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Dzongkhag Disaster Management and Contingency Plan



Dzongkhag Administration, Zhemgang  
ROYAL GOVERNMENT OF BHUTAN  
2020

**DISASTER MANAGEMENT & CONTINGENCY  
PLAN OF ZHEMGANG DZONGKHAG**

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གཞུགས་སྐྱོད་རྫོང་ཁག་བདག་སྐྱོང་།  
Royal Government of Bhutan  
Dzongkhag Administration  
Zhemgang



ZD/DDM (01)2019-2020/ 6790

Date: 20/01/2020.

## Executive Summary

In accordance with, Section 77 of the Disaster Management Act of Bhutan, 2013, it mandates the Dzongkhag Disaster Management Committees to develop Disaster Management and Contingency Plans, in consultation with the Dzongkhag sectors and other relevant agencies. Further, Section 78 mandates to submit Disaster Management and Contingency Plan by Dzongkhag Disaster Management Committee to the National Disaster Management Authority through the Department of Disaster Management. Similarly, Section 79 of the Act mandates Disaster Management and Contingency Plans to be updated at-least once a year and reviewed every five years. In line with this provision of the Act, Zhemgang Dzongkhag Disaster Management and Contingency Plan is formulated in 13<sup>th</sup> to 17<sup>th</sup> May, 2019 with the facilitators from Department of Disaster Management.

With changing risk patterns and frequency of disasters, formulation of Dzongkhag specific disaster management plan is an important strategy to strengthen local level disaster management systems and systematically reduce disaster risks.

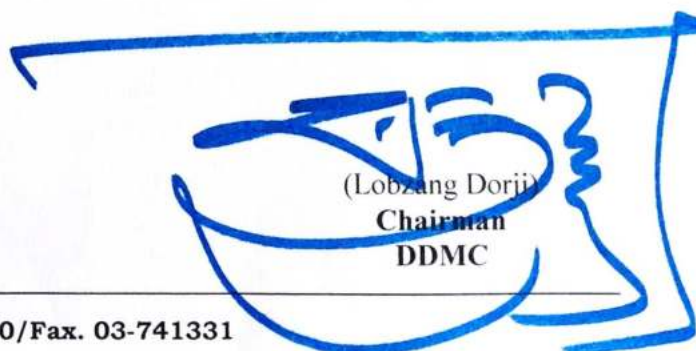
The Plan is prepared through conduct of Hazard, Vulnerability and Capacity Assessment (HVCA) of 8 Gewogs in consultation with the Gups, Gewog Administrative Officers (GAO) and Officiating. GAOs, Dzongkhag Administration officials, representatives from the schools and regional offices to strengthen school and Dzongkhag DM plan linkages; data collections and analysis; followed by endorsement from the Dzongkhag Disaster Management Committee (DDMC).

The Dzongkhag Disaster Management and Contingency Plan presents Hazard, Vulnerability and Capacity Profile for the 8 Gewog. The plan also outlines priority disaster risk reduction, awareness raising and capacity building activities and spells out the standard procedures for response. An implementation and monitoring process for the plan is also included.

This Plan is to be referred by the Dzongkhag Administration and Sectors to ensure mainstreaming and integration of disaster risk management into their annual and five-year development plans. It is required that every stakeholder and relevant National Disaster Management institutions and agencies take ownership and fulfill their own roles and responsibilities to make this Dzongkhag a disaster resilient and safe place.

The Dzongkhag Disaster Management and Contingency Plan of Zhemgang is endorsed by the Dzongkhag Disaster Management Committee on 09/01/2020 at Berti White Ballet Heron Camp, Tingtibi.

Tashi Delak!

  
(Lobzang Dorji)  
Chairman  
DDMC

## Acknowledgement

For making this Dzongkhag a disaster resilient and safe place, Zhemgang Dzongkhag would like to proudly express that now we have a full fledge disaster management and contingency plans. For the successful development of the plans, this Dzongkhag Administration would like to extend our sincere gratitude and appreciation to the Department of Disaster Management, Ministry of Home and Cultural Affairs, for providing guidance, inputs to the Dzongkhag DM and Contingency Plan.

The Dzongkhag would also like to extend our appreciation to the Local Government elected leaders, all the sector head, heads of the regional offices and the Gewog Administrative Officer for providing constant support and cooperation in coming up with systematic Dzongkhag Disaster Management and Contingency Plan.

Finally, we would like to acknowledge the team form Department of Disaster Management, MoHCA, for facilitating and every individual for their active participation throughout the course of drafting this DDMCP.

## ACRONYMS

CBDRM	Community Based Disaster Risk Management
DDM	Department of Disaster Management
DM Act, 2013	Disaster Management Act of Bhutan, 2013
DM	Disaster Management
DDMC	Dzongkhag Disaster Management Committee
DT	Dzongkhag Tshogdue
GNH	Gross National Happiness
GT	Gewog Tshogdey
HVCA	Hazard, Vulnerability and Capacity Assessment
NASART	National Search and Rescue Team
NDMA	National Disaster Management Authority
RBP	Royal Bhutan Police
SDMP	School Disaster Management Plan

## Scope

The Disaster Management and Contingency Plan for Zhemgang Dzongkhag is mandated by the Disaster Management Act of Bhutan 2013. The plan was drafted by the Dzongkhag Disaster Management Committee (DDMC) on 13<sup>th</sup>-17/05/2019 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.

## Objectives

The objectives of the Dzongkhag Disaster Management Plan are:

- ✓ To ensure mainstreaming and enabling for implementation of disaster risk reduction and preparedness activities in the Dzongkhag;
- ✓ To ensure required capacities 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:
  - ✓ Life-saving and public safety
  - ✓ Life sustaining for the 14Days
  - ✓ Ensuring Dzongkhag's resilience
  - ✓ Laying the foundation for 'Build Back Better'

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

# Chapter 1: Overview of the Dzongkhag

## Background

Zhemgang *Dzongkhag* lies in the South-central region of the country sharing its borders with Bumthang to the north, Trongsa and Sarpang to the west, Mongar and Pemagatshel to the east and the Indian State of Assam in the South. The *Dzongkhag* is a part of the wildlife corridor constituting the famous Royal Manas National Park, the Jigme Singye Wangchuck National Park, and Phrumshingla National Park. The *Dzongkhag* is administratively supported by a *Drungkhag* in Panbang, and eight *Gewogs* namely Bjoka, Bardo, Goshing, Nangkhor, Nangla, Phangkhar, Shingkar and Trong. Zhemgang is considered as one of the most inaccessible *Dzongkhags* in the country. Its population is 17,763 (Male: 9,195 Female: 8,568) with a total Gung of 3803.

The *Dzongkhag* is popularly known by the name *Khenrig Namsum*, which means the Dzongkhag is divided into three agro-ecological zones-Upper *Kheng* covering Bardo and Shingkar with high altitude areas, Middle *Kheng* covering Nangkhor and Trong with middle altitude areas and Lower *Kheng* covering Phangkhar, Goshing, Nangla and Bjoka with mid-low altitude areas.

Zhemgang is a region blessed with incredibly rich biodiversity. Its lush forests are home to 22 endangered animal species including the Golden Langur. Though much of the district has warm and humid climatic conditions, its northern regions have moderately cool temperatures.

Zhemgang is notable for being one of the last regions where ancient Bon (Animist) religious practices are still carried out. Though Buddhism has been growing in popularity, every region of the district still continues its animist traditions and Bon priests known as Bonpo are considered respected religious leaders. The inhabitants of Zhemgang are famous for their rich culture, particularly their folk songs and dances. They are also famed for their skill at crafting various goods out of bamboo such as Bangchungs (matted bamboo bowls), Palangs (alcohol containers), Balaks (hats), mats and boxes. They are also adept potters and their earthenware products were highly prized throughout the country in the past.

There are also a number of famous Buddhist temples in the region such as Buli Lhakhang and Tharpa Choeling Lhakhang. These ancient temples were built by Terton Pema Lingpa, a famous revealer of the lost religious treasures of Guru Rimpoche.

One of the most interesting features in Zhemgang is the Royal Manas National Park. This protected park is the oldest nature preserve in the Kingdom of Bhutan. Its incredible biodiversity includes hundreds of rare animal and plant species such as Golden Langurs and the Asian One-horned Rhinoceros that cannot be seen anywhere else in the world. The park is the most biologically diverse protected area in the kingdom as well as one of the most outstanding nature preserves worldwide.

Lama Zhang Dorje Drakpa who lived in the 12th century founded the Zhemgang Dzong. Lama Zhang Dorje Drakpa, a renowned scholar-sage of Drukpa kgyu school of Buddhism, originated from Tibet and travelled to present Zhemgang in 1163. Lama Zhang set up a hermitage in on the present site of the Dzong and settled there for many years. In 1655, a one-storied Dzong was built on the hermitage to defend the land against invaders led by Choetse Penlop. Khenrig Namsum is the ancient name of Zhemgang Dzongkhag. It literally means the three divisions of Kheng: Upper (Chikhor), Middle (Namkor), and Lower (Tamachok) Kheng.



## Social and Administrative Profile

GENERAL INFORMATION	
Total Area (sq. km)	2421.74
Forest cover (%)	
Location of Dzong	Trong
<i>Source: Land Cover Mapping Project report 2010</i>	
Administrative units	
Dungkhag	1
Dzongkhag Thromde	1
Gewogs	8
Chiwogs	40
Villages	153
Households <sup>1</sup>	3803
Population <sup>2</sup>	17763
<i>Note: 1. Households is based on PHCB Report 2017.</i>	
Local Government	
2018	
Gup	8
Mangmi	8
Gewog Administrative officer	8
Tshogpas	40
Dzongkhag Tshogdu Members	17
Gewog Tshogdu Members	56
CULTURE	
Numbers	
Details	
2017	
Monks in ZhemgangRabdey	
Lhakhangs <sup>1</sup>	90
Chortens	305
Shedra	
Lobdra	
Drubdey	2
Gewog Connectivity	
2016	
Gewog Connected by Road	159.12

Gewogs connected with mobile network	8
Gewog Connected by Electricity	8

EDUCATION	Numbers		
Types of School	2017	2018	2019
Tertiary Institute under RUB	0	0	0
Central Schools	4	4	4
Higher Secondary Schools	1	1	2
Middle Secondary Schools	3	3	2
Lower Secondary Schools	2	2	2
Primary Schools	22	22	NA
Extended Class Room	10	10	10
Non-Formal Education Centers	21	21	21
ECCD	11	11	11
Students Enrolment	2016	2017	2018
Male	2174	2274	2240
Female	2234	2274	2240
Total	4408	4623	4572
Teachers	2014	2015	2016
Male	194	194	194
Female	99	99	103
Total	293	302	279
Students to Teacher ratio	15	16	15

*Note: NSB.*

HEALTH	Numbers		
Types of Health Facilities	2015	2016	2017
Hospitals	1	1	1
BHU-I	2	2	2
BHU-II	13	13	16
Indigenous Unit	3	3	4
Sub Post	27	36	36
ORC With Shed	27	37	38
ORC Without Shed	NA	5	7
Health Staffs	2016	2017	2018

Doctors	3	5	5
Dungtshos (Indigenous Doctor)	1	2	1
Health Assistants	NA	NA	NA
Menpas	NA	NA	NA
Nurses (Asst nurse/GNM/B.Sc Nurse)	18	18	30
Technicians	16	16	33

Water and Sanitation	2017	2018
Rural water supply coverage (%)	98	98
Rural population access to improved sanitation (%)	99	99

AGRICULTURE	2017	2018
Farm Road (km)	228.19	528
Irrigation channel (km)	132	161.02
Functional (km)	132	161.02
Non- functional (km)	0	0
Power tillers (Nos.)	NA	83
Electric fencing (Nos.)	5	30
Electric fencing (km.)	13.6	120.7
Farm sales shops (Nos.)	1	9

Major Cash Crops Production, 2018			
Details	Cultivated area (acres)	Production (MT)	Yield (kg/Acre)
Wheat	84	85	952
Paddy	1214	1656	1364
Maize	7464	9283	1244
Buckwheat	406	225	554

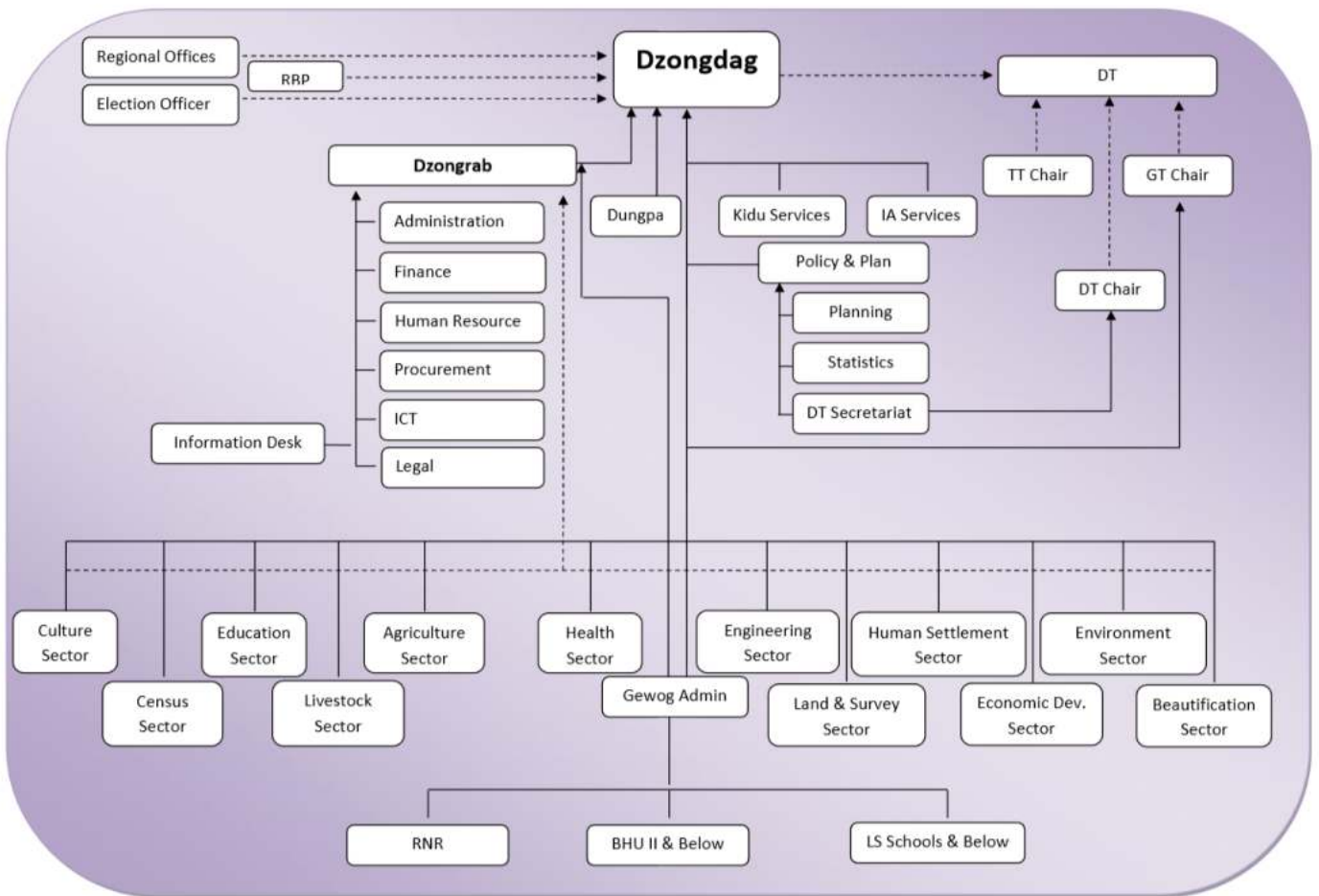
*Source: Statistical Yearbook of Bhutan 2018, NSB*

Livestock		
Livestock Population	2016	2017
Cattle	10789	12110
Mithun	173	12

Pig	652	1057
Poultry	17272	27168
Sheep	0	0
Goat	34	37
<b>Livestock Production</b>	<b>2016</b>	<b>2017</b>
Fresh Milk (MT)	1254.7	1659.2
Butter (MT)	32.9	59.5
Cheese (MT)	52	89.2
Eggs (000' nos)	1353	3223.4
Beef (MT)	11.8	43.9
Pork (MT)	43.9	75.9
Chicken (MT)	2.7	40.7
Mutton (MT)	0.1	0
<i>Source: Statistical Yearbook 2018, NSB</i>		

<b>Livestock Infrastructures</b>		
<b>Details</b>	<b>2016</b>	<b>2017</b>
Veterinary Hospitals	1	1
Livestock Extension Centers	2	2
Regional Veterinary Laboratories	1	1
Calf rearing center	0	0
<b>Forestry</b>		
<b>Details</b>	<b>2016</b>	<b>2017</b>
Territorial Division HQs	1	1
Range Offices	4	4
Beat Offices	8	8
Number of community forest	NA	NA
Community Forest (acres)	6323.76	6830
No. of Households in CF group	NA	NA
Nursery (Nos.)	2	2
Protected Areas (Nos)	NA	NA
Protected Areas (areas)	87.7	94.17

Figure 1 – Organogram of Dzongkhag Administration



# General Map of Dzongkhag



### 1.3: Weather and climate

The elevation ranges from approx. 150-4000 meters above sea-level, much of the district has warm and humid climatic conditions, its northern regions have moderately cool temperatures

Average temperature Approx. 25 degree Celsius

### 1.4: Demography

The total population of Zhemgang Dzongkhags as of Population: 17763 (Male = 9195, Female = 8568)

No. of Households:3803

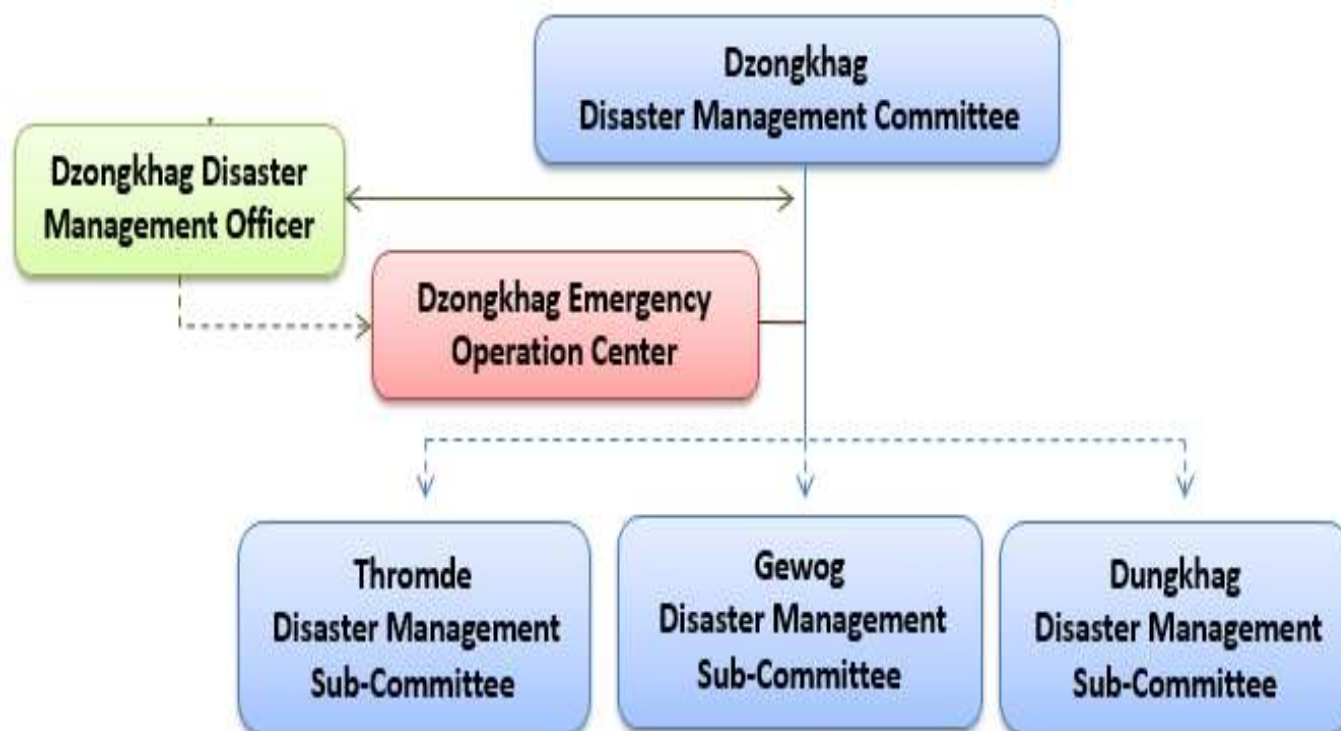
Gewog: 08      Chiwog: 40      Village: 153

### 1.5 Economy

The people of the Dzongkhag cultivate mainly maize followed by rice, buckwheat, millet, barley, wheat, foxtail millet, potato, etc. Orange and Cardamom are the main source of cash income for the southern and central *Gewogs* of the *Dzongkhag*. The northern *Gewogs* depend mainly on livestock products for source of income. In-addition skilled at crafting various goods out of bamboo - Bangchungs (matted bamboo bowls), Palangs (alcohol containers), Balaks (hats), mats and boxes.

## Chapter 2: Dzongkhag Disaster Management System

### 2.1 DM Institution





## 2.2 Dzongkhag Disaster Management Committee (DDMC)

Zhemgang Dzongkhag Disaster Management Committee (DDMC) is constituted as below in line with the provisions of the DM Act of Bhutan, 2013:

### *Dzongkhag Disaster Management Committee*

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

Sl. No.	Name	Designation	Contact
1	Dasho Dzongdag	Chairman	+975-17832085
2	<u>Dzongrab</u>	Vice Chairman	+975-17699898
3	DT Chairperson	Member	+975-17704755
4	Drungchen	Member	+975-17120044
5	Officer In-Command	Member	+975-17800394
6	All Gups	Member	Enclosure 1
7	Dzongkhag Kidu Officer	Member	+975-17699898
8	Thromde Ngotsab	Member	+975-17802750
9	DDMO	Secretary	+975-16901642

Note: 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 Gup, 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.

## 2.3. 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). The DDMC and Chairperson shall function as mandated under section 31 and 38 of DM Act, 2013.

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

- ✓ Prepare, review, update and implement the Dzongkhag Disaster Management and Contingency Plan
- ✓ Monitor and evaluate measures taken for prevention, mitigation, preparedness, response, recovery and capacity building by each sector in the Dzongkhag
- ✓ Ensure establishment and functioning of the Dzongkhag Emergency Operation Centre
- ✓ Ensure mainstreaming of disaster risk reduction into the development plan, policy, program and project
- ✓ Ensure compliance of the approved hazard zone and vulnerability map
- ✓ Ensure the enforcement of structural and non-structural measures
- ✓ Ensure that information about an event or a disaster is promptly communicated to the NDMA, DDM and all concerned.
- ✓ Ensure that the damage assessments in the field are carried out professionally and efficiently without fear or favor
- ✓ Coordinate and support disaster response and relief operation including recovery and reconstruction
- ✓ Ensure that detailed reports and regular updates on disaster event is provided to the DDM upon completion of field assessment of the situation
- ✓ With the support of the DDM promote education, 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
- ✓ Conduct regular mock drill
- ✓ Report on a quarterly basis to the NDMA on the progress of implementation of its DM plan
- ✓ Perform such other function 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 and to frame rules and regulations concerning the conduct of its meeting.

## 2.4 Functions of Chairperson

The Chairperson of the DDMC shall exercise and discharge such functions of the DDMC as the committee may delegate without prejudice to the generality of the provision contained in section 37 of this Act, the Chairperson of the DDMC shall:

- ✓ Regularly review and assess the effectiveness of DM Plan
- ✓ Ensure decision and policy formulated by the DDMC is implemented
- ✓ Ensure that disaster risk reduction and disaster management activities are consistent with Disaster Management Strategic Framework.
- ✓ Provide prompt information on a disaster or an impending disaster situation to the DDM
- ✓ Provide regular updates and detailed reports on a disaster event to the DDM upon completion of filed assessment of the situation
- ✓ Manage response and relief operation in accordance with the directives issued by the national Disaster Management authority; and
- ✓ Coordinate delivery of services and resources to disaster affected communities

## 2.5 Disaster Management Sub-committee

The DDMC may, if it considers necessary, constitute a sub-committee at the Dungkha, Thromde or Gewog level to assist the DDMC in the performance of its functions under section 35 of 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 36 of the DM Act, 2013.

In line with the provisions of the Act, Disaster Management Sub-Committees will form in Dungkha and all Gewogs.

## Chapter 3: Disaster Risk Profile of Zhemgang Dzongkhag (HVCA)

Zhemgang Dzongkhag is susceptible to both natural and human-made disasters. This includes earthquake, windstorm, fire, landslides, thunderstorm and vehicle accidents. The most notable disaster was the Sept, 21<sup>st</sup> earthquake in 2009 which affected the most Dzongkhags including Zhemgang. It damaged most of the rural households, schools, Lhakhang's and other government infrastructures. Further the Dzongkhag is affected by windstorms every year which destroys houses and crops, with serious implication on the livelihood of the people.

### **Past disasters**

In terms of assessing the disaster risk of the Dzongkhag for this plan, it is assessed by looking at the hazard, vulnerability and capacity at the Dzongkhag as well as individual Gewogs. Since, disaster risk is a function of hazard, vulnerability and capacity of the community/Gewogs. Disaster risk is a function of hazard. Vulnerability and capacity of the community/Gewog/Dzongkhag. The HVCA is conducted by the Gups, GAOs, DDMO and relevant sector heads. The Gewog's hazard is prioritized for action planning using the probability and impact matrix.

$$\text{Disaster Risk (ཉེན་རྟོག་ལྡན་ལྗང་)} = \frac{\text{Hazard (གཞོན་ཉེན་)} * \text{Vulnerability (ཉེན་ཚུན་)}}{\text{Capacity (སྤོགས་སྲུབ་)}$$

## Hazard Assessment

Hazards	Secondary hazards	When it could occur	Probability of occurrence	History of past disaster	Impact
<b>Wind storm</b>	Fire outbreak, Heavy wind, rolling boulders	Spring/ Autumn	High	2014- 2019	More than 200 public and Private Houses, Crops, Govt. Infrastructure were damaged from 2014 to 2019.
<b>Earthquake</b>	Fire outbreak Landslide, Erosion	Unpredictable	High	2009, 2011, 2018	Damaged to 1-2 private houses especially in the villages by minor shocks every year. Moreover, falling boulders has damaged 3 houses in Shingkhar Gewog in 2018
<b>Structural Fire</b>	Forest fire out break	Dry and windy season	High	2014, 2017	Damageprivate/publicproperties are possible but reports not available.
<b>Landslide</b>	Artificial lakes	Summer/rainy season	Medium	2003, 2017, 2018	Traffic disturbance, lost lives, damages to infrastructures and properties especially in lower Kheng

## Vulnerability Assessment

Hazard	Elements at risk	Why they are at risk	
		Physical/Material	Social/Organizational
<b>Windstorm</b>	Infrastructure, Crops, Lives, telecom and electric lines	Poor method of roofing, weak structures, most of settlement are in high windstorm prone areas	Limited awareness on windstorm safety, absence of community groups/ Volunteers/ De-Suups in most of vulnerable areas and lack of Skilled professional in terms of building Disaster resilience structure.
<b>Earthquake</b>	Private and public Structure, Lives, outbreak of forest fire, road and bridges.	Geologically fragile Dzongkhag, -Old structure Lack of awareness, -poor construction ethics including poor construction materials and scattered settlement.	Absence of well-trained SAR teams in Gewogs and vulnerable areas, and no prepositioning of response and relief materials. In addition, lack of Skilled professional in terms of building Disaster resilience structure.
<b>Structural Fire</b>	Traditional houses and infrastructures, old age people and disabled people.	Poor electrification, use of highly inflammable materials & poor construction materials (use of bamboo & wood) and shortage of budget.	Lack of professionals and awareness among vulnerable groups, private and public houses not equipped with fire extinguishers, inadequate firefighting force in Dzongkhag and Gewogs
<b>Landslide</b>	Public and private buildings, Road, bridges, land, crops, lives and other properties.	Unstable and step Terrance, poor land management, Infrastructure located in high land slide prone areas, weak and poorly constructed structures.	Lack of land management knowledge among public, general people less bother about degradation, no proper monitoring of activities in landslide areas

## Capacity Assessment

Hazard	Physical capacity	Social/institutional capacity
<b>Wind storm</b>	Enough infrastructure in all the BHU and schools in the Dzongkhag and open spaces for evacuation during emergency where in place eg. Buli CS, Zhemgang CS Lower and Upper Campus, Sonamtang CS, Zhemgang BHU and Yebliptsa Hospital.	Most of people insured their properties, strong Community vitality, Dairy groups, RUG in place, Community forestry Group, 1 central school, Farmers vegetable group, Good village leaders.
<b>Earthquake</b>	New design and specification for rural house constructions, open ground and structures for evacuation, mobile network in all gewogs.	Formed Dzongkhag SAR team, Dzongkhag has some basic SAR equipment, has strong collaboration among sectors under Dzongkhag.
<b>Structure Fire</b>	Good RWSS coverage, good Mobile network coverage.	RBP fire Fighting team, De-Suups/Volunteers, regular monitoring of safety in key infrastructure.
<b>Landslide</b>	Enough open spaces nearby landslide prone areas for evacuation, -good road connection among gewogs and Dzongkhag centre.	Taken initiative of mass plantation in landslide areas, Instituted DDMC and GDMC.

**Hazard Ranking**

Sl.No	Gewog	HAZARD								
		Earth- quake	Wind-storm	Forest Fire	Pest & Diseases	Structural Fire	Flood	Hail-storm	Thunder/ Lightning	Land-slide
1	Bardo	5	9	2	3	7	8	2	2	6
2	Bjoka	8	10	5	4	8	3	7	5	7
3	Goshing	9	8	3	4	7	5	3	6	7
4	Nangkor	8	9	2	3	2	0	3	2	5
5	Ngangla	8	9	3	3	1	2	4	5	7
6	Phangkhar	4	10	3	7	2	8	5	4	6
7	Shingkhar	7	10	2	3	4	5	1	4	9
8	Trong	8	9	6	8	8	3	7	4	8
<b>Total</b>		57	74	26	35	39	34	32	32	55
<b>Overall Rank</b>		<b>2</b>	<b>1</b>	<b>8</b>	<b>5</b>	<b>4</b>	<b>6</b>	<b>7</b>	<b>7</b>	<b>3</b>

(Score: 1 to 10 (10 highest, 1 lowest, 0 unknown))



Overall, 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 summary of capacity needs in Dzongkhag:

### **1) Risk Reduction and Mitigation**

There is need for capacity development for all staffs working at the Dzongkhag premises 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 past earthquake events. Therefore, vulnerability assessment of old and important/ public structures is important to determine strengthening needs or replacement decisions. In terms of earthquake, and also other hazards, there is need to strengthen the construction quality monitoring system to ensure constructions adhere to standards and building codes.

Structural Fire and Landslide is also a priority hazard for Zhemgang and there is need to build capacities in the Dzongkhag to raise awareness in the community on ways of land management and to carry out mass awareness inclusive of nonstructural mitigation measures in preventing structural fires. Community groups such as community forest groups and system of having Resuups, Me-suups, Chu-suups, etc need to be encouraged. Also, there is still need to raise awareness within the Dzongkhag and in the communities on key messages for risk reduction and preparedness.

### **2) Preparedness**

As a part for early preparedness for any types of disaster, there is a need to ensure early warning capacities for heavy rainfall, thunderstorms, hailstorms, and other such extreme weather conditions and have systems in place to provide the early warning/ advisory to the affected communities in time. Capacities also need to be built in terms of raising community awareness on risks and family preparedness. Similarly, preparedness capacities need to be developed in important public institutions such as schools and health facilities.

### **3) Response**

In terms of response, capacities for Search and Rescue, First Aid, conducting various assessments (rapid, damage, safety etc.) need to be built at various levels. There is also need to support and organize volunteers for response and coordinate with existing volunteer organizations such as Desuups. For effective response, Standard Operating Procedures (SOPs) need to be developed for each Gewog. Simulations and drills should be carried out to test and practice the procedure. At the Dzongkhag level, EOC should be established along with related Standard Operating Procedures (SOPs).

### Disaster Management Action Plan (2018 – 2022)

Hazard	Priority Area	Key Activities	Target	Responsible Agency	Supporting Agency	Time Line(FY)	Budget (M)
(01) Windstorm	Awareness and Education	1. Conduct Public education and advocacy program on windstorm safety.	Vulnerable communities in 8 Gewogs (including all schools ERC & ECCD), Agencies Include people with disabilities	Gup, GAO, DDMC DE	Dzongkhag Administration DDM RBP	2018-2023	0.2
		2. Distribute Windstorm Safety Key messages and video clips	Schools including monastic, Extended Classroom and ECCD)	DEO, Culture, DDMO	Dzongkhag Administration, Schools, DDMC	2018-2023	0
		3. Conduct awareness on incorporate traditional and modern roofing patterns	Vulnerable Communities	DE, DDMO	DDMC, Dzo. Engineering cell	2018-2023	0.1
	Enhance risk reduction and mitigation	1. Carry out vulnerability assessment of old/ existing government buildings – schools, health facilities, cultural buildings, office buildings	All Gewog centers, offices, schools and other critical infrastructure	DDMO/ DE	DDM, DES, MoWHS, MoE, Gewog Adm. Dratshang	2018-2023	0.1
		2. Instruct anchorage of roofs and other mitigation measures.	All Gewogs,	DDMO/DE	Gewog Admin. DDM, MoF, concerned sectors	2018-2023	0
	Enhance preparedness, response and recovery	Conduct training on roofing technique	Engineers and Carpenters	DE	DDMO, DDMC, DDM, DES (MoHWS), DoC (MoHCA)	2018-2023	0.4
		Forming of Dzongkhag Disaster Assessment Teams and develop Disaster Assessment Tools	Tshogpas and GAOs, Mangmi	DDM and MoWHS	Dzongkhag and Gewog Administration	2018-2023	0.1
		Conduct training for the SAR Team (including De-Suups)	SAR team (Dzongkhag, Dungkhag and Gewog), RBP	DDMO	DDM, RBP	2018-2023	0.7

Hazard	Priority Area	Key Activities	Target	Responsible Agency	Supporting Agency	Time Line(FY)	Budget (M)
(02) Earthquake	Awareness and Education	Public education and advocacy program on earthquake including family disaster preparedness	8 Gewogs including Schools (including monastic, ERC & ECCD), Agencies	Gewog Administration DDMC	Dzongkhag Administration, regional offices, DDM, RBP	2018-2023	0.2
		Create awareness on insurance benefit and encourage public to insure properties	All 8 gewogs	DDMO/GAO	RICBL, BIL, Dzongkhag Adm. and DDM	2018-2023	0.1
	Enhance risk reduction and mitigation	Conduct vulnerability assessment of old/ existing buildings/ houses	Public and Private buildings including critical infrastructure	DE/DDMO	DDMC, DDM, DES, MoHWS, MoE, DoC (MoHCA)	2018-2023	
		Carry out structural mitigation measures as per vulnerability assessment recommendations	All weak infrastructure	DE/ DDMO	DDM, DES (MoHWS), MoE, Gewog Adm. Dratshang	2018-2023	0.2
	Enhance risk reduction and mitigation	Monitor construction quality as per standards and designs	Gewog Administration and Dzongkhag Administration	Gup/ Mangmi, DE	DES, MoWHS, DDM Other relevant sectors	2018-2023	
		Strengthen systems to disseminate weather forecast and advisories	Communities	DDM, NCHM, DoA	NCHM	2018-2023	
	Enhance preparedness, response and recovery	Form and Train SAR teams	Dzongkhag/Gewogs	Dzongkhag and Gewog Administration	DDM/RBP	2018-2023	
		Pre-position enough response and relief materials	In all Gewogs	GAO/DDMO	DDM and Dzongkhag Adm.	2018-2023	
		Establish and equip Dzongkhag Emergency Operation Center	Dzongkhag	DDMO	DDMC, DDM NDMA, Relevant sectors	2018-2023	8

Hazard	Priority Area	Key Activities	Target	Responsible Agency	Supporting Agency	Time Line (FY)	Budget (M)
(03) Landslide	Awareness and Education	Conduct advocacy on flood safety measures	Vulnerable communities in all Gewogs	DDMO and Flood Monitoring	DDMC/DDM, Gewog Adm	2018-2023	
		Educate people on incorporating DRR features in farm road, irrigation canal, RWSS construction	Communities and contractors (mega and community)	DE and DAS	DDMC, DDM, MoWHS	2018-2023	
	Enhance risk reduction and mitigation	Develop landslide hazard zonation	Dzongkhag	DGM, DHMS, MoWHS	DDMC, Dzongkhag Administration	2018-2023	
		Organize mass plantation in landslide prone sites	In land slide are in all gewogs	DEO / DDMO	NEC, MoAF, DDM Other relevant sectors	2018-2023	
	Enhance preparedness, response and recovery	Institute pre-arrangements for emergency procurement and requirements	Dzongkhags/Gewogs	Procurement Officer /DDMO/ Finance Officer	DDMC, DDM, MoF	2018-2023	
		Preposition materials required for emergency response and immediate recovery at strategic location	Dzongkhag and all Gewogs	DDMO and GAO	DDM, DDMC/MoF,	2018-2023	
(04) Structural Fire (04) Structural Fire	Awareness and Education Enhance risk reduction and mitigation	Raise awareness on Fire Safety measures (Dos and Don'ts)	All Gewogs and Thromde Communities	Gup, GAO, Mangmi, Tshogpas, Thromde Thuemi	Dzongkhag and Gewog Administration	2018-2023	
		Raise awareness on installation of fire safety equipment (fire alarm, extinguishers in govt., private buildings, and community Lhakhang)	Govt offices, private building owners, Caretakers of Lhakhangs	RBP/ Dzongkhag Administration	Gewog Administration and community	2018-2023	
		Conduct hands on training on use of fire safety equipment	General Public in vulnerable communities	DDMO/RBP	DDMC, Gewog Administration	2018-2023	
		Construct water reservoir or tank in vulnerable area	All Gewogs	Tshogpa, Respective Sectors, TDMO	DDM, GNHC, MoF, concerned sectors	2018-2023	
		Ensure fire-fighting equipment in important public and private building	All gewogs	Concern sector and DDMO	RBP/ Dzongkhag Lhakhang caretakers, schools, institutions, Gewogs	2018-2023	
	Enhance preparedness, response and recovery	Review and update the functionality of the DM and Contingency Plan	DMCP	Chairperson, DDMO	Dzongkhag and Gewog Administration	2018-2023	0.5
		Put fire preparedness and response strategy in place	In all Gewogs	DDMO/RBP	Dzongkhag and Gewog Administration	2018-2023	

## Chapter 4: Dzongkhag Contingency Plan

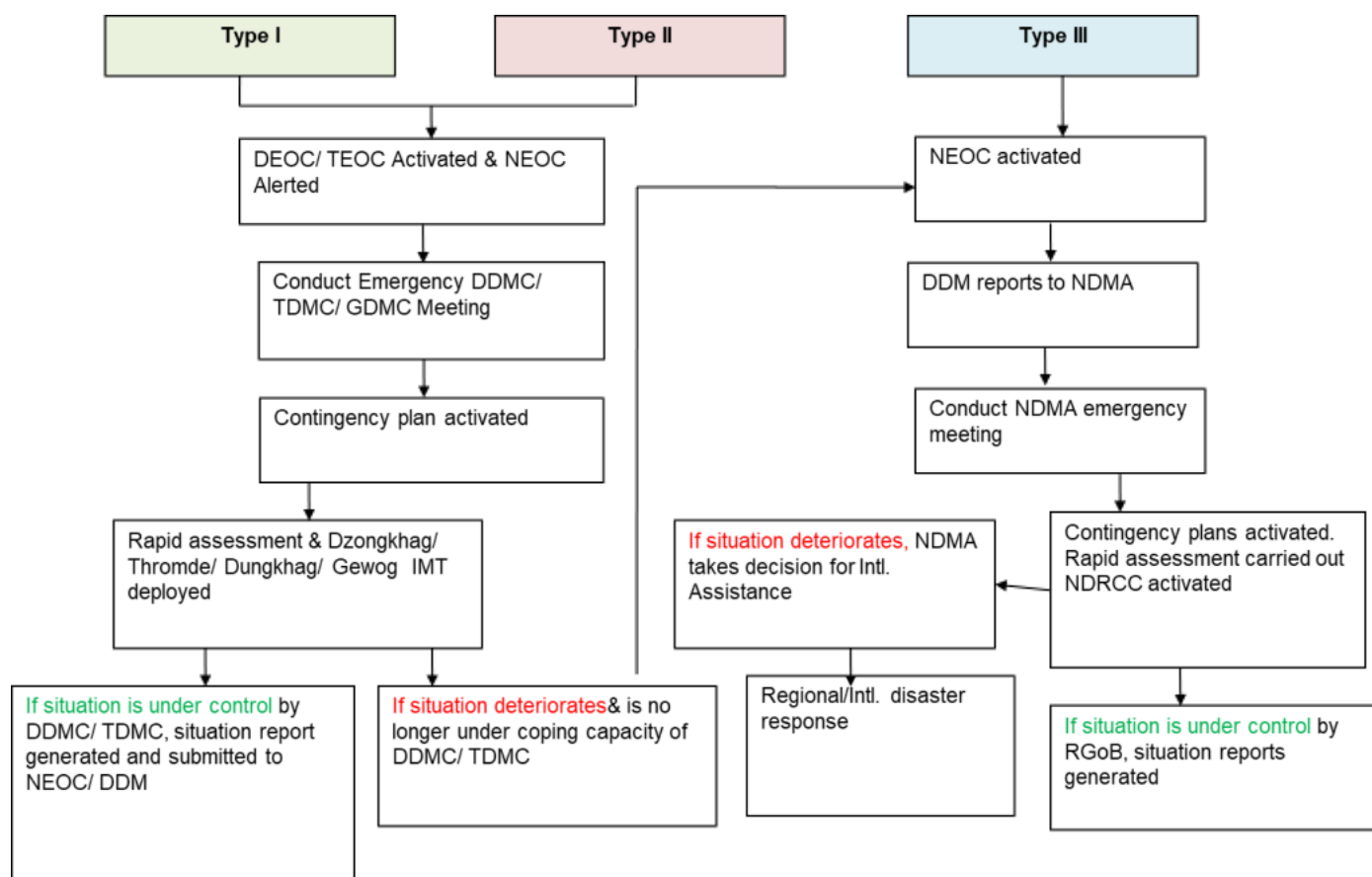
This chapter details the contingency plan of Zhemgang Dzongkhag including the response/ coordination structure and standard operating procedure as per the Contingency Planning Guidelines for Bhutan 2014, a contingency plan 'aims to prepare an organization to respond well to an emergency and its potential humanitarian impact'. Thus, developing a contingency plan involves making decisions in 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 a disaster when/if early warning of an impending situation or an event is received;
- During a disaster when immediate response and relief measures need to be implemented; and
- After a 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.

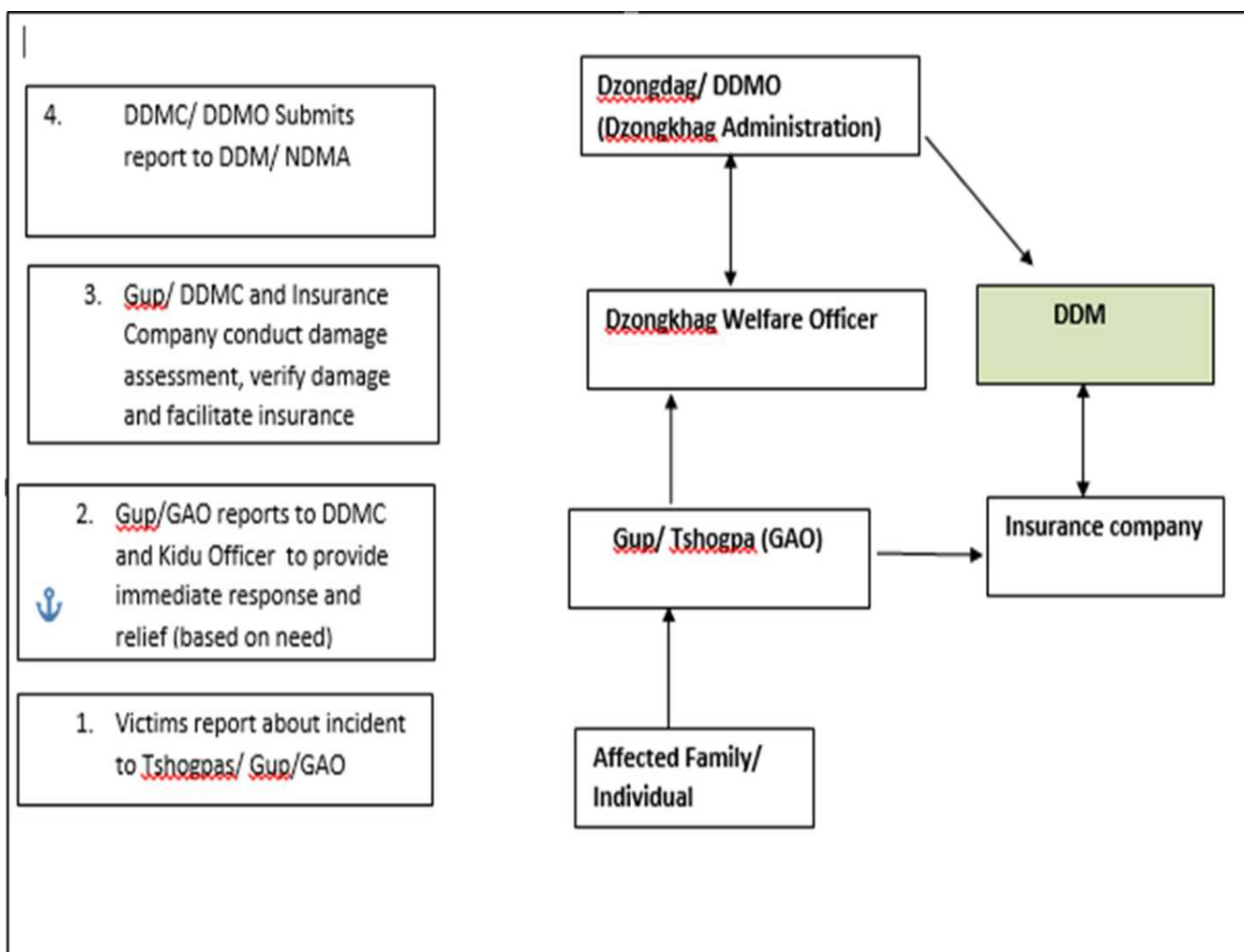
### 4.1 General disaster decision making chart



## 4.2. Standard Operating Procedure for Isolated local Incidents

For isolated disaster Management Act of Bhutan 2013, the following standard procedure shall be followed.

**Isolated Local Incident** - An isolated local incident is an incident which does not have a widespread 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



Note: Insurance officials will do physical verification and for immediate payment based on damages and DDMO to ensure that the Insurance officials have verified and do the payment on time.

### ***4.3. Coordination and response structure for various disaster types***

As per the DM Act of Bhutan 2013 and the DM Rules and Regulations, Standard Operating Procedures for response at the Dzongkhag level for different Disaster Types will be as follows:

#### **In case of Disaster Type I**

*As per Chapter 8 of Disaster Management Rules and Regulation 2014, section 131 A disaster shall, pursuant to section 93 of the Act, be classified as Type I, if it:*

- ✓ *Affects a Thromde(s) or Gewog(s) or any part thereof*
- ✓ *Can be managed with available resources of the Gewog/Thromde*

SOP for Disaster Type I: -

- 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 Gewog DM Sub-Committee/ 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. 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.
- e) The DDMO shall submit the first information report to the DDM within 24 hours of the incident. f. 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.
- f) Gewog shall conduct detailed damage assessment along with insurance companies for rehabilitation and reconstruction and submit report to DDMC.

## **In case of Disaster Type II**

*As per Chapter 8 of Disaster Management Rules and Regulation 2014, section 132 A disaster shall, pursuant to section 94 of the Act, be classified as Type II, if it:*

- ✓ *affects a Dzongkhag as whole or in part or more than one Dzongkhag*
- ✓ *can be managed with available resources of the Gewog/Thromde*

SOP for Disaster Type II: -

- 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) The DDMC Chairperson shall activate the DEOC and be in contact with the National Emergency Operation Centre.
- c) 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.
- d) Dzongkhag/ Dungkhag Incident Management Team shall direct evacuation of disaster-affected communities to safe areas and temporary shelters.
- e) Dzongkhag/ Dungkhag IMT shall conduct rapid needs assessment as per Bhutan Disaster Assessment (BDA) tool within 72 hours.
- f) The DDMO shall submit the First Information Report to DDM within 24 hours of the incident.
- g) 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.
- h) 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.
- i) Dzongkhag/ Dungkhag shall conduct detailed damage assessment along with insurance companies for rehabilitation and reconstruction and submit report to DDMC.



### **In case of Disaster Type III**

*As per Chapter 8 of Disaster Management Rules and Regulation 2014, section 133 A disaster shall, pursuant to section 94 of the Act, be classified as Type III, if it:*

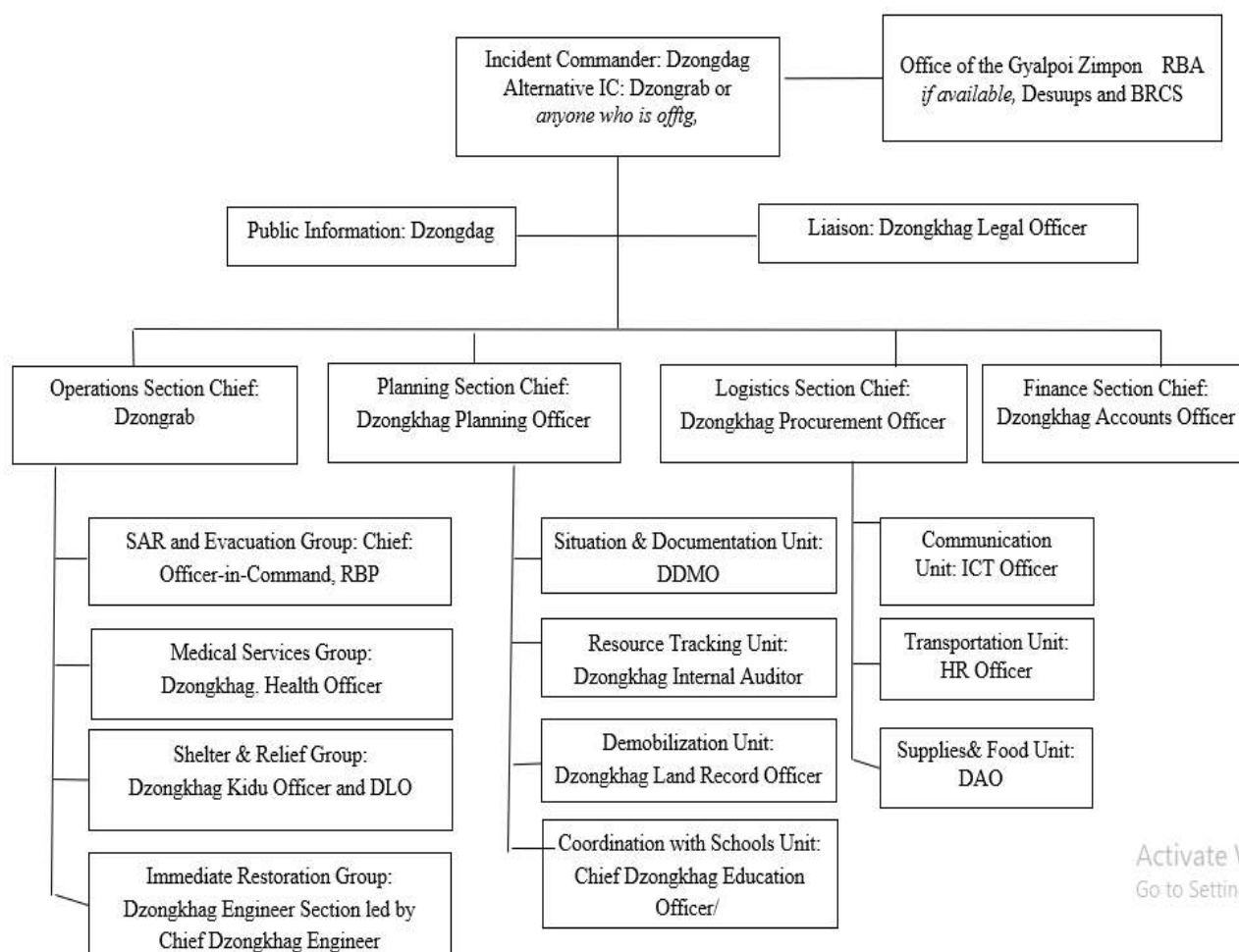
- ✓ *it affects the nation as a whole or in part*
- ✓ *severity and magnitude is so great that it is beyond available resources of the affected Dzongkhag(s)*

SOP for Disaster Type III: -

- 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/ Dungkhag Incident Management Team shall direct evacuation of disaster-affected communities to safe areas and temporary shelters.
- d) Dzongkhag/ Dungkhag IMT shall conduct rapid needs 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/ Dungkhag shall conduct detailed damage assessment along with insurance companies for rehabilitation and reconstruction and submit report to DDMC.

#### 4.4.1. Incident Management Team at Dzongkhag Level

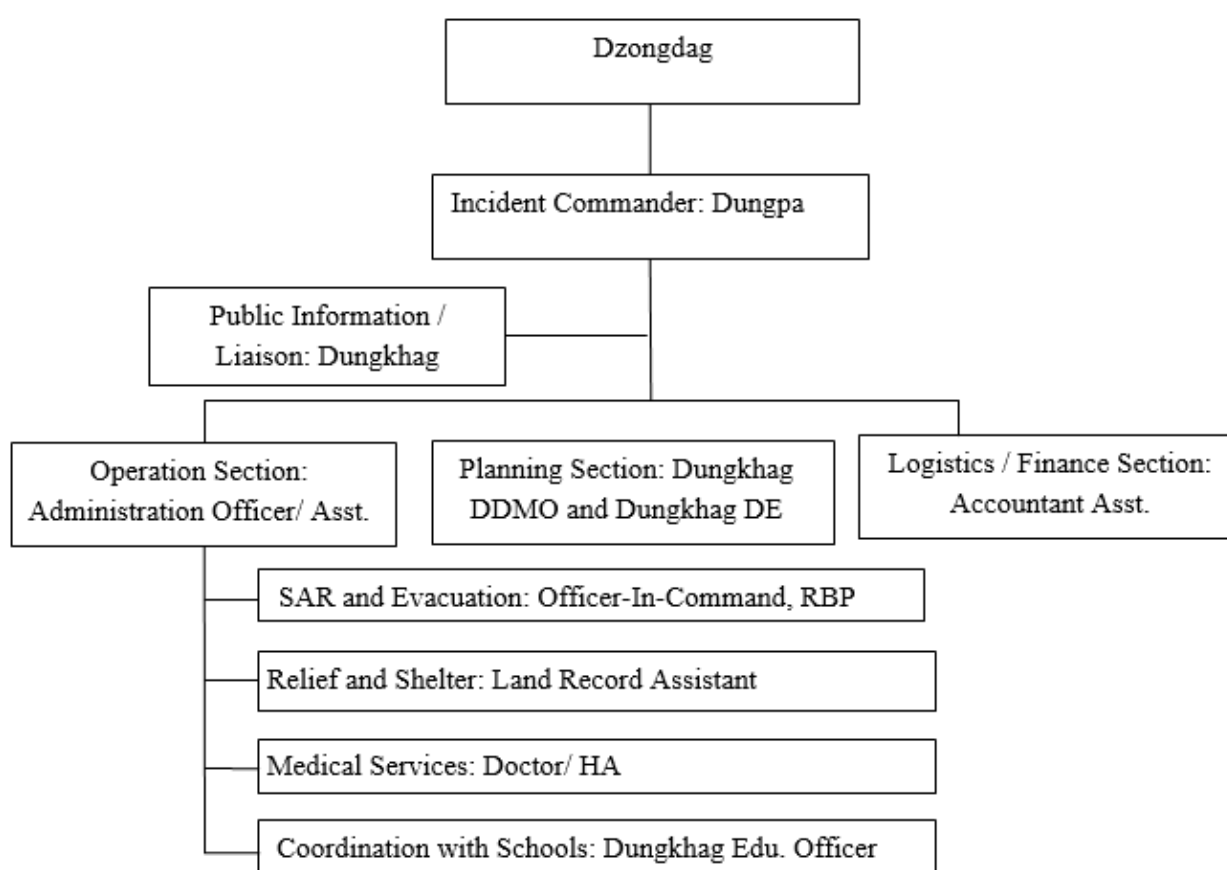
The Dzongkhag Incident Response Management Team will be led by the Dzongdag with Dzongrab being the alternate or *any one officially officiating the position in case, if both are not at the station or vacant during the Disaster*. The IC will liaise with office of the Gyalpoi Zimpon, Army, and Desuups for effective coordination with these entities. Various positions in the team will be occupied by the officer's 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.



Note: The support of Desuups/ Dratshang/ NGOs/ CSOs/ Corporations/ Regional Offices/ Private businesses and communities will be coordinated through the NDRCC and IMT at the national and dzongkhag level. As per Section 41 of the Disaster Management Act 2013, the Dzongdag (chair of 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.

#### 4.4.2. Incident Management Team at Dungkhag level:

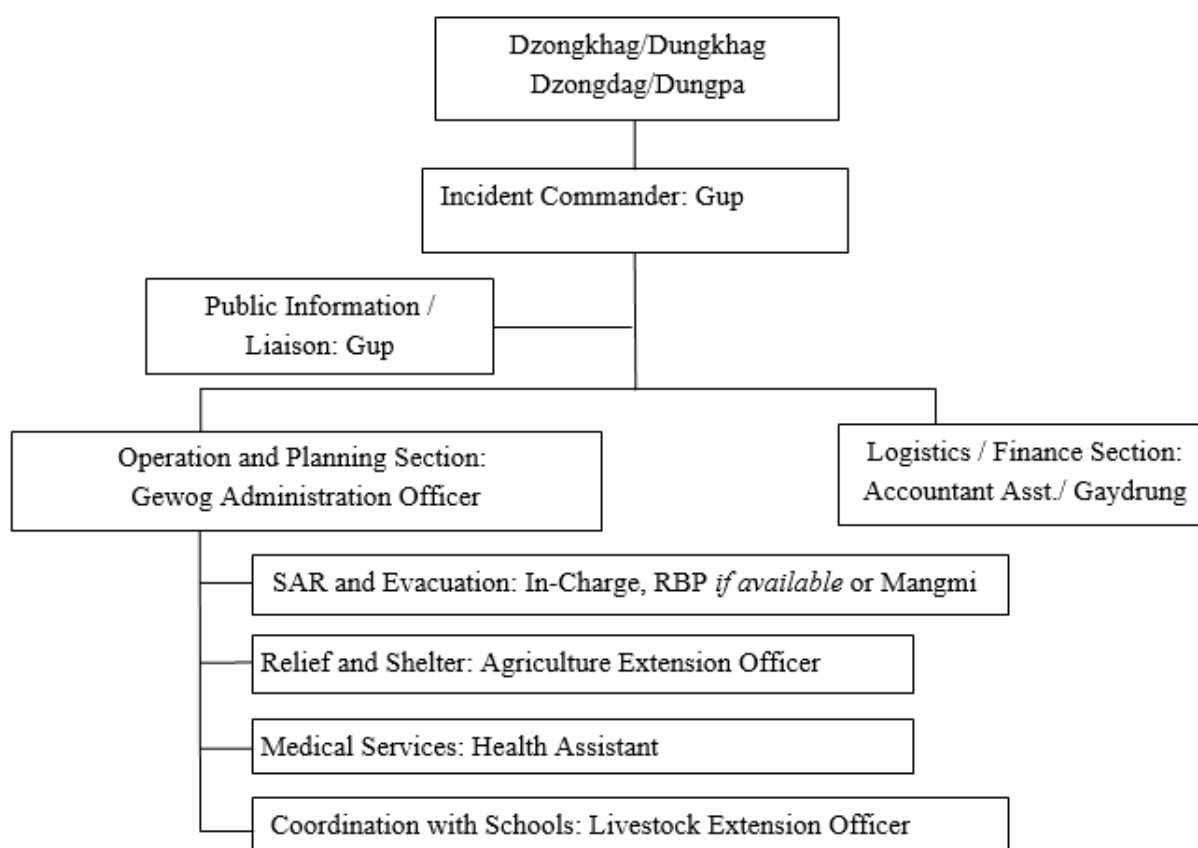
The Dungkhag Incident Response Management Team will be led by Dungpa or *any one officially officiating the position in case, if both are not at the station or vacant during the Disaster* and monitored by Dzongdag. Due to a shortage of human resources and smaller scale of response, Operations and Planning will be combined in to a single section and Finance and Logistics will also be combined in to a single section. However, when the scale of response escalates to Type II then the organizational structure discussed for Dzongkhag will be adopted.



Note: The support of Desuups/ Dratshang/ NGOs/ CSOs/ Corporations/ Regional Offices/ Private businesses and communities will be coordinated through the NDRCC and IMT at the national and dzongkhag level. As per Section 41 of the Disaster Management Act 2013, the Dzongdag (chair of 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.

### 4.4.3. Incident Management Team at Gewog level

The Gewog Incident Response Management Team will be led by Gup and monitored by Dzongdag or Dungpa or *any one officially officiating the position in case, if both are not at the station or vacant during the Disaster*. 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 Dungkha / Dzongkhag will assume command with the support of the IMT at the Gewog.



Note: *The support of Desuups/ Dratshang/ NGOs/ CSOs/ Corporations/ Regional Offices/ Private businesses and communities will be coordinated through the NDRCC and IMT at the national and dzongkhag level. As per Section 41 of the Disaster Management Act 2013, the Dzongdag (chair of 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.*

## 4.5. Description

**INCIDENT COMMANDER:** *The individual responsible for all incident activities, including the development of strategies and tactics and the 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

- a) *SAR and Evacuation Group:* will be responsible for conducting the SAR and providing evacuation at the site of the incident. Also responsible for monitoring and assessing safety hazards or unsafe situations, and for developing measures for ensuring personnel safety.
- b) *Medical Services Group:* will provide medical assistance to the victims.
- c) *Relief & Shelter Group:* responsible for providing shelter and relief to the affected families
- d) *Immediate Restoration of Essential Public Services Group:* Responsible for immediate restoration of essential public services

**PLANNING SECTION:** *Responsible for the collection, evaluation, and dissemination of information related to the incident, and for the preparation and documentation of Incident Action Plans. The Section also maintains information on the current and forecasted situation, and on the status of resources assigned to the incident.*

### Units within Planning Section

- a) *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.
  - b) *Resources Unit:* Responsible for maintaining the status of all assigned resources (primary and support) at an incident.
  - c) *Demobilization Unit:* responsible for assuring orderly, safe, and efficient demobilization of incident resources.
  - d) *Logistics Section:* Responsible for providing facilities, services, and materials for the incident.
- ✓ *Units within Logistics Section*
- i. *Communications Unit:* responsible for providing communication services at an incident.
  - ii. *Transportation Unit:* responsible for the fueling, maintaining, and repairing of vehicles, and the transportation of personnel and supplies.

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

#### **FINANCE SECTION**

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

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, Dungkha and Gewogs)
- BBS and radio for giving information to communities
- Sat phone: not activated (to be used for emergencies when other modes of communication fail)

#### ***4.6. Dzongkhag Emergency Operation Centre Management (DEOC)***

The DEOC is 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:
  - a) Officer in charge of DEOC: DDMO
  - b) Manned by two full time technicians as per Section 62 of the Disaster Management Rules and Regulations 2014
- During threatening/ disaster situations
  - a) Dzongdag to head the DEOC as per the DM Act 2013.
  - b) Other sector experts to staff the DEOC
- DDMC to meet in the DEOC to make critical decisions.

#### ***4.7 Disaster Lessons Learnt***

Disasters offer opportunity for the DDMC and the Dzongkhag IMT to learn from it and to improve their DM and Contingency plan. Thus, the DDMO will facilitate the conduct of lessons learnt after every disaster in the format attached as Annexure x. The lessons learnt will then be incorporated in the Dzongkhag DM and Contingency Plan. In case of Disaster Type II, the lessons learnt will also be shared with DDM for record and reference.



## Chapter 6: Implementation Mechanism

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

Dzongkhag administration will be responsible for ensuring that the activities are incorporated into their annual and five-year plans and for implementation of the prioritized plan activities.

The Dzongkhag Disaster Management Officer/ Gewog Administrative Officer will facilitate incorporation of priority disaster risk reduction, preparedness, awareness and capacity building activities in annual and five-year development plans of the Dzongkhag/ Gewog and facilitate implementation of the prioritized activities.

As member secretary to the DDMC, the DDMO will keep record, maintain data, and assist the chairman of the DDMC in monitoring the 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, on the implementation of the DM and Contingency Plan as required.

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.

## ***6.1. Financial Provisions as per the Disaster Management Act of Bhutan 2013***

There are four different types of financial arrangement:

1. Annual Budget for Disaster Activities and plans,
2. Financing for Response and Relief Activities,
3. Financing for Immediate Restoration of essential Public Infrastructure and Service Centre and
4. Financing for Recovery and Reconstruction Activities. (*See Operational Guidelines for Disaster Financing 2017, in Annexure XI as per letter no. MoHCA/NYA(M)-01)/2018-19/603 dated 9<sup>th</sup> April, 2019.*)

## Annexure

### *I. Contact Details of Gups under Zhemgang Dzongkhag*

Sl.No.	Name	Designation	Contact
1	Kinzang Jurmey	Bardo, Gup	+975-17704755
2	Tshering Wangchuk	Bjoka Gup	+975-17962066
3	Pema Samdrup	Goshing Mangmi/ Offtg. Gup	+975-17514415
4	Dorji Wangchuk	Nangkhor Gup	+975-17873885
5	Rinchen Wangdi	Nangla Gup	+975-17686938
6	Tashi	Phangkhar Gup	+975-17573034
7	Needup	Shingkhar Gup	+975-17866591
8	Wangay	Trong Gup	+975-17856759
9	Tashi Choden	Thromde Ngotsab	+975-17802750

### *II. Emergency Contact details of Responsible Officers of Dzongkhag Incident Management Team*

Sl.No	Name	Designation	Contact No	E-mail
1	Lobzang Dorji	Incident Commander	17832085	ldorji@zhemgang.gov.bt
2	Chogyel Zangmo	Liaison Officer	17968604	czangmo@zhemgang.gov.bt
3	Kinzang Dorjee	Operation Section Chief	17699898	kdorjee@zhemgang.gov.bt
4	Thinley Jamtsho	Planning Section Chief	17895562	tjamtsho@zhemgang.gov.bt
5	Dorji Wangchuk	Logistic Section Chief	17368161	dorjiwangchuk@zhemgang.gov.bt
6	Tshering Choden	Finance Section Chief	16903313	tsheringchoden@zhemgang.gov.bt
7	Maj. Pema Dangsel	SAR Chief	17800394	pdangsel@rbp.gov.bt
8	Sonam Nima	DDMO	16901642	snima@zhemgang.gov.bt

### *III. Fire-fighting (trucks, equipment, location, capacity)*

1. Fire Brigade, Zhemgang PS, RBP Focal person: Drimpon Sonam Dorji, In-charge @ 77447798

**IV. Contact list of the Hospitals and Health Centers**

<b>Sl.no</b>	<b>Name of Hospitals/HC's</b>	<b>Location</b>	<b>Contact person</b>	<b>Phone</b>
1	Buli Primary Health Center	Buli, Nangkor	Devi Maya Siwakoti, HA	17803700
2	Tshaidang Primary Health Center	Tsaidang, Nangkor	Dorji Tshomo, HA	17354600
3	Nimshong Sub-post	Nimshong, Shingkar Gewog	Lham Sangay, HA	17944922
4	Shingkar Primary Health Center	Shingkar Gewog	Laxmi Kanta Dhimal, HA	17663924
5	Khomshar Primary Health Center	Khomshar, Bardo Gewog	Sonam Wangchuck, HA	17677521
6	Langdurbi Primary Health Center	Bardo Gewog	Bumpa Wangdi, HA	17493922
7	Gomphu Primary Health Center	Trong Gewog	Tsheltrim Jamtsho, HA	17680516
8	Kradijong Primary Health Center	Phangkhar Gewog	Zangpo, HA	17745840
9	Pantang Primary Health Center	Phangkhar Gewog	Samba Dorji, HA	17805137
10	Tashibi Sub-post	Phangkhar Gewog	Rinchen Damcho, HA	17694570
11	Goshing Primary Health Center	Goshing Gewog	Sarita Maya Gurung, HA	17506240
12	Bjoka Primary Health Center	Bjoka Gewog	Pema Zangmo, HA	17572560
13	Namergang Sub-post	Goshing Gewog	Dorji Tenzin, HA	17580675
14	Kagtong Primary Health Center	Bjoka Gewog	Leki Dorji, HA	17672939
15	Manas Primary Health Center	Nangla Geowg	Nima Gyeltshen, HA	77224581
16	Panbang Hospital	Nangla Geowg	Dr.Abhisek Pradhan, HA	77655125
17	Zhemgang Hospital	Trong Gewog	Tenzin Jurmi, HA	17478494
18	Yebilaptsa Hospital	Trong Gewog	Dr. Sonam Kelzang	17290340

(Note: HA- Health Assistant)

## V. Contact details of Des-sups

Co-coordinator: Mr. Jambay Ugyen, Asst. DAO, Zhemgang (Contact No: +975-17610599)

Total Des-ups in Zhemgang Dzongkhag as of current date: 01.01.2020

Sl.No	Name	Gender	Designation	Contact Number
1	Tshogyal	M	Teacher	17515208
2	Suku Dolma Tamang	F	Teacher	17569893
3	Ngawang Tenzin	M		17693215
4	Sangay Tenzin	M	Teacher	17838122
5	Tshenten Yangzom	F	Teacher	17789495
6	Yeshey Dorji	M		17613093
7	Thukar	M	Junior Engineer	17933231
8	Phuntsho Wangyel	M	Self employed	77450673
9	Ugyen Tshomo	F	Election Officer	17665578
10	Jigme	M		77454343
11	Tashi Norbu	M	Teacher	17989953
12	Jigme Wangchuk	M		17422227
13	Tenzin Norbu	M	Principal	17560101
14	Jambay Ugyen	M	Asst. DAO	17610599
15	Rinzin Wangchuk	M		17862113
16	Jigme Dorji	M	Chief Forest Officer	17638946
17	Tenzin Wangda	M	Admin Assistant	17432033
18	Norbu	M	Drangpon	17697255
19	Chodup	M	Drangpon	17130046
20	Dorji Lungten	M	Teacher	17610417
21	Yeshi Lhaden	F	Teacher	17349141
22	Sangay	M	Warden	17557028
23	Tenzin Jurme	M	Health Assistant	17478494
24	Zangpo	M	Health Assistant	17745840
25	Rinchen Chung Chung	M	Sr. Health Assistant	17693018
26	Sonam Dendup	M	Technician	17895504
27	Damchen	M	Assistant Engineer	17996229
28	Cheten Norbu	M	Teacher	17720909
29	Dorji Samdup	M	Teacher	17716839
30	Ugyen Tshomo	F	Teacher	17801134
31	Joti Maya Rai	F	Teacher	17391501

32	Sonam Dorji	M	Teacher	17514164
33	Tashi Dorji	M	Teacher	77320111
34	Sonam Tshering	M	FMCL	17512081
35	Yieshy Gyeltshen	M	Assistant Engineer	17385610
36	Sangay Dorji	M	Adm Assistant	17669720
37	Rinchen Dolo	M	Forester	17715264
38	Lobzang Dorji	M	Dzongdag	17832085
39	Pempa Tshering	M	Teacher	17150748
40	Kinley Dem	F	Teacher	17276492
41	Lungten Tshering	M	Teacher	17485266
42	Kuenga Legpa	M	Teacher	17442726
43	Sangay Namgyel	M	Teacher	17448586
44	Tshering Pem	F	Teacher	77276751
45	Dorji Wangchuk	M	Gup	17873885
46	Sangay Lethro	M	Gup	17120169
47	Wangay	M	Gup	17856759
48	Tashi	M	Gup	17573034
49	Pema Zangpo	M		17827548
50	Monu Gurung	M	Sr. RQI	17698887
51	Sangay Lhamo	F	ECCD Facilitator	17699899
52	Tashi Choden	F	Thromde Ngotshab	17802750
53	Lobzang Dhendup	M	Technical	17649146
54	Tashi	M	Sr. Surveyor	17766509
55	Rinchen	M	Extension Supervisor II	17835134
56	Longchenla	M	Gaydrung	17389365
57	Samten Norbu	M	Technician	17697177
58	Kuenzang Tenzin	M	Principal	17150837
59	Tashi Wangdi	M	Teacher	17283189
60	Tshering Lhamo	F	Teacher	17492864
61	Ratna Bahadur Dahal	M	Teacher	17437380
62	Kinzang Dorjee	M	Dzongrab	17699898
63	Sonam Dorji	M	Drungpa	17666073
64	Tashi Choden	F	Adm. Assistant	17526998
65	Choki Pelden	F	Adm Assistant	17259623
66	Chimi Zangmo	F	CC Operator	17982154
67	Pema Sonam	M	Care Taker	17392311
68	Kelzang	M		17459092

### VII. Contact details of Principals of Zhemgang Dzongkhag

Sl. No.	Name	Designation	Name of schools	Contact Number	
				Office	Personal
1	Rinzin Namgyal	Principal	Zhemgang CS (B)	03-741126/ 741228/741272	17821854
2	Sonam Wangchuk	Principal	Zhemgang CS (A)	03-741145	17689271
3	Dorji Principal	Principal	Yebilabtsa CS	03-744042/ 17470199	17725340/ 77622446
4	Neema Dorji	Principal	Tingtibi LSS	03-744011	17689809
5	Karma Tenzin	Principal	Gomphu LSS	17120759	17688580
6	Samten	Principal	Tshanglajong PS	17120771	17822286
7	Kelzang Tashi	Principal	Tali PS	17120117	17565383
8	Pema Chogyel	Principal	Buli CS	17120780	77107988
9	Singye Wangchuk	Principal	Goling PS	17110034	17955497
10	Pema Wangdi	Principal	Tshaildang PS	17120684	17851390
11	Tenzin Yeshi	Principal	Dunmang PS	17120775	17576106
12	Tshering Tobgay	Principal	Shingkhar PS	17120631	17120631
13	Sonam Chopel	Principal	Nimshong PS	17122670	17467425
14	Tenzin Norbu	Principal	Thrisa PS	17122669	17560101
15	Ugyen Wangdi	Principal	Bardo PS	17120697	17802761
16	Sangay Tenzin	Principal	Khomshar PS	17120757	17990506
17	Mitsi Dorji	Principal	Langdurbi PS	17123072	17123072
18	Jangchub Dorji	Principal	Degala PS	17116191	17510860
19	Dorji Lungten	Principal	Kikhar PS		17610417
20	Rinzin Wangdi	Principal	Sonamthang CS	17150741	17668834
21	Cheten Tashi	Principal	Pantang PS	17150839	17722303
22	Choda	Principal	Tashibi PS	17150838	17504950
23	Kunzang Tenzin	Principal	Panbang PS	17150844	17126222
24	Kinga Penjor	Principal	Kagtong PS	17150836	17788581
25	Pempa Tshering	Principal	Budashi PS	17150748	17943505
26.	Sangay Thinley	Principal	Barpong PS	17123070	17777059
27	Tenzin Dorji	Principal	Goshing PS	17150837	17150837
28	Leki	Principal	Bjoka PS	17150835	17714745
29	Tempa Rinchen	Principal	Repati PS	17150081	17150081/ 17522197
30	Ugyen Dorji	Principal	Tradijong PS	17110330	17110330/
31	Chungla Dorji	CDEO	Dzongkhag Adm.	03-741229	17725394/ 77242498
32	Sherab Jamtsho	Dy. CDEO	Panbang Dungkhag	03-741164	17693138
33	Sangay Dema	Adm. Asst	Dzongkhag Adm.	03-741164	17762549
34	Phub Gyeltshen,	Adm. Asst	Panbang Dungkhag	03-742049	17928924

**VIII. Contact details of Gewog Administrative Officers**

SI No	Name	Designation	Contact Number	E-mail ID
1.	Nima (Extension Supervisor)	Offtg. GAO, Bardo	+975-17757711	nimadyodzer@gmail.com
2.	Leki Choeda	GAO, Bjoka	+975-17738507	lekichodas@gmail.com
3.	Sangay Wangchuk	GAO, Goshing	+975-17970769	swangchu14@gmail.com
4.	Yenten Dema	GAO, Phangkhar	+975-17389752	yonten5@gmail.com
5.	Ugyen Phuntsho	GAO, Nangkor	+975-17766771	phunden508@gmail.com
6.	Tashi Choden	GAO, Ngangla	+975-17981267	tashic381@gmail.com
7.	Sita Gurung	GAO, Shingkhar	+975-17754283	sitagurung91@gmail.com
8.	Sherub Tashi	GAO, Trong	17773317	sherabtashi@gmail.com

**IX. SOP for Response Immediately after a disaster:**

1. As soon as a disaster strikes the Contingency Plan is activated
2. Rapid assessment teams to conduct rapid assessment and pass on the assessment information to IC/ DEOC
3. DDMC and all Teams to report to DEOC
4. DEOC to compile rapid assessment report and submit to DEOC head (Dzongdag)
5. Planning Section to formulate Incident Action Plan/ IAP (response strategy for a fixed duration along with IC and other section chiefs
6. Based on the IAP initiate response actions -
7. Briefing of Unit leaders by Section Chiefs
8. Briefing of team members on their respective task by the team/ unit leaders (including area, timings, shift system, communication, etc.).
9. Deployment of teams.
10. IC to submit rapid assessment report and IAP to National Emergency Operation Centre through the Dzongkhag Emergency Operation Centre
11. Logistics Section to mobilize resources as per the IAP
12. Outgoing team leaders to brief the incoming Team Leader on the status of ongoing operations.
13. Debrief of the day's response – At Team level, Section level and EoC level
14. Planning Section - based on de-brief information to plan for operations for the next day (detailed roles and responsibilities to be worked out)
15. Liaison officer to submit list of resources required to the NEOC
16. Liaison officer to depute volunteers based on needs in the field
17. IC to provide public information i.e. provide timely press releases and advisories
18. Dzongkhag shall conduct detailed damage assessment along with insurance companies for relief and early recovery and submit report to DDMC.

*Dzongkhag shall provide immediate relief and response support as per rapid assessment reports using available funds at dzongkhag/ Gewog level and submit expenditure report and bills to DDMC for further submission to Ministry of Finance, with a copy to DDM, for reimbursement. Bills submitted by the Gewogs have to be verified by the Gup and related sectors.*



*IX. List of participants for the DM and Contingency Plan Workshop held in Zhemgang from 13-16 May, 2019*

S/N	Name	Sex	Designation	Agency
1	Lobzang Dorji	M	Dzongdag	Dzongkhag Adm. Zhemgang
2	Kinzang Dorjee	M	Dzongrab	Dzongkhag Adm. Zhemgang
3	Sonam Dorji	M	Drungpa	Dungkhag Adm. Panbang
4	Pema Dangsels	M	Officer-In-Command	RBP, Zhemgang Police Station
5	Kinzng Jurmey	M	Dy. DT Thrizin	Bardo Gewog
6	Lham Dorji	M	Dratsang Drungchn	Zhemgang Rabdey
7	Tshering Wangchuk	M	Gup	Bjoka Gewog
8	Pema Samdrup	M	Mangmi/Offgt. Gup	Goshing Gewog
9	Dorji Wangchuk	M	Gup	Nangkhor Gewog
10	Rinchen Wangdi	M	Gup	Nangla Geowg
11	Tashi	M	Gup	Phangkhar Gewog
12	Needup	M	Gup	Shingkhar Gewog
13	Tashi Choden	F	Thromde Ngotsab	Zhemgang Throm
14	Sonam Choden	F	Gewog Adm. Officer	Bardo Gewog
15	Sita Gurung	F	Gewog Adm. Officer	Shingkhar Gewog
16	Karma Dorji	M	Chief Engineer	DOR, Tingtibi Regional Office
17	Tshering Tobgay	M	Base In-Charge	RSTA, Zhemgang Base
18	Tshering Choden	F	Asst. Finance Officer	Dzongkhag Adm. Zhemgang
19	Ugyen Dorji	M	Sr. Human Resource Officer	Dzongkhag Adm. Zhemgang
20	Dorji Wangchuk	M	Asst, Procurement Officer	Dzongkhag Adm. Zhemgang
21	Mohan Subba	M	Asst. Info. Communication and Technology Officer	Dzongkhag Adm. Zhemgang
22	Chogyal Zangmo	F	Dzongkhag Legal Officer	Dzongkhag Adm. Zhemgang
23	Wangay	M	Gup	Trong Gewog
24	Luv Kumar Cheteri	M	Chief Dzongkhag Engineer	Dzongkhag Adm. Zhemgang
25	Yang Dorji	M	Chief Program Officer	Department of Disaster Mgt.
26	Tshewang Norbu	M	Sr. Program Officer	Department of Disaster Mgt.
27	Dorji Wangchuk	M	Sr. Info. Communication and Technology Officer	Department of Disaster Mgt.
28	Phub Tshering	M	Asst. Culture Officer	Dzongkhag Adm. Zhemgang
29	Sonam Nima	M	DDMO	Dzongkhag Adm. Zhemgang

***X. Disaster Lessons Learnt Template***

## Disaster Lessons learnt Template

<b>SI No</b>	<b>Questions</b>	<b>Response</b>	<b>Remarks</b>
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/ Drungkhag/ 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.*

## ***XI. Operational Guidelines for Disaster Financing 2017***

### 1. Introduction

The Operational Guidelines shall be called the ‘Operational Guidelines for Disaster Financing 2017. It is developed in line with Chapter 8, Section 80 of the Disaster Management Act of Bhutan 2013 to facilitate efficient, effective and timely response during disaster emergencies.

### 2. Objective and Scope

The main objective of this Operational Guidelines is to facilities agencies in accessing financing from a separate budget (General Reserve for Disaster Relief) allocated for National Disaster Management Activities under the Ministry of Finance as required by Section 82 of the DM Act 2013. This Guidelines shall cover financing requirements of all disaster related activities in the country and shall extend its application to agencies responsible to coordinate as per the DM Act 2103.

### 3. Authority

The Chairperson, Disaster Management Committee (DMC) shall after duty verifying the scope of financing eligibility under various categories of disaster financing shall have the authority to approve expenditure for providing immediate relief to the affected people in the communities and restoring infrastructures to restore the business back to normalcy. Any fund request must be submitted under the signature of Chairperson/Offgt. Chairperson of the DMC without which the request shall be considered incomplete and shall not be processed.

### 4. Financial Arrangements

There shall be three types of financing arrangements for disaster management activities as per Chapter 8 of DM Act 2013 as given below:

- I. Financing for Response and Relief Activities;
- II. Financing for Immediate Restoration of essential Public Infrastructure and Service Centre and
- III. Financing for Recovery and Reconstruction Activities.

#### 4.1 Financing Arrangements

‘*Response and relief*’ shall refer to measures taken immediately during or after a disaster in order to bring relief to people and communities affected by the disaster. Activities under ‘Response and Relief’ includes providing food, shelter and other essential relief items for the affected people in the communities and to the ‘*Responders*’ as per the minimum standards set by the Department of Disaster Management (DDM). The response and relief support shall not exceed 21 days for disaster type III and 10 days for disaster type I and II. The disaster period may, however, be altered in accordance to DM Act 2013.

- ✓ The procurements of goods and services for the purpose of relief and response may be exempted from following normal Government procurement procedures specified in the Procurement Rules and Regulations. However, where there is annual quotation, in accordance to DM Act 2013.
- ✓ No compensation shall be paid to individuals or private entities on damage caused by natural disasters. However, in case where a person's or private property is used, lost or damaged during response, relief and recovery operations, compensation shall be admissible in accordance with Chapter 11 of the DM Act 2013. Whatever relevant, the Government rate of compensation shall be applied. The Compensation shall not be payable for loss or damage in the event that an amount for loss or damage is recovered or recoverable under any policy of Insurance.
- ✓ The agencies in coordination with DMC shall submit detailed accounts of expenditure with copies of documentary evidences to the DDM. The DDM shall review in line with minimum standardized relief items and forward the request to the Department of National Budget (DNB) for Budget. The DNB shall, upon receipt of the request from the DDM, transfer the amount of budget from General Reserve for Disaster Relief to the agencies concerned at the earliest possible. The agency may initially use their normal budget to incur expense for response and relief activates.
- ✓ The Chairperson (DMC) shall ensure to maintain a detailed inventory of goods/items and services procured for response and relief operation.

#### 4.2 Financing Immediate restoration of Essential Public Infrastructure and Service Center

The activities under this category shall include immediate restoration of essential public infrastructure and service centers damaged by disaster so as to continue providing undisrupted service center shall;

- a. Be fully owned and maintained by the government and is not involved in profit making activities;
- b. Be an integral and necessary part of the public Infrastructure; and
- c. Severely disrupted the normal functioning of community

*(Some examples of essential public infrastructure and services centers are; school, hospital, gewog office, rural water supply schemes, irrigation channel, bridge, highway, Gewog Centre road)*

For the purpose of financing such activities (*rehabilitation/restoration*), the DMC shall assess, verify and submit sufficiently detailed damage report along with work plans, cost estimates and pictorial evidence to DNB with a copy to DDM within 45 days of the disaster event. The request received after 45 days of the disaster event. The request received after 45 days shall be construed as recovery and reconstruction activities.

Upon receipt of the request from the DMC, the DNB shall transfer budget from General Reserved for Disaster Relief to the respective agency. The DNB may conduct physical verification to re-confirm or validate the report.

#### 4.3 Financing for Recovery and Reconstruction Activities

‘Recovery and Reconstruction’ means effort including development aimed at restoring normalcy in condition caused by disaster, mitigating the effect of disaster or creating circumstances that will reduce the risk of similar disaster from occurring in the future.

The agencies shall, for the purpose of recovery and reconstruction of public assets and infrastructures, undertake detailed damaged assessment within its area of responsibility as per the post disaster assessment framework endorsed by the NDMA. The budget requirement for the recovery and reconstruction activities shall follow the normal planning and annual budgeting process.

#### 5. Interpretation and Revision

The Department of Disaster Management, MoHCA and Department of National Budget, MoF shall be the final authority to interpret the Guidelines and may revise the same jointly from time to time.

#### 6. Accounts, Audit and Accountability

6.1 The agencies concerned shall maintain the book of accounts for all financing provided for disaster activities as per Financial Rules and Regulations, 2016.

6.2 The Royal Audit Authority shall audit all disaster related expenditure.

6.3 Accountability for non-compliance, making false claims and misappropriation shall be vested with the Chairperson (DMC)

#### 7. Effectiveness

The revised Operational Guidelines for Disaster Financing 2017 shall come into effect from Day 1 Month July Year (2017)

## ***XII. Disaster Management Terms***

1. **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.
2. **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.
3. **Coping Capacity:** The ability of people, organizations and systems, using available skills and resources, to manage a disaster.
4. **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.
5. **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.
6. **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.
7. **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.
8. **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.
9. **Mitigation:** Measures aimed at reducing risk, impact or effect of a disaster or an impending disaster situation.
10. **Preparedness:** State of readiness to deal with a potential disaster situation or disaster and its effects thereof.
11. **Prevention:** Measures taken to avert a disaster from occurring or to impede a hazard so that it does not have any harmful effects.
12. **Recovery and Reconstruction:** Efforts, including development, aimed at:
  - a) Restoring normalcy in condition caused by disaster;

b) Mitigating the effect of disaster) Creating circumstances that will reduce the risk of similar disasters from occurring.

13. **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.
14. **Retrofitting:** Reinforcement or upgrading of existing structures to become more resistant and resilient to the damaging effects of hazards.
15. **Risk:** The level of value of expected losses in the form of deaths, damage to property etc. caused by a hazard.

