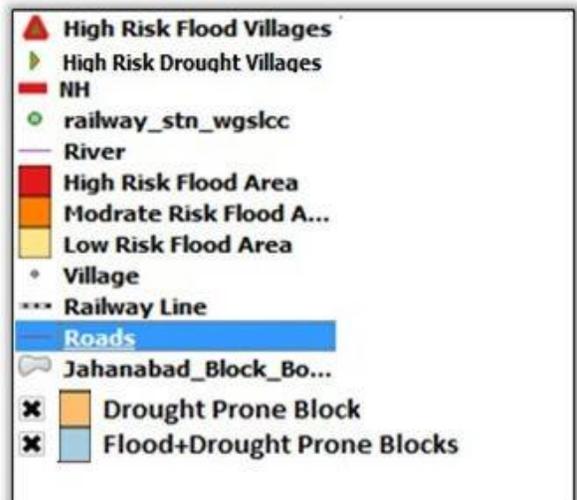
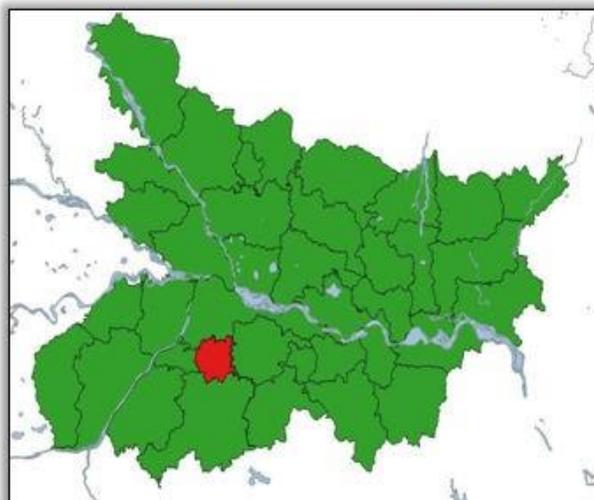
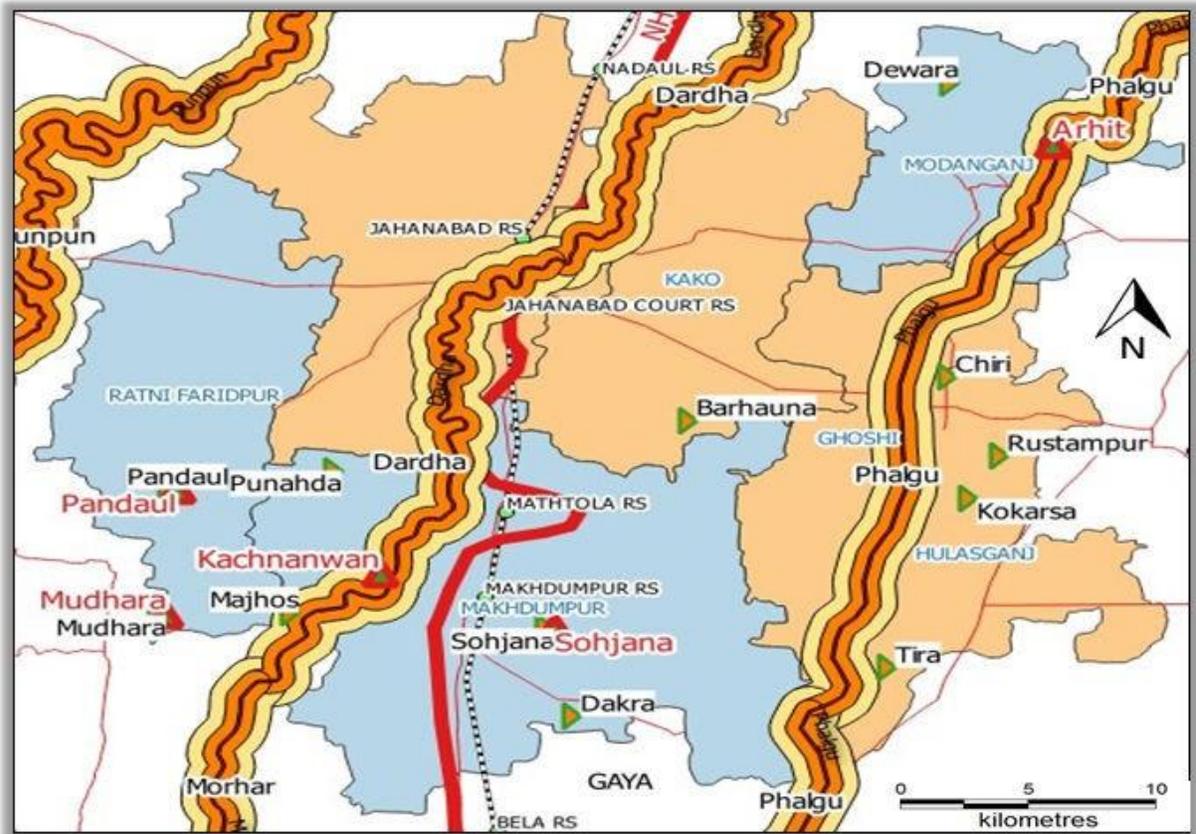
Disaster type	Year	Blocks/ villages affected	Life loss	Cattle loss	Building/ Houses damaged	Agriculture crop/area damaged	Property Damage (in Rs)	Others	Remarks
Floods									
Drought									
Fire									
Earthquake	25-Apr-15								No Damaged
	21-May-14								No Damaged
	11-Apr-12								No Damaged
Lightning	2019-20		6	2					
	2020-21		7						
	2021-22		6						
Drowning	2019-20		84						
	2020-21		87						
	2021-22		12						
Cold Wave									
Heat Wave									
Epidemics (COVID-19)			237						
Cattle Epidemics									
Road Accident			57						
Festival Related Stampede									
Civil Unrest									
Terrorist Attacks									
Nilghai Menace									
Forest fire									
Soil Erosion									

Hazard: Flood and Drought (entire district)

Flood prone Blocks and Panchayats

- Ratni block, panchayats- Murahara, Panadaul due to Baldai and Murahara
- Makhdumpur block, panchayats- Solhanda, Kachnama due to rain in Garhwa Palamu Jharkhand
- Modanganj block, panchayat- Arihat due to Kachnama river and Chamubigha dam
- Modanganj block due to Kosi river and Falgu river

Jehanabad Flood and Drought Hazards Map



3.1.1 Drowning

Drowning has been one of the major disasters recorded in the district due to human negligence especially during the festivals like Chhat. Accidental drowning is prominent due to the presence of rivers and ponds in the blocks. A total of 183 death cases is reported in the past 5 years due to drowning.

Drowning(Human Loss)							T
Sno	Block Name	2018	2019	2020	2021	2022	
1	Ghosi			7	7		14
2	Hulasganj		2	12	5	1	20
3	Jehanabad		7	17	18	3	45
4	Kako		3	12	13		28
5	Makhdumpur		2	17	13	5	37
6	Modanganj			9	10		19
7	Ratni-Faridpur		1	4	15		20
Total		0	15	78	81	9	183

Source :- Source: District Emergency Operation Centre, jehanabad.

3.1.1 Lightning

There are reported cases of death due to lightning strikes every year in different blocks of the district. In recent five years, a total of 25 deaths are reported in blocks-Ghosi, Hulasganj, jehanabad, kako, makhdumpur, Modanganj, Ratni Faridpur.

Mitigation measures: Wall painting at the vulnerable areas, ward level lightning conductor audit, lightning arrester to be made compulsory for old and ongoing construction of buildings. More measures (preparedness, prevention and mitigation have been given in chapter 5)

The table below shows the lightning effected blocks and a number of deaths in the past 5 years.

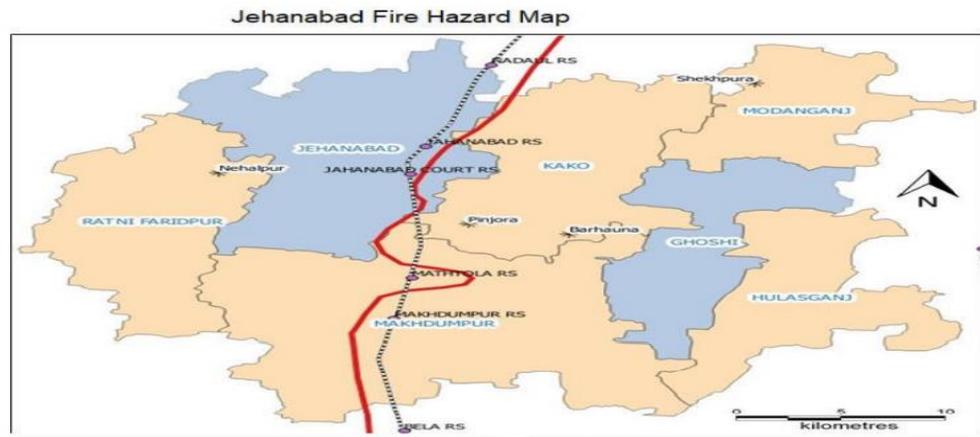
Human Death Due to Lightning						
Sl. No	Block Name	Year				
		2018	2019	2020	2021	2022
1	Ghosi		1	1	2	
2	Hulasganj		1	2		
3	Jehanabad		1	1		2
4	Kako		1		1	1
5	Makhdumpur		1	2	1	1
6	Modanganj			1		
7	Ratni-Faridpur	1	1		2	1
Total		1	6	7	6	5

Hazard: Fire

Fire prone **Blocks:** Ratni, Kako, Makhdumpur, Hulasganj

Fire prone panchayats- Nehalpur, Barauna, Pinjaura (Village: Shekhpura)

Due to Kachha houses and roof made up of grass.



Road Risk Analysis

Blind Spot in Jehanabad District

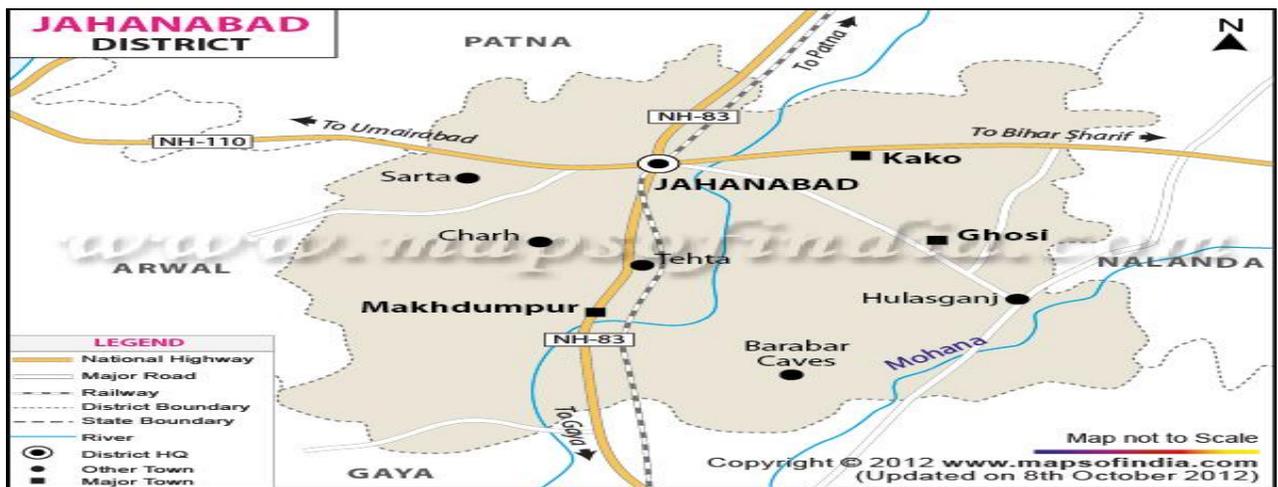
At SH71 there are two places where blind spot exist they are west side from Manas International School.

Narrow Flange

No any Narrow Flange exist in Jehanabad District.

Dangerous Crossing

At Hati More There is a dangerous Crossing Exist, which is the intersection point of Hati More And SH71.



Railway Risk Analysis

- There are 09 Unmanned/ Unauthorized railway crossing without gate in Jehanabad district .
- There are 03 Gates without signal in Jehanabad District.

3.2 Vulnerability and Risk Analysis

There are multiple types of vulnerabilities present in Jehanabad district have been categorized in four major types, namely, social, physical, economic and environmental vulnerability.

Fire Vulnerability

Offices and premises in Jehanabad are also prone to fires. People should be careful using heating sources such as gasoline or similar flammable liquids. Also, in Schools there is a need of training teachers/ school staff in fire safety and taking necessary precautions to prevent it, to conducting fire drills, keeping first aid kits, ensuring and previewing fire risk management plan. Root causes of Fire are people living in kutch houses made of dry grass etc that catch fire easily, improper cooking practices, houses very close to each other, high wind, high temperature, dryness in atmosphere particularly in the month of March to May, short circuit etc.

Physical Vulnerability

Physical vulnerability includes locations of flood prone area, improper condition of infrastructures and inappropriate construction of houses communities residing in and around snake prone areas etc.

In 2011, total 95 families live on footpath and 414 lived without roof which is approx 0.04% of total population of Jehanabad district.

Considering a family size of 5 persons, 35,184 (both urban and rural) family lives in Temporary houses (Kutch houses; having wall and roofs made of where, grass, leaves, reeds, bamboo, mud and unburnt bricks), 2638 family residing with no exclusive room and livable condition in the district which is prone to multiple hazards and lie in moderate risk seismic zone III.

Table 3.3 Details of Housing Condition People are Living in Jehanabad District

Table -1: Households by Ownership Status and by Number of Dwelling rooms occupied in the District, 2011											
Name of district	Ownership status	Number of dwelling rooms	Number of households								
			Total			Scheduled Castes			Scheduled Tribes		
			Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban
1	2	3	4	5	6	7	8	9	10	11	12
	Owned	No exclusive room	2,415	2,145	270	483	433	50	56	54	2
		One room	31,681	28,143	3,538	12,242	11,072	1,170	396	375	21
		Two rooms	51,565	46,081	5,484	14,386	13,254	1,132	557	503	54
		Three rooms	31,516	28,103	3,413	5,935	5,550	385	237	215	22
		3+ rooms	58,899	52,691	6,208	6,790	6,279	511	482	434	48
	Rented	No exclusive room	88	48	40	13	9	4	5	3	2
		One room	1,331	493	838	164	82	82	96	86	10
		Two rooms	1,645	473	1,172	165	82	83	59	43	16
		Three rooms	604	141	463	34	17	17	12	10	2
		3+ rooms	537	201	336	41	23	18	32	4	28
	Others	No exclusive room	135	102	33	52	31	21	6	4	2
		One room	489	406	83	219	189	30	15	11	4
Two rooms		319	254	65	51	41	10	4	3	1	
Three rooms		146	111	35	22	13	9	3	3	-	
3+ rooms		276	240	36	23	15	8	11	11	-	
District - Jehanabad (10239)	Total	No exclusive room	2,638	2,295	343	548	473	75	67	61	6
		One room	33,501	29,042	4,459	12,625	11,343	1,282	507	472	35
		Two rooms	53,529	46,808	6,721	14,602	13,377	1,225	620	549	71
		Three rooms	32,266	28,355	3,911	5,991	5,580	411	252	228	24
		3+ rooms	59,712	53,132	6,580	6,854	6,317	537	525	449	76

Data Source:-Census of India, 2011, HH- series Tables on Houses, Household amenities and assets

Social Vulnerability

Social factors or processes prevalent in Jehanabaddistrict which increase the susceptibility of a community to the impact of hazards includes gender, age, caste and disabilities.

a. Age:

The vulnerable age groups are that of 0-6 years and old age people. According to 2011 census, 0-6 age group population is 193946 Children of this age group along with adolescent girls have their special needs for diet, sanitation, hygiene, safety and security. Old age people are also vulnerable because of their limited physical strength, dependence on their families. These needs aggravate further during disaster situation, particularly post disaster during relief and response.

b. Gender

Females of all age groups are part of vulnerable population because of safety and security reasons. The district has alarming cases of rapes and molestation. According to 2011 census, the sex ratio of the district is 922. Female literacy rate of 56.24% is also much low compared to male literacy rate of 79.30% leads females being a vulnerable group as far as financial dependence on their male counterpart, post disaster safety-security in over-crowded relief camps, human trafficking, forced prostitutions, rapes, molestation and sexual abuse.

c. Caste

According to 2011 Population Census data, Jehanabaddistrict has the SC population of 2,16,083. The dominant SC in the region are Kako,Ratni, Makhdumpur,Hulashganj.

d. Disabilities

Disability adds to vulnerability of a person as it reduces or limits the physical ability of the person to certain extent and in a disaster situation, their conditions become worse if their aids (hearing, visual, etc.) get lost or damaged. They also have special needs in order to access public utilities and other facilities. Table below provides details of disabled population of the district.

Table 3.4 Disabled Populations

Type of Disability	Number
Sight related	2813
Speech related	1236
Hearing related	1275
Movement related	7766
Mental related	2378

Economic Vulnerability:

Jehanabad has an agrarian economy. It lies in a drought prone area. There are 46324 -AAY, 167822-BPL and 250950-APL groups in the district which are considered as low income group population and faces challenges to live a life of dignity with all daily needs well met. Their low income status sometimes also forces them to choose cheap housing in vulnerable areas or occupation in hazard prone areas which become further vulnerable during disaster due to impact on market condition, production units, road or logistics network support, equipments.

Table 3.5: Population pattern as per the poverty line (Block wise)

Block	AAY	BPL	APL	TOTAL
Kako	3804	14465	16862	35131
Nagar	580	2046	3163	5789
Panchaytmakhdumpur				
Makhdumpur	4798	16226	26294	47318
JehanabadAnchal	3322	12081	19260	34663
Jehanabadnagarparishad	1468	5179	17701	24348
Ratnifaridpur	3194	10813	15068	29075
Ghosi	2363	9000	11924	23287
Modanganj	1701	7653	7173	16527
Hulashganj	1932	6448	8030	16410
Total	23162	83911	125475	232548

During 2011, income of agricultural laborers to plough is Rs 200, to sow is Rs 200, and to harvest is Rs 150. Apart from this a large number of people are also involved in unorganized sector for their living. Such population becomes highly vulnerable during disaster due to any damage or impact on market condition, production units, road or logistics network support.

Environmental Vulnerability

a. Urbanization

Due to urbanization and limited livelihood opportunities in the rural areas, in cities are migrating to urban areas creating additional pressure on the limited resources. These altogether form the key reasons for exploitation of the available resources, deforestation, unplanned development and various other related after effects including environmental degradation and risk of increasing man-made and human-induced disasters.

b. Deforestation

As the population is increasing the need of people is also increasing. To fulfill these needs various developmental activities are required and being implemented which results in deforestation.

c. Water-Logging

Water-logging is a big issue in some of the wards of the Jehanabad Municipal area. As many of the colonies do not have proper drainage system as a result of unplanned development. Land encroachment is also a big reason as people have made their houses beyond the actual land they own. At some places drainage system are available but not maintained properly.

d. Ground-Water

The shallow ground water of the district is alkaline in nature (pH 7.25 to 8.13) and is moderately to highly saline. According to permissible limits of Bureau of Indian Standards, ground water is mostly unsuitable for drinking purposes in 88% of wells mainly due to high nitrate and fluoride contents that exceed the maximum permissible limits of these parameters which are 45 mg/l and 1.5mg/l respectively. Decline of ground water and salinity is a big problem in the district.

3.3 Capacity Analysis

Capacity that can be used during peace time or disaster situation for various services like search and rescue, first aid, medical response, trained human resources, life saving equipments, critical life-saving facilities and infrastructure, etc in the district of Jehanabad. Capacity analysis also includes actions (projects and/or measures) and instruments expressly aimed at reducing disaster risk in endangered regions, and mitigating the extent of disasters.

Table: 3.6 Key Resources within the District

Infrastructure	Quantity
Health	
Sadar Hospital	1
Referral Hospital	2
CHC	3
PHC	7
APHC	29
Sub- Health Centres/ HSC	107
Major Private Hospital	18
Major Clinics	5
Ambulance Services	1
Blood Banks	1
Veterinary Hospitals	17
Education	
Primary	561
Middle	198
Secondary & senior secondary schools	43
Navodaya Vidyalaya	01
Kendriya Vidyalaya	01
Colleges	14
Police	

Police post/ Police station	18
Firestation	
Government fire station	1
Private	Nil
Roads	
National Highway	2
State Highway	3
Main District Highway	2
Major Highway	NH 83
Other district & rural roads	25
Rural roads/ agricultural marketing	-
Communication	
Telephone connection	-
Post Offices	11
Telephone centre	14
PCO Rural	-
Financial institutions	
Commercial Banks	28
Rural Banks	11
Cooperative banks	-
Microfinance institutions	1079
Miscellaneous	
Petrol Pumps	11
Kerosene Depots	576
PDS Shops	560
Nearest NDRF Batallion	Patna
Radio station	Patna
Shelter places like school, community centres, Panchayat Bhawan NGO/INGO/Red cross etc.	
Specialized institutions like NDRF, SDRF and Army Posts which can be helped in unrest situations through the district administration	
National Disaster Response Force (NDRF)	
State Disaster Response Force (SDRF)	
Civil Defence	
Human Resource Trained in Disaster Management	
Engineers	13
Veterinary doctors	-
Panchayat Mukhiya/Sarpanch	88/88
Rajmistries	110
Navik and Surveyors	-
School Teachers/ Others	903
Capacity Analysis Regarding Prevention of Lightning	
Availability of Lightning App:- Indrabajra & Damini	Awareness about the app and installation process. The app was always used to send lightning alert message to various group at Block level/District level.
Burn Hospitals	-
Trained Volunteers	-

CHAPTER4: INSTITUIONAL ARRANGEMENT

4.1. DDMA

As per the DM Act 2005 the DDMA is formed in **all** districts of the state including Jehanabad vide order of the state government dated 30.06.08 and it will be the nodal agency for preparation, functioning and review of the District Disaster Management Plan (DDMP). The DDMA will prepare the DDMP and monitor the implementation of the National Policy and the State Policy. The Jehanabad DDMP is an operational module for district administration (owned by the DDMA) and it helps to effectively response and mitigates the different types of disasters with locally available resources as per Section 30, of the DM Act 2005.

The DDMP is designed as per the current need and the major strategies to respond to any disaster events have also been considered. In this multi-hazard district plan, all the disasters will be handled properly following the use of resource inventory, Standard Operating Procedures (SOP), keeping coordination with the line agencies and proper community based awareness activities. SOP of line departments is designed to make them alert. It also ensures a checklist for all the stakeholders for an action oriented response structure and to study their preparedness level, role and responsibilities during, after and at normal time of the disaster.

DDMP is a Multi-Sector and the strategies for strengthening institutional and functional capacities, the roles and responsibilities for different government departments and for different stakeholders during different disasters including early warning system and further response for district level different disasters.

DDMA may identify functions of other institutions which they consider important such as Disaster Management Teams, Crisis Management Group / Incident Response System (IRS), Emergency Operation Centers (EOCs) and their operation, Site Operation Centres.

DDMA provides guidelines to various entities involved in disaster management in the state to discharge their responsibilities more effectively.

Table 4.1: Composition of DDMA members

Members	Designation
District Magistrate	Chairman
Chairperson- ZilaParisad	Vice Chairman
Police Superintendent	Member
Chief Medical Officer (Civil surgeon)	Member
Deputy Development Commissioner	Member
Additional District Magistrate (Disaster Management Official)	Member
Executive Engineer (Flood Control Division)	Member

Table 4.2 : Jehanabad DDMA Member Details

In Jehanabad district DDMA has been formed as per the instructions provided vide Notification Letter No.-1502 Date-13-06-2008 of Disaster Management Department, Govt. Of Bihar.

Composition of District Disaster Management Authority (DDMA) of Jehanabad			
Sl No.	ORGANIZATION/ DESIGNATION	DESIGNATION IN DDMA	Contact Number
1	District Magistrate	Chairman	9431226100
2	Chairperson- Zila Parisad	Vice-Chairman	9572403231
3	Police Superintendent	Member	9431822976
4	Chief Medical Office (Civil Surgeon)	Member	9470003329
5	Deputy Development Commissioner	Member	9431818352
6	Additional District Magistrate (In charge Disaster Management)	Member	9431632413
7	Executive Engineer (Flood Control Diversion)	Member	9939667589

4.2 PRIs

Provide assistance to DDMA in Disaster Management activities. Ensure training of PRI members and employees on their roles in Disaster Management Ensure that resources relating to Disaster Management are maintained as to be readily available for use in the event of any threatening disaster situation or disaster.

Ensure that all construction projects under the PRIs conform to the standards and specifications accordingly.

Carry out immediate response, assessment, relief, rehabilitation and reconstruction activities in the affected area within the district.

4.3 CBOs

Assist in prevention and mitigation activities under the overall direction and supervision of the DDMA. Participate in all training activities organized and should familiarize themselves with their role in Disaster Management. Adhere to the relevant rules regarding the prevention of disasters, as may be stipulated by relevant local authorities. As a part of Corporate Social Responsibility (CSR) undertakes DRR projects in consultation with the DDMA for enhancing the district's resilience.

4.4 District EOC

The District EOC (District Emergency Operations Centre) on the basis of DDMP is the well-equipped focal point of activity in a disaster situation in the district

with flexibility to expand when demand increases and reachable when the situation comes to normal. The DEOC is connected with the State EOC in the upstream which further connects to National EOC and other EOCs in the downstream including other field offices during emergencies.

- Similarly, at the Sub-Division and Blocks, Control Rooms are to be set up. Sub-Division Committees, BDMCs and the VDMCs headed by the respective Civil Sub-Divisional Officers, Block Development Officers and the Village Heads responsible for overall Disaster Management and to keep in close contact with the DEOC/DDMA.

Objectives of the Emergency Operations Centre

- The EOC at the District level is the nerve centre for coordination and management of disasters. The objectives of the EOC shall be to provide centralized direction and control of any or all of the following functions:
 - Receive and process disaster alerts/warnings from nodal agencies and other sources and communicate the same to all designated authorities.
 - Monitor emergency operations
 - Facilitate Coordination among ESF of Departments/Agencies.
 - Requisitioning additional resources during the disaster phase
 - Issuing disaster/incident specific information and instructions specific to all concerned;
 - Consolidation, analysis, and dissemination of damage, loss and needs assessment data;
 - Forwarding of consolidated reports to all designated authorities.
- The DEOC will be connected with the SEOC. The control room will function on 24x7 bases and will be functional round the year. Suitable personnel will be selected and imparted training in the operation of Control Room who will be posted to man the EOC.

Alternate EOC

- An alternate or standby EOC will be set up in the in other places if needed

4.5. Coordination mechanism

DDMA and DEOC to coordinate with all heads of department at the district level, IRTs, ESFs, BDOs, DMTs, Task Forces, NGOs, CBOs, Corporate and the community for effective implementation of DM Plans at all levels. DDMA should also have a link with neighbouring districts in case of disasters covering neighbouring districts.

- Facilitate and coordinate with local Government bodies to ensure that pre and post Disaster Management activities in the district are carried out.
- Assist community training, awareness programmes, pre-positioning and the installation of emergency facilities with the support of local administration, non-governmental organizations and the private sector.
- Function as leader and take appropriate actions to smoothen the response and relief activities to minimize the adverse impact of disaster.
- Recommend Relief Commissioner and State Government for declaration of disaster
- Generally, Emergency Operation centre (EOC) is the enabler of communication and coordination. Pre-Disaster meetings to review the DDMP with all stakeholders should be planned.
- For achieving the objective, the plan should have a pre-established and practiced mechanism for Inter, intra and extra agency coordination

CHAPTER 5: PREVENTION, MITIGATION AND PREPAREDNESS MEASURES

Preventative measures reduce the likelihood of a disaster event occurring or the severity of an event should it eventuate. Prevention and mitigation strategies should work towards reducing the financial and social costs to communities over time, improving the built environment, and reducing the impact on, and damage to, life, property, culture and the environment. Investment in disaster risk prevention and reduction enhances the socio-economic resilience of people, communities, countries and their assets, as well as the environment.

The DDMA is responsible to deal with all phases (Preparedness, Prevention, Mitigation, and Response & Recovery) of DM within the district also ensure all relevant department/agencies enforcement of the codes, bylaws and act such as National Building Code, Bureau of Indian Standards, etc. in the upcoming development projects, construction work, and commercial complexes.

All department/agencies ensure implement guidance and orders given by DDMA and avail following effective mechanisms to prevent, mitigate risks and vulnerability and strengthen its and preparedness against identified hazard:

- Long term planning for mitigation, preparedness and prevention investments in the district,
- Enforcement of regulations, particularly the building codes and land use,
- Review and evaluation of development plans and activities to identify ways to reduce risks and vulnerability, and
- Capacity building, including warning, the provision of relief and recovery assistance and community level identification of risk and vulnerability

PREVENTION MEASURES: Follow basic rules and regulations in environmental management, site selection, urban planning and sound construction are critical to the safety of communities, whereas socio-economic measures can be used to increase resilience, spread risk and responsibility, create redundancy and minimize the impact.

MITIGATION MEASURES: All mitigation measures are important as they save lives and reduce the cost of response to and recovery of the community. The Multi-Hazards Mitigation Action approach targeting both structural and non-structural mitigation measures which aim at reducing the physical and socioeconomical vulnerability, enhancing capacity and reduce damaging impacts of disasters across the district for all disasters.

PREPAREDNESS MEASURES: Comprehensive state of readiness to deal with any degree of threatening of hazard, risk or even disaster and the effects thereof has to be checked by the DDMA particularly on all new development projects,

construction work, and commercial complexes and strictly enforcing adhering rules in views of disaster preparedness.

5.1 Key functions of departments/ agencies

The powers & functions of the DDMA in the event of any threatening disaster situation or disaster area

- Give directions for the release and use of resources available with any Department of the Government and the local authority in the district;
- Control and restrict vehicular traffic to, from and within, the vulnerable or affected areas;
- Control and restrict the entry of any person into, his movement within and departure from, a vulnerable or affected area;
- Remove debris, conduct search and carry out rescue operations;
- Provide shelter, food, drinking water provisions, healthcare and services;
- Establish emergency communication systems in the affected areas;
- Make arrangements for the disposal of the unclaimed dead bodies;
- Recommend to any Department of the Government of the State or any authority or body under that Government at the district level to take such measures as are necessary in its opinion;
- Require experts and consultants in the relevant fields to advise and assist as it may deem necessary;
- Procure exclusive or preferential use of amenities from any authority or person;
- Construct temporary bridges or other necessary structures and demolish structures which may be hazardous to public or aggravate the effects of the disaster;
- Ensure that the non-governmental organizations carry out their activities in an equitable and non-discriminatory manner;
- Take such other steps as may be required or warranted to be taken in such a situation.

5.2. Key Functions common for all departments/ agencies

All department/agencies ensure implement guidance and orders given by DDMA and avail following effective mechanisms to reduce risks and vulnerability and strengthen its capacity against identified hazard:

- Long term plan for mitigation, preparedness and prevention investments
- Enforcement of regulations, particularly the building codes and land use,
- Review and evaluation of development plans and activities to identify ways to reduce risks and vulnerability, and

- C
apacity building, warning, provision of relief and recovery assistance and
communitylevelidentification of risk and vulnerability

5.3. Disaster wise functions of departments /agencies

Table 5.1: role and responsibilities of line departments

Department / Agency	For all Disasters including FLOOD, DRAUGHT, EARTHQUAKE, FIRE etc.		
	Disaster Prevention	Disaster Mitigation	Disaster Preparedness
DDMA	<ul style="list-style-type: none"> • The DDMA will give Public awareness on heat related illness, preventive tips on Do's & Don'ts of Flood through electronic media, print media and Social Media. • Ensure enforcement of the codes, bylaws and act such as National Building Code, Bureau of Indian Standards, etc. in the upcoming development projects, construction work, and commercial complexes • DDMA and Incident Response System (IRS), Coordinate activities of various agencies /organizations and if necessary invoke, help from the local Army/CPMF unit, State Govt and the Central Government. 		
Health Department	<ul style="list-style-type: none"> • Medical plan for preparedness & mass casualty management, preventive & curative healthcare in the affected areas. Preventive & curative healthcare in the affected areas and hospitals, Medical plan for mass casualty management, medical aid. 	<ul style="list-style-type: none"> • Ensure availability of trained mobile medical teams at disposal. • Prepare psychological and psychosocial care teams. • Ensure availability of generator sets and buffer stock of fuel at disposal. • Check and repair all medical equipment's to ensure functional materials (if needed) in hospitals 	<ul style="list-style-type: none"> • IEC materials in local languages like posters, pamphlets etc, will be developed for publicity and awareness. Identify likely diseases associated with disasters. • Set up location-wise quick response teams with team leaders and supporting staff (Identify by name & allocation). • Skill upgradation trainings for the officers/supporting staff & volunteers. • Plan for emergency accommodation for staff & other officers from outside areas. • Equipment/machines etc., to be upgraded & maintained in working condition. • Important telephone/contact details to be made available. • Determine the quantity, type of sufficient supply of life saving equipments and stock of medicines/disinfectants/vaccines and first aid kits/ambulances., portable supplies including portable

			<p>oxygen cylinders, portable X-Ray machine, portable ultrasound machines, triage tags, equipments etc. that will be required per day/district/block/village, including relief camps etc. in case of an emergency</p> <ul style="list-style-type: none">• Develop do's and don'ts and IEC materials regarding health and hygiene.• Organise awareness camps with help of CHC/ PHCs and Department of Rural• Prepare psychological and psychosocial care teams.• Ensure availability of generator sets and buffer stock of fuel at disposal.• Ensure availability of adequate space with suitable facilities for storage of medicines.• Prepare a database of private hospitals and nursing homes with services and facilities available, Red Cross Society, database of blood donors, restaurants and caterers through Food Safety Officer (FSO)• Prepare a database of doctors registered with Indian Medical Association (IMA).• Prepare for prompt establishment of temporary hospital, mobile surgical unit, etc at short notice, near the affected area.• Ensure chlorination of surface water sources to avoid water borne diseases.• Ensure proper and safe mechanism for medical waste disposal. <p>Prepare for proper disease surveillance system.</p>
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<p>Revenue and Disaster Management Department</p>	<ul style="list-style-type: none"> • Ensure proper mechanism in place for early warning of different hazards to village level through RajasvaHalkaKarmchari, PanchayatSachiv, VikasMitra, TolaSevak, tehsildars, patwaris, District Development and Panchayat Officer (DDPO). • Prepare Flood Control Order by 31st May of each year. • Ensure proper functioning of district Flood Control Room during monsoon period and otherwise, if required. • Identify disaster prone villages. • Prepare a database of critical and lifesaving infrastructure and safe locations for evacuation, safe sites for temporary shelters, relief camps and staging area • Prepare a database of 	<ul style="list-style-type: none"> • Ensure regular monitoring of rain-gauge and regular updation of database for distribution and variation in rainfall 	<ul style="list-style-type: none"> • Executive Officer of Disaster Management Committee, Incident Commander (I/C) for the Incident Response System (IRS), Coordinate the activities of various agencies /organizations and If necessary invoke, help from the local Army/CPMF unit, District Administration, the State Government and the Central government. Arrangement of shelter houses, essential commodities to the affected victims, Incident commander/overall supervision at Sub-division level, financial assistance to victims. • Ensure regular monitoring of rain-gauge and regular updation of database for distribution and variation in rainfall. • Ensure proper functioning of district Flood Control Room during monsoon period and otherwise, if required. • Update lists of villages vulnerable to flood and drought. • Prepare a database of critical and lifesaving infrastructure and safe locations for evacuation
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	<p>voluntary organizations and service they offer. Ensure the authenticity of the same.</p> <ul style="list-style-type: none"> • Identify competent persons/experts from various required fields for carrying out damage and need assessment post disaster. • Prepare proper mechanism for disbursement of compensation to victims or families of deceased. • Prepare a database of safe locations for relief distribution site for mass care and housing. • Identify site for temporary burial. 		
Food & Supplies Department	<ul style="list-style-type: none"> • Identify hazard prone zones. Formation of teams & delegation of areas of operation. 	<ul style="list-style-type: none"> • Prepare and/or repair for safety of stored food grains in godowns against inundation and water logging, fire and other possible hazards. • Prepare for out- 	<ul style="list-style-type: none"> • Arrangements of essentials commodities and other related matters, to continue PDS. • Determine the quantity & type of supplies required in a disaster (e.g. dry food, ready to eat food, essential commodities, SKO, LPG, POL, toiletries, blankets etc.) & tie up with suppliers. • Identify storage facilities, location & capacity wise. • Maintain a list of suppliers of different commodities in the District & outside the District Important

		<p>movement of food grains to a pre-decided safer location, if required.</p>	<p>telephone/contact details to be made available.</p> <ul style="list-style-type: none"> • Pre-contract with suppliers.
Fire Department		<ul style="list-style-type: none"> • Regular checking and repair of fire tenders and keeping them in full working condition • Mock drills according to plans 	<ul style="list-style-type: none"> • Search & rescue, first aid , fire fighting, evacuation, removal of collapsed houses, walls etc. • Formation of teams & delegation of areas of operation. • Skill upgradation trainings for the officers and supporting staff in fire fighting, search & rescue. • Materials required for use in emergency should be indented for and kept in reserve. • Keep in touch with other fire stations in the District. • Keep in close contact with the District administration.
Education Department	<ul style="list-style-type: none"> • Conduct hygiene promotion activities as per direction issued by the Health Department on a regular basis. • Identify safe schools and colleges to serve as relief shelter in case of any emergency within that area, only for short period of time 	<ul style="list-style-type: none"> • Disaster preparedness in schools, First Aid, Search and rescue 	<ul style="list-style-type: none"> • Organise awareness generation programs in schools and colleges for students, teachers, administrative staff and other helpers. These programs should focus on do's and don'ts for various hazards and safe evacuation in case of any emergency. • Ensure database and awareness regarding dos and don'ts of various hazards as issued by Department of Revenue & Disaster Management, Health Department, Police Department, etc. • Ensure preparation of first aid and disaster management kit in each school and college. • Ensure preparation of school and colleges disaster management plan..

<p>Public Works Department (Building and Roads)</p>	<ul style="list-style-type: none"> • Ensure availability and functioning of all equipments like cranes, JCB, including lists of private agencies. • Prepare for prompt clearance of debris. Prepare the demolishing squad for prompt demolition of unsafe buildings, clearing and repairing of damaged roads, culverts, bridges and flyovers in your jurisdiction. Prepare for construction of new temporary roads at short notice for diverting traffic from the affected area. • Prepare for construction of temporary facilities like that of medical post, temporary shelters, etc. at short notice. Prepare for prompt establishment of helipad near the affected site for VVIP visits. Prepare for restoration of government buildings 	<p>As given in DRR Road Map BCD is to establish EQ management resource centre and EQ advisory cell at district level</p>	<ul style="list-style-type: none"> • Disaster preparedness, Provide engineering support in search and rescue, demolition of weak/damaged buildings, emergency restoration of roads and bridges, assessment of quantum & extent of loss, availability of JCBs/other equipment from private parties.
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	damaged during disaster		
Public Health Engineering Department	<ul style="list-style-type: none"> • Ensure availability and well-functioning of all equipments and vehicles. • Prepare for treatment/ chlorination of piped water, if required. Prepare for distribution of water purifying tablets, bleaching powder and chlorination of public water resources, if required. • Prepare for arrangement of safe drinking water supply for surviving community in the affected areas and also in relief camps and shelters and for other purposes. • Prepare for prompt repair of pipelines supplying potable water. Make standby arrangements of generators for running the water pumps. • Ensure installations of tube wells, if needed, before the monsoon to 	Ensure repair and re-positioning of adequate number of water tankers, drums, jerry cans to prepare for supply of safe water, in scarcity period and in emergency.	<ul style="list-style-type: none"> • Ensuring filling of storage tanks in the jurisdiction in coordination of Irrigation Department prior to the onset of summer. • Prepare for the arrangements of clean drinking water for affected livestock and poultry. • Prepare mechanism for proper liquid waste management and disposal of liquid waste in shelter and relief camps, feeding centres and affected areas. • Prepare for prompt provision of temporary toilets/ trench latrines in the affected urban area and relief camps in the jurisdiction.

	<p>provide underground water to the livestock during flood period.</p> <ul style="list-style-type: none"> • Ensure availability of water supply/ filling points for fire tenders, water cannons, hospitals and other necessary life-saving infrastructure. 		
Agriculture Department	<ul style="list-style-type: none"> • Ensure surveillance for pest infestation and crop diseases. • Ensure availability of stock for immediate replacement of broken/non-functioning gadgets/equipments. • Prepare for establishment of public information booths, with appropriate and modern means of communication, to assist farmers in providing information regarding insurance, compensation, repair of agro equipments and restoring of agricultural activities at the earliest. 	<ul style="list-style-type: none"> • Promote Crop Insurance/ Draught resistant crops, restoration of normalcy in agriculture crops and daily rainfall data is to be supplied to DEOCE. • Promote Crop Insurance/ Draught resistant crops, restoration of normalcy in agriculture/horticulture crops 	<ul style="list-style-type: none"> • Prepare Agriculture Contingency Plan. • Constitute a Crop Weather Watch Group at district level (as per 'A Model Manual or Drought Management', GoI) with representatives from Meteorological Department and concerned officers dealing with agricultural inputs, credit extension, etc. to keep a close watch on the monsoon situation, extreme temperature, hail and wind storm. • Identify vulnerable areas prone to pest infestation, drought, flood and other hazards. • Skill upgradation trainings for the officers/supporting staffs & volunteers. • Equipment/machines etc., to be upgraded & maintained in working condition. • Encourage & ensure crop insurance by farmers. • Determine the quantity, type of seeds/plants/medicines/tools and equipments etc. which will be required per district/block/village, in case of an emergency. • Listing possible storage godowns.

			<ul style="list-style-type: none"> • Pre-contract with suppliers • (seeds/plants/medicines/manure/tools/equipments).
Animal Husbandry	Cattle vaccination in flood scenario, Carcass disposal, arrangement of shelter/fodder/medicines for animals.		
Police Department	<ul style="list-style-type: none"> • Formation of teams & delegation of areas of operation to maintain peace and safety • Skill upgradation trainings for the officers and supporting staff & wardens /post wardens. • Equipment/machines to be upgraded & maintained in working condition. • Emergency Control Rooms operational. • Adequate warning mechanism for evacuation. • Identification of alternative routes. • Important telephone/contact details to be made available. • Antisocial elements/groups 	<ul style="list-style-type: none"> • Evacuation of the incident areas, provide police wireless communication, search & rescue and to maintain law & order immediate after disaster. Take all steps to ensure safety of life and property of every citizen in consultation with the ADM/ Incident Commander, Control entry to the emergency area by establishing various points. • Mock drills according to plan 	<ul style="list-style-type: none"> • Evacuation of the incident areas, provide police wireless communication, search & rescue and to maintain law & order immediate after disaster. Take all steps to ensure safety of life and property of every citizen in consultation with the ADM/ Incident Commander, Control entry to the emergency area by establishing various points.

	<p>identified.</p> <ul style="list-style-type: none"> • Identification of sensitive areas and patrolling therein • Patrolling on important buildings/ highways. • Support to the Administration on training of volunteers. • Keeping close contact with the Administration 		
Information and Public Relations Department	<ul style="list-style-type: none"> • Dissemination of information to public and others concerned regarding do's and don'ts of various disasters. • Regular liasioning with the media print & visual 	Warning, control of rumours/ panic, media coverage	<ul style="list-style-type: none"> • Awareness campaigns, Warning, control of rumours/ panic, media coverage (print media and electronic media). Creation of public awareness regarding various types of disasters through media propagation.
Electricity Department	<ul style="list-style-type: none"> • Restoration of electric supply, maintenance and repairing, availability of electricity/DG sets from private parties 		<ul style="list-style-type: none"> • Restoration of electric supply, maintenance and repairing, availability of electricity/DG sets from private parties
Forest Department	<ul style="list-style-type: none"> • Promotion of erosion preventing plantations, Clearance of broken trees and bushes to clear road transportation, co-operation in rescue works 	<ul style="list-style-type: none"> • Plan for reducing the incidence, and minimise the impact of forest fires. 	<ul style="list-style-type: none"> • Promotion of shelter belt plantations. • Publishing for public knowledge, details of forest cover, use of land under the forest department, the rate of depletion and its causes. • Keep saws (both power and manual) in working condition.

			<ul style="list-style-type: none"> • Provision of seedlings to the community and encouraging plantation activities, promoting nurseries for providing seedlings in case of destruction of trees during natural disasters. • IEC activities for greater awareness regarding the role of trees and forests for protection during emergencies and also to minimize environmental impact as a result of deforestation like climate change, soil erosion, etc.
Social Welfare Department	<ul style="list-style-type: none"> • Identify and maintain lists of persons with disabilities, identified site, responsibilities for risk managements for person with disabilities. 	<ul style="list-style-type: none"> • Report and Coordination with DM & Collector pre-disaster and post disaster. 	<ul style="list-style-type: none"> • Capacity building for vulnerable section of society
Bihar Roadways	<ul style="list-style-type: none"> • Enlisting various classes of vehicles available, arranging vehicles for evacuation 		<ul style="list-style-type: none"> • Ensure proper functioning of filling station, vehicles and equipments including fire extinguishers, first aid kits, etc. • Prepare for prompt deployment of vehicles at short notice for various purposes like mass evacuation, transportation of response teams, relief items, victims, etc. • Prepare mechanical team for prompt repair of equipment and vehicles. • Train drivers and conductors in first aid and basic life saving techniques. • Develop and practice on with routes of potential hazardous installations and follow incident traffic plan.

Urban Development Department, Bihar		<ul style="list-style-type: none"> To disseminate warning information of urban flood prone-wise 	<ul style="list-style-type: none"> To strengthen urban flood warning system. To clean drain. To constitute QRT. Preparedness of urban flood management
Civil Aviation			<ul style="list-style-type: none"> Identify safe locations that can be used as helipads for emergency operations in disaster prone areas
Department of Rural Development Authority (DRDA)		<ul style="list-style-type: none"> Enlist repairable drains and sanitation and make them functional before every monsoon season 	<ul style="list-style-type: none"> Ensure availability of tractor trolleys and other required equipments Plan to provide building/guest-house/dharamshalas/chaupals at different locations to establish control room, first aid and medical post or shelters during emergency. Prepare a database of private catering services providers, tents, tarpaulin sheets, poles, kanats, cooking utensils, polythene bags, shrouds and other essential items that could be used for community kitchen and cremation and burial. Ensure cleaning of house drains before the monsoon season and sanitation operations in view of post flood situations. Prepare for prompt provision of temporary toilets/ trench latrines in the affected rural area and relief camps in urban areas. Prepare mechanism for proper solid waste management, disposal of waste and removal of debris in shelter and relief camps, feeding centres and affected rural areas.
Red cross Society	<ul style="list-style-type: none"> Ensure availability of fund for relief materials/ work. 	<ul style="list-style-type: none"> Train and prepare ward and village wise first aid teams 	<ul style="list-style-type: none"> Prepare database of blood donors in the district and update the same in DDMRI. Prepare database of trainers & volunteers and

			<p>update the same in DDMRI.</p> <ul style="list-style-type: none"> • Prepare a database of voluntary organizations and services they offer, ensure their authenticity, and update the same in DDMRI. • Ensure availability of adequate stock of food items, blankets, clothing including woolens, utensils, first aid kits, stretchers, medicines, etc. in view of any emergency situation. • Ensure availability of adequate stock of aids (hearing, visual, crutches, artificial limbs, etc.) for physically challenged persons. • Ensure availability of old blankets/ gunny bags for animal during cold wave period. • Prepare database of providers of shrouds and tarpaulin sheets.
Civil Defense	<ul style="list-style-type: none"> • Prepare a database of equipments available and update the same in DDMRI. 	<ul style="list-style-type: none"> • Maintain and update regularly household record. 	<ul style="list-style-type: none"> • Prepare workforce of volunteers particularly trained on a) First aid b) Rescue Operations c) Minor fire-fighting services d) Traffic management e) Crowd management f) Dead body management g) Evacuation h) Shelter and camp management i) Mass Care j) Welfare services during relief • Prepare a database of volunteers available and update the same in DDMRI. • Prepare a database of NSS/ NCC students and faculties from various educational institutions and update the same in DDMRI.

CHAPTER 6: CAPACITY BUILDING AND TRAINING

To implement DDMP the DDMA require Capacity Building for Disaster Response of the 13th Finance Commission, NDMA Fund & State Fund to capacitate all the stake holders like officials, policy makers, engineers, architects, masons, doctors, nurses, teachers, police, fire personnel, drivers, NGOs and volunteers (NYK, NCC, NSS). Schools and colleges are also included in Capacity Building and training.

Prepositioning of critical infrastructures at appropriate locations, Damage and Needs Assessment, Search & Rescue/First Aid training and Mock Drills are the priority of the DDMA which is imparting by CD&HGs. Gender and Disaster awareness is also one of the components in Capacity Building along with preparation of DM Plans by all stakeholders.

6.1. Institutional capacity building:

DDMA / District HODs

The role of district level officials in Jehanabad in terms of capacity-building and training is primarily that of the District Disaster Management Authority (DDMA), Jehanabad. The Authority will ensure that participants from various departments are nominated for the various disaster management related trainings conducted by BSDMA, CDM, BIPARD and any other body/authority that is competent to conduct/organise trainings in the field of disaster management.

Table 6.1: Institutional capacity building

Activities	Responsible Department/s
<ul style="list-style-type: none"> <input type="checkbox"/> Sensitization to Representatives & law/ policy makers <input type="checkbox"/> Sensitization & training to government officials of different departments <input type="checkbox"/> Overall supervision and training programme of all line department <input type="checkbox"/> Develop trained human resource as swimmers, divers and boat-operators in view of flood vulnerability of the district. <input type="checkbox"/> Form and train team in first aid, search and rescue and basic life saving techniques. <input type="checkbox"/> Adequate stocking/replenishing of first aid kits, boats, oars, OBM, life jackets, life buoy, public Redressal address system. 	<p>SDMA, DDMA, Revenue & DM Department,</p>

<ul style="list-style-type: none"> <input type="checkbox"/> Formation and training of a Weather Watch Group for the purpose of monitoring crops in the district. <input type="checkbox"/> Putting in place disaster management protocols for the hazards of drought, flood, hailstorm, etc. <input type="checkbox"/> Provision of training to farmers in alternate cropping techniques and mixed cropping, fodder management, seed banks and fodder banks. <input type="checkbox"/> Formation of Rapid Damage Assessment Teams who will be capable of assessing the condition of soil, fields, irrigation systems and any other damage to crops in post-disaster situations. 	DDMA, Agriculture Department
<ul style="list-style-type: none"> <input type="checkbox"/> Training to CD&HGs personnel in various aspect of DM including <input type="checkbox"/> Search and Rescue & First Aid 	Revenue & DM Department, SDMA, DDMA, CD&HG
<ul style="list-style-type: none"> <input type="checkbox"/> Training to engineers, architects, structural engineers, builders <input type="checkbox"/> and masons in various aspect of DM 	DDMA, PWD and all relevant departments
<ul style="list-style-type: none"> <input type="checkbox"/> Training of doctors & paramedics on Medical preparedness & <input type="checkbox"/> Formation and training of damage and needs assessment teams within the department and members of local communities in health and hygiene practices. Provision of trainings for paramedics, mobile medical teams, psychological first aid teams, psycho-social care teams and Quick Reaction Medical Teams (QRMT) and Hospital Emergency Preparedness Programme (HEPP) <input type="checkbox"/> Timely procurement/purchase of portable equipments for field and hospital diagnosis, triage, etc. Coordinate and liaison with NCC, NSS and Civil Defence volunteers. 	Mass Casualty Management DDMA, Health Department
<ul style="list-style-type: none"> <input type="checkbox"/> Training to educational institutions, teachers etc on College/ <input type="checkbox"/> School Safety, Search & Rescue, First Aid <input type="checkbox"/> Formation and training of damage and needs assessment teams within the department. <input type="checkbox"/> Education and awareness programs should be designed in such a way so that the disaster management education in the school/college curriculum could be included. Capacity building at the institutional level should be done by carrying out various activities under the National School Safety Programme (NSSP) and Mukhyamantri School Safety Program (MSSP). 	DDMA, Education Department, CD&HG

<ul style="list-style-type: none"> □ Training to Police and Traffic personnel in various aspect of DM □ The efforts of the police go a long way in helping avoid and/or control chaos at disaster sites. They also help prevent human trafficking which is increasingly common in the aftermath of disasters these days. 	DDMA, Home Department
<ul style="list-style-type: none"> □ Training to Fire & Emergency personnel in various aspect of DM 	DDMA, Home Department
<ul style="list-style-type: none"> □ Training to NCC, NSS, NYK& volunteers in various aspect of DM 	DDMA
<ul style="list-style-type: none"> □ Training to NGOs/CBOs in various aspect of disaster management 	DDMA
<ul style="list-style-type: none"> □ Training to Media in various aspect of disaster management 	DDMA, IPR
<ul style="list-style-type: none"> □ Training to Teachers of PWDs 	DDMA & Social Welfare Department
<ul style="list-style-type: none"> □ Training on Gender & Disaster to all stakeholders 	DDMA
<ul style="list-style-type: none"> □ Formation of Rapid Damage Assessment teams capable of examining and assessing damage caused to livestock, feed and fodder, and other things within the domain of animal husbandry 	DDMA, Animal Husbandry
<ul style="list-style-type: none"> □ IEC, Advertisement, hoarding, booklets, leaflets, banners, demonstration, street play, rally, exhibition, audio-visual and documentary etc 	DDMA & all line departments
<ul style="list-style-type: none"> □ Provision of trainings for volunteers in search and rescue (SAR), first aid, traffic management, dead body management, evacuation, shelter and camp management, mass care and crowd management. □ The purchase of SAR equipments such as Helmet, Jackets, Gloves, Ropes, Pully Hooks, Tracking, Signaling & Note-Taking Gear, Flashlight, Multitool, Whistle & Lanyard , Fire-Starting Kit, First Aid Kit, Miscellaneous etc., through the appropriate channels of the District Administration. 	DDMA, Civil Defence
<ul style="list-style-type: none"> □ Provision of training for the preparation of ward-level and village level first aid teams. Organise drives to recruit volunteers to help with blood donation camps and other activities on a regular basis during normal times. 	District Red Cross Society
<ul style="list-style-type: none"> □ Provision of training for formation of teams to engage with the issues of hygiene and sanitation at the village level through the Gram Panchayats. □ Provision of training regarding relief distribution and shelter & camp management 	DDMA, DRDA

<ul style="list-style-type: none"> ❑ The timely purchase of electric equipments necessary for maintaining a state of adequate preparedness and for speedy and efficient disaster response, through the appropriate channels of the District Administration. ❑ Provide training to officials to use such equipments to reduce risks 	DDMA, Electricity Department
<ul style="list-style-type: none"> ❑ Conduct fire safety trainings/refresher for all district officials as well as for housing societies, shopkeeper associations, etc. regularly. ❑ Conduct safety audits of various government and civilian buildings in order to check whether they comply with fire safety norms. Conduct mock-drills for fire-fighting and evacuation procedures regularly, following a schedule stipulated by the District Disaster Management Authority (DDMA), Jehanabad. 	DDMA, Fire Services Department
<ul style="list-style-type: none"> ❑ Formation and training of teams within the department for catching wild/escaped animals who pose a threat to human safety. Train staff to deal with cases of forest fire 	DDMA, Fire Service Department, Forest Department
<ul style="list-style-type: none"> ❑ Provision of training to drivers, conductors and staff in first aid and basic life saving techniques Adequate stocking/replenishing of First Aid kits and maintenance of fire extinguishers in all vehicles and depots in the district. 	DDMA, Bihar Roadways
<ul style="list-style-type: none"> ❑ Provision of trainings to all human resources with regard to early-warning for flood. ❑ The timely purchase of early warning and communication equipments through appropriate channels of the District Administration. ❑ Awareness regarding Participatory Irrigation Management for farmer staff. 	DDMA, Irrigation Department

6.2 Community- including CBOs and PRIs/ULBs

Capacity building at this level includes awareness, sensitisation, orientation and developing skills of communities and community leaders. At the district level, assistance will be provided by consolidating the know-how and practical training provided by NDRF, Civil Defence and NGOs, District Red Cross, Self-Help Groups (SHGs), anganwadi centres and disseminating it within the communities and school. Multiple responsibilities within the arena of capacity building and training will be delegated to local authorities, PRIs and ULBs under the overall guidance of District authorities. It is also crucial to focus on imparting training, cultivating community awareness and ensuring skill-development among members of the community.

Furthermore, capacity-building of PRI, ULBs and CBOs at the community level should be done on the Public Private Partnership (PPP) model by ensuring identification of local resources and developing local infrastructure through PPP. Community-based Disaster Risk Reduction (CBDRR) and Village Contingency Planning (VCP) are also critical for capacity building at the community-level and will be managed by the concerned departments in the district.

6.3. Professionals

- Encourage preparation/review of DM plan through PRA
- Identification of vulnerable community & vulnerable groups keeping in mind the hazard, risk & gender issues
- Advice and issue direction wherever necessary for community disaster prevention, mitigation and preparedness through local resources and participatory approach
- Review the preparedness and provide necessary resources and support for DRR at community level
- Promote community preparedness, education, awareness, training and cooperation
- Ensure fail safe mechanism for timely dissemination of forecasting and warning of impending disaster to the community

6.4. Training Institutes and other facilities

Civil Engineers (Structural Capacity Building)

There is strong evidence that appropriate engineering intervention can significantly reduce the risk of disasters. Civil engineers also play an important role in post-disaster conditions – in rescue operations, damage assessment and the retrofitting of structures. Civil engineers need to keep themselves updated about the latest research and developments in construction technology, advances in construction materials and analysis or design procedures. Civil engineers should also take support from other branches of engineering for the better planning, execution and functioning of their building and infrastructure projects. Trainings to civil engineers will be provided by BIPARDBSDMA. Furthermore, at the district level, civil engineers will conduct training of masons for construction of earthquake-resistant structures. Such trainings will be facilitated by the DDMAJehanabad. BSDMA trained engineers and masons must be placed at annexure.

Strengthening of District (EOC)

The Emergency Operations Centre (EOC) contains important equipments and resources such as maps and communication equipments including landline telephones, mobile phones, satellite phones, walkie-talkie, HAM radio, computer/laptop with printer facility, email facility, fax machine, television, etc. In addition, it will also contain LCD monitors, printers, video-conferencing

equipment, power sources and backups, copies of plans, etc. It is crucial to strengthen the district-level EOC. This can be done by ensuring regular training of all staff meant to be present in the EOC.

Development of IEC

Material Addressing the specific requirements of vulnerable regions and the risk mitigation and preparedness needs of identified communities, various IEC material like list of do's and don'ts, posters, leaf -lets, banners, training modules and audio visual material must be produced using capacity-building funds of the state. The aim is to develop a large body of advocacy and awareness materials, especially in vernacular languages, targeting vulnerable groups such as women, children, elderly, differently-abled, and marginalized and excluded groups.

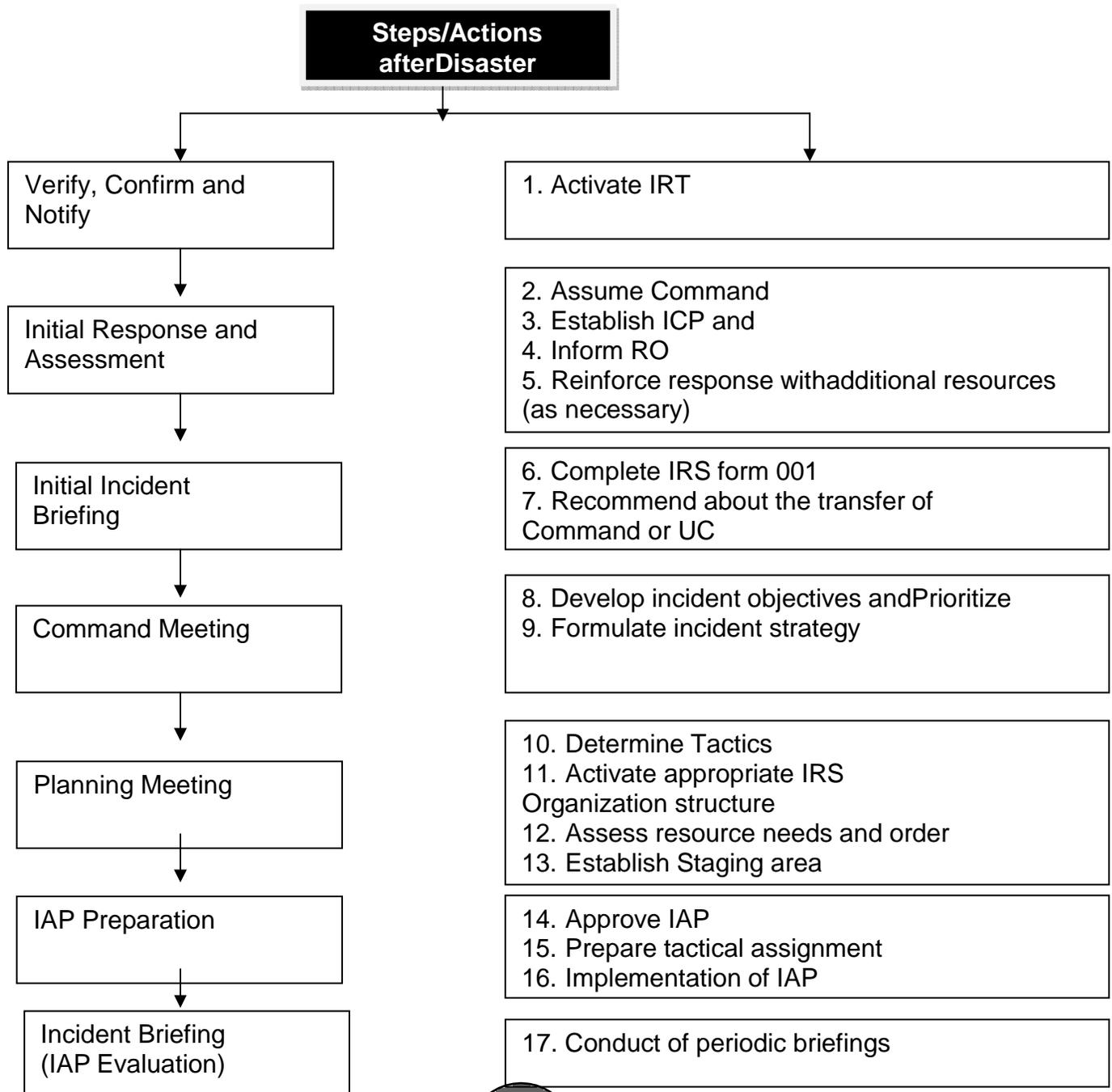
6.5. Awareness Generation

The DDMA prioritize adopting innovative strategies and processes for massive public awareness programs on disaster preparedness and identifying high risk localities, vulnerable buildings of Angawadi Centres, Health Service Centres and Schools and reviewing of ambulance, motorist boats, life jackets, stretcher, rescue ropes, fire extinguisher, tree cutters, claws, hooks, drain cleaners, etc., locally available active human resources like swimmer, search-rescue team, boatmen and other skilled volunteers for critical services for life and resource savings.

CHAPTER 7: RESPONSE PLANNING

Response is the set of activities implemented after the event/ impact of a disaster in order to assess the needs, reduce the suffering, limit the spread and the consequences of the disaster and open the way to rehabilitation. Response planning provides rapid and disciplined incident assessment to ensure a quickly scalable, adaptable and flexible response with clear roles and responsibilities of the government and private sectors at all levels.

Figure 7.1: Disaster response planning



7.1 Response Plan: Declaration of Disaster

Deputy Commissioner as the ex-officio chairperson of District Disaster Management Authority is responsible for declaration of disaster as well as activation of response and relief activities. First priority is to determine whether the resources are sufficient or not. If the situation is beyond the coping capacity of community in the affected area, then a disaster shall be declared. Declaration can be on the basis of level of disasters (L0, L1, L2 and L3) in affected area as per the NDMA guidelines.

- **L0** Denotes normal times which are expected to be utilised for close monitoring, documentation, prevention, mitigation and preparatory activities. This is the planning stage where plans at all levels from community to the State shall be put in place. Training on search and rescue, rehearsals, evaluation and inventory updation for response activities will be carried out during this time.
- **L1** Specifies disasters that can be managed at the district level, however, the state and centre will remain in readiness to provide assistance if needed
- **L2** Specifies disaster situations that may require assistance and active participation of the state and the mobilisation of resources at the state level.
- **L3** Disaster situations arise from large scale disasters where districts and the state may not have the capacity to respond adequately, and require assistance from the central government for reinstating the state and district machinery

(Source: NDMA Guidelines)

7.2 Implementation of DDMP and Activation of IRS

On declaration of disaster, DDMA shall activate IRS at district level. The District Magistrate, as Responsible Officer (RO) will activate various sections, branches, divisions, units and other facilities, as and when required.

DDMA shall ensure implementation of District Disaster Management Plan for activation of IRS, roles and responsibilities of departments and their officers, Emergency Support Functions, and implementation of DDMRI for resource mobilisation.

7.3 Early Warning & Coordination

To alert departments and public for the disaster about to strike, use EWS and immediate coordination with various critical stakeholders.

There should be proper liaison and coordination among the stakeholders involved in the comprehensive disaster management for ensuring the implementation of the components involved in the DDMP. It is the responsibility of the Coordination Team Manager (CTM), Jehanabad to liaison with concerned line departments, agencies, NGO's, INGO's, BO's, etc. and their representatives at various locations, keeping Incident Commander (IC) informed about arrivals of all the Government and Non-government agencies and their resources, and organise briefing sessions of all Government and Non-government agencies with the IC. This coordination will also involve facilitating disaster-response by addressing special needs of services like sign language interpreters or language translators for communication and other needs. CTM will also be responsible for management of all the VIPs and VVIPs visiting the affected area. CTM must coordinate with police to ensure their safety and security without affecting response and relief work.

7.4 Emergency Support Functions

Emergency support functions (ESF) are essential services for prompt and well-coordinated management of disaster. It is to be noted that each Response Branch Director (RBD) will be responsible for the tasks assigned to his/her respective department. Table below explains the purpose of different ESFs during any disaster. Annexure gives detailed roles and responsibilities of departments in various ESFs.

Rapid Assessment Report

Rapid damage and needs assessment team will produce a report describing the magnitude of disaster with respect to life loss, property loss and other urgent needs of the affected areas. This assessment provides a base for planning response activities. This report should further be communicated to DMD and BSDMA.

7.5 Emergency Relief

There are norms of compensation for ex-gratia grant payable to people affected by calamities like flood, drought, hailstorm, fire, lightening and earthquake for loss of human life, damage of crops, loss of cattle, and loss of personal property by fire and damage to houses due to floods. Relief in district should be cultural sensitive and appropriately distributed. Considering district profile of Jehanabad, special attention is necessary for population from scheduled caste, women, children and old age people during the process (vulnerability as discussed in chapter 3). It is the responsibility of each responsible department within the District Administration to see that rights of affected population particularly that of vulnerable population are not violated during the process.

Withdrawal of Declaration of Disaster

This would be about normalization and withdrawal of special orders which were given to bring situation under control at the beginning.

CHAPTER 8: RECONSTRUCTION, REHABILITATION AND RECOVERY

Post-disaster activities are complex process involving several dimensions such as livelihood restoration, psychological care, environmental rehabilitation, etc. This requires strong linkages between government, nongovernmental organisations as well as international organisations and should be seen as an opportunity to work with communities in the district Application of knowledge, capacity, and strategic plan and management skills can prepare DDMA, institutions and agencies to promote resilience against future disasters. The process demands coordinated focus on multi-disciplinary aspects under the holistic framework of post disaster reconstruction, recovery and rehabilitation programs.

8.1. Damage Assessment

Damage Assessment is a precondition for effective Disaster Management and DDMA should initiate the post disaster activities on the basis of the detailed damage assessment reports. Priority to be given lifeline infrastructures and communication systems like roads, bridge, administrative buildings, schools etc. Further, on the basis of extent and type of damage to buildings (public, private, government, etc.), district administration should initiate Reconstruction, Rehabilitation & Recovery measure to build back better in the post-disaster phase.

There are two stages for Damage Assessment:

- Preliminary Damage Assessment which is conducted immediately after a disaster and
- Detailed Damage Assessment which is conducted before reconstruction and rehabilitation by all relevant departments.

Table 8.1: Format for Restoration of Damage Assessment

Sectors Affected	Description- methodology	Responsible agencies
Human lives lost/ injured		
Government Building / infrastructure		
Private houses		
Agriculture crop/ cattle etc.		

8.2. Relief to the victims

Emergency relief is the right of every victim regardless of their status which plays most important role in betterment of psychological trauma, livelihood, health, education in entire disaster recovery process. Therefore, it should consist of a comprehensive multi-disciplinary activities and approaches involving rehabilitation of housing, infrastructure, livelihood, health, education, environment, etc. to ensure sustainable development of disaster affected communities.

Livelihood Restoration/ Generation: The socio- economic rehabilitation committee shall further co-ordinate along with Employment Agency, District Welfare Department and NGO's to ensure financial arrangements such as loans and assistance for self-employment. Other livelihood support activities which can be provided by the schemes under Welfare Department

Child Protection: The socio- economic rehabilitation committee shall further co-ordinate along with child and welfare department to install playschools, orphanages etc. at community level. Under the Balwadi Programme, pre-school education, routine health check-up, nutrition, play and other related activities are covered. Financial Assistance under the Non-School Going Disabled Children and Destitute Children, ICDS, etc. could also be used. Provide active strategies for Child protection.

Rehabilitation of Vulnerable communities- Widows / Destitute, Old Age Person and Physically Challenged

- The socio- economic rehabilitation committee should co-ordinate along with Department of Social Welfare to ensure that each Widows / Destitute, Old Age Person and Physically Challenged is registered under various schemes and measures to support livelihood.

Restoration of Social Capital

- DDMA shall constitute a Social Capital Restoration Committee to ensure intact social bonding of the people during distribution of houses.
- The committee shall co-ordinate with distributing agency to ensure that the social fabric is not weakened in the process of allocation of houses. Families with better cooperation with each other should be allocated close to each other.

Environmental Rehabilitation

- DDMA shall constitute an Environmental Rehabilitation committee to ensure decontamination of water bodies, soil, air and other environmental problems
- The committee shall co-ordinate along with Bihar State Pollution Control Board, Industrial Safety and Health, Environmental and Forest, Agriculture and Health department to monitor carry out decontamination.

8.3. Restoration of Basic Infrastructures

Restoration of basic infrastructure including roads, bridges, drinking water supply, electricity, communication network, school, health centres etc. may be required to be built in the existing sites or in the new relocated site depending upon the nature and extent of the rehabilitation programme. Repair/reconstruct the lifeline buildings/critical buildings which are necessary for treating the affected people or rehabilitation in these buildings as shelters.

Table 8.2: Format for Restoration of Basic Infrastructures

Basic Infrastructure	Description	Responsible agencies
Road	Repairing and maintenance of roads and bridges in the district.	NHAI, RCD, RWD
Hospital	Construction of New hospital and maintenance of hospitals.	BMSICL
Govt. School	Construction and maintenance of Govt. School.	BSID & VSS
Govt. Buildings	Construction and maintenance of Govt. Buildings in district.	Building Division, Jehanabad
Drinking Water	Construction and maintenance of drinking water supply installations.	PHED
Electric Supply	Construction and maintenance of installations regarding electrical supply and office buildings.	SBPDCL & Civil Wing of energy dept.

8.4. Repair/ reconstruction of life line building

For repair or reconstruct of life line buildings, the existing inhabited settlements may be completely reconstructed at a new site for which land acquisition may have to be done. Housing rehabilitation may also be carried out by way of upgradation of existing damaged houses through repairing and retrofitting. Much depends of carefully studied damage and needs assessment and consultation with stakeholders.

8.5. Other relevant

Basic Amenities

DDMA, Jehanabad shall ensure the provision of the following basic amenities at all reconstruction and relocation sites.

Health Facilities

DDMA shall constitute a committee to ensure for provision of health facilities at all reconstructing sites in the district.

The committee shall co-ordinate with constructing agencies and departments (Private agencies, PWD (B&R), Urban Development Authority, Housing board, etc.) in association with Health department and ensure functioning of health facilities along with necessary infrastructure at strategic locations at all reconstruction sites.

Schemes under health department like NRHM should be used for same.

Educational Facilities

DDMA shall constitute a committee to ensure provision of educational facilities for all the reconstructing sites in the district.

- The committee shall co-ordinate with constructing agencies (PWD B&R, Urban Development Authority etc.) in association with Education department for ensuring education for disaster affected children/ students in the district.
- Various departmental schemes such as Anganwari programme, creche programme, children's library can be used for the same.

Water

- DDMA shall constitute a committee to ensure provision of adequate water supply for all the reconstructing sites in the district.
- The committee should ensure potable water for drinking and water for other use is provided by PHED department through proper functional pipelines and other arrangements.
- The committee shall co-ordinate with reconstruction agencies to ensure that each household/ constructed unit is provided with adequate water storage facilities.

Drainages and Sanitation Facilities

- DDMA shall constitute a committee to ensure provision of proper drainage and sanitation facilities for all reconstruction sites in the district.
- The committee shall co-ordinate with PHED and constructing agencies (Private, PWD (B&R), Urban Development Authority, Housing Board, etc.) to ensure proper drainage system and other hygiene and sanitation activities in rehabilitation sites.

Electricity

- DDMA shall constitute a committee to ensure provision of electricity and sufficient lighting facilities for all the reconstructing sites in the district.
- The committee shall coordinate with electricity department and Municipality to ensure provision of electricity and associated infrastructure in all the rehabilitated sites with permanent connections.

Transportation and Connectivity Facilities

- DDMA shall constitute a committee to ensure provision of proper road connectivity and transportation facilities for all the reconstructing sites in the district.
- The committee shall coordinate along with PWD (B&R) Department, Bihar roadways and Regional Transport Authority (RTO/RTA) RTA to ensure road connectivity and transportation facilities for the reconstruction sites.
- DDMA shall coordinate with electricity department and Municipality to ensure provision of electricity and associated infrastructure in all the rehabilitated sites with permanent connections.

CHAPTER 9: BUDGET AND FINANCIAL RESOURCES

According to DM ACT 2005 Section No. 53 of Chapter IX, Finance, Account and Audit.), Section 48 of the DM Act 2005 explains the State Disaster Response Fund (SDRF) and State Disaster Mitigation Fund (SDMF), District Disaster Response Fund (DDRF) and District Disaster Mitigation Fund (DDMF) are to be created at the State & District Levels.

The disaster response funds at the district level would be used by the DDMA towards meeting expenses for emergency response, relief, rehabilitation in accordance with the guidelines and norms laid down by the Government of India and the State Government.

9.1. Schemes and programmes supporting DRR

State Allocation

- Every year the Revenue & Disaster Management Department, Government of Bihar prepares the Budget for Disaster Management in the State and releases the fund through the State Disaster Management Authority.

State Disaster Response Fund (SDRF)

- As per Section 48 (1a) of the DM Act, 2005, SDRF is to be created with 90% Central Share and 10% State Share. This fund is made available to the DDMA for post-disaster activities & relief as per norms of NDRF/SDRF.

State Disaster Mitigation Fund (SDMF)

- As per Section 48 (1c) of the DM Act, 2005, SDMF is to be created for pre-disaster activities and to be made available to the SDMA.

Department Fund

- As per Section 39 (e) of the DM Act, 2005 each department of the State Government shall allocate funds for measures for prevention of disaster, mitigation, capacity building and preparedness.

Recommendation of the 13th Finance Commission

- The Thirteenth Finance Commission (2010-2015) recommended fund for Capacity Building for Disaster Response at the District, Block and Village levels. This recommendation helps to capacitate all stakeholders in DM and also for preparation and updation of DM Plans.
- All State Government Departments, Boards, Corporations and ULBs would prepare their DM plans including the financial projections to support these plans. The necessary financial allocations would be made as part of

their annual budgetary allocations and ongoing programmes and should be used for mitigation and preparedness measures. They will also identify mitigation projects and project them for funding in consultation with the SDMA/DDMA to the appropriate funding agency. The Departments should also keep in mind for mainstreaming or integration of DM into their development plans and projects. The guidelines issued by the NDMA vis-à-vis various disasters should be considered while preparing mitigation projects.

Disaster Risk Insurance

DDMA should look at other options of new financial tools like catastrophe risk financing, risk insurance, micro insurance etc. to compensate for massive losses on account of disasters.

Table 9.1: Format for Mainstreaming DRR

Scheme Name	How it is relevance to DRR (or Mainstreaming DRR). Also mention, if required how to customize the scheme meeting DRR needs	Implementing Agencies
MGNERGA	<p>MGNREGA Scheme is being implemented in all Panchayats of the district. MGNREGA Scheme is highly favourable in mainstreaming DRR, especially in Flood disaster risk reduction as well as in mitigation of drought prone conditions.</p> <p>MGNREGA Scheme via-Construction/renovation of small water irrigation channels, embankments, pond etc reduces the chances of flood and would help in disbursement of excess surface water during flood.</p> <p>MGNREGA Via Plantation scheme, drought prone conditons are checked and mitigated, hence relevant to DRR.</p>	

9.2. Central government plan and non-plan schemes

Additional Central Assistance

In the context of disaster finance post-disaster reconstruction, there is provision for Additional Central Assistance (ACA). Over and above the provision of the SDRF, funding is provided from the NDR Fund in the wake of calamities of severe nature. On receipt of memorandum from the affected states, an Inter-Ministerial Central Team comprising of representatives of the Central Ministries/Departments is constituted and its report, after examination by the Inter-Ministerial Group (IMG) headed by Home Secretary, is placed before High Level Committee (HLC) for their consideration and approval of funds from NDRF.

Prime Minister Relief Fund

At the national level, Prime Minister's National Relief Fund was created shortly after Independence with public contribution to provide immediate relief to people in distress for:

Immediate financial assistance to the victims and next of kin.

- ❑ Assisting search and rescue.
- ❑ Providing health care to the victims.
- ❑ Providing shelter, food, drinking water and sanitation.
- ❑ Temporary restoration of roads, bridges, communication facilities and transportation.
- ❑ Immediate restoration of education and health facilities.

9.3. Other Options

DDMA should look for other options like risk insurance, micro- insurance to compensate for massive losses on account of disaster and also Corporate Social Responsibility (CSR) fund options for relief, reconstruction, rehabilitation etc.

Chief Minister Relief Fund

- ❑ At the state level, a provision has been made to provide immediate support to the distressed people affected by the natural calamities/disasters, or road, air or railways accidents, under the Chief Minister Relief Fund.

Member of Parliament Local Area Development Scheme (MPLADS)

In the context of natural & man-made calamities, MPLADS works can also be implemented in the areas prone to or affected by the calamities like floods, wind cyclone, tsunami, earthquake, hailstorm, avalanche, cloud burst, pest attack, landslides, tornado, drought, fire, or chemical, biological and radiological hazards. Lok Sabha MPs from the non-affected areas of the State can also recommend permissible works up to a maximum of Rs.10 lakh per annum in the affected area(s) in that State.

- ❑ The funds would be released by the nodal district of the MP concerned to the District Authority of the affected district. MPLADS funds may be pooled by the District Authority of the affected district for works permissible under the Guidelines.
- ❑ The amount so transferred from the nodal district to the natural calamity affected district may be shown in the UCs as well as Monthly Progress Reports as amount transferred to natural calamity affected district for rehabilitation work.
- ❑ The Works Completion Report, Audit Certificate and Utilization Certificate for such works and funds will be provided by the District Authority of the affected districts directly to the Ministry of Statistics and Programme Implementation for overall reconciliation.
- ❑ No separate UC/AC/Completion Report in respect of the transferred amount would be required from the Nodal District authority in this regard while processing release of subsequent installments of MPLADS funds.
- ❑ In the event of “Calamity of severe nature” in any part of the country, an MP can recommend works up to a maximum of Rs. 50 lacs for the

affected district. Whether a calamity is of severe nature or not will be decided by the Government of India. The funds in this regard will be released by the District Authority of Nodal district of the MP concerned to the District Authority of the affected district to get permissible works done.

Convergence with Central Sponsored Schemes

- Various employment generation schemes, especially those such as the National Rural Employment Guarantee Scheme (NREGS), assure financial relief to needy families in drought-affected areas. They can be easily integrated with relief programs post disaster to increase the availability of funds for relief expenditure.
- Another scheme that has been effectively dovetailed with calamity relief is the PradhanMantriAwasYojana - Gramin (PMAY-G) Indira AawasYojana (IAY) which has accomplished useful relief work in terms of providing housing to the affected families. Ten percent of the annual allocation under PMAY-G IAY is earmarked for this purpose.
- The provision has been made for the mid-day meal to remain functional in the drought hit areas.

Other Financial Sources

- District authority can take assistance from UN bodies and International organizations, NGOs and private donors (depending on their mandates) for relief, rehabilitation and other disaster risk reduction activities. Activities undertaken as Corporate Social Responsibility (CSR) can be channelized for mitigation and capacity building purposes as well as the disaster response.

Risk Transfer and Disaster Insurance (A Recommendation)

Risk Transfer is a tool that enables a concerned party to share/transfer a portion of the disaster risk to another party, for a certain fee. This party can be the government itself or the microfinance institutions. The absence of disaster insurance means that the government has to bear a huge cost for compensation and rehabilitation work in post-disaster situations.

- The Insurance Regulatory and Development Authority (IRDA), India has framed micro insurance regulations that allow distribution of micro insurance products in the state. The regulations cover insurance for personal accidents, health care for individual and family and assets like houses, livestock, tools and others. In Bihar, various Ministries/ Department have their insurance schemes related to health, crops, livestock, and other which can be utilize in case of disaster.

CHAPTER 10: MONITORING, EVALUATION and UPDATION OF DDMP

The DDMA is the authority for maintaining and reviewing the DDMP. As per Sub Section (4) of Section 31 of the Disaster Management Act, 2005, the plan would be reviewed and updated annually. The plan will then be uploaded in the District Website.

The DDMP has to be properly monitored and evaluated. This can be done by conducting Table Mock Exercise/ Mock Drill and Mock Exercise at District, ULB, Block and village levels. These exercises can be conducted twice a year preferably in the month of May and October.

After the simulation exercises, the DDMA will encourage interactions with all the stakeholders to evaluate the gaps, lessons learnt with proper documentation for further improving the capability to deal with future disasters.

10.1. Guidelines for monitoring and Evaluation of the plan:

The District Disaster Management Authority (DDMA), Jehanabad must ensure the planning, coordination, monitoring and implementation of DDMP. The District Magistrate, Jehanabad is the overall in charge of all the activities related to disaster management.

Monitoring and evaluating of the effectiveness of plan and its maintenance involves a combination of training events, exercises etc. to determine whether the goals, objectives, decisions, actions and timing outlined in the plan will result in an effective response. Guidelines for monitoring and evaluation of the plan are as given below:

Monitoring & Evaluation- Mock Drill

The purpose of monitoring and evaluation of DDMP is to determine:

- Adequacy of resources
- Coordination between various departments/agencies
- Community participation
- Partnership with NGOs
- Partnership with insurance companies to work on disaster insurance schemes

Regularly review the implementation of the DDMP

- Implementation of DDMP within the district, its updation and quarterly mock-drill
- Implementation of all policies and plans of State Government
- Implementation of all NDMA guidelines
- Implementation of all instructions of Revenue & Disaster Management Department
- Department should ensure that all schemes based on the parameters of mitigation, relief and rehabilitation are identified and implemented
- Implementation of all guidelines/instructions related to disasters from Government of India and State Government
- All officers to be trained in Disaster Management.
- Implementation of National bylaws
- Implementation of Fire-safety and building bylaws
- Implementation of all on-site plans of the respective industries
- Establishment and proper functioning of Emergency operation Center (EOC)
- Check the efficacy of the plan after any major disaster/emergency in the district and see what did work and what did not work and make amendments to the plan accordingly.
- Keep India Disaster Resource Inventory (IDRN) updated and connected with the plan.
- Update coordinates of responsible personnel and their roles/responsibility every six months or whenever a change happens. Names and contact details of the officers/officials who are the nodal officers or the in-charge of resources to be updated on regular basis.
- Plan should be web enabled with access on intra and internet.
- Plan should be circulated to all stakeholder departments, agencies and organizations so that they know their role and responsibilities and also prepare their own plans.
- Regular Drills/exercises should be conducted to test the efficacy of the plan and check the level of preparedness of various departments and other stakeholders.
- Regular training and orientation of the officers/officials responsible to implement the plan should be done so that it becomes useful document to the district administration.
- Army, NDRF, SDRF and other agencies should be integrated into the plan exercise regularly.
- DDMA should hold regular interaction and meetings with the Army or any other central government agencies for strengthening coordination during disasters.

- The DEOC should be made responsible for keeping the plan in updated form and collecting, collating and processing the information.

Review and Update of the DDMP

The DDMA, Jehanabad will be responsible for the review of the DDMP. This needs constant review and updation based on the following requirements:

- Major change(s) in the operational activities and location
- Valuable inputs from actual disasters
- Lessons learnt from trainings
- Inputs from mock drills/simulation exercises
- Lessons learnt from near-miss incidents
- Changes in disaster profile of Jehanabad
- Technological developments/ innovations in identifying potential hazards or mitigating them
- Changes in regulatory requirements
- Updation of databases using GIS
- Change in demography of population of Jehanabad and nearby places
- Changes in geo-political environment

Annexure Index

1. Composition of District Disaster Management Authority (DDMA)

Composition of District Disaster Management Authority (DDMA)			
Sl. No.	ORGANIZATION / DESIGNATION	DESIGNATION IN DDMA	Contact Number
1	District Magistrate	Chairman	9431226100
2	Chairperson – Zila Parishad	Vice-Chairman	9572403231
3	Police Superintendent	Member	9431822976
4	Chief Medical Officer (Civil Surgeon)	Member	9470003329
5	Deputy Development Commissioner	Member	9431818352
6	Additional District Magistrate (In charge Disaster Management)	Member	8340514201
7	Executive Engineer (Flood Control Diversion)	Member	9939667589

2. District Disaster Management Nodal Officers

District Disaster Management Nodal Officers of Jehanabad					
Sl. No.	Organization & Designation	Mobile No.	Telephone No. (Office)	Telephone No. (Residence)	Fax. No.
1	District Magistrate	9431226100	06114-223072	06114-223001	06114-223142
2	Police Superintendent	9431822976	06114-223108	06114-223110	06114-299970
3	Dy Development Commissioner, Jehanabad	9431818352	06114-350002 06114-223079	06114-223078	N/A
4	Additional District Magistrate	9473191253	06114-223145	N/A	N/A
5	Civil Surgeon	9470003329	N/A	N/A	N/A
6	In charge-Disaster Management	8340514201	06114-295071 06114-295072	N/A	N/A
7	District Agriculture Officer	9431818800	N/A	N/A	N/A

8	Manager, State Food Corporation	8340386352	N/A	N/A	N/A
9	District NIC officer	8210010508	N/A	N/A	N/A
10	District Nazareth Officer	9718219173	N/A	N/A	N/A
11	District Program Officer, Planning	8409505086	N/A	N/A	N/A
12	District Commandant Officer -Home guard	7992240115	N/A	N/A	N/A
13	Indian Red Cross Society	8789212939	N/A	N/A	N/A
14	District Fire Brigade Officer	7631404806	N/A	N/A	N/A
15	District IT Manger	9798474208	N/A	N/A	N/A
16	District Animal Husbandry officer	9931202387	N/A	N/A	N/A
17	Executive Engineer PHED	8544428568	N/A	N/A	N/A
18	Executive Engineer Flood Control Div.	9431370984	N/A	N/A	N/A
19	Sub Divisional Officer, Jehanabad	9473191254	N/A	N/A	N/A
20	District Statistical Officer	9931288926	N/A	N/A	N/A
21	DPM. D.H.S.	9473191879	N/A	N/A	N/A

3. District Level Govt. Officials Contacts

Collectorate- Jehanabad					
Designation	Name	Landline No.	Fax No.	Mobile No.	E-Mail
District Magistrate, Jehanabad	Shri Richie Pandey	06114-223072	06114-223142	9431226100	dm-jehanabad.bih@nic.in
Dy Development Commissioner, Jehanabad	Paritosh Kumar	06114-350002 06114-223079	N/A	9431818352	ddc-jehanabad-bih@nic.in
District Education Officer, Jehanabad	Roshan Ara	N/A	N/A	8544411391	deojehanabad.education@gmail.com

District Land Acquisition Officer, Jehanabad	Shams Jawed Ansari	N/A	N/A	9931327453	dlojehanabad@gmail.com
Director DRDA	Pankaj Kumar Ghosh	N/A	N/A	9718219173	ddc-jehanabad-bih@nic.in
District Programme Officer, ICDS	Rashmi Singh	N/A	N/A	9431005028	dpo.jehanabad@icdsbih.gov.in
District Panchayati Raj Officer	Gulab Hussain	N/A	N/A	9955282397	dpro.jeh.bih@gmail.com
Assistant Director Social Security	Mala Kumari	N/A	N/A	8605813300	assistant.director.jbd@gmail.com
Treasury Officer Jehanabad	Azmat Ali Ansari	N/A	N/A	9473191255 7004548855	to_jehanabad@biharonline.gov.in
Deputy Election Officer	Poonam Kumari	N/A	N/A	8544429921	dyeo_jehanabad@yahoo.com

DISTRICT LEVEL OFFICER-JEHANABAD

SI No	Designation	Name of Officer	Tele Phone	Fax	Mobile	Email-ID
1	District Magistrate	Shri Richie Pandey	06114-223072	06114-223142	9431226100	dm-jehanabad.bih@nic.in
2	Superintendent of Police	Deepak Ranjan	06114-223108 06114-223110	06114-299970	9431822976	sp-jehanabad-bih@nic.in
3	Dy. Development Commissioner (Cum- Sr. Officer Disaster Management)	Paritosh Kumar	06114-350002 06114-223079	N/A	9431818352	ddc-jehanabad-bih@nic.in
4	Civil Surgeon	Indrajeet Prasad	N/A	N/A	9470003329	csofficejbd@gmail.com
5	Assistant Collector-cum ADM	Sudha Gupta	N/A	N/A	9473191253	adm.jeh.bih@gmail.com
6	Sub-Divisional Officer cum-RO	Manoj Kumar	N/A	N/A	9473191254	jehanabadsdo@gmail.com

7	DCLR, cum-RO	Awadhesh Kumar Anand	N/A	N/A	8544412332	dclrjehanabad@gmail.com
8	Sub-Divisional Officer	Manoj Kumar	N/A	N/A	9473191254	jehanabadsdo@gmail.com
9	District Land acquisition officer-cum-RO	Shams Javed Ansari	N/A	N/A	9931327453	dlojehanabad@gmail.com
10	Sub-Divisional Officer, Sadar-cum-RO	Manoj Kumar	N/A	N/A	9473191254	jehanabadsdo@gmail.com
11	Additional Collector-cum-RO	Sudha Gupta	N/A	N/A	9473191253	adm.jeh.bih@gmail.com
12	ADM Departmental inquiry-cum-RO	Sudha Gupta	N/A	N/A	9473191253	adm.jeh.bih@gmail.com
13	D.D.C-cum-RO	Paritosh Kumar	06114-350002 06114-223079	N/A	9431818352	ddc-jehanabad-bih@nic.in
14	District Transport Officer	Manoj Kumar	N/A	N/A	6202751067	dto-jehanabad-bih@nic.in
15	District Welfare Officer	Sunil Kumar	N/A	N/A	7004104464	dwojehanabad@gmail.com
16	District Deputy Election Officer, Jehanabad	Poonam Kumari	N/A	N/A	8544429921	dyeo_jehanabad@yahoo.com
17	District Panchayati Raj Officer	Gulab Hussain	N/A	N/A	9955282397	dpro.jeh.bih@gmail.com
18	District Program Officer (ICDS)	Rashmi Singh	N/A	N/A	9431005028	dpo.jehanabad@icdsbih.gov.in
19	District Informatics Officer, NIC	Sarvesh Kumar	N/A	N/A	9570464899	dio-jhb@nic.in
20	ADIO-cum-Sr. System Analyst, NIC, Jehanabad	Sarvesh Kumar	N/A	N/A	9570464899	dio-jhb@nic.in
21	In charge IT Manager	Krishna Kumar Sahani	N/A	N/A	9798474208	krishna.ksahani@gov.in
22	District Minority Welfare Officer	Priyanka Kumari	N/A	N/A	6287594813	dmwo.jeh-bih@nic.in

23	Distt. Program Officer	Subhas Das Ram	N/A	N/A	9931288296	dpo.jehanabad-bih@nic.in
24	District Sub-Registrar	Riwa Choudhary	N/A	N/A	9110036352	dsr.jehanabad@yahoo.com
25	Senior Deputy Collector	Pankaj Kumar Ghosh	N/A	N/A	9718219173	pankaj.5543@gmail.com
26	Senior Deputy Collector	Aman Preet Singh	N/A	N/A	7676099966	amannirvana@gmail.com
27	Senior Deputy Collector	Ratna Priyadarshini	N/A	N/A	8340514201	ratna.p.031989@gmail.com
28	Senior Deputy Collector	Margan Sinha	N/A	N/A	9891809769	margan27@gmail.com
29	Senior Deputy Collector	Nikita	N/A	N/A	9654952508	nikita.zen09@gmail.com
30	Senior Deputy Collector	Srishti Priya	N/A	N/A	7903483815	Srishtipriya26@gmail.com
31	District Agriculture Officer	Sanjay Kumar	N/A	N/A	9431818800	dao-jeh-bih@nic.in
32	District Animal Husbandry Officer	Anil Kumar Sinha	N/A	N/A	9931202387	dahojehanabad@gmail.com
33	District Education Officer	Roshan Ara	N/A	N/A	8544411391	deojehanabad.education@gmail.com
34	Director (Accounts), DRDA	Pankaj Kumar Ghosh	N/A	N/A	9718219173	ddc-jehanabad-bih@nic.in
35	Dist. Transport Officer	Manoj Kumar	N/A	N/A	6202751067	dto-jehanabad-bih@nic.in
36	Dist. Election Officer	Poonam Kumari	N/A	N/A	8544429921	dyeo_jehanabad@yahoo.com
37	Dist. Panchayat Raj Officer, Jehanabad	Gulab Husain	N/A	N/A	9955282397	dpro.jeh.bih@gmail.com
38	Distt. Supply Officer	Sanjeev Jamuar	N/A	N/A	8544426117	dso.jeh.bih@gmail.com
39	NDC (Nazarat Dy Collector)	Pankaj kumar Ghosh	N/A	N/A	9718219173	ndcjehanabad@gmail.com
40	O.S.D (Confidential)	Sanjeev Jamuar	N/A	N/A	8544426117	sanjeev.jamuar@nic.in

41	Distt. Public Relation Officer	Nikita	N/A	N/A	9654952508	dpro-jeh@prdbihar.gov.in
42	Asst. Director, Social Security	Mala Kumari	N/A	N/A	8605813300	assistant.director.jbd@gmail.com
43	District Welfare Officer	Sunil Kumar	N/A	N/A	7004104464	dwojehanabad@gmail.com
44	Treasury Officer	Azmat Ali Ansari	N/A	N/A	9473191255 7004548855	to_jehanabad@biharonline.gov.in
45	District Cooperative Officer	Babu Raza	N/A	N/A	9470089742	dcojehanabad@gmail.com
46	District Manager, SFC	Santosh Kumar	N/A	N/A	8340386352	bsfc.jeh@gmail.com

4. Contact Details of Line Departments

Contact Details of Line Departments of Jehanabad District					
SI No	Designation	Mobile No	Telephone (Office)	Telephone (Res.)	E-Mail
1	Commissioner	9473191426	0631-2225821	0631-2229002	divcom-magadh-bih@nic.in
2	District Magistrate	9431226100	06114-223072	06114-223001	dm-jehanabad.bih@nic.in
3	D.D.C	9431818352	N/A	N/A	ddc-jehanabad-bih@nic.in
4	Additional Collector	9473191253	N/A	N/A	adm.jeh.bih@gmail.com
5	District Transport Officer	6202751067	N/A	N/A	dto-jehanabad-bih@nic.in
6	District Welfare Officer	7004104464	N/A	N/A	dwojehanabad@gmail.com
7	District Panchayati Raj Officer	9955282397	N/A	N/A	dpro.jeh.bih@gmail.com
8	District Program Officer	9931288296	N/A	N/A	dpo.jehanabad-bih@nic.in
9	District Supply Officer	8544426117	N/A	N/A	dso.jeh.bih@gmail.com
10	Treasury Officer	9718219173	N/A	N/A	to_jehanabad@biharonline.gov.in
11	Nazarat DY. Collector	9718219173	N/A	N/A	ndcjehanabad@gmail.com

12	Executive Magistrate,	N/A	N/A	N/A	-
13	District Informatics Officer	8210010508	N/A	N/A	dio-jhb@nic.in
14	ADIO-cum-Sr. System Analyst	8210010508	N/A	N/A	dio-jhb@nic.in
15	IT Manager	9798474208	N/A	N/A	krishna.ksahani@gov.in
16	DPRO	9955282397	N/A	N/A	dpro.jeh.bih@gmail.com
17	District Education Officer	8544411391	N/A	N/A	deojehanabad.education@gmail.com
18	District Statistical Officer	9931288926	N/A	N/A	dsojehanabad1@gmail.com
19	Commercial Tax Officer	9470001733	N/A	N/A	saletaxjbd@gmail.com
20	Civil Surgeon	9470003329	N/A	N/A	csofficejbd@gmail.com
21	DM SFC	8340386352	N/A	N/A	bsfc.jeh@gmail.com
22	DY. Election Officer	8544429921	N/A	N/A	dyeo_jehanabad@yahoo.com
23	District Planning Officer	8409505086	N/A	N/A	dpo.jehanabad-bih@nic.in
24	DPM Health Officer	9473191879	N/A	N/A	dpmjehanabad@gmail.com
25	District Treasury Officer	9431226100	N/A	N/A	to_jehanabad@biharonline.gov.in
26	District Sub-Registrar	9110036352	N/A	N/A	dsr.jehanabad@yahoo.com
27	District Animal Husbandry Officer	9931202387	N/A	N/A	dahojehanabad@gmail.com
28	Executive Engineer PHED	8544428568	N/A	N/A	ee.phdivisionjnb@yahoo.in
29	Executive Engineer Road Division	9470001284	N/A	N/A	eercdjehanabad@gmail.com
30	Executive Engineer Flood Control, Jehanabad	8409376978	N/A	N/A	eefcddekangarsarai@gmail.com
31	Executive Engineer Electricity	7763814340	N/A	N/A	eee.jehanabad.bih@gmail.com eee.jehanabad2022@gmail.com

5. Contact Details of Police Department of Jehanabad

Contact Details of Police Department of Jehanabad						
Sl. No	Place/Post	Officer Name	STD Code	Office	Residence	Mobile
1	IG, Magadh Zone	fou; dekj	0631	2222352	N/A	&
2	SP, Jehanabad	fnid jtu	06114	223108	223110 299970	9431822976
3	ASP, Jehanabad	gfj'kdj dekj	N/A	N/A	N/A	8544428169
4	SDPO, Jehanabad Sadar	v'kkd dekj ik.M;	06114	223184	223103	9431800104 9430220959
5	lnj vpy	i0fu0 jktdekj flg	N/A	N/A	N/A	7992411839
6	?kk"kh vpy	i0fu0 ftrUn dekj flg	N/A	N/A	N/A	9661684800
7	tgkukckn Fkkuk	i0fu0 fuf[ky dekj	N/A	N/A	N/A	9431822258 9430222956
8	ijlfcxgk Fkkuk	i0v0fu0 jktfd'kkj ilkn	N/A	N/A	N/A	9431822264 9523228017
9	dldk Fkkuk	i0v0fu0 v{;oj flg	N/A	N/A	N/A	9431822262 9523228015
10	'kdjckn Fkkuk	i0v0fu0 nhid dekj&2	N/A	N/A	N/A	9431822269 9523228014
11	e[kneij Fkkuk	i0fu0 jfoHk"k.k	N/A	N/A	N/A	9431822260 9523228011
12	ikyh Fkkuk	i0v0fu0 cyohj dekj flg	N/A	N/A	N/A	9431822263 9472484061
13	?kk"kh Fkkuk	i0fu0 Hkko"k eMy	N/A	N/A	N/A	9431822259 9523228010
14	gylxt Fkkuk	i0v0fu0 plUn"kkj dekj	N/A	N/A	N/A	9431822261 9430220961
15	cjkj i;Vd Fkkuk	i0v0fu0 uhfr"k dekj	N/A	N/A	N/A	9523228019 9472484101
16	dMkuk vk0ih0	i0v0fu0 ed"k dekj&1	N/A	N/A	N/A	9523228020 9472484024
17	vdjh vk0ih0	i0v0fu0 plngk l flg	N/A	N/A	N/A	9523228024 9472484079
18	Hkykoj vk0ih0	i0v0fu0 cky'oj ikloku	N/A	N/A	N/A	9523228022 9472484046
19	dYik vk0ih0	i0v0fu0 ed"k dekj	N/A	N/A	N/A	9523228021 9472484006
20	VgVl vk0ih0	i0v0fu0 /khjt dekj	N/A	N/A	N/A	9523228023 9430222965

21	fo'kuxt vk0ih0	i0v0fu0 j.k/khj dej fojkt ^h	N/A	N/A	N/A	9472484090
22	efgyk Fkkuk	i0v0fu0 cchrk dekj ^h	N/A	N/A	N/A	9523228013
23	,0lh0@,l0vh0 Fkkuk	i0v0fu0 vo/k ["] k pk/kj ^h	N/A	N/A	N/A	9523228012
24	merk /kjub vk0ih0	i0v0fu0 eukt dej	N/A	N/A	N/A	9631866206

6. Contact Details of Engineers of Energy Department of Jehanabad District

Contact Details Of Engineers of Energy Department Of Jehanabad District			
Sl No	Officers	Related Block	Mobile
1	Jh gjt ^h r dj ^h c ^h p lgk;d vfhk;rk ¼lfonk½	i[kM&e[knei] jruh Qj ^h ni ^h voj ie.My 'kdj ^h ckn	8602318079
2	Jh vkdk{k ^h dekj ^h lgk;d vfhk;rk	i[kM&?kk ["] kh] eknuxt] gyk ^h xt voj ie.My ?kk ["] kh	9122638804
3	Jh j[kk dekj ^h lgk;d vfhk;rk	i[k.M&t ^h gkukckn] ddk voj ie.My tgkukckn	6200636658
4	Jh dyk ["] kifr jke] duh; vfhk;rk	ddk	9142492804
5	Jh uUnu dej i[koku] duh; vfhk;rk	tgkukckn	9534651675
6	Jh Nfrdr eMy] duh; vfhk;rk ¼lfonk½ vfrfjDr iHkkj	gyk ^h xt	9973618092
7	Jh Nfrdr eMy] duh; vfhk;rk ¼lfonk½	?kk ["] kh	9973618092
8	Jh Nfrdr eMy] duh; vfhk;rk ¼lfonk½ vfrfjDr iHkkj	eknuxt	9973618092
9	Jherh vtuk dekj ^h duh; vfhk;rk ¼lfonk½	jruh&Qj ^h ni ^h	7979024032
10	Jherh vukfedk dekj ^h duh; vfhk;rk ¼lfonk½	e[knei]	9304302871

ELECTRIC SUPPLY DIVISION			
Sl No.	Name	Designation	Mob No.
1	Sunil Kumar	EEE/S jehanabad	7763814340
2	Pramod Kumar Nirala	AEE Supply Jehanabad	7763814341
3	Rahul Kumar	AEE Supply Makhdumpur	7763814345
4	Vishal Kumar Chaudhary	AEE Project Makhdumpur	7763818243
5	Anil Kumar	JEE Supply Jehanabad East	7033191327
6	Ashish Kumar	JEE Supply Jehanabad West/Court Area	7763814344
7	Abhay Kumar	JEE Supply Jehanabad (Rural)	7763814342
8	Navin Kumar	JEE Supply Kako	7541814821
9	Shiv Kumar Prasad	JEE Supply Ratni	7632996803
10	Anita Kumari	JEE Supply Makhdumpur East	9264438610

11	Pradeep Kumar Sah	JEE Supply Makhdumpur West	7763814347
12	Sailesh Kumar	JEE Supply Ghoshi	7763814346
13	Kumar Vikaram	JEE Supply Hulasganj	9264438611
14	Akhilesh Kumar Sharma	JEE Supply Modanganj	7632996787

7. Contact Details of Sub-division Level Officers

Sub-Divisional Officer-Jehanabad					
Designation and Name of the Sub-Division	Name	Landline No	Fax No	Mobile No	Email
DCLR, Jehanabad Sadar	Sri Awadhesh Kumar Anand	06114-295071	-	8544412332	dclr.jehanabad@gmail.com

8. Contact Details of Block Level Officers

Block Development Officer			
Name of the Block	Name of the BDO	Mobile Number	Email Id
Block Development Officer, Ghosi	Prabhakar Kumar	9431818075	bdo.jeh.gho.bih@gmail.com
Block Development Officer, Hulasganj	Avinash Kumar	9431818490	bdo.jeh.hul.bih@gmail.com
Block Development Officer, Jehanabad	Devendra Kumar Paswan	9431818077	bdo.jeh.jeh.bih@gmail.com
Block Development Officer, Kako	Sanjeev Kumar	9431818079	bdo.jeh.kak.bih@gmail.com
Block Development Officer, Makhdumpur	Prabhakar Singh	9431818078	bdo.jeh.mak.bih@gmail.com
Block Development Officer, Modanganj	Rakesh Kumar	9431818076	bdo.jeh.mod.bih@gmail.com
Block Development Officer, Ratni-Faridpur	Gayatri Kumari	9431818080	bdo.jeh.rat.bih@gmail.com

9. Contact Details of Circle Officers

Contact Details of Circle Officers			
Designation and Name of the Block	Name of Circle Officer	Mobile Number	Email ID
Circle Officer, Ghosi	Dinesh Kumar	8544412573	co.gho.jeh.bih@gmail.com
Circle Officer, Hulasganj	Arvind Kumar Choudhary	8544412574	co.hul.jeh.bih@gmail.com
Circle Officer, Jehanabad	Sanjay Kumar Ambasht	8544412575	co.jeh.jeh.bih@gmail.com
Circle Officer, Kako	Dinesh Kumar	8544412576	co.kak.jeh.bih@gmail.com
Circle Officer, Makhdumpur	Arvind Kumar Choudhary	8544412577	co.mak.jeh.bih@gmail.com
Circle Officer, Modanganj	Anu Kumari	8544412578	co.mod.jeh.bih@gmail.com
Circle Officer, Ratni-Faridpur	Kaushalya Kumari	8544412579	co.rat.jeh.bih@gmail.com

10. Contact Details of NDMA Officials, New Delhi

Contact Details of NDMA Officials, New Delhi		
Designation	Phone/Fax/Res.	Email
Member	011-26701775	kkishore@ndma.gov.in
Member	011-26701738	
Member	1 212 906 3695	
Joint Secretary (Mitigation)	011-26701718	mitigation@ndma.gov.in
Joint Advisor (Mitigation Projects & Procurement)	011-26701798	
Under Secretary (Mitigation)	011-26701896	
JA (Communication & IT)	011-26701743	
PA to JA (Communication & IT)	011-26701890	
SAO (Communication & IT)	011-26701810	
AO (Communication & IT)	011-26701793	
Programmer (Communication & IT)	011-26701855	
NIC Cell, NDMA		
Sc 'C', NIC		
Network Engineer		
Bio Metric Attendance System Engineer		
NDMA Control Room	011-26701728	info@ndma.gov.in

11. State Disaster Management Nodal Officers, Patna

State Disaster Management Nodal Officers, Patna			
SI No	Department	Designation	Contact Address
1		Secretary	Bihar State Disaster Management Authority 2 nd Floor, Pant Bhavan, Bailey Road, Patna, Bihar-800001
2		Member	Phone No:- 0612-2522032, Fax-0612-2532311
3		Member	Email id- info@bsdma.org website- www.bsdma.org

State Disaster Management Nodal Officers, Patna				
SI No	Department	Designation	Contact No	Email
1	Disaster Management Department	Principal Secretary	0612-2223855 0612-2215600	disastermgmt.bih@nic.in
2	Agriculture Department	Agriculture Production Commissioner	0612-2215720	apcbih@nic.in
3	Home Department	Secretary (Home)	0612-2234518	secyhomebih@nic.in
4	Water Resources Department	Principal Secretary	0612-2217377 0612-2217948	wrdbih@nic.in
5	Minor Irrigation Department	Secretary	0612-2215820	sectmid@yahoo.com
6	Human Resources Department	Principal Secretary	0612-2217016	cs-bihar@nic.in
7	Energy Department	Secretary	0612-2217412	energybih@nic.in
8	Public Health Engineering Department	Principal Secretary	0612-2545087	secyphedbih@nic.in
9	Health Department	Principal Secretary	0612-2215809	secyhealthbih@nic.in
10	Animal and Fishery Resources Department	Secretary	0612-2217543 0612-2217010	secahdbih@nic.in
11	Rural Development Department	Principal Secretary	0612-2217496	rlrsecbih@nic.in
12	Rural Works Department	Secretary	0612-2545191	secyrwdbih@nic.in
13	Food and Consumer Protection Department	Principal Secretary	0612-2217799	secyfscbih@nic.in

14	Building Construction Department	Secretary	0612-2545656	secybcdbih@nic.in
15	Road Construction Department	Secretary	0612-2545009/ 2233362	secy_road@bihar.gov.in
				secyrcdbih@nic.in
16	Social Welfare Department	Secretary	0612-2234830	socwel_bihar@hotmail.com
17	Directorate of Economics & Statistics	Secretary	0612-2217977	secyplandevbih@nic.in
18	Bihar State Electricity Board	Secretary	0612-2504495	cmd.bsphcl@gmail.com
19	Bihar State Food & Civil Supplies Corporation	Managing Director	0612-2223051	bsfcccontrolroom@gmail.com
20	Information and public Information Department	Secretary	0612-2212390	iprsec.or@nic.in
21	Environment and Forest Department	Secretary	0612-2217713	apccfcentral-ngp-mef@gov.in

12. Contact Details of NDRF Officials and Nearby Battalions

Contact Details of NDRF Officials and Nearby Battalions			
NDRF HEAD QUARTER			
Name	Designation	Address	Telephone Number
P.M Nair, IPS	Commandant	Directorate General, National Disaster Response Force (NDRF) Sector-1, RK Puram, New Delhi-110066	011-26712851 011-26161442
Shri Sandeep. R.Rathore	IG		011-26160252 011-24106667
Shri J K S Rawat	DIG		011-26105910 011-26260369
Shri Rakesh Ranjan	Dy Commandant (Proc)		011-26107921
Shri Keshav Kumar	DC (ADM)		011-26107934
Shri R K Srivastava	DC (Ops/Trg)		011-26181519
P.M Nair, IPS	Commandant		011-26712851 011-26161442
Shri Ashok Malhotra	Sr AO		011-26105911
Shri Sudhir Thapa	Inspector, Control Room		011-26107953

13. NDRF BNS

NDRF BNS			
Name	Designation	Address	Telephone Number
Sh. S.S Guleria	Commandant	9 th Bn NDRF, Bihata Patna	06115-253942
Sh. Jaipal Yadav	Commandant	8 th Bn NDRF, Greater Noida, Distt. G.B.Nagar, UP	0120-2766013
Sh. Sukhdev Raj	Commandant	2 nd BN NDRF, Digberia Camp, PO-Badu Road, Madhyamgram, Barasat, Kolkata-700128	033-25264302 033-25264394
Sh. M.K. Yadav	Commandant	3 rd BN NDRF, PO-Mundali, Cuttak-Odisha	0671-2879710

14. Contact Number of Military, Airforce and Rehabilitation Department

Contact Numbers of Military, Airforce and Rehabilitation Department					
SI No	Name Of The Center Or Person	Telephone No (Office)	Telephone No (Residence)	Mobile Number	E-Mail Id
1	Danapur Cant	0612-2424910		8294627800	ceodana-stats@nic.in
2	Colonel J. Fedrik	0612-3340016	0612-2421487	9835240320	
AIR FORCE (BIHATA)					
3	Shree Vishvjeet kumar (Chief Operational Offier) Air force Exchange			0612-2235501/02/03/04	
RELIEF AND REHABILITATION DEPARTMENT, PATNA, BIHAR					
4	Control Room	0612-2226305			
5	Relief Commissioner	0612-222945	2225785 (Fax)		
6	Central Water commission (Patna)	0612-2216997			cehrmgmt@nic.in
7	Metrological Department (Patna)		0612-2226556		mc.patna@imd.gov.in
8	Superintendent Engineering, Kamlabalan				
9	Surveillance Medical Officer				

	(WHO) Based in Jehanabad				
10	Mithila Radio (Private FM Channel) Primary language- Maithili		06272-246602	9386849583	comment@mithilaradio.com
11	Radio Rudraksha (Jaleshwar-5, Mahottari, Nepal.) (FM radio operated by "Women empowerment Mission (WEM)" Mahila Sashaktikaran Abhian" in Nepali)	00977-44520521			

15. Contact Details of IMD and Observatories

Contance Details of Indian Meteorological Department (IMD) and Observatories						
SL No	Name	Designation	Place	Office	Residence	Fax
1	Dr. A.V Tyagi	D.G.M	New Delhi	011-24611842	011-24633692	011-24611792
2	Dr. C.V.V Bhadram	D.D.G.M (C.W) New Delhi-3	New Delhi	011-24611068	011-24644937	011-24619167
3	R.S Dattatreyan	Director (Seismo)	New Delhi	011-24611305	011-2622827	
4	Surya Baili Jaiswar	D.D.G.M (Sesmo) New Delhi	New Delhi	011-24629770	011-24648067	011-24629770
5	A.K Shukla	Director (EREC) New Delhi-3	New Delhi	011-24619943	011-24634714	
6	S.B Yadav	Director (C.W.C) New Delhi	New Delhi	011-24631913/24629798	011-26196225	011-24643128/246266815
7	B.K Bandopadhyay	Director (N.H.A.C) Delhi	Delhi	011-24619167	011-24488939	011-246110068
8	Mr. D. Pardhan	Deputy Director General (R.M.C)	Kolkata	033-24793782		033-24793782
9	Dr. Sahu	Director (M.C)	Bhubaneswar	0612-2226556	0612-2251086	0674-2596010

10	Dr. A.K Shan		Patna	0674-2596116		0612-2226556
11	Mr. Arun	Asst. Meteorologist, MC	Bhubanew hwar			0674-2596010

16. IMD Regional

IMD REGIONAL		
1	Jehanabad	-
2	Patna	0612-2226556

17. Name and Contact Numbers of Gram Panchayat Mukhiya

Name and Contact Numbers of Gram Panchayat Mukhiya					
SI No	Block Name	GP Name	All members of GP/Paiks president/Panchayat Samiti/ Mukhiya	Designation	Mobile No.
1	काको	अमथआ	मेशज अहमद	मखिया	9546830786
2	काको	उत्तर सेरथ	सरोज देवी	मखिया	9931812596
3	काको	खालिसपर	मिर्ता देवी	मखिया	8294730387
4	काको	डेढसया	राज कुमार	मखिया	8541015175
5	काको	दमहा	इंद देवी	मखिया	7903209397
6	काको	नेरथआ	राजेश दास	मखिया	9934021348
7	काको	नोहर	मालती देवी	मखिया	9801477985
8	काको	पिछं रेश	रामानंद सिंह	मखिया	7739188975
9	काको	बढान	मोहक राम	मखिया	7257942409
10	काको	बरावा	सिमल राज	मखिया	9939000421
11	काको	बारा	रत्न कुमार	मखिया	7654558755
12	काको	मनियवा	महेश चौधर	मखिया	8969045795
13	काको	सदाबाद परसाईन	अरविंद ठाकर	मखिया	7272912604
14	काको	सलेमानपर	उदय कुमार	मखिया	7763918033
15	घोसा	उबेर	चंमण कुमार	मखिया	9572499634
16	घोसा	कर	आशा देवी	मखिया	7992376974

17	घोसा	परवन	कांचन कमार	मखिया	9304670426
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18	घोसी	भारथ	हेमंत शरण	मखिया	9473296134
19	घोसी	लखावर	विजय साव	मखिया	6207078291
20	घोसी	शाहपर	ललित कमर	मखिया	8084440425
21	घोसी	साहोविगहा	अशोक कमर साह	मखिया	9955750326
22	जहानाबाद	अमन	इंद देवी	मखिया	834063700
23	जहानाबाद	कांपा	अशोक कमर	मखिया	9955506504
24	जहानाबाद	किनारक	रजत देवी	मखिया	8809256824
25	जहानाबाद	गोनवा	अमरनाथ सिंह	मखिया	7739103023
26	जहानाबाद	जामक	फलेवर रजक	मखिया	8969134033
27	जहानाबाद	नाथ	9याम बिहारी सिंह	मखिया	9931216041
28	जहानाबाद	पांडई	हेमंत कमर	मखिया	8789803500
29	जहानाबाद	मठेर	आशा देवी	मखिया	6203270984
30	जहानाबाद	मांडदेविगहा	कांत देवी	मखिया	9113391853
31	जहानाबाद	मांडदल	बबल कमर	मखिया	9430070196
32	जहानाबाद	लरसा	रेखा देवी	मखिया	7903551531
33	जहानाबाद	सरंगपर भवानीचक	नरेश देवी कमर	मखिया	9939870862
34	जहानाबाद	सेवनन	अजित कमर	मखिया	8002792092
35	जहानाबाद	सिकारवा	पनम देवी	मखिया	9472121742
36	मखदम पर	कचनवा	राजेश कमर	मखिया	9973426062
37	मखदम पर	कमरडीह	भनेवर दास	मखिया	7764838452
38	मखदम पर	कलानार	रत देवी	मखिया	9334803811
39	मखदम पर	कोहरा	कमल देवी	मखिया	9186512760
40	मखदम पर	छारयारक	रत कमर	मखिया	6205202692
41	मखदम पर	जगपरा	सोनी कमर	मखिया	9162170220
42	मखदम पर	जमनगंज	उषा देवी	मखिया	9939019602
43	मखदम पर	इकरा	जितेश देवी कमर	मखिया	9934496851
44	मखदम पर	धरनई	गड कमर	मखिया	9110955824
45	मखदम पर	धरत	धनदेजय कमर	मखिया	9939208201
46	मखदम पर	पनहदा	निभा कमर	मखिया	6203733636

47	मखदम पर	पव ः सरःेन	सऱतऱरऱनऱ कऱमऱरऱ	मऱखयऱ	9304939866
48	मखदम पर	पऱऱचऱमऱ सरःेन	सऱवतऱ देवऱ	मऱखयऱ	7643085730
49	मखदम पर	भख	दऱनःेश मऱङ्गऱ	मऱखयऱ	9576746996

50	मखदम पर	मकरपर	अजित कुमार	मखिया	7306509862
51	मखदम पर	मंझोस	राम निवास शमा [मखिया	8789124597
52	मखदम पर	मलाठ	धोरज कुमार	मखिया	9546679141
53	मखदम पर	रामपर	संजय चौधर	मखिया	8740031934
54	मखदम पर	वेली विस [० बौ देवी	मखिया	9661058021
55	मखदम पर	सगाव	रंज देवी	मखिया	9931638561
56	मखदम पर	समोरा	विपला देवी	मखिया	9162215751
57	मखदम पर	सोलहो डा	भने9वरा देवी	मखिया	9661631640
58	मोदनगंज	गंधार	राजीव रंजन कुमार	मखिया	9931427185
59	मोदनगंज	जयतिपर क० आ	सशीला देवी	मखिया	8084512037
60	मोदनगंज	देवरा	नरेंद्र5 यादव	मखिया	7254000540
61	मोदनगंज	नईम	राजाकिशोर मी सद 1	मखिया	7739113917
62	मोदनगंज	बंघगंज	मी दप कुमार	मखिया	9431617968
63	मोदनगंज	मोदनगंज गोखंदपर	शलेश पासवान	मखिया	6287072657
64	मोदनगंज	विशनपर ओकर	रकं कुमार	मखिया	7807788832
65	मोदनगंज	साईतावाद	सरिता देवी	मखिया	9006129070
66	रतनी फरादपर	उचिया	सोता देवी (2)	मखिया	9931920565
67	रतनी फरादपर	कनसआ	इ9तीयाक आजम	मखिया	993400336
68	रतनी फरादपर	कसवा	मध देवी	मखिया	9955538318
69	रतनी फरादपर	झनाठ	9यामसंदे देवी	मखिया	9934805883
70	रतनी फरादपर	नेहालपर	रामाशंकर धोरज	मखिया	9546840576
71	रतनी फरादपर	नरायणपर	नवीन कुमार	मखिया	9934261469
72	रतनी फरादपर	नीआवा	तारा कुमार	मखिया	9525851488
73	रतनी फरादपर	पंडील	नंद किशोर राम	मखिया	7766040501
74	रतनी फरादपर	मरहरा	अनीता कुमार	मखिया	6206416601
75	रतनी फरादपर	रतनी	गौनी देवी	मखिया	9570968043
76	रतनी फरादपर	लाखापर	देमवती देवी	मखिया	9525937026
77	रतनी फरादपर	सेसदवा	रि9म देवी	मखिया	9135738093
78	रतनी फरादपर	सिकंदरपर	सबेलाल कुमार	मखिया	958418488

79	रतना फरादपर	सोहरया	जयशंकर मी साद	मखिया	9631863361
80	हलासगंज	के उर	बिचय देवी	मखिया	9546023564
81	हलासगंज	कोकरसा	राध देवी	मखिया	9931286393

82	हलसगंज	खदरक	रणजित कमर	मखिया	9931057917
83	हलसगंज	चिरक	वीपन कमर	मखिया	7091679400
84	हलसगंज	तोरन [अवधेश पं डत	मखिया	9931434693
85	हलसगंज	दावथ	बेवी कमरक कमरक	मखिया	9931230562
86	हलसगंज	बोरक	ओम ई काश समन	मखिया	9931026464
87	हलसगंज	मरगाव	बिनद कमर	मखिया	9507975348
88	हलसगंज	सरजपर	पावती देवी	मखिया	9931216114
1	रतनी फरादपर	1	आभा रानी	जिला परषद के सदय	7033950006
2	रतनी फरादपर	2	सशाल देवी	जिला परषद के सदय	7004671911
3	जहानाबाद	3	अभिषेक रंजन	जिला परषद के सदय	7004839545
4	जहानाबाद	4	मिहत देवी	जिला परषद के सदय	9110948064
5	काको	5	अजात मिहरी	जिला परषद के सदय	7903204493
6	काको	6	सधर चौधरक	जिला परषद के सदय	8809256972
7	मखदम पर	7	रानी कमरक	जिला परषद के सदय	9572403231
8	मखदम पर	8	संगीत देवी	जिला परषद के सदय	9661253935
9	मखदम पर	9	रेण कमरक	जिला परषद के सदय	9110949186
10	मोदनगंज	10	शक्ति देवी	जिला परषद के सदय	9110992003
11	घोसी	11	अजय सिंह	जिला परषद के सदय	9431019497
12	घोसी	12	संगीत देवी	जिला परषद के सदय	6204053012
13	हलसगंज	13	कमल कमरक	जिला परषद के सदय	9508686092

18. Subdivision & Block wise No. of Gram Panchayats & Revenue Villages

Subdivision & Block wise No. of Gram Panchayats & Revenue Villages				
SI No.	Subdivisions	Blocks	No. of Gram Panchyats	No. of Revenue Villages
1	JEHANABAD	GHOSI	07	46
2	JEHANABAD	HULASGANJ	09	48
3	JEHANABAD	JEHANABAD	14	126
4	JEHANABAD	KAKO	14	100
5	JEHANABAD	MAKHDUMPUR	22	117
6	JEHANABAD	MODANGANJ	08	54
7	JEHANABAD	RATNI FARIDPUR	14	95
Total			88	586

19. Heritage buildings and sites details

Sno	Temple Palace/ Heirtage Building/ Heritage sites	Block	Panchayat	Address
1	350 Iky ijuk BkdjokMh e jk/kk d".k ,o f'kofyx dk ikphu efnjA	tgkukckn	Tgkukckn uxj ifj"kn	Tgkukckn uxj ifj"kn vrxr nj/kk unh d if"pe vkj
2	250 Iky ijuk xkj{k.kh ekrk ekM"ojh dk ikphu efnjA	tgkukckn	Tgkukckn uxj ifj"kn	Tgkukckn uxj ifj"kn {k= vrxr nj/kk&;euk unh d lxe ij fLFkr
3	NkVh&NkVh nk ijkuh c) dh ifrekA	tgkukckn	fdukjh	xke&dEgok
4	I; efnj] dkdKA	dkdk	if"peh dkdk	dkdk
5	dd;h Ijkoj %ifugk I½ dkdk	dkdk	if"peh dkdk	dkdk
6	chch deky dk edcj] chchijA	dkdk	[kkyhIij	chchij] dkdk
7	cMdh ik[kj] I; efnj /kjgkjKA	dkdk	veFkvk	/kjgkj

8	[kkudlg g; kfr; k] veFkvk 'kjhQA	dldk	veFkvk	veFkvk
9	eg: e vkye dk fdyk fitkjA	dldk	fitkj	fitkj
10	l; efnj] nf{k.khA	dldk	M<l;k	nf{k.kh
11	xkjh 'kdj efnj] HkykojA	dldk	c<kuk	Hkykoj
12	beleckMk] ikyhA	dldk	Ckkj	ikyh
13	dmj ltrk rkycA	gykixt	dmj	fVyyk
14	ijrkrRod LFky nkoFkA	gykixt	nkoFk	nkoFk
15	Egkd; LrEHkA	gykixt	nkoFk	ykV
16	y{eh ukj; .k efnjA	gykixt	nkoFk	gykixt
17	ikjkdud f'kofyxA	gykixt	ckjh	fcgVk egkno LFkku] gykixt
18	;kx"oj ukFk f'ko efnj %igkM ij% _A	gykixt	rhjk	cucfj; k
19	ikjkd .kd l; efnjA	gykixt	ejxko	ejxko
20	ckck f)ukFk dk ikphu efnjA	Ek[kneij	cjkj	cjkj] e[kneij
21	ukxktuh xQk cjkj igkMh {k= e fLFkr gA	Ek[kneij	cjkj igkMh {k=	ukxktuh xQk
22	f'ko efnj ,o ujf]g efnj l; efnj ,o ,d rkyc Hkh gA	Ek[kneij	/kjkmr	/kjkmr
23	ckykcdV'k vkJe] drjklu	Ek[kneij	jkeij	jkeij
24	vUui.kk noh dk ikphu efnj	Ek[kneij	dykukj	fej k foxgk %dykukj%
25	ukokek BkdjokMh	jruh Qjhnij	ukokek	ukokek BkdjokMh
26	BkdjokMh c<rk e)Inukpk; exynkl	jruh Qjhnij	lkgj; k	lkgj; k
27	Jhke tkudh BkdjokMh	jruh Qjhnij	mfprk	BkdjokMh
28	ck)eB ?ktu	jruh Qjhnij	ukj; .kij	ukj; .kij] jruh Qjhnij
29	Jhke tkudh BkdjokMh] fldUnjij	jruh Qjhnij	fldUnjij	BkdjokMh fldUnjij
30	l; efnj >ukBh	jruh Qjhnij	>ukBh	>ukBh

31	dkyh efnj	eknuxt	eknuxt	jkeij p:b
32	eB	eknuxt	no?kjk	nojk eB
33	ckck eg'k ukFk eB	eknuxt	x/kkj	x/kkj eB
34	egkno LFkku	eknuxt	lkbLrkckn	lkbLrkckn

20. Detail of Road Connectivity of Jehanabad District

Detail of Road Connectivity of Jehanabad District					
Sl No.	From	To (Block Head)	Road Communication	Name of Road Department	Distance (in KM)
1	Circuit House	Nalanda Boarder	-	SH-71	22.5
2	Dharnai	Nadaul	-	NH-83	32
3	Jhunathi	Bandhuganj	-	NH-110	60

21. Detail of Shelters Constructed by NGOS in Jehanabad

Detail of Shelters Constructed by NGOS in Jehanabad						
Sl. No.	Support organization	Place of Shelter	Name of Block	Capacity of Shelter	Availability of Drinking Water	Availability of Toilet
Nil						

22. Resources In Fire Station in District

Resources in Fire Station in District					
Name of Fire Station	Telephone No.	Vehicles and Pumps		Man Power	
		Fire service Vehicle	Pumps	Function	Person in Number
Jehanabad	9430099183 06114-223164	10	01	Fire Man	09
				Driver	09
				Sub Fire Officer	01
				Fire Officer	00
				District Fire Officer	01

23. Resources in Health Facilities

Resources in Health Facilities				
SI No	Position Name	Total Position	Employing	Required Position
1	ANM	638	381	257
2	Chathurth Vargiya Karmchari	230	219	11
3	Sangarak	5	1	4
4	Prakhand Prasar Prashikshak	4	3	1
5	Sankhyata	-	-	-
6	Lipik	81	43	38
7	L.H. Bhi.	5	0	5
8	Paricharika Grade "a"	150	86	64
9	Kaniya Dal Neta	-	-	-
10	Vaccinator	-	-	-
11	Cholera Supervisor	9	0	9
12	Vishesh haija Karyakarta	18	15	3
13	Netra Sahayak	4	3	1
14	Swasthya Prashikshak	34	15	19
15	X-ray Technician	10	3	7
16	Pharmacist	53	17	16
17	Prayogshala Prashedhik	71	29	42
18	Tresar (Parichalak)	36	0	36
19	Jeep Chalak	18	5	13
20	Purush Pariwar Kalian Karyakarta	17	6	11
21	Swa. Karyakarta/ Bu. Swa. Karyakarta	17	3	14
22	Doctor	225	14	77

24. Resources of Physicians in Health Facilities in Jehanabad

Resources of Physicians in Health Facilities in Jehanabad				
Name of institution	Name of Doctors	Doctors Category	Name of Facility	Extra
		(Reg/Cont./MBBS/ Ayush, Dental)	Place of Working	Degree/ Training
Referral Hospital		Regular		
		Regular		
		Regular		
		Cont(MBBS)		
		Cont(Dental)		
		Cont(Ayush)		

25. Details of ANMs Posted in PHC/HSC/APHC

Details of ANMs Posted in PHC/HSC/APHC				
Sno	Name of ANM	Name of Block	Name of HSC/HSC/APHC	Mobile No.

26. Block Wise Water Resources

Block Wise Water Resources			
SI No	Block	Tube Well (Functional)	Hand Pumps
1	Ghosi	14	1039
2	Hulasganj	07	983
3	Jehanabad	55	1833
4	Kako	14	2146
5	Makhdumpur	26	2548
6	Modanganj	15	858
7	Ratni Faridpur	07	1666
	Total	138	11073

27. Data on Water Quality Testing By the Department

Data on Water Quality Testing By the Department				
Name of Block	Number of Sample of Water From each Block	Total Number Tested Sample of Water	Number of Polluted Water Sample Found in form of Iron	Number of Pure Water Sample Found
Ghosi	406	406		406
Hulasganj	454	454		454
Jehanabad	259	259		259
Kako	756	756		756
Makhdumpur	759	759		759
Modanganj	367	367		367
Ratni-Faridpur	666	666		666

28. List of Ration Godwon/Position of Godwon for Ration

List of Ration Godwon/Position of Godwon for Ration				
Sl. No	Name of Block	Name of GP	Exact Location of the Godown	Storage Capacity (in M.Ton)
1	Ghosi	Golakpur	Godown No.-09, Nigam Godwon Ghosi Block Parisar	500
2	Ghosi	Golakpur	Godown No.-10, Nigam Godwon Ghosi Block Parisar	500
3	Ghosi	Golakpur	Ghosi Block Campus	200
4	Ghosi	Golakpur	Ghosi Block Campus	200
5	Ghosi	Golakpur	Ghosi Block Campus	500
6	Hulasganj	Surajpur	Godown No.-06, Nigam Godwon Hulasganj, Jehanabad	500
7	Jehanabad	Ward No.-04	Godown No.-01, Swc Godwon Bazar Samiti Parisar, Jehanabad	5000
8	Jehanabad	Ward No.-04	Godown No.-02, Nigam Godwon Bazar Samiti Parisar, Jehanabad	1000
9	Jehanabad	Ward No.-04	Godown No.-03, Nigam Godwon Bazar Samiti Parisar, Jehanabad	700
10	Jehanabad	Ward No.-04	Godown No.-04, Nigam Godwon Bazar Samiti Parisar, Jehanabad	1000
11	Jehanabad	Ward No.-04	Godown No.-12, Viscoman Godwon Bazar Samiti, Jehanabad	1000

12	Jehanabad	Ward No.-29	Godown No.-05, Nigam Godwon Treasury Bhawan ke pass, Jehanabad	500
13	Jehanabad	Ward No.-29	Godown No.-13, Kargil Chowk, Jehanabad	700
14	Jehanabad	Ward No.-29	Kargil Chowk, Jehanabad	500
15	Jehanabad	Ward No.-29	Kargil Chowk, Jehanabad	500
16	Kako	East Kako	Kako Blcok Campus	500
17	Kako	East Kako	Kako Blcok Campus	500
18	Makhdumpur	Ward No.-06	Godown No.-07, Nigam Godwon Makhdumpur Blcok Parisar	700
19	Makhdumpur	Ward No.-06	Godown No.-08, Nigam Godwon Makhdumpur Blcok Parisar	700
20	Makhdumpur	Dharnai	Godown No.-11, Nigam Godwon Dharnai	500
21	Makhdumpur	Nagar Parisad	Ward no.-06, Makhdumpur Block Campus	200
22	Makhdumpur	Nagar Parisad	Ward no.-06, Makhdumpur Block Campus	200
23	Makhdumpur	Nagar Parisad	Ward no.-06, Makhdumpur Block Campus	500
24	Ratni-Faridpur	Ratni	Ratni-Faridpur Blcok Campus	200
25	Ratni-Faridpur	Ratni	Ratni-Faridpur Blcok Campus	200
Total Capacity				17500

29. List of Stakeholders' Plans

List of Stakeholders' Plans			
SI No	Line Departments	Gram Panchayats Committees	Other Stakeholders
1	Agriculture Department	Gram Panchayat Disaster Management Committee	Business group (Private sector to include Corporate, Industry, SMEs, Traders and Markets and market associations)
2	Animal Husbandry and Fisheries Department	GP Child Protection Committee	District Inter Agency Group
3	Building Construction Department	GP Education Committee	SHG, women's group, farmers, JEEVIKA group
4	Education Department	GP WASH Committee	Health association (Including Medical association, Chemist and druggist association, RVC, nurses etc.)

5	Energy Department	GP Food and Nutrition Committee	Dalit association and minority
6	Forest and Environment	GP Health Committee	Youth groups (Including NYK, NCC, NSS, scout, guides)
7	Finance Department	GP Search and Rescue Committee	Retired and ex-servicement
8	Food Supply and Commerce department	GP Shelter Committee	Local NGOs, red cross, INGOs, outside NGOs, UN agencies
9	Health Department	GP Household Committee	Local and external Media
10	Home Department	GP Ward Member Committee	Architects and engineers, diploma holders, masons etc.
11	Industries Department	GP Social Protection Committee	Transporter (Including Train, Road, Ferries etc.)
12	Labour and Planning Department	GP Livestock Committee	Storage, godowns, warehouses.
13	Information and Public Relation Department	Gp Village Knowledge centre	Trade Unions
14	Planning and Development Department		
15	Public Health and Engineering Department		
16	Road Construction Department		
17	Rural Development Department		
18	Panchayati Raj Department		
19	Science and Technology Department		
20	Transportation Department		
21	Urban Development Department		
22	Water resources Department		

23	Social Wefare Department		
Reference: Identified by DDMA and line departments.			

30. List of Villages Based on their Flood, drought & other hazard Vulnerability

List of Villages Based on their Flood, drought & other hazard Vulnerability			
Gram panchayats away from the Embankments	Gram panchayats in between the Embankments	Gram panchayats next to the Embankments	Gram panchayats in low laying areas
Gandhar		Bandhuganj	Naima
Saistabad		Bishunpur Okari	Jaytipur Kurua
		Modanganj	
		Devra	
Solhanda		Kachnawa	Punhada
Makarpur		Solhanda	Kumardih
Town area			Ambedkar Nagar
Surungapur		Mandeybigha	Surungapur, Jamuk
Jamuk		Kinari	
Gonwan		Pandooi	

31. Block Wise Details of Rivers and the Affected Areas

Block Wise Details of Rivers and the Affected Areas			
Name of Block	Name of River	Name of Effected Areas/Villages	Remarks
gylxt	QYx unh	Ekukfcxgk	mDr LFkyk ij dVko fujk/kd dk; ,o ck/k d müphdj.k ,o ln<hdj.k dk; ;ktuk vko”;d gA
gylxt	QYx unh	beknij	
gylxt	QYx unh	fd'ku ij	
gylxt	QYx unh	ckjh	
gylxt	QYx unh	nknij	
gylxt	QYx unh	xk<h;k	
gylxt	QYx unh	prhij	
gylxt	QYx unh	ld;kek	
?kk'kh	QYx unh	Mejh	
?kk'kh	QYx unh	HkkjFk	
?kk'kh	QYx unh	'kgctij	
?kk'kh	QYx unh	djek	
?kk'kh	QYx unh	fdjk	
gylxt	QYx unh	mnlkLFku cjt dk ck;k ck/k %D/S½	ck< l?k'kkRed dk; dj;k; t jgk gA

gyllxt	QYx unh	mnjklFkku cjt dk ck; k ck/k %D/S½	
gyllxt	QYx unh	fcjxke	
eknuxt	Hkrgh unh	ihre fcxgk	mDr LFkyk ij dVko fujk/kd dk; ,o ck/k d müphdj.k ,o ln<hdj.k dk; djkkuk vko";d gA
eknuxt	Hkrgh unh	ihjk/kk eB	
eknuxt	Hkrgh unh	eMb	
eknuxt	Hkrgh unh	ebek iy	
eknuxt	Hkrgh unh	xtmvkiij	
jruh&Qjinij	cynb;k unh	?k tu	
jruh&Qjinij	cynb;k unh	:Lrepd	
jruh&Qjinij	cynb;k unh	noulnu fcxgk	
jruh&Qjinij	cynb;k unh	ujk; .kij	
jruh&Qjinij	cynb;k unh	ukvkok AFS xV d fudV	
jruh&Qjinij	cynb;k unh	iMky Lybl xV d fudV	
e[kneiij	;eu unh	e[kneiij nfyv Vkyk	mDr LFkyk ij dVko fujk/kd dk; ,o ck/k d müphdj.k ,o ln<hdj.k dk; djkkuk vko";d gA
tgkukckn	ekjgj unh	ulnijk	
eknuxt	Hkrgh unh	noMk xko	
eknuxt	Hkrgh unh	NkVdh eB	
e[kneiij	nj/kk unh	e{kk	
e[kneiij	nj/kk unh	ükfcxgk	
e[kneiij	nj/kk unh	nkufcxgk	
e[kneiij	nj/kk unh	Eknhypd l; efnj	mDr LFkyk ij dVko fujk/kd dk; ,o ck/k d müphdj.k ,o ln<hdj.k dk; djkkuk vko";d gA
e[kneiij	nj/kk unh	ljFkvk iy d il	
tgkukckn	nj/kk unh	Lyeij pfd;k	
tgkukckn	nj/kk unh	tgkukckn 'kgjh {k=	'kgjh {k= e unh dh /kkjk dh pkMkb de gku ,o flYV tek gku d dj.k.k ck< d le; ikuh Qyu dh lHkkouk jgrh gA vr% unh dh xgjk b c<kb=u ,o nkuk ck/k dk fuek.k ,o dVko fujk/kd dk; vko";d gA

32. List Of Highly Sensitive Embankments In The District, Jehanabad

List Of Highly Sensitive Embankments in The District, Jehanabad		
S.No	Name of Embankment	Types
1	Falgu (Mandai)	Kaccha
2	Udera Sthan	Pakka

33. Seismic Zone and Seismic Intensity vs Probable Damage to Buildings

Seismic Zone and Seismic Intensity vs Probable Damage to Buildings			
Building Type	Seismic Zone III	Seismic Zone IV	Seismic Zone V
	MSK Intensity VII	MSK Intensity VIII	MSK Intensity IX

Mud and Adobe Houses, random stone constructions	About 75% have large deep cracks. About 5% suffer partial collapse.	About 75% suffer partial collapse	About 75% suffer complete collapse
Ordinary brick buildings, Building of large blocks and prefabricated, Poor half-timbered houses	About 50% have small cracks in walls	About 75% have large deep cracks	About 50% show partial collapse, About 5% complete collapse
Reinforced buildings, well-built wooden buildings	About 50% have fine plaster cracks	About 75% may have small cracks in walls, About 5% may have large deep cracks	About 50% may have large deep cracks, about 5% may have partial collapses
Source: Bureau of Indian standards, IS:1893 Part 1, Appendix			

34. Major Vulnerabilities

Major Vulnerabilities
Kutcha Houses- 50
Semi-Pucca Houses- 100
Drainage-20
Sanitation
Villages within River Embankments- 27
Villages beside River Embankments- 22
Villages in low lying areas
Socio-economic Vulnerabilities- 80

35. Panchayat Apda Kendras

Panchayat Apda kendras of Jehanabad District			
Name of Apda Kendra	Panchayat	Block	No. of Villages Covered
Nil			

36. Number of capacity building program conducted- year wise

Number of capacity building program conducted- year wise for last 3 years			
Name of Training	Year	No. of Persons	Total Block/GP
Search and Rescue Operation			
Disaster Management		903	07
Fire Safety Awareness	2019-20	6000	07
	2020-21	10000	07
	2021-22	17903	07
Flood Safety		903	07
School Safety		903	07
First Aid			

Mason Training	2017-18	110	07
Other			

37. Public trainings conducted- year wise

Public trainings conducted-year wise for last 3 years			
Name of Training	Conducted by	Year	Total Block/GP
Flood Safety Week	9 BN NDRF, BIHTA	2022-23	Jehanabad all 07 Blocks
Flood Safety Awareness		2022-23	Jehanabad all 07 Blocks
Earthquake Awareness		2022-23	Jehanabad all 07 Blocks
Earthquake Awareness		2022-23	Jehanabad all 07 Blocks

38. Number of Sankalp Kendra

Number of Sankalp Kendra		
Name of Sankalp Kendra	Block	Units
Nil		

39. Key Departments Involved In DM

Key Departments Involved in DM of Jehanabad District		
SI No	Officers Designation	Contact Nos.
1	Civil Surgeon, Jehanabad	9470003329
2	DPM-DHS	9973982913
3	District Agriculture Officer, Jehanabad	9431818800
4	District Animal Husbandry Officer	9931202387
5	Dist. Ed. Officer, Jehanabad	8544411391
6	Dist. Manager, SFC, Jehanabad	8340386352
7	Exe Engineer Flood Control	9431370984
8	Exe Engineer Road Construction, Jehanabad	9470001284
9	Exe Engineer PHED, Jehanabad	8544428568
10	Exe Engineer Rural Works Jehanabad	8986915328
11	Exe Engineer Electricity Supply Division, Jehanabad	7763814340
12	Exe Engineer Minor Irrigation Division, Jehanabad	8340497672
13	Manager, Lead bank	7739561732
14	Dist. Statical Officer, Jehanabad	8409505086
15	Dist. Supply Officer, Jehanabad	9334345707
16	Dist. Information Jehanabad	8210012268
17	Dist. IT Officer, Jehanabad	9798474208
18	Ex. Magistrate, Nagar Parishad, Jehanabad	8809491360

Note-All Line Department are Working with DRR Approach, DRR Plan formulation & Follow SOP

40. Major NGOs working in the district

Major NGOs working in the district				
SI No.	Name of Organization	Functional Areas	Contact Person	Contact Nos/Email
Nil				

41. IEC material prepared activities conducted-year wise for last 3 years

IEC material prepared activities conducted-year wise for last 3 years	
Title	Year
Flood Safety Pamphlets	
Earthquake Safety Pamphlets	
Fire Safety Pamphlets	
Road Safety Pamphlets	

42. Funds allocated to DM activities- year wise for last 3 years

Funds allocated to DM activities- year wise for last 3 years		
Year	Purpose	Source
2018-19	पंचायत पतिनिधियों के प्रशिक्षण हेतु राशि मो0-9,28,500/- रूपये	BSDMA
	राजमिस्त्रीयों के प्रशिक्षण हेतु राशि मो0-17,99,000/- रूपये	BSDMA

43. Existing programs in Districts for DM

Existing programs in Districts for DM	
SI. No	Program Name
1	Earthquake Safety Programs
2	Fire Safety Programs
3	Road Safety Programs
4	Flood Safety Programs
5	Coordination with all line department
6	Activate emergency centres during disaster
7	Provide Early Warning to affected areas
8	Provide relief to the victims
9	Provide death and property damage compensation
10	Develop IEC materials
11	Conduct awareness and capacity building workshop and trainings
12	Organize monthly and emergency meetings
13	Drowning Awareness Programme
14	Lightning Awareness Programme
15	Time to Time NDRF & SDRF activity for Flood and Fire Awareness Programme

MISCELLANEOUS: Standard Operating procedures (SOPs) and Checklist

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 as per the DDMP.

Standard Operating procedures (SOPs)

Standard Operating Procedures (SOPs) are a common method of implementing instructions. SOPs provide response protocols for carrying out specific responsibilities. They describe who, what, when and how SOPs are appropriate for complex tasks requiring step-by-step instructions for performing a task. The District is having the SOP based from the Guidelines of the Government of India.

Emergency Support Functions (ESFs)

Emergency Support Functions (ESFs) are the essentials of Emergency Management comprising of various coordinating agencies, which manage and coordinate specific kinds of assistance common to all disasters types. Emergency Support Functions (ESFs) consisting of activities like Communication, Search and Rescue, evacuation, law and order, medical response and Trauma Counseling, water supply, electricity, warning and transport, relief etc. All of these emergency functions consist of emergency plans that would be activated at the time of emergency by primary agency which assisted by one or more supporting agencies (secondary agencies) ensuring the mission accomplished. The primary and secondary agencies have the authority to execute response operations to directly support the district needs.

The ESF outlines the objective, scope, organization setup and SOPs for each ESF that is to be followed by the respective ESF agencies when the Responsible Officer will activate the response plan. SOPs provide a basic concept of the operations and responsibilities of Nodal and Secondary agencies.

At the district level, the Nodal Agency will lead the ESF with direct link to the RO of the District and the DEOC. The Nodal Agency will also be a member of the Incident Team lead by an officer of the Revenue/Police or other department as decided upon by the district IC, and as required by the IC who may draw upon some or all of the ESFs for onsite response. The Nodal Agency must hence nominate a Team Leader (TL).

The Nodal and Support Agencies must together or separately (as decided according to need of the specialized function) constitute QRTs with members, and appropriate (at least two) backstopping arrangements. TL of EOC would be on the basis of its authorities, resources, and capabilities in the functional area.

He would be the member of Disaster Management Team that represents all of the key functions of the district in a single location under the direction of the RO.

The success of ESF will be of critical importance and would reflect in the lives saved in the golden hour. Below a list of ESFs has been given which will be activated at state/district level during emergency situation.

Emergency Support Function # 1: Coordination

Team Leader: Deputy Commissioner, Jehanabad

Support Agencies: S.P; ADC (DM); ADC (Law and Order); Joint Director of Supply, CEO, JehanabadMunicipal Board; Secretary, ,, S.P, Fire, DTO, Youth

Coordinator, NYK; Executive Engineer (PWD), Assistant Director, IPR, District AH&VO; Deputy Controller, CD&HG and other relevant departments of District desired during the crisis.

In anticipation of any disaster, the District Administration has taken various precautionary measures. Functioning of the Control Room, closure of past breaches in river and canal embankments and guarding of weak points, rain recording and submission of rainfall report, communication of Gauge reading, deployment of power/country boats, installation of temporary VHF stations, arrangement for keeping telephone and telegraph lines in order, storage of food stuff, arrangement for keeping drainage clear, agricultural/health/veterinary measures, selection of Flash flood/Earthquake shelters, etc. have been properly planned. The government officials of different departments have been apprised of their duties for pre, during and post disaster periods.

The ULBs, Executive Engineers of Water Resource Department, Executive Engineers of PWD Department, Executive Engineers of ,, DM&HO, AH &Veterinary, Joint Director of Supply etc. have been requested to take all precautionary and preparatory measures and to remain alert to face the challenge of any disaster. The other government officials have also been apprised of their roles and responsibilities to be played during pre-disaster arrangement and during/post disaster management. Every possible kind of cooperation from all the line departments has been sought for by the District Administration in combating the severe natural calamities that may occur anytime.

Emergency Support Function # 2: Communication

Team Leader: SP, Jehanabad

Support Agencies: MPRO, Ham radio operator Clubs, IPR, BSNL, NIC, Private/mobile Telecom Representatives, Signal Representative Army, IMD, CWC, FM Radio, Doordarshan, All India Radio, Private Satellite Channels.

The ESF 'Communication' supports the Response Plan in case of Major Communication links damage in various parts of the city during a disaster and there is a requirement for immediate restoration or replacement of the network. The objective of the ESF is to provide safe and reliable communication support during and after a disaster; to restore communication facilities in the aftermath of a disaster and provide vital communication linkages between EOC, and important response agencies. This ESF encompasses setting up of temporary communication centers in and around the area of impact and activation of Mobile units in case of widespread damage in a disaster like an earthquake.

Immediate Tasks:

- Collection of initial reports of damage
- Status of the affected regions in respect of establishing communication with rest of the City/District
- Status of the key officials in the area
- The main focus of the activities is to coordinate life saving activities concurrent with re- establishing control of the disaster affected area
- Establish radio communication with the SEOC, DEOC as well as Relief Centers
- Appoint a Nodal Officer, Communications
- Renew and update precautionary measures and review with the staff the precaution to be taken to protect the equipment
- Alternative Communication

Initial Action:

- Identify operational telecommunication facilities within the affected area.
- Identify telecommunication facilities that need to be transported to the affected site to establish the emergency operational services
- Identify the actual and planned action of private telecommunication companies towards reconstruction of their facilities
- Establish temporary communication facility through mobile exchange on priority for use by District Officials, Officers in transit, relief camp, NGOs.
- Establish a temporary communication facility for use by the public

Carry out an assessment of overall damage for the following:

- (i) Overhead route damage, (ii) Cable damage, (iii) Specific equipment damage.

Task during sustained Phase:

Establish emergency communications in order of priority to the functions and locations most in need of them for the mitigation of life- threatening situations and the relief of human suffering. Provide a communication advisory function and

internal communication organization. Monitor and control, where possible, the re-establishment of telephone services.

Standard Operating procedures for the Nodal Agency

- TL of Communication ESF will activate the ESF on receiving the intimation of occurrence of the disaster from the RO
- Wireless operators would be informed about the current requirements and coordination mechanisms shared. Till the restoration of normal telecom facilities, the police wireless system would be the main communication network
- TL issues orders to establish systems and reports to District EOC on the action taken
- TL would inform NOs of support agencies about the event and ESF activation
- TL would establish contact with the DEOC for First Information Report
- TL requests for reports from local ESF contact persons (this would be the local office of ESF Primary Agency) to understand the current situation and actions taken
- Based on information given by the support agencies, TL decides on the need to launch an assessment mission to estimate the extent of damage to telecom services and network as well as to come up with possible arrangements to establishing reliable and appropriate network
- TL communicates situation to support agencies and also requests to provide details on the status of equipment and infrastructure in the affected area(s).
- TL informs the RO on the status of telecom services
- TL works out a plan of action for telecom companies and convenes a meeting of all ESF members to discuss and finalize the modalities
- TL gets the temporary telephone facilities established for the public. Prior information on this would be announced through media/ and locally through mega phones and other feasible mediums
- TL monitors the situation and arranges emergency staff required to operate established systems
- TL sends the District QRT at the affected site with the required equipments and other resources

SOPs for QRT on Help Lines, Warning Dissemination

The QRT members will reach to the Nodal office as soon as they will get instructions. Once the QRTs receive any intimation from the Nodal Officer to

reach at the site they would reach to the site at the earliest, without wasting any time.

- At the emergency site QRT members will take stock of the situation from the site communication manager
- QRTs would assess the ground situation and would send sectoral report to the District ESF agency

A sectoral report would contain following:

- An assessment of overall damage, listing specifically:
 - Overhead route damage (in miles/ kilometres)
 - Cable damage (in yards/meters)
 - Specific equipment damaged
- Establish a temporary communication facility for use by the public
- Identify requirements of manpower, vehicles and other materials and equipments Give priority and concentrate on repairs and normalization of communication system at disaster affected areas
- Begin restoration by removing and salvaging wires and poles from the roadways with the help of casual labourers
- Carry out temporary building repairs to establish a secured storage area for the equipments and salvaged materials
- Report all activities to head quarter
- Begin restoration by removing damaged wires and poles through recruited casual laborers
- Establish a secure storage area for incoming equipments and materials

Emergency Support Function # 3: Emergency Public Information, Help line & Warning

Team Leader: Assistant Director, IPR

Support Agencies: NIC, NGOs, Media (Print/Audio-Visual), Local Cable TV Network, FM Radio, Doordarshan, AIR, NSS, NYK, Scouts & Guides.

All levels of government and the news media have a responsibility to provide emergency information to the public that is accurate, timely and consistent. Just when public and media demands for information are at their highest following an earthquake, the probability is that most media in the area will not be operational due to power failures. Nevertheless, media will be present to gather information for later local dissemination, and for media outside the disaster area. The media represent the major resource to inform the public about the disaster situation, and some Local Cable TV Network and radio broadcast media have long been

oriented to their role. It then follows that the utilization of the media for the benefit of ongoing relief, rehabilitation and restoration activities is essential, and a high level of priority should be set to restore an adequate radio broadcast capability.

Immediate Tasks:

- Assist in the determination of damage to media public information capabilities
- Pass prepared and updated public information announcements to the operational media from the DEOC

Tasks during sustained Phase:

- Establish the requisite level of emergency public information capabilities; establish the necessary media relations capabilities for release of government information to the general public through the national/international media
- Control media personnel access through a system of accreditation and access control, in conjunction with the Law and Order function; as capabilities are available, assist media personnel to prepare and send their material from the Operational Area; arrange for official government and media tours of the Operational Area subject to availability of resources; assist district/sub-divisional authorities with their own requirements when requested

SOP of Nodal Agency

- Upon finding out about any hazardous event, ESF-TL will contact the DEOC by any means possible (phone, wireless, personally)
- If asked to activate the ESF, TL will call nodal officers of supporting agencies of the ESF
- QRTs will be activated and deployed at the affected sites
- Coordinate with the different ESFs to get regular information in order to compile and prepare updates, situation reports, damage assessment reports, and media briefs
- Upon finding out about any hazardous event, Nodal officers will contact the ESF-TL/ District EOC by any means possible (phone, wireless, personally)

SOP of QRT

The QRT members will reach to the nodal office as soon as they will get instructions

- QRT teams would reach to the site immediately after receiving instructions from the nodal officer
- On the site QRT members will take stock of the situation from the RO at the site and their counter parts
- The QRTs will coordinate, collect, process, report and display essential elements of information and facilitate support for planning efforts in response operations

Emergency Support Function # 4: Search & Rescue

Team Leader: S.P Fire and Emergency Service and Deputy Controller, CD&HGs, Jehanabad

Support Agencies: CEO, SMB; PWD (Roads and Building); Police Department, NDRF, Health

Dept, Ambulance Services, NSS, NCC, NYK, ZilaSainik Board, NGOs, DorbarShnong, Volunteer, Army, Air force and Para-military forces.

- SAR operations are one of the primary activities taken up in a post disaster situation. The promptness in these operations can make a remarkable difference in the amount of loss of life and property and will include removal of trapped and injured persons from buildings collapses and other structural collapses, administering first aid, and assisting in transporting the seriously injured to medical facilities.
- This activity involves the use of professional and volunteer search teams including the use of dog teams.

Immediate Tasks:

The objectives of the team would be to:

- Locate and remove injured people who are trapped in the wreckage of damaged buildings and other structures
- To ascertain the safety of damaged buildings and structures
- To provide on- site medical treatment; and to remove the dead

Task during sustained Phase:

- Assist in removal of the dead from collapsed structures
- Team Organization (Conceptual)

The SAR ESF has to respond to assist the Operation Section Chief as per their assigned duty, which has been described in the SOP and is to be followed during emergency within the State. The scope of Response function includes the following broad areas:

- Rescue of those trapped
- Search for victims of a disaster (whether living or dead)

SOPs for Nodal Agency

- The ESF would be activated on receiving order from the RO/IC/OSC to the TL of Primary Agency for ESF activation
- TL of primary agency will call Nodal Officers of supporting agencies
- TL would activate the District Quick Response Team
- Quick Assessment for the scale of SAR operations required to be carried out
- On requirement request for additional SAR teams sent to NDRF through state Govt. without wasting time, almost simultaneously
- Assessments of the specific skill sets and the other equipments required
- Using IDRN network to check and map the availability of resources in and around the disaster site
- RO/DEOC (on orders from RO) would contact the team leader of SAR Operations to activate the ESF response plan
- Team leader of Nodal agency would report to the QRTs for immediate operation and inform supporting agencies to coordinate in the situation depending upon the scale of the disaster
- QRTs (of both nodal and supporting agencies) would perform a physical damage assessment and report to the leaders of central and nodal agency about the percentage of damage, percentage of casualties expected and possible requirement of equipments, manpower and rescue sites
- Medical and Trauma Counselling Response Teams at District Level to be activated by ESF-TL if needed, and report to the IC at the Onsite EOC who will coordinate their activities
- Response Teams in the field communicate with the ESF-TL at the DEOC, through the IC
- Major hospitals given warning to activate their contingency plan, if required
- ESF-TL to inform RO at DEOC if activation of the SEOC will be needed
- Following up a systematic approach of transferring resources, manpower equipments, vehicles at the disaster affected areas
- Determine the release of QRTs and facilities at effected site may be considered on a priority basis

- ❑ Contacting health services to instruct them to send first-aid and trauma counselling team to the affected site, so the patients can be treated before transporting to the hospital for the advance treatment (if needed)
- ❑ Contacting damage assessment teams and send them to the site so that assessment reports can be prepared and situation analysis can be done properly
- ❑ Establishing a failsafe communication system with QRTs members so that current reports on situation analysis can be gathered and accordingly help can be provided to the site
- ❑ Declaration of further help required at State and National level in case of damage is at large scale and situation is unmanageable with the available resources
- ❑ At the site, QRTs should contact the local volunteers and local people to gather information about vulnerable areas so that search and rescue operation can be taken place through a proper channel in heavily dense areas, large buildings, community centres, hotels, hospitals, public building and any other area having large gathering.
- ❑ Special care to women and children groups should be given as they are expected to be more affected and helpless in case of any emergency situation
- ❑ Further request to the health department to deploy mobile hospitals in case the casualties are severe and transportation of patients may take much more time
- ❑ Provide regular updates to the RO at the DEOC/SEOC based on reports from the field and the hospitals Coordinate with the Transportation ESF if a large number of medical professionals need to be sent to the affected sites and/or a large number of victims need to be transported to health facilities.
- ❑ Ensure the provision and continuous supply of medical facilities (medicines, equipments, ambulances, doctors and manpower etc) required at the disaster affected site and the hospital health centres catering to disaster victims
- ❑ Coordinate with the ESFs on Law & Order, Evacuation, and Debris and Road Clearance, for setting up of field medical posts, transport of victims, and setting up of mobile hospitals

SOP for QRT on Search & Rescue

- ❑ Assessment of damage (locations, number of structures damaged, severity of damage)
- ❑ The QRTs will be deployed at the affected site

- ❑ Enlisting the types of equipment required for conducting the SAR
- ❑ QRTs will report the situation and the progress in response activities to the respective EOCs
- ❑ QRTs will reach on the spot and take a damage assessment including type of injuries, number of people affected and possible medical assistance need
- ❑ QRTs will provide situation and progress reports on the action taken by the team to the ESF-TL
- ❑ QRTs will ensure timely response to the needs of the affected victims by Establishing field medical posts at disaster sites, as needed
- ❑ QRTs should maintain a coordination with the local people so the SAR operation may take place at more vulnerable locations having dense, population, multi-storied buildings and community gatherings as more people are expected to be trapped in such areas
- ❑ QRT will report to Nodal Agency in case of shortage of vehicles, manpower, resources and relief materials
- ❑ QRT will also work effectively with the other teams conducting first aid, trauma counselling, law and order, debris clearance, damage assessment and water and sanitations so the effective rehabilitation may take place accordingly

Emergency Support Function # 5: Evacuation

Team Leader (TL): Deputy Controller, Civil Defence

Support agencies: Police Department; CD& HG Volunteer; Voluntary Organization; NSS; NYK; NCC; Rotary Club; NDRF; Army, Air Force and Para-military forces

The purpose of this ESF is to coordinate efforts in safely evacuating the public from a threat to life and/or health. Evacuation and movement involves the coordination of varying agencies and good communications with the public. Evacuation and movement is the responsibility of public safety and the legislative authorities of a jurisdiction. This ESF applies to those agencies and others that are necessary for an evacuation. The ESF on evacuation is primarily responsible for establishing evacuation plans, identification of fastest evacuation routes and alternate routes and coordinating evacuation logistics during field operations.

SOP for Nodal Agency:

- ❑ TL of Evacuation ESF would activate the ESF on receiving the warning of the disaster/disaster from DEOC

- TL would inform NOs of other primary and support agencies about the event and ESF activation
- TL will direct the QRTs to be deployed on the affected site
- TL will gather information on availability of predefined evacuation routes
- Where the predefined evacuation routes are not available, the Nodal officer would coordinate through DEOC with other ESFs Nodal Officers and the support agencies about clearing of routes and identifying alternate routes.

SOPS for Quick Response Team on Evacuation

- The QRT members will reach the Nodal office as soon as they get instructions to do so from the TL
- Once the quick response teams receive an order from the Nodal Officer for reaching the site they would reach to the site immediately
- On reaching at the site the QRT members will take stock of the situation from the Incident Management Team at the site and their counter parts
- The quick response teams with the help of local task forces will start evacuating peoples to safe shelters or open areas
- The QRT members should concentrate more on evacuation in areas that have been worst affected by the disasters
- Keep reporting about all the activities to the TL

Emergency Support Function # 6: Emergency Medical Response

Team Leader: DM&HO

Support Agencies: Medical Supt. JehanabadCivil Hospital and other hospitals; Blood Bank;

Indian Red Cross Society, Nursing Homes; NSS; Rotary Club, Lions

Club; Ambulance Services; Civil Defence First Aider; Medicine Stockiest;

NYK; NCC.

All disasters affect human life and health. Health is both a main objective and a yardstick in disaster management. This ESF will be responsible for the emergency medical treatment and mental trauma support in the aftermath of any hazardous event.

The ESF on Emergency Medical Services and Public Health Counseling will look after emergency treatment for the injured people immediately after the disaster take place.

The function includes:

- District level health services responsibilities shall be mobilized to provide emergency medical treatment to the injured; sustained hospital care to the seriously injured or seriously ill
- Continue care at an appropriate level to patients in hospital and outpatients at the time of the earthquake and other hazards response
- Evacuation of the sick and injured to a location where care can be provided as well as sustained emergency care until evacuation can be carried out with medical or paramedical supervision
- District level coordination of delivery of medical supplies, blood and blood Products; operation of ambulance services
- Prevention of epidemic through education of the general population
- Carrying out of health inspections of food and water supplies
- Initiation of vaccination programs under epidemic conditions. Radiological and toxicological services could be in increased demand and require an expanded response
- There will also be a need to provide initial establishing of death, and the temporary safe storage of human remains in support of coroner operations.

A major earthquake would require a much greater degree of control of resources within the Operational Area and would necessitate the establishment of a health services coordination center at the State Capital. The Health Department is to identify some safe locations to use as first aid centers and to shift the patients whenever needed. In each ward the general public should be trained up for first aid assistance and dispensary should maintain a rotating reserve stock of blood, saline, bandage, cotton, benzene, dettol and life saving drugs/injections.

Immediate task:

- Appoint one person as Nodal Health Officer for the district
- Ensure that the personnel working within the district come under the direct control of the District

Nodal Health Officer

- Any other personnel once deployed for the purpose will directly come under the control of the District
- Identify emergency patient holding facilities
- To prepare and keep ready Mobile Hospitals and stock them with emergency equipment that may be required after the disaster

- Transfer patients who can be removed from hospitals to make room for the injured; where necessary implement a system of staging casualty collection, treatment, and evacuation to places where facilities are available (probably outside the Operational Area)
- Arrange delivery of emergency medical supplies; arrange for temporary suitable storage of the dead until taken over by the coroner

All efforts should be made to keep the health care receiving centres and outpatient service centres free from any kind of panic; prevent disease outbreak or spread; attend to mental health requirements; expand local public health services as necessary, particularly the supply of essential drugs and pharmaceuticals in areas where the private sector drug stores have ceased to function; carry out sanitary inspections.

SOPs for Nodal Agency

- Upon finding out about any hazardous event, RO will call the TL of Primary Agency and get the ESF activated
- Team leader (TL) of primary agency will call Nodal Officers of support agencies
- In coordination with the transport ESF, it will ensure a critical number of medical professionals to be reached at the site including specialists.
- QRTs will be activated and deployed at the affected sites
- Medical and Trauma Counselling Response Teams to be activated, based on report from the QRTs
- Provide systematic approach to patient care (Mass Casualty Management)
- Trauma counselling provided to the victims and their relatives at the site and in the hospital. In the hospital emergency department, triage carried out again to prioritize treatment, and appropriate care provided
- Maintain patient tracking system to keep record of all patients treated
- Deploy mobile hospitals as needed
- If medical facilities severely affected by the disaster, or roads blocked preventing transport of patients to the hospital, mobile hospitals deployed at required sites.
- Provide regular updates to the RO at the DEOC based on reports from the field and the hospitals
- Coordinate with the Transportation ESF if a large number of medical professionals need to be sent to the affected sites and/or a large number of victims need to be transported to health facilities
- Ensure the provision and continuous supply of medical facilities (medicines, equipments, ambulances, doctors and manpower etc)

- required at the disaster affected site and the hospital health centers catering to disaster victims
- ❑ Coordinate with the ESFs on Law & Order, Evacuation, and Debris and Road Clearance, for setting up of field medical posts, transport of victims, and setting up of mobile hospitals
 - ❑ If temporary housing arrangements are being made for the affected population, the ESF must ensure high standards of sanitation in settlements in order to reduce epidemic outbreak
 - ❑ Ensuring the provision and continuous supply of medical facilities (medicines, equipments, ambulances, doctors and manpower etc) required at the disaster affected site and the hospital health centers catering to disaster victims
 - ❑ In case of orthopedic care required, the immediate response would have to be complimented by a follow up treatment schedule for a majority of the patients in/near their place of shelter
 - ❑ Trained professionals should be mobilized by psychological support
 - ❑ Ensuring setting up of temporary information centres at hospitals with the help of ESF through help lines and warning dissemination system
 - ❑ TL will coordinate, direct, and integrate district level response to provide medical and sanitation health assistances
 - ❑ On the recommendations of the EOC, the TL is also responsible to :
 - ❑ Send required medicines, vaccines, drugs, plasters, syringes, etc
 - ❑ Arrange for additional blood supply. Send additional medical personnel equipped with food, bedding and tents etc

SOP of Quick Response Team (QRT)

- ❑ QRTs will assess the damage: type of injuries, number of people affected and possible medical assistance need
- ❑ QRTs will provide situation and progress reports on the action taken by the team to the ESF-TL
- ❑ QRTs will ensure timely response to the needs of the affected victims by establishing field medical posts at disaster sites, as needed
- ❑ QRTs should maintain check posts and surveillance at each railway junction, bus depots and all entry and exit points from the affected area, especially during the threat or existence of an epidemic

Emergency Support Function # 7: Relief

The purpose of this ESF is to identify food and water needs in the aftermath of a disaster or emergency; obtain these resources; and transport them to the impact area. Food supplies (Food, Water, Shelter etc)obtained and distributed by ESF.

Obtaining food and supplies, arranging for transportation and authorizing assistance may be required. Food must be suitable for household distribution or congregate meal service. Transportation and distribution of food and supplies will be arranged by local, state, private and/or federal agencies/organizations. The Food & Civil Supplies Department assumes overall coordination for this function. The scope of the function is to primarily provide food and civil supplies to the affected area. It would include setting up of storage facilities at the disaster site and distribution of the supplies to the effected.

Immediate Tasks:

- Establish mobilization centre at the different points like bus station, airport etc for movement of relief supplies
- Inform all suppliers of relief materials within 2-3 hours of the occurrence of the disaster to keep ready the required supply;
- Arrange for transportation of the relief supplies;
- Provide assistance to in establishing local offices, relief camps, etc., by providing beddings, furniture, etc

Emergency Social Services includes feeding, clothing, shelter, reception, registration and inquiry, and personal services provided to evacuees, victims, and response workers. The services are defined as follows:

- Personal Services- Counselling of victims and response workers, welcoming the evacuees at entrance to relief centres in order to screen for need and to give information, and supervision and support of groups of dependent individuals including children separated from their parents, frail elderly, and the handicapped
- Registration and Inquiry- Registering individuals and families involved in the disaster, answering inquiries from relatives and friends concerning victims' whereabouts, reuniting separated family members, and providing information to response workers on the whereabouts and numbers of evacuees
- Clothing- Emergency clothing, blankets, toiletry articles, baby supplies, and other related goods necessary to protect health and safety
- Shelter- Temporary housing or sleeping space for individuals and families forced to leave their dwellings
- Feeding- Provision of meals, hot beverages and snacks to protect health, to maintain strength of response personnel, and to reassure victims

Immediate Tasks

- Help the DC in opening staff reception centers in all affected areas and alert the response workers and the public about the location of these centers
- Mobilize feeding units to provide support to response workers on location; Coordinate supporting debriefing, counseling, and related services for responders and victims
- Inventory of the available habitable shelter supply
- Begin registering all persons involved in the disasters

Task during sustained Phase:

Continue basic emergency social services to all evacuees, victims and others requiring help; continue the registering process and respond to enquiries from around the world; initiate public information services on emotional responses to disasters; transform reception centers into multi- service centers; lay basis for outreach, self- help, and educational programs.

A. Food Supply

- Team Leader: Additional Deputy Commissioner (Relief)
- Support Agencies Joint Director of Supply; Food Corporation of India; Social Welfare
- Dept., Chamber of Commerce; Donor Agency; SMB; Market Association; Local Civil Suppliers.

Immediate Tasks:

- TL will activate ESF on receiving the information about the incident and will also inform to the supporting agencies
- Food coordinator would gather information about the locations of shelters and number of persons housed in each of these shelters.
- TL will guide QRTs to reach at rehabilitation centres to provide food packages
- TL will keep on coordinating about the distribution of food items to the evacuees and will give appraisal to the IC
- In case of shortage of food items TL will arrange more food packages and will ensure continuous supply

Tasks for QRTs:

- Management and distribution of relief items to affected victims
- Report the progress on action to the TL
- Inform TL about more requirements of staff members, additional materials and food packages
- Initiate procurement of food items available at nearby markets
- Prepare take-home food packets for the families
- Ensuring equal distribution of relief material including children, aged groups, women and poor people

B. Shelter Arrangements

Team Leader: Additional Deputy Commissioner (Disaster Management)
Support Agencies: PWD(B), Housing, PHE; SMB; Social Welfare Department, Nazarat

Department, Education Department, Local Traders, NGOs etc.

Immediate Action:

- TL would be the in-charge of rehabilitation centers that will ensure number of people evacuated, care of evacuees and availability of essential supplies
- Those who will reach to the relief centers would also like to know about their missing members. TL will response to their queries and also pass on the message to the evacuation and rescue related coordinators
- QRT will help them in arranging temporary shelters, food and sanitary facilities
- Medical facilities will also be provided to the victims and injured people.

Emergency Support Function # 8: Water & Electricity

Team Leader: Executive Engineers, PHE
Support Agencies: SMB; Water Resource.; PHE; Health Dept.; Local water suppliers;

The purpose of this ESF is to identify water needs and restore basic water supply if damaged, in the aftermath of a disaster or emergency. Till the time water supply to the damaged areas is restored water requirements need to be arranged by the ESFs and distributed either using their own transportation mechanisms or in coordination with transportation agencies.

SOPs for Nodal Agency

- Team leader (TL) of ESF on Water Supply will activate the ESF on receiving the intimation of the disaster from DEOC
- TL would inform NOs of support agencies about the event and ESF activation
- TL will ensure special care for women with infants and pregnant women
- Provide for sending additional support along with food, bedding, tents
- Send vehicles and any additional tools and equipments needed

Immediate Tasks:

- QRTs will ensure that supply of drinking water is made available at the affected site and relief camps
- QRTs will ensure the temporary sewerage lines and drainage lines are kept separate
- QRTs will report the situation and the progress on action taken by the team to the EOC
- QRTs will intimate their TL of the additional resources needed
- Carry out emergency repairs of all damages to water supply systems
- Assist health authorities to identify appropriate sources of potable water
- Identify unacceptable water sources and take necessary precautions to ensure that no water is accessed from such sources, either by sealing such arrangements or by posting the department guards
- Arrange for alternate water supply and storage in all transit camps, feeding centres, relief camps, cattle camps, and also the affected areas, till normal water supply is restored
- Ensure that potable water supply is restored as per the standards and procedures laid down in “Standards for Potable Water”
- Plan for emergency accommodations for staff from outside the area
- QRTs will ensure timely response to the needs of the affected victims
- QRTs will set up temporary sanitation facilities at the relief camps
- TL will ensure that QRTs are on the site along with the required resources
- TL shall be ensuring uninterrupted supply of water for fire-fighting to all the brigades in operation
- TL shall coordinate with the transport coordinator for replenishing the depleted stock of fire water at the incident site through water tanks
- Carry out repairing task of all damages to water supply system
- Arranging alternate storage of potable water at temporary shelters
- Ensure restoration of potable water as per standards and procedures laid down under ‘Standards for Potable Water’

- Plan for emergency accommodation of water supply in or near temporary shelters
- Establish temporary sanitation facilities at the shelters
- Ensure cleanliness of sanitation facilities, relief shelters and local command post.

Electricity

Team Leader: Executive Engineer

Support Agencies: Power Grid

Primary Functions:

- Ensure smooth transportation links at all levels and to all nodal and support agencies
- Assess damage to power supply infrastructure for assistance from other states
- Restoration of power supply or temporary power supply to critical areas
- Restore major electricity failure anticipated during disasters due to falling of cables/poles
- Facilitate restoration of electricity distribution systems at most affected sites on priority to help in Search and Rescue operations
- Provide electricity in lifeline buildings
- Procurement of clean drinking water
- Transportation of water with minimum wastage
- Ensure quick restoration of drainage system
- Sewer pipes to be kept separate from drinking water facilities

Task Involved

- Team leader will activate the ESF by informing his headquarter team and field team
- Inform nodal and supporting agencies about the incident
- A Notification and shutdown of electricity utilities
- As per the instruction given by RO, TL should instruct to concerned officers to shut down the power supply immediately.
- Provisioning Backup Power during Emergency
- Once power system is closed down, but power would still be required for response teams, EOC, water supply stations, temporary houses and temporary hospitals. Therefore, electricity coordinator will be responsible

- for providing back-up or alternate source of uninterrupted power supply for smooth operations
- In addition to the above, QRTs should also undertake following responsibilities:
 - Take stock of situation immediately on reaching the incident site
 - Coordinate with other team leaders and provide essential help expected from the electricity department
 - Conduct repairing work of dismantled connections
 - Provide temporary electricity supply to EOC and relief centres
 - Appraise the team leader about the situation

Emergency Support Function # 9: Debris Clearance

Team Leader: CEO, JehanabadMunicipal Board,

Support Agency: PWD; CPWD; NHAI; Forest Dept., Water Resources

Background:The importance of this ESF emanates from the fact that most large-scale disasters such as earthquakes, wind storms, flash flood primarily affect the building structures. The ESF would involve in identification, removal, and disposal of rubble, wreckage, and other material which block or hamper the performance of emergency response functions and procure needed equipments from support agencies using IDRN; is a high priority action.

SOPS for Primary Agency:

- Team leader (TL) will activate the ESF on receiving the information of the disaster from DEOC.
- TL would inform NOs of support agencies about the event and ESF activation. TL will coordinate with the support agencies to mobilize equipments from the ware houses through IDRN database
- The respective supporting agencies will contact their respective personnel to move the equipments to central warehouse
- The equipments like earth movers, concrete cutters identified as per the need will be transported to the site.
- The equipments like JCB, concrete cutters identified as per the need will be transported to the site.
- As per the information the nodal officer of Debris road clearance will make an assessment on of the damages of roads and built structures at the site and surrounding areas
- The nodal officers of Supporting Agencies will immediately start debris clearance operation to enable movement to the affected site

- Review of the current situation is taken up by the nodal agency to update the support agencies and to delegate their respective personnel to take precautionary measure to plan de-routes for the transportation ESF to be operational
- All supporting agencies will inspect the road and rail network and structures within the disaster site and surrounding
- The Response Teams will immediately start debris clearance operation to enable movement to the affected site
- TL will also ensure proper corpse disposal and post mortem by coordinating with ESF on medical response

SOP for QRT on Equipment Support and Debris Clearance:

- Damage assessment including locations, number of structures damaged and severity of damage
- The QRTs will be deployed at the affected site.
- Enlisting the types of equipment as compiled from IDRN resource inventory required for conducting the debris clearance
- The QRTs will report the situation and the progress in response activities to the respective EOCs.
- Undertake construction of temporary roads to serve as access to temporary transit and relief camps, and medical facilities for disaster victims

Emergency Support Function # 10: Law and Order

Team Leader : Additional Deputy Commissioner (L&O)

Support Agency : City SP; SP Traffic; Deputy Controller, CD&HG's; NSS; NCC, Para-military agencies

The purpose of ESF on L & O is to establish procedures for the command, control, and coordination of all law enforcement personnel and equipment. The Law and Order function encompasses a broad range of routine policing activities. The response function has its primary goal in the maintenance of law and order activities, and, if necessary the restoration of law and order should there be a breakdown within the normally law-abiding community.

Immediate Tasks:

- Deploying a QRT to maintain law and order at the incident site
- Quick Assessment of law and order situation in affected areas

- Cordon off the site to restrict movement of curious onlookers, vehicles and pedestrians
- Control and monitor traffic movements
- Support and coordinate with local administration
- Prepare updates on the law and order situation in every 2 hours and brief the authorities
- Ensure law and order at assembly points and evacuation points
- Carry out any necessary actions to save lives and prevent injury or damage to property
- Carry out route damage assessment to permit identification of usable emergency routes
- Assess and report other damage within capabilities
- Maintain a control over traffic with priority to emergency services
- Assist with the movement of emergency traffic
- Assist the Coroner as requested to provide investigation of causes of deaths, security of body, staging areas, identification of bodies
- Assist in the dissemination of emergency notifications
- Assist in the manning of coordination centers and the provision of immediate radio communication to them, if necessary

Sustained Phase:

Maintain emergency functions and restore normalcy as quickly as possible; provide personnel to protect abandoned and damaged properties and areas, which may attract the curious and tempt the criminal elements and augment prison staffs as needed to maintain a peaceful situation.

SOPs for Nodal Agency

- IC will call the TL of Primary Agency and get the ESF activated.
- TL of primary agency will call Nodal Officers of supporting agencies.
- TL would activate the State QRT..
- The QRTs will be deployed at the affected site.
- Cordoning off the area to restrict movement of onlookers, vehicular and pedestrian traffic should be done.
- Any additional requirements at site to be taken care of.
- To coordinate and communicate with concerned functionaries
- To detail traffic staff to reach the place of occurrence
- To give directions whenever necessary to ensure free passage for fire brigade ambulance, police vehicles and vehicles of other respondents

Emergency Support Function #11: Damage Assessment

Team Leader :ADC, Relief & Rehabilitation

Support Agencies: SMB; Municipality; Agriculture Depts.; and other relevant departments of the District desired, during the crisis.

Departmental Plan:

The Departments involved in this team will develop the Damage Assessment functional concept. The DDMA will include Damage Assessment as a staff function of the Damage Assessment Team, capable of coordinating the gathering of collated damage information from DC, SDO, BDO and other agencies for the purpose of assessing overall damage on behalf of the State Government.

The DC, SDO and BDOs will plan for the gathering of post-earthquake damage information from within their jurisdiction with their own resources and with pre-planned assistance provided directly to them by private sector Agencies.

The Tasks:

Immediate Tasks: Assess areas likely to require life- saving response action. Help of nearest army units may also be obtained as and when required.

Tasks during sustained Phase: Assess total damage as the basis of response efforts, future recovery activities, and claims; coordinate the gathering of information from all sources.

Emergency Support Function # 12: Donations and Volunteers:

Team Leader: District Youth Coordinator, NYKs

Support Agencies: NCC; Civil Defence, Blood Bank; Red Cross; NSS; Rotary Club; Lions Club; NGOs.

Immediate Tasks:

To identify the donation sectors (like general public, public and private sector organizations, clubs, etc., international community); type of donations (like food, water, cloths, medicines, tools, generators, etc.) and to arrange to handover the same to the appropriate authority.

With emphasis on life- saving operations:

- Determine requirements of lead agencies and seek out suitably qualified personnel

- Pre-arranged public announcements for general broadcast (if possible) should be used. Establish method of reception and delivery of personnel to the requesting agency, or arrange direct reporting to collecting points or response sites, where feasible

Tasks during sustained Phase

Continue human resource support to all response functions, through direct recruiting and central support, to obtain out-of - area skilled personals.

Emergency Support Function # 13: Public Works and Engineering

Team Leader: Executive Engineer, PWD (Building)

Support Agencies: SMB; PWD (Roads& Building); ,PHE; Water Resources

Immediate Tasks:

- All technical Officers shall be notified for immediate response function
- Make provisions for resources to meet lifesaving operational requirements
- Inspect all roads, bridges including underwater inspection of foundations and piers
- Inspect all buildings and structures of the State Government-by a competent officer and identify structures which are endangered by the impending disaster
- Helping the DC/DDMA in identifying locations for setting up transit and relief camps, feeding centres and quality of construction materials;
- Keep ready the earth moving equipment, cranes, farm tractor (requisitioned) with chain, cables and buffer stock of fuel
- Adequate road signs should be installed to guide assist the relief work
- Establish priority list of roads which will be opened first which should include roads to hospital and main trunk roads
- Construct temporary roads to serve as access to temporary transit to relief camps and medical facilities to disaster victims
- Technical damage assessment of potentially life- threatening situations (dams, dykes, etc.)
- Demolition, route clearance of debris, etc.

Tasks during sustained Phase:

- Continuing on to generate cleanup and debris removal
- Emergency repairs to prevent further damage, and assistance to other emergency response functions requiring construction and engineering support
- This function will probably continue beyond the response stage into recovery operations and will be involved in detailed recovery planning during the response

Emergency Support Function # 14: Animal Health

Team Leader (TL): District Animal Husbandry and Veterinary Officer

Support Agencies: JehanabadMunicipal Board, Bharat Scouts & Guides, NCC/NSS/NYK volunteers

Tasks:

Public health during disasters is directly related to the safety of animals. Owners may fail to evacuate because they cannot take their animals with them, or owners who left their animals behind will later try to re-enter the disaster area to rescue them. Dead animals may create a threat to public health and safety.

SOP for Animal Health

- The TL will coordinate with the district level and block level Veterinarian
- Animal related organizations and individuals to provide assistance at the affected site
- Co-ordinate with the Shelter Task Force on the sheltering of companion animals
- In case of Animal Disease Outbreak, take immediate actions to control and quarantine the disease and issue the advisory for safeguarding one self and others
- Injuries and death of animals will be documented
- Deceased, diseased or contaminated animals to be dispensed with

Checklist of Various Departments

Preparedness Checklist for the District Collector

- Prepare of the DDMP with the assistance of DDMC after setting up the DDMA for the district.
- Set up District Control Room.
- 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.
- At the disaster site, specific tasks to manage the disaster will be performed.
- Collector will be assisted by SOC (site operation control).
- SOC will be headed by a Site Manager.
- Site Manager will co-ordinate the activities at various camp sites and affected areas.
- The site Operations Centre will report to the District Control Room.
- The Collector will co-ordinate all the field responses which include, setting up Transit Camps, Relief Camps and Cattle Camps.

Preparedness Checklist for the Police Department

- The department is familiar with the disaster response plan and disaster response procedures are clearly defined.
- Adequate warning mechanisms established for evacuation.
- 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

Preparedness Checklist for the Health Department

- The department is familiar with the disaster response plan and disaster response procedures are clearly defined.
- 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.
- 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.
- An Officer has been designated as Nodal Officer for Disaster Management.
- Sources of materials required for response operations have been identified.

Preparedness Checklist for S.E.D.C

- The department is familiar with the disaster response plan and disaster response procedures are clearly defined.
- 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.
- An Officer has been designated as Nodal Officer for Disaster Management.
- Sources of materials required for response operations have been identified.

Preparedness Checklist for Water Supply Department

- The department is familiar with the disaster response plan and disaster response procedures are clearly defined.

- 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.
- Adequate warning mechanisms for informing people to store an emergency supply of water have been developed.
- Procedures established for the emergency distribution of water if existing supply is disrupted.
- An Officer has been designated as Nodal Officer for Disaster Management.
- Sources of materials required for response operations have been identified.

Preparedness Checklist for Irrigation Department

- The department is familiar with the disaster response plan and disaster response procedures are clearly defined.
- 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.
- 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.
- An Officer has been designated as Nodal Officer for Disaster Management.
- Sources of materials required for response operations have been identified.

Preparedness Checklist for Telephone Department

- The department is familiar with the disaster response plan and disaster response procedures are clearly defined.
- 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.
- An Officer has been designated as Nodal Officer for Disaster Management.
- Sources of materials required for response operations have been identified.

Preparedness Checklist for PWD

- The department is familiar with the disaster response plan and disaster response procedures are clearly defined.
- 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.
- All officers are familiar with pre-disaster precautions and post-disaster procedures for road clearing and for defining safe evacuation routes where necessary.
- An Officer has been designated as Nodal Officer for Disaster Management.
- Sources of materials required for response operations have been identified.

Preparedness Checklist for Agriculture Department

- The department is familiar with the disaster response plan and disaster response procedures are clearly defined.
- 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.
- Information provided to all concerned officers about the disasters, likely damages to crops and plantations, and information about ways to protect the same.
- The NGOs and the other relief organizations are informed about the resources of the department.
- An Officer has been designated as Nodal Officer for Disaster Management.
- Sources of materials required for response operations have been identified.

Preparedness Checklist for Animal Husbandry Department

- The department is familiar with the disaster response plan and disaster response procedures are clearly defined.
- 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.
- Hospital staff is aware of which hospital rooms / buildings are damage-proof.
- 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.
- Emergency admission procedures with adequate record keeping developed.
- An Officer has been designated as Nodal Officer for Disaster Management.
- Sources of materials required for response operations have been identified.

REFERENCES

- Data Sources
- <https://Jehanabad.nic.in/history/>
- Vulnerability Atlas of India, Building Materials and Technology Promotion Council(BMTPC)(<http://www.bmtpc.org/>)
- Construction technology, codes related information on login/ on demand
- Table of block wise Seismic Risk (Source: Bihar State Disaster Management Authority: publication : Hypothetical Occurrence of 1934 Earthquake Intensity,)
- Report downloaded, block wise risk available for Jehanabadtable form
- Survey of India Maps (<http://www.surveyofindia.gov.in/>)
- Available for download/ purchase, to dig relevant maps with team
- Maps from Flood Management Information System (FMIS),(<http://fmis.bih.nic.in/>), Water Resources Department, Govt. of Bihar. (to be coordinated by Sr.TechnicalAdvisor, BSDMA)
- Available: Very good source for DM planning for floods, prediction etcSome initial maps downloaded and incorporated in the report as per the context.
- NDMA, NIDM, DM Act 2005

Glossary

Acceptable risk	The level of potential losses that a society or community considers acceptable given existing social, economic, political, cultural, technical and environmental conditions.
Adaptation	The adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities.
Advisor	A person invited to participate in the business of the DDMG in an advisory capacity on an as-needed basis.
Capacity	The combination of all the strengths, attributes and resources available within a community, society or organization that can be used to achieve agreed goals.
Capacity development	The process by which people, organizations and society systematically stimulate and develop their capacities over time to achieve social and economic goals, including through improvement of knowledge, skills, systems, and institutions.
Chairperson	The person appointed by Governor in Council as the Chairperson of the DDMG.
Climate change	The United Nations Framework Convention on Climate Change (UNFCCC) defines climate change as “a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods”.
Contingency planning	A management process that analyses specific potential events or emerging situations that might threaten society or the environment and establishes arrangements in advance to enable timely, effective and appropriate responses to such events and situations.
Coping capacity	The ability of people, organizations and systems, using available skills and resources, to face and manage adverse conditions, emergencies or disasters.
Critical facilities	The primary physical structures, technical facilities and systems which are socially, economically or operationally essential to the functioning of a society or community, both in routine circumstances and in the extreme circumstances of an emergency.
Deputy Chairperson	The person appointed by Governor in Council as the Deputy Chairperson of the DDMG.
Disaster	A serious disruption to the community, caused by the impact of an event, that requires a significant coordinated response by the state and other entities to help the community recover from the disruption (s. 13, DM Act).

Disaster District	A defined area established to assist local governments with disaster management and operations
Disaster Management (DM)	Arrangements about managing the potential adverse effect of an event, including, for example, arrangements for mitigating, preventing, preparing for, responding to and recovering from a disaster (DM Act).
Disaster management group	One of or a number of any of the following: the SDMG, DDMGs or LDMGs.
Disaster Management Strategic Policy Framework	A strategic tool which identifies principles that guide the development and implementation of policy and initiatives to achieve disaster management priorities.
Disaster operations	Activities undertaken before, during or after an event happens to held reduce loss of human life, illness or injury to humans, property loss or damage, or damage to the environment, including, for example, activities to mitigate the adverse effects of the event (s. 15, DM Act).
District Disaster Management Authority (DDMA)	As per provisions in Chapter-IV of the DM Act. 2005, each State Government shall establish a District Disaster Management Authority for every district in the State. The DDMA will be headed by the District Collector, Deputy Commissioner, or District Magistrate as the case may be, with the elected representative of the local authority as the Co-Chairperson to facilitate a paradigm shift from the hitherto relief-centric approach to a more proactive, holistic and integrated approach of strengthening disaster preparedness, mitigation, and emergency response as implementing body for DM at the District level and take all necessary measures for the purposes of DM in accordance with the guidelines laid down by the NDMA and SDMA.
District Disaster Management Group(DDMG)	The group established in accordance with s. 22 of the DM Act to provide coordinated State Government support and resources to LDMGs on behalf of local governments. The specific functions of the DDMG are outlined in s. 23 of the DM Act.
District Disaster Management Plan(DDMP)	A plan that documents planning and resource management to counter the effects of a disaster within the disaster district.

Disaster risk	The potential disaster losses, in lives, health status, livelihoods, assets and services, which could occur to a particular community or a society over some specified future time period. Disaster risk management: The systematic process of using administrative directives, organizations, and operational skills and capacities to implement strategies, policies and improved coping capacities in order to lessen the adverse impacts of hazards and the possibility of disaster.
Disaster risk reduction	The concept and practice of reducing disaster risks through systematic efforts, to analyse and manage the causal factors of disasters, including through reduced exposure to hazards, lessened vulnerability of people and property, wise management of land and the environment, and improved preparedness for adverse events. Early warning system: The set of capacities needed to generate and disseminate timely and meaningful warning information to enable individuals, communities and organizations threatened by a hazard to prepare and to act appropriately and in sufficient time to reduce the possibility of harm or loss. Emergency management: The organization and management of resources and responsibilities for addressing all aspects of emergencies, in particular preparedness, response and initial recovery steps.
Early Warning System	The set of capacities needed to generate and disseminate timely and meaningful warning information to enable individuals, communities and organizations threatened by a hazard to prepare and to act appropriately and in sufficient time to reduce the possibility of harm or loss.
Emergency services	The set of specialized agencies that have specific responsibilities and objectives in serving and protecting people and property in emergency situations.
Event	(1) Any of the following: <ul style="list-style-type: none"> a. a cyclone, earthquake, flood, storm, storm tide, tornado, tsunami, volcanic eruption or other natural happening b. an explosion or fire , a chemical, fuel or oil spill, or a gas leak c. an infestation, plague or epidemic (<i>example of an epidemic – a prevalence of foot-and-mouth disease</i>) d. a failure of, or disruption to, an essential service or infrastructure e. an attack against the state f. another event similar to an event mentioned in (a) to (e). (2) An event may be natural or caused by human acts or omissions. (s. 16, DM Act).
Executive Team	The Chairperson, Deputy Chairperson and Executive Officer.

Extraordinary Meeting	A meeting convened by the Chairperson in response to an operational event both inside and outside the disaster district.
Forecast	Definite statement or statistical estimate of the likely occurrence of a future event or conditions for a specific area.
Hazard	A dangerous phenomenon, substance, human activity or condition that may cause loss of life, injury or other health impacts, property damage, loss of livelihoods and services, social and economic disruption, or environmental damage.
Local Disaster Management Group (LDMG)	The group established in accordance with s. 29 of the DM Act to support the disaster management and operational activities of local governments. The specific functions of the LDMG are outlined in s. 30 of the DM Act.
Local Disaster Management Plan(LDMP)	A plan that documents agreed arrangements that are in place to deal with disaster events within its area of responsibilities.
Member	A person officially appointed as a member of the DDMG. Members have voting rights to validate the business of the group.
Mitigation	The lessening or limitation of the adverse impacts of hazards and related disasters. Natural hazard: Natural process or phenomenon that may cause loss of life, injury or other health impacts, property damage, loss of livelihoods and services, social and economic disruption, or environmental damage.
Ordinary Meeting	A DDMG meeting which is scheduled and convened on a regular basis at an agreed time (set by the Chairperson) to discuss routine business of the group.
Preparedness	The knowledge and capacities developed by governments, professional response and recovery organizations, communities and individuals to effectively anticipate, respond to, and recover from, the impacts of likely, imminent or current hazard events or conditions. Prevention: The outright avoidance of adverse impacts of hazards and related disasters. Public awareness: The extent of common knowledge about disaster risks, the factors that lead to disasters and the actions that can be taken individually and collectively to reduce exposure and vulnerability to hazards.
Prevention	The outright avoidance of adverse impacts of hazards and related disasters.
Quorum	The minimum number of DDMG members required to validate the business of the group.
Recovery	The restoration, and improvement where appropriate, of facilities, livelihoods and living conditions of disaster-affected communities, including efforts to reduce disaster risk factors.

Resilience	The ability of a system, community or society exposed to hazards to resist, absorb, accommodate to and recover from the effects of a hazard in a timely and efficient manner, including through the preservation and restoration of its essential basic structures and functions.
Response	The provision of emergency services and public assistance during or immediately after a disaster in order to save lives reduce health impacts, ensure public safety and meet the basic subsistence needs of the people affected.
Risk	The combination of the probability of an event and its negative consequences.
Risk Assessment	A methodology to determine the nature and extent of risk by analysing potential hazards and evaluating existing conditions of vulnerability that together could potentially harm exposed people, property, services, livelihoods and the environment on which they depend.
Risk Management	The systematic approach and practice of managing uncertainty to minimize potential harm and loss.
Risk Transfer	The process of formally or informally shifting the financial consequences of particular risks from one party to another whereby a household, community, enterprise or state authority will obtain resources from the other party after a disaster occurs, in exchange for ongoing or compensatory social or financial benefits provided to that other party.
State Disaster Management Group (SDMG)	The group established in accordance with s. 17 of the DM Act who is responsible for disaster management and operational arrangements for the state of Queensland. The specific functions of the SDMG are outlined in s. 18 of the DM Act.
State Disaster Management Plan (SDMP)	A planning tool for disaster managers which provides an overview of Queensland's all-hazards disaster management arrangements, including agency roles and responsibilities at each tier of the arrangements.
Sustainable development	Development that meets the needs of the present without compromising the ability of future generations to meet their own needs.
Vulnerability	The characteristics and circumstances of a community, system or asset that make it susceptible to the damaging effects of a hazard.