



Disaster Management & Contingency Plan 2023



Dzongkhag Administration, Lhuentse

EXECUTIVE SUMMARY

In accordance with the section 77 of the Disaster Management Act of Bhutan 2013, the Dzongkhag Disaster Management Committee, Lhuentse has developed Dzongkhag Disaster Management and Contingency Plan in collaboration with the various stakeholders. It was prepared through the conduct of Hazard, Vulnerability and Capacity Assessment (HVCA) of the 8 Gewogs. The Dzongkhag with support from the Department of Disaster Management have conducted week long training with the participants from different stakeholders from the Local Government and regional offices who made vital contributions in drafting the plan ensuring the cross sectoral linkages. Data collections and analysis on Standard Operating Procedures (SOPs) were carried out and endorsed by the Dzongkhag Disaster Management Committee.

The drafting of Disaster management and Contingency Plan started only after providing Training on “*Developing of Disaster Management and Contingency Plan*” to the Local Government and Regional officials on 3rd to 7th June, 2019. The training was organized by Department of Disaster Management and funded by UNICEF. Some of the best strategies were incorporated during the whole training period. Their experiences and expertise in this particular field has contributed in developing those strategies.

The Dzongkhag Disaster Management Plan has Hazard, Vulnerability and Capacity Assessment Profile collected from 8 Gewogs which is incorporated into Dzongkhag HVCA and made into one common profile. The plan also outlines priority on Disaster Risk Reduction (DRR), awareness raising and capacity building activities. It also has the standard operating procedures for immediate response and relief during disaster, implementation and monitoring processes. With the changing risk patterns and frequency of the disaster, formation of Dzongkhag specific disaster management plan is an important strategy to strengthen local disaster management system and systematically reduce disaster risks.

The disaster management plan, which shall be revised every after five year, is to be referred by Dzongkhag Administration and sectors to ensure mainstreaming and integration of disaster risk reduction into their annual plans. All the stakeholders, relevant National Disaster Management Institutions and agencies shall take ownership and ensure to fulfilling their own roles and responsibilities to make Dzongkhag a disaster resilient and safe place in all times to come.

Tashi Delek!

Jigme Choden
(Dzongdag)

Acknowledgement

The Dzongkhag Administration, Lhuentse would like to extend our heartfelt appreciation to the department of disaster management, Ministry of Home and Cultural Affairs for providing training on developing DMCP to local government and officials and other stakeholders with the financial support from UNICEF. They also provided technical and facilitation support in drafting Dzongkhag Disaster Management and Contingency Plan.

The Dzongkhag also would like to thank the members of DDMC, regional heads, sector heads, Gups, Gewog Administrative Officers, police personnels, health staffs and Thromde Thuemi for rendering full support in the process of drafting DMCP. Their full time participation in training was very crucial for development of the plan.

The Gewog collected data from the Chiwogs, participated in CBDRM activities, developed their own Gewog Disaster Management Plan. The participation and contribution by Gewogs also played a vital role in developing the Dzongkhag DMCP. Therefore, the Dzongkhag also would like to extend humble gratitude towards the members of Gewog Disaster Management Committee for their Contribution.

ACRONYMS

| | |
|--------------|---|
| BBB | Build Back Better |
| BDA | Bhutan Disaster Assessment |
| CBDRM | Community Based Disaster Risk Management |
| DDMC | Dzongkhag Disaster Management Committee |
| DDM | Department of Disaster Management |
| DDMO | Dzongkhag Disaster Management Officer |
| DEOC | Dzongkhag Emergency Operating Centre |
| DFP | Disaster Focal Person |
| DM Act, 2013 | Disaster Management Act of Bhutan, 2013 |
| DMCP | Disaster Management and Contingency Plan |
| DM | Disaster Management |
| DT | Dzongkhag Tshogdu |
| EOC | Emergency Operating Centre |
| FIR | First Information Report |
| GDMC | Gewog Disaster Management Committee |
| GNH | Gross National Happiness |
| GT | Gewog Tshogde |
| HVCA | Hazard, Vulnerability and Capacity Assessment |
| ICS | Incident Command System |
| IMT | Incident Management Team |
| NASART | National Search and Rescue Team |
| NDMA | National Disaster Management Authority |
| NDRCC | National Disaster Response Coordination Committee |
| RAT | Rapid Assessment Team |
| RBP | Royal Bhutan Police |
| SDMP | School Disaster Management Plan |
| SOP | Standard Operating Procedure |

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Scope & Objectives of the Lhuentse Dzongkhag Disaster Management and Contingency Plan

The development of Disaster Management and Contingency Plan for Lhuentse Dzongkhag is mandated by the Disaster Management Act of Bhutan 2013. The plan was endorsed by the Dzongkhag Disaster Management Committee (DDMC) on 7th June, 2019 and will serve as a document for reference by all relevant stakeholders and Sectors for implementation of prioritized disaster risk reduction and preparedness activities and guide the Dzongkhag in any response and relief operations.

The objectives of the Dzongkhag Disaster Management Plan are:

- To ensure mainstreaming and facilitation for implementation of disaster risk reduction and preparedness activities in Dzongkhag;
- To ensure required capacities are developed for risk reduction, mitigation, preparedness and response;
- To increase awareness on disaster risks, risk reduction and preparedness measures in the Dzongkhag;
- To establish a coordination mechanism for emergency response and relief operations.
- To ensure safety of community, reduce loss to property; protect critical infrastructure, and environment and continuity of essential services.

The objectives of the Dzongkhag Contingency Plan are:

1. Life saving and public safety
2. Life sustaining for the first two weeks
3. Ensuring Dzongkhag's resilience
4. Laying the foundation for 'Build Back Better' (3B)

The Dzongkhag DM and Contingency plan will be updated on a yearly basis.

Chapter 1: Overview of Lhuentse Dzongkhag

1.1 Background

Lhuentse Dzongkhag is bordered by Bumthang in the west, Trashiyangtse in the east, Mongar in the south and Tibet (China) in the north. It has an area of 2854 Sq.km and a total projected population of 17,618 ("*Lhuentse at a glance*", NSB 2016) and currently we have total population of about 14,437 irrespective of age levels as per the PHCB 2016.

The Dzongkhag is characterized by high ridges, steep slopes, deep gorges and lowland. It is located at an altitude ranging from 600 meters to 5800 meters above the sea level and annual rainfall of 1000 mm to 1500 mm.

Lhuentse is one of the remotest Dzongkhag in the country. It is divided into 8 Gewogs, viz. Gangzur, Kurtoe, Khoma, Minjey, Maenbi, Jarey, Maedtsho and Tsaenkhar. It has 16 schools comprising 10 primary schools, 2 lower secondary schools, 2 middle secondary schools and 2 higher secondary schools; 1 Dzongkhag General Hospital, 14 Basic Health Units and 31 Outreach Clinics; 99.8% of Rural Water Supply Schemes; and 8 RNR Extension Centers and 1 veterinary hospital for agriculture and livestock services.

Lhuentse Dzongkhag is blessed with numerous sacred places and sites of historical significance such as Singye Dzong which is 3 days walk from Dzongkhag Headquarters, and Jigme Namgyel Nagtshang in Dungkhar which is the ancestral home of our Kings. Lhuentse Dzongkhag is endowed with rich cultural heritage. Each Gewog has its own unique and distinct local festivals, which are celebrated at different times of the year. Lhuentse is known for its Kishuthara and is produced by the people of Khoma Gewog.

The main sources of income for the people of Lhuentse Dzongkhag are livestock and agricultural products like rice, Maize, butter, cheese, potatoes, ginger, etc.....

1.2. Social and Administrative Profile

| General Information | |
|---------------------|------------------------------|
| Total Area (sq km) | 2854sq km |
| Forest Cover (%) | 64 |
| Location of Dzong | Gangzoor Gewog, Lhuentse. |

Source: Lhuentse at a glance, published by NSB, 2016.

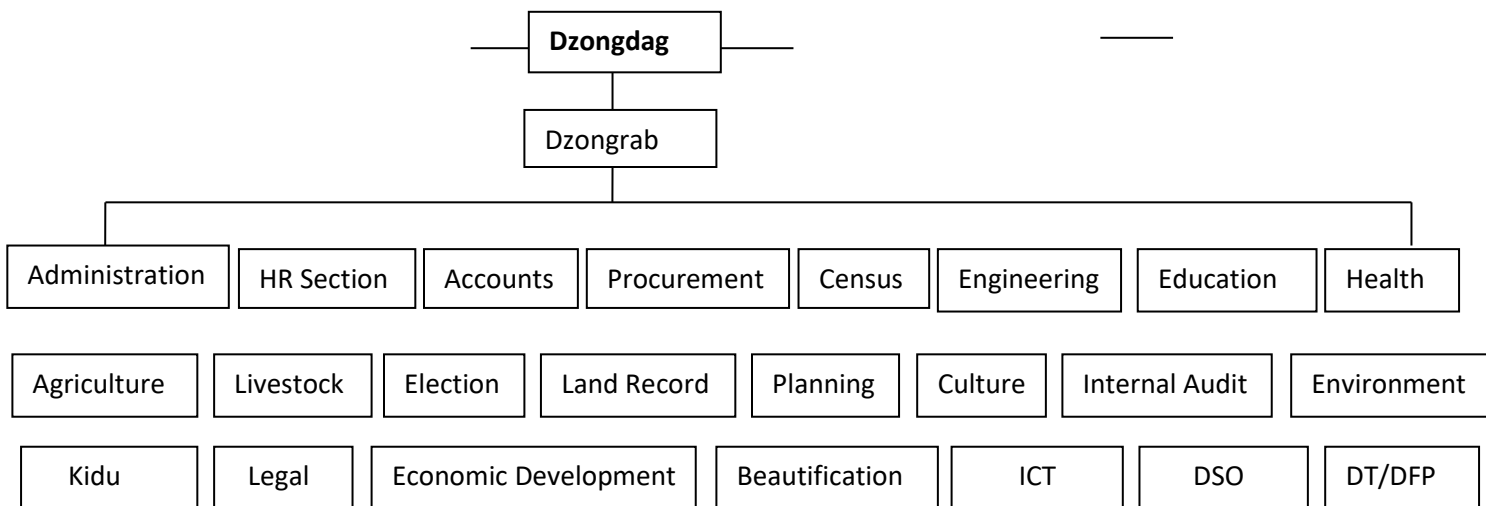
| Administrative Units | |
|----------------------|-------|
| Dzongkhag | 1 |
| Dzongkhag Thromde | 1 |
| Gewogs | 8 |
| Chiwogs | 40 |
| Villages | 297 |
| Population | 14437 |
| Gungtongs | 274 |

Source: Lhuentse at a glance, published by NSB, 2016.

| Local Government | |
|------------------------------|--------|
| Gup | 8 |
| Gewog Administrative Officer | 8 |
| Tshogpas | 40 |
| DT Members | 17 |
| Thromde Thuemi | 1 |
| Mangmi | 8 |
| GT members | 7 each |

Disaster Management and Contingency Plan, Lhuentse 2022.

Figure:1 Organogram of Dzongkhag Administration



1.3 Weather and Climate

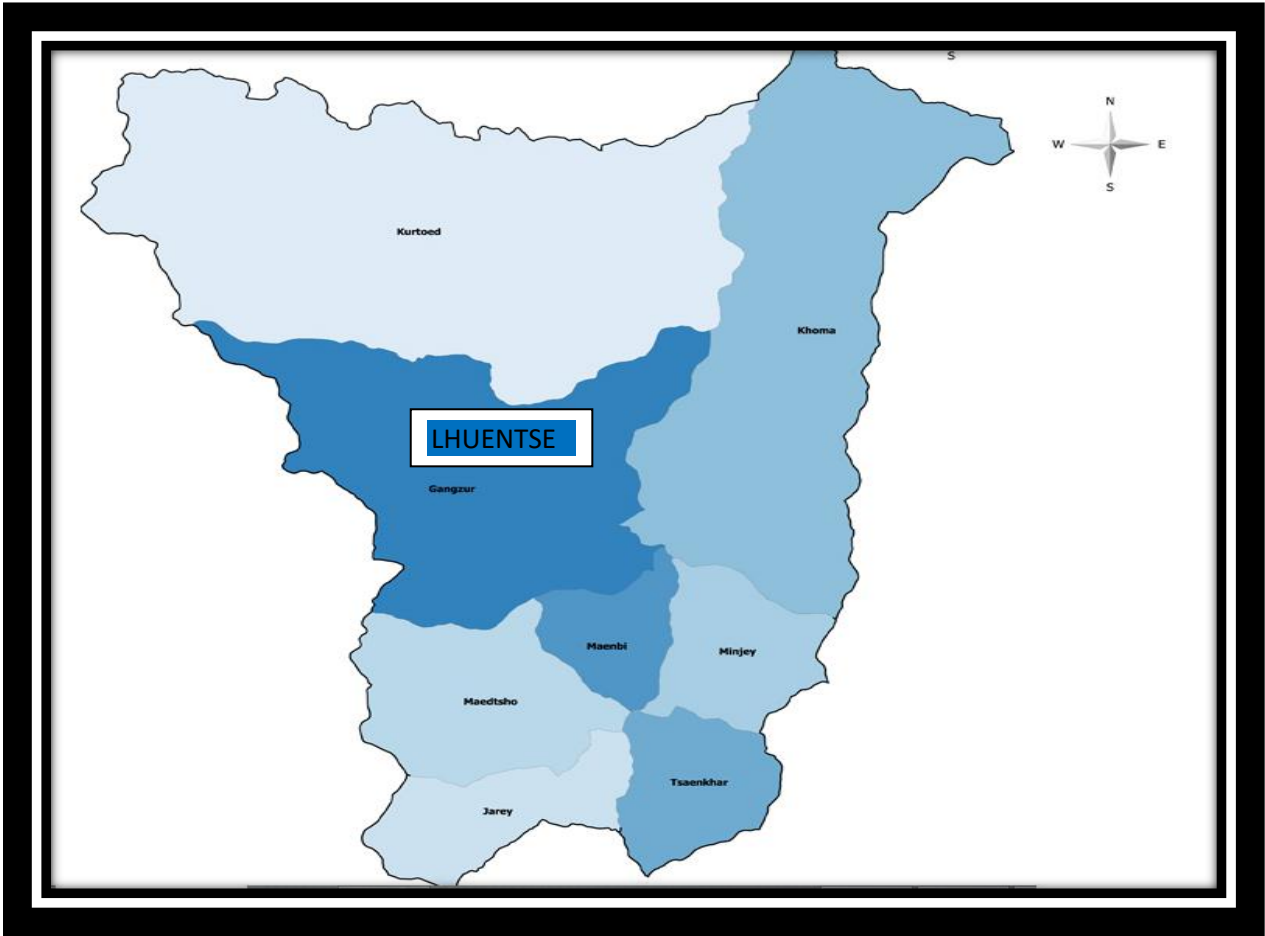
Monthly Temperature (Degree Centigrade)

Figure: 2 Average Monthly Rainfall

| Month | January | February | March | April | May | June | July | August | September | October | November | December |
|-------------------------------|---------|----------|-------|-------|------|------|------|--------|-----------|---------|----------|----------|
| Avg. Temperature (°C) | 7.5 | 9.6 | 13 | 16.1 | 18.5 | 20.7 | 21.2 | 20.9 | 19.8 | 16.4 | 12 | 8.6 |
| Min. Temperature (°C) | 0.5 | 3 | 6.5 | 10.1 | 13.3 | 16.2 | 17.1 | 16.8 | 15.4 | 10.6 | 5.3 | 1.6 |
| Max. Temperature (°C) | 14.5 | 16.2 | 19.6 | 22.1 | 23.7 | 25.3 | 25.4 | 25.1 | 24.3 | 22.3 | 18.7 | 15.6 |
| Avg. Temperature (°F) | 45.5 | 49.3 | 55.4 | 61.0 | 65.3 | 69.3 | 70.2 | 69.6 | 67.6 | 61.5 | 53.6 | 47.5 |
| Min. Temperature (°F) | 32.9 | 37.4 | 43.7 | 50.2 | 55.9 | 61.2 | 62.8 | 62.2 | 59.7 | 51.1 | 41.5 | 34.9 |
| Max. Temperature (°F) | 58.1 | 61.2 | 67.3 | 71.8 | 74.7 | 77.5 | 77.7 | 77.2 | 75.7 | 72.1 | 65.7 | 60.1 |
| Precipitation / Rainfall (mm) | 9 | 11 | 50 | 91 | 235 | 420 | 416 | 325 | 238 | 86 | 13 | 5 |

Source: <https://en.climate-data.org> › Asia › Bhutan › Lhuentse District › Lhuentse

Figure:3 Map of Lhuentse Dzongkhag



Source: Dzongkhag Website (www.lhuentse.gov.bt/dzongkhag-map)

Chapter 2: Dzongkhag Disaster Management System

2.1 Dzongkhag Disaster Management Committee (DDMC)

Lhuentse DDMC is Constituted as below in with the provisions of the DM Act of Bhutan, 2013;

Dzongkhag Disaster Management Committee

- | | | |
|--|--------------------|--------------|
| 1. Dasho Dzongdag-----Chairman | Contact # | |
| 2. Dasho Dzongrab---Vice Chairman | Contact # | |
| 3. Drungchen, Dzongkhag Rabdey | Contact # | |
| 4. Dasho OC, RBP, Lhuentse | Contact # | |
| 5. DT Chairman | Contact # | |
| 6. Dzongkhag Health Officer | Contact # | |
| 7. Dzongkhag Education Officer | Contact # | |
| 8. 8gup(Concerned Gup/ Thromdey Ngotshab attached in annexure | | Contact list |
| 9. Dzongkhag Kidu Program Officer | Contact # | |
| 10. Disaster Focal Person | Contact # 17875705 | |

Other stakeholders that may be co-opted as the members of DDMC are as follows:

On the expiry of the term/resignation of the Dzongdag (chair), the Dzongrab (vice-chair) will take over the functions of the chair. In case of the expiry of term/resignation of gups, the chair of the DDMC may temporarily designate an official from the local government as a member of the DDMC to serve until the vacancy is duly filled.

2.2 Functions of DDMC

The DDMC shall be responsible for coordinating and managing all disaster management operations in the Dzongkhag under the direction and supervision of the National Disaster Management Authority (NDMA).

In line with the clause 31 of DM Act 2013, the DDMC shall:

- Prepare, review, update and implement the Dzongkhag Disaster Management and Contingency Plan.

- b) Monitor and evaluate measures taken for prevention, mitigation, preparedness, response, recovery and capacity building by each sector in the Dzongkhag.
- c) Ensure establishment and functioning of the Dzongkhag Emergency Operation Centre.
- d) Ensure mainstreaming of disaster risk reduction into the development plan, policy, program and project.
- e) Ensure compliance of the approved Hazard zone and vulnerability map.
- f) Ensure the enforcement of structural and non-structural measures.
- g) Ensure that the information about an event or a disaster is promptly communicated to the NDMA, DDM and all concerned departments.
- h) Ensure that the damage assessments in the field are carried out professionally and efficiently without fear or favour.
- i) Coordinate and support disaster response and relief operation including recovery and reconstruction.
- j) Ensure that detailed reports and regular updates on disaster event are provided to the DDM upon completion of field assessment of the situation.
- k) With the support of the DDM, promote advocacy, awareness, capacity building and community training on hazard, risk, vulnerability and measures to be taken by the community to prevent, mitigate and respond to disaster.
- l) Conduct regular mock drills.
- m) Report on a quarterly basis to the DDM/NDMA on the progress of implementation of its DM plan.
- n) Perform such other functions as may be prescribed under the Act or any law in force or as directed by the NDMA/DDM.

In the case of a disaster, the chairperson of the DDMC may exercise all or any of the functions of the DDMC, subject to ex post facto ratification of the committee.

The DDMC is mandated to meet at least twice a year to frame rules and regulations concerning the conduct of its meeting.

2.3 Functions of Chairperson

1. The chairperson of the DDMC shall exercise and discharge such functions of the DDMC as the committee may delegate.

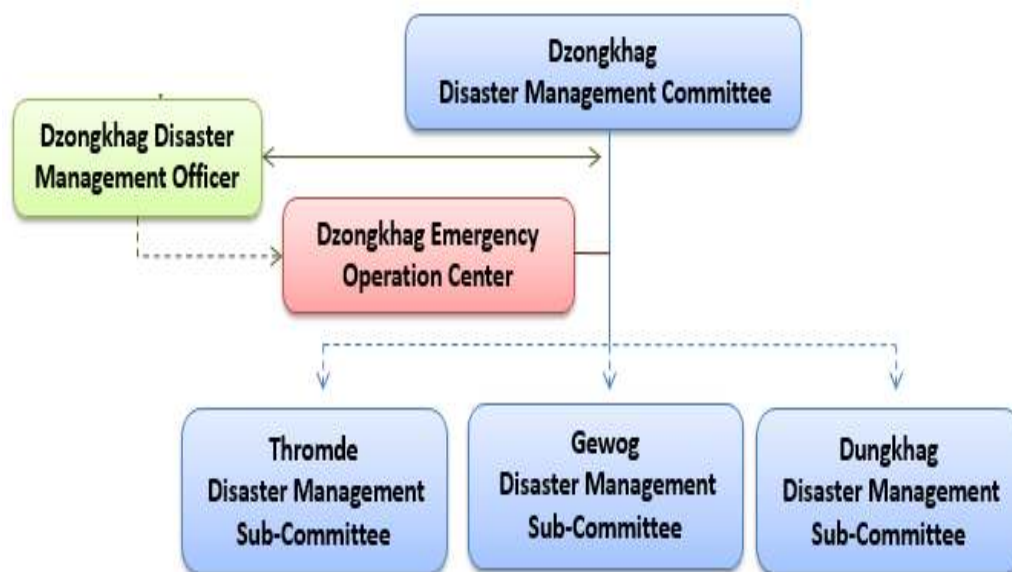
2. Without prejudice to the generality of the provision contained in section 37 of the DM Act, the chairperson of the DDMC shall:
 - a) Regularly review and assess the effectiveness of the DM plan.
 - b) Ensure decision and policy formulated by the DDMC is implemented.
 - c) Ensure that disaster risk reduction and disaster management activities are consistent with disaster management strategic framework.
 - d) Provide prompt information on a disaster or an impending disaster situation to the DDM.
 - e) Provide regular updates and detailed reports on a disaster event to the DDM upon completion of the field assessment of the situation.
 - f) Manage response and relief operation in accordance with the directives issued by the NDMA; and
 - g) Coordinate delivery of services and resources to disaster affected communities.

2.4 Disaster Management Subcommittee

The DDMC may, if it considers necessary, constitute a subcommittee at the Thromde or Gewog level to assist the DDMC in the performance of its functions under the DM Act of Bhutan 2013.

The DDMC may frame rules and regulations under this Act to determine the composition and function of a sub-committee constituted under section 35 of the DM Act.

Figure 4: Dzongkhag Disaster Management System



Chapter 3: Disaster Risk Profile of Lhuentse Dzongkhag

3.1. Dzongkhag Hazard, Vulnerability and Capacity Assessment (HVCA).

Lhuentse Dzongkhag has experienced several disasters over the past 10 to 15 decades, in which the most devastating being the September 21st earthquake in 2009 which affected the most Dzongkhags including Lhuentse. It damaged most of the rural households, schools, Lhakhangs, and other government infrastructures. Further the Dzongkhag is affected by landslides and windstorm every year which destroys houses, crops and government infrastructures with serious implications on the livelihood of the people. Due to invidious landscape, Lhuentse Dzongkhag is susceptible to both natural and human-made disasters. This includes earthquakes, windstorm, fire, landslide, thunder storm and vehicle accidents. The most notable disaster was the landslides and fire incidences beyond earthquake which affected most of the villages. The HVCA process was carried out for the Gewogs and also identified other hazards such as forest fire, structural fire, flood, landslides, pests and diseases. The HVCA of Lhuentse Dzongkhag, as per consultation with the community is presented below:

3.2 Hazard Assessment

| S/N | Hazard | Secondary Hazard | When it could occur | Probability of Occurrence | History of Past Disaster | Impact |
|-----|-----------------------|-----------------------------|--------------------------------------|---------------------------|--|--|
| 1. | Wind Storm | Structural Fire | January-December | High | 2013, 2015, 2017, 2018, 2019, | 129 HHs affected |
| 2. | Landslides | Flash Flood | May, June, July, August, Mid-Sept. | High | 2003, 2010, 2012, 2014, 2016, 2015, 2016, 2017, 2018, 2019 | Dzongkhag Road, Farm road, irrigation channel, private land & crops damaged, damaged Govt. Infrastructure, |
| 3 | Structural Fire | Forest fire | During dry season | Medium | 2010, 2013, 2014, 2016, 2017, 2018, 2019 | 12 HHs affected and lost one live. |
| 4. | Forest Fire | Structural fire | Nov, Dec, Jan, Feb, March | High | 2000, 2011, 2014, 2015, 2016, 2017, 2018, 2019 | 1049 acres of vegetation affected & damaged 1 Lhakhang and its Kitchen. |
| 5 | Lightning and Thunder | Structural fire/forest fire | Feb, Mar, April, May, Jun, Jul, Aug, | Medium | 2006, 2010, 2011, 2013, 2017, 2018, 2019 | Electric lines short circuited, Damaged Cypress tree, and lost 3 lives of people and an ox. |
| 6 | Earthquake | Landslide, Structural Fire | Unpredictable | High | 1995, 2003, 2009, 2011, 2017, 2019 | More than 50 HHs, 25 Lhakhangs, and several govt., infrastructures affect- |

| | | | | | | |
|---|------------|--------------|-----------------------------------|--------|--|--|
| | | | | | | ed. |
| 7 | Flood | Landslides | June to Mid-Sept., | Medium | 1995, 2004, 2005, 2006, 2011, 2014, 2016, 2018,2019, | Damaged crops and cultivable land, damaged roads& bridges, lost 2 lives of people and 6 lives of cattle. |
| 8 | Hail Storm | Flash-floods | Mar, April, May, June, July, Aug, | Low | 2015, 2016, 2017, 2019, | Damaged crops of 45 HHs, damaged several vehicles. |

3.3 Vulnerability Assessment

| S/N | Hazard | Element at risk | Why they are at risk | How will they be affected |
|-----|-----------------|---|--|---|
| 1 | Wind Storm | Structure, crops, properties, forests, both human and animal lives. | <ol style="list-style-type: none"> 1. Temporary Roofing 2.Lack of proper anchorage 3.Lack of Lung-go(wind to pass through) | <ol style="list-style-type: none"> 1. Roofing will be blown off. 2. Structures collapsed. 3.Live lost/injury |
| 2 | Landslides | Households, Roads, Bridges, Agricultural farm lands, Irrigation channel, crops, lives, water sources. | <ol style="list-style-type: none"> 1. Sinking Area 2. Landslide prone area 3. Steep slopes. 4. Improper managements of farm land. 5. Deforestation & no proper measures taken after developmental activities. | No sense of ownership, unequal participation from public during awareness program, lack of leadership skills, lack of kinship, lack of awareness. |
| 3 | Structural Fire | Properties, lives, forest, religious infrastructures, govt. infrastructures, | <ol style="list-style-type: none"> 1. Poor electrical wiring system, old and clustered structures, unattended electrical appliances, improper installation of bukhari, 2. Use of butter lamp, heaters and firewood without precaution method, use of easily flammable wooden blocks. 3. Carelessness while using fire, gas stoves, gas cylinders. | Lack of awareness on fire safety and its proper usage. |

| | | | | |
|----|-----------------------|---|--|--|
| 4 | Forest Fire | Houses and Environment | <ol style="list-style-type: none"> 1. Carelessness while burning debris 2. Dry season 3. Due to lightening, due to electrical short circuit along the power lines. 4. Due to steep slopes. | <ol style="list-style-type: none"> 1. Properties and lives will be lost. 2. Lack of awareness on fire hazards |
| 5 | Lightning and Thunder | Lives and properties | Working in paddy field, poor electric wiring and going under the cypress trees. | Property and affect human live & lack of awareness on impacts of lightening. |
| 6 | Earthquake | <ol style="list-style-type: none"> 1. Traditional houses 2. Dzong and Lhakhangs & lives | 1. Traditional houses are not constructed as per Standards and codes, lacks earthquake resilient materials, constructed on hilltops and on steep slopes. | <ol style="list-style-type: none"> 1. Collapsed/ cracked 2. Live lost/ injury, due to lack of mock drills, lack of awareness, its unpredictable. |
| 7 | Flash-Flood | Agricultural Farm land, irrigation channel, roads, properties, lives, environment and infrastructures. | Settlement near river banks, on steep slopes, no proper protection walls along river banks, no early warning systems, lack of proper drainage systems. | Damage properties , human lives will be affected, lack of knowledge on floods. |
| 8 | Soil erosion | Top soil of agricultural farm land and vegetation. | Lack of proper land management like land terracing, planting of hedge row and stone bounding. | Lack of skills and knowledge on top soil protection, not knowing the importance of top soil. |
| 9 | Hail storm | Properties and agricultural crops. | Due to climate change, no protection measures for it, weak structures. | Lack of awareness, due to unpredictable circumstances, it breaks down the structures. |
| 10 | Pests & diseases | Damage to crops and fruits | Due to lack of pests resilient crops. | No awareness on types of pathogens, lack of expertise in controlling pests & diseases. |

3.4 Capacity Assessment at the Dzongkhag level

| S/N | | Hazard | Physical capacity | Economic capacity | Social/Institutional capacity | Environment ca |
|-----|--|--------|--|--|--|-------------------|
| 1 | | All | Fire trucks, one water tanker, Dessups, SAR teams, SAR equipments, police personnel, Red cross society, ambulance, LHSS ground, EMTs, numbers of Emergency Kits, tarpaulin sheets. | House Insurance, Royal Kidu, Life insurance. | DDMC, Hospital, close Knit communities, FCB, Farmers group, Dzongkhag Dratshang, | Water source, Tim |

3.5 Probability and impact matrix

| | | | | | |
|----------------------|--------------------|----------------|------------------|---------------------|---------------------|
| Very probable | | | | Windstorm | Earthquake |
| Probable | | | Structural Fire | Landslides | Flood |
| Less probable | | Hailstorm | Pests & diseases | | |
| Improbable | | | | | |
| Impact | Unimportant | Limited | Serious | Very serious | Catastrophic |

Generally, in all the gewogs there are certain capacities and some level of awareness on prevailing hazards and some knowledge on the measures to take to reduce risk before and during disasters. Following are the summary of capacity required in the Dzongkhag:

1) Risk Reduction and Mitigation

There is need to build capacities in the Dzongkhag engineering cell and disaster focal points of various sectors under the Dzongkhag administration to lead both structural and non-structural mitigation activities in the communities, schools, health facilities, etc. Rural homes, school structures, health facilities and cultural structures have been particularly vulnerable in the past earthquake events. Therefore, need for the vulnerability assessment of old public structures are import to determine strengthening needs or replacement decisions. In terms of earthquake and other hazards, there is need to strengthen the construction quality monitoring system to ensure constructions adhere to standards and building codes.

Landslide is also a priority hazard for Lhuentse and there is need to build capacities in the Dzongkhag to raise awareness in the community on land management and carrying out mitigation in structures such as roads, schools, Lhakhangs, etc., which suffer from recurrent landslide damages.

2) Preparedness

There is need to ensure early warning capacities for heavy rainfall, thunderstorms, avalanches, hailstorms, and other such extreme weather conditions and need to have systems in place to provide the early warning/advisory to the affected communities in time. It is also very important to build capacities within community on family preparedness to safeguard their ones lives in times of any disasters. Similarly, public institutions, health and schools are also required to build capacity to respond to disasters fearlessly.

3) Response

In terms of response, capacities for SAR, First Aid, assessment team (rapid, damage, safety etc.) need to be built at various level. There is also need to support and organize volunteers for response and coordinate with existing volunteer organization like Desuups. For effective response, standard operating procedures (SOPS) need to be developed for every level. Simulations and drills should be carried out to test and practice the procedure. At the Dzongkhag level, EOC should be established along with the related SOPS.

3.5 Lhuentse Dongkhag Seasonal Calendar

| Event/month | Jan | Feb | Mar | April | May | June | July | Aug | Sept | Oct | Nov | Dec |
|--------------------|-----|-----|-----|-------|-----|------|------|-----|------|-----|-----|-----|
| Rainfall/monsoon | | | | | | | | | | | | |
| Windstorm | | | | | | | | | | | | |
| Dry Season | | | | | | | | | | | | |
| Thunder/Lightening | | | | | | | | | | | | |
| Sowing | | | | | | | | | | | | |
| Harvesting | | | | | | | | | | | | |
| Local festival | | | | | | | | | | | | |
| Hailstorm | | | | | | | | | | | | |
| Snow | | | | | | | | | | | | |

The matrix above shows the seasonal calendar of Lhuentse Dzongkhag. The shaded portion represents the various events falling on seasonal basis. Generally, the data for the above

events and its timings are collected from 8 Gewogs and incorporated into one to reduce the bulk. Therefore, we could accordingly make any plans by keeping in mind the above events and its timings.

Chapter 4: Disaster Management Action Plan (2018 – 2022)

This chapter details the action plan for Lhuentse Dzongkhag to raise awareness, reduce risk, and enhance preparedness and resilience for five years for the hazards which are prioritized as here under.

Priority Hazard: Earthquake, Landslide, Flood, Fire (forest fire, Structural fire), wind-storm, pests & diseases, Hailstorm and Thunder & Lightning.

| Priority Area | Key Activities | Target | Lead Agency/Person | Supporting agencies/Nodal agency | Timeline | Budget estimate (Nu. in M) |
|---|--|---|----------------------|---|----------------------------------|----------------------------|
| DDMC Meetings as per the DM Act of Bhutan 2013 | Conduct DDMC meetings bi-annual as per the DM Act of Bhutan 2013 (to review the DM and Contingency plan, assess implementation of the activities and dissemination of plan) | DDMC | DDMO | DDMC | To be conducted twice in a year. | 0.150 |
| Awareness and Education | 1.1 Raise awareness on top priority hazards – Landslide, earthquake and fire. | All 8 Gewogs, Dratshang, Monasteries, Schools, Business Community | DDMC | Gewog Administration DDM RBP | 2018-2020 | 0.300 |
| | 1.2 Distribute posters with key messages on risk reduction and disaster preparedness prepared by the DDM | Both to urban and rural public | DDMO | DDMC DDM Gewog Adm. Relevant sectors | 2018-2021 | 0.080 |
| | 1.3 Encourage contractors to incorporate risk reduction features in the farm road, irrigation and other infrastructural development projects | Both rural and urban communities | DE, Gups, DDMO | DDM Gewog Adm. DDMC | 2019– 2020 | 0.100 |

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| | 1.4 Dzongkhag observes International disaster day and Annual school preparedness drill day | Schools, communities, Rabdey, Business community | DDMO | DDMC, DDM, Gewog Adm. MoE Dratshang | Annually | 0.260 |
| | 1.5 Raise awareness on family preparedness | All Gewogs Communities | DDMO/GAOs | DDM, Gewog Adm. | 2019-2020 | 0.250 |
| | 1.6 Conduct awareness programs on insurance benefits and encourage families to insure their property against various hazards | All Gewogs Communities | DDMO/GAOs | Insurance companies, DDM, Gewog Adm. | 2019 – 2020 | (club with other awareness activities) |
| Enhance risk reduction and mitigation | 2.1 Conduct training on good construction practices | Engineers, carpenters, Masons and house owners | DDMO/DE | DDM, DES, MoWHS | 2020 -2021 | 0.600 |
| | 2.2 Carry out vulnerability assessment of old/ existing government buildings – schools, health facilities, cultural buildings, office buildings | Engineers | DDMO/DE | DDM, DES, MoWHS, MoE, Gewog Adm. Dratshang | 2020-2021 | 0.400 |
| | 2.3 Implement structural mitigation measures or replacement as per vulnerability assessment recommendations on a prioritized basis | Mitigation for priority structures | DE/DDMO | DDM, DES, MoWHS, MoE, Gewog Adm. Dratshang | 2022 onwards | Based on assessment |
| | 2.4 Institute construction quality control and monitoring mechanism for materials and adherence to standards and designs | Engineering Division | DE/DDMO | DES, MoWHS, DDM Other relevant sectors | 2019 | 0.200 |

| | | | | | | |
|--|--|---|------------------------------------|--|------------|--|
| | <p>2.5 Implement mitigation measures on a prioritized basis in the Gewogs as per HVCA:</p> <ul style="list-style-type: none"> - Fire safety training in Khoma and Jarey gewog - Landslide mitigation in Maedtsho & Jarey. - Encourage anchorage of roofs and other mitigation for Wind-storm in all gewogs. | Gewogs, Respective Sectors. | Gewogs/ Sector heads/ DDMO | DDM, GNHC, MoF, concerned sectors | 2019- 2020 | Based on identified priority mitigation activity |
| | 2.6 Training of Engineers, Sector heads and GAOs on Rapid Damage Assessment skills | Engineers, Sector heads and GAOs | DE/DDMO | DES, MoWHS, DDM, DDMC | 2018-2022 | 0.250 |
| | 2.7 Refresher course for the Dzongkhag SAR Team | Dzongkhag SAR team, RBP | DDMO | DDM, RBP | 2018-2022 | 0.300 |
| | 2.8 Hands on training on use of fire-fighting equipment | DDMC/Lhakhanga care takers/Business Community and Communities | DDMO | RBP DDM Dratshang Relevant sectors | 2019-2020 | 0.300 |
| | 2.9 Form and train gewog SAR teams | Gewogs | Dzongkhag and Gewog Administration | DDM | 2020-2022 | 0.650 |
| | 2.10 Procure additional VHF sets | Dzongkhags/ Gewogs | DDMO | Dzongkhag/ Gewog Administration | 2018-2022 | 0.300 |

| | | | | | | |
|--|---|--|---|----------------------------------|-----------|-----------------------------|
| | 2.12 Ensure fire preparedness measures is put in place in the BOD in the Sumpa, Khoma gewog | BOD | DDMO | DDMC RBP | 2018-2019 | |
| 3. Enhance preparedness, response and recovery levels | 3.1 Establish Dzongkhag Emergency Operation Center | Dzongkhag | DDMO | DDMC, DDM NDMA, Relevant sectors | 2018-2022 | 0.200 (for furnishing only) |
| | 3.2 Raise awareness and sensitize on Lhuentse Dzongkhag DM and Contingency plan. | Dzongkhag, Gewog, Dratshang, RBP, RBA, Judiciary, Regional Offices, Desuups, Communities | DDMO | DDM | 2018-2019 | 0.300 |
| | 3.3 Stockpile materials required for emergency response and immediate recovery at strategic locations | Dzongkhag | DDMC | DDM, MoF, relevant sectors | 2018-2020 | 1.500 |
| | 3.4 Establish and institute pre-arrangements for emergency procurement and requirements | Dzongkhag | Procurement Officer DDMO/ Finance Officer | DDMC, DDM, MoF | 2018-2019 | 0.200 |
| | 3.5 Identify Evacuation sites for various hazards (keeping in mind the needs of people with disabilities, women, children | Community and Offices | DDMC, Gewog Administrations | DDM, relevant sectors | 2018 | |
| | | | | | | |

| | | | | | | |
|--|--|---|------------------------------------|-----|-----------|-------|
| | and elderly) | | | | | |
| | 3.7 sensitize, conduct mock drill/ simulation on Dzongkhag DM and Contingency plan | Dzongkhag, Drungkhag Administration, Gewog Administration Dratshang, RBP, RBA, Judiciary, Regional Offices, De-Suong, Business and Communities | DDMC | DDM | 2018-2022 | 0.500 |
| | 3.8 Procure additional SAR equipment | Gewog Administration | Dzongkhag/ Gewog Administration | DDM | 2018-2022 | 1.500 |
| | 3.9 Identify Dzongkhag Disaster Assessment Team for various hazards | Dzongkhag and gewogs | DDMO | DDM | 2018-2022 | |

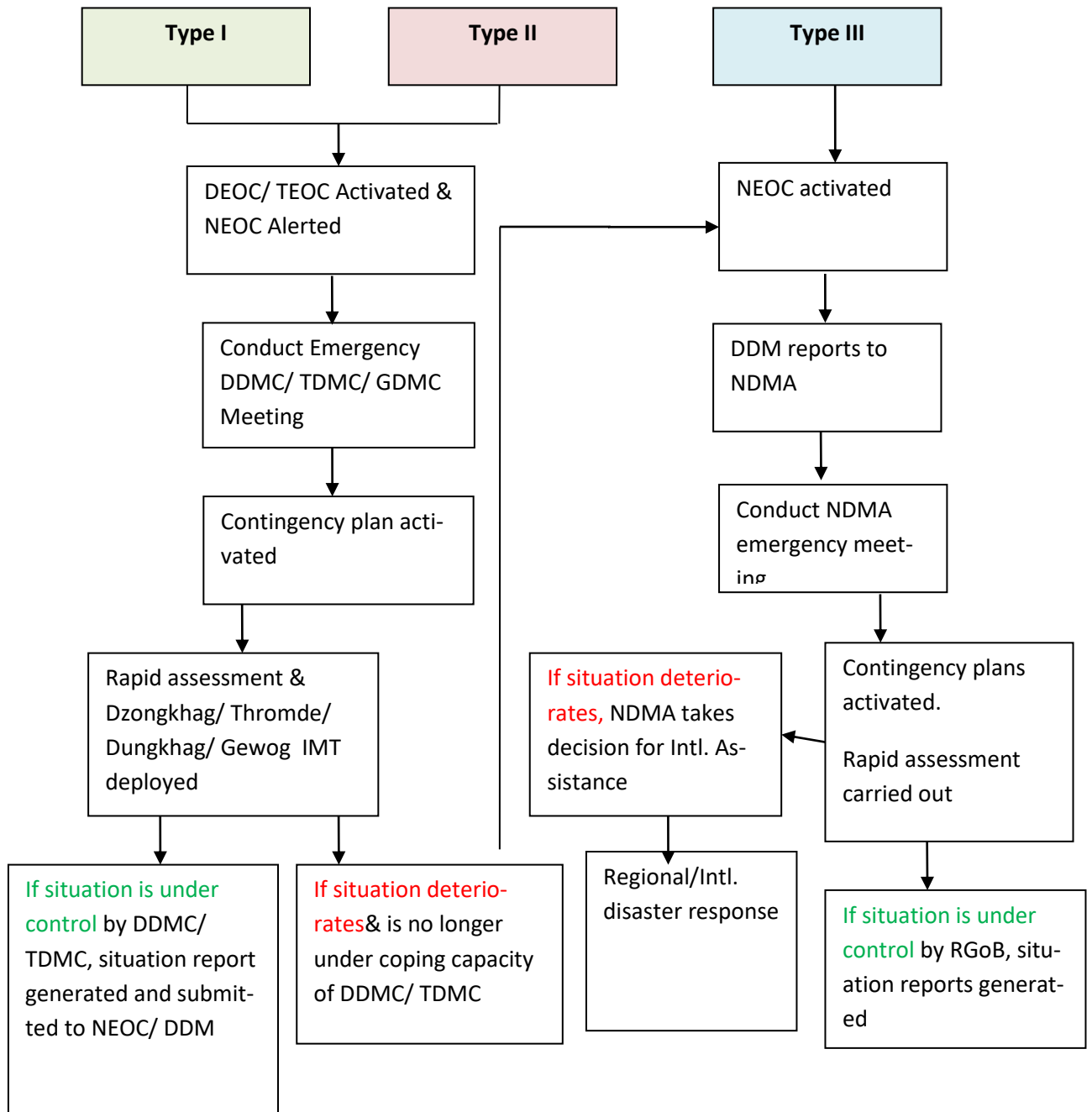
Chapter 5: Dzongkhag Contingency Plan

As per the Contingency Planning Guidelines of Bhutan 2014, a contingency plan aims to prepare an organization to respond well to an emergency and its potential humanitarian impact. Thus, developing a contingency plan involves making decisions in an advance about the management of human and financial resources, coordination and communication procedures, and being aware of range of technical and logical response.

The contingency procedures and arrangement will cover the response and early recovery phases:

- Immediately before disaster when/if early warning of an impending situation or an event is received;
- During disaster when immediate response and relief measures need to be implemented; and
- After disaster for measures to be taken in terms of relief and setting the recovery process in motion. The chart below shows the general decision making, information flow and reporting mechanism during disaster type I, II and III.

Figure 5: General disaster decision making and information reporting chart

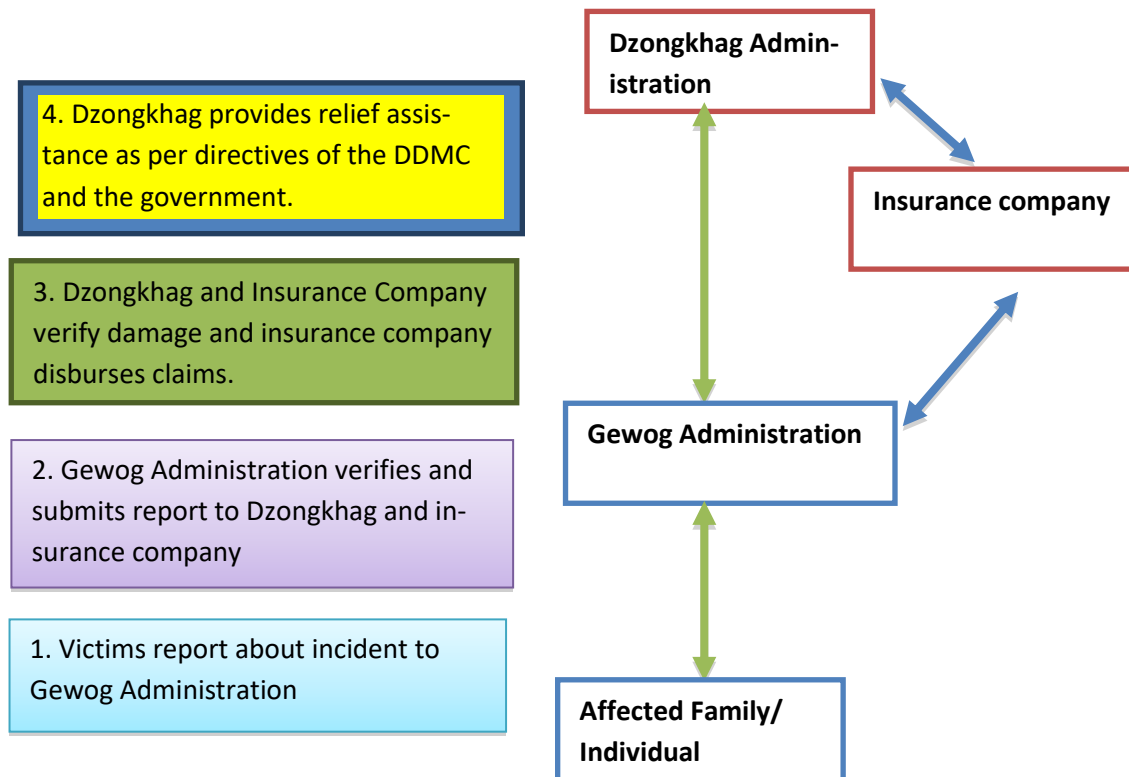


5.1 Standard Operating Procedure for Isolated local incidents

For isolated local incidents, such as fire affecting single house or windstorm blowing off roof of one structure in a locality, and cases which do not qualify under Disaster Type I-III of the DM Act of Bhutan 2013, the following standard operating procedure shall be followed.

Isolated Local Incident- An isolated local incident is an incident which does not have a wide-spread effect on people and property and can be managed within the normal operations of the agencies concerned, and such incident shall not require emergency procurement and funding.

Figure 6: Standard Operating Procedure for local incidents



As per the DM Act of Bhutan 2013 and the DM rules and regulations standard procedures for response at the Dzongkhag level for different Disaster Type will be as follows:

Disaster Type I

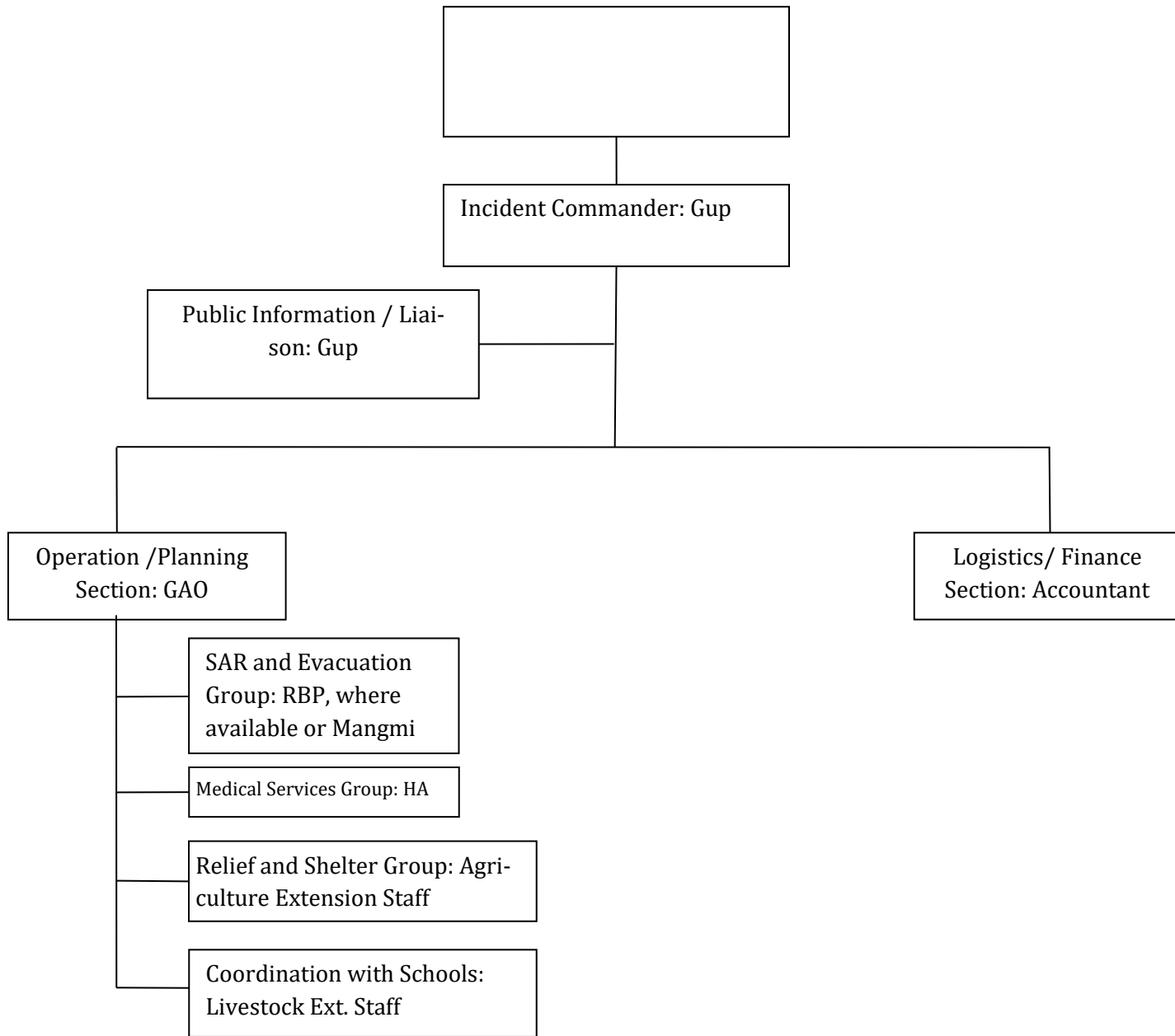
Disaster Type I - *A disaster shall be classified as Type I if it can be managed with available resources and is within the coping capacity of the Gewog/Thromde concerned*

- a. In case of an impending disaster situation, Gewog/ Thromde administration will be responsible for establishing immediate contact with likely affected areas as soon as there is early warning information and provide orders for evacuation and immediate response.
- b. In case of an incident/disaster situation:
 - a. Gewog shall immediately submit first information to the Dzongkhag DM Committee
 - b. (DDMC)/ Dzongkhag Disaster Management Officer (DDMO).
 - c. Gewog Incident Management Team (IMT) shall be activated and the IMT shall provide immediate response and relief within their capacity.
 - d. Gewog Incident Management Team shall conduct rapid needs assessment as per the required format.
 - e. Gewog shall provide immediate relief and early recovery support as per rapid needs assessment using available funds at Gewog level and submit expenditure report and bills to DDMC for further submission to DDM, for reimbursement.
 - f. The DDMO shall submit the first information report to the DDM within 24 hours of the incident.
 - g. In case the incident is beyond the coping capacity of the Gewog, the Gewog will submit for SAR and other response needs to the DDMC.
 - g. Gewog shall conduct detailed damage assessment along with insurance company for rehabilitation and reconstruction and submit report to DDMC.

Incident Management Team at Gewog level

The Gewog Incident Response Management Team will be led by Gup and monitored by Dzongdag. Due to the lack of sufficient officers at the Gewog level, the Logistics and Finance functions will be undertaken by the same officer especially in Type I disasters. In case, the disaster becomes Type II but still limited to geography of the affected Gewog then the IMT from the Dzongkhag will assume command with the support of the IMT at the Gewog.

Figure 7: ICS organization at Gewog Level



Disaster Type II

Disaster Type II - A disaster shall be classified as Type II if it can be managed with available resources and is within the coping capacity of the Dzongkhag concerned.

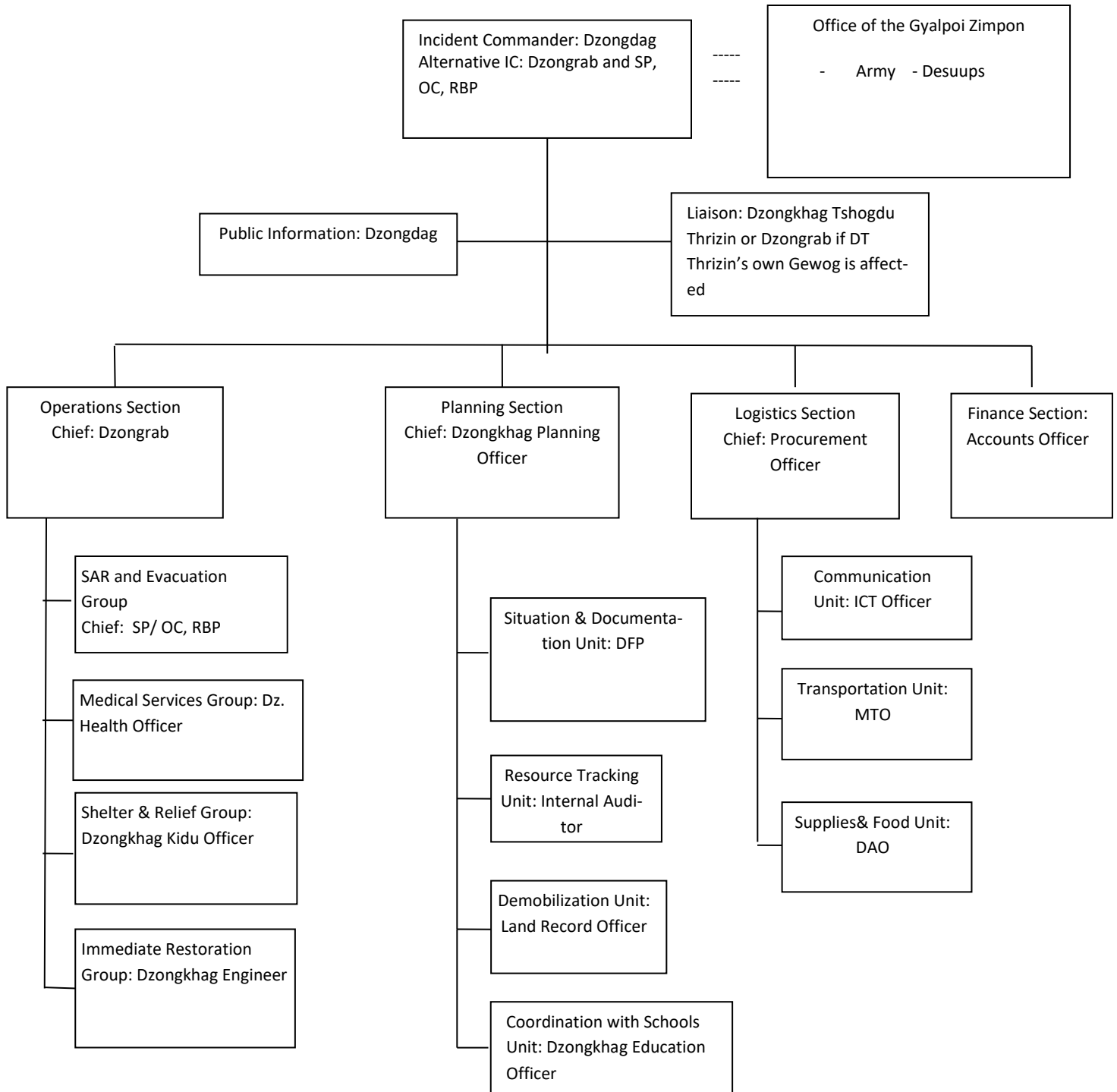
- a. In case of receiving early warning of an impending disaster situation, the DDMC Chairperson shall immediately activate the Dzongkhag Emergency Operation Centre and relay the early warning to all the Gewog/Thromde offices along with orders for evacuation, deployment of Search and Rescue Teams or any other response as required.
- b. In case of an incident/disaster situation:
 - a. The DDMC Chairperson shall activate the DEOC and be in contact with the National Emergency Operation Centre.
 - b. Dzongkhag/ Dungkhag Incident Management Team shall establish contact and line of communication with disaster site and provide immediate response and relief within their capacity and submit for SAR and other response needs to NEOC, if required.
 - c. Dzongkhag Incident Management Team shall direct evacuation of disaster-affected communities to safe areas and temporary shelters.
 - d. Dzongkhag IMT shall conduct rapid need assessment as per Bhutan Disaster Assessment (BDA) tool within 72 hours.
 - e. The DDMO shall submit the First Information Report to DDM within 24 hours of the incident.
 - f. DDMC shall provide relief and early recovery support as per the rapid assessment using available funds at Dzongkhag level and submit expenditure report and bills to DDM for further submission to Ministry of Finance for reimbursement.
 - g. In case the incident is beyond the coping capacity of the Dzongkhag, request for up-gradation of disaster from Type II to Type III shall be submitted to the NDMA.
 - h. Dzongkhag shall conduct detailed damage assessment along with insurance companies for rehabilitation and reconstruction and submit report to DDMC.

Incident Management Team at Dzongkhag Level

The Dzongkhag Incident Response Management Team will be led by the Dzongdag with Dzongrab being the alternate. The IC will liaise with office of the Gyalpoi Zimpon, Army, and Desuups for effective coordination with these entities. Various positions in the team

will be occupied by the officers present at the Dzongkhag level and together they will respond to a disaster in a well-coordinated manner using the resources that are available within the Dzongkhag.

Figure 8: ICS organization at the Dzongkhag level



*****Transportation Unit leader to liaise with RSTA Base In-charge**

Note: The support of Desuups/Dratshang/NGOs/Corporations/Regional Offices/Private business and communities will be coordinated through NDRCC and IMT at the national and Dzongkhag level. As per the section 41 of the DM Act of Bhutan 2013, the Dzongkhag (Chair of the DDMC) has the authority to 'requisition necessary human and material resources from any agency, CSO, private sector or person' for the purpose of response and relief operations during the plight of emergencies.

Disaster Type III

Disaster Type III - A disaster shall be classified as Type III if the severity and magnitude is so great that it is beyond available resources and coping capacity of the Dzongkhag concerned.

A disaster Type III is at national scale and will be managed by the NDMA and the DDMC shall follow the directives of NDMA/ national disaster response coordination committee.

Details of IMT positions and functions

INCIDENT COMMANDER

The incident commander at the Dzongkhag level by default will be the Dasho Dzongdag. During the non-disaster times, Dasho Dzongdag will function as the chairperson to the Dzongkhag Disaster Management Committee (DDMC) and as chief emergency/disaster coordinator and also as an incident commander during the disaster. The incident commander is responsible for on-site management of a disaster and his responsibilities include the following:

The Incident Commander is responsible for:

- Developing incident objectives and managing incident operations.
- Setting priorities and defining the ICS organization for the particular response.
- Assigning or deputing other officials to assist in responding, in consultation with the Chief Coordinator.
- Assess the on-site situation.
- Report periodically to the DEOC and keep Chief Coordinator informed of incident status.
- Brief Command Staff.
- Establish immediate priorities especially the safety of responders, other emergency workers, bystanders, and people involved in the incident.

- Establish an appropriate organization.
- Approve the use of trainees, volunteers, and auxiliary personnel.
- Stabilize the incident by ensuring life safety and managing resources efficiently and cost effectively.
- Approve implementation of the written or oral Incident Action Plan (IAP).
- Ensure that adequate safety measures are in place.
- Order the demobilization of the incident when appropriate.

*An individual is also responsible for all incident activities including the development of strategies, tactics, ordering and the release of resources. The IC has overall authority and responsibility for conducting incident/disaster operations and is responsible for the management of all incident/disaster operations at the incident site.

Public Information: responsible for interfacing with the public and media or with other agencies with incident-related information requirements.

Liaison: responsible for coordinating with representatives from cooperating and assisting agencies.

Operations Section: responsible for all tactical operations at the incident such as search and rescue, medical, infrastructure, and shelter/relief.

Groups under the Operations Desk

- **SAR and Evacuation Group:** will be responsible for conducting the SAR and providing evacuation at the site of the incident. They are also responsible for monitoring and assessing safety hazards or unsafe situations, and for developing measures for ensuring personnel safety. They are also responsible for;
 - Distribute emergency relief material to the affected people.
 - Keep direct contact with different officers.
 - Dispatch situation reports to the Dzongkhag EOC.
 - Send task forces to disaster affected areas.
 - Carry out search & rescue operations.
 - Set up emergency evacuation shelters, and transport affected people to the shelters

- Carry out firefighting operations
- Maintain law and order, especially during relief distribution.

They are also responsible for providing relief such as;

a. Shelter -

Pre-stockpile (blankets, tarpaulin sheet, tents, CGI sheets, family kits, minimum standards, bamboo, rope, mat/mattress fuel/fire wood (pre-arrangement))

During- setup the shelters, distribute relief items

b. Food and water-

Pre- as per the minimum standards (individual or family) (FCB)

During -Distribute food and water, ensure fair distribution

c. Sanitation-

Pre-stockpile (health and hygiene kits)

During – distribute health and hygiene kits

d. Safety and security, crowd management- RBP at distribution points and at each evacuation center with assistants from trained volunteers

Pre- agreement on dress code, procedure on safety and crowd management and awareness to general public on safety arrangement

Pre – pre-arrangement with the RBP

During – provide safety and security at the evacuation center, crowd management

e. Medical –MoH (medical staff in each evacuation center)

Pre – pre-arrangement with the MoH;

During – provide medical services at the evacuation center, triage, counseling and psycho-social support

Need: stockpiles of essential food- FCB, tents, blankets, basic SAR equipment (shovel, helmet, gloves, stretcher, battery operated lighting, safety boots, flash lights, goggles, dust mask etc), generators, portable toilets. Detailed inventory of stockpiles and resources and things that need to be procured.

Medical Services Group:

The lead agency here is the Health Sector and they would be responsible for mobilizing medical teams of specialists from within (and outside if the need arises) for immediate response and coordinating with the DEOC for supply of:

- Medical relief for the injured
- Number of ambulances required and locate hospitals
- Medical equipment and medicines required
- Special information required regarding treatment for epidemic etc.
- Blood

They would also be responsible for the monitoring of:

- Treatment of the injured and sick
- Preventive medicine and anti-epidemic actions
- Reports on food, water supplies, sanitation and disposal of waste and coordinate the services of investigation laboratories support services at district level.
- Health and sanitation, water supply, disposal of wastes, water sanitation and health services
- Communities for storage of rations, sanitation, water supply, disposal of wastes, water stagnation and health services.
- **Shelter & Relief Group:** responsible for providing shelter and relief to the affected families
- **Immediate Restoration of Essential Public Services Group:** responsible for immediate restoration of essential public services

Planning Section: Responsible for collection, evaluation, information dissemination, preparation and documentation of Incident Action Plans. The Section also maintains infor-

mation on the current and forecasted situation, and on the status of resources assigned to the incident.

Units within Planning Section

- **Situation and Documentation Unit:** Responsible for the collection, organization, and analysis of incident status information, and for analysis of the situation as it progresses. Responsible for collecting, recording, and safeguarding all documents relevant to the incident.
- **Resources Unit:** Responsible for maintaining the status of all assigned resources (primary and support) at an incident.
- **Demobilization Unit:** responsible for assuring orderly, safe, and efficient demobilization of incident resources.

1. **Logistics Section:** Responsible for providing facilities, services, and materials for the incident.

Units within Logistics Section

Communications Unit: responsible for providing communication services at an incident. The communications sections should be headed by the IT or other relevant official from the Dzongkhag administration. Emergency communications expert or professionals may also be assigned to head the section. The section would be responsible for:

- Collecting and communicating incident related information to incident commander/staff and the DEOC
- Submitting situation report (SITREP) to the DEOC
- Distribution and maintenance of communication equipment
- Facilitate communication/ relay information between affected population and their families
- Maintain contact with forecasting agencies/ EOCs and gather all possible information that may further impact the disaster or an impending disaster situation.

Transportation Unit: responsible for the fuelling, maintaining, repairing of vehicles, transportation of personnel and supplies.

- **Supplies and Food Unit:**

- Responsible for ordering equipment and supplies required for incident operations.
- Responsible for providing meals for incident personnel and for providing food/ supplies for the Relief and Shelter Unit (for victims).

Finance Section

- **Finance Officer**

- Responsible for all incident costs and financial considerations.
- Responsible for tracking costs, analyzing cost data, making cost estimates, and recommending cost-saving measures.
- Responsible for financial concerns resulting from property damage, injuries, or fatalities at the incident.
- Responsible for fiscal matters involving hiring, purchasing goods and services, establishing local sources for obtaining equipment and supplies.

- **Rapid Assessment Team (RAT) -Dzongkhag Engineer.**

The desk shall be led by the Dzongkhag Engineer. Usually after the disaster, the structures in the disaster affected area still remain risky and people remain vulnerable because of carelessness and ignorance. Therefore this section is responsible to;

- Declaring a site as no-safe zone or wise-versa for settlement after a thorough assessment of the standing structure is done.
- Advice on the retrofitting of the partially damaged structures
- Report to the incident commander for updating on the situation.
 - **Before disaster-** Identify rapid assessment team members and train & familiarize with assigned area.
 - Communication set-up (procure additional HF/VHF handset).
 - Rapid assessment forms to be available in all Gewogs and in DEOC which was prepared by DDM.

- **During disaster-** Conduct immediate assessment of disaster in terms of number of people affected (dead, injured, without shelter, missing, without food), people requiring SAR, evacuation, medical assistance, extent of damage, road network and bridges.
- **After disaster-** Carry out periodic assessments as directed by team leader.

Volunteers' Management Desk

The volunteers' management desk will be headed by the Human Resource Officer and will be supported by other staffs of the Dzongkhag. Other members may assist the desk if required.

Often, after the impacts of an event on a community, spontaneous volunteering occurs. The incident commander shall advise on volunteer management arrangements and for working with key focal person of the respective desks to ensure arrangements are in place for these volunteers to be productive. These arrangements should include the selection, induction and safety of these volunteers. This section is responsible for:

- Registering the volunteers and report to the incident commander for advice and further instructions.
- Distribute the safety gadgets to the volunteers working in the affected sites.
- Maintain up-to date information on the volunteers with regards to dispatch of volunteers to the site and their return and communicate with the incident commander.
- Try to get as many as volunteers in times of disaster.

Mode of Communication during disaster/ threatening disaster situation:

- First line of communication: VHF handsets
- Alternative modes of communication: Mobile phones
- Social media (WhatsApp, wechat and Telegram groups for Dzongkhag and Gewogs)
- BBS and radio for sharing information to communities

- Satellite phone: not activated (to be used for emergencies when other modes of communication fail)

Dzongkhag Emergency Operation Centre Management (DEOC)

The DEOC should be established as per Section 105 of the Disaster Management Act of Bhutan 2013. The DEOC will perform the following functions for coordination and management of disasters:

1. Receive disaster alerts and warnings from responsible agencies and other sources and communicate the same to all relevant agencies
2. Forward reports to relevant agencies
3. Monitor response and relief operations
4. Facilitate coordination
5. Requisition resources during disaster
6. Other functions as may be necessary

Location of the DEOC: DT hall

Staffing during normal times as per the Disaster Management Rules & Regulations 2014:

2. Officer in charge of DEOC: Disaster Focal person
3. Manned by two full time technicians as per Section 62 of the Disaster Management Rules and Regulations 2014

During threatening/ disaster situations

1. Dzongdag to head the DEOC as per the DM Act 2013.
2. Other sector experts to staff the DEOC

DDMC to convene meeting in the DEOC to make critical decisions.

Chapter 6: Implementation Mechanism

As per the DM Act, the DDMC will be responsible for the formulation, endorsement, implementation, monitoring and updating of the Dzongkhag DM and Contingency plan. The DDMC shall meet at least twice a year to update the plan's implementation progress.

Dzongkhag and Gewog administrations will be responsible for implementation of the prioritized plan activities and ensure that the activities are mainstreamed into their annual and five year plans. The Dzongkhag Disaster Management Officer will facilitate mainstreaming of priority disaster risk reduction, preparedness, awareness and capacity building activities in annual and five year development plans of the Dzongkhag.

In the event of disaster, DDMC will activate the Dzongkhag Contingency Plan. DDMC will, as an emergency measure, meet the expenses for response and relief operation from the annual budget of the Dzongkhag in accordance with the financial guidelines.

For immediate restoration of critical disaster management facilities, DDMC will submit the fund request to DDM, secretariat to NDMA as per financial guidelines.

The budget requirement for the recovery and reconstruction works should follow the normal budgetary process. The DDMC and concerned sectors shall, for the purpose of recovery and reconstruction of public assets and infrastructure, undertake detailed damage assessment within its area of responsibility as per the post disaster assessment framework endorsed by the NDMA. The detailed damage assessment along with the work program and cost estimate will be submitted to DDM who will review and forward to NDMA for further submission to MoF.

The DDM, as the national coordinating agency for disaster management and the executive arm of the NDMA, shall ensure support of the NDMA and of concerned sectors and agencies. The DDM will also provide technical and monitoring support and help in mobilizing resources for the plan.

As member secretary, the DDMO will keep record, maintain data, and assist the chairman of the DDMC in monitoring the Dzongkhag DM plan activities. The DDMO shall present the plan's progress during DDMC meetings and update DM plan activities and budget annually. DDMO will also ensure that reports are submitted to the DDM and the NDMA as required.

Financial Provisions as per the Disaster Management Act of Bhutan 2013

As per the Disaster Management Act 2013, there four different types of financial arrangement such as ***Response and Relief Expenditure, Budget for National Disaster Management Activities, Budget for Department of Disaster Management*** and ***Recovery and Reconstruction budget***.

However, there are three main categories of the disaster management activities in the Dzongkhag for which the budget allocation is required;

- i) Preparedness
- ii) Response and Relief Expenditure
- iii) Recovery and Reconstruction

Preparedness

The Disaster Management Act 2013 (DM Act 2013) mandates Gewog, Thromde, Dzongkhag, Agency and Private Sector notified to ensure mainstreaming of Disaster Risk reduction into its development plan, policy, programme and project. Thus, any expenditure on disaster preparatory works, like mitigation, prevention, purchase of equipment and so on should be proposed by the concerned agency/sector following the normal planning and budgetary procedures. For instance, any construction in the country should incorporate the disaster resilient technology inclusive of its budget.

Response and Relief Expenditure

As per the DM Act 2013 there shall be a Dzongkhag Disaster Management Committee (DDMC). The Chairperson of DDMC shall, upon declaration of disaster, have the authority to use annual budget of the concerned Dzongkhag, to provide Response and Relief support to the affected people and communities. Response and Relief shall include the following:

- a) Providing food, shelter and other essential relief items for the affected people and *Responders (if need be)* as per the minimum standards set by the Department of Disaster Management (DDM).

“Procurement of items/ goods/ services for the purpose of relief and response, not reflected in the annual quotation of the Dzongkhag/Sectors, may be exempt from standard procurement procedures specified in the Procurement Rules and Regulations, where exigencies of the disaster situation demand, as per section 89 of the DM Act 2013”.

- b) Payment of compensation to person or private entities, whose property is used, lost or damaged during relief, response and recovery operation in accordance with Chapter 11 of the DM Act 2013.

After the expenditures are met from the annual budget, *the agencies shall* submit detailed accounts of expenditure with copies of documentary evidences to the National Disaster Management Authority (NDMA) through the DDM for budget sanction by the Department of National Budget (DNB), MoF. The DNB & MoF shall, upon receipt of reimbursement let-

ter from NDMA, reimburse the actual amount of expenditure to the agency concerned at the earliest possible (*within 3 weeks*).

In case the annual budget of the agencies is not enough to meet the expenses for response and relief operation, the Chairperson of DDMC may make written requests to the Chairperson of the NDMA for additional funds from DNB, MoF.

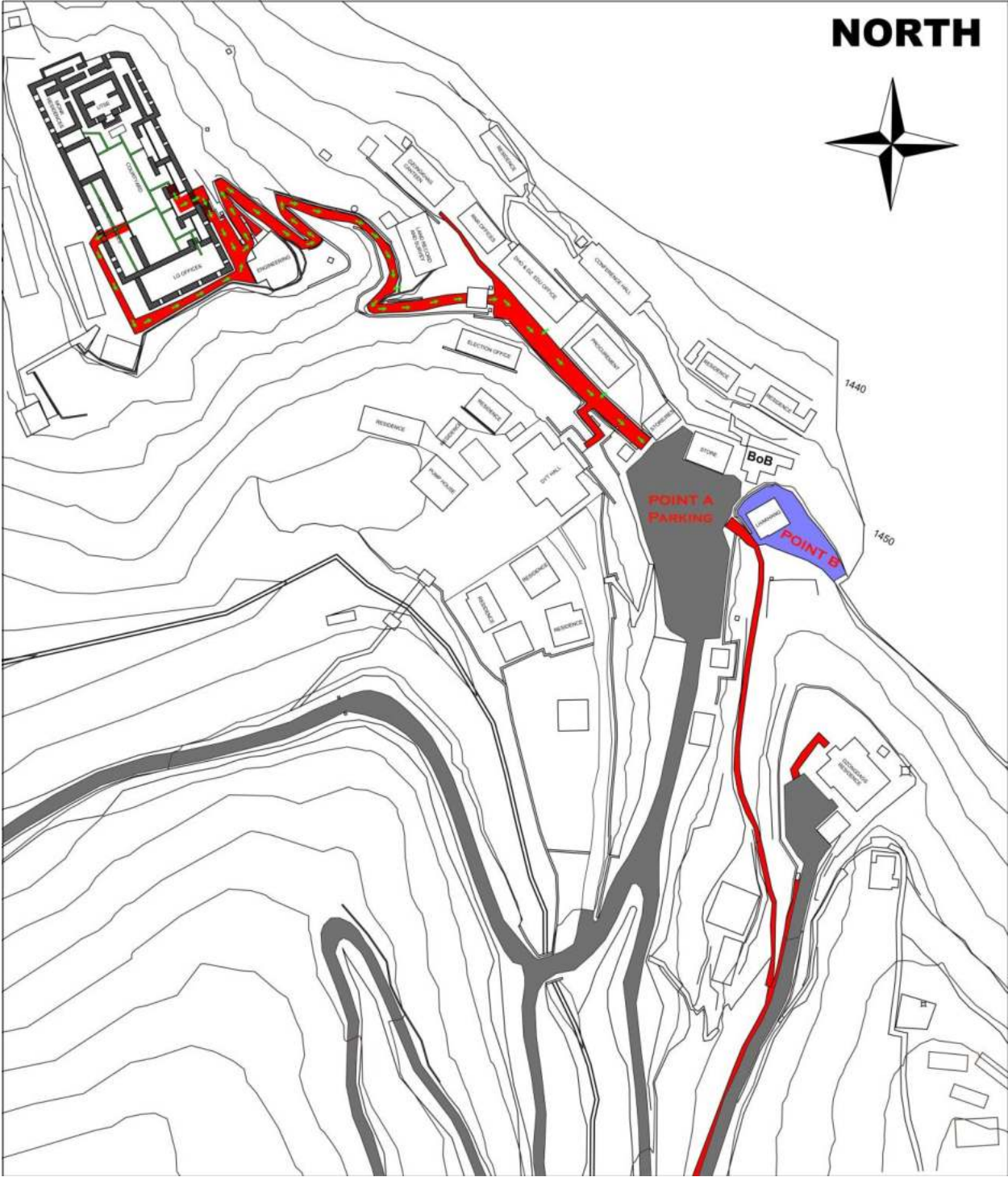
The Operation Coordinator or Chairperson of DDMC shall ensure that a detailed inventory of goods/items and services procured for response and relief operation.

Recovery and Reconstruction

The budget requirement for the recovery and reconstruction works should follow the normal budgetary process. The DDMC and concerned sectors shall, for the purpose of recovery and reconstruction of public assets and infrastructure, undertake detailed damage assessment within its area of responsibility as per the post disaster assessment framework endorsed by the NDMA. The detailed damage assessment along with the work program and cost estimate shall be submitted to DDM who shall review and forward to NDMA for further submission to MoF. The NDMA shall make recommendation to the Government (MoF) for release of fund to the sectors concerned. However, for any major recovery and reconstruction works, the concerned Dzongkhag or agency shall plan that such works are considered for the budget allocation during the preparation of the annual budget.

In the event of major disaster, where the restoration expenditures are huge and depending on the availability of resources, the government may have to reprioritize the plan activities to finance the requirement.

Figure 9: Dzongkhag Evacuation Map



Annexures:

1. Disaster Lessons Learnt Template

Disaster Lessons learnt Template

| Sl No. | Questions | Response | Remarks |
|--------|--|--------------------------------------|---------|
| 1. | What was the Disaster/ incident? | Eg. Flood/ Earthquake/ Landslide etc | |
| 2. | What was the impact of the disaster/ incident? | | |
| 3. | What was the response to the disaster/ incident: a) Initial response b) Coordination c) Reporting d) Response taken by the Dzongkhag/Thromde/ Gewog IMT? e) Did you get feedback from the affected communities? f) How did you involve the corporate/ private sector and volunteer services? | | |
| 4. | Were you able to convene the DDMC meeting? What was the process and outcome? | | |
| 5. | EOC coordination and reporting | | |
| 6. | Lessons learnt from the disaster/ incident? | | |
| 7. | Actions required to implement lessons learnt with timeline and responsible official. | | |

Note: Dzongkhags to conduct lessons learnt for all incidents and improve their response. Lessons learnt report of disasters of higher magnitude to be submitted to DDM.

2. Contact details of DDMC members

| SI No | Name | Designation | DDMC | Contact No |
|-------|---------------------------|----------------------|-----------------------|------------|
| 1 | Jigme Choden | Dzongdag | Chairperson | 17127505 |
| 2 | Wangchen Norbu | Sr. Dzongrab | Vice Chairperson | 17326186 |
| 3 | Kelzang Lhamo | O.C | Member | 17481863 |
| 4 | Tshering Dorji | Chief DEO | Member | 17936378 |
| 5 | Yangka Dorji | ADHO | Member | 17160141 |
| 6 | Tshelthrim | Drungchen, Dratshang | Member | 17688415 |
| 7 | Tashi Penjor | DT chairman | Member | 17607101 |
| 8 | Wangchen Norbu | Interim Kidu Officer | Member | 17326186 |
| 9 | Karpola | Kurtoed Gup | Member | 17347823 |
| 10 | TshewangThinley | Gangzoor Gup | Member | 17700922 |
| 11 | Tshering Wangdi | Khoma Gup | Member | 17564523 |
| 12 | Ngawang Dendup | Maenbi Gup | Member | 17691910 |
| 13 | Jigme Tenzin Zangpo | Minjei Gup | Member | 17856141 |
| 14 | Chedup Sonam Lhendup | Maedtsho Gup | Member | 17962983 |
| 15 | Kinzang Minjur | Jaray Gup | Member | 17681420 |
| 15 | Tashi Penjor | Tsaenkar Gup | Member | 17607101 |
| 16 | Samten jangchub Singye | Thromde Ngotshab | Member | 17701838 |
| 17 | Phuntsho Wangdi | Disaster FP | Member Secre- tary | 17875705 |

3. Lhuentse Dzongkhag SAR Team

| SI No | Name of person | Designation | Phone | Skills in SAR |
|-------|----------------|----------------------|-------------------|------------------|
| 1 | Kezang | OC/ leader | 17481863 | Basic SAR skills |
| 2 | Wangchen Norbu | Interim Kidu Officer | 17326186 | Basic SAR skills |
| 3 | Ugyen Dorji | Dental | 17616190 | Basic SAR skills |
| 4 | Tashi Chedup | Gopa, RBP | 17788652 | Basic SAR skills |
| 5 | Karma Dargay | Technician | 17758415 | Basic SAR skills |
| 6 | Dawa Yoezer | Chuma, RBP | 17233329 | Basic SAR skills |
| 7 | Namgay Pelzang | Chuma, RBP | 17247115 | Basic SAR skills |
| 8 | Tshering Dorji | Gopa, RBP | 17617330 | Basic SAR skills |
| 9 | Kinley Dorji | Brother, EMT | 77104382/17813930 | Basic SAR skills |
| 10 | Kelzang Rinzin | Sr. Staff Nurse | 17927173 | Basic SAR skills |

4. Firefighting (trucks, equipment, location, capacity)

| SI No | Facilities | Location | Capacity | Contact person | Phone |
|-------|--------------------------|----------------|----------|----------------|----------|
| 1 | Fire Fighting Truck | RBP, Lhuentse | 4500 L | Khaujay | 17697760 |
| 2 | Fire Hydrant -water Tank | RBP, Lhuentse. | 300000L | Khaujay | 17697760 |
| 3 | | | | | |

5. Health Facilities

| Sl No | Name of Hospital/BHU | Location | Capacity/number of patient that can be treated | Contact person | Phone |
|-------|----------------------|-------------|--|----------------|----------|
| 1 | District Hospital | Lhuentse | 20 bedded | DHO | 17668719 |
| | | | | DMO | 17853735 |
| 2 | BHU-2 | Thimyul | 3 bedded | In-charge | 17131807 |
| 3 | BHU-2 | Ney | 2 bedded | In-charge | 17130185 |
| 4 | BHU-2 | Dungkhar | 3 bedded | In-charge | 17130186 |
| 5 | BHU-2 | Khoma | 3 bedded | In-charge | 17130188 |
| 6 | BHU-2 | Ganglakhema | 3 bedded | In-charge | 17131674 |
| 7 | BHU-2 | Tangmachu | 3 bedded | In-charge | 16446105 |
| 8 | BHU-2 | Dangling | 3 bedded | In-charge | 17131792 |
| 9 | BHU-2 | Minjey | 3 bedded | In-charge | 17130440 |
| 10 | BHU-2 | Gortshom | 3 bedded | In-charge | 17130183 |
| 11 | BHU-2 | Tsaenkhar | 3 bedded | In-charge | 17130174 |
| 12 | BHU-2 | Autsho | 3 bedded | In-charge | 17130187 |
| 13 | BHU-2 | Pathpachu | 3 bedded | In-charge | 17130180 |
| 14 | BHU-2 | Ladrong | 3 bedded | In-charge | 17130190 |
| 15 | BHU-2 | Zangkhar | 2 bedded | In-charge | 17130189 |

6. Contact details of Responsible Officers from Dzongkhag

| Sl.No | Name | Designation | Contact No |
|-------|----------------|--------------|------------|
| 1 | Wangchen Norbu | Sr. Dzongrab | 17326186 |
| 2 | Dawa Dorji | DLO | 17948802 |

| | | | |
|----|-----------------|---------------------|----------|
| 3 | Kinley Tenzin | CO | 17847949 |
| 4 | Karma Chewang | CDAO | |
| 5 | Pema Tshewang | PO | 17264626 |
| 6 | Manisha Bishwa | AFO | 17758545 |
| 7 | Kelzang Lhendup | DE | 17610251 |
| 8 | Sangay Ngedup | Municipal Engg. | 17738995 |
| 9 | Ugyen Dorji | DHO | 17668719 |
| 10 | Tshering Dorji | CDEO | 17936378 |
| 11 | Sangay Dorji | HRO | 17586830 |
| 12 | Wangchuk Norbu | Procurement Officer | 17436532 |
| 13 | Sangay Wangchuk | Internal Audit | 17721810 |
| 14 | Sangay Dendup | Election Officer | 17655307 |

7. Contact Details of Desuups of Lhuentse Dzongkhag

| Sl. No. | Name | Designation | Place of Working | Contact No. |
|---------|------------------|-------------------|---------------------------------------|-------------|
| 1 | Wangchen Norbu | Dasho Dzongrab | Dzongkhag Administration, Lhuentse | |
| 2 | Tashi Wangdi | Teacher | Tangmachu CS | 17793702 |
| 3 | Nima Chendup | Teacher | Lhuentse PS | 17769334 |
| 4 | Ugyen Zangmo | Teacher | Lhuentse HSS | 17578315 |
| 5 | Sonam Geley | Adm Assist | Tangmachu CS | 17887624 |
| 6 | Chejay Dorji | Teacher | Autsho CS | 17649950 |
| 7 | Namgyel Dorji | Adm Assist | Tangmachu CS | 17764248 |
| 8 | Passang Norbu | RSTA | Lhuentse | 17601677 |
| 9 | Tshering Samdrup | DES | Dzongkhag Administration, Lhuentse | 17841901 |
| 10 | Tashi Wangchuk | Teacher | Tangmachu CS | 17666117 |
| 11 | Kencho Wangdi | HA | BHU, Pathpachu | 17546707 |
| 12 | Chophel | HA | BHU, Minjey | 17741830 |
| 13 | Needup Dorji | DES | Dzongkhag Administration, Lhuentse | 17509969 |

| | | | | |
|----|-----------------|----------------------|------------------------------------|----------|
| 14 | Kencho Tshering | Teacher | Minjey MSS | 17943931 |
| 15 | Norbu Jamtsho | Teacher | Dungkar PS | 17719198 |
| 16 | Cheni Zangmo | Teacher | Dungkar PS | 17462980 |
| 17 | Kuenzang Choden | Teacher | Ganglakhema PS | 17392727 |
| 18 | Tshering | Teacher | Tangmachu CS | 17879810 |
| 19 | Karma Tshewang | Teacher | Wambur PS | 17692459 |
| 20 | Sonam Dalma | Electrician | Dzongkhag Hospital, Lhuentse | 17694288 |
| 21 | Tshering Chopel | DKO | Dzongkhag Administration, Lhuentse | 17633909 |
| 22 | Sonam Wangdi | HA | BHU, Dungkar | 17817683 |
| 23 | Rinzin Phuntsho | SSI | Minjey MSS | 17955863 |
| 24 | Pema Dechen | Matron | Autsho CS | 17429817 |
| 25 | Pema Dorji | AN | Dzongkhag Hospital, Lhuentse | 17836033 |
| 26 | Tshering Uden | GDMO | Dzongkhag Hospital, Lhuentse | 77268980 |
| 27 | Tshering Lhamo | Receptionist | Dzongkhag Hospital, Lhuentse | 17723450 |
| 28 | Ugyen Dendup | Sr. Dental Hygienist | Dzongkhag Hospital, Lhuentse | 17616190 |
| 29 | Sonam Norbu | Adm Assist | Dzongkhag Administration, Lhuentse | 17732445 |
| 30 | Dorji Wangchuk | HA | BHU, Dangling | 17479289 |
| 31 | Tashi Tshering | GAO | Kurtoe Gewog | 17755591 |
| 32 | Dorji Tshering | GAO | Jarey Gewog | 17727006 |
| 33 | Phurpa Wangchuk | Adm Assist | Autsho CS | 17758663 |
| 34 | Karma Dargay | DES | Dzongkhag Administration, Lhuentse | 77308809 |
| 35 | | Dasho Dzongdag | Dzongkhag Administration, Lhuentse | |
| 36 | Tshering Lhaden | Teacher | Wambur PS | 17675318 |
| 37 | Tshewang Rinzin | Teacher | Domkhar PS | 17769679 |
| 38 | Chhimi Rinzin | Teacher | Domkhar PS | 17834001 |
| 39 | Rinchen Wangdi | Principal | Thimiyul LSS | 17130087 |
| 43 | Sonam Tshewang | GAO | Maenbi Gewog | 17661289 |
| 44 | Ugyen | Principal | Tangmachu CS | 17730512 |
| 45 | Chundu Dorji | Teacher | Ladrong PS | 17347461 |
| 46 | Sangay Ngedup | Architecture | Dzongkhag Administration, Lhuentse | 17738995 |
| 47 | Tshering Dorji | Chief DEO | Dzongkhag Administration, Lhuentse | |

8. Contact details of Gewog Administrative Officers

| Sl No | Name | Designation | Contact Number |
|-------|-------------------|----------------|----------------|
| 1. | Dorji Tshering | GAO, Jarey | 17727006 |
| 2. | Tashi Tshering | GAO, Tsaenkhar | 17647406 |
| 3. | Sonam Norbu Offtg | GAO, Maedtsho | 17596118 |
| 4. | Sonam Tshewang | GAO, Maenbi | 17661289 |
| 5. | Dechen | GAO, Minjey | 17899910 |
| 6. | Kelzang Jamtsho | GAO, Khoma | 17945096 |
| 7. | Chimi Yangzom | GAO, Gangzur | 17583982 |
| 8. | Kezang | GAO, Kurtoed | 17502549 |

9. Farm shops in the Dzongkhag

| Sl no. | Name of Gewog | No. of farm shops | Location | Operator's name | Contact number |
|--------|---------------|-------------------|--------------|------------------|----------------|
| 1 | Gangzur | 2 | Thimyul | Dorji Lhendup | 17956734 |
| | | | Ney | Kinley Tshering | 17933530 |
| 2 | Jarey | 2 | Gewog Centre | Kencho Rinzin | 17407585 |
| | | | Zangkhar | Kinzang | 17340625 |
| 3 | Khoma | 1 | Gewog Centre | Naina Ghalley | 17352028 |
| 4 | Kurtoed | 1 | Gewog Centre | Tandin Penjore | 17426504 |
| 5 | Maedtsho | 1 | Gewog Centre | Wangdi Tshering | 17458066 |
| 6 | Maenbi | 1 | Gewog Centre | Jigme Yangki | 17693242 |
| 7 | Minjey | 1 | Gewog Centre | Deki Wangmo | 17436692 |
| 8 | Tsaenkhar | 1 | Autsho | Choten Gyeltshen | 17467034 |

10. Emergency contact numbers of School Disaster Focal Person

| Sl. No | Name | Working place | Contact Number |
|--------|------------------|----------------|-------------------|
| 1 | Dechen Wangdi | Autsho CS | 17533415 |
| 2 | Ugyen Zangmo | Lhuentse HSS | 17578315 |
| 3 | Ugyen Dorji | Minjey MSS | 17335364 |
| 4 | Ugyen | Tangmachu CS | 17730512 |
| 5 | Guten Wangdi | Khoma LSS | 17883500 |
| 6 | Lhakpa Tshering | Thimyul LSS | 17977812 |
| 7 | Tshewang Rinzin | Domkhar PS | 17769679/77769679 |
| 8 | Bumchu Wangdi | Dungkar PS | 16938039 |
| 9 | Sonam Penjor (G) | Ganglakhema PS | 17739646 |
| 10 | Nima Dorji | Gortshum PS | 17696566 |
| 11 | Tshewang Rinzin | Ladrong PS | 17723861 |
| 12 | Chogyal Wangdi | Lhuentse PS | 17693984 |
| 13 | Nadola | Ney PS | 17700860 |
| 14 | Pema Wangmo | Tshochen PS | 17453461/401 |
| 15 | Pema Namgyel | Wambur PS | 17991203 |
| 16 | Sonam Tashi | Zangkhar PS | 17982237 |
| 17 | Chabdel Zangpo | Chagzom ECR | 17419151 |

11. Dzongkhag Evacuation Team

| Sl.No. | Name | Designation | Contact Number | Roles |
|--------|---------------|---|----------------|--------|
| 1 | | Thromde Ngotshab (Red Cross Society Org.) | | Leader |
| 2 | Thuksay Dema | Alternate leader. | 17506575 | Member |
| 3 | Karma Drukpa | Nil | 17350950 | Member |
| 4 | Pema Norbu | Nil | | Member |
| 5 | MB Gurung | Hotelier | | Member |
| 6 | Rinchen Dorji | Retired Army | | Member |

| | | | | |
|----|------------------|--------------------|----------|--------|
| 7 | Nima Tshering | Shopkeeper | 17657038 | Member |
| 8 | Yeshi Wangdi | Driver | | Member |
| 9 | Tshering Samdrup | Technical (Desuup) | 17841901 | Member |
| 10 | Damchoe Dorji | RSTA | 17622971 | member |

12. Emergency Medical Team

| Sl no. | Names | Designation | Conatact Number | Remarks |
|--------|----------------|---------------|-----------------|---------|
| 1. | Ugyen Dorji | DHO | 17668719 | Leader |
| 2. | Tshewang Dorji | ADHO | 17833629 | Member |
| 3. | Tandin Lham | GDMO | 17574463 | Member |
| 4. | Rinchen Dorji | ADM., Officer | 17963286 | Member |

13. Rapid Assessment Team

| Sl. No. | Names | Designation | Contact Number | Remarks |
|---------|-----------------|-------------|----------------|---------|
| 1 | Kelzang Lhendup | DE | 17610251 | Leader |
| 2 | Shabnam Thapa | Engineer | 17668685 | Member |
| 3 | Gurung | JE | 17756960 | Member |
| 4 | Pema Wangchuk | BI | 17623977 | Member |
| 5 | | | | |

14. Pre-list of vehicles during emergency.

| <i>S/No</i> | <i>Name of Agency</i> | <i>Type of vehicle</i> |
|-------------|------------------------------------|------------------------|
| 1 | Dzongkhag Administration, Lhuentse | Fortuner |
| 2 | Dzongkhag Administration, Lhuentse | Hilux |
| 3 | Dzongkhag Administration, Lhuentse | Tractor |
| 4 | Dzongkhag Administration, Lhuentse | Hilux |
| 5 | Dzongkhag Administration, Lhuentse | DCM |
| 6 | Dzongkhag Administration, Lhuentse | Bolero |
| 7 | Dzongkhag Hospital | Ambulance |
| 8 | Dzongkhag (Municipal) | Cess pool |
| 9 | Dzongkhag (Municipal) | Dumper Truck |
| 10 | BPC | Hilux |
| 11 | BPC | Bolero |
| 12 | BPC | DCM |
| 13 | School Bus | TCS Bus |
| 14 | School Bus | LHSS Bus |
| 15 | School Bus | MMSS Bus |
| 16 | School Bus | ACS |
| 17 | Telecom | Bolero |

15. Lists of SAR Equipment and Emergency kits in the Dzongkhag

| Sl. No | Item Name | Quantity | Unit | Status | Remarks |
|--------|--------------------------------------|----------|---------|--------|---------------------------------|
| 1 | Dynamic rope (purple) | 1 roll | 200 mtr | Old | 101 mtr issued to RBP |
| 2 | Static rope (red) | 1 roll | 200 mtr | Old | 112 mtr issued to RBP |
| 3 | Screw carabiner | 20 | Nos | Old | 1 lost and 10 Nos issued to RBP |
| 4 | Plain carabiner | 12 | Nos | Old | 6 Nos issued to RBP |
| 5 | Tandem prussic | 6 | Nos | Old | 2 Nos issued to RBP |
| 6 | Hip harness (big) | 7 | Nos | Old | 3 Nos issued to RBP |
| 7 | Hip harness (small) | 6 | Nos | Old | 3 nos issued to RBP |
| 8 | Descender (figure of 8) | 6 | Nos | Old | 3 nos issued to RBP |
| 9 | Ascender (Jumar) | 2 | Nos | Old | In disaster store |
| 10 | Tape sling | 2 | Nos | Old | 1 no issued to RBP |
| 11 | Single sheave pulley | 6 | Nos | Old | Available in disaster store |
| 12 | Life vest (jacket) | 5 | Nos | Old | Available “ |
| 13 | Throw bag | 2 | Nos | New | Available “ |
| 14 | Helmet | 12 | Nos | Old | 2 lost and 10 nos available |
| 15 | Floating rings | 4 | Nos | Old | Available “ |
| 16 | Motorola hand set | 6 | Nos | Old | Available “ |
| 17 | Motorola hand set with extra battery | 6 | Nos | New | Available |

| | | | | | |
|----|---------------------------------|--------|---------|-----|---|
| 18 | Search light chargeable (small) | 2 | Nos | Old | 1 no issued to Dzong fire security |
| 19 | Torch chargeable (big) | 1 | No | Old | Unserviceable |
| 20 | Torch chargeable (big) | 4 | Nos | New | 2 nos issued to RBP and 2 nos with de-suup coordinator (Namgay Dorji) |
| 21 | Scoop stretcher | 1 | No | Old | Issued to RBP |
| 22 | Rock breaker | 1 | Set | New | Available |
| 23 | Power chain | 2 | Set | New | Available |
| 24 | Ringer gloves | 5 | Pairs | Old | 2 pairs lost and 2pairs issued to RBP |
| 25 | Ringer gloves | 10 | Pairs | New | 1 pair lost and 4 pairs issued to RBP |
| 26 | Full body harness | 8 | Nos | New | Available |
| 27 | Evacuation stretcher | 2 | Nos | New | Available |
| 28 | Air store pressure (AS-KA) | 1 | No | Old | Available |
| 29 | Descender | 2 | Nos | New | Available |
| 30 | Multiple anchor plate | 2 | Nos | New | Available |
| 31 | Dynamic rope (white) | 1 roll | 200 mtr | New | Available |
| 32 | Static rope (blue) | 1 roll | 200 mtr | New | Available |
| 33 | Tent A-shaped | 2 | Nos | New | Available |

Disaster Management Terms

Capacity: The combination of all the strengths, attributes and resources available within a community, society or organization that can be used to achieve agreed goals.

Capacity development: The process by which people, organizations and society systematically stimulate and develop their capacities over time to achieve social and economic goals, including through improvement of knowledge, skills, systems, and institutions.

Coping capacity: The ability of people, organizations and systems, using available skills and resources, to manage a disaster.

Disaster: Subject to section 132 of the DM Act 2013, means a natural or man-made occurrence, which causes environmental loss, increased mortality, illness or injury, and destroys or disrupts livelihoods, affecting the people of an area as classified under Chapter 9 of this Act.

Disaster risk management: The systematic process of using administrative, directives, organizations, and operational skills and capacities to implement strategies, policies and improved coping capacities in order to lessen the adverse impacts of hazards and the possibility of disaster.

Disaster risk reduction: Means the conceptual framework of elements considered with the possibility to minimize vulnerability and disaster risk throughout the society and to avoid or to limit the adverse impact of hazard within the broad context of sustainable development.

Disaster risk reduction plan: A document prepared by an authority, sector, organization or enterprise that sets out goals and specific objectives for reducing disaster risks together with related actions to accomplish these objectives.

Early warning system: Set of capacities needed to generate and disseminate timely and meaningful warning information to enable individuals, communities and organizations threatened by a hazard to prepare and to act appropriately and in sufficient time to reduce the possibility of harm or loss.

Mitigation Measures: aimed at reducing risk, impact or effect of a disaster or an impending disaster situation.

Preparedness: State of readiness to deal with a potential disaster situation or disaster and its effects thereof.

Prevention: Measures taken to avert a disaster from occurring or to impede a hazard so that it does not have any harmful effects.

Recovery and Reconstruction: Efforts, including development, aimed at: a) Restoring normalcy in condition caused by disaster; b) *Mitigating the effect of disaster; ORC) Creating circumstances that will reduce the risk of similar disasters from occurring.*

Response: Measures taken during or immediately after a disaster in order to bring relief to people and communities affected by the disaster and includes activities such as search and rescue, evacuation, rapid assessment, relief distribution among others.

Retrofitting: Reinforcing or upgrading of existing structures to become more resistant and resilient to the damaging effects of hazards.

Risk: The level of value of expected losses in the form of deaths, damage to property etc. caused by a hazard.

IX. List of participants for the DM and Contingency Plan Workshop held in Lhuentse from 3rd - 7th June 2019

| S/N | Name | Sex | Designation | Organization |
|-----|-----------------|-----|---------------------|-----------------|
| 1 | Jambay Wangchuk | M | Dzongdag | LDA |
| 2 | Pema Tshewang | M | Planning Officer | LDA |
| 3 | Gyem Lham | F | ICT Officer | LDA |
| 4 | Tshering Chopel | M | Kidu Officer | LDA |
| 5 | Tashi Dendup | M | Procurement Officer | LDA |
| 6 | Rinchen Ngedup | M | Municipal Engineer | LDA |
| 7 | Sonam Chopel | M | RICBL In-Charge | RICBL, Lhuentse |
| 8 | Manisha Biswa | F | Finance Officer | LDA |
| 9 | Kinzang Minjur | M | Gup | Jarey |
| 10 | Kinzang Dorji | M | Gup | Gangzoor |
| 11 | Gembo | M | Gup | Maedtsho |
| 12 | Ugyen Tshering | M | Gup | Kurtoed |
| 13 | Sithar Tshering | M | Gup | Khoma |
| 14 | Tsheten Wangdi | M | Gup | Tsaenkhar |
| 15 | Tashi Norbu | M | Gup | Minjey |
| 16 | Tshilthrimla | M | Gup | Maenbi |
| 17 | Tashi Tshering | M | GAO | Kurtoed |
| 18 | Chimi Yangzom | F | GAO | Gangzoor |
| 19 | Wangchuk Dema | F | GAO | Khoma |
| 20 | Sonam Tshewang | M | GAO | Maenbi |
| 21 | Dechen | F | GAO | Minjey |
| 22 | Karma Choden | F | GAO | Maedtsho |
| 23 | Tenzin Lhendup | M | GAO | Tsaenkhar |
| 24 | Dorji Tshering | M | GAO | Jarey |
| 25 | Dawa Yoezer | M | Police | Lhuentse |
| 26 | Ngawang Lhamo | F | Offtg, HRO | LDA |
| 27 | Karma Zangmo | F | Culture Officer | LDA |
| 28 | Shabnam Thapa | F | Engineer | LDA |

| | | | | |
|----|-----------------------|---|---------------------|-----------------|
| 29 | Pema Dorji | M | Electrical Engineer | BPC |
| 30 | Sangay Wangchuk | M | In-Charge | Telecom |
| 31 | Khaujay | M | Police | Lhuentse |
| 32 | Pema | M | Adm Asst. | LDA |
| 33 | Yeshe Nidup | M | BAFRA | Lhuentse Branch |
| 34 | Damchoe Dorji | M | In-Charge | RSTA, Lhuentse |
| 35 | Tashi Gyeltshen | M | DFP | LDA |
| 36 | Jigme Thinley Namgyel | M | Director | DDM, Thimphu |
| 37 | Japchu | M | Program Officer | DDM, Thimphu |
| 38 | Jigme Thinley | M | Program Officer | DDM, Thimphu |
| 39 | Pema Wangda | M | Police | RBP, Lhuentse |
| 40 | Tashi Dorji | M | Police | RBP, Lhuentse |
| 41 | Yeshe Dorji | M | Drim Gom, Police | RBP, Lhuentse |