

2017

# **District Disaster Management Plan, East Khasi Hills District, Shillong**

DISTRICT DISASTER MANAGEMENT AUTHORITY, SHILLONG

## CONTENTS

PAGE NO.

### **FOREWORD**

### **ACKNOWLEDGEMENT**

### **ABBREVIATION**

### **EXECUTIVE SUMMARY**

### **CHAPTER I: INTRODUCTION**

- 1.1 Aims and Objectives
- 1.2 Authority for DDMP
- 1.3 Evolution of DDMP
- 1.4 Stakeholders & their responsibilities
  - 1.4.1 Deputy Commissioner (DC)
  - 1.4.2 Different Departments at District level
  - 1.4.3 Local Authorities
  - 1.4.4 Private Sector & Corporate
  - 1.4.5 NGOs/CBOs and Volunteer Agencies
  - 1.4.6 Citizens
- 1.5 How to use DDMP Framework
- 1.6 Approval Mechanism of DDMP
- 1.7 Plan review and updation

### **CHAPTER II: HAZARD, VULNERABILITY, CAPACITY AND RISK ASSESSMENT**

- 2.1 District Profile
- 2.2 Demographic Details
- 2.3 Physical Features, Climate and Vegetation
- 2.4 Infrastructure
- 2.5 Vulnerability to different hazards
- 2.6 Vulnerability & Risk Assessment
- 2.7 History of Disaster
- 2.8 Seasonality of Hazard
- 2.9 Risk Assessment
- 2.10 Vulnerability Analysis (Hazard-Wise)
- 2.11 List of flood prone areas

### **CHAPTER III: INSTITUTIONAL ARRANGEMENTS FOR DISASTER MANAGEMENT**

- 3.1 District Disaster Management Authority (DDMA)
- 3.2 District Crisis Management Group (DCMG)
- 3.3 District Hazard Safety Committee
- 3.4 Incident Response System (IRS)
- 3.5 Incident Response Team (IRT)
- 3.6 Local Authorities
- 3.7 District Emergency Operations Centre (DEOC)

### **CHAPTER IV: PREVENTION AND MITIGATION MEASURES**

- 4.1 Preventive Measures (for all disasters)
- 4.2 Mitigation Measures (for all disasters)
  - 4.2.1 Structural mitigation
  - 4.2.2 Non-Structural mitigation
- 4.3 Mainstreaming/Integration Disaster Risk Reduction (DRR)
- 4.4 Multi-Hazards Mitigation Actions
  - 4.4.1 Structural Mitigation Measures
  - 4.4.2 Non- Structural Mitigation Measures
- 4.5 Specific Hazard Mitigation Actions

### **CHAPTER V: PREPAREDNESS MEASURES**

- 5.1 Stakeholders involved in disaster response
  - 5.1.1 Response and evacuation of disabled
- 5.2 Activation of IRS
- 5.3 Trigger Mechanism
- 5.4 Protocol for seeking help from other agencies like Army, Air Force & Central Paramilitary Forces, NDRF and SDRF
  - 5.4.1 Army, Air Force & Central Paramilitary Forces
  - 5.4.2 National Disaster Response Force
  - 5.4.3 State Disaster Response Force
- 5.5 Mechanism for checking and certification of logistics, equipments and stores

- 5.6 Operational check-up of Warning Systems & EOC
- 5.7 Command & Coordination
- 5.8 Community Preparedness
  - 5.8.1 Community warning system
  - 5.8.2 Community awareness, education
  - 5.8.3 Community's responsibility
- 5.9 Standard Operating Procedures (SOPs)
  - 5.9.1 Arrangements for VIP visits
  - 5.9.2 Procurement
- 5.10 Knowledge Management
  - 5.10.1 India Disaster Resource Network (IDRN)
  - 5.10.2 Corporate Disaster Resource Network
- 5.11 Media Management/information dissemination
- 5.12 Medical Preparedness and Mass Casualty Management

## **CHAPTER VI: CAPACITY BUILDING AND TRAINING MEASURES**

- 6.1 Approaches towards Capacity Building
- 6.2 Capacity Building Plan
  - 6.2.1 Training & Awareness
  - 6.2.2 Community Based Disaster Management

## **CHAPTER VII: RESPONSE AND RELIEF MEASURES**

- 7.1 The Incident Action Plan (IAP)
- 7.2 Incident Response System (IRS) and its activation
- 7.3 Roles and Responsibilities of District Magistrate as RO
- 7.4 The Incident Response Team (IRT)
- 7.5 Triggering Mechanism for Deployment of IRT
- 7.6 Incident Commander (IC)
  - 7.6.1 Roles and Responsibilities of IC
  - 7.6.2 Roles and Responsibilities of Information and Media Officer (IMO)
  - 7.6.3 Roles and Responsibilities of Liaison Officer (LO)
  - 7.6.4 Roles and Responsibilities of Safety Officer (SO)
- 7.7 Operations Section (OS)

- 7.7.1 Operations Section Chief (OSC)
- 7.7.2 Roles and Responsibilities of OSC
- 7.8 Response Branch
  - 7.8.1 Roles and Responsibilities of Response Branch Director (RBD)
  - 7.8.2 Roles and Responsibilities of Division Supervisor and Groups-in-charge
- 7.9 Single Resource
  - 7.9.1 Roles and Responsibilities of Single Resource Leader
  - 7.9.2 Strike Team or Task Force
  - 7.9.3 Roles and Responsibilities of Strike Team or Task Force Leader
- 7.10 Transportation Branch (TB)
  - 7.10.1 Roles and Responsibilities of Transportation Branch Director (TBD)
  - 7.10.2 Roles and Responsibilities of Coordinator (Road Operations)
  - 7.10.3 Air Operations
  - 7.10.4 Roles and Responsibilities of Nodal Officer (NO)
- 7.11 Planning Section (PS)
  - 7.11.1 Planning Section Chief (PSC)
  - 7.11.2 Roles and Responsibilities of PSC
  - 7.11.3 Roles and Responsibilities of Resource Unit Leader (RUL)
  - 7.11.4 Roles and Responsibilities of Check-in/Status Recorder
  - 7.11.5 Roles and Responsibilities of Situation Unit Leader (SUL)
  - 7.11.6 Roles and Responsibilities of Display Processor (DP)
  - 7.11.7 Roles and Responsibilities of Field Observer (FO)
  - 7.11.8 Roles and Responsibilities of Documentation Unit Leader (DUL)
  - 7.11.9 Roles and Responsibilities of Demobilization Unit Leader (Demob. UL)
  - 7.11.10 Technical Specialists (TS)
- 7.12 Logistics Section (LS)
  - 7.12.1 Logistics Section Chief (LSC)
  - 7.12.2 Roles and Responsibilities of LSC
  - 7.12.3 Roles and Responsibilities of Service Branch Director (SBD)
  - 7.12.4 Roles and Responsibilities of Communication Unit Leader (Com. UL)
  - 7.12.5 Roles and Responsibilities of Medical Unit Leader (MUL)
  - 7.12.6 Roles and Responsibilities of Food Unit Leader (FUL)
  - 7.12.7 Roles and Responsibilities of Support Branch Director (Sup. BD)
  - 7.12.8 Roles and Responsibilities of Resource Provisioning Unit Leader (RPUL)
  - 7.12.9 Roles and Responsibilities of Resource Ordering-in-charge
  - 7.12.10 Roles and Responsibilities of Resource Receiving and Distribution-in-Charge

- 7.12.11 Roles and Responsibilities of the Tool and Equipment Specialist
- 7.12.12 Roles and Responsibilities of Facilities Unit Leader (Fac. UL)
- 7.12.13 Other in-charges under the Fac. UL
- 7.12.14 Roles and Responsibilities of Facility Maintenance-in-charge
- 7.12.15 Roles and Responsibilities of Security-in-charge
- 7.12.16 Roles and Responsibilities of Ground Support Unit Leader (GSUL)
- 7.12.17 Roles and Responsibilities of Finance Branch Director (FBD)
- 7.12.18 Roles and Responsibilities of Time Unit Leader (TUL)
- 7.12.19 Roles and Responsibilities of Procurement Unit Leader (PUL)
- 7.12.20 Roles and Responsibilities of Compensation/Claims Unit Leader (Com./CUL)
- 7.12.21 Roles and responsibilities of Cost Unit Leader (CUL)
- 7.13 Area Command (AC)
- 7.14 Unified Command (UC)
- 7.15 IRS Facilities & Symbols used
  - 7.15.1 Incident Command Post (ICP)
  - 7.15.2 Staging Area (SA)
  - 7.15.3 Roles and Responsibilities of the Staging Area Manager (SAM)
  - 7.15.4 Incident Base
  - 7.15.5 Camps
  - 7.15.6 Relief Camp (RC)
  - 7.15.7 Helibase/Helipad
  - 7.15.8 Roles and Responsibilities of Helibase/Helipad-in-Charge
- 7.16 Activation of EOC
- 7.17 Relief
  - 7.17.1 Food & Nutrition
  - 7.17.2 Water
  - 7.17.3 Health
  - 7.17.4 Medical Response
  - 7.17.5 Mental Health Services
  - 7.17.6 Clothing & Utensils
  - 7.17.7 Shelter
  - 7.17.8 Relief Camp
  - 7.17.9 Sanitation and Hygiene
  - 7.17.10 Provision of Intermediate Shelters
  - 7.17.11 Management of Relief Supplies
  - 7.17.12 Transparency in Relief

- 7.18 Reporting- First Information Report & Daily Situation Report
- 7.19 Responsibility Matrix for emergency response functions
  - 7.19.1 Earthquake
  - 7.19.2 Cyclone
  - 7.19.3 Flood

## **CHAPTER VIII: RECONSTRUCTION, REHABILITATION AND RECOVERY MEASURES**

- 8.1 Detailed Damage and Loss Assessment
- 8.2 Housing units & Basic Infrastructure Rehabilitation
- 8.3 Economic Rehabilitation
- 8.4 Social Rehabilitation
- 8.5 Recovery

## **CHAPTER IX: FINANCIAL RESOURCES FOR IMPLEMENTATION OF DDMP**

- 9.1 State Allocation
- 9.2 State Disaster Response Fund (SDRF)
- 9.3 State Disaster Mitigation Fund (SDMF)
- 9.4 Recommendation of the 13<sup>th</sup> Finance Commission
- 9.5 Disaster Risk Insurance

## **CHAPTER X: PROCEDURE AND METHODOLOGY FOR MONITORING, EVALUATION, UPDATION AND MAINTENANCE OF DDMP**

- 10.1 Authority for maintaining and reviewing the DDMP
- 10.2 Monitoring & Evaluation- Mock Drill
- 10.3 Monitoring and gap evaluation

## **CHAPTER XI: COORDINATION MECHANISM FOR IMPLEMENTATION OF DDMP**

## **CHAPTER XII: STANDARD OPERATING PROCEDURES (SOPs) AND CHECK LIST**

- 12.1 Standard Operating Procedures (SOPs)
- 12.2 Standard Operating Procedure of ESFs
  - 12.2.1 Emergency Support Function #1: Coordination
  - 12.2.2 Emergency Support Function #2: Communication

- 12.2.3 Emergency Support Function #3: Emergency Public Information, Help line & Warning
- 12.2.4 Emergency Support Function #4: Search & Rescue
- 12.2.5 Emergency Support Function #5: Evacuation
- 12.2.6 Emergency Support Function #6: Emergency Medical Response
- 12.2.7 Emergency Support Function #7: Relief
- 12.2.8 Emergency Support Function #8: Water & Electricity
- 12.2.9 Emergency Support Function #9: Debris Clearance
- 12.2.10 Emergency Support Function #10: Law and Order
- 12.2.11 Emergency Support Function #11: Damage Assessment
- 12.2.12 Emergency Support Function #12: Donations and Volunteers:
- 12.2.13 Emergency Support Function #13: Public Works Engineering
- 12.2.14 Emergency Support Function #14: Animal Health

### 12.3 Roles & Responsibilities of different departments

- 12.3.1 Police Department
- 12.3.2 Health Department
- 12.3.3 Water Resources Department
- 12.3.4 PWD Department
- 12.3.5 PHE Department
- 12.3.6 Animal Husbandry & Veterinary Department
- 12.3.7 Meghalaya Energy Corporation Limited
- 12.3.8 Agriculture Department

## **ANNEXURES**

Annexure 1: District Disaster Management Authority

Annexure 2: Important Names & Contact numbers at the State Level

Annexure 3: Important Names & Contact numbers in the State Disaster Management Authority

Annexure 4: Important Names & Contact numbers in the District

Annexure 5: Name of BDOs with Contact numbers

Annexure 6: Other important Offices and Contact numbers

Annexure 7: List of Police Stations



Annexure 8: List of Fire & Emergency Services

Annexure 9: List of Hospitals

Annexure 10: List of Medical Officers & QRTs in East Khasi Hills

Annexure 11: Static First Aid Posts/Shelters under Urban Areas

Annexure 12: List of Hospitals and Nursing Homes in Guwahati

Annexure 13: List of Open Space for use as Helipads

Annexure 14: Format for First Information Report on Occurrence of Natural  
Calamity

## **REFERENCES**

### **APPENDIX I – District IRT**

#### **MAPS**

1. Administrative Map
2. Resource Map

**GOVERNMENT OF MEGHALAYA  
OFFICE OF THE DEPUTY COMMISSIONER  
EAST KHASI HILLS DISTRICT  
SHILLONG**



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**Shri.P.S. Dkhar, IAS  
Chairman, District Disaster Management Authority**



### **FOREWORD**

The District Disaster Management Authority (DDMA), East Khasi Hills District, Shillong which was notified & constituted on 26<sup>th</sup> June, 2008 is responsible for preparation of the District Disaster Management Plan (DDMP) as per Section 31 of the National Disaster Management Act, 2005. Apart from being in the Earthquake Seismic Zone V, the district is prone to other hazards like landslide, thunderstorm/thundersquall, flash flood, fire. A Disaster Management Plan is therefore of prime importance for such multi-hazards prone district and of course Shillong being headquarter of the State.

The DDMP is a document planned by the DDMA which will serve as a ready reckoner for the District Administration & stakeholders to take up both preparedness and response activities. This plan deals with Hazard, Vulnerability, Capacity and Risk Assessment; Institutional Arrangements; Prevention & Mitigation Measures; Preparedness Measures; Response (from Incident Response System) & Relief Measures; Standard Operating Procedures and Directory of key officials & institutions.

On behalf of the DDMA, I would like to place on record my gratitude to all the different Departments for their valuable contributions in the preparation of the plan and hope that this document will be effective in managing disasters in the whole district.

Shillong  
May 2016

Shri.P.S.Dkhar, IAS  
Deputy Commissioner & Chairman (DDMA)  
East Khasi Hills District, Shillong

**GOVERNMENT OF MEGHALAYA  
OFFICE OF THE DEPUTY COMMISSIONER  
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**Smt.I.Majaw, MCS  
CEO, District Disaster Management Authority**



### **ACKNOWLEDGEMENT**

At the outset, I express my sincere thanks to the Members of the District Disaster Management Authority for their cooperation and support in preparation and formulation of this plan.

I must place on record my gratitude to all the line departments for their contributions in preparation of this document which will help the DDMA to holistic and effective management of future disasters.

I would like to express my gratitude to the Chairman of DDMA, Shri.P.S.Dkhar, IAS for guidance and suggestions in preparation of this plan.

I would also like to thank the Revenue & Disaster Management Department and Meghalaya State Disaster Management Authority for their continued support & guidance from time to time.

Last but not the least, I would like to thank the officers & staff of DDMA for their assistance in overall preparation of this document.

Being the Chief Executive Officer of DDMA, I hope and expect that this effort will prove useful to all the stakeholders dealing with disasters.

Shillong  
May 2016

Smt.I.Majaw, MCS  
Addl. Deputy Commissioner & CEO (DDMA)  
East Khasi Hills District, Shillong

## ABBREVIATION

1. AAI - Airport Authority of India
2. AC – Area Command
3. ADC – Additional Deputy Commissioner
4. AIR – All India Radio
5. AH&VO – Animal Husbandry & Veterinary Officer
6. ANM – Auxiliary Nursing Midwifery
7. ATF – Aviation Turbine Fuel
8. AWW – Anganwadi Workers
9. BDO – Block Development Officer
10. BDMC – Block Disaster Management Committee
11. BDMP - Block Disaster Management Plan
12. BIS – Bureau of Indian Standards
13. BSNL – Bharat Sanchar Nigam Limited
14. CBOs – Community Based Organizations
15. CBDM - Community Based Disaster Management
16. CBDP - Community Based Disaster Preparedness
17. CD&HG – Civil Defence & Home Guards
18. CDRN - Corporate Disaster Resource Network
19. CEO – Chief Executive Officer
20. CHC – Community Health Centre
21. CM – Chief Minister
22. Com. UL - Communication Unit Leader
23. Com./CUL - Compensation/Claims Unit Leader
24. CPWD – Central Public Works Department
25. C&RD – Community & Rural Development
26. CS – Chief Secretary
27. CSR -Corporate Social Responsibility
28. CUL - Cost Unit Leader
29. CWC – Central Water Commission
30. DA – District Administration
31. DC – Deputy Commissioner
32. DCMG - District Crisis Management Group
33. DDMA – District Disaster Management Authority
34. DDMP - District Disaster Management Plan
35. DDMF - District Disaster Mitigation Fund

36. DDRF - District Disaster Response Fund
37. DEOC – District Emergency Operations Centre
38. Demob. UL - Demobilization Unit Leader
39. DM – Disaster Management
40. DMTs – Disaster Management Teams
41. DM&HO – District Medical & Health Officer
42. DP - Display Processor
43. DPO – District Planning Officer
44. DRR - Disaster Risk Reduction
45. DSS – Decision Support System
46. DTO – District Transport Officer
47. DUL - Documentation Unit Leader
48. EOC - Emergency Operations Centre
49. ESF – Emergency Support Function
50. Fac. UL - Facilities Unit Leader
51. FB - Finance Branch
52. FBD - Finance Branch Director
53. FOs - Field Observers
54. FUL - Food Unit Leader
55. GIS – Geographical Information System
56. GPS – Global Positioning System
57. GSU - Ground Support Unit
58. GSUL - Ground Support Unit Leader
59. HAZCHEM – Hazardous Chemicals
60. HF – High Frequency
61. HQ – Head Quarter
62. HRVA - Hazard Risk Vulnerability Analysis
63. IAP – Incident Action Plan
64. IC – Incident Commander
65. ICP – Incident Command Post
66. IDRN - India Disaster Resource Network
67. IDP -Incident Demobilization Plan
68. IEC – Information, Education & Communication
69. IMO - Information & Media Officer
70. IMD – India Meteorological Department
71. IPR – Information & Public Relations
72. IRS-Incident Response System

- 73. IRT – Incident Response Team
- 74. IT – Information Technology
- 75. LO - Liaison Officer
- 76. L&O – Law & Order
- 77. LS – Logistic Section
- 78. LSC - Logistic Section Chief
- 79. MATI – Meghalaya Administrative Training Institute
- 80. MeECL – Meghalaya Energy Corporation Limited
- 81. MNREGA – Mahatma Gandhi National Rural Employment Guarantee Act
- 82. MPRO – Meghalaya Police Radio Organization
- 83. MUL - Medical Unit Leader
- 84. MUDA – Meghalaya Urban Development Authority
- 85. NCC – National Cadet Corps
- 86. NDMA – National Disaster Management Authority
- 87. NDMP – National Disaster Management Plan
- 88. NDRF - National Disaster Management Force
- 89. NEC – National Executive Committee
- 90. NEEPCO – North Eastern Electric Corporation Limited
- 91. NESAC - North Eastern Space Applications Centre
- 92. NGOs – Non-Governmental Organizations
- 93. NHAI – National Highway Authority of India
- 94. NIC – National Informatics Centre
- 95. NO – Nodal Officer
- 96. NSS – National Service Scheme
- 97. NYK – Nehru Yuva Kendra
- 98. ORS – Oral Rehydration Solution
- 99. OS – Operations Section
- 100. OSC - Operations Section Chief
- 101. PHC – Public Health Centre
- 102. PHE – Public Health Engineering
- 103. PRA – Participatory Rural Appraisal
- 104. PS – Planning Section
- 105. PSC – Planning Section Chief
- 106. PUL - Procurement Unit Leader
- 107. PWD – Public Works Department
- 108. PWDs – People with Disabilities
- 109. QRT – Quick Response Team

- 110. RC - Relief Camp
- 111. RO – Responsible Officer
- 112. RPUL - Resource Provisioning Unit Leader
- 113. RUL - Resource Unit Leader
- 114. SA – Staging Area
- 115. SAM – Staging Area Manager
- 116. SAR – Search and Rescue
- 117. SBD - Service Branch Director
- 118. SDO – Sub Divisional Officer
- 119. SDMA - State Disaster Management Authority
- 120. SDMP – State Disaster Management Plan
- 121. SDRF - State Disaster Response Force
- 122. SDRF - State Disaster Response Fund
- 123. SDMF - State Disaster Mitigation Fund
- 124. SEC – State Executive Committee
- 125. SEOC – State Emergency Operations Centre
- 126. SMB - Shillong Municipal Board
- 127. SOP – Standard Operating Procedure
- 128. SO - Safety Officer
- 129. SP – Superintendent of Police
- 130. SUL - Situation Unit Leader
- 131. Sup. BD - Support Branch Director
- 132. TB - Transportation Branch
- 133. TBD -Transportation Branch Director
- 134. TL - Team Leader
- 135. TS - Technical Specialists
- 136. TUL -Time Unit Leader
- 137. UC – Unified Command
- 138. UHC- Urban Health Officer
- 139. ULB – Urban Level Body
- 140. URR – Urban Risk Reduction
- 141. VDMC – Village Disaster Management Committee
- 142. VDMP - Village Disaster Management Plan
- 143. VDMTs - Village Disaster Management Teams
- 144. VHF – Very High Frequency

## **EXECUTIVE SUMMARY**

On the 23<sup>rd</sup> December 2005, the Government of India took a defining step by piloting the enactment of the Disaster Management Act 2005, which envisaged the creation of the National Disaster Management Authority (NDMA) headed by the Prime Minister of India, State Disaster Management Authorities (SDMAs) headed by the Chief Ministers and District Disaster Management Authorities (DDMAs) headed by the District Collector/Deputy Commissioners and co-chaired by the elected representatives of local authorities to spearhead and implement a holistic and integrated approach to Disaster Management.

The Disaster Management Act, 2005 was enacted to provide the requisite institutional mechanisms for formulating and monitoring the implementation of Disaster Management Plans, ensuring measures by various wings of the Government for preventing and mitigating the effects of disasters and for undertaking a holistic, coordinated and prompt response to any disaster situation.

There has been a paradigm shift in dealing with disasters in the country. Recently, the approach of the Government for dealing with disasters has undergone a change from Relief Oriented Approach to planning, preparedness and mitigation. The focus on capacity building of all the stakeholders is being given due emphasis by the State Government for better management of disasters. The impact of these disasters like earthquake, flood, cyclone etc hindered overall development effort in the state/district. Government and the community need to be aware of the risks and take concrete actions to prepare for and mitigate against the natural disasters affecting their place of living and livelihood. Taking into account the negative impact of the natural disasters, therefore, greater attention by government, community and other stakeholders like Non-Governmental Organizations, Community Based Organizations, and Corporate Sectors should be focused on identifying and reducing disaster risks within local communities.

East Khasi Hills District, Shillong being situated in Seismic Zone - V is highly vulnerable to earthquakes. During 1897 the state was severely affected by an 8.7 magnitude earthquake which resulted in untold miseries. The earthquake of 8.5 magnitude which occurred in 1950 also caused loss of human lives and properties. The district experiences several low to medium intensity earthquakes regularly. Apart from



earthquakes, the district is affected by a number of landslides, storms, flash floods, fire accidents, road accidents and other kinds of hazards. Vulnerability of the district increases due to many factors like increase in population, urbanization, narrow lanes and by lanes, National Highway 44 passes through the city & mushrooming of concrete buildings. Clearly, all these points lead to the need to prepare plan for effective response of any emergencies and as mandated by the National Disaster Management Act, 2005. With this mandate, the DDMA has the responsibility for preparation of the District Disaster Management Plan by involving all stakeholders.

This document comprises of 12 (twelve) chapters namely- Introduction; Hazard, Vulnerability, Capacity & Risk Assessment; Institutional Arrangements, Prevention and Mitigation Measures; Preparedness Measures; Capacity Building and Training Measure; Response & Relief Measures; Reconstruction, Rehabilitation & Recovery Measures, Financial Resources; Procedure & Methodology for Monitoring, Evaluation, Updation and Maintenance of DDMP; Coordination Mechanism for Implementation and Standard Operating Procedures & Checklist; directory of key officials & institutions, appendix and maps.

This document is expected to meet the requirements for dealing with disasters, however, since the community is the first responder to any disaster, the community needs to be empowered for coping with disasters and as well as the need to mobilize their capabilities and capacities for effective Disaster Management.

## **CHAPTER –I**

### **INTRODUCTION**

#### **1.1 Aims and Objectives**

**Under Section 31 of National Disaster Management Act, 2005 it is mandatory** to prepare a District Disaster Management Plan (DDMP). The aim of the plan is to enable the District to be disaster resilient with focus on sustainable development by concerted efforts of all stakeholders. The objectives are:

- i. To identify the areas vulnerable to major types of the hazards in the district.
- ii. To adopt proactive measures at district level by all the govt. departments to prevent/ know disaster and mitigate its effects.
- iii. To define and assign the different tasks and responsibilities to stakeholders during the pre-disaster and post-disaster phases of the disaster.
- iv. To enhance disaster resilience of the people in the district by way of capacity building.
- v. To enhance the capacity of the most vulnerable section of the society including People with Disabilities (PWDs).
- vi. Reduce the loss of public and private property, especially critical facilities and infrastructure, through proper planning.
- vii. Manage future development to mitigate the effect of natural hazards in the district.
- viii. To set up an Emergency Operations Centre at the District level to function effectively in search, rescue, response.
- ix. To develop the standardized mechanism to respond to disaster situation to manage the disaster efficiently.
- x. To set up the early warning system so as to prepare the community to deal with the disaster and responsive communication system based upon fail-proof proven technology.
- xi. To prepare the response plan based upon the guidelines issued in the State Disaster Management Plan so as to provide prompt relief, rescue and search support in the disaster affected areas.
- xii. To adopt disaster resilient construction mechanism in the district by way of using Information, Education and Communication for making the community aware of the need of disaster resilient future development.
- xiii. To make the use of media in disaster management.
- xiv. Rehabilitation plan of the affected people and reconstruction measures to be taken by different govt. departments at district level and local authority.

## **1.2 Authority for DDMP**

Under Section 31 of the DM Act -2005 the District Plan:

1. There shall be a plan for disaster management for every district of the State.
2. The District Plan shall be prepared by the District Authority, after consultation with the local authorities and having regard to the National Plan and the State Plan, to be approved by the State Authority.
3. The District Plan shall include -
  - (a) the areas in the district vulnerable to different forms of disasters;
  - (b) the measures to be taken, for prevention and mitigation of disaster, by the Departments of the Government at the district level and local authorities in the district;
  - (c) the capacity-building and preparedness measures required to be taken by the Departments of the Government at the district level and the local authorities in the district to respond to any threatening disaster situation or disaster;
  - (d) the response plans and procedures, in the event of a disaster, providing for –
    - (i) allocation of responsibilities to the Departments of the Government at the district level and the local authorities in the district;
    - (ii) prompt response to disaster and relief thereof;
    - (iii) procurement of essential resources;
    - (iv) establishment of communication links; and
    - (v) the dissemination of information to the public;
  - (e) such other matters as may be required by the State Authority.
4. The District Plan shall be reviewed and updated annually.
5. The copies of the District Plan referred to in sub-sections (2) and (4) shall be made available to the Departments of the Government in the district.
6. The District Authority shall send a copy of the District Plan to the State Authority which shall forward it to the State Government.
7. The District Authority shall, review from time to time, the implementation of the Plan and issue such instructions to different departments of the Government in the district as it may deem necessary for the implementation thereof.

## **1.3 Evolution of DDMP**

The DDMP was first evolved in 2004 during the implementation of Government of India-United Nations Development Programme Disaster Risk Management Programme. With the enactment of the National DM Act, 2005 it provides for the preparation of the District Plan as per Section 31.

#### **1.4 Stakeholders & their responsibilities**

The DDMA with Deputy Commissioner as the RO and other line departments at district HQ are the main stakeholders in DM. They are responsible to deal with all phases of DM (Preparedness, Prevention, Mitigation, Response & Recovery) within the district.

Other technical institutions, community at large, local self-governments, NGOs etc. are also stakeholders of the DDMP. The role of the stakeholders have been prepared with the avowed objective of making the concerned organizations understand their duties and responsibilities regarding disaster management at all levels and accomplishing them.

##### **1.4.1 Deputy Commissioner (DC)**

- Facilitate and coordinate with local Government bodies to ensure that pre and post Disaster Management activities in the district are carried out.
- Assist community training, awareness programmes and the installation of emergency facilities with the support of local administration, non-governmental organizations and the private sector.
- Function as leader of the team and take appropriate actions to smoothen the response and relief activities to minimize the adverse impact of disaster.
- Recommend Relief Commissioner and State Government for declaration of disaster.

##### **1.4.2 Different Departments at District level**

- Every Office of the State Government at the District level shall prepare a Disaster Management Plan setting out of the following:
  - Provisions for prevention and mitigation measures as provided in the District Plan and as assigned to the department or agency concerned;
  - Provisions for taking measures relating to capacity-building and preparedness as laid down in the District Plan;
  - The response plans and procedures, in the event of, any threatening disaster situation or disaster;
- Coordinate the preparation and the implementation of its plan with those of the other organizations at the district level including local authority, communities and other stakeholders;
- Regularly review and update the plan; and
- Submit a copy of its Disaster Management Plan, and of any amendment thereto, to the District Authority.

#### **1.4.3 Local Authorities**

- Provide assistance to DC in Disaster Management activities.
- Ensure training of its officers and employees on Disaster Management
- Ensure that resources relating to Disaster Management are maintained as to be readily available for use in the event of any threatening disaster situation or disaster.
- Ensure that all construction projects under it conform to the standards and specifications laid down.
- Carry out relief, rehabilitation and reconstruction activities in the affected area within the district.

#### **1.4.4. Private Sector & Corporate**

- Encourage for their active participation in the pre-disaster activities in alignment with the overall plan developed by the DDMA or the DC.
- Adhere to the relevant rules regarding prevention of disasters, as may be stipulated by relevant local authorities.
- As a part of Corporate Social Responsibility (CSR) undertakes DRR projects in consultation with the DC for enhancing district's resilience.

#### **1.4.5 NGOs/CBOs and Volunteer Agencies**

- Assist in prevention and mitigation activities under the overall direction and supervision of the DDMA or the DC.
- Participate in all training activities organized and should familiarize themselves with their role in Disaster Management.

#### **1.4.6 Citizens**

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

### **1.5 How to use DDMP Framework**

As per Section 31 of DM Act 2005 it is mandatory to prepare a DDMP, for the protection of life and property from the effects of hazardous events within the district.

- The DC as the chairman of DDMA has the power of overall supervision and direction control as may be specified under State Government Rules/SDMP guidelines.
- The DEOC will be staffed and operated as the situation dictates. When activated, operations will be supported by senior officers from line departments and central

government agencies; private sector and volunteer organizations may be used to provide information, data and resources to cope with the situation.

- Facilities vital to operation of the district government functions have been identified.
- The DC/RO or his designee will coordinate and control resources of the District.
- Emergency public information will be disseminated by all available media outlets through the designated media and information officer.
- Prior planning and training of personnel are prerequisites to effective emergency operations and must be considered as integral parts of disaster preparations.
- Coordination with surrounding districts is essential when events occur that impact beyond district boundaries. Procedure should be established and exercised for inter district collaboration.
- Departments, agencies and organizations assigned either primary or supporting responsibilities in this document must develop implementation documents in order to support this plan.
- When local resources prove to be inadequate during emergency operations, request for assistance will be made to the State or higher levels of government and other agencies in accordance with set rules and procedures.
- District authority will use normal channel for requesting assistance and/or resources, i.e., through the DEOC to the SEOC. If state resources have been exhausted, the state will arrange to provide the needed resources through central assistance.
- The DEOC will coordinate with the SEOC, Agencies of the Govt. of India like IMD/CWC to maintain up to-date information concerning potential flooding, cyclones etc. As appropriate, such information will be provided to the citizens of the affected areas in the district.
- Upon receipt of potential problems in these areas, DEOC/designated official will appropriately issue alert and notify action to be taken by the residents.
- Disaster occurrence could result in disruption of government functions and, therefore, all levels of local government and their departments should develop and maintain procedures to ensure continuity of Government action.

### **1.6 Approval Mechanism of DDMP**

As per Section 30 of DM Act 2005, the DDMA acts as the district planning, coordinating and implementing body for disaster management and take all measures for the purpose of DM in the district in accordance with the guidelines laid down by the National Authority and the State Authority. Accordingly, the District Plan is prepared by the DDMA, after consultation with the local authorities and having regard to the NDMP and the SDMP.

### **1.7 Plan review and updation**

The District Plan shall be reviewed and updated annually as per Section 31 (4) of the DM Act 2005.

## **CHAPTER –II**

### **HAZARD, VULNERABILITY, CAPACITY AND RISK ASSESSMENT**

#### **2.1 District Profile**

The Khasi Hills District was divided into two districts, viz the East Khasi Hills District and the West Khasi Hills District on 28th October 1976. On June 4th, 1992, East Khasi Hills District was further divided into two administrative districts of East Khasi Hills District and Ri-Bhoi District. East Khasi Hills District forms a central part of Meghalaya and covers a total geographical area of 2,748 Sq. Kms. It lies approximately between 25°07" & 25°41" N Lat. and 91°21" & 92°09" E Long, bounded by Ri-Bhoi District on the North, West Jaintia Hills District on the east, Bangladesh on the South, West Khasi Hills District on the west and South West Khasi Hills on the South West. The District is constituted of 1 (one) Civil Sub-Division at Sohra (Cherrapunji) and 8 (eight) Community & Rural Development Blocks namely, Myllem, Mawphlang, Mawsynram, Khatarshnong-Laitkroh, Pynrusla, Shella-Bholaganj, Mawryngkneng and Mawkynrew C&RD Blocks.

#### **2.2 Demographic Details**

As per Census 2011, the total population of the District is 825922. The details are as in the Tables below:

**Table 1: Showing population of the District**

Areas	No. of Household	Population		0-6 years Population		Scheduled Tribe		Scheduled Caste	
		Male	Female	Male	Female	Male	Female	Male	Female
Rural	86985	228409	231032	48233	47095	213721	218900	1566	1488
Urban	77061	182340	184141	22572	21155	106327	122210	1358	1230
Total	164046	410749	415173	70805	68250	320048	341110	2924	2718

**Table 2: Showing population Block-wise**

Name of the Block	Areas	No. of Household	Population		0-6 years Population		Scheduled Tribe		Scheduled Caste	
			Male	Female	Male	Female	Male	Female	Male	Female
Mawphlang	Rural	13117	35331	36160	8118	7958	35118	35998	8	3
	Urban	0	0	0	0	0	0	0	0	0
	Total	13117	35331	36160	8118	7958	35118	35998	8	3
Myllem	Rural	17240	43556	44635	8061	7728	37167	39631	153	127



	Urban	74809	176725	178034	21660	20196	100961	116314	1336	1203
	Total	92049	220281	222669	29721	27924	138128	155945	1489	1330
Mawryngkneng	Rural	12219	33396	33895	7259	6969	32895	33462	139	135
	Urban	0	0	0	0	0	0	0	0	0
	Total	12219	33396	33895	7259	6969	32895	33462	139	135
Mawkynrew	Rural	7995	22118	22484	5252	5249	21962	22331	0	0
	Urban	0	0	0	0	0	0	0	0	0
	Total	7995	22118	22484	5252	5249	21962	22331	0	0
Khatarshnong-Laitkroh	Rural	6587	16723	16847	3701	3609	16675	16804	3	0
	Urban	0	0	0	0	0	0	0	0	0
	Total	6587	16723	16847	3701	3609	16675	16804	3	0
Mawsynram	Rural	10145	27143	26966	5857	5733	25064	25144	155	143
	Urban	0	0	0	0	0	0	0	0	0
	Total	10145	27143	26966	5857	5733	25064	25144	155	143
Shella-Bholaganj	Rural	8409	21636	20681	4250	4049	16839	16434	1097	1080
	Urban	2252	5615	6107	912	959	5366	5896	22	27
	Total	10661	27251	26788	5162	5008	22205	22330	1119	1107
Pynursla	Rural	11273	28506	29364	5735	5800	28001	29096	11	0
	Urban	0	0	0	0	0	0	0	0	0
	Total	11273	28506	29364	5735	5800	28001	29096	11	0

### 2.3 Physical Features, Climate and Vegetation

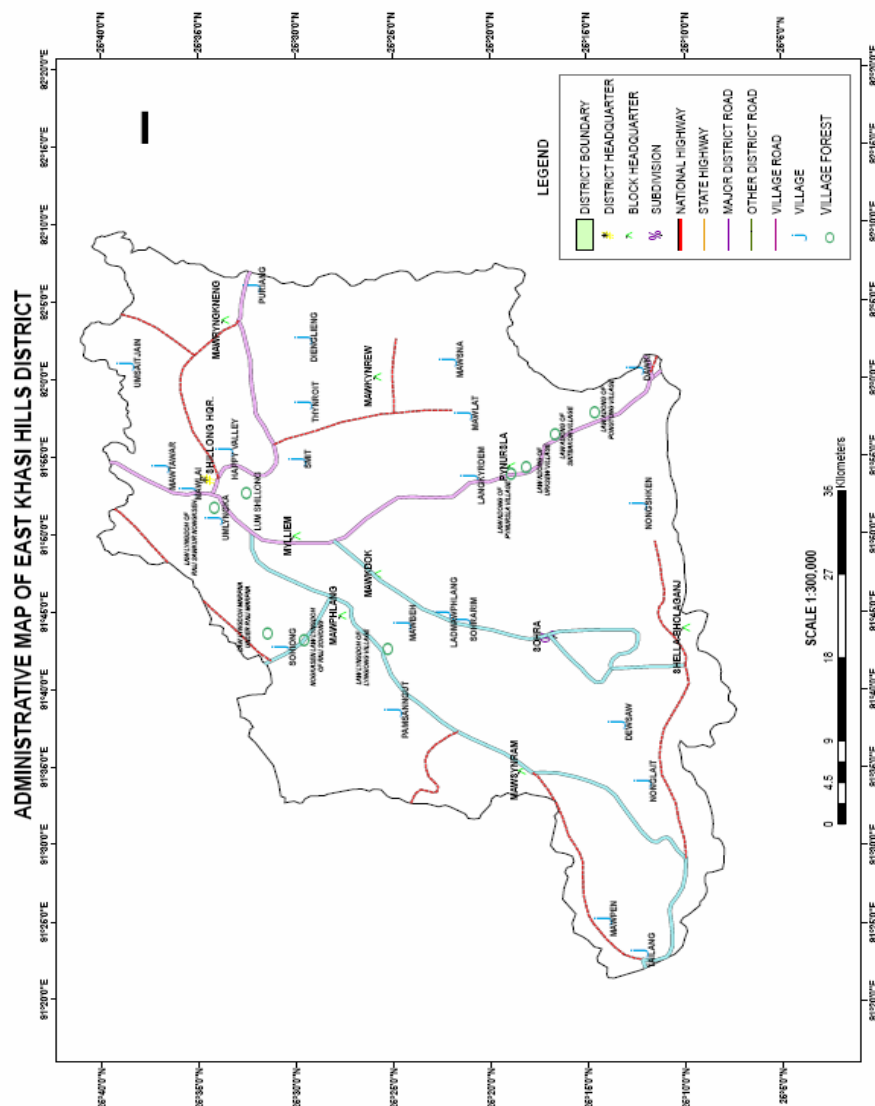
The East Khasi Hills District is mostly hilly with deep gorges and ravines on the southern portion. The most important physiographic features of the district is the Shillong Plateau interspersed with river valley, then fall sharply in the southern portion forming deep gorges and ravine in Mawsynram and Shella-Bholaganj bordering Bangladesh. Shillong peak lying 10 Kms from the city, offer a panoramic view of the scenic country side and is also the highest point in the district as well as in the State. In the evening, the city lights below appear like a star studded abyss.

The climate of the district ranges from temperate in the plateau region to the warmer tropical and sub-tropical pockets on the Northern and Southern regions. The whole of the district is influenced by the south-west monsoon which begins generally from May and continues till September. The

weather is humid for the major portion of the year except for the relatively dry spell usually between December and March.

## 2.4 Infrastructure

The headquarter of the district, Shillong which is also the capital city of State, is connected to Guwahati and Silchar by NH 44 of 103 Kms and 240 Kms respectively. The nearest Rail head and airport are situated at Guwahati. There is an airstrip suitable for small aircrafts at Umroi which is 35 Kms. from Shillong. The agricultural and other products are transported by trucks, jeeps and tractors. Shillong is well connected with other parts of the State by motorable road. Similarly, all the block headquarters in the district are also connected by roads. However, the villages in the interior areas are poorly connected and transport services are inadequate.



## 2.5 Vulnerability to different hazards

The district being situated in Seismic Zone - V is highly vulnerable to earthquakes. During 1897 the district was severely affected by an 8.7 magnitude earthquake which resulted in untold miseries. The earthquake of 8.5 magnitude which occurred in 1950 also caused loss of human lives and properties. The district experiences several low to medium intensity earthquakes regularly. Apart from earthquakes, it is affected by a number of landslides, storms, flash floods, fire accidents, road accidents and other kinds of hazards.

## 2.6 Vulnerability & Risk Assessment

Vulnerability and Risk Assessment is an integral part of DM planning. The HRVA for Shillong City has been initiated with NESAC, Umiam and CSIR-NEIST, Jorhat by the Revenue & Disaster Management Department and SDMA.

## 2.7 History of Disaster

Type of Hazards	Year of Occurrence	Impact on				
		Area	Population	Life	Livelihood	Livestock
Earthquake	1897, 1950	Yes	Yes	Yes	Yes	Yes
Cyclone (Thunderstorms/Thunder squall & Hailstorm)	2000, 2001, 2002, 2003, 2004, 2005, 2006, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015	Yes	Yes	-	Yes	Yes
Flash Flood	1999, 2001, 2002, 2003, 2004, 2005, 2006, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015	Yes	Yes	Yes	Yes	Yes
Landslide	1999, 2001, 2002, 2003, 2004, 2005, 2006, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015	Yes	Yes	Yes	Yes	Yes
Incessant Rainfall	1999, 2001, 2002, 2003, 2004, 2005, 2006, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015	Yes	Yes	Yes	Yes	Yes
Fire	1999, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015	-	Yes	Yes	Yes	Yes

## 2.8 Seasonality of Hazard (Use tick mark)

Type of Hazards	Jan-March				April-June				July-September				October-December			
	H	C	A	I	H	C	A	I	H	C	A	I	H	C	A	I
Cyclone (Thunder squall/thunder storm)					✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Flash Flood					✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Earthquake	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Landslide					✓	✓		✓	✓	✓		✓	✓	✓		✓
Fire	✓			✓				✓	✓			✓				✓
Epidemic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Accidents	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Communal Disturbances	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Incessant Rainfall					✓	✓		✓	✓	✓		✓				
Hailstorm		✓			✓	✓		✓		✓		✓				

H = Human, C = Crop, A = Animal, I = Infrastructure

## 2.9 Risk Assessment

Type of Hazards	Time of Occurrence	Potential Impact	Vulnerable Areas
<b>Flash Flood</b>	Monsoon	Low	Polo Area (Details at 2.11)
<b>Cyclone (Thunder squall/thunder storm)</b>	Pre & during Monsoon	Moderate to High	All the Blocks, Sohiong, Smit, Myllem Rngi, Pomkaniew, Mawbyrthih, Laitkor Lumheh, Mawarling, Mawrashe, Rngi Shyllong, Iewrynghep, Siltham, Wah Mawlein, Lyngshing, Kharang, Dienglieng, Mawblang, Ksan Rngi, Mawiapbang, Pingwait, Laitlum, Laitdiengsai, Nongrah, Mawlynrei, Mawmih, Urban areas
<b>Fire</b>	April, November	Low to Moderate	All the Blocks & Urban areas
<b>Earthquake</b>	Unpredictable	Moderate to High	Whole District
<b>Landslide</b>	During Monsoon	Moderate to High	Parts of Urban areas and all the Blocks
<b>Epidemic</b>	Unpredictable	Unpredictable	All the Blocks & Urban areas
<b>Accidents</b>	Unpredictable	Unpredictable	All the Blocks & Urban areas
<b>Communal Disturbances</b>	Unpredictable	Unpredictable	Urban areas
<b>Lightning</b>	Pre & During Monsoon	Moderate	All the Blocks & Urban areas
<b>Hailstorm</b>	Pre & During Monsoon	High	All the Blocks & Urban areas

**2.10 Vulnerability Analysis (Hazard-Wise)**

Infrastructure	Flood	Cyclone (Thunder squall/thu nder storm)	Earthquake	Landslide	Hailstorm
	Area Name	Area Name	Area Name	Area Name	Area Name
Road Network	Polo Area (Details at 2.11)	Entire district but specifically Sohiong and Smit, Nongrah, Umpling, Mawlynrei	Entire district	Mawphlang-Balat Road, Phlangtyngur-Nongjri Road, Bholaganj-Nongjri Road, Pynursla-Myllat- Nongkhlieng Road, Pomlum -Massar- Wahkhen Road, Mawsynram Thieddieng Road, Mawsynram Syntein Road, Lawbah Thyllaw Road, Phlangsynnei-Tynger- Dewsaw Road, Mawsynram-Hatmadon- Ryngku Road, Tyrsad- Mawsadang Road, Mawkneng-Nongspung Road, Rangshkeng Wahrahaw Road, Nongspung- laitmawsiang Road, Mynsain-Laitlyngkhoi , SP Road to Demthring, Roads towards Wahumkhen at Happy Valley, Sohiong- Wahnongkseh Road, Mawmaram-Nongthliew- Mawmih-Mawlyndep Road, Mawlaingut- Lawmei Rd, Rangshken village Rd, Mawlaiteng- Mawripih Rd, Weilyngkut bazaar- Mawkohtep Rd, Weilyngkut-Mawprem Rd, Sohiong- Weilyngkut-Nongbsap Rd, Manai-Nongktieh Rd, Mawmluh- Mawshamok Rd, Mawlong-Mawshamok Rd, Suktia Hat Sohpieng	Sohiong, Smit

				Rd, Pynursla-Nongjri Rd, Approach rd to Borsora, Cherrapunjee Rd	
Water Supply	Polo Area	Entire district	Entire district	-	-
Hospitals	None	-	Entire district	-	-
Schools	Schools in Polo Areas	-	Entire district	-	-
Residential buildings	Polo area	Sohiong, Smit, Myllem Rngi, Pomkaniew, Mawbyrthi h, Laitkor Lumheh, Mawarling, Mawrashe, Rngi Shyllong, Iewrynghep, Siltham, Wah Mawlein, Lyngshing, Kharang, Dienglieng, Mawblang, Ksan Rngi, Mawiapbang, Pingwait, Laitlum, Laitdiengsa i, Nongrah, Mawlynrei, Mawmih	Entire district	-	Lyngshing, Umsham, Demkhtien g
Office buildings	-	-	Entire district	-	-
Communication facilities	None	Entire district	Entire district	-	-
Bridges	-	Entire district	Entire district	-	-
Power distribution	-	Cherra Distribution	Entire district	-	-

n system		, Pynursla Distributuio n, Mawsynra m Distribution , Sohiong Distrbution, Mawryngk neng Distribution , Shillong Distribution			
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### 2.11 List of Flood prone Areas

Sl. No.	Name of Sub-Basin	Name of River/Stream	Location	Approx Area in Ha
1.	Umiam Sub-Basin	Wahumkhrach, Umshyrpi, Umlew	Polo area, Pynthorumkhrach, Dhanketi Lower Malki, Cantonment, Umlew	150 Ha
2.	Umiew Sub-Basin	Umiew, Umtung & Umjilieng	Marnaniang Village, Madanling Syiem Village, Nongkrem Kharbuli & Nongkrem	132 Ha
3.	Silai Sub-Basin	Umtung, Silai, Kyrdoth & Khasimara	Katrang, Mawdon Sirdarship & Kyrdoth Village	370.70 Ha
4.	Umngi Sub-Basin	Bhowal, Dholai Bhowal, Umngi, Nongspung, Umtdie & Umbah	Umphniang, Rajajam, Warjipung & Nongspung Village	522 Ha
5.	Umken Sub-Basin	Jongkalum & Wahmawiong	Mawryngkneng Village	153 Ha
6.	Umngot Sub-Basin	Paitklong, Rynkon & Umngot	Thynroid, Jakalong, Nongjriong, Syngkli Nongjriong & Perkseh Nongjriong Village	179 Ha
7.	Umsohryngkew Sub-Basin	Umsohryngkew & Wahtyllap	Kalatek, Ichamati	1000 Ha

**\*\* Source from Water Resource Department**

### **CHAPTER –III**

## **INSTITUTIONAL ARRANGEMENTS FOR DISASTER MANAGEMENT**

On the 23<sup>rd</sup> December 2005, the Government of India enacted the DM Act which envisaged the creation of NDMA, headed by the Prime Minister; the NEC headed by the Secretary to the Government of India, Ministry of Home Affairs; the SDMA headed by respective Chief Ministers; the SEC headed by the respective Chief Secretaries and the DDMA headed by the respective DCs.

The DM Act, 2005 provides for an effective institutional mechanism for drawing up and monitoring implementation of DDMP for prevention and mitigating effects of disasters and for taking a holistic, coordinated and prompt response to any disaster situation. Under Section 78 of the DM Act 2005, powers are conferred to the State Government for making rules to carry out the provisions of this Act and notify such rules in the official gazette.

The institutional mechanism for DM at the District Level, as envisaged in the National Plan and other national guidelines, is as given below:

### **3.1 District Disaster Management Authority (DDMA)**

The DDMA under the chairmanship of the DC was constituted as per the Section 25 of DM Act 2005. DDMA acts as the planning, coordinating and implementing body for DM in the District and take all measures for the purposes of DM in accordance with the Guidelines laid down by the NDMA and SDMA. The DDMA will prepare the DDMP and monitor the implementation of the National Policy, the State Policy, the National Plan and the State Plan. The DDMA also ensures that the Guidelines for prevention, mitigation, preparedness and response measures laid down by NDMA and SDMA are followed by all Departments of the State Government and the Local Authorities in the District. As per Section 30, the powers and functions of the DDMA are-

- i) prepare a disaster management plan including district response plan for the district;
- ii) coordinate and monitor the implementation of the National Policy, State Policy, National Plan, State Plan and District Plan;
- iii) ensure that the areas in the district vulnerable to disasters are identified and measures for the prevention of disasters and the mitigation of its effects are undertaken by the departments of the Government at the district level as well as by the local authorities;



- iv) ensure that the guidelines for prevention of disasters, mitigation of its effects, preparedness and response measures as laid down by the National Authority and the State Authority are followed by all departments of the Government at the district level and the local authorities in the district;
- v) give directions to different authorities at the district level and local authorities to take such other measures for the prevention or mitigation of disasters as may be necessary;
- vi) lay down guidelines for preparation of disaster management plans by the department of the Government at the district level and local authorities in the district;
- vii) monitor the implementation of disaster management plans prepared by the Departments of the Government at the district level;
- viii) lay down guidelines to be followed by the Departments of the Government at the district level for purposes of integration of measures for prevention of disasters and mitigation in their development plans and projects and provide necessary technical assistance thereof;
- ix) monitor the implementation of measures referred to in clause (viii);
- x) review the state capabilities for responding to any disaster or threatening disaster situation in the district and give directions to the relevant departments or authorities at the district level for their up-gradation as may be necessary;
- xi) review the preparedness measures and give directions to the concerned departments at the district level or other concerned authorities where necessary for bringing the preparedness measures to the levels required for responding effectively to any disaster or threatening disaster situation;
- xii) organize and coordinate specialized training programmes for different levels of officers, employees and voluntary rescue workers in the district;
- xiii) facilitate community training and awareness programmes for prevention of disaster or mitigation with the support of local authorities, governmental and non-governmental organizations;
- xiv) set up, maintain, review and upgrade the mechanism for early warnings and dissemination of proper information to public;
- xv) prepare, review and update district level response to plan and guidelines;
- xvi) coordinate response to any threatening disaster situation or disaster;
- xvii) ensure that the Departments of the Government at the district level and the local authorities prepare their response plans in accordance with the district response plan;

- xviii) lay down guidelines for, or give direction to, the concerned Department of the Government at the district level or any other authorities within the local limits of the district to take measures to respond effectively to any threatening disaster situation or disaster;
- xix) advise, assist and coordinate the activities of the Departments of the Government at the district level, statutory bodies and other governmental and non-governmental organizations in the district engaged in the disaster management;
- xx) coordinate with, and give guidelines to, local authorities in the district to ensure that measures for the prevention or mitigation of threatening disaster situation or disaster in the district are carried out promptly and effectively;
- xxi) provide necessary technical assistance or give advice to the local authorities in the district for carrying out their functions;
- xxii) review development plans prepared by Departments of the Government at the district level, statutory authorities or local authorities with a view to make necessary provisions therein for prevention of disaster or mitigation;
- xxiii) examine the construction in any area in the district and, if it is of the opinion that the standards for the prevention of disaster or mitigation laid down for such construction is not being or has not been followed, may direct the concerned authority to take action as may be necessary to secure compliance of such standards;
- xxiv) identify buildings and places which could, in the event of any threatening disaster situation or disaster be used as relief centers or camps and make arrangements for water supply and sanitation in such buildings and places;
- xxv) establish stockpiles of relief and rescue materials or ensure preparedness to make such materials available at a short notice;
- xxvi) provide information to the State Authority relating to different aspects of disaster management;
- xxvii) encourage the involvement of non-governmental organizations and voluntary social welfare institutions working at the grassroots level in the district for disaster management;
- xxviii) ensure communication systems are in order, and disaster management drills are carried out periodically;
- xxix) perform such other functions as the State Government or State Authority may assign to it or as it deems necessary for disaster management in the District.

The powers & functions of the DDMA in the event of any threatening disaster situation or disaster are-

- a) give directions for the release and use of resources available with any Department of the Government and the local authority in the district;
- b) control and restrict vehicular traffic to, from and within, the vulnerable or affected areas;
- c) control and restrict the entry of any person into, his movement within and departure from, a vulnerable or affected area;
- d) remove debris, conduct search and carry out rescue operations;
- e) provide shelter, food, drinking water and essential provisions, healthcare and services;
- f) establish emergency communication systems in the affected areas;
- g) make arrangements for the disposal of the unclaimed dead bodies;
- h) recommend to any Department of the Government of the State or any authority or body under that Government at the district level to take such measures as are necessary in its opinion;
- i) require experts and consultants in the relevant fields to advise and assist as it may deem necessary;
- j) procure exclusive or preferential use of amenities from any authority or person;
- k) construct temporary bridges or other necessary structures and demolish structures which may be hazardous to public or aggravate the effects of the disaster;
- l) ensure that the non-governmental organizations carry out their activities in an equitable and non-discriminatory manner;
- m) take such other steps as may be required or warranted to be taken in such a situation.

### **3.2 District Crisis Management Group (DCMG)**

As per the State Policy on Disaster Management, 2013 of the Government of Meghalaya a District Crisis Management Group is constituted with the DC as Chairman with the following members:

- i) The Superintendent of Police
- ii) The Commandant of the Battalion Headquarter available in the District
- iii) The Chief Executive Officer, Municipal Board
- iv) The District Transport Officer
- v) The Secretary, Autonomous District Council
- vi) The District Medical & Health Officer
- vii) The Deputy Controller of Civil Defence
- viii) Additional Chief Engineer/Superintending Engineer/Executive Engineer, PWD (Roads)

- ix) Additional Chief Engineer/Superintending Engineer/Executive Engineer, Public Health Engineering
- x) The District Social Welfare Officer
- xi) The Assistant Director, Information and Public Relations
- xii) The Local Area Commandants of the Central Reserve Police Force/Border Security Force Battalion
- xiii) The Members of the Intelligence set up (Central and State) in the Districts

The DPO/ADC in charge Crisis Management Group will be the Member Secretary of the DCMG.

The responsibilities of the DCMG will be preparation of the District Crisis Management Plan, to ensure maintenance of law and order during the crisis, to coordinate with the other sub-groups, to ensure timely supply of relief and issue of guidance and direction to set up the control room during the period of crisis.

### **3.3 District Hazard Safety Committee**

As per Section 28 of the DM Act 2005, it empowers the DDMA to constitute advisory committees or sub-committees to assist the DDMA and also enables it to make payment to any person associated as an expert with these committees. Hence, the **District Hazard Safety Committee** has been constituted vide Notification RL.33/34/2011/25, dated 2<sup>nd</sup> February 2012 and reviewed vide Notification RL.33/34/2011/209, dated 12<sup>th</sup> February 2016. The Powers & Functions are:

- a. To conduct Safety Audit of existing **lifeline** structures for the prevention/mitigation of any disaster.
- b. The priority for Safety Audit shall be fixed by the Committee
- c. To recommend measures for strengthening/retrofitting of the structures for safety against earthquakes and other hazards
- d. To recommend for non-structural mitigation measures for safety against earthquakes and other hazards
- e. To recommend for demolition of any threatening structures based on auditing report
- f. To conduct field visits to review the compliance of building codes/guidelines and safety norms during the construction of **lifeline** buildings and structures and advise the safety measures to be adopted if any for prevention of disasters.
- g. To certify the safety of the **lifeline** buildings.
- h. The Committee shall meet once every quarter.
- i. The findings of the Committee to be forwarded to the DDMA and to all concerned.

The Chairman may co-opt any expert or specialist in the relevant field as member of the Committee or to attend the meeting of the Committee as and when considered necessary.

### **3.4 Incident Response System (IRS)**

The Incident Response System (IRS) is an effective mechanism for reducing the scope for ad-hoc measures in response. It incorporates all the tasks that may be performed during DM irrespective of their level of complexity. It envisages a composite team with various Sections to attend to all the possible response requirements. The IRS identifies and designates officers to perform various duties and get them trained in their respective roles.

### **3.5 Incident Response Team (IRT)**

IRT is constituted at the District level and will be instructed to constitute at Sub-Division & Block levels. (Details on IRS & IRT in Chapter VII)

### **3.6 Local Authorities**

Local Authorities include the District Council, Rangbah Shnong, Municipal Board, Cantonment Board and Town/Urban Planning Authorities. These bodies will prepare DM plans in accordance with the Guidelines of NDMA, SDMA and the DDMA and will ensure capacity building of their officers and employees for managing disasters, carry out relief, rehabilitation and reconstruction activities in the affected areas.

### **3.7 District Emergency Operations Centre (DEOC)**

The DEOC is the hub of activity in a disaster situation in the district. The EOC will have the flexibility to expand when demand increases and contract when the situation comes to normal. The DEOC is connected with the SEOC in the upstream which further connects to NEOC and other EOCs in the downstream including other field offices during emergencies. EOC has been set up in the office of the DC with requisite facilities.

Similarly, at the Sub-Division and Blocks, Control Rooms are to be set up. Sub-Division Committees, BDMCs and the VDMCs headed by the respective Civil Sub-Divisional Officers, Block Development Officers and the Village Headmen are responsible for overall Disaster Management and to keep in close contact with the DEOC/DDMA.

### **Objectives of the Emergency Operations Centre**

The EOC at the District level is the nerve centre for coordination and management of disasters. The objectives of the EOC shall be to provide centralized direction and control of any or all of the following functions:

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

The DEOC will be connected with the SEOC. The control room will function on 24x7 basis and will be functional round the year. Suitable personnel will be selected and imparted training in the operation of Control Room who will be posted to man the EOC.

#### **Alternate EOC**

An alternate or standby EOC will be set up in the State Central Library, Shillong as permitted by the Director, Arts & Culture.

## **CHAPTER –IV**

### **PREVENTION AND MITIGATION MEASURES**

Prevention and mitigation are actions or activities taken before a disaster that helps to reduce the risk from any disaster whether man-made or natural. Recently, the approach of the Government for dealing with disasters has undergone a change from Relief-centric Approach to planning, prevention, preparedness and mitigation. The focus on capacity building of all the stakeholders is being given due emphasis by the Government for better management of disasters. The district can avail itself the four mechanisms to reduce risk and vulnerability:

- Long term planning for mitigation, preparedness and prevention investments in the district,
- Enforcement of regulations, particularly the building codes and land use,
- Review and evaluation of development plans and activities to identify ways to reduce risks and vulnerability, and
- Capacity building, including warning, the provision of relief and recovery assistance and community-level identification of risk and vulnerability.

The DC, assisted by the ADC, is responsible for developing plans and activities to effect mitigation and prevention using the mechanism noted above. Base on the interim assessment of risk and vulnerabilities, the District will focus on the following areas for mitigation and prevention;

- Provide better early warning methods for flash floods, storms
- Resilience of lifeline systems (water, power and communications)
- Reduction impact on health care facilities, schools and roads
- Vulnerability reduction for earthquake
- Vulnerability reduction in flash flood-prone areas
- Vulnerability reduction to road accidents

#### **4.1 Preventive Measures (for all disasters)**

The principle of prevention and mitigation is to reduce both exposure and vulnerability. Environmental management, site selection, urban planning and sound construction are critical to the safety of communities, whereas socio-economic measures can be used to increase resilience, spread risk and responsibility, create redundancy and minimize the impact.

## 4.2 Mitigation Measures (for all disasters)

Mitigation refers to all measures undertaken in anticipation of a possible threat/hazard. These may include both structural and non-structural mitigation which aim at reducing the physical and socio-economical vulnerability, enhancing capacity and reduce damaging impacts of disasters.

**4.2.1 Structural mitigation** may refer to both – engineered structures and non-engineered structures. Engineered structures involve architects and engineers during the planning, designing and construction of structures, including buildings, dams, embankments, roads, bridges etc. Many countries have rules and laws providing codes for engineered construction. These codes provide guidelines for appropriate design and construction techniques in disaster prone areas for specific disasters such as earthquakes and cyclones.

Non-engineered structures are generally constructed by people with the help of local artisans like masons, carpenters etc using locally available raw materials. These structures are normally of low-cost but have less strength/resistance for a disaster.

**4.2.2 Non-Structural mitigation** encompasses those measures that attempt to bring about coordination of efforts between all organizations and persons during all phases of Disaster Management, training and public awareness, legislation, policy making, preparation of action plans etc.

## 4.3 Mainstreaming/Integration Disaster Risk Reduction

Mainstreaming/integration of Disaster Risk Reduction (DRR) in developmental plan & projects is necessary for effective mitigation. Some of the sectors and DRR initiatives that can be taken are:

Sector	Target Schemes	Key Interventions
Housing	Indira Awaas Yojana (IAY), Rajiv Awaas Yojana, Jawaharlal Nehru National Urban Renewal Mission	<ul style="list-style-type: none"> <li>• Ensure that IAY houses are constructed in locations which are less vulnerable to hazards or disaster-resistant house.</li> <li>• Introduce awareness/training programmes for safe construction practices for engineers/masons/community/house owners</li> <li>• Provide for community based infrastructure such as common multi-purpose shelters as part of the housing clusters</li> <li>• Include strategies for DM in City Plan/Master Plan &amp; allocate funds for</li> </ul>



		plans/projects
Infrastructure	Pradhan Mantri Gram Sadak Yojana, Jawaharlal Nehru National Urban Renewal Mission	<ul style="list-style-type: none"> <li>• Ensure that the roads under PMGSY are constructed in such a manner that it does not lead to landslides, water logging etc</li> <li>• Far off villages across the river be connected through foot bridges</li> <li>• Safety audit &amp; retrofitting of lifeline services</li> </ul>
Education	Sarva Shiksha Abhiyan (SSA)	<ul style="list-style-type: none"> <li>• Design &amp; construct schools/institutions keeping in mind the hazard and vulnerability of the region</li> <li>• Introduce school safety in curriculum</li> <li>• Introduce school safety in the Teachers' training curriculum</li> <li>• Introduce disaster awareness as an element of education imparted in all schools</li> </ul>
Rural Employment	Mahatma Gandhi National Rural Employment Guarantee Scheme	<ul style="list-style-type: none"> <li>• Introduce disaster resilient designs &amp; construction techniques for engineers</li> <li>• Create water conservation and water harvesting systems</li> <li>• Undertake afforestation &amp; tree plantation</li> <li>• Undertake flood control &amp; protection works including drainage in waterlogged areas</li> </ul>
Environment		<ul style="list-style-type: none"> <li>• Afforestation programmes in landslide prone areas, catchment areas of rivers</li> </ul>
Health	National Rural Health Mission	<ul style="list-style-type: none"> <li>• Ensure that the District Health Plan addresses DRR concerns to all levels</li> <li>• Provide training to the Accredited Social Health Activist (ASHA) &amp; all health workers on disaster preparedness and response</li> <li>• Ensure PHCs/CHCs in rural areas</li> <li>• Train doctors &amp; hospital staff on Mass Casualty Management and Emergency Medicine</li> <li>• Create Community Awareness on DM</li> <li>• Ensure stock of essential medicines in all health centres</li> </ul>

#### 4.4 Multi-Hazards Mitigation Actions

The following structural and non-structural measures may also be considered in addition to hazard specific actions.

##### 4.4.1 Structural Mitigation Measures

- All public buildings like schools, hospitals, health centres should be multi-hazard resilient being built on raised grounds and platforms with retrofitting and having adequate exit gates and fire extinguishers in place.
- Construct multipurpose community shelters in all vulnerable areas
- Houses built in the area should have multi hazard resilient features keeping in tune with cultural housing practices
- Watershed management:
  - ✓ A study may be conducted by the District Administration to assess the existing structures and system in place for watershed management and recommend best options for effective watershed management.
  - ✓ Periodically cleaning, de-silting and deepening of natural water reservoir and drainage channels
  - ✓ Construction of irrigation channels. Sluice gates may be linked with ponds which could be used as a water resource for enhancing livelihood.

#### **4.4.2 Non- Structural Mitigation Measures**

- Risk transfer mechanisms: Establishment and strengthening of insurance schemes and policies which would transfer losses the risk due to hazard to a third party. Insurance schemes for crop, cattle, small businesses and life should be strengthened and promoted to minimize economic losses.
- Formation of groups of architects, engineers and masons and trainings for them on building safe infrastructure.
- Alternate safe housing technology along with rainwater harvesting structures is constantly encouraged and mainstreamed for long-term vulnerability reduction. Policies and bye laws could be developed for the same.
- Continuous Awareness campaign & encouragement for disaster proof habitat planning at community level including shifting/relocating from low lying areas and villages within embankments to safe raised grounds. (With some incentives if feasible).
- Disaster management may include first-aid & rescue & evacuation as a part of school, college, educational institutions (both techno-tech) curriculum starting from primary level.
- The DDMA may suggest conducting Research on alternative cropping to reduce adverse affect due to flood, water logging or drought.

#### 4.5 Specific Hazard Mitigation Actions

In addition to the multi-hazard mitigation actions, the following hazard specific mitigation actions should be taken depending on the vulnerability of the village/block:

Hazard Type	Structural Mitigation	Non-Structural Mitigation
Earthquake	<ul style="list-style-type: none"> <li>All buildings especially public building must have earthquake resilient features</li> <li>Techno Legal Regime - Follow BIS Code, Safety Auditing, Enforcement of Byelaws, Land use control, heights of building etc</li> <li>Retrofitting – Lifeline Buildings, Structures, Houses</li> <li>Building bye laws applicable for Zone 5 region should be followed</li> </ul>	<ul style="list-style-type: none"> <li>Awareness on Building byelaws applicable for Zone 5 should be followed</li> <li>Training &amp; Awareness - Engineers, Architect, contractors, Masons, House Owners, Govt. Functionaries etc</li> <li>DM Plans – DM Plans and Mock Drills at all level</li> <li>Community Mobilization - Institution Building, Planning, Response Teams, Insurance</li> </ul>
Landslide	<ul style="list-style-type: none"> <li>Land use Control-Resettlement of colonies, avoid major development works, reforestation, protection of vegetation, construction of buildings, roads, canals etc be carried out after proper study of the area following building codes, slope protection or stabilization. No construction beyond certain degree of slope</li> <li>Retaining Wall</li> </ul>	<ul style="list-style-type: none"> <li>Mapping (Hazard/Risk) - Historical records, areas at risk, locating areas prone to slope failures.</li> <li>Community Awareness–DM Plans, Training and Mock Drills at all level, Community Mobilization-Institution Building, Response Teams, Insurance, Constant Monitoring and Early Warning.</li> </ul>
Cyclone	<ul style="list-style-type: none"> <li>Land use Control- Resettlement of colonies, avoid major development works, enforcement of building codes, vulnerable areas be kept for parks, play ground, grazing ground etc</li> <li>Construction of Engineered Structures– As per code, wind &amp; flood force resistant building in upland, building with high platform, weak houses to be anchored properly before cyclone season. Construction of Cyclone Shelter</li> <li>Flood Diversion: levees, embankments, dams and channel improvement and lakes</li> </ul>	<ul style="list-style-type: none"> <li>Hazard/Risk Mapping</li> <li>Wind Control- Reforestation, mangroves plantation, protection of vegetation, clearing of debris, silts, conservation of ponds</li> <li>Community Preparedness– Structural &amp; non-structural DM Plans, Training and Mock Drills at all level, Community Mobilization-Institution Building, Response Teams, Insurance, alternate cropping.</li> </ul>
Flood	<ul style="list-style-type: none"> <li>Construction, maintenance and protection of flood control</li> </ul>	<ul style="list-style-type: none"> <li>Crops that can be harvested before the onset of</li> </ul>

	<p>structures like embankments, ring bunds, etc.</p> <ul style="list-style-type: none"> <li>• Dams and levees can also be constructed which can be used as temporarily storing space which reduced the chances of lower plains getting flooded.</li> <li>• Critical buildings as well as private houses in flood prone areas should be constructed on an elevated area and if necessary on stilts and platform.</li> <li>• Land use Control-Resettlement of colonies, avoid major development works, building water holding areas in urban areas</li> <li>• Construction of Engineered Structures– As per code, flood force resistant building in upland, building with high platform</li> </ul>	<p>monsoon/flood season and crops that are flood friendly should be grown in the region.</p> <ul style="list-style-type: none"> <li>• Awareness on flood proof habitat planning with long term goal of flood plain zoning and rehabilitating all to safer zones.</li> <li>• <i>Flood Reduction:</i> reforestation, protection of vegetation, clearing of debris, silts, conservation of ponds and lakes</li> <li>• Non-structural Disaster Management Plans and Mock Drills at all level, Community Mobilization-Institution Building, Response Teams, Insurance, alternate cropping.</li> </ul>
Fire	<ul style="list-style-type: none"> <li>• Establishment of fire stations as per Fire Safety norms</li> </ul>	<ul style="list-style-type: none"> <li>• Promotion of usage of fuel blocks during summers to minimize cases of fire during summer</li> <li>• Awareness campaign on fire hazard and strategies to prevent fire incidents</li> </ul>
Petro-Chemical, Industrial Hazards (Petrol Pumps)	<ul style="list-style-type: none"> <li>• Ensuring safety of chemical storage vessels</li> <li>• Safe &amp; proper construction of Petrol pumps</li> </ul>	<ul style="list-style-type: none"> <li>• Enforcement of safety provisions for isolated storages</li> <li>• Ensure safe electrical conditions</li> <li>• Onsite Emergency Plan</li> <li>• Emergency response plans for transport of HAZCHEM</li> <li>• Mock Drill &amp; Training</li> </ul>

**Drought:** Drought preparedness and mitigation can be accomplished with the practices of soil and moisture, better water and crop management, augmentation of water supplies with ground water, increased public awareness and education, intensified watershed and water conservation etc. Soil and moisture conservation can be approached through agronomic and engineering measures.

Agronomic measures include contour farming, off season tillage, deep tillage, mulching and providing vegetative barriers on the contour. These measures prevent soil erosion and increase soil moisture.

Engineering measures differ with location, slope of the land, soil type and amount and intensity of rainfall. Measures commonly used are the following:

Contour bunds, trenches, stone walls, check dams, gully control measure and percolation ponds.

Water supply projects can also be implemented for drought mitigation. Activities such as water use planning, rain water harvesting, run-off collection, improved management of channels and wells.

To increase moisture availability the following in situ moisture conservation practices can be adopted:

- For agricultural crops, measures include ridges and furrows, basins and water spreading.
- For tree crops, measures include saucer basins, semi-circular bunds and crescent shaped bunds, coach pits and deep pitching.
- Rain water harvesting collects rainfall or moisture for immediate or eventual use in irrigation or domestic supplies. Part of the rain water collected from roofs can be stored in a tank for later use.

**Pest attack:** Insect outbreak is generally the result of a combination of temperate, monoculture of crops, introduction of plants to new locations, weather pattern and migration (ecological factors).

Due to adverse/harmful effect of chemical pesticide to the farm land and environment as a whole and also destroying the beneficial insect, the State Government has ordered that only Bio-pesticides/organic pesticide can be issued to the farmers for safer environment. Organic pest control is about Organic Pest Management (OPM). Observing and giving attention to the total farm land (soil, plant health and plant diversity) not only reduces pest damage but also is safer for the farming system. For encouraging beneficial insects in the field it is important that the farm land has these. Not too many just enough:- (i) harmful insects (to feed on by the benefitted them on or use as host for the young one) (ii) water, (iii) soil aeration, (iv) care and attention, (v) any one of the nutrient.

Seven steps to successful OPM

1. Pest prevention
2. Learn about beneficial insects to help with pest control in the field
3. Identification of the insect problem
4. Assessment of insect damage
5. Selection of insects control tactic
6. Implementation of insect control
7. Re-assessment of insect damage

#### 8. Follow up periodic assessment

There are also several types of non-chemical practices that can be implemented to prevent pest infestation.

These include:-

- Plowing or harrowing to control weeds
- Crop rotation-rotating susceptible crops with non-susceptible ones
- Removing infected plant material from fields
- Maintaining soil organic matter by leaving crop residues on the soil and adding manure or compost
- Using mixed cropping, inter cropping, strip cropping. Planting adjacent fields to non-susceptible crops can decrease disease and spread of pest.
- Avoid planting seeds in cold, wet soils. These conditions favour growth of fungal and bacterial pathogens and are not favourable for seedling growth.
- Using soil test to determine fertilizers and manure application level appropriate to obtain realistic yields. Over or under fertilization can make crops more susceptible to pest attack or infestation or infestation.
- Controlling weeds that can serve as alternative hosts for plant pests or diseases.
- Planting pre-resistant varieties of crops are selectively bred or genetically altered to be less susceptible to pest or disease attack.
- Natural biological enemies or pest organisms can be used to control pest population i.e. ladybugs, beneficial mites and bacteria such as *Bacillus thuringensis*.

These cultural or biological practices effectively control pest by disrupting the environmental conditions that pests need to grow and reproduce. They also deter pests through the use of disease resistant varieties as well as biological competition. Using non-chemical practices to prevent pest reduces or eliminates the risk of water resources contamination and can save the farm money.

**Frost, Cold Wave:** A cold wave is a rapid fall in temperature within a 24-hour period requiring substantially increased protection to agriculture, industry, commerce and social activities. Cold waves that bring unexpected freezes and frost during the growing season in mid-latitude zones can kill plants during the early and most vulnerable stages of growth resulting in crop failure as plants are killed before they can be harvested economically. More economic losses occur due to freeze damage.

To mitigate/prevent frost damage, sprinklers, smudge pots (create thick, heavy smoke) and covering crops with plastic, hay, trap, etc. can be practiced. Also planting of crops in green house during winter so as to control temperature can help to control pest damage.

**Hail** – Anti-hail nets can be used to protect crops from hailstones. However, the protection is rarely installed to protect some important farms only because its installation and handling costs are very expensive for large area farm. In the event of strong hail storms, the anti-hail nets are not efficient. Consequences are potentially even worse than for a completely unprotected farm because the nets structure collapses on the area and the farmer will often be forced to replant the entire affected area.

To protect themselves against losses due to natural disasters like hail, drought and flood, etc. the agriculture producers including farmers can purchase crop insurance whichever available and applicable to them.

## **CHAPTER –V**

### **PREPAREDNESS MEASURES**

Preparedness is the state of readiness to deal with a threatening disaster situation or disaster and the effects thereof. The preparedness level at the District has to be checked by the DDMA.

#### **5.1 Stakeholders involved in disaster response**

The overall responsibility of DM lies with the DDMA, however, all stake holders like the different Departments of the Government, Local Authorities, NGOs and Community have to support the DDMA in all its efforts for effective management of disasters.

##### **5.1.1 Response and evacuation of disabled**

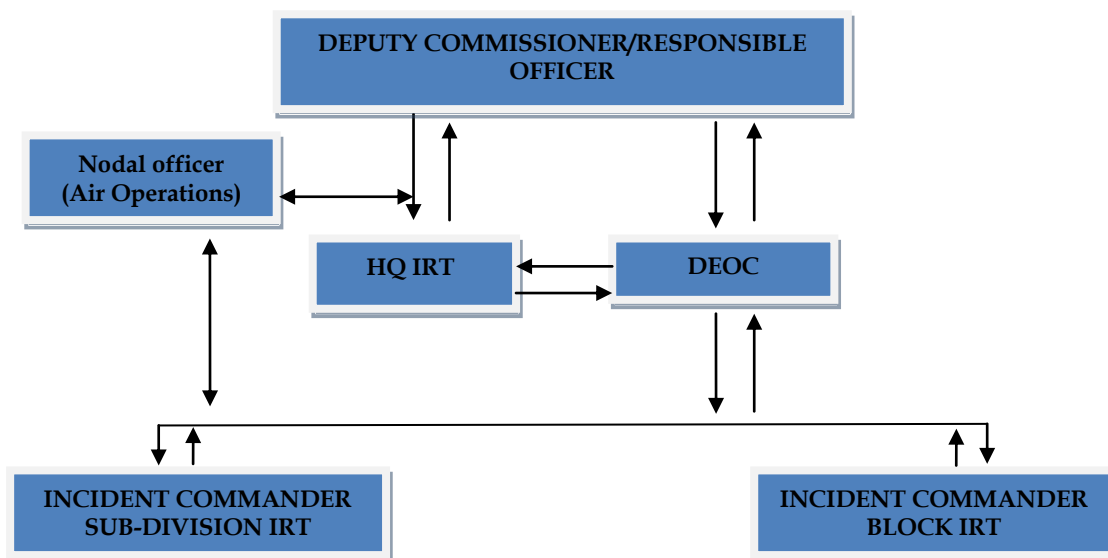
Immediately after a disaster the following actions are to be taken for disability-related responses-

- Evacuate PWDs to safe shelters with care.
- Identify/list persons with existing disabilities in temporary shelters and camps.
- Respond to the specific health care needs of persons with existing disabilities, such as insulin for diabetics, soft mattresses for people with spinal cord injuries and spectacles for people with low vision.
- Identify people with injuries and providing appropriate trauma care to save lives and minimize future functional impairment and disability.

- Implement other curative and therapeutic interventions that can prevent disability such as prevention of pressure sores and possible deformities.
- Transfer people with severe injuries and/or newly acquired disabilities to referral centers for medical rehabilitations. In settings where such centers do not exist, efforts should be made to ensure that such persons are treated by specialists in existing facilities.
- Establish a multi-disciplinary task force to prepare a long-term rehabilitation program, taking into consideration the resources available and economic conditions of the district/state.

## 5.2 Activation of IRS

The DC being the head of the district and chairman of the DDMA is designated as the RO of the district. The DC may delegate some of the functions to the ADC for the day to day supervision and management of the incident. However, he will remain fully briefed by the DEOC and IC and be aware of all developments and progress of response activities at all times. The hierarchical representation of RO is shown at Fig. 1



**Fig.1: Hierarchical representation of RO**

The heads of different departments in the District will have separate roles to play depending on the nature and kind of disaster. The roles and responsibilities of the members of the DDMA will be decided in advance in consultation with the concerned members. The roles of other line departments also have to be clearly delineated in various

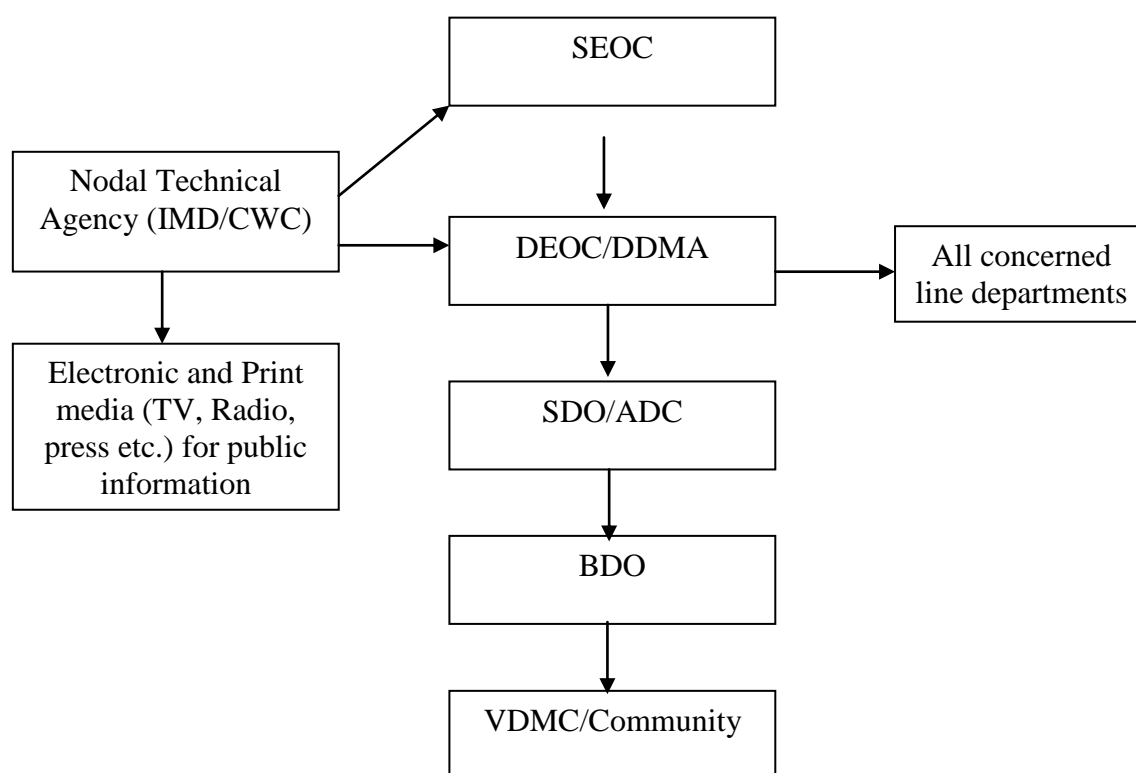


disaster situations in the DDMP which will be duly approved by the State Government, so that there will be no ambiguity about their functions during response.

### 5.3 Trigger Mechanism

There is an institutional trigger mechanism that every agency takes its assigned role at the time of such disaster. There are two types of the Trigger mechanism set up depending upon the warning signals availability as mentioned below:

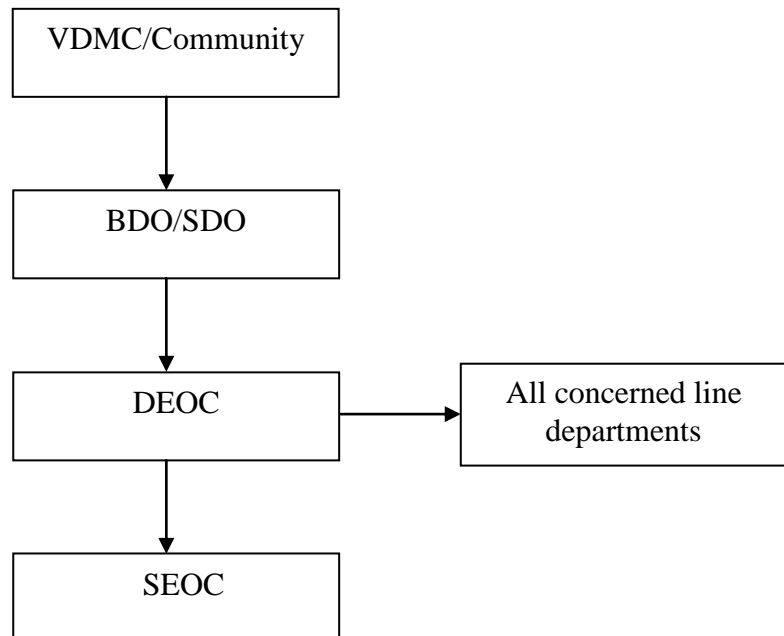
**Warning Signal Available:** In this case the Govt. of India/State Govt. has authorized agencies generating such early warning signals; in case the matter is very urgent needing action at Block/Village levels, the alerts and action points will go directly to all concerned. Arrangements need to be in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



**Fig.2: Information flow chart in Case I: where early warning signals are available**

**Without Early Warning Signal:** In this case the information starts from the place of incident through government agency or community and the institutional mechanism in such cases will be as follows:-

- The concerned village will report to the SDO/BDO/Police Station and the information should reach the DC/DDMA.
- The DDMA will assess the information and assess the disaster to be of the level L0, L1, L2 or L3.
  - L0: A no-disaster situation. This is the level at which surveillance, preparedness & mitigation activities must be focused on.
  - L1: A District Level Disaster, within the capabilities of the District Administration to deal with.
  - L2: A State Level Disaster, within the capabilities of the State Government to deal with.
  - L3: A National Level Disaster, requiring major direct intervention of the Central Government.
- The DEOC will be activated and if required the SEOC will be kept at alert if assistance needed; otherwise information of the incident will be passed on to the SEOC.
- The DDMA will convene the meeting of IRT and plan the management of the disaster as Incident Action Plan (IAP).
- The respective Incident Response Teams (IRTs) will be rushed to the site for effective management.



**Fig.3: Information Flow Chart in Case II: Where Incident happens without any early warning signals**

The disaster response structure will be activated on the receipt of disaster warning or on the occurrence of the disaster by the competent authority. The occurrence of disaster may be reported by the concerned monitoring authority to the Relief Commissioner/SDMA by the fastest means. The SDMA/SEC will activate all departments for emergency response including the SEOC & DEOC. In addition, they will issue instructions to include the following details:

- Exact quantum of resources (in terms of manpower, equipments and essential items from key departments/stakeholders) that is required.
- The type of assistance to be provided
- The time limit within which assistance is needed
- Details of other Task/Response Forces through which coordination should take place
- The DEOC and other control rooms at the district should be activated with full strength.

#### **5.4 Protocol for seeking help from other agencies like Army, Air Force & Central Paramilitary Forces, NDRF and SDRF**

##### **5.4.1 Army, Air Force & Central Paramilitary Forces**

The Chairman of the DDMA will write to the Government in the Revenue and Disaster Management Department for requisition of Army, Air force & Central Paramilitary Forces which will take up the matter with the concern Ministries.

##### **5.4.2 National Disaster Response Force**

The NDRF Battalion/Team can be requisitioned by the DDMA directly in cases of rapid onset disasters where early warning/alerts is not available and through the Director General, NDRF and NDMA in cases where sufficient lead time is available. The DDMA will maintain close liaison with the NDRF Commander, Guwahati for rapid deployment in case of threatening disaster situations/disasters.

##### **5.4.3 State Disaster Response Force**

The Chairman of the DDMA will write to the Government in the Revenue and Disaster Management Department for requisition of SDRF which will take up the matter with the Director General of CD&HG.

#### **5.5 Mechanism for checking and certification of logistics, equipments and stores**

The Logistic Section Chief (LSC) is responsible for checking and certification of logistics, equipments, stores and for all logistic arrangements.

## **5.6 Operational check-up of Warning Systems & EOC**

Operational check-up of EOC should be done twice a year. Equipments especially communication equipments should be checked and tested regularly with the assistance of the MPRO.

## **5.7 Command & Coordination**

The DC/RO will convene a coordination meeting regularly with all the stakeholders including the NGOs for effective management of disaster and for preparedness of South West Monsoon and Cyclone seasons.

## **5.8 Community Preparedness**

Community is one of the most important stakeholders and also the first responders to any disaster, hence, community preparedness plays a very important role in –

### **5.8.1 Community Warning System**

IMD is responsible for warning of thunderstorm, cyclone and earthquake and the DDMA/ DEOC will warn the public through the Information & Public Relations Department to the BDOs for further information to all the Village Early Warning Teams. After receipt of warning, the teams shall communicate the message to the concerning people of the areas by sound system or any locally available resources. The DDMA/DEOC shall ensure fail safe mechanism for timely dissemination of forecasting and warning of impending disaster to the community

### **5.8.2 Community Awareness, Education**

Awareness and education programmes on DM are conducted regularly under the supervision of DDMA & BDOs by involving the community at the village levels.

### **5.8.3 Community's responsibility**

The Community should not only support the DDMA but owned the responsibility for effective DM at their level. Their responsibilities are –

- To promote community education and awareness
- Training and capacity building in Search & Rescue, First Aid and conducting Mock Drills
- Preparation of Community/VDMP through participatory approach along with formation of DM teams.
- Provide necessary resources and support for disaster risk reduction at community level
- Disseminate information to community to deal with any disaster situation and take appropriate actions to enhance community preparedness

- Take additional care for the most vulnerable sections like children, disabled, aged etc

## **5.9 Standard Operating Procedures (SOPs)**

**5.9.1 Arrangements for VIP visits:** VIP visit to any affected areas is important to build confidence on the people after a disaster. However, minimum protocol requirement is to be maintained so that it will not affect the relief and response operations.

**5.9.2 Procurement:** Resources have been updated in the IDRN website. However, procurement of resources like tents, blankets, tarpaulins, equipments etc during disasters will be done by the Procurement Unit Leader. Emergency procurement of resources can be made by the DDMA as per Section 50 of the DM Act, 2005.

## **5.10 Knowledge Management**

- Documentation of disasters and to make it available in easy accessible format
- Undertake research studies and application of outcomes in disaster management practices
- Documenting field data, experience and indigenous technological knowledge from local community
- Development of plan by using available resources like IDRN.
- Sharing of data/information/reports/proceeding through consultation meeting/seminars etc.
- Use of Information and Communication Technology at DEOC.

### **5.10.1 India Disaster Resource Network (IDRN)**

IDRN, a web-based information system is a nation-wide electronic/on-line inventory of resources like equipment, skilled human resources and critical supplies collected from all departments in the district. All resources from different departments at the district have been uploaded and updated regularly.

### **5.10.2 Corporate Disaster Resource Network**

CDRN, a web-based supply chain management system that helps relief agencies or response agencies and local government to access and feed in real time information on products and services required for humanitarian relief.

## **5.11 Media Management/information dissemination**

Media plays a very important role to check rumour and panic, hence, Media Management System and proper coordination with the DDMA is necessary. The main roles of Media are informative, suggestive and analytical. The IPR Department is responsible for Media Management.

### **5.12 Medical Preparedness and Mass Casualty Management**

The District Medical & Health Officer is in charge of Disaster Medicines and Mass Casualty Management. (Medical Quick Response Teams at Annexure 10). The following activities are to be prepared-

- Preparation of Authentic medical database for public and private facilities available in the district.
- Resource management- Manpower, logistics, medical equipments, medicines, antidotes, personal protective equipments, disinfectant, vaccine.
- Identification of medical IRS at the district level and disaster site.
- Preparation of Medical Management Plan
- Preparation of Hospital Preparedness/Disaster Management Plan
- Training and capacity building -Hospital preparedness, Pre hospital care, Mass Casualty Management, etc.
- Medical Preparedness for Chemical Emergencies- including formation of trained medical first responder, QRT, stationary and mobile decontamination facilities, identification of poison centres, mobile hospital, antidotes planning and crisis management planning at hospitals.

## **CHAPTER –VI**

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

As per the High Powered Committee Report, Capacity Building is a complex, long-term phenomenon requiring the development of human resources, the establishment of well functioning organizations within a suitable work environment and a supportive socio-political environment for improving the performance of institutions and personnel.

Capacity Building develops and strengthens skills, competencies and abilities of both Government and Non-Government officials and communities to achieve the desired results during and after disasters, as well as preventing hazardous events from becoming a disaster. All the stakeholders and communities are critical components to a successful, long term, sustainable management plan.

The DDMA is implementing DRR, URR, Capacity Building for Disaster Response of the 13<sup>th</sup> Finance Commission, NDMA Fund & State Fund to capacitate all the stake holders like officials, policy makers, engineers, architects, masons, doctors, nurses, teachers, police, fire personnel, drivers, NGOs and volunteers (NYK, NCC, NSS). Schools and colleges are also included in Capacity Building and training.

Search & Rescue/First Aid training and Mock Drills are the priority of the DDMA which is imparting by CD&HGs. Gender and Disaster awareness is also one of the components in Capacity Building along with preparation of DM Plans by all stakeholders.

#### **6.1 Approaches towards Capacity Building**

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

- Holistic approach is about integrating all aspects of disaster management like preparedness, response, recovery etc with sustainable development.
- Integrated approach is about involving all stake holders, the Government, NGOs and the community with DM.
- CBDM/CBDP approach is about involving the community in every aspect of disaster management planning. Involving communities in disaster preparedness programs provides a venue for these communities to implement their own solutions thus inculcating ownership and an increased probability of sustainability.

## 6.2 Capacity Building Plan

### 6.2.1 Training & Awareness

Task	Activity	Responsibility
Training & Awareness	<ul style="list-style-type: none"> <li>Sensitization to Representatives &amp; law/ policy makers</li> <li>Sensitization &amp; training to government officials of different departments</li> </ul>	Revenue & DM Department, SDMA, DDMA
	<ul style="list-style-type: none"> <li>Training to CD&amp;HGs personnel in various aspect of DM including Search and Rescue &amp; First Aid</li> </ul>	Revenue & DM Department, SDMA, DDMA, CD&HG
	<ul style="list-style-type: none"> <li>Training to engineers, architects, structural engineers, builders and masons in various aspect of DM</li> </ul>	DDMA, PWD and all relevant departments
	<ul style="list-style-type: none"> <li>Training of doctors &amp; paramedics on Medical preparedness &amp; Mass Casualty Management</li> </ul>	DDMA, Health Department
	<ul style="list-style-type: none"> <li>Training to educational institutions, teachers etc on College/School Safety, Search &amp; Rescue, First Aid</li> </ul>	DDMA, Education Department, CD&HG
	<ul style="list-style-type: none"> <li>Training to Police and Traffic personnel in various aspect of DM</li> </ul>	DDMA, Home Department
	<ul style="list-style-type: none"> <li>Training to Fire &amp; Emergency personnel in various aspect of DM</li> </ul>	DDMA, Home Department
	<ul style="list-style-type: none"> <li>Training to NCC, NSS, NYK &amp; volunteers in various aspect of DM</li> </ul>	DDMA
	<ul style="list-style-type: none"> <li>Training to NGOs/CBOs in various aspect of disaster management</li> </ul>	DDMA
	<ul style="list-style-type: none"> <li>Training to Media in various aspect of disaster management</li> </ul>	DDMA, IPR
	<ul style="list-style-type: none"> <li>Training to Teachers of PWDs</li> </ul>	DDMA & Social Welfare Department
	<ul style="list-style-type: none"> <li>Training on Gender &amp; Disaster to all stakeholders</li> </ul>	DDMA
IEC	<ul style="list-style-type: none"> <li>Advertisement, hoarding, booklets, leaflets, banners, demonstration, street play, rally, exhibition, audio-visual and documentary etc</li> </ul>	DDMA & all line departments

### 6.2.2 Community Based Disaster Management

Taking into account the negative impact of the natural disasters in the district and as Community is the first responder to any disaster and the first to be affected. Defining community is the first step towards community preparedness and stressed that any strategy must focus on the community and its problems for effective implementation of the programme. Community is one of the most important stakeholders in DM. Therefore, effective participation of the community which includes all sections of a society is emphasized to capacitate the community and



increase their preparedness level so that loss of life & property can be reduced. The concept of putting the communities at the forefront gives rise to the idea of CBDM. The community needs to be empowered for coping with disasters and as well as the need to mobilize their capabilities and capacities for effective DM. It is also known that the local communities have an active part to play in all phases of disasters because:

- A good state of preparedness by the community before a disaster strikes may reduce its impact.
- The Community can save more number of lives during the golden hours after a disaster strikes till the arrival of external help.
- The Community can effectively address the issues of water and sanitation, health, rehabilitation etc in more organized way.

Task	Activity	Responsibility
Community Preparedness	<ul style="list-style-type: none"> <li>• Identification of vulnerable community &amp; vulnerable groups keeping in mind the gender issues</li> </ul>	DDMA, BDOs
	<ul style="list-style-type: none"> <li>• Information on risk &amp; vulnerability</li> </ul>	
	<ul style="list-style-type: none"> <li>• Encourage preparation of DM plan through PRA</li> </ul>	
	<ul style="list-style-type: none"> <li>• Advice and issue direction wherever necessary for community disaster prevention, mitigation and preparedness through local resources and participatory approach</li> </ul>	
	<ul style="list-style-type: none"> <li>• Provide necessary resources and support for DRR at community level</li> </ul>	
	<ul style="list-style-type: none"> <li>• Review the preparedness at community level</li> </ul>	
	<ul style="list-style-type: none"> <li>• Promote community preparedness, education, awareness and training</li> </ul>	
	<ul style="list-style-type: none"> <li>• Ensure fail safe mechanism for timely dissemination of forecasting and warning of impending disaster to the community</li> </ul>	
	<ul style="list-style-type: none"> <li>• Disseminate information to community to deal with any disaster situation</li> </ul>	

## **CHAPTER –VII**

### **RESPONSE AND RELIEF MEASURES**

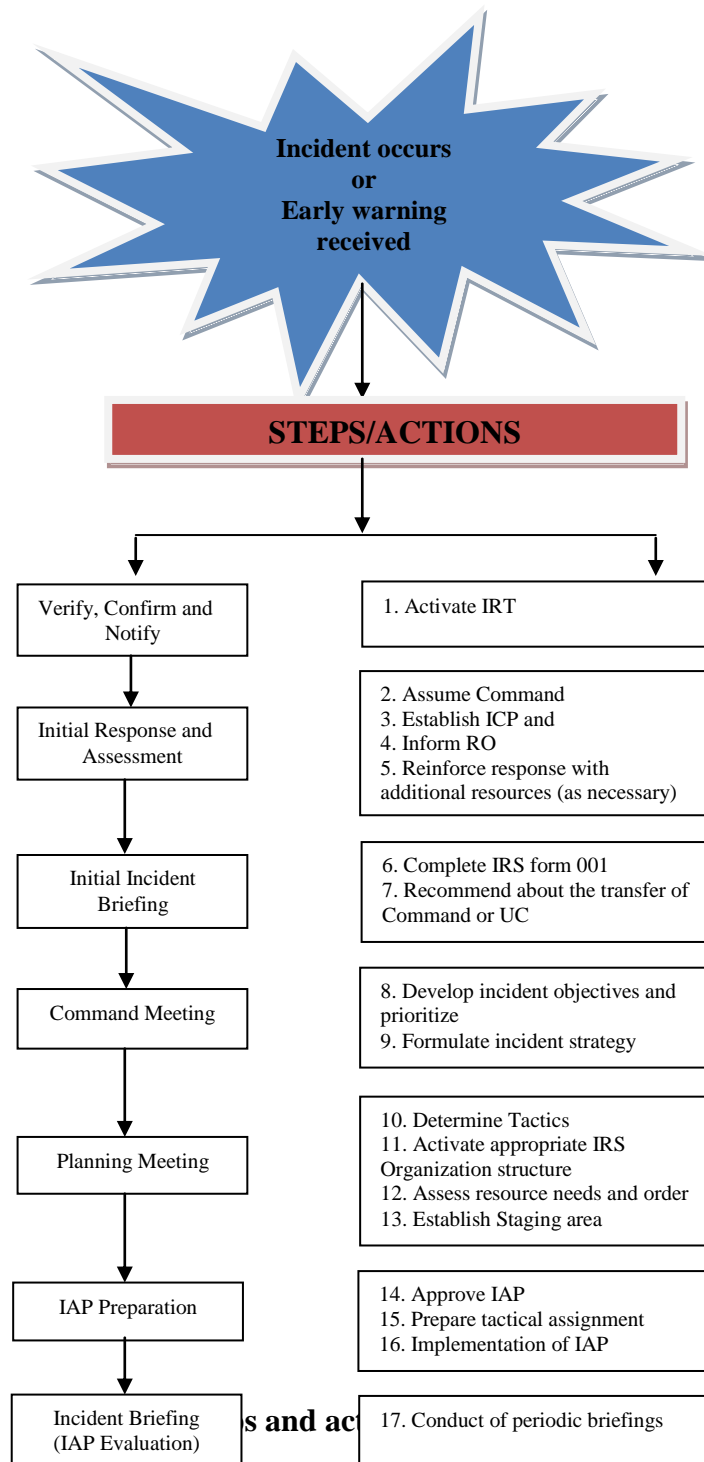
Response is the set of activities implemented after the impact of a disaster in order to assess the needs, reduce the suffering, limit the spread and the consequences of the disaster and open the way to rehabilitation. Response planning provides rapid and disciplined incident assessment to ensure a quickly scalable, adaptable and flexible response. It also defines the roles and responsibilities for incident response across all levels of the government and private sectors.

The District is in the process of adopting the Incident Response System (IRS) of the Govt. of India to respond to any disaster.

#### **7.1 The Incident Action Plan (IAP)**

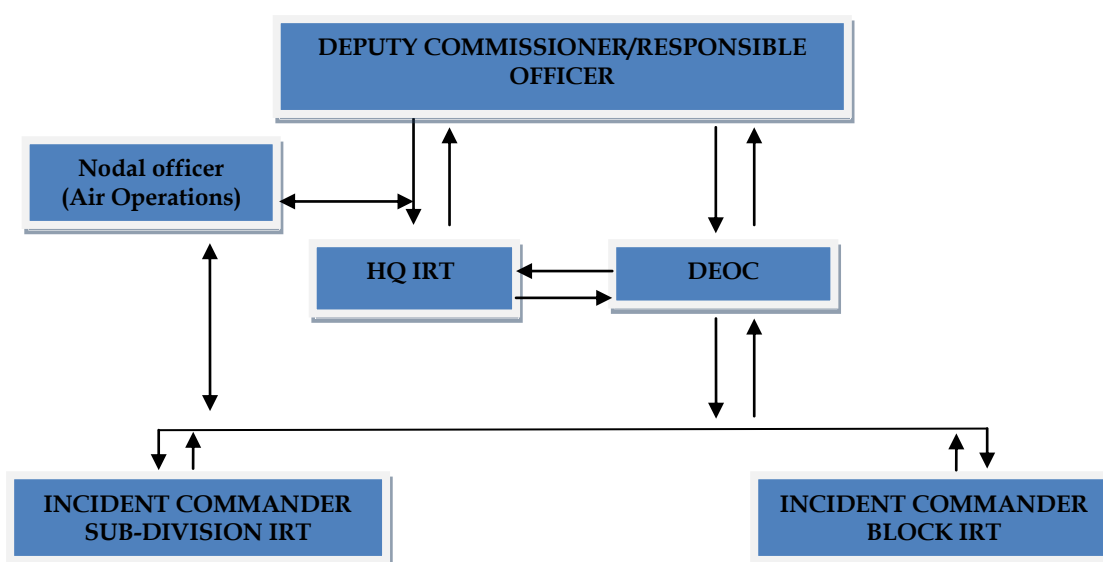
Management of every incident needs an action plan and proper briefing of all personnel. The purpose of the action plan and briefing is to provide all concerned personnel with appropriate directions for the various tasks in hand. **Before taking up response activities, the RO/IC will need to take stock of the situation, availability and mobilization of resources for listing out the various tasks and to provide proper briefing to the responders.** For this, RO/IC will need to hold a proper briefing meeting at the beginning of each operational period. At the end of the operational period, a debriefing meeting is equally important where he 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. For the convenience of the IC, a briefing form-001 will be used. The briefing form - 001 can also be used for briefing of senior officers who arrive on the scene. 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 of 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 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 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.



## 7.2 Incident Response System (IRS) and its activation

The DC being the head of the district and chairman of the DDMA is designated as the RO of the district. The DC may delegate some of the functions to the ADC for the day to day supervision and management of the incident. However, he will remain fully briefed by the DEOC and IC and be aware of all developments and progress of response activities at all times. He will also immediately convene a meeting of the DDMA, IC, OSC, PSC & LSC. The hierarchical representation of RO is shown at Fig. 1



**Fig.1: Hierarchical representation of RO**

## 7.3 Roles and Responsibilities of District Magistrate as RO

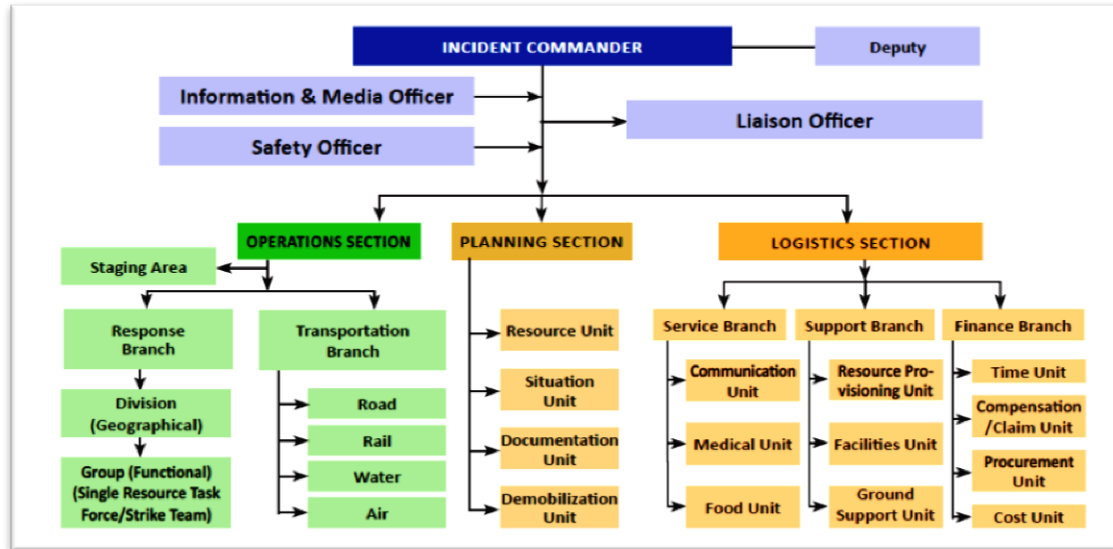
- ensure that IRTs are formed at District, Sub-Division, Block levels and IRS is integrated in the District DM Plan as per Section 31 of the DM Act, 2005. This may be achieved by issuing a Standing Order by the RO to all SDO and BDOs;
- ensure web based/on line DSS is in place in EOC and connected with 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 EOC for response, command and control. For e.g., if there is any fire incident, the information should not only reach the fire station but also the EOC and the nearest hospital to gear up the emergency medical service;
- obtain funds from State Government as recommended by the 13th FC and ensure that a training calendar for IRTs of District is prepared and members of IRTs are trained through MATI and other training institutions of the District;
- delegate authorities to the IC;

- vi. activate IRTs at District headquarter, Sub-Division, Block levels, as and when required;
- vii. appoint/deploy, terminate and demobilize IC and IRT(s) as and when required;
- viii. decide overall incident objectives, priorities and ensure that various objectives do not conflict with each other;
- ix. ensure that IAP is prepared by the IC and implemented;
- x. remain fully briefed on the IAP and its implementation;
- xi. coordinate all response activities;
- xii. give directions for the release and use of resources available with any department of the Government, Local Authority, private sector etc. in the District;
- xiii. ensure that local Armed Forces Commanders are involved in the planning process and their resources are appropriately dovetailed, if required;
- xiv. ensure that when 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;
- xv. appoint a NO at the District level to organize Air Operations in coordination with the State and Central Government NO. Also ensure that all ICs of IRTs of the District are aware of it;
- xvi. ensure that the NGOs carry out their activities in an equitable and non-discriminatory manner;
- xvii. deploy the District Headquarter IRTs at the incident site, in case of need;
- xviii. ensure that effective communications are in place;
- xix. ensure that telephone directory of all ESF is prepared and available with EOC and members of IRTs;
- xx. ensure provision for accountability of personnel and a safe operating environment; in case the situation deteriorates, the RO may assume the role of the IC and may seek support from the State level RO;
- xxi. mobilize experts and consultants in the relevant fields to advise and assist as he may deem necessary;
- xxii. procure exclusive or preferential use of amenities from any authority or person;
- xxiii. conduct post response review on performance of IRTs and take appropriate steps to improve performance; and
- xxiv. take other necessary action as the situation demands.

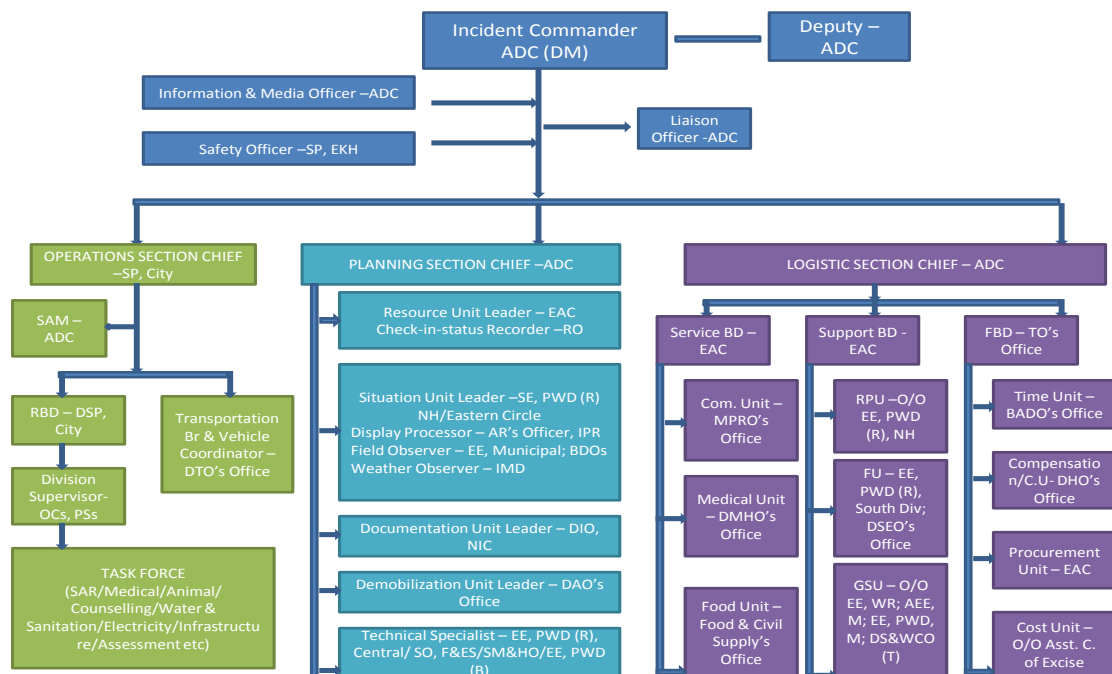
#### **7.4 The Incident Response Team (IRT)**

The IRT is a team comprising of all positions of IRS organization as shown in Fig.3, which is headed by IC. The Operations Section (OS) helps to prepare different tactical

operations as required. The Planning Section (PS) helps in obtaining different information and preparing plans as required. The Logistic Section assesses the availability and requirement of resources and takes action for obtaining them. The District IRT is enclosed at Fig.3 and also at Appendix-1.



**Fig.2: Incident Response Team**



**Fig.3: District Incident Response Team**

### **7.5 Triggering Mechanism for Deployment of IRT**

Some of the natural hazards have a well established early warning system. The District should have a functional 24x7 EOC. On receipt of information regarding the impending disaster, the EOC will inform the RO, who in turn will activate the required IRT and mobilize resources. The scale of their deployment will depend on the magnitude of the incident. At times the information about an incident may be received only on its occurrence without any warning. In such cases the local IRT (District, Sub-Division, Block) as the case may be, will respond and inform the higher authority and if required seek reinforcement and guidance. The measures decided to be taken for response will be jotted down by the Command Staff and later handed over to Planning Section. It will thus form the initial IAP.

- **In case of early warning, the RO will trigger the IRT as required or necessary.**
- **In case there is no early warning, the lowest formation of IRT will respond and alert the higher formation.**

The structure depicted above may be activated as and when required. For monitoring and support of the incident response, the RO will involve all required ESF and headquarter IRT to support the on-scene IC. In case when central teams (NDRF, Armed Forces) are deployed, the RO will ensure resolution of all conflicts. For this purpose he may attach a representative of such agencies in the EOC where all conflicts can easily be resolved at the highest level. The teams so deployed will have to work in OS in the form of Single Resource, Strike Teams or Task Forces under the supervision of OSC. The IC will also exercise close supervision for resolution of all conflicts, if required. The IC will work in close coordination with EOC and report to RO. The RO will ensure that the strategic goals are achieved through the implementation of the IAP by the IRTs working in the field.

### **7.6 Incident Commander (IC)**

The IC is the overall in-charge for the management of onsite response to any incident. He/She is appointed by the RO. He/She may have a deputy with him depending upon the magnitude and nature of the 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 consists of the OS, PS and LS, each having a specific function in the overall response.

#### **7.6.1 Roles and Responsibilities of IC**

- i) obtain information on:
  - a. situation status like number of people and the area affected etc.;
  - b. availability and procurement of resources;
  - c. requirement of facilities like ICP, Staging Area, Incident Base, Camp, Relief Camp, etc.; availability and requirements of Communication system;
  - d. future weather behavior from IMD; and
  - e. any other information required for response from all available sources and analyze the situation.
- ii) determine incident objectives and strategies based on the available information and resources;
- iii) establish immediate priorities, including search & rescue and relief distribution strategies;
- iv) assess requirements for maintenance of law and order, traffic etc. if any at the incident site, and make arrangements with help of the local police;
- v) brief higher authorities about the situation as per incident briefing form - 001 of IRS and request for additional resources, if required;
- vi) extend support for implementation of AC and UC if considered necessary by the RO;
- vii) establish appropriate IRS organization with Sections, Branches, Divisions and/or Units based on the span of control and scale of the incident;
- viii) establish ICP at a suitable place. There will be one ICP even if the incident is multijurisdictional. Even a mobile van with complete communication equipment and appropriate personnel may be used as ICP. In case of total destruction of buildings, tents, or temporary shelters may be used. 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 contact with the ICP in order to provide quick assistance;
- ix) ensure that the IAP is prepared;
- x) ensure that team members are briefed on performance of various activities as per IAP;
- xi) 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;



- xii) ensure that planning meetings are held at regular intervals. The meetings 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 meetings;
- xiii) ensure that all Sections or Units are working as per IAP;
- xiv) ensure that adequate safety measures for responders and affected communities are in place;
- xv) ensure proper coordination between all Sections of the IRT, agencies working in the response activities and make sure that all conflicts are resolved;
- xvi) ensure that computerized and web based IT solutions are used for planning, resource mobilization and deployment of trained IRT members;
- xvii) consider requirement of resources, equipment which are not available in the functional jurisdiction, discuss with PSC and LSC and inform RO regarding their procurement;
- xviii) approve and ensure that the required additional resources are procured and issued to the concerned Sections, Branches and Units etc. and are properly utilized. On completion of assigned work, the resources will be returned immediately for utilization elsewhere or to the department concerned;
- xix) if required, establish contact with ULBs, CBOs, NGOs etc. and seek their cooperation in achieving the objectives of IAP and enlist their support to act as local guides in assisting the external rescue and relief teams;
- xx) approve the deployment of volunteers and such other personnel and ensure that they follow the chain of command;
- xxi) authorize release of information to the media;
- xxii) ensure that the record of resources mobilized from outside is maintained so that prompt payment can be made for hired resources;
- xxiii) ensure that Incident Status Summary (ISS) is completed and forwarded to the RO (IRS form-002);
- xxiv) recommend demobilization of the IRT, when appropriate;
- xxv) review public complaints and recommend suitable grievance redressal measures to the RO;
- xxvi) ensure that the NGOs and other social organizations deployed in the affected sites are working properly and in an equitable manner;
- xxvii) ensure preparation of After Action Report (AAR) prior to the demobilization of the IRT on completion of the incident response.

- xxviii) perform any other duties that may be required for the management of the incident;
- xxix) ensure that the record of various activities performed (IRS Form-004) by members of Branches, Divisions, Units/Groups are collected and maintained in the Unit Log (IRS Form-003)
- xxx) perform such other duties as assigned by RO.

#### **7.6.2 Roles and Responsibilities of Information and Media Officer (IMO)**

- i) prepare and release information about the incident to the media agencies and others with the approval of IC;
- ii) jot down decisions taken and directions issued in case of sudden disasters when the IRT has not been fully activated and hand it over to the PS on its activation for incorporation in the IAP;
- iii) ask for additional personnel support depending on the scale of incident and workload;
- iv) monitor and review various media reports regarding the incident that may be useful for incident planning;
- v) organize IAP meetings as directed by the IC or when required;
- vi) coordinate with IMD to collect weather information and disseminate it to all concerned;
- vii) maintain record of various activities performed as per IRS Form-004; and
- viii) perform such other duties as assigned by IC.

#### **7.6.3 Roles and Responsibilities of Liaison Officer (LO)**

The LO is the focal point of contact for various line departments, representatives of NGOs and ULBs etc. participating in the response. The LO is the point of contact to assist the first responders, cooperating agencies and line departments. LO may be designated depending on the number of agencies involved and the spread of affected area. **The LO will:**

- i) maintain a list of concerned line departments, agencies (CBOs, NGOs, etc.) and their representatives at various locations;
- ii) carry out liaison with all concerned agencies including NDRF and Armed Forces and line departments of Government;
- iii) monitor Operations to identify current or potential inter-agency problems;
- iv) participate in planning meetings and provide information on response by participating agencies;
- v) ask for personnel support if required;

- vi) keep the IC informed about arrivals of all the Government and Non Government agencies and their resources;
- vii) help in organizing briefing sessions of all Governmental and Non Governmental agencies with the IC;
- viii) maintain record of various activities performed as per IRS Form-004;
- ix) and perform such other duties as assigned by IC.

#### **7.6.4 Roles and Responsibilities of Safety Officer (SO)**

The SO's function is to develop and recommend measures for ensuring safety of personnel, and to assess and/or anticipate hazardous and unsafe situations. The SO is authorized to stop or prevent unsafe acts. SO may also give general advice on safety of affected communities.

##### **The SO will:**

- i) recommend measures for assuring safety of responders and to assess or anticipate hazardous and unsafe situations and review it regularly;
- ii) ask for assistants and assign responsibilities as required;
- iii) participate in planning meetings for preparation of IAP;
- iv) review the IAP for safety implications;
- v) obtain details of accidents that have occurred within the incident area if required or as directed by IC and inform the appropriate authorities;
- vi) review and approve the Site Safety Plan, as and when required;
- vii) maintain record of various activities performed as per IRS Form-004; and
- viii) perform such other duties as assigned by IC.

### **7.7 Operations Section (OS)**

The OS deals with all types of field level tactical operations directly applicable to the management of an incident. This section is headed by an Operation Section Chief (OSC). In addition, a deputy may be appointed to assist the OSC for discharging his functions depending on the magnitude of the work load. OS is further sub-divided into Branches, Divisions and Groups which assist the OSC/IC in the execution of the field operations.

#### **7.7.1 Operations Section Chief (OSC)**

On activation of the OS, 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 report to the IC. He will be responsible for activation,

deployment and expansion of his Section as per IAP. As the operational activities increase and because of geographical reasons, the OSC will introduce or activate and expand the Branch into Divisions for proper span of control and effective supervision.

#### **7.7.2 Roles and Responsibilities of OSC**

- i) coordinate with the activated Section Chiefs;
- ii) manage all field operations for the accomplishment of the incident objectives;
- iii) ensure the overall safety of personnel involved in the OS and the affected communities;
- iv) deploy, activate, expand and supervise organizational elements (Branch, Division, Group, etc.) in his Section in consultation with IC and in accordance with the IAP;
- v) assign appropriate personnel, keeping their capabilities for the task in mind and maintain On Duty Officers list (IRS Form-007) for the day;
- vi) request IC for providing a Deputy OSC for assistance, if required;
- vii) brief the personnel in OS at the beginning of each operational period;
- viii) ensure resolution of all conflicts, information sharing, coordination and cooperation between the various Branches of his Section;
- ix) prepare Section Operational Plan in accordance with the IAP; if required;
- x) suggest expedient changes in the IAP to the IC;
- xi) consult the IC from time-to-time and keep him fully briefed;
- xii) determine the need for additional resources and place demands accordingly and ensure their arrival;
- xiii) ensure record of various activities performed (IRS Form-004) by members of Branches, Divisions, Units/Groups are collected and maintained in the Unit Log IRS Form-003; and
- xiv) perform such other duties as assigned by RO/IC.

### **7.8 Response Branch**

#### **7.8.1 Roles and Responsibilities of Response Branch Director (RBD)**

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 a large incident. The ideal span for supervision is 1:5. i.e. one

Branch Director can supervise up to five Divisions, one Division Supervisor can supervise up to five Groups and one Group-in-charge can supervise five teams. More Branches, Divisions, Groups may be formed as required. **The RBD will:**

- i) work under the supervision of the OSC and is responsible for the implementation of IAP as per the assigned role;
- ii) attend planning meetings as required by the OSC;
- iii) review Assignment Lists IRS Form-005 for Divisions or Groups under his Branch;
- iv) assign specific tasks to Division and Groups-in-Charge;
- v) supervise Branch functions;
- vi) resolve conflicts reported by subordinates;
- vii) 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.
- viii) provide Single Resource, Strike Team and Task Force support to various operational areas;
- ix) ensure that all team leaders maintain record of various activities performed as per IRS Form-004 relating to their field Operations and send to OSC; and
- x) perform any other duties assigned by the OSC;

#### **7.8.2 Roles and Responsibilities of Division Supervisor and Groups-in-charge**

As the operational activity increase because of the largeness and magnitude of the disaster, the OSC who is responsible for directing all tactical actions to meet the incident objectives will have to deploy more and more functional teams. There may be such locations which are distant, isolated and difficult to reach. There may also be a situation when simultaneously different types of incidents occur requiring different specialized handling. For example, while a lot of building may have collapsed in case of earthquake, gas leaks may also have occurred resulting in fire at a number of places.

The OSC may create a Division for close and proper supervision, when the span of control becomes larger or when some locations are very distant and difficult to reach.

Except for the hierarchical difference, the roles and responsibilities of the Division Supervisors and the Groups-in-charge are the same. Divisions are activated when there are supervisory requirements in an isolated and distant geographical area or

for the purpose of a proper span of control when the number of functional Groups increases or for various specialized response. While Groups-in-charge are assigned to accomplish specific functions within the Branch, Divisions are created for effective supervision over a large number of Groups. **The Division Supervisors and Group-in-charge will:**

- i) implement Division or Group assignment list;
- ii) assign resources within the Division or Group under them;
- iii) report on the progress of Operations, and the status of resources within the Division or Group;
- iv) circulate Organisational Assignment List (Divisional/Group) IRS Form-005 to the leaders of the Group, Strike Team and Task Force;
- v) review assignments and incident activities with subordinates and assign tasks as per the situation;
- vi) coordinate activities with adjacent Divisions or Groups, if required;
- vii) submit situation and resource status to the RBD and the OSC;
- viii) report all hazardous situations, special occurrences or significant events (e.g., accidents, sickness, deteriorating weather conditions, etc.) to the RBD and the OSC;
- ix) resolve problems within the Division or Group;
- x) participate in the development of IAP for next operational period, if required;
- xi) ensure that record of various activities performed (IRS Form-004) are collected and sent to the RBD and OSC; and
- xii) perform any other duties as assigned by the RBD/OSC.

## **7.9 Single Resource**

Single Resource includes both personnel and their required equipment to be deployed in a given incident, e.g. a fire tender with the required personnel, an ambulance with the required medical officer, paramedic and driver etc. 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 1 ton capacity or 2 tons capacity, medical team having 1 doctor and 3 paramedics etc.**

### **7.9.1 Roles and Responsibilities of Single Resource Leader**

- i) take charge of necessary equipment and supplies;

- ii) assess local weather and environmental conditions, law and order situation etc. in the assigned area and report to the in-charge;
- iii) perform the assigned duty;
- iv) keep contact with his supervisor; and
- v) perform any other duties that may be assigned by his supervisor.

### **7.9.2 Strike Team or Task Force**

A Strike Team is a combination of same 'kind' and 'type' of Single Resource with a common communication facility and one leader. A Task Force is a combination of different 'kinds' and 'types' of 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. For example, if a combination of Medical team, Rescue personnel, Fire personnel, Sanitation workers and workers for disposal of dead bodies and animal carcasses is required to be sent to a particular location, the team so constituted will be called a Task Force. The concept of proper span of control should be kept in mind while constituting the Task Force.

The Strike 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.

### **7.9.3 Roles and Responsibilities of Strike Team or Task Force Leader**

- i) review assignments with members of his team;
- ii) report on work progress;
- iii) coordinate activities with adjacent Single Resource, Strike Teams and Task Forces if assigned;
- iv) establish and ensure communications;
- v) perform any other duties assigned; and
- vi) maintain record of various activities.

## **7.10 Transportation Branch (TB)**

The TB in the OS supports the response effort by transporting different resources, relief materials, personnel to the affected site and also transportation of victims if necessary. Though there is a Ground Support Unit (GSU) in the LS which is responsible for providing all transportation and other related resources, the TB in the OS manages the actual deployment and utilization of the transport at ground zero according to the needs of the IRT and the IAP.

The TB may comprise four operational Groups such as Road, Rail, Water and Air. But in the district there is no Rail & water operation. Hence, only Road and Air operations will be included. These Groups may be activated as and when required. Air Operations is an important transportation activity during disasters which requires coordination at the National, State and District level. For coordination of Air Operations, the RO of the District will identify and designate a NO.

### **7.10.1 Roles and Responsibilities of Transportation Branch Director (TBD)**

All functional Groups (Road and Air) of the TB are managed by the TBD. Since the air transportation is to be coordinated at the State and District levels, the TBD also needs to function in close coordination with RO, IC and NO for Air Operations. He will collect the details of all related flights from the concerned NO and organise the ground support requirement. The TBD will also be responsible for the activation and expansion of various functional Groups as per the IAP. **The TBD will:**

- i) activate and manage different Operations Groups like Road and Air;
- ii) coordinate with the LS for required resources, and activate Groups of his Branch;
- iii) coordinate with railways, road transport, waterways and airport authorities for support as required;
- iv) ensure that Organisational Assignment List (Divisional / Group) IRS Form-005 is circulated among the Group-in-charge(s) and other responders of his Branch;
- v) provide ground support to the air operations and ensure appropriate security arrangements;
- vi) provide Road transport support to the Rail and Water Operations Group as required;
- vii) ensure safety of all personnel of his Branch involved in the Incident Response activities;



- viii) ensure that all units moving in the area are familiarized with route with the help of road maps or local guides;
- ix) report to the OSC and IC about progress of the TB;
- x) prepare transportation plan as per the IAP, if required;
- xi) determine the need for additional resources, their proper and full use and place demand accordingly in advance;
- xii) resolve problems and conflicts, if any;
- xiii) ensure the maintenance of the status of hired resources, their full utilisation and timely release;
- xiv) ensure that the record of various activities performed (IRS Form-004) by different operational groups (Road and Air) are collected and sent to the Section concerned; and
- xv) perform any other duties assigned by the IC or OSC;

#### **7.10.2 Roles and Responsibilities of Coordinator (Road Operations)**

The Coordinator (Road Operations) is primarily responsible for coordinating the Road transport needs. There may be more than one coordinator depending upon the number of vehicles deployed. **The Coordinator (Road Operations) will:**

- i) survey the assigned incident area to analyse situation and identify other potential problems in the context of transportation;
- ii) requisition an Assistant Coordinator (Road Operations) depending on the magnitude of the incident and requirement;
- iii) coordinate with SAM for smooth transportation of resources;
- iv) receive assignments, brief drivers regarding the routes, assign missions, supervise vehicle movement and attend to the vehicle maintenance and repair needs;
- v) monitor activities of all assigned vehicles and keep senior officers informed;
- vi) report incidents or accidents that occur in Road Operations to the TBD;
- vii) maintain the records of supplies to different locations;
- viii) keep track of vehicle movements. Provide GPS support, if available;
- ix) request security support for transportation of relief materials if required and alert the police administration in the affected areas along the transportation route;
- x) maintain coordination at loading and unloading points;
- xi) ensure that communication facilities are established at loading stations, SAs and destination points;
- xii) attend to and resolve the needs of the personnel working under him;

- xiii) maintain record of various activities performed (IRS Form-004) and send to the Group-in-charge or TBD; and
- xiv) perform any other duties assigned by the OSC or TBD.

### **7.10.3 Air Operations**

For disaster response air operations may be needed for four tasks: (a) quick transportation of relief materials and resources to the affected area, (b) quick distribution of relief materials, food, medicine etc (Air dropping) in inaccessible and affected areas, (c) search and rescue of victims trapped in inaccessible areas, and (d) evacuation of casualties.

The Indian Air Force will be tasked for Air support Operations i.e the Eastern Air Command in Upper Shillong. At times, Indian Airlines, Pawan Hans and other private Airlines may also be utilized for transportation purposes. Different types of Aircrafts may need to be utilized for different mission requirements e.g. transport Aircraft or helicopter etc. from any of the agencies discussed above. Close coordination at the National Level is essential for the launch of any Air Operations. It needs a close liaison among the NDMA, NEC, Air Force, Ministry of Civil Aviation, State RO and the RO of the District where the Air Operations is to be performed. It is therefore very essential that a NO be identified and designated in advance at all these levels for coordination and activation of the Air Support. The stakeholders should be aware of the designated NO for Air Operations. In the context of the IRS, a ground support element will have to be placed at all required landing and takeoff facilities in the affected areas. The ground support requirements including Aviation Turbine Fuel (ATF), security etc. for the Air Operations will be the responsibility of the TBD. On taking the decision to launch Air Operations, the TBD will activate the Air Operations Group under him. The Group will be headed by a supervisor and necessary organizational elements will have to be activated at all required landing and takeoff locations headed by an in-charge at airbases, helibases and helipads. The composition of the Air Operations will be: NO who will be designated by the RO who will work directly under the TBD for coordination of logistic support at Airbase, Helibase and Helipad.

#### **7.10.4 Roles and Responsibilities of Nodal Officer (NO)**

- i) coordinate with concerned authorities for air operations;
- ii) project the type of Air support required to the appropriate authorities based on the IAP and place the demand at least 24 hours in advance or as early as possible;
- iii) inform the IC and OSC about the Air movements and landing schedules in their respective areas;
- iv) ensure that relevant Maps of the incident locations are available with all agencies involved in the Air Operations to give the correct coordinates etc. of the locations where Air support is required;
- v) determine the suitability of Helipads or Helibases in coordination with the Air Force authorities and the State authorities;
- vi) maintain communication with Air Traffic Control and the ground support staff regarding the Air movements and other related activities;
- vii) assist the IC and the LSC in the procurement of required ATF etc.;
- viii) report on Air Operations activities to the RO; and
- ix) perform any other duties assigned by the RO and IC.

#### **7.11 Planning Section (PS)**

The PS deals with all matters relating to the planning of the incident response. It is headed by the Planning Section Chief (PSC). This section helps the IC in determining the objectives and strategies for the response. It works out the requirements for resources, their allocation and subsequent utilization. It maintains up-to-date information about the ongoing response and prepares IAP. For the closing phase of the Operations, this Section also prepares the Incident Demobilization Plan (IDP).

##### **7.11.1 Planning Section Chief (PSC)**

The PSC is responsible for collection, evaluation, dissemination and use of information. It keeps track of the developing scenario and status of the resources. In case of need, the PS may also have Technical Specialist for addressing the technical planning matters in the management of an incident. A list of such specialists will be kept available in the PS. The PSC reports to the IC and will be responsible for the activation of Units and deployment of personnel in his Section as per requirement.

##### **7.11.2 Roles and Responsibilities of PSC**

- i) coordinate with the activated Section Chiefs for planning and preparation of IAP in consultation with IC;
- ii) ensure that decisions taken and directions issued in case of sudden disasters when the PS had not been activated are obtained from the IMO (Command Staff) and incorporated in the IAP;
- iii) ensure collection, evaluation, and dissemination of information about the incidents including 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 mobilised;
- iv) coordinate by assessing the current situation, predicting probable course of the incident and preparing alternative strategies for the Operations by preparing the IAP. The IAP contains objectives reflecting the overall incident strategy and specific tactical actions and supporting information for the next operational period (24 hours is considered as one operational period). The plan may be oral or written. Written plan may have a number of attachments, including incident objectives, organisation assignment list IRS Form-005), incident communication plan IRS Form-009, demobilisation plan IRS Form-010, traffic plan, safety plan, and incident map etc. The major steps for preparing IAP are as follows;
  - a. Initial information and assessment of the damage and threat;
  - b. Assessment of resources required;
  - c. Formation of incident objectives and conducting strategy meetings;
  - d. Operations briefing;
  - e. Implementation of IAP;
  - f. Review of the IAP; and
  - g. Formulation of incident objectives for the next operational period, if required;
- v) ensure that Incident Status Summary (IRS Form-002) is filled and incorporated in the IAP;
- vi) ensure that Organisational Assignment List (Divisional / Group) IRS Form-005 is circulated among the Unit leaders and other responders of his Section;
- vii) plan to activate and deactivate IRS organisational positions as appropriate, in consultation with the IC and OSC;
- viii) determine the need for any specialized resources for the incident management;
- ix) utilise IT solutions for pro-active planning, GIS for decision support and modeling capabilities for assessing and estimating casualties and for comprehensive response management plan;

- x) provide periodic projections on incident potential;
- xi) report to the IC of any significant changes that take place in the incident status;
- xii) compile and display incident status summary at the ICP;
- xiii) oversee preparation and implementation of Incident Demobilisation Plan (IRS Form-010);
- xiv) assign appropriate personnel, keeping their capabilities for the tasks in mind and maintain On Duty Officers List (IRS Form-007) for the day;
- xv) ensure that record of various activities performed (IRS Form-004) by members of Units are collected and maintained in the Unit Log (IRS Form-003); and
- xvi) perform any other duties assigned by IC.

#### **7.11.3 Roles and Responsibilities of Resource Unit Leader (RUL)**

- i) 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;
- ii) 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 mobilisation, if required. IDRN facilities will also be used for this purpose;
- iii) ensure and establish Check-in function at various incident locations;
- iv) update the PSC and IC about the status of resources received and despatched from time to time;
- v) coordinate with the various activated Branches, Divisions and Groups of OS for checking status and utilisation of allotted resources;
- vi) ensure quick and proper utilisation of perishable resources;
- vii) maintain record of various activities performed as per IRS Form-004 and send to Section concerned; and
- viii) perform any other duties assigned by PSC.

#### **7.11.4 Roles and Responsibilities of Check-in/Status Recorder**

- i) report to the RUL;
- ii) Ensure that all resources assigned to an incident are accounted for at each check-in point;
- iii) 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 resources etc. The

status of resources would be displayed through T card board or through a computerized programme on the computers;

- iv) establish communications with the EOC and Ground Support Unit (GSU) of LS;
- v) ensure displays of check-in locations on signboard so that arriving resources can easily locate the Check-in location(s);
- vi) enter or record information on Incident Check-in and deployment list as per the IRS Form-006;
- vii) transmit Incident Check-in and deployment information to Resource Unit on a regular and prearranged schedule or as needed;
- viii) forward completed Check-in Lists to the Resource Unit;
- ix) maintain record of various activities performed as per IRS Form-004 and send to Sections concerned; and
- x) perform any other duties as assigned by PSC.

#### **7.11.5 Roles and Responsibilities of Situation Unit Leader (SUL)**

- i) collect, process and organise 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 Local Institutions, CBOs, NGOs etc;
- ii) prepare periodic future projections of the development of the incident (along with maps if required) and keep the PSC and IC informed;
- iii) prepare situation and resource status reports and disseminate as required;
- iv) provide authorised maps, photographic services to responders, if required;
- v) attend IAP Meeting with required information, data, documents and Survey of India maps etc;
- vi) maintain record of various activities performed as per IRS Form-004 and send to Section concerned; and perform such other duties assigned by SUL or PSC.

#### **7.11.6 Roles and Responsibilities of Display Processor (DP)**

The 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.

**The DP will:**

- i) display incident status obtained from Field Observers (FOs), Single Resource, Strike Teams, Task Forces, aerial photographs and other data received from technical sources;
- ii) report to the SUL;
- iii) ensure timely completion of display chart;
- iv) obtain necessary equipment and stationery;
- v) assist in analyzing and evaluating field reports;
- vi) maintain record of various activities performed as per IRS Form-004 and send to the SUL; and
- vii) perform such other duties as assigned by SUL or PSC.

**7.11.7 Roles and Responsibilities of Field Observer (FO)**

The 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. **The FO will:**

- i) 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;
- ii) gather intelligence that may facilitate better planning and effective response;
- iii) maintain record of various activities performed as per IRS Form-004 and send to the SUL; and
- iv) perform such other duties as assigned by SUL or PSC.

**7.11.8 Roles and Responsibilities of Documentation Unit Leader (DUL)**

- i) ensure that all the required forms and stationery are procured and issued to all the activated Sections, Branches, Divisions, Groups and Units;
- ii) compile all information and reports related to the incident;
- iii) review and scrutinize the records and various IRS forms for accuracy and completeness;
- iv) inform appropriate Units of errors or omissions in their documentation, if any, and ensure that errors and omissions are rectified;
- v) store files properly for post-incident analysis;
- vi) maintain record of various activities performed as per IRS Form-004 and send to Sections concerned; and
- vii) perform any other duties as assigned by the PSC.

#### **7.11.9 Roles and Responsibilities of Demobilization Unit Leader (Demob. UL)**

In the management of a large incident, demobilisation can be quite a complex activity and requires proper and separate planning. When the disaster response is nearing completion, the resources mobilised for response need to be returned. This should be done in a planned and phased manner. Demobilisation requires organising transportation of both equipment and personnel to a large number of different places both near and far away. The Demob. Unit will prepare the demobilisation plan in consultation with RO, IC and PSC. The plan should include the details of the responders to be demobilised, the date, mode of transport, location from where they will be demobilised, the destination where they have to finally reach etc. There will be a similar plan for out of service equipment and sick personnel also. **The Demob.**

**UL will:**

- i) prepare Incident Demobilisation Plan (IDP) as per IRS Form-010;
- ii) identify surplus resources and prepare a tentative IDP in consultation with the PSC and give priority to demobilisation of surplus resources;
- iii) 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 Demobilisation in consultation with LS; disseminate IDP at an appropriate time to various stakeholders involved;
- iv) ensure that all Sections, Units, Teams and Resources understand their specific Incident Demobilisation responsibilities and avail Demobilisation facilities;
- v) arrange for proper supervision and execution of the IDP;
- vi) brief the PSC on the progress of Demobilisation;
- vii) request the PSC for additional human resources, if required;
- viii) maintain record of various activities performed as per IRS Form-004 and send to Sections concerned; and perform any other duties assigned by the PSC.

#### **7.11.10 Technical Specialists (TS)**

In consultation with the RO and IC, the PSC may mobilise 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. A data base of TS will be prepared in advance at the District, level and incorporated in their DM Plan.



## **7.12 Logistics Section (LS)**

LS provides all logistic support for effective response management. The Units under different Branches of the LS are responsible not only for the supply of various 'kinds' and 'types' of resources, but also for the setting up of different facilities like the Incident Base, Camp, ICP and Relief Camp etc. This would entail the involvement of several line departments of Government and other agencies. It would require a proper and smooth coordination at the highest level of the administration. The LS will work closely with the RO, EOC and the IC. The DM plan will have comprehensive details like where the required resources can be procured from and manpower mobilized, etc. IDRN may also be useful for the mobilisation of equipment and manpower.

### **7.12.1 Logistics Section Chief (LSC)**

The LS comprises Service, Support and Finance Branches. The Section is headed by a chief known as the LSC. The activation of various Branches of the LS is context 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.

### **7.12.2 Roles and Responsibilities of LSC**

- i) coordinate with the activated Section Chiefs;
- ii) provide logistic support to all incident response effort including the establishment of SA, Incident Base, Camp, Relief Camp, Helipad etc.;
- iii) participate in the development and implementation of the IAP;
- iv) keep RO and IC informed on related financial issues;
- v) ensure that Organisational Assignment List (Divisional/Group) IRS Form-005 is circulated among the Branch Directors and other responders of his Section;
- vi) request for sanction of Imprest Fund, if required;
- vii) supervise the activated Units of his Section;
- viii) ensure the safety of the personnel of his Section;
- ix) assign work locations and preliminary work tasks to Section personnel;
- x) ensure that a plan is developed to meet the logistic requirements of the IAP with the help of Comprehensive Resource Management System;
- xi) brief Branch Directors and Unit Leaders;
- xii) anticipate over all logistic requirements for relief Operations and prepare accordingly;

- xiii) constantly review the Communication Plan, Medical Plan and Traffic Plan to meet the changing requirements of the situation;
- xiv) assess the requirement of additional resources and take steps for their procurement in consultation with the RO and IC;
- xv) provide logistic support for the IDP as approved by the RO and IC;
- xvi) ensure release of resources in conformity with the IDP;
- xvii) ensure that the hiring of the requisitioned resources is properly documented and paid by the FB;
- xviii) assign appropriate personnel, keeping their capabilities for the tasks to be carried out and maintain On Duty Officers List (IRS Form-007) for the day;
- xix) ensure that cost analysis of the total response activities is prepared;
- xx) ensure that record of various activities performed (IRS Form-004) by members of Branches and Units are collected and maintained in the Unit Log IRS Form 003; and
- xxi) Perform any other duties as assigned by RO or IC.

#### **7.12.3 Roles and Responsibilities of Service Branch Director (SBD)**

- i) work under the supervision of LSC, and manage all required service support for the incident management;
- ii) manage and supervise various Units of the Branch like Communication Unit, Medical Unit, Food Unit and any other activated Unit;
- iii) discuss with activated Unit leaders for the materials and resources required and procure the same through LS;
- iv) ensure proper despatch of personnel, teams, resources etc as per the IAP;
- v) prepare an assignment list, if required;
- vi) keep the LSC informed about the progress of Service Branch, from time-to-time;
- vii) resolve Service Branch problems, if any;
- viii) maintain record of various activities performed as per IRS Form-004 and send to sections concerned; and
- ix) perform any other duties assigned by the IC and LSC.

#### **7.12.4 Roles and Responsibilities of Communication Unit Leader (Com. UL)**

- i) work under the direction of the SBD;
- ii) provide communications facility as and when required;
- iii) ensure that all communications equipment available are in working condition and that the network is functional;

- iv) supervise Communication Unit activities;
- v) maintain the records of all communications equipment deployed in the field;
- vi) recover equipment provided by Communication Unit after the incident is over. Ensure that it is properly linked with the IDP;
- vii) ensure setting up of a message centre to receive and transmit radio, telephone and other messages from various activated Sections, Branches, Units and higher authorities and maintain their records;
- viii) 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 etc;
- ix) 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;
- x) ask for and ensure adequate staffing support;
- xi) ensure that the communications plan is supporting the IAP;
- xii) demobilise Communications Centre in accordance with the IDP;
- xiii) maintain record of various activities performed as per IRS Form-004 and send to SBD; and
- xiv) Perform any other duties assigned by the SBD or LSC.

#### **7.12.5 Roles and Responsibilities of Medical Unit Leader (MUL)**

- i) work under the direction of the SBD;
- ii) 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, as given in IRS Form 008, obtain a road map of the area from the PS for the ambulance services, transportation of medical personnel and victims;
- iii) respond to requests of the OS for medical aid, transportation and medical supplies etc. under intimation to the SBD and LSC;
- iv) maintain the list of medical personnel who could be mobilised in times of need;
- v) requisition more human resources as and when required to meet the incident objectives;
- vi) prepare and circulate list of referral service centres to all the medical team leaders;

- vii) maintain record of various activities performed as per IRS Form-004 and send to SBD; and perform any other duties assigned by the SBD and LSC.

#### **7.12.6 Roles and Responsibilities of Food Unit Leader (FUL)**

- i) work under the direction of the SBD;
- ii) supply resources to various activated Sections, Branches, Units and Groups of IRT as per direction of the SBD;
- iii) supply food to: a) Personnel of IRT(s) at ICP, Camps, Incident Base, SA, etc., and b) Victims at the temporary shelters, relief camps etc.;
- iv) 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;
- v) determine food and drinking water requirements and their transportation, and brief the SBD and LSC;
- vi) maintain an inventory of receipt and despatch of resources;
- vii) supervise the Unit activities; maintain record of various activities performed as per IRS Form-004 and send to SBD; and
- viii) perform any other duties assigned by the SBD and LSC.

#### **7.12.7 Roles and Responsibilities of Support Branch Director (Sup. BD)**

- i) work under the supervision of LSC, and supervise the function of Resource Provisioning Unit, Facility Unit and Ground Support Unit;
- ii) procure and despatch required tactical materials and resources for Operations with the concurrence of the Section Chief;
- iii) participate in the planning meeting of the LS;
- iv) ensure that organisation assignment list concerning the Branch is circulated to all Units under him;
- v) coordinate various activities of the Support Branch;
- vi) keep the LSC informed about the progress of work;
- vii) resolve problems within his unit, if any;
- viii) maintain record of various activities performed as per IRS Form-004 and send to Section concerned; and
- ix) perform any other duties assigned by the LSC.

#### **7.12.8 Roles and Responsibilities of Resource Provisioning Unit Leader (RPUL)**

- i) work under the supervision of Sup.BD;
- ii) organise movement of personnel, equipment and supplies,
- iii) receive and store safely all supplies required for the incident response,
- iv) maintain the inventory of supplies and equipment;
- v) maintain the records of receipt and despatch of supplies including equipment and personnel;
- vi) organise repair and servicing of non-expendable supplies and equipment;
- vii) participate in the planning meeting of LS;
- viii) monitor the 'Kind', 'Type' and quantity of supplies available and despatched;
- ix) 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. B.D.;
- x) 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;
- xi) maintain record of various activities performed as per IRS Form-004 and send to Sup.BD; and
- xii) Perform any other duty as assigned by LSC or Sup.BD.

#### **7.12.9 Roles and Responsibilities of Resource Ordering-in-charge**

- i) report to the RPUL;
- ii) prepare a list of resources to be procured and obtain its approval;
- iii) place resource orders in a timely manner as per procedure laid down;
- iv) maintain record of various activities performed as per IRS Form-004 and send to RPUL; and
- v) perform any other duties assigned by the RPUL.

#### **7.12.10 Roles and Responsibilities of Resource Receiving and Distribution-in-Charge**

- i) report to the RPUL;
- ii) receive and distribute all resources and services which have been ordered;
- iii) identify and ensure time and locations for delivery of supplies and equipment;
- iv) prepare separate lists for the resources received from line departments of Government and from other sources;

- v) organise physical layout of supply area;
- vi) set up a filing system for receiving and distributing supplies and equipment and keep RPUL informed;
- vii) ensure security requirements;
- viii) keep the Resource Ordering-in-Charge informed about the positions of supplies and equipment received;
- ix) maintain record of various activities performed as per IRS Form-004 and send to RPUL; and
- x) perform any other duties assigned by the RPUL.

#### **7.12.11 Roles and Responsibilities of the Tool and Equipment Specialist**

- i) report to RPUL;
- ii) supervise the service and repair all tools and equipment and keep the RPUL informed of their status;
- iii) maintain record of activities performed as per IRS Form-004 and send to RPUL; and perform any other duties assigned by the RPUL.

#### **7.12.12 Roles and Responsibilities of Facilities Unit Leader (Fac. UL)**

- i) 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;
- ii) report to the Sup.BD;
- iii) locate the different facilities as per the IAP;
- iv) participate in the planning meeting of the Section, prepare list for each facilities and its requirements in coordination with the LSC;
- v) ask for additional personnel support if required to monitor and manage facilities at Incident Base and Camp etc;
- vi) maintain record of various activities performed as per IRS Form-004 and send to Sup. BD; and
- vii) perform such other duties as assigned by the Sup. BD.

#### **7.12.13 Other in-charges under the Fac. UL**

Depending on the enormity and magnitude of the arrangements required, the Fac.UL may need to deploy other incharge under him for maintenance of various facilities and their security. The various other in-charges and their roles and responsibilities are as follows:

#### **7.12.14 Roles and Responsibilities of Facility Maintenance-in-charge**

- i) ensure that proper sleeping and resting facilities are organised;
- ii) organise and provide toilet, bath and sanitation;
- iii) maintain lighting arrangements;
- iv) maintain general cleanliness in Incident Base, Camp(s), Relief Camp(s), ICP etc.;
- v) maintain record of various activities performed as per IRS Form-004 and send to Fac. UL; and
- vi) perform any other duties directed by the Fac. UL.

#### **7.12.15 Roles and Responsibilities of Security-in-charge**

- i) provide security to the deployed resources including responders, relief materials at the required places and relief camps;
- ii) establish contact with local law enforcement agencies, as required;
- iii) request personnel support to accomplish work assignments, if required;
- iv) coordinate security plan for incident facilities;
- v) maintain record of various activities performed as per IRS Form-004 and send to Fac. UL; and perform any other duties assigned by the Fac. UL.

#### **7.12.16 Roles and Responsibilities of Ground Support Unit Leader (GSUL)**

- i) work under the supervision of the Sup. BD;
- ii) provide transportation services for field operations to TBD;
- iii) in case Air Operations are activated, organise and provide required ground support through TBD;
- iv) 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;
- v) inform Resource Unit about the availability and serviceability of all vehicles and equipment;
- vi) arrange for and activate fueling requirements for all transport including Aircrafts in consultation with the Sup. BD;
- vii) maintain inventory of assigned, available and off road or out of service resources;
- viii) ensure safety measures within his jurisdiction;

- ix) maintain record of various activities performed as per IRS Form-004 and send to the Sup. BD; and perform any other duties as assigned by the Sup. BD.

#### **7.12.17 Roles and Responsibilities of Finance Branch Director (FBD)**

The FB is responsible for managing all financial aspects of response management. The FB has been kept under the LS for quick and effective procurement. Due diligence is very important in all financial transactions and proper procedure needs to be followed. Special precautions will be taken in selecting knowledgeable and experienced personnel conversant with the financial rules for functioning in this Branch. **The FBD will:**

- i) work under the LSC;
- ii) attend planning meetings;
- iii) prepare a list of resources to be mobilised, 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;
- iv) ensure that time records of hired equipment, personnel and their services are accurately maintained as per Government norms for payment;
- v) examine and scrutinize cost involved in the entire response activity including the demobilisation, analysis the cost effectiveness and keep the LSC informed;
- vi) ensure that all obligation documents initiated at the incident are properly prepared, completed, verified and signed by the appropriate Section Chief and BD;
- vii) brief the LSC or IC on all incident related financial issues needing attention or follow-up;
- viii) maintain record of various activities performed as per IRS Form-004 and send to Sections concerned; and perform any other duties as assigned by the LSC or IC.

#### **7.12.18 Roles and Responsibilities of Time Unit Leader (TUL)**

- i) maintain time recording of hired equipment and personnel and ensure that it is maintained on a daily basis and according to government norms;
- ii) examine logs of all hired equipment and personnel with regard to their optimal utilisation;
- iii) ensure that all records are correct and complete prior to demobilisation of hired resources;



- iv) brief the FBD on current problems with recommendations on outstanding issues, and any follow-up required;
- v) ask for additional support of human resources for assistance, if required;
- vi) maintain record of the activities performed as per IRS Form-004 and send to FBD; and
- vii) perform any other duties as assigned by the FBD.

#### **7.12.19 Roles and Responsibilities of Procurement Unit Leader (PUL)**

- i) attend to all financial matters pertaining to vendors and contracts;
- ii) review procurement needs in consultation with the FBD;
- iii) prepare a list of vendors from whom procurement can be done and follow proper procedures;
- iv) ensure all procurements ordered are delivered on time;
- v) 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;
- vi) brief FBD on current problems with recommendations on outstanding issues and follow-up requirements;
- vii) maintain record of activities performed as per IRS Form-004 and send to FBD; and
- viii) perform any other duties as assigned by the FBD.

#### **7.12.20 Roles and Responsibilities of Compensation/Claims Unit Leader (Com./CUL)**

DM Act 2005, Section 65 and 66 provides for payment of compensation. Payments are also to be made for requisitioned premises, hired services, resources and vehicles for the purpose of disaster response and rescue operations etc. The Government may also decide to make ex-gratia payments depending upon the magnitude and the quantum of damage. There are some benchmarks for quantifying the level of loss in different scenarios like flood, drought, etc. While some states may have their own norms for such purposes the GoI has also laid down the CRF Norms which should be followed. If the incident is such that there may be a requirement of making payments concerning compensations and claims, the IC in consultation with the RO will activate a Compensation/Claims Unit and appoint a leader to collect and compile figures of loss of life and property etc. as provided by the relevant Government norms and directions. The leader in such cases should be

advised to get photographs taken of the damages that may have occurred and even get the photographs of the dead victims and animals. He will also compile details of premises requisitioned, services and resources hired for which payments have to be made. These details should be sent to RO through IC for further necessary orders and payments. **The Com./CUL will:**

- i) collect all cost data and provide cost estimates;
- ii) prepare and maintain a list of requisitioned premises, services, resources and vehicles, etc. with correct date and time of such requisition;
- iii) follow appropriate procedures for preparation of claims and compensation;
- iv) requisition additional human resources, if required;
- v) maintain record of various activities performed as per IRS Form-004 and send to FBD; and
- vi) perform any other duties as assigned by the FBD.

#### **7.12.21 Roles and responsibilities of Cost Unit Leader (CUL)**

The CUL is responsible for collecting all cost data, and providing cost estimates. At the end of the response the CUL provides cost effectiveness analysis.

- i) develop incident cost summaries in consultation with the FBD on the basis of Cost Analysis Report;
- ii) make cost-saving recommendations to the FBD;
- iii) complete all records relating to financial matters prior to demobilisation;
- iv) maintain record of various activities performed as per IRS Form-004 and send to FBD; and
- v) perform any other duties as assigned by the FBD.

#### **7.13 Area Command (AC)**

Area Command is activated when span of control becomes very large either because of geographical reasons or because of large number of incidents occurring at different places at the same time. Area Command may also be activated when a number of administrative jurisdictions are affected. It provides closer supervision, support to the IRTs and resolution of conflicts locally. When a number of Districts get affected, involving more than one Revenue Division, the concept of Area Command may be introduced Revenue Division wise by the State RO. In such cases the District Magistrate (RO) of the District will function as the IC. Similarly the District RO may introduce it Sub-Division wise when a large number of Blocks in different Sub-Divisions get affected. The RO will

ensure adequate supporting staff for the AC. The roles and responsibilities of AC are as follows. **The AC will:**

- i) ensure that incident management objectives are met and do not conflict with each other;
- ii) allocate critical resources according to identified priorities;
- iii) ensure proper coordination in the management of incidents;
- iv) ensure resolution of all conflicts in his jurisdiction;
- v) ensure effective communications;
- vi) identify critical resource needs and liaise with the EOC for their supply;
- vii) provide for accountability of personnel and ensure a safe operating environment; and
- viii) perform any other tasks as assigned by the RO.

#### **7.14 Unified Command (UC)**

In an incident involving multiple agencies, there is a critical need for integrating resources (men, materials and machines) into a single operational organization that is managed and supported by one command structure. This is best established through an integrated, multidisciplinary organisation. In the IRS this critical need is addressed by the UC.

UC is a framework headed by the Governor/CM and assisted by the CS that allows all agencies with jurisdictional responsibilities for an incident, either geographical or functional, to participate in the management of the incident. This participation is demonstrated by developing and implementing a common set of incident objectives and strategies that all can subscribe to, without losing or abdicating specific agency authority, responsibilities and accountability. The organisations that constitute the UC have the mandate for specific task and functional responsibilities to address the incident requirements.

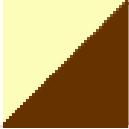
#### **UC incorporates the following components:**

- a. A set of objectives for the entire incident;
- b. A collective approach for developing strategies to achieve incident goals;
- c. Improved information flow and inter-agency coordination;
- d. Familiarity with responsibilities and constraints of other agencies;
- e. Respect for the authority or legal responsibilities of all agencies;
- f. Optimal synergy of all agencies for the smooth implementation of the IAP; and
- g. Elimination of duplication of efforts.

#### **7.15 IRS Facilities & Symbols used**

Apart from the EOC, for effective response the following facilities may be required to be established depending on the needs of the incidents, the length and time the facilities are needed to be used, the cost to establish it and prevailing weather conditions etc.

#### **7.15.1 Incident Command Post (ICP)**



The ICP is the location at which the primary command functions are performed. The IC will be located at the ICP. There will only be one ICP for each incident. This also applies to situations with multi-agencies or multi jurisdictional incidents operating under a single or Unified Command.

The ICP can be located with other incident facilities like Incident Base. For the initial location of the ICP, the nature of the incident, whether it is growing or moving and whether the ICP location will be suitable in size and safe for the expected duration of the incident should be taken into consideration. Larger and more complex incidents will require larger ICP.

The ICP may be located at Headquarters of various levels of administration of State (District, Sub-Division, Block). In case of total destruction or reasons of non availability of any other space, the ICP may be located in a vehicle, trailer or tent. It should however have adequate lighting, effective communication system and other such facilities so that one can function effectively. In such a situation the other components of IRT may function from a convenient location and the ICP should be in constant and regular touch with them.

#### **General guidelines for Establishing the ICP:**

- a. Position away from the general noise and confusion associated with the incident;
- b. Position outside the present and potential hazard zone;
- c. Position within view of the incident, when appropriate;
- d. Have the ability to expand as the incident grows;
- e. Have the ability to provide security and to control access to the ICP as necessary;
- f. Should have distinctive banner or sign to identify location; and
- g. Activation of ICP and its location should be announced via radio or other communications so that all concerned personnel are notified.

### 7.15.2 Staging Area (SA)



The 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. If resources are mobilised at other locations to be ultimately despatched to the affected areas, these locations are also known as SAs. 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 LS and PS through the OSC. School and college playgrounds, community halls, shelters and Offices, stadia etc. may be used as SA. In case of total destruction of buildings in an incident, tents or temporary shelters may be used for such purposes.

For Air Operations, open space of Airport Authority of India (AAI) may be used for loading and unloading of relief materials. If area of AAI is not available, other suitable places near Helipads, Helibases etc. will have to be selected for such purpose. For parking of vehicles, playgrounds of the schools or any large plain areas may be used. Such parking area will preferably have separate entry and exit points. The SAM will arrange for separate entry and exit points to avoid and reduce traffic jam in an emergency.

### 7.15.3 Roles and Responsibilities of the Staging Area Manager (SAM)

- i) 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;
- ii) organise storage and despatch of resources received and despatch it as per IAP;
- iii) report all receipts and despatches to OSC and maintain their records;
- iv) manage all activities of the SA;
- v) utilise all perishable supplies expeditiously;
- vi) establish check-in function as appropriate;
- vii) request maintenance and repair of equipment at SA, as needed;
- viii) ensure that communications are established with the ICP and other required locations e.g. different SAs, Incident Base, Camp, Relief Camp etc;
- ix) maintain and provide resource status to PS and LS;

- x) demobilise SA in accordance with the Demobilisation Plan IRS Form-010;
- xi) maintain record of various activities performed as per IRS Form-004 and send to Sections concerned; and
- xii) perform any other duties as assigned by OSC.

#### **7.15.4 Incident Base**



All primary services and support activities for the incident are usually located and performed at the Incident base. The LS will also be preferably located here. Normally base is the location where all uncommitted/out-of-service equipment and personnel to support operations are located. There will be only one Base established for each incident and normally it will not be relocated. It will be designated by incident name. In locations where major incidents are known to occur frequently, it is advisable to pre-designate possible base locations and plan their layouts in advance.

The management of the Incident Base comes under the LS. If an Incident base is established, a Base Manager will be designated. The Base Manager in a fully activated IRS organization will be in the Facility Unit of the LS.

#### **7.15.5 Camps**



Camps are temporary locations within the general incident area which are equipped and staffed to provide rest, food, drinking water and sanitary services to the responders. These are separate facilities which may not be located at the Incident Base. Camps may be in place for several days and they may be moved depending upon incident needs while the Incident Base remains at the same location.

Very large incidents may have one or more Camps located in strategic areas. All IRS functional unit activities performed at the incident Base may also be performed at camps. Each camp will have a Camp Manager assigned. The Camp Managers are responsible for managing the camp and for providing coordination to all organizational Units operating within the camp. The Camp manager will report to the Facility Unit in the LS. If the FUL has not been activated he will report to the LSC. After the camp is established, additional personnel and support needs will normally be determined and ordered by the Camp manager. If Logistics Units are established at Camps they will be managed by assistants. Camps will be designated by a geographic name or by a number.

#### 7.15.6 Relief Camp (RC)



All support services to the affected communities are usually provided in the Relief Camps (RCs). They will be established as per demands of the situation. **The resources required for the establishment of RC will be provided by the LS and it will be maintained and managed by the Branch or Division of the OS deployed for the purpose.** It may be established at the existing buildings like Schools, Community halls, Shelters, etc. or tents may also be used for such purposes. While establishing the RC, priority will be given for cleanliness of the RC. Each RC will have a Camp Manager assigned. After RC is established, additional personnel and support needs will normally be determined and requested for by the RC Manager. The RCs will be designated by a geographic name or by a number.

#### 7.15.7 Helibase/Helipad



A Helibase is the main location for parking, fueling and carrying out the maintenance of the Helicopters. It may also be used for loading and unloading of relief materials. Helipads are temporary locations in the



incident area where Helicopters can safely land and take off. 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 designated 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. The Helibase / Helipad-in-charge will report to the TBD.

#### 7.15.8 Roles and Responsibilities of Helibase/Helipad-in-Charge

- i) provide all ground support requirement of Helicopters at the location;
- ii) keep appropriate Maps in order to provide correct coordinates to the pilots;
- iii) survey the Helibase / Helipad area to analyse situation, potential Aircraft hazards and other likely problems;
- iv) ensure that the Helipad and Helibase is properly marked so that it is visible from the air for smooth landing of Aircrafts;
- v) coordinate with the ground supervisor for Helicopter Operations;
- vi) determine and implement ground and air safety requirements and procedures;

- vii) maintain continuous monitoring of the assigned Helibases and Helipads and remain vigilant for unusual happening or hazards that may affect the Air Operations and take precautionary measures;
- viii) ensure that all personnel deployed at the Helibases and Helipads are aware of the safety requirements;
- ix) establish ground communication facilities;
- x) notify supervisor immediately of any delays in Helicopter schedules;
- xi) ensure Aircraft rescue measures, firefighting 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;
- xii) ensure proper facilities for rest, refreshment, water and sanitation for the Air crew;
- xiii) inform the supervisor about the mission completion;
- xiv) maintain record of various activities performed as per IRS Form-004 and send to Group-in-charge; and
- xv) perform any other duties assigned by the Group-in-charge.

#### **7.16 Activation of EOC**

The EOC is a nodal point for the overall coordination and control of relief work. In case of an L1 Disaster the DEOC will be activated, in case of an L2 disaster SEOC will be activated along with the DEOC.

#### **7.17 Relief**

In the aftermath of disasters, the affected people must be looked after for their safety, security and well being and provided food, water, shelter, clothing, medical care etc. so as to ensure that the affected people live with dignity. The District Administration shall be responsible for providing prompt and adequate relief assistance to the victims of disasters as per the minimum standards of relief laid down by the NDMA and SDMA.

##### **7.17.1 Food & Nutrition**

People affected by disasters may be deprived of food and therefore food aid shall be provided to sustain life. The following measures shall be taken:

- Where necessary, free distribution of food shall be made to those who need the food most.
- Food distribution will be discontinued as soon as possible.
- Wherever possible, dry rations shall be provided for home cooking.



- Community Kitchen for mass feeding shall be organised only for an initial short period following a major disaster, particularly where affected people do not have the means to cook.
- While providing food assistance, local food practices shall be kept in mind and commodities being provided must be carefully chosen, in consultation with the affected population.
- Food must be of good quality, safe to consume, and appropriate and acceptable to recipients.
- Rations for general food distribution shall be adopted to bridge the gap between the affected population's requirements and their own food resources.
- Food distributed should be of appropriate quality and fit for human consumption.
- Food should be stored, prepared and consumed in a safe and appropriate manner at both household and community levels
- Food should be distributed in a responsive, transparent, equitable manner.
- NGOs, CBOs and other social organizations should be involved for supplementing the efforts of the Government.
- The nutritional needs of the population should be met and malnutrition and micronutrient deficiencies of identified risk groups addressed.

#### **7.17.2 Water**

Water supply is invariably affected in natural disasters. Safe drinking water might not be available particularly in hydro-meteorological disasters. The following measures shall be taken by the district administration:

- The department concerned shall identify alternative sources of water and make necessary arrangements for supply to the affected population.
- The District Administration shall ensure that affected people have adequate facilities and supplies to collect, store and use sufficient quantities of water for drinking, cooking and personal hygiene.
- It shall be ensured that drinking water supplied conforms to the prescribed quality standards
- It shall be ensured that water made available for personal and domestic hygiene should not cause any risk to health.

### **7.17.3 Health**

During post disaster phase many factors increase the risk of diseases and epidemics. These include poverty, insecurity, overcrowding, inadequate quantity and quality of water, poor environmental and sanitary conditions, inadequate shelter and food supply.

### **7.17.4 Medical Response**

Medical response has to be quick and effective. The execution of medical response plans and deployment of medical resources warrant special attention at the District level in most of the situations. The following measures shall be taken by the District:

- A mechanism for quick identification of factors affecting the health of the affected people shall be established for surveillance and reporting.
- An assessment of the health and nutritional status of the affected population shall be done by experts with experience of emergencies and, if possible, local knowledge.
- The voluntary deployment of the nearest medical resources to the disaster site, irrespective of the administrative boundaries, will be warranted.
- Mobile medical hospitals and other resources available with the Central Government shall be provided to the District Administration.
- Adequate supply of medicines, disinfectants etc. shall be made.
- Where necessary inoculation shall be done.
- Vaccination of the children & pregnant women shall be undertaken.
- Vector-borne diseases are a major cause of sickness and death in many disaster situations. Vector control measures shall be undertaken.
- Water borne diseases may cause sickness and deaths and therefore adequate measures shall be taken to prevent such outbreaks.

### **7.17.5 Mental Health Services**

Disasters cause tremendous mental trauma to the survivors. Psychosocial support and mental health services should be made available immediately in the aftermath of disaster so as to reduce the stress and trauma of the affected community and facilitate speedy recovery. The following measures shall be undertaken by the District Administration:

- A Nodal Mental Health Officer shall be designated by the concerned Department.
- Rapid needs assessment of psycho-social support shall be carried out by the Health Department.
- Trained man power for psycho-social and mental health services shall be mobilized and deputed for psycho-social first aid and transfer of critically ill persons to referral hospitals.
- Psycho-social first aid shall be given to the affected community/population by the trained community level workers and relief and rescue workers.
- Psycho-social first aid givers shall be sensitized to local, cultural, traditional and ethical values and practices.
- Psycho-social support and mental health Services shall be arranged in relief camps set-up in the post disaster phase.
- Where large number of disaster victims have to be provided psychosocial support a referral system for long term treatment shall be followed.
- The services of NGOs and CBOs may be requisitioned for providing psycho-social support and mental health services to the survivors of the disasters.
- Community practices such as mass prayers, religious discourse etc. should be organized with for preventive and promotive mental health services.

#### **7.17.6 Clothing & Utensils**

During disasters, people lose their clothing and utensils. The following measures shall be taken by District authority:

- The people affected by the disaster shall be provided with sufficient clothing, blankets etc. to ensure their dignity, safety and well-being.
- Each disaster-affected household shall be provided with cooking and eating utensils.

#### **7.17.7 Shelter**

In a major disaster a large number of people are rendered homeless. In such situations shelter becomes a critical factor for survival of the affected people in the initial stages of a disaster. Further, shelter becomes essential for safety and security and for protection from the adverse climatic conditions. Shelter is also important for human dignity and for sustaining family and community life in difficult circumstances. The following measures shall be taken by District Authority for providing shelter to the affected people:

- Disaster affected people who have lost their dwelling units or where such units have been rendered damaged/useless shall be provided sufficient covered space for shelter.
- Disaster affected households shall be provided access to appropriate means of artificial lighting to ensure personal security.
- Disaster-affected households shall be provided with necessary tools, equipment and materials for repair, reconstruction and maintenance for safe use of their shelter.

#### **7.17.8 Relief Camp**

The following steps shall be taken for setting up relief camps in the affected areas:

- Adequate numbers of buildings or open space shall be identified where relief camps can be set up during emergency.
- The use of premises of educational institutions for setting up relief camps shall be discouraged.
- One member of the DM Team of the district trained in running and management of relief camps will be deputed for management of relief camps.
- The requirements for operation of relief camps shall be worked out in detail in advance.
- Agencies to supply the necessary stores will be identified in the pre-disaster phase.
- The temporary relief camps will have adequate provision of drinking water and bathing, sanitation and essential health-care facilities.
- Adequate security arrangements shall be made by local police
- Adequate lighting arrangements shall be made in the Camp Area including at water points, toilets and other common areas.
- Wherever feasible, special task forces from amongst the disaster affected families will be set up to explore the possibility of provision of food through community kitchens, provision of education through the restoration of schools and anganwadis.
- Efficient governance systems like entitlement cards, identification cards, bank accounts for cash transfers etc shall be developed.

#### **7.17.9 Sanitation and Hygiene**

Sanitation services are crucial to prevent an outbreak of epidemics in post disaster phase. Therefore a constant monitoring of any such possibilities will be necessary. It should be ensured that disaster-affected households have access to sufficient

hygiene measures. Soap, detergents, sanitary napkins and other sanitary items should be made available to ensure personal hygiene, health, dignity and well-being. In the relief camps, toilets should be sited, designed, constructed and maintained in such a way as to be comfortable, hygienic and safe to use.

#### **7.17.10 Provision of Intermediate Shelters**

In the case of devastating disasters, where extreme weather conditions can be life-threatening or when the period of stay in temporary shelters is likely to be long and uncertain, the construction of intermediate shelters with suitable sanitary facilities will be undertaken to ensure a reasonable quality of life to the affected people. Such shelters shall be designed to be cost effective and as per local needs.

#### **7.17.11 Management of Relief Supplies**

Speedy supplies of relief materials shall be ensured in relief operations. A supply chain management system shall be developed. Standard Protocols shall be put in place for ensuring the procurement, packaging, transportation, storage and distribution of relief items. A mechanism shall be developed for receiving donations in cash or kind and their distribution.

#### **7.17.12 Transparency in Relief**

DDMA shall take all appropriate measures for transparency in the relief operations. Affected people shall be apprised of the nature and quantum of relief admissible to them. Proper formats will be developed to acknowledge the receipt of relief materials and their further distribution.

### **7.18 Reporting- First Information Report & Daily Situation Report**

DEOC shall send First Information Report immediately to SEOC and all designated authorities/agencies. FIR shall invariably give an account of the severity of the disaster, damage & loss caused, locally available capacities, priority. The FIR shall briefly summarize,

- a. Severity of the disaster
- b. Actions being taken locally
- c. Local coping capacities (including locally available resources)
- d. Immediate priorities for external relief required and approximate quantities for the same
- e. Best logistical means for delivering relief
- f. Forecast of possible future developments including new risks.

The First Information Report on occurrence of natural calamity shall be sent to SEOC, NEOC and MHA, Government of India within maximum 24 hours of occurrence of calamity. A standardized format for the same is at Annexure –14. Situation report will be transmitted on daily basis in a standardized format.

## 7.19 Responsibility Matrix for emergency response functions

### 7.19.1 Earthquake

Time	Task/Activity	Department/Agency
D+15 Min	1. Report the occurrence of earthquake to DDMA, Heads of all line departments, ESF	Officer-in-charge of DEOC
D+30 Min	1. Establish communication links by activating alternate communication equipments i.e. satellite phone, HF/ VHF set, HAM radio, VSAT etc.	DEOC, MPRO, NIC
	2. Deploy mobile emergency communication units to affected areas for establishing communication link	BSNL
	3. Activate the DMTs, QRT, ESFs, IRTs.	DDMA
	4. Ask all Nodal Officers/team leaders and IRT members to immediately report to the EOC.	DEOC
	5. Verify the authentic of the incident from agencies like IMD, block level officers, police and fire department etc.	DEOC
	6. DDMA and EOC together analyze the information and take decision on the level of the disaster (viz. Village level, block level, sub-division level, district level etc.).	DDMA DEOC
	7. Organize first coordination meeting with the ESF team leaders, District IRTs, and the officials from the affected areas. Representative from the affected areas should also be invited to share updates and ground level information. This meeting can be organized in the affected areas (such as Block office) if required and feasible.	DEOC, DDMA
D+1 Hr	1. Establish onsite Emergency Operations Center	DEOC
	2. Activate the emergency response as per the level of the disaster. <ul style="list-style-type: none"> <li>In case of disaster up to block level, the BDO takes charge of the emergency response coordination along with the DMTs, QRTs and IRTs.</li> <li>The BDO shall stay in regular communication with the DDMA and EOC for information updates and response actions.</li> <li>In case of disaster upto district level, a senior officer of ADC rank shall be given responsibility of emergency response coordination. He/she shall coordinate with the EOC, DMTs, QRT, ESFs etc.</li> </ul>	DDMA, DEOC

	3. Activate the search and rescue teams in the affected areas with immediate effect.	DEOC
	4. If required, ask for external support from armed forces, other technical institutions for search, rescue and evacuation operations.	DDMA
	5. Collate and analyse the available initial information on damage and needs.	DEOC
	6. Ask all line departments to share their assessment information with EOC.	DEOC
D+3 Hr	1. Senior ADC level officer to be deputed to the affected areas	DDMA
	2. Assess the condition of roads for quick mobilization of emergency teams and resources to the affected areas and take follow up actions	Transport dept., DEOC
	3. Establish media management/information cell for public information, guidance to volunteers and aid agencies and for rumour control	DEOC, IPR
	4. Contact public and private sector agencies etc. to assist in emergency rescue and relief operations	DDMA
	5. If required, seek assistance from neighbouring districts and state level.	DDMA
	6. Provide security in affected areas and maintain law and order situation	Police dept
	7. Mobilize medical response teams with orthopaedic experts, first aid, cuts, wounds etc. to the affected areas.	Health dept
	8. Mobilize SAR teams and equipments etc. to the affected areas.	DEOC, DDMA
	9. Maintain constant communication with onsite EOC	DEOC
	10. Alert all major hospitals to make necessary arrangements for treatment of injured	DDMA, DEOC
D+12 Hr	1. Open access routes and manage traffic for mobilization of equipment, machinery and volunteers to the affected areas	Transport dept, Police
	2. Establish information centers at strategic places	DDMA
	3. Mobilize relief materials i.e. tents, food materials, water, essential medicines, blankets etc. to the affected areas	DDMA, Supply Dept
	4. Arrange to shift evacuated persons to temporary shelters and ensure provision of food, water & sanitation facilities, blankets, storage of relief materials etc	DDMA, Supply Dept
	5. Set up field hospitals near the affected areas.	Health dept
	6. Arrange to shift injured people to field hospitals.	Health dept
D+24 Hr	1. Develop situation report of the affected areas and share with all stakeholders. This should also be updated on the District website promptly to ensure its availability to other stakeholders.	DEOC
	2. Prepare press note twice a day with details of situation and response being made.	DEOC
	3. Depute additional officers and supporting staff to affected areas from non affected areas	DDMA

	4. Restore essential services i.e. power, water supply, telecommunication facilities of the EOC, HQ, AIR, Doordarshan, offices of key line departments, SP, Hospitals etc. on priority basis.	PHE, BSNL, MeECL
D+48 Hr	1. Plan for a multi sectoral damage and needs assessment of the affected areas. The assessment team may comprise of various ESFs and members from NGOs to have a multi-agency, multi-sectoral assessment.	EOC
	2. Publish the assessment reports and other relevant information on the District website	DEOC
	3. Arrange for identification, photograph, post mortem, and record maintenance for disposal of dead bodies (Refer NDMA guideline on disposal of dead)	Health dept. Police dept.,
	4. Set-up an information center near the relief shelters for community, relatives, NGOs etc.	DEOC, IPR
	5. Arrange system to receive reports and complaints regarding missing people and other such losses and damages, and initiate search in hospitals, shelters and police records	DEOC
D+72 Hr	1. Arrange for disposal of unidentified and unclaimed dead bodies	Police dept., Health dept.
	2. Arrange for transportation of injured people from local hospitals to district hospitals or to other specialized hospitals (if required)	Transport, Health dept
	3. Initiate relief distribution and recovery actions	DDMA

### 7.19.2 Cyclone (Thunders quall/Thunderstorm)

Time	Task/Activity	Department/Agency
D-72 Hr	1. On receipt of warning, report to DC/DDMA	IMD, DEOC
	2. Alert all IRTs, line departments, BDOs	DEOC
	3. Prepare for additional manpower, resources & Relief material to the blocks/villages likely to be affected	DEOC
	4. Activate alternative communication equipments i.e. satellite phones, HF/VHF sets, Ham radio, VSAT in Block control rooms	DEOC
	5. Establish communication links with Search & Rescue Teams and alert them to be in stage of readiness.	DEOC
	6. Establish communication links with villages likely to be affected	DEOC
D-48 Hr	1. Establish contact with IMD & CWC & get the latest weather report from IMD to know the exact location of Cyclone and the likely area where landfall will take place.	DEOC/DDMA
	2. After reviewing the weather report and satellite images, issue instructions and orders for	DEOC/DDMA



	emergency response to areas likely to be affected.	
3.	Instruct line departments to depute representatives at the DEOC	DEOC/DDMA
4.	Hold a meeting with leaders of task forces and entrust them their tasks.	DEOC/DDMA
5.	Ensure that Cyclone information is disseminated to all who are at danger	DEOC/DDMA
6.	Arrange emergency meeting with DDMA, IRTs to devise a plan of action.	DEOC/DDMA
7.	Arrange dissemination of information through various means of communication such as Radio, TV, Cable Network, SMS about Cyclone warning to blocks/areas which are likely to be hit by Cyclonic Storm.	DEOC, IPR
8.	Impose restriction on all transport activities heading towards areas that are likely to be affected by Cyclone	Transport, Police
9.	Alert following teams to remain in readiness: Evacuation, Emergency Medical Services, Search and Rescue	DEOC/DDMA
10.	Alert following emergency response forces to remain in readiness: Fire & Emergency Services, VDMTs, Police, CD&HGs, SDRF, NDRF, Army (if required) Air Force (if required)	DEOC/DDMA
11.	Start the procedure for identifying safe places/shelters for evacuation in those villages.	DEOC, BDO
12.	Village wise data of safe sheltering for evacuation should be referred and the BDOs/Village level officers should be contacted to know the status of the shelters with the capacity of the shelter and other available facilities at the site.	DEOC, BDO
13.	Make transport arrangement for mobilization of all emergency response teams.	DEOC, Transport, BDO
14.	Ensure safety of tourists visiting the district	Tourism Dept.
15.	Ensure law and order is maintained in areas likely to be affected.	Police
16.	Ensure that the schools and colleges are closed in areas likely to be affected by Cyclone and associated hazards.	Education Dept.
17.	Ensure dissemination of information to remote areas by local means.	DEOC, IPR
18.	Ensure that local help lines are opened and effectively managed for public information, guidance and rumor control.	DEOC, IPR
19.	Ensure that the information to public and media about the progress of Cyclone at periodic intervals is released.	DEOC, IPR
20.	Make arrangements for logistic support to all emergency response teams.	DEOC
21.	Activate the Departmental Disaster Management Plan and Departmental SOPs for Management of	Line Departments

	casualties	
D-24 Hr	1. Establish contact with IMD, CWC for latest report	DEOC/DDMA
	2. After reviewing the weather report and satellite images issue instructions and orders for emergency response to areas likely to be affected areas.	DEOC/DDMA
	3. Review and monitor following activities: <ul style="list-style-type: none"> <li>• Evacuation of people from areas likely to be affected</li> <li>• Position of Search and Rescue Teams</li> <li>• Positioning of mobile communication units</li> <li>• Positioning of quick medical response teams</li> <li>• Mobilization of restoration teams of respective departments</li> <li>• Requirement of armed forces in rescue and relief operations</li> <li>• Dissemination of information to the vulnerable areas</li> <li>• All preparedness measures to be taken by various authorities</li> </ul>	DEOC/DDMA
	4. Keep in touch with National, State & Block Control Rooms	DEOC/DDMA
	5. Release information at appropriate time to media and public regarding response measures organized by the Government	DEOC, IPR
	6. If reports regarding striking of Cyclone are confirmed by IMD and other sources, start the emergency response and relief operations	DEOC/DDMA
	7. Divert the emergency services to areas likely to be affected as per the warning issued by IMD.	DEOC/DDMA
	8. Inform the public residing in areas likely to be affected to evacuate through various means such as SMS, AIR, FM Radio, Doordarshan, etc.	DEOC/IPR
	9. Start evacuation from the likely affected areas through Police support, if necessary	DEOC, DDMA, BDO
	10. Ensure that the Relief Management work planned in the areas likely to be affected by the Cyclone are well organized.	DEOC, Supply Dept
	11. Ensure that the arrangement for basic amenities (shown below) at evacuation/relief centres are made by the respective departments: <ul style="list-style-type: none"> <li>• Drinking water</li> <li>• Food</li> <li>• Clothing</li> <li>• Sanitation and hygiene,</li> <li>• Lighting</li> <li>• Medicines and other Health Care</li> </ul>	PHE, SMB, Supply, Health Dept, MeECL
	12. Inform following agencies to be in a state of readiness for assisting in the Cyclone response measures (if required): <ul style="list-style-type: none"> <li>• Public sector agencies</li> <li>• Private sector agencies</li> </ul>	DEOC, DDMA

	<ul style="list-style-type: none"> <li>• NGOs</li> <li>• CBOs</li> <li>• Volunteer Organizations</li> </ul>	
	13. Request for help (if needed) to SDMA	DEOC, DDMA
	14. Make necessary arrangements for public information/guidance, public opinion and rumor control.	DEOC, IPR
	15. Restriction may be imposed for transportation in threatened areas.	DEOC, BDO, Police Dept, Transport Dept
D0 Hr	1. When Cyclone makes a landfall, Cyclone affected blocks should send a communication to the DEOC, then SEOC to declare the area as disaster affected, if necessary, (depending upon the nature and intensity of impact)	DEOC, DDMA
	2. DC should send teams to the affected areas to take stalk of the effects of Cyclone and associated rain.	DEOC, DDMA
	3. DC should send sector wise situation reports to SEOC, SDMA	DEOC
	4. Deployment of following teams to Cyclone affected areas: <ul style="list-style-type: none"> <li>• Emergency Communication Teams</li> <li>• Emergency Medical Services Teams</li> <li>• Search and Rescue Teams (With Equipments)</li> <li>• Preliminary Damage Assessment Teams</li> <li>• Need Assessment Teams</li> </ul>	DEOC, DDMA
	5. Establish communication link with affected blocks by activating alternate communication equipments such as Satellite Phones, HF/VHF Sets, Ham Radio etc., in DEOC and Block Control Rooms	DEOC, MPRO, IPR
	6. Arrange dissemination of information about occurrence of Cyclone and areas that are affected by it to Media & Public.	DEOC, IPR
D+24 Hr	1. Remain in constant touch with IMD for updates on weather forecast for the coming hours and plan accordingly. <ul style="list-style-type: none"> <li>• Immediate mobilization of following units/teams to areas affected by Cyclone and associated rains.</li> <li>• SAR Teams of Fire and Emergency Services</li> <li>• Quick Medical Response Teams</li> <li>• Quick Damage &amp; Loss Assessment Teams</li> <li>• Quick Need Assessment Teams</li> <li>• Road Clearance Teams</li> <li>• Teams for disposal of dead bodies</li> <li>• Teams for disposal of carcasses</li> <li>• Teams for debris clearance (if any)</li> <li>• Teams for maintaining Law &amp; Order in the affected areas</li> <li>• Arrange for SAR teams of Air Force (If required).</li> </ul>	DEOC/DDMA, Line departments

	2. DEOC/BDO of the affected blocks should ensure that the following response activities are carried out immediately: <ul style="list-style-type: none"> <li>To survey the access roads/routes leading to the affected areas and manage traffic for mobilization of equipments, machinery and volunteers.</li> <li>Identify alternate roads/routes for evacuation.</li> <li>Undertake repairing/restoration of damaged roads leading to the affected areas.</li> <li>Identify and declare unsafe buildings/structures in Cyclone affected areas.</li> <li>Evacuate people from unsafe buildings/structures and shift them to relief camps/sites.</li> <li>Divert/stop transport activities heading towards Cyclone affected areas.</li> </ul>	PWD Transport Police Dept, DDMA, BDO	Dept, Dept.,
	3. To ensure that necessary arrangements at evacuation/relief centers is made with sufficient availability of: Food, Water, Blankets/Clothing, Medicines, Lighting, Sanitation and hygiene etc. <ul style="list-style-type: none"> <li>To ensure necessary security arrangements for the personals (Emergency responders/relief teams) who are working at Relief Centers and involved in distribution of Relief Materials.</li> <li>To ensure that law and order is maintained at evacuation/relief centers and in the affected areas as well.</li> </ul>	DDMA, Dept., PHE SMB Health MeECL, Authorities, Dept.	Supply Dept., Dept., Local Police
	4. To establish camp hospitals near the affected areas <ul style="list-style-type: none"> <li>To make transportation arrangements to shift seriously injured persons to nearest- Camp Hospitals, District Hospitals etc</li> <li>Ensure that the Hospitals are well prepared to deal with seriously injured persons.</li> <li>To ensure that the required medical assistance/aid and medicines are provided to the affected people at site as well as at evacuation/relief centers in the affected area and necessary records are maintained.</li> <li>Take sanitation and epidemic control measures for preventing any water borne disease.</li> <li>Keep adequate stock of essential medicines, first-aid etc. at all hospitals</li> <li>Take steps to purify drinking water sources</li> <li>If required, take the help of doctors/paramedics from the list of doctors/paramedics available at the district level for immediate medical assistance.</li> </ul>	Health Transport Dept.	Dept, Dept, PHE Dept.
	5. Assess need for fodder if required. Keep ready teams for carcass disposal (if required).	Animal Dept.	Husbandry
	6. Establish Media/Press Centre for media management and information dissemination <ul style="list-style-type: none"> <li>Ensure that the information to media/general</li> </ul>	DDMA, IPR	

	public about the response of the Government is released in an organized manner. <ul style="list-style-type: none"> <li>Organize media briefing twice a day at pre-determined intervals.</li> </ul>	
	7. Prepare quick need assessment report for planning of relief operation. Additional assistance may be asked for emergency response/relief from SDMA/GoI-NDMA (If needed).	DEOC/DDMA
	8. Prepare situation report and circulate it twice a day in the morning and evening to key Government functionaries. <ul style="list-style-type: none"> <li>Maintain constant touch with National, SEOC and block control rooms</li> <li>Remain in constant touch with IMD for updates on weather forecast for the coming days and plan accordingly</li> <li>Conduct Aerial survey of affected areas for taking a stalk of the situation.</li> </ul>	DEOC/DDMA
	9. Activate evacuation & relief centers according to needs/situation. Maintain record of persons admitted at evacuation/relief centres.	DEOC/DDMA
D+24 to 48 Hr	1. Establish contact with IMD, CWC, Defense Ministry of GoI for aerial / satellites imageries about further weather condition and plan accordingly.	DEOC/DDMA
	2. Ensure that the essential services/critical infrastructure of the affected areas have been restored or alternative arrangement is made for ensuring safety of people and smooth management of emergency response. <ul style="list-style-type: none"> <li>Ensure that key administrative and lifeline buildings are brought back to operation quickly.</li> <li>Designate and deploy senior officers (as per the need) to worst affected area/s to oversee rescue/relief operation.</li> <li>Ensure following primary necessities are restored –Power, Water, Telecommunication, Roads &amp; Bridges</li> </ul>	DEOC/DDMA, Line Departments
	3. Ensure following procedure is followed before disposal/handing over of dead bodies: <ul style="list-style-type: none"> <li>Photographs of the dead bodies are taken,</li> <li>Identification of the dead bodies is done,</li> <li>Post Mortem where ever necessary and possible is carried out,</li> <li>Handing over dead bodies of persons known/identified to their relatives,</li> <li>Disposal of unclaimed and unidentified dead bodies.</li> </ul>	DEOC/DDMA, SMB Police Dept., Health Dept., Local Authorities, BDO

	4. Animal Husbandry Department to ensure medical aid to cattle who are injured. Disposal of animal carcasses with the help of local bodies/health dept.	AH&V Dept, Local Authorities, Health Dept
	5. Ensure that the information about progress of rescue and relief is provided to media/public in an organized manner at least twice a day. <ul style="list-style-type: none"> <li>Establish help lines for facilitating communication between the victims and their relatives residing outside the affected area/s.</li> <li>Establish Information Centers at strategic locations for providing information about persons evacuated to the relief centres/hospitals.</li> </ul>	DEOC/DDMA, IPR
	6. Assess the situation and take appropriate action to accelerate the Search & Rescue Operations. <ul style="list-style-type: none"> <li>Depute additional officers and supporting staff to Cyclone affected areas from non-affected areas (if required) to accelerate the rescue and relief operations.</li> </ul>	DEOC/DDMA
	7. Ensure that the relief assistance received from outside is centrally received, stored and sent for distribution to Cyclone affected areas according to their need and proper accounts are maintained about both receipt and distribution.	DEOC/DDMA, Supply Dept, BDO
	8. Oversee the functioning of relief centres and ensure adequate supply of relief materials.	DEOC/DDMA, Supply Dept
D+48 to 96 Hr	1. Remain in constant touch with IMD for updates on weather forecast for the coming days and plan accordingly. <ul style="list-style-type: none"> <li>Arrange for procurement of additional relief material required for relief operations (on the basis of need assessment).</li> <li>Mobilize additional relief material required for relief operations.</li> <li>Maintain constant touch with SEOC &amp; Block Control Rooms</li> </ul>	DEOC/DDMA, Supply Dept
	2. Arrangement for transportation of injured from field hospital to base hospital <ul style="list-style-type: none"> <li>Arrangement for transport of dead bodies to their native places.</li> </ul>	DEOC/DDMA, Health Dept, Transport Dept
	3. Ensure maintenance of record, timely reporting and information management. <ul style="list-style-type: none"> <li>Ensure maintenance of record and information database.</li> </ul>	DEOC/DDMA, Line departments, BDO
D+96 to 168 Hr	1. Remain in constant touch with IMD for updates on weather forecast for the coming days and plan accordingly. <ul style="list-style-type: none"> <li>Review the restoration of all the public and essential in Cyclone affected areas.</li> <li>Review and follow-up all necessary arrangements for emergency response &amp; relief in the affected area/s.</li> </ul>	DEOC/DDMA, BDO

	2. On receiving the message from IMD about degradation of Cyclone, inform the concern	DEOC/DDMA, IMD, IPR
	3. Organize a quick rapid visual survey of the affected areas (through a technical team of engineers) to ascertain the safety of the structures decide on giving the go-ahead to people to move back to their respective houses.	DEOC/DDMA, PWD, BDO
	4. After receiving the message of de-warning, ensure that people are moved back safely to their houses.	DEOC/DDMA, BDO, IPR
	5. Ensure relief disbursement, allotment of funds for organizing emergency response, relief and evacuation arrangements.	DEOC/DDMA, BDO

### 7.19.3 Flood

Time	Task/Activity	Department/Agency
<b>Pre – Flood</b>	1. Convening a meeting of the DDMA official, ESFs, EOC and other concerned institutions to take stock of department wise preparations.	DEOC/DDMA
	2. Take stock of functioning of the EOC and Control Rooms	DEOC/DDMA
	3. Closure of past breaches in river and canal embankments and guarding of weak points	Water Resources Dept
	4. Rain-recording and submission of rainfall reports	Water Resources Dept
	5. Communication of gauge-readings and preparation of maps and charts	Water Resources Dept
	6. Dissemination of weather reports and flood bulletins issued by the India Meteorological Centres & Central Water Commission	DEOC/DDMA
	7. Deployment of boats at strategic points, arrangement and use of power/motor boats	DEOC/DDMA
	8. Installation of temporary Police Wireless Stations and temporary telephones in flood-prone areas	DEOC/DDMA, Police/MPRO
	9. Storage of food in interior, vulnerable strategic and key areas and arrangements for their safety	DEOC/DDMA, Food Supplies dept.
	10. Arrangements of dry food stuff, essential medicines and other necessities of life	DEOC/DDMA, Food Supplies dept., Health dept.
	11. Alternative drinking water supply arrangements	PHE, SMB
	12. Arrangements for keeping the drainage system desilted and properly maintained	Water resource dept., MUDA
	13. Appropriate measures for Health, Veterinary services etc	Health & Animal dept.
	14. Identification /Selection of flood shelters	DDMA/DEOC
	15. Advance arrangements for army assistance if required	DDMA
	16. Training of department employees in flood relief work	DDMA
<b>Post</b>	1. Report the occurrence of flood to DDMA, Heads of all line departments, ESFs, IRTs	DEOC



<b>Flood</b>	2. Establish communication links by activating alternate communication equipments i.e. satellite phone, HF/ VHF set, HAM radio, VSAT etc.	DEOC/DDMA, MPRO, NIC
	3. Deploy mobile emergency communication unites to affected areas for establishing communication link	DEOC, BSNL
	4. Verify the authenticity of the flood event from agencies like IMD, Water Resource Dept, block level officers, police and fire department etc.	DEOC/DDMA
	5. Organize first meeting of duty officers	DEOC/DDMA
	6. Organize and dispatch the SAR teams to the affected areas.	DEOC/DDMA
	7. Ask for SDRF/NDRF/Army assistance as per requirement.	DEOC/DDMA
	8. Relief measures by non-official and voluntary organisations may be enlisted as far as possible.	DEOC/DDMA
	9. Organise relief camps and flood shelters	DEOC/DDMA
	10. Provision of safe drinking water to the affected communities	PHE dept., SMB
	11. Organise controlled kitchens to supply foods initially at least for 3 days.	Food supplies Dept., DDMA
	12. Provision of sanitation and hygiene facilities	PHE Dept, NGOs & Community Groups Health dept.
	13. Provision of health assistance and medical services	Health dept.
	14. Making necessary arrangements for air dropping of food packets in the marooned villages through helicopters.	DDMA, Air Force
	15. Establish alternate communication links to have effective communication with marooned areas.	BSNL, MPRO
	16. Organising cattle camps, if necessary, and provide veterinary care, fodder and cattle feed to the affected animals	AH&V Dept, Fisheries Dept.
	17. Grant of emergency relief to all the affected people.	DEOC/DDMA, Food Supplies Dept, Health dept
	18. Submissions of daily reports and disseminate correct information through mass media and district website to avoid rumors.	DEOC/DDMA, IPR
	19. Rehabilitation of homeless people	DEOC/DDMA
	20. Commencement of agricultural activities-desiltation, resowing	Agriculture, Horticulture, Fisheries Depts
	21. Repairs and reconstructions of infrastructural facilities such as roads, embankments, resettlement of flood prone areas.	Line depts
	22. Maintain constant communication with the onsite EOC	DEOC/DDMA
	23. Initiate relief distribution and recovery actions	DEOC/DDMA, Line depts



## **CHAPTER –VIII**

### **RECONSTRUCTION, REHABILITATION AND RECOVERY MEASURES**

Reconstruction, Rehabilitation & Recovery measures are processes to build back better & are the activities in the post-disaster phase. The following are the activities during this phase-

#### **8.1 Detailed Damage and Loss Assessment**

Damage Assessment is a precondition for effective DM. There are two stages for Damage Assessment – 1) Preliminary Damage Assessment which is conducted immediately after a disaster and 2) Detailed Damage Assessment which is conducted before reconstruction and rehabilitation by all relevant departments.

#### **8.2 Housing units & basic infrastructure Rehabilitation**

For housing rehabilitation, the existing inhabited settlements may be completely reconstructed at a new site for which land acquisition may have to be done. Housing rehabilitation may also be carried out by way of upgradation of existing damaged houses through repairing and retrofitting. Restoration of basic infrastructure including roads, bridges, drinking water supply, electricity, communication network, school, health centres etc may be required to be built in the existing sites or in the new relocated site depending upon the nature and extent of the rehabilitation programme. Repair/reconstruct the lifeline buildings/critical buildings which are necessary for treating the affected people or rehabilitation in these buildings as shelters.

#### **8.3 Economic Rehabilitation**

Rehabilitation aims at making the entire system work once again by allowing it to function normally. Economic Rehabilitation would mean restoring economic attributes of a system, namely creation of livelihood opportunities, reconstruction of infrastructure and resources in a disaster affected area. All essentials such as seed, manure, livestock etc have to be distributed as initial capital to restart their livelihood activities. In this way, employment can also be generated for rehabilitation work.

#### **8.4 Social Rehabilitation**

Restoration of educational institutions, cultural places, community resources and infrastructure.

#### **8.5 Recovery**

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

the efficient use of resources and incorporate national recovery doctrine. Recovery processes should incorporate the local needs of the affected people.

The nodal departments are to be assigned the responsibilities of reconstruction and restoration activities and perform these activities and restore the minimum basic infrastructure in the area which is vital for sustaining human life in the area. These departments are PWD (R & B), Health & Family Welfare, MeECL, MUDA, PHE, Education, C & RD departments, etc.

## **CHAPTER IX**

### **FINANCIAL RESOURCES FOR IMPLEMENTATION OF DDMP**

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

#### **9.1 State Allocation**

Every year the Revenue & Disaster Management Department, Government of Meghalaya prepares the Budget for Disaster Management in the State and releases the fund through the State Disaster Management Authority.

#### **9.2 State Disaster Response Fund (SDRF)**

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

#### **9.3 State Disaster Mitigation Fund (SDMF)**

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

#### **9.4 Department Fund**

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

#### **9.5 Recommendation of the 13<sup>th</sup> Finance Commission**

The Thirteenth Finance Commission (2010-2015) recommended fund for Capacity Building for Disaster Response at the District, Block and Village levels. This recommendation helps to capacitate all stakeholders in DM and also for preparation and updation of DM Plans.

All State Government Departments, Boards, Corporations and ULBs would prepare their DM plans including the financial projections to support these plans. The necessary financial allocations would be made as part of their annual budgetary allocations and ongoing programmes and should be used for mitigation and preparedness measures. They will also identify mitigation projects and project them for funding in consultation with the SDMA/DDMA to the appropriate

funding agency. The Departments should also keep in mind for mainstreaming or integration of DM into their development plans and projects. The guidelines issued by the NDMA vis-a-vis various disasters should be considered while preparing mitigation projects.

#### **9.6 Disaster Risk Insurance**

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

## **CHAPTER X**

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

Evaluating the effectiveness of plan & maintenance involves a combination of training events, exercises etc. to determine whether the goals, objectives, decisions, actions and timing outlined in the plan will result in an effective response. Guidelines for monitoring and evaluation of the plan are as given below:

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

### **10.1 Authority for maintaining and reviewing the DDMP**

The DDMA is the authority for maintaining and reviewing the DDMP. As per Sub Section (4) of Section 31 of the Disaster Management Act, 2005, the plan would be reviewed and updated annually. The plan will then be uploaded in the District Website.

### **10.2 Monitoring & Evaluation- Mock Drill**

The DDMP has to be properly monitored and evaluated. This can be done by conducting Table Mock Exercise/Mock Drill and Mock Exercise at District, ULB, Block and village levels. These exercises can be conducted twice a year preferably in the month of May and October. All stakeholders of DM like the Government, NGOs, corporate and community are to be participated for the success implementation of the plan.

### **10.3 Monitoring and gap evaluation**

After the simulation exercises, the DDMA will encourage interactions with all the stakeholders to evaluate the gaps, lessons learnt with proper documentation for further improving the capability to deal with future disasters.

**CHAPTER XI**  
**COORDINATION MECHANISM FOR IMPLEMENTATION OF**  
**DDMP**

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

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

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

DDMA and DEOC to coordinate with all heads of department at the district level, IRTs, ESFs, BDOs, DMTs, Task Forces, NGOs, CBOs, Corporate and the community for effective implementation of DM Plans at all levels. DDMA should also have a link with neighboring districts in case of disasters covering neighboring districts.

## **CHAPTER XII**

### **STANDARD OPERATING PROCEDURES (SOPs) AND CHECK LIST**

#### **12.1 Standard Operating procedures (SOPs)**

Standard Operating Procedures (SOPs) are a common method of implementing instructions. SOPs provide response protocols for carrying out specific responsibilities. They describe who, what, when and how SOPs are appropriate for complex tasks requiring step-by-step instructions for performing a task. The District is having the SOP based from the Guidelines of the Government of India.

#### **12.2 Standard Operating Procedure of ESFs**

Emergency Support Functions (ESFs) are the essentials of Emergency Management comprising of various coordinating agencies, which manage and coordinate specific kinds of assistance common to all disasters types. Emergency Support Functions (ESFs) consisting of activities like Communication, Search and Rescue, evacuation, law and order, medical response and Trauma Counseling, water supply, electricity, warning and transport, relief etc. All of these emergency functions consist of emergency plans that would be activated at the time of emergency. The designated primary agency would be assisted by one or more supporting agencies (secondary agencies) and will be responsible to manage activities of the Emergency Support Functions and ensuring the mission accomplished. The primary and secondary agencies have the authority to execute response operations to directly support the district needs.

The ESF outlines the objective, scope, organization setup and SOPs for each ESF that is to be followed by the respective ESF agencies when the Responsible Officer will activate the response plan. SOPs provide a basic concept of the operations and responsibilities of Nodal and Secondary agencies.

At the district level, the Nodal Agency will lead the ESF with direct link to the RO of the District and the DEOC. The Nodal Agency will also be a member of the Incident Team lead by an officer of the Revenue/Police or other department as decided upon by the district IC, and as required by the IC who may draw upon some or all of the ESFs for onsite response. The Nodal Agency must hence nominate a Team Leader (TL).



The Nodal and Support Agencies must together or separately (as decided according to need of the specialized function) constitute QRTs with members, and appropriate (at least two) backstopping arrangements. TL of EOC would be on the basis of its authorities, resources, and capabilities in the functional area. He would be the member of Disaster Management Team that represents all of the key functions of the district in a single location under the direction of the RO.

The success of ESF will be of critical importance and would reflect in the lives saved in the golden hour. Below a list of ESFs has been given which will be activated at state/district level during emergency situation.

#### **12.2.1 Emergency Support Function # 1: Coordination**

Team Leader: Deputy Commissioner, Shillong

Support Agencies: S.P; ADC (DM); ADC (Law and Order); Joint Director of Supply, CEO, Shillong Municipal Board; Secretary, MUDA, S.P, Fire, DTO, Youth Coordinator, NYK; Executive Engineer (PWD), Assistant Director, IPR, District AH&VO; Deputy Controller, CD&HG and other relevant departments of District desired during the crisis.

In anticipation of any disaster, the District Administration has taken various precautionary measures. Functioning of the Control Room, closure of past breaches in river and canal embankments and guarding of weak points, rain recording and submission of rainfall report, communication of Gauge reading, deployment of power/country boats, installation of temporary VHF stations, arrangement for keeping telephone and telegraph lines in order, storage of food stuff, arrangement for keeping drainage clear, agricultural/health/veterinary measures, selection of Flash flood/Earthquake shelters, etc. have been properly planned. The government officials of different departments have been apprised of their duties for pre, during and post disaster periods.

The ULBs, Executive Engineers of Water Resource Department, Executive Engineers of PWD Department, Executive Engineers of MeECL, DM&HO, AH &Veterinary, Joint Director of Supply etc. have been requested to take all precautionary and preparatory measures and to remain alert to face the

challenge of any disaster. The other government officials have also been apprised of their roles and responsibilities to be played during pre-disaster arrangement and during/post disaster management. Every possible kind of cooperation from all the line departments has been sought for by the District Administration in combating the severe natural calamities that may occur anytime.

### **12.2.2 Emergency Support Function # 2: Communication**

Team Leader: SP, Shillong

Support Agencies: MPRO, Ham radio operator Clubs, IPR, BSNL, NIC, Private/ mobile Telecom Representatives, Signal Representative Army, IMD, CWC, FM Radio, Doordarshan, All India Radio, Private Satellite Channels.

The ESF 'Communication' supports the Response Plan in case of Major Communication links damage in various parts of the city during a disaster and there is a requirement for immediate restoration or replacement of the network. The objective of the ESF is to provide safe and reliable communication support during and after a disaster; to restore communication facilities in the aftermath of a disaster and provide vital communication linkages between EOC, and important response agencies. This ESF encompasses setting up of temporary communication centers in and around the area of impact and activation of Mobile units in case of widespread damage in a disaster like an earthquake.

#### **Immediate Tasks:**

- Collection of initial reports of damage
- Status of the affected regions in respect of establishing communication with rest of the City/District
- Status of the key officials in the area
- The main focus of the activities is to coordinate life saving activities concurrent with re- establishing control of the disaster affected area
- Establish radio communication with the SEOC, DEOC as well as Relief Centers
- Appoint a Nodal Officer, Communications

- Renew and update precautionary measures and review with the staff the precaution to be taken to protect the equipment
- Alternative Communication

**Initial Action:**

- Identify operational telecommunication facilities within the affected area.
- Identify telecommunication facilities that need to be transported to the affected site to establish the emergency operational services
- Identify the actual and planned action of private telecommunication companies towards reconstruction of their facilities
- Establish temporary communication facility through mobile exchange on priority for use by District Officials, Officers in the transit, relief camp, NGOs.
- Establish a temporary communication facility for use by the public
- Carry out an assessment of overall damage for the following:
  - (i) Overhead route damage, (ii) Cable damage, (iii) Specific equipment damage.

**Task during sustained Phase:**

Establish emergency communications in order of priority to the functions and locations most in need of them for the mitigation of life- threatening situations and the relief of human suffering. Provide a communication advisory function and internal communication organization. Monitor and control, where possible, the re-establishment of telephone services.

**Standard Operating procedures for the Nodal Agency**

- TL of Communication ESF will activate the ESF on receiving the intimation of occurrence of the disaster from the RO
- Wireless operators would be informed about the current requirements and coordination mechanisms shared. Till the restoration of normal telecom facilities, the police wireless system would be the main communication network
- TL issues orders to establish systems and reports to District EOC on the action taken
- TL would inform NOs of support agencies about the event and ESF activation
- TL would establish contact with the DEOC for First Information Report

- TL requests for reports from local ESF contact persons (this would be the local office of ESF Primary Agency) to understand the current situation and actions taken
- Based on information given by the support agencies, TL decides on the need to launch an assessment mission to estimate the extent of damage to telecom services and network as well as to come up with possible arrangements to establishing reliable and appropriate network
- TL communicates situation to support agencies and also requests to provide details on the status of equipment and infrastructure in the affected area(s).
- TL informs the RO on the status of telecom services
- TL works out a plan of action for telecom companies and convenes a meeting of all ESF members to discuss and finalize the modalities
- TL gets the temporary telephone facilities established for the public. Prior information on this would be announced through media/ and locally through mega phones and other feasible mediums
- TL monitors the situation and arranges emergency staff required to operate established systems
- TL sends the District QRT at the affected site with the required equipments and other resources

### **SOPs for QRT on Help Lines, Warning Dissemination**

The QRT members will reach to the Nodal office as soon as they will get instructions. Once the QRTs receive any intimation from the Nodal Officer to reach at the site they would reach to the site at the earliest, without wasting any time.

- At the emergency site QRT members will take stock of the situation from the site communication manager
- QRTs would assess the ground situation and would send sectoral report to the District ESF agency

A sectoral report would contain following:

An assessment of overall damage, listing specifically:

- Overhead route damage (in miles/ kilometres)
- 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 labourers
- Carry out temporary building repairs to establish a secured storage area for the equipments and salvaged materials
- Report all activities to head quarter
- Begin restoration by removing damaged wires and poles through recruited casual labourers
- Establish a secure storage area for incoming equipments and materials

### **12.2.3 Emergency Support Function # 3: Emergency Public Information, Help line & Warning**

Team Leader: Assistant Director, IPR

Support Agencies: NIC, NGOs, Media (Print/Audio-Visual), Local Cable TV Network, FM Radio, Doordarshan, AIR, NSS, NYK, Scouts & Guides.

All levels of government and the news media have a responsibility to provide emergency information to the public that is accurate, timely and consistent. Just when public and media demands for information are at their highest following an earthquake, the probability is that most media in the area will not be operational due to power failures. Nevertheless, media will be present to gather information for later local dissemination, and for media outside the disaster area. The media represent the major resource to inform the public about the disaster situation, and some Local Cable TV Network and radio broadcast media have long been oriented to their role. It then follows that the utilization of the media for the benefit of ongoing relief, rehabilitation and restoration activities is essential, and a high level of priority should be set to restore an adequate radio broadcast capability.

#### **Immediate Tasks:**

- Assist in the determination of damage to media public information capabilities
- Pass prepared and updated public information announcements to the operational media from the DEOC

### **Tasks during sustained Phase:**

- Establish the requisite level of emergency public information capabilities; establish the necessary media relations capabilities for release of government information to the general public through the national/international media
- Control media personnel access through a system of accreditation and access control, in conjunction with the Law and Order function; as capabilities are available, assist media personnel to prepare and send their material from the Operational Area; arrange for official government and media tours of the Operational Area subject to availability of resources; assist district/sub-divisional authorities with their own requirements when requested

### **SOP of Nodal Agency**

- Upon finding out about any hazardous event, ESF-TL will contact the DEOC by any means possible (phone, wireless, personally)
- If asked to activate the ESF, TL will call nodal officers of supporting agencies of the ESF
- QRTs will be activated and deployed at the affected sites
- Coordinate with the different ESFs to get regular information in order to compile and prepare updates, situation reports, damage assessment reports, and media briefs
- Upon finding out about any hazardous event, Nodal officers will contact the ESF-TL/ District EOC by any means possible (phone, wireless, personally)

### **SOP of QRT**

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 RO 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

#### **12.2.4 Emergency Support Function # 4: Search & Rescue**

Team Leader: S.P Fire and Emergency Service and Deputy Controller, CD&HGs, Shillong

Support Agencies: CEO, SMB; PWD (Roads and Building); Police Department, NDRF, Health Dept, Ambulance Services, NSS, NCC, NYK, Zila Sainik Board, NGOs, Dorbar Shnong, Volunteer, Army, Air force and Para-military forces.

SAR operations are one of the primary activities taken up in a post disaster situation. The promptness in these operations can make a remarkable difference in the amount of loss of life and property and will include removal of trapped and injured persons from buildings collapses and other structural collapses, administering first aid, and assisting in transporting the seriously injured to medical facilities. This activity involves the use of professional and volunteer search teams including the use of dog teams.

##### **Immediate Tasks:**

The objectives of the team would be to:

- Locate and remove injured people who are trapped in the wreckage of damaged buildings and other structures
- To ascertain the safety of damaged buildings and structures
- To provide on- site medical treatment; and to remove the dead

##### **Task during sustained Phase:**

- Assist in removal of the dead from collapsed structures
- Team Organization (Conceptual)

The SAR ESF has to respond to assist the Operation Section Chief as per their assigned duty, which has been described in the SOP and is to be followed during emergency within the State. The scope of Response function includes the following broad areas:

- Rescue of those trapped
- Search for victims of a disaster (whether living or dead)

### **SOPs for Nodal Agency**

- The ESF would be activated on receiving order from the RO/IC/OSC to the TL of Primary Agency for ESF activation
- TL of primary agency will call Nodal Officers of supporting agencies
- TL would activate the District Quick Response Team
- Quick Assessment for the scale of SAR operations required to be carried out
- On requirement request for additional SAR teams sent to NDRF through state Govt. without wasting time, almost simultaneously
- Assessments of the specific skill sets and the other equipments required
- Using IDRN network to check and map the availability of resources in and around the disaster site
- RO/DEOC (on orders from RO) would contact the team leader of SAR Operations to activate the ESF response plan
- Team leader of Nodal agency would report to the QRTs for immediate operation and inform supporting agencies to coordinate in the situation depending upon the scale of the disaster
- QRTs (of both nodal and supporting agencies) would perform a physical damage assessment and report to the leaders of central and nodal agency about the percentage of damage, percentage of casualties expected and possible requirement of equipments, manpower and rescue sites
- Medical and Trauma Counselling Response Teams at District Level to be activated by ESF-TL if needed, and report to the IC at the Onsite EOC who will coordinate their activities
- Response Teams in the field communicate with the ESF-TL at the DEOC, through the IC
- Major hospitals given warning to activate their contingency plan, if required
- ESF-TL to inform RO at DEOC if activation of the SEOC will be needed
- Following up a systematic approach of transferring resources, manpower equipments, vehicles at the disaster affected areas
- Determine the release of QRTs and facilities at effected site may be considered on a priority basis
- Contacting health services to instruct them to send first-aid and trauma counselling team to the affected site, so the patients can be treated before transporting to the hospital for the advance treatment (if needed)
- Contacting damage assessment teams and send them to the site so that assessment reports can be prepared and situation analysis can be done properly



- Establishing a failsafe communication system with QRTs members so that current reports on situation analysis can be gathered and accordingly help can be provided to the site
- Declaration of further help required at State and National level in case of damage is at large scale and situation is unmanageable with the available resources
- 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 be taken place through a proper channel in heavily dense areas, large buildings, community centres, hotels, hospitals, public building and any other area having large gathering.
- Special care to women and children groups should be given as they are expected to be more affected and helpless in case of any emergency situation
- Further request to the health department to deploy mobile hospitals in case the casualties are severe and transportation of patients may take much more time
- Provide regular updates to the RO at the DEOC/SEOC based on reports from the field and the hospitals Coordinate with the Transportation ESF if a large number of medical professionals need to be sent to the affected sites and/or a large number of victims need to be transported to health facilities.
- Ensure the provision and continuous supply of medical facilities (medicines, equipments, ambulances, doctors and manpower etc) required at the disaster affected site and the hospital health centres catering to disaster victims
- Coordinate with the ESFs on Law & Order, Evacuation, and Debris and Road Clearance, for setting up of field medical posts, transport of victims, and setting up of mobile hospitals

#### **SOP for QRT on Search & Rescue**

- Assessment of damage (locations, number of structures damaged, severity of damage)
- The QRTs will be deployed at the affected site
- Enlisting the types of equipment required for conducting the SAR
- QRTs will report the situation and the progress in response activities to the respective EOCs
- QRTs will reach on the spot and take a damage assessment including type of injuries, number of people affected and possible medical assistance need
- QRTs will provide situation and progress reports on the action taken by the team to the ESF-TL

- QRTs will ensure timely response to the needs of the affected victims by Establishing field medical posts at disaster sites, as needed
- QRTs should maintain a coordination with the local people so the SAR operation may take place at more vulnerable locations having dense, population, multi-storied buildings and community gatherings as more people are expected to be trapped in such areas
- QRT will report to Nodal Agency in case of shortage of vehicles, manpower, resources and relief materials
- QRT will also work effectively with the other teams conducting first aid, trauma counselling, law and order, debris clearance, damage assessment and water and sanitations so the effective rehabilitation may take place accordingly

#### **12.2.5 Emergency Support Function # 5: Evacuation**

Team Leader (TL): Deputy Controller, Civil Defence

Support agencies: Police Department; CD & HG Volunteer; Dorbar Shnong, Voluntary Organization; NSS; NYK; NCC; Rotary Club; NDRF; Army, Air Force and Para-military forces

The purpose of this ESF is to coordinate efforts in safely evacuating the public from a threat to life and/or health. Evacuation and movement involves the coordination of varying agencies and good communications with the public. Evacuation and movement is the responsibility of public safety and the legislative authorities of a jurisdiction. This ESF applies to those agencies and others that are necessary for an evacuation. The ESF on evacuation is primarily responsible for establishing evacuation plans, identification of fastest evacuation routes and alternate routes and coordinating evacuation logistics during field operations.

#### **SOP for Nodal Agency:**

- TL of Evacuation ESF would activate the ESF on receiving the warning of the disaster/disaster from DEOC
- TL would inform NOs of other primary and support agencies about the event and ESF activation
- TL will direct the QRTs to be deployed on the affected site
- TL will gather information on availability of predefined evacuation routes

- Where the predefined evacuation routes are not available, the Nodal officer would coordinate through DEOC with other ESFs Nodal Officers and the support agencies about clearing of routes and identifying alternate routes.

### **SOPS for Quick Response Team on Evacuation**

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

### **12.2.6 Emergency Support Function # 6: Emergency Medical Response**

Team Leader: DM&HO

Support Agencies: Medical Supt. Shillong Civil Hospital and other hospitals; Blood Bank; Indian Red Cross Society, Nursing Homes; NSS; Rotary Club, Lions Club; Ambulance Services; Civil Defence First Aider; Medicine Stockiest; NYK; NCC.

All disasters affect human life and health. Health is both a main objective and a yardstick in disaster management. This ESF will be responsible for the emergency medical treatment and mental trauma support in the aftermath of any hazardous event.

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

### **Functions:**

The function includes:

- District level health services responsibilities shall be mobilized to provide emergency medical treatment to the injured; sustained hospital care to the seriously injured or seriously ill
- Continue care at an appropriate level to patients in hospital and outpatients at the time of the earthquake and other hazards response
- Evacuation of the sick and injured to a location where care can be provided as well as sustained emergency care until evacuation can be carried out with medical or paramedical supervision
- District level coordination of delivery of medical supplies, blood and blood Products; operation of ambulance services
- Prevention of epidemic through education of the general population
- Carrying out of health inspections of food and water supplies
- Initiation of vaccination programs under epidemic conditions. Radiological and toxicological services could be in increased demand and require an expanded response
- There will also be a need to provide initial establishing of death, and the temporary safe storage of human remains in support of coroner operations.

A major earthquake would require a much greater degree of control of resources within the Operational Area and would necessitate the establishment of a health services coordination center at the State Capital. The Health Department is to identify some safe locations to use as first aid centers and to shift the patients whenever needed. In each ward the general public should be trained up for first aid assistance and dispensary should maintain a rotating reserve stock of blood, saline, bandage, cotton, benzene, dettol and life saving drugs/injections.

### **Immediate task:**

- Appoint one person as Nodal Health Officer for the district
- Ensure that the personnel working within the district come under the direct control of the District Nodal Health Officer
- Any other personnel once deployed for the purpose will directly come under the control of the District Nodal Health Officer
- Identify emergency patient holding facilities

- To prepare and keep ready Mobile Hospitals and stock them with emergency equipment that may be required after the disaster
- Transfer patients who can be removed from hospitals to make room for the injured; where necessary implement a system of staging casualty collection, treatment, and evacuation to places where facilities are available (probably outside the Operational Area)
- Arrange delivery of emergency medical supplies; arrange for temporary suitable storage of the dead until taken over by the coroner

All efforts should be made to keep the health care receiving centres and outpatient service centres free from any kind of panic; prevent disease outbreak or spread; attend to mental health requirements; expand local public health services as necessary, particularly the supply of essential drugs and pharmaceuticals in areas where the private sector drug stores have ceased to function; carry out sanitary inspections.

#### **SOPs for Nodal Agency**

- Upon finding out about any hazardous event, RO will call the TL of Primary Agency and get the ESF activated
- Team leader (TL) of primary agency will call Nodal Officers of support agencies
- In coordination with the transport ESF, it will ensure a critical number of medical professionals to be reached at the site including specialists.
- QRTs will be activated and deployed at the affected sites
- Medical and Trauma Counselling Response Teams to be activated, based on report from the QRTs
- Provide systematic approach to patient care (Mass Casualty Management)
- Trauma counselling provided to the victims and their relatives at the site and in the hospital. In the hospital emergency department, triage carried out again to prioritise treatment, and appropriate care provided
- Maintain patient tracking system to keep record of all patients treated
- Deploy mobile hospitals as needed
- If medical facilities severely affected by the disaster, or roads blocked preventing transport of patients to the hospital, mobile hospitals deployed at required sites.

- Provide regular updates to the RO at the DEOC based on reports from the field and the hospitals
- Coordinate with the Transportation ESF if a large number of medical professionals need to be sent to the affected sites and/or a large number of victims need to be transported to health facilities
- Ensure the provision and continuous supply of medical facilities (medicines, equipments, ambulances, doctors and manpower etc) required at the disaster affected site and the hospital health centres catering to disaster victims
- Coordinate with the ESFs on Law & Order, Evacuation, and Debris and Road Clearance, for setting up of field medical posts, transport of victims, and setting up of mobile hospitals
- If temporary housing arrangements are being made for the affected population, the ESF must ensure high standards of sanitation in settlements in order to reduce epidemic outbreak
- Ensuring the provision and continuous supply of medical facilities (medicines, equipments, ambulances, doctors and manpower etc) required at the disaster affected site and the hospital health centres catering to disaster victims
- In case of orthopaedic care required, the immediate response would have to be complimented by a follow up treatment schedule for a majority of the patients in/near their place of shelter
- Trained professionals should be mobilized by psychological support
- Ensuring setting up of temporary information centres at hospitals with the help of ESF through help lines and warning dissemination system
- TL will coordinate, direct, and integrate district level response to provide medical and sanitation health assistances
- On the recommendations of the EOC, the TL is also responsible to :
  - Send required medicines, vaccines, drugs, plasters, syringes, etc
  - Arrange for additional blood supply. Send additional medical personnel equipped with food, bedding and tents etc

### **SOP of Quick Response Team (QRT)**

- QRTs will assess the damage: type of injuries, number of people affected and possible medical assistance need
- QRTs will provide situation and progress reports on the action taken by the team to the ESF-TL

- QRTs will ensure timely response to the needs of the affected victims by establishing field medical posts at disaster sites, as needed
- QRTs should maintain check posts and surveillance at each railway junction, bus depots and all entry and exit points from the affected area, especially during the threat or existence of an epidemic

#### **12.2.7 Emergency Support Function # 7: Relief**

The purpose of this ESF is to identify food and water needs in the aftermath of a disaster or emergency; obtain these resources; and transport them to the impact area. Food supplies obtained and distributed by ESF (Food, Water, Shelter etc). Obtaining food and supplies, arranging for transportation and authorizing assistance may be required. Food must be suitable for household distribution or congregate meal service. Transportation and distribution of food and supplies will be arranged by local, state, private and/or federal agencies/organizations. The Food & Civil Supplies Department assumes overall coordination for this function. The scope of the function is to primarily provide food and civil supplies to the affected area. It would include setting up of storage facilities at the disaster site and distribution of the supplies to the effected.

#### **Immediate Tasks:**

- Establish mobilization centre at the different points like bus station, airport etc for movement of relief supplies
- Inform all suppliers of relief materials within 2-3 hours of the occurrence of the disaster to keep ready the required supply;
- Arrange for transportation of the relief supplies;
- Provide assistance to in establishing local offices, relief camps, etc., by providing beddings, furniture, etc

Emergency Social Services includes feeding, clothing, shelter, reception, registration and inquiry, and personal services provided to evacuees, victims, and response workers. The services are defined as follows:

- **Personal Services**- Counselling of victims and response workers, welcoming the evacuees at entrance to relief centres in order to screen for need and to give information, and supervision and support of groups of dependent individuals

including children separated from their parents, frail elderly, and the handicapped

- **Registration and Inquiry**- Registering individuals and families involved in the disaster, answering inquiries from relatives and friends concerning victims' whereabouts, reuniting separated family members, and providing information to response workers on the whereabouts and numbers of evacuees
- **Clothing**- Emergency clothing, blankets, toiletry articles, baby supplies, and other related goods necessary to protect health and safety
- **Shelter**- Temporary housing or sleeping space for individuals and families forced to leave their dwellings
- **Feeding**- Provision of meals, hot beverages and snacks to protect health, to maintain strength of response personnel, and to reassure victims

### **Immediate Tasks**

- Help the DC in opening staff reception centres in all affected areas and alert the response workers and the public about the location of these centres
- Mobilize feeding units to provide support to response workers on location; Coordinate supporting debriefing, counselling, and related services for responders and victims
- Inventory of the available habitable shelter supply
- Begin registering all persons involved in the disasters

### **Task during sustained Phase:**

Continue basic emergency social services to all evacuees, victims and others requiring help; continue the registering process and respond to enquiries from around the world; initiate public information services on emotional responses to disasters; transform reception centers into multi- service centers; lay basis for outreach, self- help, and educational programs.

### **A. Food Supply**

Team Leader:

Additional Deputy Commissioner (Relief)

Support Agencies

Joint Director of Supply; Food Corporation of India; Social Welfare Dept., Chamber of Commerce; Dorbar Shnong; Donor Agency; SMB; Market Association; Local Civil Suppliers.



### **Immediate Tasks:**

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

In case of shortage of food items TL will arrange more food packages and will ensure continuous supply

### **Tasks for QRTs:**

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

### **B. Shelter Arrangements**

Team Leader: Additional Deputy Commissioner (Disaster Management)

Support Agencies: PWD(B), Housing, PHE; SMB; Social Welfare Department, Nazarat Department, Education Department, Local Traders, Dorbar Shnong, NGOs etc.

### **Immediate Action:**

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

- Medical facilities will also be provided to the victims and injured people.

#### **12.2.8 Emergency Support Function # 8: Water & Electricity**

Team Leader: Executive Engineers, PHE and MeECL

Support Agencies: SMB; Water Resource.; PHE; MeECL; Health  
Dept.; Local water suppliers; Dorbar  
Shnong.

The purpose of this ESF is to identify water needs and restore basic water supply if damaged, in the aftermath of a disaster or emergency. Till the time water supply to the damaged areas is restored water requirements need to be arranged by the ESFs and distributed either using their own transportation mechanisms or in coordination with transportation agencies.

#### **SOPs for Nodal Agency**

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

#### **Immediate Tasks:**

- QRTs will ensure that supply of drinking water is made available at the affected site and relief camps
- QRTs will ensure the temporary sewerage lines and drainage lines are kept separate
- QRTs will report the situation and the progress on action taken by the team to the 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
- TL will ensure that QRTs are on the site along with the required resources
- TL shall be ensuring uninterrupted supply of water for fire-fighting to all the brigades in operation
- TL shall coordinate with the transport coordinator for replenishing the depleted stock of fire water at the incident site through water tanks
- Carry out repairing task of all damages to water supply system
- Arranging alternate storage of potable water at temporary shelters
- Ensure restoration of potable water as per standards and procedures laid down under ‘Standards for Potable Water
- Plan for emergency accommodation of water supply in or near temporary shelters
- Establish temporary sanitation facilities at the shelters
- Ensure cleanliness of sanitation facilities, relief shelters and local command post.

### **Electricity**

Team Leader: Executive Engineer, MeECL

Support Agencies: NEEPCO, Power Grid

#### **Primary Functions:**

- Ensure smooth transportation links at all levels and to all nodal and support agencies
- Assess damage to power supply infrastructure for assistance from other states
- Restoration of power supply or temporary power supply to critical areas
- Restore major electricity failure anticipated during disasters due to falling of cables/poles
- Facilitate restoration of electricity distribution systems at most affected sites on priority to help in Search and Rescue operations

- Provide electricity in lifeline buildings
- Procurement of clean drinking water
- Transportation of water with minimum wastage
- Ensure quick restoration of drainage system
- Sewer pipes to be kept separate from drinking water facilities

#### **Task Involved**

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

#### **12.2.9 Emergency Support Function # 9: Debris Clearance**

Team Leader: CEO, Shillong Municipal Board,

Support Agency: PWD; CPWD; MUDA; MeECL; NHAI;  
Forest Dept., Water Resources

**Background:** The importance of this ESF emanates from the fact that most large-scale disasters such as earthquakes, wind storms, flash flood primarily affect the building structures. The ESF would involve in identification, removal, and disposal of rubble, wreckage, and other material which block

or hamper the performance of emergency response functions and procure needed equipments from support agencies using IDRN; is a high priority action.

**SOPS for Primary Agency:**

- Team leader (TL) will activate the ESF on receiving the information of the disaster from DEOC.
- TL would inform NOs of support agencies about the event and ESF activation. TL will coordinate with the support agencies to mobilize equipments from the ware houses through IDRN database
- The respective supporting agencies will contact their respective personnel to move the equipments to central warehouse
- The equipments like earth movers, concrete cutters identified as per the need will be transported to the site.
- 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 ESF to be operational
- All supporting agencies will inspect the road and rail network and structures within the disaster site and surrounding
- The Response Teams will immediately start debris clearance operation to enable movement to the affected site
- TL will also ensure proper corpse disposal and post mortem by coordinating with ESF on medical response

**SOP for QRT on Equipment Support and Debris Clearance:**

- Damage assessment including locations, number of structures damaged and severity of damage

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

#### **12.2.10 Emergency Support Function # 10: Law and Order**

Team Leader: Additional Deputy Commissioner (L & O)

Support Agency: City SP; SP Traffic; Deputy Controller, CD&HGs;  
NSS; NCC, Para-military agencies

The purpose of ESF on L & O is to establish procedures for the command, control, and coordination of all law enforcement personnel and equipment. The Law and Order function encompasses a broad range of routine policing activities. The response function has its primary goal in the maintenance of law and order activities, and, if necessary the restoration of law and order should there be a breakdown within the normally law-abiding community.

##### **Immediate Tasks:**

- Deploying a QRT to maintain law and order at the incident site
- Quick Assessment of law and order situation in affected areas
- Cordon off the site to restrict movement of curious onlookers, vehicles and pedestrians
- Control and monitor traffic movements
- Support and coordinate with local administration
- Prepare updates on the law and order situation in every 2 hours and brief the authorities
- Ensure law and order at assembly points and evacuation points
- Carry out any necessary actions to save lives and prevent injury or damage to property
- Carry out route damage assessment to permit identification of usable emergency routes
- Assess and report other damage within capabilities
- Maintain a control over traffic with priority to emergency services

- Assist with the movement of emergency traffic
- Assist the Coroner as requested to provide investigation of causes of deaths, security of body, staging areas, identification of bodies
- Assist in the dissemination of emergency notifications
- Assist in the manning of coordination centers and the provision of immediate radio communication to them, if necessary

**Sustained Phase:**

Maintain emergency functions and restore normalcy as quickly as possible; provide personnel to protect abandoned and damaged properties and areas, which may attract the curious and tempt the criminal elements and augment prison staffs as needed to maintain a peaceful situation.

**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 State QRT..
- The QRTs will be deployed at the affected site.
- Cordoning off the area to restrict movement of onlookers, vehicular and pedestrian traffic should be done.
- Any additional requirements at site to be taken care of.
- To coordinate and communicate with concerned functionaries
- To detail traffic staff to reach the place of occurrence
- To give directions whenever necessary to ensure free passage for fire brigade ambulance, police vehicles and vehicles of other respondents

**12.2.11 Emergency Support Function #11: Damage Assessment**

Team Leader: ADC, Relief & Rehabilitation

Support Agencies: SMB; Municipality; Agriculture Depts.; and other relevant departments of East Khasi Hills District desired, during the crisis.

**Departmental Plan:**

The Departments involved in this team will develop the Damage Assessment functional concept. The DDMA will include Damage Assessment as a staff function of the Damage Assessment Team, capable of coordinating the gathering of collated damage information from DC, SDO, BDO and other

agencies for the purpose of assessing overall damage on behalf of the State Government.

The DC, SDO and BDOs will plan for the gathering of post-earthquake damage information from within their jurisdiction with their own resources and with pre-planned assistance provided directly to them by private sector Agencies.

**The Tasks:**

Immediate Tasks: Assess areas likely to require life- saving response action. Help of nearest army units may also be obtained as and when required.

**Tasks during sustained Phase:** Assess total damage as the basis of response efforts, future recovery activities, and claims; coordinate the gathering of information from all sources.

**12.2.12 Emergency Support Function # 12: Donations and Volunteers:**

Team Leader: District Youth Coordinator, NYKs

Support Agencies: NCC; Zilla Sainik Board; Blood Bank; Red Cross; NSS; Rotary Club; Lions Club; NGOs.

**Immediate Tasks:**

To identify the donation sectors (like general public, public and private sector organizations, clubs, etc., international community); type of donations (like food, water, cloths, medicines, tools, generators, etc.) and to arrange to handover the same to the appropriate authority.

With emphasis on life- saving operations:

- Determine requirements of lead agencies and seek out suitably qualified personnel
- Pre-arranged public announcements for general broadcast (if possible) should be used. Establish method of reception and delivery of personnel to the requesting agency, or arrange direct reporting to collecting points or response sites, where feasible

**Tasks during sustained Phase**

Continue human resource support to all response functions, through direct recruiting and central support, to obtain out-of - area skilled personals.



### **12.2.13 Emergency Support Function # 13: Public Works and Engineering**

Team Leader: Executive Engineer, PWD (Building)

Support Agencies: SMB; MUDA; PWD (Roads & Building); MeECL; PHE; Water Resources

#### **Immediate Tasks:**

- All technical Officers shall be notified for immediate response function
- Make provisions for resources to meet life saving operational requirements
- Inspect all roads, bridges including underwater inspection of foundations and piers
- Inspect all buildings and structures of the State Government-by a competent officer and identify structures which are endangered by the impending disaster
- Helping the DC/DDMA in identifying locations for setting up transit and relief camps, feeding centres and quality of construction materials;
- Keep ready the earth moving equipment, cranes, farm tractor (requisitioned) with chain, cables and buffer stock of fuel
- Adequate road signs should be installed to guide assist the relief work
- Establish priority list of roads which will be opened first which should include roads to hospital and main trunk roads
- Construct temporary roads to serve as access to temporary transit to relief camps and medical facilities to disaster victims
- Technical damage assessment of potentially life- threatening situations (dams, dykes, etc.)
- Demolition, route clearance of debris, etc.

#### **Tasks during sustained Phase:**

- Continuing on to generate cleanup and debris removal
- Emergency repairs to prevent further damage, and assistance to other emergency response functions requiring construction and engineering support
- This function will probably continue beyond the response stage into recovery operations and will be involved in detailed recovery planning during the response

### **12.2.14 Emergency Support Function # 14: Animal Health**

Team Leader (TL):	District Animal Husbandry and Veterinary Officer
Support Agencies:	Shillong Municipal Board, Bharat Scouts & Guides, NCC/NSS/NYK volunteers

### Tasks:

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

### SOP for Animal Health

- The TL will coordinate with the district level and block level Veterinarian
- Animal related organizations and individuals to provide assistance at the affected site
- Co-ordinate with the Shelter Task Force on the sheltering of companion animals
- In case of Animal Disease Outbreak, take immediate actions to control and quarantine the disease and issue the advisory for safeguarding one self and others
- Injuries and death of animals will be documented
- Deceased, diseased or contaminated animals to be disposed with

## 12.3 Roles & Responsibilities of different departments

### 12.3.1 Police Department

Preparedness	Pre-Disaster (after warning)	Post Disaster
<ul style="list-style-type: none"> <li>• Ensure that Mock Drills are conducted at all levels</li> <li>• Train volunteers through mock drills for search &amp; rescue operation</li> <li>• Formation of teams</li> </ul>	<ul style="list-style-type: none"> <li>• Keeping close contact with the DC</li> <li>• Deploy personnel to guard vulnerable places. (for predictable disasters)</li> <li>• Alert all Police Officers to remain at the HQ</li> </ul>	<ul style="list-style-type: none"> <li>• Maintenance of Law &amp; Order</li> <li>• Arrange security at relief camps.</li> <li>• Arrangement for post mortem of dead person &amp; legal procedures for speedy disposal</li> </ul>

<ul style="list-style-type: none"> <li>• Delegation of areas of operation</li> <li>• Formation of Zones and Sub zones</li> </ul>		<ul style="list-style-type: none"> <li>• Support the District Administration &amp; volunteers during evacuation operations</li> <li>• Assist fire brigade personnel in their efforts</li> <li>• Identify &amp; register the names of the dead &amp; dispossessed persons</li> <li>• Assist the District Administration in the supply &amp; distribution of relief materials</li> <li>• Providing escort or security to the relief items stored or transported</li> </ul>
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### 12.3.2 Health Department

Preparedness	Pre-Disaster (after warning)	Post Disaster
<ul style="list-style-type: none"> <li>• IEC activities on maintenance of health and sanitation.</li> <li>• Check stock position of life saving drugs, ORS, IV fluids and other equipment</li> <li>• Distribution of ORS, Halogen to field areas</li> <li>• List of contact addresses of field staff to be maintained</li> <li>• List of volunteers to be maintained</li> <li>• List of AWW to be maintained</li> <li>• List of epidemic/risk prone areas to be maintained</li> <li>• Listing of site operation areas &amp; delegation of duties</li> <li>• Mobile health units</li> <li>• List of Dist./ health control rooms</li> <li>• List of private and local doctors</li> <li>• Daily disease report collection and analysis</li> </ul>	<ul style="list-style-type: none"> <li>• Direct Medical &amp; Paramedical staff to join HQ immediately</li> <li>• Delegation of duty at CHC/PHC for 24 hours</li> <li>• Meeting with the volunteers/ANM/AWW &amp; distribution of work as per the need.</li> </ul>	<ul style="list-style-type: none"> <li>• Attend to injured persons.</li> <li>• Send sufficient stock of medicines to the affected areas.</li> <li>• Shift seriously injured people to hospitals.</li> <li>• Check the stock &amp; collect the required stock from the DA.</li> <li>• Treatment of emergency cases &amp; removal to big hospitals, if necessary.</li> <li>• Keeping records of dead/injured persons with relevant particulars.</li> <li>• Registration of deaths &amp; issuing Death Certificates.</li> <li>• Distribution of disinfectants to the volunteers to dispose of dead bodies.</li> <li>• Taking steps to check any possibility of epidemic outbreaks.</li> <li>• Provision of temporary</li> </ul>

		medical camps/relief centers. • Attend to the ill/victims & report to CHC/PHC control rooms.
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### 12.3.3 Water Resources Department

Preparedness	Post Disaster
<ul style="list-style-type: none"> <li>• Stock piling of repair materials like sand bags, bamboo at vulnerable points [Place names] etc.</li> <li>• Provision for guarding weak points</li> <li>• Listing of volunteers</li> <li>• Co-ordinating with others</li> <li>• Equipments to be ready</li> <li>• Delegation of areas of operation</li> <li>• Contact nos./ addresses of staff / officers</li> <li>• Ensure tube wells, wells are in perfect condition</li> <li>• Coordinate with DA</li> </ul>	<ul style="list-style-type: none"> <li>• Taking help of the community for maintenance of the embankments</li> <li>• Assist the Dist. Adm. in infrastructure restoration.</li> </ul>

### 12.3.4 PWD Department

Preparedness	Post Disaster
<ul style="list-style-type: none"> <li>• Identification of weak points</li> <li>• Repair of weak roads /structures/canals before the hazard season</li> <li>• Stockpiling of building material</li> <li>• Arrangement of equipment for roads clearance</li> <li>• Arrangement of all important lines &amp; numbers in order</li> <li>• Maintenance of record for information generation &amp; dissemination</li> </ul>	<ul style="list-style-type: none"> <li>• Provide all the available resources &amp; manpower</li> <li>• Make arrangement for repair of roads, bridges etc, ensure free flow of vehicles</li> <li>• Provision of equipments for road clearance</li> <li>• Clearance of roadside, dead trees posing threat to communication, life &amp; electricity.</li> </ul>

### 12.3.5 PHE Department

Preparedness	Pre-Disaster (after warning)	Post Disaster
<ul style="list-style-type: none"> <li>• Installation of Tube wells</li> <li>• Site visits and report preparations</li> <li>• Awareness generation for using bleaching powder</li> <li>• Supply of drinking water during emergencies</li> <li>• Arrangement for equipments &amp; water</li> </ul>	<ul style="list-style-type: none"> <li>• Bleaching/ disinfection of drinking water sources</li> <li>• Supply of halogen tablets</li> <li>• Lab testing of drinking water if necessary</li> <li>• Bleaching of water sources</li> </ul>	<ul style="list-style-type: none"> <li>• Repairing of water pipes/water supply/water tanks in case of damage</li> <li>• Provision of drinking water to the relief camps</li> <li>• Use of bleaching powder wherever necessary.</li> <li>• Supply of drinking water</li> </ul>

<ul style="list-style-type: none"> <li>tankers</li> <li>Area wise deployment of staff</li> <li>Procurement / collection of water purifiers</li> <li>Stockpiling of accessories</li> <li>Repairing of defunct tube wells</li> <li>Raising platform /height of the tube wells in low-lying areas.</li> </ul>		<ul style="list-style-type: none"> <li>Supply of poly pack containing safe drinking water</li> <li>Distribution of halogen tablets</li> </ul>
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### 12.3.6 Animal Husbandry & Veterinary Department

Preparedness	Pre-Disaster (after warning)	Post Disaster
<ul style="list-style-type: none"> <li>List out staff members with contact addresses</li> <li>Vaccination of cattle population</li> <li>Provision of supply of yearly medicines</li> <li>Arrangement of vehicles for uninterrupted mobility</li> <li>Arrangement of mobile health units in in-accessible areas</li> <li>Health awareness campaigns</li> </ul>	<ul style="list-style-type: none"> <li>Mobilise the community to evacuate cattle population to the nearest elevated places</li> </ul>	<ul style="list-style-type: none"> <li>Record keeping</li> <li>Information dissemination to concerned quarters</li> <li>Maintenance of regular flow of information</li> <li>Send mobile teams with necessary equipment in case of cattle death in the affected areas for the disposal of carcass</li> <li>Treatment of injured cattle</li> <li>Support villagers and farmers and help in rescuing trapped cattle</li> <li>Vaccination immediately after disaster &amp; treatment to prevent epidemics</li> <li>Provide first aid to the affected animals</li> <li>Record keeping</li> <li>Supply of medicines &amp; cattle feed</li> <li>Collection of dead animals</li> <li>Issuing of death certificates for the insured livestock</li> <li>Distribution of disinfectants at the place where animals are buried/cremated</li> </ul>

### 12.3.7 Meghalaya Energy Corporation Limited

Preparedness	Post Disaster
<ul style="list-style-type: none"> <li>• Regular identification of the faults</li> <li>• Regular checking &amp; repair of weak points/Transformers</li> <li>• Stockpiling of equipments/accessories</li> <li>• Skill development training/orientation</li> <li>• Precautions/protection near high voltage electric installations</li> <li>• Stopping illegal consumption of electricity</li> <li>• Retrofitting of weak points if found</li> <li>• Disconnection of electricity in the event of an emergency (for predictable disasters)</li> <li>• Arrangement of alternative energy sources such as generator and fuel</li> </ul>	<ul style="list-style-type: none"> <li>• Review electric supply position.</li> <li>• Restoration of electric supply which has got disrupted.</li> <li>• Disconnection of electricity in the event of an emergency</li> </ul>

### 12.3.8 Agriculture/Horticulture Department

Preparedness	Post Disaster
<ul style="list-style-type: none"> <li>• Database of Crop pattern with land holding</li> <li>• List of irrigation points with status to be maintained</li> <li>• Feasibility of alternative cropping</li> <li>• Training for food preservation and protection</li> </ul>	<ul style="list-style-type: none"> <li>• Damage assessment report to be done immediately.</li> <li>• Send necessary equipments in the case of crops having been washed away</li> <li>• Provision of seeds and other requirements</li> <li>• Helping in raising of community nurseries for seedlings</li> </ul>

**ANNEXURES**

**District Emergency Operations Centre- 1077/0364-2225289/2502094,  
Fax-2502149**

**Annexure 1: District Disaster Management Authority**

Sl. No.	Name	Designation	Status	Address	Contact Nos.
1.	Shri. P. S. Dkhar, IAS	Deputy Commissioner	Chairman	O/O Deputy Commissioner, East Khasi Hills, Shillong	(O):0364-2224003 (R): 0364-2521561 (F): 0364-2223394 (M):94361-17519
2.	Shri. P. Syiem	Chief Executive Member, District Council	Co-Chairman	O/O Khasi Hills Autonomous District Council, Shillong	(O):0364-2241601 (M):98563-83742 80140-41742
3.	Smt. I. Majaw, MCS	Addl. Deputy Commissioner	Chief Executive Officer	O/O Deputy Commissioner, East Khasi Hills, Shillong	(O): 0364-2503201 (M): 96120-02864
4.	Shri. M. Kharkrang, IPS	Superintendent of Police	Member	O/O Supdt. Of Police, East Khasi Hills, Shillong	(O): 0364-2224150 (R): 0364-2223251 (M): 98630-21548 (F): 0364-2225675
5	Dr. M.Basaiawmoit	I/C DM&HO	Member	O/O District Medical & Health Officer, East Khasi Hills, Shillong	(O): 0364-2226432 (M): 87947-13976
6	Shri. B. Kharbuli	Addl. Chief Engineer, PWD, Roads	Member	O/O Addl. CE, PWD (R ), East Khasi Hills, Shillong	(O):0364-2227905
7	Smti. Aroma M.Lyngdoh	District Agriculture Officer	Member	O/O District Agriculture Officer , East Khasi Hills, Shillong	(O):0364-2522290 (M):98630-27451

**Annexure 2: Important Names & Contact numbers at the State Level**

Sl No.	Name	Designation	Contact
1.	Shri P.W.Ingty, IAS	Principal Secretary, Revenue and Disaster Management	(O) 0364 – 2225669 (M) 9436105253
2.	Shri M. Kharmujai, IAS	Commissioner & Secretary, Revenue and Disaster Management	(O) 0364- 2224381 (M) 94361-04395
3.	Shri B. Hajong, MCS	Joint Secretary, Revenue	(M) 9436113592

		and Disaster Management	
4.	Smt. M. G. Kharkongor	Deputy Secretary, Revenue and Disaster Management	(O) 0364-2223615 S- 2470/1070 (M) 9774931081 (F) 0364 - 2223615
5.	Smt. I. Mawlong, MCS	Deputy Secretary, Revenue and Disaster Management	(M) 9863089263

**Annexure 3: Important Names & Contact Numbers in SDMA**

Sl.No.	Names of Officers	Designation	Contact Nos.
1.	Shri H. B. Marak, IAS	Executive Officer, SDMA	(O) 0364-2226579 (M) 94361-11073 98560-25902 (F) 0364- 2226671
2.	Smt. I. Mawlong, MCS	Nodal Officer	M: 94363-33728
3.	Shri S. Bordoloi	Consultant	M: 94025-44433
4.	SDMA	-	(O) 0364-2503022
5.	State Emergency Operation Centre	-	(Fax) – 0364 - 2502098

**Annexure 4: Important Names & Contact Numbers in the District**

Sl.No.	Names of Officers	Designation	Office Address	Contact Nos.
1.	Smt. P. L. Lawai, MCS	Addl. Deputy Commissioner & Project Director	O/O Deputy Commissioner, East Khasi Hills District, Shillong	M: 9856612717
2.	Shri. B. Mawlong, MCS	Addl. Deputy Commissioner	O/O Deputy Commissioner, East Khasi Hills District, Shillong	M: 9436110507 8575069002
3.	Shri S. S. Syiemlieh, MCS	Addl. Deputy Commissioner	O/O Deputy Commissioner, East Khasi Hills District, Shillong	M: 94361-06342
4.	Smt. D. M. Suja, MCS	Addl. Deputy Commissioner	O/O Deputy Commissioner, East Khasi Hills District, Shillong	M: 94361-64363
5.	Smt. A. Mawlong, MCS	Addl. Deputy Commissioner	O/O Deputy Commissioner, East Khasi Hills District, Shillong	M: 94361-07594



6.	Shri. V. Syiem, MPS	SP (City)	O/O Supdt. Of Police, East Khasi Hills District, Shillong	M: 94361-03108
7.	Shri. N. K. Syiem, MPS	SP, Traffic	O/O Supdt. Of Police, East Khasi Hills District, Shillong	O: 0364-2222900 M: 8014081394
8.	Smt. Mary G. T. Sangma	SP, Fire & Emergency Service	Fire & Emergency Service, Fire Brigade, Shillong	O:2222247 M:94363-36218
9.	Shri N. Hajong, MCS	Sub-Divisional Officer	O/o SDO Civil Sub- Division, Sohra	M - 9436730762
10.	Shri. L. Passah	Chief Engineer, PWD (R)	O/O Chief Engineer, PWD (R), Shillong	O-2226481 M-87318-38611 F-2226481
11.	Shri. R.D.Shira	Chief Engineer, PWD Standard	O/O Chief Engineer, PWD Standard, Shillong	O-2506228 M-98560-07008
12.	Shri. C.W. Momin	Chief Engineer, PWD (NH)	O/O Chief Engineer, PWD, NH, Shillong	O- 2226429/2216 M-94361-12268
13.	Shri. M.Phanbuh	Chief Engineer, PWD (B)	O/O Chief Engineer, PWD, B, Shillong	O- 2226481/2394 M-98630-63442
14.	Shri. S. K. Sunn	Chief Engineer, PHE	O/O Chief Engineer, PHE, Shillong	O-2225119 M-94361-04286
15.	Shri. P. Lyngwa	Chief Engineer, Water Resources	O/O Chief Engineer, Water Resources Shillong	O-2211363 M-94361-10892 F-2211363
16.	Shri. P.H.Khongsngi	Deputy Controller	O/O Deputy Controller, Civil Defence, Shillong	O-2211746 M-97742-94520
17.	Smt. K. Marbaniang	District Social Welfare Officer	O/O the District Social Welfare Officer, Shillong	O-0364-2224409 M-98560-08442
18.	Smt. P. Suchiang	District Programme Officer (ICDS)	O/O the District Programme Officer ICDS Cell	M-94361-03008
19.	Shri. A. Kharpran	District Sericulture Officer	O/O the District Sericulture Officer	M-089740-09351
20.	Shri. R. Budnah	EE, Urban Affairs	O/O the EE Urban Affairs, Shillong	O-2220831 M-085753-47184
21.	Dr. (Mrs) A. Pakyntein	District AH & Vety. Officer	O/O District AH & Vety. Officer, East Khasi Hills District, Shillong	O- 2241244/2548724 M-094363-34515
22.	Shri. E. Kharmalki, MCS	Secretary, MUDA	MUDA, Shillong	O-2227844
23.	Shri. E. Kharmalki, MCS	Chief Executive Officer	Shillong Municipal Board	O - 2501359

24.	Shri P. S. Lyngdoh	Asst. Director, IPR	Information & Public Relations, Lachumiere, Shillong	O-2224957 M- 98569-27257 F- 2224612
25.	Shri. H. F. Khongsit	District Transport Officer	O/O District Transport Officer	O-2220219
26.	Shri. H. Decruse	General Manager	O/O General Manager, District Commerce & Industries Centre	O-2590117 (M) - 09436111675
27.	Shri. D. K. Khonglah	Divisional Soil & Water Conservation (Territorial)	O/O Divisional Soil & Water Conservation (Territorial), Polo	O-2591085 M: 94361-07021
28.	Shri. I. Rynjah	Divisional Soil & Water Conservation (Cash Crop)	O/O Divisional Soil & Water Conservation (Cash crop), Polo	O-2590361 M-9436330363
29.	Smt. P. Lyngdoh	District School Education Officer	O/O District School Education Office, Mawkhar	O-2226847 M- 9863022909
30.	Smt. L. M. Iangap	Sub-Divisional School Education Officer	O/O Sub-Divisional School Education Officer, Mawkhar	O-2226204 M-98560-07708
31.	Shri. B. R. M. Lyngdoh	District Urban Planner, Urban Affairs	O/O District Urban Affairs, Urban Affairs, Raitong Building	O- 2223530
32.	Shri. Manjunatha C, IFS	Divisional Forest Officer, Khasi Hills Division	O/O Divisional Forest Officer, Khasi Hills Division	O-2226375 M-94369-99102
33.	Shri R. Nainamalai, IFS	Divisional Forest Officer, Silviculture Division, Shillong	O/O Divisional Forest Officer, Silviculture Division, Shillong	O - 2502789
34.	Smt. L. Syiemiong, IFS	Divisional Forest Officer, Training Division, Shillong	O/O Divisional Forest Officer, Training Division, Shillong	O- 2225305
35.	Shri S. A. Nongsiej, IFS	Divisional Forest Officer, East Khasi Hills SF Division, Shillong	O/O Divisional Forest Officer, East Khasi Hills SF Division, Shillong	O - 2591482
36.	Shri W.S.Manner, IFS	Divisional Forest Officer, Khasi Hills WL Division, Shillong	O/O Divisional Forest Officer, Khasi Hills WL Division, Shillong	O- 2226181 M-94369-98360

37.	Shri M.M.Sangma, MFS	Divisional Forest Officer, FRS Division, Shillong	O/O Divisional Forest Officer, FRS Division, Shillong	O- 2226780 M-94369-95609
38.	Smti. H. Lyngdoh	District Horticulture Officer	O/O District Horticulture Officer	M: 9436303034
39.	Shri. E. Lamare	EE, PHE	GSWS Division-I, PHE Administrative Complex	O-2223286 M-94361-16402
40.	Shri. C. Kharwanlang	EE, PHE	Hills Division, Barik Point	O-Extn 2212 R-2226791 M-97740-10546
41.	Shri. D. Marbaniang	EE, PHE	S&D Division, PHE Administrative Complex	O-2226987 M-98560-08079
42.	Shri. B. L. Lawai	EE, PHE	Electrical Division, Shillong, PHE Administrative Complex	O-2501912
43.	Shri. K. Khonglah	EE, PHE	Investigation Division, PHE Administrative Complex	M-9863097654
44.	Shri. S.G.Kharmawphlang	EE, PHE	GSWS Division II, Mawphlang	O-2567305 M-80147-46752
45.	Shri. H. S. Nongkynrih	EE, PHE	Electrical Division, Mawphlang	O-2567265
46.	Shri. B. Phira	EE, PWD (B)	O/O the EE, PWD Building Division	M-97740-31758
47.	Shri. P. Dhar	EE, PWD (E)	O/O the EE Electrical Division	M-94361-03665
48.	Shri. B. M. Syiem	EE, PWD (R)	National Highway Shillong Bye Pass Division	O - 2502357 M-9436102314
49.	Shri. W. R. Lyngdoh	EE, PWD (R)	National Highway	M-94363-22235
50.	Shri. H. S. Basaiawmoit	EE, PWD (R)	Shillong Central Division	M-94361-19557
51.	Shri. C. Kharmudai	EE, PWD (R)	Shillong South Division	M- 85753-35381
52.	Smt. M. B. Ritshong	EE, Water Resources	O/O the EE, Water Resources, East Khasi Hills District, Shillong	M-98560-28826
53.	Shri S. Rangad	CO	Central Training Institute, Mawdiangdiang	M- 9856625678
54.	Shri S. B. Umdor	Chief Executive Officer, Shillong Distribution	MeECL, Shillong	O- 2590812
55.	Shri T. Passah	Chief Engineer	MPDCL, Shillong	M- 94361-00655

(Distribution)				
56.	Shri F. K. Langstieh	Deputy General Manager (West)	MeECL, Shillong	O- 2590145
57.	Shri M. F. Mawlieh	Deputy General (East),	MeECL, Shillong	O- 2223122 2222222 2223050
58.	Shri J. H. Suchiang	Superintendent of Fisheries	O/o Superintendent of Fisheries, East Khasi Hills, Shillong	O- 2225954

**Annexure 5: Names of Block Development Officers with Contact Numbers**

Sl. No.	Names of BDOs	Office Address	Office No.	Mobile No.
1	Shri. A. S. Mukhim, MCS	Shella-Bholaganj C&RD Block	-	98567-82177 98621-90775
2	Shri. P.T.Passah, MCS	Myllem C&RD Block	0364-2561473	94021-35152
3	Smt. E.L.Warjri, MCS	Khatarshnong-Laitkroh C&RD Block		89745-85801 98560-18274
4	Shri.L. Kynjing, MCS	Mawryngkneng C&RD Block	03637-235239	98630-67114 98622-61834
5	Shri.W.M. Marbaniang	Mawkynrew C&RD Block	-	94363-04632 96155-27463
6	Shri.P.S.Tynsong	Pynursla C&RD Block	269518	94363-07322
7	Shri.M.Challam, MCS	Mawphlang C&RD Block	0364-2567278	98631-14269
8	Shri.P. Mukhim	Mawsynram C&RD Block		98560-84164

**Annexure 6: Other Important Offices with Contact Numbers**

Sl.No.	Name of Offices	Contact Numbers
1	Indian Red Cross Society, Meghalaya Branch, Oxford Hill, Kenches Trace, Laban, Shillong	2223403/2220459/2223674
2	All India Radio, Shillong	2224153/2230075/2223057/2224439
3	Doordarshan Kendra, Shillong.	2580312/2580320/2580311
4	MeECL, Shillong.	2591609/2590145
5	BSNL, Shillong	2222228/2223700/2223400
6	Meghalaya Transport Corporation	2232779/2222864
7	Shillong Municipal Board	2224702/2224850/2224702
8	Head Quarter Army 101 Area, Shillong	2224300/2224302
9	Eastern Air Command, Upper Shillong	2561461/2561465
10	Border Security Force, Shillong	2535891/2230411/2534856
11	Central Reserve Police Force, Shillong	2210321/2590069/2591948/

12	Indo-Tibetan Border Police Force, Shillong	2220438/2224591
13	Assam Rifles, Shillong	2705403 Fax-2705419
14	National Disaster Response Force, Guwahati	0361-2841464, Fax-2840284
15	Indian Meteorological Department, Shillong	2560106, 2561638
16	Indian Meteorological Department, Guwahati	0361-2840225/2840552/2842421 (F)
17	North Eastern Space Applications Centre, Shillong	2570141, Fax-2570139
18	Chief Engineer, Central Water Commission, NER	2226226

**Annexure 7: List of Police Stations/O.P/BH/TB with Contact Nos.**

Sl.No	Name of Police Stations/Out Posts/Beat Houses/Traffic Branch	Contact Numbers
1.	Police Control Room	100, 2222277, 2226101
2.	Women Police Station	2502077
3.	Sadar Police Station	222440, 2224818
4.	Laitumkhrah P.S.	2223069
5.	Lumdiengjri P.S.	2548151
6.	Laban P.S.	2223168
7.	Mawlai P.S.	2575505
8.	Madanryting P.S.	2231408
9.	Rynjah P.S.	2230402
10.	Mawsynram P.S	03657-242320
11.	Pynursla P.S	03653-269368
12.	Shella P.S	03637 - 261353
13.	Sohra P.S	03637-235227
14.	Jhalupara O.P	2547600
15.	Cantonment BH	2544124
16.	Pasteur BH	2591545
17.	Kench's Trace BH	2224055
18.	Sohryngkham O.P	2265211
19.	Mawryngkneng, P. S	0364-2264403
20.	Mawngap O.P	2567230
21.	Nongmynsong O.P	2230224
22.	Nongthymmai O.P	2537587
23.	Mawdiangdiang O.P	2908684
24.	Dangar O.P	-
25.	Bholaganj P.C.P	-
26.	Tyllap O.P	-
27.	Shillong Sadar Traffic Branch	2223451
28.	Lumdiengjri Traffic Branch	2548083
29.	Laitumkhrah Traffic Branch	2227731
30.	Madanryting Traffic Branch	2535322

**Annexure 8: List of Fire & Emergency Service Stations**

Sl. No.	Name of Station	Office No.	Equipped with VHF
1.	Control Room, F&ES, Shillong	2227000/101	Yes
2.	Nongthymmai F&ES	2227000/2223300	Yes
3.	Bara Bazar FS	2222000	Yes
4.	Mawlai Sub F&ES	2546875	Yes
5.	Upper Shillong Sub F&ES	2560327	Yes
6.	Mawngap F&ES Camp	-	Yes
7.	Sohra Sub F&ES	03637 - 235261	No
8.	Shella Sub F&ES	-	No

**Annexure 9: List of Hospitals & Contact Nos.**

Sl. No.	Name of Hospitals	Contact Nos.
1	EMRI	108
2	Civil Hospital	2223889, 2224100
3	Ganesh Das Hospital	2224766, 2590766
4	KJP Hospital	2242053, 2548053
5	Military Hospital	2224368
6	Nazareth Hospital	2224052, 2210188
7	Reid Chest Hospital	2241497, 2225742
8	Bethany Hospital	2520300, 2300168
9	Woodland Hospital	2224885, 2225240
10	NEIGRIHMS	2590593, 2590623
11	Super Care Hospital	2506226
12	NIMHANS	2591714
13	Red Cross Hospital	2223403
14	Govt. Eyes Hospital	2225399, 2225423
15	J.R.Geonka	2241483
16	T.B.Chest Hospital	2241521
17	Children Hospital, Pohkseh	2535061/2535062

**Annexure 10: List of Officers/In-Charge with contact numbers**

**Dr. M.Basaiawmoit, i/c District Medical & Health Officer, East Khasi Hills –  
8794713976**

<b>Sl. No.</b>	<b>Name of Private Hospitals</b>	<b>Administrators/MS</b>	<b>Contact No.</b>
1	Nazareth Hospital, Laitumkhrah Shillong	Sr. Noreen	0364-2221506/8794052620
2	Dr. H. Gordon Robert Hospital, Jaiaw Shillong	Dr. D. Tariang	9863026390
3	Woodland Hospital, Dhanketi Shillong	Dr. W. Kharshiing	0364-2225240/2224885/2500472
4	Bethany Hospital, Nongrim Hills Shillong	Dr. J. L. Sailo Ryntathiang	0364-2520300
5	Supercare Hospital, Laitumkhrah Shillong	Dr. R. S. Thangkiew	9863021640
6	Children's Hospital, Pohkseih Shillong	Dr. D. Das	0364-2535061/2535062/9863063608

<b>Sl. No.</b>	<b>Name of Government Hospitals</b>	<b>Administrators/MS</b>	<b>Contact No.</b>
1	NEIGRIHMS Shillong	Prof. A. C. Phukan	0364-2538076/9436336370
2	Military Hospital, Shillong	Brigadier M. K. Garg	9774014882
3	Ganesh Das Hospital, Shillong	Dr. T. Wahlang	9863043618
4	Civil Hospital, Shillong	Dr (Mrs) B. Mawlong	8575091235
5	Reid Provincial Chest Hospital		7308093444
6	MIMHANS		9436104963

**QRT LEADER WITH CONTACT NO. KHASI HILLS DISTRICT, FEB 2015**

<b>BLOCK</b>	<b>Sl. No.</b>	<b>Name of Institution</b>	<b>Team Leader</b>	<b>Designation</b>	<b>Contact No.</b>
Myllem	1	Mawiong CHC	Dr. W. M. Kharlukhi	Sr. M & HO	9863028220/9615735685
	2	Diengiei PHC	Dr. C. Wann	M & HO	7308963315
	3	Mawroh PHC	Dr. Sheela Lyndem	Sr. M & HO	9436101171
	4	Pomlum PHC	Dr. P. Syiem	M & HO	9856489409
	5	Laban St Dispensary	Dr. M. Sohliya	Sr. M & HO	9856022621
	6	Rynjah St Dispensary	Dr. (Mrs.) B. Syiem	Sr. M & HO	9863097252

	7	Shastri Memorial St Dispensary	Dr. R. Lyngdoh	Sr. M & HO	9436111275
	8	Nehru Memorial St Dispensary	Dr. G. M. Mihsil	Sr. M & HO	9436110561
	9	Mawpat UHC	Dr. M. Raplang	M & HO	9863611609
	10	Upper Mawprem UHC	Dr.(Mrs.) B. Garod	M & HO	9862086050
	11	Lower Mawprem UHC	Dr. M. Synrem	M & HO	9436118242
	12	Nongthymmai UHC	Dr. D. Kharrubon	M & HO	9436101297
	13	Bishnupur UHC	Dr. (Mrs.) P. Kharbuli	M & HO	9856007404
	14	Umsohsun UHC	Dr. (Mrs.) M. Nongrum	M & HO	9862955756
	15	Mawlai Nongkwar UHC	Dr. (Mrs.) H. L. Kharlukhi	M & HO	9863092975
	16	Demthring UHC	Dr. R. Tham	M & HO	9863197517
	17	Demseiniong UHC	Dr. J. Marwein	M & HO	9612168320
	18	Dong Kharmalki UHC	Dr. P. D. Laloo	M & HO	9863096477
	19	Pynthorbah UHC	Dr. W. Shympliang	M & HO	9436314334
	20	Lumparing UHC	Dr. M. Kachari	M & HO	9774183101
	21	Jaiaw UHC	Dr. E. Warjri	M & HO	9862038741
Laitkroh	1	Swer PHC	Dr. R. Kyndiah	M & HO	9863259458
	2	Laitryngew PHC	Dr. M. K. Diengdoh	M & HO	9856934863
	3	Laitlyngkot PHC	Dr. C. Lamin	M & HO	8415901823
Shella Bholaganj	1	Sohra CHC	Dr. (Mrs.) M. Bareh	Sr. M & HO	9436104963
	2	Ichamati CHC	Dr. Manas Kr. Kar	M & HO	8014403280
	3	Laitkynsew PHC	Dr. W. Chyne	M & HO	8575646520
	4	Shella PHC	Dr. S. Nonglang	M & HO	9436161667
	5	Mawsahew PHC	Dr. B. K. Patgiri	M & HO	8794463631
	6	Sohbar PHC	Dr. L. Syiemlieh	M & HO	9856933919
	7	Mawlong PHC	Dr. S. Thapa	M & HO	8794061086
Mawsynram	1	Mawsynram CHC	Dr. H. Lyngdoh	M & HO	9863109434
	2	Rynku PHC	Dr. Rahul Marak	M & HO	8014826724
	3	Dangar PHC	Dr. Mudasser Hasham	M & HO	9615307920
Mawryngkneng	1	Mawryngkneng PHC	Dr. A. Kharduid	Sr. M & HO	9863317491
	2	Smit PHC	Dr. C. Majaw	M & HO	9615485807
	3	Diengpasoh PHC	Dr. C. Budnah	Sr. M & HO	9863064827
Mawphlang	1	Nongspung PHC	Dr. P.S. Lyngdoh	M & HO	9856494588
	2	Sohiong CHC	Dr. (Mrs.) G. H.	M & HO	9436106438



			Rymbui		
	3	Mawphlang PHC	Dr. (Mrs.) E. G. Tariang	Sr. M & HO	9436102189
Pynursla	1	Pynursla CHC	Dr. E. Khongthaw	M & HO	9615812241
	2	Pongtung PHC	Dr. S. Khongkliam	M & HO	9856132789
	3	Wahsherkhmut PHC	Dr. K. Diengdoh	AYUSH DR,	9856443402
Mawkynrew	1	Mawkynrew PHC	Dr. (Miss) I. Syiem	M & HO	841407836
	2	Jongksha PHC	Dr. Wanheiky Sutnga	M & HO	8414954665
	3	Jatah PHC	Dr.M.I.Ahmed	M&HO	8132004692

### **Annexure 11: Static First Aid Posts/Shelters under Urban Areas**

#### **1. Ram Krishna Mission Dispensary, Laitumkhrah**

- Ramkrishna Dispensary Compound
- St. Edmund's School
- Laitumkhrah Presbyterian High School
- Football field at Motinagar

#### **2. Bethany Hospital, Nongrim Hills**

- Sports Complex, Nongthymmai
- S. Ferrando School
- Mizo Modern School, Nongrim Hills
- H. Elias School, Nongshilliang
- Auxilium School, Nongshiliang
- Eriben School, Jylli's Shop, Nongthymmai
- NEHU existing facility at Upper Nongthymmai
- IIM, Shillong at Mayurbhanj Complex

#### **3. Nazareth Hospital, Laitumkhrah**

- NEHU Bijni Complex
- Shillong College
- St. Margaret's School, Upland Road
- St. Mary's School, Upland Road

#### **4. Woodland Hospital, Dhankheti**

- Malki Ground
- Don Bosco Youth Centre
- Law College, Dhankheti
- St. Anthony's School
- Seven Set School, Malki

#### **5. John Roberts Hospital ( KJP ), Jaiaw**

- St. Joseph's School
- Dinam Hall
- Khasi Pnar School
- St. Dominic School
- Seng Khasi School
- Community Hall, Lumdiengjri
- Govt. Boys' School, Jaiaw
- Mawkhar Christian High School

- St. Joseph's Dispensary, Jaiaw
- 6. E.S.I. Dispensary, Lachumiere**
  - Areas of Lower Lachumiere
  - Office of the DM&HO
- 7. P&T Dispensary, opp. Raj Bhawan**
  - Offices of the A.G.
  - A.G. staff quarters
  - Youth Hostel
- 8. Demthring Urban Health Centre (UHC)**
  - Presbyterian Compound - Madanriting
  - Holy Child School - Demthring
  - St. Peter's School – Madanriting
- 9. Nehru Memorial St. Dispensary, Mawlai**
  - Sacred Heart Compound - Mawlai
  - Madan Heh
  - Basic School – Mawlai Kynton Massar
- 10. Laban State Dispensary, Laban**
  - Laban State Dispensary Compound
  - Community Hall - Upper Lumparing
  - Community Hall - Lumsophoh, Laban
- 11. Bishnupur Urban Health Centre**
  - Sishu Mandir – Bishnupur
- 12. R.P. Chest Hospital, Jhalupara**
  - R.P. Chest Hospital Compound
- 13. Goenka Hospital (Cantonment Board Dispy.) - Jhalupara**
  - Goenka Hospital Compound – Garikhana
- 14. Mawprem Urban Health Centre**
  - Community Hall - Mawprem
  - Hindu Mission School
  - Community Hall - Lumsophoh Mawprem
- 15. Umsohsun Urban Health Centre**
  - Community Hall - Sweeper's Colony
  - Community Hall - Riatsamthiah
  - Christian Academy School (Block III) – Wahingdoh
- 16. Civil Hospital, Shillong**
  - Community Hall - Jail Road
  - Bengali Boys' School - Jail Road
  - Bengali Girls' School - Jail Road
  - Community Hall - Oakland.
  - St. Xavier's School, Polo
- 17. Mawpat Urban Health Centre**
  - Mawpat Community Hall
  - Langkyrding Community Hall
- 18. Mawlai Urban Health Centre**
  - Basic School, Mawlai Kynton Massar
  - Umthlong Community Hall
  - Umjajew Girls L.P. School
- 19. Rynjah State Dispensary**

- Umpling Community Hall
- Lapalang Community Hall
- Nongrah Community Hall
- Pohkseh Community Hall

**Annexure 12: List of Main Hospitals and Nursing Homes in Guwahati for Referral**

Sl. No.	Name	Address	Phone No.
1.	M/S Dispur Polyclinic & Nursing Home	Ganeshguri Dispur, Guwahati – 36	2220769/2260864
2.	M/S Nemcare Hospital	G.S. Road, Bhangagarh, Guwahati – 5	2455906/2528587 Fax – 2457344
3.	M/S Wintrobe Hospital	G.N.B. – Road, Ambari, Guwahati – 1	2522860
4.	M/S Central Nursing Home	Behola Basistha Road, Guwahati – 28	2262044/2265923/ 2227342
5.	M/S Down Town Hospital Ltd.	G.S. Road, Dispur, Guwahati – 36	2331003/2330659/ 2330695/2332741
6.	M/S Guwahati Neurological Research Centre Ltd.	Dispur, Guwahati – 36	2227700-04 Fax – 2227711
7.	M/S Agile Hospital	Jayanagar Chariali, Beltola, Guwahati	2620611
8.	M/S Gutucharan Polyclinic cum Nursing Home	M.D. Shah Road, Paltanbazar, Guwahati – 8	2514194/2540876
9.	M/S H.M. Hospital & Research Centre (P) Ltd.	Hatigaon, Dispur, Guwahati – 33	260948
10.	M/S East End Nursing Home & Research Institute	G.N.B. Road, Bamunimaidam, Guwahati – 21	2550334/2556008/ 2740045
11.	M/S Care Home & Diagnostic Centre	Bamunimaidam, Guwahati – 21	2550202
12.	M/S International Hospital	Lotus Tower, Christianbasti, G.S. Road, Guwahati – 5	2347700/01/02/03 Fax – 2347715
13.	M/S Central Clinic and Nursing	M.S. Road, Faneybazar,	2602104/2549065

	Home	Guwahati – 1	
14.	M/S Kalicharan Das Nursing Home & Polyclinic	Kalapahar, Gopinath Nagar, Guwahati – 16	2472963/2476774
15.	M/S Nightingale Hospital (E.N.T.)	Ganeshguri, Kacharibasti, Dispur, Guwahati – 5	2342920
16.	M/S Marwari Maternity Hospital	Satijoymati Road, Guwahati	2541201/2541202
17.	M/S Good Friend Hospital & Research Centre	G.S. Road, Dlubari, Guwahati – 7	2515209
18.	M/S Swagat Endolaparoscopic, Surgical Research Institute	A.T. Road, Santipur, Guwahati – 9	2131726/2637899 Fax – 2519026
19.	M/S Barthakur Clinic Pvt. Ltd. Hospital	Kharghuli, Guwahati – 4	2543411/2546233
20.	M/S Sacred Home Hospital & Research Clinic Pvt. Ltd.	Kachaibasti, B.K. Kakati Road Byclane – 4, Ulubari, Guwahati – 7	2431358
21.	M/S Kumar Nursing Home	K.R. Choudhury Road, Near Panchali, Kumarpara, Guwahati - 9	2570033
22.	M/S Dr. B.A. Saikia Memorial Nursing Home	A.T. Road, North Jalukbari, Adabari, Guwahati – 14	2529854/2527229
23.	M/S Aruna Memorial Hospital Pvt. Ltd.	Rajgarh Road, Bhangagarh, Guwahati – 5	(9536231) 2840001/2840379
24.	M/S Greenland Nursing Home & Medhi Diagnostic Clinic	V.I.P. Road (Guwahati Airport), Guwahati – 17	2268230/2263407
25.	M/S Good Health Hospital	G.S. Road, Guwahati – 6	2522647/2562130
26.	M/S City Heart Hospital	Rajgarh Road, Guwahati – 7	2491090
27.	M/S Sangpo Health Care Pvt. Ltd.	Adagodown, Lakhara Road, Guwahati – 34	2522959
28.	M/S City Nursing Home	R.K. Choudhury Road, Bharalumukh, Guwahati –	2529390/2529945

		9	
29.	M/S N.L. Medicure & Research Centre	Sarboday Path, Bus Stop A.B.C., G.S. Road, Guwahati – 5	2202338
30.	M/S Midland Hospital & Research Centre (P) Ltd.	Sreenagar (Near Zoo), R.G. Baruah Road, Guwahati – 5	2522866/2541859
31.	M/s Sidhant Maternity & Nursing Home	Subhadra Bhawan, Chatribari, Guwahati – 6	2544560
32.	M/S Institute of Human Reproduction (Goenka Nursing Home)	Bharalumukh, Guwahati – 9	2431358
33.	M/S Advance Neoro-Science Hospital	Kahililpara Road, Ganeshguri, (Near Ganesh Mandir), Guwahati – 6	2263540/2335519
34.	M/S Carewell Polyclinic and Diagnostic Centre (P) Ltd.	Silpukhuri, Guwahati – 3	2666352
35.	M/S Ramcharan Foundation for Better Medical Care	Sandhyachal Nagar, Lalmati, Guwahati – 29	2303674
36.	M/S Reliance Polyclinic	Mathgharia – 2, Guwahati – 20	2550338
37.	M/S Sri Sankardev Netralaya	Beltola, Guwahati – 28	2305516/2228879 -80/2223922-21
38.	M/S Brahmaputra Hospital Ltd.	Six mile, G.S. Road, Guwahati – 22	2227014/2230035
39.	M/S E.G. Nursing Home (P) Ltd.	Narengi Tiniali, Guwahati – 26	2641898/2640697
40.	M/S Marwari Hospital & Research Centre	Sati Joymati Road, Athgoan, Guwahati - 8	2662774/2662775/ 2602738-39
45.	M/S Omega Eye Clinic & Research Centre	Lankeswar, Near Old Survey Jalukbari, Guwahati – 14	2572374
46.	M/S Satribari Christian Hospital	K.C. Choudhury Road, Guwahati – 8	2600051/2540193

47.	M/S Institute of ENT – Head & Neck Surgery & Research Centre	B.K. Kakati Road, Uluhari, Guwahati – 7	2460513
48.	M/S Arya Hospital	A.M. Road, Rehabari, Guwahati – 8	2606888/2606665
49.	M/S Dr. S.C. Jain Maternity & Nursing Home	Ganeshguri, Janakpath, Guwahati – 6	
50.	M/S Guwahati Lions Eye Hospital	Lions Hospital Road, Rehabari, Guwahati – 8	2541235/2637423
51.	M/S Sanjivane Hospital	Maligoan, Guwahati – 12	2674892/893
52.	Guwahati Medical College Hospital	Bhangagarh, Guwahati	2529457, 2528417
53.	MMC Hospital	Panbazar, Guwahati – 1	2543998
54.	N.R. Rly Hospital	Maligaon, Guwahati	2570492
55.	Red Cross Hospital	Red Cross Road, Chandmari, Guwahati – 3	2665114

**Annexure 13: List of open space for use as helipads**

List of open space for use as helipads			
Name of the Block	Sl No	Space	Location
<b>Mawphlang Block</b>	1	Madan Lyngktop	Mawphlang (Nongrum)
	2	Madan Ktok	Mawphlang (Nongrum)
	3	Football Ground	Lad Umrisain
	4	Football Ground	Nongspung East
	5	Football Ground	Mawpunneng
	6	Football Ground	Pyndenlitha
	7	Football Ground	Khliehshnong Lyngkhoi
	8	Football Ground	Mawmahwar
	9	Madan Tanaw	Mawngap
	10	Football Ground	Umsaw Sohiong
	11	Football Ground	Rangskhen
	12	Football Ground	Wahrahaw
	13	Football Ground	Pyndengkah
	14	Football Ground	Mawkneng
	15	Football Ground	Mawkynthei
<b>Shella Bholaganj Block</b>	1	Football Ground	Kemrang
	2	Football Ground	Laitryngew
	3	Football Ground	Wahkaiar
	4	Football Ground	Lummawskhen
	5	Football Ground	Laitduh
	6	Football Ground	Mawmluh

	7	Football Ground	Pynshadkhurai
	8	Football Ground	Mawkisyiem
	9	Football Ground	Sohra Stadium
	10	Football Ground	Khliehshnong
	11	Football Ground	Mawsmmai
	12	Football Ground	Nongthymmai
	13	Football Ground	Majai Umdud
	14	Football Ground	Shella
	15	Football Ground	Ichamati
	16	Football Ground	Mawlong
	17	Football Ground	Tdongsaikuna Pdengshnong
	18	Football Ground	Mawsahew
	19	Football Ground	Dak Bangla
	20	Football Ground	Wahlong
	21	Football Ground	Laitkynsew
	22	Football Ground	Maraikaphon
<b>Khatarshnong-Laitkroh Block</b>	1	Play Ground	Mawkdok
	2	Play Ground	Kongthong
	3	Play Ground	Laitsohpliah
	4	Play Ground	Kukon
	5	Play Ground	Umthli
<b>Mawsynram Block</b>	1	Play Ground	Tyrsad Mawlum
	2	Play Ground	Pomsanngut
	3	Play Ground	Langsymphut
	4	Play Ground	Weiloi
	5	Play Ground	Block Campus
	6	Play Ground	Mawsynram
	7	Play Ground	Phlangwanbroi
	8	Play Ground	Phlangmawpyrsad
	9	Play Ground	Mawlongbna
	10	Play Ground	Mawlongbna (Madan Knah)
	11	Play Ground	Lawbah
	12	Play Ground	Ingkyrsa
	13	Play Ground	Dangar
	14	Play Ground	Pataghat
<b>Mawkynew Block</b>	1	Play Ground	Thynroit
	2	Play Ground	Mawpynieng
	3	Play Ground	Laitkyrhong
	4	Play Ground	Jongksha ( Good Shepherd H/S School Ground)
	5	Play Ground	Umkhohi
	6	Play Ground	Dienglieng
	7	Play Ground	Mawkynew
	8	Play Ground	Lyngshing
	9	Play Ground	Mawkria
	10	Play Ground	Wahlakhiat
	11	Play Ground	Mynsang
	12	Play Ground	Jatah Lakadong

<b>Mawryngkneng Block</b>	13	Play Ground	Syntung
	14	Play Ground	Nohron
	1	Football Ground	Lumdiengsai
	2	Football Ground	Lumkseh
	3	Football Ground	Mawpdang
	4	Football Ground	Nonghali
	5	Football Ground	Diengpasoh
	6	Football Ground	Tynring
	7	Football Ground	Siejiong
	8	Football Ground	Mawshbuit
	9	Football Ground	Mawlynrei
	10	Football Ground	Jyntah
	11	Football Ground	Umphyrnai
	12	Football Ground	Mawlyngad
	13	Football Ground	Sohryngkham
	14	Football Ground	Pommura
	15	Football Ground	Ksehpungdeng
	16	Football Ground	Mawryngkneng
	17	Football Ground	Thangshalai
	18	Football Ground	Puriang
	19	Football Ground	Mawlyndep
	20	Football Ground	Lamlyer
	21	Football Ground	Nongkrem
	22	Football Ground	Umphrup
	23	Football Ground	Umiew-Maw-U-Sam
	24	Football Ground	Smit
	25	Football Ground	Umtngew
	26	Football Ground	Mawkathein
	27	Football Ground	Maw-U-Sam
	28	Football Ground	Laitkseh
	29	Football Ground	Thadan
	30	Football Ground	Umsaw
	31	Football Ground	Mawber
	32	Football Ground	Mawpyrshong
	33	Football Ground	Kut
	34	Football Ground	Mawkhanu
	35	Football Ground	Mawsharoh
	36	Football Ground	Ummir
	37	Football Ground	Jaroit
	38	Football Ground	Sohlaper
	39	Football Ground	Jarain
	40	Football Ground	Pepbah
	41	Football Ground	Mawiong Sung
	42	Football Ground	Niur
	43	Football Ground	Pomlahier
	44	Football Ground	Kynton-U-Mon
	45	Football Ground	Iew Pomtiah
	46	Football Ground	Mawpynthaw



	47	Football Ground	Mawmuthoh
	48	Football Ground	Ur-Masi-U-Joh
	49	Football Ground	Madan Langning
	50	Football Ground	Iapsyndeit
<b>Pynursla</b>	1	Upp Playground	Urksew
	2	Seng Khasi H/S School Playground	Rangthylliang
	3	Madan Lyntad Field	Between Nongshyrngan And Siatbakon Village
<b>Myllem</b>	1	Play Ground	Lyngkien
	2	Play Ground	Madan Iingsyiem
	3	Play Ground	Myllem Kyndong
	4	Play Ground	Mawkriah West
	5	Play Ground	Sadew
	6	Play Ground	Sadew Marbaniang
	7	Play Ground	Banuin
	8	Play Ground	Mawnianglah
	9	Play Ground	7th Mile
	10	Play Ground	Mawlaingut
	11	Play Ground	Lawmei
	12	Play Ground	Kynton Mynniar
	13	Play Ground	Nongpathaw
<b>Shillong City</b>	1	Play Ground	Garrison Ground
	2	Play Ground	Polo
	3	Play Ground	GTC, Happy Valley
	4	Play Ground	Golflinks
	5	Play Ground	Students' Field
<b>Sohra Civil Sub Division</b>	1	Football Ground	Nongwar
	2	Football Ground	Nongriat
	3	Football Ground	Mawphu
	4	Football Ground	Tyrna
	5	Football Ground	Mawshamok
	6	Football Ground	Umwai
	7	Football Ground	Rumnong
	8	Football Ground	Nongwar

**Annexure 14: Format for First Information Report on Occurrence of Natural Calamity**

(To be sent to Government within maximum of 24 hours of occurrence of calamity)

From: District----- Date of Report -----

To

Under Secretary (fax : \_\_\_\_\_ ; email :\_\_\_\_\_)

- a. Type and Nature of Calamity
- b. Date and time of occurrence
- c. Affected area (number and names of affected Blocks)
- d. Total Population affected (approx.)
- e. Number of Persons
  - Dead
  - Missing
  - Injured
- f. Animals
  - Affected
  - Lost
  - Dead
- g. Crops affected and area (approx.)
- h. Number of houses damaged
- i. Damage to public property
- j. Relief measures undertaken in brief
- k. Immediate response & relief assistance required and the best logistical means of delivering that relief from State
- l. Forecast of possible future developments including new risks.
- m. Any other relevant information

## **REFERENCES**

1. District Agriculture Office, East Khasi Hills District, Shillong
2. DDMP, Madhubani, Bihar
3. National DM Act, 2005
4. MPA-007 – Rehabilitation, Reconstruction & Recovery – IGNOU
5. SOP, Govt. of India
6. State Policy on DM, 2013, Govt. of Meghalaya
7. SDMP, Gujarat
8. [www.eastkhasihills.gov.in](http://www.eastkhasihills.gov.in)

