सत्यमेव जयते

2025

DISTRICT DISASTER MANAGEMENT PLAN

SIAHA DISTRICT

MIZORAM

SIAHA DISTRICT DISASTER MANAGEMENT AUTHORITY

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PREFACE

Siaha District is one of the oldest districts in Mizoram and is located at the extreme south of the State. There are two Administrative sub-divisions i.e, Siaha and Tipa and two Rural Development Blocks, i.e Siaha and Tipa Block. It has an Autonomous District Council (MADC).

The Plan 2025 has been designed and updated so as to serve a useful purpose in tackling the multi-hazards vulnerabilities and facilitating the execution of activities prevention, mitigation, preparedness and response through community participation and involvement. The plan is prepared in accordance with the framework and the guidelines provided by NDMA.

With a view and intention of having reliable and effective district DM plan, a lot of information and data are collected from various departments. After such materials have been scrupulously screened and checked, relevant and useful materials are incorporated in the Plan. Therefore, it is my belief that the Plan will prove very helpful and significant in pursuit of disaster management for better and effective response to different types of disasters.

In this plan, contact numbers of various functionaries under the state governments and other offices have been added and under the chapter of Disaster preparedness and mitigation, certain provisions in respect of some hazards and vulnerabilities are also incorporated. With this new incorporation, the present plan is believed to provide new innovative thinking for making effective mechanism.

It is expected that this plan will be resourceful and useful for government officials and other stakeholders who are involved in the activity of disaster management with regard to the execution of preventive measures, mitigation, preparedness and response through community participation and involvement.

(VL HRUAIZELA KHIANGTE)
Deputy Commissioner
&
Chairman
District Disaster Management Authority
Siaha District, Siaha

LIST OF IMPORTANT TELEPHONE NUMBERS

Sl. No	*Functionaries*	*Contact Numbers*	
		Office No.	*Mobile No.*
1.	Deputy Commissioner	222024	9862311968
2.	Additional DC	226068	8974362453
3.	Sub-Divisional Officer (S)	222042	8974591417
4.	Election officer	222056	8974591417
5.	SDC & Nodal Officer, DM&R	226067	9862751618
6.	Superintendent of Police	222040	9462006850
7.	Addl. Superintendent of Police	226002	9101888836
8.	SDPO	-	8974693939
9.	Project Director, DRDA	226166	9862925772
10.	BDO, Siaha	222918	8416048257
11.	BDO, Tipa	280003	9862234496
12.	E.E, PWD	222012	9862923655
13.	E.E, PHE	225065	9436148012
14.	E.E, P&E	222073	8794542320
15.	Chief Medical Officer	222059	8787688821
16.	District Medical Superintendent	224059	8794184809
17.	I&PRO	222036	8837287521
18.	Chief Judicial Magistrate	226020	8119964716
19.	DAO	223032	8131938465
20.	District Education Officer	222014	9862463709
21.	General Manager, DIC	222048	9862925772
22.	District Employment Officer	222069	8731966418
23.	Treasury Officer	222034	8731042297
24.	DCSO	222050	9612744219
25.	Dy Commissioner of Taxes	222081	9436119490
26.	DV&AHO	224018	8837253599
27.	DHO	226434	7005253498
28.	Asst. Commissioner of Excise	223011	9612217073
29.	O.C, Assam Rifles	222543	6909915605
30.	OC, MRHG	225088	9862384846
31.	SDE, Telecom	226165	9990570871
32.	DRO	223038	9436144409
33.	DIO, NIC	226051	8730922784
34.	O.C, MPRO	222032	9862366299
35.	District Organiser, DEOC	222055	9774478529
36.	Casualty, Civil Hospital	102/222006	-
37.	Police Station	100/225052	9436393947
38.	Fire & Emergency Service	101/223085	9612230834
39.	ECM Hospital	222738	-
OTHER NUMBERS			
1.	Police Outpost, Siahatlah	223015	
2.	MIZOFED	222037	
3.	Power & Electricity	225019	
4.	PHE	222099	

5.	Circuit	222039
6.	PWD I.B	225044
7.	Tourist Lodge	222591
6.	HSV Cable TV	222248
7.	NSV Cable TV	222195
8.	State Bank of India	222462
9.	MCAB	226169
10.	MRB, New Siaha	222285
11.	MRB, Vaihpi	222285
12.	HDFC	222113
13.	BSNL Office	226065
14.	IDBI	226533
15.	Telephone complaint	222001
16.	Power House	225019
17.	District Jail	223044
18.	MRHG	225088
19.	KVK	224104
20.	Assam Rifles	222777
21.	AOC	222318
22.	Fast Track Court	226040
NGO's		
1.	President, MSO	8837324339
2.	President, MTP Hqrs.	9485384825
3.	President, Group YMA	8974362047
4.	President, MYA	9862688137
5.	President, YLA Sub-Hqrs.	9436149419
6.	President, MCHP	9612247404
7.	President, LWA	9436149474
8.	President, MHIP	9436149011

LIST OF JOURNALISTS			
1.	Hmaokao Hlychho	Editor, Maraland	9485055835
2.	CZ. Hluna	Editor, Buannel, DDK	8730970403
3.	M. Baithai	Editor, Chhim Aw	9612935428
4.	H. Lalliana	Editor, Siaha Times	8731068895
5.	J. Jeffrey Khara	Editor, Moonlight	9437776563
6.	B. Vanlalhriata	Editor, Siaha Post	8118908033
7.	BB. Pacho	Editor, Awsicharu	9862552679
8.	CL. Zama	Editor, Saikhawpui	9436755122
9.	H. Sabi	News Stringer, DDK	9436871605
10.	V. Pawhla	Editor, NSV	9862541627
11.	PT. Lalhnehzova	News Editor, NSV	9436379616
12.	Lalnunkima Pisa	Editor, HSV	9436379382
13.	Thatha Khithie	Editor, ECN, Tuipang	8974587914
14.	K. Thangvela	Editor, Vohbik	9862747633
15.	T. Lalrosiama	Editor, Tipa Express	9612243353

OWNERS OF PRIVATE EARTHMOVERS

S/N	*Name*	*Address*	*Contact Nos.*
1.	H. Lalchhinga	New Colony	9436379511
2.	K.Hrangsu-a	New Colony	9436149086
3.	HC.Lalmalsawma	Council Vaih	9436149008
4.	H.Lalawii	N.Siaha 'E'	9436149011
5.	C.Lalawmpuia	N.Siaha 'W'	9436149118
6.	Zamanga	New Siaha	9436149093
7.	Vanlalngaia	N.Siaha 'W'	9436879145
8.	K.H Beihlo	New Colony	222095
9.	K. Sangthanga	New Siaha	226131
10.	C.Lalthlamuana	N.Siaha 'E'	9436149527

LIST OF TRUCK OWNERS

S/N	*Name*	*Address*	*Contact Nos.*
1.	H. Lalchhinga	New Colony	9436379511
2.	K.Hrangsu-a	New Colony	9436149086
3.	N. Nadaw	Vengpui	222257
4.	Vanlalngaia	N.Siaha 'W'	9436879145
5.	Anthony P. Gangte	Vengpui	9436149049
6.	C.Lalawmpuia	N.Siaha 'W'	9436149118

DISTANCE OF VILLAGES FROM SIAHA

Village	*In Km*	*Village*	*In Km*	*Village*	*In Km*
Tuipang	72	Zawngling	86	Tuipang L	80
Chapui	115	Chakhang	67	Tuisih	68
Siata	55	Niawhtlang	30	Chhuarlung	46
Khopai	102	Mawhre	100	Laki	114
Siatlai	79	Vahai	115	Chheihlu	92
Siasi	79	Phusa	58	Lungbun	37
Ahmypi	106	Kawlchaw E	41	Serkawr	53
New Serkawr	48	New Latawh	41	Laty (Lohry)	67
Maila	82	Kaisih	99	Phura	97
Lawngban	98	Meipu	126	Lungdar	98
Supha	117	Lope	110	Tongkolong	110
Lomasu	120	Theiri	56	Zero point	29
Riasikah	20	Lower Theiva	47	Tuipui Ferry	14
Rawmibuk	61	Tuisumpui	14	Maubawk CH	36
Tuipang D	72	Lotai	105	Maubawk L	35
Bymary	115	Lungpuk	117		

CHAPTER – 1
INTRODUCTION

1.1 Aims and objective of DDMP

- To engage in activities that may help in minimizing damages caused by disasters especially in rural areas.
- To make endeavors towards creating awareness among the people about disasters and its consequences and to prepare them in advance to face such situations and to ensure their participation in the disaster mitigation plans.
- Existing institutional arrangements, inter-departmental linkages, role of NGO's, voluntary agencies and local communities so as to understand their capabilities to mitigate specific disasters which will also facilitate effective coordination in their activities in times of need.
- To act as an agency for the execution of disaster management schemes of the Government and the NGOs.
- To undertake studies on a regular basis to procure Disaster Management Information – Data base and to engage in the task of risk assessment and vulnerability analysis both for the state and districts.
- To evolve information reporting and monitoring tools for preparedness, immediate response and damage assessment, keeping in view the socioeconomic conditions of urban and rural areas.
- To undertake studies with a view to facilitating the preparation of a comprehensive 'Disaster Management Plan' both for the state and the districts within the state so as to help the Government in providing uniform directives from the state government to the district administration and to establish standardized response to any disaster situation.
- To evolve mechanism for saving children specially those who are the victims of floods, droughts, earthquake and similar other disasters in rural and urban areas.
- To establish educational & training institutions for educating communities in the areas of "Disaster Management" and "Rural Development".
- To ensure proper co-ordination amongst District Level, Sub-Division Level, Block level and Village Level Disaster Management Committee.
- To give important information and advice at the time of rescue, relief, and rehabilitation of affected families during the calamities through Block Level and Village Level Disaster Management Committee.
- Risk & vulnerability assessment and to set response mechanism and strategies.
- Establishment of emergency response policies, organizational arrangements and operational plan to be followed after disaster.

1.2 Authority for DDMP

As per the provision contained in section 31 of DM Act, 2005, District Disaster Management Plan is prepared by District Disaster Management Authority. Further, as

mandated by the Act, the Plan is reviewed and updated annually by the District Authority.

1.3 Evolution of DDMP

In pursuance of the mandate enshrined in the DM Act, 2005 which was subsequently endorsed to each district by the State Government, DM Plan was initially prepared for Siaha Town and other selected villages in the year 2012 after which District Plan was framed with the incorporation of Siaha Town Plan and selected Village Plans. With the evolution of District DM Plan, Town and Village Plans ceased to exist.

1.4 Stakeholders and their responsibilities

At the District level, District Disaster Management Authority, with the Deputy Commissioner designated as Responsible Officer (RO) and other line departments at the District HQ are responsible to deal with all phases of disaster management within district.

Other technical institutions, community at large, local self-governments, NGOs etc are also stakeholders of the District DM Plan. Siaha District has a number of CBO's (Community Based Organisations). These organizations provide invaluable support to the DM process for ensuring effective response to any eventualities. Their responsibilities are also formalized as given below –

Sl. No	***Name of Stakeholder***	***Responsibilities***
1.	Beino Youth Adventure Club	Providing necessary support to search & rescue operation
2.	Meisavaih Youth Adventure Club	
3.	Mara Thyutlia Py (MTP)	1. Providing immediate support which will be of immense help in dealing with any eventualities of disasters. 2. These organizations are also responsible for facilitating – shelter management, food & water management, relief coordination, information & damage assessment, trauma counseling, first aid, etc. 3. All these activities shall be coordinated by competent authority.
4.	Mara Chano Py (MCHP)	
5.	Young Lai Association (YLA)	
6.	Lai Women Association (LWA)	
7.	Model Youth Association (MYA)	
8.	Young Mizo Association (YMA)	

Deputy Commissioner has the following duties –

- ✓ To facilitate and coordinate with local Government bodies to ensure that pre and post disaster management activities in the district are carried out.
- ✓ To assist community training, awareness programmes and the installation of emergency facilities with the support of local administration, non-governmental organizations and the private sector.
- ✓ To take appropriate actions to smoothen the response and relief activities to minimize the adverse impact of disaster.
- ✓ To move State Government for declaration of disaster.

1.5 How to use DDMP framework

i. Section 31 of DM Act 2005 makes it mandatory for every district to prepare a disaster management plan, for the protection of life and property from the effects of hazardous events within the district
ii. In significant emergencies or disasters, District Magistrate or the chairperson of DDMA will have the powers of overall supervision direction and control.
iii. The district EOC will be staffed and operated as the situation dictates. When activated, operations will be supported by senior officers from line departments and central government agencies; private sector and volunteer organizations may be used to provide information, data and resources to cope with the situation.
iv. The DDMA may recommend for action under Sec 30of DM Act, 2005.
v. The DM or his designee will coordinate and control resources of the District.
vi. Emergency public information will be disseminated by all available media outlets through the designated media and information officer.
vii. Prior planning and training of personnel are prerequisites to effective emergency operations and must be considered as integral parts of disaster preparations.
viii. Coordination with surrounding districts is essential, when an event occurs, that impacts beyond district boundaries. Procedure should be established and exercised for inter district collaboration.
ix. Departments, agencies and organizations assigned either primary or supporting responsibilities in this document must develop implementation documents in order to support this plan.
x. When local resources prove to be inadequate during emergency operations, request for assistance will be made to the State or higher levels of government and other agencies in accordance with set rules and procedures.
xi. District authority will use normal channel for requesting assistance and/or resources, i.e., through the District Emergency Operations Center (DEOC) to the State EOC. If state resources have been exhausted, the state will arrange to provide the needed resources through central assistance.
xii. The District EOC will coordinate with the State EOC, Agencies of the Govt. of India like IMD/ CWC to maintain upto-date information concerning potential flooding, cyclones etc. As appropriate, such information will be provided to the citizens of the affected areas in the district.
xiii. Upon receipt of potential problems in these areas, DEOC/designated officials will appropriately issue alert and notify action to be taken by the residents
xiv. Disaster occurrence could result in disruption of government functions and, therefore, all levels of local government and their departments should develop and maintain procedures to ensure continuity of Government action.

1.6 Approval mechanism of DDMP

DM Plan is prepared by DDMA and subsequently submitted to SDMA for its approval. After getting the Plan approved by SDMA, the Plan has an official stature and can be referred to and utilized whenever necessary.

1.7 Setup of DDMA

S/N	*Designation*	*Position*
1.	Deputy Commissioner	Chairperson
2.	CEM, MADC	Co-Chairperson
3.	Superintendent of Police	Member
4.	Executive Secretary	MADC
5.	Chief Medical Officer	Member
6.	Executive Engineer, PWD	Member
7.	Executive Engineer, PHED	Member
8.	Addl. Deputy Commissioner	Chief Executive Officer

1.8 Plan review and updation

DM Plan is reviewed an updated annually by the District Disaster Management Authority (DDMA). The updating, in the past years, has usually taken place at the end of calendar year. However, with the adoption of a new format designed by NDMA for DM Plan in 2016, there has been a slight change with regard to the periodicity of Plan review and updation. As such, the present Plan is updated at the start of the current fiscal year.

CHAPTER – 2
HAZARD, VULNERABILITY, CAPACITY AND RISK ASSESSMENT

2.1 Socio – economic profile of the district

Location: Siaha District lies in the southeastern corner of Mizoram. The district is situated between $22^0$45' to $22^0$60' Latitudes and $92^0$50' to$93^0$14' Longitudes.

Boundary:	North & North-west	:	Lawngtlai District & part of Lunglei district
	South & East	:	Myanmar
	West side	:	Lawngtlai district

Its international boundary with Myanmar is 159 kms long. The inter district boundary with Lunglei district is 62 kms and 73 kms with Lawngtlai district. The District is surrounded by the river Kolodyne (Chhimtuipui or Beino) on the three sides- East, North and West.

Total Geographical Area	:	1399 square kms (6.63% of the State area)
Administrative Sub-Divisons	**:**	Siaha (S) and Tipa (S).
Rural Development Block	**:**	Siaha and Tipa
No. of Educational Institution		
Primary School	-	131
Middle School	-	95
High School	-	33
Higher Secondary School	-	6 (Govt.-1 & Pvt.-5)
College	-	1
ITI	-	1
DIET	-	1
Total	**-**	**268**

Siaha District AT A GLANCE (2011 Census) –

Description	2011
Actual Population	56,574
Male	28,594
Female	27,980
Population Growth	-7.34%
Area Sq. Km	1,399
Density/km2	40
Proportion to Mizoram Population	5.16%
Sex Ratio (Per 1000)	979
Child Sex Ratio (0-6 Age)	932
Average Literacy	90.01
Male Literacy	92.64

Description	2011
Female Literacy	87.34
Total Child Population (0-6 Age)	9,653
Male Population (0-6 Age)	4,997
Female Population (0-6 Age)	4,656
Literates	42,233
Male Literates	21,861
Female Literates	20,372
Child Proportion (0-6 Age)	17.06%
Boys Proportion (0-6 Age)	17.48%
Girls Proportion (0-6 Age)	16.64%

Occupation/economic –

Siaha District is economically one of the most backward districts in Mizoram. About 80% of the total populations are engaged in Agriculture. Only a few people hold Government jobs. The people customarily practiced shifting cultivation or jhumming which creates deforestation leading to soil erosion problem. The principal crops in the District are Rice, Maize, Orange, etc. People used to obtain many varieties of consumer goods imported from other Districts of Mizoram and Assam.

Current status of employment under state government and district council –

(i) No. of government employees under State Government - 1984

(ii) No. of government employees under MADC - 1976

(The figure is based on the Census of Government Employees & Workers, Siaha District, 2015 prepared by the office of DRO, Economic & Statistic Department, Siaha)

2.2 Matrix of past disasters in the district –

DURING 2021 - 2022				
Type of Disasters	*Damage to infrastructure & human including its extent*		*No. of village affected*	*No. of families affected*
Cyclone	Dwelling house	Partial - 1	1	1
		Fully - 1	1	1
Landslide	Dwelling house	Partial - 1	1	1
		Severely - 1	1	1
		Fully - 4	4	4
Fire	Dwelling house	Fully - 13	7	90
	Crop damaged	11.5 hectares		
DURING 2022 - 2023				
Cyclone	Dwelling house	Partial - 1	3	5
		Fully - 4		

Landslide	Dwelling house	Partial - 7	6	10
		Severe - 1		
		Fully - 2		
	Road	12.2 Kms	3	300
Fire	Dwelling house	Fully - 5	5	5
	Crops	6.0 hectares	4	3
DURING 2023 - 2024				
Cyclone	Dwelling house	Partial - 187	20	187
		Severe - 26	7	26
		Fully - 12	4	12
	Crops	3 Hectares	2	1
Landslide	Dwelling house	Partial - 3	2	3
	Crops	2.8 Hectares	2	1
	Road	13.75 Kms	3	2
Fire	Dwelling house	Fully - 13	7	13
	Crops	5 Hectares	5	5
	Hut	2	2	2
Flood	Crops	5.5	3	2
	Boat	4	1	4
	Bridge	2	2	
Cloudburst	Dwelling house	Partially - 10	6	10
		Fully - 3	2	3
	Crops	9.5 Hectares	6	3
DURING 2024 - 2025				
Cyclone	Dwelling house	Partially - 50	10	50
		Fully - 4	3	4
	Boat	4	1	4
	Pig	2	2	2
Landslide	Dwelling house	Partial - 5	3	5
		Severe - 2	1	2
		Fully - 8	5	8
	Crops	4 Hectares	2	2
	Road	10.40 Kms	4	
	Bridge	1	2	
Fire	Dwelling house	Fully - 2	2	2
	Crops	1.5 Hectares	2	2
	Hut	1	1	1
Flood	Crops	18.5 Hectares	2	4
Cloudburst	Dwelling house	Partial - 12	14	12
	Hut	1	1	1

2.3 Hazard/risk, vulnerability & capacity analysis

The entire district falls under multiple hazards. Let us discuss the different risk/hazard and vulnerability that may occur in the entire district.

WIND &CYCLONE –

Wind and Cyclone Hazard classes of Siaha district is divided into Very High, High and Moderate zone.

Very High Hazard Zone:

This zone occurs mostly within the southern part of the district, closer to the coastline and comprising high elevated areas with NW-SE slope aspect. Very high hazard zone covers an area of 979.30 sq. km which is 38.30% of the total district area. Occurrence of high wind velocity and cyclone is more prevalent during monsoon period.

High Hazard Zone:

This zone also occurs mostly within the southern part of the district within 120-180 Km distance from the coastline. It comprises elevation ranging from 501-800 m from MSL with NW-SE slope aspect. High hazard zone extends over 215.02 sq. km which comprises 8.41% of the total district area.

Moderate Hazard Zone:

This zone covers maximum district area stretching from Siaha town to north and eastern tips of the district. Moderate hazard zone covers 1362.78 sq. km which constitutes 53.29% of the total district area.

The area statistics of Wind and Cyclone hazard zones of Siaha district is shown in Table given below. Wind and Cyclone Hazard map of Siaha district is shown below in Figure No. 1

Hazard Class	***Area (Sq. Km)***	***%***
Very High	497.27	35.52
High	612.22	43.73
Moderate	290.41	20.75
TOTAL	1399.90	100.00

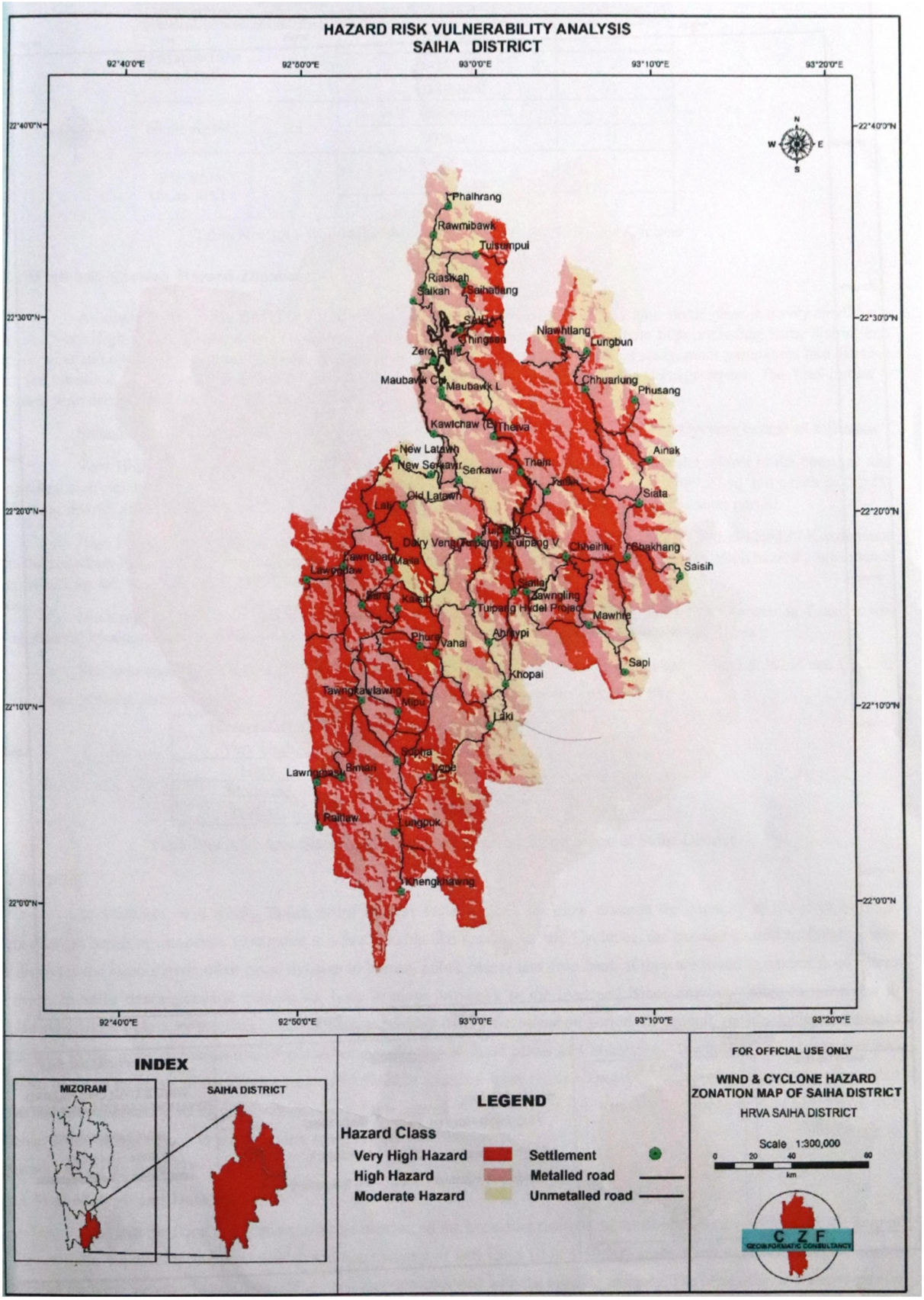


Fig. 1 : Wind &Cyclone Hazard Map of Siaha District

LANDSLIDE –

Very High Hazard Zone:

This zone is highly unstable and is at a constant threat of landslides, especially during and after an intense spell of rain. This is because the area forms steep slopes with loose and unconsolidated materials. Besides, it includes areas located near faults and tectonically weak zones. It also includes areas where unplanned quarrying, road cutting and other human activities are extensively undertaken. The vegetation is generally sparse. This zone constitutes an area of 221.82 sq. km and forms 8.67% of the total district area.

High Hazard Zone:

It includes areas where the probability of sliding debris is at a high risk due to weathered rock and soil debris covering steep slopes which when disturbed are prone to landslides. Most of the pre-existing landslides fall within this category. This zone occupies a fairly large area i.e, about 446.76 sq. km which is 17.47% of the total district area.

Moderate Hazard Zone:

This zone is generally stable, though it may contain unstable zones in some areas. Moreover, seismic activity and continuous heavy rainfall may reduce its stability. Though this zone may include areas such as cliffs that have steep slopes (more than 45 degree), the orientation of the rock bed and absence of overlying loose debris and human activity make them less hazardous. In general, this zone comprises areas that have moderately dense vegetation, moderate slope angle and relatively compact and hard rocks. It spreads over an area of about 1084.30 sq. km and occupies 42.41 % of the total district area.

Low Hazard Zone:

This includes areas where the combination of various controlling parameters is unlikely to adversely influence the slope stability. In other words, this zone comprises areas where the chance of slope failure is low or unlikely to occur. Vegetation is relatively dense, though some areas may not have vegetative cover. Although some of the areas may be covered with soft and unconsolidated sediments, the slope angles are generally low, about 30 degrees or below. This zone extends over an area of about 597.0 sq. km and forms 23.35% of the total district area.

Very Low Hazard Zone:

This zone mainly comprises vegetative areas and is located away from human settlement. As such, it is assumed to be free from present and future landslide hazards. The dip and slope angles of the rocks are fairly low. This zone covers an area of about 188.67 sq km and forms 7.38% of the total district area.

Apart from the various hazard classes, some areas are covered by water bodies which are not included in the hazard classes. Such water bodies cover an area of 18.51 sq. km which is 0.72% of the total district area.

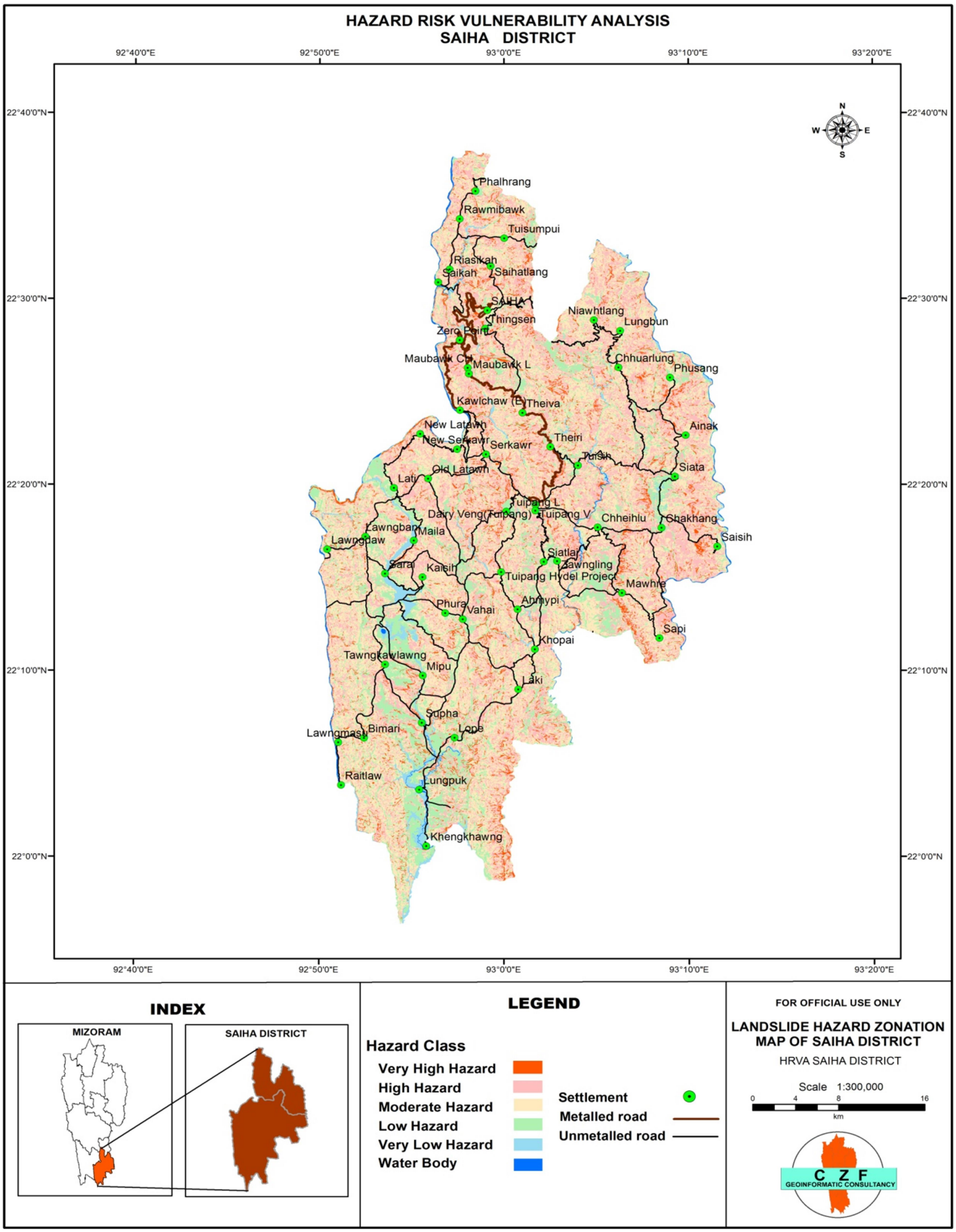
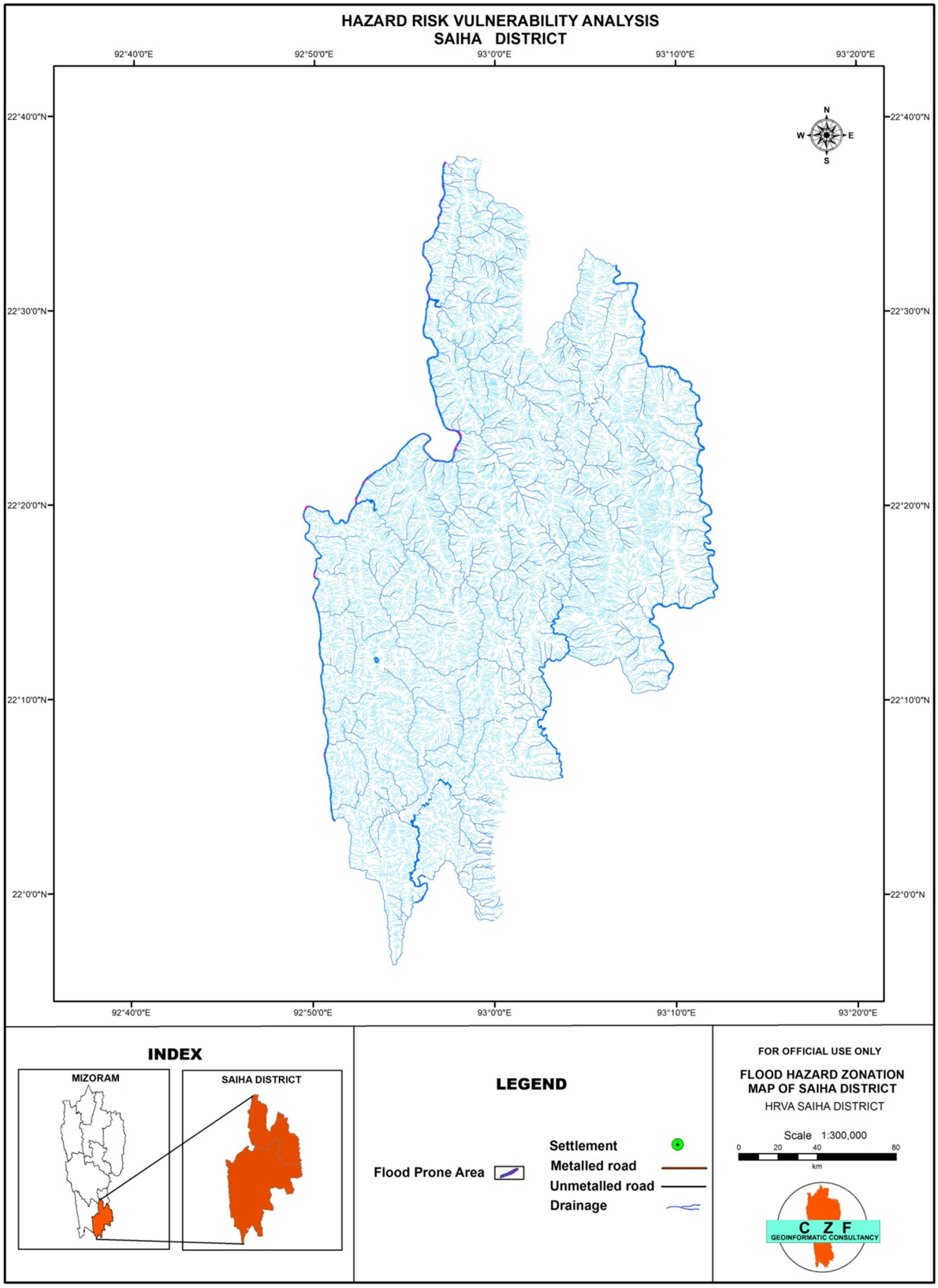


Fig. 2 : Landslide Hazard Zonation Map of Siaha District

Flood –

In Siaha district, several villages are lying in close proximity to the river and hence drowning often happens due to unplanned activities close by the river. This happens especially during the monsoon period. Flood prone areas cover 8.20 sq. km, i.e. 0.32% of the district area. Below is the Flood Hazard Zonation map of the District.



EARTHQUAKE –

The district also lies in a Seismic Zone V, which is most vulnerable to earthquakes. And due to absence of building bye laws, the present construction of houses may bring great damage to the district.

Road accident –

There is a good network of pucca and kuccha road in the district with 292.95kms of state highway and village roads out of which 229.70 km are PMGSY road, ongoing works of PMGSY length is 47.215 Km. Most of the accidents occurs during rainy season due to slippery roads, drinking and carelessness while driving.

Fire- forest/ house –

Forest fires are occurring due to practice of jhum cultivation, the district experiences every year. House fires are again man-made due to carelessness, sparking of electricity wires and faulty equipment.

Drought –

There was a long spell of drought in 1998 and 2005 causing huge loss of agriculture crops during Kharif season in the district. Many streams dried up and paddy as well as other cereal seeds of jhumming could not germinate. Based on past experience of drought we should have proper emergency management plan to lessen the damage done by it.

Epidemics –

Epidemics are disasters, which can hit the District any time. While normally a disaster due to epidemic is likely to hit after the onset of the monsoon due to bacteria and insects, nevertheless epidemics can also take place at any other time due to water contamination, etc.

2.4 Hazard Analysis:

Types of Hazard	*January*	*February*	*March*	*April*	*May*	*June*	*July*	*August*	*September*	*October*	*November*	*December*
Cyclone				↔	↔	↔						
Landslide			↔	↔	↔	↔	↔	↔	↔	↔		
Fire	↔	↔	↔	↔	↔					↔	↔	↔
Drought	↔	↔	↔							↔	↔	↔
Flood							↔	↔	↔			
Earthquake	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Riot	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Accident	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔

2.5 Vulnerability Analysis:

S/N	*Types of hazard*	*Vulnerable areas*
1.	Cyclone	Heavy zone - New Siaha, New colony, Siahatlangkawn, Thingsen, Medium zone – Meisavaih, Meisatla, College veng, Council veng.
2.	Landslide	New colony, College veng, Siahatlangkawn, New Siaha, Thingsen, Council veng, Old Siaha
3.	Earthquake	Whole Town
4.	Fire	Whole Town
5.	Drought	Whole Town
6.	Epidemics	Whole Town
7.	Riot	Whole Town

Table showing level of damage risk (vulnerability to natural hazards) of house types as per the classification is given below -

House Type		**LEVEL OF VULNERABILITY UNDER**			
		Earthquake Zone V	***Wind & Cyclone***	***Landslide***	***Flood***
A	RCC	Very High	Low	Low	Low
B	RCC structure mixed with Assam type	High	Moderate	Moderate	Low
C	Assam Type buildings(Well built wooden structures)	Moderate	High	High	Moderate
X	Kutcha(thatch roof & bamboo wall & floor)	Low	Very High	Very High	Very High

Statistics of house type within Siaha District is also given below –

House Type	***Percentage of house type***
RCC	2.90
RCC structure mixed with Assam type	14.03
Assam Type buildings (Well-built wooden structures)	69.73
Kutcha (thatch roof & bamboo wall & floor)	13.33
TOTAL	100.00

Detailed house type of Siaha district is shown below –

Habitation	RCC%	RCC mixed with Assam type%	Assam type%	Kutcha %	Percent
Ahmypi	0	17	74	9	100
Ainak	2	19	75	4	100
Bimari	1	25	52	22	100
Chakhang	9	11	70	10	100
Chheihlu	8	8	57	27	100
Chhuarlung	4	16	74	6	100
Kaisih	2	10	70	18	100
Kawlchaw E	4	12	72	12	100
Khengkhawng	1	11	75	13	100
Khopai	2	20	73	5	100
Laki	1	12	71	16	100
Lawngban	0	15	55	30	100
Lawngdaw	0	8	72	20	100
Lawngmasu	0	8	70	22	100
Lope	0	14	55	31	100
Lungbun	0	14	73	13	100
Lungpuk	1	5	55	39	100
Maila	7	13	73	7	100
Maubawk CH	8	20	70	2	100
Maubawk L	7	15	67	11	100
Mawhre	2	16	67	15	100
Mipu	4	14	70	12	100
New Latawh	2	14	73	11	100
New Serkawr	7	10	67	16	100
Niawhtlang	1	25	68	6	100
Old Latawh	3	9	69	19	100
Phalhrang	0	12	77	11	100
Phura	1	13	71	15	100
Rawmibawk	2	8	71	19	100
Riasikah	2	11	55	32	100
Saiha	19	15	63	3	100
Sapi	4	16	68	12	100
Serkawr	3	32	63	2	100
Siasi	0	15	75	10	100
Siata	3	15	66	16	100
Siatlai	1	19	72	8	100
Supha	0	23	74	3	100
Tawngkawlawng	3	20	66	11	100
Theiri	1	14	75	10	100
Theiva	1	20	77	2	100
Thingsen	0	15	78	7	100
Tuipang Dairy	4	11	75	10	100
Tuipang L	7	12	72	9	100
Tuipang V	5	13	73	9	100
Tuipui Ferry	1	9	78	12	100
Tuisih	3	10	69	18	100
Tuisumpui	6	5	75	14	100
Vahai	1	8	78	13	100
Zawngling	2	15	74	9	100
Zero point	1	10	73	16	100

Population:

A more vulnerable group is defined as a group which has some special needs in a disaster and cannot comfortably or safely access and use the standard resources offered in disaster preparedness, relief and recovery. Vulnerable Group includes young

children, old aged, people with disabilities (physically and mentally challenged), women like pregnant & lactating women, people with critical needs, poor, minority etc. The vulnerable groups are those that also find it hardest to reconstruct their livelihoods following disaster

a) Population Density– Areas having higher population density are considered more vulnerable to disaster than those which are having low density. The statistics of vulnerability based on population density of Siaha district is given in following Table -

Sl. No.	*Vulnerability Class*	*Population density*	*No. of habitations*	*%*
1	High	> 50 persons per sq km	12	24
2	Moderate	20 – 50 persons per sq km	11	22
3	Low	< 20 person per sq km	27	54
Total		**50**	**50**	**100**

b) Total Population – The total population within each village or town is recorded and depending on the number of the total population they are divided into the three classes of vulnerability. Areas with higher total population are considered more vulnerable to disaster than those which are having low population. The statistics of population density of Siaha district given in Table given below -

Sl. No.	*Vulnerability Class*	*Population*	*No. of habitations*	*%*
1	High	> 1000	12	24
2	Moderate	500 – 1000	16	32
3	Low	< 500	22	44
Total			**50**	**100**

C) Sex-ratio – Sex-ratio is defined as the number of females per 1000 males. The sex-ratio of Siaha district as a whole is 979 females per 1000 males (Census 2011). After analysing the data, sex-ratio is divided into High, Moderate and Low classes. Areas having female population 1000 and above per 1000 males are assigned high sex-ratio class. Those which are having sex-ratio 900-1000 are assigned moderate class while the areas having sex-ratio below 900 are assigned low class. Since, females are considered more vulnerable to disaster; areas having higher sex-ratio will be more vulnerable in case of disaster. The vulnerability statistics based on sex-ratio of Siaha district is given in the table herewith –

Sl. No.	Vulnerability Class	Sex ratio	No. of habitations	%
1	High	> 1000	19	38
2	Moderate	900 – 1000	21	42
3	Low	< 900	10	20
Total			**50**	**100**

d) Elders' population – Population with age group of 70 years and above are categorised under elders' population. Numbers of elders are recorded from all the villages and town within the district as per Electoral Roll 2015 and then the percentage to the total is calculated. Based on this calculation, villages and town are divided into High, Moderate and Low classes of elders' population. The age group of 70 years and above lack physical strength and mobility and are thus considered more vulnerable. Therefore, areas having high elders' population will be more vulnerable to disaster than those which are having low elders' population. The statistics of elders' population of Siaha district is below –

Sl. No.	Vulnerability Class	Sex ratio	No. of habitations	%
1	High	>5	8	16
2	Moderate	2 – 5	15	30
3	Low	<2	27	54
Total			**50**	**100**

e) Children's population – Children below the age of 6 years are considered in children's population. 2011 Census data were used for analyzing children's population. The data are analyzed and the villages are divided into High, Moderate and Low classes of children's population. Areas having high children's population are considered more vulnerable to disaster. Statistics of children's population is given in the Table –

Sl. No.	Vulnerability Class	Children %	No. of habitations	%
1	High	> 20%	16	32
2	Moderate	18 – 20%	14	28
3	Low	< 18%	20	40
Total			**50**	**100**

f) Literacy rate – Literacy rate is the percentage of literates to population aged 7 years and above. The literacy rate of Siaha district is 90.01 (Census 2011). The literacy rate within Siaha district is collected and according to that all the villages and town are divided into High, Moderate and Low classes. The literacy rate have a positive impact on vulnerability analysis as the areas having high literacy rate are considered less vulnerable to disaster than those which are having low literacy rate. Statistics of literacy rate classes for Siaha district is clearly shown in the table –

Sl. No.	Vulnerability Class	Literacy %	No. of habitations	%
1	High	< 70%	27	54
2	Moderate	70 – 80%	18	36
3	Low	> 80%	5	10
Total			**50**	**100**

g) People with Physically Disability – Natural and man-made disasters tend to have a disproportionate impact on people with disabilities (PWD). This issue is recognised and addressed by Article 11 of the United Nations Convention on the Rights of Persons with Disabilities which states that "States Parties shall take, in accordance with their obligations under international law, including international humanitarian law and international human rights law, all necessary measures to ensure the protection and safety of persons with disabilities in situations of risk, including situations of armed conflict, humanitarian emergencies and the occurrence of natural disasters."

The numbers of People with Physical Disability within Siaha District is collected from Directorate of Social Welfare, Government of Mizoram based on Identity Card Issued and Cases identified in various Certification Camp which is given in the Table –

Sl. No.	*Name of Village*	*Orthopedically Handicapped*	*Mentally retarded*	*Visually impaired*	*Hearing impaired*	*Multiple*	*Total*
1	Tipa	7	6	3	13		29
2	Theiri				2		2
3	Saiko				1		1
4	New Laty				1		1
5	Tipa 'V'	1					1
6	Zyhno	2	2		3		7
7	Chakhei	5	6	11	7		29
8	Chapi		1		1		2
9	Maila			1			1
10	Lawngban			1			1
11	Phura	2	21	2	4		29
12	Vahia			1			1
13	Tipi Ferry	2					2
14	Zero point	6			1		7
15	Amobyu 'L'	8	6	1	4		19
16	Kaocho 'E'	2		1	1		4
17	L. Theiva	1					1
18	Lobo	1					1
19	Aina					1	1
20	Siata		1	1	1		3
21	Tisopi	1					1
22	Siaha town	60	37	14	35	6	152
23	Laki	5	17		10	1	33
Total		**103**	**97**	**36**	**84**	**8**	**328**

2.6 Capacities and Resource Analysis:

Drugs store within siaha town

Sl.No.	*Name of Drugs store*	*Proprietor and Address*
1.	L.B. Drugs Store	Hlawnpari, New Siaha,
2.	C.V.B. Medical Store	N. Nadaw, New Colony
3.	V.T. Medical Store	P. Zapovei, New Colony
4.	Mami Drugs Store	Hmangaihzauvi, New Colony
5.	Haler Drugs Store	K. Heleni, New Colony
6.	Salem Drugs Store	Salema, New Colony
7.	K. Merry Drugs Store	K. Merry, Bazar
8.	ECM Nursing Home	ECM, New Colony
9.	J.H. Medical Store	Zothanpuii, New Siaha
10.	Lifeline Pharmacy	Kamthiamlal, New Siaha
11.	Joe Medical Store	Aizama, New Siaha
12.	Maruata Drugs Store	Maruata, Siahatla
13.	Chhangte Medical Store	Siahatla
14.	Lab Drugs Store	Ngosi, Meisatla
15.	Darkii Medical Store	Darkii, New Siaha

Financial institutions within siaha town

S/N	*Name of the institution*	*Address*	*Contact No.*
1.	State Bank of India	Siaha Bazar	222017
2.	Mizoram Co-operative Apex bank	Council Vaih	226169
3.	Mizoram Rural Bank	New Siaha	222857
4.	HDFC Bank	Siaha Bazar	222133
5.	NEREFS	Siaha Bazar	226044
6.	Mizoram Rural Bank	Siaha Bazar	222857
7.	IDBI	New Siaha	9540613360

Deployment of Mizoram police personnel within Siaha District

S/N	*Rank*	*Present Strength*
1.	Superintendent of Police	1
2.	Addl Superintendent of Police	1
3.	Deputy Superintendent of Police	-
4.	Sub Divisional Police Officer	1
5.	Inspector	3
6.	Sub Inspector	13
7.	Assistant Sub Inspector	5
8.	Head Constable	14
9.	Honorary Head Constable	16
10.	Constable	49
11.	Driver	12
Total		**115**

M.P.R.O –

Stations	*Inspector*	*S.I*	*A.S.I*	*H.C*	*C/GD*	*FLR*	*Total*
Siaha	1	1	1	6	1	-	10
Tuipang	-	-	-	2	-	-	2
Phura	-	-	1	1	-	-	2
Kawlchaw	-	-	-	2	-	-	2
Lungbun	-	-	1	1	-	-	2
Total	**1**	**1**	**3**	**12**	**1**	**0**	**18**

Fire & Emergency Services

S/N	*Name of Post*	*No. of Post*
1.	Station officer	1
2.	Constable	1
3.	Firemen	3
4.	Driver	2
5.	Fire Tender	2

Reg. No	*Type of Vehicle*	*On/Off Road*	*Condition*
MZ-01D-9681	407 Turbo WaterBowser	On Road	O.K
MZ-01D-6664	Pick-UpFire tender	On Road	O.K

Civil Society Organizations –

The Non-Governmental Organizations (NGOs) working in Siaha district play a significant role in educating the public on various social issues and their rights. Disaster Management is one of the major subjects for them and the District Administration has already started collaboration with such organization for community level disaster management planning.

Two Adventure clubs viz. Beino Youth Adventure Club (9774046198) and Meisavaih Adventure Club (7085417461) are utilized and trained as 'District Search and Rescue Team'.

FCS&CA storage facilities with capacity –

S/N	*Location*	*Year*	*Capacity*	*Area*	*Contact No.*
1	Siaha SDC	1987	8000	140'x30'	223018
2	Bualpui	1987	3000	36'x18'	262167
3	Lungpher	1992	2000	50'x20'	226021
4	Vawmbuk	1986	1500	30'x20'	9436379158
5	Lungtian	1991	1500	30'x20'	9436149630
6	Sangau	1994	3000	50'x20'	2553179
7	Niawhtlang	1995	3000	50'x20'	226503
8	Chhuarlung	1993	3000	50'x20'	9612588096

9	Chakhang	1995	2800	48'x20'	9436379677
10	Tuipang	1995	3000	50'x24'	9436764632
11	Tuisih	1992	3000	50'x20'	229222
12	Zawngling	1995	3000	50'x20'	280007
13	Chapui	1991	1500	30'x20'	280001
14	Vahai	1997	3000	50'x20'	224107
15	Laki	1991	1500	30'x20'	280007
16	Maubawk	1994	1500	30'x20'	222579
17	Siata	1992	3000	50'x30'	280308
18	Kawlchaw	1985	4500	60'x24'	9436379607
19	Serkawr	1991	3000	60'x18'	222579
20	Phura	1991	1500	30'x20'	222704
21	Tongkolong	1994	3000	50'x20'	-
22	Lungpuk	-	1500	30'x20'	-
23	Phalhrang	-	1500	30'x20'	222331

Mara Thyutlia Py branches with members (as on November 10, 2015)

S/n	*BRANCH*	*MEMBER*	*S/n*	*BRANCH*	*MEMBER*
1	Siahatla	420	2	New Siaha	360
3	College Vaih	867	4	Council Vaih	276
5	ECM Vaih	415	6	New Colony	1020
7	Siaha Vaihpi	715	8	Meisavaih 'E'	402
9	Meisavaih 'W'	340	10	Meisatla	286
11	Thosaih	223	12	Tisopi Peniel	157
13	Tisopi	204	14	Amotlah	256
15	Thiahra	201	16	Riasika	106
17	Tipi Ferry	182	18	No Aotlah	52
19	Lobo	287	20	Chhaolo I	291
21	Chhaolo II	147	22	Siata	296
23	Iana	247	24	Chakhei I	288
25	Chakhei II	247	26	Siasi	157
27	Chapi I	183	28	Chapi II	144
29	Mawhro	267	30	Chheihlu	207
31	Zyhno I	298	32	Zyhno II	225
33	Siatlai	187	34	Ahmypi	226
35	Khopai	236	36	Laki	302

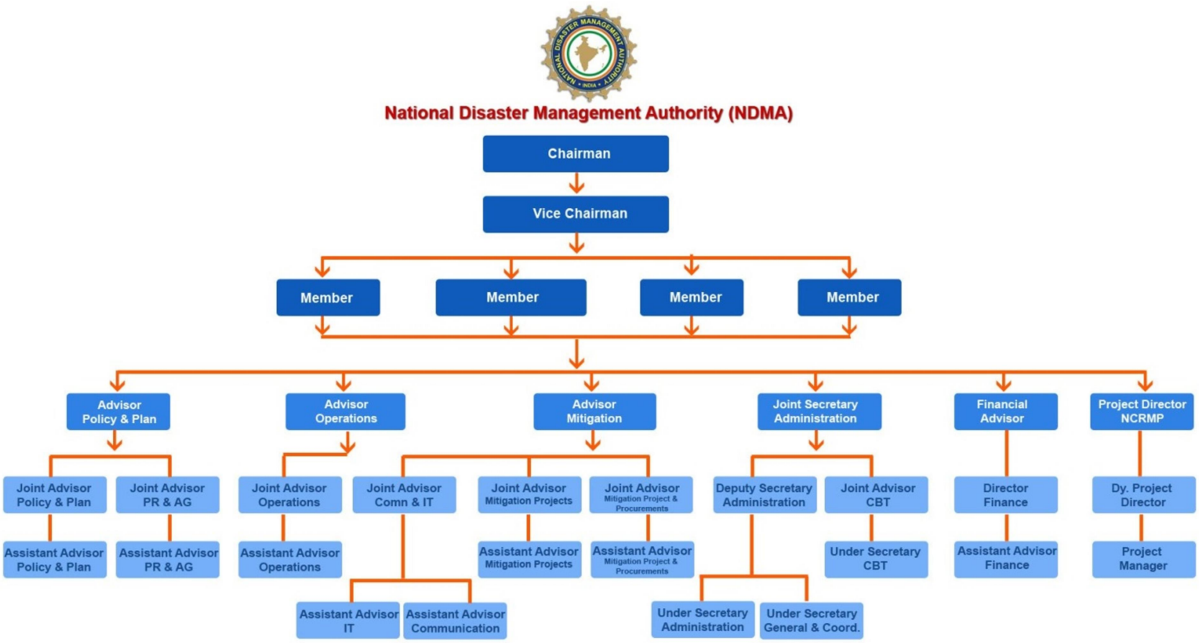
37	Vahia	347	38	Miepu	202
39	Lopu I	198	40	Lopu II	184
41	Khaikhy	152	42	Leisai	125
43	Supha	143	44	Lomasu	251
45	Lopaw	267	46	Pala	221
47	Bymari	262	48	Kiasie	206
49	Phura I	196	50	Phura II	184
51	Maila	152	52	Lohry	161
53	New Laty	263	54	New Saikao	104
55	Lorrain Ville	151	56	Saikao I	182
57	Saikao II	173	58	Kaochho 'E'	264
59	Amobyu V	251	60	Amobyu CH	182
61	Amobyu B	283	62	Theiva	264
63	Theiri	262	64	Tisi 'E'	164
65	Tisi 'W'	172	66	Tipa 'D'	263
67	Tipa 'V'	271	68	Tipa Bazar	234
69	Tipa Beivaih	206	70	Tlyrah	102
71	Vyhtu	201	72	Tokalo	251
73	Ngiaphiah	182	74	Khipiluh	102
75	Locheipi	161	76	Locheita	132
77	Lodao	124	78	Sachie	104
79	Meisakotlah	161	80	Phaphe	154

Total MTP branch - 80
Total members - 19251
Headquarters - Siaha
Sub headquarters - Tipa, Saikao, Chhaolo, Phura

CHAPTER – 3
INSTITUTIONAL ARRANGEMENT FOR DISASTER MANAGEMENT (DM)

3.1 National Disaster Management Authority

The National Disaster Management Authority has been constituted under the Disaster Management Act 2005, with the Prime Minister of India as its Chairman; a Vice Chairman with the status of Cabinet Minister, and four members at present with the status of Ministers of State in the Central Government.



3.2 State Disaster Management Authority

1. The Chief Minister – Chairperson
2. Minister, Relief & Rehabilitation - Vice-Chairperson
3. Minister, Plan. & Prog. Implementation – Member
4. Minister, Finance - Member
5. Minister, PHE - Member
6. Minister, Rural Development - Member
7. Minister, LAD - Member
8. Minister, Health & Family Welfare – Member
9. Minister, PWD - Member
10. Chief Secretary - Chief Executive Officer (Ex-Officio)

IRS Positions and suitable officers at State level

IRS Position	Suitable officers
RESPONSIBLE OFFICER	Chief Secretary, Govt. of Mizoram
INCIDENT COMMANDER	Principal Secretary, DM&R Department

Deputy IC	Director, DM&R Department
Information & Media Officer	Director, I&PR Department
Liaison Officer	Joint Secretary, DM&R
Safety Officer	Director, F & ES
OPERATIONS SECTION CHIEF	Director General of Police
Staging Area Manager	SP (Traffic)
Response Branch Director	Inspector General of Police (Law & Order)
Division Supervisor / Group-in-charge	Dy. Inspector General (Range)
Task Force / Strike Team	Commander/Leaders of SDRF, SYS (AW), F & ES, MRP, MAP, IR, MRHG, YMA (DMV)
Single Resources	Deputy Commissioner (IRT), Medical Superintendent (Civil Hospital), Engineer in Chief (PHE, PWD, P&E), Director (SYS).
Transportation Branch	Director , Transport Department
Road Group	
Group-in-charge	Addl. S.P (Traffic)
Vehicle Coordinator	Jt. Director , Transport Department
Loading-in-charge / Unloading-in-charge	Commissioner, Excise.
Rail Group	
Group-in-charge	Superintendent, Railway Out Agency
Coordinator	UDC, Railway Out Agency
Loading-in-charge / Unloading-in-charge	LDC, Railway Out Agency
Water Group	
Group-in-charge	Engineer-in-Chief, PHE
Coordinator	Chief Engineer, PHE
Loading-in-charge / Unloading-in-charge	Superintending Engineer, PHE
Air Operations Group	
Group-in-charge Air Operations	Principal Consultant, Civil Aviation
Helibase / Helipad-in-charge	Dy. Controller, Civil Aviation
Loading / Unloading-in-charge	Commissioner, Excise.
PLANNING SECTION CHIEF	Deputy Secretary, DM&R
Resource unit	Commandant, MRHG
Check-in-status Recorder	Director, Sainik Welfare & Resettlement.
Situation unit	SPO, NSS
Display Processor	Jt. Sect, GAD
Field Observer	President, Central Y MA
Weather Observer	Chief Scientific Officer, Science & Tech. Dept.
Documentation Unit	Director, Economic & Statistics Dept.
Demobilization Unit	Inspector General of Police
Technical Specialist	Head Faculty, DMC, ATI
LOGISTICS SECTION CHIEF	Director, DM&R
Service Branch Director	Dy. Secretary, GAD

Communication unit	Superintendent of Police (Wireless)
Medical Unit	Director, Health Services
Food Unit	Director, FCS&CA Dept.
Support Branch Director	Asst. Inspector General of Police - I
Resource Provisioning Unit	Director, FCS&CA Dept.
Facilities Unit	Under Secretary, DM&R
Ground Support Unit	Director (Fire & Emergency Services).
Finance Branch Director	Commissioner / Secretary, Finance Dept.
Time Unit	Director, Economics & Statistic
Compensation / Claim Unit	Deputy Director, DM&R
Procurement Unit	Deputy Director, DM&R
Cost Unit	Superintendent, DM&R

3.3 District Disaster Management Authority –

As per the Government Notification vide No.B.13011/102/2015 - DMR dated 25th October, 2019; the following are the composition of DDMA:

Chairperson	:	Deputy Commissioner (Ex-Officio)
Co-Chairperson	:	CEM, MADC
Members	:	Superintendent of Police
		Executive Secretary, MADC
		Chief Medical Officer
		Executive Engineer, PWD (Govt. Nominated)
		Executive Engineer, PHE (Govt. Nominated)
Chief Executive Officer	:	Additional Deputy Commissioner

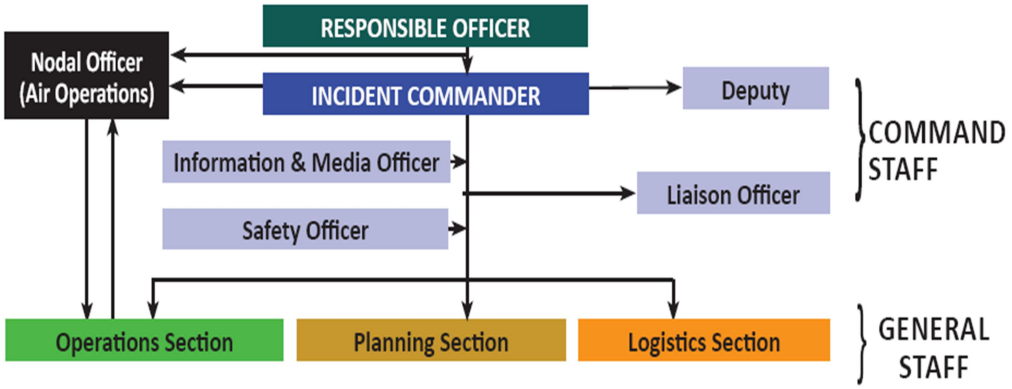
3.3.1 District Advisory Committee on DM –

As per the provision under Section 28, Sub-Section (1) of Disaster Management Act, 2005 and in pursuance of the Government of Mizoram Disaster Management & Rehabilitation Department letter No.B.13011/21/2007-DMR of 23.05.2015, the District Advisory Committee on Disaster Management is constituted with the following members vide No. B. 16012/8/2012 – DC (S), dt. 20/4/2015 –

1.	Chairman	:	Deputy Commissioner
2.	Member Secretary	:	Sub Divisional Officer (S)
3.	Members	:	Executive Engineer, P&E Department
			Superintendent of Police, Siaha
			Chief Medical Officer, Siaha
			I & PRO, Siaha
			Executive Secretary, MADC
			Commandant, 28th Assam Rifles, Siaha
			Sub Deputy Commissioner, i/c DM&R
			District Organiser, DEOC, Siaha

3.3.2 IRS in the District –

Incident Response System in the District is systematically designed with a view to ensuring effective approach in disaster management. The structure is as under –



Position and suitable officers is as under –

IRS Position	Suitable officers
RESPONSIBLE OFFICER	Deputy Commissioner
INCIDENT COMMANDER	Addl. Deputy Commissioner
Deputy IC	Superintendent of Police
Information & Media Officer	District Information & Public Relation Officer
Liaison Officer	SDO (Sadar)
Safety Officer	SDC, i/c DM&R
OPERATIONS SECTION CHIEF	Addl. Superintendent of Police
Staging Area Manager	SDO (Civil)
Response Branch Director	SDC
Division Supervisor/Group-in-charge	Dy. Superintendent of Police (Hqrs.)
Task Force / Strike Team	Commander/Leaders of SDRF, MAP, MRP, IR, Fire & Emergency, YMA
Single Resources	SMO - Health & Family Welfare Dept., SDO - PWD/P&E, S.O, F & ES.
Transportation Branch	District Transport Officer
Road Group	
Group-in-charge	Deputy Superintendent of Police
Vehicle Coordinator	District Transport Officer
Loading-in-charge / Unloading-in-charge	Motor Vehicle Inspector, Transport Dept.
Rail Group	
Group-in-charge	Not Relevant in District Level in Mizoram.
Coordinator	Not Relevant in District Level in Mizoram.
Loading-in-charge / Unloading-in-charge	Not Relevant in District Level in Mizoram.
Water Group	
Group-in-charge	Executive Engineer, PHE
Coordinator	Sub Divisional Officer, PHE

Loading-in-charge / Unloading-in-charge	Junior Engineer, PHE
Air Operations Group	
Group-in-charge Air Operations	*District Aviation/Helipad*
Helibase / Helipad-in-charge	Executive Engineer, PWD
Loading / Unloading-in-charge	Superintendent of Excise.
PLANNING SECTION CHIEF	Deputy Commissioner
Resource unit	Commandant, MRHG
Check-in-status Recorder	DFO, Environment & Forest (MADC)
Situation unit	Sub-Divisional Police Officer
Display Processor	District Information & Public Relation Officer
Field Observer	Representative of Sub Hqrs YMA/YLA/MTP
Weather Observer	DAO, Agriculture Dept.
Documentation Unit	DEO, Education Dept.
Demobilization Unit	Superintendent of Police
Technical Specialist	Executive Engineer, P&E Dept.
LOGISTICS SECTION CHIEF	Superintendent of Police
Service Branch Director	Local Administrative Officer (MADC)
Communication unit	Inspector Wireless, Police Dept.
Medical Unit	CMO, Health & Family Welfare Dept.
Food Unit	DCSO, FCS&CA Dept.
Support Branch Director	District Local Administrative Officer
Resource Provisioning Unit	DCSO, FCS&CA Dept
Facilities Unit	Superintendent of Taxes
Ground Support Unit	Executive Engineer, Public Work Department
Finance Branch Director	DTO, Accounts & Treasuries Dept.
Time Unit	District Research Officer, Economic & Statistic
Compensation / Claim Unit	Revenue Officer (MADC).
Procurement Unit	Deputy Commissioner
Cost Unit	Deputy Commissioner

3.3.3 EOC setup and facilities available in the district

Siaha District has an exclusive Disaster Management Nerve Centre known as District Emergency Operation Centre (DEOC) at the Office of the Deputy Commissioner. The District EOC is functional for five days in a week during office hours and is manned at present by one District Organizer (D.O.) and a IV Grade worker. The District EOC is equipped with ICT equipment and is also provided with search & rescue equipments (the list of available equipments is given below). This centre is intended to coordinate all disaster related activities in the district starting from preparedness to rehabilitation and reconstruction.

List of equipments available at DEOC, Siaha

S/n	*Name of Equipments*	*Quantity*	*Location*	*Remark*
1.	Figure of 8	3	EOC	Good
2.	Rappelling mitten	4	EOC	Good
3.	Ascender jummer	4	EOC	Good
4.	Photo Copier (Sharp) with stabilizer	1	EOC	Good
5.	Jumper	4	EOC	Good
6.	Aluminum ladder	2	EOC	Good
7.	Climbing rope 10 mm	2 bundles	EOC	Good
8.	Climbing rope 8 mm	1 bundle	EOC	Good
9.	Tape Artier	2	EOC	Good
10.	Body Harness	4	EOC	Good
11.	Heavy duty work glove	2	EOC	Good
12.	Climbing Helmet	120 nos.	EOC	Good
13.	Carabiner screw	10	EOC	Good
14.	Carabiner Plain	10	EOC	Good
15.	Sit Harness	4	EOC	Good
16.	Pully	2	EOC	Good
17.	Stretcher	1	EOC	Good
18.	Sledge Hammer	2	EOC	Good
19.	LCD Screen	1	EOC	Good
20.	Petromax	3	EOC	Good
21.	Portable Inflatable Lightning System	1	EOC	Good
22.	Projector	1	EOC	Good
23.	Fire Extinguisher	10		Good
24.	High Power Electronic Siren	2	EOC	Good
25.	Computer and its accessories	1	EOC	Good
26.	Combo sound	4	EOC	Good
27.	Emergency Light	2	EOC	Good
28.	Hammer	1	EOC	Good
29.	Fax Machine (Panasonic KX-FP701)	1	EOC	Good
30.	Stabilizer (KV 4) Indo	1	EOC	Good
31.	Diamond Blade for multipurpose Diamond Saw	2	EOC	Good
32.	Angle Cutter 14"Dia	1	EOC	Good
33.	Replacement Blade for angle cutter	2	EOC	Good
34.	Traffic Cone	5	EOC	Good

35.	Cordoning Tape	2 coils	EOC	Good
36.	Spade with steel handle	3	EOC	Good
37.	Pliers	2	EOC	Good
38.	Chainsaw	2	EOC	Non functional
39.	Rope ladder	2	EOC	Good
40.	Four fold stretcher	1	EOC	Good
41.	Generator 2.5KVA	1	EOC	Good
42.	Fire Extinguisher 2 Kg	1	EOC	Good
43.	Inflatable Boat	1	EOC	Good
44.	Life jacket	6	EOC	Good
45.	WT Set	3	EOC	Good
46.	Tower Light	1	EOC	Good

3.3.4 Alternate EOC–

1. DC bungalow
2. Circuit House
3. DC conference hall
4. SP Office
5. CEM bungalow

3.4 Public and Private emergency service facilities available in the district –

Resources of District Hospital, Siaha –

Total Bed strength - 75
General Doctor - 8
Specialist doctor - 6
Dental surgeon - 1
AYUSH doctor - 1
Nurses - 19
Group D - 12 (regular)

S/N	*Name of Equipments*	*Quantity*	*Location*	*Remark*
DISTRICT HOSPITAL, SIAHA				
1.	Operation Table	2	DHS	One major, one minor
2.	Anaesthesia Machine	1	DHS	Working condition
3.	Multipara Monitor	1	DHS	Working
4.	Oxygen Concentrator	5	DHS	OT Ward
5.	Ultrasound Machine	2	DHS	Working condition
6.	Diathermy Machine	1	DHS	Working condition

7.	OT Lamp	1	DHS	Working condition
8.	Suction Machine	10	DHS	Working condition
9.	Endoscopy Machine	1	DHS	Working condition
10.	Ambu Bag	4	DHS	Working condition
11.	X-Ray Machine	1	DHS	Working condition
12.	Defibrillator	1	DHS	Working condition
13.	Ambulance	2	DHS	One working, one out of order
14.	Labour Table	2	DHS	Working condition
15.	ECG Machine	1	DHS	Working condition
16.	Colposcope	1	DHS	Working condition
17.	Colonoscope	1	DHS	Working condition
18.	ECG Machine	1	DHS	Working condition
19.	Pulse Oximeter	5	DHS	Working condition
20	Ventilator	1	DHS	Working condition

FCS&CA storage facilities with capacity –

S/N	*Location*	*Year*	*Capacity*	*Area*	*Contact No.*
1.	Siaha SDC	1987	8000	140'x30'	223018
2.	Bualpui	1987	3000	36'x18'	262167
3.	Lungpher	1992	2000	50'x20'	226021
4.	Vawmbuk	1986	1500	30'x20'	9436379158
5.	Lungtian	1991	1500	30'x20'	9436149630
6.	Sangau	1994	3000	50'x20'	2553179
7.	No-aotlah	1995	3000	50'x20'	226503
8.	Chhaolo	1993	3000	50'x20'	9612588096
9.	Chakhei	1995	2800	48'x20'	9436379677
10.	Tipa	1995	3000	50'x24'	9436764632
11.	Tisi	1992	3000	50'x20'	229222
12.	Zyhno	1995	3000	50'x20'	280007
13.	Chapi	1991	1500	30'x20'	280001
14.	Vahia	1997	3000	50'x20'	224107
15.	Laki	1991	1500	30'x20'	280007
16.	Amobyu	1994	1500	30'x20'	222579
17.	Siata	1992	3000	50'x30'	280308
18.	Kaochao	1985	4500	60'x24'	9436379607
19.	Saikao	1991	3000	60'x18'	222579
20.	Phura	1991	1500	30'x20'	222704
21.	Tokalo	1994	3000	50'x20'	-
22.	Lopu	-	1500	30'x20'	-
23.	Amotlah	-	1500	30'x20'	222331

Owners of private earthmovers –

S/N	*Name*	*Address*	*Contact Nos.*
1.	H. Lalchhinga	New Colony	9436379511
2.	K. Hrangsu-a	New Colony	9436149086
3.	HC. Lalmalsawma	Council Vaih	9436149008
4.	H.Lalawii	N.Siaha 'E'	9436149011
5.	C. Lalawmpuia	N.Siaha 'W'	9436149118
6.	Zamanga	New Siaha	
7.	Vanlalngaia	N.Siaha 'W'	9436879145
8.	K.H Beihlo	New Colony	222095
9.	K. Sangthanga	New Siaha	226131
10.	C.Lalthlamuana	N.Siaha 'E'	9436149527

List of truck owners

S/N	*Name*	*Address*	*Contact Nos.*
1.	H. Lalchhinga	New Colony	9436379511
2.	K.Hrangsu-a	New Colony	9436149086
3.	N. Nadaw	Vengpui	222257
4.	Vanlalngaia	N.Siaha 'W'	9436879145
5.	Anthony P. Gangte	Vengpui	9436149049
6.	C.Lalawmpuia	N.Siaha 'W'	9436149118

Civil society organizations –

The Non-Governmental Organizations (NGOs) working in Siaha district play a significant role in educating the public on various social issues and their rights. Disaster Management is one of the major subjects for them and the District Administration has already started collaboration with such organization for community level disaster management planning. Two Adventure clubs viz. Beino Youth Adventure Club and Meisavaih Adventure Club are utilized and trained as 'District Search and Rescue Team'.

3.3.5 Forecasting and warning agencies –

1. State Meteorological Centre, Science & Technology Department, Mizoram
2. Indian Meteorological Department (IMD)

CHAPTER – 4
PREVENTIONAND MITIGATION MEASURES

4.1 Prevention and Mitigation plan for each hazard

A disaster depends on the type of hazards and its intensity as well as vulnerability of the community. No one can prevent any natural hazards but we can minimize the effect by strengthening the capacity of the vulnerable groups and reduce the risk factors. Some activities like strengthening new construction practices, environment protection and proper land use plan for the urban areas etc. can be undertaken by the State Government and the community to reduce the impact of natural disasters.

4.2 Mitigation

Mitigation means activities taken up to reduce the impact of any hazard that cannot be prevented or evaded. Natural hazards like cyclone, monsoon rain or earthquake cannot be prevented; therefore, it is necessary to prepare ourselves to minimize the loss and sufferings that follows once these hazards occur. Mitigation is, therefore, closely associated with preparedness. Therefore, mitigation is an integral part of disaster management. The objectives of mitigation strategy are:

- To enhance the public awareness of disaster risk reduction and public demands for a safer communities to live and work
- To significantly reduce the risk to minimize the loss of life, injuries, loss of economics or loss of development initiatives, damage of infrastructures, which are the result of any disaster.

The mitigation activities could be structural and non-structural also. The assumption of mitigation efforts are long terms and more expenditure, which would be treated as investment in terms of reduction of life loss and damage to infrastructure. The effective hazard assessment and the vulnerability analysis would project the probability of future damage/ losses.

Some of the mitigation strategies suggested to the State Government to be adapted to minimize the effect of various disasters are as follows:

- Risk reduction measures ensure the long term economic development for the community as a whole rather than short term benefit to a specific interest.
- Risk reduction measures of one disaster should be compatible to the other risk reduction measures for other disasters.
- Community participation should be there in the entire mitigation programme to reduce the local risks.
- Proactive mitigation measures can reduce the response time and help in quick recovery.
- Hazard identification and risk assessment should be the focus of all mitigation strategy.
- All risk reduction measures shall always be compatible to the protection of nature and cultural resources of the State.

- Mitigation activity is to be recognized as an integral part of sustainable development and multi-disaster approach should be adopted.

4.3 Preventive measures for Earthquake:

4.3.1 Structural mitigation:

- The best mitigation process from earthquake is to construct earthquake resistant buildings in safe location.
- Unsafe old building/structures be reconstructed/retrofitted as per technical assessment to make the house safe from earthquake.
- Land use planning is an essential part to minimize the effect of earthquake.
- The district has to ensure the safety of buildings or institution where mass gathering usually takes place as in schools, public halls, etc.
- Strict regulation for approvals of building design and to ensure safe construction practices are followed while construction of new buildings is undertaken.

4.3.2 Non- structural mitigation:

- Mass education on safe construction practices and protection of human being from the earthquake. Practice do's and don'ts on regular basis.
- Have mock drills with all institutions and buildings to ensure the preparedness.
- Training of engineers and masons on safe construction practices

4.4 Preventive measures for Flood:

4.4.1 Structural mitigation:

- Strengthen the early warning system for accurate warning to the community.
- Storm drains are strengthened and cleared before rainy season.
- Land use planning is done properly to avoid mudslides and landslides due to heavy rainfall.
- Stream restoration can be done based on the rain water carrying capacity to avoid flood due to heavy pouring.

4.4.2 Non- structural mitigation:

- Community awareness and education is required to prevent flood.
- Mapping of flood prone areas and flood risk mapping which can assist during pre-disaster decision making.
- Formulation of flood preparedness plan which includes emergency response planning and training, land use regulation, flood proofing, setting alternative plans and local social structure strengthening.

4.5 Preventive measures for Cyclone/ High wind:

4.5.1 Structural mitigation:

- Structural modifications in existing houses to keep the roof intact during heavy wind.
- Construction of Cyclone shelters that can act as safe places to flee during cyclone.
- Construction of wind breakers to minimize the effect of high wind on the houses.

4.5.2 Non- structural mitigation:

- Strengthen early warning system in the State. Coordinate with Meteorology Dept. to get localized cyclonic information and alert the people for preparedness.
- Use of technology to identify evacuation routes in case of emergency.
- Mapping, delineation and demarcation of cyclone hazard areas and sensitive/vulnerable areas to high wind velocities.
- Design and control of Land use so that least critical activities are placed in vulnerable areas. Vulnerable areas can be kept for parks, grazing or play grounds.

4.6 Preventive measures for Landslides:

4.6.1 Structural mitigation:

- Landslides always occurred due to heavy rainfall. Identify all stream runoff and clear blocked areas before the rainy season, to avoid blockade.
- Maintain and protect both sides of river and stream to avoid erosion and improve the channels for free flow of water.
- Monitoring of landslide prone areas either through an automated system or by preparation of hazard area maps and following up ground check on such prone areas during monsoon or raining season.

4.6.2 Non- structural mitigation:

- House site allotment should be considered only after careful consultation with Land Use Plan to avoid risk against landslides and land-sinking.
- Soil testing should be mandatory before permission is considered for any new construction.
- Campaigns to create public awareness of warning services and protective measures, importance of insurance to encourage sound land use and structural mitigation actions.

4.7 Preventive measures for Drought:

4.7.1 Structural mitigation:

- Tracking the behavior of monsoon and taking advance action to reduce the drought situation.
- Keep ready with food for work programme, so that people would get opportunity to earn their livelihoods when severe drought is forecasted.
- Construction of rainwater harvesting structures in prone areas to ensure that water is at least available during drought prevalence.

4.7.2 Non- structural mitigation:

- State government can provide necessary support on alternative crop planning to the farmers.
- Crop insurance should be promoted to transfer the risk.
- Micro watershed development should be initiated with community participation for maintenance and optimum utilization of water to avoid drought situation.

4.8 Preventive measures for Hailstorm:

4.8.1 Structural mitigation:

Fornewconstructionaswellasretrofittingexistingbuildings,techniquestominimize haildamageinclude:

- Including measures such as structural bracing, shutters, laminated glass in window panes, and hail-resistant roof coverings or flashing in building design to minimize damage.
- Improving roof sheathing to prevent hail penetration;
- Installing hail resistant roofing and siding.

4.8.2 Non- structural mitigation:

- Posting warning signage at local parks, county fairs, and other outdoor venues.
- Teaching school children about the dangers of hail and how to take safety precautions.

4.9 Preventive measures for Pest attack:

- 10 % cow's urine is sprayed once in 10 days thrice.
- Half litre cow's urine along with ½ litre sour butter milk is mixed with 9 litres of water. This is sprayed once in 7 days twice.
- Cow's urine and water is mixed in the ratio 1:2. The seeds or roots of seedlings are soaked in this for half an hour before sowing or transplanting.
- 40 kgs of neem cake per acre is applied as basal manure for vegetable crops to prevent diseases.
- If there is a disease attack in the nursery, then add 10 % cow's urine extract along with the water that is used to irrigate the nursery.
  (http://www.agritech.tnau.ac.in/org_farm/orgfarm_pestanddisease.html)

4.10 Mitigation Measures for Crops against frost and cold wave:

Department of Agriculture & Cooperation, Ministry of Agriculture closely monitors cold wave situation in consultation with India Meteorological Department (IMD) and State Governments.

Farmers are to provide light irrigation as per need, immediately prune damaged tips of branches or shoot, burn leave/waste material in the orchard to create smoke and manage rejuvenation of damaged crops through pruning of dead material, application of extra doses of fertilizer through foliar sprays. Illustrative example of mitigation measures during different vegetative stages are as under:

Sl. No	*Stages of plant growth*	*Measures to be taken by farmers*
1.	Seedling/ Nursery Stage	Change of micro climate by smoking around the field especially during night.
2.	Vegetative Stage	Irrigating the field, smoking the field during night.
3.	Reproductive Stage	

4.	Harvesting Stage	Harvest the crop at physiological maturity stage.

(Source: Contingency Plan developed by Central Research Institute for Dry land Agriculture (CRIDA), available at http://www.crida.in/)

4.11 Livestock management during Disasters

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

(i) **Development of cyclone and other natural calamity warning system:** Early Warning System would make it possible to avoid many adverse economic and human costs that arise due to the destruction of livestock resources every year.

(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. The fodder bank must be established at a secure highland that may not be easily affected by a natural calamity.

(iii) **Supply of feed ingredients at nominal cost:** Most grain rations for cattle and sheep provide enough protein to maintain a satisfactory 10-12% level. But when we feed livestock in emergency situations – mostly low – protein materials such as ground ear corn, grain straws or grass straws – a protein supplement is needed. Adequate reserves as per the availability of resources will be developed.

(iv) **Conservation of monsoon grasses** in the form of hay and silage during the flush season greatly helps in supplementing shortage of fodder 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.

(vi) **Treatment and vaccination of animals** against contagious diseases in flood affected areas.

4.12 Mitigation Strategy of some Government Departments:

Some of the suggested measures to be undertaken by different Government Department as mitigation approach for various disasters:

(i) Agriculture Department:

- Storing of seeds, seedlings, mini kits, fertilizers, pesticides and other agricultural inputs for making them readily available to the affected cultivators under the loan/grant for raising alternative crops after any disaster.
- Raising seed beds with support from community and keep them in stock to the places prone to the disasters for easy access.
- Introduction of new seeds storage banks at community level.

(ii) School Education Department:

- Have School Safety Plans in all schools.

- Practice evacuation drills on regular basis.
- Strengthen school building against earthquake, cyclonic storms, landslides and fire.
- Ready with books and kits for crash course after any major disasters.

(iii) Health Department:

- There should be a health and medical services plan for vulnerable areas.
- Emergency Mass Casualty Plans for each hospital and health service centers to be drawn up.
- Mobile health and medical facilities to be always alert and ready.
- Materials and manpower shall be made available at all time to set up temporary health centers in affected areas.
- Inoculation, vaccination and health care shall always be in readiness.

(iv) Public Health Engineering Department:

- Keeping ready materials required for quick supply of drinking water where it may be required after any disaster.
- Protect all water supply systems from earthquake and landslides. Keep ready with alternate water supply system in case normal water supply system is broken.
- Provide water to Fire & Emergency Services when there is an outbreak of fire for refilling of empty Fire Tender without any delay in time.
- Proper drainage and sewerage system be constructed to prevent or mitigate landslide, etc in Siaha and other towns.

(v) Police Department:

- Trained Personnel shall be placed in static duty in their respective battalions as far as possible to facilitate quick response and efficiency in Search & Rescue operations as nobody knows when disaster may strike.
- Put on alert officers and other ranks to immediately act and take control of any critical situation side by side with the administration.
- Provide security during relief operation in disaster situation.
- During normal time, trained personnel of SDRF Units can impart training to Community DMTs on research and rescue operation and maintain linkages with community leaders for better cohesion during any type of disaster.

(vi) Fire and Emergency Services:

- Create more community volunteers to support the department in carrying out their activities.
- Organize trainings of volunteers and upgrade their skill and knowledge on search and rescue on regular basis.
- Auxiliary Fire Force be recruited during critical period –February to May.

(vii) Public Works Department:

- Maintain all roads before the rainy seasons.

- Ensuring that equipments, materials and workers are kept ready to repair broken roads and establish linkages quickly after any disaster.
- Keep an updated list of heavy earthmoving equipment, etc with contact numbers.
- Special provision for roadside drainage be included with road development projects.
- Vigilance maintained during construction work to ensure that engineering designs are strictly followed for safety against cyclonic wind and earthquake.
- Rock fall/Landslide vulnerable area be monitored regularly and take necessary preventive measures by removing or fixing those portions which are likely to fall during rainy season. Such works along the roads be maintained by the department to avoid risk to life and to maintain regular flow of traffic.

(viii) Power and Electricity Department:

- Assess the electricity supply system of the district and take preventive action to protect the supply system during disaster periods.
- Keeping ready the requirements of manpower and stock to meet any emergency situation.
- Conduct refreshers' training for existing staff at regular interval to handle the emergency situation and provide electricity to the essential services and community as well.
- Keep equipments ready to provide electricity supply temporarily to disaster affected areas.

(ix) Environment & Forest Department:

- Support the community in generation of wind break by planting appropriate trees near the community settlements.
- Give support to Soil & Water Conservation Department to maintain all river banks and streams to protect landslides and mud slides. Enhance the community participation in generation of more saplings and encourage them to protect the forest.
- Generate the awareness among the community to avoid forest fire.

(x) Transport Department:

- Keep list of transport/vehicle for relief and rescue operation.

(xi) Food, Civil Supplies and Consumers Affairs Department:

- Construction of food storage facilities in disaster prone areas to keep sufficient food-grain before disaster seasons.
- Stock sufficient food-grain before monsoon starts in isolated rural areas.

(xii) Land Revenue & Settlement Department:

- Coordinate with Urban Development & Poverty Alleviation Department and follow the Land Use Plan approved by the Government before making house sites plan for residential or other purposes.

- 'No development zones' as per approved Land Use Plan should be disturbed.
- Natural drainages should not be disturbed while allotment of house sites in areas where natural drains crosses the sites.

(xiii) Village Councils/Local Councils:

- LC/VC level Disaster Management Committee be formed to look after various aspects of pre and post disaster activities.
- Coordinate with the local NGO's to establish active Disaster Management Teams for various activities like Search &Rescue, First Aid, Shelter Management, Information & Damage and Needs Assessment, Relief Coordination, Trauma Counseling, Food &Water Supply, etc as may be considered required.
- Assess the risk factor of the community and develop various protection measures along with the Government Dept. and NGOs.
- Have a VC level DM Plan and regularly update the knowledge and skill of DMTs.
- Carry out mock drills twice a year to assess the preparedness levels

4.13 Early warning and Dissemination System:

General warning may not be useful to the community but specific warning indicating the probability of affected areas and intensity of the disaster could help both the community and Government system to manage the disaster effectively.

Early warning system indicates the onset of a disaster, its intensity, possible affected areas and the system may range from alarms, sirens, public announcements; media to reach the mass community through radio and TV for various disasters. In remote and hilly areas, people use some of the traditional methods to communicate with each other. For example, beating drums, using colour lights, ringing bells, using various colour flags, torchlight morse code communication to communicate with people living in remote and inaccessible areas.

District administration is primarily responsible for the dissemination of early warning based on the information received from the technical agencies such as IMD, CWC, etc.

These are the following technical agencies that are responsible for issue of hazard wise early warnings:

Earthquake: The data acquired from or dispatched by Indian Meteorological Department (IMD) should be utilized for early warning. Information for early warning should be disseminated to the public by the responsible State/District level Disaster management authorities.

Flood: Data or information dispatched by Meteorological dept./CWC/ Water resource dept., should be used for early warning.

Cyclone: Indian Meteorological Department (IMD) is the nodal agency for observing, detecting, tracking and forecasting cyclones which develop in the Indian seas.

Information can also be acquired from cyclone early warning centres located on the east coast of India.

Epidemics: Information acquired through diseases surveillance team, etc of Health Department should be used for early warning.

Fire: Fire Services/ Police should disseminate necessary early warning information.

Road Accident/ Road Blocked: Police Department will be responsible for early warning dissemination for this hazard. The early warning information received from these agencies/Depts. for specific hazards will be used for further planning and information dissemination to responsible State/District level Disaster management authorities.

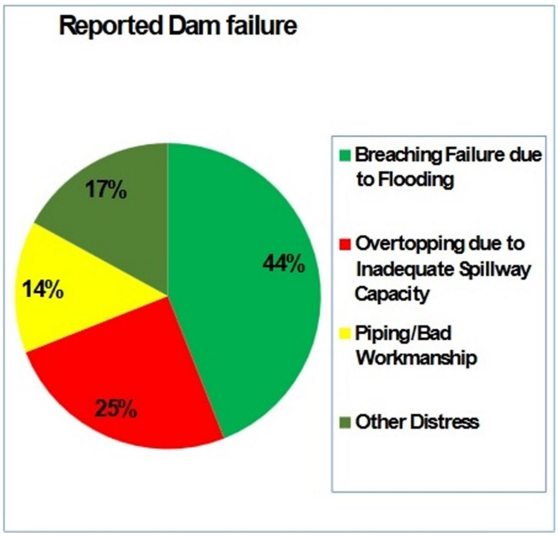
4.13.1 Dissemination of Warning:

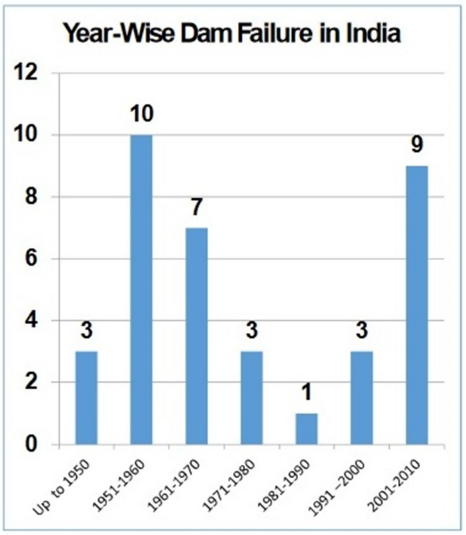
With regard to the dissemination of warning to the communities and other concerned, following points are to be kept in mind –

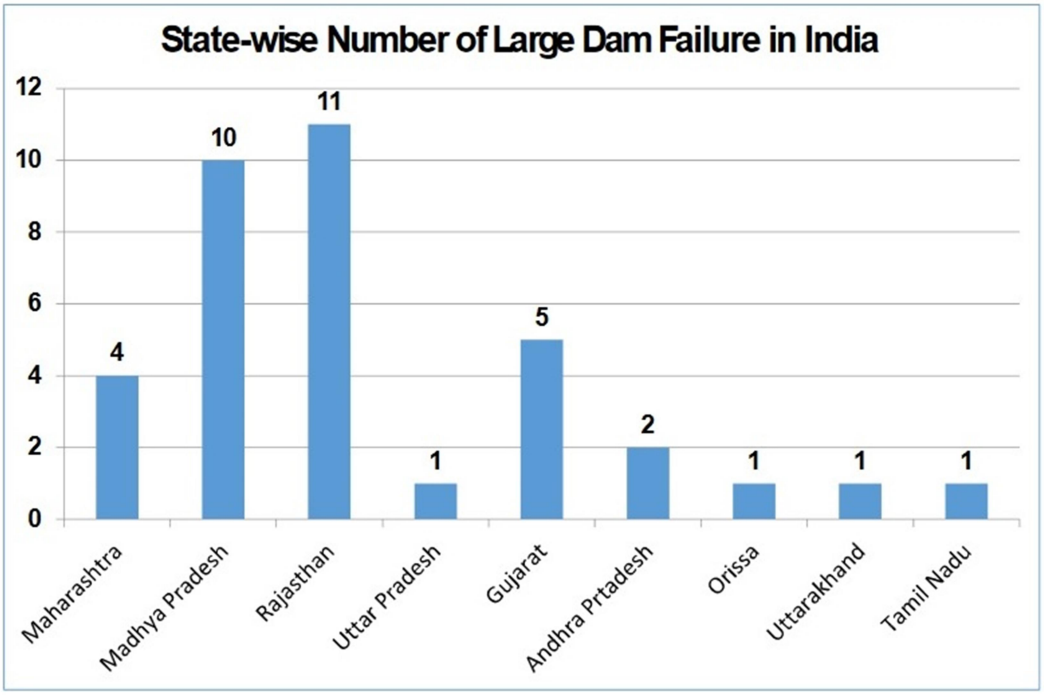
- An alternate early warning tracking should be identified and kept ready in case of failure of the regular early tracking system like failure of power functions etc.
- Identify the officer for issue of early warning. Make sure that there is a back up of the nodal officer to issue early warning.
- The warning message should be simple and easily understood by the communities. There should be awareness among the communities regarding various type of warning signal and its intensity. The language should be in local and should limit the use of technical words for dissemination of early warning.
- The Do's and Don'ts should be clearly communicated to the community and ensure an appropriate response from the community.
- Make sure that warning message should not create any panic and confusion among the community. Rumor control mechanism should be there to control panic and curiosity.
- All relevant agency and organization should be alerted and make them active.
- Use DMT members and VC members for early warning dissemination. They should be trained to understand the early warning message for mass awareness.
- Once warning is issued, the community should be informed about the situation at regular interval.
- After the danger is over, de-warning should be immediately disseminated.

4.14 Dam burst scenario and its contingency plan

Dam Failure in India







Type of Dam	*No. of failure*	*% failure*
Earth Dama	30	83.33%
Composite Dams	3	8.33%
Masonry Dams	3	8.33%
Total	**36**	**100%**

Age of Dam at failure	Number of failure	% Failure
0 - 5 years	16	44.44%
5 - 10 years	7	19.44%
10 - 15 years	1	2.77%
15 - 20 years	1	2.77%
50 - 100 years	6	16.67%
> 100 years	2	5.56%
Age not defined	3	8.33%
Total	36	

The most common cause of dam failures in India is breaching accounting for about 44% of cases followed by overtopping that accounted for about 25% failures. Majority of Indian dams have failed immediately after construction or at the time of first full-load, which can be clearly attributed to factors of either inadequate design or poor quality of construction.

Only one dam is there in Siaha District located at Tipa. The Dam was constructed for the purpose of small hydel power project. Human settlement is not close to the site of existing dam for which risk of failure and other related hazards may not be very sensitive to the local residents within Tipa RD Block.

Safety Plans

Routine Periodic Inspections

- ✓ Safety Inspection of Dams
- ✓ Routine Periodic Inspection by trained and experienced engineers from concerned department at least twice a year - **Pre monsoon** and **post monsoon**
- ✓ Examination of general health of the dam and appurtenant works
- ✓ Preparedness of dam and hydro mechanical structures for handling expected floods

Comprehensive Dam Safety Evaluation

- ✓ Once in a 10 year
- ✓ More comprehensive examination
- ✓ Multi-disciplinary team for holistic view
- ✓ May order additional field and laboratory investigations as well as numerical simulations

DDMA, Siaha in coordination with line department and other stakeholders shall take certain preventive measures for safety of the dam as well as of the surrounding environment. State government should also be invariably roped into the action.

CHAPTER – 5
PREPAREDNESS MEASURES

5.1 Identification of stakeholders involved in disaster response:

When disaster strikes, there has to be a systematic response system so as to deal with the situation in an organized manner. Since DM&R department alone is not able to manage any eventualities, coordination and supportive actions of various stakeholders should be ensured immediately.

- Search & Rescue Team which is composed of Mizoram Police personnel will be responsible to the site operation requiring a single command system. According to the severity or magnitude of the disaster, SDRF may be deployed through proper channel of communication as they are stationed in other districts.
- Various stakeholders and their suitable positions are clearly mentioned in the IRS which has been incorporated in the previous chapter.

5.2 Formation of Teams:

Function	***Nodal Agency***	***Supporting Agency***
Early warning	DEOC	I&PR
Communication	MPRO	BSNL, I&PR, NIC
Evacuation	Police	Police, Fire Services, NCC, Army, PWD (State & MADC), PHE (State & MADC)
Search and Rescue	Police & Fire	Police, Beino & Meisavaih Adventure Club, Assam Rifles.
Law and Order	Police	Home Guards
Medical & Trauma Counseling	Health Deptt.	SWD, MCHP, CDPO
Water Supply	PHE (State)	PHE & LAD (District Council)
Relief	Food &Civil Supplies,	NGOs
Debris and Road Clearance	PWD (State)	PWD& LAD (District Council)
Help Lines, Warning Dissemination	D.C.	NIC, MPRO, I&PR, NGO
Electricity	P&E (State)	NGOs
Transport	RTP (State)	PWD (State & Council)
Damage & Loss Assessment	DC (DM&R branch)	Revenue Deptt, MADC

5.3 Activation of IRS in the district:

Incident Response System will be activated by chairman of DDMA depending upon the extent of damage caused by calamities of any types.

IRS has flexibility and adaptability to be applied to a wide variety of incidents and events both large and small.

5.4 Protocol for seeking help from other agencies:

Under the leadership of Superintendent of Police, Mizoram Police personnel will take action on search and rescue. As and when a need arise, SDRF can be engaged in such operation.

5.5 Mechanisms for checking and certification of logistics, equipments and stores:

DDMA will ensure that equipments available at DEOC are functional and that periodical checking and certification of logistics, equipments as well as stores belonging to other stakeholders and line departments is carried out.

5.6 Operational check-up of warning systems:

District administration is primarily responsible for maintaining warning systems within its jurisdiction which is supposed to be 24x7 operational. Dissemination of information relating to impending natural hazards and other eventualities should be on time so as to facilitate preparedness measures. Therefore, District administration or DDMA may, by office order or other means, give directions time and again to technical departments which are responsible to the services of information and communication to keep their systems always in order.

The risk and vulnerability map and resource maps are kept in EOC for quick decision and action. A clear-cut warning dissemination will be developed by EOC.

5.7 Seasonal inspection of facilities and critical infrastructure:

As DDMA is mandated by the DM Act, 2005 to examine the soundness and safety of government buildings and critical infrastructures like hospitals, schools, market, etc, structural safety audit shall be initiated by DDMA. In this regard, services of technical departments like PWD and PHE are essential so as to work out appropriate suggestions and comments for further course of action.

5.8 Command and Coordination:

Deputy Commissioner is the head of the district administrative setup and chairperson of the District Disaster Management Authority as per the Disaster Management Act, 2005. He is designated as the Responsible Officer in respect of incident response system in the District. The heads of different departments in the District will have separate roles to play depending on the nature and kind of disaster.

In case when central teams (NDRF, Armed Forces) are deployed, the Responsible Officer will ensure resolution of all conflicts. For this purpose he may attach a representative of such agencies in the EOC where all conflicts can easily be resolved at the highest level. The teams so deployed will have to work in OS in the form of Single Resource, Strike Teams or Task Forces under the supervision of

Operation Section Chief. The Incident Commander (IC) will also exercise close supervision for resolution of all conflicts, if required. The Incident Commander (IC) will work in close coordination with EOC and report to Responsible Officer. The Responsible Officer will ensure that the strategic goals are achieved through the implementation of the IAP by the IRTs working in the field.

5.9 Quick Response Team:

QRT has been constituted by DC Office as follows on 25thFebruary, 2020 vide No.B.16012/8/2012-DC (S).

Sl.No	*Name*	*Locality*	*Phone number*
1	N. Lalchampuia	New Siaha East I	7005130068
2	C. Lalvenhima	New Siaha East I	9612038698
3	Beihuhie	New Colony III	7628814730
4	Aiskika	College Vaih	7629869611
5	Vapathai	New Colony III	9366913303
6	S. Byhnadaochai	Meisatla	9383179113
7	Beipaduakhei	College Vaih	9436720094
8	N. Beibyhnadaosa	New Siaha West	9862426680
9	Lalropuia	New Siaha West	8415094726

5.10 NGOs and stakeholders coordination:

When any eventuality takes place causing disruptions or calamities, the first victims and responders are the communities themselves. Hence, NGOs should be given certain duties and responsibilities to perform before, during and after occurrence of any type of disasters.

Siaha District has a good number of NGOs like MTP, YMA, MYA, YLA, MCHP, MHIP, LWA, etc. These organizations are very active in their respective areas of concern. Mara Thyutlia Py (MTP) is playing a dominant role above the other NGOs in the district as most of the people belong to Mara tribe.

5.11 Seasonal Preparedness for Flood and Cyclone

5.11.1 Flood Preparedness:

Pre-disaster period:

- The DDMA/ BDMC has to call meetings of disaster management committees at district/ block and village levels respectively to assess the level of preparedness as per the disaster management plans, preferably every three months.
- Ensure the alertness of all vulnerable pockets for flood warning.
- Ensure the functionality of the control rooms at various levels and assess the functionality of all warning dissemination equipments on a monthly basis by the delegated representative at District, block or village levels.
- Repair broken culverts and clear all storm water drainage for free flow of rain water.

- Ensure the dissemination of weather bulletin and flood bulletins issued by the concerned authorized department.
- Deployment of SDRF team and local search and rescue DMT members for rescue of the affected population quick response.
- Keep necessary stuff such as food, clothes as per the requirement of that locality and keep alert the State Dept. for more support.
- Training will be brought to the village level rather than bringing them together at some town or village. The training at village level will involve all concerned including voluntary organizations and churches.
- Form a team for post–trauma counseling with the local organization including church leaders, medical professionals and other specialized persons (if available) and train them in the subject.
- Activate the crisis management team/ disaster management team and allow them for pre-positioning of equipments or materials. Constitution of various relief, search and rescue teams as per the requirement and keep ready all materials for quick disposal of the teams to the affected areas.
- Assign coordinator amongst the team who will be leading the response. (Village Council/MTP President or any other relevant person).

Arrangement during flood time:

- Activate the Incident Command system for the flood affected areas.
- Assess the flood report on daily basis and keep contact with control rooms for necessary support.
- Dispatch relief and temporary shelter materials to the affected areas.
- Coordinating the response by the team headed by the Coordinator.
- Ensure the rescue or evacuation of entire population from affected areas and provide the necessary relief support.
- Take help of existing trained DMT members for all activities including distribution of relief materials.
- Issue flood bulletins for community in local language and make sure that it is easily understood by community.
- Maintain peace, law and order in the affected areas and control the panic and rumors.

Activities in Post flood situations:

- Clear the road communication and clear the debris from the villages with the help of village DMT members.
- Damage assessments done by the trained DMT members along with authorities and Government official for getting quick assistance for recovery.
- Report should be made immediately and widely circulated.
- Start restoration of damage houses and allow the affected people to move back to their homes.
- Urgent repair of affected community institutions such as school building and health centers for quick start of services.

- Make sure the provision of safe drinking water, power supply and health facilities for the affected population.
- Urgent repair of broken road, bridges, culverts to make sure of communication facilities.
- Facilitate a post-trauma counseling for those affected directly and encourage people to start their income generating activities or allow them to work and earn something for their livelihood. Do not encourage anybody to sit idle and get food from relief services.
- Motivate the people to go for insurance and protect their houses and transform the risk to insurance company

5.11.2 Cyclone/ Wind and Hailstorm preparedness:

The wind speeds are often very high and localized in Mizoram. DEOC (DC Office) should coordinate with the Directorate of DM&R and Meteorological Department to get localized weather information and try to disseminate it as soon as possible. Houses with thatched or tin roofs are more vulnerable to high wind speed/cyclonic storm.

Pre-disaster actions:

- Disseminate the localized early warning messages specially to the vulnerable groups, those who are living in the thatched and tin roofs.
- Educate the people on the impact of the high wind speed and its effect. Allow them to go to the safe place identified in the community and as per based in disaster management plan.
- Activate the trained DMTs for action in their respective roles as per the requirement of the work.
- Check the stock of food stuff as per the requirement or send request for more food stuff to manage the situation.
- Arrange vehicle and alert SDRF and local rescue teams for early deployment.
- Alert Medical Team before the cyclonic storm and request for sufficient staff with medicine for the affected areas.
- Arrange quick evacuation of the people based on the warning to safe place.
- Have a mock drill to familiarize of the DM plan among the villagers and DMT members.

Action during Cyclone/High wind/ Hailstorms:

- Rescue operation may be geared up to evacuate the people to safe place identified in the village DM plan.
- Keep all food stuff and other necessities in the pre-identified place for the affected population.
- Keep all the evacuees in the safe places and keep a record of all and ensure that nobody goes outside during the high wind storm.
- Provide necessary support to the affected population in terms of food, water and medicine.

- Keep special care for the children, sick people, pregnant, lactating mother and persons with disabilities.
- Maintain peace and calm in the temporary shelter and engage everybody in different activities.

Post disaster activities:

- Allow village DMT members along with Government authorized persons for damage assessment of the affected areas in terms of house/property damage, crop damage and loss of livestock etc.
- Based on the damage assessment, arrange the distribution of assistance for quick recovery.
- Provision of safe drinking water, sanitation facilities and food in the affected areas.
- Allow the community to clean the roads and villages through food for work programme.
- Facilitate a post-trauma counseling for those affected directly.
- Provide necessary health care facilities to affected population; take precautionary measures to avoid any epidemic after the disaster.
- Support the community to construct the cyclone proof roof and generate a green belt by planting more trees surrounding the village and create a wind breaker.
- Motivate the people to go for insurance and protect their houses and transform the risk to insurance company.

5.12 Community Preparedness

A prepared community is the best community to minimize the loss and damage caused by the disasters. It is never too late to institute a disaster preparedness plan in our community. Disaster often strikes without warning. The best way to prepare for disaster is to create a specific plan of action that can be put in place at a moment's notice.

5.12.1 Community warning system:

Community members should establish and know their local warning system. In the event of a disaster, local radio and television stations will provide information on evacuation routes, temporary shelters and other emergency procedures.

- Telephone directory is quite helpful in the event of emergency for disseminating reports on incidents as well as for acquiring immediate assistance and aids from other agencies and stakeholders.
- It is also important to identify members of the community who may need special assistance during an emergency.
- Community members who have special skills (medical, technical, etc.) or equipments that they would be willing to share in the event of an emergency may be identified and their contacts should also be made available for easy reference.

5.12.2 Community awareness and education:

Education and Communication initiatives for disaster risk management will have two components:

- Increasing knowledge and understanding to strengthen skills, and capacities for emergency response and support agencies;
- Increasing knowledge and awareness amongst the people and wider stakeholders to strengthen their coping abilities and ensure their participation in preparedness, response, recovery, and mitigation initiatives.

While some of these activities will focus on emergency management, others will focus on larger issues of disaster risk reduction. IEC activities will specially focus on vulnerabilities of the poor, women, children, physically challenged, aged, and minorities. Special attention shall be paid to the use of language in preparing IEC materials. The language will be simple and easy to understand. IEC materials should be prepared in local language of the State i.e. Mizo. Attention will also be paid to prepare pictorial IEC materials to target a

5.12.3 Community's responsibility:

Most of our preparedness is concentrated at State or at District level before 2000. The shift has been seen in the country after few major disasters affected the country. Even though the preparedness is well planned and of high quality, the strategy may not be effective due to lack of community participation. The general feeling is that communities are always victims and treated as the recipient of the relief only. They are not considered to be part of the response.

Meanwhile, a new approach called Community Based Disaster Risk Management came into being in which all communities are expected to prepare their own disaster management plan on the hazards that are prevalent and have Community level Disaster Management Committees and form their own working groups called Disaster Management Teams. The Community Based Disaster Management Plan(CBDMP) is based on the vulnerability of the community as well as the resources available with them. They shall plan for the capacity building of all DMT members and conduct mock drills to familiarize the DM plan and update the plan from time to time.

5.12.4 Sensitization of community about the needs of persons with disabilities:

Community should ensure that the rights and needs of people with disabilities form an integral part of the emergency planning process. This involves the following:

- Knowing about people with disabilities by compiling records of addresses and needs for assistance, and where they are likely to be located. All beneficiaries with special needs during an emergency should be identified, quantified and registered with the civil protection authorities.
- Common and specific hazards and risks should be considered in terms of how they affect people with disabilities, not merely how they impinge upon the general population.

- Special needs are associated with care homes for the elderly, psychiatric hospitals and rehabilitation centres, as well as other special institutions that cater for people with severe disabilities who are unable to live in the community.
- The needs of people with disabilities in an emergency must be estimated and resources found to cater for them. This process must recognise the individuality of particular needs resulting from disability and not overgeneralise them. It must be recognised that the needs of people with disabilities will be highly varied according to the types of disabilities involved, the living arrangements and the care and support services utilised by the individuals concerned.
- Preventative emergency planning for people with disabilities should consider whether and how individuals are able to summon assistance, whether and to what extent rescuers are trained to deal with them, whether there are barriers to processes such as evacuation, and whether such processes are adequately endowed with resources, and whether appropriate temporary accommodation can be provided to people with disabilities if long-term evacuation is required.
- Finally, planning should include measures to monitor, evaluate, and deal with discrimination against people with disabilities if it occurs during emergency, disaster or crisis situations.

5.13 Standard Operating Procedures (SOPs)

A standard operating procedure is "an organizational directive that establishes a standard course of action. In other words, SOPs are written guidelines that explain what is expected and required from service personnel in performing their jobs.

Purpose of the SOP:

- To provide, in a concise and convenient form, a list of major executive actions involved in responding to natural disasters and necessary measures for preparedness, response and relief required to be taken;
- To ensure that all concerned Departments and Organizations of District Administrations know the precise measure required by them at each stage of the process and also to ensure that all actions are closely and continuously coordinated; and
- To indicate various actions that would be required by the Deputy Commissioner within the sphere of responsibilities as the head/ chairman of the District Disaster Management Authority so that DDMA members may prepare and review the Contingency Action Plans accordingly.

The SOP encompasses the following five phases of disaster management for effective and efficient response to natural disasters.

1. Preparedness Phase
2. Early Warning Phase
3. Response Phase
4. Relief Phase
5. Early Recovery (Restoration) Phase

Standard Operating Procedures (SOP) at different phases

The SOP encompasses the following five phases of disaster management for effective and efficient response to natural disasters.

Preparedness Phase: This phase include taking all necessary measures for planning, capacity building and other preparedness so as to be in a state of readiness to respond, in the event of a natural disaster. This Stage also includes development of Search and Rescue Teams, mobilization of development of Search and Rescue Teams, mobilization of resources and taking measures in terms of equipping, providing training, conducting mock drills/exercises, etc.

Early Warning Phase: This phase will include all necessary measures to provide timely, qualitative and quantitative warnings to the disaster managers to enable them to take pre-emptive measures for preventing loss of life and reducing loss/damage to property. On the occurrence of a natural disaster or imminent threat thereof, all the concerned Agencies will be informed/notified for initiating immediate necessary follow up action.

Response Phase: This phase will include all necessary measures to provide immediate succour to the affected people by undertaking search, rescue and evacuation measures.

Relief Phase: This phase will include all necessary measures to provide immediate relief and succour to the affected people in terms of their essential needs viz., food, drinking water, health and hygiene, clothing, shelters as per the CRF norms.

Early Recovery (Restoration) Stage: This phase will include all necessary measures to stabilize the situation and restore the utilities.

5.13.1 Protocol and arrangements for VIP visits

DC Office will take up protocol and arrangement for VIP visits as and when a need arises. In case support from other stakeholders in terms of man power and money, intimation will be sent to such other departments asking for their help.

5.13.2 Procurement

Preparedness, Response and Recovery phases require huge amount of money to procure various essential commodities and materials. In such emergency situation, DDMA will make arrangement for procurement of relief and response materials in an appropriate manner in the sense that they will call a bid for supply of required materials as per existing guidelines.

5.13.3 Logistics

Depending upon the magnitude and severity of the disaster, DDMA will activate and request services of other stakeholders. In order to deal with any disaster situation

in an organized and systematic way, it is imperative to acquire appropriate action from the concerned authorities that are able to provide essential support to the needy.

5.14 Knowledge Management, Networking and Sharing

National Disaster Management Authority has insisted that each and every state in the country should ensure updating of relevant information and data in the IDRN portal which is being monitored by National Institute of Disaster Management, New Delhi. As such, District Administration, i.e DC office keeps uploading information in the IDRN portal.

DDMA is required to issue instruction to all offices within the district for collection of data with regard to the resources and other relevant information available at their end. All line departments should furnish details of their resource inventory to the DDMA/ DC office after which they will be uploaded in the portal for easy reference at any time.

Resource inventory available at the IDRN will be utilized in times of crisis for assessing the strength of the district in terms of resources to face the situation. Therefore, status of the inventory must be reliable and actual and regular updating shall also be ensured.

5.15 Media Management/ Information Dissemination

Media management and information dissemination are essential components of disaster management. Community should be aware of what to do and what not do during crisis period through electronic and print media.

Media role shall be played by Information & Public Relation Department in coordination with Mizoram Journalist Association. By their mistakes in reporting events and incidents, people can get into commotion and chaos which can cause a serious concern. In view of this, media people have to take certain terms of seriousness and utmost care while making reports of incidents. Official spokespersons may be identified by concerned authority. Important duties and responsibilities to be carried out in times of calamities should be made clear to them.

5.16 Medical Preparedness and Mass Casualty Management

Medical preparedness and mass casualty management are the sole responsibility of District hospital. Recently, District Hospital, Siaha has formulated a comprehensive Plan which consists of complete resource inventory and various committees.

In the event of any disaster requiring medical response, District Hospital should be entrusted upon specific tasks in connection with the management of mass casualty. In such a situation, Disaster Management Plan of the Hospital has to be taken into account for ensuring strong and effective mechanism of response and recovery.

5.17 Team of Qualified Ex-Military Personnel

Sl. No	*Name*	*Locality*	*Contact No.*
1.	BS Tako	Meisavaih 'E'	9436208206

2.	Zakhai	Siahatla II	9436765929
3.	Laimaw	Siahatla III	8929834252
4.	Chako	Siahatla II	9436343462
5.	Pame	Meisavaih	8119867881
6.	Beila Lawhai	Vaihpi III	6909293249
7.	Samuela	New Colony	8962843870
8.	S. Paha	Vaihpi III	9436621392
9.	Chotha	Siahatla III	9402111183

5.18 Role of District Legal Service Authority

The following staffs of Siaha District Legal Service Authority are responsible to provide necessary assistance in relation to the cases requiring legal expertise –

1. Pu H. Lalduhsanga, Chief Judicial Magistrate and Secretary, DLSA
2. Pu H. lalhriatrenga, UDC
3. Pu Zirduhmawia, LDC
4. Pu HC Lalhmingsanga, Peon

Further, a group of Para Legal Volunteers will also give a foothold to the District legal Service Authority –

Sl. No	*Name*	*Address*
1.	J. Lalnuntlani	Tipa 'L'
2.	H. Lalrinsiama	Meisatla
3.	Nuna Azyu	Meisavaih East
4.	Raymond Azyu	Meisavaih East
5.	LC Esther Beihmaso	Meisatla
6.	K. Lalbiakzuala	Meisatla
7.	C. Malsawmthangi	New Siaha West II
8.	Khaipha Azyu	Meisavaih

CHAPTER - 6
CAPACITY BUILDING AND TRAINING MEASURES

6.1 Approach:

According to UNDP, Capacity building can defined in much broader terms as the creation of an enabling environment with appropriate policy and legal frameworks, institutional development, including community participation, human resources development and strengthening of managerial systems.

6.2 Capacity Building Plan

To enhance organizational and capability skills to deal with emergency situations requires trainings and capacity building exercises of the various linked government and non-government officers. Since disaster management is a multi-organizations effort, it emphasizes on trainings in execution and coordination as well. Therefore, wide ranges of trainings related to management skills are highly required for potential officers in order to equip them for specialized disaster related tasks.

6.2.1 Institutional capacity building

Task	*Activity*	*Responsibility*
Training & Awareness	Sensitization of DM to officials & policy makers	SDMA/ DDMA
	Training on various aspects of DM including Search & Rescue and First Aid	DDMA/ Police & H&FW
	Training on structural safety and construction	DDMA, PWD and other concerned departments
	Training of doctors & paramedics on medical preparedness and mass casualty management	DDMA & H&FW
	Training & awareness on school safety	DDMA & DEO
	Workshop/ capacity building on traffic management during disaster	DDMA & Police (Traffic Cell)
	Fire safety	DDMA & F&E Department
	Training on DM for NCC, NSS, NYK & communities	DDMA
	Awareness programme of DM for NGOs/CBOs	DDMA
	Workshop for media persons	DDMA & I&PRO
	Training for Teachers/ Caretaker of PWDs	DDMA & Social Welfare Department
	Training on Psycho-social care for victims of disasters	DDMA & H&FW
	Training of trainers	DDMA & DM&R

	Skill up-gradation and follow up training programme	DDMA
	Disaster Management Education	DDMA & All Educational Institutions
IEC	Advertisement, hoarding, booklets, leaflets, banners, demonstration, street play, rally, exhibition, audio-visual and documentary	DDMA & all line departments
I.	**Administrative Training Institute (ATI) New Secretariat Complex, Aizawl**	**0389 – 2323321**
II.	**State institute of Rural Development (SIRD), Kolasib**	**03837 – 221521/221523**
III.	**Mizoram Institute of Remote Sensing Application Centre (MIRSAC), Aizawl**	**0389 – 2341240**
IV.	**State Disaster Response Force (SDRF) PHQ, Khatla, Aizawl**	**0389 – 2334682/ 2335146**

6.3 Community Awareness and Community Preparedness Planning

The hazard analysis of the district indicates that there is a high need of community awareness through public awareness programmes and other mechanisms. The level of preparedness can be enhanced with the following activities –

Task	***Activity***	***Responsibility***
Community preparedness	Identification of vulnerable community & vulnerable groups keeping in mind gender issues	DDMA/ BDO, NGOs
	Information on risk and vulnerability	
	Advise and issue direction wherever necessary for community disaster prevention, mitigation and preparedness through local resources and participatory approach	
	Provide necessary resources and support for DRR at community level	
	Review preparedness at community level	
	Promote community preparedness, education awareness and training	
	Dissemination of information to community to deal with any disaster situation	
	Set up of forecasting and early warning system	

6.4 Capacity Building of Community Task Forces

Community task forces and community committees has been constituted and trained in all types of communities by government and non-government agencies. District administration, Medical officers, trained volunteers, fire Services, volunteers etc. are playing important role in building their capacities in search and rescue, fire-fighting, warning dissemination, first-aid and damage assessment etc.

Training on basic first aid will be initiated by DDMA and medical practitioners are expected to render their skills and expertise to the communities with a view to enhancing the knowhow of communities in respect of medical aid.

6.5 Simulation Exercises

To encourage participation in a coordinated manner, simulation exercises on various disasters are very important. These exercises help in institutional building at various levels. Mock exercises have been promoted at district and community level. These exercises help in improving response time and also test reliability. These mock-drills are arranged by involving all required agencies. These drills also help in updating the response plans. District Disaster Management Authority is playing an important role in conducting mock-drills and to update plan.

6.6 Disaster Management Education

Government of India, Ministry of Human Resource Development in its Tenth Five Year Plan emphasized the need for integrating disaster management in the existing education system in India. In addition, the government of India launched a set of nation-wide disaster risk mitigation initiatives that address larger aspects of development in order to safeguard the developmental gains. One of the important initiatives includes disaster management in the curriculum of school and professional education has been recommended to the Boards.

Schools and colleges are also encouraged to get their teachers and students and other ministerial staff trained on First Aid, Search and Rescue etc. by various Governmental and Non-Governmental agencies.

6.7 Focus on School Safety

- ✓ DEO would ensure that the buildings are safe and secure and are constructed according to safety norms as per National Building Code.
- ✓ Installation and maintenance of fire extinguishers in all existing government and private school buildings would be ensured including necessary training to stakeholders to use these equipments.
- ✓ Non-structural measures including safe storage of inflammable and toxic material (laboratory purpose).
- ✓ Preparation of School Disaster Management Plan.
- ✓ Conduct of periodic mock drills in the schools.
- ✓ Safety audits of school buildings including structural and nonstructural aspects at periodic intervals. Safety certificate to be issued to the school only post thorough inspection and compliance of the safety measures.

- ✓ Capacity building of teachers, staff and students on school safety and disaster preparedness.

Key areas on monitoring

- ✓ District Disaster Management Authority (DDMA) will ensure timely compliance of the implementation of the guidelines through periodic meetings.
- ✓ Nomination of District Education Officer (DEO) as the Nodal Officer to ensure compliance for timely implementation of the guidelines in the district must be done on priority.
- ✓ The DEO will render monthly progress reports on the same to DDMA.

CHAPTER – 7
RESPONSE AND RELIEF MEASURES

7.1 Response planning (multi hazard), preparedness and assessment

The need for an effective disaster management strategy is to lessen disaster impact which can be achieved through strengthening and reorienting existing organizational and administrative structure from district - state to national level. The emergency response plan is the first attempt to follow a multi-hazard approach to bring out all the disasters on a single platform and incorporates the 'culture of quick response'. It provides a framework to the primary and secondary agencies and departments, which can outline their own activities for disaster response.

7.2 Quick assessment of damages and need

At the onset of disaster, DDMA will sit for consideration of the course of action depending upon the nature and magnitude of the incident. Quick assessment of damages should be done taking into account the needs for response. If the extent of calamity is huge and severe, it cannot be dealt with in concerted efforts by various department and stakeholders.

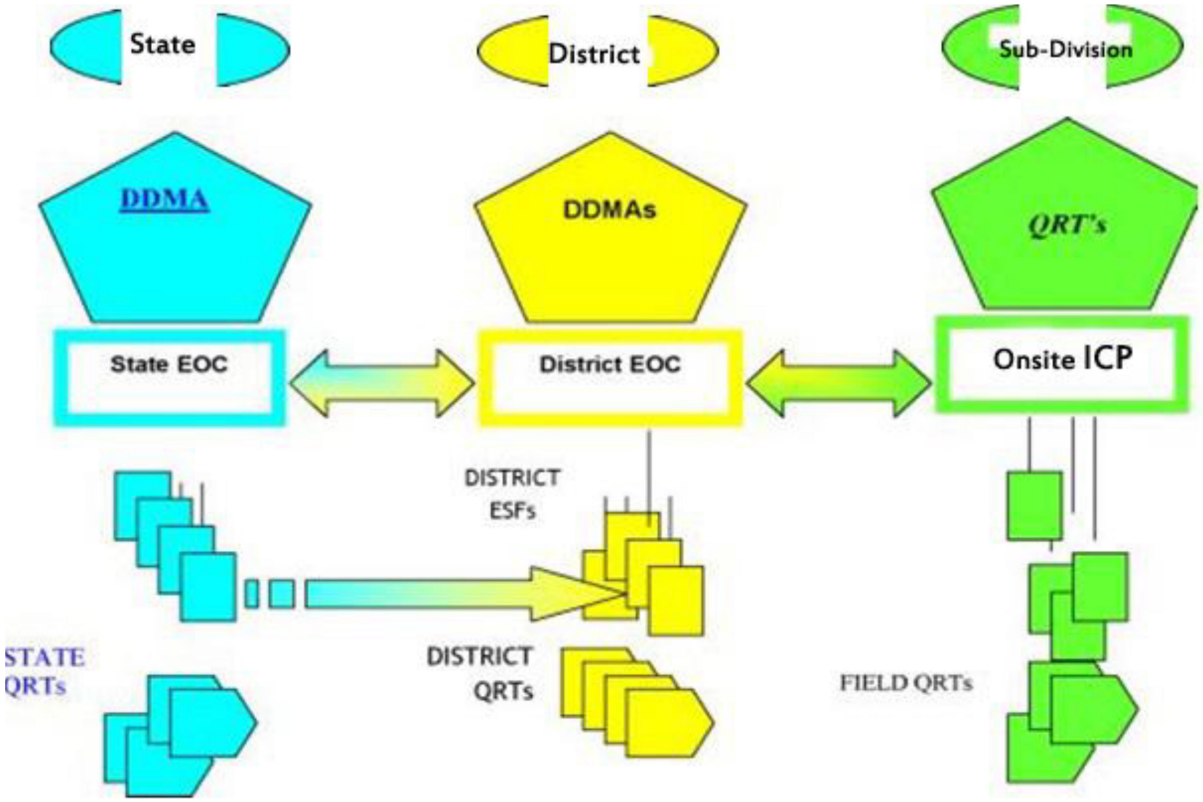
In such circumstances, participation of others along with their resources will be mobilized and be made use of at their maximum capacity. In times of crisis triggered by natural disasters, appropriate plan and mechanism may be designed immediately bearing in mind the following aspects –

- Identification of disasters depending on
  - Past records,
  - Micro-zonation according to the geological settings,
  - Vulnerability associated in context to the disaster,
  - Risk assessment according to the socio - economic conditions,
- Identification of emergency response functions in consultation to the guidelines provided by state nodal agency.
- Identification of responsible government and non-government agencies according to the response functions.
- Identification of responsible officers, manpower and resources according to the activities of the identified agencies.
- Identification of primary and secondary agencies and demarcation of roles and responsibilities according to their functions.

7.3 Response flow chart

Most of the disasters are to be managed at the state and district level. The Centre plays a supporting role in providing resources and assistance. Incase disaster may be managed at the district level, district emergency operation system would be activated where state and national level authorities would be on guard in case of assistance needed. Incident commander (IC) of the district would activate the emergency support functions and Incident Response System and similarly according to the guidance disaster management teams and quick response teams would respond.

If disaster may not be managed within district level and required active participation of state resources, State EOC would activate and Divisional Commissioner would take over the IC system.



7.3.1 Rescue operations

Immediately after a disaster the Deputy Commissioner shall act as the District Magistrate and incident commander and take over disaster management. He/she shall coordinate the rescue operations with the help of the Working Group for relief and rehabilitation and the Emergency Support Functions. Along with the rescue operations the Incident Commander shall do the following measures –

- Activate the Incident Command System.
- Call meeting of Crisis Management Group.
- Coordinate the ESFs in disaster management.
- Set up Site/Onsite Operation Centers and activate relief camps.
- Collect preliminary assessment report from the onsite EOCs.
- Activate the pre-contract vendors and collect relief materials for distribution.
- Brief the situation to the higher authority as well as to the press/media people.
- Ensure basic logistic arrangements for disaster managers and the Operation Centers.
- Mobilize resources/call assistance from various stakeholders.

7.3.2 Relief operations

Once the rescue phase is over, the district administration shall provide immediate relief assistance either in cash or in kind to the victims of the disaster. The

DDMA shall enter in to pre-contract well in advance and procure materials required for life saving. The office of Deputy Commissioner is responsible for providing relief to the victims of natural and man-made disasters like fire, flood, drought, earthquake, riots, terrorist attacks, accidents etc. The relief is provided as per the scale fixed by the government.

7.3.3 Rehabilitation

In short term response rehabilitation is the final step. The incident Command System shall be deactivated as the rehabilitation phase is over. Thereafter the normal administration shall take up the remaining reconstruction works in the disaster-affected areas. These activities shall be performed by the Working Group for relief and rehabilitation under the direction of the DDMA.

7.4 Warning and alert

DDMA would issue an early warning to the probably affected communities so that they would be able to take preventive measures. On receipt of information about the impending natural forces from the reliable sources like IMD and Science & Technology Department, Government of Mizoram, DDMA would immediately take up the matters for the dissemination of warning to the public. This would help them prepare themselves for the impending disasters.

Agencies that are competent to issue warning or alert pertaining to various types of disasters are given below –

Earthquake	DDMA
Flood	DDMA
Landslide	DM&R, GM&R, DDMA, I&PR
Cyclone	DM&R, IMD, DDMA, I&PR
Drought, Hailstorm, Pest Attack	Agriculture & Horticulture Department
Epidemic & Biological Disaster	H&FW and AH&Vety
Major road accident	DC, Transport, Traffic Police
Large scale refugees	Home Department and DC
Cyber terrorism	ICT & Police
Collapse of structure	PWD, P&E, Police
Major breakdown of Law and Order	Home Department & DC
Forest fire	E&F and DC
Urban & rural fire	F&ES
Persons with disabilities	SWD
Livestock management	AH&Vety

7.4.1 Early Warning System

Now-a-days, communications system has been tremendously developed with the advancement of science and technology. Medium of communications like Radio, Local TV, Public Address System and Mobile phones provide considerable conveniences in

sending messages that are of either urgent or normal in nature. The agency that is concerned for dissemination of such warning should take advantage of this information technology in case of emergency as well.

Type of action	*Cloudburst*	*Flood*	*Cyclone*
Dissemination of warning and alert	I&PR, DDK, AIR, Local Cable Operator	I&PR, DDK, AIR, Local Cable Operator	I&PR, DDK, AIR, Local Cable Operator
Information to villages difficult to access though modern means of communication	Dak runner/ special messenger which is to be arranged by only competent authority	Dak runner/ special messenger which is to be arranged by only competent authority	Dak runner/ special messenger which is to be arranged by only competent authority

7.4.2 Warning dissemination

DDMA is responsible for warning dissemination to the likely affected people. The warning should be prepared in local language and its clarity as well brevity may also be maintained. Meanwhile, based on the words and style of the language used, our message can make people panic leading to chaotic situation. Therefore, utmost care and cautiousness need to be taken while drafting messages pertaining to imminent natural hazards. It is also important to bear in mind that withdrawal of warning should also be done by DDMA. Unless warning was withdrawn, people being in the state of readiness and alertness would waste their precious time even after the expiry of the deadline.

7.5 District CMG meeting

The Deputy Commissioner is the Chairman of the CMG, consisting of head of offices in the district. The CMG's functions are to review every year contingency plans formulated by various Offices/Departments/Organizations in their respective sectors, measures required for dealing with natural disasters, coordinate the activities of the district administration and the State Governments in relation to disaster preparedness and relief and to obtain information from the nodal officers on measures relating to above.

The CMG, in the event of a natural disaster, meets frequently at the venue designated as deemed convenient to review the relief operations and extend all possible assistance required by the affected villages and towns to overcome the situation effectively.

7.6 Activation of EOC

EOC is a nodal point for the overall coordination and control of relief work in case of any disaster situation. In case of any disaster district level EOC has to be activated. The primary function of EOC is to facilitate smooth inflow and outflow of relief and other disaster related activities. These EOCs act as bridges between State and Centre government.

District Emergency Operation Centre must arrange desks for the Emergency Support Function in its complex for better coordination and help. Simultaneously the onsite EOCs are to be set up with the help of the DEOC. Constant communication between the State EOC, District EOC and Onsite EOC is mandatory for updates on the disaster, which happened. The DEOC is to function 24x7 as demanded by the situation.

7.7 Resource mobilization

Crisis management usually necessitates mobilization of resources depending upon the magnitude and scale of calamities. Requisition of resources will be done on need base by the competent authority like DDMA. It is also necessary to maintain inventory of resources so that demobilization will be undertaken in a proper manner. Some resources or equipments may be mobilized on hire basis thereby requiring huge expenditure. In this circumstance, the inventory will be useful for assessing the actual cost of such hiring and rental.

7.8 External help for assistance

In case the affected district is not in a position to face the crisis situation alone due to lack of resources in terms of man power and technical equipments, seeking external help is a must. At this juncture, the District Disaster Management Authority shall act as a link between the concerned district and state as well as other organizations for seeking help and assistance.

7.9 Psycho - social care

Among the victims of disasters, some could be traumatized and suffer mental disorder following the worse impact of such eventualities. Medical practitioner especially like psychologists will have to take care of such patient trying to restore their normal state of being from the traumatic and panic condition. Besides doctors, religious leaders and pastors can also play a role for counseling such patients so as to make them calm and normal.

7.10 First assessment report

Village Disaster Management Committee will prepare the first assessment report which will be subsequently submitted to the concerned district authority. Based on the assessment report, further course of actions will be designed thereby initiating necessary steps and measures. Therefore, initial report has to be prepared carefully so as to enable disaster managers to cope with the situation.

7.11. Media management/ coordination/ information dissemination

Under the aegis of District Disaster Management Authority, Information & Public Relation Department will take up the matters relating to media management and information dissemination. At the time of disaster occurrence, rumours and false reports can also crop up leading to commotion and chaotic condition in the communities. Therefore, media coordination has to be ensured by the responsible department so as to curb the possible eruption of rumours and hearsay.

Only the concerned authority will disseminate reports and information through proper means of communication taking into account normal walks of life. Our media which is either print or electronic should also keep focus on certain tips even during normal time for effective response and management of any calamities.

7.12 Development of SOPs

Standard Operating Procedures shall be followed by each responder while taking responsive actions against disasters. If the standard procedure is not maintained, the situation can be exposed to further risks and threats not only for the affected people but also for the rescuers as well as those who remain unaffected. Thus, each and every stakeholder and department should ensure maintenance and compliance of such procedures so as to minimize loss of properties and money. In the standard procedures, clear demarcation of duties and responsibilities in respect of various departments and stakeholders has been made with a view to securing coordination among all the actors. These specific duties should be strictly followed when response is carried out.

7.13 Reporting

Information and Media Officer (as per IRS) will prepare and release information to the media with the approval of Incident Commander. Weather information and warning issued by India Meteorological Department will be collected and brought to the notice of the DDMA by the IMO for initiation of appropriate action.

Dissemination of information and warning has to be carried out at the right time and to the right persons. The situation can get into worse owing to the gap of communication and poor performance of media group. Situation report must be carefully prepared and released to all concerned so that actual amount of resources in terms of man, equipments and money can be calculated for mobilization in respect of all necessary actions to be carried out in response activities.

7.14 Demobilization and winding up

Documentation – Documentation Unit as provided in the IRS is responsible for arranging complete documentation of proceedings at the incident site

- Maintaining record of what happened and what actions were taken.
- Recovering response costs and damages
- Setting the record straight where there are charges of negligence or mismanagement resulting from the incident.
- Reviewing the efficiency and effectiveness of response actions.
- Preparing for future incident response.
- Videotaping of the entire combat and rescue operations

Success stories–After incident response is over, there has to be a meeting in which review and analysis of action taken during crisis management will be conducted by the respective responders. In such a meeting, various roles and activities worth mentioning may be highlighted and documented for future reference.

Lessons for future – It is obvious that certain loopholes and discrepancies may crop up following many reliable factors. However, such difficulties and hindrances in the midst of their hectic activities should rather be taken as a challenge as well as a new lesson for the future. Consequent upon this, better and more effective mechanisms will have to be adopted and further be made familiar to all the concerned. It is imperative that our failure should be turned into a new lesson for the future.

7.15 Hazard specific responsibility matrix for emergency response function for sudden disasters where early warning is available

Time	*Task*	*Department/ Agency*	*Activity*
D-72 Hr	Warning dissemination	DC, DIPRO, NIC, Media, NGO	Warning of disaster and preparedness activity and activation of DEOC
D-48 Hr	Identification of safe place and food stock	DC, FCS&CA, NGO	Instruction to public regarding safe place and stock of basic needs
D-24 Hr	Checking connectivity and identification of alternate control rooms and volunteers with resources	PWD, P&E, LAD (MADC), DM teams	Checking availability of resources at DEOC, line department and volunteers
D-0 Hr	Quick response of disaster including meeting of CMG	Trained personnel, NGO, DC and line departments	Assessment of disaster impact, search & rescue and first aid
D+30 mins	Evacuation, first assessment report and mobilization of resources	DC, NIC, Radio, Television, DDK, Search & Rescue Team	Evacuation and triage with first aid
D+2 Hr	Damage assessment	DC, Media, NGO, IPRO	Submission of assessment report to concerned authorities
D+3 Hr	Temporary shelter and transportation of victims	DC, Ambulances, NGOs	Provision of temporary shelter for affected people
D+6 Hr	External aid and payment of assistance	DC/ DM&R Department	Financial assistance to affected people
D+12 Hr	Trauma counseling	Pastors of various churches, NGOs, Counseling team of H&FW	Counseling and psycho care administered to the psychologically affected people

D+24 Hr	Provide basic needs to affected area, clearance of road and continual dissemination of disaster situation	DC, PWD, H&FW, Transport, IPRO	Clearance of road and debris, recalibration of communication system, provision of basic needs to the needy

7.16 Hazard specific responsibility matrix for emergency response function for sudden disasters where early warning is <u>not available</u>

Time	*Task*	*Department/ Agency*	*Activity*
1	2	3	4
D+15 mins	Quick response of disaster including meeting of CMG	Trained personnel, NGO, DC and line departments	Assessment of disaster impact, search & rescue and first aid
D+30 mins	Evacuation, first assessment report and mobilization of resources	DC, NIC, Radio, Television, DDK, Search & Rescue Team	Evacuation and triage with first aid
D+1 Hr	Damage assessment	DC, Media, NGO, IPRO	Submission of assessment report to concerned authorities
D+2 Hr	Temporary shelter and transportation of victims	DC, Ambulances, NGOs	Provision of temporary shelter for affected people
D+3 Hr	External aid and payment of assistance	DC/ DM&R Department	Financial assistance to affected people
D+6 Hr	Trauma counseling	Pastors of various churches, NGOs, Counseling team of H&FW	Counseling and psycho care administered to the psychologically affected people
D+12 Hr	Provide basic needs to affected area, clearance of road and continual dissemination of disaster situation	DC, PWD, H&FW, Transport, IPRO	Clearance of road and debris, recalibration of communication system, provision of basic needs to the needy
D+15 Hr	Hospital and medical care	District Hospital & MGCH	First aid and further medical treatment to the victims
D+24 Hr	Post disaster assessment and future improvement and insurance	DC, I&PR and any insurance company	Preparation of disaster reports for future improvement in man and other resources

CHAPTER – 8
RECONSTRUCTION, REHABILITATION AND RECOVERY MEASURES

8.1 General Policy Guidelines

Guidelines for minimum standard of relief to be provided to persons affected by disasters should include the following –

- The minimum requirements to be provided in the relief camps in relation to shelter, food, drinking water, medical cover, sanitation
- Special provision to be made for widows and orphans
- Ex-gratia assistance on account of loss of life as also assistance on account of damage to houses and for restoration of means of livelihood.

8.1.1 Minimum standard in respect of shelter in relief camps

- District Administration shall take necessary steps to pre identify locations/ buildings like schools, anganwadi centers/ cyclone shelters/ community centers which can be used as Relief Shelters where people can be accommodated in case of a disaster in the area. In such centers, necessary facilities like sufficient number of toilets, water supply, generators with fuel for power back up during disaster shall be ensured.
- After a disaster, large covered space shall be required to accommodate the affected people. Tents, toilets, mobile toilets and urinals also need to be arranged with a view to maintaining sanitary standard.
- Special care shall be taken for safety and privacy of inmates, especially for women, widows and children. Special arrangement should also be made for differently-abled persons, old and medically serious patients.
- Relief centers shall be temporary in nature and be closed as soon as normalcy returns in the area.
- Sufficient number of sites based on population density shall be identified as relief centers and earmarked well in advance at the time of planning and development of a town.

8.1.2 Minimum standards in respect of Food in relief camps

- Every effort shall be taken to ensure sufficient quantity of food for the affected people (especially for aged people and children) staying in the relief shelters/ camps.
- Sufficient steps shall be taken to ensure hygiene at community and camp kitchen.

8.1.3 Minimum standards in respect of water in relief camps

- Sufficient quantity of water shall be provided in the relief camps for personal cleanliness and hand wash.
- In order to ensure adequate water supply, the location of the source of water shall be preferably be within the premises of relief camp.

- It may be ensured that the minimum supply of 3 liters per person per day of drinking water is made available in the relief camps.

8.1.4 Minimum standards in respect of Sanitation in relief camps

- Sufficient number of toilets may be arranged and separate toilet and bath area be catered for women and children. At least 15 liters of water per person needs to be arranged for toilets/ bathing purposes.
- Drainage or spillage from defecation system shall not run towards any surface water source pr shallow ground water source.

8.1.5 Minimum standards in respect of medical cover in relief camps

- Mobile medical teams shall visit relief camps to attend the affected people. Steps shall be taken to avoid spread of communicable diseases.
- For pregnant women, necessary basic arrangement shall be made by the local administration for safe delivery.
- In order to manage mass casualty in a disaster, advance contingency plans for management of multiple casualties shall be developed.

8.1.6 Minimum standards in respect of widows and orphans in relief camps

- In each camp, a separate register shall be maintained for entering the details of women who are widowed and for children who are orphaned due to disaster. Their complete details shall be entered in the register, duly countersigned by the concerned officials and this register shall be kept as a permanent record with the district administration.
- Ex gratia assistance on account of loss of life and assistance on account of damage to houses shall be provided to the affected family for restoration of means of their livelihood.

8.2 Relief and Recovery coordination

DDMA is entrusted to work out relief and recovery coordination in favour of the disaster affected population. Deputy Commissioner who is also chairman of DDMA will arrange mobilization of assistance and support required from other agencies and departments if the scale of calamities is beyond the capacity of the concerned district administration. Whatever relief materials and assistance received from various sources should be properly distributed to the affected people on the strict basis of their need.

When disaster strikes leading to large scale calamities in terms of properties and livelihoods, district administration shall act as a principal agent to arrange requisition of relief materials from within and outside the district concerned.

Rehabilitation relates to the work undertaken in the following weeks and months, for the restoration of basic services to enable the population to return to normalcy. Actions taken during the period following the emergency phase is often defined as the recovery phase, which encompasses both rehabilitation and reconstruction.

8.3 Damage and loss assessment

Assessment of damage and loss is of vital importance in respect of response activity in the aftermath of a disaster. In order to calculate the actual need or requirement to restore normalcy in the affected community, scrupulous assessment of the disastrous impacts has to be undertaken first by the competent authority so as to work out reconstruction and recovery measures. Detail assessment is to be carried out under the supervision of DDMA. Based on the assessment, the amount of fund required and what kind of support expected from other agencies can be made clear and recorded. This is essential for procurement of materials required for life saving.

8.4 Restoration

Restoration comes under response phase meaning restoring utility service and removal of debris from the disaster scene. It also includes development of basic infrastructure that can provide essential services to the communities as well as every individual. When the outcome of disaster is disastrous and costs heavy loss of infrastructure and valuable assets, the government is responsible for initiating restoration process for the return of normalcy in the daily life of affected people. Critical buildings and other basic amenities can be affected and be left unserviceable by natural calamities. In such circumstances, restoration of essential service and livelihoods should be on the top priority and accordingly, immediate and appropriate measures have to be adopted to enable the victims to restore and sustain their livelihoods from the adverse repercussion of disasters.

8.5 Reconstruction

Reconstruction refers to the full restoration of all services, and local infrastructure, replacement of damaged physical structures, the revitalization of economy and the restoration of social and cultural life. Reconstruction must be fully integrated into long-term development plans, taking into account future disaster risks and possibilities to reduce such risks by incorporating appropriate measures. Damaged structures and services may not necessarily be restored in their previous form or location. It may include the replacement of any temporary arrangements established as part of emergency response or rehabilitation.

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

8.6 Recovery

This is the final phase of disaster management and can be divided into short term and long term recovery. Short term recovery means the restoration of vital services and facilities to minimum standard of operation and safety. During short term

recovery, people's immediate needs are taken care of and assistance programmes are put into effect.

The long-term recovery plans are related with Recovery and Reconstruction activities on one side and institutionalizing disaster management in district administration on the other side. There are Standard Operation Procedures (SOPs) for the Emergency Support Functions.

Recovery and rehabilitation is the final step. The incident Command System shall be deactivated as the rehabilitation phase is over. Thereafter the normal administration shall take up the remaining reconstruction works in the disaster-affected areas. These activities shall be performed by the Working Group for relief and rehabilitation under the direction of the DDMA.

8.7 Insurance

This is also an important component of disaster management in order to create security in the wake of occurrence of any eventualities. Since disaster has no specific target to be affected, we all have to prepare ourselves to face any consequences caused by calamities. Due to the result of any disastrous event, we can meet afatal circumstance at any time. Thus, we need to go for insurance which would be immensely helpful for meeting the fate ahead of us.

CHAPTER – 9
PROCEDURE AND METHODOLOGY FOR MONITORING, EVALUATION, UPDATION AND MAINTENANCE OF DDMP

9.1 Preparation and Updating of DDMP

District Disaster Management Plan is a public document. It is neither a confidential document nor restricted to any particular section or department of administration. The underlying principle of disaster management is that it has to be part of all departments and none can fold fingers against it.

The District Disaster Management Plan is the sum and substance of the Horizontal and the Vertical disaster management plans in the district. Horizontal plans included plans prepared by line departments such as Police, Fire Service, Department of Food and Civil Supplies, Public Works Departments etc. whereas the Vertical plan includes Sub Divisional Plans, Community Plans, School/Hospital plans and all other logical units' plan at the lower level and State Disaster Management Plans and National Disaster Management Plans at the higher level.

- Preparation of plan is the ultimate responsibility of the District Disaster Management Authority (DDMA) or the person/ sub committee appointed by the DDMA in the district. The first draft plan is to be discussed in the DDMA and later the Chairman of the DDMA shall rectify it.
- The same procedure is to be followed in updating of the plan document. The District plan is to be updated annually by the District Disaster Management Authority or the committee appointed by the DDMA. In order to update the document, all Vertical and Horizontal plans shall be collected and incorporated to the District Plan.
- A copy of the updated document shall be circulated to each department of Government in district.

9.2 Regular Updating of DDMP

Besides the above said procedure of updating of the DDMP, a regular data collection system shall be set up at district EOC. The EOC in-charge, under the supervision of the DDMA Chairman shall arrange to enter the collected data to an online system or make it documented properly.

9.3 Uploading of updated plan at DM&R department websites

The updated District Disaster Management Plan has to be uploaded on the DM&R department website. Then the plan can be easily accessed from other regions and various stakeholders as well as line departments shall make use of it at its maximum capacity from their own respective locations in case the hard copy is not available at their disposal. This will also be very helpful for researchers and agencies involved in disaster management as well.

CHAPTER – 10
COORDINATION MECHANISM FORIMPLEMENTATION OF DISTRICT DISASTER MANAGEMENT PLAN

10.1 Introduction

There are a number of participants in a typical disaster relief operation. Participants may include; national government, state government, local government, national and international humanitarian organizations, expert and volunteer rescue teams, third-party logistics providers, suppliers of goods used for disaster relief, and the affected people.

10.2 Coordination of Response at the District Level

The District Magistrate/DC is the head of the District administrative set up and chairperson of the DDMA as per the DM Act, 2005. He has been designated as the RO in the District. The heads of different departments in the District will have separate roles to play depending on the nature and kind of disaster. The roles and responsibilities of the members of the DDMA will be decided in advance in consultation with the concerned members.

10.3 Coordination with state departments and training institutes

Maximum coordination of government machineries at the state level should be secured by the DDMA so as to deal with the situation effectively. Training and sensitization meeting may be conducted at the district level in coordination with the training institutes. It is imperative that Government officials and those involved in disaster management have to undergo such training so as to get them trained and sensitized with the their role and responsibilities in the wake of disaster happening.

DDMP contains a lot of provisions pertaining to procedures and specific duties to be followed by various positions holders before, during and after the occurrence of disasters. This has necessitated that line departments and NGOs have to be aware of the DDMP well in advance so as to enable them to take up their duties at the right time and at the right place.

10.4 Coordination with NGOs

Emerging trends in managing natural disasters have highlighted the role of non-governmental organizations (NGOs) as one of the most effective alternative means of achieving an efficient communications link between the disaster management agencies and the effected community. In typical disaster situation, they can be of help in preparedness, relief and rescue, rehabilitation and reconstruction and also in monitoring and feedback. The role of NGOs is a potential key element in disaster management. The NGOs operating at grassroots level can provide a suitable alternative as they have an edge over governmental agencies for invoking community involvement. This is chiefly because the NGO sector has strong linkages with the community base and can exhibit great flexibility in procedural matters vis-à-vis the government.

CHAPTER – 11
FINANCIAL RESOURCES FOR IMPLEMENTATION OF DDMP

As mandated by section 48 of the DM Act, State Disaster Response Fund (SDRF) and State Disaster Mitigation Fund (SDMF), District Disaster Response Fund (DDRF) and District Disaster Mitigation Fund (DDMF) are to be created at the State and District Levels. The funds at the district level should be used by DDMA towards the expenditure incurred on emergency response, relief, rehabilitation in accordance with the guidelines and norms laid down by the Government of India and the State Government.

11.1 State Allocation

Disaster Management & Rehabilitation Department prepares annual budget to be passed by the state legislature. With the allocation of fund under the state budget, the department is run and managed to address various issues pertaining to disaster management and even financial assistance.

11.1.1 State Disaster Response Fund (SDRF)

As per section 48 (1a) of the DM act, 2005, SDRF is to be created with a 90:10 of the Central and State share. The fund is supposed to be made available to the SEC for post-disaster activities.

11.1.2 State Disaster Mitigation Fund (SMDF)

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

11.2 District Allocation

11.2.1 District Disaster Response Fund (DDRF)

According to section 48 (1b) of the DM Act, 2005, DDRF is to be established for pre-disaster activities and to be made available to the district authority.

11.2.2 District Disaster Mitigation Fund (DDMF)

Section 48 (1d) of the DM Act, 2005 states that DDMF is to be created for pre-disaster activities and to be made available to the DDMA.

11.3 Recommendation of the 13th Finance Commission

The 13th Finance Commission (2010 – 2015) recommended a huge amount of fund for Capacity Building for disaster response at the District, Block and Village levels. This recommendation proves to be very helpful for all the stakeholders in DM and also serves as the mainstay of the preparation and updating of DM Plan.

CHAPTER – 12
STANDARD OPERATING PROCEDURES AND CHECKLIST

12.1 Definition of Disaster Situations

Disaster' is defined as a crisis situation causing wide spread damage which far exceeds our ability to recover. Thus, by definition, there cannot be a perfect ideal system that prevents damage, because then it would not be a disaster. It has to suffocate our ability to recover. Only then it can be called as 'disaster'.

12.2 Action plan on receipt of warning and warning dissemination

Sl. No	*Type of disaster*	*Date/ time of occurrence*	*Responsible agency*	*Line Department*	*Action to be taken*
1.	Forest fire		EF&CC	F&ES, I&PR, VDMC	
2.	House fire		F&ES	I&PR, VDMC	
3.	Biological disaster and epidemics		H&FW/ AH&Vety	I&PR, AH&Vety/ H&FW, PHE, VDMC	
4.	Drought/ Cyclone		DDMA	I&PR, Agriculture, Horticulture, PHE, Fisheries, VDMC	
5.	Floods		DDMA	I&PR, Home Deptt, PHE, PWD, P&E	
6.	Landslide		DDMA	I&PR, PWD, P&E, PHE, LR&S, VDMC	
7.	Cyclone		DDMA	Science & Technology, I&PR,	

12.3 Process to access financial and technical resources (departments and stakeholders) for emergency response

On receiving the actual severity of incident, DDMA will deliberate upon the line of action for access of financial and technical resources available at departments and other stakeholders.

12.4. Relief and Rehabilitation Norms, Emergency Response/ Support Function

Sl. No	*Type of function*	*Nodal agency*	*Line departments*
1.	Evacuation	NDMA	Home Deptt, Youth Adventure Club, VDMC
2.	Search & Rescue	DDMA	Home Deptt, Adventure Club,

			VDMC, Sainik Welfare & Resettlement
3.	Cordoning/ Traffic/ Law & order	Home Deptt	VDMC, NGO
4.	Dead body/ body disposal	Home Deptt	H&FW, VDMC, NGOs
5.	Carcass disposal	AH&Vety	PWD, VDMC, NGOs

12.5 Humanitarian Relief and Assistance

Sl. No	*Type of Relief*	*Nodal agency*	*Line departments/ Agency*
1.	Food	FCS&CA	DDMA, Transport, VDMC
2.	Drinking water	PHE	H&FW, RD, FCS&CA, LAD, VDMC
3.	Medicine and nutrition	H&FW	SWD
4.	Psycho-social care and trauma care	H&FW	SWD, NGO, VDMC
5.	Clothing	DDMA	Industry, SWD, VDMC
6.	Public Health & Sanitation	H&FW	PHE, AH&Vety, Transport, LAD, VDMC
7.	Help-lines	DDMA	I&PR, Home Deptt, P&E, H&FW, SWD
8.	Shelter Management & Repairs & restoration of basic amenities	DDMA	P&E, PHE, H&FW, School Education, PWD, VDMC
9.	Management of VIP visits	DDMA	

12.6 Sequence of action to be taken at the time of disaster

- In the event of disaster, the DC, Siaha or District Emergency Operations Centre (DEOC) and SP, Siaha should be informed immediately about the incident. Then, these two officers would inform the concerned officials based upon the kind of disaster. Besides, immediate relief and rescue operation will be started at the places. Then, the DC will inform the level of disaster and accordingly action will be taken.
- Irrespective of whether the area is small or big, the area should be demarcated by rope or haisian cloth, so that no one except only those teams who are trained in search & rescue / first aid and DDMA officials would be permitted to enter the demarcated zone. The site emergency operations centre (SEOC) should be established near the demarcation area to see overall management and coordination. One or more officials will be in charge of this and he will be assisted by local NGO's, VC's, and MTP etc.
- Trained electrician should be used to cut off the electric current at the site of the disaster to prevent electrocution/ electric shock burns etc.
- The fire brigade should see whether there is any possibility of fire and should extinguish if there is fire at the site of disaster.

- The medical team should be sent immediately to provide first aid medical help and look after any injury. Casualties, who cannot be provided required assistance on site, should be sent to the nearest hospital immediately.
- District Search & Rescue Team should be sent to the site of disaster immediately.
- Carcass Disposal Team should look after dead bodies and carcass of animals. Any properties and valuable items should be kept carefully and protected, so that there are no missing properties and valuable items. In order to do this, no person except the disaster management teams/official will be allowed inside the demarcated area.
- If disaster occurs at night, the lighting should be provided to the site operating centre immediately.
- Different aspect of relief and rehabilitation of the affected persons should be started immediately. Eg. Clothing, shelter, food, etc.
- The overall management will be looked after by the DC or any other officials present at the site designated by DC or in their absence by the village level disaster management team including NGO's, VCP's, MTP, etc.

12.7 S.O.P for Emergency Support Functions (ESF)

Emergency Support Functions (ESFs) are intended to help the Incident Commander at the time of emergency for restoring normal life. The ESF is an organized system of District level departments and agencies, which are to be implemented under a structured pattern for response and recovery in accordance with the National Disaster Management Guidelines.

The Standard Operating Procedure (SOP) for ESFs explains about the operations andresponsibilities of the leading and supporting agencies that are to be involved in the ESF system. The document also outlines the purpose and scope for each function of operation that is to be followed by the respective ESF agencies when the Incident Commander activates the response plan during the emergency period.

The major functions of the incident command system are summarized as follows.Nevertheless, they are to be released in cooperation of all the ESFs and participatingagencies in disaster management. The incident commander is given with full control and command over the entire teams in district level.

12.8 ESF 1: COMMUNICATION –

Background

The communication ESF is primarily responsible for restoration of communication facilities. The ESF on Communication should ensure the smooth flow of information that can cater to the outreach in a time-sensitive manner at state level in response efforts.

Situation Assumption

i. There would be congestion in the network because of increased calls to control rooms due to panic created in the community.

ii. The initial reports on damage may not give a clear picture of the extent of damage to communication network.
iii. The affected site may cut off from the state control rooms and the officials on site and find difficulty in communicating to the District/State EOC

Nodal Agency	:	MPRO (Wireless)
Supporting Agencies	:	I&PRO, NIC, BSNL and Private Mobile Operators

SOPS for Nodal Agency –

i. Team Leader (TL) of Communication ESF will activate the ESF on receiving the intimation of occurrence of the disaster from the District EOC. TL would inform Nodal Officers (NOs) of support agencies about the event and ESF activation.
ii. TL requests for reports from local ESF contact persons (this would be the local office of ESF Nodal Agency) to understand the current situation and action taken.
iii. Based on information given by the supporting agencies, TL decides on the need to launch an assessment mission to estimate the extent of damage to telecom 4services and network as well as to come up with possible arrangements to establishing reliable and appropriate network.
iv. TL communicates situation to supporting agencies and also requests to provide details on the status of equipment and infrastructure in the affected area (s).
v. TL informs the Incident Commander on the status of telecom services.
vi. TL works out a plan of action for private telecom companies and convenes a meeting of all ESF members to discuss and finalize the modalities.
vii. TL issues orders to establish systems and reports to DEOC on the action taken. New phone numbers and details of contact persons would also be communicated. If required mobile exchanges would be deployed.
viii. TL gets the temporary telephone facilities established for the public. Prior information on this would be announced through media.
ix. TL sends the District Quick Response team at the affected site with the required equipments and other resources.

SOPS for Quick Response Team on Communication –

i. The QRT (Quick Response Team) members will reach to the nodal office as soon as they will get instructions from the TL.
ii. Once the QRTs receive any intimation from the nodal officer to reach at the site they would rush to the site.
iii. At the emergency site QRT members will take stock of the situation from the IC and would also know about their counter parts.
iv. QRTS would assess the ground situation and would send sectoral report to the District ESF agency.
v. A sectoral report would contain following :
    a. An assessment of overall damage, listing specifically.
    b. Overhead route damage (in miles/kilometers).
    c. Cable damage (in yards/meters).

d. Specific equipment damaged.
e. Establish a temporary communication facility for use by the public.
f. Identify requirements of manpower, vehicles and other materials and equipments Give priority and concentrate on repairs and normalization of communication system at disaster-affected areas.

vi. Begin restoration by removing and salvaging wires and poles from the roadways with the help of casual laborers.
vii. Carry out temporary building repairs to establish a secured storage area for the equipments and salvaged materials.
viii. Report all activities to head office.
ix. Begin restoration by removing and salvaging wires and poles from the roadways through recruited casual laborers.
x. Establish a secure storage area for incoming equipments and salvaged materials.

PRESS BRIEFINGS –

Press briefings play a very important role in Disaster Management. Daily press briefs will be issued at 11:00 AM at the D.C's Chamber or I& PR Conference Hall. The Government of Mizoram had declared I& PR department as Nodal Department for communicating the events or latest situation to public in this regard; therefore, the department shall release appropriate information to the public as decided by the DDMA or the state government.

MESSAGE TO PUBLIC –

Message to public over All India Radio Aizawl, Lunglei, Siaha, District I&PRO, NSV Cable Network, HSV Cable Network and local papers should be specific. Apart from the warning, it should include the following points.

i. Remain alert.
ii. Take shelter in nearest pucca building/save shelters/School & Other safe places.
iii. Keep cattle tied in open spaces/let free.
iv. Keep sufficient dry food for emergency.

1. Regular contact at intervals with D.C, Addl. D.C, SDO's, BDO's and all the nodal officers of line department, SP Police, Civil Defense, Police Control Room.
2. Written orders shall be issued for identifying places for starting free kitchens for at least 3 days.
3. Keep spare copies of District maps. Jurisdiction maps of all irrigation divisions shall be kept ready in good numbers.
4. Place requisition with SP for supply of temporary VHF sets for CMO, DVO, PWD, PHE, P&E and concerned officials.
5. Contact Geological & Mineral Resources Department, Mizoram.
6. Requisition School/College for Army/Police forces.
7. Direct all field officers to keep sufficient oil for running generator.

8. Direct all police stations to keep spare batteries for VHF.
9. Looking at the onset of emergency and after making quick preparations convene Emergency meeting of important official and non-official agencies. Give them clear instructions on the above manner.
10. Make a Duty Roster of Important Officials for uninterrupted functioning of DEOC & immediate implementation of the Relief/Rescue Programme.

12.9 ESF 2: EVACUATION –

Background –

The ESF on evacuation is primarily responsible for establishing evacuation plans,identification of fastest evacuation routes and alternate routes and coordinating evacuation logistics during field operations.

Situation Assumptions -

i. Most of the buildings would be damaged and would not remain serviceable.
ii. Many structures would be damaged and there would be an urgent need to evacuate.

Nodal agency	:	Office of the Deputy Commissioner, Siaha
Supporting agencies	:	Police, Fire Services, NCC, Army, PWD (State &MADC), PHE (State & MADC)

SOPS for Nodal Agency –

i. Team leader (TL) of Evacuation ESF would activate the ESF on receiving the warning of the disaster from District EOC.
ii. TL would inform Nodal Officers (NOs) of supporting agencies about the event and ESF activation.
iii. TL will direct the QRTs to be deployed at the affected site.
iv. TL will gather information on availability of predefined evacuation routes.
v. Where the predefined evacuation routes are not available, the nodal officer would coordinate through District EOC with other ESFs nodal officers and the support agencies about clearing of routes and identifying alternate routes.

SOPS for Quick Response Team on evacuation –

i. The QRT members will reach the nodal office as soon as they get instructions to do so from the TL.
ii. Once the quick response teams receive an order from the nodal officer for reaching the site they would rush to the site.
iii. On reaching at the site the QRT members will take stock of the situation from the Incident Management Team at the site and their counter parts.
iv. The quick response teams with the help of local task forces will start evacuating peoples to safe shelters or open areas.
v. The QRT members should concentrate more on evacuation in areas that have been worst affected by the disasters.

vi. Reporting about all the activities to head office.

12.10 ESF 3: SEARCH AND RESCUE –

Background –

Search and Rescue operations are one of the primary activities taken up in a post disaster situation, the promptness in these operations can make a remarkable difference in the amount of loss of life and property.

Situation Assumptions -

i. Local community task force will initiate search and rescue at residential level.
ii. Spontaneous volunteers will require coordination,
iii. Access to affected areas will be limited.
iv. Some sites may be accessible only through air routes only.

Nodal Agency	:	Police, Fire Service.
Support Agency	:	MRP, Army- B Coy 40 Assam Rifles and Health Department, Youth Adventure Clubs- Beino & Meisavaih, MTP

SOPS for Nodal Agency –

i. IC will call the TL of Primary Agency and get the ESF activated.
ii. TL of primary agency will call nodal officers of supporting agencies.
iii. TL would activate the District Quick Response Team.
iv. Quick Assessment of the S&R operations through surveys.
v. Assessments of the specific skill sets and the other equipments required.
vi. Using IDRN network to check and map the availability of resource in and round the disaster site.

SOP for Quick Response Team on Search and Rescue -

i. Assessment of damage (locations, number of structures damaged, severity of damage).
ii. The QRTs will be deployed at the affected site.
iii. Enlisting the types of equipment required for conducting the S&R.
iv. QRTs will report the situation and the progress in response activities to the respective EOC.

12.11 ESF 4: LAW AND ORDER –

Background –

The ESF on Law and Order maintains the law and protects the property and valuable commodities. It is mainly responsible to control crowd and avoid riots situations.

Situation Assumptions –

i. There would be panic and people will gather at a place.
ii. The crowds may go out of control.

iii. Riots may also take place.

Nodal Agency : Police
Support Agencies : Home Guards, 40 B Coy Assam Rifles.

SOPS for Nodal Agency –

i. IC will call the TL of Primary Agency and get the ESF activated.
ii. TL of primary agency will call nodal officers of supporting agencies.
iii. TL would activate the District Quick Response Team.
iv. The QRTs will be deployed at the affected site.
v. Cordoning off area to restrict movement of onlookers, vehicular and pedestrian traffic should be done.
vi. Any additional requirements at site to be taken care of.

SOP for Quick Response Team on Law and Order -

i. Quick assessment of law and order situation in affected areas.
ii. Support and coordinate with Local Administration.
iii. Prepare updates on the law and order situation every 4- 6 hours and brief the Authorities.
iv. Controlling situations like rioting and looting, and cordon off sensitive areas QRTs will guide property and valuables in affected areas.
v. Control and monitor traffic movement.
vi. QRTs will provide diversion of traffic on alternate routes as and when it is necessary especially heavy traffic or congested roads.
vii. The QRTs will also provide information about traffic flow along various corridors; QRTS will communicate to police control rooms, details on the field activities including deployment and reinforcement of staff and resources and communicate nature of additional requirements.

12.12 ESF 5: MEDICAL RESPONSE AND TRAUMA COUNSELING –

Background –

The ESF on Medical Response and Trauma Counseling will look after emergency treatment for the injured people immediate after the disaster take place.

Situation Assumptions –

i. Emergency Medical service will be required by affected population.
ii. Likely outbreaks of epidemic diseases after the disaster.
iii. Hospital services would be affected.

Nodal Agency : Health Department
Support Agencies : NSS, NCC, MCHP, Scout & Guide

SOPS for Nodal Agency -

i. IC will call the TL of Primary Agency and get the ESF activated.

ii. Team Leader (TL) of Primary Agency and get the ESF activated.
iii. In coordination with the transportation ESF, it will ensure a critical number of medical professionals to be reached at the site including specialists from other Districts.
iv. If temporary housing arrangements are being made for the affected population, the ESF must ensure high standards of sanitation in settlements in order to reduce epidemic outbreak.
v. Ensuring the provision and continuous supply of medical facilities. (Medicines, equipments ambulances, doctors and manpower etc) required at the disaster affected site and the hospital health centers catering to disaster victims.
vi. In case of orthopedic care required in disasters like earthquakes the immediate response would have to be complimented by a follow up treatment schedule for a majority of the patients in/near their place of residence.
vii. Trained professionals should be mobilized by psychosocial support.
viii. Ensuring setting up of temporary information centers at hospitals with the help of ESF through help lines and warning dissemination system.
ix. TL will coordinate, direct and integrate state level response to provide medical and sanitation health assistances.
x. On the recommendations of the EOC, the TL also responsible to:
xi. Send required medicines, vaccines, drugs, plasters, syringes, etc.
xii. Arrange for additional blood supply. Send additional medical personnel equipped with food, bedding and tents etc.
xiii. Send vehicles and any additional medical equipment.

SOP for Quick Response Team (QRT) on Medical Response and Trauma Counseling –

i. QRTs will provide situation and progress reports on the action taken by the team to the respective EOCs.
ii. QRTs will assess type of injuries, number of people affected and possible medical assistance needs.
iii. QRTs will ensure timely response to the needs of the affected victims such as :
    a. Establishing health facility and treatment centers at disaster sites.
    b. Providing medical services as reported by the District Civil Surgeon with District EOC and State EOCs.
    c. Procedures should be clarified in between
    d. Peripheral hospitals
    e. Private hospitals
    f. Blood banks
    g. General hospitals and
    h. Health services established at transit camps, relief camps and affected villages.
    i. QRTs should maintain check posts and surveillance at all entry and exit points from the affected area, especially during the treat or existence of an epidemic.

IMPORTANT TIPS –

a. Check up the stock of medicines, bleaching powder and halogen tablets. If necessary, send immediate requisition to CMO.
b. Start movement of medicines, bleaching powder, etc. to PHCs/CHCs.
c. Ensure that medical officers are in place at the PHCs and CHCs through CMO, SDMO, Police Stations, and Blocks. CMO shall decide the locations of camps. All CDPOs shall be teamed up with the MO of PHC/CHC/SC with their vehicles and supervisors.

12.13 ESF 6: WATER SUPPLY –

Background –

The ESF on drinking water and water supply will ensure provision of basic quantity of clean drinking water and water for other purposes in a manner that does not allow the spread of diseases through the contamination of water.

Situation Assumptions –

i. Existing water storage bodies will be damaged and unusable.
ii. There would be an urgent need of water to assist victims in rescue operation.
iii. Break down of sanitation system.
iv. Contamination of water due to outflow from sewers or due to breakage of water pipelines.

Nodal Agency	:	PHE (State)
Support Agency	:	PHE & LAD (District Council)

SOPS for Nodal Agency –

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

SOP for Quick Response Team (QRT) on Water Supply –

i. QRTs will ensure that supply of drinking water is made available at the affected site and relief camp.
ii. QRTs will ensure the temporary sewerage lines and drainage lines are kept separate.
iii. QRTs will report the situation and the progress on action taken by the team to the EOC.

iv. QRTs will intimate their TL of the additional resources needed.
v. Carry out emergency repairs of all damages to water supply systems.
vi. Assist health authorities to identify appropriate sources of potable water.
vii. Identify unacceptable water sources and take necessary precautions to ensure that no water is accessed from such sources, either by sealing such arrangements or by posting the department guards.
viii. Arrange for alternate water supply and storage in all transit camps, feeding centers, relief camps, cattle camps, and also the affected areas, till normal water supply is restored.
ix. Ensure that potable water supply is restored as per the standards and procedures laid down in "Standards for Potable Water".
x. Plan for emergency accommodations for staff from outside the area.
xi. QRTs will ensure timely response to the needs of the affected victims.
xii. QRTs will set up temporary sanitation facilities at the relief camps.

12.14 ESF 7: RELIEF (FOOD AND SHELTER) –

Background –

In the event of a disaster there would be a need of disbursing relief materials due to massive destruction of life and property taken place. The ESF on Relief should ensure coordination of activities involving with the emergency provisions of temporary shelters, emergency mass feeding and bulk distribution of relief supplies to the disaster victims as also the disaster managers and relief workers.

Situation Assumptions –

i. Probability of shortage of critical resources.
ii. Immediate assistance to the community at the time of resource shortage particularly when affected area is larger.

Nodal Agency : Department of Food and Civil Supplies
Support Agency : NGOs

SOPS for nodal Agency –

i. TL will activate the ESF on receiving the information of the disaster from District EOC.
ii. TL would inform Nodal Officers (NGOs) of support agencies about the event and ESF activation.
iii. TL will coordinate with all state and district level suppliers as identified with under IDRN.
iv. TL with coordinate with other ESFs related to transportation, debris and road clearance to ensure quality supply chain management of relief materials.
v. Ensuring composite relief with availability of complimentary relief materials.

SOP for Quick Response Team (QRT) on Relief –

i. QRTs will report to site of the relief camps.
ii. QRTs will be responsible to management and distribute relief items to the affected victims.
iii. QRTs will be responsible for reporting the progress on action taken by the team to the EOC.
iv. QRTs will provide information to their TL about the need of additional resources.
v. Clearing of the areas to establish relief camps.
vi. Setting up relief camps and tents using innovative methods that can save time.
vii. Assist local authorities to set up important telecom and other service related facilities.
viii. Initiate, direct and market procurement of food available from different inventories and ensuring food supplies to the affected population.
ix. Ensuring distribution of relief material to the all the people including vulnerable groups of the target area such as women infants, pregnant women, and children, aged people and handicapped.
x. Ensuring support to Local Administration.
xi. Locating adequate relief camps based on damage survey.
xii. Develop alternative arrangements for population living in structures that might be affected even after the disaster.

12.15 ESF 8: EQUIPMENT SUPPORT, DEBRIS AND ROAD CLEARANCE –

Background –

The importance of this ESF emanates from the fact that most large-scale hazards such as earthquakes, cyclones and floods primarily affect the building structures.

Situation Assumptions –

i. Access to disaster-affected area would depend upon the re-establishment of ground and water routes.
ii. Early damage assessment may be incomplete, inaccurate and general. A rapid assessment may be required to determine response time.
iii. Engineers and masons may be required in large scale for the inspection of present buildings.

Nodal Agency	:	PWD (State)
Support Agency	:	PWD & LAD (District Council), DRDA

SOPS for nodal Agency –

i. Team Leader (TL) will activate the ESF on receiving the information of the disaster from District EOC.
ii. TL would inform Nodal Officers (NGOs) of support agencies about the event and ESF activation.

iii. TL will coordinate with the supporting agency to mobilize equipments from the ware houses through IDRN database.
iv. The respective supporting agencies will contact their respective personal to move the equipments to central warehouse.
v. The equipments like JCB, concrete cutters identified as per the need will be transported to the site.
vi. As per the information the nodal officer of Debris road clearance will make an assessment on of the damages of roads and built structures at the site and surrounding areas.
vii. The nodal officers of Supporting Agencies will immediately start debris clearance operation to enable movement to the affected site.
viii. Review of the current situation is taken up by the nodal agency to update the support agencies and to delegate their respective personnel to take precautionary measure to plan de-routes for the transportation ESF's to be operational.
ix. All supporting agencies will inspect the road and rail network and structures within the disaster site and surrounding.
x. TL will also ensure proper corpse disposal and post mortem by coordinating with ESF on medical response.

SOP for Quick Response Team on Equipment support, debris and Road (QRT) on Relief' Clearance –

i. Damage assessment including locations, number of structures damaged and severity of damage.
ii. The QRTs will be deployed at the affected site.
iii. Enlisting the types of equipments as compiled from IDRN resource inventory required for conducting the debris clearance.
iv. Relief camps and medical facilities for disaster victims.
v. The QRTs will report the situation and the progress in response activities to the respective EOCs.
vi. Undertake construction of temporary roads to serve as access to temporary transit and relief camps, and medical facilities for disaster victims.
vii. Repairing of all paved an unpaved road surface including edge metalling, pothole patching and any failure of surface, foundations in the affected areas by maintenance engineer's staff and keeps monitoring their conditions.

12.16 ESF 9: HELP LINES, WARNING DISSEMINATION –

Background –

The ESF on help lines and warning dissemination should process and circulate information about the welfare of citizens of affected area and managing the tremendous flow of information. The help lines will be responsible for providing, directing and

coordinating logistical operations. D.C. Siaha has already made a disaster helpline, i.e. (03835)-1077.

Situation Assumptions –

i. There may be a flood of information and confusion about the injured population.
ii. The communication with affected area may be partially impaired.

Nodal Agency : Deputy Commissioner, Siaha
Support Agency : NIC, MPRO, I&PR, AIR, NGO Reps

SOPS for nodal Agency –

i. IC will call the TL of Primary Agency and get the ESF activated.
ii. TL of primary agency will call nodal officers of supporting agencies.
iii. TL would activate the District Quick response Team.
iv. The QRTs will be deployed at the affected site.
v. QRTs will report the situation and the progress in response activities to the respective EOCs.
vi. Sending flash news of latest updates/donation requirements for disaster area all over the state.
vii. Assisting the EOC in providing updated information to national as well as at the District level.
viii. Setting up of toll free numbers for emergency information assistance.

SOP for Quick Response Team on Help Lines, Warning Dissemination –

i. The QRT members will reach to the nodal office as soon as they will get instructions.
ii. QRT teams would reach to the site immediately after receiving instructions from the nodal officer.
iii. On the site QRT members will take stock of the situation from the IC at the site and their counter parts.
iv. The QRTs will coordinate, collect, process, report and display essential elements of information and facilitate support for planning efforts in response operations.

12.17 ESF 10: ELECTRICITY –

Background –

ESF on electricity will facilitate restoration of electricity distribution systems after a disaster. In the event of a disaster there would be major electricity failure and many power stations damaged.

Situation Assumptions –

i. Prolonged electricity failure.
ii. The affected victims may be panicked.

iii. Halt of all activities specially jamming communication-networking systems in the affected site.

Nodal Agency : P&E (State)
Support Agency : PWD (State) &NGOs

SOPS for nodal Agency –

i. IC will call the TL of Primary Agency and get the ESF activated.
ii. TL of primary agency will call nodal officers of supporting agencies.
iii. TL would activate the District Quick response Team.
iv. The QRTs will be deployed at the affected site.
v. TL will dispatch emergency repairs teams equipped with tools, tents and food.

SOP for Quick Response Team (QRT) on Electricity –

i. QRTs members will reach the nodal office as soon as they get instructions to do so from the TL.
ii. QRT members would reach to the site immediately after receiving instruction from the nodal officer.
iii. On the site QRT members will take stock of the situation from the IC at the site and their counter parts.
iv. The QRTs will coordinate, collect, process, report and display essential elements of information and facilitate support for planning efforts in response operations.
v. Begin repairing and reconstruction work.
vi. Assisting hospitals in establishing an emergency supply by assembling generators and other emergency equipments, if necessary.
vii. The members of QRTs will establish temporary electricity supplies for transit camps, feeding centers, relief camps, District Control Room and on access roads to the same.
viii. The members of QRTs will establish temporary electricity supplies for relief material go-downs.
ix. Compile an itemized assessment of damage, from reports made by various electrical receiving centers and sub-centers.
x. Report about all the activities to the head office.

12.18 ESF 11: TRANSPORTATION –

Background –

The ESF on Transport should ensure smooth transportation links at state and district level. Within the disaster context, quick and safe movement of material and humans are a priority. It should coordinate the use of transportation resources to support the needs of emergency support forces requiring transport capacity to perform their emergency response, recovery and assistance missions.

Situation Assumptions –

i. The state civil transportation infrastructure will sustain damage, limiting access to the disaster area.
ii. Access will improve as routes are cleared and repaired.
iii. The movement of relief supplies will create congestion in the transportation services.

Nodal Agency : Department of Transport (State)
Support Agencies : Transport Department (District Council)

SOPS for nodal Agency –

i. TL of Transportation ESF will activate the ESF on receiving the intimation of the disaster from District EOC.
ii. TL would inform Nodal Officers (NOs) of support agencies about the event and ESF activation.
iii. TL establishes contact with the district EOC for FIR.
iv. TL requests for reports from local Transportation ESF contact person.
v. TL communicates situation to support agencies and requests for detailed information on the status of transportation infrastructure in the affected area(s).

SOP for Quick Response Team (QRT) on Transport –

i. The QRT members will reach to the nodal office as soon as they will get instructions to do so from the TL.
ii. As quick response teams will receive instructions from the nodal officer they would reach to the site immediately.
iii. QRTs would report the situation and the progress on action taken by the team to the respective EOCs.
iv. QRTs will end a requirement schedule for the different modes of transportation e.g. trucks, boats, helicopters to be put on stand-by.
v. QRTs will ensure timely re-establishment of the critical transportation links.
vi. The members of QRTs will establish temporary electricity supplies for relief material go downs.
vii. Compile an itemized assessment of damage, from reports made by various electrical receiving centers and sub-centers.
viii. Reporting about all activities to the head of offices.

12.19 Emergency Support Functions table

This is an additional feature in the new mechanism of disaster management. A concerted effort of various agencies is required to manage a disaster. Usually the agencies are able to perform the required function, but lack of proper coordination leaves them under-utilized. To avoid this type of problem, a new mechanism called Emergency Support Functions (ESFs) are formulated in Siaha District.

ESF	Function	Nodal Agency	Supporting Agency
ESF – 1	Communication	MPRO	BSNL, I&PR, NIC
ESF – 2	Evacuation	D.C	Police, Fire Services, NCC, Army, PWD (State & MADC), PHE (State & MADC)
ESF – 3	Search and Rescue	Police & Fire	Police, Beino & Meisavaih Adventure Club, 40 B Coy A.R.
ESF – 4	Law and Order	Police	Home Guards, 40B Coy Assam Rifles
ESF – 5	Medical & Trauma Counseling	Health Deptt.	SWD, MCHP, CDPO
ESF – 6	Water Supply	PHE (State)	PHE & LAD (District Council)
ESF – 7	Relief	Food &Civil Supplies,	NGOs
ESF – 8	Equipment Supply, Debris and Road Clearance	PWD (State)	PWD& LAD (District Council)
ESF – 9	Help Lines, Warning Dissemination	D.C.	NIC, MPRO, I&PR, NGO
ESF – 10	Electricity	P&E (State)	NGOs
ESF – 11	Transport	RTP (State)	PWD (State & Council)

The basic structure of the ESF depends up on the functions they are supposed to perform. Altogether there are 11 ESFs in Siaha District each ESF is led by the nodal department in the district and assisted by the other parallel civic bodies.

12.20 ACTION PLAN FOR POLICE –

Response Activation

1. The Nodal Officer from Mizoram Police will activate the Quick Response Teams.
2. The QRT will be deployed at the SOCs.
3. As per the information from IMTs, more officers may be sent at site.

Actions to be taken

1. If felt, cordoning off area to restrict movement of onlookers, vehicular and pedestrian traffic should be done.
2. Quick assessment of law and order situation in affected areas.
3. Prepare updates on the law and order situation every 2–3 hours and brief the Incident Commander.
4. Arrangements for controlling situations like rioting and looting.
5. QRTs will guard property and valuables in affected areas.

6. Control and monitor traffic movement.
7. QRTs will also provide information about traffic flow along various corridors, especially heavy traffic or congested roads.
8. QRTs will communicate to police control rooms, details on the field activities 4including 4deployment 4and 4reinforcement 4of 4staff 4and resources and communicate nature of additional requirements.

Equipments to be brought

1. Search lights
2. Generator
3. Crane-Heavy Duty Fork Type
4. Recovery Van
5. Stretchers
6. First aid Kits
7. Vehicles: Mini Buses, Heavy Truck, Mobilization Trucks.
8. Water tanker

12.21 ACTION PLAN FOR FIRE AND EMERGENCY SERVICE –

Response Activation

1. As soon as the Nodal Officer gets information about the disaster, he should reach the EOC.
2. The Quick Response Teams will be deployed at the SOCs.
3. As per information from IMT, more officers may be sent at side.

<u>Actions to be taken</u>

1. At the site, QRTs should contact the local volunteers and local people to gather information about vulnerable areas so that search and rescue operation can take place through a proper channel in heavily dense areas, large buildings, community centers, hotels, hospitals, public buildings and any other area having large gathering.
2. Locate the damaged and collapsed structures and rescue the population buried and trapped in rubble.
3. Special care to women and children groups should be given as they are expected to be more affected and helpless incase of any emergency situation.
4. Coordinate with the Transportation ESF if a large number of medical professionals need to be sent to the affected sites and/or a large number of victims need to be transported to health facilities.

Equipments to be brought

1. Fire Extinguisher
2. Delivery hose
3. Suction hose
4. Fire axe
5. Ladder Platforms

6. Concrete Cutter
7. Foam

12.22 ACTION PLAN FOR P&E –

Response Activation

1. As soon as the Nodal Officer gets information about the disaster reach the EOC.
2. The QRT will be deployed at the sites.
3. As per information received from IMT, more officers may be sent at site.

Actions to be taken

1. Will dispatch emergency repair teams equipped with tools, tents and food.
2. Assist hospitals in establishing an emergency supply by assembling generators and others emergency equipments, if necessary.
3. The members of QRTs will establish temporary electricity supplies for other key public and private water systems.
4. The members of QRTs will make arrangements for temporary electricity supplies for transit camps, feeding centers, relief camps and SOC, DEOC and on access roads to the same.
5. The members of QRTs will establish temporary electricity supplies for relief materials go downs.
6. Compile an itemized assessment of damage, from reports made by various electrical receiving centers and sub-centers.
7. Report about all the activities to the head office.

Equipments to be brought

All material required for restoration of supply available with the department in Field Offices/Stores.

12.23 ACTION PLAN FOR BSNL –

Goal

The BSNL is primarily responsible for restoration of communication facilities. The BSNL should ensure the smooth flow of information that can cater to the outreach in a time-sensitive manner at state level in response efforts.

Response Activation

1. Soon after receiving information about disaster (from any source). Nodal Officer will contact State/District EOC.
2. The Nodal Officer from BSNL will activate the QRT.
3. As per the information from Incident Management Team, more teams may be deployed at affected sits.

Action to be taken

1. Communicate situation to support agencies (Airtel, IDEA, NIC etc.) and request for detailed information on the status of equipment and infrastructure damage in the affected area(s).

2. Launch assessment mission to understand better the nature of damage to telecom services and network.
3. Ensure possible arrangements for establishing reliable and appropriate network.
4. Work out a plan of action for private telecom companies and convene a meeting to discuss and finalize the modalities.
5. Compile and communicate Action Taken Report to District and State Authorities.
6. New numbers and details of contact persons to be communicated to Emergency Operations Centre (District/State).
7. Mobile exchanges should be deployed as alternative mode of communication for authorities and general public.
8. Establish telephone facilities for the public and information on this should be announced through media.
9. Monitor the situation and arrange for emergency staff required to operate systems established.
10. Inform district/state authorities on debris clearness of the work required.
11. Launch rehabilitation work and arrange for repairs and relocation, if required.
12. Make available various types of equipment/material/technical manpower and services, if requested.

Equipments to be brought

1. Emergency Communication Van with GSM and CDMA services.
2. Other necessary equipments to restore communication network/set-up alternative emergency communication.

12.24 ACTION PLAN FOR PWD –

Action to be taken

1. The above agencies will bring debris of heavy RCC structures (having beams/columns) and put dummies beneath the debris. This will facilitate demonstration of search & rescue operations. Soon after search and rescue team leave the site, will mobilize equipments for debris clearance.
2. Assume role in Equipment support, debris and road clearance, on receiving the intimation of the disaster from State EOC/Nodal Officer of MCD.
3. Coordinate with the MCD officers to mobilize equipments from the warehouses.
4. Contact respective personal to move the equipments to central warehouse.
5. The equipments like JCB, concrete cutters identified as per the need will be transported to the site.
6. On receiving intimation on the intensity of the damages of structure, the nodal officer will make an assessment on of the damages of roads and structures reported at the site and surrounding areas.
7. The nodal officers will call for personal to immediately start debris clearance operation to enable movement to the affected site.
8. A review of the current situation should be taken up by the nodal agency to update the support agencies to delegate their respective personnel to take

precautionary measure to plan de-routes for the transportation ESF's to be operational.

9. All supporting agencies will inspect the road/rail network and structures within the disaster site and surrounding.
10. Assessment of damage (locations, no. of structures damaged, severity of damage).
11. The QRTs will be deployed at the affected site.
12. Enlisting the types of equipment as compiled from resource inventory required for conducting the debris clearance.
13. The QRTs will report the situation and the progress in response activities to the respective EOCs.
14. Undertake construction of temporary roads to serve as access to temporary transit and relief camps, and medical facilities for disaster victims.
15. Undertake repair of all paved and unpaved road surfaces including edge metalling, pothole patching and any failure of surface, foundations in the affected areas by maintenance engineer's staff and keep monitoring their conditions.
16. Ensure a critical number of medical professionals to reach the site including specialists from outside the state.
17. If temporary living arrangements are being made from the affected populace, the agencies must ensure high standards of sanitation in settlements in order to prevent the multiplicity of the disaster.
18. Coordinate, direct, and integrate response to provide Equipments support, relief camps establishment, and sanitation health assistances.
19. Mobilizes different modes of transportation e.g. Trucks, etc. to be put on stand-by.
20. Assist timely re-establishment of the critical transportation links.
21. Compile an itemized assessment of damage, from reports made by various receiving centers and sub-centers.

Equipments to be brought

1. JCB, concrete breakers, cranes, grader, cutter, jack hammer, tipper, folkanes, dumper, aerometric hammer for debris/road clearance, supporting rescue operations.
2. Vehicles (trucks), earth movers, rescue equipments, mobile medical vans.
3. Other disaster management related equipments.

12.25 ACTION PLAN FOR PHE –

Response Activation

1. Upon receipt of notification about disaster, nodal officer will activate quick response teams.
2. The quick response teams will be deployed at the sites.

Action to be taken

1. Quick assessment of water line damage and contamination.

2. Supply of water tankers to disaster affected communities.
3. Deploy response teams to repair and restore water supply lines that may be damages after disaster.
4. Quick assessment of water contamination levels and taking steps to restore clean drinking water.
5. Provide information to IMT, DEOC and state EOC about extent of damage.

Equipments/Materials to be brought to site

Water tankers, pipe wrench, etc.

12.26 ACTION PLAN FOR FOOD, CIVIL SUPPLIES & CONSUMER AFFAIRS –

Response Activation

1. Team leader will activate ESF on receiving information of the disaster from State EOC.
2. Team leader will inform Nodal Officers of support agencies about the event and ESF activation.

Action to be taken

1. Coordinate with ESFs related to transportation, debris and road clearance to ensure quality supply chain management and relief materials.
2. QRTs to report to site of relief camps.
3. QRTs responsible for management and distribution of food and relief items to affected victims.
4. QRTs responsible for reporting progress of action taken to EOC.
5. Preparing take-home food packets for families.
6. Ensuring support to local administration.

Equipments/Materials to be brought to site

Food packets and other foods

12.27 ACTION PLAN FOR DEPARTMENT OF TRANSPORT –

Response Activation

1. Team leader will activate ESF on receiving information of the disaster from State EOC.
2. Team leader will inform Nodal Officers of support agencies about the event and ESF activation.

Action to be taken

Team leader communicates situation to support agencies and requests for detailed information on the status of transportation infrastructure in the affected area(s).

12.28 ACTION PLAN FOR ARMY –

Response Activation

1. Upon receipt of notification about disaster, nodal officer will activate quick response teams.

2. The quick response teams will be deployed at the sites.

Action to be taken

1. Support and coordinate with the Incident Command System for Law and Order, Search and Rescue, distribution of Relief material, Medical Response and Trauma Counseling functions.
2. Locate the damaged and collapsed structures and rescue the population buried and trapped in rubble.
3. Cordoning off area to restrict movement of onlookers, vehicular and pedestrian traffic should be done.
4. Quick assessment of law and order situation in affected areas.

12.29 COMPOSITION OF SEARCH AND RESCUE TEAM –

The Typical Search and Rescue Team should consist of

1. Rescue and evacuation team.
2. Relief team, Medical Unit, Technical support team.
3. Damage and need Assessment team.

Rescue Required

1. Acoustic listening devices
2. Search Cams
3. Rescue gears
4. Canines
5. Hydraulic platform 60 mts. Telescopic cum Articulating
6. Hydraulic platform 54 mts. Telescopic with Articulating tip boom
7. Hydraulic platform 45 mts. Telescopic with Articulating tip boom &rotating cage
8. Hydraulic Telescope crane (45mts. 100 ton capacity)
9. Hydraulic/pneumatic 4rescue 4tools 4(Heavy 4duty 4industrial 4type) Concrete saws, portables, gasoline operated with diamond chains
10. 12” & 14” with water pump & hose/connectors
11. Concrete breakers (28 kgs)
12. Concrete breaker (10 kgs)
13. Pneumatic High-pressure lifting bags 12 to 132 tons
14. Life detector compact system
15. Helmets with head mounted strap lights/battery & wireless/walkie-talkie adapters
16. Mechanical jack supports
17. Excavator, Bucket Cap 0.3 *cu.m.wt.* @ 7/8 ton, HP @ 50/60 HP
18. Bucket cap 1.0 *cu.mt.wt.* @ 20/25 ton HP @ 120/135
19. Wheel Dozer G14 D type. Bulldozer D80 A12, Tipper truck, tractors
20. Lifting crane cap. 25 ton
21. Mobile medical van, Tata Sumo
22. Do watering pump heavy duty mounted on a LCV
23. Towing crane, Trailer 25 ton to transfer the machinery

24. Mobile Breakdown Unit

Other Resources

1. Emergency lights, torches
2. Public Address Systems (battery operated)
3. Stretchers, Covered dustbins
4. Earth digging equipments
5. Polythene sheets, Fire-fighting equipment
6. Bleaching Powder, Fist Aid kits
7. Protective shoes/gloves, Casualty bags.

APPENDIX – I

IMPORTANT VILLAGES DATA
(BASED ON VILLAGE LEVEL STATISTICS, 2005) –

S/N	*Village*	*Distance from Siaha*	*No. of NGO*	*Others*
1.	Tipa	72 kms	MTP, MCHP, MSO, YMA & MHIP	1) PHC – 1 2) P/S – 2, M/S - 2, H/S-1 3) Community Hall – 2 4) PHE Point – 12 5) Village Water Point – 2
2.	Zyhno	86kms	MTP, MSO & MCHP	1) HSC – 1 2) P/S – 3, M/S - 1, H/S-1 3) Community Hall – 2 4) PHE Point – 6 5) Village Water Point –1
3.	Tipa B	80 kms	MTP, MSO & MCHP	1) HSC –1 2) P/S – 2 & M/S–1 3) Community Hall –1 4) PHE Point – 4 5) Village Water Point –1
4.	Chapi	115 kms	MTP, MSO & MCHP	1) HSC – 1 2) P/S – 2, M/S - 1, H/S- 1 3) Community Hall – 1 4) PHE Point – 6 5) Village Water Point – 1
5.	Chakhei	67 kms	MTP, MSO & MCHP	1) HSC – 1 2) P/S – 2, M/S - 1, H/S- 1 3) Community Hall – 1 4) PHE Point – 1 5) Village Water Point – 5
6.	Tisi	68 kms	MTP, MSO & MCHP	1) HSC – 1 2) P/S – 3, M/S - 1, H/S- 1 3) Community Hall – x 4) PHE Point – 3 5) Village Water Point – 1
7.	Siata	55 kms	MTP, MSO & MCHP	1) HSC – 1 2) P/S – 2 & M/S – 1 3) Community Hall – 2 4) PHE Point – 3 5) Village Water Point – 2
8.	Iana	61 kms	MTP& MCHP	1) HSC/ PHC – x 2) P/S – 2 & M/S – 1 3) Community Hall – 1 4) PHE Point – 4 5) Village Water Point – 2

9.	Noaotlah	30 kms	YLA & LWA	1) HSC – 1 2) P/S, M/S & H/S– 1 each 3) Community Hall – 1 4) PHE Point – 2 5) Village Water Point – 3
10.	Chhaolo	46 kms	MTP& MCHP	1) HSC – 1 2) P/S – 2, M/S - 1, H/S- 1 3) Community Hall – x 4) PHE Point – 6 5) Village Water Point – 2
11.	Khopai	102 kms	MTP& MCHP	1) HSC/ PHC – x 2) P/S & M/S – 1 each 3) Community Hall – 1 4) PHE Point – 1 5) Village Water Point – 1
12.	Mawhrei	100 kms	MTP& MCHP	1) HSC/ PHC – x 2) P/S & M/S – 1 each 3) Community Hall – 1 4) PHE Point – 2 5) Village Water Point – 1
13.	Laki	114 kms	MTP& MCHP	1) HSC – 1 2) P/S – 2, M/S - 1, H/S- 1 3) Community Hall – 1 4) PHE Point – 2 5) Village Water Point – 2
14.	Siatlai	79 kms	MTP& MCHP	1) HSC – 1 2) P/S & M/S – 1 each 3) Community Hall – x 4) PHE Point – x 5) Village Water Point – x
15.	Vahia	115 kms	MTP& MCHP	1) HSC – 1 2) P/S – 2 & M/S – 1 3) Community Hall – x 4) PHE Point – x 5) Village Water Point – 1
16.	Chheihlu	92 kms	MTP& MCHP	1) HSC/ PHC – x 2) P/S – 2 & M/S – 1 3) Community Hall – 1 4) PHE Point – x 5) Village Water Point – 5
17.	Siasi	55 kms	MTP, MSO & MCHP	1) HSC/ PHC – x 2) P/S & M/S – 1 each 3) Community Hall – x 4) PHE Point – 3 5) Village Water Point – 3

18.	Lobo	37 kms	MTP& MCHP	1) HSC/ PHC – x 2) P/S – 2 & M/S – 1 3) Community Hall – x 4) PHE Point – 3 5) Village Water Point – 2
19.	Ahmypi	106 kms	MTP& MCHP	1) HSC/ PHC – x 2) P/S – 1 & M/S – 1 3) Community Hall – x 4) PHE Point – x 5) Village Water Point – 2
20.	Kaochao E	41 kms	MTP, MSO, MCHP, YMA & YLA	1) HSC/ PHC – x 2) P/S – 2 & M/S – 1 3) Community Hall – x 4) PHE Point – x 5) Village Water Point – 4
21.	Saikao	53 kms	MTP, MSO & MCHP	1) HSC – 1 2) P/S – 3, M/S – 1& H/S -1 3) Community Hall – x 4) PHE Point – 1 5) Village Water Point – 4
22.	New Saikao	48 kms	MTP	1) HSC/ PHC – x 2) P/S – 1 3) Community Hall – x 4) PHE Point – 1 5) Village Water Point – 2
23.	New Laty	57 kms	MTP, MSO, MHIP & MCHP	1) HSC/ PHC – x 2) P/S – 2, M/S – 1 3) Community Hall – 1 4) PHE Point – 5 5) Village Water Point – 2
24.	Laty	67 kms	MTP, MSO & MCHP	1) HSC – 1 2) P/S – 1, M/S – 1 3) Community Hall – 1 4) PHE Point – 4 5) Village Water Point – 1
25.	Maisa	82 kms	MTP& MCHP	1) HSC/ PHC – x 2) P/S – 1 3) Community Hall – x 4) PHE Point – 2 5) Village Water Point – 2
26.	Kiasie	99 kms	MTP& MCHP	1) HSC/ PHC – x 2) P/S – 1, M/S – 1 3) Community Hall – 1 4) PHE Point – 4 5) Village Water Point – 1

27.	Phura	97 kms	MTP, MSO, MHIP & MCHP	1) HSC – 1 2) P/S – 2, M/S –1&H/S – 1 3) Community Hall – x 4) PHE Point – 7 5) Village Water Point – 2
28.	Pala	98 kms	MTP& MCHP	1) HSC/ PHC – x 2) P/S – 1, M/S – 1 3) Community Hall – 1 4) PHE Point – 4 5) Village Water Point – 2
29.	Miepu	126 kms	MTP, MSO & MCHP	1) HSC/ PHC – x 2) P/S – 1 3) Community Hall – x 4) PHE Point – 1 5) Village Water Point – 1
30.	Lodaw	98 kms	MTP	1) HSC/ PHC – x 2) P/S – 1 3) Community Hall – x 4) PHE Point – x 5) Village Water Point – 1
31.	Supha	117 kms	MTP	1) HSC/ PHC – x 2) P/S – 1 3) Community Hall – x 4) PHE Point – x 5) Village Water Point – 1
32.	Tokalo	110 kms	MTP, MSO & MCHP	1) HSC – 1 2) P/S – 1 & M/S – 1 3) Community Hall – 1 4) PHE Point – x 5) Village Water Point – 4
33.	Lomasu	120 kms	MTP& MCHP	1) HSC/ PHC – x 2) P/S – 2 3) Community Hall – x 4) PHE Point – x 5) Village Water Point – 2
34.	Theiri	56 kms	MTP& MCHP	1) HSC/ PHC – x 2) P/S – 1 & M/S – 1 3) Community Hall – x 4) PHE Point – x 5) Village Water Point – 1
35.	Amobyu Vaithie	29 kms	MTP	1) HSC – 1 2) P/S – 1 & M/S – 1 3) Community Hall – 1 4) PHE Point – 2 5) Village Water Point – 1

36	Riasikah	20 kms	MTP	1) HSC/ PHC – x 2) P/S – 1 3) Community Hall – x 4) PHE Point – x 5) Village Water Point – 2
37.	Lower Theiva	47 kms	MTP, MSO, MCHP, MHIP & TSU	1) HSC – 1 2) P/S – 2 & M/S – 1 3) Community Hall – 1 4) PHE Point – x 5) Village Water Point – 2
38.	Tipi Ferry	14 kms	MTP	1) HSC – 1 2) P/S – 1 3) Community Hall – x 4) PHE Point – 3 5) Village Water Point – x
39.	Amotlah	61 kms	MTP	1) HSC – 1 2) P/S – 2 & M/S – 1 3) Community Hall – x 4) PHE Point – 1 5) Village Water Point – 2
40.	Tisopi	14 kms	MTP	1) HSC – 1 2) P/S – 1 & M/S – 1 3) Community Hall – x 4) PHE Point – x 5) Village Water Point – 2
41.	Amobyu CH	36 kms	MTP, MHIP & MCHP	1) HSC – 1 2) P/S – 1 3) Community Hall – x 4) PHE Point – x 5) Village Water Point – 2
42.	Tipa D	72 kms	MTP	1) HSC/ PHC – x 2) P/S – 1 & M/S – 1 3) Community Hall – x 4) PHE Point – 4 5) Village Water Point – x
43.	Lotai	105 kms	MTP	1) HSC/ PHC – x 2) P/S – 1 & M/S – 1 3) Community Hall – x 4) PHE Point – 1 5) Village Water Point – x
44.	Amobyu B	35 kms	MTP, MSO, MHIP & MCHP	1) HSC/ PHC – x 2) P/S – 1 & M/S – 1 3) Community Hall – x 4) PHE Point – 1 5) Village Water Point – x

45.	Bymari	115 kms	MTP & MCHP	1) HSC/ PHC – x 2) P/S – 1 & M/S – 1 3) Community Hall – x 4) PHE Point – x 5) Village Water Point – 3
46.	Lopu	117 kms	MTP & MCHP	1) HSC/ PHC – x 2) P/S – 2 3) Community Hall – x 4) PHE Point – 1 5) Village Water Point – 1

APPENDIX – II

GOVERNMENT OF MIZORAM
DISASTER MANAGEMENT& REHABILITATION DEPARTMENT

Aizawl, the 25th October, 2019

NOTIFICATION

No. B. 13011/102/2015 – DMR: In pursuance of the provision under Section 25 of the Disaster Management Act, 2005 and in supersession of previous notification dated 06.06.2006, the Governor of Mizoram is pleased to reconstitute the **"District Disaster Management Authority"** for every District in Mizoram with the following composition, with immediate effect and until further orders:

1.	Chairperson	:	Deputy Commissioner (Ex-Officio)
2.	Co-Chairperson	:	Project Director, DRDA or CEM, Autonomous District Council in respect of Sixth Scheduled areas)
3.	Members	:	(i) Superintendent of Police (Ex-officio) (ii) Executive Secretary, ADC (in case of Sixth Scheduled areas) (iii) Chief Medical Officer (Ex-officio) (iv) Senior most officer from PWD i.e S.E or EE whoever is available (iv) Senior most officer from PHE i.e S.E or EE whoever is available
4.	Chief Executive Officer	:	Additional Deputy Commissioner Officer

2. Power & Functions –

Subject to the provisions under the Disaster Management Act, 2005 and in accordance with the guidelines laid down by the National Authority and the State Authority, the District Authority shall act as the planning, coordinating and implementing body for disaster management in the District and shall also be responsible for the following –

1. Prepare a District Management Plan, including District Response Plan for the District.
2. Coordinate and monitor the implementation of National Policy, State Policy, National Plan, State plan and District Plan.
3. Ensure that the areas in the District vulnerable to disaster are indentified and measures for the preventions of disasters and mitigation of its effects are undertaken by all the District Level Government Departments and the local authorities.
4. Ensure that the guide line 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 the District level State Government Departments and the local authorities.

5. Give directions to different District level authorities and local authorities to take such other measures for the prevention or mitigation of disaster as may be necessary.
6. Monitor the implementation of Disaster Management plan prepared by the District Level Government Departments and local authorities.
7. Lay down guidelines to be followed by the District Level State Government departments for the purpose of integration of measures for prevention of disaster and mitigation in their development plans and projects and provide necessary technical assistance therefore, and monitoring the implementation of such measures.
8. Review the 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.
9. Review the preparedness measures and give directions to 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.
10. Organise and coordinate specialized training programme for different levels of officers, employees and voluntary rescue workers in the District.
11. Facilitate Community training and awareness programmes for prevention of disaster or mitigation with the support of local authorities, Governmental and 4non-governmental organizations.
12. Set up, maintain, review and upgrade the mechanism for early warning and dissemination of proper information to the public.
13. Prepare, review and upgrade the District level Response Plan and Guidelines.
14. Coordinate response to any threatening disaster situation of disaster.
15. Ensure that the District Level Government Departments and local authorities prepare their response plans in accordance with the District Response Plan.
16. Lay down guideline, or give directions to the concerned District Level State Government Departments or any other authorities within the local limits of the District, to take measures to respond effectively to any threatening disaster or disaster.
17. Advise, assist and coordinate the activities of the District Level State Government Departments, statutory bodies and other governmental or non-governmental organizations engaged in disaster management in the District.
18. Coordinate with, and give guidance to, local authorities in the District to ensure that measures for the prevention or mitigation or threatening disaster situation or disaster in the District are carried out promptly and effectively.
19. Provide necessary technical assistance or give advice to the local authorities in the District for carrying out their functions effectively.
20. Review the developmental plans prepared by the District level State Government Departments, statutory authorities or local authorities with a view to make necessary provisions therein for prevention of disaster or mitigation.

21. 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 actions as may be necessary to secure compliance of such standards.
22. Identify buildings and places which could, in the event of any threatening disaster or disaster, be used as relief centres and make arrangements for water supply and sanitation in such buildings and places.
23. Establish stock piles of relief and rescue materials or ensure preparedness to make such materials available at a short notice.
24. Provide information to the State Authority relating to different aspects of disaster management.
25. Encourage the involvement of NGOs and voluntary social welfare institutions working at the grass root level in the District for disaster management.
26. Ensure that communication systems are in order, and disaster management drills are carried out periodically.
27. Perform such other functions as the State Government or State Authority may assign to it or as deems necessary for disaster management in the District.

3. Powers of the Chairperson

1. The Chairperson of the District Authority shall, in the additions to presiding over the meetings of the District Authority, exercise and discharge such powers and functions of the District Authorities as the District Authority may delegate to him.
2. Subject to the expost facto ratifications by the District Authority, the Chairpersons of the District Authority, in the case of an emergency, have the power to exercise all or any of the powers of the District Authority.

The District Authority or the Chairperson of the District Authority may, be general or special order in writing, delegate such of its or his powers and functions to the Chief Executive Officer, subject to such conditions and limitations, if any, as it or he deems fit.

5. The District Authority shall meet as and when necessary and at such time and place as the Chairperson may think fit.

Sd/- LALTHANGPUIA SAILO
Commissioner & Secretary to the Govt. of Mizoram
Disaster Management& Rehabilitation Department

Memo No.B. 13011/107/2011 – DMR ***Aizawl, the 25th October, 2019***

Copy to:

1) Secretary to the Governor of Mizoram
2) Sr. PPS to Chief Minister, Mizoram
3) P.S to Speaker/Dy. Speaker.
4) P.S to all Minister/Minister of State.
5) P.S to Vice Chairman, State Planning Board

6) Sr. PPS to Chief Secretary, Mizoram
7) All Administrative Departments.
8) All Head of Department.
9) All Deputy Commissioners.
10) Chief Executive Member, Mara Autonomous District Council, Siaha/Lai Autonomous District Council, Lawngtlai/Chakma Autonomous District Council, Chawngte.
11) Controller, Printing & Stationery with 7 (seven) spare copies for publication in the Mizoram Gazette.
12) Director, Disaster Management & Rehabilitation Department
13) Guard File

Sd/- Dr Malsawmtluanga Fanchun
Under Secretary to the Govt. of Mizoram
Disaster Management & Rehabilitation Department

APPENDIX- III

TERMINOLOGY

CAPACITY BUILDING: A combination of all the strengths and resources available within a community, society or organization that can reduce the level of risk, or the effects of a disaster. Capacity may include physical, institutional, social or economic means as well as skilled personal or collective attributes such as leadership and management. Capacity may also be described as capability.

DISASTER: A catastrophe, mishap, calamity or grave occurrence in any area, arising from natural or man-made cause, or by accident or negligence which results in substantial loss of life or human suffering or damage to, and destruction of, property, or damage to, or-degradation of, environment, and it of such a nature or magnitude as to be beyond the coping capacity of the community of the affected area (DM Act, 2005).

DISASTER MANAGEMENT: It covers the range of activities designed to maintain control over disasters/ emergency situations and to provide a framework for helping people to avoid, reduce the effects of, or recover from impact of a disaster. These activities may be related to preparedness, mitigation, emergency response and relief and recovery (reconstruction and rehabilitation) and may be conducted before, during or after a disaster.

DISASTER RISK MANAGEMENT: The systematic management of administrative decisions, organization, operational skills and abilities to implement policies, strategies and coping capacities of the society or individuals to lessen the impacts of natural and related environmental and technological hazards.

DISASTER RISK REDUCTION: The systematic development and application of policies, strategies and practices to minimize vulnerabilities, hazards and the unfolding of disaster impacts throughout a society, in the broad context of sustainable development.

EMERGENCY/ CRISIS MANAGEMENT: The organization and management of resources and responsibilities for dealing with all aspects of emergencies, in particularly preparedness, response and rehabilitation. It involves plans, structures and arrangements established to coordinate the response of government, voluntary and private agencies during an emergency.

HAZARD: Phenomena that pose a threat to people, structures or economic assets and which may cause a disaster. They could be either man made or naturally occurring in our environments.

MITIGATION: All activities undertaken in anticipation of the occurrence of a potentially disastrous event, including preparedness and long term risk reduction measures.

RISK: A measure of the expected losses due to a hazard event of a particular magnitude occurring in a given area over a specific time period.

VULNERABILITY: The extent to which a community, structure, service and geographic area is likely to be damaged a disrupted by the impact of particular hazard, on account of their nature, construction and proximity to hazardous terrain or a disaster prone area.

APPENDIX- IV

ABBREVIATIONS

ADA	Aizawl Development Authority	MPRO	Mizoram Police Radio Operators
AMC	Aizawl Municipal Council	MST	Mizoram State Transport
AR	Assam Riffles	MTP	Mara Thyutla Py
BDO	Block Development Officer	NCC	National Cadet Corps
BSNL	Bharat Sanchar Nigam Limited	NSS	National Service Scheme
CBDM	Community Based Disaster Management	NDMA	National Disaster Management Authority
CBO	Community Based Organizations	NGO	Non-Governmental Organization
CBDP	Community Based Disaster Preparedness	NIC	National Informatics Centre
CMO	Chief Medical Officer	NO	Nodal Officer
CEM	Chief Executive Member	NSS	National Service Scheme
CRF	Calamity Relief Fund	P&E	Power and Electricity
CTF	Community Task Force	PCR	Police Control Room
DDMA	District Disaster Management Authority	PHC	Primary Health Centre
DDMC	District Disaster Management Committee	PHE	Public Health Engineer
DDMP	District Disaster Management Plan	PSA	Project Support Associate
DEOC	District Emergency Operation Centre	PWD	Public Works Department
DHS	District Hospital Superintendent	QRT	Quick Response Team
DIO	District Information Officer	RCC	Reinforced Concrete Cement
DM	Disaster Management	SDMA	State Disaster Management Authority
DM&R	Disaster Management & Rehabilitation	SDMP	School Disaster Management Plan
DMP	Disaster Management Plan	SDRF	State Disaster Response Force (Fund)
DMT	Disaster Management Team	S&R	Search and Rescue
DRDA	District Rural Development Agency	SOC	Site Operation Centre
DRM	Disaster Risk Management	SOP	Standard Operation Procedures
DTO	District Transport Officer	UNDP	United Nations Development Programme
IMT	Incident Management Teams	VDMC	Village Disaster Management Committee
EOC	Emergency Operation Centre	VDMP	Village Disaster Management Plan
ESF	Emergency Support Functions	VDMT	Village Disaster Management Team
FCS&CA	Food, Civil Supplies and Consumer Affairs	ICS	Incident Command System
GoI	Government of India	IDRN	India Disaster Resource Network
IAP	Immediate Action Plan	IEC	Information, Education and Communication
IC	Incident Commander	MADC	Mara Autonomous District Council
I&PR	Information and Public Relations	MDC	Member of District Council

APPENDIX – V

LIST OF IMPORTANT WEBSITES

1. www.idrn.gov.in India Disaster Resource Network
2. www.ndmindia.nic Natural Disaster Management India. Provides current news on Cyclones, Flood and Drought, Weather links from NIC and weather conditions/temperatures on Indian Ocean.
3. www.nicee.org The National Information Center of Earthquake Engineering
4. www.imd.ernet.in Indian Meteorological Department
5. www.asc-india.org Amateur Seismic Centre
6. http://mizoramdmr.nic.in Mizoram Disaster Management & Rehabilitation Department. Provides information of all disaster related activities done in Mizoram.
7. http://ioc.unesco.org/itsu IOC/ UNESCO International Coordination group for the Tsunami Warning System in the Pacific (ICG/ ITSU) Paris, France
8. http://landslides.usgs.gov USGS National Landslide Hazards Program
9. www.cwc.nic.in Central Water Commission of India
10. http://www.envfor.nic.in Ministry of Environment and Forests
11. http://www.iifm.org/databank/index.html A Comprehensive Internet Information bank on forest and related resources in India and around the world, prepared by Indian Institute of Forest Management, Bhopal.
12. www.ipaindia.org Loss Prevention Association of India Ltd. (LPA) is engaged in promoting safety and loss control through education, training and consultancy.
13. www.dmibpl.org Disaster Management Institute
14. http://www.nidm.net National Institute of Disaster Management
15. http://dst.gov.in Department of Science and Technology
16. http://www.icar.org.in/ Indian Council for Agriculture and Research
17. http://www.iirs-nrsa.org/ Indian Institute of Remote Sensing
18. http://www.bis.org.in Bureau of Indian Standards
19. http://www.gsi.gov.in/ Geological Survey of India
20. http://gov.ua.nic.in/dmmc/ Disaster Mitigation and Management Centre
21. http://www.unisdr.org/ International Strategy for Disaster Reduction.