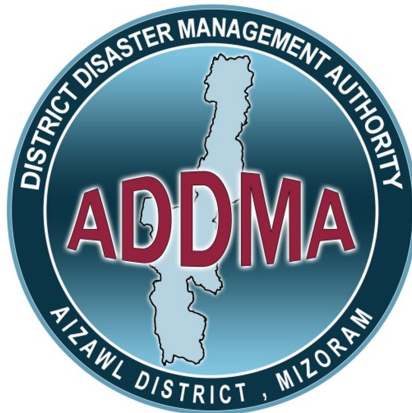


# **AIZAWL DISTRICT DISASTER MANAGEMENT PLAN 2022**



**DISTRICT EMERGENCY OPERATION CENTRE**

**-1077/2321119/2317717**

**AIZAWL DISTRICT DISASTER  
MANAGEMENT AUTHORITY**

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## **CHAPTER- 1 INTRODUCTION**

### **1.1 District Profile:**

#### **About Aizawl District**

Aizawl District is one among 11 Districts of Mizoram State, India. Aizawl District Administrative head quarter is Aizawl. Aizawl District population is 400309. It is biggest district in State by population.

#### **Geography and Climate Aizawl District**

It is Located at Latitude-23.7, Longitude-92.7. Aizawl District is sharing border with Saitual District to the East, Kolasib District to the North, Mamit District to the West, Serchhip District to the South. Aizawl District occupies an area of 3576 square kilometers. . It's in the 48 meters to meters elevation range. This District belongs to Eastern India.

#### **Census 2011 of Aizawl District**

Aizawl district Total population is 400309 according to census 2011. Males are 199270 and Females are 201039 .Literate people are 267322 among total population. Its total area is 3576 km<sup>2</sup>. It is the 1<sup>st</sup> largest district in the state by Population. But 2<sup>nd</sup> Largest District in the state by Area. Its literacy Rate is 98.21 %

Aizawl is the largest city as well as the capital of the state of Mizoram in India. The City is located north of the Tropic of Cancer in the northern part of Mizoram and is situated on ridge 1132 metres (3715 ft) above sea level, with the Tlawng river valley to its west and the Tuirial river valley to its east. In the summer the temperature ranges from 20-30 degrees Celsius, and in the winter 11-21 degrees Celsius.

Aizawl is a beautiful place that offers plenty of tourist attractions to tourists and habitants alike. Besides its breathtaking beauty, Aizawl is the storehouse of all important Government offices, State Assembly House and Civil Secretariat. It also en houses different communities of Mizo wherein they maintain *Peaceful Coexistences* as the main theme. Various varieties of jungle products, monuments and memorials connected with legends and folklores are also available. This lively and bustling city is definitely enchanting and worth visiting.

#### **Altitude:**

**Highest : 1905 meters from Sea Level (Mt. Chalfilh)**

**Lowest : 100 meters from Sea Level (Sairang Village)**

Pin Codes
796012 ( Ramhlun )
796014 ( Bawngkawn )
796025 ( Durtlang )
796009 ( Vaivakawn )
796471 ( Zawlnuam )
796005 ( Kulikawn )
796036 ( Sihphir )
796230 ( Sialsuk )
796017 ( Zemabawk )
796190 ( Aibawk )
796007 ( Chandmary )
796161 ( Thingsulthliah )
796111 ( Darlawn )
796015 ( Tlangnuam )
796001 ( Aizawl )

The topography of Aizawl district can be described as irregular. While many places have high altitudes, several areas fall under low altitudes area. The southern part of the district are characterized by moderately high altitude , while the eastern part of the district are comparatively higher in elevation than the rest of the district, while the northern part is uniformly characterized by low elevation.

**Climate:**

The climate of Aizawl District is the ‘Tropical Monsoon Type’. The climate as a whole is controlled by its location, physiographic, pressure regime in North East India and Bay of Bengal, warm and moist maritime tropical air masses from the Bay of Bengal, local mountains and Valley winds. Also, the surrounding Hill Tracts of Chin, Arakan Yoma and Chittagong play an important role in shaping the climatic condition of the district.

It is cool in summer. Aizawl District summer highest day temperature is in between 22 ° C to 36° C. Average temperatures of January is 13 ° C , February is 17 ° C , March is 21 ° C , April is 24 ° C , May is 23 ° C .

The entire district enjoys a moderate climate owing to its tropical location. It is neither very hot nor too cold throughout the year. Aizawl District falls under the direct influence of the South West Monsoon. As such, the area receives an adequate amount of rainfall which is responsible for a humid tropical climate characterized by short are winter and long summer with heavy rainfall.

**Season:** Based on the variation in temperature, rainfall, humidity and other general weather conditions, four different types of seasons are observed for the district.

**(a) The Cold Season or Winter season (Thlasik):**

**Period : December to first half of February**

Winter, which season starts from the month of December, is the coldest season of the year. During this period rainfall is less compared to other seasons, and whatever amount rainfall received originate from North East Monsoon, generally known as ‘Retreating Monsoon’. This season is very pleasant with clear blue skies in the absence of cloud cover. All the people are in a festive mood since the most celebrated festival ‘Christmas’ occurs during this season.

**(b) Pre- Monsoon Season (Thal):**

**Period : Second half of February to the first half of March**

Spring is the shortest season of the year. Temperature is mild and the sky is clear. The Mizo people are accustomed to undertaking construct works during this season as there are no weather disturbances.

**(c) Summer / Rainy Season (Nipui/Fur):**

**Period : Second half of March to first half of October**

Summer or Rainy season is the longest season covering about seven months. The early part of this season i.e. from second half of March till first half of May is characterized by bright sunshine and clear skies with little or no cloud till it is disrupted by the coming of monsoon showers. July, August and September are the warmest months of the year.

The heavy rainfall or downpour usually subsides in the first quarter of October. Rainfall during May, June, July, August & September alone contribute 76% of the total annual rainfall. This is the season of the cyclonic rains. The temperature remains high, but is kept low to a considerable extent by the rain.

**(d) *Autumn (Favang):***

**Period : The second half of October to November**

This season is very pleasant when the summer rain already receded. This is the season the Mizos longs for, since they have no unfinished works in their traditional paddy fields. Peoples are in festive moods. During this time one of Mizo festivals called ‘Mim Kut’ was used to be celebrated.

**Temperature:**

<b>O</b>
<b>Maximum : 36.7 C in the Month of April</b>
<b>O</b>
<b>Minimum : 5.4 C in the Month of December</b>

The salient thermo-characteristics of Aizawl district is that temperature do not fluctuate much throughout the year. April to September is the warmest period of the year. The temperature starts to fall down sharply from November and it is minimized in December and January.

**Rainfall:**

**Average annual Rainfall : 2786.6 mm**

The entire state of Mizoram is under the direct influence of the South West Monsoon. Hence Aizawl District also receives an adequate amount of rainfall during the monsoon season. In Aizawl District, June, July and August are the rainiest months while December, January and February are the driest months in a year.

**Minerals:**

No major mineral is found in the district. However, mention may be made about the stray deposits of certain minerals.

Bands of Shell Limestone deposit is noticed near Muthi village. The limestone is very hard and massive, and grey to dark grey in colour. The limestone bands occur as detached lensoidal bodies associated with sandstones and siltstones. Small quantities of limestone deposits are found in the Tamdil lui nala section, in the east of Sesawng village at Dam lui, Ngharum lui near Tuirial Bridge and near PHE Rest House on Reiek – Aizawl road. The limestone occurs as stalactites deposits at Tamdil lui and Dam lui.

**Roads:**

Aizawl district has good road networks. The whole length of the district is connected by various road networks. The National Highway 54 passes through the district. The National Highway 150 also runs along the northern ridges of the district. District roads and inter Village roads connect all the villages within the District.

Also, a good number of Agricultural/ Horticultural link roads have been constructed for transportation of agricultural and horticultural products from the interior parts of the district.

**Land use/ Land cover:**

	<b>Category</b>	<b>Area(Sq.km)</b>	<b>%</b>
<b>1</b>	Built- up land		
	City	26.31	<b>0.74</b>
	Town	3.15	<b>0.09</b>
	Village	18.82	<b>0.53</b>
<b>2</b>	Agriculture Land		
	2.1 Cropland ( Kharif)	2.23	<b>0.06</b>
	2.2 Plantation		
	Citrus woodland	1.59	<b>0.04</b>
	Banana	1.40	<b>0.04</b>
	Pineapple	0.13	<b>0.004</b>
	Tea	0.51	<b>0.01</b>
	Tung	1.61	<b>0.04</b>
Misc. agriculture Plantation	6.69	<b>0.19</b>	
<b>3</b>	Forest		
	3.1 Dense	642.75	<b>17.97</b>
	3.2 Medium Dense	410.21	<b>11.47</b>
	3.3 Less Dense	399.73	<b>11.18</b>
	3.4 Bamboo	1403.01	<b>39.23</b>
	3.5 Forest Plantation		
	Teak	12.23	<b>0.34</b>
Miscellaneous	2.86	<b>0.08</b>	
<b>4</b>	Shifting Cultivation		
	4.1 Current Shifting Cultivation	185.44	<b>5.19</b>
	4.2 Abandoned Shifting Cultivation	407.97	<b>11.41</b>
<b>5</b>	Scrub land	35.38	<b>0.99</b>
<b>6</b>	Water body	14.29	<b>0.40</b>
	<b>Total</b>	<b>3576.31</b>	<b>100.00</b>

**Distance of some villages (within aizawl district) from aizawl**

VILLAGE	KM	VILLAGE	KM
<b>Aizawl to Thingsulthliah:</b>			
Tuirial	27	Phaibawk	40
Seling	45	Thingsulthliah	50
Tlungvel	69	Phulmawi	76
<b>Aizawl to Sialsuk:</b>			
Muallungthu	19	Aibawk	30
Samlukhai	66	Sialsuk	69
<b>Aizawl to Keifang:</b>			
Seling	45	Tuirini	56
Keifang	75	Tuivawl	97
<b>Aizawl to Phullen:</b>			
Keifang	75	Dilkhan	85
PWD Quarry	97	Tuivawl 'R'	101
Chhirdem	107	Thanglailung	116
Phullen	125		
<b>Aizawl to Vaitin:</b>			
Zero Point	41	Sesawng	45
Mualmam	55	Tuirini 'R'	66
Khawruhlian	87	Khanpui	90
Pehlawn	100	E.Phaileng	103
Kepran	109	Sawlung	116
Darlawn	123	Sailutar	133
Ratu	140	Lungsum	153
Vervek	158	Sakawrdai	168
Vaitin	173		
<b>Aizawl to Vanbawng:</b>			
E.Phaileng	103	Tuivawl 'R'	122
Suangpuilawn	149	Lamherh	156
Vanbawng	162	N.Khawlek	172
<b>Aizawl to Daido:</b>			
Phullen	125	Phuaibuang	165
Khawlian	173	N.E. Tlangnuam	176
Daido	181		





**AIZAWL CITY POPULATION CENSUS 2011**

Description			
City		<b>Aizawl</b>	
Government		<b>Notified Town</b>	
Urban Agglomeration		<b>Only City</b>	
State		<b>Mizoram</b>	
Aizawl City	Total	Male	Female
City Population	<b>293,416</b>	144,913	148,503
Literates	<b>253,192</b>	124,882	128,310
Children (0-6)	<b>36,012</b>	18,159	17,853
Average Literacy (%)	<b>98.36 %</b>	98.52 %	98.21 %
Sex ratio	<b>1025</b>		
Child Sex ratio	<b>983</b>		

**Aizawl District: Census 2011 data**

An official Census 2011 detail of Aizawl, a district of Mizoram has been released by Directorate of Census Operations in Mizoram. Enumeration of key persons was also done by census officials in Aizawl District of Mizoram. In 2011, Aizawl had population of 400,309 of which male and female were 199,270 and 201,039 respectively. In 2001 census, Aizawl had a population of 325,676 of which males were 166,877 and remaining 158,799 were females. Aizawl District population constituted 36.48 percent of total Mizoram population. In 2001 census, this figure for Aizawl District was at 36.65 percent of Mizoram population. There was change of 22.92

percent in the population compared to population as per 2001. In the previous census of India 2001, Aizawl District recorded increase of 38.07 percent to its population compared to 1991.

**AIZAWL DISTRICT POPULATION CENSUS 2001 & 2011**

Description	2011	2001
Actual Population	400,309	325,676
Male	199,270	166,877
Female	201,039	158,799
Population Growth	22.92%	38.07%
Area Sq. Km	3,576	3,576
Density/km <sup>2</sup>	112	91
Proportion to Mizoram Population	36.48%	36.65%
Sex Ratio (Per 1000)	1009	952
Child Sex Ratio (0-6 Age)	979	973
Average Literacy	97.89	96.51
Male Literacy	98.11	96.75
Female Literacy	97.67	96.26
Total Child Population (0-6 Age)	52,357	46,223

Description	2011	2001
Male Population (0-6 Age)	26,450	23,428
Female Population (0-6 Age)	25,907	22,795
Literates	340,595	269,699
Male Literates	169,547	138,783
Female Literates	171,048	130,916
Child Proportion (0-6 Age)	13.08%	14.19%
Boys Proportion (0-6 Age)	13.27%	14.04%
Girls Proportion (0-6 Age)	12.89%	14.35%

**1.2 AIMS & OBJECTIVES OF THE DDMP (DISABILITY- INCLUSIVE)**

The primary requirement for making Aizawl District Disaster Management Plan (ADDMP) is the reliable and up to date information about topography and socio-economic and climate conditions of Aizawl district. This will help in identifying areas having various kinds of natural and man- made problems and thus will be of great help in the time of occurrence of possible future disaster and its subsequent proper management to minimize its severe effects. The main aims & objectives of the ADDMP are:

- a. Promoting a culture of prevention and preparedness by ensuring that Disaster Management (DM) receives the highest priority at all levels.
- b. Ensuring that community is the most important stakeholder in the DM process.
- c. Encouraging mitigation measures based on state- of- the- art technology and environmental sustainability.
- d. Mainstreaming DM Concerns into the developmental planning process.

- e. Developing contemporary forecasting and early warning systems backed by responsive and fail- safe communications & information Technology (IT) support.
- f. Promoting a productive partnership with the media to create awareness and contributing towards capacity development.
- g. Ensuring efficient response and relief with a caring approach towards the needs of the vulnerable sections of the society.
- h. Undertaking reconstruction as an opportunity to build disaster resilient structures and habitat.
- i. Undertaking recovery to bring back the community to a better and safer level than the pre-disaster stage.
- j. To identify the areas vulnerable to major types of the hazards in the district.
- k. To adopt proactive measures at district level by all the govt. departments to prevent disaster and mitigate its effects.
- l. To define and assign the different tasks and responsibilities to stakeholders during the pre-disaster and post-disaster phases of the disaster.
- m. To enhance disaster resilience of the people in the district by way of capacity building.
- n. Reduce the loss of public and private property, especially critical facilities and infrastructure, through proper planning.
- o. Manage future development to mitigate the effect of natural hazards in the district.
- p. To activate District Emergency Operations Centre at the District level and make it operational for 24hours x 7days and to coordinate & to function effectively in search, rescue, response & reporting.
- q. To develop the standardized mechanism to respond to disaster situation to manage the disaster efficiently.
- r. To set up early warning system so as to prepare the community to deal with the disaster and responsive communication system based upon fail- proof proven technology.
- s. To prepare a responsive plan based upon the guidelines issued in the State Disaster Management Plan so as to provide prompt relief, search and rescue support in the disaster affected areas.
- t. To adopt disaster resilient construction mechanism in the district by way of using Information, Education and Communication for making the community aware of the need of disaster resilient future development.
- u. To make use of the media in the disaster management.
- v. Rehabilitation plan of the affected people and reconstruction measures to be taken by different government departments at the district level and local authority.

The District Disaster Management Plan (DDMP) is the guide for achieving the objective i.e. mitigation, preparedness, response and recovery. This Plan needs to be prepared to respond to disasters with sense of urgency in a planned way to minimize human, property and environmental loss.

### **1.3 AUTHORITY FOR DDMP: DISASTER MANAGEMENT ACT 2005 (DM ACT)**

**Section 31 of the Disaster Management act 2005 makes it mandatory** to have a disaster management plan for every district. DDMP shall include HVCRA, prevention, mitigation, preparedness measures, response plan and procedures.

- (1) The District Authority shall act as the district planning; coordinating and implementing body for disaster management and take all measures for the purposes of disaster management in the district in accordance with the guidelines laid down by the National Authority and the State Authority.
- (2) Without prejudice to the generality of the provisions of subsection (1), the District Authority may-
  - (i) prepare a disaster management plan including district response plan for the district;
  - (ii) coordinate and monitor the implementation of the National Policy, State Policy, National Plan, State Plan and District Plan;
  - (iii) ensure that the areas in the district vulnerable to disasters are identified and measures for the prevention of disasters and the mitigation of its effects are undertaken by the departments of the Government at the district level as well as by the local authorities;
  - (iv) ensure that the guidelines for prevention of disasters, mitigation of its effects, preparedness and response measures as laid down by the National Authority and the State Authority are followed by all departments of the Government at the district level and the local authorities in the district;
  - (v) give directions to different authorities at the district level and local authorities to take such other measures for the prevention or mitigation of disasters as may be necessary;
  - (vi) lay down guidelines for prevention of disaster management plans by the department of the Government at the districts level and local authorities in the district;
  - (vii) Monitor the implementation of disaster management plans prepared by the Departments of the Government at the district level;
  - (viii) lay down guidelines to be followed by the Departments of the Government at the district level for purposes of integration of measures for prevention of disasters and mitigation in their development plans and projects and provide necessary technical assistance therefore;
  - (ix) Monitor the implementation of measures referred to in clause(viii);
  - (x) Review the state of capabilities for responding to any disaster or threatening disaster situation in the district and give directions to the relevant departments or authorities at the district level for their up gradation as may be necessary;
  - (xi) review the preparedness measures and give directions to the concerned departments at the district level or other concerned authorities where necessary for bringing the preparedness measures to the levels required for responding effectively to any

- disaster or threatening disaster situation;
- (xii) Organize and coordinate specialized training programmes for different levels of officers, employees and voluntary rescue workers in the district;
- (xiii) Facilitate community training and awareness programmes for prevention of disaster or mitigation with the support of local authorities, governmental and non-governmental organizations;
- (xiv) Set up, maintain, review and upgrade the mechanism for early warnings and dissemination of proper information to public;
- (xv) Prepare, review and update district level response plan and guidelines;
- (xvi) Coordinate response to any threatening disaster situation or disaster;
- (xvii) ensure that the Departments of the Government at the district level and the local authorities prepare their response plans in accordance with the district response plan;
- (xviii) lay down guidelines for, or give direction to, the concerned Department of the Government at the district level or any other authorities within the local limits of the district to take measures to respond effectively to any threatening disaster situation or disaster;
- (xix) advise, assist and coordinate the activities of the Departments of the Government at the district level, statutory bodies and other governmental and non-governmental organizations in the district engaged in the disaster management;
- (xx) coordinate with, and give guidelines to, local authorities in the district to ensure that measures for the prevention or mitigation of threatening disaster situation or disaster in the district are carried out promptly and effectively;
- (xxi) provide necessary technical assistance or give advise to the local authorities in the district for carrying out their functions;
- (xxii) review development plans prepared by the Departments of the Government at the district level, statutory authorities or local authorities with a view to make necessary provisions therein for prevention of disaster or mitigation;
- (xxiii) examine the construction in any area in the district and, if it is of the opinion that the standards for the prevention of disaster or mitigation laid down for such construction is not being or has not been followed, may direct the concerned authority to take such action as maybe necessary to secure compliance of such standards;
- (xxiv) identify buildings and places which could, in the event of any threatening disaster situation or disaster, be used as relief centers or camps and make arrangements for water supply and sanitation in such buildings or places;
- (xxv) establish stockpiles of relief and rescue materials or ensure preparedness to make such materials available at a short notice;
- (xxvi) provide information to the State Authority relating to different aspects of disaster management;
- (xxvii) encourage the involvement of non-governmental organizations and voluntary social-welfare institutions working at the grassroots level in the district for disaster management;

- (xxviii) ensure communication systems are in order, and disaster management drills are carried out periodically;
- (xxix) perform such other functions as the State Government or State Authority may assign to it or as it deems necessary for disaster management in the District.

#### **1.4 EVOLUTION OF DISTRICT DM PLAN:**

**Section 31 of the Disaster Management act 2005 makes it mandatory** to have a disaster management plan for every district. DDMP shall include HVCRA, prevention, mitigation, preparedness measures, response plan and procedures.

1. There shall be a plan for disaster management for every district of the State.
2. The District Plan shall be prepared by the District Authority, after consultation with the local authorities and having regard to the National Plan and the State Plan, to be approved by the State Authority.
3. The District Plan shall include-
  - a) the areas in the district vulnerable to different forms of disasters;
  - b) the measures to be taken, for prevention and mitigation of disaster, by the Departments of the Government at the district level and local authorities in the district;
  - c) The capacity-building and preparedness measures required to be taken by the Departments of the Government at the district level and the local authorities in the district to respond to any threatening disaster situation or disaster.
  - d) the response plans and procedures, in the event of a disaster, providing for:
    - i. allocation of responsibilities to the Departments of the Government at the district level and the local authorities in the district;
    - ii. prompt response to disaster and relief thereof;
    - iii. procurement of essential resources;
    - iv. establishment of communication links;
    - v. the dissemination of information to the public; such other matters as may be required by the State Authority.

**1.5 STAKEHOLDERS AND THEIR RESPONSIBILITIES:**

**1.5.1 Aizawl District Disaster Management Authority (ADDMA):**

As per the government notification No cited above, the following are the composition of DDMA and its powers and functions:

The members of the DDMA are:

**Chairperson** : Dr. Lalhriatzuali Ralte, Deputy Commissioner, Aizawl District (Ex-officio)

**Co-Chairperson** : Ethel Rothangpuii, Project Director, DRDA

**Chief Executive Officer** : Lalnundika, Addl. Deputy Commissioner, Aizawl District

**Members :**

- i. C. Lalruaia, Sr. Superintendent of Police, Aizawl District (Ex-Officio)
- ii. Dr. Lalparliani, Chief Medical Officer (East) (Ex-Officio)
- iii. Dr. Thani Pachuau, Chief Medical Officer (West) (Ex-Officio)
- iv. Lalremruata Kullai, Jt. Commissioner, Aizawl Municipal Corporation.
- v. Dr. Zoramthanga, Medical Superintendent, Civil Hospital, Aizawl
- vi. Hrangthanga Zote, Superintending Engineer, PWD (Other Deptt Circle)
- vii. Lalchhuana, Superintending Engineer, PWD (Central Circle)
- viii. Lalzawmliana, Superintending Engineer, PHED (Aizawl Watsan Circle)
- ix. Lalrammawia, Superintending Engineer, PHED (Rural Watsan Circle)
- x. C. Lalramliana, Superintending Engineer, P&E Deptt (Aizawl Power Circle)
- xi. C. Lallawmsanga, Superintending Engineer, P&E Deptt (Transmission Circle)

**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:-



- (i) Prepare a District Management Plan, including District Response Plan for the District.
- (ii) Coordinate and monitor the implementation of National Policy, State Policy, National Plan, State plan and District Plan.
- (iii) Ensure that the areas in the District vulnerable to disaster are identified 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.
- (iv) Ensure that the guidelines for prevention of disasters, mitigation of its effects, preparedness and response measures as laid down by the National Authority and the State Authority are followed by all the District level State Government Departments and the local authorities.
- (v) 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.
- (vi) Monitor the implementation of Disaster Management plan prepared by the District Level Govt. Departments and local authorities.
- (vii) 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.
- (viii) 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.
- (ix) 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.
- (x) Organise and coordinate specialized training programme for different levels of officers, employees and voluntary rescue workers in the District.
- (xi) Facilitate Community training and awareness programmes for prevention of disaster or mitigation with the support of local authorities, Governmental and non-governmental organizations.
- (xii) Set up, maintain, review and upgrade the mechanism for early warning and dissemination of proper information to the public.
- (xiii) Prepare, review and upgrade the District level Response Plan and Guidelines.
- (xiv) Coordinate response to any threatening disaster situation of disaster.
- (xv) Ensure that the District Level Government Departments and local authorities prepare their response plans in accordance with the District Response Plan.
- (xvi) 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.
- (xvii) 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.

- (xviii) 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.
- (xix) Provide necessary technical assistance or give advice to the local authorities in the District for carrying out their functions effectively.
- (xx) 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.
- (xxi) 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.
- (xxii) 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.
- (xxiii) Establish stock piles of relief and rescue materials or ensure preparedness to make such materials available at a short notice.
- (xxiv) Provide information to the State Authority relating to different aspects of disaster management.
- (xxv) Encourage the involvement of NGOs and voluntary social welfare institutions working at the grass root level in the District for disaster management.
- (xxvi) Ensure that communication systems are in order, and disaster management drills are carried out periodically.
- (xxvii) 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.

**1.5.2 Aizawl District Disaster Management Committee**

With a view to supplementing the ADDMA, there shall be a Aizawl District Disaster Management Committee to monitor and gear up the preparedness of the district administration as well as different district level functionaries in regard to disaster management in an effective manner. It would be a larger group than that of the DDMA so that necessary follow-up actions of the decisions of DDMA can be taken as deemed appropriate. This Committee will function as a District Working Group. The members of the Committee will be:

Chairperson	:	Deputy Commissioner, Aizawl
Co-Chairperson	:	Addl. DC (G)
Member Secretary	:	SDO(S) (Nodal Officer), DM&R
Members	:	All Officers IRS/T

Besides, the chairperson can invite other officer/member to attend the meeting/committee of the DDMC as per the need of time, as special invitee.

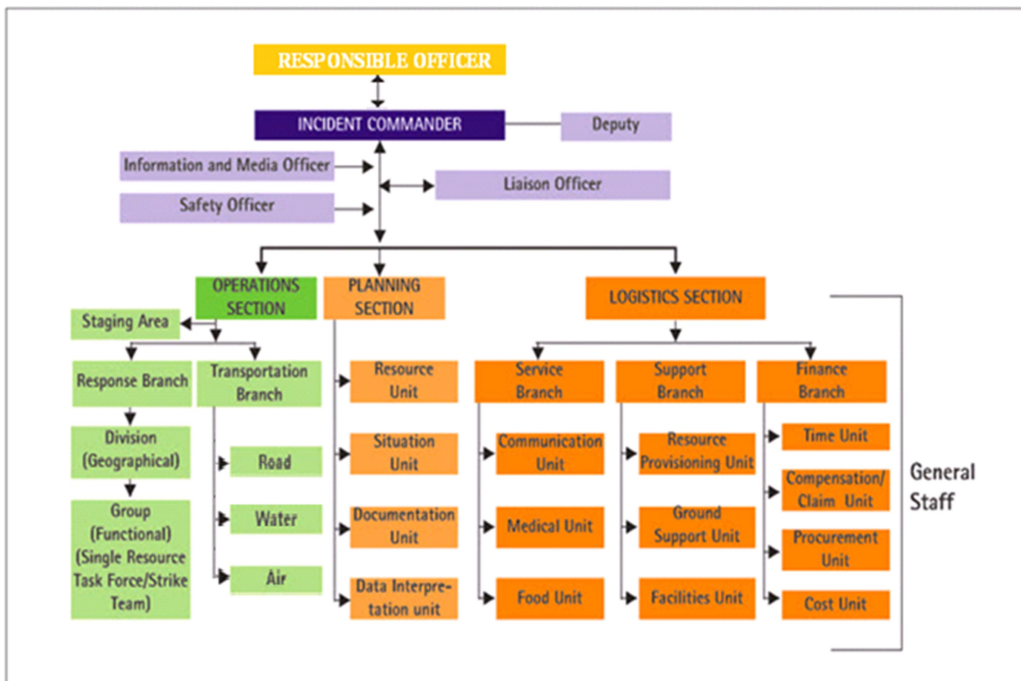
The major functions of this Committee would relate to

1. Monitor the activities of Sub-division Disaster Management Committee.
2. Ensure follow-up actions by concerned stakeholders of the decisions taken by the DDMA
3. Facilitate preparation of Disaster Management Plan and necessary updating in different departments/schools/hospitals
4. Lobbying for policy formulation for disaster management
5. The group will work for a link between the DDMA and its agencies involved in the Disaster Management activities
6. Initiate and monitor mock drills at various levels as per the direction of DDMA.
7. Control and supervise the functioning of SDMC.

**1.5.3 Aizawl District Disaster Management Advisory Committee:**

1. Chairman- Director, Geology & Mineral Resources
2. Executive Engineer, PWD
3. Executive Engineer, P&E
4. Executive Engineer, PHE
5. Assistant Professor, Geology Department, Pachhunga University.

**1.5.4 Aizawl District Incident Response System/ Team**



*The Aizawl IRS/T is an effective mechanism for institutionalizing disaster response at all levels and eliminates ad-hocism.*

- The Deputy Commissioner and Chairman, ADDMA is the **Responsible Officer** for overall supervision and control of IRS/T of Aizawl District and is responsible for smooth and effective disaster response.
- The Addl. Deputy Commissioner (E) & CEO, ADDMA is the **Incident Commander** for the overall in-charge for management of onsite response to any incident.
- The Addl. Deputy Commissioner (G) is the **Deputy Incident Command** for assistance & management of the incident depending upon the magnitude & nature of the incident and for the two sets of staff: Command Staff & General Staff.
- The Dy. Director, I&PR is the **Information and Media Officer (IMO)** for point of contact to assist the IC for media briefing. He also initially documents ongoing activities of response.
- The DMC is the **Liaison Officer**: a focal point of contact for District Emergency Operations, various line departments, representatives of NGOs, LDMCs / VDMCs, SEOC etc participating in the response. The LO is the point of contact to assist the first responders, cooperating agencies and line departments.
- The Nodal Officer, DM&R is the **Safety Officer (SO)**. The SO's function is to develop and recommend measures for ensuring safety of personnel, and to assess and/or anticipate hazardous and unsafe situations. The SO is authorized to stop or prevent unsafe acts. He also gives general advice on safety of affected communities.
- The Superintendent of Police, Aizawl is the Operation Section Chief (OSC). The **Operation Section (OS)** deals with all types of field level tactical operations directly applicable to the management of an incident. The OS is further sub- divided into Branches, Divisions and Groups which assist the OSC/ IC in the execution of the field operations.
- The Addl. Deputy Commissioner (E) is the Planning Section Chief (PSC). He is responsible for collection, evaluation, dissemination and use of information, keeps track of the developing scenario and status of the resources. The **Planning Section (PS)** comprises of Resource Unit, Situation Unit, Documentation Unit, Technical Specialist and Demobilization Unit. The PSC reports to IC and will be responsible for the activation of Units and deployment of personnel in his Section as per requirement.
- The Superintendent of Police, Aizawl is the Logistics & Finance Section Chief (L&FSC). The **Logistics & Finance Section (L&FS)** provides all logistic support for effective response management. It is further sub- divided into Service Branch, Support Branch & Finance Branch. The L&FS will work closely with the RO, DEOC, and the IC.

### **1.5.5 Emergency Support Functions**

Aizawl District's disaster response resources are organized into thirteen (13) Emergency Support Functions (ESFs). Each ESF is comprised of numerous public and private agencies/organizations that manage and coordinate specific categories of assistance common to all disaster or emergency events. A primary or lead agency/organization has been designated for each Emergency Support Function to ensure the coordination and delivery of goods and services to the disaster area. The following is a list and brief summary of each Emergency Support Function for the Aizawl District.

ESF	Field
<i>ESF 1</i>	Communication
<i>ESF 2</i>	Evacuation
<i>ESF 3</i>	Search And Rescue
<i>ESF 4</i>	Law And Order
<i>ESF 5</i>	Traffic Management
<i>ESF 6</i>	Emergency Public Information, Help Line & Warning
<i>ESF 7</i>	Medical Response And Trauma Counseling
<i>ESF 8</i>	Equipment Support, Debris & Road Clearance
<i>ESF 9</i>	Utilities Restoration
<i>Sub function of ESF 9</i>	Electricity
	Water Supply
<i>ESF 10</i>	Mass Care
<i>Sub function of ESF 10</i>	Food
	Shelter Arrangement
<i>ESF 11</i>	Transportation
<i>ESF 12</i>	Fire Fighting
<i>ESF 13</i>	Public Works & Engineering
<i>ESF 13</i>	Animal Care

### 1.5.6 Zonal Officers (ZO)

Aizawl District is divided into **17 Zones**. There are 14 Zonal Officers from Mizoram Civil Services appointed by the Deputy Commissioner and Chairman, ADDMA. They act as a link between the Locality Disaster Management Committee (LDMC)/Village Disaster Management Committee (VDMC) and ADDMA. They collect report from their respective LDMC/VDMC and submit the same to ADDMA for information, record & further action. The State Disaster Response Fund (SDRF) is scrutinized and allotted based on the Report submitted by ZO. They are the Magisterial Field Officers/ Site Incident Commanders for ADDMA.

### 1.5.7 Locality Disaster Management Committee (LDMC) for Urban Areas and Village Disaster Management Committee (VDMC) for Rural Areas

Taking into account the negative impact of the natural as well as man- made disasters in the district and as community is the first responder to any disaster and the first to be impacted: defining Community First Response is the first step towards community disaster preparedness, prevention, mitigation & response. As a holistic approach to Community Based Disaster Management, Locality Disaster Management Committee (LDMC) for Urban Areas and Village Disaster Management Committee (VDMC) for Rural Areas is suggested to be formed at the Rural and Urban areas. They report and coordinate with their respective Zonal Officers in case of disaster. They are the root towards disaster resilient district.

**1.5.8 Private Sector:**

- a. The private sectors are encouraged to ensure their active participation in the pre- disaster activities in the alignment with the overall plan development by the ADDMA or the Deputy Commissioner (DC).
- b. They adhere to the relevant rules regarding prevention of disasters as may be stipulated by relevant local authorities.
- c. As a part of the Corporate Social Responsibility (CSR), undertake the DRR projects in consultation with the Deputy Commissioner for enhancing district’s resilience.

**1.5.9 Community Group and Voluntary Agencies:**

- a. Local Community Groups and Voluntary agencies including NGOs, Youth Adventure Club normally help in prevention and mitigation activities under the overall direction and supervision of the ADDMA or the DC.
- b. They are encouraged to participant in all training activities, conduct of Mock exercises; sensitization & awareness campaign as may be organized should familiarize themselves with their role in the DM.

**1.5.10 Citizens:**

It is the duty of every citizen to assist the DC or such other person entrusted with or engaged in DM whenever demanded generally for the purpose of DM.

**1.6 HOW TO USE DDMP FRAMEWORK.**

- 1. In significant emergencies or disasters, the Chairman, ADDMA/ Responsible Officer, Aizawl IRS/T will have the powers of overall supervision direction and control as may be specified under State Government Rules/ State DM plan guidelines.
- 2. Aizawl DEOC coordinated by DDMC in normal times will be operated with full strength as the situation dictates. In case of L1 disaster situation, the DDMC will act as a Liaison Officer.
- 3. The ADDMA may recommend for action under Sec 30 of the DM act.
- 4. Since the District Disaster Management Plan is concerned with response plan of the many hazards to which the district and the citizens may be exposed to before, during and after a disaster, it will operate in accordance with *the Six Phases of Disaster Management Cycle:-*



- **PREVENTION**-Preventive actions may include the inquisitiveness about intelligence and other information to a range of activities that may include deterrence, heightened security for potential targets, investigations to determine the nature and source of the threat, public health surveillance and testing, disrupting illegal activities etc.

- **PREPAREDNESS**-Actions may be taken to eliminate or reduce the impact of a disaster. Such measures include zoning and land-use measures, formulating and enforcing building codes, public education about hazards and protective measures, hazards and vulnerability analysis (HVCRA) and preventive health care.
- **MITIGATION**- It includes moderation of (a quality or condition) in force or intensity. Any cost effective action taken to eliminate or reduce the short-term risk to life and property from natural and technological hazards is called mitigation. These actions are taken over the short-term to return vital life support systems to minimum standards. Actions may be taken in advance of a disaster to develop operational capabilities and help communities respond to and recover from a disaster. Such measures include undertaking the Community Based Disaster Preparedness Management (CBDPM), construction and equipping of EOC's with warning and communications systems, recruitment, and training of emergency management personnel, development of plans, procedures, arrangement and agreement, and mock exercises of personnel and systems.
- **RESPONSE**- Response actions are taken before, during, or after a disaster/disaster to save lives, minimize damages and enhance recovery operations. Such measures include activation of: Emergency operation centers/control room, plans and procedures, arrangements and agreements, the emergency alert system, public warning, notification of public officials, provision of mass care, shelter, search and rescue, and security.
- **RECOVERY AND RECONSTRUCTION**- These are long-term actions to return life to normal or improved levels. Such measures include damage assessment, assessment of plans, procedures, arrangement, and agreement, and the development of economic impact studies and methods. 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.

#### **1.7. APPROVAL MECHANISM OF DDMP: AUTHORITY FOR IMPLEMENTATION (DISTRICT LEVEL ORDERS).**

The DDMP shall be approved by ADDMA members. And it shall, review from time to time, the implementation of the Plan and issue such instructions to different departments of the Government in the district as it may deem necessary for the implementation thereof.

#### **1.8. PLAN REVIEW AND UPDATING: PERIODICITY.**

As per the DM Act- 2005, Section 31(4):The District Plan shall be reviewed and updated annually or whenever the situation deem.

## **CHAPTER- 2**

### **HAZARD, VULNERABILITY, CAPACITY AND RISK ASSESSMENT (HVCRA)**

Vulnerability is defined as the extent to which a community, structure, service, or geographic area is likely to be damaged or disrupted by the impact of particular hazard, on account of their nature, construction and proximity to hazardous terrain or a disaster prone area. In 1989, the General Assembly of the United Nations proclaimed the decade 1990- 2000 as the International Decade for Natural Disaster Reduction (IDNDR). At the World Conference on Natural Disaster Reduction in the city of Yokohama, Japan in 1994, deep concern was expressed at the continuing human suffering and disruption of development due to natural disasters and a Yokohama Strategy and Plan of Action for a Safe World was developed. It is not possible to do away with the devastation due to natural hazards completely. However, destruction from natural hazards can be minimized by the presence of well-functioning warning systems, combined with preparedness on the part of the vulnerable community. Disaster management may be seen as a part of good governance. *The District HVCRA is not available with the ADDMA.*

#### **2.1 SOCIO-ECONOMIC PROFILE OF THE DISTRICT**

The area of Aizawl district is 3576.00 Sq km and is divided into two sub division viz : Aizawl and Sakawrdai. According to 2011 census, the population of Aizawl district is 400309 out of which 199270 are male and 201039 are female. The literacy percentage in the district is 98.50. The literacy percentage of male is 99.01 whereas the literacy percentage of female is 98. In Aizawl district, there are 545 Primary School, 517 Middle School, 64 High School, 80 Higher Secondary School, 17 Colleges, 1 University, 2 Theological Colleges, 1 College of Veterinary Science, 1 Women Polytechnic, 1 Industrial Training Institute, 1 Administrative Institute and 1 Forest Research and Training Institute. As Aizawl is the headquarters of the district, the Secretariat and Directorate of various Departments are located in Aizawl city. Aizawl district has 8 Government Hospitals and 10 Private Hospitals, 1 TB Hospital, 1 Regional Institute of Paramedical And Nursing Sciences (RIPANS), 5 Community Health Centres, 7 Primary Health Centres, 113 Health Sub-Centres. It also has 1 Veterinary Hospital, 29 Veterinary Dispensaries. The district has 1 Telegraph Office, 1 Head Post office, 58 Branch Post Office, 7 Sub-Post Office and 11 Telephone Exchange. Regarding water supplies, there are 1250 nos. of Public Piped Water Points, 180 Drilled Water points and 791 Spring waters/Tuikhur(s). Aizawl city is being



covered by the Aizawl Greater Water Supply Scheme which feeds a number of household with water connections. The district has various banking facilities like State Bank of India, Rural Bank, Apex Bank, United Commercial Bank, NABARD, IDBI, MUCO Bank, Vijaya Bank, SIDBI, United Indian Insurance Co. Ltd and Life Insurance Company, etc. There are as many as 78 number of banks in the district at various locations. In the district, there are 14922 families engaged in jhum cultivation and 585 families engaged in WRC agricultural practice. There are also 797 fish ponds within the district. Aizawl district is well connected with road network spanning to other towns and villages. The whole length of the district is traversed by various road networks. The National Highway (NH-54) running from Kolasib district passes through Aizawl city, Seling, Thingsul-Tlangnuam, Thingsulthliah, Darlawng, Tlungvel, Phulmawi, etc. The National Highway 150 also runs along the northern ridges starting from Seling village to River Tuivai passing through villages like Sesawng, Khawruhlian, Hmunnghak, Khanpui, Pehlawn, E.Phaileng, Kepran, Sawleng, 9 Darlawn, Sailutar, Ratu, Lungsum, Vervek, Sakawrdai and Khawpuar. From E.Phaileng village, the district road runs towards north eastern part of the district passing through villages like Suangpuilawn, Lamherh, Vanbawng and Khawlek. Another district road starting from Keifang village joins this road at Suangpuilawn village. This district road passes through villages like Saitual, Dilkhan, Phullen, etc. The north eastern ridges of the district is traversed by village road from Phullen village upto Daido village and passes through Phuaibuang village, Khawlian village, N.E.Tlangnuam village, etc. The State Highway starting from Seling village run towards eastern part of the district upto River Tuivawl where it enters Champhai district. This road passes through Keifang village and serves inter-state road network with Manipur and Mizoram. From Keifang, a village road runs towards south and then passes through some villages like Rulchawm, Ruallung, Mualpheng, Tawizo, Maite, etc. Starting from Aizawl city there are two state highways, one of which runs north to south upto district boundary passing through Sihphir village and Neihboi village in the northern side. The other one passes through the villages of Melriat, Falkawn, Muallungthu, Aibawk, Sialsuk, etc. This road serves as an inter-district road network with neighboring districts like Serchhip and Lunglei. Besides this road network, a good number of Agricultural/Horticultural link roads have been constructed which serve for transportation of agricultural and horticultural produces from the interior parts of the district.

**2.1 MATRIX OF PAST DISASTERS IN THE DISTRICT**

Type of Disaster	Year	No. of villages affected	Houses damaged	Animals perished	Human Casualty		Financial assistance
					Lives lost	Injury	
<b>Landslide</b>	2012-2013	Not Specified	85	4	23	16	Rs 50,50,535/-
	2013-2014	165	86	Nil	19	11	Rs 17,27,700/-
	2014-2015	165	88	1	2	Nil	Rs 42,79,600/-
	2015-2016	13	73	1	1	Nil	Rs 51,50,900/-
	2016-2017	43	161	4	11	1	Rs 2,85,55,470/-
	2017-2018	49	311	202	1	1	Rs 80,88,661/-
	2018-2019		34	Nil	3	Nil	Rs 54,53,014/-
	2019-2020	100	36	Nil	3	3	Rs 73,05,552/-
	2020-2021	33	26	Nil	1	1	Rs 49,76,255/-
	2021-2022	28	14	Nil	6	Nil	Rs 62,01,264/-
<b>Fire</b>	2012-2013	Not Specified	85	3	3	Nil	Rs 12,62,100/-
	2013-2014	165	90	Nil	2	2	Rs 9,60,400/-
	2014-2015	Not Specified	61	2	4	Nil	Rs 35,18,200/-
	2015-2016	18	29	Nil	1	1	Rs 45,61,800/-
	2016-2017	26	24	2300	Nil	Nil	Rs 13,90,600/-
	2017-2018	21	944	902	Nil	2	Rs 25,06,300/-
	2018-2019		26	5	2	Nil	Rs 24,58,600/-
	2019-2020	26	34	Nil	Nil	Nil	Rs 32,90,333/-
	2020-2021	16	25	Nil	1	3	Rs 22,59,200/-
	2021-2022	12	23	Nil	1	Nil	Rs 20,83,060/-
<b>Cyclone/ Storm</b>	2012-2013	Not Specified	231	Nil	Nil	Nil	Rs 15,08,800/-
	2013-2014	165	92	Nil	Nil	Nil	Rs 6,81,800/-
	2014-2015	Not Specified	106	Nil	Nil	Nil	Rs 45,21,000/-
	2015-2016	16	171	1	Nil	Nil	Rs 25,26,600/-
	2016-2017	32	7	Nil	Nil	Nil	Rs 2,03,800/-
	2017-2018	11	28	Nil	Nil	Nil	Rs 14,55,700/-
	2018-2019		25	Nil	Nil	Nil	Rs 15,66,252/-
	2019-2020	18	36	Nil	Nil	Nil	Rs 26,65,462/-
	2020-2021	31	208	Nil	Nil	Nil	Rs 50,27,700/-
	2021-2022	25	33	Nil	Nil	Nil	Rs 25,08,375/-
<b>Earthquake</b>	2012-2016	<i>No incident</i>					
	2016-2017	165	1	Nil	Nil	Nil	Rs 1,01,900/-

	2017-2018	Nil	Nil	Nil	Nil	Nil	Nil
	2018-2019	Nil	Nil	Nil	Nil	Nil	Nil
	2019-2020	Nil	Nil	Nil	Nil	Nil	Nil
	2020-2021	Nil	Nil	Nil	Nil	Nil	Nil
	2021-2022	Nil	Nil	Nil	Nil	Nil	Nil
<b>Flood/ flash flood</b>	2012-2016	<i>No incident</i>					
	2016-2017	2	1	Nil	6	Nil	Rs 25,05,700/-
	2017-2018	19	35	Nil	2	Nil	Rs 24,52,679/-
	2018-2019		Nil	Nil	4	Nil	Rs 38,49,769/-
	2019-2020	14	2	Nil	3	Nil	Rs 17,76,668/-
	2020-2021	Nil	Nil	Nil	Nil	Nil	Nil
	2021-2022	Nil	Nil	Nil	Nil	Nil	Nil
<b>Hailstorm</b>	2012-2016	<i>No incident</i>					
	2016-2017	11	212	Nil	Nil	Nil	Rs 33,82,590/-
	2017-2018	7	21	Nil	Nil	Nil	Rs 2,52,370/-
	2018-2019	Nil	Nil	Nil	Nil	Nil	Nil
	2019-2020	22	51	Nil	1	Nil	Rs 15,58,140/-
	2020-2021	1	1	Nil	Nil	Nil	Rs 5,200/-
	2021-2022	Nil	Nil	Nil	Nil	Nil	Nil
<b>Lightning Struck</b>	2012-2016	<i>No incident</i>					
	2016-2017	2	1	Nil	3	Nil	Rs 13,05,700/-
	2017-2018	2	1	Nil	Nil	Nil	Rs 1,05,700/-
	2018-2019		2	Nil	Nil	Nil	Rs 10,400/-
	2019-2020	Nil	Nil	Nil	Nil	Nil	Nil
	2020-2021	Nil	Nil	Nil	Nil	Nil	Nil
	2021-2022	Nil	Nil	Nil	Nil	Nil	Nil

*Source: DM&R Branch, D.C's Office, Aizawl*

## **2.2 HAZARD RISK VULNERABILITY ASSESSMENT (HVCRA):**

### **2.2.1 Authority/ Agency that carried out HVCRA**

The project on Hazard Risk and Vulnerability Analysis of Aizawl District was conducted by Mizoram Sensing Application Centre (MIRSAC) in 2010. The main concept of the project lies in

the preparation and systematic analysis of data for hazard zonation of natural disasters occurring in the District.

Aizawl district, like other districts of the State, is characterized by hilly terrain, steep slope and high relief with complex structural dispositions, and is geologically immature. It is, therefore, prone to all types of natural disasters such as landslides, earthquake, flood or cyclone. Being the State's district headquarter and owing to its economic importance, the study of natural disasters and its implication is necessary so that concerned departments and agencies can take mitigation measures when and where these disasters happen. As such, the natural disasters comprising of Landslide, Cyclone, Earthquake and Flood has been studied for Aizawl district. Hazard zone maps and statistics for each of these disasters are also prepared in Atlas form. The project utilizes Remote sensing and GIS techniques for extracting data required during the process of risk and vulnerability analysis for the mentioned natural disasters. These data have been captured in a GIS environment which will facilitate further updation and analysis, if necessary.

The following are the main objectives of the project:

- 1) Hazard mapping for Landslide, Earthquake, Cyclone and Flood on 1:50,000 scale
- 2) Generation of Multi-hazard map.
- 3) Physical, Environmental and Socio-economic vulnerability mapping and analysis at block level.
- 4) Risk Assessment integrating hazard and vulnerability analysis.
- 5) Analysis on critical infrastructure and resources.

### **2.2.2 Hazard Analysis**

Aizawl district is prone to natural hazards like landslide, earthquake, wind & cyclone and flood. Various geological and geophysical settings, climatic, meteorological and hydrological condition of the area induces the occurrence of these natural hazards. Anthropogenic processes such as developmental activities i.e, construction of buildings, roads and other infrastructures can influence the natural forces to manifest as hazards. The natural hazards which are prevalent within Aizawl district are analysed as follows:

*a) **Landslide:*** Aizawl district is characterized by the presence of several lineaments, both major and minor faults oriented in different directions, and steep slopes. The lithology is mainly represented by soft sedimentary rocks, such as shale, silty shale, sandstone and their admixture in varying proportions. Besides, loose and unconsolidated sediments form a dominant composition on the exposed surface, particularly in built-up areas. This, together with the aforesaid factors makes it susceptible to landslides. Water bodies cover an area of

14.29 sq km which is 0.40% of the total district area which also makes it susceptible to landslide.

**b) Earthquake:** North-east India, including Mizoram is seismically one of the six most active regions of the world. The region has been placed in Zone V, the highest level of seismic hazard potential, according to the Seismic Zonation Map of India prepared by Bureau of Indian Standards (BIS) in 2002. Till now, there has not been any record of significant tremors of high intensity within Mizoram. Earthquakes of low intensity, on the other hand, have been felt from time to time.

There has been a phenomenal increase in the population density and development programmes, particularly in Aizawl city, and gradual progress in other towns within the district. Aizawl city has witnessed a mushroom growth of unplanned multi-storied buildings in haphazard manner in the recent years. The same pattern is likely to happen in future to townships in other parts of the district, where building codes and bye-laws are not strictly enforced. This has resulted into increasing vulnerability of human population and physical structures to earthquakes. Thus, it becomes essential to assess the status of seismicity in the district, at least to some extent.

**c) Wind and cyclone:** Incidence of cyclone (Thlichhia) has been recorded since 1876 in Mizoram. Past records on the occurrence of cyclone that were known to cause disruption to normal life and property during 2010 - 2011 showed that 167 villages were affected in the district. The affected villages during the past years (2008 - 2009) from the same source recorded as much as 186. Further, during 2004-2005 heavy rain with cyclonic- hailstorm caused reported damage to a large number of houses particularly roofing portion. Horticulture and agriculture crops were also seriously affected by this incident. Data collected by MIRSAC during 2004 and the consequent reports indicated that 15 villages in Aizawl district were highly vulnerable to cyclone.

**d) Flood:** In Mizoram, as a whole, floods occur in river valleys, when the flow exceeds the capacity of the river channel, particularly at bends or meanders. Compared to other hazards like Landslides and Cyclones, the damage caused by floods within the district is the least. In Aizawl district, Sairang village is the only village 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. In general, most significant damages occur only to the crops and erosion of cropland lying in the fluvial flood plains of Tlawng, Tuirial, Tuivawl and Tuivai rivers.

*e) Multi Hazard Mapping:* The process of multi-hazard mapping integrates different hazard related information for specific areas to convey a composite picture of natural hazards in varying magnitude, frequency and areas affected. In the HRVA, hazards like landslide, earthquake, wind & cyclone and flood which are natural hazards are studied and maps are produced through the integration of spatial data and local knowledge. When an area is exposed to more than one hazard, a Multi-hazard map helps the planning team to analyze all of them for vulnerability and risk. The area statistics of Multi-hazard zones of Aizawl district and block-wise are given in the table below

Hazard Class	Name of Block							
	Aibawk		Darlawm		Tlangnuam		Thingsulthliah	
	Area (Sq.m)	%	Area (Sq.m)	%	Area (Sq.m)	%	Area (Sq.m)	%
<b>High</b>	122.14	20.27	602.59	57.52	165.51	31.57	105.94	12.59
<b>Moderate</b>	340.31	58.23	418.06	39.91	166.82	31.82	349.92	41.57
<b>Low</b>	129.49	21.49	26.98	2.58	169.79	32.39	385.89	45.84
<b>Total</b>	<b>592.30</b>	<b>100</b>	<b>1047.63</b>	<b>100</b>	<b>502.13</b>	<b>100</b>	<b>841.75</b>	<b>100</b>

### 2.2.3 Risk Analysis and Vulnerability Profile of the District

The process of conducting a risk assessment is based on a review of both the technical features of hazards such as their location, intensity, frequency and probability; and also the analysis of the physical, social, economic and environmental dimensions of vulnerability and exposure, while taking particular account of the coping capabilities pertinent to the risk scenarios. The elements at risk are the population, properties, infrastructure, economic activities and others. Risk map is prepared by overlaying physical and socio-economic vulnerability maps on the hazard map and based on the combination of different classes from these thematic maps, the district is divided into High risk, Moderate risk and Low risk zones.

#### **Landslide Risk and Vulnerability:**

Landslide hazard zones are well distributed in all parts of the district. Location of settlement area with respect to hazard zones is taken into account for risk analysis. Risk analysis based on landslide hazard and vulnerability is done using the landslide hazard zones and physical and socio-economic vulnerabilities. The following villages come under high risk zone : Aibawk, Buhban, Chhanchhuahnakhawpui, Daido, Hmuifang, Hmunnghak,

Hualngohmun, Khawlian, Lamherh, Lungleng I, Melriat, Muallungthu, N Lungleng, NE Tlangnuam, Ratu, S Maubuang, Saitual, Samtlang, Sateek, Seling, Sialsuk, Thiak, Thingsat, Thingsulthliah, Tlangnuam(Seling), Tlungvel, Zohmun, Zokhawthiang and Aizawl Municipality Ward I, Ward II, Ward III, Ward IV, Ward IX, Ward VI, Ward VII, Ward X, Ward XI, Ward XII, Ward XV, Ward XVI.

The following villages come under Moderate risk zone : Chamring, Darlawn, Darlawng, Keifang, Kelsih, Khawruhlian, Lamchhip, Lungsei, Mauchar, North Khawdungsei, North Serzawl, Palsang, Phuaibuang, Phulmawi, Sailam, Sailutar, Sairang (with Sihhmui), Sakawrdai (with Upper Sakawrdai), Samlukhai, Sawleng, Sihphir(with Nausel & Neihbawih), Sunhluchhip, Tachhip, Vaitin, Vervek and Aizawl Municipality Ward-V.

The following villages come under Low risk zone : E Phaileng, Falkawn, Kepran, Khanpui, Khawpuar, Lailak, Lengpui, Muthi, Pehlawn, Phulpui, Sesawng, Sumsuih, Tawizo, Tinghmun, Tuirial (with Tuirial Airfield) and Aizawl Municipality Ward VIII, Ward XIII, Ward XIV, Ward XIX, Ward XVII, Ward XVIII.

The risks involved in Landslide disaster include loss of human lives, partial or complete damage of houses in some areas. Disruption of power supply, drinking water supply and communication network in some areas will also be some of the major impacts of landslide disaster. Road transport network may be disrupted in many places which in turn will affect supply of food and other daily necessities. The impact also contributes to the physical deterioration of land and downgrading of land value.

**Table showing landslide risk and vulnerability**

Sl No	Risk Class	No. of villages/ wards	%
1	High	14	13.46
2	Moderate	56	53.85
3	Low	34	32.69
	Total	104	100

**Earthquake Risk and Vulnerability Profile**

It has been found that the entire district falls within seismic zone V, the highest seismic zone in the country. Therefore, in earthquake hazard zonation, Aizawl district is categorised into a single class i.e. high hazard zone. For earthquake and vulnerability based risk analysis, separate physical vulnerability map is prepared as the vulnerability of house type under

earthquake hazard is different from those of the other hazards. Hence, concrete and semi-concrete buildings are considered highly vulnerable towards earthquake hazard within Aizawl district. On the other hand, Assam type buildings and other houses made of bamboo, thatch, grass and other light materials are considered less vulnerable to earthquake hazard. These factors are taken into consideration while analysing the risk.

The following Aizawl Municipality wards come under High risk zone: Ward I, Ward II, Ward III, Ward IV, Ward IX, Ward V, Ward VI, Ward VII, Ward VIII, Ward X, Ward XII, Ward XIII, Ward XIV, Ward XV, Ward XVI, Ward XVII, Ward XVIII.

The following villages come under Moderate risk zone: Aibawk, Chawilung, Falkawn, Hualngohmun, Khanpui, Lamherh, NE Tlangnuam, Sateek, Seling(Phaibawk), Sialsuk, S Maubuang, Thiak, Thingsat, Thingsulthiah, Tinghmun, Tuirial(with Tuirial Airfield), Zokhawthiang and Aizawl Municipality Ward XIX.

The following villages come under Low risk zone: Chamring, Chhanchhuahnakhawpui, Darlawn, Darlawng, E Phaileng, Hmuifang, Hmunnghak, Keifang, Kelsih, Kepran, Khawpuar, Khawruhlian, Lailak, Lamchhip, Lengpui, Lungleng I, Lungsei, Lungsum, Mauchar, Melriat, Muallungthu, Muthi, N Khawdungsei, N Lungleng, North Serzawl, Palsang, Pehlawn, Phulmawi, Phulpui, Ratu, Sailam, Sailutar, Sairang(with Sihmui), Sakawrdai (with Upper Sakawrdai), Samlukhai, Samtlang, Sawleng, Seling(Tlangnuam), Sesawng, Sihphir(with Nausel & Neihbawih), Sumsuih, Sunhluchhip, Tachhip, Tlungvel, Vaitin, Vervek, Zohmun and Aizawl Municipality Ward XI.

Since the entire district falls in seismic zone V, there is a probability of magnitude 7 to 8 earthquake occurrence. The impact may induce loss to thousands of human lives as well as casualties, particularly in urban areas. Well built concrete houses may suffer partial damage. However, many private concrete buildings may suffer partial or total destruction. The other impacts may range from disruption of power supply, drinking water supply and telecommunication network. Road transport network may suffer a setback as many of the bridges within the district may be partially or completely damaged. Industrial sectors may suffer major setback due to loss of power supply. If this happens, many economic activities will also be hindered. In rural areas, the dominant house types are wooden structures. Hence, they may only suffer little to moderate damage during an earthquake, and do not pose threat to human lives as compared to the other house types.



**Table showing earthquake risk and vulnerability**

SI No	Risk Class	No. of villages/ wards	%
1	High	43	41.35
2	Moderate	40	38.46
3	Low	21	20.19
	Total	104	100

### **Cyclone/ Wind Risk and Vulnerability Profile**

In term of physical vulnerability towards wind & cyclone hazard, concrete and semi-concrete buildings are considered less vulnerable. Building made up of timbers, asbestos and other light materials are considered more vulnerable towards wind & cyclone hazard. These parameters are taken into consideration in risk analysis.

*The following villages come under high risk zone:* Aibawk, Chamring, Chawilung, Falkawn, Hmuifang, Hualngohmun, Khanpui, Lamherh, NE Tlangnuam, Phulmawi, S Maubuang, Sailam, Samlukhai, Sateek, Sialsuk, Sumsuih, Thiak, Thingsulthliah, Tlungvel and Aizawl Municipality Ward III, Ward IX.

*The following villages come under moderate risk zone:* Darlawn, Darlawng, E Phaileng, Kelsih, Kepran, Lailak, Lamchhip, Lengpui, Lungleng I, Melriat, Muallungthu, Muthi, N Lungleng, North Khawdungsei, Pehlawn, Sairang (with Sihhmui), Samtlang, Sawleng, Sihphir (with Nausel & Neihbawih), Tachhip and Aizawl Municipality Ward I, Ward II, Ward IV, Ward VI, Ward VII, Ward X, Ward XI, Ward XII, Ward XIV, Ward XIX, Ward XV, Ward XVIII.

*The following villages come under Low risk zone:* Chhanchhuahnakhawpui, Hmunnghak, Khawpuar, Khawruhlian, Lungsei, Lungsum, Mauchar, North Serzawl, Palsang, Phulpui, Ratu, Sailutar, Sakawrdai (with Upper Sakawrdai), Seling, Sesawng, Sunhluchhip, Thingsat, Tingmun, Tlangnuam(Seling), Tuirial (with Tuirial Airfiled), Vaitin, Vervek, Zohmun, Zokhawthiang and Aizawl Municipality Ward V, Ward VIII, Ward XIII, Ward XVI, Ward XVII.

Since, the entire state falls within Very high wind hazard zone as per BMTPC classification, there can be loss of human lives and casualties due to this hazard. Particularly in rural areas, majority of the houses are made up of timber, GI sheets, asbestos tiles and other light

weight materials. Hence, the impact will be partial or complete damage to houses and loss of human lives in many villages. Agriculture sector may suffer major setback due to loss of paddy cultivation and other cash crops. The impacts of wind & cyclone hazard, like other hazards, also include disruption of power supply and telecommunication network.

**Table showing cyclone/wind risk and vulnerability**

SI No	Risk Class	No. of villages/ wards	%
1	High	30	28.85
2	Moderate	32	30.77
3	Low	42	40.38
	Total	104	100

**Flood Risk and Vulnerability Profile**

Risk analysis is done based on flood hazard and physical and socio-economic vulnerabilities. Scores are assigned to the flood prone areas, non-flood prone areas and different physical and socio-economic vulnerability classes. From these parameters, the final risk score is calculated using Raster Calculator in ARC-INFO GIS software. Infact, most of the settlement areas of the villages and wards are not located at flood hazard zone. However, a few of the low lying areas within the jurisdiction of some villages and wards are prone to flood. Therefore, villages and wards within the district are categorized into Low risk zones and No risk zones.

The villages that come under high risk zone are Khawhminglokawn, N.E. Tlangnuam, Tinghmun. It may be noted that the settlement areas of these villages are not under high risk zone. However, as the low lying areas under the jurisdiction of these villages have flood prone areas, they are classified under high risk zones. Similarly, Lengpui, Lungsei, Mauchar, N. Khawdungsei, North Palsang, Sairang, Sailutar, Samlukhai, Serzawl, Sialsuk and Sunhluchhip villages are classified under moderate risk zone. Further, the villages viz, Chhanchhuahnakhawpui and Ratu are classified under Low risk zone.

The risks involved in flood hazard in the present study are mainly loss of paddy cultivation and other crops. As the district area is a hilly terrain, the flood hazard is negligible as compared to plain areas in other parts of the country. It also has less significance as compared to other hazards and may not create setback to daily life in the district.

**Table showing flood risk and vulnerability**

SI No	Risk Class	No. of villages/ wards	%
1	High	7	6.73
2	Moderate	14	13.46
3	Low	2	1.92
4	No risk	81	77.88
	Total	104	100

#### 2.2.4 Capacities and Resource Analysis

Critical facilities include all man-made structures or other improvements which because of their function, size, service area, or uniqueness have the potential to cause serious physical harm, extensive property damage, or disruption of vital socio-economic activities if they are destroyed, damaged, or if their services are repeatedly interrupted. Within the scope of HRVA, critical facilities are also defined as facilities that are essential in order to carry out emergency response activities in Aizawl district. The critical facilities which are mapped within Aizawl district are as follows:

- a) **Administrative buildings:** The administrative buildings which are marked and recorded for HRVA are Chief Minister's office, Mainbuilding of New Secretariat Complex, Governor's Office, DC office, Directorate of Disaster Management and Rehabilitation, office of Block Development Officers from each of the rural development blocks within the districts. All the administrative buildings which are recorded are analysed in terms of their vulnerability towards the natural hazards.
- b) **Roads:** Roads are one of the most important critical infrastructures during disaster. Roads within Aizawl district are delineated from Cartosat-I of IRS Satellite data, and are categorised into Metalled and Unmetalled roads. The total length of metalled roads delineated from the imagery is 607.04 km whereas that of unmetalled roads is 642.56 km. Both classes of roads are analysed in terms of their vulnerability towards the natural hazards.
- c) **Bridges:** There are 10 main bridges recorded within the districts. These bridges are constructed across 5 rivers namely - Tuirial, Tlawng, Tuirini, Tuivawl and Mat rivers. All the bridges which are recorded are analysed in terms of their vulnerability towards the natural hazards.
- d) **Hospitals:** The medical facilities recorded are Hospitals, Community Health Centres, Primary Health Centres, Urban Health Centres, Health Sub-Centres and Sub-Centre Clinics.

There are 14 hospitals recorded within the district and are located within Aizawl city, except Referral Hospital located at Farkawn village. There are 4 Community Health Centres, 7 Primary Health Centres, 4 Urban Health Centres, 81 Health Sub-Centres and 39 Sub-Centre Clinics.

- e) **Community Halls:** There are 141 community halls recorded for HRVA within 89 villages/wards. These community halls may serve as shelters during any disaster incident. However, all of them may not serve this purpose as many of them are located in vulnerable zones.
- f) **Airport, Helipad & Playgrounds:** There is 1 airport which is located at Lengpui, 1 operational helipad at Thuampui (Aizawl municipality Ward VII) and 150 playgrounds which can serve the purpose of helipad in time of emergency. Playgrounds may also serve as dropping zones for food and other supplies in case of emergency.
- g) **Water supply pumping station:** Within Aizawl district, there are two main water supply pumping stations namely Greater Aizawl Water Supply Phase I and Greater Aizawl Water Supply Phase II located near river Tlawng.
- h) **Police establishment:** There are 5 police headquarters, 9 police stations, 7 outposts, 1 training institute and 1 Fire & Emergency Service office recorded within Aizawl district.
- i) **Location of WT sets:** Wireless Telegraph sets are located in 19 villages/wards of the district. Police department have WT sets at 14 locations, Power and Electricity department at 12 locations, PWD at 3 locations, PHE at 2 places while Environment and Forest Department have these sets at Aizawl only.

**CHAPTER- 3**

**DISTRICT INSTITUTIONAL ARRANGEMENTS FOR DISASTER MANGEMENT (DM)**

**3.1 DM ORGANIZATIONAL STRUCTURE AT THE NATIONAL LEVEL.**

The Government of India (GOI), in recognition of the importance of Disaster Management as a national priority, set up a High-Powered Committee (HPC) in August 1999 and a National Committee after the Gujarat earthquake, for making recommendations on the preparation of Disaster Management plans and suggesting effective mitigation mechanisms. The Tenth Five-Year Plan document also had, for the first time, a detailed chapter on Disaster Management. The Twelfth Finance Commission was also mandated to review the financial arrangements for Disaster Management.

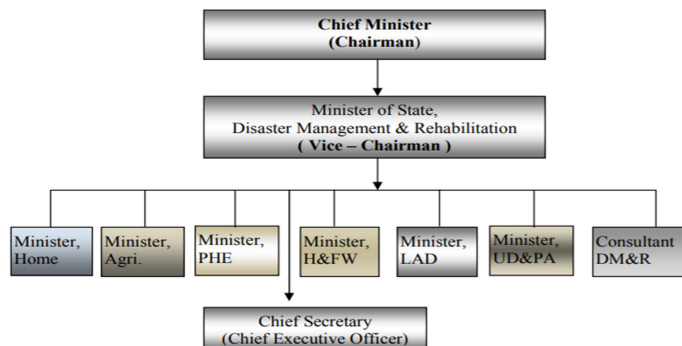
On 23 December 2005, the Government of India enacted the Disaster Management Act, which envisaged the creation of National Disaster Management Authority (NDMA), headed by the Prime Minister, and State Disaster Management Authorities (SDMAs) headed by respective Chief Ministers, to spearhead and implement a holistic and integrated approach to Disaster Management in India. The overall coordination of disaster management vests with the Ministry of Home Affairs (MHA). The Cabinet Committee on Security (CCS) and the National Crisis Management Committee (NCMC) are the key committees involved in the top-level decision-making with regard to disaster management. The NDMA is the lead agency responsible for the preparation DM plans and the execution of DM functions at the national level.

**Vital Roles of NDMA**

- Lay down policies, plans and guidelines for disaster management
- Coordinate their enforcement and implementation throughout the country
- Approve the NDMP and the DM plans of the respective Ministries and Departments of Government of India
- Lay down guidelines for disaster management to be followed by the different Central Ministries, Departments and the State Governments

**3.2 DM ORGANIZATIONAL STRUCTURE AT THE STATE LEVEL.**

The Government of Mizoram in pursuance of the provisions under Sec. 14 of the Disaster Management Act, 2005 constituted the State Disaster Management Authority for Mizoram vide letter No.B.13011/1712006-REH on the 23rd May 2006.



### 3.3 DM ORGANIZATIONAL STRUCTURE AT THE DISTRICT LEVEL.

District has been and continues to be the pivotal and centre of rural administration in normal time in the country. Its roles and responsibilities in times of disaster as well have great importance. Taking this situation into consideration, the state government has constituted DDMA at the District level to look after disaster management and emergency response. (Vide **No. B 13011/17/2006-REH dated 6<sup>th</sup> June, 2006**). As per the government notification No cited, the following are the composition of DDMA and its powers and functions:

*The members of the DDMA are:*

Chairperson	:	Deputy Commissioner (Ex-Officio)
Co-Chairperson	:	Project Director, DRDA
Members	:	1) Superintendent of Police. (Govt.nominated) 2) Chief Medical Officers. (Govt.nominated) 3) Superintending Engineers, PWD (Govt.nominated) 4) Superintending Engineers, PHE (Govt. Nominated) 5) Med supdt, CHA 6) Superintending Engineers, P&E (Govt.nominated) 7)Jt Commissioner, AMC (Govt.nominated)
Chief Executive Officer -	:	Additional Deputy Commissioner (i/c DM&R)

#### **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:-

- (i) Prepare a District Management Plan, including District Response Plan for the District.
- (ii) Coordinate and monitor the implementation of National Policy, State Policy, National Plan, State plan and District Plan.
- (iii) Ensure that the areas in the District vulnerable to disaster are identified 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.
- (iv) Ensure that the guidelines for prevention of disasters, mitigation of its effects, preparedness and response measures as laid down by the National Authority and the State Authority are followed by all the District level State Government Departments and the local authorities.
- (v) 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.
- (vi) Monitor the implementation of Disaster Management plan prepared by the District Level Govt. Departments and local authorities.
- (vii) 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.
- (viii) 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.
  - (ix) 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.
  - (x) Organise and coordinate specialized training programme for different levels of officers, employees and voluntary rescue workers in the District.
  - (xi) Facilitate Community training and awareness programmes for prevention of disaster or mitigation with the support of local authorities, Governmental and non-governmental organizations.
  - (xii) Set up, maintain, review and upgrade the mechanism for early warning and dissemination of proper information to the public.
  - (xiii) Prepare, review and upgrade the District level Response Plan and Guidelines.
  - (xiv) Coordinate response to any threatening disaster situation of disaster.
  - (xv) Ensure that the District Level Government Departments and local authorities prepare their response plans in accordance with the District Response Plan.
  - (xvi) 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.
  - (xvii) 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.
  - (xviii) 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.
  - (xix) Provide necessary technical assistance or give advice to the local authorities in the District for carrying out their functions effectively.
  - (xx) 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.
  - (xxi) 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.
  - (xxii) 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.
  - (xxiii) Establish stock piles of relief and rescue materials or ensure preparedness to make such materials available at a short notice.
  - (xxiv) Provide information to the State Authority relating to different aspects of disaster management.

- (xxv) Encourage the involvement of NGOs and voluntary social welfare institutions working at the grass root level in the District for disaster management.
- (xxvi) Ensure that communication systems are in order, and disaster management drills are carried out periodically.
- (xxvii) 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.

**3.3.1 District Crisis Mangement Group (CMG)/ Emergency Support Functions (ESFs)**

<b>ESF</b>	<b>Field</b>	<b>Scope</b>	<b>ESF Team Leader</b>	<b>Primary Agency</b>	<b>Support Agency</b>
<i>ESF 1</i>	<b>COMMUNICATION</b>	Establishing, using, maintaining, augmenting, and providing backup for all the types of communication devices needed during emergency response operations.	SP (Wireless)	MPRO (Wireless) and BSNL	NIC, Police / Private Telecom / Mobile Operator
<i>ESF 2</i>	<b>EVACUATION</b>	Immediately following a disaster people may need to be evacuated from structures that have been damaged and are likely to receive more damage when hit by one or more.	DC, Aizawl	Office of the DC, Aizawl	Police, F&ES, MRHG, NCC, Army, Pushpak, PWD, PHE, YMA
<i>ESF 3</i>	<b>SEARCH AND RESCUE</b>	Removal of trapped and injured persons from buildings collapses and other structural collapses, administering first aid, and assisting in transporting the seriously injured to medical facilities. This activity involves the use of professional and volunteer search teams including the use of dog teams.	SP, Aizawl	Police	F&ES, MRHG, NCC, 26 Assam Rifles, BSF, Health Department, QRT, SDRF, NDRF, P&E, YMA.
<i>ESF 4</i>	<b>LAW AND ORDER</b>	Law and Order enforcement for Public Safety	SP, Aizawl	Police	Home guards, Army, 26 Assam Rifle, AMC, YMA.



<b>ESF 5</b>	<b>TRAFFIC MANAGEMENT</b>	Control of access to the area severely affected until it is safe. Only those people directly involved in emergency response operations should be allowed to enter. Also determining the appropriate time to allow evacuees and the general public to re-enter the area that was severely impacted.	SP (Traffic)	Police	PWD, BRTF/ BRO
<b>ESF 6</b>	<b>EMERGENCY PUBLIC INFORMATION, HELP LINE &amp; WARNING</b>	The flow of accurate and timely emergency information is critical to the protection of lives and property in the wake of a catastrophic event. Preparation and dissemination of Notifications, updates, warnings, and instructional messages, making the help line operational.	DIPRO	I&PR	NIC, DDK, AIR
<b>ESF 7</b>	<b>MEDICAL RESPONSE AND TRAUMA AND COUNSELING</b>	Mass fatality management, Public health, Medical, Mental health services	CMO 'W'	H&FW	PHE (Sanitation), YMA, NSS
<b>ESF 8</b>	<b>EQUIPMENT SUPPORT, DEBRIS AND ROAD CLEARANCE</b>	The identification, removal, and disposal of rubble, wreckage, and other material which block or hamper the performance of emergency response functions and procure needed equipments from support agencies using IDRN; should be a high priority action	S.E. (Planning & Works)	PWD	LAD/ UD&PA, BRTF/BRO

<b>ESF 9</b>	<b>UTILITIES RESTORATION</b>				
<i>Sub function of ESF 9</i>	<b>ELECTRICITY</b>	Restoration and repair of electrical power system to minimize the impact on critical service to the public	S.E. Aizawl Power Circle	P&E	PWD
	<b>WATER SUPPLY</b>	Restoration and repair of water supply system to minimize the impact on critical service to the public	S.E. Aizawl Watsan Circle	PHE	LAD, UD&PA, AMC
<b>ESF 10</b>	<b>MASS CARE</b>				
<i>Sub function of ESF 10</i>	<b>FOOD</b>	Optimizing Food and Civil Supplies to the needful	Jt. Director (M)	Dept. of FCS & CA	Social Welfare Dept., Transport Dept., AMC, YMA
	<b>SHELTER ARRANGEMENT</b>	Accommodating homeless and affected people and providing mass care	Prog. Officer	Social Welfare Dept.	Dept. of Food Civil Supplies & Consumer Affairs, Transport Dept., AMC, YMA
<b>ESF 11</b>	<b>TRANSPORTATION</b>	Provides transportation out of a disaster area for people in need, and provides transportation essential to support emergency response in the event of a disaster, coordinating for resurrection of transport infrastructure.	Dy. Director (Hqrs.)	Transport Dept.	PWD
<b>ESF 12</b>	<b>FIRE FIGHTING</b>	Coordination of fire fighting operations	SP	F&ES	PHE, YMA
<b>ESF 13</b>	<b>PUBLIC WORKS AND ENGINEERING</b>	Infrastructure protection and emergency repair, Infrastructure restoration, Inspection of buildings and other structures to determine whether it is safe to the inhabitant.	E.E. (Building Division)	PWD	AMC
<b>ESF 14</b>	<b>ANIMAL CARE</b>	Controlling spread of diseases in animal and providing animal care	Dy. Director (REP)	AH & Vety Dept.	PHE (Sanitation), YMA, NSS

## **Standard Operating Procedure for the ESFs in Aizawl City**

A standard operating procedure is “a set of instructions constituting a directive that establishes a standard course of action.” Standard operating procedures or SOPs, clearly spell out what is expected and required of personnel during emergency response. A Quick Response Team (QRT) will be established by the Team Leader in each and every Emergency Support Function in consultation with Supporting Agencies to assess the situation of the emergency site.

### **ESF 1: Communications**

The communication ESF is primarily responsible for establishing, using, maintaining, augmenting, and providing backup for all of the types of communications devices needed during emergency response operations.

#### **Situation Assumptions:**

1. There would be congestion in the network because of increased calls owing to confusion and panic in the community.
2. The initial reports on damage may not give a clear picture of the extent of damage to communication network.
3. The affected site may be cut off from the District Control room/ Emergency Operation Centre (EOC) and the officials on site would face difficulty in communicating to the District EOC.
4. Police wireless network will only be the reliable communication network till the other communication networks are fully restored.

***ESF Team Leader (TL): SP (Wireless)***

***Primary Agency at City level: MPRO (Wireless) and BSNL***

***Support agencies: NIC, Police / Private Telecom / Mobile Operator***

#### **SOP for primary agency:**

- Team leader (TL) of Communication ESF will activate the ESF on receiving the intimation of occurrence of the disaster from the Incident Commander.
- Wireless operators would be informed about the current requirements and coordination mechanisms shared. Till the restoration of normal telecom facilities, the police wireless system would be the main communication network.
- TL issues orders to establish systems and reports to District EOC on the action taken.
- TL would inform Nodal Officers (NOs) of support agencies about the event and ESF activation.
- TL would establish contact with the district EOC for First Information Report
- TL requests for reports from local ESF contact persons (this would be the local office of ESF Primary Agency) to understand the current situation and actions taken.
- Based on information given by the support agencies, TL decides on the need to launch an assessment mission to estimate the extent of damage to telecom services and network as well as to come up with possible arrangements to establishing reliable and appropriate network.
- TL communicates situation to support agencies and also requests to provide details on the status of equipment and infrastructure in the affected area(s).
- TL informs the Incident Commander on the status of telecom services.

- TL works out a plan of action for telecom companies and convenes a meeting of all ESF members to discuss and finalize the modalities.
- TL gets the temporary telephone facilities established for the public. Prior information on this would be announced through media/ and locally through mega phones and other feasible mediums. TL monitors the situation and arranges emergency staff required to operate established systems. TL sends the District Quick Response team (QRT) at the affected site with the required equipments and other resources.

#### **SOP for Quick Response team on communication**

- The QRT (Quick Response Team) members will reach to the Nodal office as soon as they will get instructions from the TL.
- Once the QRTs receive any intimation from the Nodal officer to reach at the site they would reach to the site at the earliest, without wasting any time.
- At the emergency site QRT members will take stock of the situation from the site communication manager.
- QRTs would assess the ground situation and would send sectoral report to the District ESF agency.
- An assessment of overall damage, listing specifically:
  - Overhead route damage (in miles/kilometers).
  - Cable damage (in yards/meters).
  - Specific equipment damaged.
- Establish a temporary communication facility for use by the public.
- Identify requirements of manpower, vehicles and other materials and equipments give priority and concentrate on repairs and normalization of communication system at disaster affected areas.
- Begin restoration by removing and salvaging wires and poles from the roadways with the help of casual laborers.
- Carry out temporary building repairs to establish a secured storage area for the equipments and salvaged materials.
- Report all activities to head quarter.
- Begin restoration by removing damaged wires and poles through recruited casual laborers.
- Establish a secure storage area for incoming equipments and materials.

#### **ESF 2: Evacuation**

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

#### ***Situation Assumptions***

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

**ESF Team Leader (TL): DC, Aizawl**

**Primary Agencies: Office of the DC, Aizawl**

**Support agencies: Police, F&ES, MRHG, NCC, Pushpak, PWD, PHE, YMA**

**SOPS for primary agency:**

- Team leader (TL) of Evacuation ESF would activate the ESF on receiving the warning of the disaster/ disaster from District EOC.
- TL would inform Nodal Officers (NOs) of other primary and support agencies about the event and ESF activation.
- TL will direct the QRTs to be deployed on the affected site.
- TL will gather information on availability of predefined evacuation routes.
- Where the predefined evacuation routes are not available, the Nodal officer would coordinate through 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**

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

**ESF 3: Search and Rescue**

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 and will include removal of trapped and injured persons from buildings collapses and other structural collapses, administering first aid, and assisting in transporting the seriously injured to medical facilities. This activity involves the use of professional and volunteer search teams including the use of dog teams.

**Situation Assumptions**

1. Local community task forces will initiate search and rescue at residential level.
2. Spontaneous volunteers will require coordination.
3. Access to affected areas will be limited.
4. Some sites may be accessible only through air routes only.

**ESF Team Leader (TL): Police SP, Aizawl**

**Primary Agencies: Police**

**Support agency: F&ES, MRHG, NCC, 26 Assam Rifles, BSF, Health Department, P&E, YMA.**

### **SOPS for primary agency**

- The ESF would be activated on receiving order from the Incident Commander (IC) to the Team Leader (TL) of Primary Agency for ESF activation.
- TL of primary agency will call Nodal officers of supporting agencies.
- TL would activate the District Quick Response Team.
- Quick Assessment for the scale of S & R operations required to be carried out made.
- On requirement request for additional S&R teams sent to National Disaster Response force through state Govt. without wasting time, almost simultaneously.
- Assessments of the specific skill sets and the other equipments required.
- Using IDRN network to check and map the availability of resources in and around the disaster site.

### **SOP for Quick Response Team on search & rescue**

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

### **ESF 4: Law and Order enforcement**

#### ***Situation Assumption***

There may be a chaos in the affected area People may rush without properly following instructions which may increase the damage.

***ESF Team Leader (TL): SP, Aizawl***

***Primary Agency: Police***

***Supporting Agencies: MRHG, Army, 39 Assam Rifle, AMC and YMA.***

#### **Immediate actions of police:**

- Deploying a quick response teams (QRTs) to maintain law and order at the incident site.
- QRTs deployed at the site will be equipped and will coordinate with following activities.
- Quick Assessment of law and order situation in affected areas.
- Cordon off the site to restrict movement of curious onlookers, vehicles and pedestrians.
- Support and coordinate with local administration.
- Prepare updates on the law and order situation in every 2 hours and brief the authorities.
- Ensure law and order at assembly points and evacuation points.
- Control situation of rioting and looting and cordon off affected areas.
- Ensuring law and order in rehabilitation centre.
- Communicate with PCR on regular basis regarding field activities including deployment of manpower and resources.

**ESF 5: Traffic Management**

***Situation Assumption***

There may be a chaos in the affected area People may rush without properly following instructions which may increase the damage, Traffic may become out of control and lead to jams.

***Primary Agency: Traffic Police***

***ESF Team Leader (TL): SP (Traffic), Aizawl***

***Supporting Agencies: MRHG, YMA***

**Immediate actions of traffic police:**

- Control and monitor traffic movements.
- To detail traffic staff to reach the place of occurrence.
- To coordinate and communicate with concerned functionaries.
- Provide traffic diversions so as to ease movement of response vehicles to incident site.
- Gather and disseminate information about the traffic flow on alternate routes for decongestion.
- To give directions whenever necessary to ensure free passage for fire tender, ambulance, police vehicles and vehicles of other respondents.

**ESF 6: Emergency Public Information, helpline & warning**

The ESF on Emergency Public Information, help lines and warning dissemination should process and circulate information about the welfare of citizens in the affected area and manage the flow of correct and needed information. The help lines will be responsible for providing as and where required information and the warning messages would communicate all important information for safeguards to avoid any further damages.

**Situation Assumptions:**

1. There may be an ambiguity and confusion about the injured population.
2. The communication networks in the affected area may be partially impaired.

***Team Leader (TL): Jt. Director***

***Primary agency: I&PR***

***Support Agencies: NIC, DDK, AIR***

**SOPS for primary agency:**

The ESF would be activated on receiving order from the Incident Commander (IC) to the Team Leader (TL) of Primary Agency for ESF activation.

- TL of primary agency will call Nodal officers of support agencies and get their system activated
- The QRTs will be deployed at the affected site.
- QRTs will report the situation and the progress in response activities to the respective EOC.
- Sending Warning messages/flash news of latest updates/donation requirements for disaster area all over the state
- Assisting the EOC in providing updated information to national as well as at the District level.
- Setting up of toll free numbers for emergency information assistance.

**SOP for Quick Response Team on emergency public information, help lines and messages**

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

**ESF 7: Emergency medical services and public health**

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

***Situation Assumptions***

1. Emergency Medical services will be required for affected population.
2. Likely outbreaks of diseases epidemic after the disaster.
3. Hospital services would be affected.

***Primary Agency: H&FW***

***ESF Team Leader (TL): CMO 'W'***

***Support Agencies: PHE (Sanitation), YMA, NSS***

**SOPS for primary agency**

- IC will call the TL of Primary Agency and get the ESF activated.
- Team leader (TL) of primary agency will call Nodal officers of support agencies.
- In coordination with the transport ESF, it will ensure a critical number of medical professionals to be reached at the site including specialists from other Districts.
- If temporary housing arrangements are being made for the affected population, the ESF must ensure high standards of sanitation in settlements in order to reduce epidemic outbreak.
- Ensuring the provision and continuous supply of medical facilities (medicines, equipments, ambulances, doctors and manpower etc) required at the disaster affected site and the hospital health centre catering to disaster victims.
- In case of orthopedic care required, the immediate response would have to be complimented by a follow up treatment schedule for a majority of the patients in/ near their place of shelter.
- Trained professionals should be mobilized by psychological support.
- Ensuring setting up of temporary information centre at hospitals with the help of ESF through Help Lines and Warning Dissemination team.
- TL will coordinate, direct, and integrate district level response to provide medical and sanitation health assistances.
- On the recommendations of the EOC, the TL is also responsible to :
  - Send required medicines, vaccines, drugs, plasters, syringes, etc.



- Arrange for additional blood supply. Send additional medical personnel equipped with food, bedding and tents etc.
- Send any additional medical equipment.

**SOP for Quick Response Team (QRT)**

- QRTs will provide situation and progress reports on the action taken by the team to the respective EOCs.
- QRTs will assess type of injuries, number of people affected and possible medical assistance needs.
- QRTs will ensure timely response to the needs of the affected victims such as:
  - Establishing health facility and treatment centre at disaster sites.
  - Providing medical services as reported by the District Civil Surgeon with District EOC and State EOCs.
- Procedures should be clarified for:
  - Peripheral hospitals
  - Private hospitals
  - Blood banks
  - General hospitals and
  - Health services established at relief camps and affected villages.
- QRTs should maintain check posts and surveillance at each Transport depots and all entry and exit points from the affected area, especially during the threat or existence of an epidemic.

**ESF 8: Debris clearance & equipment support**

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

***Situation Assumptions***

1. Access to disaster-affected area would depend upon the re-establishment of access routes.
2. Early damage assessment may be incomplete, inaccurate and general. A rapid assessment may be required to determine response time.
3. Engineers and masons may be required in large numbers for the inspection of present buildings

***District Primary agency: PWD***

***ESF Team Leader (TL): S.E. (Planning & Works)***

***Support Agencies: LAD/ UD&PA, BRTF/BRO***

**SOPS for primary agency**

- Team leader (TL) will activate the ESF on receiving the information of the disaster from District EOC.
- TL would inform Nodal Officers (NOs) of support agencies about the event and ESF activation.

- TL will coordinate with the support agencies to mobilize equipments from the ware houses through IDRN database.
- The equipments like earth movers, concrete cutters identified as per the need will be transported to the site.
- As per the information the TL of Debris clearance will make an assessment on of the damages of roads and built structures at the site and surrounding areas.
- The Response Teams will immediately start debris clearance operation to enable movement to the affected site.
- Review of the current situation is taken up by the Primary 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
- All supporting agencies will inspect the road and structures within the disaster site and surrounding.
- 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 and debris clearance:**

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

**ESF 9: Utilities Restoration: water and electricity supply electricity supply**

***Situation Assumptions:***

1. Expect electric short circuits in the affected area which may aggravate the fire explosions.
2. Electric fitting of the affected areas may get damaged and need repairing
3. There may be a requirement of temporary lightning provisions in the relief shelters and local commandant post

***Primary Agency: P&E***

***ESF Team Leader (TL): S.E. Aizawl Power Circle***

***Supporting Agencies: PWD***

**Immediate tasks on electricity supply:**

- Team leader will activate the Emergency Support Function (ESF) by informing his headquarter team and field team.

- Inform nodal and supporting agencies about the incident.
- Notification and shutdown of electricity utilities:
  - As per the instruction given by IC, TL should instruct to concerned officers to shut down the power supply immediately.
  - Provisioning Backup Power during Emergency.
  - Once power system is closed down, but power would still be required for response teams, EOC, water supply stations, temporary houses and temporary hospitals. Therefore electricity coordinator will be responsible for providing back-up or alternate source of uninterrupted power supply for smooth operations.
- In addition to the above, QRTs should also undertake following responsibilities:
  - Take stock of situation immediately on reaching the incident site.
  - Coordinate with other team leaders and provide essential help expected from the electricity department.
  - Conduct repairing work of dismantled connections.
  - Provide temporary electricity supply to EOC and relief centre.
  - Appraise the team leader about the situation.

**Water supply:**

***Situation Assumptions:***

1. There may be a need of supplying water for firefighting operation.
2. There may be a need for drinking purpose.
3. Rehabilitation site might be requiring temporary/mobile toilets.
4. There may be need to ensure clean environment.

***Primary Agency: PHE***

***ESF Team Leader (TL): S.E. Aizawl Watsan Circle***

***Supporting Agencies: LAD, UD&PA, AMC***

**Immediate tasks on water supply:**

- TL will ensure that QRTs are on the site along with the required resources.
- He shall be ensuring uninterrupted supply of water for fire-fighting to all the brigades in operation.
- He shall coordinate with the transport coordinator for replenishing the depleted stock of fire water at the incident site through water tanks.
- Carry out repairing task of all damages to water supply system.
- Arranging alternate storage of potable water at temporary shelters.
- Ensure restoration of potable water as per standards and procedures laid down under ‘Standards for Potable Water’.
- Plan for emergency accommodation of water supply in or near temporary shelters.

**ESF 10: Mass Care: food supply and shelter arrangement food supply:**

***Situation Assumption***

There may be a need to distribute food packets and drinking water to the victims

***Primary Agency: Dept. of Food Civil Supplies & Consumer Affairs***

***ESF Team Leader (TL): Jt. Director (M)***

***Supporting Agencies: Social Welfare Dept., Transport Department, AMC, YMA***

**Immediate tasks on food supply:**

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

**Immediate tasks for QRTS:**

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

**Shelter Arrangements**

***Situation Assumption***

1. There may be a situation of transferring victims to the safer temporary shelter.
2. There may be a need to establish triage station for medical treatments

***Primary Agency: Social Welfare Dept.***

***ESF Team Leader (TL): Program Officer***

***Supporting Agencies: Dept. of Food Civil Supplies & Consumer Affairs, Transport Dept., AMC, YMA***

**Immediate actions to be taken on shelter arrangements:**

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

### **ESF 11: Transports**

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***

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

***ESF Team Leader: Dy. Director (Hqrs.)***

***Primary Agency: Transport Dept.***

***Support Agencies: PWD***

#### **SOPS for primary agency:**

The ESF would be activated on receiving order from the Incident Commander (IC) to the Team Leader (TL) of Primary Agency for ESF activation.

- TL would inform Nodal Officers (NOs) of support agencies about the event and ESF activation.
- TL establishes contact with the district EOC for Incident Report.
- TL requests for reports from local Transportation ESF contact persons.
- 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 on transport**

- The QRT members will reach to the Nodal office as soon as they will get instructions to do so from the TL.
- As quick response teams will receive instructions from the Nodal officer they would reach to the site immediately.
- QRTs would report the situation and the progress on action taken by the team to the respective EOCs.
- QRT will send a requirement schedule for the different modes of transportation e.g. Buses, trucks, and helicopters to be put on stand-by.
- QRTs will ensure timely re-establishment of the critical transportation links.

### **ESF 12: Fire Fighting**

#### ***Situation Assumption***

1. There may be a massive fire.
2. Expect more aggressive fire explosions.

3. There may be a need of repairing leakages to reduce fire explosions.
4. Situation can aggravate due to mishandling or carelessness

**Primary Agency: Station Officer**  
**ESF Team Leader (TL): F&ES**  
**Supporting Agencies: PHE, YMA**

**Immediate tasks:**

- TL will activate the ESF and give instructions to the QRTs to reach at incident site to conduct rescue operations.
- TL will coordinate with the EOCs (on site and off site) to judge the situation.
- TL will coordinate in deputing rescue team to enter in hazardous areas.
- TL will coordinate with technical experts, safety coordinators and material coordinator for quick response in case of any requirement in conducting rescue operations.

**Immediate tasks of QRTS:**

Fire fighting teams will undertake these services:

- **On-scene Assessment:**
  - First fire vehicle to reach at incident site will contact the site controller and collect the necessary information regarding chemical leak, action taken, current status and type of equipment required.
  - Driver will park their vehicle in a manner to prevent exposure to air-borne chemical contaminants and fire explosions.
  - Each crewmember will wear the necessary PPEs (Personnel Protective Equipments) before entering in the “hot zone”. They will work in pairs and coordination.
  - The situation will be communicated to the Dist. Control Room/EOC to provide the update of additional resource and manpower requirement
- **Plugging/Stopping of Leaks:**
  - Few crew members having good knowledge of basic tools and knowledge to limit the losses from punctured or leaking tanks will work for plugging holes.
- **Suppression of Hazardous Gas or Vapor Releases:**
  - Based on the guidance of technical coordinators, the response team shall take rapid measures to reduce the rate of amount of hazardous vapors or gases entering in the atmosphere using one or combination of the following measures.
  - Physical restriction of liquid pool surface areas.
  - Transfer to an alternate or standby container if available.
  - Use of fire-fighting or specialized hazardous material foams.
  - Dilute or coverage of liquid pools with water or other compatible liquids.
  - Use of water sprays or fogs.
  - Neutralization of spilled liquids.

- Cooling of spilled liquids or venting tanks.
- ***Search and Rescue Operations.***
  - According to the instructions of rescue coordinators QRTs should enter into the hazardous areas and rescue injured and trapped people.
  - For common safety practice, QRTs should work in pairs.
  - QRT should initiate search and rescue operations of trapped people under the guidance of technical experts.
  - QRT of rescue operations should carry a self-contained breathing apparatus (SCBA) to carry out their mission without falling victim. They should also carry a spare SCBA unit which will help them to escape people trapped in the hazardous areas and also sometimes rescue workers require extra air supplies to accomplish prolonged rescue.

**ESF 13: Public Works and Engineering**

The ESF would include the identification of critical infrastructure problems, shortcomings and damages, and the mobilization and coordination of Quick Response Teams (QRTs) to fix and improve them.

***Situation Assumptions***

1. There may be major and minor damages in critical infrastructures, public and private infrastructures.
2. Inspection of buildings and other structures may be required to determine whether it is safe to inhabit or use them after a disaster has occurred.

***Primary Agency: PWD***

***ESF Team Leader (TL): E.E. (Building Division)***

***Supporting Agencies: AMC***

**SOPS for primary agency**

- When an emergency is imminent, the TL will assess the potential impact of the threat on the state’s infrastructure and work with other authorities to ensure that any necessary immediate repairs or arrangements for critical state structures and facilities are initiated.
- The TL will work with all district and local authorities to support the evacuation of people in the threatened area(s).
- As the emergency progresses, the TL will monitor the status of the infrastructure and effect emergency repairs where needed and feasible.
- The TL will monitor the status of debris on critical state evacuation routes and initiate emergency debris clearance and repairs to save lives where needed and feasible.
- When an emergency has passed, the TL of Inspection, Condemnation, Demolition will assess damages to critical state infrastructure and initiate debris clearance and repairs.

**ESF 14: Animal Care**

***Situation Assumption:***

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

**Primary Agency: AH & Vety Dept.**  
**ESF Team Leader (TL): Dy. Director (REP)**  
**Supporting Agencies: PHE (Sanitation), YMA, NSS**

**SOP for primary agency:**

The TL will coordinate with:

- The district level and block level Veterinarian.
- Animal related organizations and individuals to provide assistance in the affected site.
- Coordinate with the Shelter TL on the sheltering of companion animals.
- In case of Animal Disease Outbreak immediate actions to control and quarantine the disease to be made, the advisory for safeguarding one self and others to be issued.
- Injuries and death of animals will be documented.
- Deceased, diseased or contaminated animals will be dispensed.
- Documentation of all expenses incurred will be maintained.
- Continue response activities as needed.

**3.3.2 DISTRICT DISASTER MANAGEMENT COMMITTEE AND TASK FORCE**

**District Disaster Management Advisory Committee (DDMAC):**

With a view to supplementing the DDMA, there shall be a District Disaster Management Committee (DDMAC) to monitor and gear up the preparedness of the district administration as well as different district level functionaries in regard to disaster management in an effective manner. It would be a larger group than that of the DDMA so that necessary follow-up actions of the decisions of DDMA can be taken as deemed appropriate. This Committee will function as a District Working Group. The members of the Committee will be:

Chairperson	:	Deputy Commissioner, Aizawl
Co-Chairperson	:	Addl. Deputy Commissioner (G)
Member Secretary	:	Nodal Officer, DM&R, D.C's Office.
Assistant Secretary	:	Branch Officer, DM&R, D.C's Office.

Members	:	
		1. Director, G&MR.
		2. Nodal Officer, PHE
		3. Nodal Officers, PWD (Road, Building etc)
		4. Nodal Officer, P&E
		5. Treasurer, CYMA or his representative

Besides the above mentioned Members, the Chairperson can invite other officer/member to attend the meeting/committee of the DDMAC as per the need of time, as special invitee.

The major functions of this Committee would relate to:

1. Monitor the activities of Sub-division Disaster Management Committee.
2. Ensure follow-up actions by concerned stakeholders of the decisions taken by the DDMA



3. Facilitate preparation of Disaster Management Plan and necessary updating in different departments/schools/hospitals
4. Lobbying for policy formulation for disaster management
5. The group will work for a link between the DDMA and its agencies involved in the Disaster Management activities
6. Initiate and monitor mock drills at various levels as per the direction of DDMA.
7. Control and supervise the functioning of SDMA.

**Quick Response Team (QRT):**

Quick Response Team comprising of 20 personnel was formed under ADDMA in 2018. The team members are volunteers from various Adventure Clubs who have undergone search & rescue and basic first aid training under Sports & Youth Services Department. During disaster situations, they operate under the guidance of 1 Adventure Organiser from S&YS Department.

At present, the operating area of the QRT is confined within Aizawl city area. Once disaster incident report is received at the DEOC, the QRT are immediately deployed along with the Emergency Response Vehicle (ERV) at the site.

**State Disaster Response Force (SDRF):**

MzSDMA, through the Home Department, has created 8 State Disaster Response Force (SDRF) units, each having strength of 100 personnel with a total strength of 800 personnel. The teams are located at Aizawl, Lunglei, Mamit, Khawzawl, Kawnpui, Lawngtlai. Equipments are being procured for use of the SDRF. A training is also being imparted to the members of SDRF in collaboration with NDRF Gauhati and Kolkata.

Four Units of SDRF is established with strength of 1 (One) Company each in 4 Battalions of the Mizoram Police Armed Forces and the Indian Reserved Police Force. Its main duty is to conduct Search & Rescue Operation in collapsed structure, Evacuation, Medical First Aid etc at the disaster site. At present, 3 (Three) headquarters have been established for Aizawl District. Since, the neighbouring District of Serchhip do not have any headquarter, the SDRF stationed in Aizawl district will response to disaster in Serchhip District as well if such a situation arises.

The SDRFs- 1<sup>st</sup> Bn. MAP, 3<sup>rd</sup> Bn. MAP & 5<sup>th</sup> IR Bn. Are included in the Aizawl IRS/T under Operation Section: Task Force. The DC/ RO will have the commanding authority to activation & to its deployment.

**National Disaster Response Force (NDRF):**

A team of 30 personnel headed by inspector is set up at PTC, Lungverh whose main headquarter is in Guwahati. The team members in collaboration with SDRF carry out training for SDRF, local volunteers, college students, adventure clubs etc.

**Sports & Youth Services:**

The Sports & Youth Adventure club comprises of youths who are trained in basic search & rescue operation and basic first Aid. Adventure clubs from different localities within the District are also monitored and provided training by the Sports & Youth Services.

**3.3.3 IRS in the District**

The Incident Response System (IRS) is an effective mechanism for reducing the scope for ad-hoc measures in response. It incorporates all the tasks that may be performed during DM irrespective of their level of complexity. It envisages a composite team with various Sections to attend to all the possible response requirements. The IRS identifies and designates officers to perform various duties and get them trained in their respective roles. If IRS is put in place and stakeholders trained and made aware of their roles, it will greatly help in reducing chaos and confusion during the response phase. Every one will know what needs to be done, who will do it and who is in command, etc. IRS is a flexible system and all the Sections, Branches and Units need not be activated at the same time. Various Sections, Branches and Units need to be activated only as and when they are required.

<b>IRS POSITION</b>	<b>APPOINTED OFFICERS</b>
RESPONSIBLE OFFICER	Dr. Lalhriatzuali Ralte, IAS Deputy Commissioner, Aizawl - Ph: 2329202 / 2329203/ 9436141306
INCIDENT COMMANDER	Lalnundika, Addl. Deputy Commissioner & Chief Executive Officer, ADDMA - Ph: 8974036258
DEPUTY INCIDENT COMMANDER	C. Lalruaia, Sr. Superintendent of Police, Aizawl. Ph: 2315877/2322009 (f)/2305483/ 9436153546(m)
SITE INCIDENT COMMANDERS	All Zonal Officers within their respective zones
Information and Media Officer	P.B Lianthangpuii , MIS, Joint Director Ph: 2323206/ 2317514/ 9436142473 (m)
Liaison Officer	Lalnunfela Chawngthu, Asst. Commissioner & Nodal Officer, DM&R Branch, DC's Office, Aizawl Ph: 9856055680
Safety Officer	Francis Lalnuntluanga Ralte, Superintendent of Police, F&ES Department Ph - 7005608991
<b>OPERATIONS SECTION CHIEF</b>	Lalţanpuia, Addl. Superintendent of Police (L & O ), Aizawl District. Ph- 9402521128
<b>Response Branch Director</b>	R. Lalrinzuali, SDC , D.C's Office Ph- 8794103462
<b>Division Supervisor/Group-in-charge</b>	C. Vaninmawia, Dy. SP (Prosecution) Ph: 2310284 /9862368105

<b>Task Force/ Strike Team</b>	SDRF	Lalringdika, Commandant, 1 <sup>st</sup> Bn. MAP, Armed Veng Ph- 8414010955
		J. Lal̄hafamkima, Commandant, 3 <sup>rd</sup> Bn. MAP, Mualpui. Ph- 9774919312
	SDRF	Lalduhthlanga, Commandant, 5 <sup>th</sup> Bn. IR, Sakawrtuichhun Ph- 9366399858
	NDRF	Kishan Lal, Inspector 1 <sup>st</sup> Bn NDRF, Sakawrtuichhun Ph- 9610484404
	F&ES	Lalremtluanga Varte, Station Officers, F&ES Department . Ph- 9862563794
MRHG	Fabian Lalfakawma, District Commandant, MRHG &CD Ph- 874061968	
<b>Task Force/ Strike Team</b>	(Adventure clubs) S&YS	Moses Lalthanpuia, State Adventure Organiser, S&YS Department. Ph - 9863221437
	Quick Response Team (QRT) ADDMA	Moses Lalthanpuia, State Adventure Organiser, S&YS Department. Ph - 9863221437
	Public Works Department	F.Lalramenga Executive Engineer, PWD (Aizawl building Division). Ph- 9436146629
		Lalbiaksangi, Executive Engineer, PWD (Aizawl Road South Division). Ph- 9436143015
		C.Lalthangvela, Executive Engineer, PWD (Aizawl Road North Division) Ph- 8974742305
Lalzarzoliana, Sr Executive Engineer, PWD (Highway Division-I) Ph- 9436147091		
	Samuel Ramdinthara, Sr Executive Engineer, PWD (Highway Division-II) Ph- 9436151779	
	Zirthanmawia Hmar, Sr Executive Engineer, PWD (Hmuifang Division) Ph - 9436151959	
LC/ VC +YMA	Chairman, Locality/ Village Disaster Management Committees of Incident Sites.	
<b>Single Resources</b>	Dr. Lalparliani, Chief Medical Officer (East) Ph- 9862257999	
	Dr. Thani Pachuau, Chief Medical Officer (West) Ph - 9436152102	
	Lalrinmawia, Executive Engineer, P& E Department ( Distribution Division) Ph- 9436154122	
	Lalhminghlua, Executive Engineer, P&E Deptt (Revenue Division) Ph- 9436353096	
	Zodingliana, Sr. Executive Engineer, P&E Deptt (Generation Division) Ph - 9436143078	

<b>Single Resources</b>	Dr. Robert Khawlhing, SNO (Mental Health), H&FW Department Ph- 9436151430
	Lalsanga, E.E., Aizawl Water Distribution Div- South, PHE – Ph: 9436147168
	Lalhruaia, Executive Engineer, Aizawl Water Distribution Div- North, PHE Ph- 9436140917
	C. Zothantluanga, Executive Engineer, Aizawl Water Transmission Division, PHED Ph 9436146241
<b>Telecommunication</b>	C.Lalrinfela, Informatics Officer, ICT Ph- 8414011617
<b>Transportation Branch</b>	Lalsangpuii Hmar, Jt. Director (Opr), Transport. Ph: 9862739124
<b>Road Group</b>	
Group-in-charge	Rodingliana Chawngthu, Sr S.P. (Traffic) Ph: 2310003/ 9436144350 (M)
Vehicle Co- ordinators	C.Vanlalvena, Addl. Superintendent of Police (Traffic) Ph- 8974241998
	Inspr. H. Laltanpuia, O.C. (Traffic) Ph: 9862376929
Vehicle Co- ordinators	Traffic Control Room Ph:2322307 (Aldo Control WT Channel 7)
Loading/Unloading-in-charge	K. Lalrinsanga MVI, Transport Department Ph - 9612366642
<b>Water Group</b>	
Group-in-charge	Lalsanga, Executive Engineer., Aizawl Water Distribution Div- South, PHE – Ph: 9436147168 Lalhruaia, Executive Engineer, Aizawl Water Distribution Div- North, PHE Ph- 9436140917 C. Zothantluanga, Executive Engineer, Aizawl Water Transmission Division, PHED Ph 9436146241
<b>Air Operations Group</b>	
Group-in-charge	Lalsangpuia, Dy. Controller. / Er. i/c Civil Aviation, GAD Ph- 7640982450
Loading/unloading-in-charge	T.Lalramzauva, Asst Commissioner Of Excise & Narcotic Ph- 9336172541
<b>PLANNING SECTION CHIEF</b>	C. Laltleipuii, Addl Deputy Commissioner, DC's Office, Aizawl Ph: 9862860325
Resource unit	Zotinkimi, Disaster Management Coordinator Ph- 9436453580
Check-in-status Recorder	Laltlanhlua, DFO, Environment & Forest Department Ph- 9436195286
Situation unit	C. Lalmalsawma, SDPO Aizawl North Ph- 8731004355
Situation unit	Lalrinpuia Chenkual, SDPO Aizawl South Ph- 986258445

Display Processor	P.B Lianthangpuii , MIS, , Joint Director Ph: 2323206/ 2317514/ 9436142473 (m)
Field Observer	Lalbiakkunga, Chairman, Disaster Management Sub-Committee, Central YMA Ph- 8415063063
Weather Observer	Lalramchuana, Sr. Sc. Officer, Directorate of Science & Technology Ph-9612158190
Documentation Unit	Lalchhanhimi, Assistant Commissioner , D.C's Office Ph- 8575951959
Demobilization Unit	Francis Lallawmkima, Addl. Superintendent of Police (A), Aizawl District. Ph- 8575518016
Technical Specialists	H. Lalbiakkima, Jt. Director, Geology & Mineral Resources Ph:9436143001
	Lalramchuana, Sr. Sc. Officer, Directorate of Science & Technology Ph-9612158190
	Pu Lalruatkima, Hydro-geologist, PHED. Ph: 9436360308
<b>LOGISTICS SECTION CHIEF</b>	C. Lalruaia, Sr. Superintendent of Police, Aizawl. Ph: 2315877/2322009 (f)/2305483/ 9436153546(m)
Service Branch Director	Lalnunfela Chawngthu, Asst. Commissioner & Nodal Officer, DM&R Branch, DC's Office, Aizawl Ph: 9856055680
Communication Unit	Robert L. Pakhuangte, Inspector, MPRO (Wireless) Ph-9366684612
Medical Unit	Dr. John Zohmingthanga, Director, Zoram Medical College. Ph: 9436140552
	Dr. Zoramthanga, Medical Superintendent, Civil Hospital Ph: 2323236/ 2322144/ 2316224/ 2322318/ 9436153551
Food Unit	Victor Lalawmpuia, Dy. Director, FCS & CA Ph- 9436198916
Support Branch Unit	Lalchhanhimi, Assistant Commissioner , D.C's Office Ph- 8575951959
Resource Provisioning Unit	Victor Lalawmpuia, Dy. Director, FCS & CA Ph- 9436198916
Facilities Unit	Lalremruata Kullai, Jt. Commissioner, AMC Ph- 9862306761
Ground Support Unit	H. Lalhmingliana, DTO (Registering Authority) Ph : 9436146330
	Lalengthanga Hnamte, DTO (Licensing Authority) Ph: 9862958265
Finance Branch Director	Isaac Lalrempuia Chenkual, SDO (Sadar) DC's Office, Aizawl Ph- 8787786244

Time Unit	Isaac Lalrempuia Chenkual, SDO (Sadar) DC's Office, Aizawl Ph- 8787786244
Compensation/Claim Unit	Lalchhanhimi, Assistant Commissioner , D.C's Office Ph- 8575951959
Procurement Unit	R. Lalrinzuali, SDC , D.C's Office Ph- 8794103462
Cost Unit	R. Lalrinzuali, SDC , D.C's Office Ph- 8794103462

**3.3.4 EOC setup and facilities available in the district**

District Emergency Operation Centre (DEOC), Aizawl is located at the D.C's premises in district headquarters. The Deputy Commissioner of Aizawl District is empowered to appoint one officer as Officer in-Charge of DEOC. At present, it is manned by Disaster Management Coordinator (DMC) along with 2 MPROs and 1 DEO. In the event of disaster, the Quick Response Team is on standby and ready for response as per requirement. The DEOC emergency No. 1077/ 2321119 / 2317717 is made toll free for all subscribers within Aizawl District- BSNL- Land & Mobile, Airtel, Vodafone and Jio. This DEOC is intended to co-ordinate all disasters related activities in the district starting from preparedness to rehabilitation and reconstruction. The DEOC is the link between the ADDMA, DDMC, IRS/T, Zonal Officers, LDMC, VLDMC and the other departments in the district as well as the State Emergency Operation Centre (SEOC). Considering the unique responsibility of the district EOC, the Equipments provided to it shall not be taken out for any purpose other than disaster management.

**Role in normal time:**

1. Send Notification on Do's n Don'ts in case of disaster on a daily basis and as when required sent Warnings / Alert, etc.
2. Monitors the DEOC phone lines around the clock.
3. Maintain a register on reports & complain received through phone lines or WT set.
4. Ensure that all the equipments in the EOC are in working conditions.
5. Collect data on routine basis from line departments for disaster management.
6. Develop status reports of preparedness and mitigation activities in the district.
7. Prepares and Updates of DDMP. Any other task assigned.
8. Ensure appropriate implementation of DDMP
9. Updating & Maintenance of data bank in with regular updating through IDR.N.gov.in.
10. Activate the trigger mechanism on receipt of disaster warning/ occurrence of disaster.

**Role during disaster:**

The EOCs/Control Rooms at the District levels will be the nerve centres for coordination and management of disasters. The objectives of the EOCs shall be to provide centralized direction and control of any or all of the following functions:

- Receive and process disaster alerts and warnings from nodal agencies and other sources and communicate the same to all designated authorities.
- Monitor emergency operations
- Facilitate Coordination among primary and secondary ESF Ministry/Departments/Agencies.
- Requisitioning additional resources during the disaster phase
- Issuing disaster/incident specific information and instructions specific to all concerned;
- Consolidation, analysis, and dissemination of damage, loss and needs assessment data;
- Forwarding of consolidated reports to all designated authorities.

**3.5. FORECASTING AND WARNING AGENCIES**

The main forecasting and warning agency coordinating with the District is IMD who sent weather forecast to the district on a daily basis. The information received is then notified to the general public via Aizawl DDMA apps and Facebook page. In case of warning relating to cyclone, tsunami etc received from IMD information is sent to the general public via mass media such as local cables, radios etc with the help of I&PR Department.

Rainfall data of the District is also received on a daily basis from Agriculture Department.

## **CHAPTER -4**

### **PREVENTION AND MITIGATION MEASURES**

#### **4.1 PREVENTION MEASURES**

A better disaster management with minimum vulnerability is possible only by means of preventive, preparedness and mitigation measures. Neither a disaster can be prevented or diverted to any other place. The only possible thing is to minimize the effect. Mitigation in fact, is not, a cost. In the long run it pays for itself. Proper preparedness and mitigation measures instantly help to respond disaster a disaster in time. So district wise preparedness and mitigation is highly required. A prepared community is the best community to minimize the loss and damaged caused by the disaster. Mitigation focuses on various ways and means of reducing the impact of disasters to the communities through damage prevention.

Prevention consists of actions that reduce risk from natural or manmade disaster incidents. It is required to list and elaborate all types of measures (like - building codes, floodplain management, storm water management, coastal area zoning and management plan, etc.) – planned and implemented by the districts as a part of prevention measures. It is good to have long term mitigation goals in place and connect these goals with measures that district has planned and implemented. These goals may include (but not limited to):

1. Provide better early warning methods for flood, storms, cyclone
2. Reduce the destruction and loss of life within buildings
3. Provide for safer environments for transportation systems
4. Eliminate flooding in populated areas
5. Ensure redundant water supply systems
6. Reduce environmental degradation and restoration of livelihood
7. Reduce effects of the natural environment on the infrastructure
8. Ensure redundant power systems on critical facilities
9. Ensure adequate materials available for road maintenance

#### **4.2 MAINSTREAMING DRR IN DEVELOPMENT PLANS AND PROGRAMS**

DDMA has to issue directions time to time in accordance with all stakeholders regarding inclusion of Disaster Risk Reduction (DRR) in developmental Planning. Disaster Risk Reduction



(DRR) issues in Development Plans etc. is to be interlinked vertically and horizontally for fail-safe infrastructures in Aizawl district. Mainstreaming disaster management into the development planning process essentially means looking critically at each activity that is being planned, not only from the perspective of reducing the disaster vulnerability of that activity, but also from the perspective of minimizing that activity's potential contribution to the hazard. Every development plan of a department should incorporate elements of impact assessment, risk reduction, and the 'donoharm' approach. Examples of this approach are urban planning and zoning, upgradation of building codes and their effective enforcement, adoption of disaster resilient housing designs and construction of school and hospitals, floodproofing, response preparedness planning, insurance, establishment of early warning systems for various types of disasters, generating community awareness, creating technical competence and promoting research among engineers, architects, health experts, and scientists. In this district, ADDMA has to sensitize officials of PWD, PHE, LAD/UD, RD/DRDA and also masons and community towards DRR issues.

#### **4.3 ONGOING AND PROPOSED DEVELOPMENT PROJECTS AND PROGRAMS ADDRESSING DISASTER PREVENTION BOTH DIRECTLY & INDIRECTLY**

- Training of volunteers from selected localities for first Responder
- Conduct of earthquake mock exercises in vulnerable villages/ localities.
- Conduct of fire safety awareness program.
- Strengthening of District Emergency Operation Centre

#### **4.4 MITIGATION MEASURES**

Mitigation measures are very important as they reduce the impact of hazards if not eliminate them. Disaster mitigation is several types and could be broadly classified into structural and non-structural measures. Structural measures are undertake to strengthen of weak existing buildings, life lines and infrastructure such as strengthening of weak existing building and re-enforcing water and electricity supply lines. Non-structural measures, on the other hand, emphasize on proper hand-use planning sustaining awareness and discrimination of information on do's and don'ts at the time of disaster.

#### **4.4.1 Mitigation measures for landslide**

- 1) Identify all streams runoff and clear blocked areas before the rainy season, to avoid blockade.
- 2) Maintain and protect both sides of river and stream to avoid erosion and improve the channels for free flow of water.
- 3) Monitoring of landslide prone areas either through and automated system or by preparation of hazard area maps and following up ground check on such areas during monsoon or raining season.
- 4) House site allotment should be considered only after careful consultation with Land Use Plan to avoid risk against landslide and land-sinking.
- 5) Campaigns to create public awareness on the importance of proper drainage system.
- 6) AMC has started implementation of Site Development & Slope Modification Regulations, 2014 since November, 2021.
- 7) Dessimination of information regarding Do's and Don'ts through social media.

#### **4.4.2 Mitigation measures for wind and cyclone**

- 1) Structural modification in existing houses to keep the roof intact during heavy wind. Construction of Cyclone shelters that can act as safe place to flee during cyclone
- 2) Construction of wind breakers to minimize the effect of high wind on the houses.
- 3) Strengthen early warning system in the district. Coordinate with Meteorology Dept. to get localized cyclonic information and alert the people for preparedness.
- 4) Mapping, delineation and demarcation of cyclone hazard areas and sensitive areas.
- 5) In areas prone to cyclones/ strong wind, critical infrastructure, school and other community buildings may be built at elevated places.
- 6) Keep trees and shrubs trimmed.
- 7) Remove damaged and decayed parts of trees to make them resist wind and reduce the potential for damage.
- 8) Removal of hoardings before specified period of cyclone.
- 9) Dessimination of information regarding Do's and Don'ts through social media.

#### **4.4.3 Mitigation measures for Earthquake**

- 1) Construction of earthquake resistant buildings in safe location.
- 2) Reconstruction/retrofitting of unsafe old buildings and structures.
- 3) Enforcement of building code and byelaws.
- 4) Ensure the safety of buildings or institutions where mass gathering usually takes place as in schools, public halls etc.

- 5) Strict regulation for approvals of building design and to ensure safe construction practices are followed while construction of new buildings is undertaken.
- 6) Mass education on safe construction practices and protection of human being from earthquake. Practice do's and don't's on regular basis.
- 7) Have mock drills with all stakeholders and institutions and the general public to ensure the preparedness level.
- 8) Training of engineers and masons on safe construction practices.

#### **4.4.4 Mitigation measures for Flash flood/ Flood**

- 1) Strengthen the early warning system for accurate warning to the community.
- 2) Storm drains should be strengthened and cleared before rainy season.
- 3) Land use planning to avoid mudslide and landslide due to heavy rainfall.
- 4) Community awareness and education to prevent flood.
- 5) Mapping of flood prone areas and flood risk mapping which can assist during pre-disaster decision making.
- 6) Formulation of flood preparedness plan which includes emergency response planning and training.

#### **4.4.5 Mitigation measures for Drought**

- 1) Tracking the behavior of monsoon and taking advance action to reduce the drought situation.
- 2) Construction of rainwater harvesting structures in prone areas to ensure that water chances of hazards available during drought prevalence.
- 3) Agriculture Corporation- Crop insurance should be promoted to transfer risk.
- 4) Schemes like Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS), Integrated Watershed Management Programme (IWMP) Drought
- 5) Prone Area Programme (DPAP)), National Rural Drinking Water Programme (NRDWP), Swarnjayanthi Grameen Swarozgar Yojana (SGSY), Rashtriya Krishi Vikas Yojna (RKVY), Fodder & Feed Development Scheme etc.to address the need for medium and long term drought mitigation requirements

#### **4.4.6 Mitigation measures for Drought**

- 1) Identify vulnerable forest areas prone to fire damage annually and prepare a fire damage map.

- 2) Clearance of fire lines which are absolutely necessary by controlled burning along the highways, village roads, foot-paths, plantations, regeneration areas, protected areas and electricity transmission lines etc.
- 3) Constitution of Village Fire Protection Committee of permanent nature.
- 4) Effective communication system for early detection of fire incident through fire watchers and carrying out intensive patrolling during dry season. Imparting training to staff and villages for fire fighting.
- 5) Strict enforcement of existing Fire Protection Regulation Act.

**4.4.7 Mitigation measures for Epidemics**

- 1) Health department needs to be provided with more water quality monitoring centers for effective surveillance of water quality principally during the monsoon months and during flood events.
- 2) Bleaching powder should be adequately available with all the villages.
- 3) Rural hospitals should be upgraded to include blood bank and surgical facilities.
- 4) Contingency plan for response should be prepared after identifying the epidemics that are likely to occur in the region.
- 5) First aid training will help to cope better during the emergency response period for epidemics.
- 6) Improving the sanitary conditions, drive to check and fumigate breeding places of any vector, disinfecting the water sources etc.

**4.4.8 Mitigation measures for Hailstorm**

- 1) Measures such as structural bracing, shutters, laminated glass in window panes, and hail-resistant roof coverings or flashing in building design to minimize damage.
- 2) Improving roof sheathing to prevent hail penetration
- 3) Installing hail resistant roofing and sliding.
- 4) Teaching school children about the dangers of hail and how to take safety precautions.

**4.4.9 Summary of Mitigation measures**

Sector	Mitigative Measures	Agency responsible
<b>INFRASTRUCTURAL DEVELOPMENT</b>	Improving Information Education Communication activities through walling, posters, street play, volunteer’s train, and village task force training. Mass rallies during normal period	Leading NGOs, BDOs
	Repair/Restoration of vulnerable points on roads before onset of monsoon.	PWD, BRTF, BDOs, VCs, NHIDCL

	Ensuring proper maintenance of shelter places constructed by default agencies.	Concerned village committee and BDOs
	Ensure maintenance and proper functioning of electronic communication system.	BSNL/Police department BDOs
	Immediate response for repair/replacement of pipe water supply system.	PHED, BDOs and CBOs
	Proper maintenance of VHF system installed by police department.	Head of office of the concerned location (Police wireless)
HEALTH/ ANIMAL HUSBANDRY	By way of IEC activities through walling posters, street play, village task force/volunteers training, during normal period.	By leading NGOs, DM&R, BDOs
	Adequate stock piling of vaccines should be ensuring for vaccination before disaster.	CMO, DVO, BDOs
	Training Programme of common people should be programmed for Health care, sanitation and first aid from village level to district level.	CMO, DVO, BDOs
LIVELIHOOD SECTOR	By way of IEC activities through walling posters, street play, village task force/volunteers training, during normal period.	CMO, DM&R, BDOs lead NGOs
	To reduce adverse impact on AGRICULTURE farmers should be advised alternating cropping pattern/flood resistance crops. Drought resistance short duration paddy seeds are made available to farmers. Ensuring crop insurance.	DAO, DHO and BDOs.
	Rising of Nursery in the horticulture farms & insurance coverage of horticultural products.	DHO, BDOs and NGOs.
INSURANCE	By way of IEC activities through walling posters, street play, village task forces/volunteers training, during normal period.	CMO/DVO/NGOs/DM&R
	Emphasizing on insurance coverage of live stock, crops, industry, workshop, etc.	DAO, BDOs and NGOs
	Creating awareness among general public. During normal time to insured human life.	Leading NGOs, BDOs

CHAPTER -5

PREPAREDNESS MEASURES

Preparedness Measures

5.1 Identification of Stakeholders involved in Disaster Response

At the District Level, The ADDMA may identify the stakeholders for Disaster Response as per the location, nature and magnitude of the incident. The LDMC of the concerned incident site will automatically become the stakeholders and they may report, assist and coordinate with the concerned Zonal Officers. The Zonal Officers may report from the on-site EOC to Deputy Commissioner through DEOC/ directly as the case may be and waits for further action.

5.2 Formation of Teams by the ADDMA

	Teams	Nature	Source	Team
	Early Warning	<ol style="list-style-type: none"> <li>1. Cyclone</li> <li>2. Thunder squall</li> <li>3. Heavy to very heavy rainfall</li> </ol>	<ul style="list-style-type: none"> <li>• Science and Technology</li> <li>• IMD</li> </ul>	<ul style="list-style-type: none"> <li>• ADDMA</li> <li>• I&amp;PR</li> <li>• DDK</li> <li>• Radio</li> </ul>
	Search & Rescue	<ol style="list-style-type: none"> <li>1. Fire</li> <li>2. Collapsed Structure</li> <li>3. Landslide/ Trapped under Debris</li> <li>4. Water accident/ dead body retrieval.</li> <li>5. others</li> </ol>	<ul style="list-style-type: none"> <li>• Public</li> <li>• LDMC</li> <li>• Zonal Officer</li> <li>• DEOC</li> <li>• others</li> </ul>	<ul style="list-style-type: none"> <li>• F&amp;ES</li> <li>• SDRF</li> <li>• S&amp;YS</li> <li>• QRT</li> <li>• LDMC/ VDMC</li> <li>• Central/ Branch YMA</li> <li>• Local Youth Volunteers/ club in case of water accident</li> </ul>
	Evacuation	<ol style="list-style-type: none"> <li>1. Earthquake</li> <li>2. Fire</li> <li>3. Collapsed Structure</li> <li>4. Landslide</li> <li>5. Unsafe structure</li> <li>6. others</li> </ol>	-	<ul style="list-style-type: none"> <li>• LDMC &amp; local youth volunteers/ case in case of locality incident</li> <li>• Floor/ Branch/ Cell/ Class Coordinator in case of building.</li> </ul>
	Damage and Loss Assessment	<ol style="list-style-type: none"> <li>1. L- 0</li> <li>2. L- 1</li> </ol>	-	<ul style="list-style-type: none"> <li>• L- 0: Zonal Officer</li> <li>• L- 1: Zonal Officer, IRS/T- Cost Unit, other concerned deptt.</li> </ul>

	Activation of IRS/T in the District	The Incident Response System/ Team in Aizawl District will be activated by the Responsible Officer/ Deputy Commissioner or in his absence, by Incident Commander/ Addl. Deputy Commissioner (E) on a receipt of warning or in the aftermath of L- 1 level disaster. The IRS/T will report/ assemble in the Office Chamber of the Deputy Commissioner.	
	Protocol for seeking help from other agencies such as GoI, State Govt., PSU, Other State Govt., NDRF, SDRF, Army, Navy, and Air Force, Central Para Military Forces	Responsible officer / Deputy Commissioner through Liaison Officer in the Aizawl District IRS/T	
	Mechanism for checking and certification of logistics, equipments and stores	See Logistic Section under IRS/T	
	Operational Check- up of warning system	Warning through Electronic Media	<ul style="list-style-type: none"> <li>• ADDMA</li> <li>• I&amp;PR</li> <li>• DNIC</li> <li>• others</li> </ul>
		The Electric Siren in DC's Office	ADEOC/ QRT Leader
	Operational Check- up for ADEOC	<ul style="list-style-type: none"> <li>• Chairman</li> <li>• Chief Executive Officer</li> <li>• Nodal Officer (DMR)</li> </ul>	
	Seasonal Inspection of facilities and critical infrastructure	Nodal Officers of respective line departments	
	Command and Coordination - identification of quick response teams	<ul style="list-style-type: none"> <li>• Chairman</li> <li>• Chief Executive Officer</li> <li>• Nodal Officer (DMR)</li> </ul>	
	NGOs and other stakeholders coordination	Duties, roles and responsibilities mentioned in the LDMC.	

	Seasonal Preparedness for seasonal disasters like landslide and thunder squall, etc.	<ul style="list-style-type: none"> <li>• Respective YMA Sections</li> <li>• Respective LDMC</li> <li>• Hazard Areas Task Team</li> <li>• ADDMA</li> <li>• ADEOC</li> </ul>
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### 5.3 Community Based Disaster Management

- Community is not only the victim but invariably the first responder in any disaster
- Any disaster revolves around the coping capacity of the community
- Therefore, community should be closely associated with prevention, mitigation, preparedness, training, capacity building, response, relief, recovery i.e. short term and long term, rehabilitation and reconstruction.

Activity	Responsibility
<b>Selecting vulnerable community and most vulnerable groups at risk (keeping gender issues in mind)</b>	<ul style="list-style-type: none"> <li>• ADDMA</li> <li>• Zonal Officers</li> <li>• DEOC/ DDMC</li> <li>• QRT</li> <li>• IRS/T</li> <li>• SDRFs</li> <li>• LDMC/ VDMC</li> <li>• YMA</li> <li>• MUP</li> <li>• MHIP</li> <li>• Locality Youth Adventure Clubs</li> </ul>
<b>Warning &amp; Dissemination of information about vulnerability and risk to the community</b>	
<b>Promote local level disaster risk management planning through participatory approach</b>	
<b>Advice and issue direction wherever necessary for community disaster prevention, mitigation and preparedness through local resources and participatory approach</b>	
<b>Provide necessary resources and support for disaster risk reduction at community level</b>	
<b>Promote community managed implementations</b>	
<b>Review the preparedness at community level</b>	
<b>Take appropriate actions to enhance community preparedness</b>	
<b>Promote community education, awareness and training</b>	
<b>Ensure fail safe mechanism for timely dissemination of forecasting and warning of impending disaster to the community</b>	
<b>Disseminate information to community to deal with any disaster situation</b>	
<b>Sensitization of community about the needs of the persons with disabilities</b>	



#### 5.4 Standard Operating Procedure (Sops)

	<b>Protocol and arrangement for VIP visits</b>	<ul style="list-style-type: none"> <li>• Deputy Commissioner</li> <li>• Protocol Officer</li> <li>• others</li> </ul>
	Procurement (Tents, blankets, tarpaulin, equipment, etc, SOP for rate contract)	<ul style="list-style-type: none"> <li>• ADDMA may write to DM&amp;R for necessary procurement.</li> </ul>
	Logistic	<ul style="list-style-type: none"> <li>• ADDMA</li> <li>• IRS/T-Logistic Section Chief.</li> </ul>

#### 5.4 Knowledge Management Networking & Sharing

	<b>Uploading of information on resources on Indian Disaster Resource Network.</b>	<ul style="list-style-type: none"> <li>• Nodal Officer/ DMC</li> </ul>
	Documentation of lessons learnt and best practices after each event.	<ul style="list-style-type: none"> <li>• Nodal Officer/ DMC</li> </ul>
	Community registries to collate basic contact information for persons with disabilities.	<ul style="list-style-type: none"> <li>• DSWO</li> </ul>

#### 5.5 Media Management/ information dissemination

	<b>Training and interaction strategies with Media/ pre – event awareness for the Media</b>	<ul style="list-style-type: none"> <li>• ADDMA</li> <li>• I&amp;PR</li> <li>• IRS/T- Information &amp; Media Officer</li> <li>• Nodal Officer from other Concerned Deptt. / Agencies.</li> </ul>
	Identification and training of the Official Spokesperson	
	Advertisement, hording, booklets, leaflets, banners, shake-table, demonstration, folk dancing and music, jokes, street play, exhibition, TV Spot, radio spot, audio-visual and documentary, school campaign, <ul style="list-style-type: none"> <li>- Planning and Design</li> <li>- Execution and Dissemination</li> </ul>	

#### 5.6 Medical Preparedness and Mass Casualty Management

	<b>Medical Preparedness and Mass Casualty Management:</b> <ol style="list-style-type: none"> <li>1. Preparation of Authentic medical database for public and private facilities available in the state                             <ul style="list-style-type: none"> <li>○ Collection of Data</li> <li>○ Mapping and gap analysis</li> <li>○ Strengthening</li> </ul> </li> <li>2. Resource management</li> </ol>	<ul style="list-style-type: none"> <li>• ADDMA</li> <li>• Medical Superintendent, Civil Hospital</li> <li>• CMO- East</li> <li>• CMO- West</li> <li>• SDRF</li> </ul>
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<ul style="list-style-type: none"> <li>○ <b>Manpower, logistics, medical equipments, medicines, antidotes, personal protective equipments, disinfectant, vaccine</b></li> <li><b>3. Identification of medical incident command system</b> <ul style="list-style-type: none"> <li>- <b>Incident Commander</b> <ul style="list-style-type: none"> <li>○ <b>State Level</b></li> <li>○ <b>Dist. Level</b></li> <li>○ <b>Disaster site</b></li> </ul> </li> <li>- <b>Identification of each section head at each level</b> <ul style="list-style-type: none"> <li>○ <b>Operation</b></li> <li>○ <b>Planning</b></li> <li>○ <b>Logistic</b></li> <li>○ <b>Administration &amp; Finance</b></li> <li>○ <b>Media and Public information</b></li> </ul> </li> <li>- <b>Identification of key members of different task force</b></li> <li>- <b>Control room arrangement</b> <ul style="list-style-type: none"> <li>○ <b>Departmental control room</b></li> <li>○ <b>State and district control room</b> <ul style="list-style-type: none"> <li>-Appointment of liaison officer in shifts</li> </ul> </li> </ul> </li> <li>- <b>Planning</b> <ul style="list-style-type: none"> <li>○ <b>Preparation of medical management plan</b> <ul style="list-style-type: none"> <li>-State level</li> <li>-Dist. Level</li> <li>-Hospital preparedness plan</li> </ul> </li> </ul> </li> <li>- <b>Training and capacity building</b> <ul style="list-style-type: none"> <li>○ <b>Hospital preparedness,</b></li> <li>○ <b>Pre hospital care,</b></li> <li>○ <b>Mass casualty management, etc.</b></li> </ul> </li> </ul> </li> </ul>	
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## 5.7 TRAINING, CAPACITY BUILDING AND OTHER PROACTIVE MEASURES

### 5.7.1 Training

Task	Activity	Responsibility
<b>Training</b>	1. Training to civil defense personal in various aspect of disaster management	<ul style="list-style-type: none"> <li>• Home Deptt.</li> <li>• DM&amp;R</li> </ul>
	2. Training to home Guards personal in various aspect of disaster management including search and rescue	<ul style="list-style-type: none"> <li>• ADDMA</li> <li>• ATI (DM centre)</li> </ul>
	3. Training to NCC and NSS personal in various aspect of disaster management	<ul style="list-style-type: none"> <li>• ADDMA</li> <li>• School Education</li> <li>• QRT</li> <li>• S&amp;YS</li> </ul>
	4. Training to educational and training institutions personal in various aspect of disaster management	<ul style="list-style-type: none"> <li>• ADDMA</li> <li>• School Education</li> </ul>
	5. Training to civil society, CBOs and corporate entities in various aspect of disaster management	<ul style="list-style-type: none"> <li>• ADDMA</li> <li>• ATI (DM Centre)</li> <li>• NGOs</li> </ul>
	6. Training to fire and emergency service personal in various aspect of disaster management	<ul style="list-style-type: none"> <li>• ADDMA</li> <li>• F&amp;ES</li> <li>• SDRF</li> </ul>
	7. Training to police and traffic personal in various aspect of disaster management	<ul style="list-style-type: none"> <li>• ADDMA</li> </ul>
	8. Training to State Disaster Response Force (SDRF) Teams in various aspect of disaster management	<ul style="list-style-type: none"> <li>• DM&amp;R</li> <li>• Home deptt.</li> </ul>
	9. Training to media in various aspect of disaster management	<ul style="list-style-type: none"> <li>• ADDMA</li> <li>• Home deptt.</li> <li>• I&amp;PR</li> </ul>
	10. Training to govt. officials in various aspect of disaster management	<ul style="list-style-type: none"> <li>• ADDMA</li> <li>• ATI (DMC)</li> <li>• F&amp;ES</li> <li>• Med. Supt. Civil Hospital.</li> </ul>
	11. Training to engineers, architects, structural engineers, builders and masons in various aspect of disaster management	<ul style="list-style-type: none"> <li>• ADDMA</li> <li>• ATI (DMC)</li> </ul>

### 5.7.2 Computer based programming

Task	Activity	Responsibility
<b>Develop database for disaster management</b>	1. Develop GIS based information system for different sectors viz. Medical and health, civil supply, fire and emergency services, etc. <ul style="list-style-type: none"> <li>○ Collection of information</li> <li>○ Generation of maps</li> <li>○ Regular updating of data</li> </ul>	<ul style="list-style-type: none"> <li>● ADDMA</li> <li>● ICT</li> <li>● DNIC</li> </ul>
	2. Create and disseminate database of contact details, resources, response agencies, NGOs, trained personnel, most vulnerable groups, evacuation routes, available shelters, relief centers, critical infrastructures, storage godowns, etc. <ul style="list-style-type: none"> <li>○ Regular review and updating of such databases</li> </ul>	<ul style="list-style-type: none"> <li>● ADDMA</li> <li>● DNIC</li> <li>● I&amp;PR</li> </ul>

### 5.7.3 Techno-legal Regime

Task	Activity	Responsibility
<b>Institutional Arrangement</b>	1. Creation of District Level Disaster Management Authority	● ADDMA
	2. Creation and updating of District Incident Response System/ Team.	● ADDMA
	3. Creation and updating of Zonal Officers	● ADDMA
	4. Creation and updating of DEOC QRT	● ADDMA
	5. Preparation and distribution of commentaries and handbooks, IEC materials	<ul style="list-style-type: none"> <li>● ADDMA</li> <li>● PWD</li> <li>● AMC</li> </ul>
	6. Maintenance of relief norms and packages	● ADDMA
	7. Development and promotion of incentives, insurance, disaster bonds, tax rebate, etc. against the disaster	<ul style="list-style-type: none"> <li>● DM&amp;R</li> <li>● ADDMA</li> </ul>
	8. Development of Disaster Management Plans <ul style="list-style-type: none"> <li>○ Hazard-wise District Disaster Management Plans</li> <li>○ District Action Plans</li> <li>○ District Contingency Plans</li> <li>○ Departmental Disaster Management Plans</li> <li>○ Taluka, City &amp; Village Disaster Management Plans</li> </ul>	<ul style="list-style-type: none"> <li>● ADDMA</li> <li>● All Line Deptt.</li> </ul>
	9. Regular rehearsal, review and updating of plans	
	10. Publication & dissemination of plans	
	11. Strengthening of Early Warning System <ul style="list-style-type: none"> <li>○ Conduct study</li> </ul>	<ul style="list-style-type: none"> <li>● DM&amp;R</li> <li>● DCs</li> </ul>

	<ul style="list-style-type: none"> <li>○ Analyse</li> <li>○ Implement</li> </ul> <p>12. Arrangement with service provider companies for multiple warning messages</p>	
	<p>13. Hazard Risk &amp; Vulnerability Assessment for different natural and man-made disasters prone to Aizawl District</p> <ul style="list-style-type: none"> <li>○ Conduct study</li> <li>○ Analyse</li> <li>○ Mapping</li> <li>○ Micro zonation</li> </ul>	<ul style="list-style-type: none"> <li>● ADDMA</li> <li>● IRS/T</li> <li>● Zonal Officers</li> <li>● LDMC/ VDMC</li> <li>● Science &amp; Tech.</li> <li>● GM&amp;R</li> <li>● MIRSAC</li> </ul>
	<p>14. Safety Measures</p> <ul style="list-style-type: none"> <li>○ Identification of places</li> <li>○ Alarm system</li> <li>○ Personnel protective equipments</li> <li>○ Promotion of life saving methods and techniques</li> </ul>	<ul style="list-style-type: none"> <li>● ADDMA</li> <li>● PWD</li> <li>● PHE</li> <li>● P &amp; E</li> <li>● Home</li> <li>● IRS/T</li> <li>● Zonal Officers</li> <li>● LDMC/ VDMC</li> </ul>
	<p>15. Strengthening of relief distribution and accounting system at district level</p> <ul style="list-style-type: none"> <li>○ Identification of centralized system for receipt, storage and distribution of relief</li> <li>○ Rate contract, procurement and stockpile of relief material</li> </ul>	<ul style="list-style-type: none"> <li>● GAD</li> <li>● SAD</li> </ul>
	<ul style="list-style-type: none"> <li>○ Strengthening of DEOC</li> <li>○ Retrofitting of existing buildings</li> <li>○ Strengthening of resources                             <ul style="list-style-type: none"> <li>- Task forces</li> <li>- Equipments</li> <li>- SOPs</li> <li>- Financial</li> </ul> </li> <li>○ Arrangement for optional EOC</li> <li>○ Arrangement of mock drills</li> <li>○ Arrangement of logistics</li> <li>○ Strengthening of communication means</li> </ul>	<ul style="list-style-type: none"> <li>● DM&amp;R</li> <li>● ADDMA</li> </ul>

#### 5.7.4 Others

Task	Activity	Responsibility
<b>Fail safe communication and last mile connectivity</b>	<ul style="list-style-type: none"> <li>- Undertake study to establish fail safe two way communication – information system from ADDMA level to local disaster site connecting state, district, RD Blocks and city level.</li> </ul>	<ul style="list-style-type: none"> <li>● ADDMA</li> <li>● I&amp;PR</li> <li>● SP (MPRO)</li> <li>● Doordarshan</li> </ul>

	<ul style="list-style-type: none"> <li>- Undertake study to establish alert/siren with multi-lingual recorded messages in times of various disasters.</li> <li>- To procure the system and run a pilot project</li> <li>- Establishment of multiple/alternative system</li> <li>- Training/IEC campaign for general public of the vulnerable areas.</li> <li>- Plan for re-establishment of disrupted system</li> </ul>	<ul style="list-style-type: none"> <li>• Prasar Bharti</li> <li>• Local Journals</li> </ul>
<b>Plan testing</b>	<ul style="list-style-type: none"> <li>- Provide copy of the plan to each stakeholder</li> <li>- Organize mock drills and rehearsal for plan testing</li> <li>- Lesson learnt through mock drill; identification of gaps through feedbacks and modification of plan</li> <li>- Organize annual mock drill and updation of plan</li> </ul>	<ul style="list-style-type: none"> <li>• ADDMA</li> <li>• Home</li> <li>• GAD</li> <li>• SAD</li> <li>• All Line Departments</li> </ul>

### **5.7.5 Proposed Information Communications Technology System (ICTS)**

Whereas early warning systems and mechanisms are in place to communicate to the general public about the impending disaster, the ADDMA is also planning to set up an “Information Communications Technology System (ICTS)” Network for emergency response for the District. The robust network/ Mobile App (available on Google Play store ) would extend to all registered in the District, Sub-Div, Block, Villages and the local incidence point with a well defined control and coordination structure supported with adequate and appropriate Information and Communication Technology (ICT) resources tools. This App would be designed for integrating Aizawl District Emergency Operation Centre (ADEOC) with IRS/T, ZO, LDMC/ VDMC and all those who registered.

## **CHAPTER -6**

### **CAPACITY BUILDING AND TRAINING MEASURES**

All Stakeholders and communities are critical components to a successful, long-term, sustainable Disaster Management Plan (DMP). Capacity Building develops and strengthens skills, competencies and abilities of both Government and non-government officials and communities to achieve their desired results during and after disasters, as well as preventing hazardous events from becoming disasters.

While undertaking disaster management planning assessments, the indigenous traditions, methods and materials being used for disaster management locally are considered and incorporated appropriately. Local residents are likely to be the first emergency responders to such incidents, particularly in remote areas and, therefore, critical to the successful outcome. Developing institutional capacity is very important. At the same time, by making the local community part of the process and solution would help in ensuring that disaster mitigation measures are more likely to be implemented and maintained over time. The capacity building plan should cater to the differential capacity building needs based on the functional responsibilities assigned to stakeholders.

The ADDMA is implementing RDD, URR Capacity Building for Disaster Response of the 13<sup>th</sup> Finance Commission, NDMA Fund & State Fund to capacitate all the stakeholders like officials, policy makers, engineers, architect, masons, doctors, nurses, teachers, task force – police, fire personnel, drovers, NGOs and volunteers. Schools and Colleges are also included in Capacity Building and Training.

Beside sensitization programme on Do's & Don'ts in case of disasters, Search & Rescue Technique, Basic First Aid Training and conduct of Mock Drills are the priority of the ADDMA. Sensitization of Persons with Disabilities, Gender: Role of Women in Disaster Management & Mitigation, Family Disaster Management Planning, School Disaster Management Planning, Locality/ Community Based Disaster Management Planning are some of the components in capacity Building along with preparation of DM Plans by all stakeholders.

#### **6.1 APPROACHES TOWARDS CAPACITY BUILDING**

The approaches of the ADDMA are proactive in prevention, mitigation, preparedness and response and follow a holistic and integrating approach in dealing with disasters.

- Holistic approach is about integrating all aspects of DM like preparedness, mitigation, response, recovery etc with sustainable development.
- Integrated approach is about involving all stake holders, the government, NGOs and the Community with DM.
- Community Based Disaster Management (CBDM) / Community Based Disaster Preparedness (CBDP) approach is about involving the community in every aspect of DMP. Involving

communities in disaster preparedness programme provides a venue for these communities to implement their own solutions thus inculcating ownership and an increased probability of sustainability.

## **6.2 CAPACITY BUILDING PLAN**

Capacity building programs is to be conducted at both the district and local level as per the work plan made by the SDMA. The program may include

- Community Based disaster Management awareness at Local level
- Workshop on Gender Issues in Disaster Management for women
- School safety training for school teachers and students (For schools not covered under NSSP)
- Awareness drive and training programme on institutional safety for persons with disability.
- Conduct of mock exercise

## **6.3 DISASTER MANAGEMENT EDUCATION**

Under the National School Safety Program 250 schools within the district were covered where training of school teachers and students in Disaster Management was carried out for the selected schools. Disaster Management plan was made for each individual school and mock drill was carried out in all the selected schools. Under the program, Govt J.L High School, Aizawl was selected for retrofitting and the project was completed in June, 2015.



## CHAPTER -7

### RESPONSE AND RELIEF MEASURES

Response planning provides rapid and disciplined incident assessment to ensure a quickly scalable, adaptable and flexible response. It incorporates National and State response doctrine, which defines basic roles and responsibilities for incident response across all levels of government and the private sector.

Before taking up response activities, a meeting will be held in the Office of the Deputy Commissioner/ Responsible Officer to take stock of the situation, availability and mobilization of resources for listing out the various tasks and to provide proper briefing to the responders. The Incident Action Plan will be drawn and put into action based on the situation assessment. The DC / RO will nominate Operation Section Commander (OSC) based on —incident type and rest will follow as per IRS/IRT and other procedural guidelines issued by the state.

#### PLAN ACTIVATION:

The disaster response structure will be activated, on the receipt of disaster warning or on the occurrence of the disaster, with approval from the competent authority. The occurrence of disaster may be reported by the concerned monitoring authority to the DC /RO/ ADDMA by the fastest means. The DC /RO/ will activate all departments for emergency response including the District EOC, IRS/T and ESFs. Also, he will issue instructions to include the following details:

Exact quantum of resources (in terms of manpower, equipment and essential items from key departments/stakeholders) that is required.

- ✓ The type of assistance to be provided
- ✓ The time limit within which assistance is needed
- ✓ Details of other Task/Response Forces through which coordination should take place.

The DEOC and other control rooms at the Block level as well as Village Level should be activated with full strength. The ADDMA may publish a Press Release declaring such areas to be disaster-affected area under applicable Act / Rule etc. Once the situation is totally controlled and normalcy is restored, the DC/ RO or the Addl. DC (E) / IC declares end of Emergency Response and issues instructions to withdraw the staff deployed in emergency duties.

***District Crisis Management Group / Emergency Support Functions / Incident Response System/ Team will be activated as per the situational requirements by DC***

#### Capability Analysis:

The district has certain resources that can be immediately put to relief work in case of any disaster. There are many NGOs, Voluntary Organizations working in the district which can be a great help for district administration in case of emergencies.

### **Communication and Media:**

The district has good network of wireless (police communication network), which has to be strengthened to cover the remote areas as well. At present the information on earthquake has to be obtained from two Seismological Centres; Geology & Mineral Resources and Pachhunga University College.

### **Mass Media**

There are a number of local news papers and cable operators like LPS, Zonet in the Capital Aizawl besides Doordarshan and All India Radio stations. These establishments will be used for educating/ creating awareness among the public in normal time as well as in disaster situation.

### **District Communication Network**

The district is having good telecommunication facilities. All District Level Officers, Sub-Division, Blocks & important Villages have been provided with a Telephone connection. Wireless communication sets are available with Police Department, PWD and P&E which may be utilized at crisis situation.

### **Preparedness Apparatus**

The district administration along with all the line departments is ready to plunge into action at short notice. The Police, Home Guards, Fire Services, PWD, P&E, PHE, Forest Department, Medical Staff etc and local community are well trained in their fields to take up rescue works. They are ready to take up the rehabilitation measures, at short notice with the available resources. The resources, if necessary, will be augmented from the neighboring districts whenever necessary.

### **Control Room**

At present there is a Control Room what we called District Emergency Operations Centre in Aizawl. Separate control room of the Police Department is also functioning round the clock. Depending upon the need, additional control rooms will be set up by the District Administration at headquarters of SDO(C) and BDOs levels transmitting necessary instructions/information.

### **Vital Installations**

The vital installations that has to be protected like power stations, transformers, telecommunication centres, wireless relay stations, civil and police establishments, Lengpui airport and location of Helipad would have been provided with necessary protection and the same will be intensified during disaster.

Taking stock of Resources available with District Administration, Private individuals and different Government Officials and their deployment at the time of calamity for Relief/Rescue Operation are of vital importance.

All District Level Officers, Sub-Division, Blocks & important Villages have been provided with a Telephone connection.

**DISTRICT EMERGENCY OPERATION CENTRE (DEOC):**

Aizawl District has an Emergency Operation Centre (EOC) located at the D.C's premises in district headquarters. This shall be round the clock set up with sufficient man-power and most modern equipments. Considering the unique responsibility of the district EOC, the Equipments provided to it shall not be taken out for any purpose other than disaster management. This Centre is intended to co-ordinate all disasters related activities in the district starting from preparedness to rehabilitation and reconstruction.

There shall be permanent sitting place for each emergency support functionary in the EOC and they shall be provided with sufficient telephone connections. Only the Nodal ESFs are to sit in the EOC and co-ordinate the disaster management activities in the district with their support agencies. There shall be dedicated telephone lines and other communication facilities.

**ROLE IN NORMAL TIME:**

The Deputy Commissioner of Aizawl District may be empowered to appoint one officer as Officer in-Charge of EOC. The appointee will be responsible for effective functioning of the EOC. Responsibilities of EOC in-charge in normal time include:

1. Ensure that all the equipments in the EOC are in working conditions.
2. Collect data on routine basis from line departments for disaster management.
3. Develop status reports of preparedness and mitigation activities in the district.
4. Ensure appropriate implementation of DDMP
5. Maintenance of data bank with regular updating through IDRN.gov.in.
6. Activate the trigger mechanism on receipt of disaster warning/ occurrence of disaster.

**ROLE OF EOC DURING DISASTER:**

The District EOC shall be a meeting place for different stakeholders. On the basis of message received from the forecasting agencies, warning has to be issued for the general public and the departments, which play a vital role during emergencies. Issuing correct and timely warning would be one of the prime responsibilities of EOC. For effective dissemination of warning, EOC should have a well planned line of communication. The DC shall be the competent authority to disseminate a disaster warning. The warning on occurrence of a disaster will also be communicated to:

1. All IRS members.
2. Members of DDMA/DDMC, Aizawl
3. Hospitals in the disaster area.
4. State Relief Commissioner/Secretary, DM&R.

5. EOC in the neighbouring districts.
6. State EOCs
7. NGO representatives from the district.

### **SOP FOR DISTRICT EMERGENCY OPERATION CENTRE**

1. *Officer in charge of EOC:*

The control room shall be in overall charge of the DC. In the absence of DC, Addl DC (G), Nodal Officer (DM), SDO(S) or any other officer or staff on duty at that point of time shall remain in charge of Control Room. The person in charge of control room shall personally be responsible for implementing the SOP. He/she shall take all decisions without any delay.

2. *Assembly in Control Room:*

Following officers and staff shall assemble in the EOC on getting any information from any source about any emergency. Apart from these, any other officer or staff who get the information from any source will reach the Control room.

- DC, Addl. DC, Nodal Officer (DM), SDO(S), Branch Officer (DM) Members of DDMA, DIPRO and other related officers.
- All staffs of DM&R, PA to DC, PA to Addl.DC.

3. *Getting the Control Room ready:*

Following preparatory steps will be taken up for keeping the DEOC functional during emergency.

- Shift two or more phone lines to control room.
- Keep a radio with new batteries ready.
- Get the generator ready.
- Stock at least 2 barrels of Kerosene and Diesel for running the generator sets.
- Charge the battery of inverter.
- In case of warning, arrange extra batteries.
- Inform NIC & BSNL for internet accessibility.

Alert all responsible officers, LCs/VCs, MOs, Police, Telephone, Agriculture, Social Welfare, MLAs, Station Director, All India Radio, DDK. DIPRO shall inform the media. Apart from this the district EOC must arrange desks for the ESF in its complex for better co-ordination and help. Simultaneously the Onsite EOCs are to be set up with the help of the district EOC. Constant communication between the State EOC, District EOC and Onsite EOC is mandatory for updates on the disaster, which happened.

### **ONSITE EMERGENCY OPERATION CENTRES (OEOC):**

Onsite Emergency Operation Centres (OEOC) are complementary units to District Emergency Operation Centre in the district (EOC), which will operate close to the disaster sites and will be linked directly with the District Emergency Operation Centre. The district administration shall designate the OEOCs, which are located in the 2 Sub-Divisional Office

complexes (except Aizawl Sadar Sub-Division). These strategic locations will help covering operations in a calamity in the district instantly. The concerned SDO(C) will be the Incident Commander at this level. The OEOCs will be physically activated only in time of a disaster. The Concerned SDO(C) of the OEOC unit would be responsible to execute activity at the disaster site.

However, tasks would be controlled and coordinate from District EOC through DDMA/DDMC.

**Hazard Specific “Responsibility Matrix” for Emergency Response Function for sudden disasters where Early Warning is available:**

Time 1	Task 2	Department/ Agency 3	Activity 4
D - 72 Hr	Warning Dissemination	ADDMA, Information & Media Officer (IRS/T & I&PR), DNIC, Media, NGO.	Warning, Dissemination & Preparedness activity. Activation of DEOC for 24/7 & alert IRS/T to be on standby.
D – 48 Hr	Identification of safe place & food stock	ADDMA, Food Unit (IRS/T), NGOs.	Activation of LDMP/ VDMP- safety place / shelter. Dissemination of instructions to public regarding safe place, Control Room & Stock of basic needs.
D – 24 Hr	Checking connectivity & identification of alternate control rooms & volunteers with resources.	ADDMA, Road Group (IRS/T), Communication Unit (IRS/T), Logistic Section (IRS/T), NGOs	Assessment of Road Connectivity/ Road Block. Reporting on WT Channel 6 or DEOC 1077.
*D – 0 Hr			
D + 15 Min	Evacuation, Preliminary Assessment Report & collection of Resources.	ADDMA, DNIC, Media-Information & Media Officer & Display Processor (IRS/T) /& I&PR, AIR Aizawl, DDK.	Activation of DEOC with full strength. Reporting & Collection of data.
D + 30 Min	Quick response to Disaster including meeting of CMG	ADDMA, Operation Section & Medical Unit (IRS/T).	Activation & deployment of QRT, SDRF, Medical Unit
D + 1 Hr	Damage Assessment & Report- I	ADDMA, I&PR, Documentation Unit (IRS/T), NGO	Assessment & Submission of Report by ZO, Field officials, LDMC/ VDMC, Citizens to DEOC (Phone call/WT Channel 6/ SMS)

D + 2 Hr	Damage Assessment & Report- II	ADDMA, I&PR, Documentation Unit (IRS/T), NGO	Meeting of ZOs in the Incident Command Centre, Aizawl DC's Chamber for Assessment & Submission of Report – II by ZO.
D + 3 Hr	Temporary shelter & transportation of victims/ casualties.	ADDMA, Transportation Branch (IRS/T), LDMC/VDMC, NGOs	Provide temporary shelter (LDMP/VDMP) & transportation for affected victims/ casualties.
D + 6 Hr	External Aid & pay out assistance	ADDMA, DM&R Deptt. Finance Branch Director, Cost Unit, Compensation Claim Unit (IRS/T)	Assistance to affected population.
D + 12 Hr	Trauma Counseling	Trauma & Counseling team (LDMC/VDMC), NGOs.	Activation of Trauma & Counseling team of affected localities.
D + 24 Hr	Provide basic needs to affected area clear out Roads & give out continuous information of disaster.	ADDMA, IRS/T, Volunteers, NGOs	Clearance of debris & road blocks, accede of communication with all possible means.

**Hazard Specific “Responsibility Matrix” for Emergency Response Function for sudden disasters where Early Warning is not available:**

<b>Time</b>	<b>Task</b>	<b>Department/ Agency</b>	<b>Activity</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
D + 15 Min	Evacuation, Preliminary Assessment Report & collection of Resources.	ADDMA, DNIC, Media-Information & Media Officer & Display Processor (IRS/T) /& I&PR, AIR Aizawl, DDK.	Activation of DEOC with full strength. Reporting & Collection of data.
D + 30 Min	Quick response to Disaster including meeting of CMG	ADDMA, Operation Section & Medical Unit (IRS/T).	Activation & deployment of QRT, SDRF, Medical Unit
D + 1 Hr	Damage Assessment & Report- I	ADDMA, I&PR, Documentation Unit (IRS/T), NGO	Assessment & Submission of Report by ZO, Field officials, LDMC/ VDMC, Citizens to DEOC (Phone call/WT Channel 6/ SMS)
D + 2 Hr	Damage Assessment & Report- II	ADDMA, I&PR, Documentation Unit (IRS/T), NGO	Meeting of ZOs in the Incident Command Centre, Aizawl DC's Chamber for Assessment & Submission of Report – II

			by ZO.
D + 3 Hr	Temporary shelter & transportation of victims/ casualties.	ADDMA, Transportation Branch (IRS/T), LDMC/VDMC, NGOs	Provide temporary shelter (LDMP/VDMP) & transportation for affected victims/ casualties.
D + 6 Hr	External Aid & pay out assistance	ADDMA, DM&R Deptt. Finance Branch Director, Cost Unit, Compensation Claim Unit (IRS/T)	Assistance to affected population.
D + 12 Hr	Trauma Counseling	Trauma & Counseling team (LDMC/VDMC), NGOs.	Activation of Trauma & Counseling team of affected localities.
D + 24 Hr	Provide basic needs to affected area clear out Roads & give out continuous information of disaster.	ADDMA, IRS/T, Volunteers, NGOs	Clearance of debris & road blocks, accede of communication with all possible means.

## CHAPTER -8

### RECONSTRUCTION, REHABILITATION AND RECOVERY MEASURES

Recovery encompasses both short-term and long-term efforts for the rebuilding and revitalization of affected communities. Recovery planning must provide for a near-seamless transition from response activities to short-term recovery operations—including restoration of interrupted utility services, re-establishment of transportation routes and the provision of food and shelter to displaced persons. Planners should design long-term recovery plans to maximize results through the efficient use of resources and incorporate national recovery doctrine.

#### **8.1. Damage & Loss assessment**

Damage & Loss assessment is carried out by respective Zonal Officers and involves other nodal department if need arises. The report is submitted to the Chairman, ADDMA for perusal & further action.

#### **8. 2. Restoration of Basic Infrastructure, Reconstruction and Repairs (Short term)**

Respective nodal departments will plan, pull in resources and carried out the Restoration of Basic Infrastructure including roads, bridges, drinking water supply, electricity, communication network and roads/ paths leading to the villages; Restoration/ Repair of the lifelines/critical buildings – repair/reconstruct the lifeline buildings /critical buildings which are necessary for treating the affected people or rehabilitation in these buildings as shelters.

#### **8.3 Recovery program (both short and long term)**

The nodal departments are to be assigned the responsibilities of reconstruction and restoration activities, perform these activities diligently and restore the minimum basic infrastructure in the area which is vital for sustaining human life in the area. These departments are PWD, Health & family welfare, Electricity Boards, Development authority, Roads and Buildings, water supply and sanitation departments.



## CHAPTER -9

### FINANCIAL RESOURCES FOR STRENGTHENING OF DDMA

*A Focus on the budget and other financial allocations made at the district level in preparing and executing the disaster management, all relevant Government Orders (GO's) issued from time to time would find a reference here with important ones attached in Annexure*

As Mandated by Section 48 of the DM Act, 2005; The State Disaster Response Fund (SDRF) and State Disaster Mitigation Fund (SDMF), District Disaster Response Fund (DDRF) and District Disaster Mitigation Fund (DDMF) are to be created at the State & District Levels. The Disaster Response Funds at the district level would be used by the DDMA towards meeting expenses for emergency response, relief, rehabilitation in accordance with the guidelines and norms laid down by the Government of India and the State Government.

#### 9.1 State Allocation

Every year the DM&R Department, Government of Mizoram prepares the Budgets for DM in the State.

##### 9.1.1 State Disaster Response Funds (SDRF)

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

##### 9.1.2 State Disaster Mitigation Funds (SDMF)

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

#### 9.2 District

##### 9.2.1 District Disaster Response Funds (DDRF)

As per **Section 48 (1b)** of the DM Act, 2005, SDRF is to be created for pre-disaster activities and to be made available to the DDMA. (Pre- authorization of DC to draw money from treasury in the event of an immediate emergency)

##### 9.2.2 District Disaster Mitigation Funds (DDMF)

As per **Section 48 (d)** of the DM Act, 2005, SDRF is to be created for post-disaster activities and to be made available to the DDMA.

### **9.3 Department Funds**

As per **Section 39 (e)** of the DM Act, 2005, each department of the State Government shall allocate funds for measures for Prevention &/or Mitigation of disaster, capacity building and preparedness.

#### **Recommendation of the 13<sup>th</sup> Finance Commission 2010- 2015 (13<sup>th</sup> FC):**

The 13<sup>th</sup> FC 2010- 2015 recommended funds for Capacity Building for Disaster Response at the District, Block and Village levels. This recommendation helps to capacitate all stakeholders in the DM and also preparation and updating of DM Plans.

All State Government Departments, Boards, Corporations and Urban Local Bodies and Rural Local Bodies would prepare their DM Plans including the financial projections to support these plans. The necessary financial allocation would be made as part of their annual budgetary allocations and ongoing programmes and should be used for mitigation and preparedness measures. They will identify mitigation projects and projects them for funding in consultation with the SDMA/DDMA to the appropriate funding agency. The Departments should also keep in mind for mainstreaming or integration of DM into their development plans and projects. The guidelines issued by the NDMA vis-a-vis various disasters should be considered while preparing mitigation projects.

### **9.3 Disaster Risk Insurance**

ADDMA will look at other options of new financial tools like catastrophe risk financing, risk insurance, micro- insurance etc. to compensate for massive losses on account of disaster.

## CHAPTER -10

### **PROCEDURE AND METHODOLOGY FOR MONITORING, EVALUATION, UPDATING AND MAINTENANCE OF DDMP**

**10.1 Authority for maintaining and reviewing the DDMP-** Aizawl District Disaster Management Authority (ADDMA).

**10.2 Proper Monitoring and Evaluation of the DDMP-** Branch Officer and District Disaster Management Coordinator.

**10.3 Post Disaster Evaluation Mechanism for DDMP-** Aizawl District Disaster Management Authority (ADDMA), Nodal Officer (DMR), Branch Officer (DMR) and District Disaster Management Coordinator.

**10.4 Schedule for updating of DDMP:** ADDMA

**10.4.1 Regular updating process for the DDMP, reflecting sections that need updating at various intervals:** Chairman, CEO, Nodal Officer, Branch Officer, DDMC and Dealing Assistant.

**10.5 Uploading of updated Plans at DDMA/ SDMA:** DNIC and/ or DDMC

**10.6 Conducting mock drills at district and sub district levels,** at least annually, is important for the district as per approved Mock Drill calendar. It would ensure that all parties understand their roles and responsibilities clearly and understand the population size and needs of vulnerable groups involving them in the actual exercise. It would also help to test the efficacy of the plans prepared. Based on feedback from such simulation exercises, the plans will have to be revised and capacity would be enhanced to fill the gaps. While indicating the mock drill plan of action, it is essential to list down.

**10.7 Monitoring and gap evaluation.**

**10.7.1 Conduct of Meeting, Sensitization programme, Workshop cum training** to keep in check whether all the personnel involved in execution of DDMP are trained and updated on the latest skills necessary in line with the updated plans.

## CHAPTER -11

### COORDINATION MECHANISM FOR IMPLEMENTATION OF DDMP

Dealing with a major disaster requires resources from outside the district. When the capacities of a district administration are overwhelmed, higher levels are called upon to assist. Likewise, assets and capabilities in the corporate and non-governmental sectors available around the district may be brought to bear.

There are many actions undertaken by participants in disaster management that support this goal, both pre-disaster (to forestall or reduce potential damage) and post-disaster (to recover from actual damage) and ideally these activities would reduce the potential effects of a disaster significantly. For achieving this objective, the plan should have a pre-established and practiced mechanism for Inter, intra and extra agency coordination.

Communication is the most important tool for effective coordination. Generally, District Emergency Operation centre (DEOC) is the enabler of communication and coordination. Pre-Disaster meetings to review the DDMP with all stakeholders should also be planned.

ADDMA and DEOC to coordinate with all the heads of Department at the district level, IRS/T, ESFs, SDO(C), BDOs, DMTs, Task Forces, NGOs, CBOs, Corporate and the community for effective implementation of DM Plans at all levels. ADDMA should also have a link with the neighbouring district in case of disasters covering neighbouring districts.

The Deputy Commissioners/ Chairman, District Disaster Management Authority of the 11 districts in Mizoram:

Sl No	Name of the District	Name & Designation	Contact Number
1	AIZAWL DISTRICT	Smt Dr Lalhriatzuali Ralte, IAS	STD CODE - 0389 2329202 (O) 2329203 (O)
2	CHAMPHAI DISTRICT	Shri James Lalrinchhana, MCS	STD CODE - 03831 234402 (O) 234401 (R) 234400 (Fax)
3	KOLASIB DISTRICT	Shri John L.T Sanga, MCS	STD CODE - 03837 220001 (O) 221063 (Fax) 220002 (R)
4	LAWNGTLAI DISTRICT	Shri Amol Shrivatava, IAS	STD CODE - 03835 232805 (O) 232656 (Fax) 232001 (R) 233153 (R)

5	LUNGLEI DISTRICT	Shri Kulothungan A, IAS	STD CODE - 0372 2324121 (O) 2324021 (Fax) 2324020 (R)
6	MAMIT DISTRICT	Shri Lalnunhlua, MCS	STD CODE - 0389 2565220 (O) 2565414 (Fax) 2565221 (R)
7	SAIHA DISTRICT	Shri Lalsangliana, MCS	STD CODE - 03835 222024 (/2230600) 222038 (Fax) 222033/223033 (R)
8	SERCHHIP DISTRICT	Smt Nazuk Kumar, IAS	STD CODE - 03838 222432 (O) 222410 (R) 222178 (Fax)
9	HNAHTHIAL	Shri R.Lalremsanga, MCS	8798762758
10	SAITUAL	Shri V.L Hruaizela, MCS	STD CODE - 0389 2562048 (O)
11	KHAWZAWL	Shri. C.C Lalchuangkima, MCS	9233201092 (O)

**District NIC:**

Saiha District, Saiha	<a href="http://saiha.nic.in">http://saiha.nic.in</a>
Champhai District, Champhai	<a href="http://champhai.nic.in">http://champhai.nic.in</a>
Aizawl District Aizawl	<a href="http://aizawl.nic.in">http://aizawl.nic.in</a>
Serchhip District Serchhip	<a href="http://serchhip.nic.in">http://serchhip.nic.in</a>
Kolasib District Kolasib	<a href="http://kolasib.nic.in">http://kolasib.nic.in</a>
DC Lawngtlai	<a href="http://lawngtlai.nic.in">http://lawngtlai.nic.in</a>
Lunglei District, Lunglei	<a href="http://lunglei.nic.in">http://lunglei.nic.in</a>
Mamit District, Mamit	<a href="http://mamit.nic.in">http://mamit.nic.in</a>

**Block Administration**

BDO, Champhai	<a href="http://bdocpi.mizoram.gov.in">http:// bdocpi.mizoram.gov.in</a>
BDO, E.Lungdar	<a href="http://bdoeld.mizoram.gov.in">http:// bdoeld.mizoram.gov.in</a>
BDO, Tlangnuam	<a href="http://bdotlangnuam.mizoram.gov.in">http:// bdotlangnuam.mizoram.gov.in</a>
BDO, Thingsulthiah	<a href="http://bdothingsul.mizoram.gov.in">http:// bdothingsul.mizoram.gov.in</a>
BDO, Tuipang	<a href="http://tuipangblock.mizoram.gov.in">http:// tuipangblock.mizoram.gov.in</a>

<b>BDO, Khawbung</b>	<a href="http://khawbung.mizoram.gov.in">http://khawbung.mizoram.gov.in</a>
<b>BDO, Reiek</b>	<a href="http://bdoreiek.mizoram.gov.in">http://bdoreiek.mizoram.gov.in</a>
<b>BDO, Serchhip</b>	<a href="http://bdoserchhip.mizoram.gov.in">http://bdoserchhip.mizoram.gov.in</a>
<b>BDO, Bilkhawthlir</b>	<a href="http://bdobilkhawthlir.mizoram.gov.in">http://bdobilkhawthlir.mizoram.gov.in</a>
<b>BDO, Chawngte</b>	<a href="http://chawngterd.mizoram.gov.in">http://chawngterd.mizoram.gov.in</a>
<b>BDO, Thingdawl</b>	<a href="http://thingdawlbdm.mizoram.gov.in">http://thingdawlbdm.mizoram.gov.in</a>
<b>RD, Darlawn</b>	<a href="http://rddarlawn.mizoram.gov.in">http://rddarlawn.mizoram.gov.in</a>
<b>RD, Lawngtlai</b>	<a href="http://rdlawngtlai.mizoram.gov.in">http://rdlawngtlai.mizoram.gov.in</a>
<b>BDO, Khawzawl</b>	<a href="http://bdokhawzawl.mizoram.gov.in">http://bdokhawzawl.mizoram.gov.in</a>
<b>BDO, Phaileng</b>	<a href="http://phailengrdblock.mizoram.gov.in">http://phailengrdblock.mizoram.gov.in</a>

**ASSOCIATING TELECOM SERVICE PROVIDERS WITH DM ACTIVITIES**

As per the letter No. 1-33/2016-PP, Dated 08.06.2016 received from National Disaster Management Authority (NDMA), Govt. of India, regarding Associating Telecom Service Providers with DM Activities, the following Telecom Service Providers in Aizawl District are hereby included as an Essential Service Providers/ Key Stakeholders in the ADDMP:

Sl. No.	Telecom Service Providers	Designated Person	Contact Nos
1.	Bharat Sanchar Nigam Limited (BSNL)	James Biakthianghlina Chenkual, SDE	9436155111 (0389) 2327755
2.	Airtel	Rahul Shah, Manager of Network	9957049370 (0389) 2343136
		Deepak Shahi,	9954049289
3.	Vodafone India	Sagar Pandey, Manager of Network	9774818854
		Sanjeev	8794833382

**CHAPTER -12**

**STANDARD OPERATING PROCEDURE AND CHECKLIST**

**12.1 ACTION PLAN ON RECEIPT OF WARNING AND WARNING DISSEMINATION.**

<b>Sl no</b>	<b>Type of Disaster</b>	<b>Date/Time of warning received</b>	<b>Responsible nodal Deptt/ agency</b>	<b>Line Deptt/ Agency</b>	<b>Activity</b>
1	Forest Fire	D+15 min	EF &CC	F&ES, I&PR, RD, LDMC/VDMC	Evacuation, Preliminary Assessment Report, Collection of Resources, Activation of DEOC
2	House Fire	D+15 Min	F&ES	I&PR, RD, LDMC/VDMC	Evacuation, Preliminary Assessment Report, Collection of Resources, Activation of DEOC
3	Biological disaster & epidemic	D-48 Hr	H&FW/ AH& vety	I&PR, AH& Vety, H&FW, PHE, LDMC/VDMC, RD	Warning Dissemination & Preparedness Activity. Activation of DEOC and alert IRS to be on standby.
4	Drought/ Cyclone	D-48 Hr	DDMA	I&PR, Science & Technology Deptt, Agri Deptt, Horti Deptt, PHE, Fisheries, RD, LDMC/VDMC	Warning Dissemination & Preparedness Activity. Activation of DEOC and alert IRS to be on standby.
5	Flood	D-24 Hr	DDMA	I&PR, Home Deptt, SYS, PHE, PWD, P&E, LDMC/VDMC	Warning Dissemination & Preparedness Activity. Activation of DEOC and alert IRS to be on standby.
6	Landslide	D-24 Hr	DDMA	I&PR, PWD, P&E, PHE, LR&S, AMC, LDMC/VDMC	Warning Dissemination & Preparedness Activity. Activation of DEOC and alert IRS to be on standby.

**12.2 NORMS OF RELIEF & REHABILITATION, EMERGENCY RESPONSE/ SUPPORT FUNCTIONS**

SI No	Type of function	Nodal Agency	Line Department
1	Evacuation	DDMA	Home Deptt, SYS, LDMC/VDMC
2	Search & Rescue	DDMA	Home Deptt, SYS, VDMC, DEOC QRT
3	Cordoning/ Traffic/ Law & Order	Home Deptt	LDMC/ VDMC, Zonal Officers
4	Dead body/ body disposal	Home Deptt	H&FW, UD&PA, RD, LDMC/VDMC, Zonal Officers
5	Carcass disposal	AH& Vety	PWD, UD&PA, LDMC/ VDMC

**12.3 HUMANITARIAN RELIEF AND ASSISTANCE**

SI No	Type of Relief	Nodal Agency	Line Department/ Agency
1	Food	FCS&CA	DDMA, Transport, LDMC/VDMC
2	Drinking water	PHE	H&FW, RD, FC&CA, UD&PA, LAD, LDMC/VDMC
3	Medicine & Nutrition	H&FW	SWD
4	Psychosocial and trauma care	H&FW	SWD, NGO, LDMC/ VDMC, MPA
5	Clothing	DDMA	Industry, SWD, LDMC/ VDMC
6	Public Health & Sanitation	H&FW	PHE, AH& Vety, Transport, UD&PA, LAD, LDMC/VDMC
7	Helplines	DDMA	I&PR, Home Deptt, P&E, ICT, Sc&Tech, H&FW, SWD
8	Shelter Management & Repair & Restoration of basic amenities	DDMA	UD&PA, LAD, P&E, PHE, H&FW, SYS, School Education, H&TE, PWD, VDMC/LDMC
9	Management of VIP visits	DDMA	



**ANNEXURE-I**

**GOVERNMENT OF MIZORAM  
DISASTER MANAGEMENT & REHABILITATION DEPARTMENT**

**NOTIFICATION**

*Dated Aizawl, the 4<sup>th</sup> May, 2022*

No. B. 13011/103/2011 – DMR: In pursuance of the provisions under Section 25 of the Disaster Management Act, 2005, and in supersession of pervious notification dated 25.10.2019, the Governor of Mizoram is pleased to re-constitute 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<br>(CEM MADC/LAD/LADC for<br>sixth Scheduled areas)  |
| 3. Members              | : | 1) Superintendent of Police. (Ex-Officio)<br>2) Chief Medical Officers. (Ex-Officio)<br>3) Superintending Engineers, PWD (Govt.nominated)<br>4)Superintending Engineers, PHE (Govt.<br>Nominated)<br>6) Superintending Engineers, P&E (Govt.nominated)<br>7)Jt Commissioner, AMC (Govt.nominated) |
| Chief Executive Officer | : | Additional Deputy Commissioner (i/c DM&R)   |

**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:-

- (i) Prepare a District Management Plan, including District Response Plan for the District.
- (ii) Coordinate and monitor the implementation of National Policy, State Policy, National Plan, State plan and District Plan.
- (iii) 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.
- (iv) 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.

- (v) 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.
- (vi) Monitor the implementation of Disaster Management plan prepared by the District Level Govt. Departments and local authorities.
- (vii) 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.
- (viii) 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.
- (ix) 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.
- (x) Organise and coordinate specialized training programme for different levels of officers, employees and voluntary rescue workers in the District.
- (xi) Facilitate Community training and awareness programmes for prevention of disaster or mitigation with the support of local authorities, Governmental and non-governmental organizations.
- (xii) Set up, maintain, review and upgrade the mechanism for early warning and dissemination of proper information to the public.
- (xiii) Prepare, review and upgrade the District level Response Plan and Guidelines.
- (xiv) Coordinate response to any threatening disaster situation of disaster.
- (xv) Ensure that the District Level Government Departments and local authorities prepare their response plans in accordance with the District Response Plan.
- (xvi) 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.
- (xvii) 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.
- (xviii) 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.
- (xix) Provide necessary technical assistance or give advice to the local authorities in the District for carrying out their functions effectively.
- (xx) 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.
- (xxi) 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.

- (xxii) 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.
- (xxiii) Establish stock piles of relief and rescue materials or ensure preparedness to make such materials available at a short notice.
- (xxiv) Provide information to the State Authority relating to different aspects of disaster management.
- (xxv) Encourage the involvement of NGOs and voluntary social welfare institutions working at the grass root level in the District for disaster management.
- (xxvi) Ensure that communication systems are in order, and disaster management drills are carried out periodically.
- (xxvii) 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 expose 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.
- (3) 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.
- (4) The District Authority shall meet as and when necessary and at such time and place as the Chairperson may think fit.

Sd/- H.LALENGMAWIA  
Commissioner/Secretary to the Govt. of Mizoram  
Relief & Rehabilitation Department

**ANNEXURE-II**

**INCIDENT RESPONSE SYSTEM/ TEAMS**

<b>IRS POSITION</b>	<b>APPOINTED OFFICERS</b>	
RESPONSIBLE OFFICER	Dr. Lalhriatzuali Ralte, IAS Deputy Commissioner, Aizawl - Ph: 2329202 / 2329203/ 9436141306	
INCIDENT COMMANDER	Lalnundika, Addl. Deputy Commissioner & Chief Executive Officer, ADDMA - Ph: 8974036258	
DEPUTY INCIDENT COMMANDER	C. Lalruaia, Sr. Superintendent of Police, Aizawl. Ph: 2315877/2322009 (f)/2305483/ 9436153546(m)	
SITE INCIDENT COMMANDERS	All Zonal Officers within their respective zones	
Information and Media Officer	P.B Lianthangpuii , MIS, Joint Director Ph: 2323206/ 2317514/ 9436142473 (m)	
Liaison Officer	Lalnunfela Chawngthu, Asst. Commissioner & Nodal Officer, DM&R Branch, DC's Office, Aizawl Ph: 9856055680	
Safety Officer	Francis Lalnunluanga Ralte, Superintendent of Police, F&ES Department Ph - 7005608991	
<b>OPERATIONS SECTION CHIEF</b>	Lalñanpuia, Addl. Superintendent of Police (L & O ), Aizawl District. Ph- 9402521128	
<b>Response Branch Director</b>	R. Lalrinzuali, SDC , D.C's Office Ph- 8794103462	
<b>Division Supervisor/Group-in-charge</b>	C. Vaninmawia, Dy. SP (Prosecution) Ph: 2310284 /9862368105	
<b>Task Force/ Strike Team</b>	SDRF	Lalringdika, Commandant, 1 <sup>st</sup> Bn. MAP, Armed Veng Ph- 8414010955
		J. Lalñhafamkima, Commandant, 3 <sup>rd</sup> Bn. MAP, Mualpui. Ph- 9774919312
	SDRF	Lalduhthlanga, Commandant, 5 <sup>th</sup> Bn. IR, Sakawrtuichhun Ph- 9366399858
	NDRF	Kishan Lal, Inspector 1 <sup>st</sup> Bn NDRF, Sakawrtuichhun Ph- 9610484404
	F&ES	Lalremtuanga Varte, Station Officers, F&ES Department . Ph- 9862563794
MRHG	Fabian Lalfakawma, District Commandant, MRHG &CD Ph- 874061968	
<b>Task Force/ Strike Team</b>	(Adventure clubs) S&YS	Moses Lalthanpuia, State Adventure Organiser, S&YS Department. Ph - 9863221437
	Quick Response Team (QRT) ADDMA	Moses Lalthanpuia, State Adventure Organiser, S&YS Department. Ph - 9863221437

	Public Works Department	<p>F.Lalramenga Executive Engineer, PWD (Aizawl building Division). Ph- 9436146629</p> <p>Lalbiaksangi, Executive Engineer, PWD (Aizawl Road South Division). Ph- 9436143015</p> <p>C.Lalthangvela, Executive Engineer, PWD (Aizawl Road North Division) Ph- 8974742305</p> <p>Lalzarloliana, Sr Executive Engineer, PWD (Highway Division-I) Ph- 9436147091</p> <p>Samuel Ramdinthara, Sr Executive Engineer, PWD (Highway Division-II) Ph- 9436151779</p> <p>Zirthanmawia Hmar, Sr Executive Engineer, PWD (Hmuifang Division) Ph - 9436151959</p>
	LC/ VC +YMA	Chairman, Locality/ Village Disaster Management Committees of Incident Sites.
<b>Single Resources</b>	Dr. Lalparliani, Chief Medical Officer (East) Ph- 9862257999	
	Dr. Thani Pachuau, Chief Medical Officer (West) Ph - 9436152102	
	Lalrinmawia, Executive Engineer, P& E Department ( Distribution Division) Ph- 9436154122	
	Lalhminghluu, Executive Engineer, P&E Deptt (Revenue Division) Ph- 9436353096	
	Zodingliana, Sr. Executive Engineer, P&E Deptt (Generation Division) Ph - 9436143078	
<b>Single Resources</b>	Dr. Robert Khawlhing, SNO (Mental Health), H&FW Department Ph- 9436151430	
	Lalsanga, E.E., Aizawl Water Distribution Div- South, PHE - Ph: 9436147168	
	Lalhruaia, Executive Engineer, Aizawl Water Distribution Div- North, PHE Ph- 9436140917	
	C. Zothantluanga, Executive Engineer, Aizawl Water Transmission Division, PHED Ph 9436146241	
<b>Telecommunication</b>	C.Lalrinfela, Informatics Officer, ICT Ph- 8414011617	
<b>Transportation Branch</b>	Lalsangpuii Hmar, Jt. Director (Opr), Transport. Ph: 9862739124	
<b>Road Group</b>		
Group-in-charge	Rodingliana Chawngthu, Sr S.P. (Traffic) Ph: 2310003/ 9436144350 (M)	
Vehicle Co- ordinators	C.Vanlalvena, Addl. Superintendent of Police (Traffic) Ph- 8974241998	
	Inspr. H. Laltanpuia, O.C. (Traffic) Ph: 9862376929	

Vehicle Co-ordinators	Traffic Control Room Ph:2322307 (Aldo Control WT Channel 7)
Loading/Unloading-in-charge	K. Lalrinsanga MVI, Transport Department Ph - 9612366642
<b>Water Group</b>	
Group-in-charge	Lalsanga, Executive Engineer., Aizawl Water Distribution Div- South, PHE – Ph: 9436147168 Lalhruaia, Executive Engineer, Aizawl Water Distribution Div- North, PHE Ph- 9436140917 C. Zothantluanga, Executive Engineer, Aizawl Water Transmission Division, PHED Ph 9436146241
<b>Air Operations Group</b>	
Group-in-charge	Lalsangpuia, Dy. Controller. / Er. i/c Civil Aviation, GAD Ph- 7640982450
Loading/unloading-in-charge	T.Lalramzauva, Asst Commissioner Of Excise & Narcotic Ph- 9336172541
<b>PLANNING SECTION CHIEF</b>	
Resource unit	Zotinkimi, Disaster Management Coordinator Ph- 9436453580
Check-in-status Recorder	Laltlanhlua, DFO, Environment & Forest Department Ph- 9436195286
Situation unit	C. Lalmalsawma, SDPO Aizawl North Ph- 8731004355
Situation unit	Lalrinpuia Chenkual, SDPO Aizawl South Ph- 986258445
Display Processor	P.B Lianthangpuui , MIS, , Joint Director Ph: 2323206/ 2317514/ 9436142473 (m)
Field Observer	Lalbiakkunga, Chairman, Disaster Management Sub-Committee, Central YMA Ph- 8415063063
Weather Observer	Lalramchuana, Sr. Sc. Officer, Directorate of Science & Technology Ph-9612158190
Documentation Unit	Lalchhanhimi, Assistant Commissioner , D.C's Office Ph- 8575951959
Demobilization Unit	Francis Lallawmkima, Addl. Superintendent of Police (A), Aizawl District. Ph- 8575518016
Technical Specialists	H. Lalbiakkima, Jt. Director, Geology & Mineral Resources Ph:9436143001
	Lalramchuana, Sr. Sc. Officer, Directorate of Science & Technology Ph-9612158190
	Pu Lalruatkima, Hydro-geologist, PHED. Ph: 9436360308

<b>LOGISTICS SECTION CHIEF</b>	C. Lalruaia, Sr. Superintendent of Police, Aizawl. Ph: 2315877/2322009 (f)/2305483/ 9436153546(m)
Service Branch Director	Lalnunfela Chawngthu, Asst. Commissioner & Nodal Officer, DM&R Branch, DC's Office, Aizawl Ph: 9856055680
Communication Unit	Robert L. Pakhuangte, Inspector, MPRO (Wireless) Ph-9366684612
Medical Unit	Dr. John Zohmingthanga, Director, Zoram Medical College. Ph: 9436140552  Dr. Zoramthanga, Medical Superintendent, Civil Hospital Ph: 2323236/ 2322144/ 2316224/ 2322318/ 9436153551
Food Unit	Victor Lalawmpuia, Dy. Director, FCS & CA Ph- 9436198916
Support Branch Unit	Lalchhanhimi, Assistant Commissioner , D.C's Office Ph- 8575951959
Resource Provisioning Unit	Victor Lalawmpuia, Dy. Director, FCS & CA Ph- 9436198916
Facilities Unit	Lalremruata Kullai, Jt. Commissioner, AMC Ph- 9862306761
Ground Support Unit	H. Lalhmingliana, DTO (Registering Authority) Ph : 9436146330
	Lalengthanga Hnamte, DTO (Licensing Authority) Ph: 9862958265
Finance Branch Director	Isaac Lalrempuia Chenkual, SDO (Sadar) DC's Office, Aizawl Ph- 8787786244
Time Unit	Isaac Lalrempuia Chenkual, SDO (Sadar) DC's Office, Aizawl Ph- 8787786244
Compensation/Claim Unit	Lalchhanhimi, Assistant Commissioner , D.C's Office Ph- 8575951959
Procurement Unit	R. Lalrinzuali, SDC , D.C's Office Ph- 8794103462
Cost Unit	R. Lalrinzuali, SDC , D.C's Office Ph- 8794103462

**ANNEXURE-III**

**LIST OF ZONAL OFFICERS**

<b>Zone No</b>	<b>Name of Zonal Officers</b>	<b>Link Zonal Officers</b>	<b>Area covered</b>	<b>ADC In-charge</b>
I	PuRemlalliana Hnamte, Deputy Director, LR&S Mb-9862355288	Pi Lalhruaitluangi, Deputy Director, UD&PA Mb - 80144 47330	Selesih, Durtlang 'N', Durtlang, Durtlang Leitan.	<b>Pi C. Laltleipuii, ADC (G)</b>
II	Pi Lalhruaitluangi, Deputy Director, UD&PA Mb - 80144 47330	Pu Remlalliana Hnamte, Deputy Director, LR&S Mb-9862355288	Chaltlang Lily Veng, Chaltlang, Laipuitlang, Edentharr, Chanmari 'W'.	
III	Pi R. Lalrinzuali SDC, DC Office Mb-8794103462	Pi Lalchhanhimi A.C-II, DC Office, Aizawl Mb. 8575951959	Bawngkawn, Bawngkawn South, Thuampui	
IV	Pu Lalnunfela Chawngthu, E.O/AC-I, DC Office, Aizawl Mb -9856055680	Pi Lalhruaitluangi, DLAO Mb - 9862614255	Khatla, Khatla South, Khatla East, Nursery, Bungkawn, BungkawnVengthar, Maubawk, Lawipu	
V	Pi Lalchhanhimi A.C-II, DC Office, Aizawl Mb. 8575951959	Pu Lalnunfela Chawngthu, E.O/AC-I, DC Office, Aizawl Mb - 9856055680	Muanna Veng, Zuangtui, Zemabawk, Zemabawk North, Falkland.	
VI	Pi Lalhlimpuii Ralte, DCSO 'E' Mb - 9863225008	Pi Dorothy Muansangi, Deputy Director, LAD Mb-9774066872	Ramhlun North, Ramhlun Venglai, Ramhlun Vengthar, Ramhlun Sports Complex, Ramhlun South, Ramthar North, Ramthar	<b>Pu Lalnundika, ADC (E)</b>
VII	Pi Dorothy Muansangi, Deputy Director, LAD Mb-9774066872	Pi Lalhlimpuii Ralte, DCSO 'E' Mb - 9863225008	Aizawl Venglai, Electric Veng, Chanmari, Zarkawt. Dawrpui, Sarong Veng, Chhinga Veng, Tuithiang, Armed Veng, Armed Veng South, Chite	
VIII	Pu Isaac C. Lalrempuia, SDO (S) Mb - 8787786244	Pu Vanlalrova, Deputy Director, S&YS Mb-9436146135	Tuikual North, Tuikual South, Dinthar, Dawrpui Vengthar, Vaivakawn, Hunthar, Kanaan, Chawnpui, Zotlang,	<b>Pi C. Laltleipuii, ADC (G)</b>
IX	PuVanlalrova, Deputy Director, S&YS Mb-9436146135	Pu Isaac C. Lalrempuia, SDO (S) Mb - 8787786244	Zonuam, Ainawn Veng, Luangmual, Chawlhmun, Tuivamit, Tanhril, Sakawrtuichhun, Rangvamual, Phunchawng.	
X	Pi Lalhruaitluangi, DLAO	Pu Lalrinawma Khiangte,	Bethlehem, Bethlehem	<b>Pu Lalnundika, ADC (E)</b>



	Mb - 9862614255	Deputy Director, Rural Development Mb - 9862344118	Vengthlang, College Veng, Venghlui, Upper Republic, Republic, Republic Vengthlang, ITI.	
XI	Pi Mary L. Rodinpuii, SDC, DC Office, Aizawl Mb - 8837345273	Pu Lalrinawma Khangte, Deputy Director, Rural Development Mb - 9862344118	Salem Veng, Dam Veng, Venghnuai, Tuikhuahtlang, Mission Veng, Mission Vengthlang, Model Veng.	
XII	Pu Lalrinawma Khangte, Deputy Director, Rural Development Mb - 9862344118	Pi Mary L. Rodinpuii, SDC, DC Office, Aizawl Mb - 8837345273	Thakthing, Kulikawn, Tlangnuam, Tlangnuam Vengthar, Saikhamakawn, Melthum, Hlimen.	
XIII	PuLalfakawma Chhakchhuak, SDO (C) Sakawrdai	9436151829	Khawpuar, Luakchhuah, Lungsum, Mauchar, N. Khawdungsei, N. Tingmun, New Vervek, Palsang, Sakawrdai, Thingsat, Upper Sakawrdai, Vaitin, Vervek (Damdai), Zohmun, Zokhawthiang (Kani)	
XIV			Chhanchhuahna Khawpui, Darlawn, Darlawn Chhimveng, Darlawn Venghlun, E.Phaileng, Hmunghak, Kepran, Khanpui, Khawruhlian, Lailak, N.Serzawl, Pehlawn, Ratu, Sailutar, Sawleng, Sunhluchhip	
XV	Dr. Saithangpuia BDO, Thingsulthliah	8787573706	Darlawn, Phulmawi, Seling, Sesawng, Thingsul Tlangnuam, Thingsulthliah, Tungvel, Tuikhurhlu	
XVI	Pi Jennifer Vanlalhruii Pachau BDO, Tlangnuam	8974756807	Lengpui, Lungleng, Muthi, N. Lungleng, Sairang, SairangDinthar, Sihmui, Samt lang, Sihphir, Sihphir Venghlun, Tuirial, Tuirial Airfield	<b>Pi C. Laltleipuii, ADC (G)</b>
XVII	PuChinlianmanga, BDO, Aibawk	7005273242	Aibawk, Chamring, Chawilung, Falkawn, Hmuifang, Hualngohmun, Kelsih, Lamchhip, Lungsei, Melriat, Muallungthu, N. Lungsei, Phulpui, S. Maubuang, Sailam, Samlukhai, Sateek, Sialsuk, Sumsuih, Tachhip, Thiak	

**ANNEXURE-IV**

**SITES FOR SETTING UP OF SHELTER**

1. Community Hall located in each & every locality/ village.
2. Govt. High Schools, Middle Schools, Primary Schools in each & every locality/ village.

List of NSSP Schools where Structural Rapid Visual Survey have been conducted & Non- Structural Risk Mitigations have been done:-

	<b>Aibawk RD Block</b>	<b>Darlawn Sub- Div.</b>
1.	Aibawk P/S	Govt. Darlawn P/S -I
2.	Chamring P/S	Govt. Darlawn P/S - III
3.	Chawilung P/S	Govt. E. Phaileng P/S –II
4.	Falkawn P/S	Govt. Hmunghak P/S
5.	Hmuifang P/S	Govt. Khanpui P/S -I
6.	Lungsai P/S	Govt. Khawruhlian P/S- III
7.	Lungsei P/S	Govt. Khawruhlian P/S –I
8.	Maubuang P/S	Govt. Darlawn Model M/S
9.	Melriat P/S	Govt. Darlawn M/S
10.	Muallungthu P/S- I	Govt. Khanpui M/S
11.	Phulpui P/S	Govt. Khawruhlian M/S
12.	Aibawk M/S	Govt. Lamherh M/S
13.	Chawilung M/S	Govt. N. Serzawl M/S
14.	Falkawn M/S	Govt. Vaitin M/S
15.	Hualngohmun M/S	Govt. Darlawn HS
16.	Kelsih M/S	Govt. Darlawn HS- II
17.	Lamchhip M/S	Govt. E. Phaileng HS
18.	Maubuang M/S	Govt. Kepran HS
19.	Melriat M/S	Govy. Khawruhlian H/S
20.	Muallungthu M/S	Govt. Ratu HS
21.	Govt. Awithangpa H/S	Govt. Sawleng HS
22.	Govt. Falkawn H/S	Govt. Suangpuilawn H/S
23.	Govt. Melriat H/S	Govt. Tuisualral H/S
24.	Govt. Samlukhai H/S	Govt. Vanbawng H/S
25.	Govt. Sateek H/S	Govt. Darlawn HSS
26.	Govt. Sialsuk H/S	
27.	Govt. Sumsuih H/S	

<b>Aizawl Sub- Div (Sadar)</b>			
	<b>Zone I</b>	<b>Zone II</b>	<b>Zone III</b>
1	College Veng P/S	Bawngkawn P/S- I	Aizawl Venglai P/S
2	Tuithiang P/S	Bawngkawn P/S- II	Electric Veng P/S
3	Venghlui P/S	Bawngkawn P/S- V	Electric Veng P/S II

4	Armed Veng P/S II	Durtlang P/S -I	Ramhlun North P/S
5	Chhing Veng P/S I	Zemabawk P/S- I	Ramhlun South P/S
6	Govt. Electric Veng M/S	Zemabawk P/S -II	Ramthar P/S I
7	Armed Veng M/S	Zuangtui P/S	Chaltlang P/S I
8	Chhing Veng M/S	Govt. Bawngkawn M/S -I	Chaltlang P/S II
9	Pianghleia H/S	C.Z. Huala M/S	DIET Practising P/S (Chaltlang)
10	Mizo H/S	Durtlang M/S- I	Aizawl Venglai M/S
11	Model H/S	Durtlang M/S -III	B.M. M/S Ramhlun
12	MICE	T.S. Thuampui M/S	Endala M/S
13	Modern H/S	Govt. Zemabawk M/S	Ramhlun M/S
14	Central H/S	Govt. Zuangtui M/S	Ramthar M/S
15	K.V.M.	Bawngkawn H/S	Chaltlang H/S
16	St. Pauls	Muthi H/S	Hrangchhuana H/S
17	Govt. Aizawl East H/S, Armed Veng	Govt. Sihphir H/S	Govt. Republic H/S
18	Modern HSS	Sihphir Vengthar H/S	Ramhlun Vengthar H/S
19	Central HSS	Tinzagin H/S	Ramhlun South H/S
20	Mizo HSS	Zuangtui H/S	Chaltlang HSS
21	Oxford HSS, Electric Veng	Zemabawk H/S	Republic HSS
22		Zemabawk North H/S	

	<b>Zone IV</b>	<b>Zone V</b>	<b>Zone VI</b>
1	Chawlhmun P/S	Chanmari West P/S	Damveng P/S
2	Lengpui P/S -I	Chawnpui P/S	Hlimen P/S
3	Lengpui P/S -III	Dawrpui Vengthar P/S	Kulikawn P/S
4	Phungchawng P/S	Dinthar P/S -I	Melthum P/S
5	Sairang P/S -I	Edentharr P/S	North Lungleng P/S
6	Sairang P/S -III	Hunthar P/S	Saikhamakawn P/S
7	Sakawrtuichhun P/S -I	Kanan P/S	Bethlehem P/S
8	Chawlhmun M/S	Zohnuai P/S	Bethlehem Vengthlang P/S
9	Govt. Complex M/S	Zonuam P/S	Rev. Thianga P/S
10	Lengpui M/S -I	Zotlang P/S	Venghlui P/S
11	Lengpui M/S- II	Chawnpui M/S	I.T.I. P/S
12	Tanhriil M/S	Dawrpui VT M/S	Hlimen M/S
13	Hunthar M/S	Dinthar M/S -I	Kulikawn M/S
14	Kanan M/S	Dinthar M/S -II	Lungleng I M/S
15	Chawnpui H/S	Edentharr M/S	North Lungleng I M/S
16	Ch. Chhunga H/S	Vaivakawn M/S	Republic M/S II
17	Chanmari West H/S	Zonuam M/S	Govt. Bethlehem Vengthlang M/S
18	Chawlhmun H/S	Zotlang M/S	Bible Venghlui M/S
19	Sakawrtuichhun H/S	Luangmual M/S	Venghlui M/S
20	Sairang H/S	Dinthar H/S	Govt. H/S Hlimen

21	Tanhriil H/S	Tuikual South H/S	Govt. Lungleng H/S
22	Lengpui H/S	Hrangchhunga H/S	Samtlang H/S
23	Maubawk H/S	KM. H/S	Aizawl H/S
24	Helen Lowry H/S	RM. H/S	Govt. Bethlehem Vengthlang H/S
25	Zotlang H/S	Vaivakawn H/S	Kulikawn H/S
26	Aizawl North H/S	K.M. HSS	Mamawii H/S& HSS
<b>Zone VII</b>			
1	Bungkawn Vengthar P/S	Tuikual P/S III	Bungkawn H/S
2	Khatla P/S -I	Boy M/S	JL. H/S
3	Lawipu P/S	Nursery M/S	PG. H/S
4	Maubawk P/S	Govt. Comp. Model School	Khawrihnim H/S
5	Model P/S (Nursery)	Lawipu M/S	Synod H/S
6	Nepali P/S (Khatla)	Mission Vengthlang M/S	I.T.I. South H/S
7	Nursery P/S	Tuikual North M/S	Gorkha H/S
8	Tuikual P/S -I	Tuikual South M/S	JL. HSS
9	Tuikual P/S -II	T.B.L. M/S	

ANNEXURE-V

**RESOURCE INVENTORY**

**A. DISTRICT EMERGENCY OPERATION CENTRE:**

**Disaster Management Coordinator** : 1  
**Quick Response Team** : 14  
**Contact No** : 1077/ 0389-2317717

Sl. No.	Name & Brand of Equipment	Qty.
	Figure of 8 (for rope)	5 Nos.
	Jumar	6 pairs
	Foot tape	1 Nos
	Push rope (50mts)	2 coils
	Club rope (100mts)	1coil
	Projector	1 No.
	P.A. set (combo)	2 Nos.
	Jumper (Thir tiang)	3 Nos.
	Aluminum Ladder	3 Nos.
	Parallel rope 100 mts	3 Coils
	Harness	6 nos
	Tape Artier (Hrui leihlawn)	3 Nos.
	Body Harness	4 Nos.
	Climbing Helmet	115 Nos.
	Carabineer Screw	15 Nos.
	Pitagor (diaper harness)	1 Nos
	Pulley	7 Nos.
	2 Fold Stretcher	3 Nos.
	Four Fold Stretcher	1 No.
	Sledge Hammer	2 No.
	Projector Screen with Stand	1 set
	Petromax	1 No.
	Search light	2 No.
	LED Torch	3 Nos.
	Megaphone MH 20	4 Nos.
	Guangzau LED light	1 Nos
	Human life detector	2 Nos.
	Life Jacket	5 no.
	Portable oxygen kit	1 Nos
	Spine Board	1 Nos
	Fire Extinguisher 9 ltrs. (A) Minimax P.R. Type Soda Acid	2 Nos.
	Fire Extinguisher 2 kg (A B C)	2 Nos.
	Bosch 14' Chop saw	1 No.
	Honda Generator EXL 2008, Manual Start 2KVA	2 No.
	Generator 3KVA	1 No.
	Chainsaw (full set)	4 No.

Aska Inflatable Tower Light	2 Nos.
Light Mast: Pelican Light	1 No.
Flood light	1 Nos.
Multipurpose Diamond Saw for Concrete, Metal with Diamond Wheel	1 No.
Diamond Blade for Multipurpose Diamond Saw	2 Nos.
Angle Cutter 14" Dial	1 No.
Replacement Blade for Angle Cutter	2 Nos.
Hydraulic Cutter	1 No.
Traffic Cone	5 Nos.
Cordoning Tape	1 Coil
Spade with Steel Handle	2 Nos.
Tape sling	7 Nos
Heavy Duty Extension Cord 25m	2 No.
Bladder (Truck Tube)	7 Nos.
Folding Bed	1 No.
PAW M rigging plate	2 Nos
I'D L Descender	2 Nos
First Aid Box	2 Set
Notice Board cum White Board	6 Nos.
Collapsible water carrier (15ltrs)	2 Nos
Gazebo tent	1 Nos
Signal Tube	2 Nos.
Folding chair	2 Nos
Folding stool	2 Nos
Inflatable rubber Boat with OBM (12 persons)	1 No.
B. A. Compressor	1 No.
Under Water B. A. Set	1 No.
Scuba Diving Suit	1 No.
Folding table	1 Nos
Mittons	4 pairs
WT handset	18 Nos
Emergency Response Vehicle	2 nos
Scoop stretcher	2 Nos
Basket stretcher	1Nos
Rechargeable LED flood light	1 Nos
Life detector	1 Nos
Ground sheet	4 Nos
Pelican search light	3 Nos

**B. SDRF, 3<sup>rd</sup> Bn MAP**

**No. of man power : 44 personel**

SI No	Name of S&R equipment	Quantity	Location	i/c Officer	Contact No.
1	Rotary rescue saw	1	3 <sup>rd</sup> MAP Hq, Mualpui	Naik Johny Lalremruata	9862366142
2	Rotary rescue saw for concrete diamond tip	1			
3	Chain saw 18"	2			
4	Hydraulic jack 10 tons	1			
5	Rotary saw blade for metal	2			
6	Reciprocating saw	1			
7	Generator (2.5 KVA)	1			
8	Tower light	1			
9	Florescent jacket	17			
10	Climbing rope (10mm)	1			
11	4 fold stretcher	1			
12	Carabiner	4			
13	Ascender	2			
14	Full body harness	10			
15	Figure of 8	5			
16	Life jacket	4			
17	Nylon rope (20 mm)	1		Adm. Inspr. T.C Zothansanga	9436157133
18	Pulley	4			
19	Hammer 2 kgs	3			
20	Hammer 5 kgs	3			
21	Scoop stretcher	1			
22	Pelican light (pocket)	10			
23	LED Pelican light	2			
24	Mitten	4			
25	Seat harness	4			
26	Rope ladder	2			
27	First aid box	2			
28	Extension chord	1			

**C. SDRF, 1<sup>st</sup> Bn MAP**

**No. of man power : 72 personel**

SI No	Name of S&R equipment	Quantity	Location	i/c Officer	Contact No.
1	Rope 10mm	2	1 <sup>st</sup> BN MAP Hq, Armed Veng	Inspr. T.K Siama	879432439 6009257203
2	Rope 8mm	1			
3	Rope ladder	4			
4	Helmet yellow	50			
5	Helmet blue	20			
6	Four fold stretcher	1			
7	Angle cutter	2			
8	Diamond blade ofr angle cutter	1			
9	Composite blade for angle cutter	4			
10	Angle cutter (large)	1			
11	Chain saw/ 5822P	1			
12	Chain saw 18"	2			
13	Chain saw blade	2			
14	Reciprocating saw	1			
15	Generator 2.5 KVA	1			
16	Hydarulic jack 10 tons	1			
17	Tower light	1			
18	Florescent jacket (red)	7			
19	Florescent jacket (yellow)	10			
20	Head torch	10			
21	Full body harness	10			
22	Mega phone	2			
23	Nylon rope (20 mm)	1 coil			
24	Disposable gloves	1 box			
25	Life jacket	4			
26	Ascender	2			
27	Figure of 8	3			



28	Carabiner	2			
29	Pulley	2			
30	Aluminium ladder	1			
31	Search light (MA-III)	1			
32	Demolition hammer	1			
33	Bolt cutter	2			
34	Circular saw	1			
35	Rotary rescue saw blade	1			
36	Stretcher	2			
37	Drilling machine	1			
38	Search light (medium)	1			
39	Search light (big)	1			
40	Hammer 2 kgs	3			
41	Hammer 5 kgs	3			
42	Scoop stretcher	2			
43	Pelican pocket light	10			
44	Heavy duty extension chord	1			

**D. SDRF, 5<sup>th</sup> IR**

**No. of man power :**

SI No	Name of S&R equipment	Quantity	Location	i/c Officer	Contact No.
1	Angle cutter	2	5 <sup>th</sup> IR Hq, Lungverh	Inspr. C.Lalkhawngaiha	8014198530
2	Diamond tip blade	1			
3	Composite blade	2			
4	Rotary rescue saw blade	1			
5	Chain saw	2			
6	Cahin saw blade	2			
7	Drilling machine	1			
8	Reciprocating saw	1			
9	Generator 2.5 KVA	1			
10	Hydraulic jack 10 tons	2			

11	Rope 10 mm	2			
12	Rope 8 mm	1			
13	Stretcher	2			
14	Cutter	1			
15	Helmet	49			
16	Florescent jacket	17			
17	Rope ladder	4			
18	Search light (medium)	1			
19	Search light (big)	2			
20	Safety goggles	10			
21	Head torch	10			
22	Full body harness	10			
23	Disposable gloves	2 boxes			
24	Mega phone	2			
25	Nylon rope 20 mm	1 coil			
26	Heavy duty work gloves	5			
27	Life jacket	4			
28	Ascender	2			
29	Figure of 8	3			
30	Carbiner	2			
31	Pulley	2			
32	Ladder	1			
33	Demolition hammer	1			
34	Bolt cutter	1			
35	Circular saw	1			
36	4 fold stretcher	1			
37	Tower light	1			
38	Hammer 2 kgs	3			
39	Hammer 5 kgs	3			
40	Scoop stretcher	2			
41	Pelican pocket light	10			
42	Extension chord	1			
43	LED pelican light	2			

44	Mitten	4			
45	Seat harness	4			
46	First aid box	2			

**E. FIRE AND EMERGENCY SERVICES**

SI No	Location	No of fire tenders	No of station officer	No of sub-station officer	No of leading firemen	No of firemen	Contact No.	i/c Officer	Contact No.
1	Khatla F.S	3	1	1	2	17	2336406	Lalbiakdika Chhakchhuak	9383181370
2	Aizawl F.S	1	-	1	2	9	2322384	H.Buankhuma	9862040307
3	Kulikawn f.S	1	-	-	1	7	2312000	Lalngurthanga	8974248759
4	ITI F.S	2	-	-	1	4	9366984684	Romawia	9774999165
5	Bawngkawn F.S	1	-	-	1	3	-	C.Lalchhuanthanga	9612170982

**List of equipments for search & rescue**

SI No	Name of S&R equipment	Quantity	Location	i/c Officer	Contact No.
	Hydraulic bolt cutter	1	Khatla F.S	Lalbiakdika Chhakchhuak Station Officer	9383181370 2336406
	Bolt Cutter	3			
	Search light	4			
	Pulling & lifting machine	1			
	Rescue rope	1			
	Rope ladder	2			
	Extension ladder	1			

	Hammer	6			
	Concrete breaker	1			
	Spade	2			
	Crow bar	2			
	Chain saw	1			
	Helmet	12			
	Head lamp	2			
	Glass breaker	1			
	Hydraulic bolt cutter	1	Aizawl F.S	H.Buankhuma Sub-station Officer	9862040307 2322384
	Search light	1			
	Rescue rope	1			
	Rope ladder	1			
	Extension ladder	1			
	Helmet	5			
	Head lamp	4			
	Stretcher	1			
	Carabiner	1			
	Harness	1			
	Search light	2	Kulikawn F.S	Lalngurthanga Leading Fireman	8974248759 2312000
	Rescue rope	1			
	Extension ladder	1			
	Helmet	5			
	Head lamp	4			
	Stretcher	1			
	Spade	1			
	Shovel	1			
	Hydraulic bolt cutter	1			
	Search light	1	ITI F.S	Romawia, Leading Fireman	9774999165 9366984684
	Rescue rope	1			
	Ladder	1			
	Helmet	7			

	Head lamp	4			
	Bolt cutter	1			
	Stretcher	1			
	Helmet	3	Bawngkawn F.S	LFM C.Lalchhuanthanga	9612170982

**F. NDRF**

**No. of man power : 35 personel**

SI No	Name of S&R equipment	Quantity	Location	i/c Officer	Contact No.
1	Carbide tipped chainsaw	1	5 <sup>th</sup> IR BN PTC Lungverh E-2 Team, Aizawl	Insp- Banikant	8403819069 9435117541
2	2.2 KVA Generator set	4			
3	Breaching unit	1			
4	E/Lighting tower	1			
5	Smoke ventilator	2			
6	R.R saw gasoline	4			
7	Hrdraucic spreader/ cutter	1			
8	Fogging machine	1			
9	Aqua floating pump	1			
10	5.5 portable Honda generator	2			
11	OBM	2			
12	Inflatable rubber boat	2			
13	Life bouy	32			
14	Life jacket	35			
15	Foot pump	2			
16	Blower electric	2			
17	Chipping hammer (M)	3			
18	Chipping hammer (H)	1			
19	Cordless drill machine	1			
20	Ramset	1			
21	Come along	1			
22	Angle cutter	5			

23	Rotary hammer drill	4			
24	Reciprocating saw	4			
25	Circular saw (E)	4			
26	Electric drill machine	4			
27	Mega phone	2			
28	Exhaust fan	4			
29	BA SAT	2			
30	Air lifting bag	1 set 10 bags			
31	Distress signal unit	12			

Sl No	Type of vehicle	Quantity	Location	i.c Officer/ person	Contact No.
1	Maruti gypsy AS-01. AB-9875	1	5 <sup>th</sup> IR BN PTC Lungverh E-2 Team, Aizawl	Insp- Banikant	8403819069 9435117541
2	Maruti gypsy AS- DL-9CQ.2701	1			
3	TATA-407, AS- 01V.6207	1			

**G. AMBULANCE**

Sl. No.	Item Name	Qty. & Unit	Location	Availability Month	Operator Provided
1.	Ambulance MZ 01 E 2724	1 No	Khawruhlian PHC	<b>January to December</b>	<b>Yes</b>
2.	Ambulance MZ 01 E 3451	1 No	Thingsulthliah PHC		
3.	Ambulance MZ 01 E 3348	1 No	Darlawn PHC		
4.	Ambulance MZ 01E 2416	1 No	Lengpui CHC		
5.	Ambulance MZ 01E 2417	1 No	Aibawk PHC		
6.	Ambulance MZ 01 E 3194	1 No	Sialsuk PHC		

**H. SKILL HUMAN RESOURCES**

Sl. No.	Item (Skill) Name	No. of Persons available	Availability months	Prior experience in emergency response (Y/N)	Prior training in emergency response (Y/N)	Location/ Station
1	QRTs	21	January to December	Yes	Yes	1077/ 2317717
2	1 <sup>st</sup> Bn NDRF	35 trained personnel	January to December	Yes	Yes	9435117246
3.	1 <sup>st</sup> Bn. MAP-SDRF	118 Trained Personnel	January to December	Yes	Yes	Hqrs., Ph: 2322333
4.	3 <sup>rd</sup> Bn. MAP-SDRF	104 Trained Personnel	January to December	Yes	Yes	Hqrs., Ph: 2317681
5.	5 <sup>th</sup> Bn. IR-SDRF	116 Trained Personnel	January to December	Yes	Yes	Hqrs., Sakawrtuichhun Ph: 2916156
6.	Medical Team		January to December	Yes	Yes	Casualty, Civil Hospital, Aizawl. Ph: 2322318
7.	Fire Fights		January to December	Yes	Yes	Aizawl F& ES Department, Hunthar Ph:2322384/101
8.	MPRO		January to December	Yes	Yes	Office of Deputy Commissioner, Aizawl Ph: 2321119 & Police (WT)Control Room, Ph: 2334327
9.	Traffic Police		January to December	Yes	Yes	Traffic Control Room, Ph: 2322307

**ANNEXURE-VI**

**LIST OF HOSPITALS AND OTHER MEDICAL FACILITIES**

<b>Serial No.</b>	<b>Name Of the Hospitals</b>	<b>Address</b>	<b>Phone No.</b>
1.	Presbyterian Hospital	Durtlang	(0389) 2361222/2362042 (Fax)2361185
2.	Seventh Day Adventist Hospital	Chawnpui	(0389) 2340326
3.	Greenwood Hospital	Bawngkawn,Aizawl	(0389) 2341395/ 2341397
4.	Bethesda Rural Hospital	Bawngkawn,Aizawl	(0389) 2341960 /2341833
5.	Nazareth Medi-Tech Diagnostic & Care Centre	Ramluhn "N"	(0389) 2305068
6.	Ebenazar Hospital	Chawnpui	8118900590
7.	Mizoram Health Care	Dawrpui	(0389) 2314523
8.	Grace Nursing Home & Research Centre	Lower Zarkawt,Aizawl	(0389) 2318637 /2318571
9.	Aizawl Hospital	Mission Veng,Aizawl	(0389) 2319537 (Fax)2300072
10.	Care Hospital	Dawrpui,Aizawl	(0389) 2313986
11.	Alpha Hospital	Kulikawn,Aizawl	(0389)2300535 /9436140380
12.	B.N Hospital & Research Centre	Kulikawn,Aizawl	(0389)2300705 /2300702

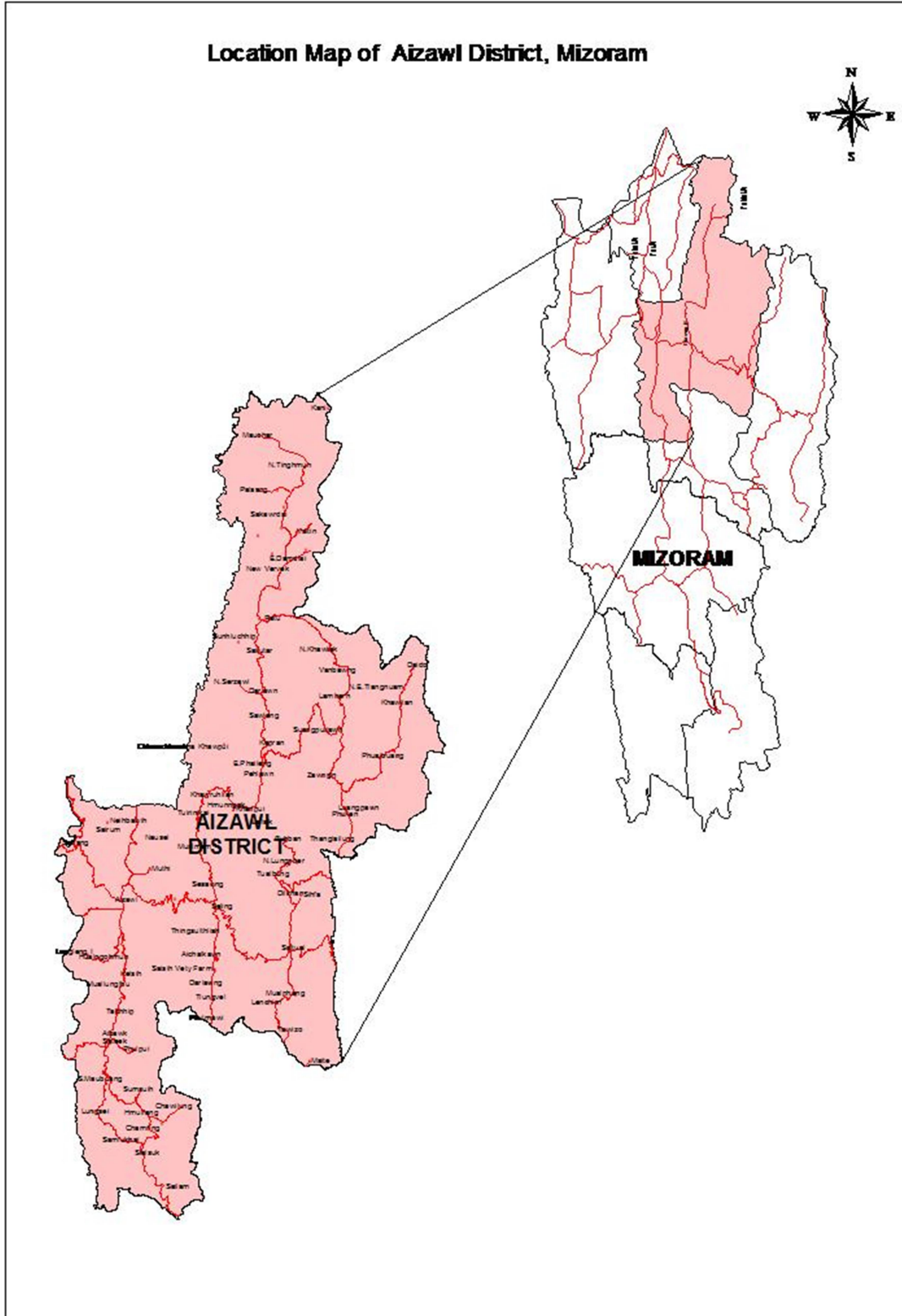


**ANNEXURE-VII**

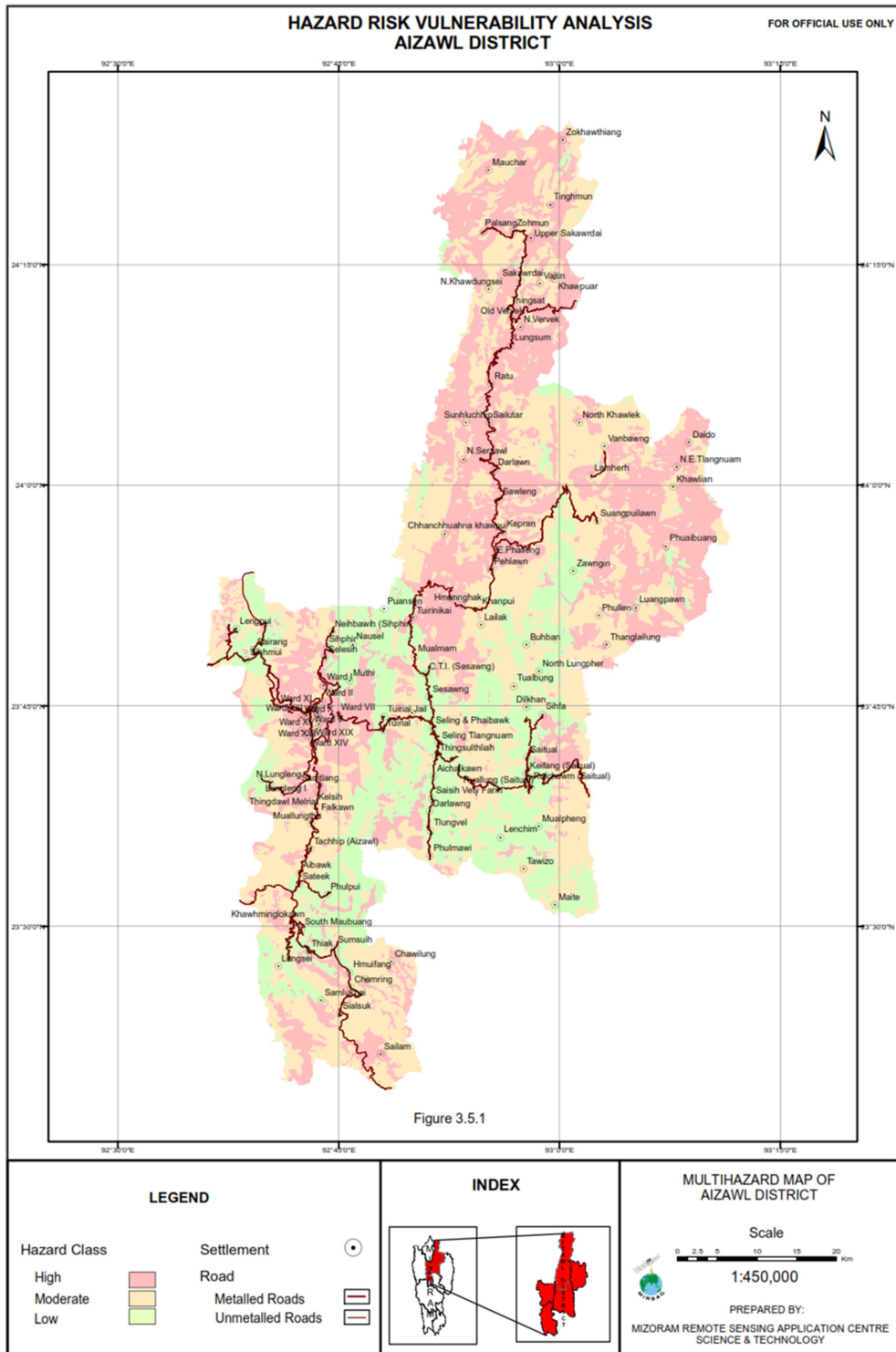
**TELECOM SERVICE PROVIDERS**

Sl. No.	Telecom Service Providers	Designated Person	Contact Nos
1.	Bharat Sanchar Nigam Limited (BSNL)	James Biakthianghlina Chenkual, SDE	9436155111 (0389) 2327755
2.	Aircel Dish net Wireless Limited	Bishwajit Sahu, Manager of Network	9856199414
		George Fanai, Marketing ExPecutive	9856199144
3.	Airtel	Rahul Shah, Manager of Network	9957049370 (0389) 2343136
		Deepak Shahi,	9954049289
4.	Vodafone India	Sagar Pandey, Manager of Network	9774818854
		Sanjeev	8794833382

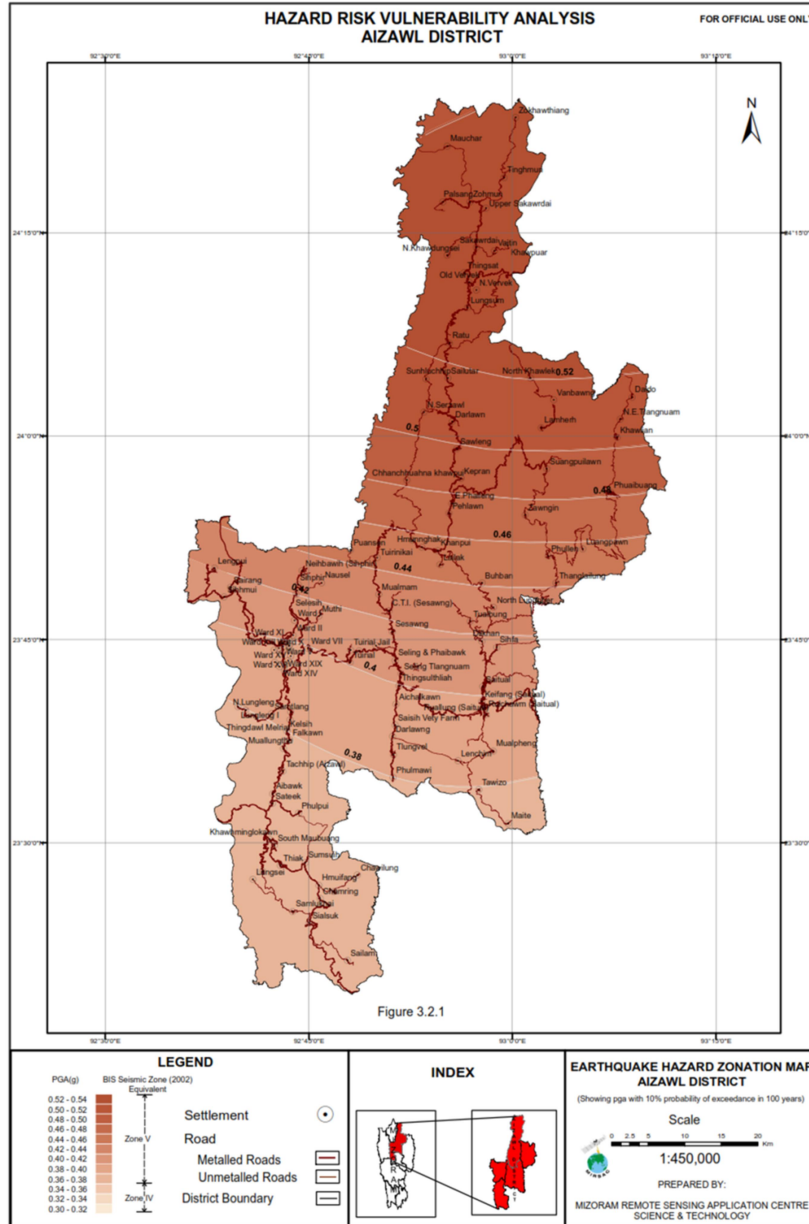
LOCATION MAP OF AIZAWL DISTRICT



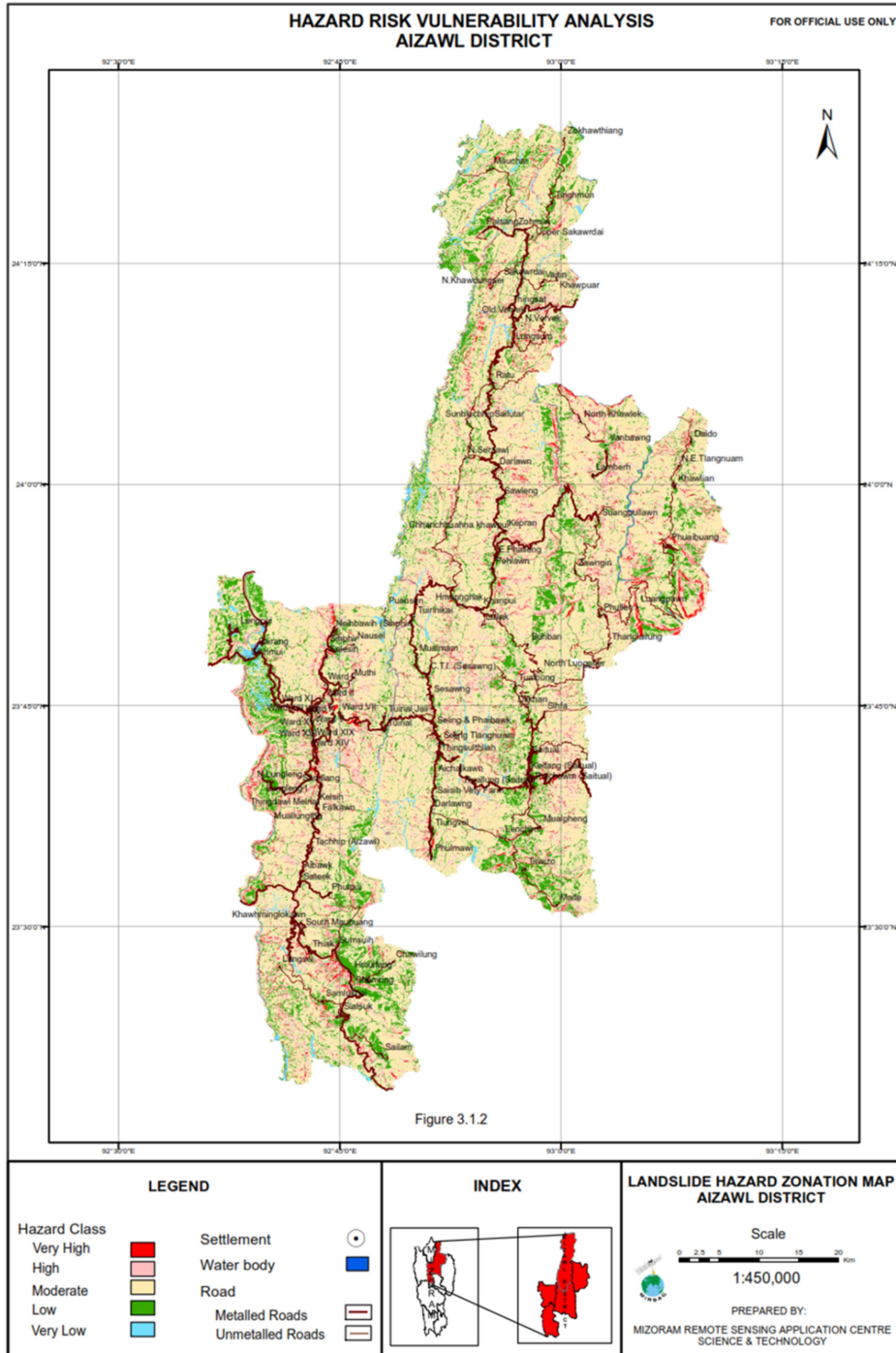
MULTI HAZARD MAP OF AIZAWL DISTRICT



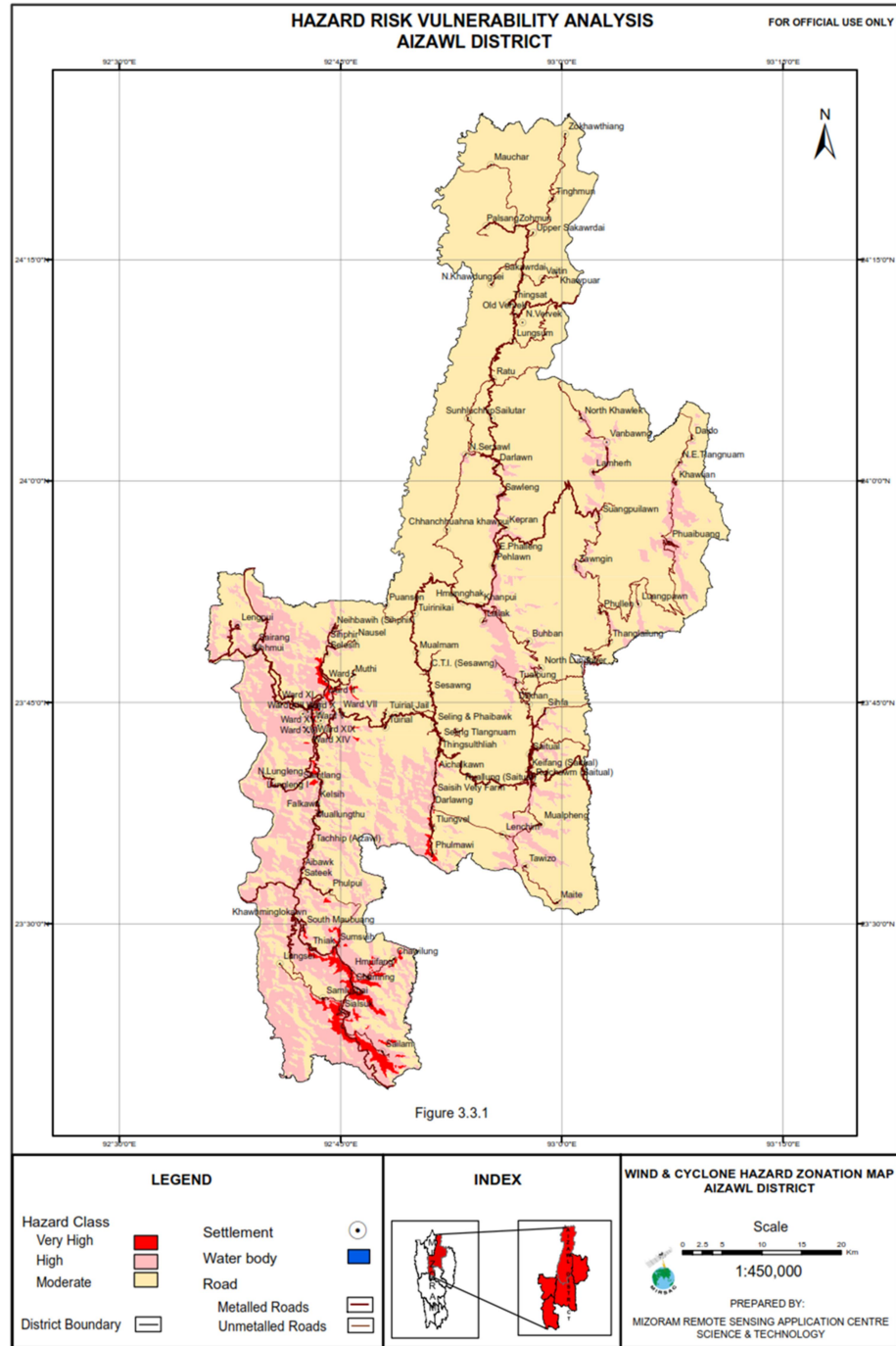
EARTHQUAKE HAZARD ZONATION MAP OF AIZAWL DISTRICT



LANDSLIDE HAZARD ZONATION MAP OF AIZAWL DISTRICT



WIND AND CYCLONE HAZARD ZONATION MAP OF AIZAWL DISTRICT



FLOOD HAZARD ZONATION MAP OF AIZAWL DISTRICT

