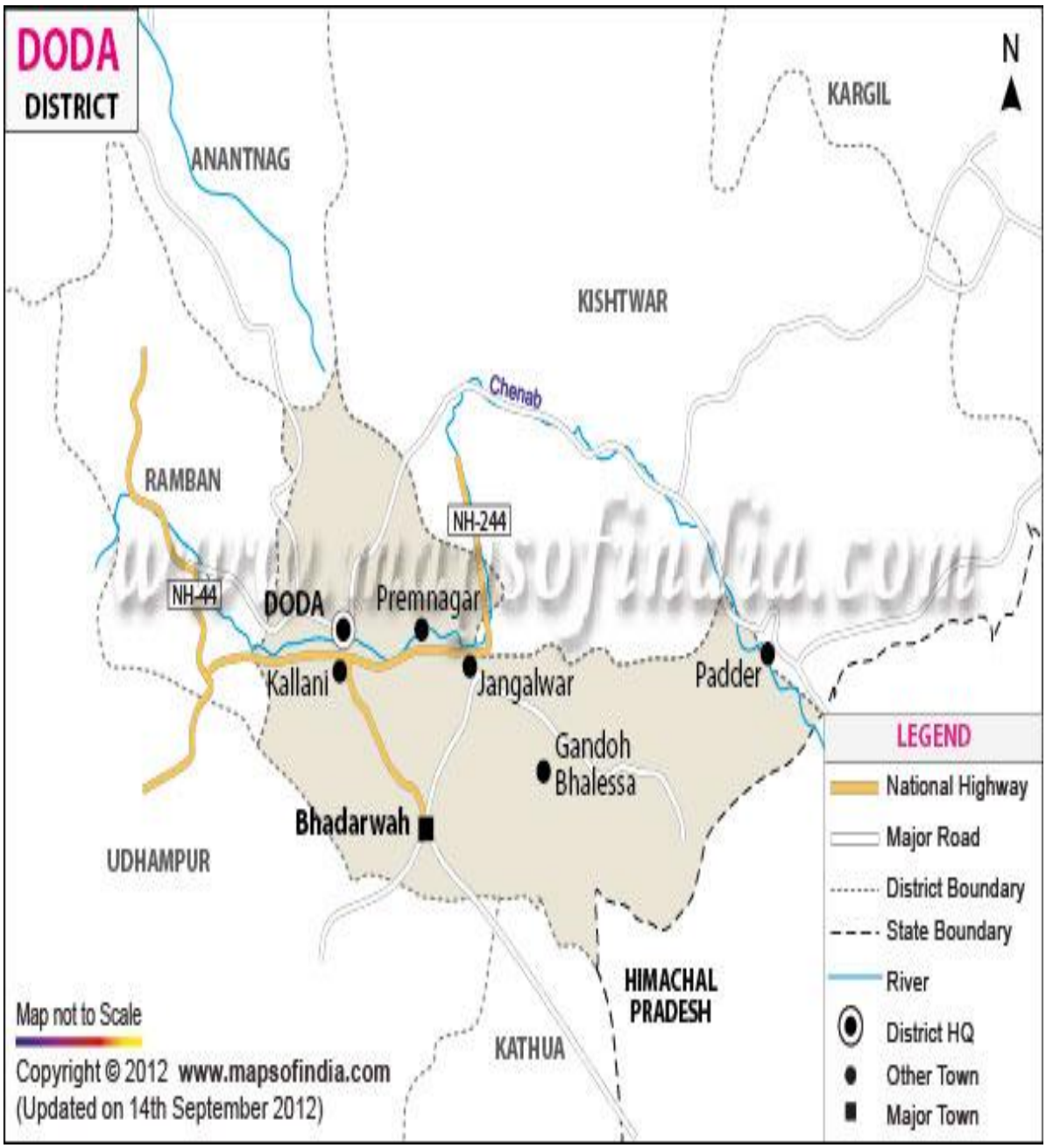
DRAFT

DISTRICT DISASTER MANAGEMENT PLAN

DODA



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DISTRICT DISASTER MANAGEMENT PLAN (DDMP), DODA

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This document has been prepared purely on the basis of information obtained from the different authentic sources and information received from concerned departments in the Districts.

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Deputy Commissioner,
Doda

Message

Disaster occurs with unfailing regularity in India causing immense loss of life, assets and livelihood. In the present executive structure of the country, the district administration is bestowed with the nodal responsibility of implementing a major portion of all disaster management activities. The increasingly shifting paradigm from a reactive response orientation to a proactive prevention mechanism has put the pressure to build a fool proof system, including within its ambit the components of preparedness, prevention, mitigation, response, rescue, relief and rehabilitation.

Pre-disaster planning is crucial for ensuring an efficient response at the time of a disaster. A well planned and well rehearsed response system can deal with the exigencies of calamities and also put up a resilient coping mechanism. Optimal utilization of scarce resources for rescue, relief and rehabilitation during times of crisis is possible only with detailed planning and preparation. Keeping in view the nodal role of the district administration in disaster management and risk reduction, preparation of District Disaster Management Plan (DDMP) was imperative.

I am very happy to present Disaster Management Plan for District Doda (J&K). The aim of this plan is to make Doda a safe, adaptive and disaster resilient District. The Plan implementation requires effective cooperation from all the stakeholders involved directly or indirectly to the field of Disaster Management and Risk Reduction especially the active involvement of Civil Society, Community based organisations and local communities.

It is the result of afforts of the Authority to preface a meaningful document so that in case of any exigency it can serve the execution of various functions and duties in a stepwise manner in line of the exigencies and priorities outlined. The draft plan is submitted for kind perusal and necessary directions. Further the plan will be updated on annual basis.

I hope this document serves a meaningful purpose in planning for Disaster Management by Integrating Disaster Risk Reduction (DRR) with Climate Change Adaptations (CCA) to make Doda a safe, adaptive and disaster resillient district.

(Simrandeep Singh) IAS,
Deputy Commissioner/Chairman
District Disaster Management Authority,
Doda

Addl. Deputy Commissioner, Doda

The catastrophes such as road accidents, flood, fire, hailstorms, earthquake, drought, snow avalanches, landslides and cloudburst have been causing loss of lives besides immense destruction to physical infrastructure and economic assets in the district Doda.

This manual is an effort to fill the gaps with regard to institutionalizing Disaster Risk Reduction (DRR) and introduction of Climate Change Adaptations (CCA) into developmental planning at district levels with Incident Response System (IRS) in place.

I hope this manual will provide help/guidance to District Disaster Management Authority, Block-level Disaster Management Committees, Panchayat/Village-level Disaster Management Committees, Planning Officers, concerned line Departments and Institutions for mainstreaming DRR and CCA measures in planning and implementation of various on-going and new projects, by offering a set of manuals (SOPs) for each line department in order to build infrastructure as per the guidelines.

This office would welcome any valuable insights, feedback and suggestions from the stakeholders in improving the District Disaster Management Plan.

Pawan Kumar (KAS)
Addl. Deputy Commissioner/CEO
District Disaster Management Authority,
Doda

ABBREVATIONS:-

ACD	Assistant Commissioner Development
ASHA	Accredited Social Health Activist
ATI	Administrative Training Institute
ANC	Anti Natal Care
BDO	Block Development Officer
BIS	Bureau of Indian Standards
BOCA	Building Operations Controlling Authority
BPL	Below Poverty Line
BQ	Black Quarter
BRO	Border Roads Organization
CAPD	Consumer Affairs and Public Distribution
CBO	Community Based Organizations
CCPD	Chief Commissioner for Persons with Disabilities
CDMA	Code Division Multiple Access
CEO	Chief Executive Officer
CFC	Cooperative Finance Corporation
CHC	Community Health Centre
CLW	Community Level Workers
CME	Continuous Medical Education
CMO	Chief Medical Officer
COR	Revenue Commissioner / Commissioner of Relief
DCC	District Coordinator Committee
DCR	Development Control Regulations
DDMA	District Disaster Management Authority
DDMAP	Department of Disaster Mitigation and Prevention
DFO	District Forest Officer
DIETs	District Institutes of Education and Technology
DM	Disaster Management
DMHP	Disaster Mental Health Providers
DMS	Disaster Management Store
DMU	Disaster Management Unit
DRR	Disaster Risk Reduction
ECEW	Emergency Coordination & Early warning
EIA	Environmental Impact Assessment
EMSA	Emergency Medical Services Authority
EOC	Emergency Operations Centre
ERC	Emergency Response Centre
ESF	Emergency Support Function
ESR	Elevated Surface Reservoir
FIR	First Investigation Report
FMD	Foot and Mouth Disease
FPO	Forest Protection Officer
FPRM	Flood Probability Reduction Measures
FReM	Flood Resilience Measures
GIS	Geographical Information System
GLR	Ground Level Reservoir
GPs	Gram Panchayats
GPRS	Global Packet Radio Services
GPS	Global Positioning System
GSI	Geological Survey of India
GSM	Global System for Mobile Communications
HFA	Hyogo Framework for Action
HFL	Highest Flood Level
HPC	High Power Committee
HRA	Hazard, Risk, Vulnerability Analysis
HSC	Hazard Safety Cells
HT	High Tension
IAP	Incident Action Plan
IASC	Inter-Agency Standing Committee
IAY	Indira Awas Yojana
IBHAS	Institute of Human Behaviour and Allied Sciences
ICDS	Integrated Child Development Scheme
ICP	Incident Command Posts
IDRN	International Disaster Response Network
IEC	Information, Education and Communication
IMD	India Meteorological Department
IMPA	Institute of Management, Public Administration and Rural Development
ISR	Incident Stress Response
ISRO	Indian Space Research Organization
ITBP	Indo-Tibetan Border Police
IWMP	Integrated Watershed Management Programme
JKPCC	Jammu and Kashmir Project Construction Corporation
KVK	Krishi Vigyan Kendra
LGBMH	Lokopriya Gopinath Bordoloi Regional Institute of Mental Health
LHZ	Landslide Hazard Zonation
LT	Low Tension
MARGS	Mutual Aid and Response Groups
MGNREGA	Mahatma Gandhi National Rural Employment Guarantee Act

MHA	Ministry of Home Affairs
MHPSS	Mental Health and Psychosocial Support
MIS	Management Information System
MoU	Memorandum of Understanding
NCC	National Cadet Corps
NDMA	National Disaster Management Authority
NDRF	National Disaster Response Force
NEOC	National Emergency Operation Center
NGO	Non-Governmental Organization
NHRM	National Rural Health Management
NIDM	National Institute of Disaster Management
NIMHANS	National Institute of Mental Health and Neuro Sciences
NIRD	National Institute for Rural Development
NMEW	National Mission for Empowerment of Women
NMHP	National Mental Health Programme
NRDWP	National Rural Drinking Water Programme
NRHM	National Rural Health Mission
NRLM	National Rural Livelihoods Mission
NRSA	National Remote Sensing Agency
NSS	Network Security Services
NYKS	Nehru Yuva Kendra Sangathan
OAR	Organized Avalanche Response Team
PDA	Personal Digital Assistant
PDC	Power Development Corporation
PDNA	Post Disaster Needs Assessment
PFA	Psychosocial First Aid
PGIS	Participatory GIS
PHC	Primary Health Care
PHE	Public Health Engineering
PIO	Public Information Officer
PMRDF	Prime Minister Rural Develop Fellow
PRI	Panchayati Raj Institutions
PRO	Public Relation Officer
PSS	Psychosocial Support
PSSMH	Psychosocial Support and Mental Health
PSSMHS	Psycho-Social Support and Mental Health Services
PSU	Public Sector Undertaking
PWD (R&B)	Public Works Department (Roads and Building)
RGSY	Rashtriya Gram Swaraj Yojana
RKVY	Rasthriya Krishi Vikas Yojana
SAR	Search and Rescue
SASE	Snow and Avalanche Study Establishment
SCP	Special Component Plan
SDM	Sub-Divisional Magistrate
SDMA	State Disaster Management Authority
SDMC	School Disaster Management Centre
SDRF	State Disaster Response Force
SDRN	State Disaster Resource Network
SEC	State Executive Committee
SGRY	Sampoorn Grameen Rojgar Yojana
SGSY	Swaranjayanti Gram Swarozgar Yojana
SIA	Social Impact Assessment
SICOP	Small scale Industrial Development Corporation Limited
SIDCO	State Industrial Development Corporation
SIHFW	State Institutes of Health and Family Welfare
SMHA	State Mental Health Authority
SOP	Standard Operating Procedure
SP	Superintendent of Police
SPDC	State Power Development Corporation
SRC	Special Relief Commissioner
TFCR	Taskforce Control Room
TOT	Training of Trainers
UDD	Urban Development Department
UNICEF	United Nations International Children's Emergency Fund
UNISDR	United Nations International Strategy for Disaster Reduction
VHF	Very High Frequency
VIP	Very Important Person
VSAT	Very Small Aperture Terminal
WHO	World Health Organization
WINSOC	Wireless Sensor Network with Self Organization
WMD	Weapon of Mass Destruction

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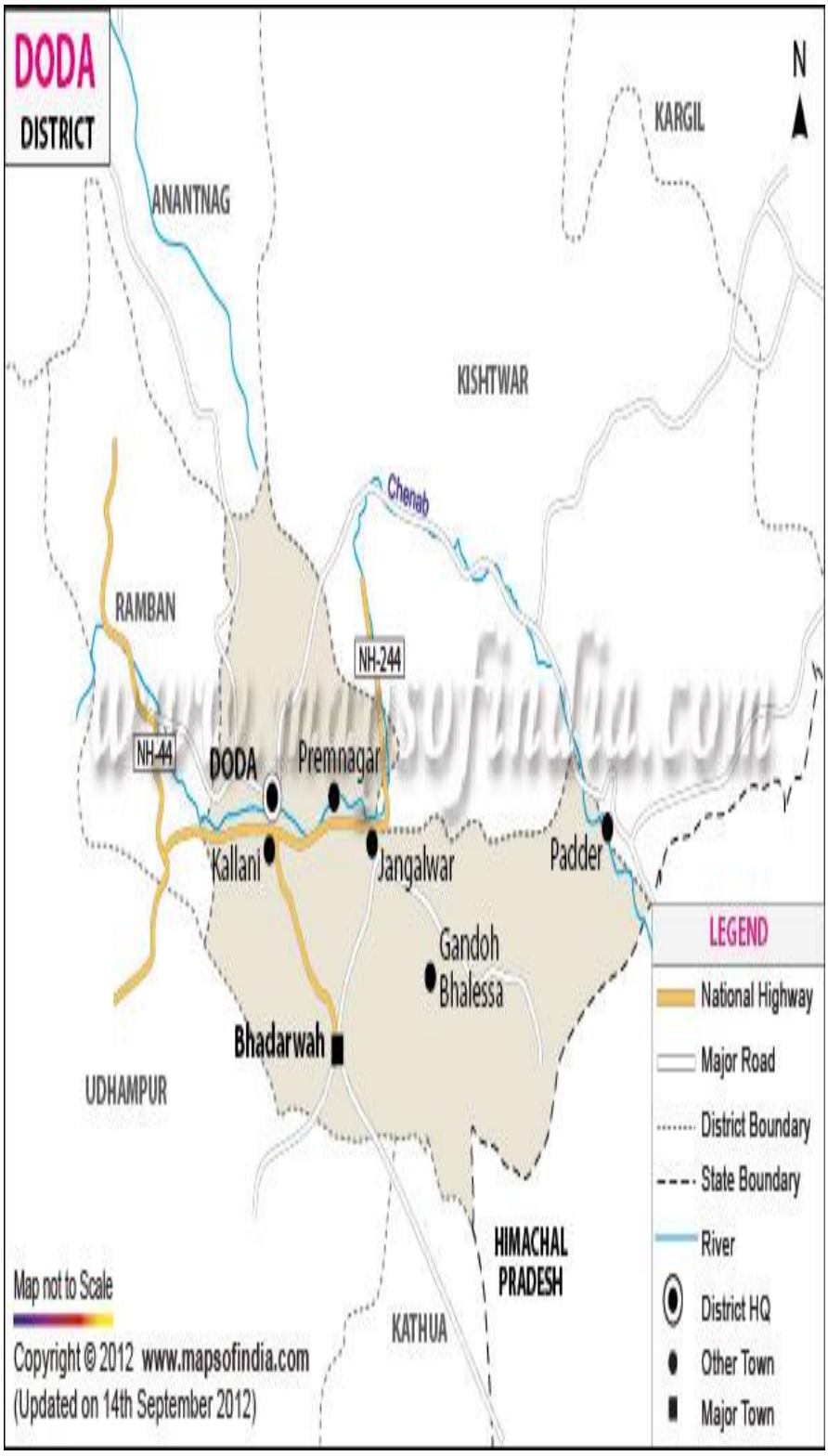

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PREFACE

In recent years, the Government of Jammu & Kashmir has been giving increased focus towards the Disaster Management and related aspects. It is because the J&K State is vulnerable to multiple natural hazards like floods, earthquake, landslides, fire, drought, windstorm, snow avalanches, drowning incidents etc resulting in loss of lives, damage to the property, infrastructure and public utilities. The State has already witnessed various disasters like earthquake of 2005, flashfloods in Leh, massive floods in the Valley in September 2014, cloud bursts in Thathri, district Doda. District Doda has too witnessed various disasters during the course of history. During the recent floods of 2014, the district authorities in collaboration with NGOs, Mass Social Organizations and volunteers has not only responded to the disaster with unparalleled bravery but have expeditiously responded and recovered from such an unprecedented deluge within the shortest possible time. This not only shows the valour and managerial skills of the district administration but depicts the resilient nature and will power of the common masses.

The data collected at various levels were collated while preparing District Disaster Management Plan [DDMP] for Doda District.

In order to address the root causes of vulnerability to natural disaster, District Administration is in the process of shifting its government policies towards proactive preparedness, mitigation and prevention. This highlights the links between disaster management and development, calling for a Cross-Sectoral approach to identify the bottlenecks to risk reduction. District Disaster Management Plan is being developed with a dual top-down and bottom-up approach, tapping the existing institutional capacity required for coordinated action, in response to community-based voicing of the most pressing needs. Efforts must mobilize a variety of actors – government, private sector and civil society – to complement each other with their respective expertise, while allocating specific and binding responsibilities to overcome difficulties of collective action.

We have tried to include the District related information, Risks and Preparedness against risks, responses at the time of disasters as well as Disaster Management and strategy during the disaster. This Plan will be updated periodically, and also we will improve it through continuous feedback from all the Stakeholders and new lessons learnt from the past and present.

We hope that this document shall go a long way in helping the district administration in tackling the disaster situations in a systematic, tandem and smooth manner.

Essential First Steps

A District-level Disaster Management Plan (DDMP) is a long desired document to have a safe, adaptive and disaster-resilient district for sustainable development. DDMP is a comprehensive document that covers the entire range of disaster management and disaster risk reduction activities at District level. As a result of this mandate, this document covers the range of policies and actions that must be undertaken by the District Administration, in consultation with the line departments, for addressing disasters in a comprehensive and holistic way in the district.

The efficacy of Disaster Management Plan depends entirely on the extent to which various elements of the Plan can be made operational or brought to the level of active implementation. In this zeroth chapter of the Disaster Management Plan for the District some key elements are emphasized that need to be taken up urgently in order to speedily operationalize and implement several parts of the Plan.

Setting up and Operationalizing of District Emergency Operations Centre (DEOC)

The Emergency Operations Centre (EOC) is the centerpiece for the implementation of District Disaster Management Plan. A full-fledged Emergency Operations Centre is the first priority. While deciding on its permanent location, it must be immediately made operational at any possible location, with adequate floor space and the facilities and amenities that have been indicated in the Plan. The EOC will become the nodal point for facilitating and monitoring the process of implementation, under the supervision of the District Disaster Management Authority (DDMA). The EOC will provide ready information of the progress of implementation, available infrastructure, level of readiness in human resources & capacities and a transparent view of the remaining gaps and deficiencies. A main EOC and SDM-level EOCs are required as a clear operational requirement.

Implementing the Disaster Management Plan in a structured & time-bound manner

The Disaster Management Plan projects a number of infrastructural requirements, operational structures and modalities of action for a safe and disaster-resilient district. These will not become a reality immediately. It requires financial, technical and human resources to be deployed, which will inevitably take some time. It would be a grave error to assume that, with an available Plan, we have a ready to hand blueprint that will enable the District machinery and other stakeholders to immediately take action for the next subsequent disaster. With this document, the District Administration and other line departments need to plan a structured, time-bound process of implementation and realization.

Ensuring an adequate framework for Disaster Governance

The importance of a clear, unambiguous framework for disaster governance at the State and district level cannot be overemphasized. Currently, in the District some elements of the recommended framework are in place, whereas other elements are not. Such ambiguities may hamper emergency response, operational readiness as well as long-term planning. It is also essential to ensure that all statutory bodies in the disaster governance framework have adequate offices, ear marked funds for specific activity and an adequate site from which they function. The District Authority also has various functional arrangements for disaster management, already in place, with a number of senior and other officers, key government offices and various departments of the government tasked with various aspects of disaster management. Their role in the new framework with State and District level disaster management authorities needs to be adequately clarified or *revamped.*

Among the key issues that need to be clarified are the strengthening of the District Disaster Management Authority with an adequate headquarters, clarification of the role of all stakeholders in line with standard governance in all other matters, and the provision of designated funds for expenditure to enhance disaster preparedness and the designation of suitable authority for undertaking such expenditure.

Developing Human Resources and their Capacities for Implementation is the Key

No Disaster Management Plan at any level will be of value if there is not adequately trained human resources to understand, implement and, when necessary, upgrade the Disaster Management Plan. Currently, there is considerable need for enhancing the capacities of District Authorities, staff and employees in all departments in general aspects of disaster management and specific aspects of their work. It is imperative that no allocated budget for training and capacity-building in disaster management be allowed to lapse, and be utilized to the fullest. These trainings must be carefully designed, have the necessary inputs from suitable experts, utilize the expertise of agencies such as the SDMA, NDMA and the NDRF, SDRF and avail of knowledge from best practices throughout the country.

Awareness generation, capacity building and simulation exercises with all stakeholders

The implementation of a district-level disaster management plan will not be feasible without the co-operation of all stakeholders. While Government should take the lead, especially in major or critical situations, the extent of successful implementation of a district- level Disaster Management Plan requires careful co-ordination with all stakeholders. These may include teachers, medical personnel at all levels, craftsmen, technicians and skilled workers from various specific trades, large establishments in the service or industrial sectors, members of civil society organizations and so on. There is considerable scope and urgent need to sensitize key sections among such stakeholders.

Large-scale simulation exercises involving all or several stakeholders are a must for coping with disasters in the future. Awareness generation, capacity building and simulation exercises must be rapidly undertaken to enable successful implementation of the disaster management plan.

CHAPTER- 1
INTRODUCTION

This plan will be known as the '**District Disaster Management Plan – Doda** and will be applicable only for District **Doda**, Jammu and Kashmir, India.

1.1 VISION

To make **District Doda,** a Safe, Adaptive and Disaster Resilient District.

1.2 THEME

The plan document envisages the accurate assessment of risk and vulnerability to disasters in the district. A significant thematic component will be the mainstreaming of disaster management concerns in development plans/projects/ and programmes. The plan proposes to achieve its stated goals by enhancing capacities and designing preparedness measures that are rooted in socio-cultural, economic, ecological and technological determinants of risks and uncertainties, which affect diverse populations of the district. This plan outlines strategies for proper coordination and allocation of roles and responsibilities of each government department and other stakeholders involved. The plan also has provisions of reviewing and updating plan annually.

1.3 OBJECTIVES

a. To protect the lives of people in the District from any kind of natural disasters.
b. To minimize the sufferings of vulnerable population and the loss of property/infrastructure in the District due to disasters.
c. To achieve maximum efficiency in reducing vulnerability of people to disasters in the District.
d. To promote a culture of disaster resilience in the District.
e. To design appropriate prevention and mitigation strategies across various levels of stakeholders in the District.
f. To enhance the capacities of all relevant stakeholders in disaster risk reduction.
g. To mainstream disaster risk reduction as integrated component of development planning in the District based on Built Back Better Approach.
h. To nurture and establish efficient disaster response/relief mechanism in the District.
i. To provide clarity on roles and responsibilities for all stakeholders concerned with disaster response and recovery.
j. To ensure co-ordination and promoting constructive partnership with all other agencies related to disaster management.

1.4 GOAL

Sustainable reduction in Disaster Risks and Recovery in all nooks and corners of Doda District with active participation of Local Government and Community.

1.5 RATIONALE

Disaster Risks Management Programme is a vast programme, which will strengthen all institutions at all levels to minimize the loss of life and property during any disaster in the shortest possible time through optimum preparedness, mitigation and response plan. Hence the rationale of an affective and realistic District Disaster Risk Management Plan was felt. This comprehensive District Disaster Risk Management Plan will strengthen the efforts of the District Administration. This plan was prepared and compiled by the District Disaster Management Professional of District Disaster Management Authority (DDMA), Doda and this Authority is responsible for renewing the plan once in every two years.

CHAPTER- 2
HAZARD, RISK AND VULNERABILITY PROFILE

2.1 DISTRICT PROFILE

Doda, believed to be named after a migrant from Multan and utensil maker Deeda, is a scenic town in the district of Doda in Jammu & Kashmir in India. Doda is a district in eastern part of Jammu region of the Indian State of Jammu & Kashmir. The District consists of 16 Tehsils viz. Assar, Bhagwah, Bhaderwah, Kastigarh, Bhalla, Bhaleessa, Bharath-Bagla, Chilli-Pingal, Chiralla, Doda, Gundna, Kahara, Marmat, Mohalla, Phigsoo and Thathri. The District is touching its boundaries by Kishtwar in the North-East, Kathua in the South, Ramban in the North-West, Udhampur in the South-West and Anantnag in the North. The total geographical area of the District is 2306 sq. km and the administrative center of the District is situated at Doda about 160 km away from Jammu, the winter Capital of the State. District Doda is famous for Tourist destinations and has two Tourism Development Authorities for Doda, & Bhaderwah. The major tourist attractions in the District are Bhaderwah, Doda, Gandoh & Thathri.

Table 2.1: District Profile-Doda

S. No.	*Description*	*Unit*	*Magnitude*
1.	*Geographical Area*	*Sq. Km*	*2306*
2.	*Sub-Divisions*	*No.*	*04*
3.	*Tehsils*	*No.*	*16*
4.	*Blocks*	*No.*	*17*
5.	*Villages*	*No.*	*400*
6.	*Panchayat's*	*No.*	*237*
7.	*Municipal Committee*	*No.*	*3*
8.	*Population*	*No*	409,576, *(Census 2011)*
9.	*Schedule Tribe Population*	*No*	39,216 *(Census 2011)*
10.	*Schedule Caste Pouulation*	*No*	*53408 (Census 2011)*
11.	*Sex Ratio*	*No*	*922 Females/1000 males*

The District consists of 400 villages and 03 Municipal Committees. There are 04 Sub-Divisions viz, Bhaderwah, Assar, Gandoh & Thathri and 17 Tehsils viz. Assar, Bhaderwah, Bhalla, Bhalessa, Bhagwah, Bharath Bagla,Bhella, Chilli Pingal, Chiralla, Doda, Gundna, Kahara, Kastigarh, Marmat, Mohalla, Phigsoo & Thathri, which have further been Sub divided into 31 Nayabats (Land Revenue Circles) and 64 Patwar Halqas. There are 17 Community Development Blocks, viz. Assar, Bhaderwah, Bhagwah, Bhalla, Bhalessa, Changa, Chilli Pingal, Chiralla, Dali-Udhyanpur, Ghat, Gundna, Jakyas, Kahara, Kastigarh, Khellani, Marmat & Thathri.

Doda District has witnessed various disasters during the course of history. During the recent floods of 2014, Cloudburst at Tehsil Thathri & Kahara of District Doda, the district disaster Management Authority in collaboration with NGOs, Mass social organization and volunteers have responded to the disasters with unparalleled bravery. This not only shows the valor and managerial skills of the District Administration but depicts the resilient nature and will power of the common masses.

Reasons for the losses, if any, are attributed to insufficient public awareness, lack or inadequacy in preparedness, lack of early warning system, lack of coordination among inter-government agencies, inadequate financial resources, low quality of human resource in terms of skill

in mitigation of natural disasters, and ineffective dissemination of knowledge and skills to the vulnerable population groups and non involvement of Disaster Management Professionals.

2.2 HISTORY OF PAST DISASTERS IN THE DISTRICT

Doda has been traditionally vulnerable to natural disasters on account of its unique geo-climatic conditions. Floods, Drought, Landslides and Earthquake have been recurrent phenomena. Accordingly, Matrix of past disasters in the district is tabulated below. The threat (risk) and possible impact (vulnerability) which can be actualized from these hazards ranges from minor impacts affecting one village to events impacting larger area.

Table 2.2: Analysis of Hazard, Risk and Disaster Impact

S. No.	Type of Disaster	Month / Year	Affected Area / Village/Tehsil	Datails of damages caused			
				Deaths	Injury	Structures Damaged	Live stock perished
01	Earthquake	May, 2013	Entire District Doda	-	-	70074	
02	Torrential rains/floods	September, 2014	Entire District Doda	01	05	1304	88
03	Torrential rains/floods	Feb, March, April. 2015	Entire District Doda	07	09	1706	81
04	Fire incidents	15-16th April, 2017	Dharevery Tehsil, Gandoh	-	-	08	-
05	Fire incidents	19-20th April, 2014	Bhatyas Tehsil, Chilly Pingal	-	-	14	-
06	Cloudburst	19-20th April, 2014	Thathri	06	01	09	20
07	Cloudburst	19-20th April, 2014	Thathri	-	-	06	03
08	Road Accident	January, 2018	Kahara, Thathri Tehsil	02	40		
09	Road Accident	January, 2018			20		

2.3 HAZARDS, RISK AND VULNERABILITY

Table 2.2 summarizes the results of an analysis of hazard, risk and disaster impact in Doda District. This analysis indicates that disaster planning at the district level should also focus on the functional response to the Floods and Earthquake. Typical responses to these disaster events can also apply to cloudbursts, landslides, fire, hailstorm, industrial accidents, road accidents, failure of critical infrastructure and building collapse.

Table 2.3: Hazard Risk Vulnerability Assessment viz; Earthquakes, Landslides, Forest Fires, Cloudbursts, Hailstorm, Drought, Snow, Fire, Accidents, Floods, etc.

S. No	Hazard Type	Year of Incidence	Place of Incidence		Area Affected				Total Area Affected	Number of Deaths		Total Deaths
			Tehsil	Village	Agriculture		Horticulture			Male	Female	
					K	M	K	M				

2.3.1 Earthquakes

The state of Jammu and Kashmir is the western most extension of the Himalayan mountain range in India. According to Global Sessimic Hazard Assessment Programme (GSHAP data) , the State of Jammu & Kashmir falls in a region of high to very high seismic hazard zone. As per the 2002

Bureau of Indian Standards (BIS) map, J&K is classified in Seismic Zone IV and V, with intensity MSK of VIII to IX or more. Historically, parts of J&K have experienced seismic activity in the M 6.0 - 7.0.

In the past, the J&K region of the Himalayas has faced many earthquakes of M>7; 1770 M 7.7 Srinagar Earthquake and 2005 M7.6 Muzaffarabad earthquakes are the largest documented events in the J&K region. The Mw5.8 event of 1 May 2013 is a smaller event in comparison with these two big events. Preliminary information suggests that the earthquake occurred by shallow intra-plate strike-slip faulting on the Eurasian Plate transverse to the prominent MCT and MBT features of the region. As per IMD, this earthquake was followed by four aftershocks of magnitudes 3.7, 4.6, 3.7 and 3.5 till 5 May 2013, and nine events of magnitude 3+ till 16 May 2013. The Mw5.8 that struck the J&K state at 12:27pm IST on 1 May 2013, caused a maximum intensity of shaking of about VI+ on the MSK scale. The earthquake was centered about 17 km northeast of Bhadarwah (Doda District of J&K) at a shallow depth of 15 km. This earthquake caused shaking in many areas adjoining area lasting about 40 seconds. The event was recorded by strong motion accelerographs at 11 stations operated by Department of Earthquake Engineering, IIT Roorkee (http://pesmos.in/2013/).

2.3.2 Landslides

Besides earthquakes, landslides are geological hazards that are common and peculiar to the region. In District Doda, the mass movement varies in magnitude from soil creep to landslides. Solifluction is another type of mass movement that is common on the higher snow covered ranges of the district. Flash floods particularly in narrow river gorges are the cause of some of the major landslides in the district. These flash floods trigger landslides in the region eventually jeopardizing the stability of the hill as a whole. The vulnerability of geologically young unstable and fragile rocks of the district has increased many times in the recent past due to various unscientific developmental activities. Deforestation, unscientific road construction and terracing, encroachment on steep hill slopes are anthropogenic activities which have increased the frequency and intensity of landslides.

2.3.3 Snow Avalanches, Snow Storm and Snow Fall

Avalanches, river like flow of snow or ice descending from mountain tops are common in the high ranges of Jammu and Kashmir. It is very difficult to predict avalanches as they are rarely observed closely and normally occur during a short time period of one or two minutes. During winter, some parts of district Doda receive the snow fall and rainfall.

Windstorms are high velocity winds that sweep with a wind speed of more than 55 km per hour. The windstorm occurrence in the district is mostly during spring and summer and often leads negative impact to lives and property. One of the major reasons for the catastrophe is due to the lack of early warning procedures and preparedness measures. Non availability of technical expert to aware the people to construct wind proof roof tops as well as the deficiency in building code standard also put the lives and property of people under risk.

Recently, on 14th May, 2017 five persons were killed while several others injured when a mini bus was hit by an avalanche on the Bhaderwah-Basholi Highway of Doda district.

2.3.4 Flash Floods

Flash floods, short lived extreme events, which usually occur under slowly moving or stationary thunderstorms, lasting less than 24 hours are common hazard events in the state. As a result of the high velocity of the current, which can wash away all obstacles in its way, this phenomenon has resulted in enormous loss of life and property in various parts of the region. Floods also occur in the summer when heavy rain is followed by a bright sun, which melts the snow. If an embankment is breached or topped, a district which is dry a few hours back could turn into a lake after a few hours.

Recently, at least six people were killed in a flash flood triggered by a cloud burst in Thathri village of Doda district. The flash flood inundated vast areas along the Batote-Kishtwar National

Highway, washing away half a dozen houses and leaving several persons trapped. Six persons, including a 12-year-old boy, were rescued from under the debris.

2.3.4.1 Zonation of Flood-Prone areas

After identifying the flood-prone areas through past history and frequency of floods, the District Administration has identified the following Blocks of the district along with the name of the Nallah/Stream and level of vulnerability thereof. The remaining Tehsils mostly include high altitude areas which are improbable to the flood threats. A team of Disaster Management officers of District Disaster Management Authority, Doda along with Officers/Officials from the revenue department shall be deputed during any flood threat, each headed by an Officer In-charge, as nominated by the District Collector/Chairperson of DDMA. The Officer In-charge shall have the responsibility of verifying and assessing the damages caused due to the flood and communicating the same with full particulars to the higher authorities for immediate necessary action: -

Table 2.4: Zonation of flood-prone Blocks

S. No.	Name of Block	Name of the Nallah	Vulnerability
1.	Bhagwah	1-Ladar Nalla 2-Dhandal Nalla	Medium Medium
2.	Bhaderwah	1-Neeru Nalla 2-Punja Nalla 3-Chinote Nalla 4-Chakka Nalla 5-Daroo Nalla	Medium High Medium Medium Medium
3.	Gandoh	1-Kaljusar Nalla 2-Goilbar Nalla 3-Chilly	High Medium Medium
4.	Thathri	1-Kalmaie Nalla 2-Dandi Nalla	Medium Medium
5.	Gundna	1-Golan Nalla	Medium

Relief camps equipped with immediate relief & rescue equipment/items like Sand bags, Tractors, Boats, blankets etc. shall be established in each zone. Arrangements shall be made for providing shelter to the affected people in the identified shelter sheds along with medical aid facility at the nearest medical aid centers.

An evacuation route plan shall be drawn in each Zone after carrying out proper survey.

Essential service centers shall be established in the vicinity of the relief camps which include Primary Health Centres & Fire & Emergency Services. Resources in the shape of Men & Machinery including Tractors, Boats, Tents etc., shall be kept at the disposal of each zone.

Volunteers from amongst the public, NYC's, NGO's shall be identified and involved for participation in the whole process of Relief, Rescue & Rehabilitation in each village. Training shall be imparted to the volunteers by the Disaster Management Professionals involving the trained personnel from SDRF, F&ES, and Red Cross in collaboration with SDMA and DDMA, Doda as and when required.

2.3.5 Cloudburst

Cloudburst is a disastrous weather condition caused by the downpour, over a small geographical area for a relatively short period. A cloudburst is construed by the meteorologist when there is an intense rainfall at a rate of 100 mm per hour. At the event of cloudburst, 20 mm of rain may fall in a few minutes. The heavy down power often leads to landslides, flashflood and pose threat to life and property. Topography of the state plays a crucial role in the formation of cloudburst. The hilly terrain of the state favors the formation of cumulonimbus cloud. This leads to the shedding of

larger droplets of water at a higher rate, resulting in higher impact on the ground. The District Doda is highly vulnerable to Cloud bursts and has witnessed 2 cloud bursts during April, 2015 in which 06 people died, and on 19/20-July, 2017 06 person died and 02 were injured, 9 structures damaged and 20 live stocks were perished.

Table 2.5: Damages Caused by Cloud Bursts

Type of Disaster	Month/Year	Affected Area	Details of damages caused			
			Deaths	Injury	Structures damaged	Live stock perished
Cloudburst	April, 2015	Bhagwah	06	-	01	-
Cloudburst	July, 2017	Thathri	06	02	09	20

2.3.6 Drought

The south-west monsoon plays a significant role in determining the sustenance of agriculture depended population in the state of Jammu & Kashmir. More than 75 % of the populations in Jammu & Kashmir are directly or indirectly depended on agriculture for livelihood. The deficiency in monsoon rain quite often results in drought, affecting the livelihood of the rural population. The State is prone to deficient rainfall once in three years, putting lives of the majority of population at stake. Doda as well is considered as drought-prone district.

2.3.7 Hailstorm

Hailstorm creates great devastation to the standing crops in the state. Every year thousand acres of crops are being affected due to the hailstorm resulting in the loss of crop yield. The government of Jammu and Kashmir has imparted crop insurance schemes to support the agrarian population who has been affected by natural disasters such as hailstorm, drought, lightning etc. The insurance schemes are meant to support Rabi crops such as wheat, mustard and potato.

2.3.8 Lightning

The population of the District is also exposed and vulnerable to lightening.

2.3.9 Biological Hazards

Biological hazards with respect to Jammu and Kashmir could be understood in terms of epidemics among humans, livestock and pest and disease with respect to agriculture. The prevalence of livestock disease has been recorded in the state of Jammu and Kashmir. Outbreaks normally occur during the post monsoon season. The prominent diseases reported are Black Quarter (BQ), Hemorrhagic Septicemia (HS), SG-POX and Foot and Mouth Disease (FMD). Pest related problems are another biological hazard prevalent in the state. Pest attack not only decreases the productivity of the fruits but also the quality of the fruits which in turn affect the livelihood of the people who depend on agriculture. The need to provide effective and ecological sound insect and disease management is very essential.

2.3.10 Forest Fires

The Doda district is well endowed with forest resources that play a significant role in protecting the ecosystem of the region. They serve as a catchment for river basin which enhances the soil stability thus prevents soil erosion. Every year in district Doda; there is a high probability of forest fire in the months of May and June. There have been various incidents of fire break outs in the forest areas of the district Doda from the last so many years due to which significant loss is occurring to the green belt.Though forests are prone to fire during the dry season, human activities such as military action, timber smuggling etc holds a huge responsibility for the onset of the fire.

2.3.11 Industrial Hazards

There has not been any report of industrial hazards in district Doda so far. Industrial hazard principally consists of four hazards such as fire, explosion, toxic release and environmental damage. However, the district needs to be cautious of the industrial wastes that are disposed, which could have severe impact on the ecology and health of the citizens in the district.

2.3.12 Fire

The District Doda is also prone to building fires. Several incidents of building fires have been witnessed so far in the district. Every year, numerous buildings including residential houses/shops gut due to fire incidents.

2.3.13 Mines

The Kashmir valley comprises of sedimentary, metamorphic and igneous rocks ranging in age from Salkhala (Precambrian) to Recent.

The department of Geology and Mining has played a vital role in overall economic development of state by providing various mineral deposits for which the Government has granted various Mining Leases. The important minerals found in Doda district are Gypsum, Granite, Sapphire (precious stone), and China Clay. Most of the mining sites are confined to remote hilly regions and their proximity to seismic activities and landslides are also very high. Safety of the labors in the mines and communities living in the different fault zones of the mining sites should be the top priority. Also, the practice of sand mining and Quarrying should be checked and must be regulated.

2.3.14 Tourism / Crowd Management / Stampede

The Doda District is highly vulnerable to crowd related disasters. The main attractions of the destination include, Bhaderwah, Chinta Valley, Seoj Meadow, and Bhal Padri, to name a few. Bhaderwah is known for a pilgrimage for the Hindus known as the Kailash Yatra. Pilgrimage- tourism in district Doda that is promoted widely needs to take appropriate crowd management measures. Most often, the situation becomes chaotic due to large movement of people that could result in stampede, damage to limbs, injury and loss of life.

2.3.15 Drowning

The Doda district is very much prone to disasters resulting to drowning related incidents. The threat perception remains from the rivers flowing through the District like Nallah Bringi, Nallah Dhandal, Puneja Nalla, Chenab, Lidder and their tributaries. The District needs to build immense capabilities to provide warning as well as human resources in terms of divers, rescue teams and related equipment.

2.3.16 Railway Safety

The Kashmir Railway route officially termed the Jammu-Udhampur-Srinagar-Baramulla Railway link, cross major earthquake zones and is subjected to extreme temperatures of cold and heat. Due to the inhospitable terrain, the railway link is also susceptible to landslides. As the State plans to expand its railway network within the State as well as to rest of the country, one need to judiciously plan appropriate disaster mitigation and response plans pertaining to rail accidents including technical failures, fires and sabotages.

2.3.17 Road Accidents

The district due to its terrain is prone to road accidents. Appropriate Incident Command System, to deal with road accidents, has to be developed taking into account the nature of the roads, terrain and frequency of accidents happening on the roads of the district. There have been numerious road accidents claiming loss of lives and property to a great extent. Recently in January, 2018 two people were killed and 50 people were seriously injuried in a road accident at Kahara, tehsil Thathri, In District Doda.this is one of the major concern which needs due attention so that no more lives are lost in such accidents.

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To achieve the vision of a safe and secure district, the following current realities need to be understood, recognized and necessary corrective measures has to be taken.

- A detailed Hazard Risk Vulnerability Atlas for the District is essential.
- Incorporation of building code while constructing new structures or retrofitting old ones.
- Establishing reliable mechanism and expertise for assessing damage caused due to natural hazards.
- Setting up efficient, operational EOCs at District and SDM levels respectively, ensuring a very strong network of coordinating authorities at all levels (State, District, SDM, Tehsil, Block levels)
- Integrating Disaster Risk Reduction into Development Planning.
- Strengthening professional expertise in dealing with disaster risk reduction specifically with respect to planning, logistic management, evacuation and shelter.
- Operationalizing DM plan at the Tehsil and District level.
- Involvement of qualified Disaster Management Professionals
- Strengthening Community based Disaster Risk Reduction initiatives.

CHAPTER- 3
INSTITUTIONAL FRAMEWORK

The Revenue Department of the District would be the Nodal Department for disaster response which includes the coordination of rescue, relief and rehabilitation. All other concerned line departments will extend their full cooperation in all matters pertaining to disaster response. The District EOC, ERC and other control rooms at the district level will be activated with full strength.

3.1 INSTITUTIONAL ARRANGEMENTS

The institutional framework that the plan proposes towards facilitating disaster response is given below in Table 3.1: -

Figure 3.1: Institutional Framework at District level

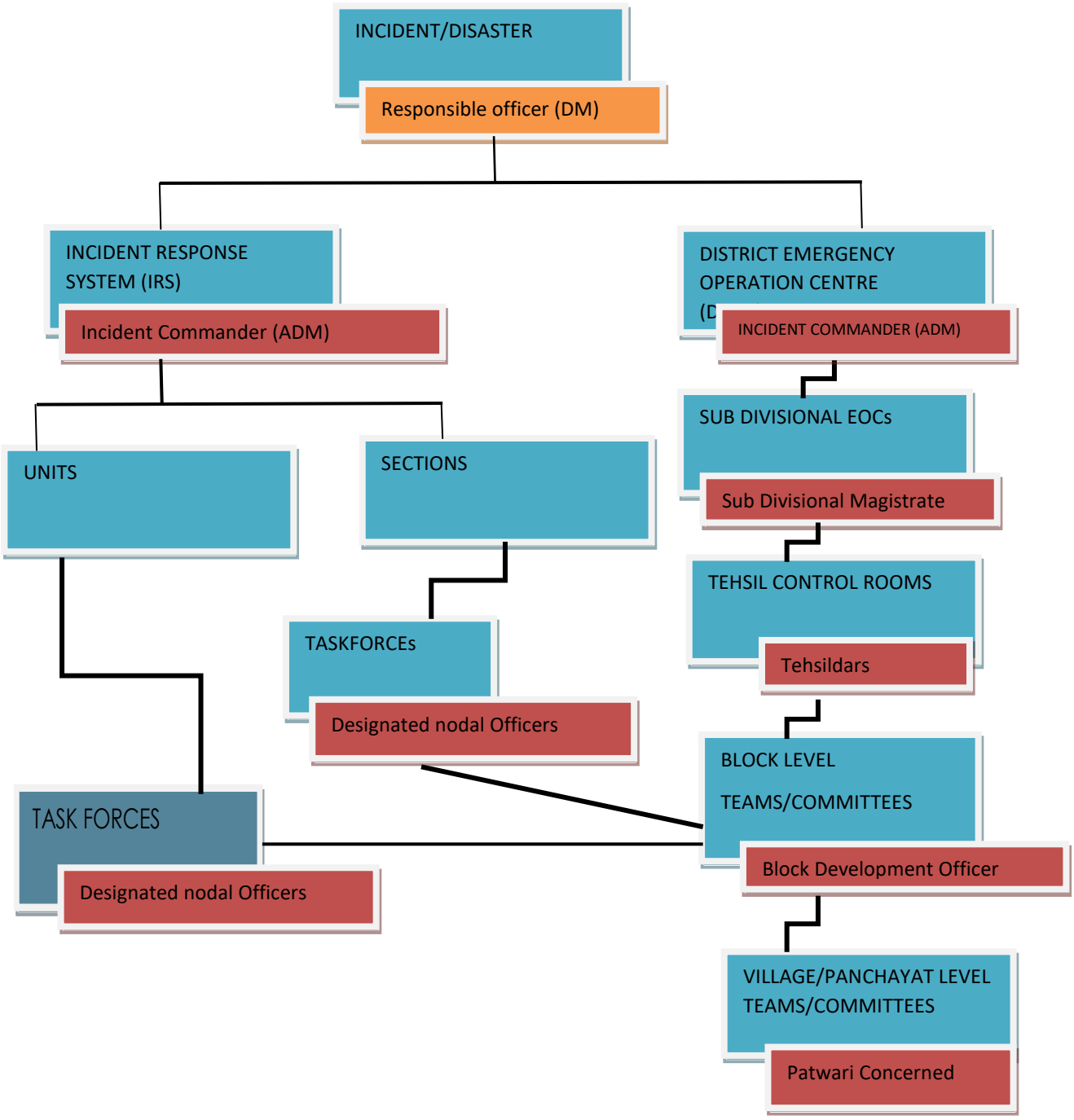


Table 3.1: Institutional Framework at District Level

Humanitarian Sectors	Preparedness – Action Points
District Disaster Management Authority (DDMA)	✓ Planning, Coordination and Monitoring of all activities related to disaster response at the district level.
District Emergency Operations Centre (DEOC),	✓ Planning, Coordination and Monitoring of all activities related to disaster response in the district. ✓ Communicating and taking orders from the State EOC. ✓ All line departments will depute Nodal Officers/ Taskforce Leaders to the District EOC, once the EOC is activated. ✓ All departmental resources will be made available for the EOC to take action during the emergency phase.
Emergency Operations Centre, (SDM Level)	✓ Planning, Coordination and Monitoring of all the activities related to disaster response at Tehsil level. ✓ Communicating and taking orders from District EOC.
Disaster Management Committee (Block level)	✓ Planning, Coordination and Monitoring of all activities related to disaster response at the Block/Village level. ✓ Communicating and taking orders from the District EOC through SDM-Level EOC.
Disaster Management Committee (Village/Gram Panchayat level)	✓ Planning, Coordination and Monitoring of all activities related to disaster response at the Village/Gram Panchayat level. ✓ Communicating and taking orders from the District EOC/SDM-Level EOC through Tehsil/ Block Control Room.

3.2 DISASTER MANAGEMENT AUTHORITY/COMMITTEES/TEAMS

3.2.1 District Disaster Management Authority (DDMA)

For the purpose of managing the disasters effectively the District Disaster Management Authority has been constituted vide **SRO 225,** dated **29th of May, 2017** issued by Department of Disaster Management, Relief, Rehabilitation and Reconstruction, Government of J&K, comprising of the following: -

Table: 3.2 District Disaster Management Authority, Doda.

i.	Deputy Commissioner	Chairperson
ii.	Addl. Deputy Commissioner	Member/CEO
iii.	District Superintendent of Police	Member
iv.	Chief Medical Officer	Member
v.	Superintending Engineers R&B, PHE, I&FC, EM&RE, MED	Member
vi.	Assistant Director CAPD	Member
vii.	Deputy Controller Civil Defense	Member
viii.	Assistant Director F&ES	Member
ix.	District Disaster Management Officer	Member/Secretary
x.	Executive Officer, Municipal Committee Member	Member
xi.	In-charge SDRF Component	Member

3.2.1.1 Powers and functions of District Disaster Management Authority as per Disaster Management Act, 2005

I. The District Authority of the Department of DMRRR functions as the district planning; coordinating and implementing body for disaster management and takes all measures for the purposes of disaster management in the district in accordance with the guidelines laid down by the National Authority and the State Authority.
II. Prepares disaster management plan including district response plan for the district;
III. Coordinate and monitor the implementation of the National Policy, State Policy, National Plan, State Plan and District Plan;
IV. Ensure that the areas in the district vulnerable to disasters are identified and measures for the prevention of disasters and the mitigation of its effects are undertaken by the departments of the Government at the district level as well as by the local authorities;
V. Ensure that the guidelines for prevention of disasters, mitigation of its effects, preparedness and response measures as laid down by the National Authority and the State Authority are followed by all departments of the Government at the district level and the local authorities in the district;
VI. Give directions to different authorities at the district level and local authorities to take such other measures for the prevention or mitigation of disasters as may be necessary;
VII. Lay down guidelines for prevention of disaster management plans by the department of the Government at the districts level and local authorities in the district;
VIII. Monitor the implementation of disaster management plans prepared by the Departments of the Government at the district level;
IX. Lay down guidelines to be followed by the Departments of the Government at the district level for purposes of integration of measures for prevention of disasters and mitigation in their development plans and projects and provide necessary technical assistance therefor;
X. Monitor the implementation of measures followed by the Departments of the Government at the district level for purposes of integration of measures for prevention of disasters and mitigation in their development plans and projects and provide necessary technical assistance therefore;
XI. Review the state of capabilities for responding to any disaster or threatening disaster situation in the district and give directions to the relevant departments or authorities at the district level for their up-gradation as may be necessary;
XII. Review the preparedness measures and give directions to the concerned departments at the district level or other concerned authorities where necessary for bringing the preparedness measures to the levels required for responding effectively to any disaster or threatening disaster situation;
XIII. Organize and coordinate specialized training programmes for different levels of officers, employees and voluntary rescue workers in the district;
XIV. Facilitate community training and awareness programmes for prevention of disaster or mitigation with the support of local authorities, governmental and non-governmental organizations;
XV. Set up, maintain, review and upgrade the mechanism for early warnings and dissemination of proper information to public;
XVI. Prepare, review and update district level response plan and guidelines;
XVII. Coordinate response to any threatening disaster situation or disaster;
XVIII. Ensure that the Departments of the Government at the district level and the local authorities prepare their response plans in accordance with the district response plan;

XIX. Lay down guidelines for, or give direction to, the concerned Department of the Government at the district level or any other authorities within the local limits of the district to take measures to respond effectively to any threatening disaster situation or disaster;

XX. Advise, assist and coordinate the activities of the Departments of the Government at the district level, statutory bodies and other governmental and non-governmental organizations in the district engaged in the disaster management;

XXI. Coordinate with, and give guidelines to, local authorities in the district to ensure that measures for the prevention or mitigation of threatening disaster situation or disaster in the district are carried out promptly and effectively;

XXII. Provide necessary technical assistance or give advice to the local authorities in the district for carrying out their functions;

XXIII. Review development plans prepared by the Departments of the Government at the district level, statutory authorities or local authorities with a view to make necessary provisions therein for prevention of disaster or mitigation;

XXIV. Examine the construction in any area in the district and, if it is of the opinion that the standards for the prevention of disaster or mitigation laid down for such construction is not being or has not been followed, may direct the concerned authority to take such action as may be necessary to secure compliance of such standards;

XXV. identify buildings and places which could, in the event of any threatening disaster situation or disaster, be used as relief centers or camps and make arrangements for water supply and sanitation in such buildings or places;

XXVI. Establish stockpiles of relief and rescue materials or ensure preparedness to make such materials available at a short notice;

XXVII. Provide information to the State Authority relating to different aspects of disaster management;

XXVIII. Encourage the involvement of non-governmental organizations and voluntary social-welfare institutions working at the grassroots level in the district for disaster management;

XXIX. Ensure communication systems are in order, and disaster management drills are carried out periodically;

XXX. Perform such other functions as the State Government or State Authority may assign to it or as it deems necessary for disaster management in the District.

3.2.2 Tehsil Level Disaster Management Committee

Table: 3.3. Tehsil Level Disaster Management Committee

1.	Tehsildar	Convener
2.	Tehsil level Medical Officer	Member
3.	Station House Officer concerned	Member
4.	Assistant Executive Engineer (PHE)	Member
5	Tehsil Disaster Management Professional	Member/Secretary
6.	Tehsil Supply Officer	Member
7.	Child Development Project Officer	Member
8.	Incharge F&ES Component	Member
9.	Jr. Engineer Rural Development	Member
10.	Jr. Engineer R&B	Member
11.	Concerned Auqaf/Shrine Board President	Member
12.	SDRF/Civil Defense Warden/volunteer	Member
13.	Home Guards Volunteer	Member

3.2.3 Block Level Disaster Management Team

Table: 3.4 Block Level Disaster Management Team

1.	Block Development Officer	Convener
2.	Block Medical Officer	Member
3.	Station House Officer concerned	Member
4.	Assistant Executive Engineer (PHE)	Member
5	Block Disaster Management Professional	Member/Secretary
6.	Tehsil Supply Officer	Member
7.	Jr. Engineer R&B	Member
8.	Jr. Engineer Rural Development	Member
9.	Child Development Project Officer	Member
10.	Concerned Auqaf/Shrine Board President	Member
11.	Civil Defense Warden/volunteer	Member
12.	Home Guards Volunteer	Member

3.2.4 Panchayat Level Disaster Management Team

Table: 3.5 Panchayat Level Disaster Management Team

1.	Patwari concerned	Convener
2.	Panchayat Secretary (VLW)	Member
3.	Supervisor Child Care Development	Member
4.	AASHA Worker	Member
5.	Sarpanch	Member
6.	Panch	Member
7.	Chowkidar	Member
8.	Lumberdar	Member

3.3 INCIDENT RESPONSE SYSTEM (IRS) IN THE DISTRICT

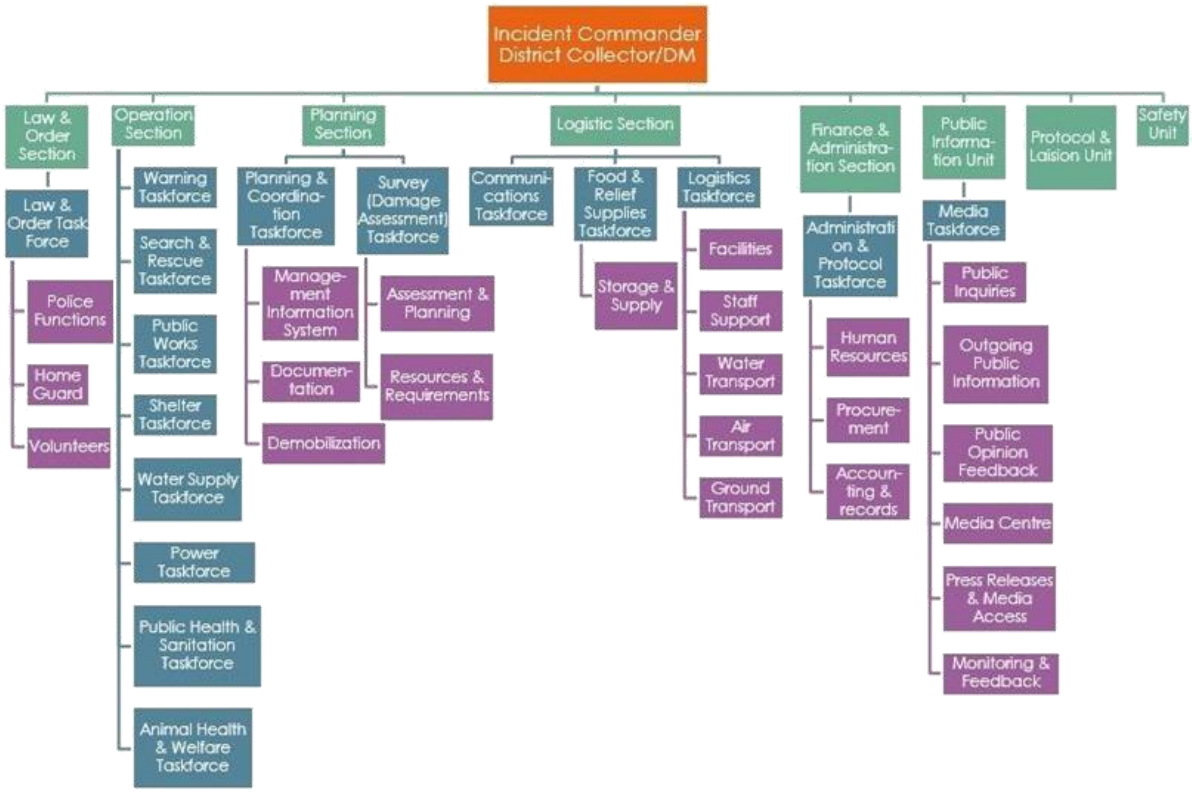
3.3.1 Disaster Response and Incident Command System (ICS)

The response to disasters in the district will be organized according to the Incident Command System (ICS). The argument for the ICS is that its fundamental elements –unity of command, clarity of objectives and efficient resource use are common to the effective response to any disaster.

The disaster response is led by the District Emergency Operations Center (DEOC) under the command and control of the District Collector/DM/Chairperson District Disaster Management Authority (DDMA).

The organizational structure of the Incident command system of Doda district is given in figure (3.2)

Figure: 3.2- Incident Command Structure of District Doda



3.3.2 ICS - Basic Functions

The basic functional descriptions for key elements in the District Incident Command System are described below. Not all these functions need to be filled (activated) in every disaster. However, the ensemble of these functions represents all the key tasks, which need to be accomplished in a well-planned manner and executed in effective and cost-efficient disaster response effort.

3.3.2.1 Incident Commander (District Collector/DM)/Chairperson DDMA

An Incident Commander, who can be assisted by a Dy. Incident Commander, leads the Incident command. Each incident will have as many commanders and other staff as there are shifts in the incident operation.

The District Collector is the Incident Commander of the District level EOC. During emergency situations, he/she takes over the charge of the Control Room and commands all emergency operations. The Incident Commander is vested with the responsibility for designing the search and/or rescue and/or recovery. The Incident Commander is assisted by a representative of the Police, Ambulance Service, Fire & Emergency Services, Civil Defense and Traffic. They are responsible for the management of all incident operations at the incident site. The requesting agencies with authority to function in role of Incident Commander are:

- ✓ **Police force of Jurisdiction**
- ✓ **Ambulance Service**
- ✓ **Civil Defence (SDRF)**
- ✓ **Transport Department (unlikely for avalanche rescue and/or recovery)**
- ✓ **Local Authorities including Fire & Rescue service providers.**

3.3.2.2 Command Staff Units/Sections

A) Safety unit:

Responsible for ensuring the safe accomplishment of all activities undertaken in response to an incident. This task accomplishes through developing incident specific safety guidance documents, reviewing and advising on the safety of plans and monitoring actual operations to ensure safety of personnel and survivors.

B) Protocol and Liaison unit:

Responsible for all official visits as well as liaison between the incident command and organizations providing personnel or material support being used to manage the incident. The first point of contact for NGOs and others coming to the disaster as well as responsible for managing coordination meetings (some of which may actually be held by taskforces or sections).

C) Public Information Unit:

Responsible for all media and public information tasks related to the incident. To accomplish its task, the unit can have the following sub units:

- **Public inquiries:** To handle non media requests for information
- **Outgoing public information:** To handle public information dissemination
- **Public opinion feedback:** To collect information from the public (incident survivors and the non-affected)
- **Media Center:** To provide a single point of contact for all media involved in the incident.
- **Press release and media access:** Produce all releases and provide a single point of contact to arrange media access to the incident.
- **Monitoring and Feedback:** To monitor media reports and provide feedback to the incident management on coverage of the incident and to also take corrective measures and issue contradictions if required.

D) Law and Order Section

Responsible for assuring the execution of all laws and maintenance of order in the area affected by the incident. The law and order section incorporates law and order Taskforce that may be created to deal with a disaster.

Police functions: As determined by the normal mandate for and special duties assigned to the police service

Home Guard: As determined by the normal mandate for and special duties assigned to the Home Guard

Volunteers: Supporting police and home guards in non-enforcement tasks, such as patrolling, monitoring and evacuations

E) Operations Section

Responsible for assuring specific operations according to objectives and plans to address the immediate impacts of the incident. Taskforces under the operation section will deal with specific functional tasks, such as search and rescue, the provision of water or shelter. The composition and size of these taskforces depends on the nature of the incident.

F) Planning Section

Responsible for collecting and analysing information and developing plans to address the objectives set to address the incident. The overall work of the planning section will include efforts undertaken by any planning and coordination taskforce which is established as part of the response to a disaster. Units under the section include:

1. Assessment and planning
2. Resources and Requirements
3. Management information system
4. Documentation
5. Demobilization and
6. Technical specialists

G) Logistic section

Responsible for all tasks and functions related to provision of material and other resources needed for operations and the physical and material support and operation of the incident management team. This section includes transportation taskforce established to support disaster operations. Logistics tasks are through the following units:

1. Storage and supply
2. Facilities
3. Staff support
4. Communications
5. Transportation (include ground, air water)

H) Finance and Administration Section

Responsible for managing all financial and administrative tasks related to incident field operations. The task of this section is accomplished through following units:

1. Human Resources
2. Procurement
3. Accounting and records

3.3.3 Emergency Operation Taskforces:

Responsible for assuring specific operations according to objectives and plans to address the immediate impacts of the incident. Taskforces under the operation section will deal with specific functional tasks, such as Search & Rescue, the provision of water, shelter, etc. The composition and size of these taskforces depends on the nature of the incident.

The District administration of Doda has identified 16 expected Taskforces for key response operation functions that are described below. Each Taskforce is led by one organization and supported by other organizations. The composition of the Taskforces is given in the Table 3.2 below:

Table 3.6: Emergency Operation Taskforces

S. NO.	Taskforce	Operations	Nodal Officer	Supporting Members/ Organizations	ICS Section/ Unit
1.	Coordination and Planning	Coordinate early warning, Response & Recovery Operations	District Collector/DM/ Chairperson DDMA	Joint Director Planning, Assistant Director Planning, Additional Superintendent of Police, District Disaster Management Officer/Professional	Planning
2.	Administration and Protocol	Support Disaster Operations by efficiently completing the paper work and other Administrative tasks needed to ensure effective and timely relief assistance	Additional District Development Commissioner	Assistant Commissioner Development, Chief Accounts Officer DRDA, Additional Superintendent of Police, District Disaster Management Officer/Professional	Finance & Administration
3.	Warning	Collection and dissemination of warnings of potential disasters	Additional Deputy Commissioner	District Information Officer, Executive Engineer Irrigation & Flood Control, Police Control Room.	Operation
4.	Law and Order	Assure the execution of all laws and maintenance of order in the area affected by the incident	Sr. Superintendent of Police	Assistant Commissioner Revenue (ADM), Commandant SDRF	Law & Order
5.	Search and Rescue (including Evacuation)	Provide human and material resources needed to support local evacuation, search and rescue efforts	Deputy Controller, Civil Defense	Deputy Director Fire & Emergency Services, Deputy Superintendent of Police (DAR)	Operation
6.	Public Works	Provide the personnel and resources needed to support local efforts to reestablish normally operating infrastructure	Executive Engineer PW (R&B)	Assistant Executive Engineer /Jr. Engineers (concerned)	Operation
7.	Water	Assure the provision of sufficient portable water for human and animal consumption (priority), and water for industrial and agricultural uses as appropriate	Executive Engineer, PHE	Assistant Executive Engineer /Jr. Engineers (concerned)	Operation
8.	Food and Relief Supplies	Assure the provision of basic food and other relief needs in the affected communities	Assistant Director, Food, Civil Supplies & Consumer Affairs Department	Supplies Officer with Deputy Commissioner Doda, concerned Tehsil Supply Officers, District Red Cross Society	Logistics
9.	Power	Provide the resources to reestablish normal power supplies and systems in	Executive Engineer, PDD	Assistant Executive Engineer /Jr. Engineers (concerned)	Operation

		affected communities			
10.	Public Health and Sanitation	Provide personnel and resources to address pressing public health problems and re-establish normal health care systems	Chief Medical Officer	Community Health Officer, Block Medical Officers, Executive Officers of Municipal Committees	Operation
11.	Animal Health and Welfare	Provision of health and other care to animals affected by a disaster	Chief Animal Husbandry Officer	Sheep Husbandry Officers, Veterinary Assistant Surgeons (concerned)	Operation
12.	Shelter	Provide materials and supplies to ensure temporary shelter for disaster-affected population	Executive Engineer (R&B)	Assistant Executive Engineer /Jr. Engineers (concerned)/ Block Development Officers/ Chief Education Officer	Operation
13.	Logistics	Provide Air, water and Land transport for evacuation and for the storage and delivery of relief supplies in coordination with other Taskforces and competent authorities	Additional Deputy Commissioner	Assistant Regional Transport Officer, MVD Inspectors, SRTC Officials	Logistics
14.	Survey (Damage Assessment)	Collection and analysis of data on the impact of disaster, develop estimates of resources needed and relief plans, and compiling reports on the disaster as required for District and State authorities and other parties as appropriate	Additional District Development Commissioner	Assistant Executive Engineer /Jr. Engineers R&B (concerned), Tehsildars	Planning
15.	Communications	Coordinate and assure operation of all communication systems (e.g; Radio, TV, Telephones, Wireless) required to support early warning or post disaster operations	Additional District Development Commissioner	District Information Officer, District Informatics Officer, Officers of Cellular Companies BSNL, Airtel, Jio, etc	Logistic
16.	Media (Public Information)	Provide liaison with and assistance to print and electronic media on early warning and post-disaster reporting concerning the disaster	District Information Officer	District Disaster Management Officer/Professional, NGOs, Local Media Organizations, Journalists	Public Information

3.3.3.1 Taskforce Action Plans- SOPs

Coordination and Planning:

Coordinate early warning, response and recovery operations.

Taskforce Leader: District Collector

(Table 3.7)

Action and (Who Should Take It)	Requirements or Conditions to be met for the action to occur.	Timeframe
Before Disaster		
Establish a disaster management structure up to village level (DDMC)	Links to State level and establishment of ICS structure	On-going
Develop disaster plans at all levels down to the village level. (DDMC)		On-going
Hold regular meetings on disaster management including government, NGOs and private sectors. (DDMC)		Quarterly
Continuous training, including public awareness. (DDMA and Media Taskforce)	Involvement of DDMA,	On-going
Check warning, communications and other systems (DDMC), including the use of drills		On-going
Warning		
Frame Crisis Management Committee (CMC) - (Collector)	Communications between Districts and with State Control Room	On receipt of warning.
Mobilize Taskforces at all levels (District, Tehsil, Block, village depending on disaster) (CMC, Telecommunications, Media Taskforces)	Communication systems and procedures	As decided by CMC.
Disseminate Information (CMC, Media Taskforce)		As decided.
Mobilize resources to be positioned near vulnerable points depending on type of disaster.	Telecommunication system, plans	As decided.
Establish alternate communications system (Telecommunications Taskforce)		As decided.

Administration and Protocol

Support Disaster Operations by efficiently completing the paper work and other Administrative tasks needed to ensure effective and timely relief assistance

Taskforce Leader: Additional District Development Commissioner

(Table 3.8)

Action and (Who Should Take It)	Requirements or Conditions to be met for the action to occur.	Timeframe
Disaster		
Start Search, Rescue and Evacuation activities (CMC)	SAR Taskforce operational	Immediately
Begin Collecting Information on extent of damage and areas affected. (CMC)	Assessment teams have communications and transport	Should be started within 4 hours
Start plan development and provide instructions on where Taskforces should go and what they should do. (CMC, Collector)	Information on damage and areas affected	Should be started within 4 hours

Mobilize outside resources (CMC)	Information on damage and needs assessment	Should be started within 4 hours
Provide Public Information (CMC, Media Taskforce)		Should be started in 6 hours)
12 Hours		
Begin regular reporting on actions taken and status by Taskforces. (Taskforces)	Operating communications system	After 12 hours
Reassess damage information, resources, needs and problem areas/activities. (CMC)		After 12 hours
Begin rotation of staff (CMC)		After 12 hours
Establish regular liaison with State Control Room.	Working communications systems	After 12 hours
Shift focus of efforts to relief. (CMC)		Open
Restore key infrastructure (CMC through Public Works and other Taskforces)		Before 48 hours
48 hours		
Continue review and reassessment of operations (CMC)	Information on operations	
Conduct broad damage assessment (CMC and Damage Assessment Taskforce)		
Establish Temporary Rehabilitation Plan (CMC)		
Begin demobilization based on situation. (CMC)		
Focus on creating a sense of normalcy. (CMC)		Before 72 hours
72 hours		
Start Rehabilitation activities. (CMC)	Plan	As early as possible
Conduct detailed survey of damage and needs. (CMC and Damage Assessment Task Force)		
Begin regular reporting on operations	Information on operations	As early as possible
Restore all public and private sector services (CMC)		As early as possible
Lessons Learned meeting. (CMC and others)		After 2 weeks
Final Report/Case Study (CMC)		After activities completed

Warning:

Collection and dissemination of warnings of potential disasters

Taskforce Leader: Additional Deputy Commissioner

(Table 3.9)

Action and (Who Should Take It)	Requirements or Conditions to be met for the action to occur.	Timeframe
Before a Disaster		
Verify communication and warning systems are functioning - drills		Every 15 days
Have warning messages prepared in advance.		
Warning		
Receive and dispatch warnings. (Taskforce)	Coordinate with Telecommunications Taskforce	As received.

Verify warnings received and understood. (Taskforce)		Within 1-2 hours of dispatch.
Independently confirm warnings if possible (Taskforce)		As time allows.

Law and Order

Assure the execution of all laws and maintenance of order in the area affected by the incident.

Taskforce Leader: Sr. Superintendent of Police

(Table 3.10)

Action and (Who Should Take It)	Requirements or Conditions to be met for the action to occur.	Timeframe
Before a Disaster		
Evaluate expected disaster needs verses normal resources. (Taskforce)		Completed in 8 days.
Estimate personnel and resources needed for disasters. (Taskforce)	Based on standard for number of security personnel per population depending on severity of disaster	Completed in one week
Planning and coordination with Revenue Dept. (Taskforce)		Immediately
Conduct drills, including public awareness raising. (Taskforce)	Includes participation of Media Taskforce	Every 45 days
Provide information to public, e.g., road status. (Taskforce)	Involves Control Room, Media Taskforce, and Deputy Magistrate	As needed.
48 hours		
Implement a Force Management Plan (increase, reduction, redeployment, of forces). (Superintendent of Police)		From start of period
Plan for return to normal ((Superintendent of Police, Taskforce, Control Room)		From 72 hours after the disaster
Conduct Lessons Learned Session (Taskforce with input from other parties.)		1 week after the disaster
Final Report		2 weeks after the disaster

Search and Rescue (including Evacuation)

Provide human and material resources to support local evacuation, search and rescue efforts.

Taskforce Leader: Deputy Controller, Civil Defense

(Table 3.11)

Action and (Who Should Take It)	Requirements or Conditions to be met for the action to occur.	Timeframe
Before a Disaster		
Risk assessment and vulnerability mapping (Taskforce)		Before warning
Develop inventory of personnel and material resources. (Taskforce)		Before warning
Training (Taskforce)	Input from SDMA and NDMA	Before warning
Establish public education program. (Taskforce)	Media Taskforce	Ongoing
Establish adequate communications system. (Taskforce)	Additional equipment required.	
Drills (Taskforce).		Before warning
Establish transport arrangements for likely SAR operations. (Taskforce)	With Logistics Taskforce	Before warning
Develop Rescue SOP. (Taskforce)		Before warning
Warning		
Mobilize Taskforce and SAR teams. (Taskforce)		On warning

Verify equipment is ready. (Taskforce)		On team activation
Confirm transport is ready. (Taskforce)	Logistics Taskforce.	On warning
Undertake precautionary evacuation. (Taskforce)	Logistics and Shelter Taskforces	As directed.
Re-deploy teams and resources, if safe. (Taskforce)	Logistics Taskforce	Based on conditions
Start public awareness patrols. (Taskforce)	Media, Law and Order and Logistics Taskforces.	As required
Disaster		
Assure safety of staff.		Immediately
Restore own communications. (Taskforce)		Immediately
Dispatch rescue/evacuation teams based on assessments. (Taskforce)	Input from Control Room.	Immediately
Call for additional resources if needed. (Taskforce)	Communications systems in operation	3-4 hours of disaster
Provide reports on operations. (Taskforce)		Starting at 3-4 hours
Begin handling of deceased per SOP. (Taskforce)	Various Revenue officers and Police involved.	Starting at 3-4 hours
12 Hours		
Begin staff rotation system. (Taskforce)		Starter at 12 hours
Begin specialized rescue (may begin earlier). (Taskforce)	May require outside resources, coordination with Logistics Taskforce	Started at 12 hours
Begin debris removal in cooperation with Public Works Taskforce.	Focus on critical infrastructure. Liaison with Control Room	Start at 12 hours
Secure additional resources (e.g., fuel, personnel) for continued operations. (Taskforce).		Start at 12 hours.
48 hours		
Demolish/Stabilize damaged buildings in cooperation with Public Works Taskforce.	Logistics Taskforce, workers, equipment.	Starting at 48 hours.
Demobilization, reconditioning, repair and replace equipment and other resources. (Taskforce)		Based on nature of disaster.
Remain on stand-by for additional operations, particularly related to safety of recovery work. (Taskforce).		As needed.
72 hours		
Lessons Learned meeting. (Taskforce and others)		After 2 weeks.
Final Report. (Taskforce)		After major activities completed.

Public Works

Provide the personnel and resources needed to support local efforts to re-establish normally operating infrastructure.

Taskforce Leader: Executive Engineer PWD (R&B)

(Table 3.12)

Action and (Who Should Take It)	Requirements or Conditions to be met for the action to occur.	Timeframe
Before a Disaster		
Inventory of personnel, equipment and status of infrastructure. (Taskforce)		One week before warning.
Identify critical infrastructure. (Taskforce)	Need to define what critical infrastructure is.	Before warning.
Identify alternate transport routes and publish map. (Taskforce)		Before warning.
Plan for prioritized post-disaster inspection of infrastructure. (Taskforce)		
Establish and maintain a resources and staffing plan. (Taskforce)		
Plan to provide sanitation and other facilities for shelters. (Taskforce)		
Warning		
Establish Control Room. (Taskforce)		No later than 6 hours from warning
Mobilize Taskforce and personnel.	Requires communications	No later than 6 hours from warning
Liaise with District Control Room. (Taskforce)		No later than 6 hours from warning
Verify status and availability of equipment and re-deploy if appropriate and safe. (Taskforce)	Coordination with Logistics Taskforce and Control Room.	24 hours from warning
Review plans. (Taskforce)		No later than 6 hours from warning
Disaster		
Begin damage assessment and inspections. (Taskforce)	Coordination with Damage Assessment Taskforce.	Within 12 hours of disaster
Develop operations plan and communicate to Control Room.		Within 12 hours of disaster
Mobilize and dispatch teams based on priorities. Teams will (1) repair, (2) replace, (3) Build temporary structures (e.g., resting facility, shelters).	Coordination with Logistics, Water, Power Taskforces and Control Room.	Within 12 hours of disaster
Collaborate with other Taskforces.		Continuous
12 Hours		
Begin staff rotation system and manpower planning. (Taskforce)		Starter at 12 hours
Mobilize additional resources based on expected duration of operations. (Taskforce).	Coordination with Logistics Taskforce, Contractors. May need additional funding.	Started at 12 hours
Assure safety. (Taskforce		Start at 12 hours
Establish security arrangements. (Taskforce)	Law and Order Taskforce.	Start at 12 hours.
Provide public information on roads, access and infrastructure. (Media Taskforce)	Coordination with Control Room	Start at 12 hours.
48 hours		
Start detailed survey. (Taskforce)	In cooperation with Damage Assessment Taskforce	Starting at 48 hours.
Begin reporting on operations (Taskforce)		Starting at 3 days
Reconditioning, repair and replace equipment and other resources. (Taskforce)		Based on nature of disaster
Plan and start demobilization. (Taskforce)		Starting at 3 days
72 hours		
Develop long term restoration plan and start activities. (Taskforce)		From 72 hours
Lessons Learned meeting. (Taskforce and others)		After 2 weeks
Final Report. (Taskforce)		After major activities completed

Water Supply

Assure the provision of sufficient potable water for human and animal consumption (priority), and water for industrial and agricultural uses as appropriate.

Taskforce Leader: Executive Engineer, PHE

(Table 3.13)

Action and (Who Should Take It)	Requirements or Conditions to be met for the action to occur.	Timeframe
Before a Disaster		
Establish water availability, capacities, reliabilities and portability. (Taskforce)	Standard of 20 liters of drinking water per person per day.	1 month before warning.
Plan for alternate water delivery and storage (Taskforce)	May need tankers, tanks, generator set.	1 month before warning.
Secure new and additional equipment. (Taskforce)		Requires funding.
Secure extra stocks of chemicals, expendable supplies and equipment. (Taskforce)	May require additional funding.	1 month before warning.
Open Water Control Room in Monsoon. (Taskforce)		Done.
Warning		
Establish staff rotation and shift system. (Taskforce)		No later than 24 hours from warning
Provide public awareness on use of water. (Taskforce)	Media Taskforce.	No later than 24 hours from warning
Provide instructions to government and private sectors on protection of water supplies. (Taskforce)		No later than 24 hours from warning
Mobilize Taskforce members		24 hours from warning.
Mobilize additional personnel and vehicles. (Logistics Taskforce)	May be difficult to locate additional personnel locally. Recourse to outside or contractor sources may be required.	24 hours from warning.
Coordinate activities with Power and other Taskforces.	Involves District Control Room.	24 hours from warning.
Verify water source status and protection. (Taskforce).		No later than 24 hours from warning.
Disaster		
Plan and prioritize supply of water to users. (Taskforce)	Requires information on needs, damage and demand.	Completed by 24 hours into disaster.
Assess status and damage to water systems. (Taskforce)	Coordination with Damage Assessment Taskforce.	Completed by 24 hours into disaster.
Mobilize water tankers. (Taskforce)	Coordination with Logistics Taskforce and Control Room.	Started by 24 hours into disaster.
Repair/restore water systems, based on plan. (Taskforce)	Coordination with Power and Logistics Taskforces.	Started by 24 hours into disaster.
Assure supply point/distribution security. (Law and Order Taskforce)		Started as soon as distributions begin.
Coordinate distribution of water and storage and provision of information on safe water use. (Taskforce).	Coordination with Media Taskforce and Control Room	Started by 24 hours into disaster.
12 Hours		
Establish temporary water systems. (Taskforce)		Up to 72 hours from disaster.
Move toward permanent water supply system. (Taskforce)		After 72 hours.
Complete long term recovery plan and needs. (Taskforce)		After 72 hours.
Begin reporting and documentation. (Taskforce)		From 48 hours.

Begin demobilization. (Taskforce)	Coordinated with Control Room.	From 48 hours.
Lessons Learned meeting. (Taskforce and others)		After 2 weeks.
Final Report. (Taskforce)		After major activities completed

Food and Relief Supplies

Assure the provision of basic food and other relied needs in the affected communities.

Taskforce Leader: Assistant Director, Food, Civil Supplies & Consumer Affairs Department

(Table 3.14)

Action and (Who Should Take It)	Requirements or Conditions to be met for the action to occur.	Timeframe
Before a Disaster		
Establish procedures and standards. (Taskforce)	Need standards.	On-going.
Maintain two months stock of essential supplies. (Taskforce)		Done.
Develop transportation plan. (Taskforce)	In cooperation with Logistics Taskforce.	Completed in 8 days
Develop list of NGOs. (Taskforce)		Done
Plan staffing for disaster. (Taskforce)		Done
Identify locations, which can be isolated and increase stock as needed. (Taskforce)		On-going.
Identify food preparation locations. (Taskforce)		Done
Warning		
Pass on warning. (Taskforce)		Within 12 hours of receipt of warning.
Alert NGOs to prepare food. (Taskforce)	Contact with NGOs.	Within 12 hours of receipt of warning.
Verify stock levels and make distribution plan. (Taskforce)	Possible cooperation with Logistics Taskforce.	Within 48 hours of receipt of warning.
Alert transport contractors to prepare for transport. (Taskforce)	Coordinate with Logistics Taskforce.	Within 5 hours of receipt of warning.
Mobilize staff. (Taskforce)		Within 6 hours of receipt of warning.
Disaster		
Receive and respond to instructions from Control Room. (Taskforce)		As received.
Monitor conditions of stocks and facilities. (Taskforce)		Need for communications.
Develop distribution plan. (Taskforce)	Need information on needs and locations.	As requested by Control Room.
Order food packets and provide supplies as needed. (Taskforce)	Coordination with Logistics Taskforce.	As per distribution plan.
Establish relief supplies receptions centers. (Taskforce)	Coordinate with Control Room and Logistics Taskforce.	As required.
12 Hours		
Start distribution operations. (Taskforce)	In coordination with Logistics and Shelter Taskforces.	At beginning of period.
Formalize reporting, communications and monitoring. (Taskforce)		Completed by 48 hours.
Start staff rotation system. (Taskforce)		At beginning of period.
Begin mobilizing and managing additional supplies.	Coordination with Logistics and, Control Room.	Underway in 48 hours.
Establish security for all sites. (Law and Order Taskforce)		At beginning of period.

Begin public announcement of distribution plan and standards. (Media Taskforce)		Underway in 48 hours.
48 Hours		
Shift to normal operations. (Taskforce)		Within 1 week.
Reconcile receipts and distribution records. (Taskforce)		Within 30 days.
Continue providing relief to special areas/populations. (Taskforce)		For 15 days from the disaster
72 Hours		
Restore Public Distribution System. (Taskforce)		From 1 week after the disaster.
Lessons Learned meeting.		Within 14 days

Power

Provide resources to re-establish normal power supplies and systems in affected communities

Taskforce Leader: Executive Engineer, PDD

(Table 3.15)

Action and (Who Should Take It)	Requirements or Conditions to be met for the action to occur.	Timeframe
Before a Disaster and Warning Phases		
Develop inventory of current status of power system and resources. (JKPDD)		
Establish minimum stock levels and procure necessary additional stocks. (JKPDD)		
Conduct monthly meetings. (JKPDD)		On-going
Develop contact lists. (JKPDD)		
Conduct informal hazard and risk assessment. (JKPDD)		Completed.
Develop disaster plan. (JKPDD)		
Disaster		
Assess impact according to SOP. (JKPDD))	Coordinate with Control Room and Damage Assessment Taskforce.	
Prioritize response actions. (JKPDD)		
Collect more information. (JKPDD)	Need to establish priorities.	
Mobilize additional resources. (JKPDD)	Coordination with Control Room and other Taskforces.	
Check for unforeseen contingencies		
12 Hours		
Revise plans based on feedback and assessments. (JKPDD)		Continuous
Monitor status of actions. (JKPDD)		Continuous
Begin staff rotation plan. (JKPDD)		At beginning of period.
Disseminate public information. (Media Taskforce)		At beginning of period.
Secure support for staff (food, lodging) from NGOs. (JKPDD)		
Assure security as needed. (Law and Order Taskforce)	Coordinate with Control Room.	
Establish constant communications on needs, requirements and resources with Control Room.		
48 Hours		
Look for improvements in efforts. (JKPDD)		
Reinforce central coordination. (JKPDD)		

Conduct regular coordination meetings with other actors. (JKPDD)		
Begin formal documentation of efforts. (JKPDD)		
72 Hours		
Review shift plan for safety. (JKPDD)		
Plan for return to normal, including additional security if needed. (JKPDD)	Involvement of Law and Order Taskforce.	

Public Health and Sanitation

(Including first aid and all medical care):

Provide personnel and resources to address pressing public health problems and re-establish normal health care systems

Taskforce Leader: Chief Medical Officer

(Table 3.16)

Action and (Who Should Take It)	Requirements or Conditions to be met for the action to occur.	Timeframe
Before a Disaster		
Develop inventory of personnel, resources and facilities. (Taskforce)		1 week.
Training. (Taskforce)	Coordination with SDMA	6 months.
Establish Control Room.		Completed.
Prepare for specific diseases by season (e.g., monsoon)		Completed.
Establish Epidemiological Reporting System (ERS). (Taskforce)		Completed.
Identify disease vulnerable areas. (CMO)		Completed.
Improve public awareness. (Media Taskforce)		
Warning		
Send out warning to health facilities. (Taskforce)		As received.
Mobilize health teams to possible disaster areas. (Taskforce)	In coordination with Control Room.	As needed.
Activate Taskforce for whole district. (CMO)		On warning.
Disaster		
Begin first aid efforts. (Taskforce)		Within 1 hour of disaster.
Establish status of health care system. (Taskforce)	Requires communications.	Within 6 hours of disaster.
Begin referral of injured to upper-level facilities. (Taskforce)		Within 1 hour of disaster.
Implement SOP for management of deceased. (Taskforce)	Involves cooperation with Law and Order and SAR Taskforce.	Within 1 hour of disaster.
Coordinate efforts with Control Room and other Taskforces.		Within 2-3 hours of disaster.
12 Hours		
Begin to call in outside resources. (Taskforce)	Involves Telecommunications and Logistics Taskforces and Control Room.	Within 3 hours.
Establish temporary medical facilities where needed. (Taskforce)	Coordination with Public Works, Power, Water, and Law and Order Taskforces.	Within 24 hours.
Expand surveillance of health status. (Taskforce)		Within 24 hours.
Establish shift system for staff. (Taskforce)		At beginning of period.
Visit and review health status in shelters. (Taskforce)		Within 24 hours.
Develop health care system recovery plan. (Taskforce)	In coordination with Control Room.	2-3 hours.

48 Hours		
Establish formal health care system reporting. (Taskforce)		At beginning of period.
Start solid waste and vector control management SOP. (Taskforce)		At beginning of period.
Start waste water management SOP. (Taskforce)		At beginning of period.
Focus health status surveillance on children 0 to 5 years.		Implements in one week.
Establish public awareness and IEC efforts. (Taskforce and Media Taskforce)		At beginning of period.
72 Hours		
Develop demobilization plan.		By beginning of period.
Lessons Learned meeting.		Within 14 days of disaster.
Final Report		Within 14 days of disaster.

Animal Health and Welfare

Provision of health and other care to animals affected by a disaster

Taskforce Leader: Chief Animal Husbandry Officer

(Table 3.17)

Action and (Who Should Take It)	Requirements or Conditions to be met for the action to occur.	Timeframe
Before a Disaster		
Update animal list. List of staff & training for disposal of carcass. (Taskforce)		Done.
Stock medical supplies and vaccines. (Taskforce)		Done
Warning		
Alert staff (by phone). (Taskforce)		As warnings received.
Distribute supplies to vulnerable areas. (Taskforce)		During warning period.
Contact Control Room. (Taskforce)		As required.
Disaster		
Remove and destroy carcasses. (Taskforce)	Need fuel and logistics.	As soon as possible.
Treat injured animals. (Taskforce)		As soon as possible.
Issue certification of death. (Taskforce)	For insurance purposes.	Within 48 hours.
Call in staff from other districts as needed. (Taskforce)		As needed.
Assist local authorities in survey of damage and reconciliation of records.		As required.
48 Hours and Beyond		
Assist local authorities in providing fodder as needed.		As required.
Collect feedback. (Taskforce)		
Final Report. (Taskforce)		In 15 days.

Shelter

Provide materials and supplies to assure temporary shelter for disaster-affected populations.

Taskforce Leader: Executive Engineer (R&B)

(Table 3.18)

Action and (Who Should Take It)	Requirements or Conditions to be met for the action to occur.	Timeframe
Before a Disaster		
Develop shelter operating procedures. (Taskforce)		
Develop inventory of shelters (location, capacity,). (Taskforce)	IDRN updating, project inventory.	On going
Provide information to other Taskforces on location of shelters. (Taskforce)	Logistics, Water, Power, SAR, Food/Relief Supplies Taskforces and Control Room	
Training for shelter managers. (Taskforce)	Need training module.	
Warning		
Mobilize shelter managers. (Taskforce)		Within 6 hours of warning.
Review shelter locations for operating status. (Taskforce)	Communications needed.	Within 6 hours of warning.
Open shelters as instructed.	Coordination with Control Room.	Within 6 hours of warning.
Mobilize additional resources for shelters and camps. (Taskforce)	Cooperation with Logistics, Food and Relief Supplies, Water and Power Taskforces.	Within 6 hours of warning.
Provide public announcements on locations and status of shelters. (Media Taskforce)		Within 6 hours of warning.
Disaster		
Beginning logging-in of occupants. (Shelter managers).		Immediately.
Report on status of shelters. (Taskforce)	To Control Room.	As needed.
Plan for prioritization of shelter use. (Taskforce)	Coordination with evacuation operations and Control Room.	Immediately.
Coordinate with other Taskforces on water, power, food, health, security. (Taskforces)		Immediately.
Provide support and assistance to occupants. (Taskforce)	Liaise with Animal Taskforce on management of animal and with Health Taskforce on health care.	
12 Hours		
Continue operations. (Taskforce)		Continuously
Monitor shelter status and movement of people. (Taskforce)		Continuously
Mobilize additional resources. (Taskforce)	Coordinate with Control Room and Logistics Taskforce.	Continuous.
48 Hours and Beyond		
Begin Demobilization as appropriate. (Taskforce)		
Begin reconditioning/repairs to shelters. (Taskforce)	In cooperation with Public Works Taskforce.	As needed.
Lessons Learned session. (Taskforce)	Involvement of other Taskforces and evacuees.	14 days after completion of operations.
Final Report. (Taskforce)		1 month after completion of activities.

Logistics

Provide air, water and land transport for evacuation and for the storage and delivery of relief supplies in coordination with other Taskforces and competent authorities.

Taskforce Leader: Additional Deputy Commissioner

(Table 3.19)

Action and (Who Should Take It)	Requirements or Conditions to be met for the action to occur.	Timeframe
Before a Disaster		
Conduct resource inventory (air/land/water transport and storage; inside and outside district.). (Taskforce)		1 month.
Establish deployment requirements, procedures and alternate options. (Taskforce)		1 month.
Conduct drills. (Taskforce)		1 month.
Coordinate with other Taskforces.	Work though Control Room.	As needed.
Warning		
Alert and mobilize Taskforce members. (Taskforce)		Within 1 hour of receiving warning.
Mobilize transport and other resources for action on short notice depending on disaster expected. (Taskforce)	Coordination with Control Room	Within 2-3 hours of warning.
Liaise with Control Room and SAR, Shelter and Food/Relief Supplies Taskforces.		Within 1 hour of receiving warning.
Review plan and determine if outside resources are needed. (Taskforce)		Within 6 hours of receiving warning.
Plan for logistics based depending on nature of disaster. (Taskforce)	Coordinate with Control Room and Food and Relief Supplies Taskforce.	As needed.
Disaster		
Take action based on instruction from Control Room. (Taskforce)		Within 2 hours of receiving warning.
Continually review requirements and resources. (Taskforce)		Continuous.
Develop operations plan. (Taskforce)	Coordinate with Control Room and Food and Relief Supplies Taskforce.	Within 2 hours of receiving warning.
Strengthen liaison with Control Room and key Taskforces. (Taskforce)		Within 2 hours of receiving warning.
Verify quality of service. (Taskforce)	Requires set standard of service and information on operations.	Daily.
12 Hours		
Respond to increased demand for logistics. (Taskforce)		Continuous.
Begin rotation of staff. (Taskforce)		At start of period.
Establish logistics bases as needed. (Taskforce)	Coordinate with Control Room and Food and Relief Supplies Taskforce.	Continuous.
Review plans and communicate with other Taskforces. (Taskforce)		Continuous.
Begin regular reporting and documentation. (Taskforce)		At start of period.
48 Hours		
Reassess needs and requirements. (Taskforce)		Continuous.
Begin demobilization as appropriate. (Taskforce)		
72 Hours		
Lessons Learned meeting.	Include Shelter, Food and Relief Supplies in meeting.	Within 14 days of disaster.
Final Report		Within 14 days of disaster.

Survey (Damage Assessment)

Collect and analyze data on the impact of the disaster, develop estimates of resource needs and relief plans, and compile reports on the disaster as required for District and State authorities and other parties as appropriate.

Taskforce Leader: Additional District Development Commissioner

(Table 3.20)

Action and (Who Should Take It)	Requirements or Conditions to be met for the action to occur.	Timeframe
Before a Disaster		
Establish assessment procedures and forms. (Taskforce)	Collaboration with SDMA and COR.	
Compile baseline data. (Taskforce)	Collaboration with SDMA project.	
Establish assessment groups and teams. (Taskforce)		
Develop an assessment coordination plan. (Coordination and Planning Task Force)		
Develop a communications plan. (Taskforce)	In cooperation with Telecommunications Taskforce	
Warning		
Mobilize Taskforce. (Taskforce)		Within 6 hours of warning.
Review Plan. (Taskforce)		Within 6 hours of warning.
Consider pre-disaster impact assessment. (Taskforce)	Based on expected nature of disaster.	Within 6 hours of warning.
Active village-level assessment teams. (Taskforce)		Within 6 hours of warning.
Disaster		
Consider safety of assessment teams. (Taskforce)		Immediately.
Start planning for assessment. (Taskforce)	As initial impact information is available.	
Begin initial assessment procedures. (Taskforce)	When conditions allow.	
Communicate assessment plans to Control Room. (Taskforce)	Once initial plan is developed.	
12 Hours		
Publicly disseminate assessment plans and reports. (Media Taskforce)		As available.
Initiate continual up-dating of assessment information. (Taskforce)	Coordinate with Coordination and Planning Taskforce.	
Initiate continual up-dating of assessment plans. (Taskforce)	Coordinate with Coordination and Planning Taskforce.	
Coordinate with other Taskforces. (Taskforce)		
Begin staff rotation and secure more staff as needed.		At beginning of period.
48 Hours		
Prepare detailed damage, losses, needs assessment and long term recovery plans. (Taskforce)	Coordinate with other Taskforces.	3-5 days after disaster.
Coordination of requirements, plans and activities.	Working through Control Room and Coordination and Planning Taskforce.	Continuous.
72 Hours		
Lessons Learned meeting.	Include Shelter, Food and Relief Supplies in meeting.	Within 14 days of disaster.

Communications

Coordinate and assure operation of all communications systems (e.g., radio, TV, phones, wireless) required to support early warning or post-disaster operations.

Taskforce Leader: Additional District Development Commissioner

(Table 3.21)

Action and (Who Should Take It)	Requirements or Conditions to be met for the action to occur.	Timeframe
Before a Disaster		
Develop telecommunications inventory and SOPs. (Taskforce)	Telecommunications training.	
Coordinate with other Taskforces. (Taskforce)		
Identify sites of vulnerable system components (e.g., switches). (Taskforce)		
Ensure redundancy in communications systems. (Taskforce)	May require close liaison with private sector providers.	
Training in communication skills and methods. (Taskforce)		
Warning		
Verify communication systems are working. (Taskforce)		Within 24 hours of warning.
Mobilize Taskforce.		Within 24 hours of warning.
Repair down systems and establish alternate communications systems. (Taskforce)	Coordinate with Control Room.	Within 24 hours of warning.
Mobilize resources. (Taskforce)		Within 24 hours of warning.
Facilitate telecom demands of other Taskforce members. (Taskforce)		
Disaster		
Check status of communications systems. (Taskforce)		In 2-3 hours.
Identify damage to systems. (Taskforce)		First information available in 2-3 hours.
Contact Control Room and other Taskforces on telecom needs. (Taskforce)		In 2-3 hours.
Start repairs. (Taskforce)		In 2 hours.
12 Hours		
Mobilize outside resources (may start earlier). (Taskforce)		Continuous.
Complete plans for repairs and re-establishment of systems. (Taskforce)	Coordinate with Control Room.	Continuous.
Liaise with Control Room and other Taskforces.		
Start shift system for staff. (Taskforce)		At beginning of period.
48 Hours and Beyond		
Continue to assist other Taskforces. (Taskforce)		
Continue repair work. (Taskforce)		
Begin demobilization. (Taskforce)		
Lessons Learned meeting.	Include Shelter, Food and Relief Supplies	Within 14 days of disaster.
Final Report. (Taskforce)	Involve other Taskforces.	Within one months of end of operations.

3.3.3.2 Roles and Responsibilities of Taskforces

The actual plans and SOPs developed by prime and supporting organizations for each disaster may result in a variation in the actual composition of each taskforce.

Once activated, these lead and supporting organizations create taskforces to accomplish the task as directed by the Incident Commander and appropriate section or unit leader. In addition, each taskforce lead organization will provide a report detailing activities undertaken and lessons learnt during disaster response operations. This report will be in addition to any purpose –specific reporting during the operation.

The taskforce action plan to identify key actions:

- Before a disaster;
- At the time of warning;
- As the disaster occurs; and
- In periods from:
    - 12 to 48 hours
    - 48 to 72 hours
    - 72 hours and beyond after a disaster

The action plans serve as quick reference guide to individual Taskforce members, the Coordination and Planning Taskforce and authorities at the state level; as to what specific taskforces expect to be doing at specific stages before and after a disaster. This information will improve coordination within and between taskforces and with authorities outside the district.

To facilitate coordination of actions between Taskforces and cross Taskforces, action matrix is a must. This matrix can be used by:

- Individual taskforces to identify actions by other taskforces in which they are involved;
- The Coordination and Planning Taskforce as an aid in coordinating activities across the response to a disaster.

3.3.3.3 Taskforce Control Rooms

Individual Taskforce shall activate & operate their respective control rooms in their offices, manned by a competent person, who is proficient in communication and technically capable of coordinating with District Control Room, EOC, ERC, Tehsil/Block Level Control Room and mobilize requisite resources to the disaster site.

Facilities at Taskforce Control Rooms

The following facilities are maintained inside TFCR:

- Telephones
- Facsimile
- Satellite Phone (not immediately) - it is desirable.
- Hand held Radios/Base Stations
- Marker board (1)
- A copyof each Disaster Management Plan and Taskforce Plan
- Other relevant documents, if any.

3.4 EMERGENCY OPERATIONS CENTRES (EOC)/CONTROL ROOMS

3.4.1 District Emergency Operations Centre (DEOC)/Control Room

Emergency Operations Centre (EOC) plays an important role in effectively and efficiently coordinating multi-agency, intergovernmental responses to disaster events and acts as Control Room at District Level. Usually, such routine emergencies are taken care by Law Enforcement Agencies, Emergency, Public Health and Medical Services, Fire and Emergency Services, Hazardous Material Teams, Police and First Responders. However, as the emergency or disaster situation escalates, the response requirements become huge and the EOC gets activated from its regular mode of functioning to the emergency mode and comes in to the scene to handle the crisis.

During large scale emergencies and disasters, the EOC become the centre of co-ordination, planning, resource mobilization and deployment, communication, information management and dissemination. Yet another significant feature of the EOC is that it acts as the platform where key decision makers and administrators interface with technical experts in the provisioning of legitimate emergency authority and expertise. The Incident Commander takes charge at the District Control Room and commands the emergency operations as per the Incident Command System (ICS) Organizational chart.

District Emergency Operation Center (DEOC) is a physical location and normally includes the space, facilities and protection necessary for communication, collaboration, coordination and emergency information management and has been temporarily established in the deputy Commissioners's Office Complex, Doda. The EOC is a nodal point for the overall coordination and control of relief work. In case of 'L1 Disaster' Local Control Room will be activate and in case of L2 disaster DEOC will be activated along with the SEOC. It is also the central point for information gathering, processing and decision making more specifically to combat the disaster.

In case of Distrcit Doda, the land is yet to be identified for establishment of EOC as the State land is not available in the periphery of the Doda City.

3.4.1.1 Facilities at District Control Room (DCR) / District Emergency Operations Center (DEOC)

The District Control Room shall be equipped with the items given in Box 3.1:

Box 3.1: Facilities at DEOC

1. Heavy Duty Printer
2. Desktop Computers with Scanner, Coloured Printer and Laserjet Printers
3. Laptop
4. Photocopier
5. Telephone with Broadband facility
6. Hot line
7. VHF Wireless Set
8. Walky Talky Sets
9. Furniture
10. Weather update Board (Electronic)
11. Fax
12. 30 KVA Gen set
13. Marker Board.
14. Video Conferencing System
15. UPS
16. Television
17. Handheld Radios and Base Stations
18. Copies of Disaster Management Plans formulated at each level
19. Drawings showing Disaster information
20. Satellite Phones
21. Mass Alert SMS System

22. Echo Van
23. 4X4 Vehicle
24. Digital Camera (DSLR)
25. CCTV
26. GPS Units
27. GIS Software
28. Overhead Projector
29. First Aid Kit
30. Water Purifiers (RO)
31. LED Lights
32. First resistant infrastructure and fire fighting system
33. PA System
34. Back Up Control System

3.4.2 Sub Divisional Level Emergency Operations Centre

For effective disaster response mechanism, Sub Divisional Level EOCs are too established. The Sub-Divisional Magistrate concerned shall take charge as Nodal Officer of Sub Divisional Level Emergency Operations Centre.

3.4.2.1 Facilities at SDM-Level Emergency Operations Center

The following facilities are maintained inside TFCR:

- PC with internet connection.
- Telephones
- Facsimile
- Satellite Phone (desirable)
- Hand held Radios/Base Stations
- Marker board (1)
- Copy of District Disaster Management Plan and Disaster Management Plan at Sub Division level.
- Other relevant documents, if any.

3.4.3 Tehsil Control Room

The Tehsil Control Room shall be located at the Office of Tehsildar. The Tehsildars of the respective Tehsils shall take charge of the Control Room. The respective Tehsildar shall act and coordinate between the Task Group members working at disaster sites and Block/Panchayat Level Disaster Management Committees for mobilization of resources and dissemination of instructions received from DEOC.

3.4.3.1 Facilities at Tehsil Control Room

The following facilities are maintained inside Taskforce Control Room (TFCR):

- Telephones
- Facsimile
- Satellite Phone (desirable)
- Hand held Radios/Base Stations
- Marker board
- A copy of Disaster Management Plan at District/SD/Tehsil level.
- Other relevant documents, if any.

3.4.4 Objectives of EOC

✓ **To be the central platform of planning and coordinating disaster management activities during situations of large-scale emergencies and disasters in the State of Jammu and Kashmir.**

- ✓ **To manage disaster events that require resources of many agencies that may be local or may come to the jurisdiction from elsewhere in the country.**
- ✓ **To coordinate the forecast and monitoring of hazards, issue accurate and reliable warnings to populations at risk.**
- ✓ **To design and facilitate safe evacuations and coordinate emergency response activities.**
- ✓ **To plan, coordinate and control relief and rescue operations.**
- ✓ **To effectively manage the gathering and dissemination of crucial information to the public and the media.**
- ✓ **To maintain and control law and order situations during emergencies.**

3.4.5 Functions of the EOC

The six primary functions of EOC are: (i) Coordination, (ii) Policy Making, (iii) Operations, (iv) Information Gathering, (v) Public Information and (v) Visitor Hosting. These functions are elaborated as follows.

(i) **Coordination:** It involves assessing the disaster threat in terms of both agent-generated and response-generated demands and marshaling the available resources to act in concert to counter the threat. In this regard, it is the EOCs responsibility to ensure that responder organizations are aware of one another's missions, responsibilities and areas of operation. The State Disaster Management Plan and the respective District Disaster Management Plans will be the key framework to achieve coordination. Box 3.2 details the specific tasks of EOC with respect to coordination.

Box 3.2. Coordination Functions of EOC: Specific Tasks

- ✓ EOC becomes the Central Coordinator.
- ✓ Enumeration of all agencies involved in Disaster Response, accessing resources and Networking with other Institutions in Disaster Preparedness and Response.
- ✓ Other Key functions of coordination include:
  - Notifying EOC staff to gather at EOC in crisis
  - Communicating decisions, needs, resource information to response partners
  - Agreeing in advance on EOC relationships/networks to other institutional structures
  - Coordinating preparation of preparedness plans by national and/or local structures before crisis
  - Coordinating joint training exercises and drills
  - Providing venue for response coordination meetings
  - Coordinating actual crisis response to ensure effectiveness and efficiency

(ii) **Policy Making:** Researches have pointed out that the policy concern operates at two levels:

a. a disaster action plan that deals with technical emergency management issues and
b. the integration of needed political and legal authorities. Together, these levels of policy-making define the creation of strategy for the overall community response to a particular disaster event.

(iii) **Operations:** The EOC has to oversee or support the conduct of disaster operations. The EOC has to continuously monitor the threat environment and the response resources (including personnel) need to be continually reviewed and re-deployed to insure optimum community wide management of the disaster impact.

Box 3.3 Operations Functions of EOC: Specific Tasks

- ✓ Activating the EOC from its regular mode to the emergency mode.
- ✓ Giving directions quickly and properly to response agencies
- ✓ Equipping response partners with needed relief supplies
- ✓ Deploying fire, emergency medical, search and rescue services
- ✓ Managing EOC staff on daily basis
- ✓ Ensuring EOC staff security and safety
- ✓ Ensuring other EOC staff needs (food, water etc.)
- ✓ Establishing telecommunications systems (main and backup)
- ✓ Ensuring needed measures are taken to guarantee public security and safety
- ✓ Coordinating response monitoring activities
- ✓ Deactivating the EOC from the Emergency mode to Regular mode

(iv) Information Gathering: The scope of information gathering by the EOC is necessarily very broad. It pertains both to the incident demands and activity and to available resources. The various modes of information include (a) damage assessment, (b) progress (success and failures) in disaster response, (c) timing and effectiveness of operational decisions and deployments. The EOC also collects and collates information on the activity and success of different responder agencies and relays the information to other responder agencies with related tasks.

Box 3.4 Information Gathering Functions of EOC – Key Tasks

- ✓ Inventorying available public and private resources for response.
- ✓ Obtaining damage and needs assessment information.
- ✓ Coordinating, cross-checking, verifying all data/information as they arrive at EOC.
- ✓ Generating and storing lessons learned.

(v) Public Information: While the need for public information is usually obvious, it is sometimes separated from the EOC. Such arrangements invite difficulties associated with misinformation and ambiguity, to the extent that those who disseminate information are not directly connected to the principal source of accurate response data – the EOC. With regard to public information needs, two audiences are of principal concern: the general public and the public-at-risk. Another important audience that sometimes serves as a buffer between the EOC and other publics is the mass media. EOC taking up this function can avoid the difficulty stemming from multiple and conflicting messages being disseminated regarding the threat and the progress of the response. By centralizing this function in the EOC, and placing it under the supervision of a Public Information Officer (PIO), one ensures that consistent and accurate messages are disseminated and at the same time makes it easier for media to obtain authoritative information.

Box 3.5: Public Information Functions at EOC – Key Tasks

- ✓ **Issuing public warnings of possible incident**
- ✓ **Communicating information to the general public**
- ✓ **Communicating information to the media**

(vi) Visitor Hosting: EOCs need to develop capacities for hosting visitors in a constructive fashion. One should not underestimate the number of visitors (usually government VIP's and elected officials) that arrive on site. Sometimes these visitors have legitimate disaster related functions and sometimes there is no function beyond a desire to show concern for the situation.

Box 3.6: Hosting Visitors Function of EOC

- ✓ Hosting/handling VIP visits during crisis situations

3.4.6 EOC Levels of Operation

The EOC activation at various levels depends on the level of disaster. Table 3.19 details these levels of operation. The National/state/district EOCs are activated in the L3, L2 and L1 levels of disasters respectively.

Table 3.22 EOC Levels of Operation

Level	Nature of EOC Operation
Level 1 (L1)	✓ **Normal: Situation is monitored by EOC in charge**
Level 2 (L2)	**Watch:** When an event / disaster may occur, notification is made to agencies and support staff who would need to take action as part of their responsibilities.
Level 3 (L3)	**Partial Activation:** Limited activation of EOC when an event / disaster is very probable or following an event which doesn't require full activation. All primary or lead staff will be notified and will staff the EOC.
Level 4 (L4)	**Full Scale Activation:** All primary and support agencies are notified. All EOC Support personnel will staff the EOC.

3.4.7 Back up Control Room

In case of rare incidents or disasters, the EOC building may be severely damaged or cease to function, a backup EOC or a temporary set up can be used for coordination and control of emergency operation. The HPC has emphasized on setting up of Backup EOCs at all levels right from National level to district levels. In case of District Doda same can be established at PCR, Doda.

CHAPTER- 4
PREVENTIVE MEASURES

4.1 STRATEGY

The strategy envisages the development and implementation of a policy framework on disaster risk reduction from a holistic perspective, which emphasizes on prevention, mitigation and preparedness in pre-disaster phase. This requires the

(i) establishment of the mitigation fund for the District;
(ii) raising awareness for disaster risk reduction at all levels and
(iii) Improving preparedness amongst all stakeholders using optimized and accessible Information and Communication Technology Systems.

To achieve the same, there needs to be appropriate legislative and regulatory instruments that would support and strengthen the enforcement mechanisms at different levels of the Government. At the local and regional levels, there needs to be relevant capacity building for vulnerability and risk assessment and in investigating the nature and extent of damage in post disaster situations. The strategy will also be to promote the use of disaster resistant construction techniques. The Government will ensure that a culture of safe building codes and practices are followed across all sectors and will be enforced by law. By promoting and encouraging scientific research on risks and disasters, database on disasters and vulnerability, and a sound understanding on their impacts and preventive measures to be taken will be developed for the district.

4.2 GUIDING PRINCIPLES AND FRAMEWORK FOR MITIGATION

This plan recommends certain guiding principles that would facilitate effective mitigation in tune with an ecosystem based approach to disaster risk reduction. Some of the guiding principles that would facilitate effective mitigation are given in Table 4.1.

Table 4.1: Guiding Principles for Mitigation

1.	Ensuring commitment from all stakeholders.
2.	Build knowledge and awareness.
3.	Identify and cooperate with relevant stakeholders.
4.	Explore and prioritize potential hazard impacts.
5.	Explore a wide spectrum of mitigation and adaptation processes.
6.	Prioritize mitigation options.
7.	Modify existing policies, structures and processes.
8.	Monitor and evaluate systematically.

4.3 PREVENTION AND MITIGATION MEASURES

The prevention and mitigation strategies need to be both structural and non-structural strategies. While the former generally indicates investment made on physical constructions or other development works (such as engineering measures and construction of hazard resistant / protective structures), the latter refer to soft measures such as awareness creation and education, policies strengthening techno-legal systems and practices, training, capacity development etc.

4.3.1 Structural Mitigation Strategies

The general plan outline for any kind of structural mitigation for the district Doda is given below.

4.3.1.1 Land Use Planning

- Land use planning should take into account the hazard risk and vulnerability context of the State and the District thereof.
- Ensure that development schemes of the District are undertaken in view of hazard, risk, vulnerability and micro-zonation.
- Provide sufficient evacuation and transportation space in roads and streets that are highly risk prone to hazards (includes widening of existing roads and building of new evacuation routes).
- Preparation of risk vulnerability maps; and notification of risk prone areas by micro- zonation.

4.3.1.2 Infrastructures for Disaster Management

- Establishing/construction of EOC (Emergency Operations Centre) and Emergency Response Centre (ERC) at district-level.
- Operationalizing EOCs at all levels.
- Construction and strengthening of disaster management cells not only at the district levels, but also at local jurisdictions of governance in tune with the ecological and social vulnerability of the populations at risk.
- Construction/strengthening of disaster shelters, disaster management stores and essential life-line infrastructures that is accessible by diverse vulnerable groups.

4.3.1.3 Adaptation of New/Appropriate Technology

- Application of Science and Technology based innovations in improvising infrastructures such as dams and reservoirs, building designs, construction etc.
- Identifying appropriate vernacular architecture and related technology that strengthens the resilience of structures.

4.3.2 Non-structural Mitigation Strategies

Non-structural mitigation measure ranges from planning, logistics, techno legal regime, capacity building, and community-based disaster mitigation to ecosystem conservation and management. Activities carried out under each task should be executed by responsible line departments. Accordingly, activities of planning involves strict regulation of land use; regular monitoring of life line structures; ensuring multi hazard preparedness, response and mitigation plan at all levels and strategies for implementation; evolving or strengthening administrative capabilities to plan and implement post disaster management. The general plan outline for any kind of non-structural mitigation for District Doda is given below.

4.3.2.1 Mainstreaming Disaster Management in Development Programmes

- Incorporate DRR concept into developmental schemes.
- Ensure that each development programme/scheme in the District should be sanctioned/undertaken only if it meets the requirement of disaster risk reduction.

4.3.2.2 Techno-legal Regime

- Restructuring of zoning regulations.
- Strict regulation of land use.
- Regular monitoring of lifeline structures.
- Enforcement and strict adherence to building codes and rules in design and implementation.
- Review and revision of building laws taking into account the objectives of disaster resilience.
- Review and revision of Town planning acts and rules/Master Plans taking into account the objectives of disaster resilience.
- Continuous monitoring and prevention of unplanned, ad-hoc development of buildings and another infrastructure.

- Ensure that expert comments are taken/made on permitting the construction of new buildings.

4.3.2.3 Planning

- Develop vulnerability atlas map.
- Prepare multi hazard preparedness and mitigation plan at all levels.
- Prepare Departmental Contingency plans for managing emergency situations.
- Ensure that each department should nominate a Nodal Officer for point of contact.
- Develop strategies for implementation of risk mitigation.
- Prepare generic categorization of disaster response for multiple hazards (articulation of Quick Response Team, Quick Assessment Teams).
- Prepare hazard-wise departmental action plan and SOPs.
- Update the plan as per the requirement.
- Monitor similar activities at district and Tehsil level.

4.3.2.4 Capacity Building

- Capacity building through Simulation and Mock Drills needs to be carried out both horizontally (across line departments) and vertically (at all levels).
- Develop a cadre of specialized taskforce in disaster mitigation.
- Strengthen the skills and knowledge of taskforces involved in the mitigation of disasters.
- Conduct workshops/training for sensitization of the stakeholders.
- Carry out specific research for instance EIA and SIA
- Regular updation and documentation of disaster database.
- Launch awareness campaigns regarding safety measures against potential hazards.
- Develop multi- hazard IEC material for Publication and Distribution.
- Organize exhibitions for public awareness through local institutions.
- Promote communication activities such as awareness, emergency contact numbers, do’s and don’ts through posters, volunteers training, and village Taskforce.
- Formulate literature of do's and don'ts for building in local/ vernacular languages.
- Conduct regular drills at all institutions at District, Tehsil & Village levels.
- Networking to share knowledge and best practices on effective approach.
- Encourage disaster insurance for crop, building, and health.
- Include disaster related topics in schools and colleges curriculum.
- Strengthening of co-ordination between stakeholders at all levels.
- Encouraging Coordination and Information sharing between stakeholders - Knowledge based management and sharing the existing information / data amongst relevant stakeholders.
- Encourage Academic Collaboration with other Universities offering Disaster Management specialization for exchanging and enhancing knowledge and information.
- Training medical and non- medical staffs for handling Mass Casualty and providing basic First Aid.
- Ensure that each village has 50 trained individuals in basic first-aid for emergency response.
- Ensure that district has at least 5 divers to deal with drowning related incidents.
- Similar expertise to deal with specific hazards needs to be identified and capacity building for the same needs to be ensured.

4.3.2.5 Safety Audit

- Ensure that all Departments undertake safety audits in their prescribed domains.
- Ensure fire audit of both the Government and Private Hospitals and other lifeline infrastructures, including the proposed EOCs.

- Ensure that BIS seismic code is incorporated in the construction of new buildings.
- Carrying out structural safety audit of all critical lifeline structures at regular intervals.
- Proper maintenance of existing helipads for emergency purposes.
- Proper maintenance of Roads, infrastructure including bridges and alternate routes to deal with emergencies.

4.4 GEOLOGICAL HAZARDS

The hazard wise mitigation measures are as follows:

4.4.1 Earthquake

The following principles could guide effective earthquake risk mitigation strategies for policy makers and practitioners in the District: -

i. As a commitment towards a safe rDoda, each stakeholder involved in disaster risk reduction need to ensure that earthquake resistant designs are incorporated in the construction of any new structures.
ii. Administrative authorities need to facilitate and promote the selective strengthening and seismic retrofitting of existing lifeline structures on a priority basis.
iii. The compliance regime needs to be enhanced and improved through appropriate regulation, enforcement and monitoring mechanisms.
iv. There needs to be consistent, innovative and improvised efforts to raise the awareness and alertness of all stakeholders towards earthquake risk mitigation.
v. Well-crafted and planned capacity development interventions for effective earthquake mitigation need to be introduced at all layers of governance.
vi. Institutions, infrastructures and resources for emergency response in earthquake prone areas need to be strengthened.

4.4.1.1 Structural Mitigation Strategies for Earthquake

4.4.1.1.1 Land Use Planning

- Delineation of fault zones.
- Slope stability.
- Undertake micro-zonation consultancy on a priority basis.
- Provide good quality seismic micro-zonation maps to all stakeholders.
- Develop and provide regularly updated vulnerability and risk assessment map.

4.4.1.1.2 Enhancing Structural Capacities

- Retrofitting and earthquake proofing of all lifeline structures.
- Monitoring of seismic activity.
- Retrofitting of existing weak buildings in the seismic zone.
- Construction and operationalization of District Hazard Safety Cell.
- Construction of earthquake resistant model houses, tested through simulated environments.
- Equip buildings with basic first aid facilities.
- Develop earthquake resistant design features for the construction of public utility/residential structures.
- Establish seismological network and round-the-clock monitoring.

4.4.1.2 Non-Structural Mitigation Strategies for Earthquake

4.4.1.2.1 Techno-legal Regimes

- Review and implementation of building codes/land use code. Revision of codes, if necessary. Incorporating the BIS seismic codes for construction.
- Constitution of Hazard Safety Cells (HSC). The function of Hazard Safety Cells towards Earthquake Risk Mitigation include:
    (i) Establishing proper mechanisms for implementation of all the building codes in all future constructions;
    (ii) To ensure the safety of buildings and structures from various hazards; and
    (iii) To carry out appropriate design review of all government buildings to be constructed in the District.
- Implementation of laws regulating developmental activities/ human activities in earthquake prone area.
- Strict enforcement of building by law residential structure.

4.4.1.2.2 Planning

- Prepare catalogues, epicenter and geological maps towards earthquake risk mitigation.
- Department wise earthquake contingency plans to be developed.
- Department wise action plan and SOPs need to be developed and regularly updated.

4.4.1.2.3 Capacity Building

- Capacity building of Engineers & Architects in earthquake risk mitigation (to design seismically safe buildings and related techno-legal requirements).
- Enhance capacities of engineering colleges and architecture colleges to provide advisory services to the government.
- Provide training for multi-hazard resistant construction.
- Conduct seismological research.
- Organize awareness camps at all levels of governance.
- Train all stakeholders in providing and understanding warning.
- Educate public in basic response measures.
- Dissemination of upgraded seismic resistant measures.
- Upgrading educational curriculum in architecture and engineering institutes.
- Include disaster related topic in technical trainings in polytechnics.
- Provision of loans by banks for retrofitting buildings and structures on easy terms.
- Strengthening urban earthquake vulnerability reduction programmes.
- Campaign for earthquake safety tips.

4.4.1.2.4 Safety Audit

- Establish a committee for safety audit and suggest seismic retrofitting of buildings.

4.4.1.2.5 Integrating DRR in Development Planning

- Integrating Earthquake Mitigation in Rural Development Schemes such as Indira Awas Yojana (IAY), Mahatma Gandhi National Rural Employee Guarantee Act (MGNREGA) and Sampoorn Grameen Rojgar Yojana (SGRY).
- Modify construction guidelines under these schemes so that the houses/schools or community buildings constructed are earthquake resistant.

- To promote seismically safe construction at villages/block level.

4.4.2 Landslides

It is hereby envisioned that each stakeholder involved with disaster risk reduction in district Doda is fully aware of landslide hazards and routinely takes action to reduce both the risks and costs associated with these hazards. The landslide mitigation strategy envisioned below not only aims at converging the different line departments, but also in bringing together relevant scientific, engineering, construction, planning and policy making actors of the District. As a prior requisite, hazard identification is a cornerstone of landslide hazard mitigation. Nevertheless, as part of the mitigation strategy, we need to gather a comprehensive understanding of landslide processes and mechanisms to predict the behavior of differing types of landslides affecting the region.

4.4.2.1 Structural Mitigation Measures

4.4.2.1.1Enhancing Structural Capacities

- Construction of deep drains, cut-off walls.
- Setting up of indigenous, alternative and innovative contour bunds and similar structures for diverse terrains.
- Construction of check dams, gully plugs, vegetative barriers, etc.
- Carryout drainage correction.

4.4.2.1.2 Land Use Planning

- Develop landslide inventory and landslide susceptibility maps.
- Developing an inventory of the existing built environment in areas around existing landslides and in high hazard zones as per the LHZ maps and along strategic roads.
- Assessing the status of risk and vulnerability of the existing built environment.
- Identify safe zones.
- Evaluate engineering and construction approaches to mitigate landslide hazards.
- Wide dissemination of model land use practices in hilly areas.
- Complete control of deforestation.
- Promoting afforestation of large scale plantation / afforestation of indigenous trees in the land slide prone areas.
- Creating vegetative barriers.
- Preparing an inventory of existing landslides, active or inactive, in the District.
- Develop and implement a plan for mapping and assessing landsides.

4.4.2.2 Non-Structural Mitigation Measures

4.4.2.2.1 Techno-legal Regimes

- Strict implementation of land use measures.
- Revision of town planning bylaws and adoption of model land use bylaws in the district.
- Restrict construction of structures at high contours (sloppy high level grounds).
- Restrict construction of residential building in landslide prone areas.
- Develop and encourage the use of standards and guidelines for landslide hazard maps and assessments.
- Establish and implement a district-level strategy for compilation, maintenance and evaluation of data on the socio-economic and environmental impacts of landslides.
- Establishing appropriate mechanisms for compliance review of all land use bye-laws.
- Total ban on grazing, cutting of trees in affected areas.
- Promotion of eco-system based land used practices.

- Develop improved, realistic scientific models of ground deformation and slope failure processes and implement their use in predicting landslide hazards.

4.4.2.2.2 Capacity Building

- Develop and implement a district-level landslide hazard monitoring and prediction capability.
- Develop real-time monitoring and prediction capabilities on both site specific and regional scales.
- Apply remote-sensing technologies such as Synthetic Aperture radar and laser altimetry and wireless sensor techniques (WINSOC) for monitoring landslide movement.
- Training of professionals like engineers and geologists for landslide mapping, investigation techniques, analysis, and observational practices.
- Develop and implement guidelines and training for scientists and geotechnical engineers in the use of landslide hazard and other technical information for mapping and assessing landslide hazards.
- Training of trainers in professional and technical institutions.
- Preparation of DM plans by educational and health institutes/ organizations, government offices, etc., and carrying out mock drills for enhancing preparedness in vulnerable areas. (General not landslide specific)
- Strengthening the EOC and communication network. (General not landslide specific)
- Develop and implement guidelines and training for scientists and geotechnical engineers to respond to landslide hazards.
- Streamlining the mobilization of communities, government agencies, the corporate sector, and other stakeholders.
- Preparing community and village level DM plans, with specific reference to the management of landslides.
- Generate public awareness regarding landslide at various levels through training and education programmes, design, landslide hazard curriculums, safety programmes and community risk reduction.
- Evolve early warning system for landslide.
- 24x7 operational Control Room for effective response (ERCs) (General not landslide specific).

4.4.2.2.3 Integrating DRR in Development Planning

- Engage MGNREGA and PMRDF work towards reducing landslide risks and enhancing the capacities of vulnerable population.

4.4.3 Avalanches

4.4.3.1 Structural Mitigation Measures

4.4.3.1.1 Enhancing Structural Capacities

- Modification of path of avalanche.
- Construction of snow avalanche control structures such as: Prevention Structures, Stepped Terraces, Avalanche Control Piles, Snow Cornice Control Structures, Retaining Walls, deflecting structures such as deflection berms and avalanche track mounds.
- Carry out drainage correction.
- Construction of breaker.

- Construction of snow sheds and tunnels in avalanche prone travel routes.
- Exploration of wind sails as a mitigation strategy.
- Exploring alternative road management options.
- Re-routing roads in avalanche prone areas.
- Large scale plantation of indigenous varieties in risks prone the areas.
- Disposing the avalanche potential snow packs by artificial triggering.

4.4.3.1.2 Land Use Planning

- Documenting avalanche incidents and avalanche hazard maps.
- Maintain and update the Map of snow avalanche prone areas
- Developing designs and plans for evacuations and closure of traffic routes.
- Issuing land use regulations and guidelines taking into account of avalanche risk.

4.4.3.2 Non-structural Mitigation Measures

4.4.3.2.1 Techno-legal Regime

- Micro-hazard zonation
- Strict implementation of avalanche control measures.

4.4.3.2.2 Capacity Building

- Ensure snow avalanche forecasting and warning; not only testing snow stability with explosives.
- Use infrasonic sensors to monitor avalanche activities.
- Generate public awareness regarding snow avalanche at various levels through media, campaign, development and distribution of leaflet posters, meetings, and workshop on priority basis.
- Avalanche awareness should also deal with safe-travel techniques.

4.5 HYDRO-METEOROLOGICAL HAZARDS

4.5.1 Windstorm

Windstorms can create significant structural damages to land and property in the Doda District of Jammu and Kashmir State. Structures need to be thus designed and built to withstand the projected wind speeds. Wind-resistant construction techniques include proper anchoring of walls to foundations, use of straps and clips to hold the roof of a structure to its walls. Other techniques include lateral roofing and wall bracing. Structural retrofitting of existing structures such as the anchoring of roof, windows and doors need to be given high priority. Windstorm shelters need to be constructed with hardened safe roofs. Retrofitting and anchoring of loose objects, water heaters, removing trees from immediate vicinity of buildings could be other mitigation strategies. Nevertheless, enhancing natural vegetation and setting up windbreaks across the wind paths could reduce the impacts as well.

4.5.1.1 Structural Mitigation Measures

4.5.1.1.1 Enhancing Structural Capacities

- Construction of shelters in windstorm prone areas.
- Construction/strengthening and repair of roads and bridges in windstorm prone areas.
- Enhancing natural vegetation and setting up windbreaks across the wind paths.
- Develop terrain specific warning dissemination systems.

4.5.1.2 Non-Structural Mitigation Measures

4.5.1.2.1 Capacity Building

- Strengthening and up-gradation of existing windstorm forecasting system at the state and district level.
- Preparation of contingency plans at district, Tehsil and community level.
- Preparation of specific disaster related departmental action plan and SOPs.
- Imparting training to the stakeholders involved in disaster mitigation and management.
- Awareness creation and campaign for wind mitigation.
- Procure sufficient food grains in the areas likely to be affected.
- Mobilization of resources such as vehicles for evacuation.
- Setting up mobile health units in the vulnerable pockets.

4.5.2 Floods

4.5.2.1 Flood hazard mitigation

The Flood Probability Reduction Measures (FPRM) should aim at restoring the retention potential of the natural hydrological systems throughout the district and at the same time enhance the detention of rain water through small retention basins distributed in minor catchments. Some of the FPRM measures that could be strengthened in the district are given below (Table 4.2).

Table 4.2: FPRM framework

FPRM	Type of Measure	Illustration
Sustainable Drainage Systems	Source Control	Green roofs, rainwater re-use, permeable pavements.
	Infiltration Techniques	Filter trenches, filter drains, filter strips,Soak-ways.
	Detention Structures	Swales, bio-retention area, detention basin, ponds and wetlands.
Controlled Surface	Detention Structures	Diversion structures, multifunctional space, conveyance structures.
Fluvial Flood Detention Measures	Give Rivers more Space	Day-lighting of watercourses, flood plain restoration.
	Holding Back Water	Flood polders, small detention reservoirs,

The flood mitigation strategy should also focus on Flood Resilience Measures (FReM). These are regarded as potentially very effective as they are capable of reducing the exposure of vulnerable population to floods without causing much negative impact on the hydrological system. FReMs support the recovery of society after an extreme flood and thus stand for the improvement of resiliency of the whole system. The maximum possible social and economic resilience against flooding can be afforded by a sustainable flood management strategy. FReM is categorized in the 4 A's of the safety chain of flood resiliency namely Alleviation, Avoidance, Awareness and Assistance. Some of the important FReM are mentioned below in the Table 4.3

Table 4.3 Flood Resilience Measures

FReM	Type of Measure	Illustration
Capacity Building	Information	Flood maps, Information materials.
	Education-Communication	Face-to-face learning, web-based learning, training, collaborative platforms.
Land use control	Spatial Planning	Flood risk adapted land use.
	Building Regulations	Building codes, zoning ordinances.

As mentioned above, the strategies, both structural and non-structural, required for flood mitigation consists of techno legal regime, capacity building, safety audit, planning, adaptation to new technology, and others. Structural measures are in the nature of physical measures and help in dealing with the physical event of the floods and altering its nature. These are measures, which are taken to protect people and property, which counteracts the flood event in order to reduce the hazard or to influence the course or probability of occurrence of the event. These measures can be aimed at (i) reducing discharge (reservoir, diversion, and watershed management), (ii) reducing stage (channel improvement), (iii) reducing existing damage susceptibility (levee or floodwall, flood proofing, relocation, flood warning and preparedness planning) and (iv) in reducing future damage susceptibility (land-use and construction regulation, acquisition). These are explained as below.

4.5.2.2 Structural Mitigation Measures

4.5.2.2.1 Enhancing Structural Capacities

- Ensure fortification of weak embankments and vulnerable points in canals/rivers during free flood monsoon.
- Ensure emergency flood ways and river diversions.
- Improvement of design for irrigation and flood protective structures.
- Construction of flood protection wall, flood diverting channels etc.
- Construction of barrages on the banks of rivers.
- Construction of rising and/or construction of community cum shelter buildings above HFL.
- Construction of rain gauge at Tehsil headquarters.
- Ensure Channel improvement.
- Ensure flood proofing.
- Take up holistic watershed management.
- Regular clearance of drains from slit and weeds.
- Strengthening/ repair of existing roads and bridges and other critical infrastructure in flood plains.
- Restore natural drainage blocked by roads and canals.
- Removal of encroachment long the riverbanks/trubutairs.
- Development of catchment area of the flood plain (i) Forestation, (ii) Land sloping and (iii) Small reservoirs/Check dams/ponds etc.
- Repair / restore vulnerable points on roads and bridges before onset of monsoon.

4.5.2.2.2 Alert Mechanisms / Early Warning

- Establish infrastructure for flood warning and dissemination.
- Strengthening and Upgradation of existing flood forecasting system.

4.5.2.3 Non-Structural Mitigation Measures

The non-structural mitigation measures include (i) preparation and dissemination of information, education and communication tools (flood maps, public presentations, collaborative platforms etc.); (ii) spatial planning (flood risk adapted land use); building regulation and improvement of building flood resistance (wet-proofing and dry-proofing); flood action plans at a local scale (infrastructure maintenance); financial preparedness (insurance of residual risk and reserve funds). Flood plain zoning is an important non-structural flood mitigation strategy. It places restrictions on the use of land on flood plains and can reduce the cost of flood damage. PRIs may prevent uncontrolled building or development on flood plains to limit flood risks and to protect nearby property.

4.5.2.3.1 Techno-legal Regimes

- Enactment and enforcement of laws regulating developmental activities in flood plain
- Restriction of construction near / along water way.
- Ensure Flood plain zoning.
- Ensure emergency flood ways and river diversions.
- Enforce building by laws for flood plains.
- Adopt appropriate measures to assess damage/loss.
- Regulate development and redevelopment policies in flood prone areas.

4.5.2.3.2 Planning

- Prepare contingency plan for any eventuality.
- Ensure that safe citing in flood prone areas is being done.
- Update resource inventory.
- Prepare maps or alternate routes, resources available.
- Prepare flood management plan at all levels of governance.
- Procure ration in advance at various micro-zones in sufficient quantity before the onset of monsoon.

4.5.3 Cloudburst

4.5.3.1 Structural Mitigation Strategies

- Construction/maintenance of small reservoirs/check dams/ponds and barrages.
- Promote large scale plantation in barren lands.

4.5.3.2 Non-structural Mitigation Strategies

- Ensure forecasting and early warning systems for predicting cloudburst.
- Enactment and enforcement of land use code.
- Organize nallah training.
- Evacuate people residing in low lying area.

4.5.4 Snowfall

4.5.4.1 Structural Mitigation Strategies

- Construction of snow gauges at necessary points
- Provide snow cutters at risk prone areas

4.5.4.2 Non-structural Mitigation Strategies

- Strict Implementation of existing Snow Clearance Plan in the newly emerging tourist and other villages.
- Procure ration in advance at various micro-zones in sufficient quantity before winter.
- Store relief material at Tehsil headquarters.
- Strengthen co-ordination between diverse stakeholders such as Roads & Building, Municipal Corporation, Public Works Department, Border Road Organization and National Highway Authority of India for snow clearance.

4.5.5 Drought

Drought mitigation measures are aimed at reducing the incidence or minimize impacts of drought. These measures not only help in drought proofing, but also in ecological restoration and social development. Drought mitigation measures are not stand alone strategies but integrate well within the domain of soil conservation, watershed development, climate change mitigation and forestry. For the same reason, these strategies are inevitable part of the Central and State sponsored development programmes.

4.5.5.1 Structural Mitigation Strategies

4.5.5.1.1 Enhancing Structural Capacities

- Strengthen water conservation techniques.
- Strengthen and stabilize irrigation system.
- Construct/ Repair dams, reservoirs, lift irrigation, tube wells, tanks, farm ponds and canals for surface irrigation.
- Construct warehouse and cold storages for preservation /storage of food grains.
- Strengthen and upgrade existing drought forecasting system.
- Establish infrastructure for drought warning and dissemination.

4.5.5.1.2 Adaptation of New / Innovative Technology

- Application of advanced agro-Science technology and agro-engineering inputs to improve agriculture production.

4.5.5.2 Non-structural Mitigation Strategies

4.5.5.2.1 Techno-legal Regimes

- Enforcement of soil/ forest conservation measures and afforestation.
- Enactment and enforcement of laws regulating ground water level and exploitation of natural resources.
- Develop mechanisms for water audits.

4.5.5.2.2 Capacity Building

- Develop drought related departmental action plan and SOP.
- Impart training to the stakeholders involved in drought mitigation and management.
- Encourage people to use advance technology of drip and sprinkler irrigation.
- Encourage indigenous rain water harvesting and conservation.
- Encourage farmers to understand crop pattern to be adopted in their area.
- Encourage the adaptation of technique for preservation of green fodder.
- Implementation of nutrition programme for the vulnerable groups.
- Promote self-schemes for employment generations.
- Ensure drought forecasting and early warning.
- Introduce and implement crop and seed insurance.
- Introduce dry land farming/ drought resistant crops.
- Conduct regular surveillance of public health measures.
- Disseminate drought risk to general public residing in drought prone zones.
- Campaign for drought tips for agriculture, general public and industries.

4.5.5.2.3 Integrating DRR in Development Planning

- Integrating drought proofing with governmental programmers such as MGNREGA, Integrated Watershed Management Programme (IWMP), National Rural Drinking Water Programme (NRDWP), Rasthriya Krishi Vikas Yojana (RKVY), Fodder and Feed Development Schemes and Rural Infrastructure Development Fund.

4.6 BIOLOGICAL HAZARDS

4.6.1 Pest and Disease

4.6.1.1 Structural Mitigation Strategies

- Encourage crop rotation
- Plantation of trap crops
- Destruction of crop refuse or insect infested plant
- Promote use of resistant varieties of domestic plants
- Ensure pest forecasting

4.6.1.2 Non-structural Mitigation Strategies

- Ensure integrated pest management
- Generate programmes for eradication and suppression of pests
- Ensure effective monitoring and surveillance of post-harvest damage in crops

4.6.2 Epidemics

There are some basic principles which will help in structuring the plan for prevention of biological disasters and epidemics. As these events cannot be predicted and very much heterogeneous in nature and finer details will have to be planed after the emergence of the problem but there can be some basic components of preparations which can be improvised and it will reflect in lesser morbidity and mortality.

4.6.2.1 Structural Mitigation Strategies

- Provision of functional isolation wards in all tertiary hospitals.
- Provision of labs which could diagnose all the rare pathogens and their characteristics including bio-terrorism agents.
- Improvement of drinking water supply system and sanitation structures.
- Strengthening the public health institutes, surveillance system and epidemiology department.
- Making provision of quarantine facilities; border and airport safety protocols for pandemics or transportation of Bio-terrorism agent.
- Establishing biological vector control system through environmental engineering.
- Provision of store house for essential drugs with inventory management.

4.6.2.2 Non-Structural Mitigation Measures

- Prepare district wise risk-profile of epidemic prone diseases.
- Map the areas with emergence of multi-drug resistant bacteria.
- Capacity building through training of all government health staff to deal with epidemic situations and heavy patient load.
- Specific programs of community health education for epidemics or other biological disasters.
- All tertiary level hospitals should have plan/protocols for epidemics and heavy patient surge.
- Legislative framework for involvement of privet health-care sector and pharma sector in crisis situation.
- Improvising CHCs for responding to epidemics and uncommon infectious diseases.
- Creation of communication linkages and protocols with state, national and international expert bodies in biological disasters.
- Identify the bio-hazard places and create biosafety and biosecurity measures to reduce the risk of spread of the disease.
- Establishment of procurement plans for essential drugs, vaccine and other medical supplies in disaster situations at district as well as state levels.

4.7 HUMAN INDUCED DISASTERS

4.7.1 Industrial Hazards

4.7.1.1 Structural Mitigation Strategies

4.7.1.1.1 Land Use Planning

- Planning permission of any factory/industry should consider the land use planning in view of hazard, risk and vulnerability of the district.
- Carry out structural safety inspection/audit.

4.7.1.1.2 Adaptation of New / Appropriate Technology

- Application of Science and technology and engineering inputs to improve industrial infrastructures.
- Installation of eco-friendly technology in industrial areas.
- Installation of fire alarms and firefighting equipments in all public buildings and government offices.
- Establish infrastructure for onsite and offsite warning dissemination.
- Construction/Strengthening of EOC/ERC at all levels.
- Procurement of all necessary equipments.

4.7.1.2 Non-structural Mitigation Strategies

4.7.1.2.1 Techno-legal Regimes

- Strict implementation of Acts and Rules.
- Strict implementation on factory / industry safety rules.
- Strict implementation of guidelines issued by State Pollution Control Board.
- Ensure all essential installations met the carrying capacity and capable of withstanding working conditions.

4.7.2 Building Fire

4.7.2.1 Structural and Non-structural Mitigation Strategies

- Strict implementation of work regulations.
- Strict adherence to fire safety standards in all buildings.
- Equipping Block, Tehsil and Municipal Corporation Headquarter with fire hydrant.
- Install firefighting equipments and fire alarms in all the public building and government offices.
- Install smoke detectors in each floor of the building.
- Organize awareness campaign regarding safety measures for incidents.
- Conduct regular drills.
- Enhance firefighting capabilities.
- Store cylinders of flammable gases in well ventilated places.
- Release firefighting resources to rural areas outside local municipal limits.

4.7.3 Forest Fire

4.7.3.1 Structural and Non-structural Mitigation Strategies

- Review & update the existing regulatory codes and standards for wild land fire protection.
- Forest use restriction. Only authorized officials or permitted local people should be allowed to enter the forest.
- Allocation of funds for developing forest fire lines.
- Maintenance of fire lines.
- Develop a community based disaster management strategy by involving community in fire detection and prevention.
- Routine assessment of forest fire risk.

- Train and equip the firefighting team.
- Ensure that the dead and dying trees are removed from the forest.

4.7.4 Crowd Management

4.7.4.1 Structural and Non-structural Mitigation Strategies

- Develop a crowd management plan that takes into account all aspects such as the venue, movement patterns identify possible problem areas, and describe how the plan will accommodate normal and emergency crowd movement.
- Setting up of a centralized crowd management and communications centre to provide real time information. The ideal centre should provide a maximum view of the venue, supplemented by video camera access to blind spaces, pressure points and major movement pathways.
- Developing an Incident Response System for mitigating any eventualities.
- Issues updated, and clear guidelines to specific authorities for crowd management.
- Training for crowd management personnel on the basics of normal and emergency crowd movement and assembly, initial handling of accident victims, communications procedures and use of communications equipment, avoidance of actions that would incite or trigger dangerous crowd behaviors, and conduct and demeanor during an emergency should be provided.
- Full communications coordination should be established between all venue staff, local police, fire & emergency, medical services and any on-site radio or television media.
- Crowd participants need to be legally warned of crowding hazards and be instructed in aid procedures.
- Prior distribution of all radio frequencies, telephone numbers and relevant information and related procedures in printed form to all staff.
- Building codes should be correlated with the movement capabilities of all corridors, stairs, ramps, bridges, escalators etc.
- Establish traffic capacities of corridors, stairs, passenger conveyors and walking spaces.
- Pressure points or locations where a change in pathway processing capacity, normal directions of movement, or a confluence of traffic streams results in conflicts or accident exposures need to be identified and mapped.
- Alternative power sources (back-up standby power) for lighting and communications need to be designed and operationalized.
- Emergency room space and equipment sufficient to handle larger crowd accidents needs to designed, built and operationalized.
- Training of crowd management staff is vital. Responsibility should not be vested to volunteers/casual laborers alone.
- Organize public meetings and local speaker announcement.
- Distribute reading materials to the general public.

4.8 RESPONSIBILITIES OF STAKEHOLDERS

4.8.1 District Administration:

The responsibilities of the district administration towards disaster mitigation are given below.

- Regular collection of situation report of the risk and vulnerable areas from the officers assigned for the purpose.
- Setting up of the District Disaster Management Cell, to be headed by the Deputy Commissioner.
- Introduce protective steps that could be taken to minimize the impact of disasters.
- Make arrangements for emergency response.

The responsibilities of other stakeholders and the line departments are given in Table 4.4.

Table 4.4 Responsibilities of Key Stakeholders

Authority	Roles and responsibilities
Agriculture/ Horticulture Department	• Review and update precautionary measures and procedures. • Strengthen and upgrade existing drought forecasting system. • Establish infrastructure for drought warning and dissemination of the same. • Encourage people to use advance technology of drip and sprinkler irrigation. • Encourage the adaptation of technique for preservation of green fodder. • Introduce and implement crop and seed insurance. • Introduce dry land farming/ drought resistant crops. • Encourage crop rotation. • Destruction of crop refuse or insect infested plant. • Ensure pest forecasting. • Ensure integrated pest management. • Generate eradication and suppression progression of pests. • Ensure effective monitoring and surveillance of post-harvest damage in crops. • Ascertain that adequate stock of seeds and other agro-inputs are available in areas prone to natural hazards. • Awareness generation regarding various plant diseases, alternate cropping practices in hazard-prone areas. • Designing and strengthening the provisions of crop insurance. • Hazard area mapping (identification of areas endemic to pest infections, drought, flood, and other hazards). • Develop database village-wise, crop wise, irrigation source wise, insurance details, credit facilities, etc. • Promotion of alternative crop species and cropping patterns keeping in mind the vulnerability of areas to specific hazards. • Training in alternative cropping techniques, mixed cropping and other agricultural practices which will minimize crop losses during future hazards. • Promote organic farming through awareness with a target of 100% organic state • Undertake soil testing for developing resilient agricultural systems in the state.
Agricultural Universities	• Encourage advanced agro-Science technology and agro- engineering inputs to improve agriculture production.
Banks / Insurer	• Provide loans for retrofitting buildings and structures on easy terms. • Provide agricultural and seed loans.
Civil Defence (SDRF)	• Organize training programmes on first-aid, search, rescue and evacuation. • Conduct regular drills and exercises for diverse stakeholders on a continuous basis. • Prepare a generic Taskforce in disaster mitigation. • Prepare generic categorization of disaster response for multiple hazards (articulation of Quick Response Team, Quick Assessment Team).
Civil Society (NGOs and CBOs)	• Organize exhibitions for public awareness through local institutions. • Strengthen community-based disaster risk reduction processes. • Promotion of Kashmiri folk theatre such as Bhand-Pather, integrating the art with the theme of disaster risk reduction.
Food, Civil Supplies & Consumer Affairs	• Identification of location (low impacted) for warehouse at all levels: District, Block and village. • Construction and maintenance of storage go-downs at strategic (identified) locations. • Procurement of Resources/Equipments/Essential Commodities in warehouse in advance at various micro-zones in sufficient quantity. • Regular replenishment of the procured resources. • Prepare a list of private vendors as they can come handy in case of emergency. • Mapping / Prepare a list of all existing stores. • Strengthening Public Distribution System and ensuring that the poorest of the poor households across all vulnerable groups are included. • Strengthening the empirical provisions of the National Food Security Act, 2013

	specific to the needs of the district.
Development Authority	• Ensure strict regulation of Land use. • Notify risk prone areas by micro-zonation. • Stoppage of unplanned and ad-hoc development activities in the state. • Review and amend planning and development laws as and when required. • Regulate development and redevelopment policies in flood prone areas.
District Administration	• Assessing the status of risk and vulnerability of the existing built environment. • Timely collection of situation report of the risk and vulnerable areas from the officers assigned for the purpose. • Establish committee for safety audit and suggest seismic retrofitting of buildings. • Develop an inventory of the existing built environment in areas around existing landslides and in high hazard zones as per the LHZ maps. • Identify safe zones. • Evacuate people living in low lying areas. • Ensure that EIA and SIA are carried out for any development projects in the district. • Maintain NGO resource inventory and identify their expertise
Economic and Statistics	• Reconstruction of past disaster related statistics for the different Tehsils & zones of the district. • Develop/Prepare formats for generating disaster related statistics / data or developing appropriate MIS. • Proper data maintenance on disaster related statistics.
Environment and Remote Sensing Department	• Prepare risk vulnerability maps of the state with accurate scaling. • Ensure accessibility of available micro-zonation data to all line departments and other stakeholders.
Fire and Emergency Services	• Encourage and ensure that smoke detector, fire alarms and firefighting equipments are installed in all public buildings and government offices. • Strict adherence to fire safety standards in all buildings. • Carry out Safety (Fire) audit in every hospitals and government buildings • Equip block, sub Tehsil and MC HQ with fire hydrant. • Enhance firefighting capacity by conducting regular mock drills. • Train and equip the firefighting team. • Identification of pockets, industry etc. which are highly susceptible to fire accidents or areas/events which might lead to fires, building collapse etc. • Organize awareness campaign on fire related safety measures. • Educating population in risk-prone areas to adopt s a f e t y measures. • Conduct training and drills periodically to ensure higher level of prevention and preparedness. • Training the communities to handle fire emergencies more effectively.
Forest Department	• Routine assessment of forest fire risk. • Promote large scale plantation / afforestation (of indigenous tree) in barren lands and areas prone to landslide, soil erosion. • Review and update the existing regulatory codes and standards for wild life, land and fire protection. • Enforcement of soil/forest conservation measures. • Promoting nurseries for providing seedlings in case of destruction of trees during natural disasters. • Maintain forest fire lines. • Limiting forest access to authorize officials or permitted local people during forest fire prone season. • Promotion of shelter belt plantation. • Involve the community in developing fire detection and prevention management plan. • Seek funding to remove the dead and dying trees from the forest and ensure its replenishment.
Geology and Mining Department	• Enforcement of existing Central Act on Mining: Mines and Minerals Concession

	Rules 1960 & Mines and Minerals Regulation Development 1957. • Strict implementation of existing Mining plans in all the mines in the District regarding safety and accordingly reissuing licenses. • Identify location / land zoning of all the mining lease areas of the state. • Delineation of earthquake and landslide zones. • Ensure slope stability. • Develop a plan for mapping and assessing landslide and regular updation. • Establish seismological network with stakeholders. • Apply Remote Sensing technologies for monitoring landslide movements. • Evolve early warning system for landslide. • Document avalanche incidents.
Geology Department, University of Kashmir, South Campus	• Conduct seismological and other hazard related research. • Prepare catalogues, epicenter and geological maps of earthquake. • Develop mechanisms to transfer scientific information to the local communities in understanding and forecasting natural hazards. • Integrating local knowledge systems with formal knowledge systems in hazard forecasting and mitigation. • Knowledge management in Hazard Research.
Department of Health	• Identify specific risk factors for epidemic prone diseases in the population. • Awareness generation about epidemic prone infections and their prevention. • Training of field personnel, traditional birth attendants, ASHA workers, PRI members, community leaders, volunteers, NGOs and CBOs in first aid. • Measures to be taken to control outbreak of epidemics during and after a hazard. • Promoting and strengthening Primary Health Centres with network of para-professionals to improve the capacity of surveillance and control of epidemics. • Identification of labs on bio-safety levels and improving their capacity. Establishment of one BSL-3 in the state. • Provision of specific essential drugs storage inventory for disasters and MoU with drug production units (govt/ pvt) for urgent supplies in case of humanitarian crises.
IMPA &RD	• Organize awareness camps at all levels of governance. • Conduct workshops / training for all stakeholders by carrying out regular mock drills and relevant training sessions. • Carrying out specific research and updating disaster data base and documentation of the same. • Develop strategies for implementation of risk mitigation. • Training of trainers in professional and technical institutions.
Indian Meteorology Department (IMD)	• Hazard forecasting, warning and monitoring. • Communicate early warning to stakeholders.
Industry and Commerce Department	• Planning permission of any factory/industry should consider the land use planning in view of hazard, risk and vulnerability of the District. • Prepare list of factories which have a potential hazards. • Spread awareness about the factory hazards to the community
Information and Public Relation	• Launch awareness campaign regarding safety measures against potential hazards using media, campaigns, development and distribution of leaflet, posters, meetings, workshop on priority basis. • Develop multi-hazard IEC material for publications and distribution. • Formulate literature of do's and don'ts for building in local/vernacular languages. • Dissemination of upgraded seismic resistant. • Educate public in basic response measures.
Irrigation and Flood Control Department	• Prepare flood management plan at all levels of governance. • Delineation of flood prone areas. • Ensure that safe citing in flood prone area is being done. • Improvement of design for irrigation and flood protective structures. • Ensure fortification of weak embankments.

	• Construction o f check dams, flood protective walls, flood diverting channels. • Provide water level gauge at critical points along the rivers, dams and tanks. • Construction of rain gauge at Tehsil level. • Install flood gauge at the head works of canal/river. • Periodic assessment of danger levels and wide publicity of those levels. • Prepare maps or alternate routes. • Identify and maintain of materials/tool kits required for emergency response. • Create public awareness regarding various types of primary and secondary hazards through media campaigns. • Strengthening and upgradation of existing flood forecasting system. • Establish infrastructure for flood warning and dissemination. • Strengthen and stabilize traditional irrigation systems. • Encourage local community participation in designing and constructing relevant structures.
IT Department	• Public awareness programme through street plays, seminars, by publishing DRR messages and clippings in news channels and other media. • Exploring new media to create a culture of resilience. • Exploring options of community radios.
J&K Project Construction Corporation (JKPCC)	• Develop a model building bylaw that is unique to the state of Jammu and Kashmir and to the District thereof.
Labor and Employment Department	• Strict implementation of the Factory Acts and Rules for the safety of worker. • Strict implementation of work regulations.
Media	• Educate the masses against potential hazards and its preventive measures through awareness generation. • Networking with community and the concerned authority to share knowledge and best practices on effective approach. • Sharing information on the anticipation hazard with accuracy.
Municipal Council/ Committees	• Strict regulation of building bye-laws. • Enforcement of Existing Building By-Laws. • Separate funds to be allocated for building audits. • Ecosystem and environment clearance needs to be incorporated for permit of building construction. • Soil testing should be done for clearance of building construction (both private and government). • Structural engineering and safety audit procedures needs to be in place. • Ensuring the continuous availability of Rapid Visual Screening experts. • Prepare a set of Guidelines/Norms/Checklist to declare a building unsafe for habitation. • Regular Monitoring and Auditing of lifeline infrastructures: Schools, Hospitals, Government Offices, Aganwadi Centres, Shelters, Bridges, Post offices, and Roads. • Government buildings should be screened under BOCA guidelines. • Ensure that all government buildings, hospitals have ramps. • Prepare list of building codes violators and take stringent actions against them on a periodic basis. • Retrofitting of old and weak buildings. • Review and Regular Updation of Building byelaws as and when required. • Establish committee for safety audit and suffest seismic retrofitting of buildings. • Equip department with the necessary resources for snow clearance.
National Highway Authority	• Construction of snow avalanche control structures such as: prevention structures, stepped terraces, avalanche control piles, snow cornice control structures, retaining walls, deflecting berms and avalanche track mounds.
Panchayati	• Promote seismically safe construction at village/block level.

Raj Institutions	• Prepare community and village level disaster management plans.
Public Health Engineering Department	• Develop checklist and contingency plans to deal with secondary hazards. • Detection of leakage of drinking water in the pipeline should be done on a regular basis using digital detectors. • Periodic upgradation of equipments. • Regular monitoring and disinfections of water bodies/catchment area through prior awareness activities and supply of inputs. • Strengthening the sanitation structure and water distribution system in coordination with Central Water Board.
Public Works Department(R&B)	• Develop building by-laws on account of potential hazards (flood, earthquake, windstorm, landslide, fire). • Strict adherence to building codes / by laws. • Regular monitoring of life line structures. • Carry out safety audit of all critical life line infrastructures. • Retrofitting of weak and aged infrastructures. • Ensure that the retrofitted infrastructures are earthquake/ flood proof. • Repair roads and bridges in anticipation of hazard. • Construction of snow gauge at necessary points. • Equip department with the necessary resources for snow clearance and allocate sufficient funds for the same.
Red Cross	• Strengthening capacity of the community by generating awareness on do's and don'ts of potential hazards. • Train community and volunteers in the field of medical first aid.
Revenue Department	• Co-ordinate in Issuing land use regulations and guidelines taking into account the potential hazard. • Assist the concerned authorities in enforcement and enactment of land use practices. • Ensure that department-wise contingency plans are developed at all levels. • Review, update and amend the plan as per the requirement. • Ensure that DRR component is mainstreamed in the district development schemes and projects. • Setting up of EOCs/ERC and equipping it with the essential life line infrastructure and communication network. • Initiate in developing terrain specific warning dissemination system. • Ensure that the control room is 24x7 operational. • Construction of disaster shelter, disaster management stores which should be accessible by diverse vulnerable groups. • Facilitate training of professionals like engineers, geologists, scientists in the field of disaster management. • Identify specific authorities for crowd management and help formulate guidelines for the same.
Rural Development	• Integrate DRR in rural development scheme like IAY, SGRY, MNREGA, IWMP, NRDWP, SAGSY, RKVY, Fodder and Food Development Scheme, Rural Infrastructure Development Fund and enhance the capacities of vulnerable population. • Revise construction guidelines under Rural Development schemes. • Encourage water harvesting and conservation. • Provide self-employment schemes for employment generation. • Popularize indigenous rain water harvesting techniques.
Snow & Avalanche Study Establishment (SASE)	• Ensure snow avalanche forecasting and warning. • Use infrasonic sensors to monitor snow avalanche activities. • Technological Innovation in dealing with snowfall and avalanche.
State Industrial Development Corporation (SIDCO), Small Scale Industrial	• Strict implementation of Factory Act. • Planning permission of any factory/industry should consider the land use planning in view of hazard, risk and vulnerability of the State. • Install eco-friendly technology in industrial areas. • Ensure that all essential installations meet the carrying capacity and capable

Development Corporation Limited (SICOP)	of withstanding working conditions. • Application of Science and technology and engineering inputs to improve industrial infrastructures. • Establish infrastructure for onsite and offsite warning dissemination.
Pollution Control Board	• Strict implementation of guidelines issued by Central/State Pollution Control Board.
Telecommunication Department	• Prepare contingency plan for emergency situations. • Make arrangement for emergency communication in case the normal network fails. • Develop alternate means of communication which are culturally and socially accepted.
Transport/Traffic Department	• Prepare traffic management plan. • Develop appropriate mitigation plans to deal with road accidents • Develop designs and plans for evacuation and closure of traffic routes. • Exploring alternative road management options. • Re-routing roads in avalanche prone areas. • Enforcement of Motor Vehicle Act. • Regulation of quality of vehicle. • Regulation of speed governance to mitigate road accidents. • Identify black spots (accident prone areas) in the District:

CHAPTER- 5
PREPAREDNESS MEASURES

5.1 RESOURCE AVAILABILITY

The primary focus is to enable the decision makers to find solutions on availability of equipment and human resources required to combat any emergency situation. A District Disaster Resource Network has to be established to collect, compile and update information on resources available and integrate with the GIS – based state resource network for timely use. The different agencies involved at the time of (i) collection and compilation, (ii) creating GIS based network and access, (iii) maintaining and updating the network needs to be identified.

Table 5.1 Resource Planning for Disaster Preparedness

Strategies	Task	Responsibility
Resource Mapping	✓ Identify available resources viz. human, financial and equipment for disaster preparedness and response with - Dist. Level - Tehsil level - Village level - Public sector - Private sector - Community level ✓ Identification of gaps of resources as per the need. ✓ Delineate processes for procurement of lacking resources.	Dist. Collector; Fire and Emergency Services; Municipal Council; Civil Defence (SDRF); Para Military Forces; Traffic Police; Forest Department; Police; Irrigation and Flood Control; Power Development Department; Agriculture Department Horticulture Department; Food, Civil Supplies & Consumer Affairs; Veterinary Department; Animal Husbandry Department; Health Department; Government Medical College; Education Board; Social welfare; Red Cross; SDM; Block Development Officers; NGOs.

The format given in Box 5.1 should be filled in by the Controlling Officers in the District of the respective stakeholders. The stakeholders as identified from above table includes the Fire and Emergency Services Department, Civil Defence (SDRF), Para Military Forces, Traffic Police, Forest Department, Police, Irrigation & Flood Control Department, Power Development Department, Agriculture Department, Horticulture Department, Food Civil Supplies & Consumer Affairs Department, Veterinary Department, Animal Husbandry Department, Health Department, Government Medical College, Education Board, Social Welfare, Red Cross, Sub-Divisional Magisrates, Block Development Officers, NGOs. The availability of resources should be regularly monitored and updated on IDRN Website to combat any emergency situation in the District. Information in the database will enable stakeholders in DRR to assess the level of preparedness for specific hazards.

India Disaster Resource Network (IDRN) has already taken an initiative to collect and collate information on resources available in the country/State/District for emergency response and to enhance the decision making capabilities of Government functionaries in quick response to

emergencies. IDRN is accessible to the Emergency Officers, District Collectors and other disaster managers at various levels of Government. A web-enabled centralized database for the IDRN is operational enabling quick access to resources to minimize response time in emergencies. The system gives the location of specific equipments/specialist resources as well as the controlling authority for that resource so that it can be mobilized for response in the shortest possible time. All the proactive steps shall be taken to verify and update dataset on IDRN database as per pre-devised formats ('Form1' & 'Form2A, 2B & 2C') provided on the IDRN Website.

Table: 5.2 Format for Resource Mapping and Periodic Update

Name of the Department:				**Date:**
Human Resource		**Equipment/ infrastructure**		**Funds**
Total number of personnel (staff) available	Total number of personnel trained in disaster context	Type of equipments / infrastructure	Quantity / Numbers of equipment / infrastructure	Total amount of funds available with the department for handling emergency situation/ equipments (including capacity building & training

5.2 COMMUNITY BASED DISASTER MANAGEMENT

The plan recognizes that people are often the first responders to any disaster situation. Their capacities determine the extent to which communities are able to resist and recover from the consequences of catastrophic events. In this context, this plan suggests some broader strategies for strengthening community preparedness. Some of these steps would involve

i. Identifying and working with vulnerable population and groups at risk.
ii. Communicating and generating awareness about their vulnerability and nature of risks to these populations.
iii. Evolving and designing participatory institutions in dealing with disaster risk and mitigating them, including the development of culturally and geographically suited disaster preparedness measures.

The purpose of any community based disaster preparedness is to strengthen local level capacities for disaster response. In order to enhance communities' capacity, the plan envisages creating necessary awareness about hazards, risks, vulnerability and response. Thematic areas that need to be specifically addressed for community preparedness are the following.

i. **Developing Village Contingency Plans:** Specific attention should be given to process underlying on who makes the plan and how it is made. The steps in developing village contingency plans are given below in Table 5.2.

Table 5.3 Steps in Developing Village Contingency Plan

Steps in Developing Village Contingency Plan
Step 1: Review and Analysis of Past Hazard Events / Experiences at the Community Level
Step 2: Situational Analysis
Step 3: Hazard, Risk and Vulnerability Mapping at Village Level
Step 4: Opportunity Mapping to identify resources to reduce risks to life and property

ii. **Identifying & Strengthening Taskforce groups:** From the opportunity mapping exercise, community representative and authorities of local governing bodies should collectively identify responsible men, women and youth volunteers who can implement and supervise the activities of the contingency plan. These individuals are

then to form small action groups of 5-10 members vested with a particular responsibility. These task groups are the following:

Table 5.4 Taskforce at Community Level

Taskforce at Community Level
Taskforce 1: Communication and Early Warning
Taskforce 2: Shelter Management Group
Taskforce 3: Evacuation and Rescue Group
Taskforce 4: First aid and Medical Group
Taskforce 5: Sanitation Group
Taskforce 6: Relief Group
Taskforce 7: Patrolling Group
Taskforce 8: Liaison Group between Government and Community

There are certain pre-requisites for the setting up of the community Taskforce. Firstly, local communities should be equipped with adequate and essential medical supply, communication infrastructure and equipment such as radio, wireless systems and extrication equipment. Early warning mechanisms should be established and tested. Local level stockpile for relief and warehouses need to be ensured.

5.3 TRAINING, CAPACITY BUILDING AND OTHER PROACTIVE MEASURES

5.3.1 Training

There are four prime responsibilities in this regard. This involves: -

i. The identification of stakeholders who are to be trained.
ii. The departments and other agencies who will offer the training.
iii. Designing training modules as per the need and context.
iv. Offering the training.

The stakeholders who need to be trained include Civil Defense Personnel, NCC & NSS cadets, personnel belonging to educational and training institutions, Civil Society actors and CBOs, Corporate entities, Personnel of Fire and Emergency Services, Police and Traffic Departments, Disaster Response Teams, Media, Government Officials at different levels, Health Personnel and Personnel in the engineering and construction industry. This plan proposes the following training strategy for preparedness.

Table 5.5 Training Strategy for Preparedness

Components of Training	Stakeholders to be Trained	Trainers/Resource Personnels
Information; Education; Communication; Management & Administration; First aid; Response & Evacuation; Mass casualty preparedness; Emergency coordination; Search and Rescue; Operations	Civil Defence; Police; Fire Brigade; Line Departments; Anganwadi Workers; Medical, para-medical and supportive staff; Civil Society Networks (NGOs); Volunteers from educational institutions; NSS / NCC cadets; Members of PRIs; Local Youth	Fire and Emergency Service Department; Health Department; Social Welfare; Civil Defence; Traffic Police; Police; IMPA & RD; Red Cross; Government Medical College;

5.3.2 Awareness

An important task to generate awareness will be towards information dissemination, education and communication. The various strategies will be advertising in media, demonstration through modern and traditional media that are sensitive to culture and local realities, folk arts, street plays and exhibitions, documentaries, campaigns in schools etc. Some of the crucial strategies and tasks related to awareness generation in preparedness are given below in Table 5.5.

Table 5.6 Strategies for Awareness Generation

Strategy	Task	Responsibility
Information Education And Communication	✓ Imparting awareness about do's and don'ts for various emergency situation through electronic media like television, print, radio, internet, pamphlets, literature, education, in vernacular languages. ✓ Generating awareness on disaster preparedness using mediums like public meetings, speaker announcement, street plays, village Taskforce/ volunteers training, sign board, hoarding, walling, poster, religious and discourses utilizing the services of preachers. ✓ Organizing declamation/debate, poster and quiz competition for mass public awareness	Information Centre; Education Department; Religious leaders; Media; Municipal Council; Elected members; Telecommunication; Civil society; Red Cross; NGOs; PRIs; IMPA; Civil Defence; Line Departments
Fail safe communication and last mile connectivity	✓ Undertake research to establish fail safe two-way communication – information system from state level to disaster site connecting State, District, Tehsil and city/village level. ✓ Set up alert/siren with multi- lingual recorded massages in risk prone areas. ✓ Establishment of multiple/alternative system of warning. ✓ Training/IEC campaign for general public of the risk prone areas. ✓ Plan for re-establishment of disrupted systems of communication and network.	Science & Technology Department: Information Department; District Administration; PRIs; IMPA; Executive Officer Municipal Council; Private Mobile Network Providers.
Plan Testing	✓ Provide copy of the plan to each stakeholder. ✓ Organize mock drills and rehearsal for plan testing. ✓ Lesson learnt through mock drill; identification of gaps through feedbacks and modification of plan. ✓ Organize annual mock drill and updation of plan	District Administration; Science & Technology Department; IMPA; Information Department; PRIs

5.3.3 Capacity Building

Table 5.7 Strategies for Capacity Building

Strategy	Task	Responsibility
Mock Drills	✓ Conduct mock drill periodically. Organize combined mock drills among various actors to create a cordial atmosphere. ✓ Develop training programmes for volunteers to conduct mock drills. ✓ Arrangement of advance preparatory periodic mock drills on disaster management.	Fire and Emergency Service Department; Health department; Civil Defence; Red Cross; IMPA; District Administration;

		Government Medical College
Immediate Response	✓ Ensure availability of rescue materials. ✓ Establish search, rescue, relief and rehabilitation Taskforce. ✓ Co-ordinate with NCC / NSS / Civil Defence/ NGO / UNICEF /Red Cross / other voluntary organizations and PSUs	District Administration; Revenue Department; Fire and Safety; Police; Civil Defence; PRIs
Planning	✓ Carrying out detailed vulnerability analysis and risk assessment in the wards/ villages as per hazards/ disaster. ✓ Preparations of disaster preparedness in consultation with experts on specific subject plans for: Women/housing and infrastructure/ livestock/community based participation/ industrial disaster/ drinking water/ electricity/ land use. ✓ Formulation of various committees for different hazards.	District Administration; Line Departments; PRIs

5.4 TECHNO-LEGAL REGIME

The institutionalization of disaster preparedness in the District requires appropriate techno-legal support systems. These include certain crucial steps such as:

- Operationalize District Level Disaster Management Authority.
- Appropriate legislations pertaining to Emergency Medical Services.
- Development of Standards of Relief and Recovery.
- Preparation and distribution of manuals and handbooks.
- Development of Disaster Management Plans including contingency plans, Departmental Disaster Management Plans and District/Tehsil/City/Village Level Disaster Management Plans. Space should be created in the beginning itself for regular rehearsal, review and updation of these plans. All these plans need to be published and disseminated and should be accessible to concerned stakeholders at all levels.
- The Early Warning Systems needs to be in place and strengthened. There needs to be an integration of localized warning systems with the advanced forms of formal warning systems.
- Safety Measures in terms of safe evacuation routes, identification of places for shelter, alarm system, access to protective equipments, promotion of life saving methods and techniques has to be identified/developed and integrated with the early warning system.
- Strengthening of relief distribution and accounting system at different levels of the District has to be done. This would include strategic measures such as identification of centralized system for receipt, storage and distribution of relief as well as establishing norms/logistical tools of rate contract, procurement and stockpile of relief material.
- Yet another important step will be the strengthening of EOC at District and Sub Division levels. This would include retrofitting of existing buildings, enhancing resources in terms of finance, manpower and equipment. The SOPs will be generated accordingly and there will be specific arrangements for mock drills, logistics, communication means etc.

Table 5.8 Strategies and Techno-legal Regimes for Disaster Preparedness

Strategies	Task	Responsibility
Mock Drills	✓ Conduct mock drill periodically. Organize combined mock drills among various actors to create a cordial atmosphere. ✓ Develop training programmes for volunteers to conduct mock drills ✓ Arrangement of advance preparatory periodic mock drills on disaster management	Fire and Emergency Services Department; Health department; Civil Defence; Red Cross; IMPA; District Administration; Government Medical College
Strengthening Institutional Arrangement and Practices	✓ Creation of District Level Disaster Management Authority ✓ Creation of an Emergency Medical Services Authority (EMSA) ✓ Establish paramedic cadre through training programmes and accredit/license them. Impart training to manpower for emergency services. ✓ Recognize and accredit trauma centres. ✓ Standardize and license ambulance services. ✓ Establish medical emergency access number. ✓ Creation of District EMS Council. ✓ Creation of guidelines for Emergency Care of special section of people like children, elders, BPL beneficiaries, citizens of remote and disaster prone areas. ✓ Development of relief norms and packages	Revenue Dept. Executive Officer Municipal Council/ Committees; PWD; Fire & Emergency Services; Health Department; Irrigation Flood Control Dept; Other Line Depts.

5.5 MEDICAL PREPAREDNESS

A very crucial preparedness strategy will be to strengthen the medical preparedness to disasters and emergencies in the District. This will include:

- The preparation and provision of accessible medical database of public and private facilities available in the District.
- Strengthening and provision of manpower, logistics, equipment and infrastructure, medicines including vaccinations and antidotes, protective gears, disinfectants etc.
- Identification of Medical and Health Incident Command System at all levels of the administrative structure.
- Diverse Taskforce need to be set up.
- Control Rooms need to operationalized and activated.
- A medical management plan including hospital preparedness suited to deal with both natural and man-made disasters has to be evolved and disseminated at levels.
- Training and capacity building of diverse stakeholders associated with the health sector has to designed and conducted. Some of the important themes will be hospital preparedness, first-aid, mass casualty management etc.

Table 5.9 Strategies for Medical Preparedness

Strategies	Task	Responsibility
First Aid	✓ Train volunteer groups in first aid	Red Cross
Awareness	✓ Awareness generation about various infectious diseases and their prevention before and after a	Chief Medical Officer; Government Medical

	hazard event. ✓ Spreading awareness message to stop the outbreak of epidemic.	College; Health Department; Primary and Community Health Centres; ASHA workers
Capacity Building	✓ Resource management: In terms of manpower, logistics, medical equipments, medicines, antidotes, personal protective equipments, disinfectant, vaccines. ✓ Training of field personnel, training birth attendants, community leaders, volunteers, NGOs and CBOs in first aid, measures to be taken to control outbreak of epidemic during and after a disaster, etc. ✓ Manage and develop volunteer groups at district, Tehsil and village level. ✓ Establish DM cell in all associated hospitals to cater any kind of disaster. ✓ Establish Triage in the hospital in case of emergency. Establish early warning, evacuation and EOC practices. Establish Primary Health Centres in all villages. Organizing free medicare camp. ✓ Conducting drills in hospitals. ✓ Formation of adequate number of mobile units with trained personnel, testing facilities, communication system and emergency treatment facilities.	Chief Medical Officer; Government Medical College; Health Department; Primary and Community Health Centres; Medical institutions; Social Welfare.
Logistics	✓ Preparation of authentic medical database for public and private facilities available in the District: Collection of Data, Mapping and gap analysis and Strengthening. ✓ Ensure availability of survival/emergency kits during disaster situation. ✓ Stock sufficient medicines and lifesaving drugs at district/sub- district, PHC and CHC levels. ✓ Arrangement of standby generators for every hospital.	Commissioner of Health; Directorate of Health Services; Chief Medical Officer; Medical institutions
Planning	✓ Identification of Medical Incident Command System -Incident Commander • Dist. Level • Zonal Level • Disaster site ✓ Identification of each section head at each level • Operation • Planning • Logistic • Administration & Finance • Media and Public information ✓ Identification of key members of different Taskforce • Control Room arrangement	District Administration; Revenue Department; Chief Medical Officer; Medical institutions; Social Welfare

	• Departmental Control Room • District and Tehsil Control Rooms ✓ Preparation of Medical Management Plan • Dist. Level • Zonal Level • Hospital Preparedness Plan ✓ Identification of areas endemic to epidemic and natural disaster for emergency operation camps. ✓ Ensure that the nutritional requirements for children expectant and nursing mothers are met. ✓ Practicing constant surveillance of public health measures including immunization and vaccination. ✓ Identification of site operation camps. ✓ Ensure that trained medical staffs are in operation to attend all types of sick and injury cases. ✓ Regular updating of available medical staff with their contact information.	
Information and communication	✓ Disease surveillance and transmission of reports to the higher authorities on a daily basis. ✓ Obtain and transmit information on natural calamities to District Control Room.	Medical & Health Dept. Chief Medical Officer; Medical institutions; Social Welfare
Others	✓ Disinfecting drinking water sources to prevent the spread of water-borne diseases. ✓ Arrangement of treatment and transportation of the injured to the hospital. ✓ Develop a network of volunteers for blood donation with blood grouping data.	Medical & Health Department; Chief Medical Officer; Medical Institutions; Social Welfare

5.6 COMMUNICATION

The plan also envisages that there should be appropriate provisions for effective risk communication. Risk communication need not be only from state to communities vulnerable to disasters but it can also be vice-versa. Many times, local stakeholders are the first informers of hazard events, which are later verified and confirmed by formal authorities at the district and state level. An effective communication channel to capture this process of sharing and receiving warning has to be designed and implemented. Apart from these, there is a need to establish hazard/region/culture specific early warning systems or alert systems. The relevant actors and agencies for the same needs to be identified and their capacities need to be enhanced.

5.7 SHELTER MANAGEMENT

Table 5.10 Strategies for Shelter Management

Strategies	Task	Responsibility
Capacity Building	✓ Setting up of Shelter/temporary shelter in suitable and safe places. ✓ Assigning responsibilities to officials for distribution of emergent relief / running of free kitchen. ✓ Provision of lightning facilities for shelter places.	District Administration; Tehsildar; Block Development Officer; PWD; Electric department; Education Department; PRIs; NGOs;
Planning	✓ Identification of shelter places with maps.	District Administration;

	✓ Arrangement of free kitchen in the shelter camps and affected areas.	Tehsildar; Block Development Officer; PWD; Electric department; Education Department; PRIs;NGOs;Health Department
Logistics	✓ Arrangement of food/drinking water/medicine in the shelter places. ✓ Deployment of vehicle. ✓ Deployment of Police Personnel. Arrangement of tents (for workers as well). ✓ Temporary supply of safe drinking water.	District Administration; Tehsildar; Block Development Officer; PWD; Electric department; Education Department; PRIs;NGOs; Health Department; Police; Food, Civil Supplies & Consumer Affairs

5.8 SCHOOL SAFETY

Table 5.11 Strategies for School Safety

Strategies	Task	Responsibility
Techno legal regime	✓ Strict implementation of Hon'ble Supreme Court directions of School Safety dated 13 April 2009; ✓ Strict implementation of Jammu and Kashmir School Education Rules, 2010.	Education Board; School Authority; District Administration; PRIs
Capacity Building	✓ Conduct mock exercises on the perceived disaster in school every six month; ✓ Equip the school to be self-reliant, till the first respondent arrives; ✓ Participatory exercise, to practice taking various life- saving measures during the occurrences of a disaster and evacuation of the school buildings after the disaster has occurred should be conducted; ✓ Formation of various DM teams in school: Disaster Awareness Team, Early Warning & Information Dissemination Team, Evacuation Team, Search & Rescue Teams, First Aid Team, Fire Safety Teams, Transport Safety Team.	Education Board; School Authority; District Administration; PRIs
Planning	✓ Setting up of School Disaster Management Committee (SDMC); ✓ Formulation of DM plan in each school. ✓ Formulation of DM structure in each school; ✓ Establishment of DM committee with Principal as its Chairperson; ✓ <u>School Disaster Management Plan should include:</u> • Hazard and safety assessment; • Various School DM teams; Delineation of roles and responsibilities; • Required Equipment; • Evacuation plan- Assembly Areas, Location of School Control Room; ✓ <u>The Coordinator before conducting a mock drill exercise should review:</u>	Chief Education Officer; Education Board; School Authority; District Administration; PRIs

	• The updated School Disaster Management Plan; • The type of disasters in which the mock exercise is to be conducted (to be given by the Principal of the school); • Incident Commander during mock exercise; • The presence of members of various school DM Teams; • The Floor Evacuation Plan; • The location of School Control Room; • The assembly areas.	
Logistics	✓ Daily stock of the situation; ✓ Deployment of vehicle; ✓ Arrangement of sound system for information dissemination; ✓ All concerned departments should prepare an Inventory of Resources both human and infrastructure; ✓ Providing material machinery and manpower immediately soon after the demand by the special relief teams from the affected villages; ✓ Dispatch emergency repair gangs equipped with food, bedding, tents and tools only on the recommendation of the concern officer; ✓ Procurement and transportation of Relief materials to affected pockets/areas.	Deputy Commissioner; District Administration; Chief Education Officer; PRIs

5.9 FOOD SUPPLY AND NUTRITION

Table 5.12 Strategies for Ensuring Food Supply and Nutrition

Strategies	Task	Responsibility
Techno legal regime	Strict implementation of Infant Milk Substitute Act, 1992 (amended in 2003).	Social Welfare; Health Department
Capacity Building	Provision of alternative crop strategy for maximum output of Kharif crop and a better ensuing Rabi crop; Provide insurance coverage of crops.	Agriculture Department; Horticulture Department
Infant Care	Integrating infant feeding during emergencies. Ensure adequate strategies to maintain optimal infant and young child feeding as it is paramount for child's survival	Social Welfare; Health Department

5.10 ANIMAL WELFARE

Table 5.13 Strategies for Animal Welfare

Strategies	Task	Responsibility
Capacity building	✓ Establish cattle camps to take complete care of the cattle population; ✓ Encourage fodder cultivation wherever feasible; Arrangement of safe shelter for animals; ✓ Ensure insurance cover to livestock through Livestock development board where the department provides 50% of the total premium; ✓ Ensure that adequate staff is available by	Animal Husbandry; Animal Welfare Board & Society; Veterinary Hospital PRIs

	establishing work schedule by cattle camp and hospital administrator; ✓ Construction of mounds/local strategies for safe shelter of animals; ✓ Training of volunteers and creation of local units for carcass disposal.	
Logistics	✓ Procurement of fodder and medicine for animals in selected outlets; ✓ Ensure supply from molasses to cattle feed plants; ✓ Ensure that extra supplies and materials should be obtained quickly; ✓ Ensure that sterilized surgical packs are stored in protective cabinets; ✓ Mobilizing community participation for carcass disposal.	Animal Husbandry; Animal Welfare Board & Society; Veterinary Hospital PRIs
Planning	✓ Monitor the prices of fodder in selected places/ market; ✓ Carry out thorough survey of cattle sheds which are more vulnerable to collapse all over the District; ✓ Foresee expected injuries and illness; ✓ Determine sufficient amount of drugs and medicine in case of emergency; ✓ Develop emergency admission procedure (with adequate record keeping); ✓ Promote the eradication and control of animal diseases, treatment of injured animals; ✓ Ensure proper sanitation (disposal of carcasses) to avoid outbreak of epidemics; ✓ Identify various water sources that are required by animals in case of prolonged hot and dry spells.	Animal Husbandry; Animal Welfare Board & Society; Veterinary Hospital PRIs
Information and communication	✓ Provide information to all staff of veterinary hospitals about the disaster, likely damages and effects and ways to protect life, equipment and property; ✓ Establishment of Police Information Centre with a means of communication, to assist in providing an organized source of information.	Animal Husbandry; Animal Welfare Board & Society; Veterinary Hospital PRIs
Others	✓ Rescue injured animals in collaboration with other emergency service departments; ✓ Protection of abandoned and lost cattle.	Animal Husbandry; Animal Welfare Board & Society; Veterinary Hospital

5.11 EOC – PREPAREDNESS

This section specifically deals with the functions and roles of EOC during the preparedness phase.

Table 5.14 Emergency Operations Centre – Preparedness Phase

Strategies	Task	Responsibility
Early Warning	✓ Ensure functioning of warning system & communication systems; ✓ Facilities for early warning like radio, TV, police wireless and telephones should be made available; ✓ Public Address System should be installed in all associated hospitals;	District Collector/ Revenue Department; IMD; Line Departments

	✓ Installation of hotline/communication system. Arrangement of vehicle and sound system for spreading the information.	
Capacity Building	✓ Setting up Control Room and manning of control room round-the-clock; ✓ Equipping the Control Room with following: *District maps showing identified school building/shelters;* *List of Resources Persons with contact address database on Resources & Inventory;* *First Aid & other basic medical assistance;* *One retiring room with adequate facilities such as: Generator sets/Emergency light /Candles etc; Telephone, Fax, Satellite phones, telephonic linkage with Army, Para-Military like ITBP, CRPF etc; Printer & Modem; Thermometer, Fire extinguisher, White Hard board & soft board;* ✓ Ensure IEC through: • *DM Cell, Tehsildars, BDO's, NGO's, Street plays, Workshops,* Walling*'s, Public Relations, Media etc;* ✓ Capacity assessment of different NGO's need to be recorded in order to work hand in hand with the government officials at the event of calamities; ✓ Assignments of specific duties to officers/Sr. Officers at Headquarters; ✓ Ensure the formation of village level Disaster Management Committee through Block Development Officers; ✓ Create awareness with the target groups. ✓ Each ward/offices should act as Disaster Management Units (DMU); ✓ Equip district headquarter and Tehsil headquarter for providing all the necessary services and facilities to the affected areas / villages; ✓ Set up forest range wise firefighting parties headed by one FPF inspector equipped with firefighting equipments; ✓ Reporting centres are put on extra alert with complete duty roaster and contact details and location of Reporting centre; ✓ Pre-positioning of staff or site operation centres; Establish at each sub-station a disaster management toolkit comprising cable cutters, pulley blocks, jungle knives, axes, crowbars, ropes, hacksaws, spanners; ✓ Ensure that adequate staffs are available by recalling personnel out of station officers or those on leave when required and assisting extension officers to establish work schedule; ✓ Set up teams of extension personnel and assistants for visiting disaster sites.	District Collector; Police Fire Brigade; NCC; NSS; Civil Defence; NGOs; PRIs; BDOs; IMD; Communication Department Line Departments
Planning	✓ Prepare department wise resource checklist;	District Collector;

	✓ Assess preparedness level and report the same as per the format to district control room every six months and consider suggestions for improvement of the response document DDMAP; ✓ Regular updating of Disaster Management Plan on the basis of past experience; ✓ Collect the information on the agencies who will involve at the time Disaster; ✓ Regular updating of Telephone numbers; ✓ Review of advance preparation undertaken at field level; ✓ Categorizing Hazard zones and strategy meeting to combat; ✓ Prepare a notebook for recording the information on hazard wise Do's and Don'ts; ✓ Activate District Control Rooms and depute senior officers from time to time to review the receipt of information and dissemination; ✓ Linkage with other line departments; ✓ Advance preparatory/mock drills through, Civil Defence volunteer/Institutions/NGOs on management of Disaster; ✓ Arrange meeting with stakeholders such as: Sectoral Departments/Police/Army/ Paramilitary/ NGOs for assigning specific responsibility that need to be carried out at the event of a disaster; ✓ Prepare an accessibility map showing the location of temporary shelter camps; ✓ Decentralize disaster management plan at the local self-government level and adjacent level for effective response; ✓ Sufficient funds for all types of hazards may be kept available for all the department; ✓ Review and update precautionary measures and procedures; ✓ Keep a check on high tension lines, towers, substations, transformers, insulators, poles and other equipments from the time of receipt of alert warning. ✓ Firefighting control room in each Gamma unit should be activated and operationalized round-the-clock with duty roaster.	Communication Department; All line Departments;
Logistics	✓ Funds for manual clearance should be kept available for areas where machine cannot be displayed; ✓ Procurement of pre-operative items like snow clearance machine, snow cutter, disaster management store, trucks, tippers, light vehicle, etc; ✓ Mobilizing machine manpower; ✓ Providing of basic equipments and installation of equipments in the specific DM areas; ✓ Forest Protection Force teams in different Gamma units should work together in close coordination	District Collector; Communication Department; All line Departments; Food, Civil Supplies & Consumer Affairs Department

	with Forest Department territorial staff; ✓ Divide the whole firefighting operational plan into range wise with respective range officers supervising the whole operations; ✓ Maintain a list of storage points and facilities available, dealers of food stuffs; ✓ Ensure buffer stock of fuel exists; ✓ Arrange emergency generator on loan if not available in the hospital; ✓ Purchasing of resources in advance and kept ready in the district; ✓ Storing of non-perishable items in Disaster Management Store (DMS); ✓ Stock emergency equipments which may be required after a disaster; ✓ Procurement of pre-operative items; ✓ Deployment of early warning infrastructure like sufficient machinery and dumper to handle any situation; ✓ Update the Inventory of Resources; ✓ Take note of the calamity situation in the district over the next one-year through District & Tehsil Level Natural calamity meeting and through other agencies; ✓ Take stock of the DCR and make it functional as per SOP that are prepared earlier; ✓ Check stock of the Public Distribution System and arrangement of the temporary go-downs; ✓ Take stock of Resource/Resource personnel of other departments viz. Police, Fire, Civil Defence and of NSS/NCC/NYKS; ✓ Assist the district authorities to make arrangements for stand by generators in the following public service form at the time of receipt of alert warnings: Hospitals, PHE, Collectorate, Police Stations, Telecommunication Buildings, Meteorological Stations; ✓ Take stock of road cleaning equipment and vehicles for relief operation; ✓ Proper record keeping and transmission of information all the levels; ✓ All valuable equipments and instruments should be packed in protective coverings and stored in the damage-proof room.	
Information and communication	✓ Provide communication facility to the inaccessible villages; ✓ Ensure the functioning of warming systems & communications systems; ✓ Dissemination of Warning/Information; ✓ Provide information to all concerned people about impact of disaster on crops and plantations and also information on ways to protect the same; ✓ Warn people about the impending danger and provide information on the rescue shelter.	District Collector; District Information Officer; Education Department; All line Departments; Municipal Council; Other Dist. Authorities

Evacuation	✓ Identification of safe zones. ✓ Resources like snow cutters should be made available from the month of October. ✓ Funds for manual clearance should be kept available for areas where machine cannot be displayed. ✓ Identify shortest possible foot routes and transportation in consultation with village heads. ✓ Identify machinery and other equipments to save life and property. ✓ Identify expert man power for rescue and evacuation of the people from the dangerous spots. ✓ Evacuation of people from affected areas. ✓ Choppers should be pressed into for emergency evacuation for places which remain close due to closure of passes. ✓ Recording of list of cut off areas with alternate route map. ✓ Updating of Maps displayed in DCR with up-to-date information.	District Collector; District Relief Team
Public Health	✓ Arrange emergency supplies of anesthetic drugs; ✓ Request from central warehouse on an emergency priority basis, those supplies likely to be dispatched to the hospital immediately.	Health Department Municipal Council/ Committee.

5.12 KEY RESPONSIBILITIES OF STAKEHOLDERS

5.12.1 District Administration:

The general responsibilities of the District Administration with respect to the preparedness are given below:

- Prepare District Disaster Management Plan.
- Meeting with district level officials at headquarters and chalk out emergency plan with vulnerable areas and resource list.
- Overall supervision and management of disaster affected areas.
- Collect information from different areas and to act accordingly.
- Identification of places for opening of operational sites.
- Arrange food and other basic requirement for emergency response.

The specific roles of key officials within the District Administration are given below in the tables (Table 5.14).

Table 5.15: Roles and Responsibility of District Administration & Line Departments in Preparedness

Authority	Roles & Responsibility
Deputy Commissioner	• Equip with relevant data pertaining to the district. • Maintain list of official manpower available which he/she should use in case of emergency. • Issuing alert to concerned Tehsil level DM committee and the responsible personnel of various shelters sheds. If person deployed on shelter shed is not available, it will be brought to the notice of the DC/ADC to provide alternate official.

	• Activate the District Control Room and keep close vigil over the situation.
District Treasury Officer (Chief Finance Officer)	• Keep track of incident related costs, personnel and equipments record and administering procurement contracts associated with the incident.
District Collector	• Convene the district level natural calamity meeting whenever required. • Designate one or two officers as the Nodal Officer to carry out the disaster risk management activities in the District.
District Project Officer	• Help the Nodal Officer in developing the work plan for the District. • Provide technical support for preparedness and mitigation plan for the District and the levels below. • Training of Master Trainers along with the resource persons and Superintendent of Police (SP). • Facilitate the training of Disaster Management Committees and training of DM teams at all levels.
District Information Officer	• Managing information flow to media giving media briefs, arranging media visits etc.
District Disaster Management Committee	• Formation of committee under the Chairmanship of District Collector. • Assist in preparing district disaster preparedness and mitigation plan. • Approve the Work Plan of the District for Disaster Preparedness Programme and help in implementation of the programme.
Department of Public Health Engineering	• Development of checklists and contingency plans. • Prior arrangement of water tankers and other means of distribution and storage of water to the risk prone areas. • Provision of safe drinking water to all habitats. • Ensure sanitation in all block areas. • Identification of appropriate potential water supply. • Ensure sufficient supply of drinking water and regular cleanliness /chlorination of all water sources. • Adequate prior arrangements to provide water and halogen tablets at identified sites to be used as relief camps or in areas with high probability to be affected by natural calamities • Maintain list of manpower and materials available in the district.
Agriculture/ Horticulture Department	• Establishment of pests and disease monitoring system. • Management of control activities following crop damage, pest infestation and crop disease to minimize losses. • Pre-positioning of seeds and other agro-inputs in strategic points so that stock is readily available to replace damage caused by natural calamities. • Detail response manuals to be drawn up for advising the farmers for different types of disasters, e.g., rain failure in July or September and development of a dynamic response plan taking into account weekly rainfall/snow patterns.

	• Promotion of drought, snow and flood tolerant seed varieties. • Provide information about the hazard and likely damages to crops and plantations. • Provide fodder to the animals which would be affected by any type of hazard. • Establish communication with District and Block/Tehsil control rooms and departmental officer within the division.
Food, Civil Supplies & Consumer Affairs Department	• Stock piling of food and essential commodities in anticipation of disaster. • Adopt appropriate preservatives methods to ensure that food and other relief stock are not damaged during storage, especially precautions against moisture, rodents and fungus infestation. • Arrange food and other basic requirement for emergency response. • Maintain list of wholesale traders of local market and traders dealing with temporary shelter materials. • Maintain list of petrol pump dealers and medical shops. • Maintain list of storage agents with quantity of monthly allotment and uptake. • Diversion of essential commodities to probable pockets to be affected as and when required.
Department of Sheep / Animal husbandry	• Eradication and control of animal diseases, treatment of injured animals. • Carry out surveillance of pests and diseases. • Protect abandoned and lost cattle. • Provide shelter and fodder to the animals which would be affected by any type of disaster. • Mobilizing community for carcass disposal. • Disposal of carcasses ensuring proper sanitation to avoid outbreak of epidemics. • Organize transport, storage and distribution of seeds/fertilizers/ pesticides. • Establish communication with District and Block/Tehsil control rooms and departmental officer within the division.
Veterinary Department	• Constitute animal rescue team which would be available during any type of disaster. • Arrangement of anesthetic drugs and vehicles for injured animal.
Health and Medical Service Department	• Assess preparedness level at District, Block and Community levels. • Developing a network of volunteers for blood donation with blood grouping data. • Formation of adequate number of mobile units with trained personnel, testing facilities, communication systems and emergency treatment facilities. • Arrangement of standby generators for every hospital. • Good number of ambulance should be made available in District Headquarter. Ambulances should always be ready.

	• Lifesaving drugs should be utilized and replenished on and on. • Stock Position of life saving drugs, ORS, IV fluids and other equipment should be done. • Strengthen disease surveillance. • Establish communication with District and Block/Tehsil control Rooms and Taskforces.
Police Department	• Establish communication with District and Block/Tehsil control rooms and departmental officer within the division. • Ensure that all communication equipments including wireless are regularly functioning. • Deployment of extra wireless units in vulnerable pockets. • Co-ordinate with the District Administration. • Over all traffic management and patrolling of all highways and other access roads to disaster sites. • Maintain information on manpower available at each level. • Appoint officer as a nodal officer on behalf of Sr. • Superintendent of Police. • Keep watch on antisocial elements, rumor mongers and those elements who want to take advantage of the situation. • Identify hazardous situations reviewing safety implications, investigating accidents etc. • Provision of security in transit camps, relief camps, feeding centres, cattle camps, cooperative food stores & distribution centres.
Irrigation and Flood Control Department	• Dissemination of flood warning. • Undertake the responsibility to repair irrigation channels and flood protection activities. • Stockpile of sand bags and other necessary items for breach closure at the Panchayat level. • Store sufficient material for drought and other type of disaster. • Inspection of bunds of dams, irrigation channels, bridges, culverts, control gates and overflow channels. • Inspection and repair of pumps, generator, motor equipments, station buildings. • Monitoring and protection of irrigation infrastructures
Defence / Home Guard	• Triage of casualties and provision of first aid and treatment. • The Commandant should work in close coordination with the district administration and shall have access to all the available manpower, machinery and materials.
Social Welfare Department	• Prepare a list of all the Anganwari Centres (Village wise) in the district along with infrastructure details (i.e. No. of rooms available in the centres, bathroom etc). • Prepare/Equip Anganwadi centres/Schools for shelter purposes during disaster. • Deploy Anganwadi workers as Volunteers. • Prepare a database of all the staff posted in different Anganwari centres.

Forest Department	• Keep saws (both power and manual) in working conditions. • Trekking and camping materials including diverse routes to be made readily available.
Municipality	• Providing basic urban services of viz. sanitation and Conservation, potable water, Street lighting, Disposal of carcasses, Shelter and lodging facilities. • Prepare special teams to look keenly in the area to stop pollution. • Prepare schedules which will play an important role in the cleanliness in the area.
Transport Department	• Maintain list of vehicles which can be used for emergency operations. • Requisition vehicles, trucks, and other means of transport to help in the emergency operations. • Ensure all vehicles follow accepted safety standards. • Build awareness on road safety and traffic rules through awareness campaign, use of different IEC strategies and training to school children. • Arrange transportation means during the occurrence of any type of hazards. • Formation of rescue team for evacuation of people.
PWD	• Keep a list of earth moving and clearing vehicles / equipments (available with Govt. Departments, PSUs, and private contractors, etc.) and formulate a plan to mobilize those at the earliest. • Inspection and emergency repair of roads/ bridges, public utilities and buildings. • Meeting with district level officials/ officials at Headquarter and chalk out emergency plan with vulnerable areas and resource list. • Establish communication with District and Block/Tehsil control rooms and departmental officer within the division. • Arrange extra vehicles/ heavy equipments, such as front end loaders/ towing vehicles/ earth moving equipments/ cranes. • Should give priority to reopen the blocked/closed roads. • Provide route strategy for evacuation and relief measures. • Inform all staff about hazards, likely damages and effects. • Maintain information on manpower, machinery and materials at all the places in the district.
Fire and Emergency Services	• Always keep ready a good number of vehicles to combat situations. • Linking VHF network and fire service with Revenue and Police networks. • Should work in close coordination with the District Administration and shall have access to all the available manpower, machinery and materials.
Power Development Department	• Prepare contingency plan to ensure early electricity supply to essential services during emergencies and restoration of electric supply at an early date

	• Identify materials/tool kits required for emergency response. • Stand-by arrangements to ensure temporary electricity supply or generator. • Emergency inspection by mechanical engineer of all plant and equipments. • Inspection and repair of high tension lines/ substations/ transformers/ poles etc. • Ensure and educate the minimum safety standards to be adopted for electrical installation and equipments and organize training of electricians accordingly.
Department of Education	• Prepare a list of all the educational institutions (village wise) in the district along with infrastructure details (i.e. no. of rooms available in the institution, bathroom etc) for evacuation and relief shelters. • Prepare a database of all the staff posted in different educational institutions.
Information Department	• Manage information flow to media giving media briefs, arranging media visits etc.
Rural Development Department	• Arrangement of alternative communication/generator sets etc. • Prepare vulnerability maps at block levels. • Maintain list of cut off areas with safe route maps. • Ensure convergence with village committee. • Maintain list of storage facilities, dealers of food. • Pre-positioning of staffs for site operations centres. • Preparation of shelters in clubs, schools, halls • Collection of tents, blankets, torch lights etc.

CHAPTER- 6
RESPONSE MEASURES

Response measures are those which are taken instantly prior to, and following, a disaster aimed at limiting injuries, loss of life and damage to property and the environment and rescuing those who are affected or likely to be affected by disaster. Response process begins as soon as it becomes apparent that a disastrous event is imminent and lasts until the disaster is declared to be over. Since response is conducted during periods of high stress in a highly time-constrained environment and with limited information and recourses (in majority of the cases), it is by far, the most complex of four functions of disaster management. Response includes not only those activities that directly address the immediate needs, such as search and rescue, first aid and shelters, but also includes systems developed to coordinate and support such efforts. For effective response, all the stakeholders need to have a clear perception/vision about hazards, its consequences and actions that need to be taken in the event of it.

The aim of disaster response measures need to be aimed at rescuing those who are affected or likely to be affected by hazards. This involves minimizing the impact of injuries, loss of life and damage to property and the environment. Usually disaster response is carried amidst periods of heightened stress and often with constraints of time, information and resources. Apart from addressing the immediate needs and functions of search and rescue, it also involves the activation and coordination of various lifeline systems.

6.1 ESTABLISHMENT OF DISTRICT EMERGENCY RESPONSE CENTRE (ERC)

Response measures are those that are taken immediately prior to and following disaster impact. Such measures are aimed at saving lives and protecting property and dealing with the immediate damage caused by the disaster impact. Disaster response measures include those that are aimed at limiting casualties, alleviating hardship and suffering, restoring essential life support and community systems, avoiding further damage and losses, and providing the foundations for subsequent recovery.

In countries which are frequently prone to major disasters, specialized Emergency Response Centers (ERC) have been set up, which houses trained personnel and response equipments. The concept of Emergency Response Centers (ERCs) has also been institutionalized by the Nodal Ministry. The main objective of ERC is to minimize any possible adverse impact on the people, environment and property.

As far as the establishment/construction of Emergency Response Centre in district Doda is concerned, no such scheme/proposal has been received from the State Government so far. However, the need for advanced ERCs was felt during several occasions like floods & earthquakes wherein the services of Army and CRPF were rendered due to shortage of adequate trained personnel and sophisticated equipments for search & rescue operations. For this purpose, the District Emergency Operations Centre shall also function as Emergency Response Centre, until any scheme/proposal from State Government shall be launched.

6.2 ALERT MECHANISM – EARLY WARNING

On the receipt of warning or alert from any such agency which is competent to issue such a warning, or on the basis of reports from District Collector of the occurrence of a disaster, the response structure of Doda District will be put into operation. The details of agencies competent enough for issuing warning or alert pertaining to various types of disasters are given below.

Table 6.1 Agencies involved in issuing first alert

Disaster	Nodal Agencies
Earthquakes	IMD, ISR, GSI
Floods	IMD, Irrigation & Flood Control Department
Windstorm/ Rains/ Cloudburst/ Cold-Waves	IMD, Revenue Department, Irrigation & Flood Control Department, Agriculture/ Horticulture Departments
Avalanche	IMD, ISR, SASE
Drought	Agriculture/Horticulture Department
Epidemics	Health & Family Welfare Department
Industrial & Chemical Accidents	Industry, Labour & Employment Department
Fire	Fire & Emergency Services

The EOCs and ERC will be put on full alert and expanded to include branch arrangements, with responsibilities for specific tasks, depending on the nature of disaster and extent of its impact. The number of branches to be activated will be decided by the Deputy Commissioner/District Collector at the District level. All line departments and Nodal Officers will work under the overall supervision and administrative control of the District Collector. All the decisions taken in the EOC have to be approved by the District Incident Commander. Immediate access to the disaster site through various means of communications such as mobiles, VSAT, wireless communication and hotline contact needs to be established and maintained. As mentioned earlier, the EOCs and ERC in its expanded form will continue to operate as long as the need for emergency relief and operations continue and the longer term plans for rehabilitation are finalized. For managing long-term rehabilitation programmes, such as reconstruction of houses, infrastructure and other social amenities, the responsibilities will be that of respective line departments through a well-structured R&R Programme.

6.3 ACTIVATION OF EMERGENCY OPERATION TASKFORCES

The District Disaster Response structure is activated on warning or occurrence of a disaster. Taskforces are activated according to pre-determined SOPs, as appropriate for the nature of the hazard or disaster. Activation can be:

- In anticipation of a District level disaster, or
- Occur in response to a specific event or problem in the district.

On activation, coordination of warning and response efforts will operate from the District Control Room and Information Centre (DCIC).

To activate a Taskforce, the Collector or designated Incident Commander will issue an activation order. This order will indicate:

- The nature of needs to be addressed
- The type of assistance to be provided
- The time limit within which assistance is needed
- The District or other contacts for the provision of the assistance
- Other Taskforces with which coordination should take place, and
- Financial resources available for Taskforce operations.

Special powers are conferred on Incident Controller during disasters. The principal organization leading each Taskforce is responsible for alerting the appropriate authority when use of these special powers is required to accomplish warning, relief or recovery objectives give to a Taskforce.

6.4 SEARCH AND RESCUE

The District Collector, in conjunction with local authorities will be responsible for the search & rescue operations in an affected region. In doing so, the Collector will be guided by relevant disaster management plans and will be supported by Government Departments and local authorities. Table 6.2 shows the key components and actors of the rescue services.

Table 6.2: Key Components and Actors in Rescue

Components	Tasks	Responsibility
Rescue Service	✓ Rescue the victims under debris in damaged buildings. ✓ Give necessary first aid to such casualties at the post before rescue. ✓ Recover the dead bodies. ✓ Carry out demolition of dangerous structures and remove debris.	Rescue Team consist of: - Paramedical Staff - Home Guard - Police personnel Other actors include: - Fire Services - Paramilitary forces - Civil Defence - Civil Society - Civilians
Evacuation	✓ Shift the injured and the affected population from the disaster site. ✓ Employ sufficient manpower and material resources, transport facilities what so ever available in the district for immediate evacuation. ✓ Formation of rescue sub-committee. ✓ Civilian should be evacuated from military areas to prevent their interference with the operation of troops. ✓ Control of spontaneous exodus to prevent panicky condition.	District Administration; SDMs; Tehsildars; BDOs; DFO; SDPO; SHO; Range officer; Fire Brigade; PRIs
Emergency Operation	✓ Rescue people trapped in burning, collapsed or damaged buildings, damaged vehicles, including motor vehicles, trains, industries, boilers and pressure vessels etc. ✓ Control fires and minimize damages due to explosions. ✓ Control other dangerous or hazardous situations such as oil, gas and hazardous materials spill. ✓ Protection of property and the environment from fire damage. ✓ Provide support to other agencies in the response to emergencies. ✓ Investigate on the causes of fire.	SDM/ Tehsildars-Chairman BMO -Coordinator SDPO/SHO - Member BDO - Member Executive Officer MC - Member Zonal Education Officer PWD, PHE PDD PRIs
Relief/ Aid	✓ District Headquarters is the focal point for all rescue and relief activities. ✓ Provide immediate first aid and relief. ✓ Carry out relief operations at one place so that control/sub-control centre can easily issue orders for movement of services. ✓ Organize relief camp. ✓ Immediate freezing of 75% stock of POL Bunkers in the districts and should be used during time of disaster followed by scarcity.	District Administration; Police; Fire Services; Health Department; Education Department; Paramilitary Forces; Civil Defence; Civilians; Civil Society; PRIs

	✓ Assisting in distribution of relief material. Maintaining law and order. ✓ Cash relief/ex-gratia grant to affected families. ✓ Encourage the formation of Mutual Aid and Response Groups (MARGs). ✓ Prepare a damage list to by conducting a preliminary damages assessment at Tehsil/ bock Level/ Panchayat Level. ✓ Help the evacuees for returning to their houses. ✓ Co-ordination between agencies is needed on the issue of compensation.	
Welfare Service	✓ Provide orphans, widows and other vulnerable ✓ people every sort of relief and rehabilitation. ✓ Establish rest centres to provide shelters, food and care to them. ✓ Establish rest centres for homeless citizens. ✓ Collect clothing from NGO's and other like Red Cross and distribute them amongst the deserving and needy people.	Social Welfare Department; PRIs Civil Society; Local Auqaf

6.5 SUBSISTENCE, SHELTER, HEALTH AND SANITATION

6.5.1 Shelter Management

Disasters situations typically result in an immediate need for shelter and protection against an incidence of any disaster. The concerned Government departments and local authorities would provide temporary shelter, health and sanitation services to rescued victims in order to prevent an outbreak of diseases. All the School Buildings in the District shall be used as shelter sheds in case of exigencies. The concerned authorities shall make all the necessary arrangements for providing shelters to common masses and prepare a database of the sufferers with full particulars.

6.5.2 Public Health

The components of public health response are given in Table 6.3 below.

Table 6.3: Public Health and Disaster Response

Components	Tasks	Responsibility
First Aid	✓ Provision of Medical facilities. ✓ Provision of required medications such as dressing, antibiotics, I.V Fluids, steroids, tincture iodine/fly repellants, digestive tonics, phenyl, NSAIDs etc. ✓ Vaccinations after disaster for Food-Mouth Disease and other infections in cattle and livestock. ✓ Vaccinations against Typhoid, Hepatitis A, Cholera etc. ✓ CMO shall ensure that the teams are assigned zones for providing necessary medical assistance. ✓ Medical team shall continue to assist till situation returns to normal.	Deputy Commissioner; Civil Defense; Chief Medical Officer (CMO); Surgeon Specialist; Physician Specialist; Child Specialist; Gynecologist; Microbiologist; Health Supervisor; Sr. Assistant Animal Husbandry.
Ambulance Service	✓ Administer first aid to injured individuals. ✓ Evacuate people to relief camps/shelter	Health Services; Trained Civil Society Volunteers.

Casualty Service	✓ Immediate response in handling the causalities. ✓ Medical assistance should be given to the needy and injured persons. ✓ Carry out on spot first aid facilities. ✓ Transport the patients who are in critical conditions to hospitals for treatment. ✓ In patients having sustained craniofacial (i.e. head and neck region) trauma it is essential to understand that the patient has to be transferred in such a way that the neck area (cervical spine) is put to minimum strain.	Civil Defence; Command Officers; Chief Medical Officer; Civil society; Semi-Govt Organizations; Medical Staff
Management of Epidemics	✓ Draw-up Plans at PHC level to cope with any epidemic. ✓ Immunization against infectious diseases. ✓ Disease surveillance and transmission of reports to the higher authorities on daily basis.	Medical Staff; District Officials
Corpse Disposal Centre	✓ NDMA guidelines regarding corpse disposal would be followed. ✓ Arrange sufficient manpower for burial of dead bodies immediately to prevent spread of diseases. ✓ Recovered dead bodies shall be kept in mortuary of the local hospital dispensaries for identification purpose. ✓ Identified and claimed bodies should be handed over to their kith and kin's. ✓ Assistance in funerals. ✓ Manage the disposal of dead bodies and carcasses to clean the environment. ✓ The process of identification and handing over to next of kin shall be followed. ✓ Mass burial/disposal of bodies shall be the last resort. The bodies shall be disposed in honorable manner ✓ by observing religious and cultural practices in the area	Municipality; Government Hospital; District Hospital; Police; District Administration

6.5.3 Food Supply and Nutrition

Table 6.4 Food Supply and Nutrition Services during disaster response

Components	Tasks	Responsibility
Food Security, Nutrition & Food Aid	✓ Pre-positioning of staff in the areas that are vulnerable to the risk and arrange food and other basic requirement for emergency response. ✓ Assign responsibilities to the officials for distribution of emergent relief and to run free kitchen. ✓ Assign role to trained voluntary staff/ taskforce/Anganwadi workers etc. for delivering effective service. ✓ Provision of supplementary nutrition through Integrated Child Development Scheme (ICDS)/Anganwadi to the vulnerable groups. ✓ Monitor the price through committees from the	DC; SDMs; Tehsildars; BDOs; Social Welfare Department; Health

	Panchayat level. ✓ Ascertain the availability of dry food, drinking water and medicines to the evacuees especially the ones in the in the cut-off and inaccessible areas. ✓ Arrangements for food and ration etc. to be made available to the people. ✓ Prior storage of food grains in the vulnerable pockets. ✓ Make necessary arrangements for air dropping of food packets in the marooned villages through helicopters.	Department; Food Civil Supplies & Consumer Affairs PRI

6.5.4 Water Supply, Sanitation and Hygiene

Table 6.5 Water Supply and Nutrition Services during disaster response

Components	Tasks	Responsibility
Water Supply	✓ Provision of drinking water. ✓ Normal water supply in the affected areas either by arranging tankers or fire tenders. ✓ Desalting and dewatering of the inundated areas. Provision of water supply schemes and check dams across Nallahs and riverbeds. ✓ Disinfection of water sources.	Revenue Department; PHE Department; Municipality; PRIs
Sanitation	✓ Ensure round the clock sanitation and shall take necessary help from NGOs & volunteers. ✓ Provide assistance till situation returns to normal.	Municipality; PRIs; Health Services;- Civil society

6.6 INFRASTRUCTURE AND ESSENTIAL SERVICES

Disasters can result in breakdown of essential infrastructure and support systems such as roads, public buildings, airfields, ports, communication network etc. An immediate priority after a disaster is to bring the basic infrastructure into operating condition and deal with fires and other hazardous conditions that may exist in the aftermath of the disaster. The local authorities would work in close coordination with relevant Government departments like PWD (R&B), Police etc. to restore infrastructure to normal operating condition. Some of the crucial tasks that the PWD (R&B) will take up are given below.

- Maintenance and construction of infrastructure facilities such as roads, embankments.
- Inspect, strengthen and repair all the roads and sewer system.
- Repair power, telephone and sewerage lines on priority basis to restore normalcy.
- Filling of ditches, disposal of debris, and cutting of uprooted trees along the road.
- Schemes should be sanctioned for repair/restoration of public as well as private properties.

Some of the crucial tasks associated with re-establishing road network connectivity is given below in 6.6.

Table 6.6 Establishing Road Network Connectivity after Disasters

Components	Tasks	Responsibility
Road Network Connectivity	✓ Establish Connectivity. ✓ Identification and notification of alternative routes to strategic locations. ✓ Mobilize the community to obtain assistance for clearing blocked roads. ✓ Facilitate movement of heavy vehicles carrying equipments and materials.	PWD (R&B); Police; Fire & Emergency Services; Paramilitary forces; Civil Defence; Civil Society
Transport Services	✓ Availability/arrangement of high ground clearance vehicle. ✓ Maintain the transport in an efficient and road worthy condition. ✓ Make arrangements for quick service training of drivers.	Transport Department; SRTC

6.7 SECURITY

Usually, in a disaster situation, the police and security personnel are preoccupied with conducting search and rescue missions. Some people could take advantage of the situation and resort to looting and other anti-social activities. Consequently, it is necessary that security agencies functioning under the administrative control of the district authorities be geared to prevent this and provide a sense of security to citizens.

6.8 COMMUNICATION

The District Administration and local authorities would communicate to the larger community the impact of the disaster and specific activities that are required to be undertaken to minimize the impact. Some of these activities could include precise communication of the impact of disaster and relief measures being taken and generate goodwill among community and other stakeholders. It would also aim at preventing panic reactions, while providing relevant information and handling welfare enquiries. The communication channel will also act as a feedback mechanism on relief measures and urgent needs of various agencies involved in emergency relief measures and relief.

- A standardized daily situation report will be submitted by EOC at the Sub Division level to the District level EOC, which will be then submitted to the SDMA/NDMA/MHA.
- Based on instructions from the EOC Incident Commander, the Nodal Officers from the Department of Public Information will be responsible for the dissemination of information to the electronic and print media, including press briefing.
- Some of the key tasks that will be carried out as part of information dissemination and creating public awareness of the disaster are given below. These are the responsibilities of information management and dissemination team of respective EOCs.
- Prepare a damage list by conducting a preliminary damage assessment at Tehsil/Block / Panchayat Levels.
- Co-ordinate meeting with the officials at District Control Room at 12 hours' interval and 24 hours' interval with the field to get the up-to-date information of the situation. Regular collection of situation report of the risk and vulnerable areas from the officers assigned for the purpose. Continue to operate till post disaster scenario returns to normal.
- Submission of daily reports and dissemination of correct information through mass media to avoid rumours.

- Generating public awareness through locally acceptable and accessible announcement measures.
- Establish alternate communication links to have effective communication especially in the marooned/isolated areas.

6.9 PRELIMINARY DAMAGE ASSESSMENT

Once a disaster strikes, the Government Departments and the local authorities shall carry out a preliminary 'need and loss assessment' and the District Administration shall mobilize resources accordingly. The members of the rapid impact assessment will be officials drawn from various line departments facilitated by the Tehsildar of the affected Tehsils. The rapid impact assessment report will be detrimental to take decisions on the required rescue and relief operations. The preliminary report should be made available within 24 hours of the calamity.

6.10 FUNDS GENERATION

The State Disaster Response Fund (SDRF) and National Disaster Response Fund (NDRF) are the state and central level funding assistance provided for immediate relief. Under the guidelines, people affected by avalanches, cloudburst, drought, earthquake, fire, floods, hailstorms, landslides, frost and cold waves, and pest attack are eligible for accessing the assistance.

6.11 FINALIZING RELIEF PAYOUTS AND PACKAGES

Relief packages would include details relating to collection, allocation and disbursal of funds to the affected people. Relief would be provided to all the affected families without any discrimination of caste, creed, religion, community, sex or whatsoever.

6.12 POST-RELIEF ASSESSMENT

The post-relief assessment will be aimed at faster recovery and in reducing vulnerabilities to future risks. The District Administration, with assistance from Government Departments and local authorities, will also document learning from the relief experience, which can be inputs into further mitigation, relief or rehabilitation and reconstruction plans.

6.13 PSSMHS IN DISASTER RESPONSE

The District Disaster Management Authority will coordinate the following functions towards ensuring the Psycho- Social Support and Mental Health Services during the disaster response phase.

- **Establish a committee which will coordinate and implement District Mental Health Response Plan.**
- **Conduct a 'coordinated' rapid and detailed needs assessment of mental health and psychosocial issues 'to avoid duplication' in an ethical and appropriately participatory manner.**
- **Share the needs assessment information to all stakeholders and conduct feedback sessions with community.**
- **Ensure that interventions are based on consultation with and, whenever possible, participation of affected communities (include sub-groups varying in interests and power and marginalize) which protect local people's dignity, strengthen local social supports and mobilize community networks.**
- **Increase affected people's awareness of their legal rights and their ability to assert these rights in the safest possible way, using culturally appropriate communication methods.**

- **Activate or establish social protection mechanisms, building local protection capacities where needed.**
- **Provision of emergency Psychosocial First Aid (PFA) acknowledging the cultural and traditional beliefs, practices and sensitivity through mass catharsis, ventilation, resuming ritual practices, organizing regular meetings of the survivors, and providing needs for the children.**
- **Design a referral system for survivors needing specialize intervention/service.**
- **Ensure care for care givers and young children (0-8 years).**

6.14 HAZARD SPECIFIC RESPONSE PLAN

6.14.1 NODAL MINISTRIES, STATE DEPARTMENTS AND DISTRICT DEPARTMENTS/AUTHORITIES FOR SPECIFIC HAZARDS

6.14.1.1Hydro-Meteorological Hazards

Table 6.7: Departments/Authorities for Hydro-Meteorological Hazards

DISASTER	Nodal Ministries/ Department	Nodal State Department	Nodal District Department/ Authority
Flood	MHA/ Ministry of Water Resource	Irrigation and Flood Control Department	Irrigation & Flood Control Department
Drought	Department of Agriculture and Cooperation / Ministry of Agriculture	Revenue Department	Revenue Department/ Agriculture and Horticulture Department
Snow Avalanche	MHA/Ministry of Defence	Snow Avalanche Study Establishment (SASE), DRDO	Revenue Department
Hailstorm	Department of Agriculture and Cooperation/ Ministry of Agriculture	Agriculture and Horticulture Department	Revenue/ Agriculture and Horticulture Department

6.14.1.2 Geological Hazards

Table 6.8: Departments/Authorities for Geological Hazards

DISASTER	Nodal Ministries/ Department	Nodal State Department	Nodal District Department/ Authority
Earthquake	MHA / Ministry of Earth Sciences	Revenue Department	Revenue Department
Landslide	MHA / Ministry of Mines	Revenue Department	Revenue Department

6.14.1.3 Chemical, Industrial and Nuclear Hazards

Table 6.9: Departments/Authorities for Nuclear Hazards

DISASTER	Nodal Ministries/ Department	Nodal State Department	Nodal District Department/ Authority
Chemical and Industrial Disasters	Ministry of Environment and Forests	Department of Home	District Industries & Commerce Department

6.14.1.4 Accidents

Table 6.10: Departments/Authorities for Accidents

DISASTER	Nodal Ministries/ Department	Nodal State Department	Nodal District Department/ Authority
Forest Fire	Ministry of Environment and Forests	Forest Department	Forest Department
Serial Bomb blast	MHA	Department of Home	Police
Building fires	Directorate General Civil Defence, MHA	Department of Home	Police/ Fire & Emergency Services
Building Collapse	MHA	Department of Home	Police/ PW Department
Boat capsizing	MHA	Department of Home	Police, Civil Defense

6.14.1.5 Biological Hazards

Table 6.11: Departments/Authorities for Biological Hazards

DISASTER	Nodal Ministries/ Department	Nodal State Department	Nodal District Department/ Authority
Epidemics	Ministry of Health and Family Welfare	Department of Health and Education	Department of Health and Education
Pest Attack	Department of Agriculture and Cooperation / Ministry of Agriculture	Agriculture Department	Agriculture/Horticulture Departments
Cattle Epidemic	Department of Agriculture and Cooperation/ Ministry of Agriculture	Revenue Department	Revenue/Sheep/Animal Husbandry Department
Food Poisoning	Ministry of Health and Family Welfare	Department of Health and Education	Assistant Controller Food/Food Inspectors

CHAPTER- 7
RECOVERY MEASURES

Recovery is defined as decisions and actions taken after a disaster with a view to restore or improve life and assets of the stricken community, while encouraging and facilitating necessary adjustments to reduce disaster risk. Recovery and Reconstruction (R&R) or comprehensive rehabilitation is the last step in cycle of disaster management. In addition, this is the phase of new cycle, where the opportunity to reconstruction and rehabilitation should be utilized for building a better, safer and resilient society.

Strategies for restoring physical infrastructure and lifeline services may be:

Build Back Better:

This ensures greater resilience, preparedness; and minimum loss in an event of future disaster.

Participatory Planning:

Infrastructure improvement measures need to be balanced with, or at least be in line with, the social and cultural needs and preferences of beneficiaries

Coordination:

A plan of recovery will help better coordination between various development agencies. Damage Assessment and Need Assessment shall be the basis of recovery planning, various sectors for recovery process may be:

- Essential Services: Essential Commodities (eatables), Health, Water, Sanitation Power, Communication & Transport.
- Infrastructural: Housing, Public Buildings and Roads
- Livelihood: Employment, Agriculture, Cottage Industry, Shops and Establishments.

Basic services such as power, water supply, sanitation, etc. should be restored in shortest possible time. Alternate arrangement of water supply, temporary sanitation facilities can be sought with help of special agencies. Special arrangements for provision of essential services should be ensured. It can include creating temporary infrastructure for storage and distribution of water supply, running tankers, power supply and sanitation facilities.

7.1 DAMAGE LOSS ASSESSMENT

7.1.1 Sector-wise Damage Assessment Format

After an event of disaster, every intending shall communicate the damage-loss assessment to the district authorities, through proper channel, on the devised formats, as given below.

Name of Department:
Dated:
Type of Hazard:

Table No. 7.1: Power

S. No.	Name of Tehsil	Name of village	Item/ Services	No. of unit damaged	No of villages affected	Population affected	Recovery measures
			Feeder				
			Transformers				
			HT Lines				
			LT Lines				
			Electric Poles				

Note: To be planned after initial damage assessment by concerned departments

Table No. 7.2: Health

S. No.	Name of Tehsil	Name of Village	Items	Particulars	Total
1			PHCs (Damaged / Destroyed)	No. of buildings	
				Estimated Loss (Rs. In Lacs)	
2			CHC's (Damaged / Destroyed)	No. of buildings	
				Estimated Loss (Rs. In Lacs)	
3			Other Buildings (Damaged/Destroyed)	No. of buildings	
				Estimated Loss (Rs. In Lacs)	
4			Human lives lost	Male	
				Female	
5			Person who suffered grievous injurious	Male	
				Female	
6			Person who suffered minor injuries	Male	
				Female	

Note: To be planned after initial damage assessment by concerned departments

Table No. 7.3: Social

People in need of immediate rehabilitation including psychosocial support (due to disaster)

S. No.	Name of Tehsil	Village	Men	Women	Children	Total	Recovery measures

Table No. 7.4: Water Supply

S. No.	Tehsil	Village	Type	No. of Unit(s) affected	Population affected	Recovery measures
			Well			
			Bore wells			
			Ponds			
			Water Supply Disrupted			
			Contamination			
			ESR damaged			
			GLR Damaged			
			Sump Damaged			
			Pipelines damaged			
			Stand Post damaged			
			Hand pump			

Table No. 7.5: Housing

S. No.	Name of Tehsil	Name of village	Items	Particulars	Total
1			Fully damaged pucca houses	No. of houses	
				Estimated Loss (Rs. In Lacs)	
2			Fully damaged kutcha houses	No. of houses	
				Estimated Loss (Rs. In Lacs)	
3			Severely damaged pucca houses	No. of houses	
				Estimated Loss (Rs. In Lacs)	
4			Severely damaged kutcha houses	No. of houses	
				Estimated Loss (Rs. In Lacs)	
5			Partly damaged houses (Pucca/kuthca)	No. of houses	
				Estimated Loss (Rs. In Lacs)	
6			No. of huts damaged	No. of houses	
				Estimated Loss (Rs. In Lacs)	

Table No. 7.6: Agriculture/Horticulture

Sl. No	Name of Tehsil	Name of Village	Type of Crop	Total cropped area affected (in Acres)		Estimated Loss to Crops (Rs. In Lacs)		Total
				Agriculture	Horticulture	Agriculture	Horticulture	
1								
2								

Table No. 7.7: Livestock

Sl. No	Name of Tehsil	Name of Village	Item	Particulars	Total
1			Milch animal lost (Buffalo/Cow)	No.	
				Estimated loss (Rs. In Lacs)	
2			Milch animal lost (Sheep /Goat)	No.	
				Estimated loss (Rs. In Lacs)	
3			Draught animal lost (Horse/Bullock)	No.	
				Estimated loss (Rs. In Lacs)	
4			Draught animal lost (Calf/Donkey/Pony/Mule)	No.	
				Estimated loss (Rs. In Lacs)	

Table No. 7.8: Education

Sl. No.	Name of Tehsil	Name of Village	Items	Particulars	Total
1			Primary Schools (Damaged-Fully/Severely/Partially)	No. of buildings	
				Estimated Loss (Rs. In Lacs)	
2			Middle School (Damaged-Fully/Severely/Partially)	No.	
				Estimated Loss (Rs. In Lacs)	
3			Higher Secondary School (Damaged-Fully/Severely/Partially)	No.	
				Estimated Loss (Rs. In Lacs)	
4			Other Educational Institutes (Damaged-Fully/Severely/Partially)	No.	
				Estimated Loss (Rs. In Lacs)	

Table No. 7.9: Public Utilities

Sl. No	Name of Tehsil	Name of Village	Item	Particulars	Total
1			Roads (All)	Length	
				Estimated Loss (Rs. In Lac)	
2			State Roads	Length	
				Estimated Loss (Rs. In Lac)	
3			District Roads	Length	
				Estimated Loss (Rs. In Lac)	
4			Village Roads	Length	
				Estimated Loss (Rs. In Lac)	
5			Bridges	No.	
				Estimated Loss (Rs. In Lac)	
6			Bridges	No.	
				Estimated Loss (Rs. In Lac)	
7			Culvert	No.	
				Estimated Loss (Rs. In Lac)	
8			Hospitals	No.	
				Estimated Loss (Rs. In Lac)	
9			Office Buildings	No.	
				Estimated Loss (Rs. In Lac)	
10			Police Station	No.	
				Estimated Loss (Rs. In Lac)	
11			Shops	No.	
				Estimated Loss (Rs. In Lac)	

Table No. 7.10: Food Supplies

S. No.	Name of Tehsil	Name of Village	Type	No. of Godown(s) damaged	Type of Grain(s) perished	Qty of Grain(s) perished (Ton)	Qty of Grain(s) at risk (Ton)	Recovery measures
			Civil Supply					
			Other					

7.2 GRIEVANCE REDRESSAL SYSTEM

Grievance redressal is an important aspect in the context of providing need based assistance to affected communities with transparency and accountability. It is also ensuring the protection of their rights and entitlements for disaster response services.

Table 7.11: Grievance Redressal

S. No.	Key Person/ Establishment	Contact No.	Address
1	District Administration		Office of Deputy Commissioner/ District Magistrate, Doda
2	DEOC/ ERC		Office of Deputy Commissioner/ District Magistrate, Doda
3.	Police Control Room		S.P. Office, Doda

7.3 LONG-TERM RECOVERY PROGRAMME

Disaster recovery typically occurs in phases with initial efforts dedicated to helping those affected and having immediate needs for housing, food and water. As homes and businesses are repaired, people return to work and communities continue with cleanup and rebuilding efforts. Many government agencies, voluntary organizations, and the private sector cooperate to provide assistance and support.

Some individuals, families and communities that are especially hard hit by a disaster may need more time and specialized assistance to recover, and a more formalized structure to support them. Specialized assistance may be needed to address unique needs that are not satisfied by routine disaster assistance programs. It may also be required for very complex restoration or rebuilding challenges. Community recovery addresses these ongoing needs by taking a holistic, long-term view of critical recovery needs, and coordinating the mobilization of resources at the, and community levels.

Oftentimes, committees, Taskforces or other means of collaboration formed with the goals of developing specific plans for community recovery, identifying and addressing unmet or specialized needs of individuals and families, locating funding sources, and providing coordination of the many sources of help that may be available to assist. Some collaboration focuses on the community level and relies on the expertise of community planning and economic development professionals. Other collaborations focus on individual and family recovery and are coordinated by social service and volunteer groups. All such efforts hope to lay the groundwork for wise decisions about the appropriate use of resources and rebuilding efforts.

Under the National Response Framework, Emergency Support Function (ESF) Community Recovery coordinates the resources of federal departments and agencies to support the long-term recovery of States and communities, and to reduce or eliminate risk from future incidents. While consideration of long-term recovery is imbedded in the routine administration of the disaster assistance and mitigation programs. Some incidents, due to the severity of the impacts and the complexity of the recovery, will require considerable interagency coordination and technical support. ESF efforts are driven by the authorities, focusing on permanent restoration of infrastructure, housing and the local economy.

7.4 MATRIX FORM OF SHORT TERM AND LONG-TERM RECOVERY PROGRAMME

Disaster recovery has three distinct but interrelated meanings. First, it is a goal that involves the restoration of normal community activities that were disrupted by disaster impacts – in most people's minds, exactly as they were before the disaster struck. Second, it is a phase in the emergency management cycle that begins with stabilization of the disaster conditions (the end of the emergency response phase) and ends when the community has returned to its normal routines. Third, it is a process by which the community achieves the goal normal life.

Table 7.12: Short Term and Long Term Recovery

Activity/Action	Estimate of Duration (Short-Term)	Estimate of Duration (Long-Term)
Warning	Hours to a few days	Hours to a few days
Response/Operations	Ongoing	Ongoing
Emergency	1-15 days	1-60 days
Preparation of damage assessment	1-4 days	4-8 days
Disaster declaration	1-10 days	0-30 days
Federal/State mitigation Strategy	1-15 days	15-30 days
Recovery	7-150 days	150-365 days
Temporary building moratorium	<=30 days	<=60 days
Letter of intent to submit HM Grant	<=60 days	<=60 days
Short-term reconstruction	<= 1 year	200-365 days
Long-term reconstruction	100 days to 5 years	5 to 10 years

CHAPTER- 8

REHABILITATION AND RECONSTRUCTION

The rehabilitation and reconstruction phase will be carried out in accordance with the reconstruction and rehabilitation plans framed by District Disaster Management Authority in conjunction with implementing authorities. The guiding principles of rehabilitation and reconstruction are given below.

8.1 KEY PRINCIPLES GUIDING REHABILITATION AND RECONSTRUCTION

- In the reconstruction and rehabilitation phase, the focus has to shift from response and immediate relief to the livelihood enhancement and employment generation plans and programs with food-for work arrangements.
- Every group involved in the social, economic, and physical reconstruction of the affected region must grant and respect people's right to information and right to participate in the planning process, with full freedom of expression at every stage of planning and execution.
- Community participation must be sought through representatives of various socio-economic sections within as a precondition for design, planning, site and material selection, material procurement, construction, and utilization of resources.
- There should be complete transparency and accountability on the part of the District and the donor agencies.
- The vulnerable members of the community should be given the top priority in skilled and unskilled livelihood opportunities arising during the reconstruction and rehabilitation process.
- Whether for cities, towns, or villages, relocation should as far as possible, be avoided.
- New community location should be planned with clear consent from the village commune or the Gram Panchayat.
- Where there is even partial, minimum relocation of a community, forcible, unjust land acquisition should be avoided.
- The scheduled castes, schedules and nomadic tribes, other socially and economically backward class communities, disabled population, women-headed households etc. should be especially protected against land alienation.
- Reconstruction planning should include apart from housing, community amenities like health, education, water supply, grazing ground, etc, all of which can be part of the final village resettlement plan.
- New housing and community reconstruction should have facilities for land conservation, maximum rainwater harvesting, soak pits & drainage, along with other appropriate technology measures to fill water and energy requirements.
- In reconstruction, the choice of technology should necessarily be based on multiple criteria, including self-reliance of the community, availability of the material, and specific hazard proofing technology.
- Wherever possible, retrofitting should be a priority over new construction.
- Representatives of affected communities, people's organizations, NGOs, and the local government should form a body for decision making at every level of planning and execution of a project, where funds and inputs are to come from outside the community.
- All funds received from any agency, national or international, including the collection of surcharge, must be deposited into a separate fund / account related to the specific disaster and must be utilized only for the purpose for which it is assigned.
- An independent High Power Committee with eminent persons from various walks of life should be immediately constituted to monitor the planning and execution, including expenditure at each - District, Zonal and Local - stage.

8.2 COMPONENTS OF REHABILITATION AND RECONSTRUCTION PROCESSES

The key components in the rehabilitation and reconstruction phase are given below.

8.2.1 Detailed Damage Assessment

While a preliminary damage assessment is carried out during disaster response phase, a detailed assessment must be conducted before commencing reconstruction and rehabilitation activities. The relevant Government departments and local authorities shall initiate detailed assessment at their respective level for damages sustained in housing, industry/services, infrastructure, agriculture, health/education assets in the affected regions. Detailed survey of buildings is required for assessment of damage and decision regarding repair, reconstruction and strengthening or demolition. It is the responsibility of the district/local administration, which covers all aspects of private as well as public properties, including loss of crops etc. An inventory of all such details is to be prepared along the estimated costs of damages and sent to the State government who may release the required funds. Certain crucial information that needs to be collected during this phase is given as follows in Table 9.2 below.

Table 8.1: Crucial Information that needs to be collected during the Rehabilitation Phase

Information	Illustration
Number of affected people requiring assistance	• This figure will determine all other estimates and calculations, and therefore, needs to be established as precisely as possible. • Assistance for provisions of temporary accommodation, food, clothing, medical care, etc.
Water needs	• Assessment should examine whether each person is having access to minimum 15 litres of potable water per day to cover drinking, cooking and personal hygiene needs. • Assessment should check whether each hospital in the affected region is able to provide minimum 10 litres per person per day for patients and staff. • The criteria of access to water points, such that one water point per 250 people and the maximum distance from any shelter to the nearest water point should be 500 metres, has to be verified. • Assessment should check whether each family have access to two water collecting vessels of 10-20 litres, plus water storage vessels of 20 litres.
Shelter needs	• Assessment should check whether tents are available for each family comprising of 4-6 people. • Should explore the type of shelter requirements (roofs, walls and floors) in the context of approaching season such as summer/winter/rains. • Should assess the accessibility of locally available shelter resources. • Should access the requirement and type of shelter heating, if necessary. • Assistance sought for repair/restoration of damaged houses.
Nutritional needs	• Assessment should inquire the accessibility of individuals to food rations, in terms of access to at least a minimum of 2,100 kilocalories per person per day. • Special care is to be taken to check the accessibility of special food to treat severely malnourished individuals. • Monitoring of malnutrition using international standards (e.g. Sphere minimum standards) and methods such as weight-for-height, etc. needs to be used.
Sanitation needs	• Assessment should check the availability/accessibility of toilets such that a maximum of 20 people per toilet have access to it. • Assess, whether use of toilets is arranged by household and/or segregated by sex. • Assess the distance of toilets from dwellings such that there should be no

	more than 50 metres from dwellings or no more than a one-minute walk. • Assess the distance of toilets from groundwater sources such that toilets should be at least 30 metres away from any groundwater sources and the bottom of the latrine should be at least 1.5 metres above the water table. • Assess whether there exist containers or a system for disposing of solid waste. • Assess the need and methods for vector control (flies, rats, etc.).
Livelihood needs	• Calculations of assistance for agricultural input, replacement/treatment of livestock. • Calculations of assistance for repairing land and other livelihood resources/materials.
Health and Psycho-social care	• Assess the nature and type of short-term and long-term medical care and support that needs to be given the affected persons. • Assess the nature and type of psycho-social care and support that needs to be given to the affected persons.

8.2.2 Assistance to restore houses and dwelling units

- Recovery support for housing reconstruction should be based on indigenous designs and adaptable to perceived/occurred hazards.
- Housing units that are repaired or replaced should account for future hazard risk in design, construction, and materials.
- Housing solution should ensure access to livelihoods, availability of food and water, access to markets, utilities, and transportation, access to religion and religious facilities and any other routines of daily life during normal times.
- Care should be taken to prevent unintended and negative effects on the natural environment, or should address any environmental impacts that are caused by the intervention.
- Housing solution should be sustainable (environment, technical, financial, organizational and social). The burden on these sustainability dimensions should never be imposed upon the affected communities.

8.2.3 Relocation (need based)

The local authorities in consultation with the people affected and under the guidance of the Government of Jammu and Kashmir shall determine relocation needs taking into account the criteria relevant to the nature of the calamity and the extent of damage. Relocation efforts will include activities like:

- Gaining consent of the affected population;
- Land acquisition;
- Urban/ rural land use planning;
- Customizing relocation packages;
- Obtaining due legal clearances for relocation;
- Getting the necessary authorization for rehabilitation;
- Livelihood rehabilitation measures for relocated communities, wherever necessary.

8.2.4 Re-building Infrastructure

- Repair, replace and re-establish damaged physical, social and economic infrastructure upon which the society's life-lines depend.
- Infrastructure development that accompanies the recovery effort should be accessible to all populations affected, respective to their physical location, and irrespective of their economic, ethnic, religious, or other background.
- Infrastructure solutions must adequately account for sustainable development of the region - the climate, geography, financial and technical capacity, and projected growth of the communities served all needs to be considered. There should be no negative effect on the natural environment, ensuring that any collateral impacts are resolved.

- Ensure sound environmental impact assessment of potential reconstruction sites in which technical, social, political and economic factors should be included to minimize/reduce the exposure of the affected populations to additional health and natural hazards.

Typical infrastructure building activities during the reconstruction phase would include:

- Disaster proofing and retrofitting of buildings.
- Creation/retrofitting of structures such as roads, bridges, canals etc. that may have been destroyed/ damaged due to the disaster.
- Restoration of basic infrastructure facilities, for example, Water Supply Schemes, Power Stations, etc.
- Construction of health centres, first aid centres and hospitals.

8.2.5 Re-building Livelihoods

- Restore livelihood activities by replacing or repairing assets that have been destroyed or disrupted in disaster.
- Enhance the capacities of livelihood related line departments.
- Strengthen Community Based Organizations (CBOs) and communities in planning, implementing, monitoring and evaluating community livelihood rehabilitation plans.
- Diversify or transform livelihood by developing new skills and strategies based on existing knowledge and experience to improve people's resilience.
- Identify new and improved marketing methods and trade routes.
- Ensure that gender sensitive approach/methods are incorporated in the livelihood rebuilding processes.
- Enhance the resilience of communities to future climatic change events by livelihood diversification and biodiversity conservation.
- Organized comprehensive rehabilitation package for livestock-dependent livelihoods including restocking, shelter construction and income-raising activities.
- Establish community based animal health care delivery system to reduce livestock deaths in the rehabilitated area.

8.2.6 Psycho-Social Care and Support

- Impart essential skills of psychosocial care to community level workers engaged in relief, rehabilitation and reconstruction as part of the overall rebuilding process.
- All medical personnel should be trained in the essentials of mental health care so that they recognise these conditions and treat the affected population with specific interventions and thus avoid dependence on non-specific interventions like the use of pain relievers, sleeping tablets, vitamins and injections.
- Providers of psychosocial care should be sensitive to culture, ethnic, religion, racial and language diversities.
- Administrators should integrate psychosocial care as part of the overall care programmes.
- Ensure that Standard Operating Procedure is developed for proper rapport building between care givers and survivors (follow up).
- Carry out psycho social needs assessment at individual, family and community level.
- Conduct periodic assessment on mental health and psycho social needs keeping in mind the physical, social and economic factors that perpetuate mental health.
- Monitor and evaluate PSSMHS intervention.

8.3 FINALIZING RECONSTRUCTION AND REHABILITATION PLAN

The effectiveness of any reconstruction and rehabilitation is based on detailed planning and careful monitoring of the relevant projects. The District Collector/DDMA will oversee reconstruction and rehabilitation work and ensure that it takes into account the overall development plans for the district.

8.4 FUNDS GENERATION

- **Estimation of funds required based on detailed damage assessment reports and consolidation of the same under sectoral and regional heads;**
- **Contracting with funding agencies and evolving detailed operating procedures for fund flow and corresponding agreements and activities.**

8.5 FUNDS DISBURSEMENT AND AUDIT

The District Collector/DC, in conjunction with relevant agencies, shall monitor disbursal of funds by:

- **Prioritizing resource allocation across approved projects;**
- **Establishing mechanisms (like a chain of banks, collection centres, nature of accounts, spread etc) for collection of funds;**
- **Ongoing monitoring and control of fund usage throughout actual project implementation.**

8.6 PROJECT MANAGEMENT

The rehabilitation and reconstruction effort requires the coordinated efforts of several stakeholders. The project management capabilities of diverse stakeholders need to be synergized efficiently such that the project is executed on time, in accordance with the technical specifications and to the satisfaction of the beneficiaries.

8.7 INFORMATION, EDUCATION AND COMMUNICATION

Communication activities are necessary to convey to the larger community the scope and nature of the proposed reconstruction and rehabilitation effort so as to increase the stakeholder awareness and buy-in for the ongoing activities. Hence, the relevant government departments, district administration and local authorities shall undertake:

- Ongoing media management/ Public Relations: To ensure accurate communication of the reconstruction and rehabilitation measures being taken to various stakeholders;
- Community management: This includes communicating to the affected communities with a view to appraising them of efforts being made for their relocation/ rehabilitation/ reconstruction;
- Feedback mechanisms: Using the communication network to get feedback on reconstruction and rehabilitation measures.

8.8 DISPUTE RESOLUTION MECHANISMS

The District Collector, in conjunction with relevant agencies, shall institutionalize mechanisms to address beneficiary grievances at various levels, as well as explore innovative ways of dispute minimization like involving the community in reconstruction initiatives. Appropriate mechanism with penalties for dealing with false claims will be evolved to prevent misuse of assistance

CHAPTER- 9
PSYCHOSOCIAL SUPPORT AND MENTAL HEALTH SERVICES (PSSMHS)– MITIGATION PLAN

Disaster Psychosocial Support and Mental Health (PSSMH) that has gained prominence in the past two and half decades have opened up new spaces and opportunities to the exploration of psychosocial dimensions in relation to wellbeing. The conceptualization of mental health and approaches to target the same has seen a sea change since these two and half decades. It has moved from a bio medical understanding to a more comprehensive bio-psycho social approach which has been much more comprehensive than that of the conventional sector of mental health interventions. The traumatic nature of disasters, the attention that it draws on psychological suffering and the non-suitability of conventional ways of addressing distress among a large population has made the shift true to its nature, beyond just the use of terminologies and jargons. More over since disasters warrant a whole range of basic support services such as safety, protection, relief, housing, livelihood etc., it becomes practically possible to comprehensively address all dimensions of wellbeing and thus evolve, research and document comprehensive psychosocial support and care interventions. A balanced approach that bridges the gap between mental health and psychosocial interventions as proposed by WHO, NDMA and IASC is used as the framework to evolve the disaster PSSMH mitigation and preparedness plans for the state of Jammu and Kashmir.

9.1 INSTITUTIONAL FRAMEWORK AND FUNCTIONARIES FOR DISASTER PSSMHS

Table 9.1: Institutional framework at District level

District level				
Technical, Scientific, Academic Regional and Nodal Institutions	**Mental Health**	**Disaster Management**	**Ministry of Health**	**Other Ministries and Line Departments**
Local Centres - Referral Centre for Mental Health Services – District Hospital and Medical College Psychiatric Departments to be Nominated – DMHP will coordinate and monitor the referral services in District. Centres for PSS at the District Level – Social Work/ Psychology/ Sociology Departments, DIET (District Institute of Education and Training), NGO at District Level, Civil Society Groups, Academic Institutions	District Mental Health Programme - Nodal Officer	DDMA – Chairperson DDMA will coordinate with DMHP authorities to provide training and services	District Health Department - Chief Medical Officer	Labour, Women and Child Welfare, Human Resource Development, Social Welfare, Youth affairs and sports, tribal affairs, social justice and empowerment, housing and urban poverty alleviation, agriculture, culture, information and Broadcasting, Micro, small and medium enterprises, minority affairs
District Working Group for PSSMHS				

- **Effective planning, execution, monitoring and evaluation of PSSMHS activities**

Institutions at the District level	Functionaries at the District level
Family and Community	NSS, NCC, NYKS, CLW, Civil Defense, First Responders, NDRF, Panchayati Raj Functionaries, Local Non-Government and Community based organizations, Civil Society Functionaries, Department of Education Functionaries, Health Department Functionaries, NRHM, NHRM, NRLM, NMEW, MGNREGA functionaries.
DIET (District Institute of Education and Training), DMHP, NGO at District Level – Infrastructure to be used for mitigation and preparedness	
Academic Institutions, Professional Bodies	
Block Development Office	
Local Panchayati Raj Institutions	
NGOs, Community Based organizations and Civil Society Organizations	
Private Sector Institutions and Organizations – Corporate Sector	

9.2 SECTORAL PREPAREDNESS MEASURES FOR DISASTER PSSMHS

Table 9.2: District-level institutional framework for PSSMHS

Humantarian Sectors	***Preparedness- Action Points***
Protection and human Rights Standards	✓ *Develop mechanism to monitor, report and seek redress for human rights violations.* ✓ *Work with people at risk to identify priorities and develop capacities and strategies for protection and security.* ✓ *Train Armed Forces on International protection Standards.* ✓ *Implement strategies to prevent violence including gender based violence.*
Food security	✓ *Monitor access to keep micronutrients known to influence child's psychological development.* ✓ *Plan and develop equitable distribution according to needs during emergencies.* ✓ *Amend the provisions o f Food Security Act to meet and address the needs of the Disaster survivors*
Housing water and Sanitation	✓ *Conduct participatory assessments on safety and appropriateness of potential sites.* ✓ *Plan to provide emergency shelter for all people (with appropriate targeting of people at risk) in a manner that supports safety, dignity, privacy and empowerment.* ✓ Plan to prevent people being placed in camps long-term. ✓ Plan for the heating of shelters (in emergencies involving cold climates). ✓ Map social dimensions of existing resources, gaps and at-risk groups regarding water and sanitation. ✓ Plan to provide water and sanitation for all people (with appropriate targeting of people at risk) in a manner that supports safety, dignity, privacy and non-violent problem solving. ✓ Amend the provisions of the existing housing schemes to address the needs of disaster survivors.
Health Services	✓ Strengthen the national capacity of health systems for providing MHPSS in emergencies. ✓ Train staff in culturally appropriate clinical care of survivors of gender-based and other violence. ✓ Orient health staff in psychological first aid. ✓ Bring the national essential drug list in line with the WHO Model. ✓ Essential Drug List and prepare emergency stocks of essential

	psychotropic medications. ✓ Develop emergency preparedness plans for institutions. ✓ Amend the provisions of existing health schemes to address the needs of disaster survivors.
Education	✓ *Using participatory methods train and supervise teachers in basic psychological support, children rights, participatort methods, positive discipline and code of conduct.* ✓ Strengthen the capacity of national education systems for school-based MHPSS in emergencies ✓ Establish general and psychosocial crisis plans for schools. ✓ Strengthen emergency education capacities, addressing prominent issues in the curriculam. ✓ Amend the provisions of educational programmes to meet the needs of disaster survivors.
Dissemination Of Information	✓ *Prepare a risk communication streategy for disseminating essential information during emergencies.* ✓ *Advocate against media use of harmfull images and the distribution of inappropriate information.* ✓ Involve key stakeholders in developing, pilot-testing and distributing information on positive copying.
Community Mobilization and Support	✓ Conduct risk analysis, develop a community response plan, including an early warning system, and strengthen local capacity to implement such plans. ✓ Develop mechanisms for mobilization of internal MHPSS resources and integration of external resources. ✓ Train and supervise existing community workers on how to provide appropriate emergency MHPSS services. ✓ Develop community plans on protecting and supporting early childhood development in emergencies.
Livelihood	✓ Conduct livelihood risk analysis and develop a community response plan during emergencies. ✓ Amend provisions of existing livelihood programmes to accommodate the needs of disaster survivors, especially the most vulnerable.

9.3 CAPACITY BUILDING

- Special attention be given to the development of trained manpower, their availability during disasters, knowledge networking and scientific up-gradation at all levels especially in sub/districts prioritized based on hazard, vulnerability and disaster probability
- Mainstreaming the disaster PSSMH aspects in the education system - psychologist, psychiatric social workers, psychiatrist and sociologist
- Standardized training for disaster PSSMHS will be imparted to all MH professionals and paramedics
- Integrating disaster PSSMH component in Continuous medical education (CME) and other TOTs. The training of District Level Master Trainers will be conducted at designated institutes. Training of district level trainers shall be held at administrative training institutes (ATIs), District Institutes of Education and Technology (DIETs), State Institutes of health and Family Welfare (SIHFW), universities and other places. - sensitization, orientation, TOT, basic, advanced and refresher programmes need to be organized

- Integrating disaster PSSMH component in the training of Community Level Workers, Civil defence, first responders, Panchayati Raj functionaries, local non-government and community based organizations, civil society and NDRF personnel.
- Civil defence can be actively involved in training CLWs for disaster PSSMHS.
- Local Universities and National bodies will enhance the infrastructural inadequacies of the training providing organization/ institutions in the district/state.
- NIDM and ATI's NIRD will train and build disaster PSSMH capacities of administrative officials and community representatives.
- Psychological First Aid and Practical Support training and skills to hospital emergency paramedics, ambulance crew, community level workers, students and other first responders to disasters, to enhance the reach of the PSSMHS.

9.4 COMMUNITY ACTIVITIES AND DIRECT SERVICE DELIVERY

- PSSMH services to be formally linked with various health programmes (like NMHP/DMHP, NRHM) as well as non-health development programmes like Rural Employment Scheme, Community Development Programme, NSS/NYKS programmes.
- Community sensitization and information dissemination regarding disaster PSSMH through activities like street plays, dramas, posters, distribution of reading material, school exhibition and interaction with media and publicity
- Need to expand the infrastructure available for management of PSSMHS in mental hospitals and the creation of additional facilities in the District and Zonal level.
- The PSSMH facility in every district has to be enhanced, based on hazard, vulnerability and risk, to address the needs of capacity building for pre and post disaster situation
- Few more zonal centres created or upgraded within medical colleges to meet disaster needs – where ever it is not available the department of psychiatry in medical colleges can be upgraded
- The district hospital and medical college psychiatric departments will be nominated as referral centres
- Private facilities to be enlisted and incorporated in the plans and resource inventory – NGOs, CBOs, medical health facilities, paramedical staff – block development office and panchayathi raj institutions to maintain the inventory.
- India disaster resource network functioning under the ministry of home affairs will be upgraded with PSSMHS related information.
- Coordination mechanisms for operations during disasters to be worked out with private facilities, government, non-government organizations, private and corporate sector.
- Disaster PSSMHS shall form an integral part of all hazard district management plans.
- Amending and extending all social support services/schemes/ programmes under various ministries and line departments to support disaster survivors towards enhancing their PSSMH.
- PRO at district level will be responsible for providing authentic reports – he will collect reports from designated nodal officers of the PSSMHS plan and will distribute it to the media for the general public.

9.5 PSSMHS IN DISASTER RESPONSE

The District level authority will coordinate the following functions towards ensuring the Psycho-Social Support and Mental Health Services during the disaster response phase.

- Establish a committee which will coordinate and implement District Mental Health Response Plan.
- Conduct a 'coordinated' rapid and detailed needs assessment of mental health and psychosocial issues 'to avoid duplication' in an ethical and appropriately participatory manner.
- Share the needs assessment information to all stakeholders and conduct feedback sessions with community.
- Ensure that interventions are based on consultation with and, whenever possible, participation of affected communities (include sub-groups varying in interests and power and marginalize) which protect local people's dignity, strengthen local social supports and mobilize community networks.
- Increase affected people's awareness of their legal rights and their ability to assert these rights in the safest possible way, using culturally appropriate communication methods.
- Activate or establish social protection mechanisms, building local protection capacities where needed.
- Provision of emergency Psychosocial First Aid (PFA) acknowledging the cultural and traditional beliefs, practices and sensitivity through mass catharsis, ventilation, resuming ritual practices, organizing regular meetings of the survivors, and providing needs for the children.
- Design a referral system for survivors needing specialized intervention/service.
- Ensure care for care givers and young children (0-8 years)

CHAPTER -10

LIVESTOCK MANAGEMENT IN CASE OF DISASTERS

Livestock population is the first to be affected in the precarious situations due to to natural disasters viz., floods, drought, volcanic eruption, earthquake, etc. At that time large scale transportation of feed and fodder becomes more difficult to the affected areas. Most of the Govt and Non- government organizations generally remain busy for the welfare of human beings. As a matter of fact, due to this negligience, very difficult situation gradually arises which makes it incapable of controlling the losses due to massive spread of epidemic diseases, particularly during the post disaster period.

Agriculture and allied sectors account for about 24% of Indias Gross Domestic product (GDP). Out of this, animal husbandry and dairy accounts for about 25% and fisheries a shade over 4%. Livestock also provide gainful employment to the rural poor and women. India is second in cattle and first in buffalo population of 185 million and 98 million respectively, second in goat with 124 million, third in sheep with 61 million and seventh in poultry with 489 million. The livestock sector produced approximately 98 million tonnes of milk, 44 billion eggs, 48.5 million kg of wool, and 6million tonnes of meat in 2004–05. The fisheries sector's contribution is no less impressive, either, with 6.4 million tonnes of fish production during the same period. Natural disasters have negative economic consequences in the livestock sector, particularly in developing countries. Droughts, earthquakes, floods, ice storms, wildfires, etc., create havoc with human and livestock population. With increasing globalisation, the persistence of Trans-boundary Animal Diseases (TADs) anywhere in the world poses a serious risk to the world's animal, agriculture and food security and jeopardises international trade.

Disaster Management for livestock should be proper. Livestock population is the first to be affected in the precarious situations due to natural disasters viz, flood, drought, earthquake, snow avalanche fires etc. At that time large scale transportation of feed and fodder becomes more difficult to the affected areas. Transported food for human feeding is tried to be maintained. Because in that period, main target of rescue, relief and rehabilitation is restricted for the people of affected area. Little or meagre help is extended towards the livestock population. Most of the government and nongovernment organizations generally remain busy for the welfare of human beings. As a matter of fact, due to this negligence, a very difficult situation gradually arises which makes it incapable of controlling the losses due to massive spread of epidemic diseases, particularly during the post disaster period. Thus, situation is aggravated for livestock population; there is occurrence of epidemic, particularly during post producer disaster period, causing large number of casualty and huge economic loss to farmers.

10.1 CONSEQUENCES OF LOSSES IN THE ANIMAL HUSBANDARY SECTOR DUE TO DISASTERS

Be it animal disease or a natural disaster, the consequences of loss of livestock in large numbers are predictable. These are primarily:

i) Food scarcity due to shortage of animal origin food, e.g., milk, meat and eggs. Economic crisis due to escalation of food prices (the value of milk output in India is equal to the combined value of paddy and wheat produced).
ii) Environmental contamination leading to epidemics due to massive animal mortality
iii) Loss of valuable germ-plasm and biodiversity.
iv) Loss of employment starting from primary producers, down the food processing and marketing chain
v) Loss of traction power, shortage of manure.
vi) Emotional shock to animal owners.

10.2 DISASTER MANAGEMENT STRATEGIES FOR LIVESTOCK

Considering the economic, political, social and environmental importance of animals and life system of the small holder who depend on them, one may have to consider animal disaster management (in that light).

A disaster management plan for animals shall essentially include:-

a) Retrospective epidemiological study of the disasters in the area and this shall include,
b) Data Collected interpreted & analysed (i.e. information), on the basis of which some prediction can be made.
c) Disaster Vignetting: is a means by which mapping is done on the basis of incidence frequency magnitude, epicentre, and vulnerable areas.
d) Herd profile: The total animal population (herd number), vulnerable animal population as per their species, breed, age, sex etc.
e) Community Profile: The total population, animal owning population their age, sex, socio-economic status, education, cultural distribution etc.
f) Animals at risk: The nature of hazard, the intensity of impact and mortality rate (immediate or delayed).
g) Risk factor analyses: is the analysis of type of risk (identification & analyses).

10.2.1 PREPAREDNESS MEASURES

The following preparations are essential for management of animals during disasters:

i) Development of flood, earthquakes and other natural calamity warning systems. In principle, an EWS would make it possible to avoid many adverse economic and human costs that arise due to the destruction of livestock resources every year. Reliable forecasting would also allow state governments to undertake more efficient relief interventions. Other tools that may provide early warning signals include field monitoring and remote sensing systems. Ideally, field monitoring should provide monthly flows of information on the availability of water and the general state of crop and livestock production. Remote sensing, which relies on imagery satellites, is a valuable tool when used in conjunction with field monitoring. These tools will be integrated to develop an effective EWS.
ii) Establishment of fodder banks at the village level for storage of fodder in the form of bales and blocks for feeding animals during drought and other natural calamities is an integral part of disaster mitigation.
iii) Conservation of monsoon grasses in the form of hay and silage during the flush season greatly helps in supplementing shortage of fodder during emergencies such as drought or flood.
iv) Development of existing degraded grazing lands by perennial grasses and legumes. As a majority of the population in drought- prone areas depends on land-based activities like crop farming and animal husbandry, the core task for development will be to promote rational utilization of land for supplementing fodder requirements during emergencies.
v) Provision of free movement of animals for grazing from affected states to the unaffected reduces pressure on pastures and also facilitates early rehabilitation of the affected livestock. In emergency situations, the presence of livestock can exacerbate conflict when refugees with animals compete for reduced forage and water resources. To prevent this, what is

technically known as emergency de- stocking programme, will be instituted. This programme provides for the intentional removal of animals from a region before they die.

vi) Treatment and vaccination of animals against contagious diseases in flood affected areas. Routine prophylactic vaccination of livestock in flood-prone area significantly reduces the severity of the post-disaster outbreak of any endemic diseases. Since animals affected by floods are prone to pick up infectious diseases, vaccination and veterinary camps will be set up to treat and immunise livestock against various diseases. The creation of a community based animal health care delivery system may significantly reduce livestock deaths in a region. Vaccination programmes and primary animal health care will prevent some of the drastic losses associated with the onset of rains.

10.2.2 During Disaster

During disasters, the following steps should be considered in order to manage the livestockproperly:

A. Disposal of carcasses:

Animal carcasses during calamities cause environmental pollution resulting in human health hazards and spread of different epidemic diseases. Thus, proper steps should be taken for disposal of carcasses by suitable measures. Carcasses can be a hazard to the environment and other animals and require special handling. To minimize soil or water contamination and the risk of spreading diseases, guidelines for proper carcass disposal must be followed. Disposal options include calling a licensed collector to remove dead stock or burial in an approved animal disposal pit. Alternatives include incineration and burial. Burial avoids air contamination associated with burning carcasses and is economical. Since the heat in the pile eliminates most pathogens, burial can also improve the bio-security of farming operations. A plan for the disposal of dead livestock should address selection of the most appropriate site in each village or cluster of villages for burial or burning, disinfection process, provision of costs for burial or burning, material and equipment required for burial and burning

B. Community Management:

It is always advisable to rear the animals in post-calamity period by Community management as stated below:

a) Working bullocks, cows and calves should be kept in separate enclosure.

b) The animals should be provided with clean water near their housing place.

c) Weak cows with calf and newly-born calves should be housed separately and cheap sheds should be provided.

d) In flood affected areas, the animal enclosures are to be made on high lands.

C. Hygienic Measures:

Animal enclosures have to be cleaned properly and suitable disinfectants should be applied time to time.

D. Segregation of ill animals:

During calamities, diseased or ill animals are to be segregated separately and suitable treatments are to be provided.

E. Prevention and Control of Diseases:

It has been observed that the livestock population is also affected during post disaster period due to rapid spread of different epidemic diseases. If suitable measures are not taken in time may result huge losses to the farmers. To reduce worm load of animals, immediate steps should be taken for deworming. The animals in the camp should be vaccinated against infectious diseases.

10.2.3 After Disasters

Since following disaster, animals are to be rescued and collected in relief camps; the immediate priority would be controlling and combating disease. The animal health component of disaster mitigation will include:-

a) Promotional herd health care such as nutrition, pregnant animal care, care of new-born and young animal etc.

b) Prevention of risk is through vaccination, pest/ vector, control, sanitation etc.

c) Specific therapy by way of early diagnosis and treatment.

d) Rehabilitation: help animals to recover from any trauma or fear.

e) Disposal of dead animals: Carcass utilization is one method. Many animals in which treatments are unlikely to be beneficial may have to be put to sleep i-e. Euthanasia ("mercy killing").

10.3 RESOURCE PLANNING FOR DISASTER MANAGEMENT FOR LIVESTOCK:

a) **Assessment of available manpower** i.e. Veterinary doctors, Para-veterinary staff, ancillary staff.

b) **Store and equipment** include the medicine, surgical and medical appliances, diagnostics, lifesaving equipment etc.

c) **Logistical needs:** that is the need for fuels, lighting equipment, tents, sheds, Grassbedding, trolleys, material for sanitation, storage of feed and fodder and water.

d) **Ambulance and outreach facility: -** transporting animals is more cumbersome whenthey are sick, injured and non-ambulatory.

e) **Veterinary medical facilities** as veterinary hospital, mobile veterinary units etc. grazingand watering facility.

10.4 TRAINING PLAN FOR DISASTER MANAGEMENT FOR LIVESTOCK

a) Training veterinary personnel, attendants etc.

b) Training administrators like B.D.O., telephones & Fire Service personel, Civil defence personel, Sarpanch/ Village headmen, administrators

c) Animal Health awareness for trainees such as social workers, volunteers.

d) Allied Planning (Organisation)

e) Augmenting political and administrative support

f) Involving N.G.O.'s, C.B.O's, media, animal welfare organisations and other volunteer groups.

g) Formation of veterinary service groups at State and Central Government level.

h) Organization of district/area level bodies, assigning specific tasks and responsibilities.

i) Establishing communication channels, alternate channels like ham radios.

j) Establishing alternate source of power, energy etc.

k) Plan for monitoring and supervision.

l) Publicity and public relation activities (Vet-PR)

m) Plan for mitigation and rehabilitation of animal owners along with animals.

10.5 ESTABLISHMENT OF CONTROL ROOMS

For information exchange and co-ordination of veterinary support, a Control Room shall be established at District level manned by Chief Animal Hubandry Officer. This will handle co-ordinated information among directorate of Animal Husbandry, District Veterinary Hospitals, rural hospitals of the affected area etc. Control room shall keep link with and co-ordinate supplies from agencies. The control room would be working on feedback from affected area on the extent and nature of emergency and the need for special equipment/emergency equipment (pain killer, sedatives, antibiotics, fracture equipments etc).

10.6 RECOMMENDATIONS AND FUTURE STRATEGIES:

i) Buffer stock of straw and feeds in the areas for endemic disasters under local administration.
ii) Storage of vaccine and adequate stock of medicines.
iii) Insurance coverage of costly animals.
iv) Implementation and taking benefits from various Central/State sponsored schemes viz., Assistance to States for Control of Animal Disases (ASCAD); National Project on Rinderpest Erradiction (NPRE); Foot & Mouth Disase Control Programme (FMD-CP); Professional Efficiency Development (PED); Animal Quarantine & Certification Services (AQCS); National Veterinary Biological Products Quality Control Centre (Institute of Animal Health), etc.
v) Urea molasses blocks or complete feed block with straw could be suggested for future strategies which can be used as reserve for scarcity and can also be transported to far off places.
vi) NGOs have to motivate for animal welfare during disasters.
vii) Extension education of farmers for management of livestock during disasters.

CHAPTER -11

TECHNOLEGAL FRAMEWORK

There has been a paradigm shift in the approach to disaster management in the District. The new approach proceeds from the conviction that development can not be sustainable unless disaster mitigation is built into the development process. Laws pertaining to planning, development and building construction are very important to achieve planned and safe development in urban and rural areas.

District Administration/local authorities shall ensure that existing building bye laws, land-use zoning regulations and development control regulations correspond to the requirements for safe construction, as laid down by various agencies such as Bureau of Indian Standsrds (BIS), for seismic zones IV & V. Transfer of disaster resilient construction by capacity building of professionals involved in activities related to construction sector (Town Planners, Engineers, Architects, Builders and Masons) shall be promoted. Modern technology such as Remote Sensing, GIS and GPS shall be used in disaster risk reduction and crisis management.

11.1 TECHNO LEGAL REGIME

The institutionalization of disaster preparedness in the state requires appropriate techno-legal support systems. These include certain crucial steps such as:

- Operationalize State Level Disaster Management Authority.
- Appropriate legislations pertaining to Emergency Medical Services.
- Development of Standards of Relief and Recovery.
- Preparation and distribution of manuals and handbooks.
- Development of disaster management Plans including contingency plans, departmental disaster management plans and District/Tehsil/ Village level disaster management plans. Space should be created in the beginning itself for regular rehearsal, review and updation of these plans. All these plans need to be published and disseminated and should be accessible to concerned stakeholders at all levels.
- The Early Warning Systems needs to be in place and strengthened. There needs to be an integration of localized warning systems with the advanced forms of formal warning systems.
- Safety Measures in terms of safe evacuation routes, identification of places for shelter, alarm system, access to protective equipments, promotion of life saving methods and techniques has to be identified/developed and integrated with the early warning system.
- Strengthening of relief distribution and accounting system at different levels of the state has to be done. This would include strategic measures such as identification of centralized system for receipt, storage and distribution of relief as well as establishing norms/logistical tools of rate contract, procurement and stockpile of relief material.
- Yet another important step will be the strengthening of EOC at state, region and district levels. This would include retrofitting of existing buildings, enhancing resources in terms of finance, manpower and equipment. The SOPs will be generated accordingly and there will be specific arrangements for mock drills, logistics, communication means etc.

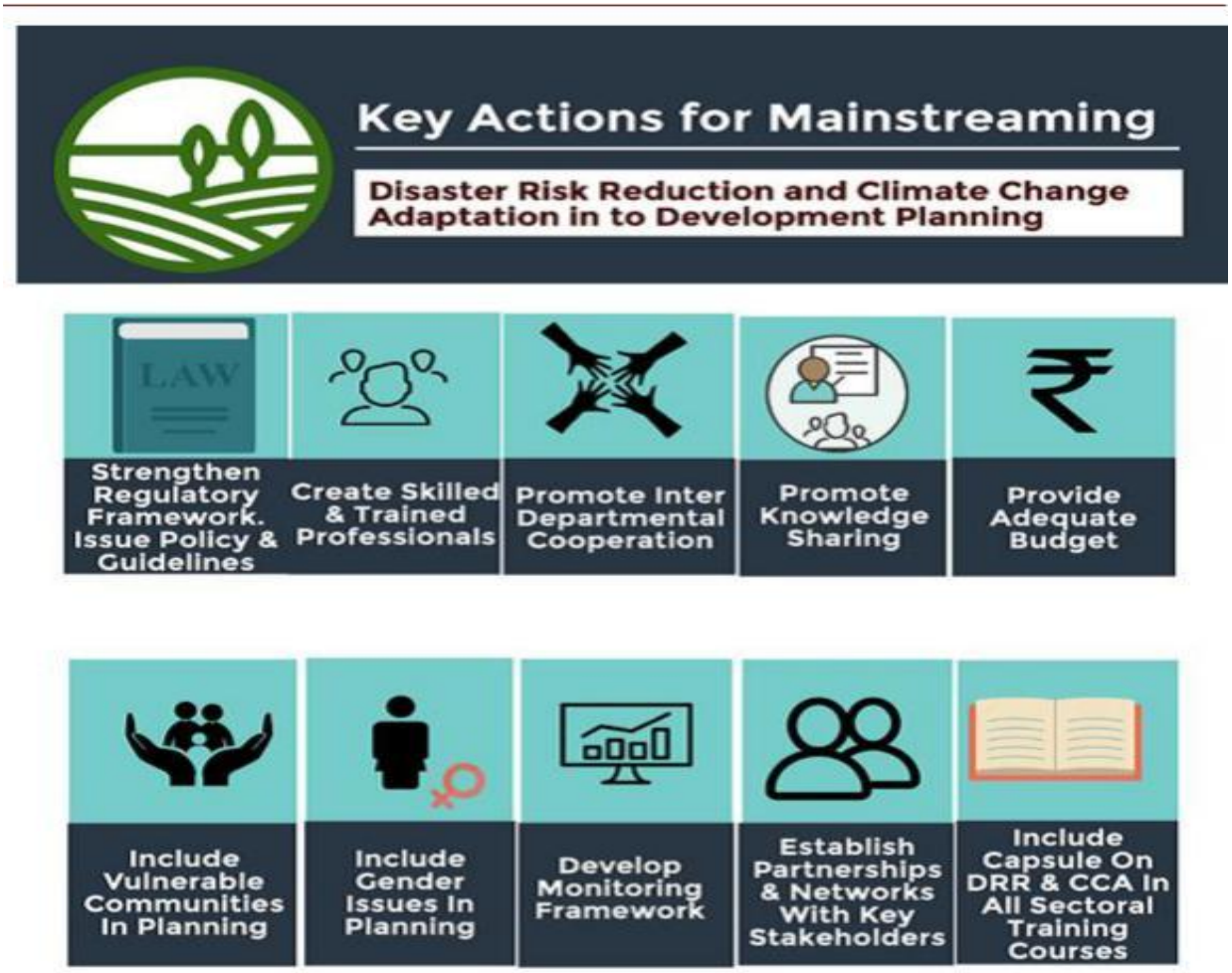
11.2 Strategies and Techno- Legal regime for Disaster Preparedness:

Table 11.1: Strategies and Techno-legal Regimes for Disaster Preparedness

Strategies	Task	Responsibility
Mock Drills	✓ Organise combined mock drills among various actors tocreate a cordial atmosphere. ✓ Develop training programmes for volunteers to conduct mock drills. ✓ Arrangement of advance preparatory periodic mock drills on disaster management.	District Disaster management Authority, Fire & Emergency Services (F&ES), State Disaster Response Force (SDRF), Irrigation & Flood Control (I&FC), Health, other line Departments, Civil Defence, Red Crosss.
Strengthening Institutional Arrangements and Practices.	✓ Strengthening of District Disaster management Authority. ✓ Establishing and operationalising of District Emergency Operation Centre (DEOC). ✓ Establishing of paramedic cadre through training programmes and accredit/license them. ✓ Impart training to manpower for emergency services. ✓ Recognize and accredit trauma centres, standardize and license ambulance services. ✓ Establish District wide emergency medical access number. ✓ Creation of guidelines for Emergency care of most vulnerable groups in the society like children, old, women, etc., ✓ Development of relief norms and packages.	District Disaster Management Authority, Fire & Emergency Services (F&ES), State Disaster Response Force (SDRF), Irrigation & Flood Control (I&FC), Health, other line Departments, Civil Defence, Red Crosss

To regulate development within the framework of a development plan by fulfilling the basic purpose of such regulations i.e. to promote quality of life of people by organizing the most appropriate development of land in accordance with the developmental policies and the land use proposals contained therein.

CHAPTER-12
MAINSTREAMING DRR CONCERNS INTO DEVELOPMENTAL PLANNING/PROJECTS



Mainstreaming Risk Reduction' describes a process to fully incorporate DRR into relief and development policy and practice. It means radically expanding and enhancing DRR so that it becomes a normal practice, fully institutionalised within the departments' relief and development agenda. While "Mainstreaming Climate Change Adaptation" has emerged as a new area of focus for building resilience of vulnerable communities by introducing climate adaptive planning across departments (agriculture, water resources, rural development etc.) and vertical bureaucratic levels (national, state, district, block and village).

Disasters are determined by a combination of factors. This includes types of hazards that affect people and the different levels of vulnerability among different groups of people. People's vulnerability is determined by social systems and power, not by natural forces alone. It is overwhelmingly acknowledged that women, persons with disabilities and socially excluded groups (low castes and minorities) are at higher risk with regards to natural hazards. Disaster risk reduction (DRR) programmes of the District need to respond to these needs and built on capacities of such vulnerable groups. This plan proposes to formulate an inclusive DRR framework, which through enhanced partnerships and cross-fertilization, increases the coping capacities of the most vulnerable population in the state to face and manage adverse conditions, emergencies or disasters. A significant step to develop and implement an inclusive DRR & CCA framework is to mainstream disaster management concerns into developmental plans and projects. The proposed

plan conceptualizes mainstreaming as a process by which DRR components are defined and operationalised in all sectoral plans.

12.1 Disaster Risk reduction and Climate Change Adaptation Strategies for Local Impact:

Certain strategies underlie the process of mainstreaming DRR & CCA in developmental planning which needs to be imbibed in the planning processes at local level in the District as under:-

- DRR should be an integral component in each governmental development project.
- Mainstreaming DRR and climate change adaptation in development planning includes resilience building measures such as rainwater harvesting, aquifer recharges, changes in types of crops/plantation season, better planning of construction and water management, safe dwellings and sustainable livelihood resources.
- District Administration, Municipalities and PRIs to incorporate DRR and preparedness into their development plans, programs and regular activities.
- Incorporate DRR in existing national and state development strategies and policies such as MGNREGA, NRLM, NRHM, IAY, SGSY, RGSY etc.
- Prioritize adaptation efforts in communities where vulnerabilities are highest and where the need for safety and resilience is greatest.
- Build projected climate change related trends in risk and vulnerability assessment based on current climate variability.
- Fully integrate adaptation into long-term sustainable development and poverty reduction strategies in the District.
- Prioritize the strengthening of existing capacities – among local authorities, civil society organizations and the private sector – to lay the foundation for the robust management of climate risk and the rapid scaling up of adaptation through community-based risk reduction and effective local governance.
- Develop robust resource mobilization mechanism for adaptation that ensures the flow of both financial and technical support to local actors.
- Leverage the opportunities in disaster prevention and response through improved Early Warning System. Contingency Planning and integrated response to promote effective community-based adaptation and risk reduction.

12.2 Steps in integrating DRR & CCA in Developmental Planning:

Table 12.1 Steps in integrating DRR in Development Planning

1. Current Situation of Analysis and Challanges	All planners/line Departments develop shorts notes of analysis on the socio-economic situation of the district and what possibilities exist in securing the needs of the citizens. The state and sector plans need to be made in the context of Agriculture, Industry, Commerce, Infrastructures, Energy, transportation, hydraulics and irrigation, Human Resources through education and Eco- tourism. Planners should also analyze about the barriers and challenges to the region/state/district's developmental activities caused by chronic natural

	hazards/disasters
a) Economic Situation Analysis	Trained planners should also analyze the main and sub-economic activities and factors that have been assumed as the potential issues of the District/state for each sector for supporting daily livelihoods of population such as Agriculture, Infrastructure, Industry, Commerce, livelihood and Tourism. Planners should also analyze the barrier and challenges to the region/state/Districts main and sub-economic activities and its figures caused by natural hazards/disasters.
b) Social Situation Analysis	Trained planners analyze situations of Education, Health, Poverty of Citizens and possibility of emergency relief and response to victims of disasters.
c) Natural Resources and Environmental analysis	The analysis of potential of natural resources, level of resource utilizations done, with respect to local people's access to lands, forests, wild animals, fisheries, lakes, rivers etc. Is carried out.
d) Climate change Analysis	The analysis of a potential impact to environment, social life and economy due to climate change, with emphasis on the best possible ways/measures for adaptation is carried out.
2. Vision Development	Line departments along with trained Planners will develop vision relating to the improvement of socio-economic situations and good governess in the district based on the State Development Plan and District plan. Nevertheless, this reference should be based on their respective Minister's strategy. The vision should also incorporate components of DRR in terms of Challenges/Measures/Capacities to cope with disasters.
a) Development Goals and Objectives	Mainstreaming of DRR in Development Planning could take use from the efforts to localize the plans and provide right direction in terms of how to adopt policies to different places and how to develop synergies among different sectoral interventions.
3. Development Strategy	
a) Economic Development	Planners and the line departments should develop plans focusing on what are the core programmes or priority sectors of the state/district for each sector such as agriculture, tourism, commerce, industry, taxations, irrigation system, transportation, livelihoods, infrastructure, water supply, electricity etc. Focus should be on how the plan can contribute to the state/district/sectors/line departments in social and economic progress and at the same time in DRR. The linkage betwwn economic development and DRR needs to well work out in these plans.
b) Social Development	Planners and line departments should develop plan components focused on what kind of social Development measures (Structural & Non structural) are effective in the present and for the future. These could be with respect to Education, Capacity Building, health Services, Response and Relief etc.
c) Land Use Planning strategy and natural Resources Management	The plan strategy should focus on how potential natural resourced such as land, other natural resources, environment and human capacities are the most concened for sustainable developmental activities in the District/Tehsil/Panchayat. The analysis could also describe situations of land use management, specific roles/responsibilities of relevant committees and challenges to the conservation of resources.
d) Climate Change Adaptations and DRR	The planners/line departments should evolve strategies based on analysis of natural hazards and extreme disasters, duration, intensity, frequently affected areas, number of victims and affected people, agriculture productivity,

Strategies.	infrastructure etc. in relation to climate change and adaptation as as DRR component. The roles and responsibilities of the relevant committees for Disaster management at all levels and resources for DRR preparedness plan to cope with hazards and climate change adaptations needs to be specifically outlined,

12.3 Priority implementation projects for mainstreaming of DRR & CCA in Developmet Projects:

The plan proposes the following Priority Implementation Projects that would facilitate faster and effective mainstreaming of DRR in development planning.

Table 12.2 Thematic-wise Priority Implementation Projects

Thematic Area	Priority Implementation Projects
Education	• Introduce DRM modules into the school curriculum • Promoting hazard resilient construction of new schools; • Introducing features into schools for their use as emergency shelters
Health	• Vulnerability assessment of hospitals in hazard-prone areas. • Promoting hazard resilient construction of new hospitals. • Implementing of disaster preparedness plans for hospitals
Infrastructure	• Introducing Disaster Risk Impact Assessments into the construction of new roads and bridges. • Promoting the use of hazard risk information in land use planning.
Agriculture	• Promoting programs of contingency crop planning • Crop diversification. • Supplementary income generation from off-farm and non-farm activities. • Effective insurance and credit schemes to compensate for crop damage and loss to livelihoods.
Housing	• Promoting the increased use of hazard-resilient designs in rural housing in hazard prone areas. • Utilization of national building codes; and the compliance and enforcement of local building laws in urban hazard prone areas.
Natural Resource Management	• Optimizing natural resources through better management of natural resources, cost effective energy provision, intensive and innovative agriculture and Animal husbandary practices, communication connectivity, livelihood opportunities within the villages and a commitment to social development.
Skill Building	• In a disaster recovery context, maximum resources go towards shelter and physical infrastructure reconstruction. Skill building should thus be a strategy to develop a cadre of local masons, materials and building technology and construction related services. • Promoting skills and knowledge in modifying locally available building technologies to enhance their safety features. • Trained local people in these slightly modified technologies.
Livelihoods	• Livelihoods are the greatest priority for vulnerable populations at risk • Livelihood and especially that is linked to natural resources and local capacities and opportunities hold the key to long term and sustainable recovery. • MGNREGA has tremendous potential in dealing with alternative

	livelihood for the poor if Disaster Risk Reduction (DRR) is mainstreamed with it. MGNREGS aims to provide an assured job involving unskilled manual work for minimum hundred days per year. MGNREGS supports individual asset-building and also contributes to reduction of physical vulnerabilities through structural measures. It represents an important social safety net. It provides employment when households find it difficult to restore their productivity assets, entailing irreversible damages to their livelihoods.

CHAPTER- 13
PLAN MAINTENANCE

Plan maintenance is a dynamic process of updating the plan on a periodic basis. The back-bone of maintaining the plan is carrying out mock drills, undertaking periodic vulnerability and risk assessment, improvising in the context of new development programmes/projects and updating the plan accordingly.

All the Departments, which have specific roles and responsibilities in District Disaster Management Plan, must have a system to ensure that all Officers of their departments who have a specific role to play are fully conversant with their responsibilities/tasks.

13.1 AUTHORITY FOR MAINTAINING AND REVIEWING THE PLAN:

(According to ACT No. 31 of 2005 – The Disaster Management Act, 2005 Chapter IV, District Plan.)

"31. District Plan:-

1) *There shall be a plan for disaster management for every district of the State.*
2) *The District 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.*
3) *The District Plan shall include-*
    a) *the areas in the district vulnerable to different forms of disasters;*
    b) *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;*
    c) *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;*
    d) *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;*
        ii. *prompt response to disaster and relief thereof;*
        iii. *procurement of essential resources;*
        iv. *establishment of communication links; and*
        v. *the dissemination of information to the public;*
    e) *such other matters as may be required by the State Authority.*
4) *The District Plan shall be reviewed and updated annually.*
5) *The copies of the District Plan referred to in sub-sections (2) and (4) shall be made available to the Departments of the Government in the district.*
6) *The District Authority shall send a copy of the District Plan to the State Authority which shall forward it to the State Government.*
7) *The District Authority shall, review from time to time, the implementation of the Plan and issue such instructions to different departments of the Government in the district as it may deem necessary for the implementation thereof."*

13.2 DEBRIEF AND EVALUATION-MOCK DRILLS

- **After the mock exercise, debriefing and evaluation is very important. It is of critical importance that these insights are collected from participants (who participated in the exercise) and used to modify the plan.**
- **Hot debriefing is very effective as it is carried out immediately after the exercise. It also includes documentation in terms of recommendations and improvements of the plan.**
- **The lessons learned from the mock exercise are likely to be similar to those from real events.**

The only major difference is that exercises are controlled events, specifically designed to test procedures and they can be repeated again and again until sound/ workable arrangements are in place.

13.3 REVIEW/UPDATION OF PLAN

The District Disaster Management Plan should be reviewed and updated regularly by the month of every April, based on inputs as under:

a) Drills and Rehearsals;
b) Recommendations from all Departments in their Annual Disaster Management Report;
c) Lessons learnt from any disaster event in other districts, states and countries;
d) Directions from Ministry of Home Affairs, National Disaster Management Authority, Government of India, State Disaster Management Authority etc.

The DDMA and all other concerned agencies will interact with various stakeholders at different levels to learn and document their experiences, and there by improvising the District Disaster Management Plan.

(Simrandeep Singh) IAS
Deputy Commissioner/Chairman
District Disaster Management Authority,
Doda

********** END**********