

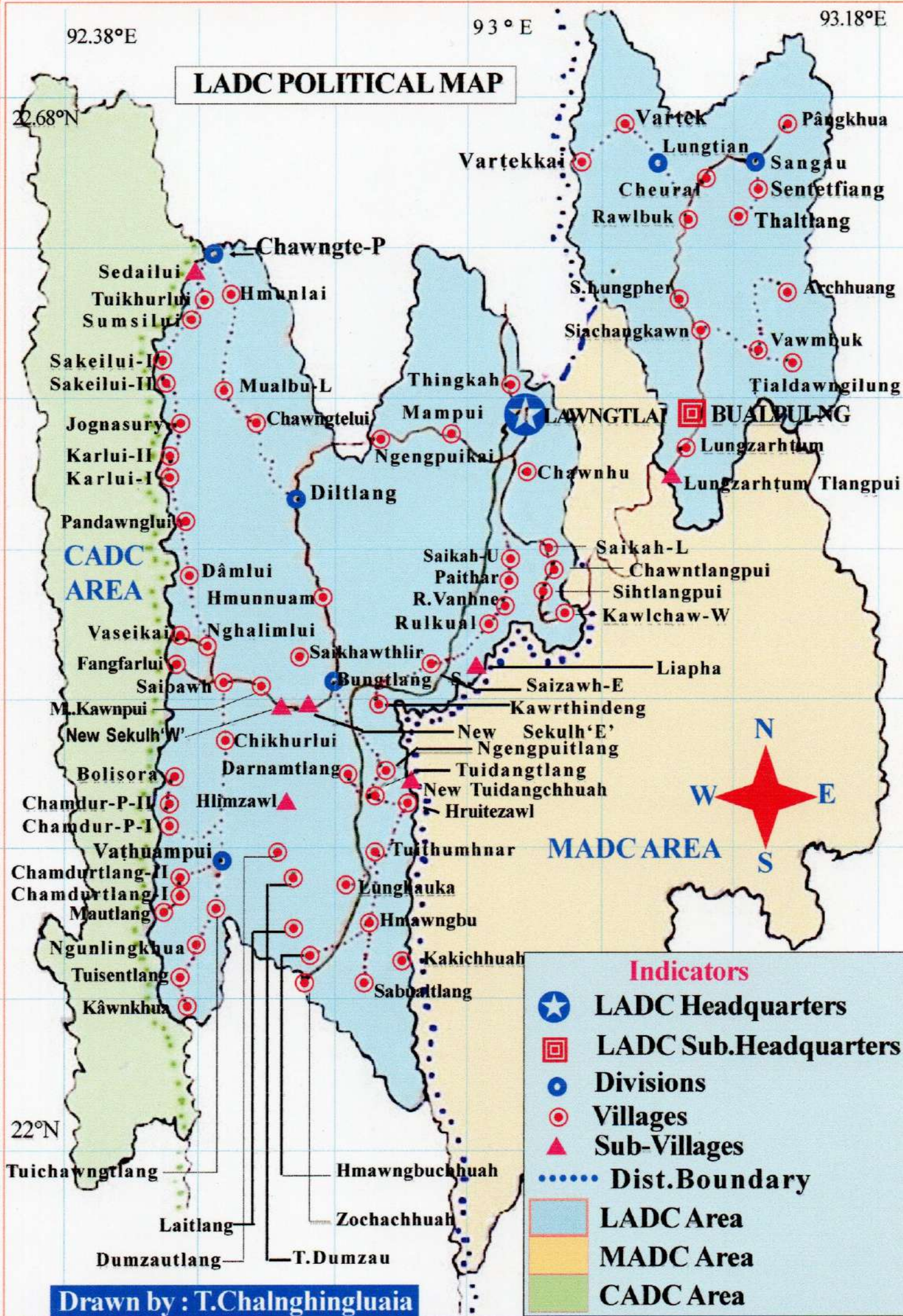
DISTRICT DISASTER MANAGEMENT PLAN



2025

DISTRICT DISASTER MANAGEMENT AUTHORITY
LAWNGTLAI DISTRICT

LADC POLITICAL MAP



Drawn by : T.Chalngingluaia



BANGLADESH

ASSAM

MANIPUR

TRIPURA

MAMIT

Kolasib

KOLASIB

AIZAWL

★ Aizawl

CHAMPHAI

Champhai

Serchhip

SERCHHIP

LUNGLEI

Lunglei

MYANMAR

BANGLADESH

LAWNGTLAI

Lawngtlai

Saiha

LAWNGTLAI

SAIHA

MIZORAM DISTRICTS

Country Boundary

★ State Capital

State Boundary

■ District HQ

District Boundary



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Chapter – 1
PROFILE OF LAWNGTLAI DISTRICT

1.1 LAWNGTLAI DISTRICT AT A GLANCE

Location:	Lawngtlai District is situated in the south west of the state of Mizoram, lying between 92°30' 93E Longitudes and 21°85 – 22°60' Latitudes.		
Boundary:	East Side	:	Myanmar and Saiha District
	West Side	:	Bangladesh
	North Side	:	Lunglei District
	South Side	:	Myanmar
Total Geographical Area:	The total Geographical area of the district is 2557.110 Sq.kms. It accounts for 12.12% of the geographical area of the state.		
No. of Educational Institution:	Primary School	-	297
	Middle School	-	191
	High School	-	59
	Higher Secondary School	-	11
	Colleges	-	02
Administrative Sub – Divisions:	Chawngte, Sangau and Lawngtlai (Sadar) Sub – Divisions.		
Rural Development Block:	Lawngtlai, Chawngte, Sangau and Bungtlang 'S' RD Block		
Population of the District:	Male	–	60,599
	Female	–	57,295
	Total	–	117,894 (10.74% Population of the State)
Density of Population**	:	46-person sq. Km	
Sex Ratio **	:	945/1000	
Rural Population**	:	82.33%	
No. of household**	:	18,205 Nos.	
Literacy rate (2011 Census) **	:	65.88% (Lowest in the State)	

[As per 2011 Census]**

Salient physical features and land use pattern:

Total Geographical Area	–	2557.10 Sq. Kms
Forest Area	–	1304 Sq. Kms
Net Sown Area	–	831 Sq. Kms
Net Irrigated Area	–	49.86 Sq. Kms
Cropping Intensity	–	112
Average Operational Holdings	–	1.2
WRC Area	–	950 Ha
Rainfall	–	2832.1mm

1.2 SOCIO – ECONOMIC CONDITION

Lawngtlai town is the headquarter of the district. District Officers of various departments are located in Lawngtlai town. In Lawngtlai district, there are 3 Hospitals including private owned Hospital, 1 Community Health Centre, 4 Primary Health Centres and 37 – Health Sub – Centres which are existing in various part of the district. There is 1 Veterinary Dispensary and 3 Regional/Rural Animal Health Centres within the district. The District has 3 Sub – Post Offices, 43 Branch Post Offices. The district is having 5 Telephone Exchange Offices, Besides WLL connection, BSNL have issued 45 Village Panchayat Telephone (VPT) to 9 Village VCP's covering the remotest corner of the district. There are 6 Public Distribution Centres, 5 Police Stations and 2 Police Outposts. The banking facilities exist in the district includes State Bank of India, Mizoram Rural Bank, Punjab National Bank, HDFC, Canara Bank and Apex Bank Ltd.

Lawngtlai District has bad road and communication network as compared to other district in Mizoram due to its remoteness as well as its geographic location. This could be a cause of concern in the event of disaster as it is possible that bad connectivity could hinder timely delivery of life saving aid, utilities, food etc. The western belt areas of the district are the worst to suffer. In the northern most of the district starting from Thingkah Village, National Highway No, 54 (NH – 54) runs along the south-eastern ridges passing through some village like Saikah, Chawntlangpui, Sihtlangpui and Kawlchaw 'W' besides the district capital Lawngtlai. The State PWD road that runs from Hnahthial passes through village in the eastern parts of the district like Vartek, Lungtian, Sangau, Cheural, Rawlbuk, Lungpher 'S', Siachangkawn, Bualpui 'NG', Lungzarhtum etc. Joining the BRTF Highway that runs from Saiha Town. From Saikah Village BRTF Highway passes through villages like Paithar, R. Vanhne, Rulkual, and E. Saizawh. Starting from the district capital another BRTF Highway runs towards the south-western most ridges of the district passing through Mampui, Ngengpui, Diltlang 'S', Hmunnuam, Bungtlang 'S' to Chawngte town which passes through Chawngtelui, Mualbu, Hmunlai. Road communication from Saibawh to Chikhurlui, Chamdur, Vathuampui, Tuichawntlang, Mautlang, Ngunlingkhua, Tuisentlang and Parva is also under its supervision. The KMMTTP highway under Act East Policy passes through the district and when operational in the future this highway will provide easy connectivity to East Asia.

In Lawngtlai District, one third of the total population relies on Agriculture and its allied sectors for their livelihood. The main method of Agriculture is humming/Shifting Cultivation. Therefore, drought or floods could pose a serious threat to the livelihood of majority of the Population. Number of People especially within Lawngtlai Town area are engaged in various services in the Government particularly in Autonomous District Council's Office. The Economic status of the District is one of the lowest in comparison with other Districts in Mizoram.

1.3 ADMINISTRATIVE SET UP

In comparison with other districts in Mizoram, Lawngtlai District has certain uniqueness and peculiarity. There are two Autonomous District Councils within the district viz. Lai Autonomous District (LAD) and Chakma Autonomous District (CAD) with their headquarters at Lawngtlai and Chawngte respectively. Having separate autonomous legislature, The Lais and the Chakmas administered their respective autonomous regions whereas Civil administration including all kinds of criminal cases came under the jurisdiction of the Deputy Commissioner (DC), all cases trial able under customary laws are vested within the jurisdiction of the Autonomous District Councils.

1.4 CLIMATIC CONDITION

Lawngtlai District has moderate climate. Relative humidity climate. Relative humidity is highest during south – west monsoon season when it is about 85%. Heavy rainfall is usually received during the months from May up to September every year. The Temperature ranges from 15° to 25°C during winter. The average annual rainfall is about 285cm. The hottest period starts from the month of March up to August every year. During the rainy season, heavy cloud covers many parts of the district. There is an increase of cloudiness from March onwards. A clear and cool weather starts appearing from the month of September up to January the preceding year. Lawngtlai District comes under the tropical monsoon climate zone of India. It experiences direct impact of monsoon. With the valleys lying in areas of hotter humid climate, the hill tops are cooler and pleasant.

CHAPTER – 2

OBJECTIVES AND PRINCIPLES OF DISTRICT DISASTER MANAGEMENT PLAN

DISASTER DEFINITION (W.H.O)

“Any occurrences that cause damage, ecological disruption, loss of human life and deterioration of health and health services on a scale sufficient to warrant all extraordinary response from outside the affected community and area is known as disaster”

Losses caused by disasters continue to mount year after year throughout the world. So, the need for an effective disaster management strategy to lessen the impact of disaster is increasingly being felt in many quarters and the need of strengthening organizational structure for disaster management is widely accepted.

Precise actions, procedures and responsibilities have to be clearly laid down well in advance to ensure timely response in case of any disaster. Therefore, a mechanism that takes into account multiple hazards and basic preparedness has to be articulated in the form of Quick Response Team, Quick Assessment Team, Reporting Procedures, Checklist and Handbooks. The Mechanism also lays down crucial parameters, requirements and organisational composition of Emergency Operations Centres and Incident Command Systems. The Disaster Management Plan is a document that include every aspect of response and preparedness measures and provides guidance to the District Administration as well as the general public and NGOs for systematic execution of procedures to be followed before, during and after and disaster.

2.1 VISION

The vision is to create a comprehensive and practical plan that provides and accurate database, clearly laid down systems and procedures which are to be activated in the shortest possible time with minimum simple orders and communication at the event of disaster. It has the vision of ensuring active participation by Government, Community and Volunteers at all levels, making optimal utilization of men, materials and resources with no gaps or overlaps in order to prevent loss of lives and to minimize damages to property, thereby ensuring immediate response, faster relief, rehabilitation and restoration after a disaster.

2.2 OBJECTIVES

The District Disaster Management Plan of Lawngtlai District is prepared to reduce the severe effect of different types of disasters and to protect all its residents its residents and every kind of assets, property and infrastructure from all kind of fun toward incidents through the following objectives:

- To mitigate impact of natural and man – made disaster through preparedness at District, Sub – Division, Block and Village Level.

- To create awareness among the people about hazard occurrence and increase their participation in preparedness, prevention, development, relief & rehabilitation and reconstruction process.
- Better coordination of relief and rehabilitation in the aftermath of disaster.
- To have response system in place to face any eventuality.

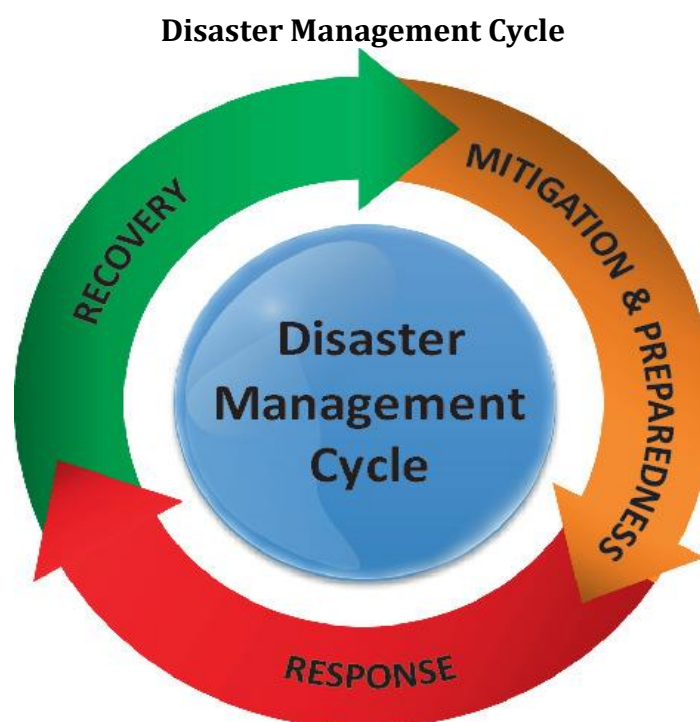
District Disaster Management Plan is an operational module for the District Administration and measures for mitigating the different types of disaster effectively with the locally available resources and personnel and to provide the distressed people with immediate relief. It also ensures a checklist for all the stakeholders for an action-oriented response structure and to study their preparedness level.

2.3 PERSPECTIVES AND STRATEGIES

A formal plan for managing disaster includes:

- Pre planning a proper sequence of response actions.
- Allocation of responsibilities to the participant agencies.
- Developing codes and standards operating procedures for various departments and relief agencies involved.
- Inventory of existing facilities and resources.
- Mechanism for effective management of resources.
- Coordination of all relief activities including those of NGO's ensure coordinated and effective response.
- Coordinating with the State response machinery for appropriate support.
- Testing the plan through mock drills.
- Defining levels of acceptable risk.
- Monitoring and evaluation of action taking during relief and rehabilitation.

2.4 DISASTER MANAGEMENT CYCLE.



Phase of Disaster Management: Prevention, Mitigation, Preparedness, Response and Recovery, Reconstruction and Rehabilitation.

I. Mitigation: It refers to activities which climates or reduce vulnerability to a disaster thereby reducing the chance of and also includes measures undertaken to minimize the effects of a disaster. Mitigation phases begin with hazard identification and vulnerability analysis. Firstly, a hazard which has the potential to affect the population needs to be identified. Secondly, how people, properties and structures will be affected by the disastrous event and Retrofitting of infrastructure needs to be considered.

II. Preparedness: It is planning on how to respond effectively. Disaster preparedness is a state of being ready to react promptly and effectively in the event of disaster. Its measures depend upon the analysis of hazards and vulnerability.

III. Response: Response activities occur immediately following a disaster. They are designed to provide emergency assistance to victims of the event and reduce the likelihood of a secondary damage. The Five basic stages of response to an emergency disaster are:

1. **Notification/Warning:** Warning should be issued to two specific groups. (i) The General Public and (ii) Line Departments, individual or agencies who must respond to the disaster. In such a situation, the general public can be informed through loud speaker (FLS) and Local Newspapers. However, the immediate danger area should be informed by telephones, messenger, and Local Cable Televisions etc.
2. **Immediate Public Safety:** Immediate Public Safety deals with providing disaster medical services, search and rescue and evacuation from the danger area. The primary concern is safety of the people and treatment of those who may be injured.
3. **Property Security:** The stage deals primarily with the protection of property in the community. The local Police should keep vigil on the property and should ensure that property is safe and that looting and vandalism does not occur. The Fire Department should aid in prevention of further damage to surrounding property. The local PWD may also play an important part by providing man power, remove debris or provides street barricades.
4. **Public Welfare:** The main concern on this stage should be mass Welfare should be mass, proper care for injured, shelter for homeless, food and clothing for those in need. During this stage, assessment of the damage is necessary in order to obtain state or national support. All the service agencies must work closely.

5. **Restoration**: Restoration means restoring of essential services such as communications, water supply, power supply etc. as early as possible and removal of debris from disaster scene. It requires good administration and commitment by all i.e Government people and voluntary organizations.

IV. Recovery: This is the final phase of disaster management and can be divided into short term and along term recovery.

1. **Short Term Recovery**: Short term recovery means the restoration of vital services and facilities to minimum standard of operation and safety. During short term recovery people's immediate needs are taken care of and assistance programmes are put into effect.
2. **Long Term Recovery**: Long Term Recovery is simply those recovery efforts, including Reconstruction and Rehabilitation which are still in operation long after a disaster and includes everything from complete development of a disaster area to mitigation effort to prevent a similar disaster on an ongoing basis for year after a disaster.

2.5 STAKEHOLDERS AND THEIR RESPONSIBILITIES

2.5.1 ROLE OF THE DEPUTY COMMISSIONER/CHAIRMAN, DDMA

- Chairman, Responsible officer and Supervision 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 role and responsibilities of all line departments.
- Preparation of the Disaster Management Action Plan for the District.
- To implement the disaster management action plan.
- Setting up District Control Room and making it function effectively.
- To liaise with 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 media.
- Brief the media of the situations and day to day reports during the disaster.

2.5.2 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 / Natural Calamity Committee meeting to be conducted twice in a year, i.e. May and November.
- Supervise the activity of Dist. Control Room and communicate the information to the District Collector.
- 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 returns and forward to District Collector for approval, sanction and onward action.

2.5.3 ROLES AND RESPONSIBILITIES OF DISTRICT ORGANISER:

- To monitor, Co-ordinate and implement the actions for disaster management.
- He should look after the safety and well keeping of the infrastructure available at Dist. Control room (DCR).
- He should look at the facilities provided in D.C.R, which should always be in good working condition, and the Control Room should be manned round the clock.
- During the disaster response period, being the representative of the District Collector, will have to play a pivotal role coordinating and managing the assets, resources, relief etc. among the agencies, Department Organisations and individuals.
- Ensure that all warning and communications systems, instruments are in working condition.
- Receive information of disaster on a routine basis from the district departments on the vulnerability of the various villages through proper channel (Block).
- He will receive report on preparedness from the relevant district level departments and other departments, as per information details. These will be forwarded to the Emergency Operations Centre, Special Relief Commissioner through Collector on fixed regular basis.
- Update data bank and maintain an inventory of resources half yearly as per the table given below heading Inventory of resources, materials and equipment accessible to EOC.
- Monitor preparedness measures, training activities including simulation exercise undertaken by various departments.
- Ensure proper dissemination of District Disaster Management Plan at the district level, local level and disaster-prone areas.

2.5.4 ROLES AND RESPONSIBILITIES OF SUPERINTENDENT OF POLICE:

- The Superintendent of Police must work in close co – ordination with the District Collector on receipt of a warning or alert on an emergency situation.
- The Superintendent of Police must be designate three senior Officers of the District Collector for co-ordinating the activities of the Police Department in the District Control Room.
- These senior Officers deputed by the Superintendent of Police for the District Control Room will work in three shifts in the Control Room.
- During normal times, the police department under the Superintendent of Police must assess the preparedness level and report the same as per format (Preparedness Checklist for Police as given below) to the District Control Room every Six Months.
- They should have continued contact with the District Control Room over V.H.F 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 programme 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 City, 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 coordinating with local NGO's, control the mobs, onlooker crowding by cordoning the disaster area. Control vehicle movement and traffic system.
- Assess the situation of law and order and inform 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.

2.5.5 ROLES AND RESPONSIBILITIES OF BLOCK DEVELOPMENT OFFICERS:

- Converter and Chairman of the Block Disaster Management Committee.
- Incident Commander and Supervise the overall management in Block Level.
- Prepare a Block Disaster Management Plan and set up Control Room equipped with modern facilities.
- Establish coordination with all line departments and other private agencies.
- To oversee overall disaster management activities.
- Appraise community participation in disaster management at all levels.
- Ensure linking of Block Control Room (Emergency Operation Centre) with other District Field Control Room (Emergency Operation Centre).

2.5.6 ROLES AND RESPONSIBILITIES OF THE FOOD & CIVIL SUPPLY OFFICER:

- Public Distribution System may be kept actively working. Fair price shops should function well and allotment of Commodities and its lifting in time be ensured.
- Functioning of Storage Agents should be closely watched and the stocks in the stores should be verified by the responsible Officers very often to ensure transparency.

2.5.7 ROLES AND RESPONSIBILITIES OF STATION OFFICER (F&ES):

- He shall be in alert during Jan – June and his team is ready for action at short call. The drivers and the staff engaged with the Fire Brigade should not be allowed leave during this period.
- Storing of fire extinguishers in an easy to access places.
- Training volunteers on use of fire extinguishing materials.
- Sending of important equipment to various field operation sites.
- Maintain communication channel all the time.
- Arrange fire tender duties with standby motors.
- Main actors in search and rescue operation.
- Identify water point for emergency use.
- Co-operate other line departments.
- Coordinate with Police and NGOs for quick response.

2.5.8 ROLES AND RESPONSIBILITIES OF DIPRO:

- He must make arrangement for release of news bulletin to the press and media regarding rain fall, weather. Preventive measures taken and all the other activities. The district administration is taking to mitigate the distress of the people.
- He must keep close contact and liaise with the Nodal Officer (DM&R)/ District Emergency Officer and the Collector for the purpose of procuring information.

- In case of calamity occurring in the district or any part thereof, authentic news must be provided by the Information Officer at the earliest to the public in order to evade from unreliable rumours.

2.5.9 ROLES AND RESPONSIBILITIES OF THE S.E./E.E., POWER AND ELECTRICITY DEPARTMENT

- He is (Nodal Officer) appointed as overall in charge of disaster management.
- Provide uninterrupted power supply and arrange alternate source of power supply.
- Arrange power supply to the relief camps and temporary shelter camps.
- Spread awareness in economical 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.
- Appreciate participation of community and provide necessary back up.
- Generate power as soon as possible to normalize the situation.

2.5.10 ROLES AND RESPONSIBILITIES OF CHIEF MEDICAL OFFICER (CMO)

- He is (Nodal Officer) a Supreme Incident Commander.
- 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 mobile medical unit and keep it ready for immediate action.
- Activate linking with others line departments.
- Arrangement of Ambulance duties.
- Deploy vehicles with medicines and man power to the site operation centres.
- Check – list the stock inventory of required medical equipments 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.

2.5.11 ROLES AND RESPONSIBILITIES OF THE S.E./E.E., PWD

- Emergency repair of damaged road and bridges.
- Communication with official at all levels viz., District, Block, Sub – Division and Village levels.
- Detailment of heavy machines, earth movers, towing vehicles, 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 control room.
- Survey the disaster site and surrounding areas for structure collapse and check out buildings, bridges etc. which are at a risk of collapsing.

2.5.12 ROLES AND RESPONSIBILITIES OF THE S.E./E.E., PHE

- Supply of drinking water to relief and shelter camps.
- Provision for disinfecting water by bleaching, halogen tablets at the relief camps.
- Asses 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 control room.

2.5.13 ROLES AND RESPONSIBILITIES OF D.T.O (TRANSPORT)

- Cross check the vehicle registration from response plan and make necessary requisition of transport materials.
- Provide vehicular assistance for response activities.
- Arrange vehicles for relief transportation and its distribution at various centres.
- Help human transit to safe shelters.
- Coordinate PWD to restore the transport system to normalcy.
- Transport of relief materials and civil supplies to relief camps and other safe shelters.
- Establish communication with district, block, sub – division and village level.
- Moving the victims to hospitals and relief camps.
- Work side by side with other line departments such as PHE, Health, Civil Supplies and NGO's.

2.5.14 ROLES AND RESPONSIBILITIES OF DVO (AH & VETY)

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

2.5.15 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 control room.
- 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 private communication agencies.
- Relay transmission of information update and sent to authorities.

2.5.16 ROLES AND RESPONSIBILITIES OF RURAL DEVELOPMENT (PD DRDO)

- Assist other line departments in the response mechanism. Qualitative implementation of employment generation schemes like NREGS should be ensured.
- Disperse awareness about disaster to the community.
- Retrofitting of rural infrastructure, like road, bridges etc. should be undertaken with nodal departments.
- Keep vigil on the development works.

2.5.17 ROLES AND RESPONSIBILITIES OF D.A.O (AGRI)

- Assess vulnerability of agriculture crops and plantation.
- 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.

2.5.18 ROLES OF VILLAGE COUNCIL, YLA, LWA/MHIP, ETC. IN DISASTER MANGEMENT

- The YLA, MUP, LWA/ MHIP has their branches in all localities and villages throughout the district and they will be responsible for mobilising such branches.
- Maintenance of security and creating help – centre at suitable place in the locality.
- Maintenance of law and order during evacuation and helping in emergency evacuations.
- Containing panic behaviour, maintaining orderly movements towards community shelter and taking preventive steps to avoid injuries and accidents.
- Organizing recreational activities.
- Contributing labour force (loading and unloading) for distribution of temporary construction materials, salvage of debris and restoration of water supplies, creating feeding centres and relief camps.

- Ensuring standard process is followed in sanitation and disposal of waste and counselling injured and panic-stricken people.

2.5.19 ROLES AND RESPONSIBILITIES OF PUBLIC & PRIVATE INDUSTRIES AND CORPORATION

- 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 to the livelihood of the people with warm response.
- The services of PSUs/Industrial Units shall be sought for especially for immediate post calamity relief operation and providing shelter for the distressed, both temporary and permanent by the District Administration and shall be implemented under the direct supervision of Project Director, DRDO.

2.6 LIFE CYCLE OF DISTRICT DISASTER MANAGEMENT PLAN

As planning is a continuous process, any plan, to be effective, must be regularly checked, tested and revised. It should be updated as the condition changed. Responsibility in this regard lies with the District Disaster Management Committee. Any amendment to plans will be necessary where deficiencies in operational systems and procedures are revealed. This is a result of review meetings, exercises, change in hazards and environment.

2.7 WHO FORMULATES AND CARRIES OUT THE PLAN

District Disaster Management Authority (DDMA) under the chairmanship of the Deputy Commissioner is the apex body in the district to oversee and supervise disaster management. The Authority makes a plan and monitor routine preparedness for different types of calamities for minimal effects of disaster, draw a response mechanism and coordinate linkages of all departments and agencies in tackling the problems of disaster.

CHAPTER – 3
INSTITUTION FOR DISASTER MANAGEMENT (DM)

DISTRICT DISASTER MANGEMENT AUTHORITY (DDMA)

DISTRICT DISASTER MANAGEMENT COMMITTEE (DDMC)

SUB – DIVISIONAL DISASTER MANGEMENT COMMITTEE (SDMC)

VILLAGE DISASTER MANGEMENT COMMITTEE (VDMC)

3.1 DISTRICT DISASTER MANGEMENT AUTHORITY

The District Disaster Management Authority is a high-powered committee at district level to look after disaster management and emergency response. This high-powered committee in the district is chaired by the Deputy Commissioner, Lawngtlai with important officials within the district as members. As per the Government Notification **No.B.13011/17/2006REH, Dt. 06.06.2006**, the following are the composition of DDMA:

- | | | |
|--|---|---|
| 1. Chairperson | : | Deputy Commissioner (Ex – Officio) |
| 2. Co – Chairperson | : | (i) Project Director, DRDO
(ii) CEM, LADC
(iii) CEM, CADC |
| 3. Members | : | 1) Superintendent of Police
2) Chief Medical Officer
3) Executive Engineer, PWD
4) Executive Engineer, PHE |
| Chief Executive Officer –
Cum – Secretary | : | Additional Deputy Commissioner. |

3.2 DISTRICT DISASTER MANGEMENT COMMITTEE:

In addition to DDMA, District Disaster Management Committee was formed with the Deputy Commissioner as Chairman consisting of all policy makers from the District/Nodal Officers of each line department/Nodal Officers from various organizations as its members. The Sub – Divisional Officer(S) is the Member – secretary of the committee as well as Nodal Officer for the district:

S.No	Functionaries	Designation
1	Deputy Commissioner	Chairman
2	Sub – Divisional Officer (Sadar)	Member Secretary
3	Superintendent of Police	Member
4	Executive Engineer, PHE	Member
5	Sub – Divisional Officer, P&E	Member
6	Executive Engineer, PWD	Member
7	Chief Medical Officer	Member
8	Officer – in – Charge, Fire Service	Member
9	Information & Public Relation Officer	Member
10	President, CYLA	Member
11	President, MHIP	Member
12	President, LWA	Member
13	President, LSA	Member
14	President, LDJA	Member
15	Block Development Officer	Member
16	Sub Deputy Commissioner	Member

Accordingly, Sub – Divisional Level Disaster Management Committee pertaining to Sub Divisional is constituted as under:

S.No	Functionaries	Designation
1	Sub – Divisional Officer (Civil)	Chairman
2	Block Development Officer	Member Secretary
3	Sub – Divisional Officer, PHE	Member
4	Sub – Divisional Officer, PWD	Member
5	Junior Engineer, P&E	Member
6	Executive Secretary, District Council	Member

7	Senior Medical Officer	Member
8	Representative of CYLA	Member
9	Child Development Project Officer	Member

Further, at the village level, DC Lawngtlai had issued instructions to all village council/court President, Lawngtlai District to form a village level disaster management committee as per the following composition:

S.No	Functionaries	Designation
1	Nodal Officer	Headmaster (P/S, M/S, H/S)
2	Chairman	VCP of the Village Council / Court
3	Secretary	President of YLA & YMA
4	Member	MHIP, LWA & any NGOs present in the village

Beside these, Relief & Rehabilitation Monitoring Sub Committee is formed as follows:

S.No	Functionaries	Designation
1	Sub Deputy Commissioner, DM&R	Chairman
2	President, CYLA	Member
3	President, LSA	Member
4	President, MHIP	Member
5	President, LWA	Member
6	Representative of Churches	Member

3.3 POWER & FUNCTIONS OF DDMA/DDMC:

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

- Prepare a District Disaster Management Plan, including District Response Plan for the District.
- Coordinate and monitor the implementation of National Policy, State Policy, National Plan, State Plan and District Plan.
- Ensure that the areas in the District vulnerable to disaster are identified and measures for the preventions of disaster and mitigation of its effects are undertaken by all the District Level Government Departments and the local authorities.
- Ensure that the guideline for prevention of disasters, mitigation of its effects, preparedness and response measures laid down by the national Authority and the State Authority are followed by all the District level State Government Departments and the local authorities

- Give Directions to different district level authorities and local authorities to take such other measures for the prevention or mitigation of disaster as may be necessary.
- Monitor the implementation of Disaster Management plan prepared by the District Level Govt. Departments and local authorities.
- Lay down guidelines to be followed by the District level State Government departments for the purpose of integration of measures for prevention of disaster and mitigation in their development plans and projects and provide necessary technical assistance thereof, and monitoring the implementation of such measures.
- Review the capabilities for responding to any disaster or threatening disaster situation in the District and give directions to the relevant Departments or authorities at the District level for their up – gradation as may be necessary.
- Review the preparedness measures and give directions to the District level or other concerned authorities, where necessary, for bringing the preparedness measures to the level required for responding effectively to any disaster or threatening disaster situation.
- Organise and coordinate specialized training programme for different levels of officers, employees and voluntary rescue workers in the District.
- Facilitate community training and awareness programmes for prevention of disaster or mitigation with the support of local authorities, Governmental and Non – governmental organizations.
- Set up, maintain, review and upgrade the mechanism for early warning and dissemination of information to the public.
- Prepare, review and upgrade the District Level Response Plan and Guidelines.
- Coordinate response to any threatening disaster situation of disaster.
- Ensure the District Level Government Departments and local authorities prepare their response plans in accordance with the District Response Plan.
- Lay down guidelines, or give directions to the concerned District Level State Government Departments or any other authorities within the local limits of the District, to take measures to respond effectively to any threatening disaster or disaster.
- Advise, assist and coordinate the activities of the District Level State Government Departments, statutory bodies and other governmental or non – governmental organizations engaged in disaster management in the district.
- Coordinate with, and give guidance 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.
- Provide necessary technical assistance or give advice to the local authorities in the District for carrying out their functions effectively.
- Review the developmental plans prepared by the District level State Government Departments, statutory authorities or local authorities with a view of make necessary provisions there in for prevention of disaster or mitigation.

- Examine construction in any area in the District and if it is of the opinion that the standard for the prevention of disaster or mitigation laid down for such construction is not being or has not been followed, may direct the concerned authority to take such actions as deemed necessary to secure compliance of such standards.
- Identify buildings and places which could, in the event of threatening disaster or disasters, be used as relief centres and make arrangement for water supply sanitation in such buildings and places.
- Establish stock piles of relief and rescue materials or ensure preparedness to make such materials available at a short notice.
- Provide information to the State Authority relating to different aspects of disaster management.
- Encourage the involvement of NGOs and voluntary social welfare institutions working at the grass root level in the district for disaster management.
- Ensure that communication systems are in order, and disaster management drills are carried out periodically.

3.4 POWER OF THE CHAIRPERSON

- The Chairperson of the DDMA shall, in addition to presiding over the meetings of the DDMA, shall exercise and discharge such powers and functions of the DDMA as the Disaster Management Plan may delegate to him.
- Subject to the ex-post-facto ratification by the District Authority, the Chairperson of the DDMA, in the case of an emergency, have the power to exercise all or any of the powers of the District Authority (DDMA).
- The Chairperson of the DDMA may in general or special order, give in writing, delegate his powers and functions to the Chief Executive Officer, subject to such conditions and limitations, if any, or as he deems fit.
- The DDMA shall meet as and when necessary and at such time and place as the Chairperson may think fit.

3.5 ROLES AND RESPONSIBILITIES OF THE DEPUTY COMMISSIONER, LAWNGTLAI DISTRICT AS AN INCIDENT COMMANDER / CHAIRMAN, DDMC:

- Management initiatives including Disaster Risk Management.
- Act as Incident Commander during disaster.
- To implement Disaster Management Programme in consultation with DDMC at district level.
- To direct and coordinate district administration through various line departments and agencies for the Disaster Management incidents.
- To set up the District emergency Operation Centre (DEOC) and facilitate setting up of mobile coordination.
- To constitute DMCs at Sub – Division, Block and Village levels.
- To ensure preparedness among communities by generating awareness and capacity building process.
- To ensure community participation in all the stages of disaster operation in order to maintain community morale and confidence, maximize the use of local resource, reduce the cost of operation and promote a faster and more efficient recovery.

- To coordinate activities of the voluntary organization and NGOs to ensure community participation.
- To facilitate DMCs for preparing Community Disaster Management Plans.
- To procure / hire/purchase/pre-contract material for the DEOC.
- To coordinate with all fields of relief and rehabilitation including transit camps, relief camps, feeding centres and livestock camps during an emergency.
- Review the capabilities for responding to any disaster or threatening disaster situation in the District and give directions to the relevant Departments or authorities at the District level for their up gradation as may be necessary.
- Review the preparedness measures and give directions to the District level or other concerned authorities where necessary, for bringing the preparedness measures to the levels required for responding effectively to any disaster or threatening disaster situation.
- Organise and coordinate specialized training programme for different levels of officers, employees and voluntary rescue workers in the District.
- Facilitate community training and awareness programmes for prevention of disaster or mitigation with the support of local authorities, Governmental and Non – Governmental organizations.
- Set up, maintain, review and upgrade the mechanism for early warning and dissemination of information to the public.
- Prepare, review and upgrade the District Level Response Plan and Guidelines.
- Coordinate response to any threatening disaster situation.
- Ensure that the District level Government Department and local authorities prepare their response plans in accordance with the District Response Plan.
- Lay down guidelines, or give direction to the concerned District Level State Government Departments or any other authorities within the local limits of the District, to take measures to respond effectively to any threatening disaster situation.
- Advise, assist and coordinate the activities of the District Level State Government Departments, statutory bodies and other governmental or non – governmental organizations engaged in disaster management in the District.
- Coordinate with, and give guidance 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.
- Provide necessary technical assistance or give advice to the local authorities in the District for carrying out their functions effectively.
- Review the developmental plans prepared by the District level State Government Departments and statutory authorities with a view to make necessary provisions therein for prevention of disaster or mitigation.
- Examine the construction of structures 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 works is not being or has not been followed, may direct the concerned authority to take such actions as may be necessary to secure compliance of such standards.

- Identify buildings and places which could, in the event of any threatening disaster or disaster, be used as relief centres and make arrangements for water supply and sanitation in such buildings and places.
- Establish stock piles of relief and rescue materials or ensure preparedness to make such materials available at a short notice.
- Provide information to the State Authority relating to different aspects of disaster

3.6 OTHER MEMBERS:

- Responsible for disaster management in their own departments.
- To coordinate with D.C in all activities of the DM carried out in their own departments.
- To facilitate and coordinate preparation of Department Specific Disaster Management Plan.
- To exercise department wise mock drills at least bi-annually.
- To report to D.C about any eventuality which may occur in the district.
- Any other responsibility as the Incident Commander cum Chairman, DDMC allocates as per the Disaster Management Act.

3.7 DISTRICT EMERGENCY OPERATION CENTRE:

Lawngtlai District shall have an exclusive Emergency Operation Centre (EOC) at the district headquarters. This shall be functional around the clock, set up with sufficient manpower and modern equipments. Considering the unique responsibility of the DEOC, the equipments available shall not be taken out on any purpose other than matters relating to disaster management. This centre is intended to co-ordinate all disaster related activities in the district starting from preparedness to rehabilitation and reconstruction.

There shall be permanent sitting place for each emergency support functionaries in the EOC and shall be provided with sufficient telephone connections. Only the Nodal Officers are to sit in the EOC and co-ordinate the disaster management activities in the district with their supporting agencies. There shall be dedicated telephone lines and other communication facilities such as satellite phones in the DEOC.

3.8 ROLE OF EMERGENCY OPERATION CENTRE IN NORMAL TIME:

The Deputy Commissioner, Lawngtlai District may be empowered to appoint one Officer as Officer-in-Charge of EOC. He will be responsible for effective functioning of the EOC.

3.9 ROLE OF EOC DURING DISASTER:

On the basis of message received from the forecasting agencies, warning has to be issued to the general public and other line departments, which play a vital role during emergencies. Issuing correct and timely warning should be one of the prime responsibilities of EOC. For effective dissemination of warning, EOC should have a well-planned line of communication.

The DC shall be the competent authority to disseminate a disaster warning. The warning on occurrence of a disaster will be also be communicated to:

- All Emergency Support Functionaries.
- Members of DDMC, Lawngtlai
- Hospital in the disaster area.
- State Disaster Management Commissioner.

- EOC in the neighbouring districts.
- National or State EOCs
- People's representative from the district.

Apart from these, the district EOC must arrange desks for the ESF in its complexity for better co-ordination. Simultaneously, temporary EOCs are to be set up on site with the help of the district EOC. Constant communication between the State EOC, District EOC and onsite EOC is mandatory for maintaining updates on the disaster which happened.

3.10 ONSITE EMERGENCY OPERATION CENTRES (OEOC):

Onsite Emergency Operation Centres (OEOC) are complementary units to District Emergency Operation Centre (DEOC) in the district, which will operate at a close range to the disaster sites and will be linked directly with the District Emergency Operation Centre. Beside, Lawngtlai District shall set up two OEOC, which are to be located in the two Sub-Divisional Office complex at Chawngte and Sangau. These strategic locations will help to cover operations in a calamity in the district within a short period of time. The concerned SDO (C) will be the Commander-in-Chief at this level. The OEOCs will be physically activated only in time of a disaster. The concerned SDO of the OEOC unit would be responsible for executing activities at disaster site. However, any task would be under the control and coordination of the DEOC, through Nodal Officer.

CHAPTER – 4
HAZARD, VULNERABILITY, CAPACITY AND RISK ASSESMENT

This chapter deals with various types of disaster that Lawngtlai District is prone to and has experienced in the past. Based on this, the vulnerability assessment of people and their income sources, infrastructure, crops, livelihood resources, drinking water supply, daily necessities, communication and transportation system, public distribution, medical facilities and other elements has been done so as to take appropriate measures for hazard reduction and to identify and prescribe proper mitigation efforts.

4.1 DISASTER PROBABILITY WITHIN LAWNGTLAI DISTRICT

Hazards	Time of Occurrence	Potential impact	Vulnerable area
Landslide	May - Oct	Loss of life, loss of infrastructure, loss of property	Entire District
Earthquake	Anytime	Loss of life, Lose of houses, loss of infrastructure, Loss of life stock etc	Entire District
Fire	Anytime	Loss of life, Lose of houses, loss of crops, loss of infrastructure	Entire District
Hailstorm	March - Oct	Loss of houses, loss of property	Entire District
Cyclone	Anytime	Loss of life, loss of property, loss of crops	Entire District
Road accident	Anytime	Loss of life, loss of property	Entire District
Pest Attack	May – Sept	Loss of crops	Entire District
Flood	May – Oct	Loss of crops, loss of property	Some part of the district
Electrical Disaster	Anytime	Loss of life, loss of property	Entire District
Lightning	April - December	Human, Livestock, Infrastructure loss	Entire District <i>Once or more every year</i>

4.2 DISTRICT SPECIFIC PRONENESS TO VARIOUS TYPES OF DISASTERS

TYPE OF HAZARD	POTENTIAL IMPACT	VULNERABILITY	VULNERABLE AREA (District)
LANDSLIDE	Loss of crop, infrastructure, human and livestock, livelihood system, houses, private and public property, etc.	<i>Communication network:</i> Road network of the effected block Telephone connections. <i>Private Infrastructures:</i> Kutcha Houses, Semi Kutcha houses. <i>Agriculture/Horticulture:</i> Crop (estimated Area), others. <i>Irrigation sources:</i> Private Li-Points, Govt. Li-Points. Electrical Installations. <i>Drinking Water Sources:</i> Stream, Pond, PHD/ Rural Water supplies. <i>Educational Institute:</i> Primary Schools, Middle School, High Schools, Colleges. <i>Livestock:</i> Cows, Buffalos, Goats/Sheep, Poultry farms. <i>Vulnerable People:</i> Handicapped, Old/Aged, Pregnant, Slick and ailing/diseased, Children below 5years. Other Vulnerable assets: Steep slopes, minor canal embankments, Irrigation Projects, Small scale Industries, PMRY units, Handloom Units, Cardamoms Plantations, Paddy fields, Trees/Orchards/Plantation	All over the District
FLASH FLOOD	Loss of crop, infrastructure, human live, livestock, livelihood system, houses, Pvt./ Public property etc.	<i>Communication network:</i> Road network Telephone connections. <i>Private Infrastructures:</i> Kutcha Houses, Semi Kutcha houses. <i>Agriculture:</i> Crop & others <i>Irrigation sources:</i> Private Li-Points, Govt. Li-Points. Electrical Installations. <i>Drinking Water Sources:</i> Stream, Pond, PHD/ Rural Water supplies. Stand Posts. <i>Educational Institute:</i> Primary Schools, Middle School, High Schools, Colleges. <i>Livestock:</i> Cows, Buffalos, Goats/Sheep, Poultry farms. <i>Vulnerable People:</i> Handicapped, Old/Aged, Sick and ailing/diseased, Pregnant, Children aged below 5. Other Vulnerable assets: Embankments Handloom Units, Minor Irrigation, Channels, Cardamom Plantations, Hydro-Project, Small Scale Industries, Textile Units, Orchard plantation.	All over the District
COLD WAVE		Loss of Human life & livestock Damage of Crops	All over the District

VILLAGE FIRE/FOREST FIRE	Loss of property/Forest area/Loss of animal and medicinal plants	Loss of property & life. Animal life and medicinal plants, loss of forest, crops loss	Selected area in the District
DROUGHT	Loss of crop, livelihood, livestock, cash crops etc.	Crop loss, Drinking Water scarcity	Selected area in the District
PEST ATTACK	Loss of crop, loss of livestock	Agricultural fields, home garden, horticulture crops.	All over the District
HAILSTORM	Crop loss, damages to automobiles, roof etc, loss of life and livestock	Agricultural fields, human settlement areas	All over the District

4.3 EARTHQUAKE

North East India has been divided into four (4) earthquake zones by Seismologists. They are:

- Eastern Syntax
- Arakan Yuma and Naga Thrush Folded Belt
- Shillong Plateau
- MCT and MBF of the Himalayan Frontal Arc.

Mizoram faces significant geological hazards due to its location in a tectonically active region and its fragile geology. The state lies in seismic zone-V, the highest risk category in India, making it highly vulnerable to earthquakes, which can trigger landslides on its steep slopes. According to reports made by the International Seismological Society, major earthquake occurs at intervals ranging from 35-40 years, the last major earthquake felt in the North-East was in the year 1950. As such, a major quake can be predicted in North – East, particularly in Mizoram. As we already know, Mizoram is a steadily developing state and there is extensive urbanization within the state. However, we do not have any guidelines, rules, regulations or laws pertaining to earthquake resistance during construction of buildings. Though it will be a giant task to correct unplanned developed structures all over Mizoram, concerned authorities need to wake up to realise the potential earthquake danger. This is true because of the fact that, even from a cursory examination of earthquake distribution and global tectonics, Mizoram is in the earthquake zone. According to Geological Survey of India's Director

General K. Krishna Nunny, “Mizoram, whose capital Aizawl, is a nightmare for Seismologists as it has no codes and rules of town planning”.

4.4 CYCLONE / WINDSTORM:

As far as wind hazard is concerned, the wind speed in the whole state is 55m/s (198Km/h) which is the highest value specified in the country, occasionally reached when cyclonic wind comes crossing Bangladesh. In such events, weak house structure made of bamboo, thatch, tiles and those AC sheet, Corrugated Galvanized Iron (GGI) sheet roofs which are not fully anchored and integrated, will suffer much damage, The damage occurring in such high winds is of a localized nature and may not result in a disaster at the state level. But, it will be very useful that wind resistant construction guidelines are adopted and implemented for minimizing wind damages to buildings.

The South – West Monsoon usually reached Lawngtlai District during second half of May and prevail till the first half of October. The Summer Monsoon is characterized by highly variable weather with frequent spells of drought and heavy rains. Besides these, the winter monsoon, which is gentle drift of air in which the winds generally blow from the North East part of the state, also prevails. This retreating Monsoon cause sporadic rainfall especially in Lawngtlai District and other district, sometimes producing heavy cyclonic rains. Mizoram State is vulnerable to the impact of tropical cyclone which develops in North Indian Ocean (Bay of Bengal), and the Cyclones of the post Monsoon season (October to December) are more intense than those of pre-Monsoon season (April & May).

Cyclone are associated with strong winds, torrential rains storms, etc. The Impact of Cyclone/Windstorm and hailstorm has often led to damage of houses, power line cut-off, landslide, blockage of road, damage to crops and plantation, loss of livestock's, etc. within the District.

4.5 LANDSLIDE

Mizoram, being a hilly terrain, is prone to landslides. Every year a number of landslides have been usually reported from various localities. This causes a lot of miseries to public usually because it results in loss of life and property, disruption of communication network, and also cause economic burden on the society. This scenario is primarily attributed to steep slope and immature geology, neo-tectonic activity, heavy rainfall and unplanned and improper land use practiced in the state.

4.6 ACCIDENTS

The figures of road accidents indicate a rising trend in Mizoram. According to reports from Mizoram CID (Crime), in the period between 2014–2018, there were 393 road accident resulting in the loss of 338 lives. The figures are however not complete since each and every accident case is not reported to the Police Station and the Newspaper. Thus, the actual number of road accident cases may still be higher. Beside the observance of the Traffic Week, No tolerance Week, Safety Week annually, there must be regular and sustained campaigns to prevent and reduce the road accidents.

4.7 FIRE:

Fire accident are quite common, especially in rural areas because of the following factors:

- Individual housing with roof of straw and storage of straw/hay in close proximity of the house.
- Close proximity of construction of houses in many areas leading to spread of fire and wider destruction.
- Lack of availability of adequate water and nil or poor equipments for firefighting especially in rural areas and small towns.
- Lack of awareness of basic do's and don'ts when people live in houses that uses inflammable materials.
- Human error or carelessness.

The State is also becoming increasingly vulnerable to electrical accidents. The main causes of such accidents are:

- Substandard electrical fittings.
- Lack of check-up of overused electrical items.
- Lack of trained electricians.
- A combination of the above factors.

4.8 HAILSTORM

Any thunderstorm which produces hail that reaches the ground is known as a hailstorm. Hail has a diameter of 5 millimetres (0.20in) or more. Hail stones can grow up to 15 centimetres (6 in) and weigh more than 0.5 kilograms (1.1 lb). Hailstorms can happen anywhere where the right conditions are present. They are most likely to form during late spring and summer and typically happen between late afternoon and evening. Hail can cause serious damage, notably to housing, automobiles, glass-roofed structures, livestock, and most commonly, farmers' crops. Hail damage to roofs often goes unnoticed until further structural damage is seen, such as leaks or cracks. Secondary hazards like snapping of electric poles due to uprooting or trees, disruption of communication links etc. are also attributed to hailstorms.

4.9 COLD WAVE

A cold wave is weather phenomenon that is distinguished by marked cooling of air, or the invasion of very cold air, over a large area. It can also be a prolonged period of excessively cold weather, which may be accompanied by high wind that cause excessive wind chills, leading to weather that seems even colder than it is. Cold wave can be preceded or accompanied by significant winter weather events such as blizzards or ice storms. A cold wave requires substantially increased protection to Agriculture, Industry, Commerce, and social activities. The precise criterion for a cold wave is determined by the rate at which the temperature falls, and the minimum to which it falls. This minimum temperature is dependent on the geographical region and time of year.

4.10 PEST ATTACK

A pest is an organism with characteristics that people see as damaging or unwanted, as it harms agriculture through feeding on crops or parasitizing livestock. An animal can also be a pest when it causes damage to a wild ecosystem or carries germs. The term pest is used to refer specifically to harmful animals but it also relates to all other harmful organisms, including fungi and viruses. It is possible for an animal to be pest in one setting but beneficial or domesticated in another. Many weeds (plant pests) are also seen as useful under certain conditions.

Crops need to be protected from a variety of different pests, organism that present a threat to the crop. While we often think of pests as insects, a pest can also be a weed, a disease or an animal (such as a rat or even bacteria).

4.11 RISK ASSESMENT AND VULNERABILITY ANALYSIS

4.11.1 ECONOMIC, OCCUPATIONAL, SOCIAL AND EDUCATIONAL PROFILE OF THE POPULATION

Agriculture is the main occupation of the people and the majority of the population depends on agriculture and its allied sectors for their livelihood. However the frequent occurrence of calamities like storms/cyclones, forest fire etc hindered the economic progress of the people. The scope of investment in Public Sector areas is extremely limited to provide employment opportunity to a large section of unemployed. The employment generating programmes like PMRY, JRY, SGSY, SGSSY, PMGRY etc & beneficiaries' programmes like IRDP provide additional employment/income to the people.

4.11.2 OCCURRENCE OF DISASTER IN THE PAST:

One major disaster occurred in the district in the last twelve years. The typology and effect of the major disaster in the last fifteen years is elucidated below:

Type of Disaster	Time of Occurrence	Effect
LANDSLIDE	1989	Area damaged & lives lost College Veng area and claimed 9 lives
	1990	ChandmaryVeng, Lawngtlai washed away 25 dwelling houses and claimed 2 lives
	1995	Washed away 194 dwelling houses. Partially destroyed 617 dwelling houses claimed 14 lives and injured 3 persons.

	2025	Major landslide occurred in the Town Center, where 6 buildings collapsed rendering many homeless and also cause significant loss of infrastructure and disrupting traffic.
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OTHERS

Type of Disaster	Time of Occurrence	Effect
FLOOD	1995	(a)Kolodyne river washed away 20 dwelling at Kawlchaw 'W' (b)Ngengpui river washed away bailey's Bridges over the said river and washed away 30 dwelling houses at Kamlanagar
CYCLONE	1982	Destroyed 650 dwelling houses in the district
	2014	Destroyed hundreds of dwelling houses different part of the district
FIRE	June, 1990	Vaseitlang – I destroyed 12 houses
	March, 1991	Parva – III destroyed 18 houses
	1997	Kamalanagar – razed down 36 shops and 20 dwelling houses
	2000	Kamalanagar Bazar – destroyed 30 shops and 10 dwelling houses
	2004	Kawlchaw 'W' – destroyed 20 dwelling houses
	2014 (Forest Fire)	Due to long spell of dry weather, forest fire ravaged through huge area of agricultural land.

4.12 INVENTORY AND EVALUATION OF RESOURCES

Taking stock of Resources available with District Administration, Private Individuals & different Govt. Officials & their deployment at the time of calamity for Relief/Rescue Operation is of vital importance. Such inventory is updated in the IDRN portal

4.13 CAPABILITY ANALYSIS OF INSTITUTION / OFFICE IN THE DISTRICT

All district Level Officers, Sub – Division, Blocks & Important Villages have been provided with a Telephone connection.

All Police Station/Out Post having VHF Communication facilities.

DEPLOYMENT OF POLICE PERSONNEL IN LAWNGTLAI DISTRICT as on 10.12.2025

- Superintendent of Police – 01
- Addl. S.P – 01
- SDPO/DSP – 02

• Inspector	-	04
• Inspector (M)	-	01
• Sub – Inspector	-	6
• Sub – Inspector (M)	-	2
• Sub – Inspector (Steno)	-	0
• Asst. Sub – Inspector	-	10
• Asst. Sub – Inspector (M)	-	1
• Head Constable	-	15
• Constable	-	65
• Driver	-	12
• Grade – IV	-	6

Fire Station of the District equipped with following resources for rescue operation.

• Fire tender	:	02 Small (407)
• Firemen	:	03 + 02 (Drivers)
• Constable	:	01
• LTM	:	02
• SSO	:	01
• Fire Extinguisher	:	16

Number of Ambulance

• Lawngtlai		
➤ LCMC	-	01(Bus)
	-	01(LPK)
	-	01 (Pick up)
	-	01 (Ambulance)
	-	01 (Bolero)
➤ CHL	-	01 (Pick up)
	-	01 (Ambulance)
• Chawngte	-	01(Sumo)
• Bungtlang ‘S’	-	01(Sumo)

List of Hospitals including private/Church owned Hospital

<i>Name of Hospital</i>	<i>Bed Strength</i>
• Lawngtlai Civil Hospital	- 34
• Christian Hospital (BCM), Vengpui	- 40
• Lairam Christian Medical Centre, College Veng	- 70
• Community Health Centre, Chawngte	- 30
• Primary Health Centre, Sangau	- 10
• Primary Health Centre, Bualpui ‘NG’	- 10
• Primary Health Centre, Lungpher ‘S’	- 10
• Primary Health Centre, Bungtlang ‘S’	- 10
Total	- 203

Number of Sub-Centre in the district – 36

- Number of Health Clinic – 08
- Number of Health Worker – 55

List of Medical Store (registered under Taxation Deptt., Lawngtlai Circle)**Name of Store with Properties & location**

- Bethesda Medical Store – F. Lalnghinglova, Lawngtlai Bazar
- Rexi Medical Stall – Punya Chakma, Chawngte ‘C’
- LCMC – Gen. Secy, LIKBK Lawngtlai Bazar
- Health Clinic – Lalkhawngaihi, Lawngtlai Bazar
- V.L. Drug Store – F. Vanlalchhunga, Lawngtlai Bazar
- Gateway Store – H. Remhnuni, Lawngtlai – IV
- Valeit Medical Store – Valeit Chakma, Chawngte ‘C’
- J.J. Drug Store – Lobinbra Chakma, Chawngte ‘C’
- Purna Drug Centre – Dr. BP Purna Chakma, Chawngte

4.11 COMMUNICATION & MEDIA

In Disaster Management preparedness, media plays a capable role in building communication network both horizontally and vertically. It interacts with and synchronises the activities of different sections of society, actors of relief administration, NGOs etc. and feeds the right information at right time to the right people. The following tabular form ensures media involvement at different hierarchy of administration.

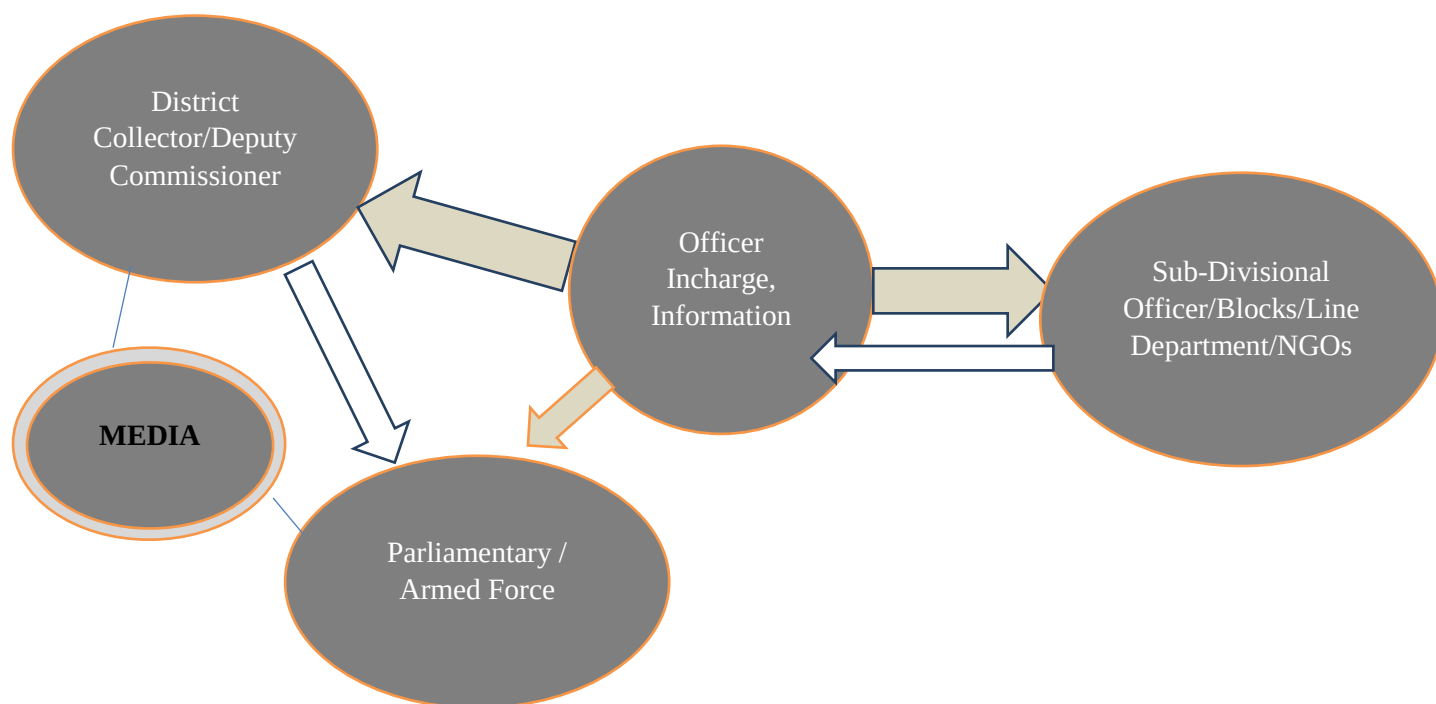
District Level – Dy. Comm’r – Paramilitary Force – Officer i/c, DPR

Sub-Division Level – Sub-Divisional Officer – Line Department / NGO

4.12 LIST OF EXCAVATOR OWNERS (BOTH PUBLIC AND PRIVATE)

SI. No	Owner’s Name	Phone No.	Quantity
1	C. Hranghluna	9612 790 234	1
2	N. Thangzuala		1
3	K. Saidi	9402 587 567	1
4	Bimal Sadam Jamaita		1
5	Project Director	03835 232210 (O)	1
6	C. Sihu		1
7	VL. Dawma (L)	9436 148 020	2
8	Keystone Infra Pvt. Ltd	03834 291316	1
9	J. Lalrinawma	9436 149 338	1

10	B. Lalzuala	9862 508 277	1
11	RDS Project Ltd	03835 232134	2
12	HmingthantluangaChinzah	9612 328 314	2
13	ARSS Infrastructure Project Ltd	03835 232183	1
14	C. Hranghluna		1
15	HC. Lalthiauva		1
16	Jyothi Infrastructure India Pvt. Ltd		1
17	C. Sangchhunga	9436 148 912	1
18	Ramthianghlima		1
19	MC Lalsangliana	8414886497	1
20	Biakchungnunga	9862219160	1



Two officers in charge from D.C will be appointed as Officer i/c Information on rotation basis to collect and provide information at the time of disaster.

CHAPTER – 5

PREVENTION AND MITIGATION MEASURES

A better disaster management with minimum vulnerability is possible only by means of preventive, preparedness and mitigation measures. Neither a disaster can be prevented nor diverted to any other place. The only possible thing is to minimize the effect. Mitigation in fact, is not a cost. In the long run it pays for itself. Proper preparedness and mitigation measures instantly help to respond disaster in time. So, district wise preparedness and mitigation is highly required. A prepared community is the best community to minimize losses 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.

5.1 MITIGATION MEASURES:

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

- 1. Structural Mitigation Measures:** Most of the buildings in Lawngtlai District are non-engineered and Kutcha and will have low seismic resistant capacity. These buildings are liable to get 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 Hospital, community Halls, Churches, Schools and Colleges first priority as they are lesser in number and are the places where people shelter during a disaster. Second priority will be given to other types of buildings, hotels, offices, go downs and factories etc.
- 2. Non- Structural Measures:** The following aspects required to be look into for the purpose of non-structural mitigation:
 - a. Land – Use Planning:**
 - Which area should be spared for human settlement, agriculture, forestation etc.
 - Hazard zoning of areas. Areas where new roadways and infrastructure should be avoided.
 - b. Building Improvement Programme:** Buildings should be improved in terms of making them earthquake resistant. The rapid urbanization is leading to increase housing collapse of and buildings are primarily responsible for damages and loss of lives, it is extremely important to have systematic building bye – laws which at present is not imposed in the whole of Mizoram. Also, as man – made features and systems are responsible for devastation, the loss can be minimized by reducing congestion in urban areas.

5.2 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 institution where mass gathering usually takes places as in schools, public halls etc.
- Strict regulation for approvals of buildings 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 stake holders 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.
- 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.
- Mapping of Flood prone areas and flood risk mapping which can assist during pre-disaster decision making.
- Formulation of flood preparedness plan which include emergency responsible planning and training.

(c) Cyclones / High wind

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

(d) Landslides

- Identify all streams run off 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 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 prone areas to ensure that water chances of hazards available during drought prevalence.
- Crop insurance should be promoted.
- 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 Yojana (RKVY), Fodder & Feed Development Scheme etc. to address the need for medium and long-term drought mitigation requirements.

(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 Protection Committee of permanent nature.
- 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 firefighting.
- Strict enforcement of existing Fire Protection Regulation Act.

(g) Epidemics

- Health departments need to be provided with more water quality monitoring centres for effective surveillance of water quality especially 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 team which will be a specialized division of Police to tackle road accident.
- 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 sheathing to prevent hail penetration.
- 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 ration 1:2. The seeds or roots of seedlings are soaked in this mixture for half an hour before sowing 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, States need to initiate location specific measures as outlined in the District Crop Contingency Plans and in consultation with their respective State Agricultural Universities 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 mange rejuvenation of damaged crops through pruning of dead material, application of extra doses of fertilizer through foliar sprays.

CHAPTER – 6

PREPAREDNESS MEASURES

6.1 INTRODUCTION:

Throughout the history of mankind, disaster have shaped the destiny of the earth and her people. It is assumed that nearly 20 major disaster strike the world every year, resulting in many deaths, casualties and loss of property. In the past century, millions of people died due to flood, earthquake and tropical storms. India is one of the most disaster – prone countries as far as natural disaster are concerned. Mizoram of North East Region of India is included in Zone 5 (the most prone area in relation of earthquake).

6.2 OBJECTIVE OF PRPEAREDNESS PLAN

Hazard exist within all communities, irrespective of whether they are recognized for not, Planning for emergencies is the key to meet requirements during crisis situations. Management strategies can be applied to all emergencies, whether they are man – made or natural. Emergency management consist of 4 (four) cycles namely Preparedness, mitigation, Response and Recovery and can be visualized as having a circular relationship. Each phase results from the previous one and can be overlapping at times. The main objectives of the Preparedness Plan are:

- To prevent of human life and property.
- Preparedness, Prevention and Mitigation of life and property.
- Training and awareness creation.
- The demographic features, the latest census, statistic of male, female population and destiny of population to be taken into account.
- Disaster management cycle, hazard Analysis and History.
- The Occurrence to Disaster – periodicity, intensity and damages to be analysed.

6.3 DIFFERENT TYPES OF DISASTER AND CORREDPONDING PREPAREDNESS PLAN

6.3.1 EARTHQUAKE

Earthquake is also known as ‘Seismo’ and it taken from the Greek word ‘Seio’ which literally means ‘to shake’. It is the shaking of places from a focus point also known as the epicentre. The shaking movements are called waves. The focus point originates beneath the earth’s surface and there are three types of waves:

- **L- Wave (Low frequency, long wave length, transverse vibration) :**
These waves usually shake the earth’s outer crash manner. Hence, they are very destructive and cause extensive damage.
- **S – Wave (High frequency, Short wave length, transverse):**
The speed of these waves range from 4.35 km per second to 7.25 km per second and can effect both the earth’s crust and below. These waves too, cause extensive damage.

- **P – Wave (High frequency, Short wave length, longitudinal waves, push and pull):**

These waves moves longitudinally and horizontally. They not only effect the earth's crust and below, but also cause tremors in water and ocean.

These are 12 types of earthquake depending upon the intensity and damage cause. They are:-

- Instrumental
- Slight
- Moderate
- Rather strong
- Strong
- Very strong
- Destructive
- Ruinous disastrous
- Very disastrous and
- Catastrophic

EPICENTRE

Usually, earthquake originates at a point many kilometres deep under the earth's surface. It is called 'focus'. The point on the earth's surface vertically above the focus is called the Epicentre. The main area of earthquake surrounds this point.

EARTHQUAKE SCENARION IN N.E. INDIA

The North – East, which is under Zone V, or highly prone seismic zone – has been hit by nearly 794 earthquakes registering up to about 4 point on the R/Scale from 1964 to 1992. Out of these, three have spread widespread damage life and property. The 2015 Nepal earthquake was recorded as 7.8 Magnitude in the Richer scale, strong tremors were felt in many parts of NE India and about 9000 people were killed, while more than 600000 of structures were destroyed in Nepal. In 2016, Mizoram's neighbour Manipur was hit by a quake of 6.7 magnitude. Mizoram is among those state highly prone to quakes as it lies in the Arakan Yuma subduction zone, therefore the need for a comprehensive preparedness plan for an earthquake disaster is of utmost importance. The government of Mizoram has recently passed a comprehensive Building Regulation Act in the wake of recent events.

EARTHQUAKE PREDICTION

Earthquake prediction is not yet scientifically possible with reasonable accuracy in terms of location, time and magnitude. The only tangible effort, which can be done, is to mobilize relief and rescue operations immediately so as to minimize damage to life and property. Earthquakes cause widespread disaster and lose of human lives primarily due to the collapse of structures and buildings. Therefore, implementation of building regulations and bylaws must be the steps towards the mitigation of damages caused by earthquakes. According to director General. GSI K.

Krishnanunny, the Geological Survey of India is currently engaged in charting out the model code for Mizoram whose capital Aizawl, is a nightmare for Seismologists as it has no Codes and Rules for town planning.

PREPARATION FOR EARTHQUAKE SAFETY

- Ensure that each family member is aware of Do's and Don'ts during earthquake.
- Identify specific safe place in each room of house and every member of the family should know the said place.
- Do practice for safety and also safety for your head to avoid injuries.
- Identify dangerous places in house and be at the distance during earthquake.
- Identify safe place outside where you and your family member can take shelter.
- Ensure there is no obstruction en-route of escape/stairs to the said safe place.
- Ensure member of the family must know where to be collected after earthquake.
- Ensure each member of family has knowledge about first – aid and always keep some medicine.
- Ensure Almirah & other heavy luggages are tightened properly to avoid fall and head injuries.
- Ensure heavy luggages if any be kept in the bottom rack of almirah.
- Don't store in excess cooking gas, petrol, K/Oil and other inflammable materials inside house.
- Ensure heavy hanging articles are hanged away from sleeping/sitting place.
- Keep cotton on the windows located near beds.
- Ensure technique of earthquake protection and materials as well as other safety measures are used during construction of new house.
- Have your house/ building assessed by qualified engineer and also ensure regular renovation and repair of any crack in house/building to avoid fall during earthquake.
- Keep eye on unnatural panic, barking and other activities of animals as some of these indicate early warning of forthcoming disaster.

MEASURES DURING EARTHQUAKE

Inside House

- Remain calm, stay where you are, and do not get panic as it could be dangerous.
- Be away from articles likely to fall.
- Be away from windows, mirrors, book cases and unsecured heavy objects/articles to avoid injuries.
- Don't stand in doorways as violent motion may cause doors slam and cause injuries, flying objects may also injure you.
- In case being inside old & weak fastest and safest route to get out.
- Don't use elevators/lift, but take staircase to reach open space.
- Take cover under strong table or other sturdy furniture, hold its legs so that it does not move away and wait there till shaking stops.
- In case non availability of sturdy furniture/table/cover. Kneel and sit close to the floor near structurally strong wall and maintain balance.
- Be prepared to protect face and head with your hands to avoid head injuries from any object.

Outside House

- Move out to the open space, away from buildings, electric poles/lines and trees.
- Be at a distance from landslides, boulders, big buildings/structure and loose electrical wire.
- Don't touch metallic object which are either in touch with or likely to be contacted by loose electric.
- Do not re-enter your house if damaged and also avoid visiting damaged building/structures, unless properly inspected.

Precaution while in moving vehicle

- Stop while in vehicles, but stay inside till earth shaking is over. However, ensure vehicle is stopped in open space away from tress/building/over-bridges/electric wire/poles etc.
- Proceed to journey carefully taking care of bridges/roads which might have damaged due to earthquakes.

Measures after the earthquake

Dos's

- Ensure safety and security of every member of the family.
- Don't panic, remain calm and don't listen or spread rumours.
- Help injured or trapped person and provide first – aid.
- Take extra care to those who require special assistance like infants, elderly, ladies & disabled.
- Check for fire hazards, broken articles/glasses and take precautions against injuries/further damage.
- Clear the routes to maintain speedy movement of essential service & supply of articles.
- Mark the places where the victims are suspected/reported to be trapped and inform search and rescue team immediately.
- Switch off the cooking gas, electricity, and switch on only after ensuring that there was no leakage.
- In case an inflammable liquid like K/Oil, Petrol etc. is spread on the floor, clean it properly to avoid fire and do not use matchbox before cleaned.
- Avoid prolonged use of telephone to facilities others to use the services.
- Be calm and listen to radio and help others as help from outside might be delayed due to disturbance of road/line communication etc.
- Return home only after confirmation that house is safe.
- Don't waste potable water.
- Don't repair your house without proper structural inspection.
- Don't spread rumours and also do not listen rumours.
- Don't use elevators/lift until/unless checked/found and declared serviceable.

6.3.2 CYCLONE

India with its long coastline is vulnerable to the impacts of tropical cyclones that develop in the North of India Ocean (Bay of Bengal and the Arabian Sea). Cyclone are intense low – pressure systems that develop in the Oceanic area surrounding Indian sub-continent. These systems are classified as depressions, deep depressions, cyclonic storms, server cyclones and sever cyclones with cores of Hurricane winds depending on the surface winds associated with them as indicated below:

Sl. No	Type	Surface Winds
1	Depression	18 to 27 Kts (36 to 54 Kms per hours)
2	Deep Depression	28 to 33 Kts (56 to 66 Kms per hour)
3	Cyclonic Strom	34 to 47 Kts (68 to 94 Kms per hour)
4	Sever Cyclonic Strom	48 to 63 Kts (96 to 117 Kms per hour)
5	Sever Cyclonic Strom With core of Hurricane Winds	64 Kts (117 Kms per hour)

WHEN IT OCCURS:

There are two cyclones season for India. The first is the Pre – Monsoon Season (April and May) and the second is post – monsoon season (October to December). The Cyclones of the Post – Monsoon season are more intense than those of Pre-monsoon season. Cyclones formed in the Bay of Bengal often pass through Bangladesh and Mizoram wreaking havoc in its way. Hundreds of houses were destroyed in Lawngtlai District in 1982 and 2014 due to cyclones. Cyclone Mora and the heavy downpour in June last year claimed 1 life, damaged thousands of houses resulting in damages worth Rs. 7,50,000. Cyclones are associated with Strong winds, torrential rains and storm surges (abrupt rise of sea level at the time storm crossing the coast). Storm surge is the most destructive phenomena associated with a cyclone. Due to this, low – lying areas along the coast are inundated by sea water, which can result in the loss of human lives unless the people are evacuated from those areas.

POSSIBLE IMPACTS

- Uprooting of trees which disrupt transportation and relief supply missions.
- Failures in many cantilever structures such as signposts, electric poles, and transmission line towers. Damage to improperly attached windows or window frames.
- Damage to roof projections and sunshades.
- Failure of improperly attached or constructed parapets.

- Overturning failures of compound walls of various types.
- Failure of weakly built walls and consequent failure of roofs and roof covering.
- Overturning failures of compound walls of various types.
- Failure of weakly built walls and consequent failure of roofs and roof covering.
- Failure of roofing elements and walls along the gable ends particularly due to high internal pressures.
- Failure of large industrial buildings with lightweight roof coverings and long/tall walls due to combination of internal and external pressure.
- Brittle failure of asbestos – cement (AC) sheeting of the roofs. The thatch roof commonly employed in rural construction lack durability but it provides greater permeability and attracts less forces of wind.

CYCLONE WARNING SYSTEM IN INDIA

The Indian Meteorological Department (IMD) is the nodal agency for observing, detecting, tracking and forecasting cyclones, which develop in the Indian Seas. The Cyclone warnings are provided through six cyclone – warning centres located at Calcutta, Bhubaneswar, Vishakhapatnam, Madras, Bombay and Ahmedabad. These centres have distinct responsibilities area wise, covering both the East, West Coast of India and the Oceanic area of the Bay of Bengal and the Arabian Sea including Andaman and Nicobar Islands and the Lakshadweep. Cyclone are monitored through synoptic charts and INSAT (Indian National Satellite) when it is in the high seas. When the Cyclone approach the coastal areas they are tracked through cyclone detection radars which are installed in coastal stations of the east and west coasts of the country, covering the entire region. Cyclones warning are provided in two stages. In the first stage, a cyclone Alert is issued 48 hours before the commencement of the adverse weather along the coast. In the second stage, a cyclone warning is issued 24 hours before the cyclone anticipated landfall.

The cyclone Warning messages are continued till the cyclone crosses the coast. The ports and fisheries warnings start much earlier. Informatory messages on cyclones are issued for broadcast to AIR as soon as cyclone is detected in the Bay of Bengal and the Arabian Sea.

DISSEMINATION OF WARNING

The Cyclone warnings are disseminated by the following means:

- High priority telegrams.
- Telecast through Doordarshan.
- Broadcast through AIR.
- Bulletins to the press.
- Satellite based disaster – warning systems. (Cyclone disaster warning system)

In addition to the above, cyclone warnings are also disseminated through tele-printers, telex, facsimile and telephones wherever such facilities exists with the recipients. The warning bulletins are normally issued at 3 hourly intervals, but more frequently whenever needed. These bulletins contain the information on the areas threatened by cyclones, heavy rainfall, and magnitude of destructive winds and

inundation of coastal areas by storm surges. Advice for fisherman not to venture into the sea for evacuation of the people from the low – lying areas are also included.

The Cyclone warning are disseminated to:

- Commercial shipping and Indian Navy.
- Port Authorities.
- Fisheries Official.
- Officials of the State and Central Government.
- Commercial Aviation.
- General Public.

THE RESPONSIBILITIES OF THE DISTRICT ADMINISTRATION

- All the district of the maritime states are vulnerable to the cyclone impacts to a different degree. It is henceforth imperative that the concerned District Collectors should be familiar and get prepared with the measures to be taken in the event of Cyclone disaster.
- Cyclone are expected in the months of April, May and October to December. Prior to this season , pre-cyclone exercise such as strengthening of the communication facilities, checking and repair of cyclone shelters and checking and repair of road condition in the vulnerable areas may be carried out. Action to be taken by various administrative wings in the event of Cyclone should be defined, issue clear orders ensure that reached everyone intended.

Action to be taken by District Administration before landfall of the Cyclones:

- After the receipt of the first warning from the concerned cyclone – warning centre, constant touch with the concerned cyclone – warning centre should be maintained to get updates on the cyclone movements.
- Constantly review and coordinate the measures necessary to face the cyclone threat.
- Make arrangements for the storage of food, first aids kits and availability of ware in the Cyclone shelters may be ensured.
- Ensure that drainage system is kept free of all blockades so that the rainwater in the event of heavy rains drains out fast.
- Ensure wide publicity of cyclone warnings through local modes of dissemination, in vogue, so as to increase the alertness of the public, particularly the fisherman community.
- Keep adequate number of vehicles ready at the nearest point possible so as to evacuate the people from low lying areas in a shorter time as and when required.

After the Cyclone – for District Administration:

- Rescue the people who are stranded or otherwise affected
- Restore the supply of powers, and clear the roads (remove the fallen trees etc.) as early as possible.

- Food and water should be supplied to the standard people and those who are in shelters.
- Search and rescue operation to be initiated, if necessary, for the people (particularly, for the missing including fishermen).
- Check for the outbreak of epidemics. Appropriate measures for inoculation and vaccination must be undertaken to prevent any outbreak of epidemic.
- If there is serious disruption of the regular communication system, communication through HAM Radios and / or wireless sets may be pressed into service.
- Supply of electricity must be restored by carrying out repairs to the dismantled wires, uprooted damaged transformers and other switch – gears.
- Help of voluntary organizations to be taken but the security aspect should not be ignored so as to prevent the entry of undesirable, anti – social elements. (issue identity cards).
- Veterinary medical care should be made available, along with provision of fodder to the displaced cattle.
- Minimum road communication in the affected districts should be restored on war footing.
- Use cycle and two wheelers – Bikes for transportation.
- Supply of all essential commodities, such as, rice, wheat, pulses, salt, match box, kerosene, diesel, etc. should be ensured to all the habitats in the disaster affected areas to concessional rates, or, free or, cost.
- Inundated land should be reclaimed by desalination.
- If the drinking water wells are inundated by saline water, bore wells are to be dug, or pumps are to be installed for the supply of water to the public.
- Land survey of the affected area should be undertaken to assess the damage caused to the dwellings and standing crops as early as possible.
- Loan should be sanctioned on the basis of the survey, to construct/repair of the dwellings. (Short term and long term loans be given).

SUGGESTION FOR THE FUTURE

A good network of motor able roads should be constructed in all vulnerable coastal areas. This not only facilitates quick evacuation in the time of need, but also facilitates the supply of relief of the needy in the aftermath of the cyclone (for example, the East Coast Road, under construction from Calcutta to Kanyakumari). Construct high level coastal road with its top about one meter above the highest surge level which should of course have adequate drainage openings to permit the flow of normal rain/flood waters across. Such a road could serve as the first time of defence against the surges waters permitting only limited entry of water through the openings. All Governments official working in the cyclone prone areas may be trained in Programme related to the cyclone preparedness activities and relief works.

6.3.3 LANDSLIDES

Landslides occur in all terrains in response to a wide variety of natural/man – made conditions and triggering processes that include heavy rainstorms, cloudbursts, earthquakes, lives every year besides causing an economic loss of more than US \$4 Billion. The major burnt of the calamity is, however, borne by the developing countries where population pressures have pushed the people occupy even the hazard prone areas. Nearly 25% of our country's area is prone to various degrees of landslide hazard, frequently affecting the human life, properties, infrastructure, livestock, natural resources and the environment in a big way.

In India, the Himalayan belt, Nilgiris, Western and Eastern Ghats comprise the landslide sensitive zones. Nearly 25% of our Country's area is prone to various degrees of landslide hazard, frequently affecting humanlife, properties, infrastructure, livestock, naturalresources and the environment in abig way. They constitute a serious hazard that caused substantial human and financial losses, estimated to average more than 100 death annually and cost approximately 300 – 400 crores of rupees per year. In addition to direct and indirect losses, landslides cause significant environmental damage, societal disruption and strategic concern. With growing population and human interventions in terms of developmental activities, landslide pose constant risk to human life, buildings, structures and infrastructures. Large scale deforestation along with faulty management practices have led to high vulnerability to landslides in many regions of the country particularly Mizoram due to houses and structure being constructed on hilly terrains and the severity of monsoon. Human activities relating to expansion on unsafe locations, constructions of roads, dams and river training works ignoring natural features contribute to increased intensity of landslides. In Lawngtlai District, landslide in 1995 washed away 194 dwelling houses, partially destroyed 617 dwelling houses, claimed 14 lives and injured 3 persons. The heavy monsoon last year had also led landslides in different parts of the district causing damage to property and infrastructure.

The absence of large scale landslide hazards maps leads to people being caught unaware especially when the first time landslides. Similarly absence of coordinated national approach to mitigating the detrimental effects of landslides has resulted in a reduced ability of the Sates and Local Government Agencies to apply the important lesson learnt, often at a considerable expense, in other parts of the country. As a result, the need for a national approach has been strongly felt and worked upon now by the National Disaster Management Authority by preparing the National Landslides Policy and Guidelines. Being cognizant of the diversity of issues associated with national landslides problem that arise from both the regional considerations and of the considerable variations in the institutional capability and responsibility at regional and local levels, inputs from a wide variety or stake holders are essential. Strengthening the process of landslide inventory mapping and building of landslides databases will have far reaching effects in generating reliable landslide hazard zonation maps according to user's requirements. NIDM, the nodal institute dealing with disasters is planning to undertake such projects in order to stimulate necessary activities across the country and create a nodal platform to deliver comprehensive periodic data of the National Landslide Data and inventory Map in public domain. It would pave way for

effective decision making and planning micro level mapping for various developmental and regulatory activities in hilly terrains.

DEFINATION OF LANDSLIDES

Landslides are simply defined as *down slope movement of rock, debris and / or earth under the influence of gravity*. The sudden movement of material causes extensive damage of life and property. They are reported from Garhwal, Kumaun, Himachal and North East Himalayas in addition to Western and Eastern Ghats of India. Human intervention by way of slope modification has added to aggravation of landslides.

Landslide prone areas

- Existing or old landslides.
- Areas at or on the base of slopes.
- Within or at the base minor drainage hollows.
- At the base or top of a fill slope.
- At the base or top of a cut slope.
- Any sloping ground in an area known have a landslide problem.

Potential landslide indicators

- Saturated ground or seeps in areas that are not typically wet.
- New cracks and scraps or unusual bulges in the ground, roads or pavements.
- Movement of ancillary structures such as decks and patios in relation to a house.
- Sticking doors and windows, and visible open spaces indicating jambs and frames out a plumb.
- Tilting or cracking of concrete floors and foundations.
- Broken water lines and other underground utilities.
- Leaning telephones poles, trees, retaining walls and fences.
- Offset fence lines.
- Sunken or displaces road surfaces.
- Rapid increase in creek water levels, possibly accompanied by increase turbidity (soil content).

Effects of Landslides

- Loss of human lives.
- Property damage.
- Affect a variety of resource like water supplies, fisheries, sewage disposal systems, forest, dams and
- Reservoirs.

Economic Effects of Landslides

- Cost of repair.
- Loss of property value.
- Disruption of transportation routes.
- Medical costs (injury)
- Water availability, quality and quantity.

DESTRUCTIVE SIGNIFICANCE OF LANDSLIDES

Velocity (mm/sec)	Probable destructive significance
Extremely slow 5×10^{-7}	Imperceptible without instruments; construction possible with precaution.
Very Slow 5×10^{-5}	Some permanent structures undamaged by movement.
Slow 5×10^{-3}	Remedial construction can be undertaken during movement; insensitive structures can be maintained with frequent maintenance work if the movement is not large.
Moderate 5×10^{-1}	Some temporary and insensitive structures can be temporarily maintained.
Rapid 5×10^1	Escape evacuation possible; structures; possession and equipment destroyed.
Very Rapid 5×10^3	Some lives lost; velocity too great to permit all persons to escape.
Extremely Rapid 5×10^3	Catastrophe of major violence;

MINIMIZING THE EFFECTS OF LANDSLIDE – PLANNERS AND DECISION MAKERS:

Planners and Decision Makers should learn from past tragic events and should impose stringent planning and design requirements in landslides – prone and unstable areas. These may include:

- Implementation of regional hazard and risk assessments into land planning policies. This ensures that appropriate processes are in place whereby new development applications are assessed with respect to slope stability issues and zoning for future development is directed towards areas with a low or very low risk of slope instability.
- Engineering and geotechnical investigation that define the landslide hazard and risk at site specific levels of investigation.
- Mapping of landslides vulnerability that can help with the development of emergency response scenarios.

MITIGATION

Mitigation includes any activities that prevent an emergency, reduce the change of an emergency happening, or lessen the damaging effects of unavoidable emergencies. Investing in preventive mitigation steps now such as planting ground cover (low growing plants) on slopes, or installing flexible pipe fitting to avoid gas or water leaks, will help reduce the impact of landslides and mudflows in the future.

PREPAREDNESS PLAN FOR LANDSLIDES

Landslide usually strike without warning. The force of rocks, soil, or other debris moving down a slope can devastate anything in its path. Take the following steps to be ready.

PRE – DISASTER PREPAREDNESS

- Get a Ground Assessment of your property.
- Seek specific information on areas vulnerable to land sliding from a geologist, Consult a professional.
- Engineering geologist or a geotechnical expert for opinions and advice on landslide problems and on corrective measures you can take.
- Minimize home hazards.
- Plant ground cover slopes and build retaining walls. In mudflow areas, build channels or deflection wall to direct the flow around buildings. (Remember if you build walls divert debris flow and the flow lands on a neighbour's property, you may be liable for damages).

Learnt to recognize the landslide warning signs

- Doors or windows stick or jam for the first time.
- New cracks appear in plaster, tile, brick, or foundations.
- Outside walls, walks, or stairs begin pulling away from the building.
- Slowly developing, widening cracks appear on the ground or on a paved areas such as streets or driveways.
- Underground utility lines break.
- Bulging ground papers at the base of a slope.
- Water breaks through the ground surface in new locations.
- Fences, retaining walls, utility poles, or trees tilt or move.
- Faint rumbling sound that increases in volume as the landslide nears.

Make Evacuation Plans

- Plan at least two evacuation routes since road may become blocked or closed.
- Develop an emergency communication plan.
- In case family are separated from one another during a landslide or mudflow this is (a real possibility during the day when adults are at a work and children are at a school), have a plan for getting back together.
- Ask an out – of state relative or friend to serve as the “family contact”. After a disaster, it's often easier to call long distance. Made sure everyone knows the name, address, and phone number of the contact person.

Insurance

The local insurance companies can over mudflow and landslide risks under natural calamities.

DURING LANDSLIDE

- If inside a building: stay inside.
- Take cover under a desk, table, or other piece of sturdy furniture.
- If outdoors: Try and get out of the path of the landslide or mudflow.
- Run to the nearest high ground in a direction away from the path.
- If rocks and other debris are approaching, run for the nearest shelter such as a group of trees or a building.
- If escape is not possible, curl into a tight ball and protect your head.

POST DISASTER PLANS

- Stay away from the slide area.
- There may be danger of additional slides.
- Check for injured and trapped persons near the slide area.
- Give first aid if trained.
- Remember to help your neighbours who may require special assistance – infants, elderly people, and people with disabilities.
- Listen to a battery – operated radio or television for the latest emergency information.
- Remembering that flooding may occur after a mudflow or a landslide.
- Check for damage to utility lines. Report damage to the utility company.
- Check the building foundation, chimney, and surrounding land for damage.
- Replant damaged ground as soon as possible since erosion caused by loss of ground cover can lead to flash flooding.
- Seek the advice of a geotechnical expert for evaluating landslide hazards or designing corrective techniques to reduce landslide risk.

6.3.4 DROUGHT:

Drought is a natural hazard that differs from other hazards since it has a slow onset, evolves over months or even years, affects a large spatial extent, and causes little structural damage. Its onset and end and severity are often difficult to determine. Like other hazards the impacts of drought span economic, environmental and social sectors and can be reduced through mitigation and preparedness. Because drought is a normal part of climate variability for virtually all regions, it is important to develop plans to deal with these extended periods of water shortage in a timely, systematic manner.

The National Commission of Agriculture in India classified three types of drought: meteorological, agricultural and hydrological.

- Meteorological drought is defined as a situation when there is a significant decrease from normal precipitation over an area (i.e., more than 10%).
- Hydrological drought results from prolonged meteorological drought resulting in depletion of surface and sub – surface water resources.
- Agricultural drought is a situation when soil moisture and rainfall are inadequate to support healthy crop growth.

Most of the agricultural land in Mizoram is rain – fed except for some areas which assured irrigation. It received rainfall under influence of the monsoon becoming more and more erratic, drought situation poses a serious threat each year. The impact of drought is severely felt in hilly areas where the drainage of water on the hill slopes is very fast.

DROUGHT ASSESSMENT

This can be done either by monitoring the drought – causing conditions or by predicting and forecasting the weather conditions.

MONITORING

Technical / scientific means of monitoring are necessary to provide early warning of drought and also provide an objective and transparent definition of droughts to be used in the allocation of resources. But, at present the use of information available is partial and unsystematic. It requires strengthening of the institutional relationship between early warning and decision making.

Predictability:

As drought is very much linked with the performance of the monsoon, it can be predicted by monitoring rainfall over the target region and taking into account previous rainfall history of the monsoon seasons.

Vulnerability analysis:

Vulnerability express the degree of susceptibility to hazard. Its analysis bridges the gap between impact assessment and policy formulation by directing attention to the underlying causes rather than the post – disaster impacts. Vulnerability to drought is dynamic and is influenced by a multitude of factors, including population growth and regional shifts in population, urbanization, technology, government policies, land – use and other natural resource base, water use trends, and level of environmental awareness. Individually, these factors are important because they may increase or decrease vulnerability.

EARLY WARNING SYSTEM

The objective of designing a EWS is to keep track of leading indicators (agro-climatic, market socio – economic indicators and late anthropometric indicators) to get ample lead – time to intervene at the drought onset phase itself. However, most interventions based on late indicators force the governments to adopt a crisis management approach to deal with drought – induced food insecurity stresses. There are many deficiencies in this approach, as it does not reduce vulnerability to drought in the long – run. The effective warning systems should have meteorological /agricultural information, production estimates, price trends of food and feed, availability of drinking water and household vulnerability, so that a variety of indices related to production, exchange and consumption could be addressed.

MITIGATION

Drought can be mitigated by two kinds of measures, either by adopting preventive measures or by developing a preparedness plan. Preparedness refers to pre – disaster activities to increase the level of readiness, or improve operational and institutional capabilities for responding to a drought. In order to delineate an implementable drought mitigation strategy, risk areas are identified on the basis of historical records to establish priority zones for comprehensive and integrated development programmes aimed at drought proofing and mitigation.

PREVENTIVE MEASURES AND PREPAREDNESS PLAN FOR DROUGHT MITIGATION

Preventive measures	Preparedness plan
• Dams/reservoirs and wetlands to store water • Watershed management • Water rationing • Cattle management • Proper selection of crop for drought – affected areas • Levelling, soil – conservation techniques • Reducing deforestation and fire – wood cutting in the affected areas • Alternative land – use models for water sustainability • Checking of migration and providing alternate employment • Education and training to the people • Participatory community programmes	• Improvement in agriculture through modifying cropping patterns and introducing drought – resistant varieties of crops. • Management of rangeland with improvement of grazing patterns, introduction of feed and protection of shrubs and trees. • Development of water resource system with improved irrigation, development of improved storage facilities, protection of surface water from evaporation and introduction of drop irrigation system. • Animal husbandry activities can help in mitigation with use of improved and scientific methods.

6.3.5 HAILSTORM

Any thunderstorm which produces hail that reaches the ground is known as a hailstorm. Hail has a diameter of 5 millimetres (0.20in) or more. Hail stones can grow to 15 centimetres (6 in) and weight more than 0.5 kilograms (1.1 lb). Hailstorms can happen anywhere where the right conditions are present. They are most likely to form during late spring summer and typically happen between late afternoon and evening. Hail can cause serious damage, notably to automobile, glass – roofed structures, livestock, and most commonly, farmer's crops. Hail damage to roofs often goes unnoticed until further structural damage is seen, such as leaks or cracks. Secondary hazards like snapping of electric poles due to uprooting of trees, disruption of communication links etc are also attribute to hailstorms.

6.3.6 COLD WAVE

A cold wave is a weather phenomenon that is distinguished by marked cooling of air, or the invasion of very cold air over a large area. It can also be prolonged period of excessively cold weather, which may be accompanied by high wind that cause excessive wind chills, leading to weather that seems even colder than it is. Cold waves can be preceded or accompanied by significant winter weathers events such as a blizzards or ice storms. A cold wave requires substantially increased protection to agriculture, industry, commerce, and social activities. The precise criterion for a cold wave is determined by the rate at which the temperature falls, and the minimum to which it falls. This minimum temperature is dependent on the geographical region and time of year.

EFFECTS:

Exposure the extreme and especially unexpected cold can lead to hypothermia and frostbites, which require medical attention due to the hazards of tissue damage and organs failure. They can cause death and injury to livestock and wildlife. Exposure to cold mandates greater caloric intake for all animals, including humans, and if a cold wave is accompanied by heavy and persistent snow, grazing animals may be unable to reach needed food and die of hypothermia or starvation. They often necessitate the purchase of foodstuffs at a considerable cost to farmers to feed livestock.

Extreme winter cold often causes poorly insulated water pipelines and mains to freeze. Winter cold waves that aren't considered cold in some areas, but cause temperatures significantly below average for an area, are also destructive. Areas with subtropical climates may recognize unusual cold, perhaps barely freezing, temperatures, as a cold wave. In such places, plant and animal life is less tolerant of such cold as may appear rarely. Cold wave that bring unexpected freezes and frosts during the growing season in mid – latitude zones can kill plants during the early and most vulnerable stage of growth, resulting in crop failure as plants are killed before they can be harvested economically. Such cold waves have caused famines.

COUNTER MEASURES

People can stock upon food, water, and other necessities before a cold wave. Some may even choose to migrate to places of milder climates, at least during the winter.

- Suitable stocks of storage can be secured before cold waves for livestock.
- Vulnerable crops may be sprayed with water that will paradoxically protect the plants by freezing and absorbing the cold from surrounding air.
- Most people can dress appropriately and can even layer their clothing should they need to go outside or should their heating fail.
- They can also stock candles, matches flashlights, and portable fuel for cooking and wood for fireplaces or wood stoves, as necessary. However caution should be taken as the use of charcoal fires for cooking or heating within an enclosed dwelling is extremely dangerous due to carbon monoxide poisoning. Adults must remain aware of the exposure that children and the elderly have the cold.
- Hospitals can prepare for the admission of victims of frostbite and hypothermia; schools and other public buildings can be converted into shelters.

6.3.7 PEST ATTACK

A pest is an organism with characteristic that people see as damaging or unwanted, as it harms agriculture through feeding on crops or parasitizing livestock.

EFFECTS:

Pest and disease have a direct impact on agricultural productions through reduced yield of crop plants which reduces the frame income. The impacts of reduced productivity on crops or animals can be long – lasting. Pest infestation can impair fertilization rates or seed recovery, while pesticide applications can harm soil and water fertility. Diseases can have lasting effects on livestock output in a number of “hidden” ways (such as delays in reproduction, leading to fewer offspring and the consequences of a reduced population) which often exceed the losses associated with clearly visible illness.

REMEDIAL MEASURES

Integrated pest management (IPM) has proved to be the most effective in controlling pest population. IPM is the selection and use of pest control actions that will ensure favourable economic, ecological and social consequences and it's applicable to most agricultural, public health and amenity pest management situations.

The IPM starts with monitoring, which includes inspection and identification, followed by the establishment of economic injury levels. The economic injury levels set the economic threshold level. That is the point when pest damage (and the benefits of treating the pest) exceeds the cost of treatment. This can also be an action threshold level for determining an unacceptable level that is not tied economic injury. Action threshold are more common in structural pest management and economic injury levels in classic agricultural pest management. An example of

an action threshold is one flu in a hospital operating room is not acceptable, but one fly in a pet kennel would be acceptable. Once a threshold has been crossed by the pest population action step need to be taken to reduce and control the pest. Integrated pest management employ a variety of actions including cultural controls, including physical barriers, biological controls, including adding and conserving natural predators and enemies to the pest, and finally chemical controls or pesticides. Reliance on knowledge, experience, observation and integration of multiple techniques makes IPM appropriate for organic farming. Although the pesticides and particularly insecticides used in organic farming and organic gardening are generally safer than synthetic pesticides and can cause harm. For conventional farms IPM can reduce human environmental exposure to hazardous chemicals, and potentially lower overall costs.

6.4 ADMINISTRATIVE PREPAREDNESS FOR DIFFERENT HAZARDS FOR EARLY WARNING DISSEMINATION

PREPAREDNESS	RESPONSIBILITY
✓ Setting up control room and manning of Control Room round the clock.	• All district Level Officials. • All Sub – Magistrates. • All revenue Officer. • District Fisheries Officer. • Leading NGOs. • Nodal Officer of NGOs. • PWD. • PHE. • P&E.
✓ Assignment of duties to the District level officials and Sub – Division/Blocks	
✓ Arrangement of vehicle and sound system for information dissemination.	
✓ NGO coordination and assignment of duty.	
✓ Proper record keeping and transmission of information to all the levels.	
✓ Holding of Natural calamity meeting.	
✓ Ensure functioning of warning systems & communication systems.	
✓ Ensure Mock drill.	

EVACUATION

PREPAREDNESS	RESPONSIBILITY
To warn people about the impending danger & to leave for safer places	✓ All Sub – Magistrate. ✓ Village Council ✓ Leading NGOs ✓ Police
TO CO-ORDINATE WITH Civil defense NGOs/Secretary/Police for support	
Arrangement of vehicles, etc. for evacuation.	
Evacuate people of marooned areas and administer emergent relief.	
Organize trained task force members.	
Deployment of policed for maintaining law & order & peace keeping during evacuation.	

SEARCH AND RESCUE

PREPAREDNESS	RESPONSIBILITY
Deployment of Police /Fire Brigade for search and rescue.	✓ Police ✓ Fire Brigade ✓ Leading NGOs ✓ Sub – Magistrate ✓ PWD ✓ Programme Co-coordinators of NSS/NCC/Defense Unit
Co – ordination with the NCC/NSS/Civil Defense/Rajyasainik Board etc. for rescue operation	
Ensure availability of the rescue materials.	
Prepare inventory of shelter places and map indicating the shelters centres.	
Provide & arrange Rescue kit at risk areas.	

MEDICAL AID

PREPAREDNESS	RESPONSIBILITY
Deployment of Medical Staff	✓ CMO
Stock piling of Life saving drugs/ORS packets/Halogen Tablets.	✓ DVO ✓ SDVO
Treatment of the injured persons and Transportation of the injured to hospitals.	✓ Medical Officers of ✓ PHC/CHCS
Awareness messages to stop the outbreak of epidemics.	✓ ICDS ✓ Leading NGOs
Disease surveillance and transmission of reports to the higher authorities on a daily basis.	✓ Leading NGO/VC/PHC workers / Doctors
Vaccination.	
Constitute mobile teams and visit the worst affected areas.	
Dis – infection of Drinking water sources.	
Identification of site operation camps.	
To obtain/transmit information on natural calamities to District Control Room.	
Advance inoculation programme in the Flash Flood/Land Slide prone areas.	
Arrangement of fodder /medicines for the animals.	
Vaccination site operation camps, Carcasses, disposal	

SHELTER MANAGEMENT

PREPAREDNESS	RESPONSIBILITY
Identification of shelter/Temporary shelter in high – elevated places and arrangement of tents etc.	✓ Sub – Magistrate. ✓ Medical Officers. ✓ Paramilitary Forces.
Arrangement of Food/Drinking Water/Medicine in the shelter places.	✓ Police. ✓ PHE.
Person's allocation for each shelter.	✓ Block Officer / Ranger (Forest Department)
Arrangement of transportation.	✓ SP. ✓ PHE.
Arrangement of safe shelter for animals.	✓ P&E.
Providing the lightning facilities for shelter places.	
Deployment of Police Personnel.	
Temporary supply of safe drinking water.	

EMERGENT RELIEF / FIRE KITCCHEN OPERATION

PREPAREDNESS	RESPONSIBILITY
Deployment of vehicle.	✓ Sub – Magistrate.
Procurement and transportation of relief materials to affected pockets/areas.	✓ BDOs. ✓ DFO/DCF.
Arrangement of free kitchen in the shelter camps & affected areas.	✓ Medical Officers. ✓ Paramilitary Forces.
Assigning responsibilities to officials for distribution of emergent relief/running of free kitchen.	✓ Police. ✓ PHE.
Coordination with the NGOs/Other	✓ Leading NGO.

voluntary organization & PSUs/UNICEF/UNDP/REDCROSS for continuing Relief Operation.	
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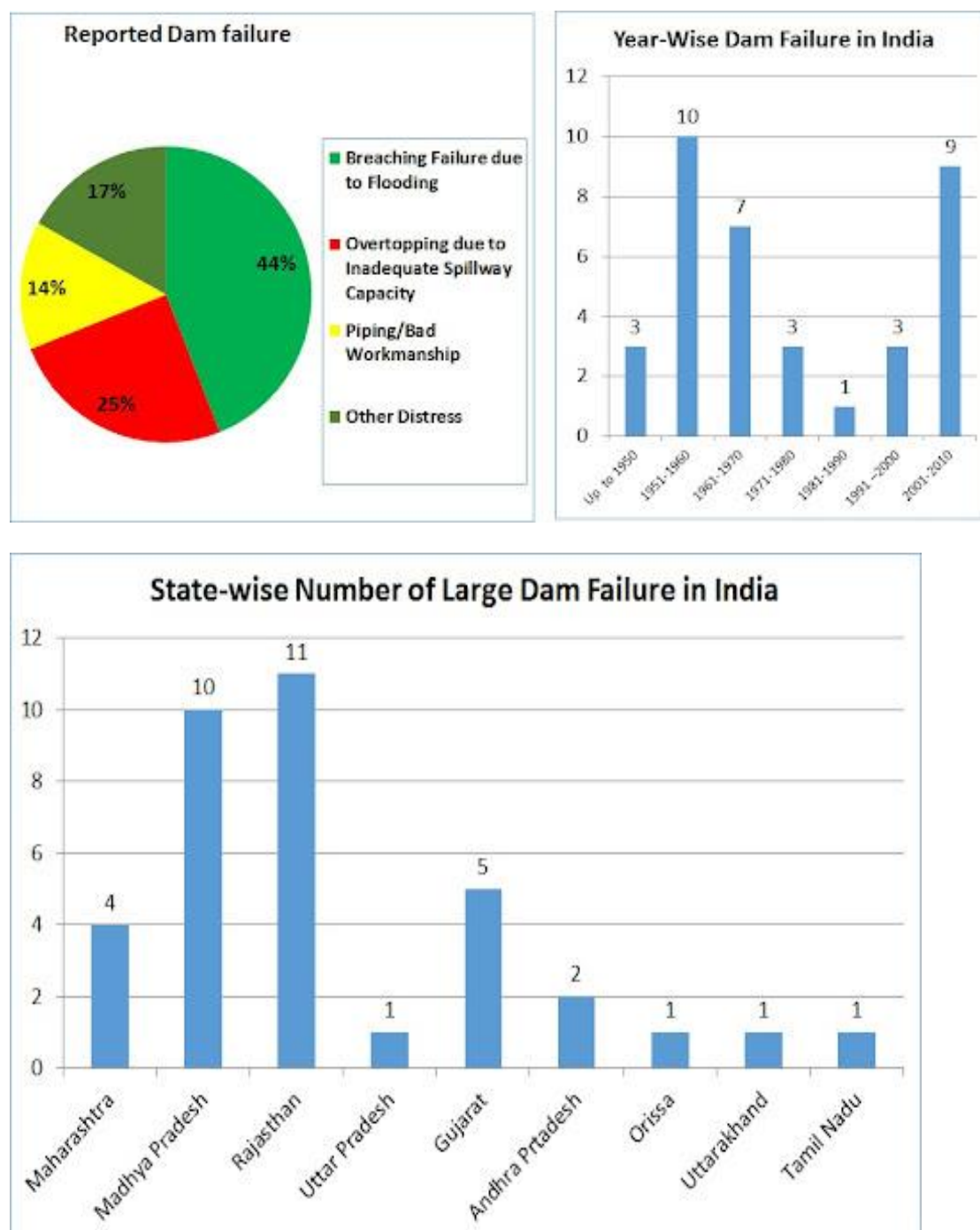
HEALTH AND SANITATION RESPONSE STRUCTURE

PREPAREDNESS	RESPONSIBILITY
List of the medical staff members with contact address/telephone number.	✓ Sub – Magistrate.
Stock position of medicines at District/Sub-Division/PHC/CHC/AWC.	✓ CMO
Plant and indent position of stock.	✓ DVO
Trained voluntary staffs/task forces/ Anganwadi workers on use and providing min. health services to the community.	✓ PHE.
Arrangement of Mobile Health Unit for inaccessible pockets/Health awareness campaign.	✓ DFO/DCF.
Stock position for medicines for animals.	✓ Medical Officers.
Ensuring supply of safe drinking water arrangement for supply of safe drinking water.	✓ Paramilitary Forces.
Disinfection for purification of water.	✓ Police.
Arrangement of mobile team and assigning specific operational area for supply of water.	
Involvement of volunteers/village level workers.	

INFRASTRUCTURE RESTORATION

PREPAREDNESS	RESPONSIBILITY
Formation of task force with specific equipment's.	✓ RTO/MVI/BRO
Assigning responsibilities for Police.	✓ All line departments
PHE/BRO/R&B/ Civil Defence specific areas.	✓ All Revenue Officers
	✓ All Village Councils
Emergency cleaning of debris to enabled reconnaissance.	✓ 71 RCC
Coordinate road – cleaning activities to assist local relief work.	✓ PWD
Begin clearing roads, assemble casual labour provide a work team carrying emergency tool kits.	
Towing vehicles, earth moving equipment's, cranes, construct temporary roads.	
Keep National & other Highways clear from disaster effects.	
Damage assessment.	
Monitoring.	

6.5 DAM BURST SCENARIO AND ITS CONTINGENCY PLAN



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

Safety Plans

Routine Periodic Inspections

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

Comprehensive Dam Safety Evaluation

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

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

CHAPTER – 7
CAPACITY BUILDING AND TRAINING MEASURES

For better Disaster Management in Lawngtlai District the District Administration has taken initiatives by dividing the District into different zones. The divided zones are allocated to zonal officers. The Zonal officers are allocated the task of first responder for any reported disasters. Law and order management, spot verification and any other necessary action need to be taken.

The District administration has also designated Nodal Officer for coordinating with State Disaster Management Authority and also Department of Disaster Management & Rehabilitations are as under.

NODAL OFFICER	
Name – Margaret J.Vanlalremmawii Designation – Sub – Divisional Officer	Phone No. – 8131932592

ALTERNATE NODAL OFFICER (I)	
Name – Lalhruaizela Designation – Sub – Deputy Commissioner	Phone No. – 70050222502

ALTERNATE NODAL OFFICER (II)	
Name – Lalrindika Designation – Sub – Deputy Commissioner	Phone No. – 9862233514

The District Administration has also appointed the following Officers for Quick Response in Emergency at Field Level outside Lawngtlai Town but inside Lawngtlai District as follows:-

ZONAL OFFICER	COVER AREA	Phone No.
SDO (C), Chawngte	Chawngte RD Block	9560162144
BDO, Bungtlang 'S'	Bungtlang 'S' RD Block	7827319604
BDO, Sangau	Sangau RD Block	9383317977
BDO, Lawngtlai	Lawngtlai RD Block	7005212542

7.1 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 all about 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.

- Disaster Management Training calendar has been made for 2016 -2017. Communities are trained and awareness programme are organised for community. Volunteers are identified and they are given training so that they will be able to response more effectively during real crisis situations.
- Every villages and block are requested to make their own village and block disaster management plan.
- Village Disaster Management Committee and Block Disaster Management Committee are formed.
- Disaster Management Teams like Search & Rescue, Evacuation and First Aid Team are formed in every village and block level.
- District Level Mock drill involving Govt. Departments and Community is conducted occasionally.

7.2 COMMUNITY DISASTER MANGEMENT TEAMS

- **First Aid and Medical:** This team attends 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 Department.

First Aid and Medical Group

Pre – Disaster

- Maintain a list of pregnant women, infants, disabled, sick, old and infirm.
- Keep first Aid Kits ready and ensure that expired drugs are replaced with new ones.
- Distribute basic medicines and demonstrate their use.
- To keep stretchers /local – made alternative ready for carrying the injured people.

On receipt of warning

- Ensure the contents of all First Aid Kits are satisfactory.
- Move into the safe shelter.
- If caught inside, stand with their backs against a strong indoor wall (in EQ).
- If outside the earthquake, run to an open space (in EQ).
- If in a moving in vehicle, will stop and stay inside (in EQ).

Post Disaster

- Attend to the injured people.
- Counsel traumatized people.
- Listen to and calm the victim 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.

2. Search and Rescue Group: This team will also perform evacuation besides search and rescue operation. They will undergo training on: i) Drowning ii) Firefighting and, iii) Search and rescue of collapsed building victims.

Pre – Disaster

- Familiarize themselves with the existing response mechanism of the government.
- Arrange for the necessary S&R equipment for Govt. and Pvt. Agencies.
- Use the equipment properly and maintain it well.
- 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 receive of warning

- Organize a meeting of the S&R members.
- Contact the administration for detailed information.
- Identify the vulnerable areas in which their help is required and decide the action plan.
- Gather the equipment's required.
- Assist the evacuation team in moving people to the safe shelter.
- Co – ordinate with the First – Aid team to provide primary health care.
- Shift the seriously injured person to Hospital/PHC.

Post Disaster

- Conduct a general hazard assessment to determine the possible hazards.
- Make a quick head 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 teams for primary health care rescued victims.
- Coordinate with the evacuation team to shift rescued persons to open space/tents.

- 3. Shelter Management:** This team will identify building for accommodation of shelter less people due to disaster.

Pre – Disaster

- Monitor the infrastructure needs of the community such as roads, schools etc.
- Co-ordinate with the local authority to identify/location for setting relief camps.
- Check for plaster cracks and damp patches in safe shelters 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 cleaned regularly.

On receipt of warning

- Evacuate people from their homes and clear the area as soon as possible.
- Moves stock of dry food, fuels and medicines to the shelter.
- Help the hold, disabled, pregnant women, and children etc. to settle in the shelter.
- Ensure the strict sanitary practices are adhered to in the shelter.
- Register the evacuees and give them identification slips/cards.

During Disaster

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

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.
- Collect stocks of food, clothing and fuel etc.
- Clean and disinfect the shelter all throughout the stay and before leaving.
- Help NGOs and their engineers in conducting meeting and rehabilitation activity.
- Monitor the rehabilitation and reconstruction process of the community.

- 4. Food and Water Management:** This team will 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.

Pre – Disaster Preparedness Activities:

- Ensure sufficient supplies of chlorine tablets etc. for disinfecting drinking water.
- Ensure sufficient stock 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 at Dist.com and PHE 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.
- Ensure sufficient number of raised platforms, deep tube wells etc. constructed.
- Stock long steel rods, kerosene and fuel wood to dispose corpus and carcasses.
- Help of the local administration to construct temporary sanitary facilities.
- Identify the tractors and labourers requires for sanitation purposes.
- Contact the P.H.E Department for assistance in acquiring diesel engines and generators.

On receiving warning

- Assess the drinking water supply and available water resources.
- Organize for alternate power supply by procuring generators/diesel engines.
- 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.
- Ensure that sufficient water is available in bathing units and toilets at relief camps.
- Demarcate areas for safe excreta disposal around the relief camp.
- Guide the local authorities to construct latrines away from ground water sources.
- Coordinate with the local authority to construct sufficient bathing cubicles for female.
- Spray bleaching powder and other disinfectants to prevent infectious disease.
- Ensure that solid waste is put in refuse containers or buried in a refuse pit.
- Ensure that there are no medical wastes such as needles, drugs etc. lying around.
- Coordinate with the first aid team to inoculate against water borne diseases.
- Construct temporary soak pits for onsite disposal of carcasses.
- Ensure that dead bodies are registered and cremated after legal/religious formalities.

5. Relief Co-ordination: this will operate collection and distribution of all other collection and distribution of all other relief material except food and water supply.

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.
- Be transparent in the accounting and stocks by giving timely correct information.

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 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.

6. Information and Damage Assessment: This team 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 village. 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 BDO/SDO/DC.

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

Pre – Disaster:

- Ensure that communication equipment's 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 interruption.
- Cross check 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.

CHAPTER – 8

RESPONSE AND RELIEF MEASURES

8.1 SHORT TERM RESPONSE PLAN

Short – term response plan contains the actions to be taken immediately after a disaster. Once an information has been reached the district EOC or any of the Disaster Mangers in the district either from authentic or unauthentic sources, it has to be reported to the Incident Commander via fast communication system. The Incident Commander shall take the following actions.

- Disseminate warning/ alert to the potential victims.
- Disseminate information to vertical and horizontal EOC's.\
- Disseminate information to vertical and horizontal Administration and DMT's.
- Declare Disaster based on the severity / vulnerability.

8.1.1 RESCUE OPERATIONS

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

- 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.

8.1.2 RELIEF OPERATIONS

Once the rescue phase is over, the district administration shall immediately relief assistance either in cash or in kind to the victims of the disaster. The DDMC shall enter in to pre-contract well in advance and procure materials required for life saving. The office of Deputy Commissioner is responsible for providing relief to the victims of natural & manmade disasters like fire, flood, drought, earthquakes, riots, terrorist attacks, accident's etc. the relief shall be provided as per the scale fixed by the government.

8.1.3 REHABILITATION

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

8.1.4 SEQUENCES OF ACTIONS TO BE TAKEN AT THE TIME OF DISASTER

- In the event of disaster, DC Lawngtlai, SP and Project Director, DRDA shall be informed immediately about the incident. Then, these three Officers would inform the concerned officials based upon the kind of disasters. The DEOC would also be activated in emergency mode. Besides, immediate relief and rescue operation would start at the places. Then, the DC will inform the level of disaster and accordingly action will be taken.
- The 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 from NGO's.
- The fire brigade 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 injuries will be immediately sent to Hospitals.
- District Quick Response Team and other District DM Teams should be sent to the site of disaster immediately.
- Different aspects 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.

8.2 LONG TERM RESPONSE TEAM

The long-term response plans are related with Recovery and Reconstruction activities on one side and institutionalizing disaster management in district administration on the other side. The former one is given in detail in the coming chapter. There are Standard Operation Procedures (SOPs) for the Emergency Support Functions. In long term measures the following action shall be undertaken duly.

- Constitution of Emergency Support Functions, Disaster Management Teams, Quick Response Teams, Field Response Teams.
- Refresher trainings for all such teams in a regular interval of time and exercise of Mock Drills.
- Continuous awareness / sensitization programmes for the stakeholders and the general Public.
- Getting pre-contract with vendors and merchant establishment to procure relief materials in times of disaster.

Most of the Line departments in the District, autonomous Bodies and Organizations are part of the Emergency support Functions. The action plan for ESFs for disaster management are discussed below. The DDMC shall ensure that these action plans are updated bi – annually and practiced through mock drills in the district.

8.3 ACTION PLAN FOR DIFFERENT DEPARTMENTS:

8.3.1 ACTION PLAN FOR POLICE:

Response Activation-

- The Nodal Officer from Mizoram Police will activate the Quick Response Teams.
- The Quick Response Teams will be deployed at the Onsite EOCs.
- As per the information from IMTs, more Officers may be sent to a site.

Action to be taken-

- If felt, cordoning of area to restrict movement of onlookers, vehicular and pedestrian traffic should be done.
- Quick assessment of law and order situation in affected areas.
- Prepare updates on the law and order situation every 2 – 3 hours and brief the Incident Commander.
- Arrangements for controlling situations like rioting and looting.
- QRTs will also provide information about traffic flow along various corridors especially heavy traffic or congested roads.
- 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's to be brought-

- Search Lights.
- Electric Lights.
- Crane – Heavy duty Fork Type.
- Recovery Van.
- Stretches.
- First Aid Kits.
- Vehicles: Mini Buses, Heavy Truck, Ambulance Vans.
- Mobilization Trucks.
- Water Tanker.
- Any other.

8.3.2 ACTION PLAN FOR FIRE AND EMERGENCY SERVICE:**Response Activation-**

- As soon as the Nodal officer gets information about the disaster, he should reach the EOC.
- The Quick Response Teams will be deployed at the Onsite EOCs.
- As per information from IMT, more Officers may be sent at side.

Action to be taken-

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

Equipment's to be brought-

- Water Tender.
- Ladder Platforms.
- Haz Mat Van.

- Concrete Cutter.

Other equipment's necessary for search and Rescue Operations, depends upon need. As soon as Fire and Emergency services gets information about the disaster, the Nodal Officer/duty Officer shall call the PHE department for help to arrange other trips of water or provide water from the nearest source available as early as possible. The necessity of such arrangement is obvious as the district has only one fire fighting vehicle.

8.3.3 ACTION PLAN FOR HOME GUARDS:

Response Activation-

- As soon as the Nodal Officer gets information about the disaster, reach the EOC.
- The Quick Response Teams will be deployed at the three sites.
- As per information received from Incident Management Team (IMT). More Officers may be sent at site.

Actions to be taken-

- Support and coordinate with the Incident Command System for Law and Order, Search and Rescue and Medical Response and Trauma Counselling functions.
- Locate the damaged and collapsed structures and rescue the population buried and trapped in rubble.
- Special care to women and children's groups should be given as they are expected to be more affected and helpless in case of any emergency situation.
- In case of fire, the CD team members should do firefighting.
- First Aid should be provided along with the members of ESF on Medical Response.
- Do Search and Rescue

Equipment's to be brought-

- Extension Ladders.
- Sledge Hammers.
- Lifting Tackles.
- Stretchers.
- Tarpaulins / Silpaulin.
- Any Other.

8.3.4 ACTION PLAN FOR POWER & ELECTRICITY:

Response Activation-

- As soon as the Nodal Officer gets information about the disaster reach the EOC.
- The Quick Response Teams will be deployed at the sites.
- As per information received from Incident Management Team (IMT), more Officers may be sent at site.

Actions to be taken-

- Will dispatch emergency repair teams equipped with tools, tents and food.
- Assist Hospitals in establishing an emergency supply by assembling generators and others emergency equipment's, if necessary.
- The members of QRTs will establish temporary electricity supplies for other key public and private water systems.
- The members of QRTs will make arrangement for temporary electricity supplies for transit camps, feeding centres, relief camps and Onsite EOC, District EOC and on access roads to the same.

- The members of QRTs will establish temporary electricity supplies for relief materials go downs.
- Compile and itemized assessment of damage, from reports made by various electrical receiving centres and sub – centres.
- Report about all the activities to the head office.

Equipments to be brought-

All materials required for restoration of supply available with the department in Field Officers/Stores.

8.3.5 ACTION PLAN FOR BSNL

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

Response Activation-

- Soon after receiving information about disaster (from any source), Nodal Officer will contact State/District Emergency Operation Centre.
- The Nodal Officer from BSNL will activate the Quick Response Teams.
- As per the information from Incident Management Team, more may be deployed at affected sits.

Action to be taken-

- Communicate situation to support agencies (Reliance, Airtel, NIC etc.) and request for detailed information on the status of equipment and infrastructure damage in the different areas(s).
- Launch assessment mission to understand better the nature of damage to telecom services and network.
- Ensure possible arrangements for establishing reliable and appropriate network.
- Work out a plan of action for private telecom companies and convene a meeting to discuss and finalize the modalities.
- Compile and communicate Action Take Report to District and State Authorities.
- New numbers and details of contact persons to be communicated to Emergency Operations Centre (District/State).
- Mobile exchanges should be deployed as alternative mode of communication for authorities and general public.
- Establish telephone facilities for the public and information on this should be announced through media.
- Monitor the situation and arrange for emergency staff required to operate systems established.
- Inform District/State authorities on debris clearness of the work required.
- Make available various types of equipment/ material / technical manpower and services, if requested.

Equipment's to be brought-

- Emergency Communication Van with GSM and CDMA services.
- Other necessary equipment's to restore communication network / set – up alternative emergency communication.

8.3.6 ACTION PLAN FOR PRIVATE MOBILE OPERATORS:

Goal: The BSNL is primarily responsible for restoration of communication facilities. The private operators should ensure the smooth flow of information that can cater to the out reaching a time – sensitive manner at state level in response efforts.

Response Activation –

- Soon after receiving information about the calamity (from any source). Nodal Officer will contact Team Leader from BSNL.
- The Nodal Officer will activate the Quick Response Team.
- The Quick Response Team will be deployed at the three incidents sites.
- As per the information from Incident Management Team, more teams may be deployed at the affected sites.

Action to be taken –

- Communicate situation of BSNL and arrange for detailed information on the status of equipment's and infrastructure damage in the affected area(s).
- Launch assessment mission to understand better the nature of damage to telecom services and network.
- Ensure possible arrangement for establishing reliable and appropriate network.
- Work out of plan of action for restoration and convene a meeting to discuss and finalize the modalities.
- Compile and Communicate Action Taken report to BSNL.
- New numbers and details of contact persons to be communicated to Emergency Operations Centre (District/State).
- Mobile exchanges should be deployed as alternative mode of communication for authorities and general public.
- Establish telephone facilities for the public and information on this should be announced through media.
- Monitor the situation and arrange for emergency staff required to operate systems established.
- Inform District / State authorities on debris clearance of the work required.
- Launch rehabilitation work and arrange for repairs and relocation, if required.
- Make available various types of equipment / material / technical manpower and services, if requested.

Equipment's to be brought-

- Emergency Communication Van with GSM services.
- Other necessary equipment's to restore communication network / set – up alternative emergency communication.

8.3.7 ACTION PLAN FOR PWD:

Action to be taken-

- The above agencies will bring debris of heavy RCC structures (having beams/columns) and put dummies beneath the debris. This will facilitate demonstration of search & rescue operations. Soon after search and rescue team leave the site, will mobilize equipment's for debris clearance.
- Assume role in Equipment's support, debris and road clearance, on receiving the intimation of the disaster from State EOC / Nodal Officer of MCD.

- Coordinate with the MCD Officers to mobilize equipment's from the warehouses.
- Contact respective personal to move the equipment's to central warehouse.
- The equipment's like JCB, concrete cutters identified as per the need will be transported to the site.
- On receiving on the intensity of the damages of structure, the Nodal Officer will make an assessment on of the damages of roads and structures reported at the site and surrounding areas.
- The Nodal Officer will call for personal to immediately start debris clearance operation to enable movement to the affected site.
- 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 ESFs to be operational.
- All supporting agencies will inspect the road / rail network and structures within the disaster site and surrounding.
- Ensure proper corpse disposal and post mortem by coordinating with ESF on medical response.
- Assessment of damage (location, no. of structure damaged, severity of damage).
- The QRT will be deployed at the affected site.
- Enlisting the types of equipment as complied from resource inventory required for conducting the debris clearance.
- The QRT will report the situation and the progress in response activities to the respective EOCs.
- Undertake construction of temporary roads to serve as access to temporary transit and relief camps, and medical facilities for disaster victims.
- Undertake repair of all paved and unpaved road surfaces including edge metalling, pothole patching and any failure of surface, foundations in the affected areas by maintenance engineer's staff and keep monitoring their conditions.
- Ensure a critical number of medical professionals to reach the site including specialists from outside the state.
- If temporary living arrangements are being made from the affected populace, the agencies must ensure high standards of situation in settlements in order to prevent the multiplicity of the disaster.
- Coordinate, direct, and integrate response to provide Equipment's support, relief camps establishment, and sanitation health assistances.
- Mobilizes different modes of transportation e.g., Trucks, etc. to be put on stand – by.
- Assist timely re – establishment of the critical transportation links.
- Compile an itemized assessment of damage, from reports made by various receiving centres and sub – centres.

Equipment's to be brought:

- JCB, Concrete breakers, Cranes, Grader, Bulldozers, Gas, Cutter, Jack Hammer, Tripper, Folkanes, Dumper, Aeromatic Hammer for debris / road clearance, supporting rescue operations.
- Vehicle (Trucks), Earth movers, rescue equipment's, mobile medical vans.
- Other disaster management related equipment's.

Quick Response Team:

Team Leader: *Executive Engineer* **Contact No:** 03835 – 232291 (O) / 233299 ®

Alternate Team Leader: *Sub – Divisional Officer* **Contact No:** 03835 –232291
Members: i) Junior Engineer ii) Lower Divisional Clerk

8.3.8 ACTION PLAN FOR PHE:

Response Activation-

- Upon receipt of notification about disaster, Nodal Officer will activate quick response teams.
- The quick response teams will be deployed at the sites.

Action to be taken-

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

Equipment's / Materials to be brought to site-

- Water tankers.

As soon as the department gets information about the disaster – especially in fire, the Nodal officer / duty Office shall lease with the PHE officials to arrange at the disaster site, a trip (HMT) of water for Fire Tender quickly. It is necessary for the fire Tender to get another trip of water in a short time unless such disaster may turn bad to worst.

The following telephone number may be utilized-

- | | | |
|-----------------------|---|--------------|
| 1. E.E., PHE | - | 232235 |
| 2. SDO., PHE | - | 232 235 |
| 3. Control Room i/c - | | 9612 327 979 |

8.3.9 ACTION PLAN FOR DEPARTMENT OF IRRIGATION (AGRICULTURE):

Response Activation-

- Team leader of ESF will activate Quick Response Team.
- QRTs will be deployed at all three sites.

Action to be taken –

- QRT to report situation and progress of action to the EOC.
- Coordinate will Team leader for water supply.
- Provide arrangements for transportation means across any river in case bridge network fails.

8.3.10 ACTION PLAN FOR DCSO, FOOD, CIVIL SUPPLIES & CONSUMER AFFAIRS

Response Activation-

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

Action to be taken –

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

Equipment's / Materials to be brought to site –

- Food packets.

8.3.11 ACTION PLAN FOR DEPARTMENT OF TRANSPORT:**Response Activation-**

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

Action to be taken –

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

8.3.12 ACTION PLAN FOR ARMY / MILITARY:**Response Activation-**

- Upon receipt of notification about disaster, nodal officer will activate quick response teams.
- The quick response teams will be deployed at the sites.
- Support and coordinate with the Incident Command System for Law and Order, Search and Rescue.
- Distribution of Relief material, Medical Response and Trauma Counselling functions.
- Locate the damaged and collapsed structures and rescue the population buried and trapped in rubble.
- Cordoning of area to restrict movement of onlookers, vehicular and pedestrian traffic should be done.
- Quick assessment of law and order situation in affected areas.

SEQUENCE OF EVENTS, EXPECTED AND AGENCIES INVOLVED

Sl. No.	Event
1	Notification Phase: to district Authorities of the incident – Tremors lead falling of buildings.
2	Notification Phase: Notification to State and National Authorities by the designated Unified Commander.
3	Response Phase: Mobilization of Resources Movement of Emergency Response Team (ERT) under the overall supervision of Unified commander from their permanent location to the site of incident.
4	Physical movement and deployment of Emergency Response Teams at the site(s) of incident.

5	Response Phases: Cordon of the area, evaluation of the situation site security and control.
6	Response Phases: detection, Decontamination and Rescue & Evacuation (if chemical spillage takes place as an after effect of earthquake).
7	Safety.
8	Response Phase: Execution of rescue and relief operations.
9	Setting up of Relief Camps at safe community buildings / open spaces.
10	Actions to information officer of media management.
11	Restoration and recovery.
12	Crime Investigation.

8.3.13 COMPOSITION OF SEARCH AND RESCUE TEAM:

The Typical Search and Rescue Team should consist of –

- Rescue and evacuation team.
- Relief team, Medical Unit, Technical Support team.
- Damage and need assessment team.

Rescue Requirement-

- Acoustic listening devices.
- Search Cams.
- Thermal Imaging Cameras.
- Rescue gears.
- Canines.
- Hydraulic platform 60 mts. Telescopic cum Articulating.
- Hydraulic platform 54 mts. Telescopic with Articulating tip boom.
- Hydraulic platform 45 mts. Telescopic with Articulating tip boom & rotating cage.
- Hydraulic Telescope crane (45 mts.100 ton capacity).
- Hydraulic / pneumatic rescue tools (Heavy duty industrial type) Concrete saws, portables, gasoline operated with diamond chains.
- 12" & 14" with water pump hose / connectors.
- Concrete breakers (28 kgs).
- Concrete breakers (10 kgs).
- Pneumatic High – Pressure lifting bags 12 to 132 tons.
- Life detector compact system.
- Helmets with head mounted strap light / battery & wireless / wake – talkie adapters.
- Mechanical jack supports.
- Hydraulic jacking system. Front End Loader (JCB Type).
- Bucket cap 1.0 cu.mt/Back hoe cap. 0.2/0.3 cu.mt.HP
- Bucket cap 0.2 cu. mt. HP
- Bucket cap 1.0 cu.mt. HP
- Excavator, Bucket cap 0.3 cu. mt.wt @ 7/8 ton, HP @50/60 HP
- Bucket cap 1.0 cu.mt.wt @20/25 ton, HP @120/135.
- Wheel Dozer G14 D type. Bulldozer D80 A12, Tipper truck, Tractors.
- Lifting crane cap. 25 ton.
- Mobile medical van, Tata Sumo.
- Dead animal van/Animal ambulance.
- Do watering pump heavy duty mounted on an LCV.
- Towing crane, Trailer 25 ton to transfer the machinery.
- Mobile Breakdown Unit.

Other Resources-

- Emergency lights, torches.
- Public Address Systems (battery operated).
- Stretchers, Covered dustbins.
- Earth digging equipment's.
- Polythene sheets, Fire – fighting equipment.
- Bleaching Powder, First Aid Kits.
- Protective shoes/gloves, Casualty bags.

CHAPTER – 9

RECONSTRUCTION, REHABILITATION AND RECOVERY MEASURES

9.1 GENERAL POLICY GUIDELINES

The District Administration will give assistance to victims of Natural Calamities based on the nature of damages. All assistance given to victims is based on the guidelines of SDRF norms. The assistance that can be received from SRDF norms is as under.

9.2 FINANCIAL ARRANGEMENT

To ensure the long – term sustenance and permanency of the organisation, funds would be generated and deployed on as ongoing basis. There are different ways to raise the fund in the State as described below;

9.2.1 STATE BUDGET

The authority submits to the State Government for approval a budget in the prescribed form for the next financial year, showing the estimated receipts and expenditure, and the sums which would be required from the State Government during the financial year.

As per the provision of the Disaster Management Act, 2005 the Authority may accept grants, subventions, donations and gift from Central or State Government or a local authority or any individual or body, whether incorporated or not.

9.2.2 STATE DISASTER RESPONSE FUND

To carry out Emergency Response & Relief activities after any disaster. The State Disaster Response Fund is made available to Secretary, Disaster Management & Rehabilitation Department under which the Central Government will share 90% and the Govt. of Mizoram has to share 10% as per the recommendation of the 13th Finance Commission.

9.2.3 GRANT IN AID

Further, the State may receive a grant in aid from Central Govt. of Ministry of DONER, NEC and / or other departments / agencies to carry out specific projects / schemes related to disaster management / mitigation / capacity building.

9.2.4 PARTNERSHIP

These are project / schemes in which funding can be done by a public authority and a private party in partnership (also called a PPP mode funding) in which the Sate Govt. along with Private organisation and Central Govt. share their part.

9.3 FINANCE BUDGETING

Budget planning is a comprehensive exercise for annual financial planning. For DM, there can be two categories of budget heads:

- a) Line Department's own fund through various schemes and programmes.
- b) Additional budget required particularly for DM activities. Following are the source available (or to be tapped) for different components of disaster management.

Name	Purpose	Finance Arrangement	Activities that can be taken under scheme	Nodal Agency
NDRF (NCCF)	Relief Assistance	100% Central Government	Cash and kind relief	DM&R Department
SDRF (CRF)	Relief Assistance	90% Centre 10% State	Cash and kind relief	DM&R Department
Planning Commission P (13 Finance commission) year 2011 -2015	Capacity Building	100% Centre	Training Awareness Generation IEC Materials Mock drills	DM&R Department
Line Department Funds	Preparedness and Mitigation	Line Department budgetary allocation	Activities falling in purview from DRP, preparedness and mitigation	Line Department
District Planning Fund	Any public work	MPLAD and MLALAD	Preparedness, Mitigation, Capacity building, recovery	Local Bodies, Line Department
Donor	Any	Total donation in cash and kind	Any	SDMA/DDMA

9.4 REVISED LIST OF ITEMS AND NORMS OF ASSISTANCE FROM STATE DISASTER RESPONSE FUND (SDRF) AND NATIONAL DISASTER RESPONSE FUND (NDRF)

(Period 2010-105, MHA Letter No. 32-7/2011-NDM-I Dated the 16th January, 2012 modified vide letter No.32-3/2013-NDM-I, dated 28th September, 2012 modified vide No.32-3/2013-NDM-I, dated 21st June 2013)

Sl/No	Item	Norms of Assistance
1	Gratuitous relief	
1	(a) Ex-Gratia payment to the families of deceased	• Rs.4.00 lakh per deceased persons including those involved in relief operations or associated in preparedness activities subject to certification regarding cause of death from appropriate authority. • In the case of an Indian citizen who loses his life due to a notified natural calamity in a foreign country, his family would not be paid this relief. • In the case of a foreign citizen who loses his life due to a notified natural calamity within the territory of India, his family would also not be paid this relief.
	(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 lakh 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/household 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 whose livelihood is seriously affected.	• Rs. 60/- per adult, and Rs. 45/- per child, not housed in relief camps. State Govt. will certify that (i) these persons have no food reserve, or their food reserves have been wiped out in the calamity, and (ii) identified beneficiaries are not housed in relief camps. Further 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 upto to 30 days, which may be extended upto 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.
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.
	(a) 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. Medical care may be provided from National Rural Health Mission (NHRM)
	(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 air dropping 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 may be extended up to 90 days in case of drought
4	CLEARANCE OF AFFECTED AREAS	
	(a) Clearance of affected areas.	As per actual cost for a period 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 for a period 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 (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	

A	Assistance for land and other loss	
	(a) De – silting of agricultural land (where thickness of sand / salt deposit is more than 3 " to be certified by the competent authority of the State Government)	Rs. 18,000/- per hectare for each item (subject to the condition that no other assistance/subsidy has been availed of by/is eligible to the beneficiaries under any other Government Scheme)
	(b) Removal of debris on agricultural land in hilly areas.	
	(c) De – silting / Restoration / Repair of fish farms	
	(d) Loss of substantial portion of land caused by land slide, 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.

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 and restricted to sown areas. Rs. 17,000/- per hectare in assured irrigated areas, subject to minimum assistance not less than Rs. 2,000/- and restricted to sown areas.
	(b) Perennial crops	Rs. 22,500/- per hectare for all types of perennial crops subject to minimum assistance not less than Rs. 2,000/- and restricted to sown areas.
	(c) Sericulture	Rs. 6,000/- per ha for Eri, Mulberry, Tussar Rs. 7,500/- per ha for Muga.
(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 and restricted to sown areas. Assistance may be provided where crop loss is 33% and above, subject to a ceiling of 2 ha per farmer.
6	ANIMAL HUSBANDRY-ASSISTANCE TO SMALL AND MARGINAL FARMER	
	(i) Replacement of draught animals, milch animals or animals used for haulage	Milch Animal Rs. 37,500/- Buffalo/Cow/Camel/Yak etc. Rs. 4,000/- Sheep/Goat/Pig

		<u>Draught Animals</u> Rs. 32,000/- Camel/Horse/Bullock etc. Rs 20,000/- 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 1 large milch animal or 4 small milch animals or 1 large draught animal or 2 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). Poultry • Poultry @ Rs100/- 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 the senorms 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.	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 upto 30 days which may be extended upto 60 days in the first instance and in case of severe drought up to 90 days. 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 about 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	HANDICRAFT/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 the competent authority designated by the State Government about loss and its replacement.
9	HOUSING	
	(a) Fully damaged/destroyed housed	
	(i) Pucca house	Rs. 1,30,000/- per house, in plain areas Rs. 1,30,000/- per house, in hilly areas
	(ii) Kutcha House	
	(b) Severely damaged Houses	
	(i) Pucca House	
	(ii) Kutcha House	
	(c) Partially Damaged House-both	Pucca: Rs.6,500/- per house

	pucca/kutchra (other than huts) where the damage is at least 15%	Kutchra: Rs. 4,000/- per house
	(d) Damaged/destroyed huts	Rs. 8,000/- per Hut (Hut means- Temporary, make shift unit, inferior to Kutchra 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	Rs. 3,000/- per shed
10	INFRASTRUCTURE	
	Repair/restoration of immediate nature of the damaged infrastructure (1) Roads & Bridges (2) Drinking Water Supply Works, (3) Irrigation, (4) Power (only limited to immediate restoration of electricity supply in the affected areas, (5) Primary Education (6) Primary Health Centres, (7) Community assets owned by Panchayat. Sectors such as Telecommunication and Power (except immediate restoration of power supply), which generate their own revenues, and also undertake immediate repair/restoration works from their own funds/resources, are excluded.	Activities of immediate nature: An illustration list of activities which may be Considered as works of an immediate nature are given in the enclosed Appendix. Assessment of requirement: Based on assessment of need, as per States cost/rates/scheduled for repair, by SEC and recommendation of the Central Team (in case of NDRF). -As regard repairs of roads, due consideration shall be given to Norms for Maintenance of Roads in India, 2001, as amended from time to time, for repair of roads affected by heavy rains/floods, cyclone, landslide sand dunes, etc. to restore traffic. For reference these norms are -Normal and Urban areas up to 15% of the total of Ordinary Repair (OR) and Periodical Repair (PR). -Hills: up to 20% of total of OR and PR. Note: States shall first use its provision under the budget for regular maintenance and repair.
11	PROCUREMENT	
	Procurement of essential search and rescue and evacuation equipments including communication equipments etc. for response to disaster.	Expenditure is to be incurred from SDRF only (and not from NDRF) as assessed by the State Executive Committee (SEC). The total expenditure on this item should not exceed 5% of the annual allocation of the SDRF.

CHAPTER-10

INCIDENT RESPONSE SYSTEM

10.1 DIRECTION, CONTROL AND COORDINATION (INCIDENT RESPONSE SYSTEM (IRS)):

Incident Response System (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.

The IRS organization functions through Incident Response Teams (IRTs) in the field. In line with the administrative structure and DM Act, 2005, Responsible Officers (ROs) have been designated at the State and District level as overall in charge of the incident response management. The Responsible Officer may, however, delegate responsibilities to the Incident Commander (IC), who in turn will manage the incident through IRTs. The IRT is a team comprising of all positions of IRS organization as shown in figure below headed by IC. The IRTs will be pre-designated at all levels of State and District. On receipt of early warning, they will be activated by the Responsible Officer. A Nodal Officer has to be designated for proper coordination between the District, State and National level in activation and support for response.

Apart from the Responsible Officer and Nodal Officer, the IRS has two main components-(a) Command staff and (b) General Staff, as shown below:

- 1. COMMAND STAFF:** This section of IRS establishes the framework within which a single leader (IC) can manage the overall event response effort. One person is responsible with all authority to manage the situation successfully. If the disaster area is large different, command posts will take care of the different areas. In that cases multiple incidence commanders can operate independently with one incident command.

Incident Commander requires the following staff to support the operation:

- Public Information Officer- the single media point for contact.
 - Safety Officer- Responsible for identifying safety issues and
 - Fixing them for any operational issues.
 - Liaison Officer- Point of contact for agency to agency issues.
- 2. GENERAL STAFF:** This section of IRS constitutes staff that are responsible for planning, operation of DM activities, logistic support, finance and administration of

disaster incident activities. Each of these section have specific function in the overall response.

3. **PLANNING SECTION (PS):** This section has to support the disaster management effort by collecting, evaluating, disseminating information about the development of the emergency and status of all available resources. This section creates the action plan, often called Incident Action Plan (IAP), which shall guide the emergency operation/response by objectives. The following are the six primary activities performed under the planning section:
 - Collection, evaluation and display of incident intelligence and information.
 - Preparing and documenting IAPs.
 - Conducting long range and contingency planning.
4. **OPERATIONS SECTION (OS):** This section carries out the response activities described in the IAP along with coordinating and managing the activities. It coordinates action taken by the responding agencies and officials that are directed at reducing the immediate hazard, protecting lives and properties. This section manages the tactical field work and assigns most of the resources used to respond to the event. Within operations, separate sections are established to perform different functions such as emergency services, law enforcement, public works etc.
5. **LOGISTIC SECTION (LS):** the process of response includes personnel, equipment's, vehicles, facilities etc., all which will depend upon the acquisition, transport and distribution of resources, the provision of food and water and proper medical attention.

The logistic section is thus responsible for providing adequate services and support to meet all incident or event needs.

IRS requires the effort of general staffs, who are responsible for the execution of the emergency response services. They should be divided into units or groups, according to the requirement of the above component. A group or unit manages the resources at field. Groups are functional in nature and divided into various geography units. Fields operation depends either on function or geographical basis.

The resources wise three standards are used during the field operations and they are following:

- Single resource – it is any resource.
- Strike Team – a number of resources of same type organized together under a single leader and answering to a single radio call sign.
- Task Force – resources of different types together from a Task Force.

10.2 IRS ESTABLISHMENT AND COORDINATION AT DISTRICT LEVEL

The District Commissioner is the head of the District administrative set up and chairperson of the District Disaster Management Authority as per the District Disaster Management Act, 2005. He is designated as the Responsible Officer in the District. The heads of different departments in the District will have separate roles to play depending on the nature and kind of disaster. The roles and responsibilities of the members of the District Disaster Management Authority will be decided in consultation with the concerned members. The roles of other line departments also have to be clearly delineated in various disaster situations in the District DM Plan which will be duly approved by the State Government, so that there will be no ambiguity about their functions during response. During the pre-disaster period, the Responsible Officer will

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 resolution of all conflicts. For this purpose he may attach a representative of such agencies in the EOC where all conflicts can easily be resolved at the highest level. The teams so deployed will have to work in OS in the form Single Resource, Strike Teams or Task Forces under the supervision of Operation Section Chief. The Incident Commander (IC) will also exercise close supervision for resolution of all conflicts, if required. The Incident Commander (IC) will work in close coordination with EOC and report to Responsible Officer. The Responsible Officer. The Responsible Officer will ensure that strategic goals are achieved through the implementation of the IAP by the IRTs working in the field.

IRS POSITION AND SUITABLE OFFICERS AT STATE LEVEL

Suitable Officers	IRS Position
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 (Civil)
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, YLA
Single Resources	SMO – Health & Family Welfare Dept. SDO – PWD / P&E, S.O, F & ES
Transportation Branch	District Transport Officer
Road Group	
Group-in-charge	Deputy Superintendent of Police
Vehicle Coordinator / Loading – in Charge / Unloading – in - Charge	Motor Vehicle Inspector, Transport Dept.
Rail Group	
Group-in-charge	Not Relevant in District Level in Mizoram
Coordinator	Not Relevant in District Level in Mizoram
Loading – in – Charge Unloading – in - Charge	Not Relevant in District Level in Mizoram
Water Group	
Group-in-charge	Executive Engineer, PHE
Coordinator	Executive Engineer, PHE
Loading – in – Charge Unloading – in - Charge	Sub Division Officer, PHE
Air Operation Group	
Group-in-charge / Air Operation	District / Aviation
Helibase / Helipad – in - charge	Superintending Engineer / Executive Engineer PWD
Loading – in – Charge Unloading – in - Charge	Superintending of Excise

PLANNING SECTION CHIEF	Deputy Commissioner
RESOURCE Unit	Commandant, MRHG
Check – in status Recorder	DFO, Environment & Forest
Situation Unit	Sub – Divisional Police Officer
Display Processor	District Information & Public Relation Officer
Field Observer	Representative of Sub Hqrs. YLA
Weather Observer	DAO, Agriculture Dept.
Documentation Unit	DEO, Education Dept.
Demobilization Unit	Superintendent of Police
Technical Specialist	Executive Engineer, P&E Dept.
LOGISTICS SECTION CHIEF	Superintendent of Police
Service Branch Director	Local Administrative Officer
Communication Unit	Inspector Wireless, Police Dept.
Medical Unit	CMO, Health & Family Welfare Dept.
Food Unit	DCSO. FCS&CA Dept.
Support Branch Director	District Local Administrative Officer
Resource Provisioning Unit	DCSO. FCS&CA Dept.
Facilities Unit	Superintendent of Taxes
Ground Support Unit	Executive Engineer, Public Work Department
Finance Branch Director	District Treasury Officer, Account & Treasuries Dept.
Time Unit	District Research Officer, Economic & Statistic
Compensation / Claim Unit	Settlement Officer / Asst. Settlement Officer, Revenue Dept. / Revenue Officer
Procurement Unit	Deputy Commissioner
Cost Unit	Deputy Commissioner

10.3 ROLES AND RESPONSIBILITY OF DEPUTY COMMISSIONER AS RESPONSIBLE OFFICER OF DISTRICT

The Deputy Commissioner who is the head of the District administrative set up and chairperson of the District Disaster Management Authority will have the following responsibilities as Response Officer in his / her respective District.

- Ensures that IRTs are formed at District, Sub – Division and Block Levels and IRS integrated in the District DM Plan, this may be achieved by issuing a standing Order to all SDOs, SDMs and BDOs.
- Ensure web based / online Decision Support System (DSS) is in place on EOC and connected District, Sub – Division and Block level IRTs for support.
- Ensure that toll free emergency numbers existing for Police, Fire and Medical support etc. are linked to the District EOCF for response, command and control.
- Obtain funds from State Governments as recommended by the 13th FC and ensure that training calendar for IRTs of district is prepared and a member of IRTs are trained through ATIs and other training institution of the District.
- Delegate authorities to the IC.
- Activate IRTs at District Headquarters, Sub – Division and Block levels, as and when disaster strikes.
- Appoint / Deploy, terminate and demobilize IC and IRT(s) as and when required.
- Decide overall incident objectives, priorities and ensure that various objectives do not conflict with each other.
- Ensure that IAP is prepared by the IC and implemented.

- Remain fully briefed on the Incident Action Plan (IAP) and its implementation.
- Coordinates all response activity.
- Give directions for the release and use of resources available with any department of the Government, Local Authority, privates sector etc. in the District.
- Ensure that Armed Forces arrive in support for disaster response, their logistic requirements like camping grounds, potable water, electricity and requirement of vehicles etc. are sorted out.
- Appoint a Group – in – charge of Air operation at the District level to organize Air operation support in coordination with the state and Central Government Nodal Officers (Air Operations). Also ensure that all ICs of IRTs of the District are aware of it.
- Ensure that the NGOs carry out their activities in an equitable and non – discriminatory manner.
- Deploy the District Headquarter IRTs at the incident site, in case of need.
- Ensure that effective communications are in place.
- Ensure that telephone directory of all emergency support facilities are prepare and available with EOC and members of IRTs.
- Ensure provision for accountability of personnel and safe operating environment.
- In case the situation deteriorates, the District Responsible Officer may assume the role of the IC and may seek support from the State Level Responsible Officer.
- Mobilize experts and consultants in the relevant fields to advise and assist as may be deem necessary.
- Conduct post response review on performance of IRTs and take appropriate steps to improve performance.
- Take other necessary action within the district as the situation demands.

10.3.1 ROLES AND RESPONSIBILITIES OF INCIDENT COMMANDER (IC) – STATE & DISTRICT

The Incident Commander (state & District Level) is the overall in charge for the management of onsite response to any incident. For his assistance and management of the incident there are two sets of staff: a) Command staff and b) General Staff. The command staff comprises IC, Information & Media Officer (IMO), Safety Officer (SO), and the Liaison Officer (LO). The General Staff comprise IC, Deputy IC, operation Section Chief (OSC), Planning Section Chief (PSC) and Logistic Section Chief (LSC).

The Principle Secretary / Secretary, DM&R Department, Govt. of Mizoram shall be the IC at the District levels. They shall have the following responsibilities:

- Obtain information on:
 - Situation status like number of people and the area affected etc.
 - Availability and procurement of resources.
 - Requirement of facilities like ICP, Staging Area, Incident Area, Incident Base, Camp, Relief Camp, etc.
 - Availability and requirements of Communication System.
 - Weather forecast from IMD, Science & Technology Dept., Agriculture Dept.
 - Any other information required for response from all available sources.
- Determine incident objectives and strategies based on the available information and resources.
- Establish immediate priorities, including search & rescue and relief distribution strategies.

- Assess requirements for maintenance of law and order, traffic etc. if any, at the incident site and make arrangements with help of the Police Dept.
- Brief higher authorities about the situation and request for additional resources, if required.
- Establish appropriate IRS organization with Sections, Branches, Divisions and/or Units based on the span of control and scale of the incident.
- Establish Incident Command Post (ICP at a suitable place. There will be ICP even if the incident is multijurisdictional. If appropriate or enough space is not available, other Sections can function from a different convenient location. But there should be proper and fail safe with the ICP in order to provide quick assistance.
- Ensure that the Incident Action Plan (IAP) is prepared.
- Ensure that team members are briefed on performance of various activities as per IAP.
- Approve and authorize the implementation of an IAP and ensure that IAP is regularly developed and updated as per debriefing of IRT members. It will be reviewed every 24 Hours and circulated to all concerned.
- Ensure that planning meeting are held at regular intervals. The meeting will draw out an implementation strategy and IAP for effective incident response. The decision to hold this meeting is solely the responsibility of the IC. Apart from other members, ensure that PSC attend all briefing and debriefing meeting.
- Ensure that all Sections or Units are working as per IAP.
- Ensure that adequate safety measures for responders and affected communities are in place.
- Ensure proper coordination between all Sections of the IRT, agencies working in the response activities and make sure that all conflicts are resolved.
- Ensure that computerized and web based IT solutions are used for planning, resource mobilization and deployment of trained IRT members.
- Consider requirement of resources, equipment which are not available in the functional jurisdiction, discuss with PSC and LSC and inform Responsible Officer regarding their procurement.
- Approve and ensure that the required additional resources and procured and issued to the concerned sections, Branches, and Units etc. and are properly utilized. On completion of assigned work, the resource will be returned immediately for utilization elsewhere or to the department concerned.
- If required, establish contact with CBOs, NGOs etc. and seek their cooperation on achieving the objectives of IAP and enlist their support to act as local guides in assisting the external rescue and relief teams.
- Approve the deployment of volunteers and such other personnel and ensure that they follow the operations as planned.
- Authorize release of information to the media.
- Ensure that the record of resources mobilized from outside is maintained so that prompt payment can be made for hired resources.
- Ensure that Incident Status Summary (ISS) is completed and forwarded to the Responsible Officer.
- Recommended demobilization of the IRT, when appropriate.
- Review public complaints and recommend suitable grievance redress measures to the R.
- Ensure that the NGOs and other social organization deployed in the affected sites are working properly and in an equitable manner.

- Ensure preparation of After Action Report (AAR) prior to the demobilization of the IRT on completion of the incident response.
- Perform any other duties that may be required for the management of the incident.
- Ensure that the record of various activities performed by members of Branches, Divisions, Units/Groups are collected and maintained in the Unit Log (prescribed format).
- Perform such other duties as assigned by Responsible Officer.

10.3.2 ROLES AND RESPONSIBILITIES OF INFORMATION & MEDIA OFFICER (IMO) – STATE & DISTRICT

The Information & Media Officer (IMO) is the focal point of all matters related with public media communication about disasters happening within their area of operation. The District Information & Public Relations Dept. shall be the IMO at the District level. They shall have the following duties and responsibilities as mentioned below:

- Prepare and release information about the incident to the media agencies and others with the approval of IC.
- Jot down decision taken and directions issued in case of sudden disasters when the IRT has not been fully activated and hand it over to the Planning Section on its activation for incorporation in the IAP.
- Ask for additional personnel support depending on the scale of incident and workload.
- Monitor and review various media reports regarding the incident that may be useful for incident planning.
- Organize IAP meetings as directed by the IC or when required.
- Coordinate with IMD, weather observers of State Science & Technology Dept., Agriculture Department to collect weather information and disseminate it to all concerned.
- Maintain records of various activities performed during pre and post disaster incidents.
- Perform such other duties as assigned by IC.

10.3.3 ROLES & RESPONSIBILITIES OF LIAISON OFFICER (LO) – STATE & DISTRICT

The Liaison Officer (LO) is the focal point of contact for various line departments, representative of NGOs, CBOs etc. participating in the response. The LO is also the point of contact to assist the first responders and other cooperating agencies. The State Protocol Officer shall be the LO at State level and the SDO (Sadar) shall be the Liaison Officer at District levels. They shall have the following responsibilities:

- Maintain a list of concerned line departments, agencies (CBOs, NGOs, etc.) and their representatives at various locations.
- Carry out liaison with all concerned agencies including NDRF and Armed Forces and line departments of Government.
- Monitor Operations to identify current or potential inter – agency Problems.
- Participate in planning meetings and provide information on response by participating agencies.
- Ask for personnel support if required.
- Keep the IC informed about arrivals of all the Government and Non-Government agencies and their resources.

- Help in organizing briefing sessions of all Governmental and Non-Governmental agencies with the IC.
- Maintain records of various activities performed, pertaining to the above-mentioned actions.
- Perform such other duties as assigned by IC.

10.3.4 ROLES AND RESPONSIBILITIES OF SAFETY OFFICER (SO) – STATE & DISTRICT

The Safety Officer (SO) function is to develop and recommend measures for ensuring safety of personnel, and to assess and/or anticipate hazardous and unsafe situations. The SO is authorized to stop or prevent unsafe acts. SO may also give general advice on safety of affected communities. The Secretary, Health & Family Welfare Dept. shall be the SO at State level and the SDC i/c Disaster Management, shall be the SO at District levels. They shall have the following roles and responsibilities:

- Recommend measures for assuring safety of responders and to assess or anticipate hazardous and unsafe situations and review it regularly.
- Ask for assistants and assign responsibilities as required.
- Participate in planning meetings for preparation of IAP.
- Review the IAP for safety implications.
- Obtain details of accidents that have occurred within the incident area if required or as directed by IC and inform the appropriate authorities.
- Maintain record of various activities performed by him/her.
- Perform such other duties as assigned by IC.

10.3.5 ROLES AND RESPONSIBILITIES OF OPERATION SECTION CHIEF (OSC) – STATE & DISTRICT

On activation of the Operation Section, the OSC will assume command of all the field operations and will be fully responsible for directing all tactical actions to meet the incident objectives. The OSC will be responsible for activation, deployment and expansion of his Section as per IAP. The DGP, Police Department, shall be the Operation Section Chief at the State level and Addl. Superintendent of Police, shall be the OSC at District levels. The following are their roles and responsibilities:

- Coordinate with the activated Section Chiefs.
- Manage all field operations for the accomplishment of the incident objectives.
- Ensure the overall safety of personnel involved in the Operation Section (OS) and the effected communities.
- Deploy, activate, expand and supervise organizational elements (Branch, Division, Group, etc.) in his Section in consultation with the IC and in accordance with the IAP.
- Assign appropriate personnel, keeping their capabilities for the task in mind and maintain On Duty Officers list for the day.
- Request IC for providing a Deputy OSC for assistance, if required and depending on the scale of disaster.
- Brief the personnel in OS as the beginning of each operational period.
- Ensure resolution of all conflicts, information sharing, coordination and cooperation between the various Branches of his Section.
- Prepare Section Operational Plan in accordance with the IAP; if required.
- Suggest expedient changes in the IAP to the IC.
- Consult the IC from time to time and keep him fully briefed.
- Determine the need for additional resources and place demands accordingly and ensure their arrival.
- Ensure records of various activities performed by members of Branches, Divisions, Units/Groups and maintained in the Unit Log.
- Perform such other duties as assigned by Responsible Officer / IC.

10.3.6 ROLES AND RESPONSIBILITIES OF STAGING AREA MANAGER (SAM) – STATE & DISTRICT

The Staging Area (SA) is an area where resources are collected and kept ready for deployment for field operations. These may include things like food, vehicles and other materials and equipment. The SA will be established at a suitable area near the affected site for immediate, effective and quick deployment of resources. More than one SA may be established if required. School and college playgrounds, community halls, cyclone shelters and Local Council Officers, stadia etc. may be used as SA.

The overall in – charge of the SA is known as Staging Area Manager (SAM) and he needs to work in close liaison with both the Liaison Section and Planning Section through the OSC. The Additional Director General of Police shall be the Staging area Manager at State level and Sub Divisional Officer (Civil) shall be the SAM at the District levels. The following are their roles and responsibilities:

- Establish the SA with proper layout, maintain it in an orderly condition and ensure that there is no obstruction to the incoming and outgoing vehicles, resources, etc.
- Organize storage and dispatch of resources received and dispatch it as per IAP.
- Report all receipt and dispatches to OSC and maintain their records.
- Manage all activities of the SA.
- Utilize all perishable supplies expeditiously and establish check – in function.
- Request maintenance and repair of equipment at SA, as needed.
- Ensure that communications are established with the ICP and other required locations e.g. different SAs, Incident base, Camp, Relief Camp etc.
- Maintain and provide resource status to Planning Section and Liaison Section.
- Demobilize SA in accordance with the Demobilization Plan.
- Maintain records of various activities performed and send to Sections concerned.
- Perform any other duties as assigned by OSC.

10.3.7 ROLES AND RESPONSIBILITIES OF RESPONSE BRANCH DIRECTOR (RBD) – STATE & DISTRICT

Response Branch is the main responder in the field dealing with the situation and performing various functions. Depending on the scale of disaster, the RBD may have to expand the number of Groups which in turn may require creation of Division. This structure is meant for close supervision by the OSC in the management of large incident. More Branches, Divisions, groups may be formed as required. The Inspector General of Police (Law & Order), shall be the RBD at State level and the SDC shall be the RBD at District levels. The following are their roles and responsibilities.

- Work under the supervision of the OSC and is responsible for the implementation of IAP as per the assigned role.
- Attend planning meetings as required by the OSC.
- Review Assignment Lists for Division and Group – in – charge.
- Supervise Branch functions and resolve conflicts reported by sub – ordinates.
- Report to OSC regarding modifications required if any in the IAP, need for additional resources, availability of surplus resources and when hazardous situations or significant events occur etc.
- Provide Single Resource, Strike Team and Task Force support to various operational areas.

- Ensure that team leaders maintain record of various activities performed – relating to their field Operations and send to OSC.
- Perform any other duties assigned by the OSC.

10.3.8 ROLES AND RESPONSIBILITIES OF DIVISION SUPERVISION / GROUP – IN – CHARGE – STATE & DISTRICT

Except for the hierarchical difference, the roles and responsibilities of the division supervisor and the Group-in-charge are the same. Divisions are activated when there are supervisory requirements in an isolated and the distant geographical area or for the purpose of a proper span of control when the number of functional Groups increase or for various specialized response.

While Group-in-charge are assigned to accomplish specific functions within the Branch. Division are created for effective supervision over large number of Groups. At the State level, deputy Inspector General of Police (Range), shall be the Division Supervisor / Group-in-charge at District levels. They will have the following responsibilities.

- Implement Division or Group assignment list.
- Assign resources within the Division or Group under them.
- Report on the progress of operations, and the status of resources within the Division or Group.
- Circulate Organizational assignment List (Divisional / group) to the leaders of the Group, Strike Team and Task Force.
- Review assignments and incident activities with sub-ordinates and assign tasks as per the situation.
- Coordinate activities with adjacent Divisions or Groups, if required.
- Submit situation and resource status to the RBD and the OSC.
- Report all hazardous situations, special occurrences or significant events (e.g., accidents, sickness, deteriorating weather conditions, etc.) to the RBD and the OSC.
- Resolve problems within the Division or Group.
- Participate in the development of IAP for next operational period, if required.
- Ensure that records of various activities performed are collected and sent to the RBD and OSC.
- Perform any other duties as assigned by the RBD/OSC.

10.3.9 ROLES AND RESPONSIBILITIES OF TASK FORCE / STRIKE TEAM – STATE & DISTRICT

A Strike Team is a combination of Single Resource with a common communication facility and one leader. A task Force is a combination of different Single Resources. They are assembled for a particular tactical need, with a common communication facility and one leader. A strike Team may be needed when specific type of work, requiring specific expertise and resources are grouped under one leader. A Task Force may be grouped with different 'kinds' and 'types' of Single Resource and dispatched under a leader, when a number of different tasks requiring different expertise need to be performed.

The State Team or Task Force Leader reports to the Division Supervisor or Group Supervisor and is responsible for performing the tactical assignments assigned to the Strike Team or Task Force. The leader of the Strike Team and Task force reports on work progress and status of resources maintains work records on assigned personnel and relays important information to their supervisor. In case the Branch, Division, or Group is not activated, the team leader will directly report to the OSC. At the state level,

the Task Force/Strike Team shall comprise of SDRF, MRP, IR, MRHG, Fire and Emergency Service, Sport & Youth Service (Adventure wing), Central Young Lai Association (Disaster Management volunteer) with a Team Leader, similarly at the District level SDRF, MAP, MRP, IR, Fire & Emergency, Sub – Headquarter Young Lai Association (District Management volunteer) shall constitute the Task Force / Strike Teams. The team leader of the Task Force / Strike Team shall have the following responsibilities:

- Review assignments with members of his team.
- Report on work progress.
- Coordinate activities with adjacent Single Resource, Strike Teams and Task Forces if assigned.
- Establish and ensure communications.
- Perform any other duties assigned and maintain record of various activities.

10.3.10 ROLES AND RESPONSIBILITIES OF SINGLE RESOURCE LEADER (SRL) – STATE& DISTRICT

Single Resource includes both personnel and their required equipment to be deployed in a given incident. The Responsibilities Officers of the States and Districts will ensure that the resources are categorized into 'kind' and 'type'. In IRS resources are categorized under; a) 'kind' and b) 'type'. 'Kind' refers to equipment, vehicles or personnel for example; truck, medical team, bulldozer, etc. 'Type' refers to its capacity for that kind of resource e.g. truck having 1ton capacity or 2 tons capacity, medical team having 1 Doctor 3 paramedics etc.

Depending on the Resources at the State Level, the Single resources shall constitute available resources from Deputy Commissioner (IRT), Medical Superintendent (Civil Hospital), Engineer in Chief (PWD, PHE, P&E), Director (F&ES) and at the District level the Single resources shall constitute available resources from Sr. Medical Officer (Health & Family Welfare dept.), Sub Divisional Officer (Public Work Dept. / Power & Electricity dept.). the Single Resource leader will be the appointed by the OSC depending on the type of disaster and he/she shall have the following responsibilities:

- Take charge of necessary equipment and supplies.
- Assess local weather and environmental conditions, law and order situation etc. in the assigned area and report to the in – charge.
- Perform the assigned duty.
- Keep contact with supervisor.
- Perform any other duties that may be assigned by his supervisor.

10.3.11 ROLES AND RESPONSIBILITIES OF TRANSPORT BRANCH DIRECTOR (TBD) – STATE & DISTRICT

All functional Groups (Road, Rail, Water and Air) of the Transport Branch are managed by the Transport Branch are managed by the Transport Branch Director (TBD). The TBD at State level shall be the Director, Transport Dept. and at the District level – District Transport Officer. Since the air transportation is to be coordinated at the State and District levels, the TBD also needs to function in close coordination with Responsible Officer, IC and NO for Air Operations. He will collect the details of all related flights from the concerned NO and organize the ground support requirement. The TBD will also be responsible for the activation and expansion of various functional Groups as per the IAP. Besides, the TBD will have the following responsibilities:

- Activate and manage different Operations Groups like Road, Rail, Water and Air.
- Coordinate with the Liaison Section for required resources, and activate Groups of his Branch.

- Coordinate with railways, road transport, waterways and airport authorities for support as required.
- Ensure the Organizational Assignment List (Divisional / Group) is circulated among the Group – in – charge (s) and other responders of his Branch.
- Provide Ground support to the air operations and ensure appropriate security arrangements.
- Provide Road transport support to the Rail and Water Operations Group as required.
- Ensure safety of all personnel of his Branch involved in the Incident Response activities.
- Ensure that all units moving in the area are familiarized with route with the help of road maps or local guides.
- Report to the OSC and IC about progress of the Transport Branch.
- Prepare transportation plan as per the IAP, if required.
- Determine the need for additional resources, their proper and full use and place demand accordingly in advance.
- Resolve problems and conflicts, if any.
- Ensure the maintenance of the status of hired resources, their full utilization and timely release.
- Ensure that the records of various activities performed by different operational groups (Road, Rail, Water and Air) are collected and sent to the section concerned.
- Perform any other duties assigned by the IC or OSC.

10.3.12 ROLES AND RESPONSIBILITIES OF GROUP – IN – CHARGE (ROAD) – STATE & DISTRICT

The Group-in-charge (Road Operations) works under the TBD and is responsible for all road transportation activities. He has a Vehicle Coordinator (Road Operations) under him for assistance. The Superintendent of Police (Traffic) shall be Group-in-charge (Road) at State level and The Deputy Superintendent of Police shall be Group-in-charge (Road) at District levels. The following are their responsibilities:

- Ensure transportation of resources by Road to the affected sites.
- Requisition additional personnel support, if required.
- Attend planning meetings on the direction of OSC.
- Determine coordination procedures with various destinations as per IAP.
- Ensure proper parking locations.
- Resolve conflicts of the Group, if any.
- Update Road Operations plan as required and share them with higher authorities.
- In case of accidents, inform the TBD, the local Police and provide assistance in investigation, if required.
- Ensure that mechanics are available for repair of vehicles and also ensure adequate availability of Petrol, Oil and Lubricants (POL).
- Maintain the records of all important activities relating to the number of vehicles deployed, source of vehicles (i.e. Government of private), locations where vehicles are deployed along with resource details they are carrying, etc.
- Support and coordinate the Road Operations part of the Rail, Water and Air Operations as required.
- Collect records of various activities performed from coordinator and other members and send to TBD or OSC.
- Perform any other duties assigned by the TBD or OSC.

10.3.13 ROLES AND RESPONSIBILITIES OF VEHICLE COORDINATOR – STATE AND DISTRICT

The Vehicle coordinator is primarily responsible for coordinating the Road transport needs. There may be more than one coordinator depending upon the number of vehicles deployed. At the State level, Superintendent of Police (Traffic) shall be the Vehicle Coordinator and Jt. Director, Transport Dept. shall be the Vehicle Coordinator at the District levels. The following are their responsibilities:

- Survey the assigned incident area to analyse situation and identify other potential problems in the context of transportation.
- Requisition an Assistant Coordinator (Road Operations) depending on the magnitude of the incident and requirement.
- Coordinate with SAM for smooth transportation of resources.
- Receive assignments, brief drivers regarding the routes, assign missions, supervise vehicle movement and attend to the vehicle maintenance and repair needs.
- Monitor activities of all assigned vehicles and keep senior officers informed.
- Report incidents or accidents that occur in Road Operations to the TBD.
- Maintain the records of supplies to different locations and keep track of vehicle movements. Provide GPS support, if available.
- Request security support for transportation of relief materials if required and alert the Police administration in the affected areas along the transportation route.
- Maintain coordination at loading and unloading points;
- Ensure that communication facilities are established at loading stations, SAs and destination points.
- Attend to and resolve the needs of the personnel working under him.
- Maintain record of various activities performed and sent to the Group – in – charge or TBD.
- Perform any other duties assigned by the OSC or TBD.

10.3.14 ROLES AND RESPONSIBILITIES OF LOADING / UNLOADING – IN CHARGE (ROAD/RAIL/WATER) – STATE & DISTRICT

The loading and Unloading– in – charge has a very significant role to play in any disaster response. In the context of Mizoram, the operations related with Rail will be taken up by State level officials and assist District level operations if Rail services are required. The roles and responsibilities in Road, Rail and Water Operations are the same whereas the roles and responsibilities for the Air Operations is slightly different. Therefore, the roles and responsibilities of Loading / Unloading – in – charge are being dealt together for the Rail, Road and Water and separately for the Air Operations. The Loading / Unloading – in – charge will work under the Road, Rail and Water Coordinator. At the State level, loading & unloading in-charge in road, rail and water group shall be Addl. Superintendent of Police, Lower Divisional Clerk (Railway Out Agency) and Superintending Engineer (Public Health Engineering Dept.) respectively. At the District level, loading & unloading in-charge in road and water group shall be Motor Vehicle Inspector (Transport Dept.) and SDO (Public Health Engineering Dept.) respectively. They have the following responsibilities:

- Supervise the safe Operations of Loading Unloading activities.
- Obtain Operations Summary from the Group-in-charge (Road, Rail and Water transport).
- Organize the Loading area and supervise Loading and Unloading crews and collect equipment (ladder, gloves, helmet, etc.) as required.
- From time to time inform the coordinator about the progress of Loading / Unloading activities.
- Prepare a Loading / Unloading plan with details of their resources and destinations.
- Maintain record of various activities performed and send to the TBD or Coordinator.
- Perform any other duties assigned by Coordinator or in – charge (Road, Rail and Water).

10.3.15 ROLES AND RESPONSIBILITIES OF GROUP – IN – CHARGE (WATER) – STATE & DISTRICT

In some disasters, especially floods and cyclones, the need for Water Operations may become essential. Depending on the scale of the disaster, the TBD may activate a Water Operations Group, consisting of Group-in-charge, Coordinator and Loading / Unloading –in-charge. At the State level, the Engineer in Chief, PHE Dept., shall be the Group-in-charge (Water) and Superintending Engineer, PHE Dept. shall be at the Group-in-charge (Water) at the District level. The Group-in-charge shall have the following responsibilities:

- Ensure transportation of rescue teams and relief materials by motor boats or by any other water transport to the affected sites with communication facilities and a local guide for guidance with each team.
- Requisition personnel support, if required.
- Determine coordination procedures with various destinations as per IAP.
- Supervise all Water Operations plan and related activities associated with the incident.
- Update Water Operations plan and share it with the higher authorities, including the Liaison Section Chief.
- Arrange for an accident investigation team as and when required and cooperate with the appropriate investigating authorities.
- Ensure availability of POL and other logistic support for boat operations.
- Attend to the needs of the personnel working with him.
- Collect record of various activities performed from Coordinator and other in-charges and send to TBD or OSC.
- Perform such other duties as assigned by TBD or OSC.

10.3.16 ROLES AND RESPONSIBILITIES OF COORDINATOR (WATER) – STATE & DISTRICT

All the State level, the Chief Engineer, PHE Dept., shall be at the Coordinator of Water Group and Executive Engineer, PHE Department shall be at the Coordinator of Water Group at the District levels. The following are their responsibilities: The Coordinator (Water Operations) shall have the following responsibilities:

- Coordinate all activities relating to transportation of resource by boats, etc. Activation of this position is contingent upon the complexity of the incident. There may be more than one Coordinator (Water) assigned to an incident with Loading and Unloading – in – charge.
- Survey assigned incident areas to analyse the situation and other potential problems.
- Coordinate with SAM for smooth transportation of relief materials, if required.
- Receive assignments and supervise Water transport movement activities.
- Monitor all Water Operations for their safety.
- Ensure proper communications with Water transport personnel deployed in search and rescue as well as relief operations.
- Keep records of supplies to different locations, Water transport movements etc.
- Report incidents or accidents that may occur in Water Operations to the TBD and other designated authorities.
- Assess requirements of POL etc. for Water Operations and ensure their availability.
- Maintain liaison with Coordinator (Road Operations) as most relief supplies will arrive by road.
- Maintain record of various activities performed and send to the Group-in-charge or TBD.
- Perform any other duties assigned by the OSC or TBD.

10.3.17 ROLES AND RESPONSIBILITIES OF GROUP-IN-CHARGE (AIR OPERATIONS) – STATE & DISTRICT

At the State level, Principal Consultant, Civil Aviation shall be the Group-in-charge, Air Operation and the District Civil Supply Officer shall be the Group-in-charge (Air Operations) at the District levels. The following are their responsibilities:

The Group-in-charge (Air Operations) will have the following responsibilities:

- Provide ground to Air Operations as per the IAP.
- Identified the convenient, safe and easily accessible helipads for Air Operation.
- Report to TBD the progress of Air Operations and work in close coordination with the Nodal Officer, IC, OSC and TBD.
- Ensure resources and supplies required for the Air Operations are available at the concerned locations.
- Keep appropriate Maps in order to provide correct coordinates to the pilots and others involved in the Air Operations.
- Requisition additional personnel support, if required.
- Ensure refuelling facilities are available at the landing and take-off locations.
- Ensure that Helibase and Helipad locations are identified and approved by the appropriate authorities.
- Determine the need for assignment of personnel and equipment at each Helibase and Helipad.

- Ensure identification and marking of Helibase and Helipad.
- Ensure that the communication systems are in place.
- Update landing and take off schedule of Aircrafts and Helicopters as informed by Nodal Officer (Air Operations).
- Ensure preparation of the load manifest for proper loading or unloading of relief supplies.
- Arrange for unloading and dispatch or storage of relief materials that arrive at the airports, helipads and helibase. In order to keep airports operational, special attention needs to be paid to unsolicited relief supplies that may arrive. They should be immediately cleared from the operational area.
- Ensure that proper packaging and weighing facilities are in place and used for loading of relief materials.
- Liaise with the road operations group for the road transportation needs.
- Ensure the functionality of Aircraft rescue and fire fighting service at Helibases and Helipads, security, proper lights, smoke candles/devices, weighing facilities, wind direction socks, etc. are in place.
- Collect record of various activities performed form Helibase and Helipad – in – charge and send to TBD or OSC or IC.
- Perform any other duties assigned by the TBD.

10.3.18 ROLES AND RESPONSIBILITIES OF HELIBASE/HELIPAD – IN – CHARGE (AIR OPERATIONS) – STATE & DISTRICT

The Helibase is often located at the Airport or at another location decided by the District Administration in consultation and approval by the agency operating the Helicopter. When more than one Helibase is established it will be designate by name of the incident with number. Helipads are established and used for operational purpose only like loading unloading of personnel and equipment and other relief materials etc. Deputy Controller, Aviation Wing shall be the Helibase / Helipad – in – charge at the State level and Superintending Engineer/Executive Engineer (PWD) shall be the Helibase / helipad – in – charge (Air Operations) at the district levels. They will have the following responsibilities:

- Provide all ground support requirement of Helicopters at the location.
- Keep appropriate Maps in order to provide correct coordinates to the pilots.
- Survey the Helibase / Helipad area to analyse situation, potential Aircraft hazards and other likely problems.
- Ensure that the Helipad and Helibase is properly marked so that it is visible from the air for smooth landing of Aircrafts.
- Coordinate with ground supervisor for Helicopter Operations.
- Determine and implement ground and air safety requirements and procedures.
- Maintain continuous monitoring of the assigned Helibase and Helipads and remain vigilant for unusual happening or hazards that may affect the Air Operations and take precautionary measures.
- Ensure that all personnel deployed at the Helibase and Helipads are aware of the safety requirements.
- Establish ground communication facilities.
- Notify supervisor immediately of any delays in Helicopter schedules.
- Ensure that all personnel deployed at the Helibases and Helipads are aware of the safety requirements.
- Establish ground communication facilities.
- Notify supervisor immediately of any delays in Helicopter schedules.

- Ensure Aircraft rescue measures, fire fighting services, lights, smoke candles, weighing facilities, wind direction socks, dust abatement measures and security etc. are in place and working properly at Helibases and Helipads.
- Ensure proper facilities for rest, refreshment, water and sanitation for the Air crew.
- Inform the supervisor about the mission completion.
- Maintain record of various activities performed and send to Group – in – charge.
- Perform any other duties assigned by the Group – in – charge.

10.3.19 ROLES AND RESPONSIBILITIES OF LOADING / UNLOADING – IN – CHARGE (AIR OPERATIONS) – STATE & DISTRICT

At the state level Commissioner, Excise & Narcotics shall be the Loading / Unloading – in – charge (Air Operations) and District Excise Officer shall be the Loading / Unloading – in – charge at the District level. They will have the following responsibilities:

- Be responsible for the safe Operations of Loading and Unloading of cargo and personnel at Helibases.
- Report to the Airbases, Helibases and Helipad – in – charge.
- Ensure load manifest of personnel and cargo.
- Ensure no inflammable material is loaded on the Aircrafts.
- Supervise loading and unloading crew.
- Ensure proper packaging of the loads, keeping in view the weight restriction that may be imposed by the pilots due to weather conditions and make sure the weighing facilities are available for such purpose.
- Maintain record of various activities performed and send to Group – in – charge.
- Perform any other duties as assigned by the Group-in-charge, Helibase-in-charge and Helipad-in-charge.

INFORMATION AND ARRIVAL CENTRES

The traffic junction such as airports, railway stations and bus terminals will establish Information and Arrival Centre's which will be the key points for arrival and dispatch of relief materials and rescue workers. The incoming assets from within and outside the state will be clearly allotted and assigned to disaster sites with the help of various information centres. The information centre will function at the State level therefore will be accountable for all international aid and related formalities.

- **Arrival Point:** The transport junctions where relief materials as well as manpower can be collected for response activities. It could be the airport, bus stops and railway stations.
- **Information and briefing task:** The people / agencies will be briefed of the status of disaster, the most affected areas and the key agencies and personnel in the effected District(s). It will also coordinate and handle the relief material received from international and national agencies as a priority task.
- **Storage:** Storage facility at the arrival point where material is categorized and if needed, packed for dispatch.
- **Briefing Cell:** This cell will give specific briefing for different types of field workers.
- **Donation management cell:** The donations from other states and international agencies are packed and accounted for further distribution.
- **Point of departure:** Material and manpower are dispatched according to the requirement issued by the EOC at the centre.

10.3.20 ROLES AND RESPONSIBILITIES OF PLANNING SECTION CHIEF – STATE & DISTRICT

The Deputy Secretary, DM & R, Govt. of Mizoram shall be the Planning Section Chief (PSC) at the State level and Deputy Commissioner of respective districts shall be the PSC at the District levels. They shall have the following responsibilities:

- Coordinate with the activated Section Chiefs for planning and preparation of Incident Action Plan (IAP) in consultation with IC.
- Ensure that decisions taken and directions issued in case of sudden disasters when the PS has not been activated are obtained from the IMO (Command Staff) and incorporated in the IAP.
- Weather, environment toxicity, availability of resources etc. from concerned departments and other sources. The PS must have a databank of available resources with their locations from where it can be mobilized.
- Coordinate by assessing the current situation, predicting probable course of the incident and preparing alternative strategies for the Operations by preparing the IAP.
- Ensure that Organizational Assignment List (Divisional / Group is circulated among the Unit leaders and other responders of his Section.
- Plan to activate and deactivate IRS organizational positions as appropriate, in consultation with the IC and OSC.
- Determine the need for any specialized resources for the incident management.
- Utilize IT solutions for pro-active planning, GIS for decision support and modelling capabilities for assessing and estimating casualties and for comprehensive response management plan.
- Provide periodic projections on incident potential.
- Report to the IC of any significant changes that take place in the incident status.
- Compile and display incident status summary at the ICP.
- Oversee preparation and implementation of Incident Demobilization Plan.
- Assign appropriate personnel, keeping their capabilities for the tasks in mind and maintain On Duty Officers List for the day.
- Ensure that record of various activities performed by members of Units are collected and maintained in the Unit Log.
- Perform any other duties assigned by IC.

10.3.21 ROLES AND RESPONSIBILITIES OF RESOURCE UNIT LEADER (RUL) – STATE & DISTRICT

The Commandant, MRHG, Govt. of Mizoram shall be the Resource Unit Leader (RUL) at the State level and District Civil Supply Officer of respective districts shall be the RUL at the District levels. They shall have the following responsibilities:

- Maintain and display the status of all assigned resources (Primary and Support) at the incident site by overseeing the check –in of all resources, and maintaining a resource status-keeping system. Primary resources are meant for responders and support resources are meant for affected communities.
- Compile a complete inventory of all resources available. He will also access information about availability of all required resources at other locations and prepare a plan for their mobilization, if required. India Disaster Resource Network (IDRN), Corporate Disaster Resource Network (CDRN) and India Disaster Knowledge Network (IDKN) facilities will also be used for this purpose.
- Ensure and establish Check – in function at various incident locations.
- Update the PSC and IC about the status or resources received and dispatched from time to time.

- Coordinate with the various activated Branches, Divisions and Groups of OS for checking status and utilization of perishable resources.
- Ensure quick and proper utilization of perishable resources.
- Maintain record of various activities performed and send to Section concerned.
- Perform any other duties assigned by PSC.

10.3.22 ROLES AND RESPONSIBILITIES OF CHECK - IN / STATUS RECORDER - STATE & DISTRICT

Director, Sainik Welfare & Resettlement, Govt. of Mizoram shall be the Check - in / Status Recorder at the State level and DFO, Environment & Forest of respective districts shall be the RUL at the District levels. They shall have the following responsibilities:

- Ensure that all resources assigned to an incident are accounted for at each check-in point.
- Obtain required work materials, including Check - in lists, Resource Status display boards showing different locations for deployment of resources, collection of resources with time of arrival and type of resource etc.
- Establish communications with the EOC and Ground Support Unit (GSU) of LS.
- Ensure displays of check-in locations on signboard so that arriving resources can easily locate the Check-in location (s).
- Enter or record information on Incident Check-in and deployment list.
- Transmit Incident Check-in and deployment information to Resource Unit on a regular and pre-arranged schedules or as needed.
- Forward completed Check-in Lists to the Resource Unit.
- Maintain record of various activities performed and send to Sections concerned.
- Perform any other duties as assigned by PSC.

10.3.23 ROLES AND RESPONSIBILITIES OF SITUATION UNIT LEADER (SUL)

State Programme Officer, NSS, Govt. of Mizoram shall be the Situation Unit Leader (SUL) at the State level and Sub Divisional Police Officer of respective districts shall be the SUL at the District levels. They shall have the following responsibilities:

- Collect process and organize all incident information as soon as possible for analysis. For such purposes, he can take the help of members of the Single Resource, Task Forces, Strike Teams, field level Government officers and members of PRIs, CBOs, and NGOs etc.
- Prepare periodic future projections of the development of the incident (along with maps if required) and keep the PSC and IC informed.
- Prepare situation and resource status reports and disseminate as required.
- Provide authorized maps, photographic services to responders, if required.
- Attend IAP Meeting with required information, data, documents and Survey of India Maps, etc.
- Maintain record of various activities performed and send to Section concerned.
- Perform such other duties assigned by SUL or PSC.

10.3.24 ROLES AND RESPONSIBILITIES OF DISPLAY PROCESSOR (DP) - STATE & DISTRICT

The Display Processor (DP) is responsible for the display of incident status information obtained from Field Observers (FOs), Single Resource, Strike Teams, Task Forces, and through other sources. Joint Secretary, GAD, Govt. of Mizoram shall be the Display Processor (DP) at the State level and District Information & Public Relation Officer of respective districts shall be the DP at the District levels. They shall have the following responsibilities:

- Display incident status obtained from Field Observers (FOs), Single Resource, Strike Teams, Task Forces, aerial photographs and other data received from technical Sources.
- Report to the SUL.
- Ensure timely completion of display chart.
- Obtain necessary equipment and stationery.
- Assist in analysing and evaluating field reports.
- Maintain record of various activities performed and send to the SUL.
- Perform such other duties as assigned by SUL or PSC.

10.3.25 ROLES AND RESPONSIBILITIES OF FIELD OBSERVER (FO)

The field Observer (FO) is responsible for collecting situation information from personal observations of the incident and provides this information to the SUL. He may be a local private individual or a member of any of the operational Units / Groups. The PSC will specially designate the individuals for such purpose. President, Central Young Mizo Association (CYMA) a large NGO in Mizoram shall be the Filed Observer (FO) at the State level and representative from Sub. Hq. YMA/YLA/MTP of respective districts shall be the FO at the District levels. They shall have the following responsibilities:

- Report to SUL immediately on any situation observed which may cause danger and safety hazard to responders and affected communities. This should also include local weather conditions.
- Gather intelligence that may facilitate better planning and effective response.
- Maintain record of various activities performed and send to the SUL.
- Perform such other duties as assigned by SUL or PSC.

10.3.26 ROLES AND RESPONSIBILITIES OF WEATHER OBSERVER (WO) - STATE & DISTRICT

Chief Scientific Officer, Science & Technology Department, Govt. of Mizoram shall be the Weather Observer (WO) at the State level and DAO, Agriculture Department of respective districts shall be the DUL at the District levels. They shall have the following responsibilities:

- Report weather Condition to PSC.
- Obtain weather forecast data of the place from IMD, Science & Technology Department, etc. and report to PSC.

10.3.27 ROLES AND RESPONSIBILITIES OF DOCUMENTATION UNIT LEADER (DUL) - STATE & DISTRICT

Director, Economic & Statistics Department, Govt. of Mizoram shall be the Documentation Unit Leader (DUL) at the State level and CEO, Education Department of

respective districts shall be the DUL at the Districts levels. They shall have the following responsibilities:

- Ensure that all the required forms and stationery are procured and issued to all the activated Sections, Branches, Divisions, Groups and Units.
- Compile all information and reports related to the incident.
- Inform appropriate Units of errors or omissions in their documentation, if any, and ensure that errors and commissions are rectified.
- Store file properly for post v- incident analysis.
- Maintain record of various activities performed and send to Sections concerned.
- Perform any other duties as assigned by the PSC.

10.3.28 ROLES AND RESPONSIBILITIES OF DEMOBILIZATION UNIT LEADER (DEMOB. UL) – STATE & DISTRICT

Inspector General of Police, Govt. of Mizoram shall be the Demobilization Unit Leader (Demo. UL) at the State level and Superintendent of Police of respective districts shall be the DUL at the District levels. They shall have the following responsibilities:

- Prepare Incident Demobilization Plan (IDP).
- Identify surplus resource and prepare a tentative IDP in consultation with the PSC and give priority to demobilization of surplus resources.
- Develop incident check-out functions for Sections, Branches, Divisions and Units in consultation with all Sections and send to the PS.
- Plan for logistics and transportation support for Incident Demobilization in consultation with LS.
- Disseminate IDP at an appropriate time to various stakeholders involved.
- Ensure that all Sections, Units, Teams and Resources understand their specific Incident Demobilization responsibilities and avail Demobilization facilities.
- Arrange for proper supervision and execution of the IDP.
- Brief the PSC on the progress of Demobilization.
- Request the PSC for additional human resources, if required.
- Maintain record of various activities performed and send to Sections concerned.
- Perform any other duties assigned by the PSC.

Technical Specialists (TS) – State & District

In consultation with the Responsible Officer and IC, the Planning Section Chief (PSC) may mobilize Technical Resources and Specialists for specialized response, if required. They may be deployed for technical planning or specialized technical response and will function under the concerned section chief. The TSs will provide technical support to the response management.

10.3.29 ROLES AND RESPONSIBILITIES OF LOGISTICS SECTION CHIEF (LSC) – STATE & DISTRICT

The LS comprises Service, Support and Finance Branches. The Section is headed by a chief known as the LSC. The activation or various Branches of the LS is context is specific and would depend on the enormity and requirements of the incident. The

Finance Branch (FB) constitutes an important component of the LS to specially facilitate speedy procurement, and proper accounting following financial procedures and rules.

Director, DM & R, Govt. of Mizoram shall be the Logistics Section Chief (LSC) at the State Level and Superintendent of Police of respective districts shall be the LSC at the District levels. They shall have the following responsibilities:

- Coordinate with the activated Section Chiefs.
- Provide logistic support to all incident response effort including the establishment of SA, Incident Base, Camp, Relief Camp, Helipad etc.
- Participate in the development and implementation of the IAP.
- Keep Responsible Officer and IC informed on related financial issues.
- Ensure that Organizational Assignment List (Divisional / Group) is circulated among the Branch Directors and other responders of his section.
- Request for sanction of Impressed Fund, if required.
- Supervise the activated Units of his Section.
- Ensure the Safety of the personnel of his section.
- Assign work locations and preliminary work tasks to Section personnel.
- Ensure that a plan is developed to meet the logistic requirements of the IAP with the help of Comprehensive Resource Management System.
- Brief Branch Directors and Unit Leaders.
- Anticipate over all logistic requirements for relief Operations and prepare accordingly.
- Constantly review the Communication Plan, Medical Plan and Traffic Plan to meet the changing requirements of the situation.
- Assess the requirements of additional resources and take steps for their procurement in consultation with the Responsible Officer and IC.
- Provide logistic support for the IDP as approved by the Responsible Officer and IC.
- Ensure release of resources in conformity with the IDP.
- Ensure that the hiring of the requisitioned resources is properly documented and paid by the FB.
- Assign appropriate personnel, keeping their capabilities for the tasks to be carried out maintain On Duty Officers List for the day.
- Ensure that cost analysis of the total response activities is prepared.
- Ensure that record of various activities performed by members of Branches and Units are collected and maintained in the Unit Log.
- Perform any other duties as assigned by Responsible Officer or IC.

10.3.30 ROLES AND RESPONSIBILITIES OF SERVICE BRANCH DIRECTOR (SBD) – STATE & DISTRICT

Deputy Secretary, GAD, Govt. of Mizoram shall be the Service Branch Director (SBD) at the State level and District Local Administrative Officer, LAD of respective districts shall be the LSC at the District levels. They shall have the following responsibilities:

- Work under the supervision of LSC, and manage all required service support for the incident management.
- Manage and supervise various Units of the Branch like Communication Unit, Medical Unit, Food Unit and any other activated Unit.
- Discuss with activated Unit leaders for the materials and resources required and procure the same through LS.
- Ensure proper dispatch of personnel, teams, resources etc. as per the IAP.
- Prepare an assignment list, if required.
- Keep the LSC informed about the progress of Service Branch, from time to time.
- Resolve Service Branch problems, if any.
- Maintain record of various activities performed and send to sections concerned.
- Perform any other duties assigned by the IC and LSC.

10.3.31 ROLES AND RESPONSIBILITIES OF COMMUNICATION UNIT LEADER (Com.UL) – STATE & DISTRICT

Superintendent of Police (Wireless), Govt. of Mizoram shall be the Communication Unit Leader (Com.UL) at the State level and Inspector (Wireless), Police Department of respective districts shall be the Com.UL at the District levels. They shall have the following responsibilities:

- Work under the direction of the SBD.
- Provide that all communications facility as and when required.
- Ensure that all communications equipment available are in working condition and that the network is functional.
- Supervise Communication Unit activities.
- Maintain the records of all communications equipment deployed in the field.
- Recover equipment provided by Communication Unit after the incident is over; ensure that it is properly linked with the IDP.
- Ensure the setting up of a message centre to receive and transmit radio, telephone and other message from various activated Sections, Branches, Units and higher authorities and maintain their records.
- Prepare an alternative communication plan for execution in case of possible failure of the normal communications network. The alternative communications network may have wireless, satellite phones, cell phones, HAM radios, Morse code torch signal, etc.
- Prepare a plan for integration of the communications set up of the central teams (NDRF, Armed Forces) with the local communications set up for the management of large scale disasters when they come to assist in the response effort.
- Ask for ensure adequate staffing support.
- Ensure that the communications plan is supporting the IAP.
- Demobilize Communications Centre in accordance with the IDP.
- Maintain record of various activities performed and send to SBD.
- Perform any other duties assigned by the SBD or LSC.

10.3.32 ROLES AND RESPONSIBILITIES OF MEDICAL UNIT LEADER (MUL) – STATE & DISTRICT

Director, Health Services, Govt. of Mizoram shall be the Medical Unit Leader (MUL) at the state level and Chief Medical Officer, Health & Family Welfare of respective

districts shall be the MUL at the District levels. They shall have the following responsibilities:

- Work under the direction of the SBD.
- Prepare the Medical Plan and procurement of required resources as per IAP, provide medical aid and ambulance for transportation of victims and maintain the records of the same, obtain a road map of the area from the PS for the ambulance services, transportation of medical personnel and victims.
- Respond to request of the OS for medical aid, transportation and medical supplies etc. under intimation to the SBD and LSC.
- Maintain the list of medical personnel who could be mobilized in times of need.
- Requisition more human resources as and when required to meet the incident Objectives.
- Prepare and circulate list of referral service centres to all the medical team leaders.
- Maintain record of various activities performed from any other duties assigned by the SBD and LSC.

10.3.33 ROLES AND RESPONSIBILITIES OF FOOD UNIT LEADER (FUL) – STATE & DISTRICT

Director, FCS&CA Dept. Govt. of Mizoram shall be the Food Unit Leader (FUL) at the State level and DCSO, FCS&CA dept. of respective districts shall be the FUL at the District levels. They shall have the following responsibilities:

- Work under the direction of the SBD.
- Supply resources to various activated Sections, Branches, Units and Groups of IRT as per direction of the SBD.
- Supply food of Personnel of IRT(s) at ICP, Camps, Incident Base, SA and Victims at the temporary shelters, relief camps etc.
- Request for assistants if the task becomes very large. The FUL may request the LSC to split the unit into two groups-one to supply food for personnel and another for victims.
- Requisition transport for supply of food to incident base, relief camp and other facilities.
- Determine food and drinking water requirements and their transportation, and brief the SBD and LSC.
- Maintain an inventory of receipt and despatch of resources.
- Supervise the Unit activities.
- Maintain record of various activities performed and send to SBD.
- Perform any other duties assigned by the SBD and LSC.

10.3.34 ROLES AND RESPONSIBILITIES OF SUPPORT BRANCH DIRECTOR (Sup.BD) – STATE & DISTRICT

Director, FCS&CA Dept. Govt. of Mizoram shall be Resource Provisioning Unit Leader (RPUL) at the State level and District Civil Supply Officer, FCS&CA Dept. of respective districts shall be the RPUL at the District levels. They shall have the following responsibilities:

- Work under the supervision of Sup.BD.
- Organise movement of personnel, equipment and supplies.
- Receive and store safely all supplies required for the incident response.
- Maintain the inventory of supplies and equipment.
- Maintain the records of receipt and despatch of supplies including equipment and Personnel.
- Organise repair and servicing of non – expendable supplies and equipment.
- Participate in the planning meeting of LS.
- Monitor the 'Kind', 'Type' and quantity of supplies available and dispatched.
- Receive and respond to requests for personnel, supplies and equipment from the activated Sections, Branches, Divisions, Units and Groups of the IRS organisation under intimation to Sup.BD.
- Requisition additional human resource assistance, if needed. These assistants may be deployed for different functional activities such as Resource Ordering, Resource Receiving and Tool & Equipment maintenance.
- Maintain record of various activities performed as per IRS Form – 004 and send to Sup.BD.
- Perform any other duty assigned by LSC or Sup.BD.

10.3.35 ROLES AND RESPONSIBILITIES OF RESOURCE PROVISIONING UNIT LEADER (RPUL) – STATE & DISTRICT

Director, FCS&CA Dept., Govt. of Mizoram shall be Resource Provisioning Unit Leader (RPUL) at the State level and District Civil Supply Officer, FCS&CA Dept. of respective districts shall be the RPUL at the District levels. They shall have the following responsibilities:

- Work under the supervision of Sup.BD.
- Organise movement of personnel, equipment and supplies.
- Receive and store safely all supplies required for the incident response.
- Maintain the inventory of supplies and equipment.
- Maintain the records of receipt and despatch of supplies including equipment and personnel.
- Organise repair and servicing of non – expendable supplies and equipment.
- Participate in the planning meeting of LS.
- Monitor the 'Kind', 'Type' and 'Quantity' of supplies available and dispatched.
- Receive and respond to request for personnel, supplies and equipment from the activated Section, Branches, Divisions, Units and Groups of the IRD organisation under intimation to Sup.BD.
- Requisition additional human resource assistance, if needed. These assistants may be deployed for different functional activities such as Resources Ordering, Resources Receiving and Tool & Equipment maintenance.
- Maintain record of various activities performed as per IRS Form – 004 and send to Sup.BD.
- Perform any other duty as assigned by LSC or Sup. BD.

10.3.36 ROLES AND RESPONSIBILITIES OF FACILITIES UNIT LEADER (Fac.UL) – STATE & DISTRICT

Under Secretary, DM&R Dept., Govt. of Mizoram shall be the Facilities Unit Leader (Fac.UL) at the State level and Superintendent of Taxes, Taxation Department of respective districts shall be the Fac.UL at the District levels. They shall have the following responsibilities:

- Prepare the layout and activation of incident facilities, e.g., Incident Base, Camp(s), Relief Camp(s), ICP, etc., and provide basic amenities to the responders.
- Locate the different facilities as per the IAP.
- Participate in the planning meeting of the Section, prepare list for each facilities and its requirement's in coordination with the LSC.
- Ask for additional personnel support if required to monitor and manage facilities at Incident Base and Camp etc.
- Maintain record of various activities performed and send to Sup.BD.
- Perform such other duties as assigned by the Sup.BD.

10.3.37 ROLES AND RESPONSIBILITIES OF GROUND SUPPORT UNIT LEADER (GSUL) – STATE & DISTRICT

Director, F&ES, Govt. of Mizoram shall be the Ground Support Unit Leader (GSUL) at the State level and Executive Engineer, PWD of respective districts shall be the GSUL at the District levels. They shall have the following responsibilities:

- Work under the supervision of the Sup.BD.
- Provide transportation services for field operations to TBD.
- In case Air Operations are activated, organise and provide required ground support through TBD.
- Provide maintenance and repair services for all the vehicles and related equipment used for incident management as per proper procedures and keep the concerned line departments informed through the Sup.BD and LSC.
- Develop and implement the Incident Traffic Plan.
- Inform Resource Unit about the availability and service ability of all vehicles and equipment.
- Arrange for and activate fuelling requirements for all transport including Aircrafts in consultation with the Sup.BD.
- Maintain inventory of assigned, available and off road or out of service resources.
- Ensure safety measures within his jurisdiction.
- Maintain record of various activities performed and send to the Sup.BD.
- Perform any other duties as assigned by the Sup.BD.

10.3.38 ROLES AND RESPONSIBILITIES OF FINANCE BRANCH DIRECTOR (FBD) – STATE & DISTRICT

Commissioner / Secretary, Finance Department, Govt. of Mizoram shall be the Finance Branch Director (FBD) at the State level and District Treasury Officer, Account & Treasuries Department of respective districts shall be the FBD at the District levels. They shall have the following responsibilities:

- Work under the LSC.
- Attend planning meetings.
- Prepare a list of resources to be mobilized, procured or hired in accordance with the IAP. Obtain orders of the competent authority as per financial rules and take steps for their procurement without delay.
- Ensure that time records of hired equipment, personnel and their services are accurately maintained as per Government norms for payment.
- Examine and scrutinise cost involved in the entire response activity including the demobilization, analysis the cost effectiveness and keep the LSC informed.
- Ensure that all obligation documents initiated at the incident are properly prepared, completed, verified and signed by the appropriate Section Chief and BD.
- Brief the LSC or IC on all incident related financial issues needing attention or follow-up.
- Maintain record of various activities performed and send to Sections concerned.
- Perform any other duties as assigned by the LSC or IC.

10.3.39 ROLES AND RESPONSIBILITIES OF TIME UNIT LEADER (TUL) – STATE & DISTRICT

Director, Economic & Statistic Dept., Govt. of Mizoram shall be the Time Unit Leader (TUL) at the State level and Research Officer Economic & Statistic of respective districts shall be the TUL at the District levels. They shall have the following responsibilities:

- Maintain time recording of hired equipment and personnel and ensure that it is maintained on a daily basis and according to government norms.
- Examine logs of all hired equipment and personnel with regard to their optimal Utilization.
- Ensure that all records are correct and complete prior to demobilization of hired Resources.
- Brief the FBD on current problems with recommendations on outstanding issues, and any follow – up required.
- Ask for additional support of human resources for assistance, if required.
- Maintain record of the activities performed and send to FBD.
- Perform any other duties as assigned by the FBD.

10.3.40 ROLES AND RESPONSIBILITIES OF COMPENSATION / CLAIMS UNIT LEADER (Com. /CUL) – STATE & DISTRICT

Deputy Director, DM&R Dept., Govt. of Mizoram shall be the Compensation / Claims Unit Leader (Com. /CUL) at the State level and Settlement Officer / Asst. Settlement Officer, Land Revenue & Settlement Dept. of respective districts shall be the Com. /CUL in Autonomous District Councils. They shall have the following responsibilities:

- Collect all cost data and provide cost estimates.
- Prepare and maintain a list of requisitioned premises, services, resources and vehicles, etc. with correct date and time of such requisition.
- Follow appropriate procedures for preparation of claims and compensation.
- Requisition additional human resources, if required.
- Maintain record of various activities performed and send to FBD.
- Perform any other duties as assigned by the FBD.

10.3.41 ROLES AND RESPONSIBILITIES OF PROCUREMENT UNIT LEADER (PUL) – STATE & DISTRICT

Deputy Director, DM&R Dept., Govt. of Mizoram shall be the Procurement Unit Leader (PUL) at the State level and Deputy Commissioner of respective districts shall be the PUL at the District levels. They shall have the following responsibilities:

- Attend to all financial matters pertaining to vendors and contracts.
- Review procurement needs in consultation with the FBD.
- Prepare a list of vendors from whom procurement can be done and follow proper Procedures.
- Ensure all procurements ordered are delivered on time.
- Coordinate with the FBD for use of impress funds, as required.
- Complete final processing of all bills arising out of the response management and send documents for payment with the approval of the FBD, LSC and IC.
- Brief FBD on current problems with recommendations on outstanding issues and follow – up requirements.
- Maintain record of activities performed and send to FBD.
- Perform any other duties as assigned by the FBD.

10.3.42 ROLES AND RESPONSIBILITIES OF COST UNIT LEADER (CUL) – STATE & DISTRICT

Office Superintendent, DM&R Dept., Govt. of Mizoram shall be the Cost Unit Leader (CUL) at the State level and Deputy Commissioner of respective districts shall be the CUL at the District levels. They shall have the following responsibilities:

- Develop incident cost summaries in consultation with the FBD on the basis of Cost Analysis Report.
- Make cost – saving recommendation to the FBD.
- Complete all records relating to financial matters prior to demobilization.
- Maintain record of various activities performed and send to FBD.
- Perform any other duties as assigned by the FBD.

10.4 THE INCIDENT ACTION PLAN (IAP), BRIEFING AND DEBRIEFING MEETINGS:

Management of every incident needs an action plan and proper briefing of all personnel. The purpose of the action plan and briefing is to provide all concerned personnel with appropriate directions for the various tasks in hand. Before taking up response activities, the Responsible Officer / IC (Chief Secretary / Deputy Commissioner) will need to take stock of the situation, availability and mobilization of resources for listing out the various tasks and to provide proper briefing meeting at the beginning of each operational period. At the end of the operational period, a debriefing meeting is equally important where Responsible Officer/IC will be able to again review whether the objectives were achieved or not and then decide what further steps need to be taken in the next operational period. Both the briefing and debriefing meetings are the basis on which the IAP will be prepared and tasks assigned. In certain circumstances when important developments take place and further immediate intervention is needed in between the briefing and debriefing meetings, the IC may issue directions even before completion of one operational period.

IAP can be written or oral, depending on the duration and magnitude of the incident. The incident may be low, medium or large levels. Low level incident would be of less than 24 hours, medium would be of more than 24 hours and less than 36 hours and a large incident would be of more than 36 hours of emergency operations. In a low or medium level incidents, oral action plan may suffice. The directions given orally may be jotted down by the Command Staff and handed over to the Planning Section (PS) to be integrated in the IAP. At times there may be sudden disasters without warning and the IC may have to respond immediately. In such cases also the Command Staff will jot down the decisions taken for response and hand it over to the PS when it is activated and it should be incorporated in the IAP. In larger incidents when there is adequate early warning, a written IAP will be required. IAP may consist of incident objectives, organization assignment and division assignment list, incident communication plan, traffic plan, safety plan and incident map etc.

10.5 TRANSFERRING COMMAND:

As the emergency situation becomes bigger in its impact, it is necessary to transfer the command to a more experienced Incident Commander, which should be done in person. Outgoing Incident Commander will provide necessary briefing of the existing situation. Transfer of command in the early stages of incident should be limited because each transfer may cause improper information communication and confusing changes in the style of working.

10.6 ASSIGN RESOURCES TO ORGANIZATIONAL UNITS:

Before assigning any resources to any unit, it should be noted that untrained resources should not be assigned to do anything that requires training. Appropriate person has to be assigned. The skilled resources should be used optimally. Initial resources are assigned to the Incident Commander of the 1st team that arrived. Later, resources should be managed and tracked by a separate group but should always be reported to the present Incident Commander. Tracking requires what resources has been assigned to deal with a specific problem and where the resources are at present.

10.7 ESTABLISHING INCIDENT OPERATIONAL PERIODS:

Some emergency events are of short periods. But the large-scale emergencies are continued for an extended period of time. To tackle the situation during such extended events, proper planning should be in place. The span of operation will also depend of the number of sections, branch, units that a supervisor can directly manage effectively. Operational periods are continuous until the incident is closed.

10.8 STAFF FUNCTIONING:

An incident staff should have the capacity of synergy, problem solving, coordination, information processing and support for decision – making. Coordination is critical to staff effectiveness. Staff members should routinely coordinate their actions with other related teams in their own sections and laterally with teams of other sections. This includes – sharing actions in progress, planned actions, and reasons for actions, information and support. In the vertical coordination process, the incident field section Chiefs to the staffs of the EOC relating to their sources can also be generated. Anyone can be assigned as an IRS staff if he or she possesses the expertise in the respective fields, but they should have the above mentioned basic abilities.

10.9 MANAGING INCIDENT RESOURCE COMMUNICATION:

Effective communications are critical to the direction (which is the process of providing strategy, tactics, instructions and orders to individuals and teams with the expectation that they will carry them out in order to meet the established objectives) and control which is the process of monitoring and evaluating on-going operations and applying corrections to increase the probability to achieving the objectives.

10.10 FUNCTIONS OF EMERGENCY OPERATION CENTER (EOC) DURING EMERGENCIES:

Disaster response is supposed to be coordinated in safe place. The State already has EOCs at the State and District levels for the management of the emergency information. EOCs are basically the nerve system of all emergency information management. During any emergency, all information collected at EOCs will be processed and distributed for action. Function of EOC depends on the site of the event. If it is close to district, a district EOC will be used for data management and decision making place. If the event is very close to the State Hqrs., the State EOC will be used as an additional EOC for data management and decision making process. All line Depts. would be present and take on – the – spot decision for quick action. All communications are also linked with EOC and event management site. The EOC will take stock of the emerging situation and assist the Responsible Officer in mobilizing the respective line department's resources, manpower and expertise along with appropriate delegated authorities for the on – scene IRT(s). EOC will keep the Responsible Officer informed of the changing situation and support extended.

CHAPTER – 11

STANDARD OPERATING PROCEDURES (SOPs) AND CHECKLIST

11.1 INTRODUCTION

Standard Operating Procedure is the procedural operations that have to be followed to reduce repairs time to minimum in any eventuality of disaster to activate the entire civil administration defense system. In order to lay down SOP for different intensity of disaster the concept of L – 0, L – 1, L – 2 and L- 3 will be used in Lawngtlai District as in line with recommendation of high-powered committee of disaster management plan, department of Agriculture/Co-operation, Gov't of India.

11.1.1L – 0 OR ORDINARY LEVEL

L – 0 or Ordinary Level is to devote normal times when disaster management team should be maintaining a close watch over the state of preparedness of each type of disaster. Some Drill may be necessary at this level. A drill shall include that all disaster management plans that are ready at different levels should be updated in the last weeks of April and rehearsal in the first week of May. Rehearsal should be evaluated at every level.

11.1.2 L – 1 OR LEVEL ONE

This is the starting point of a disaster situation, which when reported from any quarter would set into motion, without formal orders from anywhere. Some basic initial management response steps alerting all concerned according to predetermined procedural drill for each type of disaster. Basic action to mitigate the impact of the disaster would also be taken simultaneously along with rescue and relief measures.

11.1.3 L – 2 OR LEVEL TWO

This level requires total attention of the district administration. This would show Triggering off some basic initial management response steps, predetermined for each type of disaster which would be set into motion without formal orders from any quarter. The mitigation, relief and rescue activities would swing into action simultaneously.

11.1.4 L – 3 OR LEVEL THREE

This is the last level or the disaster of the greatest intensity. When this perception takes place, some basic initial management response steps, predetermined for each type of disaster, would be set into motion without formal order from anywhere. The corresponding mitigation, relief and rescue activities would swing into action simultaneously.

11.1.5 THE L- 0, L – 1, L – 2, L – 3

Level would be determined for each type of disaster by the corresponding manager/officer at the district level. The entire exercise is essentially to determine the level L- 0, L – 1, L – 2, L – 3 along with this action that need to follow as well as the various authorities that need to be attended and activated would also need to be predetermined.

A disaster may start at a low key (L-1) and may develop overtime to a more serious level (L-2) and later become a major disaster (L-3).

11.2 SEQUENCE OF ACTION TO BE TAKEN AT THE TIME OF DISASTER

In the event of disaster, the DC, Lawngtlai or District Emergency Operations Centre (EOC) and SP, Lawngtlai should be informed immediately about the incident. Then, these two officers would inform the concerned officials based upon the kind of disaster. Besides, immediate relief and rescue operation will be started at the places. Then, the DC will inform the level of disaster and accordingly action will be taken.

Irrespectively of whether the area is small or big, the area should be demarcated by wire or haisian cloth, so that no one except only those trained in disaster management and officials would be permitted to enter the demarcation zone. And the site operation centre should be established near the demarcation area to see overall management and coordination. One or more officials will be in charge of this and he will be assisted by local NGOs, VCs, and YLAs etc.

The trained electrician should be used to stop the electric current at the site of the disaster, if there is remains of electric wire to prevent electrocution, electric shock burns etc.

The fire brigade should see whether there is any possibility of fire and should extinguish if there is no fire at the site of disaster.

The medical team should be sent immediately to provide first aid medical help and look after any injuries. If any severe/serious injuries happen, should be sent directly to the nearby hospital immediately.

Rescue party should be sent immediately to rescue any person alive at the disaster place and search for the missing person should be done immediately.

Welfare party should be sent immediately to look after dead bodies and carcass of animals. If there are any severe injuries, the welfare party will look after their transportation to nearby hospital and arranged any material require to be brought to the site operating center. The dead bodies should be put in a coffin and then buried.

Any properties and valuable items should be kept carefully and protected, so that there is no missing properties and valuable items. In order to do this, no person except the disaster management teams/officials will be allowed inside the demarcated area.

If the disaster occurs at night, the lighting should be provided to the site operating center immediately.

If the disaster happens at rainy days, the affected area should be cordoned and covered by tarpaulin/silpauline immediately.

Different aspect of relief and rehabilitation of the affected persons should be started immediately. Eg, Clothing, shelter, food, etc.

The overall management will be look after by the DC or any other officials present at the site designated by DC or in their absence by the village level disaster management team including NGOs, VCPs, YLA, etc.

11.3 S.O.P FOR EMERGENCY SUPPORT FUNCTIONS (ESF)

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

ESF 1: COOMMUNICATION

Background

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

Situation Assumption

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

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

The affected site may cut off from the state control rooms and the officials on site and find difficulty in communicating to the District/State EOC.

Nodal Agency: Bharat Sanchar Nigam Limited (BSNL)

Supporting Agencies: NIC, Police/Private telecom/mobile operator.

SOPS for Nodal Agency:

Team Leader (TL) of Communication ESF will activate the ESF on receiving the intimation of occurrence of the disaster from the district EOC.

TL would inform Nodal Officers (NOs) of support agencies about the event and ESF activation.

TL requests for reports from local ESF contact persons (this would be the local office of ESF Nodal Agency) to understand the current situation and action taken.

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 requests to provide details on the status of equipment and infrastructure in the affected area (s).

TL informs the Incident Commander on the status of telecom services.

TL works out a plan of action for private telecom companies and convenes a meeting of all ESF members to discuss and finalize the modalities.

TL issues orders to establish systems and reports to District EOCs 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 sends the District Quick Response Team at the affected site with the required equipment's and other resources.

SOPs for Quick Response Team on Communication

- The QRT (Quick Response Team) members will reach to the nodal office as soon as they will get instructions from the TL.
- Once the QRTs receive any intimation from the nodal officer to reach at the site they would rush to the site.
- 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 report would contain following:
 - An assessment of overall damage, listing specifically.
 - Overhead route damage (in miles/kilometers)
 - Cable damage (in yards/meters)
 - Specific equipment damaged
 - Establish a temporary communication facility for use by the public.
- Identify requirements of manpower, vehicles and other materials and equipments. Give priority and concentrate on repairs and normalization of communication system at disaster-affected areas.
- Begin restoration by removing and salvaging wires and poles from the roadways with the help of casual laborers.
- Carry out temporary building repairs to establish a secured storage area for the equipments and salvaged materials.
- Report all activities to head office.
- Begin restoration by removing and salvaging wires and poles from the roadways through recruited casual labors.
- Establish a secure storage area for incoming equipments and salvaged materials.

PRESS BRIEFINGS

Press briefings plays a very important role in Disaster Management. Daily press briefs will be issued at Hours. Written information will be issued.

MESSAGE TO PUBLIC

Message to public over All India Radio Aizawl, Lunglei, District AI&PRO, RL Cable Network, KT Cable Network and Local Papers should be specific. Apart from the warning, it should include the following points.

Remain alert.

Take shelter in nearest pucca building/save shelters/schools & other safe places.

Keep cattle tied in open spaces/let free.

Keep sufficient dry food for emergency.

Regular cantact at intervals with D.C, Adll. DC, SDO (S), BDOs and all the Nodal Officers of line department, SP, Police Civil Defense, Police Control Room.

Written orders shall be issued for identifying places for starting free kitchens for at least 3 days.

Keep spare copies of District maps. Jurisdiction maps of all irrigation divisions shall be kept ready in good numbers.

Place requisition with SP for supply of temporary VHF sets for CMO, DVO, PWD, PHE, P&E and concerned officials.

Contact Meteorology Department/Geology Department, Mizoram.

Requisition School/College for Army/Police forces.

Direct all field officers to hire generators and keep sufficient oil for running them.

Direct all Police stations to keep spare batteries for VHF.

Looking at the onset of emergency and after making quick preparations convene Emergency meeting of important official and non-officials agencies. Give them clear instructions on the above manner.

Make a **Duty Roster** of important officials for uninterrupted functioning of DCR & immediate implementation of the Relief/Rescue Programme.

PROFORMA FOR “IN” MESSAGE REGISTER

Sl. No.	Date	Time of receipt	In message Sr. No.	Received from	Address to	Message Transfered to	Copies to	Mode (WL/Tel /Message) for receipt	Instruction/follow-up to be done
01									
02									
03									

PROFORMA FOR “OUT” MESSAGE REGISTER

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01									
02									
03									

ESF 2: EVACUATION

Background:

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

Situation Assumptions

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

Nodal agency: Office of the Deputy Commissioner, Lawngtlai

Supporting agencies: Police, Fire services, Civil Defense, NCC, army, 71 RCC, PWD, PHE.

SOPS for Nodal Agency:

- The team leader (TL) of Evacuation ESF would activate the EFS on receiving the warning of the disaster from District EOC.
- TL would inform the Nodal Officers (NOs) of supporting agencies about the event and ESF activation.
- TL will direct the ORTs 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 District EOC with other ESFs nodal officers and the support agencies about clearing of routes and identifying alternate routes.

SOPS for Quick Response Team on evacuation

- The QRT members will reach the nodal office as soon as they get instructions to do so from TL.
- Once the quick response teams receive an order from the nodal officer for reaching the site they will 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 counter parts.
- The quick response teams with the help of local task forces will start evacuating people to safe shelters or open areas.
- The QRT should concentrate more on evacuation in areas that have been worst affected by the disasters.
- Reporting about all the activities to head office.

ESF 3: SEARCH AND RESCUE

Background:

Search and rescue operators are one of the primary activities taken up in a post disaster situation, the promptness in this operation can make a remarkable difference in the amount of loss of the life and property.

Situation Assumptions

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

Nodal Agency: Police, Fire Service.

Support Agency: Civil Defence, NCC, Army and Health Department, MRHG, P&E.

SOPs for Nodal Agency

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

SOP for Quick Response Team on Search and Rescue

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

ESF 4: LAW & ORDER

Background:

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

Situation Assumptions

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

Nodal Agency: Police

Support Agencies: Home guards, Civil Defense, Army, Assam Rifle.

SOPs for Nodal Agency

- IC will call the TL of Primary Agency and gets the ESF activated.
- TL of Primary agency will call nodal officers of supporting agencies.
- TL would activate the District Quick Response Team.
- The QRTs 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 to be taken care of.

SOP for Quick Response Team on Law & 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 and cordon off sensitive areas. QRTs will guide property and valuables 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.

ESF 5: MEDICAL RESPONSE AND TRAUMA COUNSELLING

Background:

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

Situation Assumptions

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

Nodal Agency: State Health Department.

Support Agencies: Civil Defense, NSS, DHS

SOPs for Nodal Agency

- IC will call the TL of primary Agency and get the ESF activated.
- Team Leader (TL) of primary Agency and get the ESF activated.
- In coordination with 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 site and the hospital. Health centers catering to disaster victims.
- In case of orthopedic care required in disasters like earthquakes the immediate response would have to be complimented by a follow up treatment schedule for a majority of the patients in/near their place of residence.
- Trained professionals should be mobilized by psychosocial support.
- Ensuring setting up of temporary information centers at hospitals 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 EOC, the TL also responsible to send required medicines, vaccines, drugs, plasters, syringes, etc.
- Arrange for additional blood supply. Send additional medical personnel equipped with food, bedding and tents etc.
- Send vehicles and any additional medical equipment.

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

- QRTs will provide situation and progress reports on the action taken by the team to the respective EOCs.
- QRTs will assess type of injuries, number of people affected and possible medical assistance needs.
- QRTs will ensure timely response to the needs of the affected victims such as: establishing health facility and treatment centers at disaster sites.
- Providing medical services as reported by the District Civil Surgeon with District EOC and State EOCs.

Procedures should be clarified in between-

- Peripheral hospitals
- Private hospitals
- Blood banks
- General hospitals and Health services established at transit camps and affected villages. QRTs should maintain check posts and surveillance at all entry and exit points from the affected area, especially during the treat or existence of an epidemic.

IMPORTANT TIPS

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

ESF 6: WATER SUPPLY

Background

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

Situation Assumptions

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

Nodal Agency: PHED

Support Agency: LAD (District Council)

SOPs for Nodal Agency

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

SOPs for Quick Response Team (QRT) on Water Supply

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

ESF 7 RELIEF (FOOD AND SHELTER)

Background

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

Situation Assumptions

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

Nodal Agency: Department of Food and Civil Supplies.

Support Agency: NGOs.

SOPs for Nodal Agency

- TL will activate the ESF on receiving the information of the disaster from District EOC.
- TL would inform Nodal Officers (NGOs) of support agencies about the event and ESF activation.
- 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 and road clearance to ensure quality supply chain management of relief materials.
- Ensuring composite relief with availability of complimentary relief materials.

SOP for Quick Response Team (QRT) on Relief

- QRTs will report to site of the relief camps.
- QRTs will be responsible to management and distribute relief items to the affected victims.
- QRTs will be responsible for reporting the progress on action taken by the team to the EOC.
- QRTs will provide information to their TL about the need of additional resources.
- Clearing of the areas to establish relief camps.
- Setting up relief camps and tents using innovative methods that can save time.
- Assist local authorities to set up important telecom and other service related facilities.
- Initiate, direct and market procurement of food available from 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 infants, pregnant women, and children, aged people and handicapped.
- Ensuring support to Local Administration.
- Locating adequate relief camps based on damage survey.
- Develop alternative arrangements for population living in structure that might be affected even after the disaster.

ESF 8: EQUIPMENT SUPPORT, DEBRIS AND ROAD CLEARANCE

Background:

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

Situation Assumptions

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

Nodal Agency: PWD

Support Agency: LAD (District Council)

SOPs for Nodal Agency

- Team Leader (TL) will activate the ESF on receiving the information of the disaster from District EOC.
- TL would inform Nodal Officers (NGOs) of support agencies about the event and ESF activation.
- TL will coordinate with the supporting agency to mobilize equipments from the ware houses through IDRN database.
- The respective supporting agencies will contact their respective personal to move the equipments to central warehouse.
- The equipments like JCB, concrete cutters identified as per the need will be transported to the site.
- As per the information the nodal officer of debris road clearance will make an assessment on of the damages of roads and built structures at the site and surrounding areas.
- The Nodal Officers of supporting agencies will immediately start debris clearance operation to enable movement to the affected site.
- Review of the current situation is taken up by the nodal agency to update the support agencies and to delegate their respective personnel to take precautionary measure to plan de-routes for the transportation ESFs to be operational.
- 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 postmortem by coordinating with ESF on medical response.

SOP for Quick Response Team on Equipmet support, debris and road (QRT) on relief 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 equipments as compiled from IDRN resource inventory required for conducting the debris clearance and relief camps and medical facilities for disaster victims.
- The QRTs will report the situation and the progress in response activities to the respective EOCs.
- Undertake construction of temporary roads to serve as access to temporary transit and relief camps and medical facilities for disaster victims.
- Repairing of all paved and unpaved road surface including edge metaling, pothole patching and any failure of surface, foundation in the affected areas by maintenance engineers staff and keeps monitoring their conditions.

ESF 9: HELP LINES, WARNING DISSEMINATION

Background

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

Situation Assumptions

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

Nodal Agency: DC, Lawngtlai

Support Agency: NIC/NGO Representatives

SOPs for Nodal Agency

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

SOP for Quick Response Team on Help Lines, Warning Dissemination

- The QRT members will reach to the nodal office as soon as they will get instructions.
- QRT teams would reach to the site immediately after receiving instructions from the nodal officer.
- On the site QRT members will take stock of the situation from the 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.

ESF 10: ELECTRICITY

Background

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

Situation Assumptions

- Prolonged electricity failure.
- The affected victims may be panicked.
- Halt of all activities specially jamming communication networking systems in the affected site.

Nodal Agency: P&E Department.

SOPs for Nodal Agency

- IC will call the TL of primary Agency and get the ESF activated.
- TL of primary agency will call nodal officers of supporting agencies.
- TL would activate the District Quick Response Team.

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

SOP for Quick Response Team (QRT) on Electricity

- QRTs members will reach the nodal office as soon as they get instructions to do so from the TL.
- QRT members would reach to the site immediately after receiving instruction 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 reconstruction work.
- Assisting hospitals in establishing an emergency supply by assembling generators and other emergency equipment's, if necessary.
- The members of QRTs will establish temporary electricity supplies for transit camps, feeding centers, relief camps, District Control Room and on access roads to the same.
- 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.
- Report about all the activities to the head office.

ESF 11: TRANSPORTATION

Background

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

Situation Assumptions

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

Nodal Agency: **Department of Transport.**

SOPs for Nodal Agency

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

SOP for Quick Response Team (QRT) on Transport

- The QRT members will reach to the nodal office as soon as they will get instructions to do so from the TL.

- As quick response teams will receive instructions from the nodal officer they would reach to the site immediately.
- QRTs would report the situation and the progress on action taken by the team to the respective EOCs.
- QRTs 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 of offices.

11.4 ROLE OF DISTRICT LEGAL SERVICE AUTHORITY

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

1. Jothansangi Tlau, Chairman
2. C. Lalremsanga, Secretary
3. Lynda H. Rinawmi, UDC
4. LC Roluahpuia, LDC

11.5 TEAM OF QUALIFIED EX-MILITARY PERSONNEL

1. Ex-Subedar H. Pamanga
2. N/Subedar Vanlalhluna
3. Ex-Subedar BK Thapa
4. Ex-Havildar Lalawmpuia
5. Ex-Havildar Hrangzoa
6. Ex-Havildar Rothanga

Annexure - I

RESOURCE INVENTORY OF LAWNGTLAI EOC
DDMA LAWNGTLAI

SI No	Name of Items	No. of items
1	Computer set	1
2	ISAT phone	1
3	Fire Extinguisher	4
4	Tower Light Generator	1
5	Generator 2.5 kva HONDA	1
6	Repelling Mitten	8
7	Climbing Rope 10.5mm 100m	4
8	Figure of 8	8
9	Climbing Rope 11mm 50m	4
10	Climbing Rope 8mm 50m	1
11	Full Body Harness	3
12	Safety Helmet	93
13	Carabiner (Climbing)	24
14	Carabiner Heavy duty	12
15	Sit Harness	8
16	Petromax	2
17	Head Lamp	5
18	Projector	1
19	Spade	3
20	Bawngtuthlawh (Hoe)	2
21	Ara lian (Hand saw big)	2
22	Inflatable rubber boat	2
23	Winch	1
24	Hydraulic cutter	1
25	Chainsaw BODA	1
26	Traffic cone	5
27	Life Jacket	25
28	Rope ladder	4
29	Pliers	1
30	Pelican light (RALS)	1
31	Rope 20mm 50 metre	22
32	Diving mask	5
33	Walkie talkie Talk pro 2, Motorola 2	4
34	Drone DJI Phantom 4 Pro	1
35	Pelican search light	3
36	Pulley	5
37	Boat engine YAMAHA	2
38	Ahuja Megaphone	2
39	Folding Stretcher	4

40	Scoop stretcher	4
41	Basket stretcher	1
42	Vertical stretcher	1
43	Extension cord 50m heavy duty	1
44	Demolition Hammer JCB	1
45	Reciprocating saw (Makita) 18volt cordless	1
46	Cordoning tape	2
47	Reflective vest	20
48	Tent men	1
49	Gazebo tent	1
50	Telescopic ladder	1
51	Generator 1 kva Honda	2
52	Generator Honda 3kva	1
53	Ascender for climbing	5
54	Stihl TS 800 concrete cuttere (petrol)	1
55	Makita concrete cutter (petrol)	1
56	Makita concrete cutter (electric)	1
57	Chainsaw Stihl GS461 Carbide tip	1
58	Diamond Saw Blade 14 inch	5
59	DJI Air 3s Drone	1
60	Angle Grinder Dewalt	1

**LIST OF IMPORTANT TELEPHONE NUMBER UNDER
LAWNGTLAI DISTRICT**

**Emergency Operation Centre – 232805
O/C Fire & Emergency Service – 03835 – 232801
District Hospital Casualty – 8974926184**

DEPUTY COMMISSIONER – 03835 – 232656 (Fax)

Donny Lalruatsanga	DC	232805 (O) 232001 (R)	9612638126
David Lalrinawma	ADC	232640 (O)	8416075016
Margaret J. Vanlalremmawii	SDO (S)		8131932592
Collin Hlychho	EO	233327 (O)	7005751606
Dr. Saithantluangi Zote	SDC-I		7005212542
Lalrindika	SDC-II		9862233514
Lalhruaizela	SDC-III		7005022502
Malsawmtluangi	Superintendent		8794844348
Lalchhanhima	District Organizer		9862305451

LADC – 03835 – 232268 (Fax)

	CEM	232270 (O)	
	Chairman	232355 (O)	
K. Lalthanzara	ES	232234 (O)	9436148459

CADC

	CEM	2563203 (O)	
	Chairman		
Ronit Bikash	ES		7085948784/ 9436955824

SDO (Civil)/BDO

Dr. Saithantluangi Zote	BDO, Lawngtlai		7005212542
Lalnunpuia Renthlei	SDO(C)/BDO, Chawngte	2563297 (O)	9560162144
Gilbert Lalhlipuia	BDO, Bungtlang 'S'		9615715731
Thomas Maratha Hlychho	SDO(C)/BDO, Sangau	2553003 (O)	9383317977

DRDO

H. Zonunmawia	PD	233210	8415051047
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POLICE

PC Lalchunglura	SP	232806 (O) 232807 (R)	9436143491
David J. Byhnadaolai	Addl. SP	232941 (O) 233477 (R)	8974762412
HS Lalmuanpuia	SDPO		9612540471

AGRICULTURE

Lalremmawia Colney	DAO	232309 (O)	
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SUPPLY

Lianchhuma Chinzah	DCSO	232309 (O)	9436147377
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AH&Vety

Lalmuanpuia	DVO	232362 (O)	9863502640
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FOREST

C. Lalrinmuana	DFO	232323 (O)	8729917156
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TREASURY

PC Lalrammuanpuia	T.O	232249 (O)	9612850017
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HORTICULTURE

Laldintluangi Ralte	DHO	233289 (O)	9862387414
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SOIL

Andy	DO, Soil		8974926557
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TAXATION

Lalrinzuali	Dy. Commissioner of State Tax		8794160985
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I&PRO

Zonunchama Ralte	DIPRO	232278 (O)	9599538369
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PWD

Joseph Remmawia	Sr. EE (Road)		8787781151
Timothy	SDO, Road		7356545779
B. Lalrinzuala	SDO, Building		8787440525
Lalramhluna	SE, Southern Circle, MMPC		8415901315

PHED

H Lalnunthanga	Sr. EE		9862844693
Sapliankhuma	SDO		7085946243

P&E

David Chakma	EE	232240 (O)	8974115060
VLMS Dawngliana Sailo	SDO	232259 (O)	7227885531

EDUCATION

Lalchhanhima Chhangte	DEO	233231 (O)	9862257226
Ngurhmingliani	Principal, DIET		9862655145
MC Lalrokhuma	Principal, Lawngtlai College		9436148776

FISHERIES

Lalruatfela	DFDO	233231 (O)	9612134944
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KVK

Dr. C. Lalfakawma	Sr. Scientist & Head		8399069138
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TRANSPORT

Margaret J. Vanlalremmawii	DTO	232222 (O)	8131932592
	MVI		

SERICULTURE

Lalrammawia	DSO		9612325849
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INDUSTRY

Biakchungnungi	DCIO	232102 (O)	9436782077
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SOCIAL WELFARE

Lalthlamuani Rokhum	CDPO		9862655508
Mary Lalremruati	DCPO		9612755421
Dr. Lalhruaitluangi Chhangte	DPO		9862528662

DRO

Jimmy LalkunglianaSailo	DRO		8730890886
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LAW & JUDICIAL

Jothansangi Tlau	CJM	232536	7005707851
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BANK

Lalsiam Guite	SBI	233306	8787303676
Sangzuala	MRB, Lawngtlai Branch	232692	6909391856
Meino Seri Chozah	MRB, Chandmary		9366605782
HK Jessy Lalthahluana	HDFC		9774376306
Tontang Angtlhung	CANARA	232011	9953108324
Kawlthanmawia	MCAB	232177	9862198576

VILLAGE COUNCIL, LAWNGTLAI TOWN

Immanuel Lalmuanzuala Sathing	Bazar		9436148687
C. Vankulhpuithanga	Vengpui		8256978939
Ngurchhingpuii	New Vengpui		9862249108
T. Rosangpuia	Council Veng		9612634074
C. Lalmuanawma	Chandmary		6909045842
H. Lalnunpuii	Bethel Veng		6909045842
A.Lalropekthara	College Veng		8974795044
Lalrambuatsaiha	Chawnhu		8798792209
MC Lungualpuia	Lawngtlai-III		8729815080
V. Lalramnghaka	Electric Veng		8413011637
Rochharliana	AOC		9862823445
A.Sangvela	Thingkah		8119965326

PRESS

V. Lalianzuala	Lairam		9436389910
LalnghetaRalte	Lawngtlai Post		9862843773
ZD Dengngura	Phawngpui Express		9436953554
Lalchharliana	LPS Correspondent		9436148769
Elvis Lalthangzuala	Rauthla		9862130477
JC. Lalthangliana	Lai Aw		8413827943
Lalrinmawia	Rameng		9436148894
Linda H. Rinawmi	Lairam		8258942703
LH Hauheng	Lawngtlai Today		9366044452

NGOs

F. Lalrothanga	President, CYLA		9612520500
Vanlahlupuii Fanai	President, MHIP		9436148009
V. Lalrinkimi	President, LWA		7085171477
H. Liantluanga	President, MUP		9862654181
Lalhuliana	President, LSA		7628002433