DISTRICT DISASTER MANAGEMENT PLAN 2025

HNAHTHIAL DISTRICT

PREFACE

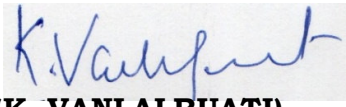
It brings me great pleasure to present an updated and revised Hnahthial District Disaster Management Plan (HDDMP-2025). The updated HDDMP is an improvement over the earlier version with increasing strength of the District both in terms of its institutional strength as well as in documentation.

The hope is that an updated HDDMP will enhance not just our understanding of the role played by stakeholders, both public and private, but our relative strengths and weaknesses on disaster risks, how to capitalise on our relative strengths while putting in more effort in improving our weaknesses. Such a constructive analysis will strengthen our capacity to face and recover from all kinds of natural disasters.

With the support of MIRSAC, Government of Mizoram, our knowledge of the kind of risks posed by various types of disaster has been widely enhanced. This will significantly contribute to the level of preparedness when faced with a particular kind of disaster. Mitigation efforts will be supplanted by the increasing sensitization of Departments/Institution towards disaster risk reduction in developmental planning. Adopting a more inclusive approach will also widen our reach to cover every inhabitant of the District.

The success of a Plan, however, is highly dependent on its successful implementation. For this, HDDMP-2025 will be widely circulated for sensitization of all stakeholders, both government and non-government, to execute this plan wisely and carry out each and every responsibility assigned to them in a time-bound manner. This will go a long way in helping achieve the goals and objectives of the District Plan.

With this in mind, it is my sincere hope that HDDMP-2025 will be implemented in letter and in spirit so that Hnahthial District will become more disaster resilient. Let us all strive to achieve a District well armoured in Disaster Management.



(K. VANLALRUATI)
Deputy Commissioner
& Chairman,
District Disaster Management Authority,
Hnahthial District, Hnahthial

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ABBREVIATIONS

Sl. No	Abbreviations	Full form
1	DEOC	District Emergency Operation Centre
2	ESF	Emergency Support Functionaries
3	L	Indicating Level of Disaster
4	DDMA	District Disaster Management Authority
5	IDRN	India Disaster Resource Network
6	CoR	Commissioner of Relief
7	RO	Responsible Officer
8	IRS	Incident Response System
9	IRT	Incident Response Team
10	IC	Incident Commander
11	ISOC/ OC	Incident Site Operation Centre/ Onsite Operation Centres
12	CIKR	Critical Infrastructure and Key resources
13	DRR	Disaster Risk Reduction
14	DRT	Disaster Response Team
15	QRT	Quick Response Team
16	OSC	Operation Section Type
17	SDRF	State Disaster Response Fund
18	DDRF	District Disaster Response Fund
19	SDMF	State Disaster Mitigation Fund
20	DDMF	District Disaster Mitigation Fund
21	SOP	Standard Operating Procedures
22	VDMC	Village Disaster Management Committees.

HNAHTHIAL DISTRICT DISASTER MANAGEMENT PLAN, 2025

Chapter 1

INTRODUCTION

This plan shall be known as **"Hnahthial District Disaster Management Plan, 2025 (HDDMP-2025)"** and will be applicable throughout the District of Hnahthial.

1.1 VISION :

The Vision of the District Disaster Management Plan, 2025 is to give it a more holistic approach to Disaster Management at the District level. This involves not just effective response during and post-disaster situations but proactive engagement in pre-disaster management to encourage a culture of prevention, mitigation and preparedness.

Under Section 2(e) of the Disaster Management Act, 2005, it defines Disaster Management as "A continuous and integrated process of Planning, organizing, co-ordinating and implementing measures which are necessary and expedient for:

a) Prevention of danger or threat of any disaster.
b) Mitigation or reduction of risk of any disaster or its severity or consequences.
c) Capacity Building.
d) Preparedness to deal with any disaster.
e) Prompt response to any threatening disaster situation or disaster.
f) Assessing the severity or magnitude of effects of any disaster.
g) Evacuation, rescue and relief.
h) Rehabilitation and reconstruction.

Since the effect of hazard cuts across all societies irrespective of class and social groups, Hnahthial District Disaster Management Plan, 2025 tries to adopt a more socially inclusive approach to Disaster Management. It also advocates greater participation of the private sector and local communities.

1.2 LEGAL MANDATE :

Section 30(2) of the Disaster Management Act, 2005 envisages the preparation of the District Disaster Management Plan. As per the legal Mandate, the District Plan includes the District Authorities designed to respond to Disaster situations, how to respond to specific Disaster, method of implementation, financial mechanisms etc. The plan also encompasses the responsibilities assigned to various Stakeholders- Government Departments, Private Corporations, and local communities etc. for successful implementation of the District Disaster Management Plan.

1.3 OBJECTIVES :

The Basic Objectives of HDDMP-2025 includes :

a) Improve the understanding of disaster risk, hazards and vulnerabilities within the District. Strengthen disaster risk modelling, assessment, mapping and develop early warning systems.
b) To set up a vibrant and functioning Emergency Operation Centre (EOC) at the District level for Search, Rescue and Response Operations.

c) Create a responsive communication system in addition to Early Warning Systems through fail proof proven technology. Media can also be effectively used as a medium of communication with the public and thus help in Disaster Management.
d) Strengthen Disaster Management governance at all levels from the District level to the Village level to prevent Disaster and mitigate its effects.
e) Invest in Disaster Resilience and mitigation measures through structural, non-structural mechanisms as well as through capacity development. Investing in Disaster Resilience measures will not only mitigate the effect of the hazard but will also reduce the loss of public and private property especially critical facilities and infrastructure.
f) Empower as well as Streamline the role of District/Local authorities and communities to help reduce and manage the pre-disaster and post-disaster phases of natural disasters.
g) Strengthen and enhance scientific and technical capacities.
h) Capacity building for all stakeholders at all levels.
i) To prepare a response plan based upon the guidelines issued in the State Disaster Management Plan so as to provide prompt relief, rescue and search support in the disaster affected areas.
j) To have a Rehabilitation & Reconstruction Plan for the affected people by the various Department and authorities at the local level.

1.4 Evolution of Hnahthial District Disaster Management Plan :

As per **Section 31 (2)** of the DM Act, 2005, the District Plan shall be prepared by the District Authority, after consultation with the local authorities and having regards to the National Plan and the State Plan, to be approved by the State Authority. The District Plan shall include-

- The areas in the district vulnerable to different forms of disasters;
- The measures to be taken, for prevention and mitigation of disasters, by the Departments of the Government at the district level and local authorities in the districts;
- 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;
- The response plans and procedures, in the event of a disaster, providing for-
    - Allocation of responsibilities to the Departments of the Government at the district level and the local authorities in the district;
    - Prompt response to disaster and relief thereof;
    - Establishment of communication links; and
    - The dissemination of information to the public;
- Such other matters as may be required by the State Authority.

1.5 HDDMP Activation :

The disaster response structure will be activated on the receipt of disaster warning/on the occurrence of the disaster. The occurrence of disaster may be reported by the concerned monitoring authority to the Chairman, DDMA by the fastest means. The Chairman, DDMA will activate all department for emergency response including the District EOC and Emergency Support Functionaries. He

will also 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.
- Detail of Task/Response Forces through which coordination should take place.

The District EOC, ESF's and other control rooms at the District level should be activated with full strength. Once the situation is totally controlled and normalcy is restored, the Chairman, DDMA declares End of Emergency Response and issues instructions to withdraw the staff deployed in emergencies duties.

1.6 HOW TO USE THE PLAN (HDDMP FRAMEWORK)

- 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 according to the six phases of the Disaster Management Cycle viz. Prevention, Mitigation, Preparedness, Response, Recovery and Reconstruction.
- In significant emergencies or disasters, Deputy Commissioner or the chairperson of DDMA will have the powers of overall supervision, direction and control as may be specified under State Government Rules/State Disaster Management Plan guidelines.
- The district EOC will be staffed and operated as the situation dictates. When activated, operations will be supported by senior officers from line departments and central government agencies; private sector and volunteers organizations may be used to provide information. Data and resources to cope with the situation.
- The DDMA may recommend for action under Section 30 of DM Act, 2005.
- Facilities that have been identified vital to operation of the district government functions have been identified.
- The Deputy Commissioner or his designee will coordinate and control resources of the District.
- Emergency public information will be disseminated by all available media outlets through the designated media and information officer.
- Prior planning and training of personnel are prerequisites to effective emergency operations and must be considered as integral parts of disaster preparations.
- Coordination with surrounding districts is essential, when an event occurs, that impacts beyond district boundaries. Procedure should be established and exercised for inter district collaboration.
- Departments, agencies and organizations assigned either primary or supporting responsibilities in this document must develop implementation documents in order to support this plan.
- When local resources prove to be inadequate during emergency operations, request for assistance will be made to the State or higher levels of government and other agencies in accordance with set rules and procedures.
- District authority will use normal channel for requesting assistance and / or resources, i.e., through the District Emergency Operations Centre (DEOC) to the State EOC. If state resources have been exhausted, the state will be provided to the citizens of the affected areas in the district.

- The District EOC will coordinate with the State EOC, Agencies of the Govt. of India like IMD/CWC to maintain up-to-date information concerning potential flooding, cyclones etc. As appropriate, such information will be provided to the citizens of the affected areas in the district.
- Upon receipt of potential problems in these areas, DEOC/designated officials will appropriately issue alert and notify action to be taken by the residents.
- Disaster occurrence could result in disruption of government functions and, therefore, all levels of local government and their departments should develop and maintain procedures to ensure continuity of Government action.

1.7 Plan review and updation periodicity:

(a) **Training:** After developing a plan, it must be disseminated and training provided to the concerned personnel so that they have knowledge, skills and abilities needed to perform the task identified in the plan. Personnel should also be trained on the organization-specific procedure necessary to support those plan tasks.

(b) **Exercise the Plan:** Evaluating the effectiveness of plan involves a combination of training events, exercise and real-world incidents to determine whether the goals, objectives, decisions, actions and timing outlined in the plan led to a successful response. The purpose of an exercise is to promote preparedness by testing policies, plans and by training the concerned personnel assigned with respective tasks.

(c) **Revise and Maintain:** Planning teams should establish a process for reviewing and revising the plan. Reviews should be a recurring activity. Review on an annual basis is considered minimum. It should be mandatory to consider reviewing and updating the plan after the following events:

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

Therefore, the DDMP of Hnahthial will be internally reviewed on a yearly basis and will be updated or reaffirmed. The updates or reaffirmed documents may be used to summarized the accomplishment of the past years and help the administration to prioritize mitigation goals for the next year.

CHAPTER 2

BASIC PROFILE OF HNAHTHIAL DISTRICT

2.1 District Profile :

Hnahthial District was created on 12th September, 2008 and started functioning as a full-fledged District on 8th August, 2019.

2.2 Demographic Profile :

	Projected Mid-year Population 2020	**Birth Rate(Per 1000 population)**	**Death Rate(Per 1000 population)**	**Infant Mortality Rate (Per 1000 population)**	**Sex Ratio at birth (Female Per 1000 population)**
Rural	24,909	9.19	4.98	4.37	1,337
Urban	7,275	19.45	9.65.	14.18	1,136
Total	32,184	11.51	6.04	8.11	1,256

(*Source: Annual Report of Registration of Births & Deaths Mizoram, 2023 published by the Office of the Addl. Chief Registrar of Births & Deaths, Directorate of Economics & Statistics, Planning & Programme Implementation Department, Government of Mizoram*)

2.3 Geographic Profile

Item	**Description**
Geographical Area	1030.5 Sq.km
Geographical Location	Latitude : 22⁰45' 0" N-23⁰10' 0" N Longitude: 92⁰45' 0" E - 93⁰10' 0" E
Neighbouring Districts	• Lunglei District in the West • Lawngtlai District in the South • Serchhip District in the North-East
International Border	Myanmar in the East
Highest Elevation	Purun Tlang(1758 metres)
Lowest Elevation	20 metres
Rivers	Chhimtuipui (Kaladan river), Tuichang River, Mat River, Tuipui D
Rainfall Distribution	1720.3 mm (meteorological data of Mizoram 2014)

2.4 Basic Features and Critical Infrastructures:

Item	**Description**
Administrative Divisions	Hnahthial RD Block- 1030.5 Sq.km
Political Divisions	• 29-South Tuipui 30-Lunglei North (in part) 31-Lunglei East (in part)

Item	Description
Health Infrastructure	• District Hospital/Community Health Centre (CHC) • 5 PHC's which includes: (1) South Vanlaiphai (2) Cherhlun (3) Thingsai (4) Chhipphir (5) Pangzawl
Educational Infrastructure	1. School of Agricultural Science. 2. Higher & technical Education: Government Hnahthial College. 3. School Education: a) Primary School: 51 b) Upper Primary School/Middle School: 47 c) High School/Secondary School: 23 d) Higher Secondary School:10 4. Aganwadi Centres: 115
Communal Hall and related Infrastructure	1. Bualpui 'H' Community Hall 2. Ngharchhip Community Hall 3. Khawhri Community Hall 4. S. Chawngtui Community Hall 5. Thiltlang Community Hall 6. Leite Community Hall 7. Cherhlun Community Hall 8. Rotlang 'E' Community Hall 9. Tuipui 'D' Community Hall 10. Hnahthial North-I Community Hall 11. Lungmawi Community Hall 12. Aithur Community Hall 13. S. Lungleng Community Hall 14. Rawpui Community Hall 15. Ropuiliani Hall, Hnahthial
Misc infrastructure	1. Chhipphir Rest House 2. Cherhlun Rest House 3. S. Vanlaiphai Rest House 4. Thingsai Rest House 5. Bualpui 'H' Rest House 6. S. Chawngtui Rest House 7. Rawpui Rest House 8. Forest Rest House, Hnahthial 9. Pangzawl Tourist Lodge. 10. S. Vanlalphai Tourist Lodge 11. Kutkawk Tourist Lodge 12. Chhipphir YMA Zawlbuk 13. PWD IB, Hnahthial.

2.5 Important District Administration Number (DC's Office & DRDO) :

Sl. No	Name	Designation	Contact Number
1	K. Vanlalruati, MCS	DC & Chairman, DDMA	9436147688
2	Zothanmawia Khiangte, MCS	Addl. DC & CEO, DDMA & SO, Hnahthial	9612027264
3	HD. Lalpekmawia, MCS	Project Director, DRDO & Co-Chairman, DDMA	8974189546
4	Esther Leihang, MCS	SDO(S) & EO Hnahthial	9612221063
5	Hmingmawizuala, MCS	DUDO & BDO, Hnahthial	9862507405
6	R. Vanlalruata, MCS	SDC, Hnahthial	8414009735
7	Lawrence Lalhlanthara, MCS	SDC, Hnahthial	8413846225
8	District Emergency Operation Centre		8787421826

CHAPTER 3

HAZARD RISK AND VULNERABILITY ASSESSMENT (HRVA) OF HNAHTHIAL DISTRICT

3.1 TYPES OF DISASTERS :

Disasters have been broadly divided into Natural and man-made Disasters, the underlying difference between the two being the latter being human induced. The widely accepted classification system used by the Disaster Information Management System of DesInventar classifies disasters arising from natural hazards into five major categories and is used globally for the Sendai targets monitoring :

Sl.No	Family	Description	Main Event
1	Geophysical	Hazards posed by geological processes and phenomenon	Earthquake/Mass movement of earth materials/Volcano/ Tsunamis
2	Hydrological	Hazard caused by deviations in the normal water cycle and/or overflow of water bodies caused by wind set-up.	Floods/Landslides/ Wave Action.
3	Meteorological	Hazard caused by short lived/small to meso-scale atmospheric processes (in the spectrum from minutes to days)	Cyclone/storm surge/ tornado/convective storm/extra-tropical storm/wind/cold wave/ derecho/extreme temperature, fog, frost, freeze, hail, heat wave, lightning, heavy rain, sandstorm, dust-storm, snow, ice, winter-storm, blizzard.
4	Climatological	Hazard caused by long lived meso to macro-scale atmospheric processes (in the spectrum from intra-seasonal to multi-decadal climate variability)	Drought/extreme hot/ cold conditions/ forest/ wildfires/Glacial Lake outburst Flood (GLOF)/ Subsidence.
5	Biological	Process or phenomenon of organic origin or conveyed by biological vectors including exposure to pathogenic micro-organisms, toxins and bioactive substances that may	Epidemics: viral, bacterial, parasitic, fungal, prion infections. Insect infestations/ animal stampedes.

		cause loss of life, injury, illness or other health impacts, property damage, loss of livelihoods and services, social and economic disruptions, or environmental damage.	

Man-Made Disasters are human induced Disasters consequential upon rise in population, rapid urbanization and industrialization. The disasters associated with climate change and extreme weather events have been attributed to man-made disasters.

3.2 Levels of Disasters :

According to Section 2(d) of the Disaster management Act, 2005 "**Disaster means a catastrophe, mishap, calamity or a grave occurrence in any area, arising from natural or man-made causes, or by accident or negligence which results in substantial loss of life or human suffering or damage to, and destruction of, property, or damage to, or degradation of, environment, and is of such a nature or magnitude as to be beyond the coping capacity of the community of the affected area."**

The plan would be put into action considering the situation prevailing at a given point of times as per the level of disaster in hand.

L concept has been developed to define different levels of disasters in order to facilitate the responses and assistances to States and Districts.

L0 level denotes normal times which will be utilized for close monitoring, documentation, prevention and preparatory activities. Training on search and rescue, rehearsals, evaluation and inventory updating for response activities will be carried out during this time.

L1 level specifies disaster that can be managed at the District level, however, the State and Centre will remain in readiness to provide assistance if needed.

L2 level disaster situations are those, which require assistance and active participation of the State, mobilization of its resources for management of disasters.

L3 level disaster situation is in case of large scale disaster where the State and District authorities have been overwhelmed and require assistance from the Central Government for reinstating the State and District machinery as well as for rescue, relief, other response and recovery measures. In most cases, the scale and intensity of the disaster as determined by the concerned technical agency like IMD are sufficient for the declaration of L3 disaster.

3.3 Trigger Mechanism :

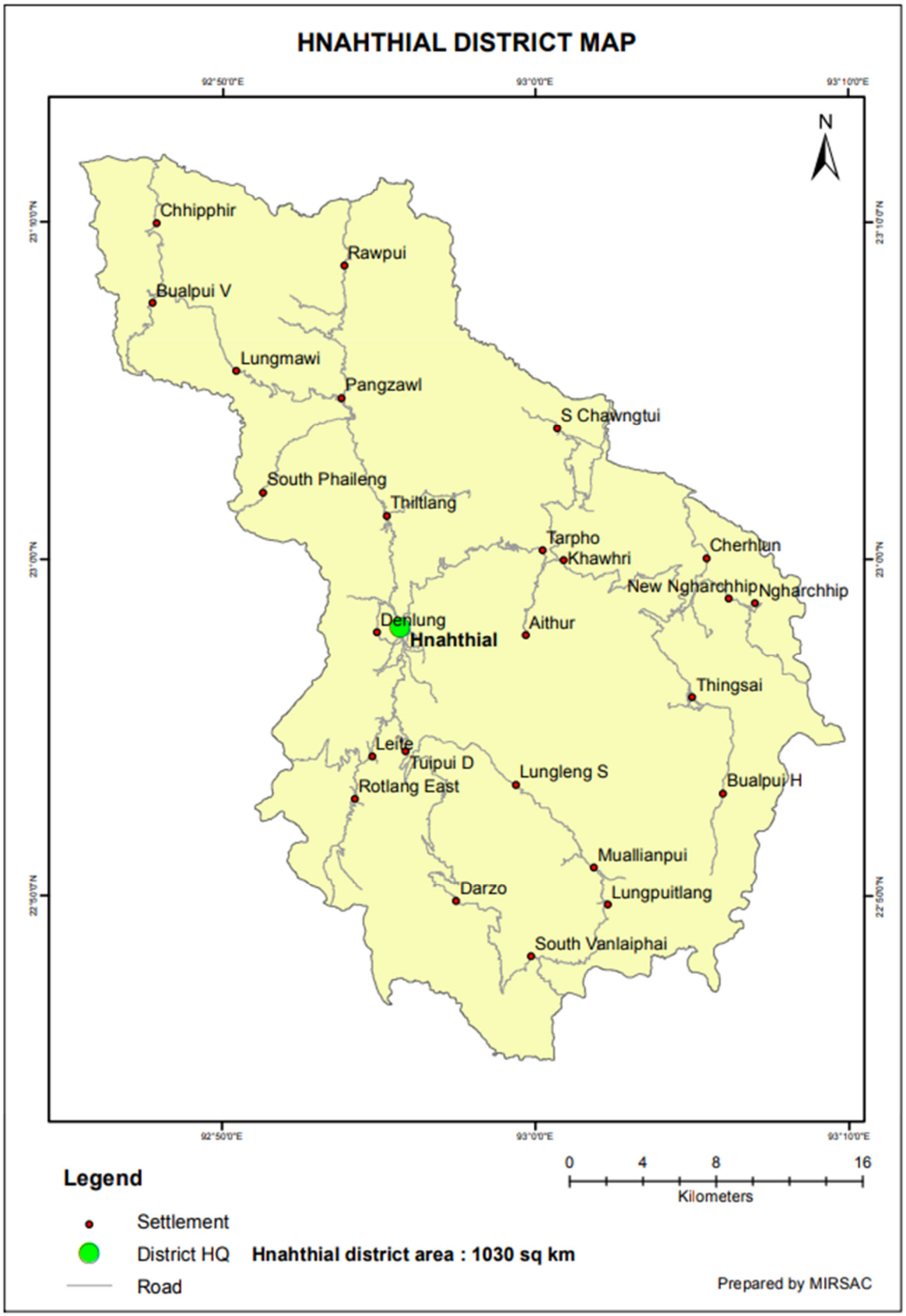
(a) Warning Signal Available

In such case the Govt. Of India/State Govt. has authorized agencies generating such early warning signals; in such case the matter is very urgent needing action at Sub-Division/Block/Tehsil/Village levels, the alerts and action points will go directly to all concerned. Arrangements need to be in place to ensure prompt receipt of these signals and action thereon. After such warning/advisory received by the State Govt., the SEOC will communicate to the DEOC urgently. The DEOC will communicate such warnings to the departments at the district level. The information flow in such cases will be as follows:- (Flowchart).

(b) Without Early Warning Signal

When disaster occurs without any early warning in that case the information starts from the place of incidents through government agency or otherwise and the institutional mechanism in such cases will be as follows :-

- The concerned village will report to the Panchayat, block, police station/ SDM/DM and the information will be sent to the Deputy Commissioner.
- DDMA will assess the information and assess the disaster to be of the level **L0, L1, L2 or L3.**
- DEOC will be activated and if required the SEOC will be kept at alert if assistance needed; otherwise information of the incident will be passed on to SEOC.
- DDMA will convene the meeting of DEOC and plan the management of the disaster as Incident Response Plan.
- The respective Incident response teams will be rushed to the site for effective management.


HNAHTHIAL DISTRICT MAP
92°50'0"E
93°0'0"E
93°10'0"E
23°10'0"N
23°0'0"N
22°50'0"N
N
Chhipphir
Rawpui
Bualpui V
Lungmawi
Pangzawl
S Chawngtui
South Phaileng
Thiltlang
Tarpho
Khawhri
Cherhlun
New Ngharchhip
Ngharchhip
Denlung
Hnahthial
Aithur
Thingsai
Leite
Tuipui D
Rotlang East
Lungleng S
Bualpui H
Muallianpui
Darzo
Lungpuitlang
South Vanlaiphai
Legend
Settlement
District HQ
Road
Hnahthial district area : 1030 sq km
0
4
8
16
Kilometers
Prepared by MIRSAC

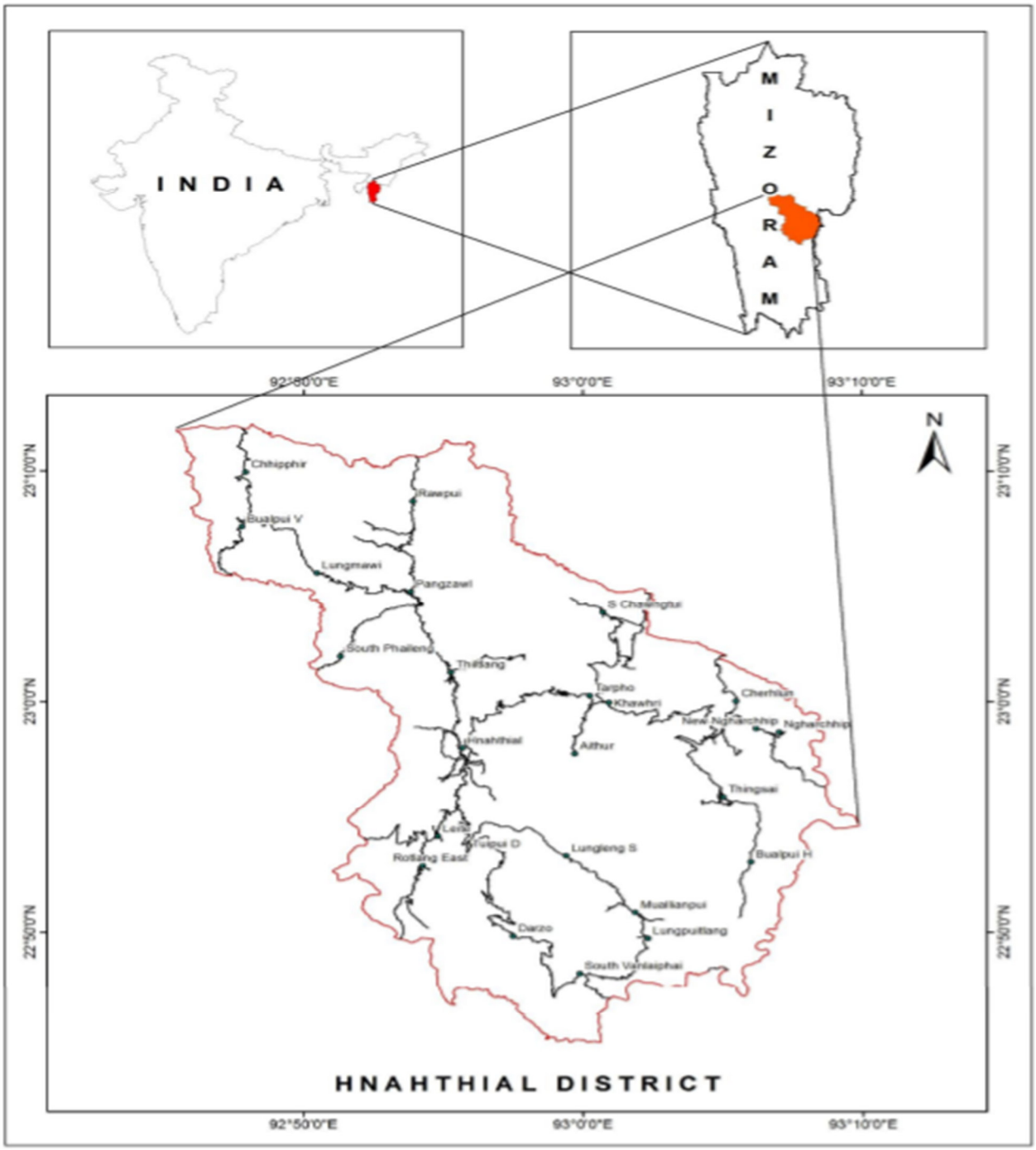


Figure 1. Location Map of Hnahthial District

CHAPTER – IV

DETAIL PROFILE OF NATURAL HAZARDS

1. NATURAL HAZARD PROFILE :

Hnahthial District is prone to natural hazards like landslide, earthquake, wind & cyclone. Various geological and geophysical settings, climatic, meteorological and hydrological condition of the District induces the occurrence of these natural hazards. Apart from these, anthropogenic processes such as routine Jhum cultivation and developmental activities, i.e., construction of buildings, roads and other infrastructures are also responsible for the occurrence of the natural hazards.

2.1. Landslide :

Landslide is the most frequently occurring natural hazard experienced by Hnahthial District. Every year, a number of landslide have been usually reported from various places of the District. These cause a lot of problem to public, resulting in loss of life and property, disruption of communication network, and also cause economic burden to the society. Landslide incidences are more prominent during the rainy/ monsoon season as the soil structure gets soften by heavy and continuous downpour, especially in high degree of slope.

Hnahthial District is characterized by steep slopes and several lineaments oriented in different directions. 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.

The Mizoram Remote Sensing Application Centre (MIRSAC) has prepared Landslide hazard zonation maps for both Hnahthial District and Hnahthial Town. The maps are shown in figures 2 and 3 along with the corresponding area statistics in Tables 1 and 2.

Hazard Zone	Area (in Sq. Km.)	Area (in %)
Very High Hazard Zone	59.78	5.80
High Hazard Zone	155.41	15.08
Moderate Hazard Zone	620.24	60.19
Low Hazard Zone	169.21	16.42
Very Low Hazard Zone	12.80	1.24
Water Body	13.07	1.27
Grand Total	1030.50	100.00

Table 1. Statistics of Landslide Hazard Zonation of Hnahthial District.

Hazard Zone	Area (in Sq. Km.)	Area (in %)
Very High Hazard Zone	0.08	1.54
High Hazard Zone	0.66	12.92
Moderate Hazard Zone	2.72	52.8
Low Hazard Zone	1.65	32.04
Very Low Hazard Zone	0.04	0.7
Grand Total	5.15	100

Table 2. Statistics of Landslide Hazard Zonation of Hnahthial Town.

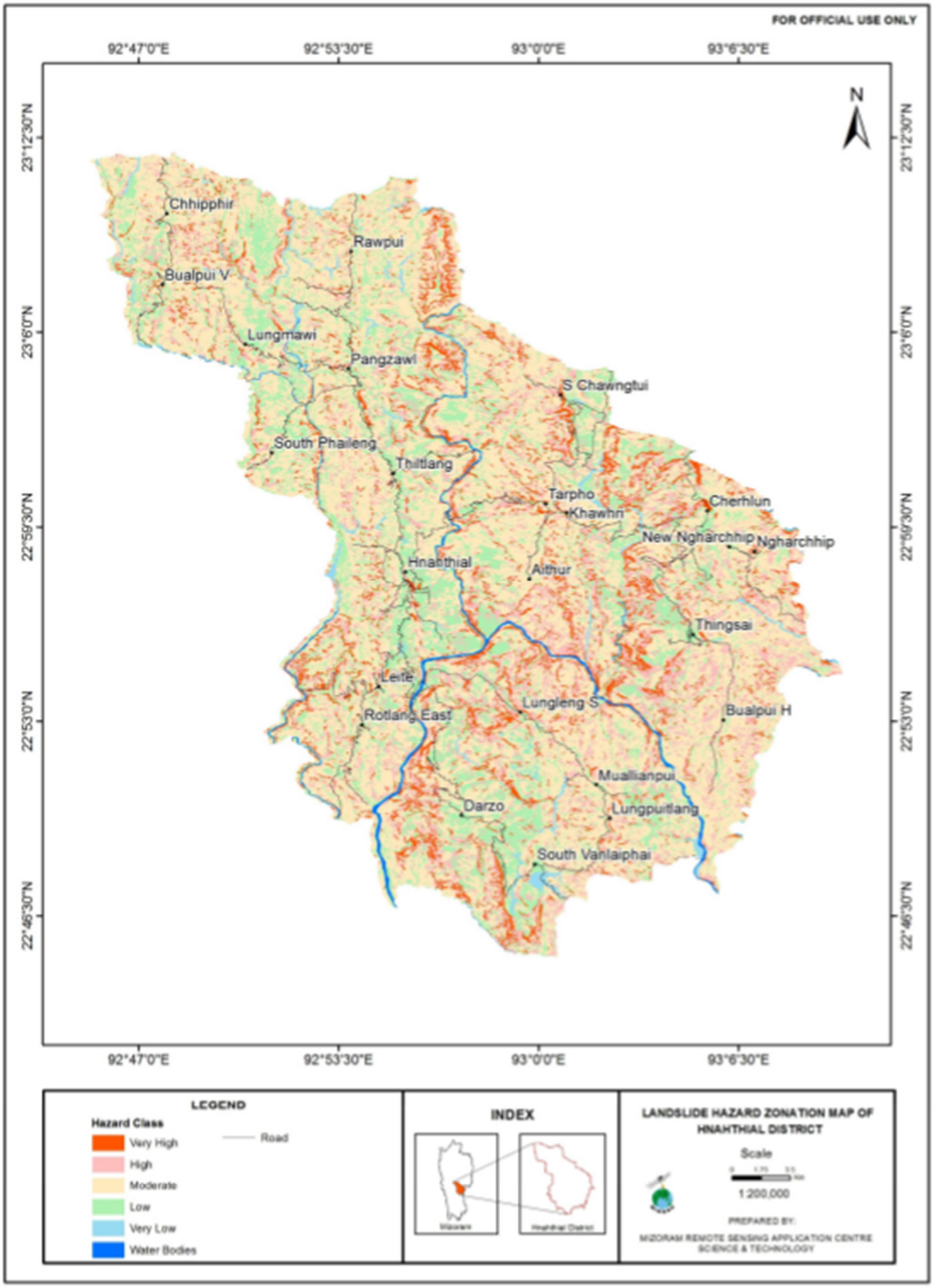


Figure 2. Landslide Hazard Zonation Map of Hnahthial District

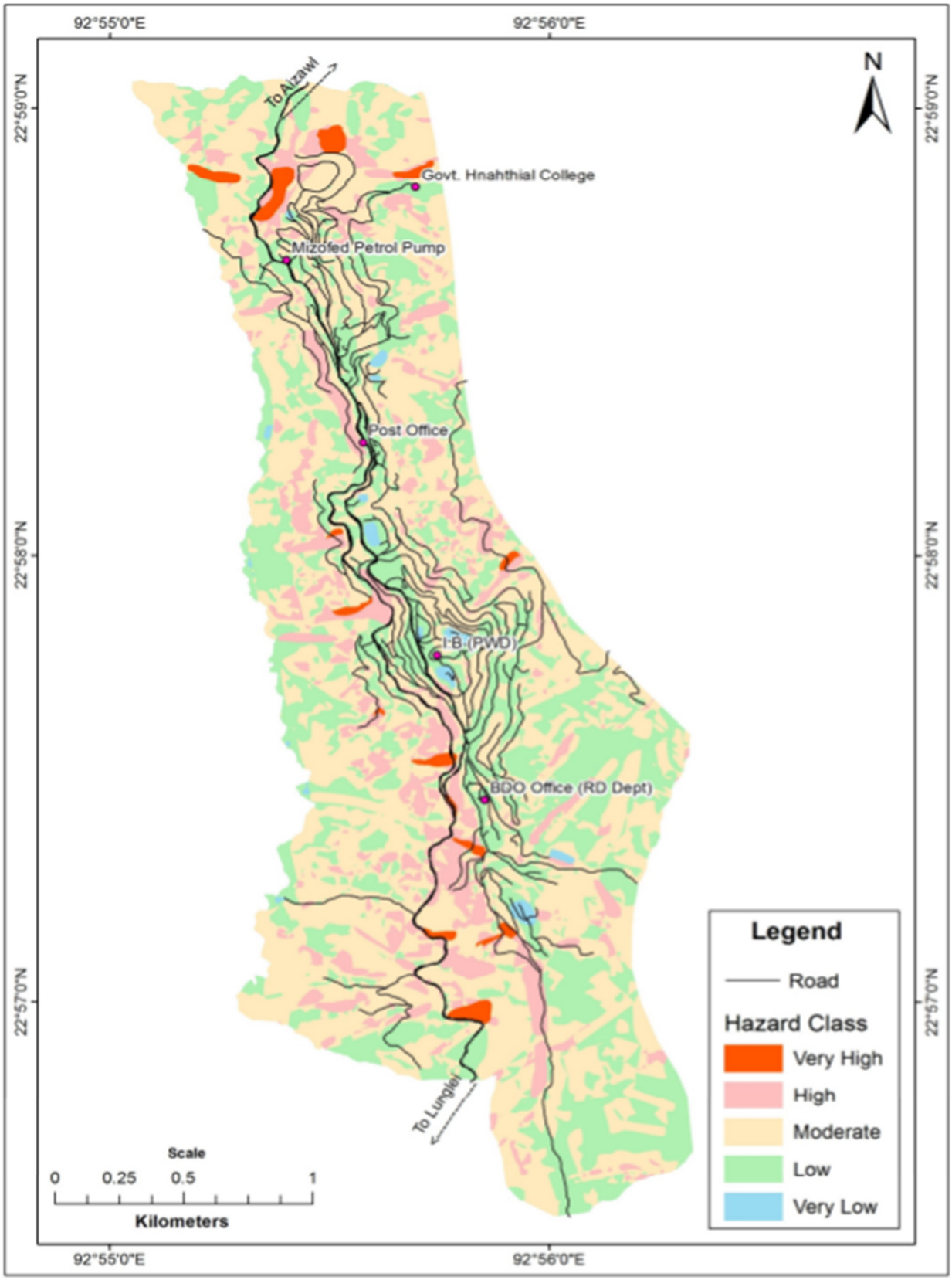


Figure 3. Landslide Hazard Zonation Map of Hnahthial Town

The Landslide Hazard Zonation Map is classified into 'Very High', 'High', 'Moderate', 'Low' and 'Very Low' hazard zones. Various hazard classes are described below:

Very High Hazard Zone

This zone is highly unstable, and is at a constant threat of landslides, especially during and after an intense spell of rain. This zone has steep slopes with loose and unconsolidated materials, and includes areas where active landslides had occurred. It also includes areas where road cutting and other human activities are actively undertaken. In addition, it is also found along the streams where toe-erosional activities are constantly taking place. The vegetation in this zone is generally scarce. The rocks exposed are characterized by numerous bedding and joint planes which facilitate the chance of sliding down along the slope.

It is recommended that no human induced activity be undertaken in this zone. It will be difficult to develop economically and socially acceptable remedial measures which can prevent recurrence of the hazard. Hence, such areas have to be entirely avoided for settlement or other developmental purposes.

High Hazard Zone

This zone includes areas where the probability of sliding the debris is at a high risk due to weathered rock and soil debris covering steep slopes which when disturbed are prone to landslides. Many of the pre-existing landslides occurred within this zone. Besides, this zone includes some areas where the dip direction and slope direction, which are usually very steep, are the same. This rendered them susceptible to sliding along the slope. Several lineaments, fractured zones and fault planes also traverse the high hazard zone. Areas, which experience constant erosion by streams because of the soft nature of the lithology and loose overlying burden, also fall under this class. Vegetation is generally either absent or sparse. The High Hazard Zone is also found along the intersection of steep slope with road cutting.

Allocation and execution of major housing structures and other projects within this zone should be discouraged. If unavoidable circumstances compel the execution of such activity, precaution should be taken in consultation with the geological experts. Unless immediate action plans are implemented, this zone will soon deteriorate to the critical situation.

Moderate Hazard Zone

This zone is generally considered stable, provided its present status is maintained. It comprises areas that have moderately dense vegetation, moderate slope angle and relatively compact and hard rocks. Although this zone may include areas that have steep slopes (more than 45 degree), the orientation of the rock bed or the absence of overlying loose debris and human activity may make this zone less hazardous. The Moderate Hazard Zone is distributed in various parts of the area. Several parts of the human settlement also come under this zone.

Although this zone is generally considered stable, it may contain some pockets of unstable zones in some areas. Such areas need to be identified on the ground and suitable mitigation measures should be undertaken. It is recommended that human activity that can destabilize the slope and trigger landslides should not be undertaken within this zone. Although this zone comprises areas which are stable in the present condition, future land use activity has to be properly planned so as to maintain its present status.

Low Hazard Zone

This zone includes areas where the combination of various controlling parameters is not having adverse influence on the stability of the slope. In other words, this zone comprises areas where the chance of slope failure is low or unlikely to occur by virtue of its present environmental set up. Vegetation is relatively dense, except in some areas. Although some of the areas may be covered with soft and unconsolidated sediments, the slope angles are generally low, about 30 degrees or below. Flat lands and areas having low degrees of slope fall under this class. This zone is mainly confined to areas where anthropogenic activities are less or absent.

No evidence of slope instability is observed and mass movement is not expected within this zone. Therefore, this zone is suitable for carrying out developmental schemes. Developmental activities are considered safe to be carried out within this zone.

Very Low Hazard Zone

This zone generally comprises areas covered by dense vegetation and is mostly located away from human settlement. In addition, it includes valley fill and other flat lands. Therefore, it is assumed that this zone is free from the present and future landslides. The dip direction of the rocks and slope angles are fairly low. Although the lithology may comprise of soft rocks and overlying

soil debris in some areas, the chance of slope failure is minimized by low slope angle and vegetative cover.

As far as slope stability is concerned, developmental activities of any kind can be safely carried out within this zone. Most of the areas within this zone can be allocated for major housing structures without hesitation.

2.2. 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 Zone Map of India prepared by Bureau of Indian Standards (BIS) in 2002. As such, the region has experienced 18 large earthquakes (M<=7) during the last hundred years including the devastating earthquakes of Shillong (M=8.1) in 1897 and Assam (M=8.7) in 1950. Besides, several hundred small and micro-earthquakes have also been recorded in the region. The high seismicity in the region is attributed to the collision tectonics between the Indian plate and the Eurasian plate in the north and subduction tectonics along the Indo-Myanmar range (IMR) in the east. Subduction is still continuing in the IMR, which is evident from the intermediate to deep focused earthquakes in this range. Incidentally, maximum seismic activity has also been recorded in this range.

Mizoram lies to the southern end of the Purbachal Himalayan range. Tectonically, the region is related to the eastward subduction of the Indian plate along the Arakan Yoma suture during Eocene time and the subsequent development of the Indo-Burman Orogenic belt. It is a part of the Neogene Surma Basin comprising a belt of elongated folds having sub-meridional trend and arcuate shape with westward convexity. The fold belt is elongated in the N-S direction almost parallel to the suture zone of the Arakan Yoma subduction. Structural complexity and also the intensity of deformation gradually increase from west to east. Several lineaments and faults of varying lengths criss-cross the area. Most of these are local in nature and are not important from the seismological viewpoint. However, a strike-slip Mat fault orienting in NW-SE direction in the central part of Mizoram is found to be tectonically active, and research is going on to understand the nature and rate of the movement. Seismotectonic map of Mizoram and its surroundings is shown in Figure 4.

There have been some research works to advocate that the region is of high seismic intensity. In 2011, the Mizoram Remote Sensing Application Centre (MIRSAC) had carried out Seismic Hazard Zonation of entire Mizoram using probabilistic method. The Seismic Hazard map shows longitudinal

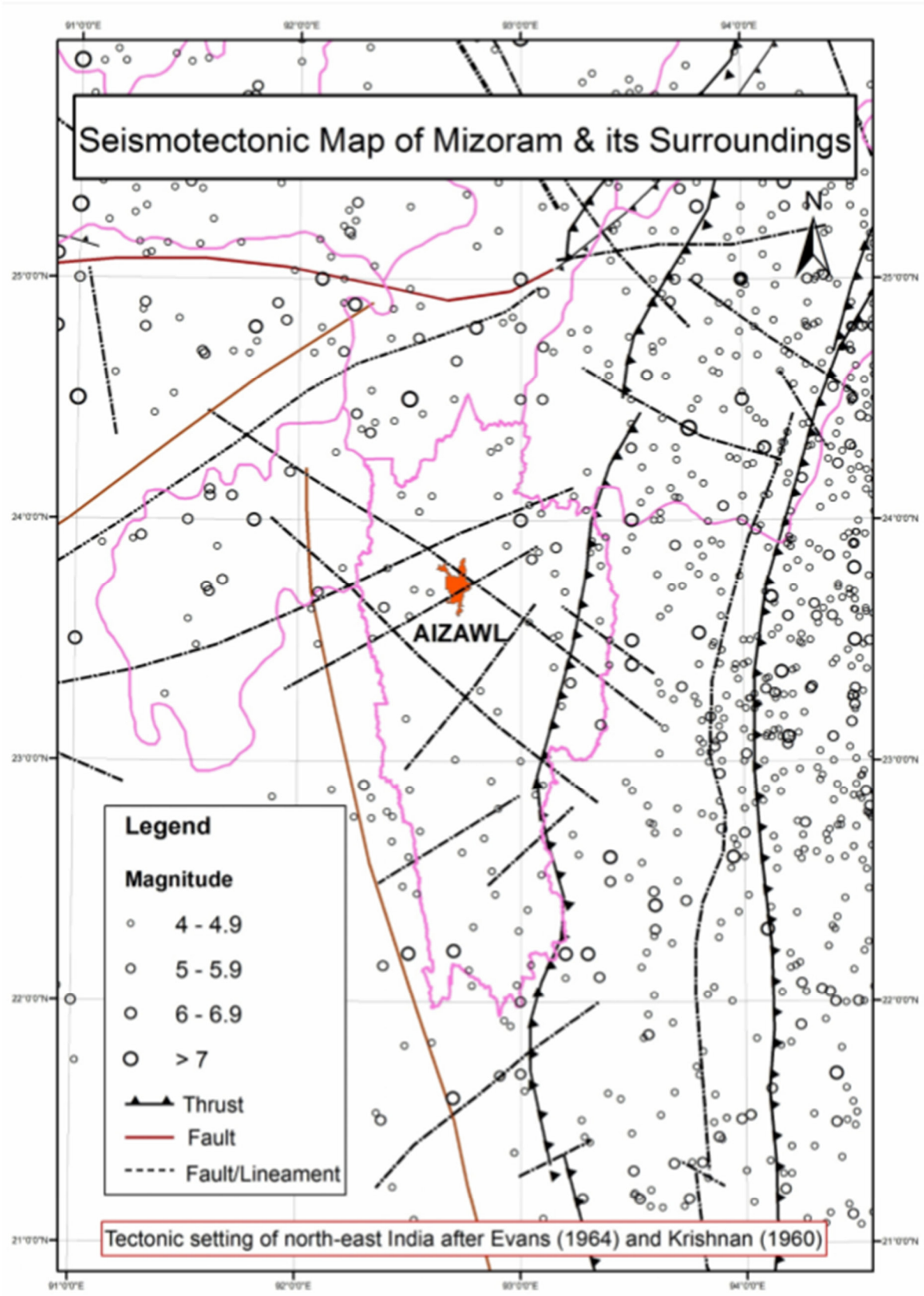


Figure 4. Seismotectonic Map of Mizoram and its surroundings

variations in hazard level which is very well correlated with the seismicity map of the region. The peak ground acceleration (PGA) value within Hnahthial district is 0.36 g, indicating that it is high in terms of seismic hazard. The Global Seismic Hazard Assessment Program (GSHAP) in 2003 provides seismic hazard map that depicts a hazard level of 0.24 g to 0.40 g in terms of peak ground acceleration (PGA) along Mizoram which is demarcated as high seismic hazard zone. Sandip Das from IIT Kanpur and his colleagues in 2006 have carried out another study based on a regionalization free seismicity model and by adopting the Probabilistic Seismic Hazard Assessment (PSHA). From their study, the Pseudo-Spectral Acceleration (PSA) values for entire Mizoram at different natural periods ranges from 0.25 g to 0.30 g which is indicative of high seismic hazard potential. In 2016, a team of research scientists led by Michael Steckler from Lamont-Doherty Earth Observatory of Columbia University, New York, USA discovered the presence of a locked megathrust plate boundary beneath the thick sediments deposited in Ganges-Brahmaputra Delta in Bangladesh. Their finding is based on a decade-long extensive research across Bangladesh, North-east India and Myanmar. After studying GPS measurements of plate motions in Bangladesh, combined with measurements from Myanmar and northeast India, they arrive at a conclusion that the pattern of deformation around northeast India and Myanmar indicates that the Indian plate and Eurasian plate are locked or stuck together, building enormous strain which when released, can produce an earthquake as large as magnitude 9 or more.

Thus, it is evident that entire Mizoram in general and Hnahthial district in particular, fall in the highest seismic potential zone. The earthquake hazard map of Hnahthial district based on Seismic Zoning Map of India is shown in Figure 5.

Until recently, 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. However, the year 2020 witnessed a series of seismic activities which took place in the eastern part of Mizoram within Khawbung RD block of Champhai district, and also within the Chin Province in Myanmar. These events occurred within a span of 6 months with a total number of more than 30 times. Majority of these tremors were felt form Hnahthial district, particularly from those settlements located close to the district border. The first recorded incident that shook the area took place on 14th June, 2020 (Sunday) at 1105 hrs (IST). The magnitude was 5, with epicenter located within Myanmar. From that time onwards, a series of jolts have taken place at irregular intervals. The last recorded event by National Centre for Seismology (NCS) took place on 20th December, 2020 (Sunday) with a magnitude 3.4 on the Richter scale.

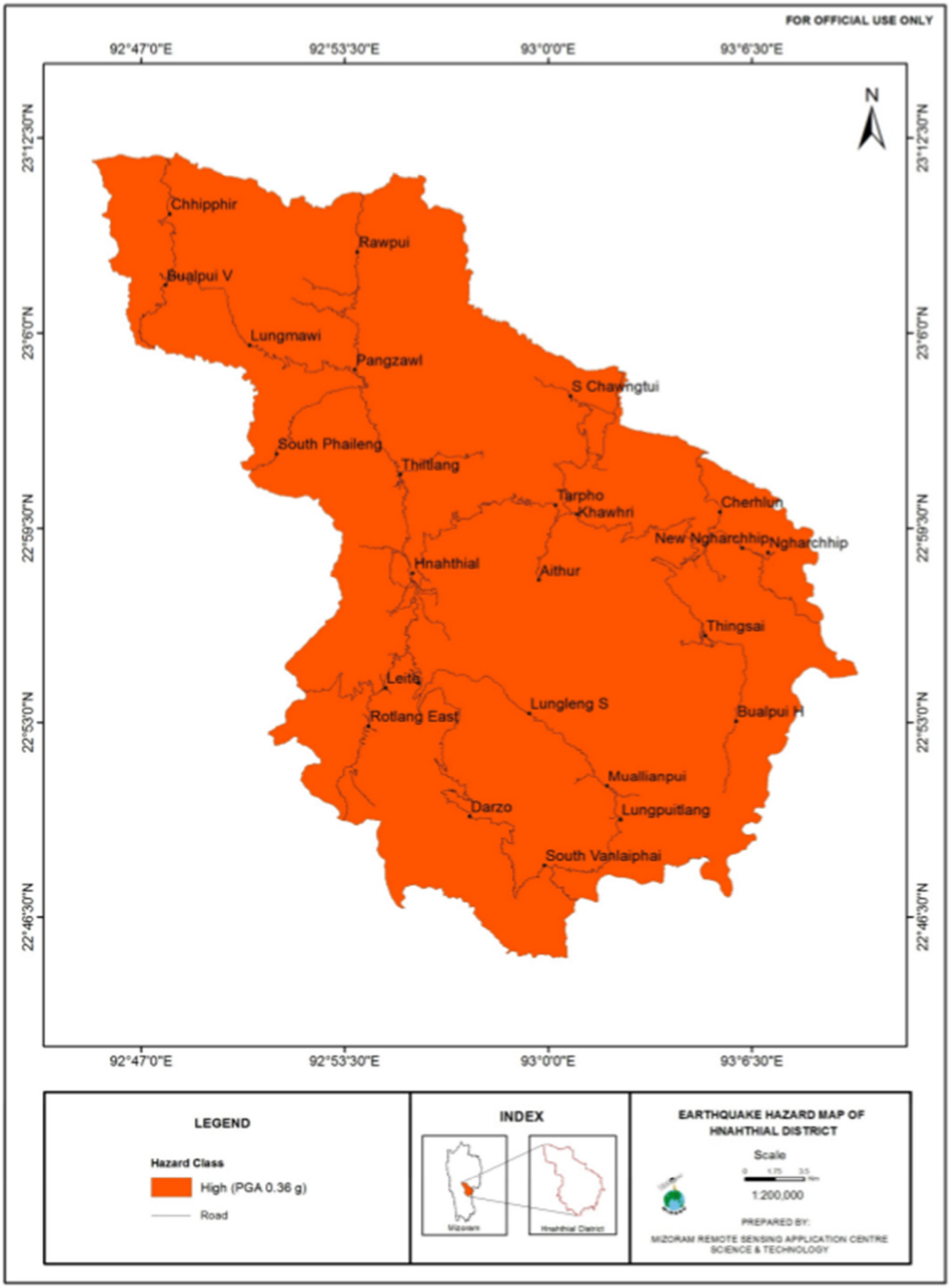


Figure 5. Seismic Hazard Map of Hnahthial District

Of the many tremors felt, a magnitude of 5.5 that occurred on 22nd June, 2020 at 0410 (IST) was the largest and was mainly responsible for damage of buildings, fracture on the ground and rock falls along the road. Apart from damage to property, these earthquake events left indelible psychological shocks and nightmare to the people in the affected area.

Among the 2020 earthquakes that occurred within Mizoram, two of the recorded events occurred within Hnahthial district. One of these epicentres was located near Tarpho and Khawhri villages and the other one occurred between Aithur and Lungleng South villages along the Tuipui river. These two events were of low intensity, less than 4 magnitude on the Richter scale, and no damage to property has been reported. However, it should be kept in mind that, although no disastrous effects were reported so far, the chance of confronting earthquakes of high intensity cannot be ruled out completely. This is because the subduction tectonic activity still continues to operate in the region where known and concealed seismogenic faults are in close proximity to Mizoram. The epicentre map of the 2020 earthquakes in the eastern part of Mizoram and its surroundings is shown in Figure 6.

2.3 Wind & Cyclone

The name 'Cyclone' was first coined by Henry Paddington at Calcutta in 1848. Cyclone is a violent storm, resembling a whirlpool, occupying a circular or nearly circular area of low pressure. A cyclone begins to form when moist air heated by the sun rises from the surface of the warm tropical seas and is funnelled upwards in a natural updraft. As this moist air rises, it cools and condenses into rain. This condensation feeds back into the air large amount of heat, which adds to the force of the storm's updraft and which strokes the power of the cyclone. Air continues to spiral up, and hot moist air rushes in from all sides to replace it and to feed the updraft. The winds spiral around an "eye", an area of calm and light rains a few kilometers across. The cyclone itself may be between 100 and 200 km (60-125 miles) in diameter with a vertical depth of 11-19 km (7-12 miles). Cyclones are low-pressure systems or depressions around which the air circulates in an anti-clockwise direction in the northern hemisphere, but in a clockwise direction in the southern hemisphere. Since both the Bay of Bengal and the Arabian sea lie in the tropical region of northern hemisphere, cyclone in this region moves in counter clockwise direction. The Indian sub-continent often experiences Tropical Cyclones, which are more destructive than their temperate region counterpart 'Temperate Cyclones'.

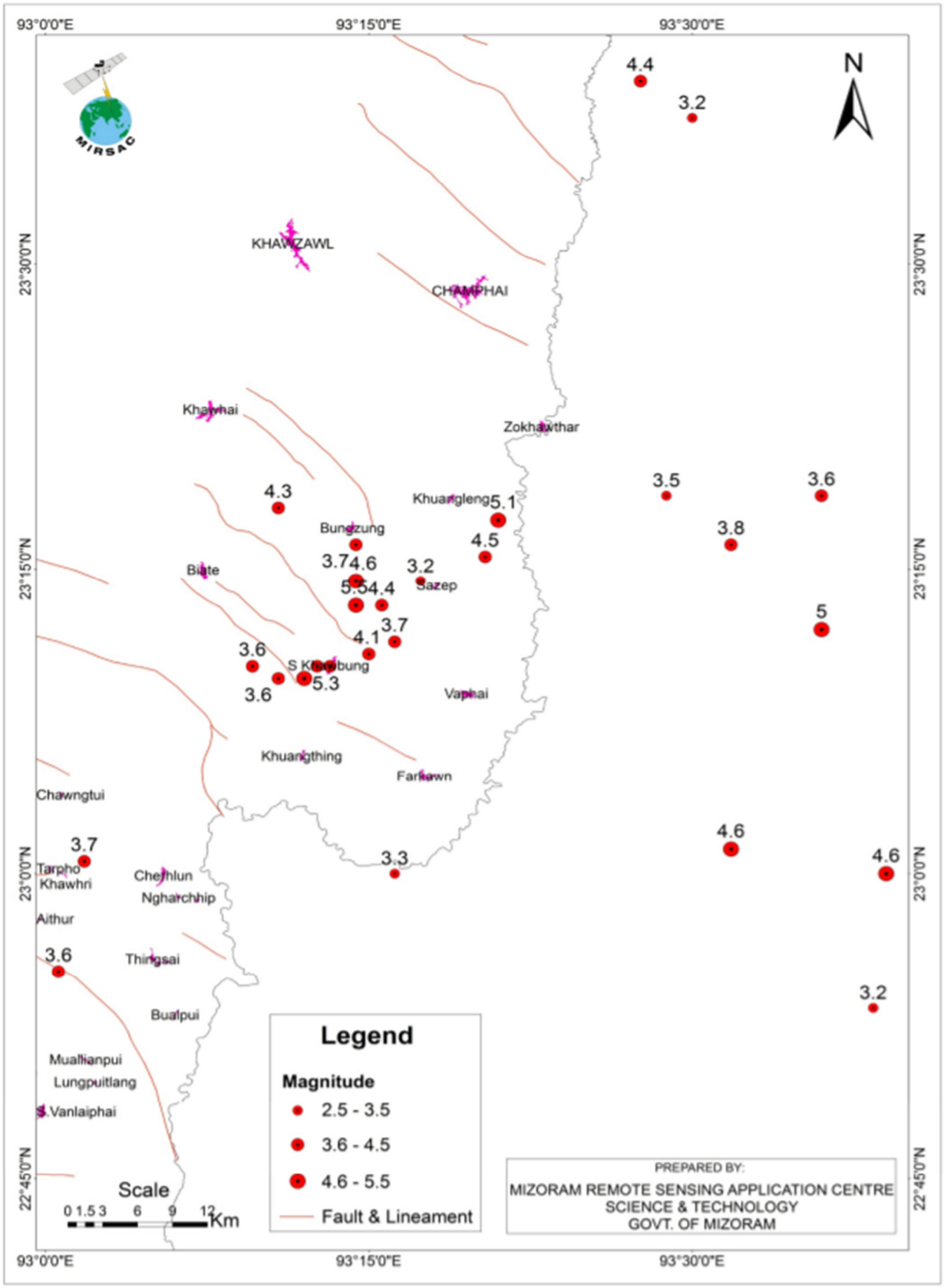


Figure 6. Epicentre Map of 2020 Earthquake

During the summer, the Sub-tropical high pressure belt and the thermal equator are displaced northward in response to the changing pattern of heating of the earth. From the ocean, particularly from the north Indian Ocean or Bay of Bengal, they move towards the land mass and blow over the Asian continent. These are called South-West monsoon and they usually reach Mizoram between May and October. The summer monsoon is characterised by highly variable weather with frequent spells of drought and heavy rains. Besides this, the winter monsoon also prevails, which is a gentle drift of air in which the winds generally blow from the north east. This retreating monsoon causes sporadic rainfall especially in Mizoram and other north eastern States, sometimes producing heavy cyclonic rains. In Mizoram, the cyclones of the post-monsoon season (October to December) are more intense than those of pre-monsoon season (April & May).

Entire Mizoram state is vulnerable to the impact of tropical cyclone which develops in the North Indian Ocean (Bay of Bengal). The first incidence of wind & cyclone in Mizoram has been recorded in 1876. The year is being long-remembered as "Thlichhe Tleh Kum," a local term for the *Year of Cyclonic Storm*. From that time onwards, several incidences of disruption to normal life and damage to property report due to wind & cyclone has been known in Mizoram. Undoubtedly, several settlements within Hnahthial district also would have suffered disruption and damages from this hydro-meteorological hazard in the past.

Like other places of the state, the impact of wind & cyclone is usually noticed in the Hnahthial district every year. Sometimes, the impact of this hazard is so devastating, and often led to damage and loss of properties and even lives. The impact also led to power line cut-off, blockade of roads, damage to crops and plantations, loss of livestock, etc. Due to its location in the climatic zone, cyclone in the form of strong winds and torrential rains often causes colossal damage and devastation in Mizoram. Therefore, the need for proper management from wind & cyclone hazard is of utmost importance.

Mizoram Remote Sensing Application Centre (MIRSAC) have prepared wind & cyclone hazard zonation map for entire Hnahthial district. There are three main parameters considered, viz., distance from the coastline, aspect and elevation. The buffered distance from the coastline is taken as 60 km intervals, assuming that there is an appreciable change in the intensity of wind speed within the specified distance. Each buffered distance is given different weightages in the decreasing order towards Mizoram. The second parameter is slope-aspect where slopes are divided into two classes taking 180° from NW to SE quadrant into one class and the rest into another class. The first class is given

weightage value of 2 along with flatland and water bodies, and the latter class is given weightage 1. The third parameter is altitude which is divided into three classes 0-500 m, 500-800 m and above 800 m. These have been given weightage value of 3, 2 and 1 respectively. The three main parameters mentioned are given an influence of 2:1:1 ratio in percentage. The district is then classified into three zones of relative degrees of the wind & cyclone hazard. The map is shown in Figure 7 along with the corresponding area statistics in Table 3.

Hazard Zone	Area (in Sq. Km.)	Area (in %)
Very High Hazard Zone	96.73	9.39
High Hazard Zone	509.63	49.45
Moderate Hazard Zone	424.15	41.16
Grand Total	**1030.5**	**100.00**

Table 3. Statistics of Wind & Cyclone Hazard Zonation of Hnahthial District.

2.4 Other Hazards

Apart from the aforementioned natural hazards, Hnahthial district is also prone to cloud burst, river floods, forest fires, pest infestations and other man-made hazards such as urban fires, drowning, road accidents, etc. Though these hazards may appear to occur less frequently, they cannot be ignored. For example, if due proper precaution and preventive mitigation measures not taken in the routine slashing and burning practice of the forest for cultivation, it may result in large scale destruction of the forest.

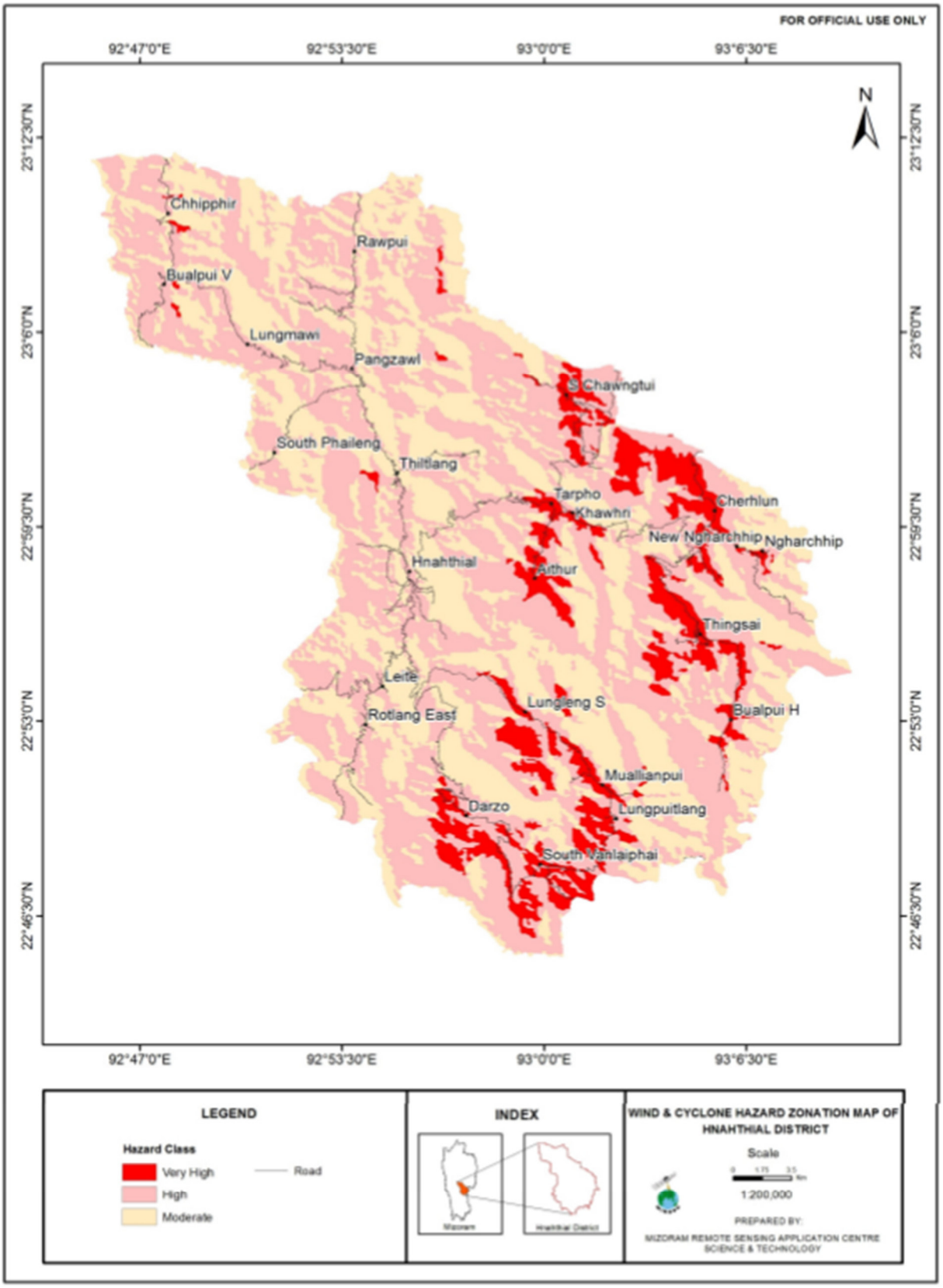


Figure 7. Wind & Cyclone Hazard Zonation Map of Hnahthial District

2.4 What Hazards can occur in the District

Natural disaster	Man-made disasters
Earthquake	Forest fire
Landslides	Road accident
Cyclone (Thlipui)	Urban fire
High speed wind	Stampede
Hail storm	Electrical disaster
Draughts	
Bamboo flowering (Mautam)	
Floods	
Clouds burst	

2.5 Probable Months for occurrence of Various Hazards

MONTH OF OCCURRENCE													
Sl. No	**TYPES OF HAZARDS**	**JANUARY**	**FEBRUARY**	**MARCH**	**APRIL**	**MAY**	**JUNE**	**JULY**	**AUGUST**	**SEPTEMBER**	**OCTOBER**	**NOVEMBER**	**DECEMBER**
1	**Cyclone**				←	—	—	→		←	—	—	→
2	**Flood**						←	—	→				
3	**Drought**			←	—	—	→						
4	**Earthquake**	←	—	—	—	—	—	—	—	—	—	—	→
5	**Fire**	←	—	—	—	—	—	—	—	—	—	—	→
6	**Landslide**				←	—	—	—	—	—	→		
7	**Hailstorm**			←	—	—	—	—	—	→			
8	**Cloudburst**					←	—	→					
9	**Accidents**	←	—	—	—	—	—	—	—	—	—	—	→

2.6 Risk Analysis

Sl. No	Type of Hazards	Potential Impact	Vulnerability	Vulnerable Areas
1	Cyclone	Loss of crop, infrastructure, human and bovine life, livelihood system, houses, private and public properties etc., cattle, livestock.	Communication network, shelter, infrastructures, power system, water supplies, transport system, human beings, livestock, agriculture, educational Institutions.	Whole district
2	Flood	Loss of crop, agricultural produce disrupted, spread of diseases, epidemics.	Agriculture, embankments, livelihood and livestock.	The River banks of Tuipui D
3	Drought	Failure of farming, loss of crops, scarcity of Water supplies, livestock.	Crops, irrigation sources, livestock and Drinking water supplies.	Whole district
4	Earthquake	Loss of crop, infrastructure, human and bovine life, livelihood system, houses, private and public properties etc., cattle, livestock.	Communication network, shelter, infrastructures, power system, water supplies, transport system, human beings, live stocks. Agriculture, educational Institutions.	Whole district
5	Fire	Huge loss of property, forest area, loss of medicinal plant and forest resources	Human beings and livestock, forests, environment, loss of properties and valuable Assets.	Whole district
6	Landslide	Loss of crop, infrastructure, human and bovine life, livelihood system, houses, private and public properties etc., cattle, livestock.	Agriculture and forest resources, communication and transport network, water supplies, irrigation, Livestock and institutions.	Whole district

2.7 Vulnerability Analysis

Sl .No	Vulnerability	Vulnerability Against Each Hazards				
		Cyclone	Landslide	Fire	Earthquake	Epidemic
1	Roadways		Whole district		Whole district	
2	Water ways		Tlawng pump areas and water lines		Whole district	
3	Hospitals	Hospitals	Whole **district** water lines	Hospitals	Whole district	
4	Food supplies			Centers in rural and urban area	Whole district	
5	Communication	Whole district	Whole district		Whole district	
6	Population	Whole district	Whole district	Whole district	Whole district	Whole district

3. CONCLUSION

It is evident that Hnahthial district is vulnerable to various natural hazards. The most frequent and disruptive natural hazard to which the district is exposed to is landslide. Although, landslides occur naturally, most of its causes can be attributed to unplanned activities on sites that are susceptible to its occurrence. The chances of its occurrence are increased manifold in areas having high degree of slope and loose soil structure which, when coupled with erratic land use practice can further increase the frequency and magnitude of landslides. Such areas are commonly found within urban complexes and road cuttings where increasing population growth has necessitated the expansion of various infrastructural amenities. In such areas, constructions are often carried out without proper consideration of site safety and feasibility.

Earthquake is another natural disaster that is unpredictable and can strike anytime. The frequency of earthquake occurrence is low, however, the intensity and area of impact is estimated to be very high which may result in heavy loss of lives and properties if this natural hazard occurs. To a lesser degree, Hnahthial district may be occasionally exposed to wind or cyclone hazard, which may cause damage to some settlements and may also result in loss of human lives. Apart from these, other hazards which are occasionally experienced by the district cannot be neglected. More investigation and analyses are required to assess the potential hazard posed by these phenomena on a larger scale.

If natural hazards are assessed and appropriate reduction techniques are incorporated into developmental planning process, social and economic disasters caused by natural hazards can be avoided or substantially reduced. Therefore, the district authorities also need to chalk out a plan to take up various mitigation, prevention and preparedness measures to combat these hazards, and also devise plans to undertake different response and rehabilitation activities in times of crises. Development needs of the district should be assessed and specific planning approaches be evolved keeping in view its physical characteristics, resources endowments, population pressure and the type of hazards. Various non-governmental organisations within the district also have their respective roles to play in the different stages of management of the impending disasters caused by these hazards. Awareness campaign also need to be launched to educate the public about the disastrous effects of these hazards, and to take preventive steps at their level. It should be kept in mind that management of the disasters and risks posed by these hazards is possible through the collective effort or synergy of the various stakeholders mentioned.

CHAPTER – 5

INSTITUTIONAL ARRANGEMENTS FOR DISASTER MANAGEMENT (DM)

The Disaster Management Act 2005 provides for an effective institutional mechanism for drawing up and monitoring implementation of disaster management plan for prevention and mitigating effects of disasters and for taking a holistic, coordinated and prompt response to any disaster situation.

The institutional mechanism for disaster management at the district level, as envisaged in the national plan and other national guidelines, is as given below –

5.1 District Disaster Management Authority (DDMA)

Section 25 of DM Act 2005 mandates Constitution of DDMA for every district and provides its composition. As per **Section 30(1)** of the DM Act 2005, DDMA 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.

As per the Act, DDMA shall consist of the following :

a) DDMA will be headed by the respective Deputy Commissioner and shall function as the ex-officio Chairman.
b) The Project Director, DRDO shall effectively be the ex-officio Co-Chairperson.
c) Ex-officio members include: i) The Chief Executive Officer of the District ii) The Superintendent of Police iii) The Chief Medical Officer iv) Not Exceeding two other District Level Officers.

The DDMA will also ensure that the Guidelines for prevention, mitigation, preparedness and response measures lay down by NDMA and SDMA are followed by all Departments at the District level and the Local Authorities in the District.

As per **Notification No.B.13011/17/2006-REH Dated Aizawl, the 6th June 2006**: and in pursuance of the provisions under Section 25 of the Disaster Management Act, 2005, the "District Disaster Management Authority" for Hnahthial District is constituted as below:

Sl. No	Name of Functionaries	Designation
1	Deputy Commissioner	Chairman
2	Project Director, DRDO	Co-Chairman
3	Additional Deputy Commissioner	Chief Executive Officer
4	The Superintendent of Police	Member
5	The Chief Medical Officer	Member
6	The Executive Engineer (P.H.E)	Member
7	The Sub-Divisional Officer (P.W.D)	Member
8	The Sub-Divisional Officer (P&E)	Member
9	Block Development Officer, Hnahthial RD Block.	Member
10	District Civil Supply Officer, Hnahthial	Member

5.2 Designated Meeting Venue

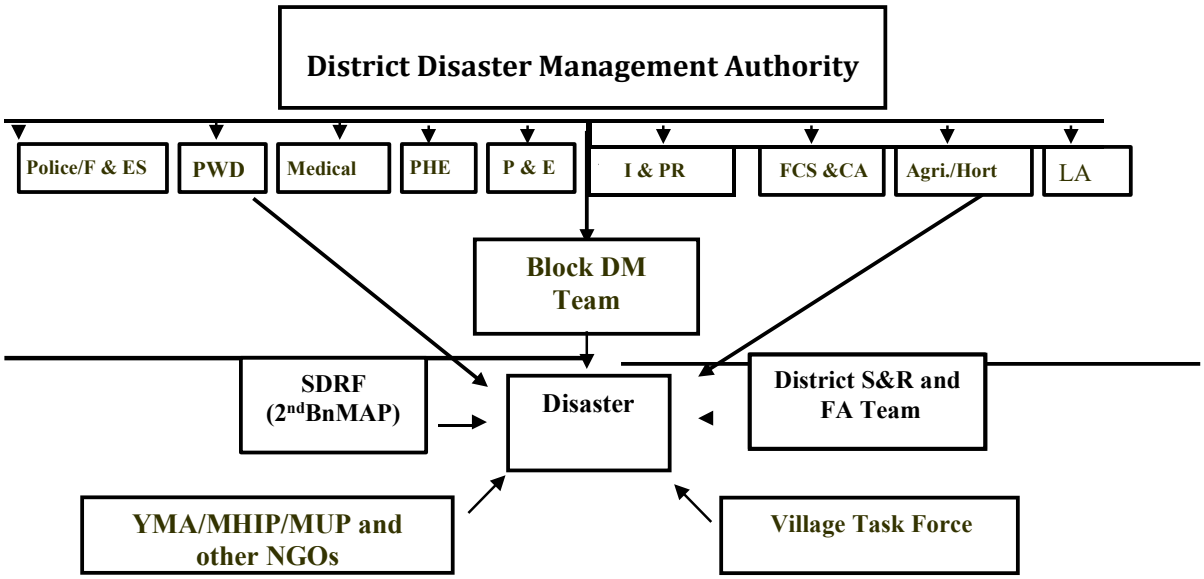
In the event of a major disaster with catastrophic consequences affecting the District capital i.e., Hnahthial or any other parts of the District, when there is total disruption of communication system, all members of Hnahthial DDMA will have to assemble immediately within 1(one) hour after the occurrence of such disaster, in a pre-designated venue without waiting for any formal correspondence or any other means of communication from the Chairman or other Officers authorized in that behalf. Such a designated Venue shall effectively function as the District Emergency Operation Centre (DEOC).

The designated DEOC shall be the office of the Deputy Commissioner. If holding of such meeting in the DEOC is not possible due to damage caused to the area or building, or blockade caused by debris, alternative venues that may function as the alternative DEOC, in order of priority will be:

1) Office of the S.P., Hnahthial
2) PWD IB, Hnahthial

The Chairman/Deputy Commissioner shall be the Responsible Officer. He/She shall ensure the operation of the District Emergency Operation Centre (DEOC)/Control room round the clock during crisis period. The DEOC is responsible for maintaining the Resource Inventory in the IDRN Website. If the Chairman is unable to preside over the meeting or fails to attend such meetings for any reason, the Co-chairman, the Project Director, DRDA will take the chair. If the Co-chairman is also absent, one of the senior members of the committee nominated by other members will preside over the meeting. There will be no quorum.

5.3 SETUP OF DISASTER MANAGEMENT RESPONSE MECHANISM (Fill in details)



5.4 District Disaster Management Advisory Committee :

As per Section 28 of DM Act 2005, Hnahthial DDMA will constitute an advisory committee or any other committees for effective discharge of its function. In case of disaster in the district, response management will be the responsibility of the DDMA and such committees constituted. The following Committees may, thus, be constituted:

5.4.1 Block Level Disaster Management Committee :

There shall be a Disaster Management Committee at the Block level. This Committee will assist in the implementation and coordinate with the programmes undertaken by the Block and of the Village Level Committee. The Committee shall consist of the following members:

Chairman	:	Block Development Officer.
Member Secretary	:	Principal/Headmaster of local High School or of Higher Secondary School.
Members	:	1. SDPO. 2. Medical Officer. 3. EE/SDO, PWD/PHE/P&E. 4. DEO (Edn). 5. Representatives of YMA, MHIP, MUP. 6. Representatives of local Churches. 7. President, Village Councils. 8. Any other member co-opted by the Chairman.

5.4.2 Village Level Disaster Management Committee :

A Village Disaster Management Committee shall be formed comprising of the following members :

Chairman	:	President, Village Council
Vice Chairman	:	President, YMA
Secretary	:	Secretary YMA
Asst. Secretary	:	Asst. Secretary, YMA
Treasurer	:	Treasurer, Village Council
Members	:	1. Post Commander, Security Force or Representative (if available). 2. O.C., Police Station/ Outpost (if any) 3. VFA if posted in the area. 4. Health Assistant/Pharmacists/Nurse/Midwife if posted in the area. 5. Representatives from MHIP and MUP. 6. Sectional Officer/Assistant, PWD if any. 7. All Office Bearers, Branch YMA. 8. All members, Village Council 9. Headmaster- Primary School/Middle School/ High School. 10. Representatives of the local churches. 11. Any other member co-opted by the chairman.

5.5 Powers & Function of the DDMA :

As per Section 30 of the DM Act, 2005, the Powers & Functions of the DDMA are as follows:

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 sub-section (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 thereof or;
   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 upgradation 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. organise and coordinate specialised 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 organisations;
   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 may be 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 organisations 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.

5.6 The Deputy Commissioner has the following duties:

- ✓ To facilitate and coordinate with local Government bodies to ensure that pre and post disaster management activities in the district are carried out.
- ✓ To assist community training, awareness programmes and the installations of emergency facilities with the support of local

administration, non-governmental organizations and the private sector.

- ✓ To function as a leader of the team and take appropriate actions to smoothen the response and relief activities to minimize the adverse impact of disaster.
- ✓ To recommend the Commissioner of Relief (CoR) to the State Government during declaration of disaster.

5.7 Stakeholders and their Responsibilities

At the District level, District Disaster Management Authority, with the Deputy Commissioner designated as the **Responsible Officer (RO)**, and other line departments at district HQ are responsible to deal with all phases of disaster management within district. All the major line departments of the district and the emergency support functions agencies converge into DEOC during disasters. Other technical institutions, community at large, local self-governments, NGOs etc. are also stakeholders of the District Disaster Management Plan. The role of the stakeholders has been prepared with the sole objective of making the concerned organizations understand their duties and responsibilities regarding disaster management at all levels and accomplishing them.

5.8 Role of Private Sector

- ✓ The private sector should be encouraged to ensure their active participation in the pre-disaster activities in alignment with the overall plan developed by the DDMA or the RO
- ✓ They should adhere to the relevant rules regarding prevention of disasters, as may be stipulated by relevant local authorities.
- ✓ As part of CSR, private Sectors shall undertake Disaster Resilient projects in consultation with the RO for enhancing district's resilience.

5.9 Role of Community Groups and Volunteers Agencies

- ✓ Local community groups and voluntary agencies including NGOs normally help in prevention and mitigation activities under the overall direction and supervision of the DDMA or the RO.
- ✓ They should be encouraged to participate in all training activities as may be organized and should familiarize themselves with their role in disaster management.

5.10 Role of Citizens

- ✓ It is the duty of every citizen to assist the Deputy Commissioner or such other person entrusted with or engaged in disaster management whenever demanded generally for the purpose of disaster management.

5.11 Incident Response System (IRS)

Incident Response System (IRS) IRS will be activated when disaster strikes the district. IRS incorporates all the tasks that may be performed during Disaster Management irrespective of their level of complexity. It envisages a composite team with various sections to attend to all the possible

response requirements. It provides a standard approach to the management of the disaster site of any small or large scale disaster event. IRS is one of the model tools for command, control and coordination of a response mechanism, which provides a means to coordinate the efforts of individual agencies as they work towards the common goal of stabilizing the incident and protecting the life, property and the environment. IRS organization functions through Incident Response Teams (IRTs) in the field. The IRT is a team comprising of all positions of IRS organization headed by IC. The IRTs will be pre-designated at all levels from District to Sub-Divisions level to Block and Village Level. On receipt of early warning, they will be activated by the RO. A Nodal Officer has to be designated for proper coordination between the District, State and National level in activating air support for response. (Insert Diagram)

5.11.1 IRS at the District level

The RO which stands at the apex of the DDMA as well as the IRS at the District Level will also ensure capacity building of all IRT members in their respective roles and responsibilities. In case when central teams (NDRF, Armed Forces) are deployed, the Responsible Officer will ensure supervision and co-ordination with the Central teams deployed with the Officers functioning at the District Level. For this purpose he may attach an Incident Commander (IC) in the DEOC and a Deputy IC where all resolutions can easily taken. The Incident Commander (IC) and Deputy IC will work in close coordination with DEOC and report to the RO. The RO will ensure that the strategic goals are achieved through the implementation of the Integrated Action Plan by the IRTs working in the field.

5.11.2 IRS Positions and suitable officers at District levels

IRS Position	Suitable officers
RESPONSIBLE OFFICER	Deputy Commissioner
INCIDENT COMMANDER	Addl. Deputy Commissioner
Deputy IC	Superintendent of Police
Information & Media Officer	District Information & Public Relation Officer
Liaison Officer	SDO Sadar
Safety Officer	SDC, i/c Disaster Management
OPERATIONS SECTION CHIEF	Addl. Superintendent of Police
Staging Area Manager	SDO Sadar
Response Branch Director	SDC (DMR)
Division Supervisor/ Group-in-charge	Dy. Superintendent of Police (Hq.)

Task Force/Strike Team	Commander/Leaders of SDRF, MAP, MRP, IR, Fire & Emergency, YMA
Single Resources	CMO - Health & Family Welfare Dept., SDO - PWD/P&E, S.O, F&ES.
Transportation Branch	District Transport Officer / Deputy Superintendent of Police
Road Group	
Group-in-charge	Deputy Superintendent of Police
Vehicle Coordinator	District Transport Officer/SDPO
Loading-in-charge / Unloading-in-charge	SDPO/Motor Vehicle Inspector, Transport Dept.
Rail Group	
Group-in-charge	Not Relevant in District Level in Mizoram.
Coordinator	Not Relevant in District Level in Mizoram.
Loading-in-charge / Unloading-in-charge	Not Relevant in District Level in Mizoram.
Water Group	
Group-in-charge	Executive Engineer, PHED
Coordinator	Executive Engineer, PHED
Loading-in-charge / Unloading-in-charge	Sub Divisional Officer, PHED
Air Operations Group	
Group-in-charge Air Operations	*District Aviation/Helipad/ Superintendent of Police*
Helibase / Helipad-in-charge	Executive Engineer, PWD
Loading / Unloading-in-charge	Superintending of Excise/SDO, PWD.
PLANNING SECTION CHIEF	Deputy Commissioner
Resource unit	Commandant, MRHG/ Superintendent of Police
Check-in-status Recorder	DFO/RO, EF&CC.
Situation unit	Sub-Divisional Police Officer
Display Processor	District Information & Public Relation Officer/ President, MJA

Field Observer	Representative of Sub Hqrs YMA/MHIP/ MUP/ VC
Weather Observer	DAO, Agriculture Dept.
Documentation Unit	DEO, Education Dept.
Demobilization Unit	Superintendent of Police
Technical Specialist	SDO, P&E Dept.
LOGISTICS SECTION CHIEF	Superintendent of Police
Service Branch Director	District Local Administrative Officer/ BDO
Communication unit	Inspector Wireless, Police Dept.
Medical Unit	CMO, Health & Family Welfare Dept.
Food Unit	DCSO, FCS&CA Dept.
Support Branch Director	District Local Administrative Officer
Resource Provisioning Unit	DCSO, FCS&CA Dept
Facilities Unit	Superintendent of Taxes/SDO(Sadar)
Ground Support Unit	Executive Engineer/SDO, Public Work Department
Finance Branch Director	District Treasury Officer, Accounts & Treasuries Dept.
Time Unit	District Research Officer, Economic & Statistics
Compensation / Claim Unit	Settlement Officer/Asst. Settlement Officer, Revenue Dept./Revenue Officer
Procurement Unit	Deputy Commissioner
Cost Unit	Deputy Commissioner

5.12 District Emergency Operation Centre (EOC)

5.12.1 EOC Norms

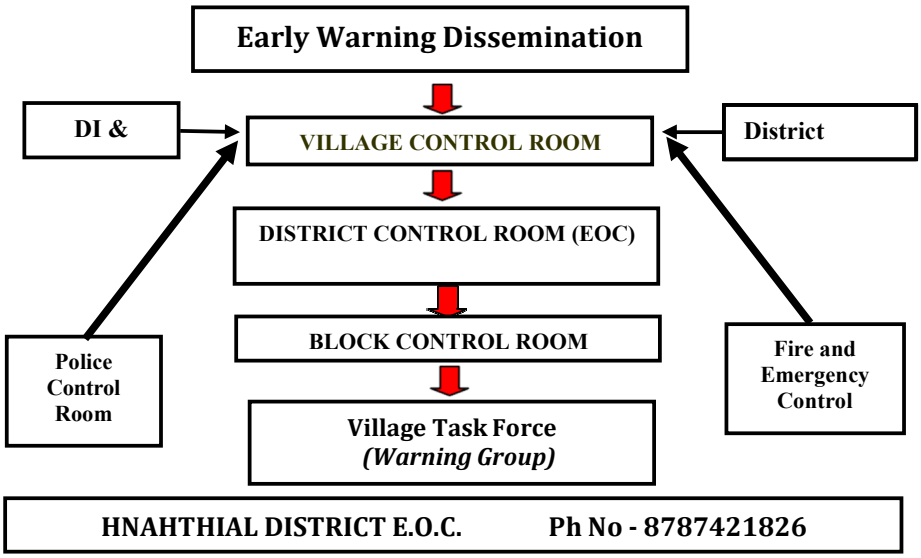
It will have:

- ✓ One Sr. Administrative Officer as EOC in-charge having experience in DM with required assistants;
- ✓ Representation of all concerned line departments with authority to quickly mobilize their resources;

- ✓ Adequate space with proper infrastructure to accommodate the participating agencies and departments;
- ✓ Communication facilities with last mile connectivity;
- ✓ A vehicle mounted with HF, VHF and satellite telephone for deployment in the affected site to provide immediate connectivity with the headquarters and ICP;
- ✓ A representative of central teams (NDRF, Armed Forces) whenever they are deployed to integrate their resources, expertise and to resolve conflicts that may arise during the response effort;
- ✓ Provision and plan for dovetailing the NDRF, Armed Forces communication capabilities with the local communication set up. There will be proper plan so that all are able to connect with each other in case of large scale disasters or failure of the local communication systems;
- ✓ Map depicting affected site, resources deployed, facilities established like Incident Command Post, Staging Area, Incident Base, Camp, Relief Camp, Helibase, Helipad, etc.
- ✓ DM plans of all line departments. DM plans of the State and the District;
- ✓ Directories with contact details of all emergency services and nodal officers;
- ✓ Connectivity with all District headquarters and police stations;
- ✓ Database of NGOs working in different geographical areas;
- ✓ Demographic details of the State and Districts;
- ✓ Online / Web based DSS with the availability of at least the following components: Standardization of Command Structure with the details of the earmarked and trained personnel in IRS;
- ✓ Socio-economic, demographic and land use planning;
- ✓ Resource inventories of all line departments and connectivity with database of India Disaster Resource Network (IDRN) India Disaster Knowledge Network (IDKN) and Corporate Disaster Resource Network (CDRN).

5.12.2 District Emergency Operation Centre, Hnahthial

The DEOC will be the hub of activity in a disaster situation in the district. This is, however not to be underestimate its normal time activities. The DEOC should have the flexibility to expand when demand increases and contrast when the situation comes to normal. The DEOC is connected with State EOC in the upstream (which further connects to National EOC) and other EOC(s) in the downstream including other field offices during emergencies.



The District Emergency Operation Centre (DEOC) will be the nerve centre for the Disaster Management in the entire District. Its main purpose will be to monitor, coordinate and implement the actions for disaster management. It shall ensure that all warning, communication systems and instruments available in the district are in working conditions. The EOC control room will receive necessary information on a routine basis from the district departments on the vulnerability of various places in the District. A complete report on the preparedness at the District level departments and the resources available at their disposal should be with the authorities at the control room. If required, it shall also arrange and supply requirements. The District Control Room shall also see to it that the disaster management plan is updated according to the changing scenario. It has to maintain an inventory of all resources and should able to provide information to all those who are needy. It will also provide information at the district and local level and disaster prone areas through appropriate media. In order to do this, it will have to brief the media of the situations and give day to day reports during the disasters. It will also maintain a record of the actual scenario and the action taken.

The Control Room will require participation of key officers from the line departments and other officers from the District administration directly involved in the Disaster Management. The facilities and amenities available with the D. C. will be at the disposal of the officials on duty. The Control Room will perform the following functions :

i) Collection and compilation of information from the affected areas.
ii) Documenting information flow.
iii) Decision making regarding resources management.
iv) Allocation of tasks to different resources organizations.
v) Supply of information to State Government.

It may not be possible for the Deputy Commissioner and his team to man the DEOC round the clock, a specialized team of Desk Officers from key source departments from the following departments should be formed :

i) Police Department
ii) Medical (Health and Family Welfare)
iii) PWD/PHE/P&E Deptts.
iv) UD&PA

The Deputy Commissioner will spell out priorities and policy guidelines and will coordinates the services of various departments and agencies. The Desk Officer will maintain constant contact with the District Disaster Management Committee and other head of offices to ensure quick decisions making. They will be responsible for allocating tasks to concerned staff, resources management and information flow. Responsibility of each desk will be pre-assigned.

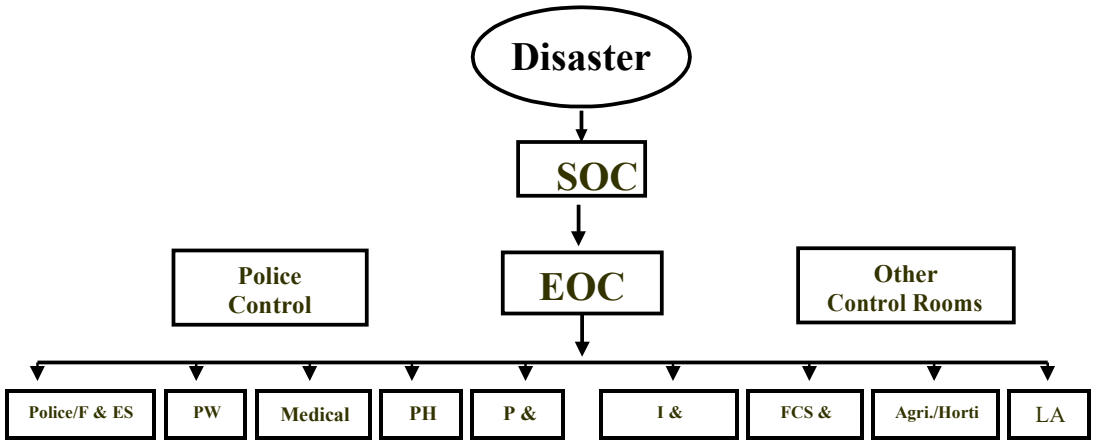
5.12.3 Alternate EOC

If case or situation arises when the DEOC at Deputy Commissioner's Office is not fit to function due collapsed or damage Office of the SP, Hnahthial or PWD IB, Hnahthial will function as alternate DEOC.

5.13 INCIDENT SITE OPERATION CENTER (SOC)

Site Operation Centre, a complementary unit to the EOC would operate close to the district site. This will be directly linked with the DEOC. It is the local community who would set up such operation centre at the locality level in order to coordinate various activities of evacuation, rescue and relief operations. Volunteers from locality supplemented by re-enforcements from the neighbourhood will conduct large scale relief operations without waiting for government agencies to reach the site.

If SOC has not been set up on the first visit of the site, the officer so deputed from the District Administration viz. SDO, BDO or other such officers conveniently available near the site will see to that the SOC is set up without delay. In order to make SOC more effective and cohesive, the local leadership should be associated in such a way that maximum participation in terms of manpower and authority is ensured.



5.14 Planning Consideration

Disaster Management planning includes the key areas involved in addressing any threat or hazard, prevention, mitigation, response and recovery.

5.15 Public Private Partnership

Development activities involve for both private and public enterprises. To mitigate disasters and create better prepared society for disasters and other hazards, strong public-private coordination is critical. In order to achieve community resilience and preparedness, public and private owners of critical infrastructure and key resources like manpower, technical expertise & equipment need to work together, before, during and after a disaster. The key issue is to recognize and embrace the public-private interfaces that can improve the ability of a community to manage the response and recovery phases of disaster management. DDMP spell out clear role and responsibilities of both Public and Private Sector and Private Sector must be involved closely into community development and organization of mock drills etc. A resource inventory be maintained indicating the capabilities in terms of human, equipment and infrastructure both in public and private sector.

CHAPTER – 6

PREVENTION AND MITIGATION 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:

1. Investment in risk mapping and assessment.
2. Providing better early warning systems for natural hazards. Improve scientific and technical capabilities.
3. Reducing the destruction and loss of life through creation of Disaster resilient infrastructure.
4. Integrating risk reduction measures into all development projects- transportation system, critical infrastructure such as water, electricity and telecommunication systems etc.
5. Prevent habitation in disaster risk and hazard zones to reduce loss of life and destruction of property.
6. Reduce environmental degradation and promote restoration of livelihood.
7. Reduce effects of the natural environment on the infrastructure.

6.1 Protection and Prevention

The protection of Critical Infrastructure and Key Resources (CIKR) is vital to reduce or eliminate threat to people, property and the environment. Prevention consists of actions that reduce risk from natural or manmade disaster incidents. Proper preparedness and mitigation measures instantly help to respond to disaster in time. So district wise preparedness and mitigation is highly required. A prepared community is the need of the hour to minimize the loss and damage caused by the disaster. Mitigation focuses on various ways and means of reducing the impact of disasters to the communities through damage prevention.

6.2 Mitigation Measures

Mitigation with its focus on the impact of hazard encompasses the structural and non-structural approaches taken to eliminate or limit a hazard's exposure, impact on people, property and the environment. Structural measures include physical measures and standards such as building codes, material specification and performance standards for the construction of new buildings, strengthening existing ones buildings and building of resilient life lines and infrastructure such as water and electricity supply lines, developing protective devices etc to make them more hazard resistant. Non-structural measures, on the other hand, are not involved in physical structures but emphasize policies such as land-use planning, investment in capacity building and awareness through dissemination of information on the various do's and don'ts at the time of disaster, insurance etc.

6.2.1 Structural Mitigation Measures :

a) **Town Planning Act:** The Department of UD&PA may develop a master plan for Hnahthial District. The master plan shall include planning, adopting and enforcing stringent building codes, seismic design standards and cyclonic wind/hail bracing requirement for new construction or repairing existing buildings, Flood-proofing requirements in areas prone to flooding etc. It will incorporate Disaster Resilient measures into development projects. It will incorporate planning and adopting zoning ordinances that steer development and settlement away from areas prone to flooding, storm surge, cyclone and landslide.

b) **Development Control Regulations:** Incorporate the disaster management concerns in development. This should include all Government Sponsored Developmental Programs and Schemes.

c) **Undertaking Retrofitting:** Most of the buildings in Hnahthial District are non-engineered and will have low seismic resistant capacity. These buildings are prone to damage even at low intensity earthquake. A detailed assessment of buildings, which are vulnerable and may cause loss of life, should be made giving public buildings like Hospitals, Community Halls, Churches, Schools and colleges first priority as they can function as evacuation centres and temporary shelters during a disaster. Priority will also be given to private houses, hotels, offices, go downs and factories to minimise casualties and destruction of both private and public property.

6.2.2 Non-Structural Measures: The following aspects required to be look into for the purpose of non-structural mitigation:

a. Land-Use Regulation:

i) Which area should be spared for human settlement, agriculture, forestation etc.
ii) Hazard zoning of areas.
iii) Areas where new roadways and infrastructure should be avoided.
iv) Planning and building community shelters and safe rooms.

b. Safety Norms/Regulations for Economic and Social Infrastructure including places of worships and crowd management for implementing public safety norms.

c. Capacity Building for Mitigation

i) Steps taken for human resource development and capacity building for effective disaster mitigation at District Level.
ii) Training and awareness generation in disaster management.

d. Building improvement Codes and By-laws:

Buildings should be improved in terms of making them disaster resilient. The rapid urbanization is leading to the increase in housing and buildings are primarily responsible for damage and loss of lives. It is, therefore, extremely important to have systematic building bye-laws in the district to reduce and prevent loss of life and property.

e. Mainstreaming of DRR in development planning :

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 Hnahthial 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 'do not harm' 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, hospitals etc., 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, DDMA has to sensitize officials of all functioning departments on DRR issues.

6.3 Mitigation & Preparedness Measures for Vulnerable Groups :

The District Administration shall take up the responsibility of training vulnerable groups based on their level of capacity. The District Administration shall also set up a special shelter or reserve a special shelter for them during disaster event.

6.4 Creating Special Working Group :

Special attention needs to be focused on vulnerable persons because their needs differ from normal persons. For this purpose a special working group may be created from DM Volunteers in each locality or village council for vulnerable groups. The special group created may undergo training under the Primary Agency already identified in the District.

6.5 **Prevention and Mitigation Measures undertaken for specific hazards:**

Separate Committees may be set up for each Specific Hazard Zone from the District to the village level. Zones will also be allocated to a nodal officer and each officer with the Committees created in each zone shall function as a **Disaster Response Team (DRT)**.

6.6 Hazard-Wise Structural and Non-Structural Mitigation Measures :

a) **Earthquake :**

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

- Strict regulation for approvals of building design and to ensure safe construction practices are followed while construction of new buildings is undertaken.
- Mass education on safe construction practices and protection of human being from earthquake. Practice dos and don'ts on regular basis.
- Have mock drills with all stakeholders and institutions and the general public to ensure the preparedness level.
- Training of engineers and masons on safe construction practices.

b) Flood :

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

c) Cyclones/High wind :

- Strengthen early warning system in the district. Coordinate with Meteorology Dept. to get localized cyclonic information and alert the people for preparedness.
- Mapping, delineation and demarcation of cyclone hazard areas and sensitive areas
- Structural modification in existing houses to keep the roof intact during heavy wind/storm. Construction of Cyclone shelters that can act as safe place to flee during cyclone
- Construction of wind breakers to minimize the effect of high wind on the houses.

d) Landslides :

- Identify all streams runoff and clear blocked areas before the rainy season, to avoid blockade.
- Maintain and protect both sides of river and stream to avoid erosion and improve the channels for free flow of water.
- Monitoring of landslide prone areas either through an automated system or by preparation of hazard area maps and following up ground check on such areas during monsoon or raining season.
- House site allotment should be considered only after careful consultation with concerned authorities according to Land Use Plan to avoid risk against landslide and land-sinking.

- Campaigns to create public awareness on the importance of proper drainage system.

e) **Drought :**

- Tracking the behaviour of monsoon and taking advance action to reduce the drought situation.
- Construction of rainwater harvesting structures in drought prone areas to ensure that water is available during drought prevalence.
- Crop insurance should be promoted to transfer risk.
- Schemes like Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS), Integrated Watershed Management Programme (IWMP) Drought 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. should address and incorporate medium and long term drought mitigation measures.

f) **Fire :**

- Identify vulnerable forest areas prone to fire damage annually and prepare a fire damage map.
- 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.
- Constitution of Village Fire Prevention Committees and adequate training and awareness generated on fire prevention for such committees.
- 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.
- Strict enforcement of existing Fire Protection Regulation Act.

g) **Epidemics :**

- Health department needs to be provided with more water quality monitoring centres for effective surveillance of water quality principally during the monsoon months and during flood events.
- Bleaching powder should be adequately available with all the villages.
- Rural hospitals should be upgraded to include blood bank and surgical facilities.
- Contingency plan for response should be prepared after identifying the epidemics that are likely to occur in the region.
- First aid training will help to cope better during the emergency response period for epidemics.

- Improving the sanitary conditions, drive to check and fumigate breeding places of any vector, disinfecting the water sources etc.

h) Road accidents :

- Setting up of highway safety patrol teams to monitor and prevent rash and reckless driving.
- Provision of adequate signboards, speed breakers and guard stones/steels near cliffs and accident prone spots.
- The risk at the accident prone spots and cliffs must be minimized by adequate construction signboards.

i) Hailstorm :

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

j) Pest attack :

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

k) Frost and Cold Wave :

- Department of Agriculture & Cooperation, Ministry of Agriculture closely monitors cold wave situation in consultation with the Indian Meteorological Department (IMD) and the State governments.
- In case of cold wave/frost situation, District Crop Contingency Plans may be activated in consultation with the Agriculture department to minimize the impact.
- Farmers are to be provided with light irrigation as per need, immediately prune damaged tips of branches or shoot, burn leave/waste material in the orchard to create smoke and manage rejuvenation of damaged crops through pruning of dead material, application of extra doses of fertilizer through foliar sprays.

CHAPTER 7

PREPAREDNESS MEASURES

Planning is the one of the key elements in the Preparedness cycle. Preparedness cycle illustrates the way plans are continuously evaluated and improved through a round of planning, organizing, training, equipping, exercising, evaluating and taking corrective actions.

Preparedness includes the formulation of viable emergency plans, the development of Early Warning Systems, the maintenance of inventories and the training of personnel. It may also embrace search and rescue measures as well as evacuation plans for areas that may be at risk from a recurring disaster.

Preparedness therefore encompasses measures taken before a disaster event which are aimed at minimizing the loss of life, disruption of critical services, and damage when the disaster occurs.

General Preparedness measures needed to be undertaken includes:

- Establishment of the Emergency Control Rooms also known as District Emergency Operation Centre (DEOC).
- Sound and fail-proof Communication system
- Training for disaster management and capacity building. This includes organising a special team known as Quick Response Team (QRT) specially created for Search & Rescue Operations.
- Organization of mock drill exercise, Community Level Training and raising Public Awareness
- Risk Assessment and Vulnerability Analysis
- Projects/Programs for PWD categories.
- Contingency Plan

7.1 Identification of Stakeholders Involved in Disaster Response

7.1.1 Nodal Department Designated for Disaster Management

Man-made disasters	***Nodal Department***
Forest Fire	EF& CC Dept.,DC
Biological Disaster	Health & Family Welfare, PHED
Major breakdown of law & order	DEF, DC
Major road accidents	Transport Department, Superintendent of Police, Hnahthial
Cyber Terrorism	Superintendent of Police, Hnahthial
Large scale refugees from any neighbouring country/state	SP/DC/FCS&CA/H&FW/P&E/PHED
Collapse structure	PWD, P&E, SP,DC
Natural Disaster	
Drought	Agriculture, LRS&WC, Horticulture
Earthquake, Landslide, Cyclone, Floods Etc	Agriculture,DC, SP

Physically Challenge Population	Social Welfare Department, SSA and RMSA, Health & Family Welfare Department, DC

7.2 Nodal Officer for Various Departments

The District Administration has designated Officers from line departments as Nodal Officers for Disaster Preparedness and response :

Sl No	Nodal Officers Designated	Department
1	PD	DRDO
2	SP	Police
3	CMO	H&FW Dept.
4	SDC(DM&R)	DC's Office
5	EE	PWD
6	EE	PHED
7	SDO	P&E Dept.
8	DFDO	District Fisheries Dept.
9	DVO	AH&Vety Dept.
10	DPC	SSA
11	DIO	Trade & Commerce Dept.
12	DSO	Sericulture Dept.
13	DAO	Agri. Dept.
14	DTO	Transport Dept.
15	DRO	Eco& Stats. Dept.
16	SO*	F&ES
17	IPRO	DIPRO
18	SRO*	Arts& Culture Dept.
19	GM*	DIC
20	TO	Treasury Office
21	DEO	Education Dept.
22	DCSO	FCA&CS
23	CDPO	SWD
24	DCPO	Dist. Child Protection Unit
25	DUDO	UD&PA
26	ACT*	Taxation Dept.
27	JD*	A&T (SZ)
28	Inspector*	Legal Metrology
29	OC	Excise & Narcotics Dept.
30	DLAO*	LAD
31	DHO	Horti. Dept.
32	SO	LR&S

33	DSYO	Sport & Youth Dept.
34	EE*	Minor Irrigation Dept.
35	DFO	EF&CC Dept.
36	District & Session Judge*	District Court
37	DEG*	BSNL
38	Principal	Govt. Hnahthial College
39	BDO	RD Dept.
40	Asst. Registrar*	Cooperative Societies
41	Medical Superintendent	District Hospital, Hnahthial
42	Programme Executive*	AIR

(Note: the Nodal Officer placed with an '' sign are the Departments currently not functioning within Hnahthial District. However, their function as designated Nodal Officer shall be activated as and when the office exists)*

7.3 Response and Evacuation of Persons with Disabilities (PWD):
Priorities should be given to PWDs especially in disaster situations. When an emergency occurs, the following guidelines shall be followed:

- ✓ No one is permitted to exit from a route made for the physically handicapped persons.
- ✓ Their Exit route must be cleared to help movement/evacuation of PWD categories.
- ✓ On a need basis, a stretcher or rope may also be utilised for evacuation.

7.4 Formation of Teams: The following Teams may be formed:

- Joint Verification Team for Disaster Management headed by the Incident Commander(IC), Hnahthial
- Early Warning & Information Team chaired by the Deputy Commissioner, Hnahthial.
- Search & Rescue Team headed by Superintendent of Police, Hnahthial
- Evacuation Team headed by Superintendent of Police, Hnahthial
- Damage & Loss Assessment Team headed by Deputy Commissioner, Hnahthial
- First Aid Team & Medical Team headed by the Chief Medical Officer, Hnahthial
- Shelter Management Team headed by SO, Hnahthial
- Food & Water Management Team Headed by SDO, PHED
- Relief Coordination Team headed by the Deputy Commissioner, Hnahthial
- Trauma Counselling Team, CMO, Hnahthial
- Patrolling Team headed by Superintendent of Police, Hnahthial

7.5 Activation of IRS in the District

The Responsible Officer, Deputy Commissioner has to ensure that the Incident Command System and IRS Teams are activated. He has to make

sure that all IRS teams are ready with equipment, fund and other logistics for any other operations. District Level IRS will be activated on recipient of warning of disasters.

7.6 Protocol for Seeking Help from any Other Agencies

DDMA shall make all logistics arrangement for seeking help from any other agencies such as Govt. of India, State Government, NDRF, SDRF etc. HDDMA will also coordinate and link with other DDMAs/DDMPs of other district.

7.7 Operational Check-up for DEOC

DEOC is an offsite facility which will be functioning from the District headquarters and which is actually an augmented control room having communication facilities and space to accommodate the various Emergency Support Functionaries (ESFs). It is a combination of various line departments of Government and other agencies whose services are generally required during incident response. These officials will be able to take decisions on the spot under the guidance of RO and will be able to assist the RO in achieving the incident objectives. RO will also ensure that the line departments do not issue parallel and contradictory instructions to their field level officers. The DEOC will take stock of the emerging situation and assist the RO in mobilizing the respective line department's resources, manpower and expertise along with appropriate delegated authorities for the on-scene IRT(s). DEOC will keep the RO informed of the changing situation and support extended.

This responsibility can be discharged most effectively only if it has the required information through a fail-safe communication facility and an ideal information technology solution. In addition to the above a web-based connectivity will further help in accessing situational awareness, decision support and multi-agency coordination. It will allow all collaborating agencies and departments inside and outside DEOC environment to share information, make decisions, activate plans, deploy IRTs, perform and log all necessary response and relief activities and make the DEOC effective. It is very important to put the above capabilities in place.

7.8 Role of the Emergency Operation Centre in normal time

The Deputy Commissioner, Hnahthial District shall be empowered to appoint an Administrative Officer as officer-in-charge of the DEOC. The latter will be responsible for the effective functioning of the DEOC. Responsibilities of the Officer-in-charge in normal time shall include:

- ✓ ensuring all equipment in the DEOC are in working condition,
- ✓ Collection of data on routine basis from line departments for disaster management.
- ✓ Develop status reports of preparedness and mitigation activities in the District.
- ✓ Ensuring appropriate implementation of the District Disaster Management Plan.
- ✓ Maintenance of data bank with regular updating maintenance of data bank with regular updating.

- ✓ Activate the trigger mechanism on receipt of any disaster warning and/or the occurrence of any disaster.

7.9 Role of District Emergency Operation Centre during Disaster

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

1. All Emergency Support Functionaries
2. Members of the DDMA, Hnahthial
3. All Line Departments with respect to Disaster Management
4. Hospitals in the disaster area
5. State Relief Commissioner
6. Emergency Operation Centre in the neighbouring districts
7. State Emergency Operation Centre
8. People's representatives from the District

During Emergency, the Officer in Charge must ensure the availability of the following equipment in the Control Room and ensure they are fully functional for proper disaster management activities:

1. Communication facilities, phone (landline and mobile including wireless set).
2. Generator, inverter with batteries.
3. Radio/TV for collection of information.
4. Record Book for entry of important notes and warning received about disaster.
5. Sufficient fuel for running the generator.
6. Vehicles for emergency (two and/or four wheelers).
7. Disaster mapping of different aspect like vulnerable and safe areas etc.
8. Standard Operating Procedure for line departments.
9. Important contact numbers for emergency.
10. List of NGOs, NSS, and NCC with their capability to respond disaster.

7.10 Command and Coordination of Response at the District Level

Incident Response System (IRS) incorporates all tasks that may be performed during Disaster Management irrespective of their level of complexity. It envisages a composite team with various sections to attend to all the possible response requirements.

It provides a standard approach to the management of the disaster site of any small or large scale disaster event. IRS is one of the model tools for command, control and coordination of a response mechanism, which provides a means to coordinate the efforts of individual agencies as they work towards the common goal of stabilizing the incident and protecting the life, property and environment.

7.11 NGO's and Other Stakeholders Coordination

7.11.1 Activation of the DM Committees

As disasters affect the whole society, implementation of Disaster Management Plan need vertical and horizontal linkages with Government and NGO's, CBO's, local bodies, educational institutes and community organizations. All DM Committees and task forces will be activated as the first responders to disaster. NGO coordination will be activated. Working group created will act in rescue operations as per activities assigned to them.

7.11.2 Ensure the Function of all Control rooms

DEOC should function properly 24 x 7. Quick and correct early warning disseminations should also be ensured. Collection of accurate and correct information from the affected area is necessary to assist in providing necessary support.

CHAPTER – 8

CAPACITY BUILDING AND TRAINING MEASURES

8.1 Approaches

Developing a DDMP without building capacity or raising awareness amongst stakeholders can be detrimental to the development of a successful and sustainable plan. Stakeholders and communities are critical components to a successful, long-term, sustainable disaster management plan. Capacity Building develops and strengthens skills, competencies and abilities of both Government and no-government officials and communities to achieve their desired results during and after disasters, as well as preventing hazardous events from becoming disasters.

8.2 Disaster Specific Measures and Approaches:

Sector	Mitigation Measures	Agency responsible
INFRASTRUCTURAL DEVELOPMENT	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, BDO, DEO
	Repair/Restoration of vulnerable points on roads before unset of monsoon.	PWD, BRTF,PD, DRDA/ BDO, VC
	Ensuring proper maintenance of shelter places constructed by default agencies.	Concerned village committee and BDO
	Ensure maintenance and proper functioning of electronic communication system.	BSNL & other telecommunication agencies/DEF/BDO
	Immediate response for repair/ replacement of pipe water supply system.	PHED, BDO,VCs, NGOs
	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, DEO, BDO
	Adequate stock piling of vaccines should be ensuring for vaccination before disaster.	CMO, DVO, BDO
	Training Programme of common people should be programmed for Health care, sanitation and first aid from village level to district level.	CMO, DVO, BDO

LIVELIHOOD SECTOR	By way of IEC activities through walling posters, street play, village task force/volunteers training, during normal period.	CMO, DEO, BDO, 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 BDO.
	Rising of Nursery in the horticulture farms & insurance coverage of horticultural products.	DHO, BDO and NGOs.
INSURANCE	By way of IEC activities through walling posters, street play, village task forces/volunteers training, during normal period.	CMO/DVO/DEO/NGOs
	Emphasizing on insurance coverage of live stock, crops, industry, workshop, etc.	DAO, DVO, BDO and NGOs
	Creating awareness among general public. During normal time to insured human life.	BDO, Leading NGOs, VC

8.3 Capacity Building Plan

As per the 14th Financial Commission, sum is annually earmarked for the State of Mizoram under the "Grant for Capacity Building. Under this grant, the State Government had drawn up their perspective plan which focuses on trainings and various other activities to build up the capacity of different stakeholders including community based organization.

8.4 Institutional Capacity Building

For better disaster management in Hnahthial District, initiatives may be taken by dividing the District into different zones. The divided zones are allocated to zonal officers. The zonal officers shall be allocated the task of first responder for any reported disasters. Law and order management, spot verification and any other necessary action needs to be taken.

8.5 Community Capacity Building and Community Based Disaster Management

- Community or the local functionary is the most important mechanism in disaster management. Community-based Disaster Management (CBDM) is the latest methodology that is successfully experimented in India. CBDM is basically concerned with community disaster awareness initiatives, which is a comprehensive method to inform and train the local residents about how to prepare to cope up with natural as well as human induced disasters. It is basically raising awareness in the community so that in the event of the Disaster, the community itself will be the first responders. For

this, communities maybe be trained and awareness programme organized. Volunteers should be identified and given training so that they will be able to response more effectively during real crisis situations.
Every villages and block may be requested to make their own village and block disaster management plan. For this Village Disaster Management Committee and Block Disaster Management Committee should be activated. Disaster Management Teams like Search & Recue, Evacuation and First Aid Team should also be formed in every village and block level. District Level Mock drill involving Govt. Departments and community may be conducted occasionally.

8.5.1 Community Based Disaster Management Teams

- ✓ **First Aid and Medical Team:** This team should be created to attend to all the casualties in the event of any disaster. They will be provided with First aid kits and they will be trained by the Health & Family Welfare Department.

SOP for First Aid and Medical Group:

Pre-Disaster

- ✓ Maintain a list of vulnerable groups such as pregnant women, infants, disabled, sick, old and infirm.
- ✓ Keep First aid kits ready and ensure that no expired drugs are utilised at any point of time.
- ✓ Distribute basic medicines and spreading information/awareness on their respective uses.
- ✓ To keep stretchers/local-made alternative ready for carrying the injured people.
- ✓ Ensure that contents of all First aid kits are satisfactory.

On receipt of warning

- ✓ Move into the safe shelter.
- ✓ If caught inside, stand with their backs against a strong indoor wall (in EQ).
- ✓ If outside during the earthquake, run to an open space (in EQ).
- ✓ If in a moving vehicle, will stop and stay inside (EQ).

Post Disaster

- ✓ Attend to the injured people.
- ✓ Counsel the traumatized people.
- ✓ Listen to and calm the victims affectionately and patiently.
- ✓ Help doctors and paramedics shift the ill and the injured to hospitals.
- ✓ Isolate the cases with infectious diseases and prevent them from spreading.
- ✓ Provide preventive medication if there is danger of cholera, dysentery etc.

Search and Rescue Group: This team should be created and shall perform evacuation besides search and rescue operation. They will undergo training on how to conduct search & rescue operation for every kind of disaster.

SOP for S&R Team

Pre-Disaster

- Familiarize themselves with the existing response mechanisms of the government through training.
- Arrange & Maintain the necessary S&R equipment for Govt. and Pvt. Agencies.
- Have a detailed map of the community indicating vulnerable areas/safe areas.
- Organize themselves into pairs (buddy system).
- Prepare back up teams ready for rotation of personnel.

On receipt of warning

- Organize an Emergency meeting of the S&R members.
- Contact the administration for detailed information.
- Gather the equipment required, identify the vulnerable area where help is required and take remedial immediate action.
- Evacuate people to a safe shelter.
- Co-ordinate with other teams such as the First-Aid team to provide immediate primary health care.
- Shift the seriously injured persons to hospital/PHC.

Post Disaster

- Conduct a general post-hazard assessment.
- Identify victims and maintain a list of missing persons.
- Clear debris and fallen trees in order to reach trapped victims.
- Communicate with the sub-division and District levels on additional assistance.
- Coordinate closely with the first aid team for primary health care to rescued victims.
- Coordinate with the evacuation team to shift rescued persons to open space/tents.

Shelter Management: This team will be created to identify buildings as temporary shelters for victims of Disaster or for accommodation of shelterless people due to a disaster.

SOP for Shelter Management Team

Pre-Disaster

- Identify existing infrastructure of the community such as roads, schools, community halls, rest houses etc.
- Co-ordinate with the local authority to identify/location for setting up of relief camps.

- Check the condition of identified safe shelters especially that require repairs.
- Stock dry food and other safe food stocks, fuels, etc.
- Ensure that the shelters are easily approachable.
- Ensure that the shelters are well maintained. Ensure there is adequate electricity & Water Supply at temporary or safe shelters.
- Organize for alternate power supply by procuring generators/diesel engines.

On Receipt of warning

- Co-ordinate with the Search & rescue and Evacuation teams to evacuate people of vulnerable areas who could become possible victims of a disaster.
- Moves stocks of dry food, fuels and medicines to the shelter.
- Organize space to house evacuee families.
- Provide additional assistance to the vulnerable groups such as the old, disabled, pregnant women, and children etc. to settle in the shelter.
- Ensure the strict sanitary practices are adhered to in the shelter.
- Register and maintain records of the evacuees.

During Disaster

- If caught inside withstand with their backs against a strong indoor wall.(EQ)
- If outside during disaster, run to an open space away from trees, building etc.(EQ)
- If in a moving vehicles; stop and stay inside (EQ).

Post Disaster

- To ensure that evacuees are fed and housed until the de-warning is received.
- Organise tents and materials for constructions of temporary shelters.
- Clean and disinfect the shelter all throughout the stay and before leaving.
- Ensure that sufficient water is available in bathing units and toilets at relief camps.
- Demarcate areas for safe excreta disposal around the relief camp.
- Ensure that solid waste is put in refuse containers or buried in a refuse pit.
- Guide the local authorities to construct latrines away from ground water sources.
- Ensure that there are no medical wastes such as needles, drugs etc. lying around.
- Coordinate with the local authority to construct sufficient bathing cubicles for female.
- Help NGOs, Health workers and other active participants in conducting meeting and rehabilitation activity.

- Monitor the rehabilitation and reconstruction process of the community.

Food and Water Management: This team will be created to ensure that sufficient food stuff and water supply are made available for the emergency response. They will be responsible for fair distribution of food and water during relief works.

SOP for Food & Water Management Team
Pre-Disaster Preparedness Activities:

- Ensure there is sufficient supplies of food and water.
- Ensure sufficient supplies of chlorine tablets etc. for disinfecting drinking water.
- Ensure sufficient stocks of lime powder for disinfecting large water bodies.
- Ensure that sufficient water is stored in proper tanks and jerry cans in safe shelters.
- Ensure that there is list of contact persons for assistance.
- Raise prior awareness amongst the community about how to treat water sources.
- Set a minimum standard in advance for distribution of water in emergency.
- Monitor and identify water sources and ensure that sufficient storage facilities are available even during times of emergency.
- Help of the local administration to construct temporary sanitary facilities.

On receipt of warning

- Assess the drinking water supply and available water resources.
- Ensure that the sanitation facilities at the safe shelter are in working order.
- Move into the safe shelter for one's own safety.

Post Disaster

- Make immediate repairs of broken or burst pipes.
- Coordinate with PHE/UD&PA for procurement of water tankers if required.
- Disinfect large water bodies with lime powder.
- Coordinate with the Sanitary Inspectors for taking drinking water samples.
- Ensure that water is distributed in an equitable manner.
- Spray bleaching powder and other disinfectants to prevent infectious disease.
- Coordinate with the first aid team to inoculate against water borne diseases.
- Construct temporary soak pits for onsite disposal of wastewater.
- Coordinate with the search and rescue team for disposal of carcasses.

- Ensure that dead bodies are registered and cremated after legal/religious formalities.

Relief Co-ordination: This will shall be created to operate collection and distribution of all other collection and distribution of all other collection and distribution of all other relief material except food and water supply.

SOP for Relief Coordination Team

Pre-Disaster

- Familiarize with damage and needs assessment formats.
- Assess the estimated need of relief materials.
- Stocks material like ropes, bamboos, tarpaulin etc in the safe shelter identified.
- Mobilize stocks of grains and medicines from government, NGOs, etc.
- Keep a record of stock available and maintain and dispatch them as required.
- Always be impartial and conduct sincere duty towards the victims.
- Be transparent in the accounting and stocks by giving timely correct information.

On receipt of Warning

- Coordinate with the other teams to move stocks of food, water and so on to the safe shelter.
- Move to the safe shelter.
- If caught inside, will stand with their backs against a strong indoor wall (in EQ).
- If outside, run to an open space away from trees, buildings and electric lines (in EQ).
- In moving vehicles, stop and stay inside (in EQ).

Post Disaster

- Conduct a complete damage and need assessment.
- Based on a preliminary need assessment as follows, communicate preferences to the District Control Room. The size, scope of the relief items required likely duration of the distribution of relief material. The estimated number of people affected local capacity, resources and external help the immediate needs of the victims.
- Communicate the assessment findings to other task force groups and local authorities.
- Establish a distribution centre or community kitchen begin distribution.
- Ensure that food and other materials are distributed in an equitable manner.
- Priorities the vulnerable groups such as the elderly persons, pregnant women, children etc.
- Maintain a list of the households receiving assistance.

- Work closely with the communication group to stay in touch with control room.
- Organize a meeting to evacuate the experience, internalize learning.
- Make a physical inventory of stocks when external assistance arrives.
- Keep the undistributed relief material in a safe place/Go down and preserve it.

Information and Damage Assessment: This team shall be created and will act as a warning group for any eminent disaster. They will be trained to understand radio warnings and act fast to disseminate the same throughout the villages. They will also conduct on the spot assessment of the damage sustained by the village and report their findings through a specified format to the VDCM who will in turn forward the same to the District Administration.

SOP for Information & Damage Assessment Team

Pre-Disaster

- Carry a hazard map demarcating the most vulnerable/safe areas and households.
- Prepare and store sufficient number of assessment formats required.

During Disaster

- Remain in the safe shelters and provide the evacuees with regular updates.
- Call emergency meeting of the group and assign duties and area of assessment.

After a Disaster

- Give immediate assessment to the authorities on damage, missing, casualty etc.
- Give detailed report assessment to the authority.
- Guide the search and rescue team with geographic information.

Warning and Communication Group

SOP for warning and Communication Group Pre-Disaster:

- Ensure that communication equipment are in working order.
- Ensure an emergency contact directory with all relevant numbers.
- Carry a hazard map demarcating the most vulnerable/safe areas and households.

On receipt of warning

- Assemble in a central location and listen to radio together to determine the situation.
- Pay attention to local warnings and their interpretation.
- Crosscheck the warning received on radio, with the nearest control room.
- Disseminate the warning using megaphones/mikes sirens etc., door-to-door.

During Disaster

- Remain in the safe shelters and provide evacuates with the regular updates.

After a Disaster

- Get the de-warning from District Control Room and announce the same.
- Disseminate precautionary information on post disaster health hazards and remedies.
- Give immediate assessment to the authority on damage, massive casualty etc.
- Guide the search and rescue team with geographic information and high damage.

8.6 Creation of a Quick Response Team (QRT) for the District:

On **24.7.2020**, QRTs were created vide Order **No.B.17014/5/2020-DC(H)** under the Hnahthial District Disaster Management Authority. Members of the QRT have been annually updated to comply with State Government Orders. Adequate Training will be provided to the QRT members who shall act as the immediate Responders to any disaster situation. They shall act as the bridge and co-ordinate with all teams so that immediate assistance is given to victims of natural disasters.

8.7 School Safety Programme

School Safety Programme and awareness programme for schools should be conducted periodically. Teachers should be trained by district authority so that they can impart knowledge and information to students. Schools are to be instructed to make Safety Plan /Schools DM plans of their school. Mock drill should also be conducted at schools.

8.8 Specifics Projects/Programs for disable persons

Disabled person is 'any person who has a physical or mental impairment that substantially limits one or more major life activities; has a record of such impairment; or is regarded as having such impairment.' When an emergency or disaster occurs, disable and physically handicapped person are more vulnerable, they are needed more care and service. Physically handicapped person can also be defined as loss of or failure to develop a specific bodily function or functions, whether of movement, sensation, coordination, or speech, but excluding mental impairments or disabilities

The Government of India gave a provision for the reservation of 3% of every post in public sector for physically handicapped person. It is obvious that in every department and office, there are some numbers of physically handicapped persons including visitors, when emergency broke out, these people cannot move easily in safe places and they have a little chance for surviving. Not only in an office, but also in a school, old age pension home, blind school, market, and shopping mall etc. the situation is also same. It is necessary to have a good evacuation plan for this special group. Every departmental and office disaster management plan should include provision for evacuation plan for the disable and the physically handicapped persons.

In Hnahthial District, there is a large number of disabled persons who live in different villages. The District Social Welfare Office does not have any record or documents about the profile of these persons and their disability. It is necessary to organize special camp for having a numbers of disable persons and their particulars. Besides these every department, every office, school and Village Council should maintain documents for these persons. In office and school, and also in other public place, it is necessary to make ramps for persons who are using wheel chairs. We can find such ramps in Hnahthial in the Government Higher Secondary School.

A special disaster management awareness campaign is needed by the disabled and the physically handicapped persons. They need to know special management method at the time of disaster. The D.M Act of 2005 makes a provision that 'every department and office should have their respective Disaster Management Plan'. When the Disaster Management plan is made, it is necessary to incorporate a special plan for the disabled. The in-charge of disaster management in every office should appoint a particular staff who can handle the disable persons at the time of an emergency. Similarly, in the schools also, the teacher should select the helpful student who can take care of the physically handicapped students at the time of emergency.

CHAPTER - 9

RESPONSE MECHANISM AND RELIEF MEASURES

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

A meeting will be held before taking up response activities. The meeting will look into the 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.

9.1 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 DDMA by the fastest means. DDMA will activate all departments for emergency response including District EOC and ERFs. Also, instructions will be issued through them.

9.2 Warning, Alert and Action Plan

9.2.1 Short Term Response Plan

Short-term response plan contains the actions to be taken immediately after a disaster. Once the DEOC or any of the Nodal Officers are alerted, it has to be verified soon for authenticity. Once the information is verified, it will be reported to the Incident Commander via fast communication system. The Incident Commander shall take the following actions.

1. Disseminate warning/alert to the potential victims.
2. Disseminate information to State Control Room or EOC.
3. Disseminate information to relevant Committees, CBDM Team, QRTs, ESFs and any other DMT's.
4. Declare Disaster based on the severity/vulnerability.

1. <u>Rescue Operations</u>: Immediately after a disaster, the Deputy Commissioner shall act as the RO and take over disaster management through the support of the IC. He/she shall coordinate the rescue operations with the help of the Various Teams so constituted for the said purpose. The following measures may then be undertaken:

1. Activate the Incident Response System
2. Call meeting of DDMA
3. Coordinate the ESFs in disaster management
4. Set up site/Onsite Operation Centres (OCs) and activate relief camps
5. Collect preliminary assessment report from the onsite OCs
6. Activate the pre-contract vendors and collect relief materials for distribution of relief materials.

7. Brief the situation to the higher authority as well as to press/media people
8. Ensure basic logistic arrangements for disaster managers and the Operation Centres
9. Mobilize resources/call assistance from various stakeholders

2. Relief Operations: Once the rescue phase is over, the district administration shall provide immediate relief assistance either in cash or in kind to the victims of the disaster. The DDMA may enter in to pre-contract well in advance and procure materials required for life saving. The office of the Deputy Commissioner is responsible for providing relief to the victims of natural and man- made disasters like fire, flood, draught, earthquakes, riots, terrorist attacks, accidents etc. The relief shall be provided as per the scale fixed by the government.

3. Rehabilitation: In short, response rehabilitation is the final step. The Incident Response System shall be deactivated as the rehabilitation phase is over. Thereafter the normal administration shall take up the remaining reconstruction works in the disaster affected areas. These activities shall be performed by the Working group for relief and rehabilitation under the directions of the DDMA.

9.2.2 Long Term Action Plan

The long-term response plans are related with recovery and reconstructions activities on one side and institutionalizing disaster management in district administration on the other side. There are Standard Operation Procedures (SOPS) for the Emergency Support Functionaries. In long term measures, the following actions shall be undertaken:

- ✓ Constitution of Emergency Support Functionaries (ESF), Disaster Management Teams, Quick Response Teams, Fields Response Teams
- ✓ Refreshers trainings for all such teams in regular interval of time and exercise of Mock Drills
- ✓ Continuous of awareness/sensitization programme for the stakeholders and the general public
- ✓ Getting pre-contract with vendors and merchant establishment to procure relief materials in times of disaster.

The actions Plans for ESFs for disaster management are discussed below. The DDMA shall ensure these action plans are updated by annually and practice dough mock drills in the district.

ACTION PLAN FOR POLICE:

Response Activation:

1. The Nodal officer from the Police will activate the Quick Response team.
2. The Quick Response Teams will be deployed at the Onsite EOCs
3. As per the information from IMTs, more officers may be sent at site

Actions to be taken:

1. If felt, cordoning off area to restrict movement of on lookers, vehicular and pedestrian traffic should be done.
2. Quick assessment of law and order situation in affected areas.
3. Prepare updates on the law and order situation every 2-3 hours and brief the Incident Commander.
4. Arrangement for controlling situations like rioting and looting.
5. QRTs will guard property and valuable in affected areas.
6. Control and monitor traffic movement.
7. QRTs will provide diversion of traffic on alternate routes as and when it is necessary.
8. The QRTs will also provide information about traffic flow along various corridors, especially heavy traffic or congested roads.
9. QRTs will communicate to police control rooms, details on the field activities including deployment and reinforcement of staff and resources and communicate nature of additional requirements.

Equipment to be brought:

1. Search Lights
2. Electric generators
3. Crane-Heavy Duty, Fork Type
4. Recovery Van
5. Stretchers
6. First Aid Kits
7. Vehicles: Mini Buses, heavy truck, light ambulance vans, mobilization trucks
8. Water tanker
9. Any other

Action Plan for Fire & Emergency Services

Response Activation:

1. As soon as the Nodal Officer gets information about the disaster, he should
   Contact the DEOC
2. Depending on the severity of the situation and instruction from District Authorities more officers may be deployed onsite.

Actions to be taken:

1. At the site, QRTs should contact the local volunteers and local people together information about vulnerable areas so that search and rescue operation can take place through a proper channel in heavily dense areas, large buildings, community centre, hotels, hospitals, public buildings and any other area having large gathering.
2. Locate the damaged and collapsed structures and rescue the victims buried and trapped in rubble.
3. The injured people should be taken out of damaged buildings etc. with utmost care.
4. Special care to vulnerable groups such as women, children, elderly etc. should be given as they are expected to be more affected and

helpless in case of any emergency situation.

5. Coordinate with the transportation ESF if a large number of medical professionals need to be sent to the affected sites and/or a large number of victims need to be transported to health facilities.

Action Plan for P&E Deptt.

Response Activation:

- Ensure there is supply of electricity especially in temporary safe shelters.

Actions to be taken: To ensure uninterrupted power supply, Team Leader will dispatch an emergency Unit for supply of electricity at DEOC, relief camps/temporary shelters etc. The Team leader shall also despatch a repair team equipped with tools, tents etc for maintenance and upkeep of the electricity supply of the aforementioned centres.

Action Plan for BSNL/Telecommunication Service Providers:

Response Activation:

1. Soon after receiving information about disaster (from any source), Nodal
   Officer will contact DEOC.
2. The Nodal Officer from the Telecommunication service provides shall act as the bridge between the public and the DDMA/Committees/Disaster Teams created and deployed for the said purpose.
3. Based on the communication, Quick Response Teams will be deployed at the Incident Sites. The relevant authorities are to be constantly updated and actions taken accordingly.

Actions to be taken:

1. Communicate situation to support agencies and request for detailed information on the status of equipment and infrastructure damaged in the affected areas.
2. Launch assessment mission to understand better the nature of damage telecom services and network.
3. Ensure possible arrangements for establishing reliable and appropriate network.
4. Both BSNL and private telecom companies shall convene a meeting to discuss plan of Action and to finalize the modalities.
5. Act as the channel for compilation and communication of Action Taken Reports to District and State Authorities which includes new numbers and details of contact persons to be communicated to Emergency Operations Centre (District/State).
6. Mobile exchanges should be deployed as alternative mode of communication for authorities and general public.
7. Establish telephone facilities for the public and information on this should be announced through media.

8. Monitor the situation and arrange for emergency staff required to operate systems established.

9. Inform district authorities on debris clearance of the work required.
10. Initiate temporary rehabilitation work required.
11. Launch rehabilitation work and arrange for repairs and relocation, if required.
12. Other necessary equipment to restore communication network/set-up alternative emergency communication.

Action Plan for PWD

Actions to be taken:

1. The above agencies will bring debris of heavy R.C.C structures (having beams/columns) and put dummies beneath the debris. This will facilitate mock drill and training of search and rescue operations.
2. Assume role in equipment support, debris and road clearance, on receiving the intimation of the disaster from EOC.
3. Coordinate with the DEOC to mobilize equipment needed for Search & Rescue etc. and transported to the site.
4. On receiving intimation on the intensity of the damages of structures, the nodal officer will make an assessment on the damages of roads and structures reported at the site and surrounding areas.
5. The Nodal Officer will call for personnel to immediately start debris clearance operation to enable movement to and from the affected site.
6. A review of the current situation should be taken up by the nodal agency to update the support agencies to delegate their respective personnel to take precautionary measure to plan de-routes for the transportation ESF's.
7. All supporting agencies will inspect the road network and structure within the disaster site and surrounding.
8. Ensure proper corpse disposal and post mortem by coordinating with ESF on medical response.
9. Assessment of damage (locations, no. of structures damaged, and severity of damage) shall be conducted.
10. Enlisting the types of equipment as compiled from resource inventory required for conducting the debris clearance as well as for other needs.
11. Undertake constructions of temporary roads to serve as access to temporary transit and relief camps, and medical facilities for disaster victims.
12. Undertake repair of all paved and unpaved road surfaces including edge metalling, pothole patching and any failure of surface, foundations in the affected areas by maintenance engineer, their staff. The shall monitor the condition of the existing roads.
13. Ensure a critical number of professionals to reach the site including specialist from outside the state.
14. If temporary living arrangements are being made from the affected populace, the agencies must ensure high standards of sanitation in settlements in order to prevent the multiplicity of the disaster.
15. Coordinate, direct, and integrate response to provide equipment support, relief camps establishment and sanitation health assistances.
16. Mobilizes different modes of transportation e.g. truck, etc to be put on stand-by.

17. Assist timely re-establishment of the critical transportation links.
18. Compiled an itemized assessment of damage from reports made by various receiving centres and sub-centres.
19. Make an assessment of disaster management related equipment and such equipment that are necessary during for disasters such as JCB, concrete breakers, cranes, Grader, Jack Hammer, tipper, Folkanes, dumper, Aromatic Hammer for debris/road clearance Vehicles (truck), earth movers, mobile medical vans etc.

Action Plan for H&FW Deptt.

Response Activation:

- ✓ Nodal Officer will co-ordinate with nodal officers of supporting agencies.
- ✓ In coordination with the transportation ESF, it will ensure a critical number of professionals to reach the sites including specialists.
- ✓ If temporary living arrangements are being made from the affected populace, must ensure high standards of sanitation in settlements in order to prevent the multiplicity of the disaster.
- ✓ Also ensure the provision of medicine and other medical facilities required at the disaster site and the hospital health centres catering to disasters victims.
- ✓ Trained professional should be mobilized for psychosocial support.
- ✓ Ensure setting up of temporary information centres at hospital with the help of ESF on help lines and warning dissemination.
- ✓ Coordinate, direct, and integrate state level response to provide medical and sanitation health assistances.

Actions to be taken:

1. Readying all hospitals (including private hospitals) for managing large no. of casualties and severely injured population.
2. Sufficient stock of required medicines, vaccines, drugs, plasters, syringes, etc.
3. Provide systematic approach to patient care (Mass casualty management).
4. Triage done to determine who needs to be taken to a medical facility on a priority basis and who can be treated on-site.
    - First –aid provided as required
    - Patients stabilized before transport
    - Patients transported to nearest available medical facility having the required facilities.
    - Trauma counselling provided to the victims and their relatives at the site and in the hospital.
    - In the hospital emergency department, triage carried out again to prioritize treatment, and appropriate care provided.
    - Maintain patient tracking system to keep to record of all patients.
    - Deploy mobile hospital as needed.
5. Arrange for additional blood supply: organize blood donation camp for additional blood requirement.

6. Provide for sending additional medical personnel equipped with food, bedding and tents. Send vehicles and any additional medical equipment.
7. Assessment on the type of injuries, no. of people affected, and possible medical needs will be conducted.
8. Timely response to the needs of the affected victims will be undertaken.
9. Establish health facility and treatment centres at disaster sites.
10. The district Civil Surgeon with DEOC shall coordinate the provision of medical services.
11. Procedure should be clarified between.
    - Peripheral hospitals
    - Private hospitals
    - Blood banks
    - General hospitals and
    - Health services established at transit camps, relief camps, and affected villages.

Medical team deployed shall maintain check posts and surveillance at all entry and exit points from the affected area, especially during the threat or existence of an epidemic.

Action Plan for PHE Deptt.

Response activation:

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

Actions to be taken:

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

9.3 Rescue Operations

Immediately after a disaster the Deputy Commissioner shall act as the District magistrate and take over disaster management. He/she shall coordinate the rescue operations with the support of the Emergency Support Functionaries. Along with the rescue operations the following measures will be undertaken:

- Activate the Incident Command System.
- Call meeting of Crisis management Group.
- Coordinate the ESFs in disaster management.
- Set up Site/Onsite Operation Centres and activate relief camps.
- Collect preliminary assessment report from the onsite EOCs.
- Activate the pre-contract vendors and collect relief materials for distribution.

- Brief the situation to the higher authority as well as to the press/media people.
- Ensure basic logistic arrangements for disaster managers and the Operation Centres.
- Mobilize resources/call assistance from various stakeholders.

9.4 Activation of EOC

District Control and other control rooms at the District Level will be activated with full strength. Once the situation is totally controlled and normalcy is restored, the DC shall declares end of Emergency Response and issues instructions to withdraw the staff deployed in emergency duties. The DEOC is a nodal point for overall coordination and control of relief work. In case of L1 Disaster the DEOC will be activated , in case of an L2 and L3 disaster State SEOC will be activated along with the DEOC.

CHAPTER – 10

RECONSTRUCTION, REHABILITATION AND RECOVER 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. It includes restoration of interrupted utility services, re-establishment of transportation routes and the provision of food and shelter to displaced person.

10.1 General Policy Guidelines

The District Administration will give assistance to victims of Natural Calamities based on the assessment made and the nature/extent of damage. All assistance given to victims will be based on SDRF norms.

10.1.1 Short Term Plan

The Incident Commander shall take the following actions:

- ✓ Disseminate warning/alert to the potential victims through available channels of communication.
- ✓ Disseminate information to vertical and horizontal EOCs
- ✓ Disseminate information to vertical and horizontal Administrators and DMTs
- ✓ Declare Disaster based on the severity/vulnerability

10.1.2 Sequences of actions to be taken at the time of disaster by DDMA

- ✓ In the event of disaster, DC & SP of Hnahthial shall be alerted immediately about the incident. Necessary instructions will be given to the concerned Nodal officers and relevant teams will be activated.. The DEOC would also be activated in emergency mode. A quick assessment will be made on the Level of disaster and action taken accordingly. Search & Rescue operations will be conducted wherever necessary followed by immediate relief operations.
- ✓ Site EOC should be established near the incident site with one responsible officer to see the overall management and coordination. He/ She will be assisted by one or more officials as well as from NGO's.
- ✓ The fire brigade/Police Personnel/QRTs should be kept ready near the incident area to control any outbreak of fire.
- ✓ The Medical Team should be sent immediately to provide first aid medical help and look after any injury. Casualties with serious injurious will be immediately sent to hospitals.
- ✓ District Quick Response Team and other District DM Teams should be send to the site of disaster immediately.
- ✓ Different aspect of relief and rehabilitation of the affected persons should be started immediately. Eg. Shelter, food, clothing etc.
- ✓ The overall management will be looked after by DC or any other officials present at the site designated by DC or in their absence by Village level officials including NGO's.

10.2 Management of Response Operations in Hnahthial District

It is the responsibility of the District Administration to organize the response activities very quickly on occurrence of a disaster so as to limit casualties, alleviate hardship and suffering, to restore life support and community system, to mitigate further damage of loss and to provide the needs for subsequent recovery.

- **Search and Rescue:** Local communities and neighbourhood will provide immediate onsite search and rescue services in the event of any disaster before the arrival of other Disaster management teams. The type of disaster shall determine the support and help provided like for instance, in the case of an earthquake, additional support from SDRF, Fire Service and NCC will be provided at the earliest and PWD will be required for clearing debris in order to rescue people trapped in collapsed buildings.

- **Medical Relief:** Victims of disasters require immediate medical care. The Health and Family Welfare Department will be responsible for providing necessary medical services to the victims. It also has to be seen that precautionary actions to prevent the outbreak of epidemics is taken as the risk is normally very high. ASHA, local medical practitioners, other Hospital and Community volunteers could support the efforts of the Health and Family Welfare Department. The Chief Medical Officer, Hnahthial could act as the Head of Combat Agency.

- **Evacuation and Shelter:** Evacuation may be required to avoid loss of human life from after-shocks (especially in a disaster like earthquake). Traditionally, the Home guards perform the responsibilities of evacuation with support from other government agencies. In Hnahthial, a major role will have to be played by NGOs, especially the biggest NGO in the State-Young Mizo Association. Provision of shelter to the evacuated people and to those who have been rendered homeless is another important requirement. Here, the joint efforts of the government agencies as well as local communities and NGOs will be required. Temporary shelters will have to establish and the DC will assign duties to the officers especially from Social Welfare Department for running and maintaining these shelters.

- **Restoration of Life-line Facilities:** Another important response activity is the prompt restoration of vital life-line facilities. Bringing such life line facilities like water and power supply is the responsibility of Technical Departments like PWD, PHED and Power & Electricity Department. We also have to see that Public Distribution System of Food & Civil Supplies is also regulated.

- **Law and Order and Security of Properties of Affected Population:** In the event of a disaster, many people are compelled to leave their homes and properties. Simultaneously, law and order conditions tend to deteriorate. It is the responsibility of the District Enforcement Force (DEF), Hnahthial to maintain law and order as well as provide security to the properties of affected population.

10.3 Institutional Arrangement for Reconstruction, Rehabilitation and Recovery Measures

1. Civil Administration: The Deputy Commissioner/District Magistrate as the Chairman of the District Disaster Management Authority will be over-all in charge of the activities for management of disaster, as soon as the authority receives occurrence of such disasters. The Incident Commander will reach the place of disaster for coordinating relief operations while all the time alerting the other officials. They will also maintain close contact with the DEOC through any means of communication available on the spot and coordinates responses of different agencies on need basis.

2. Police Department (DEF), Hnahthial: Under the operational control of District Magistrate/ Chairman, Disaster Management Authority and supervision of Superintendent of Police, Hnahthial, the under mentioned procedures will be followed on receipt of disaster information where a team will be deployed to the place of accident:

1. Look for the survivors and rescue the injured or victims trapped under rubbles or debris.
2. Arrange first-aid to the injured people in the absence of Medical Relief Team.
3. Ensure security of the properties of the victims and maintenance of law and order
4. Take up traffic management at the place of incident.
5. Start investigation of offences, if any, following all legally prescribed procedures.

Operation co-ordination: The Superintendent of Police, Hnahthial will immediately instruct all the Police Stations of the District to communicate the message to the Police in their respective areas, if necessary. A radio announcement for the same can also be done for effective communication. The District Superintendent of Police will also work out a deployment plan for the Polices keeping in view the disaster situation and will make arrangements for the transport of the Police to their duty point.

Direction and co-ordination:

- On receiving the alert message for readiness from the DEOC, SP, Hnahthial will immediately put on alert the Police on duty and the key officials of his agency. Security of property, wireless communication availability, immediate assessments of the situation are to be done immediately.
- Once the combat operations have started, the District S.P. would be required to assess the activation and operational procedure followed by the department.
- The senior most executive Magistrate present on the spot will take decisions regarding assignment of task to police team for various operations in the affected areas.
- The police team will send task completion report to the District Magistrate or the Incident Commander through DEOC as soon as the task is over. The task completion report will indicate the number of injured people and the number of people still trapped inside the debris.

On completion of all tasks relating to search, rescue and evacuation assigned to the Police by the District Magistrate, the S.P, Hnahthial will take a briefing session and submit a briefing report to the Chairman of the District Disaster Management Authority.

3. **Information and Public Relation Department:** Under the supervision of District Magistrate or Chairman, DDMA, Information and Public Relations Department shall be the main source of information/feeder where in all necessary assistance in connection with information about victims receiving treatment, their whereabouts, list of the dead etc. will be collected and disseminated. The department will also make P.A. system available at all times during relief operation and other departments having radio communication like P.H.E, P&E, P.W.D, etc. will also pass latest information in liaison with the Control Room. In the Absence of the I&PR Department in a relatively new District like Hnahthial, the MJA, Sub-Headquarter Hnahthial may function for the dissemination of information to requisite parties.

4. **Transport Department and Infrastructure Department:** Transport department will provide additional requirements of transportation in case the number of casualties is high. The nodal officer responsible to this kind of accident should also make available list of passengers with full particulars, etc. In the absence of a Transport Department in a relatively new District like Hnahthial, PWD, Hnahthial and DEF, Hnahthial will provide transportation assistance such as JCB, excavator, recovery van, mobile crane, etc. wherever necessary.

5. **NGOs/Voluntary organizations:** It has been experienced in the past that in the event of fatal accident, members of NGOs like YMA and Adventure Clubs used to carry highly commendable service to the victims and the relatives even before the civil administration come up for relief operation. As usual practice, in the event of fatal accident, members of NGOs will quickly send necessary information about the accident to the nearest civil administration, nearest Police Station and Health Centre through any means of communication available with them so that the civil administration with NGOs will be able to keep in touch each and every members or relief team the civil authority for effective relief operation.

6. **Health & Welfare Department, Hnahthial:** As soon as they received information about occurrence of incident involving high casualties, doctors/nurses or paramedical staff of the nearest health centre should rush to the place of accident to discharge the responsibilities for providing the immediate medical relief. At the same time, ambulance should be made available for transportation of victims from the side of incident to the nearest Hospital and these ambulances should also be equipped with the basic life maintenance support drugs and equipment. All the staff of medical services engaged in relief operation will seek instruction from District Magistrate/DEOC through the Chief Medical Officer, Hnahthial.

Preparedness Action: The department will ensure that all the medical doctors are aware about the responsibilities of the department in case of a disaster and all the manpower of the department, including paramedic staff, is sensitized

regarding the need for maximum efficiency during disaster situation. This should be achieved by organizing orientation training for the staff every year. The Department shall procure equipment and materials even on short notice needed in emergency and disaster situations. The inventory of all such resources should be maintained in the resource database. This database should be validated and updated every year.

The Department should train local volunteers in preventive medicine in the area identified as vulnerable to floods and in first-aid in areas identified as vulnerable to earthquakes.

Chief medical Officer (CMO) of Hnahthial District will send preparedness report to the Chairman of the District Disaster Management Authority. The Department is responsible for providing the medical relief (post-disaster) to the people affected by natural disasters and is also responsible for prevention of outbreak of epidemic (Pre-disaster). Some Additional Guidelines for the Medical team are as follows:

- Surgical packs should be kept ready for use.
- The emergency electrical generator should be made available and checked to ensure that it is operational and that a buffer stock of fuels exists.
- All valuable instruments such as surgical tools, ophthalmoscopes, portable sterilizers, CGS, dental equipment, etc. should be packed in protective covering and stored rooms considered being the most damage-proof.
- All fracture equipment should be made ready, if surgery is to be performed following the disaster. Arrangement for emergency supplies of anaesthetics gases (usually supplied on a daily basis) should also be made.
- Stocks of equipment and drugs which are likely to be most needed after the disaster should be checked. This can be categorized generally as:
    a. Drugs used in treatment of cuts and fractures such as tetanus, typhoid, analgesics and antibiotics.
    b. Drugs used for the treatment of diarrhoea, water-borne diseases and flu (including oral dehydrating supplies).
    c. Drugs required treating burns and fighting infections.
    d. Drugs needed for detoxification including breathing equipment.

The Department should identify the trained manpower, the equipment and the materials required for discharging the responsibilities assigned under the District Disaster Management Plan and prepare an inventory of the same.

The CMO, Hnahthial should ensure compliance of all the points mention above and send a compliance report to the Chairman of the District Disaster Management Authority as and when necessary.

Operational Tasks and Control: The Department is responsible for the following:

(i) Providing efficient and quick treatment
(ii) Preventing outbreak for epidemics

CMO/MS will receive the message from DEOC and immediately put his doctors and the medical staff on alert. On receipt of a warning of an impending disaster from the DEOC, the CMO/MS will immediately put his/her doctors and the paramedical staff on alert for preventing outbreak of epidemic. It will constitute medical teams for the survey in the affected area and for decontamination of drinking water sources.

In case of occurrence of an earthquake all the staff of the Department will immediately report for duty in the concerned hospital or health centre, as the case may be. The medical staff will immediately try to reach the affected area and provide medical relief. The CMO/MS will try to mobilize additional manpower from the area not affected by earthquake to supplement the local resources of the affected area.

In case of a disaster the CMO/MS can request the services of the medical officers working in nursing homes, private doctors and nurses and during the period of such requisition those medical officer/nurses can work under the administrative control of CMO/MS.

Direction and Co-ordination:

- Determine type of injuries/illness expected and drugs other medical items required, and accordingly ensure that extra supplies of medical items be obtained quickly. Provide information to all hospital staff about the disasters, likely damages and effects, and information about ways to protect life, equipment and property.
- Discharge all ambulance patients whose release does not pose a health risk to them. If possible, they should be transported to their home areas.
- Non-ambulatory patients should be relocated to the safest areas within the hospital. The safest rooms are likely to be:
    a. One ground floor
    b. Room in the centre of the building away from windows
    c. With concrete ceilings
- Assess the level of medical supplies in stock, including:
    a. Fissure materials
    b. Surgical dressings
    c. Splints
    d. Disposable needles and syringes
    e. Plaster rolls
    f. Local antiseptic
- Request resources identified to immediately dispatch of supplies likely to be needed, to hospitals, on an emergency priority basis.
- Fill hospital water storage tanks and encourage water savings. If no storage tanks exist, water for drinking should be drawn in clean containers and protected.
- Prepare an area of the hospital for receiving large number of casualties.
- Develop emergency admission procedure (with adequate record keeping)

Task Allocation:

CMO/MS will establish work schedule to ensure staff are available for in-patient needs. He will organize in house emergency medical teams to ensure that adequate staff is available at all times to handle emergency casualties. He

will set up teams of doctors, nurses and dressers for providing services at disaster sites. Once the task is allocated, the team will follow the below-mentioned procedure.

Sorting of Casualties:

1. **Quick sorting of Casualties (triage):**
   - **a.** Priority I-Needing immediate resuscitation
   - **b.** Priority II-Needing immediate surgery
   - **c.** Priority III-Needing first-aid and possible surgery
   - **d.** Priority IV-Needing only first-aid

2. **Action:**
   - (i) Priority I will be attended to in the Emergency/Casualty Deptt.
   - (ii) Priority II will be transferred immediately to OT
   - (iii) Priority III will be given first-aid and admitted if bed is available.
   - (iv) Priority IV will be given first-aid and discharged
   - (v) In some cases 'brought dead' cases are categorized as priority –V.

Operation Completion Report:

The CMO/MS will send report to the DEOC as soon as the task is over. The task completion report will indicate the number of injured people, the number of injured and dead.

On completion of all the tasks relating to Medical relief assigned to the Health Department by all the District Magistrate, the CMO will take a brief session with his doctors and submit a briefing report to the District Magistrate.

Public Works Department:

The Public Works Department (PWD), Hnahthial has the responsibility for the construction and maintenance of Government buildings, public roads and bridges in the State.

Preparedness action:

For ensuring the availability of these infrastructures even in case of a disaster, the P.W.D should ensure that the construction of all buildings, roads and bridges take into account the hazardous scenario mentioned in. Alignment of all the major roads of the district should be as far as possible outside the flood clout area so that these roads remain operational even during the floods. All the public buildings and bridges should confirm to appropriate standards to ensure that they survive the possible earthquake in the District.

The department should take immediate measures for the retrofitting of all government buildings under its charge for making them seismic resistant. The department should ensure that all officers of the rank of SDOs or above are make familiar about the responsibilities of the department and the resources that may be required for discharging his responsibility in case of a disaster. This can be achieved by organizing orientation training to all such officers once every year.

The department should identify the equipment at the material that may require for discharging the responsibilities assigned to it in case of a disaster. It

should also workout the availability of the same with the department and identifies the external resources for the same and workout arrangement for procuring the same in case of a disaster.

The department should do a stock verification of the equipment and material available with it, required for its responsibility under the plan every year. It should validate and update the resource database also every year. It will also identify the source in the community and the local market from which additional resources may be obtained for performing the responsibilities of the department with the assistance of the Nodal Department (DM&R) and V.C and work out the arrangements for procuring the same. The nodal officer should ensure compliance of all the points mentioned above and send compliance report to the Chairman, DDMA in general every year.

Operational Details:

The department will be responsible for performing the following tasks:

- The department will take up temporary construction of diversion and other structures to ensure road communication in case of disaster for conducting search, rescue and evacuation operation and providing relief to the affected people.
- It will establish temporary relief centers on the direction of the Chairman, DDMA or the IC for the affected people.
- Debris clearance to support search and rescue operation.
- Identification of unsafe buildings.
- Assessment of damage to the buildings.

Operation Control:

The nodal officer will immediately try to get information regarding the road communication available for reaching the search and rescue team and the relief material to the affected area and will take immediate action for construction of the diversion and other structures for communication of the affected area. The nodal officer will also constitute survey teams for identification of unsafe buildings both private and Government which need to be demolished in the interest of the public safety and alert the DDMA of the identified unsafe buildings.

The nodal officer will also conduct damage assessment of private buildings in consultation with the DDMA.

Resource Available:

The department will prepare the resource database for the essential manpower, equipment and material resources available with the department in the database after identifying the needs of the disaster time.

Activation Guidelines:-In case of occurrence of disaster, the nodal officer will immediately report with the DEOC and seek instruction.

Operation Completion Report:

After completion of the entire task assigned to the department relating to

immediate response, the nodal officer will take a briefing session and send a brief report to the D.C. which will also include an expenditure statement including the debris removal and establishment of the relief centers and construction of the diversion for ensuring communication in the affected areas.

The Executive will also prepare a preliminary proposal indicating estimates of different construction works for restoring the infrastructure in the affected area and send it to the department through the D.C, Hnahthial.

Public Health Engineering Department (PHED):

PHED has the responsibility for the construction and maintenance of water supply in the District during normal times. This infrastructure is required for not only general economic activities in the area but also for performing functions of water availability to the disaster affected area and relief centre.

Preparedness Action: For ensuring the availability of this infrastructure even in case of a disaster, the PHED should ensure that the construction of all water supply infrastructures takes into account the hazardous scenario in the District. The entire water supply infrastructure should confirm to appropriate BIS codes ensuring that they survive the possible disasters such as flood, cyclone, earthquakes etc. in the district.

The department should ensure that all officer of the rank of SDO or above are made familiar about the responsibilities of the department in the District Emergency Management Plan (DDMP) and the resources that may be required for discharging his responsibility in case of a disaster. This should be achieved by organizing orientation training to all such officers every year.

The department should identify the equipment and material that may require for discharging the responsibilities assigned to it in case of disaster. It should also work out the availability of the same with the department and identify the external resources of the same and work out arrangement for procuring the same in case of disaster.

Operation Details: The department will be responsible for performing the following task:

a) The department will take up temporary restoration of water supply to affected area.
b) It will also establish electric supply at relief centres on the direction of the Chairman, DDMA or the IC.

Operation Control: The nodal officer should immediately try to get information regarding the electric supply to the affected area and will take immediate action for restoration of it. The nodal officer will also constitute survey teams for identification of damaged infrastructure.

The department will prepare the resource database for the essential manpower, equipment and material resources available with the department.

Activities guidelines and task allocation: In case of occurrence of a disaster, the nodal officer of the department will immediately report with the DEOC and

seek instructions. The nodal officer will allocate the task after consultation with DDMA chairman.

Operation Completion Report: After completion of all the tasks assigned to the Department relating to immediate response, a briefing session will be held and a brief report sent to the D.C. which will also include an expenditure statement including the debris case and establishment of the centres and construction of the diversion for ensuring communication in the affected areas.

The nodal office will also prepare a preliminary proposal indicating the estimates of different constructions works for restoring the infrastructure in the affected area and sent it to the department through the D.C.

P&E Department:

The Power & Electricity Department has the responsibility for the construction and maintenance of electric supply in the District during normal times. This infrastructure is required also for performing functions of electricity availability to disaster affected area, relief centres.

Preparedness Action: For ensuring the availability of these infrastructures even in case of disaster, the P&E Department should ensure that the construction of all electric supply take into account the hazardous scenario. The entire electric supply infrastructure should confirm to appropriate BIS codes to increase Disaster resilience and mitigation efforts.

The department should ensure that all officers/staff are familiar with the responsibilities of the Department in District Disaster Management Plan and the resources that are required for discharging Departmental responsibility in case of a disaster. This should be achieved by organizing orientation training to all every year.

The department should identify the equipment and the material that may require for discharging the responsibilities assigned to it in case of disaster. It should also work out the availability of the same with the department and identify the external resources of the same and work out arrangement for procuring the same in case of disaster.

The department should do a stock verification of the equipment and material available with it. It should validate and update the resource database. It will also identify the source in the community and the local market from which additional resource may be obtained for performing the responsibilities of the department with assistance of Nodal Department (DM&R) and VC and work out the arrangement for procuring the same.

The nodal officer should ensure compliance of all the points mentioned above and send a compliance report to the D.C. in general every year.

Operational Detail: The department will be responsible for performing the following tasks:

- The department will take up temporary restoration of electric supply to affected area.
- It will also establish electric supply at relief centres on the direction of the District Magistrate for the affected people.

Operation Control: The nodal officer will, immediately try to get information regarding the electric supply to the affected area and will take immediate action for restoration of it. The nodal officer will also constitute survey teams for identification of damaged infrastructure.

The Department will prepare the resource database for the essential manpower, equipment and material resources available with the department.

Activities guidelines and task allocation: In case of occurrence of disaster, the nodal officer of the Department will immediately report with the DEOC and seek instructions.

The Nodal Officer will allocate the task after consultation with DDMA chairman.

Operation Completion report: After completion of all the tasks assigned to the department relating to immediate response, the nodal officer will take a briefing session and send a brief report to the Chairman, DDMA which will also include an expenditure statement. The nodal officer will also prepare a preliminary proposal indicating the estimates of different construction works for restoring the infrastructure in the affected area and sent it to the department through the D.C.

10.4 Roles and Responsibilities of Stakeholder in Reconstruction Works:

10.4.1 Role of the Deputy Commissioner/Chairman, DDMA:

- ✓ Chairman, Responsible Officer and Supervisor of overall Disaster Management
- ✓ Established coordination with all line departments and other private agencies.
- ✓ Update the Resource Inventories at Indian Disaster Resource Network.
- ✓ Prepare disaster mapping on different aspects viz., Vulnerability, Safe, Resource and Social mapping.
- ✓ Detailment of man-powers at various site operation centres.
- ✓ Assign roles and responsibilities in the wake of a Disaster.
- ✓ Preparation of the Disaster Management Action Plan for the District.
- ✓ To implement the disaster management action plan.
- ✓ Setting up the DEOC and making it function effectively.
- ✓ To liaise with the Government periodically about the disaster and the action taken.
- ✓ Make the district machinery to equip and to be prepared before the disaster.
- ✓ Setting up relief camps and transit camps.
- ✓ Conducting relief and rescue operations, organize training and mock drills
- ✓ Corresponding with the Defence Ministry Personnel.
- ✓ To interact with the donor agencies for relief and rehabilitation.

- ✓ Providing information at district level, local level and disaster prone areas through appropriate medium.
- ✓ Brief the media of the situations and day to day reports during the disaster.

10.4.2 Responsibilities of the Nodal Officer (DM & R):

The Nodal Officer (DM & R) will act as the overall in-charge of emergency preparedness and operation. He will coordinate in the following activities:

- ✓ Liaison with all the concerned depts. / officials of the dist. in conducting Disaster Management/Committee set-up. Meeting may be conducted twice in a year, i.e. May and November.
- ✓ Supervise the activity of the DEOC and communicate all information to the Chairman, DDMA.
- ✓ Co-ordinate the programme during preparedness, disaster and natural calamity, rescue operation, relief operation, resettlement and rehabilitation,
- ✓ Monitor the programme during relief operation, rescue operation etc.
- ✓ Evaluation of the operation process.
- ✓ Report to the Chairman, DDMA and await further necessary instructions.

10.4.3 Roles and Responsibilities of Superintendent of Police:

The Superintendent of Police in the district will get in touch with the Chairman, DDMA & Deputy Commissioner, Hnahthial for assistance in rescue, evacuation and emergency relief measures under intimation to the State Relief Commissioner. The responsibilities of the Superintendent of Police include:

- ✓ The Superintendent of Police must work in close co-ordination with the Deputy Commissioner on receipt of a warning or alert on an emergency situation.
- ✓ The Superintendent of Police must liaise with the Officers of the Deputy Commissioner with the DEF, Hnahthial for co-coordinating the activities of the police Department in the DEOC.
- ✓ During normal times, the police department under the Superintendent of Police must assess the preparedness level and report the same to the DEOC every six months.
- ✓ DEF, Hnahthial shall maintain constant communication with the DEOC during the crisis.
- ✓ The Police Department under the Superintendent of Police must maintain a list of disaster prone areas in the district, along with the details of nearest police Stations and their contact phone numbers.
- ✓ The police Department under the Superintendent of police must organize training programmes on handling of hazardous chemicals for Police Officers in collaboration with Deputy Director of industrial Safety and health to facilitate more effective handling of road accidents involving hazardous substances.
- ✓ The Police Department under the Superintendent of Police must identify a police Station in the District, which can be used as a public information centre for disseminating information to the public.

- ✓ Communicate with district headquarters and various centres for co-operation.
- ✓ Provide assistance to the authority in taking necessary action in solving the problems.
- ✓ Ensure security measures in the disaster affected areas and provide security in the transportation of relief commodities.
- ✓ Maintain law and order by coordinating with local NGOs; control the mobs, onlooker crowd by cordoning the disaster area. Control vehicle movement and traffic system.
- ✓ Assess the situation of law and order and inform the district authority.
- ✓ Control the possible looting and pilfering of the relief supplies and private properties at the affected areas at the same time provision of safeguarding the stock centres, relief camps, food stores and distribution centres.
- ✓ Keep vigil of the activities of black marketers and check the misuse and diverting of the relief materials.
- ✓ Coordination with other line departments.

10.4.4 Roles and responsibilities of Block Development Officers:

- ✓ Convener and Chairman of the Block Disaster Management Committee.
- ✓ Supervise the overall management of disaster at the Block Level.
- ✓ Prepare a Block Disaster Management Plan and Emergency Control Room equipped with modern facilities.
- ✓ Established coordination with all line departments, NGOs and other private agencies.
- ✓ To oversee overall disaster management activities.
- ✓ Appraise community participation in disaster management at all levels
- ✓ Ensure linking of Block Emergency Control Room with DEOC

10.4.5 Roles and responsibilities of the E.E/SDO Power and Electricity Department:

- The Nodal Officer appointed shall be the overall in-charge of disaster management.
- Provide uninterrupted power supply during disaster and arrange alternate source of power supply as and when required.
- Arrange power supply to the relief camps and temporary shelter camps.
- Spread awareness in economic use of electricity.
- Communicate with field operation centres to ensure power condition.
- Trimming and cutting of tree branches to avoid power shortage and electrocution.
- Provide assistance to other line departments.

10.4.6 Roles and responsibilities of Chief Medical Officer:

- ✓ Ensure good communication link with all field centres.
- ✓ Stocks piling of life saving drugs and other medicines.
- ✓ Disseminate awareness to the people about hygiene and healthy practices.
- ✓ Set up the mobile medical unit and keep it ready for immediate action.
- ✓ Activate linking with others line departments.
- ✓ Arrangement of ambulance duty.
- ✓ Deploy vehicles with medicines and man power to the site operation centres.
- ✓ Check-list the stock of requirements and its distribution.
- ✓ Survey the health condition and medicinal requirements at various relief camps.
- ✓ Ensure provision of sanitary measures to the victims at shelter centres.
- ✓ Establish easy to approach temporary health centres and hospital at disaster site.

10.4.7 Roles and responsibilities of E.E/SDO, PWD:

- ✓ Emergency repair of damaged road and bridges.
- ✓ Communication with officials at all levels viz., District, Block, Sub-Division and Village levels.
- ✓ Detailment of heavy machines, earth movers, towing vehicle, cranes etc.
- ✓ Contact private owners having earth moving machines.
- ✓ Arrange alternate road for transporting relief and rescue materials.
- ✓ Assess the infrastructure damage and plan quick restoration procedure.
- ✓ Clearance of road block for easy transit of relief materials.
- ✓ Keep a direct link to the DEOC.
- ✓ Survey the disaster site and surrounding areas for structure collapse and check out buildings, bridges etc. which are at risk of collapsing.

10.4.8 Roles and responsibilities of E.E/SDO, PHED:

- ✓ Supply of drinking water to relief and shelter camps.
- ✓ Provision for disinfecting water by bleaching, halogen tablets at the relief camps.
- ✓ Assess the water line disruption and repair the damage.
- ✓ Keep information to and fro from the control room.
- ✓ Arrangement of vehicles for distributing water at relief camps.
- ✓ Communication system to various site operation centres and headquarters should also be ensured.
- ✓ Check the pollution of water.
- ✓ Encouragement of proper sanitation at all relief camps.

- ✓ Provision of water tanks and mobile water tanker.
- ✓ Identification of water sources.
- ✓ Report the situation update to the DEOC.

10.4.9 Roles and responsibilities of DVO (AH & Vety):

- ✓ Record the livestock population.
- ✓ Arrange field operation centers at various places.
- ✓ Stock piling of medicine, water and animal feeds.
- ✓ Assessing the number of animals injured.
- ✓ Transport of injured animals for operation.
- ✓ Check the spread of animal diseases.
- ✓ Proper disposal of carcasses.
- ✓ Storage and distribution center for animal feed and medicine.
- ✓ Ensure good communication network at all levels.
- ✓ Coordination with other line departments and DEOC.

10.4.10 Roles and responsibilities of Telecom (Nodal Officer BSNL):

- ✓ Ensure uninterrupted communication system.
- ✓ Arrange alternate system of communication, if needed.
- ✓ Provision alternate power back up for communication system.
- ✓ Linking of all site operation centres and DEOC.
- ✓ Regular checking of lines and cables.
- ✓ Staff briefing on the disaster management and importance of communication.
- ✓ Emergency contact directory supplied to all control rooms and site operation centres.
- ✓ Coordination with NGOs and private communication agencies.
- ✓ Relay transmission of information update and sent to authorities.

10.4.11 Roles and responsibilities of Rural Development (DRDA):

- ✓ Assist other line departments in the response mechanisms.
- ✓ Disperse awareness about disasters to the community.
- ✓ Retrofitting of rural infrastructure, like road, bridges etc. should be undertaken with nodal departments.

10.4.12 Roles and responsibilities of D.A.O:

- ✓ Assess vulnerability of agriculture crops and plantation.
- ✓ Keep tap on drought and flood condition in risk prone areas.
- ✓ Adopt Climate resilient agricultural system.
- ✓ Make assessment after calamity situation for report to relevant authorities.
- ✓ Provision of irrigation to the deficient regions.
- ✓ Transportation of seeds, fertilizers and implements to different areas.
- ✓ Control of pest and spread of diseases.
- ✓ Maintain weather report and inform to all site operation centres.
- ✓ Desalination of soil and water logging problems to be solved.

- ✓ Rainfall and temperature recorded.
- ✓ Linking with nodal departments.

10.4.13 Roles and responsibilities of DLAO:

- ✓ Take active part in debris clearance in disaster.
- ✓ Provision of community health and sanitary measures.
- ✓ Provide assistance to the authority by contributing earth movers, concrete cutters and other equipments.
- ✓ Help to prevent outbreak of diseases.
- ✓ Coordination with other line departments.
- ✓ Repair damaged roads and pavements.
- ✓ Disseminate information to the site operation centres and vice versa.

10.4.14 Roles of village council, YMA, MHIP, etc in disaster management:

The YMA, MUP or MHIP has their branches in all localities and villages throughout the district and they will be responsible for:

- ✓ Maintaining of security and support the Emergency Control Centre created by the government and liaise with the Emergency Control Centres set up at the site of disaster.
- ✓ All Community Based Disaster Management Teams will be activated in the event of a disaster and shall be linked with line Departments for necessary action.
- ✓ Co-ordinate with DEF, Hnahthial and QRTs to maintain law and order during evacuation, assist in Search & Rescue Operations and help in emergency evacuations.
- ✓ Co-ordinate with the Medical team and assist in providing First Aid Medical help.
- ✓ Containing panic behaviour, maintaining orderly movements towards community shelter and taking preventive steps to avoid injuries and accidents.
- ✓ Contributing labourer (loading and unloading) of distribution temporary construction, materials, salvage and restoration of water supplies, feeding centres, relief camps.
- ✓ Ensuing standards in sanitation and disposal of waste and counselling injured panic stricken people.

10.4.15 Roles and responsibilities of public & private industries and corporations:

- ✓ Public and Private Industries and Corporation has their key role in rehabilitation programme apart from undertaking other relief operation in calamity stricken pockets. In the past events most of the PSUs have rendered their best efforts in restoring normalcy of the livelihood of the people with warm response.
- ✓ The services of PSUs/Industrial Units shall be sought for especially immediate post calamity relief operation and providing shelter for the distress both temporary and permanently by the District Administration and shall be implemented under the direct supervision of Chairman, DDMA/ Deputy Commissioner, Hnahthial.

CHAPTER – 11

FINANCIAL RESOURCES FOR IMPLEMENTATION OF DDMP

District Disaster Response Funds and District Disaster Mitigation Funds are proposed to be created at the District Level as mandated by **Section 48 of the DM Act, 2005**. 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.

11.1 State Allocation

Every year, the Disaster Management & Rehabilitation Department, Government of Mizoram prepares the Budgets for Disaster Management in the State.

11.2 State Disaster Response Fund

The State Disaster Response Fund (SDRF) is a fund constituted under Section 48(1) (a) of the Disaster Management Act, 2005.

The SDRF shall be used only for meeting the expenditure for providing immediate relief to the victims of cyclone, drought, earthquake, fire, flood, tsunami, hailstorm, landslide, avalanche, cloud burst, pest attack, and frost & Cold wave.

SDRF is constituted with the nomenclature "State Disaster Response Fund" in the Public Account under the Reserve Fund bearing interest in the Major Head:8121- General and other Reserve Fund in the accounts of the State Governments concerned. The closing balance for one financial year shall be the opening balance for the next financial year. For Disaster of severe nature, 50% of the SDRF Balance, as on 31st March of the preceding financial year, will be adjusted while releasing the assistance from NDRF for the first disaster in a financial year. In case the same states face another severe disaster during the same year, no adjustment will be made while releasing NDRF assistance.

11.3 State Disaster Mitigation Fund (SDMF)

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

11.4 District Disaster Response Fund (DDRF)

As per Section 48 (1)(b) of the DM Act, 2005, District Disaster Response Fund (DDRF) is to be created for post-disaster activities and to be made available to the DDMA.

11.5 District Disaster Mitigation Fund (DDMF)

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

11.6 Departmental Fund

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

11.7 Contributions to the Fund

The aggregate size of the State Disaster Response Fund of each State for each of the financial years 2015-2016 to 2019-2020, would be as recommended by the 14th Finance Commission. Of the total size of SDRF indicated, Government of India will contribute 75% for general category States and 90% for Special category States of the total yearly allocation in the form of a non-plan grant. The balance 25% in general category states and 10% in special category states will be contributed by the State Government concerned. The share of the Government of India to the SDRF shall be paid as Grant-in-Aid.

11.8 Flexi Funds in Centrally Sponsored Schemes

Guidelines have been issued for 10 % of Flexi-fund within the Centrally Sponsored Schemes (CSS) is to be utilized inter alia for mitigation, restoration activities in the event of natural calamities in the sectors covered by the CSS. Request have been made to take necessary steps toward inter-departmental co-ordination so that the resources of flexi-funds can be put to use effectively in due course for disaster mitigation and for medium/ long term restoration in different sectors.

DDMA should also look at other options of new financial tools like catastrophic risk financing, risk insurance, micro-insurance etc. to compensate for massive losses on account of disasters. Opportunity of CSR investments should also be explored and elaborated under this section by the DDMA for increasing district resilience.

11.9 Assistance that can be provided from SDRF

11.9.1 Revised List of Items and Norms of assistance from SDRF) and NDRF 2022-2026 based on MHA Letter No.33-03/2020NDM-I dt.10.10.2022 :

Sl No	ITEM	Norms of Assistance
A	**Response & Relief [40% of State Disaster Risk Management Fund (SDRMF) i.e. equal to 50% of SDRF allocation for the year]**	
	Gratuitous Relief	
1	(a) Ex-Gratia payment to families of deceased person	• **Rs.4.00 lakh per deceased** person including those involved in relief operations or associated in preparedness activities subject to certification regarding cause of death from appropriate authority.
	(b) Ex-Gratia payment for loss of a limb or eye(s).	**Rs.74,000/-per person,** when the disability is between 40% and 60%. **Rs.2.50 lac per person** when the disability is more than 60% Subject to certification by a doctor from a hospital or dispensary of Government, regarding extent and cause of disability.

	(c) Grievous injury requiring hospitalization	• **Rs 16,000/-** per person requiring hospitalization for more than a week. • **Rs.5,400**/- per person requiring hospitalization for less than a week.
	(d) Clothing and utensils /house-hold goods for families whose houses have been washed away/ fully damaged/ severely inundated for more than a week due to a natural calamity.	• **Rs.2,500/-** per family for loss of clothing • **Rs.2,500/-**for loss of utensils/household goods per family.
	e) Gratuitous relief for families in dire need of immediate sustenance after a calamity. GR to be provided to those who have no food reserves, or whose food reserves have been wiped out in a calamity, and who have no other immediate means of support.	• Gratuitous Relief (GR) for families, whose livelihood is seriously affected will be provided to two adults members of the affected family as per actual rate of MNREGA per day or average rate of all States/UTs per day, whichever is lower. For this purpose, notification issued by Ministry of Rural Development from time to time, is to be referred for calculating average rate. The relief amount should be disbursed through DBT cash (ln case of exigency of the situation only) or the State Government may provide this relief in kind. • State Govt, will certify that identified beneficiaries are not housed in relief camps, during the period GR is provided. Further, the State Government will provide the basis and process for arriving at such beneficiaries, district-wise. • Period for providing gratuitous relief will be as per assessment of the State Executive Committee (SEC) and the central Team (in case of NDRF). The default period of assistance will up to to 30 days, which may be extended up to 60 days in the first instance, if required and subsequently upto 90 days in case of drought/pest attack. Depending on the ground situation, the State Executive Committee can extend the time period beyond the prescribed limit subject to that expenditure on this account should not exceed 25% of SDRF allocation for the year.

		• Further, to ensure transparency, the list of persons to whom Gratuitous Relief is provided, should be uploaded on the website of the State Government. The State Government shall notify the basis and proof for the identification of beneficiaries in a transparent manner.
2	**SEARCH & RESCUE OPERATIONS**	
	(a) Cost of search and rescue measures/evacuation of people affected/likely to be affected.	As per actual cost incurred, assessed by SEC and recommended by the Central Team (in case of NDRF). • By the time the Central Team visits the affected area, these activities are already over. Therefore, the State Level Committee and the Central Team can recommend actual/near-actual costs.
	(b) Hiring of boats for carrying immediate relief and saving lives.	As per actual cost incurred, assessed by SEC and recommended by the Central Team (in case of NDRF). The quantum of assistance will be limited to the actual expenditure incurred on hiring boats and essential equipment required for rescuing stranded people and thereby saving human lives during a notified natural calamity.
3	**RELIEF MEASURES**	
	(a) Provision for temporary accommodation, food, clothing, medical care, etc for people affected/ evacuated and sheltered in relief camps.	As per assessment of need by SEC and recommendation of the Central Team (in case of NDRF), for a period up to 30 days. The SEC would need to specify the numbers of camps, their duration and the number of persons in camps. In case of continuation of a calamity like drought or widespread devastation caused by earthquake or flood etc, this period may be extended to 60 days and up to 90 days in case of severe drought. Depending on the ground situation, the state Executive Committee can extend the time period beyond the prescribed limit subject to that expenditure on this account should not exceed 25% of SDRF allocation for the year. Medical care may be provided from National Rural Health Mission (NRHM).

	(b) Air dropping of essential supplies	As per actual cost incurred, assessed by SEC and recommended by the Central Team (in case of NDRF). • The quantum of assistance will be limited to the actual amount raised in the bills by the Ministry of Defense for airdropping of essential supplies and rescue operation only.
	(c)Provision of emergency supply of drinking water in rural areas and urban	As per actual cost, based on assistance of need by SEC and recommended by the Central Team (in case of NDRF), up to 30 days and may be extended up to 90 days in case of drought. Depending on the ground situation, the State Executive Committee can extend the time period beyond the prescribed limit subject to that expenditure on the account should not exceed 25% of SDRF allocation for the year.
4	**CLEARANCE OF AFFECTED AREAS**	
	(a) Clearance of debris in public areas.	As per actual cost upto 30 days from the date of start of the work based on assessment of need by SEC for the assistance to be provided under SDRF and as per assessment of the Central Team for assistance to be provided under NDRF.
	(b)Draining of flood water in affected areas	As per actual cost within 30 days from the date of start of the work based on assessment of need by SEC for the assistance to be provided under SDRF and as per assessment of the Central team (in case of NDRF).
	(c)Disposal of dead bodies/Carcasses	As per actual cost based on assessment of need by SEC and recommendation of the Central Team (in case of NDRF).
5	**AGRICULTURE**	
(i)	***Assistance farmers having landholding upto 2 ha.***	
(A)	**Assistance for land and other loss**	
	(a)De-siltingof agricultural land (where thickness of sand/silt deposit is more than 3" to be certified by the competent authority of the State Government)	• **Rs. 18,000/- per hectare for each item** Above is subject to a minimum assistance of not less than Rs.2,200/- per farmer.

	(b) Removal of debris on agricultural land in hilly areas	(Subject to the condition that no other assistance/subsidy has been availed of by/is eligible to the beneficiaries under any other Government Scheme)
	(c)De-silting/Restoration/ Repair of fish farms	
	(d)Loss of substantial portion of land caused by landslide, avalanche, change of course of rivers.	**Rs. 47,000/- per hectare** to only those small and marginal farmers whose ownership of the land lost, is legitimate as per the revenue records. Above is subject to a minimum assistance of not less than Rs.5,000/- per farmer.
(B)	**Input subsidy (where crop loss was 50% and above.)**	
	a) For agriculture crops, horticulture crops and annual plantation crops	• **Rs. 8,500/- per hectare** in rain-fed areas subject to minimum assistance not less than Rs. 1000 per farmer and restricted to sown areas. • **Rs.17,000/-per hectare** in assured irrigated areas, subject to minimum assistance not less than Rs. 2000 per farmer and restricted to sown areas.
	(b) Perennial crops/ Agro forestry (Plantation in own farmland)	• **Rs 22,500 per hectare** for all types of perennial crops/ Agro forestry (Plantation in own farmland) subject to minimum assistance not less than Rs. 2,500/- and restricted to sown areas.
	(c) Sericulture	• **Rs. 6,000/- per ha** for Eri, Mulberry, Tussar • **Rs. 7,500/- per ha** for Muga. Above is subject to minimum assistance not less than Rs. 1,000/- per farmers and restricted to sown areas.
(ii)	**Input subsidy to farmers other than small & marginal farmers**	• **Rs. 8,500/- per hectare** in rain-fed areas and restricted to sown areas • **Rs.17,000/- per hectare** for areas under assured irrigation and restricted to sown areas. • **Rs.22,500/- per hectare** for all types of perennial crops / trees including agro forestry (Plantation in own farmland) and restricted to sown areas
6	**ANIMALHUSBANDRY-ASSISTANCE TO SMALL AND MARGINAL FARMERS**	

	(i)Replacement of draught animals, milch animals or animals used for haulage	**<u>Milch animal</u>** **Rs.37,500/-** Buffalo/Cow/Camel/Yak etc. **Rs.4,000/-** Sheep/Goat **<u>Draught Animals</u>** **Rs.32,000/-** Camel/horse/bullock,etc. **Rs20,000/-** Calf/Donkey/pony/mule The assistance may be restricted for the actual loss of economically productive animals and will be subjected to a ceiling of 3 large Milch animal or 30 small milch animals or 3 large draught animal or 6 small draught animals per household irrespective of whether a household has lost a larger number of animals. (The loss is to be certified by the Competent Authority designated by the State Government). **<u>Poultry</u>** • Poultry @ **Rs.100/- per bird** subject to a ceiling of assistance of **Rs.10,000/-** per beneficiary household. The death of the poultry birds should be on account of the notified natural calamity. ***Note:*** - Relief under these norms is not eligible if the assistance is available from any other Government Scheme, e.g. loss of birds due to Avian Influenza or any other diseases for which the Department of Animal Husbandry has a separate scheme for compensating the poultry owners.
	(ii)Provision of fodder / feed concentrate including water supply and medicine in cattle camps camps.	Large animals- **Rs. 80/ per day** Small animals-**Rs. 45/- per day** Period for providing relief will be as per assessment of the State Executive Committee (SEC) and the Central Team (in case of NDRF). The default period for assistance will be up to 30 days which may be extended up to 60 days in the first instance and in case of severe drought up to 90 days. Depending on the ground situation, the State Executive Committee can extend the time period beyond the prescribed limit subject to that expenditure on this account should not exceed 25% of SDRF allocation for the year.

		Based on assessment of need by SEC and recommendation of the Central Team (in case of NDRF) consistent with estimate of cattle as per Livestock Census and subject to the certificate by the competent authority on requirement of medicine and vaccine being calamity related.
	(iii) Transport of fodder to cattle outside cattle camps	As per actual cost of transport based on assessment of need by SEC and recommendation of the (in case of NDRF) consistent with estimates of cattle as per Livestock Census.
7	FISHERY	
	(i)Assistance to Fisherman for repair/ replacement of boats, nets-damaged or lost. –Boat –Dugout-Canoe –Catamaran –Net (This assistance will not be provided if the beneficiary is eligible or has availed of any subsidy/assistance, for the instant calamity, under any other Government Scheme.)	• **Rs. 6,000/-** for repair of partially damaged boats only • **Rs. 3,000/-**for repair of partially damaged net • **Rs. 15,000/-** for replacement of fully damaged boats. • **Rs. 4,000/-**for replacement of fully damaged net.
	(ii)Input subsidy for fish seed farm	• **Rs. 10,000/- per hectare** (This assistance will not be provided if the beneficiary is eligible for or has availed of any subsidy/assistance, for the instant calamity, under any other Government Scheme except the one time subsidy provided under the Scheme of Department of Animal Husbandry, Dairying and Fisheries, Ministry of Agriculture).
8	**HANDICRAFTS/HANDLOOM-ASSISTANCE TO ARTISANS**	
	(i)For replacement of damaged tools/ equipment	**Rs. 5,000/- per artisan for equipments** -Subject to certification by the competent authority designated by the State Government about damage and its replacement.
	(ii) For loss of raw material/goods in process/finished goods	**Rs. 5,000/- per artisan for raw material** -Subject to certification by Competent Authority designated by the State Government about loss and its replacement.

9	**Locust Control**	
	Hiring of vehicles, tractors, with spray equipments for spraying of plant protection chemicals for pest control, hiring of water tankers and purchase of plant protection chemicals for locust control.	As per the actual cost, based on the assessment of need by the SEC and recommended by the Central Team (in case of NDRF). The quantum of assistance will be limited to the actual expenditure incurred on hiring vehicles, tractors with spray equipments for spraying of plant protection chemicals for locust control during locust attack. However, expenditure on this account, in no case, should exceed 25% of SDRF allocation under this window (Response & Relief) for the year.
B.	**Recovery & Reconstruction: (30% Of SDRMF i.e. equal to 37.50% of SDRF allocation for the year)**	
10	**HOUSING**	
	(a) Fully damaged/ destroyed houses and Severely damaged houses	
	(i)Pucca house	**Rs. 1,20,000/- per house** in plain areas.
	(ii)Kutcha House	**Rs. 1,30,000/- per house** in hilly areas.
	(b)Partially Damaged Houses – Both pucca/ kutcha (other than huts) where the damage is at least 15%	
	(i)Pucca house	**Rs 6,500/- per house**
	(ii)Kutcha House	**Rs. 4,000/- per house**
	(d)Damaged / destroyed huts:	**Rs. 8,000/- per Hut** *(Hut means- Temporary, make shift unit, inferior to Kutcha house, made of thatch, mud, plastic sheets, etc. traditionally seen & recognized and known as Hut by the State/ District Authorities.)* *Note:- The damaged house should be authorized construction duly certified by Competent Authority of the State Government.*
	e) Cattle shed attached with house	3,000/- per shed
11	**INSFRASTRUCTURE**	
	Repair/restoration of immediate nature of the damaged infrastructure	

	(1) Roads & bridges, which may include the following activities: i) Filling up of breaches and potholes, use of pipe for creating waterways, repair and stone pitching of embankments. ii) Repair of breached culverts. iii) Providing diversions to damaged/washed out portions of bridges to restore immediate connectivity. iv) Temporary repair of approaches to bridges/embankments of bridges, repair of damaged railing bridges, repair of causeways to restore immediate connectivity, granular sub base, over damaged stretch of roads to restore traffic.	Assessment of requirements: Based on the assessment of need, as per States' notified schedule of rates for repairs, by SEC and recommendation of the Central Team (in case of NDRF). In case of repair of roads, assistance will be given based on the notified Ordinary Repair (OR) and Periodical Renewal (PR) of the State. In case OR & PR is not available, then assistance will be provided as per rate prescribed in this item. However, in any case, the assistance will be provided at the rate whichever is lower. Prescribed rate are as under:- ➢ Repairs of State Highways /Major District Roads(MDR) - in normal areas ~ @ Rs. 1.0 lakh /km ; - in hilly areas - @ Rs. 1.25 lakh /km ; ➢ Repairs of Rural/village Roads with culverts - in normal areas - @ Rs. 60,000/- km ; - in hilly areas - @ Rs. 75,000 / km ; ➢ Repairs of RCC Culvert/Bridge - in normal areas - @ Rs 60,000 per culvert; - in hilly areas - @ Rs 75,000/- per culvert.
	(2) Drinking Water Supply Schemes, which may include the following activities:- i) Repair of damaged platforms of hand pumps/ring wells/spring-tapped chambers/public stand posts, cisterns. ii) Restoration of damaged stand posts including replacement of damaged pipe lengths with new pipe lengths, cleaning of clear water reservoir (to make it leak proof). iii) Repair of damaged pumping machines, leaking overhead reservoirs and water pumps including damaged intake- outtake structure, approach gantries/jetties.	• Damaged drinking water supply schemes will be eligible for assistance as per actual, subject to a ceiling of Rs 2.00 lakh per damaged scheme. -Cleaning of Community drinking water wells as per actual, subject to a ceiling of Rs 10,000/ per well

	(3) Minor Irrigation Schemes, which may include the following activities: i) Immediate repair of damaged canal structures and earthen/ masonry works of tanks and small reservoirs with the use of cement, sand bags and stones. ii) Repair of weak areas such as piping or rat holes in dam walls/ embankments. iii) Removal of vegetative material/building material/debris from canal and drainage system. iv) Repair of embankments of minor irrigation projects.	In case of repairs of minor Irrigation works, assistance will be given as per the schedule of rates (SOR) for repairs notified by the concerned State. In case SOR is not available, assistance for irrigation scheme/ canal will be provided as per actuals, subject to the ceiling of Rs 2.00 lakh per damaged minor scheme. **Note:-** However, in any case, the assistance will be provided at the rate whichever is lower. Assistance for restoration of damaged embankment of minor irrigation projects will be at par with the case of similar rural roads, subject to the stipulation that no duplication would be done with any ongoing schemes.
	(4) Power (only limited to immediate restoration of electricity supply in the affected areas): Damaged Poles/conductors and transformers upto11kv	Regarding repair of damaged power sector, assistance will be given for the damaged conductors, poles and transformers upto the level of 11 KV and LT lines with bare conductor, as per details hereunder: ➢ The rate of assistance will be: - Rs.5000/pole; - Rs. 0.50 lakh per km for repairing of damaged LT lines; - Rs.1.00 lakh for replacement of one damaged distribution transformer. (Note:-The above assistance will not be applicable for those items which can be reused).
	(5) Schools Repair of damaged schools building	As per actual, subject to a ceiling of Rs 2.00 lakh per school.
	(6) Primary/Community Health Centres Repair of Primary/ Community Health Centres	As per actual, subject to a ceiling of Rs 2.00 lakh per unit.
	(7) Community Assets Owned by Panchayat Temporary repair of Mahila Mandal, Yuva Kendra, Panchayat Ghar, Community Hall, Anganwadi, etc.	As per actual, subject to a ceiling of Rs 2.50 lakh per unit.

C.	**Preparedness & Capacity Building (10% Of SDRMF i.e equal to 12.50% of SDRF allocation for the year**	
12	Procurement of essential search and rescue and evacuation equipments including communication equipments etc for response to disaster.	Expenditure from the preparedness and capacity building window will be governed by the Guidelines issued separately by the Ministry of Home Affairs for the Preparedness & Capacity Building window of SDRF/ NDRF
13	Capacity Building	
D.	State Specific Disasters	
	State Specific disasters within the local context in the state, which are not included in the notified list of disasters eligible for assistance from SDRF/NDRF, can be met from SDRF within the limit of 10% of the annual funds allocation of the respective fund of the SDRF	Expenditure is to be incurred from SDRF only (and not from NDRF), as assessed by the SEC. The norm for various items will be the same as applicable to other notified natural disasters, as listed above; or In these cases, the scale of relief assistance against each item for 'local disaster' shall not exceed the norms of SDRF. The flexibility is to be applicable only after the State has formally listed the disasters for inclusion and has notified transparent norms and guidelines, with a clear procedure for identification of the beneficiaries for disaster **relief for such local disasters', with the approval Of** SEC.
E.	**Items Not Covered under SDRF/NDRF**	
	a) Colleges and other educational institutions buildings b) Major/medium Irrigation Schemes c) Flood control and anti Erosion Protection work d) Hydro Power Project/HT Distribution systems/Transformers and sub stations e) High Tension Lines (above 11 kv) f) State Govt Buildings viz. departmental/office building, departmental/residential quarters, religions structures, patwarkhana, Court premises, play ground, forest bungalow property and animal/bird sanctuary etc. g) Long term/permanent restoration work h) Procurement of equipments/ machineries under NDRF i) National Highways j) Sectors such as Telecommunication and Power (except immediate restoration of power supply), which generate their own revenues, and also undertake immediate repair/restoration works form their own funds/resources, are excluded.	

Note:-

(i) For assistance under NDRF for items at S. Nos. 2 (a), (b). 3 (a), (b), (c), 4 (a), (b), (c), 6 (ii), (iii), and 9, while actual expenditure is allowed, the State Government will provide the item-wise details of expenditure to the Inter- Ministerial Central Team (IMCT)/ Central Government.

(ii) Ex-Gratia payment of Rs 50,000/- per deceased person, to next of kin of the deceased person, including those involved in the relief operations or associated in the preparedness activities, subject to the cause of death being certified as COVID-19, as per the guidelines jointly issued by the Ministry of Health and Family Welfare and the Indian Council of Medical Research on 3rd September, 2021, will be given as per guidelines on minimum relief issued by the National Disaster Management Authority (NDMA) dated 11.09.2021.

This ex-gratia assistance will be applicable from the date of first COVID-19 case reported in the country and will continue till de-notification of COVID-19 as a disaster or till further orders, whichever is earlier, to next of kin of the deceased due to COVID-19.

(iii) There will be a Mid-Term review of the norms after 2 years, based on price level index.

(iv) The State Governments are to take utmost care and ensure that all individual beneficiary-oriented assistance is necessarily/ mandatorily disbursed through Direct Benefit Transfer in the bank account of the beneficiary.

(v) The scale of relief assistance against each item for all notified disasters including 'local disaster' should not exceed the norms of SDRF/ NDRF. Any amount spent by the State for such disasters over and above the ceiling, would be borne out of the resources of the State Government and not from SDRF

CHAPTER – 12

PROCEDURE AN METHODOLOGY FOR MONITORING, EVALUATION, UPDATION AND MAINTENANCE OF DDMP

Evaluating the effectiveness of plans involves a combination of training events, exercise etc. to determine whether the goals, objectives, decisions, actions and timing outlined in the plan will result in an effective response. Indicative guidelines for monitoring and evaluating of the plan are as follows.

- ✓ Regularly review the implementation of the plan.
- ✓ Check the efficacy of the plan after any major disaster/emergency in the district and see what did work and what did not work and make amendments to the plan accordingly.
- ✓ Keep India Disaster Resource Network Inventory (IDRN) updated and connected with the plan.
- ✓ Update coordinates of responsible personnel and their roles/responsibility every six months or whenever a change happens. Names and contact details of the officers/officials who are the nodal officers or the in-charge of resources to be updated on regular basis.
- ✓ Plan should be web enabled with access on intra and internet.
- ✓ Plan should be circulated to all stakeholders departments, agencies and organizations so that they know their role and responsibilities and also prepare their own plan.
- ✓ Regular drills/exercise should be conducted to test the efficacy of the plan and check the level of preparedness of various departments and other stakeholders. It would ensure that all parties understand their roles and responsibilities clearly and understand the population size and need of vulnerable groups.
- ✓ Regular training and orientation of the officers/officials responsible to implement the plan should be done so that it becomes useful documentation to the district administration.
- ✓ Army, NDRF, SDRF and other agencies should be integrated into the plan exercise regularly.
- ✓ DDMA should hold regular interaction and meetings with the Army or any other central government agencies for strengthening coordination during disasters.
- ✓ The DEOC should be made responsible for keeping the plan in updated form and collecting, collating and processing the information.

12.1 Authority for maintaining and reviewing the DDMP

As per **Section 31 Sub Section (4)** of Disaster Management Act, 2005, the plan would be reviewed and updated annually and the year in which the plan has been reviewed would be clearly mentioned in the shape of header in each page of the plan.

And as per **Section 31 Sub Section (5)** of Disaster Management Act, 2005 the copies of the District Plan referred to in Sub Section (2) and (4) shall be made available to the Departments of the Government in the District.

12.2 Proper Monitoring and evaluation of the DDMP

Sub Section (6) of Section 31 of the Disaster Management Act, 2005, the District Authority shall send a copy of the District Plan to the State which shall forward it to the State Government.

Sub Section (7) of Section 31 of the Disaster Management Act, 2005, the District Authority shall, review from time to time, the implementation of District Plan and issue such instructions to different departments of the Government in the district as it may deem necessary for the implementation thereof.

12.3 Post –disaster evaluation mechanism of DDMP

Section 31 Sub-Section (2) of the Disaster Management Act, 2005, 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 approved by the State Authority.

Section 31 Sub Section (3) of DM Act, 2005, The District Plan shall include-

(a) the area in the district vulnerable to different forms of disasters.

(b) the measures to be taken for prevention and mitigation of disaster by different Departments of the Government at the district level and the local authorities in the district.

(c) the capacity-building and preparedness measures required to be taken by different 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

(i) allocation of responsibilities to the Departments of the Government a the district level and the local authorities in the district.

(ii) prompt response to disaster and relief thereof.

(iii) procurement of essential resources.

(iv) establishment of communication links and

(v) the dissemination of information to the public.

12.4 Schedule for updation of DDMP

Regular updation of DDMP shall be done annually. During the updation process various sections shall be kept in mind and updation of these sections shall be done.

12.5 Uploading of updated plans at DM&R Department websites.

The District Plan will be uploaded at the Disaster Management and Rehabilitation website after its approval from District Authority and State Authority.

12.6 Conducting Mock Drills

Mock drills should be conducted at district and sub district levels like sub division, blocks and village etc after approval of DDMP to test its efficacy at least annually. It is important to for the district to have Mock Drill calendar duly approved by DDMA. 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 and updated for that year. Based on the feedback from such simulation exercises, the plans will then be revised again and capacity would be enhanced to fill the gaps.

Table top exercise, meetings is to be held before mock drill. And during the mock drill plan of action, the following essentials will be listed down.

1) The Responsible parties for organizing the drills.
2) Schedule for organizing drills.
3) Resources for organizing drills.

12.7 Monitoring and Gap Evaluation

After mock exercises, debriefing and interaction with all the stakeholders involved will be conducted by DDMA to evaluate gaps, lesson learnt, and good practices and will be documented for further references to deal with future disasters.

CHAPTER – 13

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. Nearby District DDMA may be requested to be on alert render help during crisis management when it is impossible for the District alone to manage the disaster within its jurisdiction. It will seek the help of nearby DDMAs through written application or though emergency calls or whichever is applicable along with seeking the help of the State Authority.

DDMA will assess the Disaster to be of the level **L0, L1, L2, L3.**When disaster occurs beyond the coping capacity of the district L1 and above, HDDMA will inform and send alert to other DDMAs.

13.1 Intra and Inter-Department coordination and linkage

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 Hnahthial 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 'do not harm' approach. Examples of this approach are urban planning and zoning, up gradation of building codes and their effective enforcement, adoption of disaster resilient housing designs and construction of school and hospitals, flood proofing, 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, DDMA has to sensitize officials of line departments and the community towards DRR issues.

13.2 Inter Linkage with other National, State Level, DDMA's

For the purpose of specialized response to a threatening disaster situation or disasters/emergencies both natural and man-made such as those of CBRN origin, the DM Act 2005 has mandated the constitution of NDRF. The general superintendence, direction and control of this force is vested in and exercised by the NDMA and the command and supervision of the Force will vest in an officer to be appointed by the Central Government as the Director General of NDRF.

13.3 Linkage with NDRF

The Deputy Commissioner, Chairman, DDMA shall make a request to Commissioner, DM&R or Principal Secretary to Govt. of Mizoram, DM&R Deptt to deploy NDRF when the District is struck by disaster beyond the coping capacity of the resources of the District.

Presently the location and area of responsibility of the various NDRF battalions in the country are as follows:

Location	Area of responsibility for	Area of responsibility for
Guwahati	N.E States	Kolkata Battalion
Kolkata	West Bengal, Bihar, Sikkim, Jharkhand	
Mundali	Orissa, Chhattisgarh, North Andhra Pradesh	Arakkonam battalion
Arakkonam	Tamil Nadu, Kerala, South Andhra Pradesh, Pondicherry, A&N Islands	
Pune	Maharashtra, Karnataka, Goa	Pune Battallion
Gandhi Nagar	Rajasthan, Gujarat, Madhya Pradesh, Dadra & Nagar Haveli, Daman & Diu	
Bhatinda	Chandigarh, Punjab, J&K, Himachal	Ghaziabad battalion
Ghaziabad	UP, Uttarkhand, Haryana, Delhi	
Patna* Vijayawada	*Patna(Bihar) and Vijayawada(AP) have also been approved in principle to locate NDRF battalions for natural disaster, and therefore, the area of responsibility will be readjusted once these two NDRF battalions are made functional	

13.4 Linkage with SDRF

The Deputy Commissioner, Chairman, DDMA shall make a request to Commissioner, DM&R or Principal Secretary to Govt. of Mizoram, DM&R Deptt to deploy SDRF when the District is strike by disaster beyond the coping capacity of the resources of the District.

Presently the location and area of responsibility of the various SDRF battalions in the country are as follows:

Name of Battalions	Headquarters/ Locations	No. of trained personnel	Area of Operation	Remarks
1st MAP	Armed Veng	88	Aizawl District	DC. Aizawl will have the commanding authority to its deployment

3rd MAP	Mualpui, Aizawl District	104	Aizawl & Serchhip District	DC. Aizawl will have the commanding Authority to its deployment
5th IR	Sakawrtuichhun Aizawl District	116	Aizawl & Serchhip District	DC. Aizawl will have the commanding authority to its deployment
2nd MAP	Luangmual, Lunglei District	130	Lunglei District, Lawngtlai District & Siaha District	DC. Lunglei will have the commanding authority to its deployment
1st IR	Mualvum, Kolasib District	31	Kolasib District	DC. Kolasib will have the commanding authority to its deployment
2nd IR	Khawzawl, Champhai District	30	Champhai District	DC. Champhai will have the commanding authority to its deployment
4th	Luangpawl, Mamit District	30	Mamit District	DC. Mamit will have the commanding authority to its deployment

13.5 Linkage with DDMAs/DDMPs.

HDDMA needs to be linked with other DDMAs that share common boundaries with Hnahthial District. During times of disaster, the DDMA nearest to the site of disaster shall be communicated with and necessary action taken accordingly.

13.6 From Lesson Learnt

This year (2017) Hnahthial District experienced death due to landslides and heavy monsoon at its highest compare to any other year. Nine (9) persons lost live due to heavy monsoon and many houses were evacuated due to flood in many areas.

Lungsen RD Block and Bunghmun RD Block were one of the worst hit block areas during the monsoon period. Tlabung Sub-Division also suffered damages due flood. Four people died in Phairuang village due to landslide and house collapsed, two people died due to flash flood at Changpui village and three people died due to landslide at Marpara S. Prompt actions could not be taken at these areas due to blockage of roads etc.

So, from lesson learnt it is felt that there is a need to communicate with other DDMA's. A written request may also be sentr to other DDMA's beforehand

of disaster season so that when the time comes (disaster season or situation) a request maybe placed to them to act on behalf of HDDMA.

13.7 Linkage with Other District Emergency Operation Centre

Communication is the most important tool for effective coordination. Generally, Emergency Operation Centre (EOC) is the enabler of communication and coordination. EOC communication and coordination plan (EoC-SoP) should specify procedures for interfacing with different stakeholders during all phases of emergency, as stated in the DDMP framework. HDDMA will communicate to nearby EOC during the time of disaster.

CHAPTER 14

STANDARD OPERATING PROCEDURES (SOPs) AND CHECKLIST

Standard Operating Procedure (SOPs)

Standard Operating Procedure (SOPs) is common method of implementing instructions. SOPs provide response protocols for carrying out specific responsibilities. They describe who, what, when and how SOPs are appropriate for complex tasks requiring step-by-step instructions for performing a task. It is necessary to prepare and annex- SOPs for all relevant hazards to one's district- like- Earthquake, Flood, Cyclone, Landslide, Tsunami, Manmade disasters (CBRN, Stampede etc).

SOPs and checklist could be prepared for various stakeholders' effective response. These can be made based on the functioning of Emergency Support Functionaries (ESFs) or IRS. Depending on the hazard profile and level of exposure the district should decide in a participatory way the number of ESF covering all the above.

Hazard or incident specific annexes usually identify hazard specific risk and evacuation routes , specify provisions and protocols for warning the public and disseminating emergency public information and also specify the types of protective equipment and detection devices required by responders.

15.1 Definition of disaster situation

According to **Section 2(d)** of the Disaster management Act, 2005 "**Disaster means a catastrophe, mishap, calamity or a grave occurrence in any area, arising from natural or man-made causes, or by accident or negligence which results in substantial loss of life or human suffering or damage to, and destruction of, property, or damage to, or degradation of, environment, and is of such a nature or magnitude as to be beyond the coping capacity of the community of the affected area."**

15.2 Incident Action plan on receipt of warning and warning dissemination

Sl. No	Types of Disaster	Date/ Time of warning received	Responsible nodal department / agencies	Line department/ agency	Action to be taken
1	Forest Fire		EF&CC	EF&CC, I&PR, RD, VDMC	
2	House Fire		F&ES/DEF, Hnahthial	DEF, I&PR, RD, VDMC	

3	Biological disaster and Epidemics		H&FW/ AH&Vety	I&PR, AH&Vety, H&FW, PHED, VDMC, RD	
4	Drought/ Cyclone		DDMA	I&PR, Agriculture, Horticulture, PHE, Fisheries,LRS&WC, RD, VDMC	
5	Floods		DDMA	I&PR,Agriculture, Horticulture, DEF (Home Deptt), PHED, LRS&WC, PWD, P&E, RD, VDMC	
6	Landslide		DDMA	I&PR, PWD, P&E, PHE, LRS&WC , VDMC	
7	Cyclone		DDMA	I&PR, PHE, Fisheries,RD, Agriculture, Horticulture, VDMC	

15.3 Roles and responsibilities of the department or stakeholders in emergency response

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

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

a) SOP for Communication

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

Situation Assumption:

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

15.3.1.2 The initial reports on damage may not give a clear picture of the extent of damage to communication network.

15.3.1.3 The affected site may cut off from the state DEOC and the official on the site and find difficulty in communicating to the District/State EOC.

Nodal Agency: Bharat Sanchar Nigam Limited (BSNL)

Supporting Agencies: NIC, MPRO, Telecommunication Service providers and I&PR

SOP for Nodal Agency:

- Team Leader (TL) of communication ESF will activate the ESF on receiving the intimation of occurrence of disaster from the DEOC.
- TL would inform Nodal Officers (NOs) of support agencies about the event and ESF activation.
- TL would establish contact with the DEOC for First Information Report.
- TL request for reports from local ESF contact persons (this would be the local office of ESF Nodal Agency) to understand the current situation and action taken.
- Based on information given by the supporting agencies, TL decides on the need to launch an assessment mission to estimate the extent of damage to telecom services and network as well as to come up with possible arrangements to establishing reliable and appropriate network.
- TL communicates situation to supporting agencies and also request 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 private telecom companies and convenes a meeting of all ESF members to discuss and finalize the modalities.
- TL issues order to establish systems and reports to DEOCs on the action taken. New phone numbers and details of contact persons would also be communicated. If required mobile exchanges would be deployed.
- TL gets the temporary telephone facilities established for the public. Prior information on this would be announced through media.
- TL shall communicate with the District QRT so that they could be deployed at the affected site with the required equipment 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 are alerted or instructed.
- Once the QRTs receive the intimation from the nodal officer to reach at the site they would rush to the site. Search and Rescue operation will be conducted as and when necessary.
- At the emergency site, QRT members will take stock of the situation from the IC and would also know about their counter parts.
- QRTs would assess the ground situation and would send sectoral report to the District ESF agency.
- A sectoral would contain the following :
    - I. An assessment of over-all damage, listing specifically.
    - II. Overhead road damage (in miles/kilometres)
    - III. Cable damage (in yards/meters)
    - IV. Specific equipment damaged
    - V. Established a temporary communication facility for use by the public
    - VI. Identify requirements of man power, vehicles and other materials and equipment. 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.
- Carry out temporary building repairs to establish a secured storage area for the equipment and salvaged materials
- Report all activities to DEOC

b) SOP for Evacuation

The ESF on evacuation and QRT are 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.

Nodal Agency: DDMA

Supporting Agencies:DEF, HDMC/VDMC

SOP for Nodal Agency:

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

SOP 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 team receives an order from the nodal officer for reaching the site they would rush to the site.
- On reaching at the site the QRT members will take stock of the situation from the Incident Management Team at the site and their counterparts.
- The quick response team 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.
- Reporting about all activities to head office.

c) SOP for Search & 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.

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

Nodal Agency: DDMA

Support agency: DEF, VDMC, QRT and YMA

SOP for Nodal Agency:

- IC will call the TL of the primary agency and get the ESF activated
- TL of primary agency will call nodal officers of supporting agencies
- TL would activate the District Quick Response Team
- Quick Assessment of the S&R operations through surveys
- Assessment of the specific skill sets and the other equipment required
    - Using IDRN network to check and map the availability of resources in and round the disaster site

SOP for Quick Response Team on Search and Rescue:

- Assessment of damage(locations, no. 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

d) SOP for Law and Order:

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

Situation Assumption:

1. There would be panic and people would gather at a place
2. The crowds may go out of control
3. Riots may also take place

Nodal Agency: DEF, Hnahthial

Support Agency: VDMC/HDMC

SOP for Nodal Agency:

- IC will call the TL and get the QRT and ESF activated
- TL will call nodal officers of supporting agencies
- The QRTs and the ESF will be deployed at the affected site
- Cordoning off area to restrict movement of onlookers, vehicular and pedestrian traffic should be done
- Any additional requirements at site that needs to be taken care of.

SOP for Quick Response Team on Law and Order:

- Quick assessment of law and order situation in affected areas
- Support and coordinate with Local Administration
- Prepare updates on the law and order situation every 4-6 hours and brief the authorities

- Controlling situations like rioting and looting, cordon off sensitive areas in affected areas.
- Control and monitor traffic movement.
- QRTs will provide diversion of traffic on alternate routes as and when it is necessary especially heavy traffic or congested roads
- The QRTs will also provide information about traffic flow along various corridors
- QRTs will communicate to police control rooms, details on the field activities including deployment and reinforcement of staff and resources and communicate nature of additional requirements

e) SOP for Medical Response and Trauma Counselling

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

Situation assumptions:

1. Emergency Medical services will be required by the area affected by disaster
2. Outbreaks of epidemic diseases may take place after the disaster.
3. Hospital services would be affected.

Nodal Agency: H&FW Department

Support Agency: SWD, NGO,VDMC/HDMC

SOP for Nodal Agency:

IC will call the TL and get the ESF and CBMTs will be activated. Team Leader (TL) will maintain communication with nodal officers of supporting agencies:

- In coordination with the transportation ESF, it will ensure a critical number of medical professionals to be reached at the site including specialists from other districts.
- 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, equipment, ambulances, doctors and manpower etc.) required at the disaster affected site and the hospital health centres catering to the disaster victims.
- In case of orthopaedic care required in disaster like earthquakes the immediate response would have to be complimented by a follow up treatment schedule for a majority of the patient in/near their place of residence.

- Trained professional should be mobilized by psychosocial support.
- Ensuring setting up of temporary information centres at hospital with the help of ESF through help lines and warning dissemination system.
- TL will coordinate, direct, and integrate state level response to provide medical and sanitation health assistances.
- On the recommendations of the DEOC, the TL will also responsible for:

    - Maintaining the supply chain of required medicines, vaccines, drugs, plaster, syringes, etc.
    - Arrange for additional blood supply, send additional medical personnel equipped with food, bedding and tents etc.
    - Send vehicles and any additional equipment.

SOP for Quick Response Team (QRT) on Medical Response and Trauma Counselling:

- QRTs will provide situation and progress reports on the action taken by the team to the respective onsite Emergency Control Rooms and DEOC .
- 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 centres at the disaster sites.
    - Providing medical services as reported by the District Civil Surgeon with DEOC and onsite Emergency Control Rooms.
    - Procedures should be clarified in between-
        - Peripheral Hospitals
        - Private Hospitals
        - Blood Banks

          General Hospitals and Health services establish at transit camps, relief camps and affected villages
- QRTs should maintain check posts and surveillance at all entry and exit points from the affected area, especially during the threat or existence of an epidemic.

f) SOP for Water Supply

The ESF on drinking water and supply will ensure provision of sufficient quantity of clean drinking water. Clean water should also be distributed to prevent the spread of diseases through the contamination of water.

Situation assumptions:

- Existing water storage bodies will be damaged and unusable.
- There should be an urgent need of water to assist victims in rescue operation.

- Break down of sanitation system.
- Contamination of water due to outflow from sewers or due to breakage of water pipelines.

Nodal Agency: PHED

Support Agency: H&FW, FCS&CA,VDMC,HDMC

SOP for Nodal Agency:

- Team Leader (TL) of ESF on Water Supply will activate the ESF on receiving the intimation of the disaster from DEOC.
- TL would inform Nodal Officers (NOs) of support agencies about the event.
- TL will ensure special care for vulnerable groups such as the elderly, women with infants, pregnant women etc.
- Provide for sending additional support along with food, bedding, and tents.
- Send vehicles and any additional tools and equipment needed.

SOP for Quick Response Team (QRT) on water supply:

- QRTs will ensure that supply of drinking water is made available at the affected site and relief camps.
- QRTs will ensure the temporary sewerage lines and drainage lines are kept separate.
- QRTs will report the situation and the progress on action taken by the team to the DEOC.
- QRTs will intimate their TL of the additional resources needed.
- Carry out emergency repairs of all damages to water supply systems.
- Assist health authorities to identify appropriate sources of potable water.
- Identify unacceptable water sources and take necessary precautions to ensure that no water is accessed from such sources, either by sealing or any other such necessary arrangements.
- Arrange for alternate water supply and water storage in all transit camps, feeding centres, relief camps, cattle camps, and also the affected areas, till normal water supply is restored.
- Ensure that potable water supply is restored as per the standards and procedures laid down in "Standards for Potable Water."
- Plan for emergency accommodations for staff from outside the area.
- QRTs will ensure timely response to the needs of the affected victims.

- QRTs will set up temporary sanitation facilities at the relief camps.

g) SOP for Relief (Food and Shelter)

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

Situation assumption:

1. Shortage of a critical resources
2. Need for immediate and emergency assistance to the community at the time of resource shortage.

Nodal Agency: DDMA

Support Agency: FCS&CA, UD&PA, P&E, PHED, H&FW, PWD, VDMC/HDMC

SOP for Nodal Agency:

- TL will co-ordinate with the ESF on receiving the information of the disaster from DEOC.
- TL would not only inform the Nodal Officers (NOs) of support agencies about the event but maintain constant communication.
- TL will coordinate with all state and district level suppliers as identified with under IDRN.
- TL will coordinate with other ESFs related to transportation, debris road clearance to ensure quality supply chain management of relief materials.
- Ensuring composite relief with availability of complimentary relief material.

SOP for Quick Response Team (QRT) on relief:

- QRTs will immediately provide required assistance at relief camps.
- QRTs will be responsible for management and distribution of relief items to the affected victims.
- QRTs will be responsible for reporting the progress on action taken by the team to the DEOC
- QRTs will provide information to their TL about the need for additional resources.
- Clearing of the areas to establish relief camps.
- Setting up temporary but safe relief camps for temporary rehabilitation of disaster victims.
- Assist local authorities to set up important telecommunication and other critical related service facilities.

- Initiate, direct and market procurement of food available for different inventories and ensuring food supplies to the affected population
- Preparing take-home food packets for the families
- Ensuring distribution of relief material to the all the people including vulnerable groups of the target area such as women with infants, pregnant women, children, aged people and handicapped
- Ensuring support to Local Administration
- Local adequate relief camps prepared based on damage survey
- Develop alternate arrangement for population living in structures that might be affected even after the disaster

h) SOP for Equipment Support, Debris and Road Clearance

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

Situation Assumptions:

1. Access to disaster-affected area would depend upon the re-establishment of ground and water 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 scale for the inspection of present buildings.

Nodal Agency: PWD

Support Agency: UD&PA, PHE, P&E, DEF, Hnahthial.

SOP for Nodal Agency:

- Team Leader (TL) will activate the ESF on receiving the information of the disaster from DEOC.
- TL would inform Nodal Officers (NOs) of supporting agencies about the event and maintain constant communication.
- TL will coordinate with the supporting agency to mobilize equipment from the warehouses through IDRN database.
- The respective supporting agencies will contact their respective personal to move the equipment to central warehouse.
- The equipment like JCB, concrete cutters identified as per the need will be transported to the site.
- As per the information, the Nodal Officer for debris clearance will make an assessment on of the damages of roads and built structures at the site and surrounding areas.

- The Nodal Officers of Supporting Agencies will immediately start debris clearance operation to enable movement to the affected site.
- Review of the current situation must be taken up by the nodal agency to update the support agencies and to delegate their respective personnel to take precautionary measures, plan alternative or de-routes to ensure uninterrupted movement facility.
- All supporting agencies will inspect the road and rail network 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, debris and road 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.
- Ensure medical facilities at relief camps for disaster victims through maintenance of transportation and connectivity facilities. This may also include repairing of all paved and unpaved road surfaces including edge metalling, pathole patching etc followed by constant monitoring of the conditions.
- The QRTs will report the situation and the progress in response activities to the respective DEOCs.
- Undertake constructions of temporary roads to serve as access to temporary transit and relief camps, and medical facilities for disaster victims.

i) SOP for Helpline, Warning Dissemination

The ESF on help lines and warning dissemination should process and circulate information of the affected area and managing the tremendous flow of information. The help lines will act as the communicating link and will be responsible for providing, directing and coordinating operations.

Situation Assumptions:

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

Nodal Agency: DDMA

Support Agency: I&PR, ICT, Representatives from MJA, Hnahthial, Other Telecommunication Service providers.

SOP for Nodal Agency:

- IC will call the TL and the ESF will be activated.
- TL of primary agency will call nodal officers of supporting agency as well as co-ordinate with the QRT.
- The QRTS will be deployed at the affected site.
- QRTs will report the situation and the progress in response activities to the respective DEOCs.
- Sending flash news of latest updates/basic need requirements for disaster area.
- Assisting the DEOC in providing updated information to the State/National as well as at the District level.
- Setting up of toll free numbers for emergency information assistance.

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

- The QRT members will reach to the Nodal Office as soon as they 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 IC at the site and their counter parts.
- The QRTs will coordinate, collect, process, report and display essential elements of information and facilitate support for planning efforts in response operations.

j) SOP for Electricity

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

Situation Assumptions:

1. Prolonged electricity failure.
2. The electricity supply failure may result in loss/weakening of all other communication system which will have serious implication in the rescue and rehabilitation efforts.

Nodal Agency: P&E

Support Agency: UD&PA,LAD,VDMC/HDMC

SOP for Nodal Agency:

- IC will call the TL of Primary Agency and get the ESF and QRT activated
- TL of primary agency will call nodal officers of supporting agencies

- The QRTs will be deployed at the affected site
- TL will dispatch emergency repair teams equipped with tools, tents and food

SOP for Quick Response Team on Electricity:

- The QRT members will reach the nodal office as soon as they instructions to do so from the TL.
- QRT members 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 IC at the site and their counter parts.
- The QRTs will coordinate, collect, process, report and display essential elements of information and facilitate support for planning efforts in response operations.
- Begin repairing and re-construction work.
- Assisting hospitals in establishing an emergency supply by assembling generators and other emergency equipment, if necessary.
- The members of QRTs will establish temporary electricity supplies for other key public and private water system.
- The members of QRTs will establish temporary electricity supplies for transit camps, feeding centres, relief camps and onsite Emergency Control Rooms
- The members of QRTs will establish temporary electricity supplies for relief material godowns.
- Compile an itemized assessment of damage, from reports made by various electrical receiving centres and sub-centres.
- Report about all the activities to the head office.

k) SOP for Transportation

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 perform their emergency response, recovery and assistance missions.

Situation Assumptions:

1. The State Civil Transportation infrastructure will sustain damage, limiting access to the 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.

Nodal Agency: Transport Department

Support Agency: PWD,UD&PA, DEF, Hnahthial

SOP for Nodal Agency:

- TL of Transportation ESF will activate the ESF on receiving the intimation of the disaster from DEOC.
- TL would inform Nodal Officers (NOs) of support agencies about the event and ESF & QRTs will be activated.
- TL establishes contact with the DEOC for FIR.
- TL should received updated reports from local Transportation ESF contact person or nodal officer.
- TL communicates situation to support agencies and request 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 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 and DEOC.
- QRT will send a requirement schedule for the different modes of transportation E.g. trucks, boats, helicopters to be put on stand-by.
- QRTs will ensure timely re-establishment of the critical transportation links.
- The members of QRTs will establish temporary electricity supplies for relief material go downs.
- Compile an itemized assessment of damage, from reports made, by various electrical receiving centres and sub-centres.
- Reporting about all activities to the head office.

15.4 Information Management and dissemination strategy Authorities responsible for sending information

SL.NO	TYPE OF DISASTERS	NODAL DEPARTMENT
1	Natural Disasters	Deputy Commissioner/ DEOC
2	Chemical/ Biological	Deputy Commissioner/ DEOC/ H&FW
3	Forest fires	DFO/DCF and D.C
4	Terrorist Outrages	Deputy Commissioner/ SP

5	Epidemic	Deputy Commissioner/ District CMO/ H&FW
6	Law & Order	Deputy Commissioner/SP
7	Hijacking	GAD/Officer i/c Aviation and DC

14.5 Norms of Relief & Rehabilitation, Emergency Response/ Support

Sl. No	Type of function	Nodal Agency	Line Department
1	Evacuation	DDMA	DEF, VDMC, QRT
2	Search and Rescue	DDMA	DEF,QRT, VDMC,
3	Cordoning/ Traffic/ Law & Order	Home deptt.	VDMC/HDMC, DEF
4	Dead body/body disposal	Home deptt.	H&FW, UD & PA, RD, VDMC/ HDMC
5	Carcass disposal	AH&Vety.	PWD, UD&PA, VDMC/ HDMC

14.6 Humanitarian Relief and Assistance

Sl. No	Type of Relief	Nodal Agency	Line Department/Agency
1	Food	FCS&CA	DDMA, DEF, VDMC/HDMC
2	Drinking water	PHED	H & FW,RD,FCS & CA,UD & PA, LAD, VDMC/HDMC
3	Medicine and nutrition	H&FW	SWD, FCS & CA
4	Psychosocial and trauma care	H&FW	SWD,NGO,VDMC/HDMC
5	Clothing	DDMA	Industry, SWD, VDMC/HDMC
6	Public Health & Sanitation	H&FW	PHED, AH & Vety., UD & PA, LAD,VDMC/HDMC
7	Helplines	DDMA	I & PR,P & E, ICT,SWD, NGOs, MJA
8	Shelter Management & Repairs & Restoration of basic amenities	DDMA	UD & PA, LAD, P & E, PHED, QRT, PWD,VDMC/HDMC
9	Management of VIP visits	DDMA	DC

APPENDIX - I

LIST OF PRESIDENT, VILLAGE COUNCILS, WITHIN HNAHTHIAL DISTRICT

Sl. No	Name	Village	Contact No.
1	C Vanlalhruaia	Hnahthial North - I	8974418667
2	PC Lalremruata	Hnahthial North - II	9862417931
3	J Lalramliana	Hnahthial South - I	8974132762
4	Lalthuthlungliana	Hnahthial South - II	8414046430
5	K Lalchhuanmawia	Hnahthial South - III	8731879539
6	K.Lalbiaksanga	Aithur	9612228800
7	MC Lallawmawma	Bualpui H	8118943385
8	C.Ramdinpuia	Bualpui V	7085076701
9	MC Lalthlengliana	Cherhlun	8415979338
10	K Lalruatpuia	Chhipphir	8837047519
11	Roluahpuia	Denlung	6009421716
12	Lalramchhana	Darzo	8974113875
13	Lallawmzuala	Khawhri	8731037726
14	K Lalnunpuia	Leite	8974427971
15	R Lalfakmawia	Lungmawi	9383301138
16	Lalhlimpuia	Lungpuitlang	7085601981
17	HC Lallawmzuala	Muallianpui	7630822259
18	Hmangaihropuia	New Kawnpui	8793763179
19	Ronald Lalhruailiana	New Ngharchhip	8258980781
20	Johan Lalhmangliana	Ngharchhip	8798561834
21	T Laltlansiama	Pangzawl North	9612279354
22	R Lalrinawma	Pangzawl South	8974285954
23	C Laldingliana	Phaileng South	9366791679
24	R Kawlzidinga	Rawpui	7630045694
25	Lalnghakmawia	Rotlang East	8787668287
26	Lalngurliana Sailo	South Chawngtui	8415807919
27	F Laledenmawia	South Lungleng	6009569235
28	F Lalduhawma	South Vanlaiphai	9383076862
29	Lalremruata	Tarpho	8798309626
30	MC Lalrindika	Thiltlang	8974286154
31	K Lalsiammawia	Thingsai	6909554950
32	F Lalthantluanga	Tuipui 'D'	9366886187

APPENDIX - II

INVENTORIES UNDER DISTRICT DISASTER MANAGEMENT AUTHORITY, HNAHTHIAL DISTRICT

Sl. No.	Name of Property / Equipment	No. of Items
1	Cut Off Saw	2
2	Cut Off Saw – Diamond Blade / Metal Blade	7
3	First Aid Kit	27
4	Generator	3
5	Inflatable Tower Light	1
6	Rope Ladder	4
7	Telescopic Ladder 20.5 ft	1
8	Stretcher	10
9	Nylon Rope 20mm (50m)	22
10	Kernmental Rope 8mm/10mm	10
11	Sling Rope 7mm/6mm	5
12	Tape sling (180cm)	6
13	Tape sling (30cm)	6
14	Prusik 3mm	2
15	Safety Helmet	15
16	Megaphone	7
17	Extension Cord Heavy Duty	1
18	Angle Grinder	1
19	Hydraulic Jack	1
20	Bolt Cutter	1
21	Cervical Collar	2
22	Chainsaw	2
23	Reciprocating Saw	1
24	Demolition Hammer	1
25	Fire Extinguisher	21
26	Gazebo Tent	6
27	Safety Reflective Vest	60
28	Life Jacket	22
29	Storage Shelves	4
30	White Board	3
31	Full Body Harness	6

Sl. No.	Name of Property / Equipment	No. of Items
32	Sit Harness	6
33	Cordoning Tape	2
34	Figure of Eight 35 KN	4
35	Carrabiner	13
36	Mitten	6 pairs
37	Pulley	2
38	Jummer	7 pairs
39	Head Torch	5
40	Portable Fire Pump	1
41	FSSS Cutter	1
42	Cordless Drill	1
43	Pelican Light	1
44	Soft Board	1
45	WT Set	3
46	PA System	1
47	Drone	1
48	HRVA Map	1
49	Camera (Digital)	1
50	Desktop Computer with Printer/Scanner	1
51	Smart LED TV 55’’	1
52	Projector & Screen	1
53	EPABX	1
54	Emergency Response Vehicle	1
55	Dummy half body for training	1
56	Small torch light	1
57	Safety Google	5
58	Siren Electric Motor	1
59	Siren (Portable, hand crank)	6
60	Silpaulin	