



Thimphu Dzongkhag Disaster Management & Contingency Plan 2017

(Draft as of)

Dzongkhag Administration, Thimphu

ROYAL GOVERNMENT OF BHUTAN

Executive Summary

Section 77 of the Disaster Management Act of Bhutan 2013 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 the Dzongkhag Disaster Management Committee to submit the Dzongkhag's disaster management plan 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, Thimphu Dzongkhag Disaster Management and Contingency Plan is formulated through funding support from the NAPA 2 Project.

With the 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 the 8 Gewogs in consultation with the Gewog Administrative Officer (GAO), Tshogpas, discussion with the Sector Heads of Dzongkhag Administrations, representatives from the schools and regional offices to strengthen school and Dzongkhag DM plan linkages; data collation and analysis; and finally a simulation on standard procedures for response 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 Gewogs. 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.

Acknowledgements

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 Tshogde
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

Contents

ACRONYMS	4
Scope & Objective	8
Chapter 1: Overview of the Dzongkhag	Error! Bookmark not defined.
Administration.....	9
Geography	Error! Bookmark not defined.
Weather and Climate	16
Demography.....	Error! Bookmark not defined.
Economy.....	Error! Bookmark not defined.
Chapter 2: Dzongkhag Disaster Management Structure	9
2.1 Dzongkhag Disaster Management Committee (DDMC)	16
2.2 Functions of DDMC	17
2.3 Functions of Chairperson	18
2.4 Role of Key Dzongkhag Sectors	
Chapter 3: Disaster Risk Profile of Dzongkhag.....	Error! Bookmark not defined.
3.2 Hazard Assessment	Error! Bookmark not defined.
3.4 Vulnerability Assessment	Error! Bookmark not defined.
3.5 Capacity Assessment.....	Error! Bookmark not defined.
Chapter 4: Dzongkhag Disaster Management Action Plan.....	20
Chapter 5 Dzongkhag Contingency Plan	
5.1	
5.2	
5.3 Dzongkhag Emergency Operation Centre Coordination	
Chapter 6: Implementation Mechanisms	29
6.1 Overall Coordination	Error! Bookmark not defined.
6.2 Resource Mobilization.....	Error! Bookmark not defined.
6.3 Monitoring and Evaluation.....	Error! Bookmark not defined.

6.4 Reporting system	Error! Bookmark not defined.
Annexes.....	Error! Bookmark not defined.
Contact details of DDMC members.....	Error! Bookmark not defined.
Emergency Contact details of responsible Officers from Dzongkhag.....	40
Contact details of Des-sups.....	42
List of schools which have SDMP in place.....	Error! Bookmark not defined.
Contact details of Principals of Chhukha Dzongkhag, 2017.....	43
Disaster Management Terms	

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

The Disaster Management and Contingency Plan for Thimphu Dzongkhag is mandated by the Disaster Management Act of Bhutan 2013. The plan was endorsed by the Dzongkhag Disaster Management Committee (DDMC) on 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 the 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.

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'

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

Chapter 1: Overview of Thimphu Dzongkhag

Background

Thimphu Dzongkhag is located in the Western Central part of the Country at an altitude of 2330 meters above the sea level. The Dzongkhag covers an area of 1,795.868 square kilometers. Administratively, it is divided into 1 Drungkhag and 8 Gewogs namely Lingzhi Drungkhag, and the Gewogs are Kawang, Chang, Maedwang, Darkarla, Geyne, Soe, Naro and Lingzhi Gewogs. The Dzongkhag has a forest coverage of 277614.37 square kilometers which is about 64.3% of the total land area. In the agricultural land use pattern, the Dzongkhag has about 15.5% as a wet land cultivation, 70.7% dry land, and 13.7% as an orchard.

The main sources of income for the people of Thimphu Dzongkhag are Agriculture, Livestock and major cash crops like Apple and Potato. However, the people of Lingzhi Drungkhag also earn income through the sale of Cordeyceps.

Source: Dzongkhag Statistical Handbook of Thimphu Dzongkhag, 2015

Social and Administrative Profile

GENERAL INFORMATION	
Total Area (<i>sq km</i>)	1,795.868
Forest cover (%)	64.3%
Total Area under Forest Cover (<i>Acres</i>)	277,614.37
Location of Dzongkhag Headquarter	Changlimethang

Source: Statistical HandBook of Thimphu Dzongkhag, 2015

Administrative units

Dungkhag	1
Thromde	1
Gewogs	8
Chiwogs	40
Villages	194
Households ¹	1829

Population ²	13,744
Male	8041
Female	5703
<i>Note: 1. Statistical Handbook of Thimphu Dzongkhag, 2015</i>	
<i>2. Statistical Handbook of Thimphu Dzongkhag 2015</i>	
Local Government	2017
Gup	8
Mangmi	8
Gewog Administrative officer	8
Tshogpas	39
Dzongkhag Tshogdu Members	17
Gewog Tshogde Members	55
CULTURE	Numbers
Details	2016
Monks	00
Dratshang	4
Lhakhangs	65
Chortens	353
Shedra	4
Lopdra	8
Gomdey	3

Drubdey	8
Note:	
Gewog Connectivity	2016
Gewog Connected by Road	5
Gewogs connected with mobile network	8
Gewogs Connected by Electricity	6

EDUCATION	Numbers		
Types of School	2014	2015	2016
Tertiary Institute under RUB	1	1	1
Central Schools	0	1	1
Higher Secondary Schools	1	2	2
Middle Secondary Schools	2	2	2
Lower Secondary Schools	2	1	1
Primary Schools	6	6	6
Extended Class Room	2	2	2
Non Formal Education Centers	15	12	12
ECCD	5	6	6
Students Enrolment	2014	2015	2016
Male	1520	1598	
Female	1575	1675	

Total	3095	3275	
Teachers	2014	2015	2016
Male	115	127	
Female	75	79	
Total	190	206	
Students to Teacher ratio	16:1	16:1	

Note: 2016 Education data does not include schools under throde

HEALTH	Numbers		
Types of Health Facilities	2014	2015	2016
Hospitals	1	1	1
BHU-I	-	-	-
BHU-II	6	8	8
<i>Satellite Clinics</i>	<i>3</i>	<i>3</i>	<i>3</i>
Indigenous Unit	1	1	1
Sub Post			
ORC With Shed	5	5	5
ORC Without Shed	2	2	2
Health Staff	2014	2015	2016
Doctors	3	2	3
Dungtshos (Indigenous Doctor)			
Health Assistants		27	

Menpas	1	2	2
Nurses (Asst nurse/GNM/B.Sc Nurse)	18	20	20
Technicians	12	14	14

Water and Sanitation	2014	2015
Rural water supply coverage (%)	99.1	99.1
Rural population access to improved sanitation (%)	98.8	99

AGRICULTURE	2014	2015
Farm Road (km)	70.120	82.020
Irrigation channel (km)	103.24	140.8
Power tillers (Nos.)	70	78
Electric fencing (Nos.)	3	15
Electric fencing (km.)	3.2	24.29
Farm sales shops (Nos.)		

Major Cash Crops Production, 2015			
Details	Cultivated area (acres)	Production (MT)	Yield (kg/Acre)
Cardamom			
Apple			
Potato			

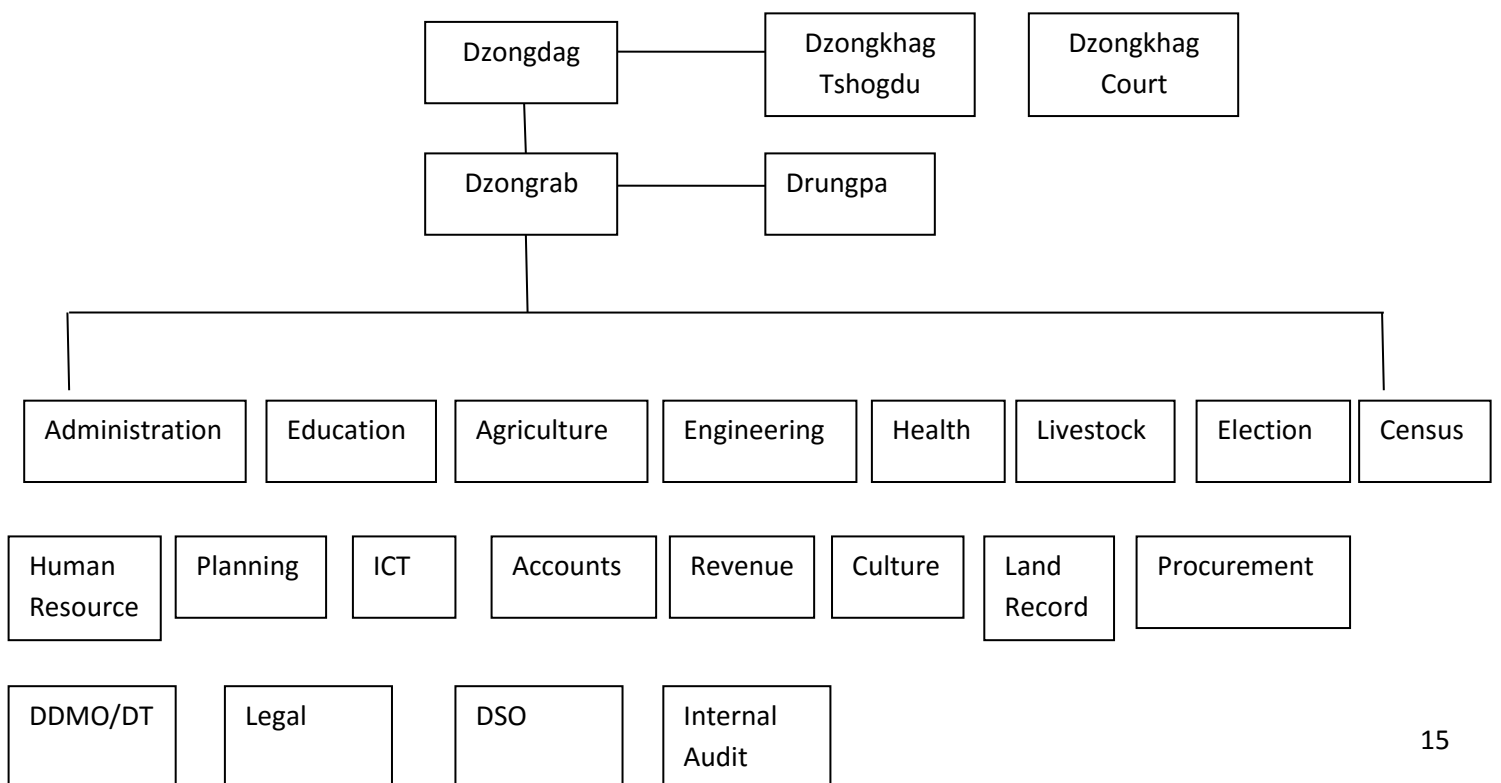
Ginger			
<i>Apple: Is in no. of trees and yield is in kg per bearing trees</i>			

Livestock		
Livestock Population	2014	2015
Cattle	3189	
Eguine (Numbers)	1249	
Pig	525	
Poultry	28847	
Sheep	7	
Goat	23	
Livestock Production	2014	2015
Fresh Milk (liters)	1,318,348	
Butter (kg)	47,855	
Cheese (kg)	27300	
Eggs (dozen)	442,501	
Beef (kg)	5750	
Pork (kg)	2475	
Chicken (kg)	1490	
Wool (kg)	627	

Livestock Infrastructures

Details	2014	2015
Veterinary Hospitals	1	1
Livestock Extension Centres	3	3
Forestry		
Details	2014	2015
Territorial Division HQs	1	1
Range Offices	4	4
Beat Offices	3	3
Number of community forest	21	21
Community Forest (acres)	6775.40	6775.40
No. of Households in CF group	917	917

Figure 1 – Organogram of Dzongkhag Administration



Weather and Climate

Monthly Temperature (Degree Centigrade)

Average Monthly Rainfall

Chapter 2: Dzongkhag Disaster Management System

2.1 Dzongkhag Disaster Management Committee (DDMC)

As prescribed in the Disaster Management Act of Bhutan 2013, every dzongkhag administration shall constitute a Dzongkhag Disaster Management Committee. Thimphu Dzongkhag Disaster Management Committee (DDMC) is constituted as below :

Dzongkhag Disaster Management Committee

SI No	Name	Designation	Contact No	Remarks
1	Tshewang Rinzin	Dzongdag	17111815	Chairman
2	Chewang Jurmi	Sr. Dzongrab	17953880	Vice Chairman
3	Rep from Dratshang			Member
4		SSP, Div XI		Member
5	Gado	DT Chairman	17600912	Member
6	Karma Gyeltshen	Genye Gup	17615262	Member
7	Kanjur	Chang Gup	Member	17163066
8	Cencho Tenzin	Maedwang Gup	Member	17627366
9	Wangdi	Lingzhi Gup	Member	17117266
10	Wangchuk	Naro Gup	Member	17640142
11	Kencho Dorji	Soe Gup	Member	17172340
12	Thukten Wangchuk	Kawang Gup	Member	17652700
13	Namgay Tshering	Thromde Thuemi	Member	17604871

14	Penjor	Dzongkhag Kidu Officer	Member	17600557
15	Gyembo Dorji	Chief Dzongkhag Health Officer	Member	17600582
16	Chabi Lal Das	Chief Dzongkhag Engineer	Member	17758570
17	Singye Dorji T	HRO/MTO	Member	17680599
18	Tashi Namgyal	Chief DEO	Member	17972619
19	Gyeltshen	Dzongkhag Procoment	Member	17844041
20	Gyeltshen	Chief Forest Officer	Member	
21	Kul Bdr	Dy. Chief DLO	Member	17653202
22	Dhodho	Dy. Chief DAO	Member	77457980
23	Tshering Deki	Dy. Chief Accounts Officer	Member	17636516
24	Dorji	Cultural Officer	Member	17738027
25	Tandin Wangchuk	DDMO	Member Secretary	17609865

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 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.

2.2. 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 clause 31 of DM Act 2013, the DDMC shall:

- a) 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 information about an event or a disaster is promptly communicated to the NDMA, DDM and all concerned.
- h) Ensure that the damage assessments in the field are carried out professionally and efficiently without fear or favor
- i) Coordinate and support disaster response and relief operation including recovery and reconstruction
- j) Ensure that detailed reports and regular updates on disaster event is provided to the DDM upon completion of field assessment of the situation
- k) 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
- l) Conduct regular mock drill
- m) Report on a quarterly basis to the NDMA on the progress of implementation of its DM plan
- n) 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.

2.3 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 this Act, the Chairperson of the DDMC shall:
 - a) Regularly review and assess the effectiveness of 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 filed assessment of the situation
 - f) Manage response and relief operation in accordance with the directives issued by the national Disaster Management authority; and
 - g) Coordinate delivery of services and resources to disaster affected communities

Important activities being undertaken in DM by key sectors

1. ***Religion and Culture:-***
 - a. Reroofing of Lhakhangs

- b. Procurement of fire extinguishers.
- c. Distribution of steel cupboards

2. Education sector:-

- a. Major renovation works.
- b. Awareness program / mock drill.
- c. All the institutions are notified by the Education sector for the disaster preparedness.
- d. Distributed first aid/school in the box kits to all the schools.
- e. Provided immediate services to schools effected by communicable and contingencies diseases.
- f. Distribution of Posters related to Disaster to all institutions.

3. Health sector:-

- a. Provided first aid training to village health workers and monks (Shedra and Dratshang)
- b. Training of Emergency Medical Teams
- c. Procured satellite tents

Chapter 3: Disaster Risk Profile of Thimphu Dzongkhag (HVCA)

Thimphu Dzongkhag is susceptible to both natural and human-made disasters. This includes earthquake, windstorm, fire, landslides, Thunder storm and vehicle accidents. The most notable disaster was the Sept, 21st earthquake in 2009 and 2011 which affected the most Dzongkhags including Thimphu. It damaged most of the rural households, schools, Lhakhangs, 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 capacities at the dzongkhag as well as individual gewogs since 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. Finally the gewog's hazard is prioritized for action planning using the probability and impact matrix.

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

This chapter details the action plan for Chhukha to raise awareness, reduce risk, enhance preparedness and resilience for five years starting from 2018 to 2022 for the hazards which were prioritized.

Priority Hazards: Earthquake, Landslide, Flood, Windstorm, Fire (including forest fire), Human Wildlife Conflict and Pest & diseases

Priority Area	Key Activities	Target	Nodal Agency	Supporting agencies	Timeline	Budget estimate (Nu. in M)
DDMC Meetings as per the DM Act of Bhutan 2013	Conduct DDMC meetings bi-annually as per the DM act of Bhutan 2013 (to review the DM and Contingency plan, assess implementation of the activities and dissemination of plan) (Gewogs to propose their own budget to hold GDMC as per need)	DDMC	DDMO	DDMC	to be clubbed with DT Meetings	0.50
Awareness and Education	1.1 Public education and advocacy program on priority hazards including family disaster preparedness (also distribute user friendly key messages on risk reduction and disaster preparedness) - Use schools to conduct	11 Gewogs including 46 Schools (including 5 ERC), Agencies Include vulnerable groups (Women, children, old age, and people with disabilities)	Gewog Administration DDMC	Dzongkhag Administration, regional offices, DDM RBP	Annually starting 2018	5.00

	community outreach activities - Disseminate Gewog DM and Dzongkhag DM plans					
	1.2 Conduct meetings with Principals and disaster focal teachers to strengthen linkages with school DM plans - At the dzongkhag level DEO to participate in DDMC - At the gewog level, GDMC to initiate	Schools	DEO, GDMC DDMC	Dzongkhag Administration	2018	as and when other meetings happen
	1.3 Dzongkhag observes International Disaster Reduction Day (13 th October every year)	Dzongkhag Administration, Schools, communities, Rabdey, Business community, Regional offices	DDMO, DDMC, Dzongkhag Administration	DDM	Annually from 2018	0.5
	1.4 Raise awareness on insurance benefits and encourage families to insure their property against various hazards	All Gewog and Thromde Communities	Gewog Administration, Thromde Thuemi	Insurance companies, DDM, Dzongkhag Administration	2018 – 2019	
	1.5 Raise awareness on installation	Govt offices, private building owners,	RBP/ Dzongkhag Administration	Gewog Administr	2018-2019	

	of fire safety gadgets (fire alarm, extinguishers in govt., private buildings, and community lhakhangs)	Caretakers of Lhakhangs		ation and community		
	1.6 Raise awareness on road safety	Govt. and communities	RSTA/ RBP	Dzongkhag administration	Annually from 2018	
	2.1 Conduct training on Bhutan Building Codes and Guidelines for construction of Traditional houses (including for earthquakes and windstorms)	Engineers, carpenters, Masons, Gewog administration staff	DE	DDMO, DDMC, DDM, DES (MoHWS), DoC (MoHCA)	2018-2020 (2 times)	0.80
Enhance risk reduction and mitigation	2.2 Carry out vulnerability assessment of old/ existing buildings/ houses (earthquake)	Cultural buildings, office buildings, private buildings	DE	DDMC, DDM, DES, MoHWS, MoE, DoC (MoHCA)	2018-2020	(DE/ DDMO to discuss with MoWHS/ MoHCA)
	2.3 Implement structural mitigation measures or replacement as per vulnerability assessment recommendations on a prioritized	Mitigation for priority structures (Government structures)	DE/ DDMO	DDM, DES (MoHWS),	2019 onwards	Based on assessment

	basis			MoE, Gewog Adm. Dratshan g		
	2.4 Strengthen construction quality control and monitoring mechanism for materials and adherence to standards and designs	Gewog Administration and Dzongkhag Administration	Gup/ Mangmi, DE	DES, MoWHS/ BSB, DDM Other relevant sectors	2018 – 2022	(as per existing rural constructio n rules 2013 framed by MoWHS)
	2.5 Flood and landslide hazard zonation	Dzongkhag	DGM, NCHM, MoWHS	DDMC, Dzongkha g Administr ation, Land Commissi on	2018- 2022	(to discuss with technical sectors)
	2.6 Study of windstorm pattern and impact in the dzongkhag/ gewog		DDMO	DDM, NCHM	2017	(to discuss with DES (MoWHS)/ NCHM and MOAF
	2.7 Implement mitigation measures on a prioritized basis in the gewogs as per the HVCA:	Lhaxhang caretakers, schools, institutions, gewogs	Tshogpa, Respective Sectors, TDMO	DDM, GNHC, MoF,	2017 – 2021	Based on identified priority

	<ul style="list-style-type: none"> - Flood mitigation in Doongna Chiwog (along Paray Lum, near Lhakhang, Zhaka lum) - Flood mitigation (Pango village, - Flood mitigation - Landslide mitigation - Landslide mitigation 			MoWHS, MoEA, concerned technical sectors		mitigation activity
2.8 Strengthen systems to disseminate weather forecast and advisories (World Bank Project)	Communities			DDM, NCHM, DoA	2016-2020	
2.9 Installation of fire hydrants as per needs assessment	Tsimalakha/ Tsimasham, Gedu Town	RBP/ Dzongkhag Administration			2018-2020	To be discussed
2.10 Installation of EWS for Amochu river basin						Dzongkhag Administration to discuss with NCHM and DDM)
3.1 Training of Dzongkhag Disaster Assessment Teams on Bhutan Disaster Assessment Tools	Engineers, Sector heads and Gewog Administration staff, Tshogpas, regional offices	DDM		Dzongkhag and Gewog Administration	2018	

3.2 Form and train gewog SAR teams (include De-Suups)	Gewogs	Dzongkhag and Gewog Administration	DDM/RBP	2018-2022 (annually)	1.65
3.3 Refresher course for the Dzongkhag SAR Team (including De-Suups)	SAR team, RBP	DDMC	DDM, RBP	Annually from 2018	0.7
3.4 Ensure fire-fighting preparedness is put in place in the BOD	Tsimasham and Gedu BOD	DDMC	RBP/Dzongkhag Administration	2018	
3.5 Identify Evacuation sites for various hazards (keeping in mind the needs of people with disabilities, women, children and elderly)	Community and Offices	DDMC, Gewog Administrations	DDM, relevant sectors	2018	
3.6 Establish Dzongkhag Emergency Operation Center (including Standard Operating Procedures)	Dzongkhag Administration	DDMO	DDMC, DDM Relevant sectors	2018	(equipment supported through NAPA 2 Project)

	3.7 Procure SAR equipment	Gewog Administration	Dzongkhag/ Gewog Administration	DDM	2018	4.0
3. Enhance preparedness, response and recovery	3.8 Sensitize, conduct mock drill/ simulation on Dzongkhag DM and Contingency plan	Dzongkhag, Dungkha Administration, Gewog Administration Dratshang, RBP, RBA, Judiciary, Regional Offices, De-Suung, Business and Communities	DDMC	DDM	2018-2021	0.500
	3.9 Stockpile essential items required for emergency response and immediate recovery at strategic locations		FCB (Essential food items) Farm shops (in Gewogs) ORC (first aid kits) Dzongkhag and Gewog Adm (for other items)	DDM, MoF, relevant sectors	2018-2022	1.00

3.10 Establish and institute pre-arrangements for emergency procurement and requirements	Dzongkhag Administrations	Procurement Officer/ Finance Officer	DDMC, DDM, MoF	2018-2022	
3.11 Establish community based early warning system for floods and landslide including monitoring and reporting system	Dzongkhag Administration	DDMC/ Dzongkhag and Gewog Adm	DDM, NCHM, DGM, RBP,	2018-2022	0.500
3.12 Identify Dzongkhag/ Gewog Disaster Assessment Team for various hazards	Dzongkhag and Gewog Administration	DDMO	DDM	2018	
3.13 Construction of the Dzongkhag Emergency Operation Centre	Dzongkhag Administration	Dzongkhag Administration	DDM	2020	
3.14 Procure emergency communication equipments (VHF/HF sets)	Dzongkhag and Gewog Administration	Dzongkhag and Gewog Administration	DDM	2019	
Work out coordination mechanism with other agencies (CHPc)					

	Capacity building activities for DM and response (Trainings, study visits etc) for dzongkhag and gewog officials					
--	--	--	--	--	--	--

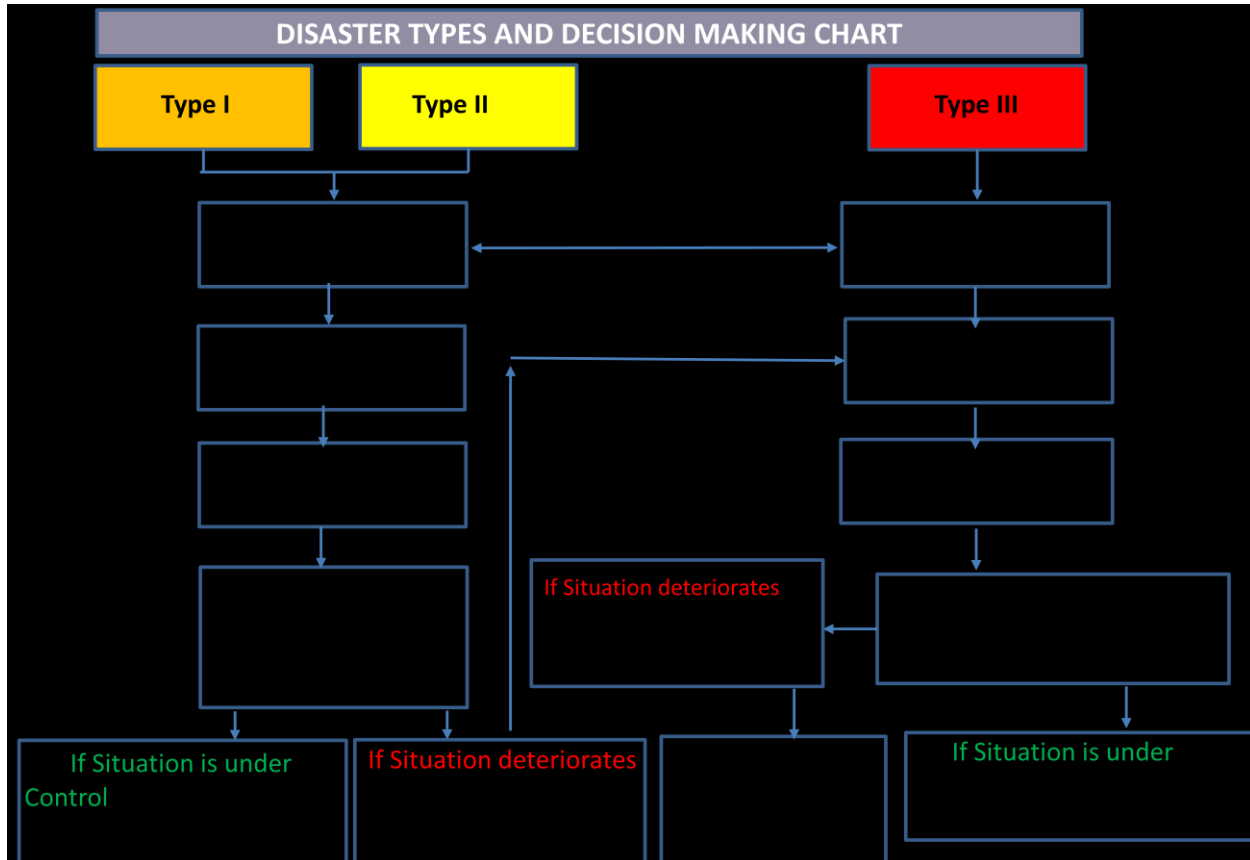
Gewog Adms. to submit detailed write-up on the hazard prone areas requiring mitigation measures.

Chapter 5: Dzongkhag Contingency Plan

This chapter details the contingency plan of Thimphu Dzongkhag including the response/ coordination structure and standard operating procedures.

The chart below shows the general decision making, information flow and reporting mechanism during disaster Type I, II and III.

Figure 1: Reporting and information flow mechanism

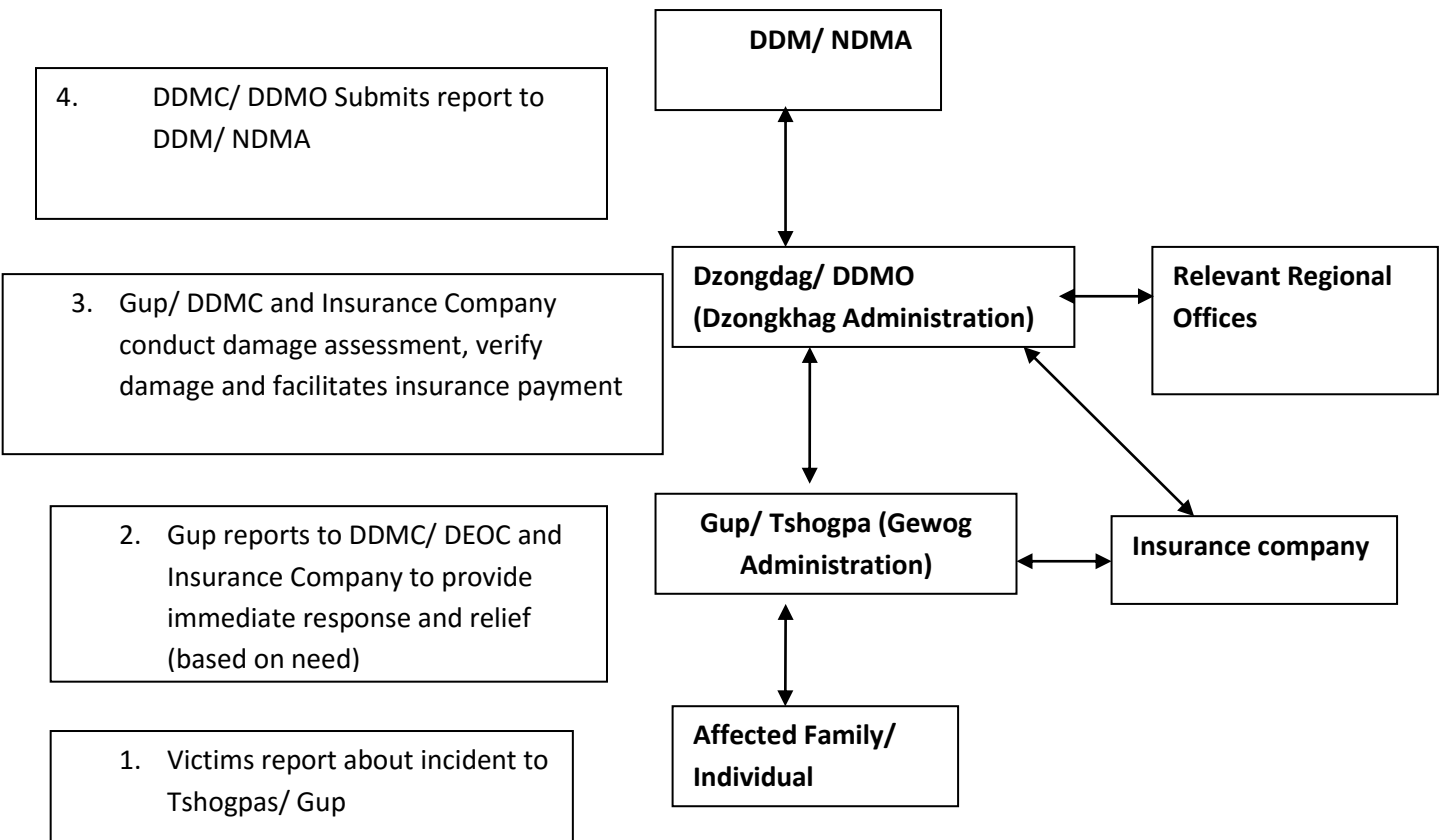


5.1 Standard Procedures for Response

5.2.1 Standard Operating Procedure for Isolated local incidents

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 of one Disaster

Figure 2 – Standard procedure for isolated local incidents

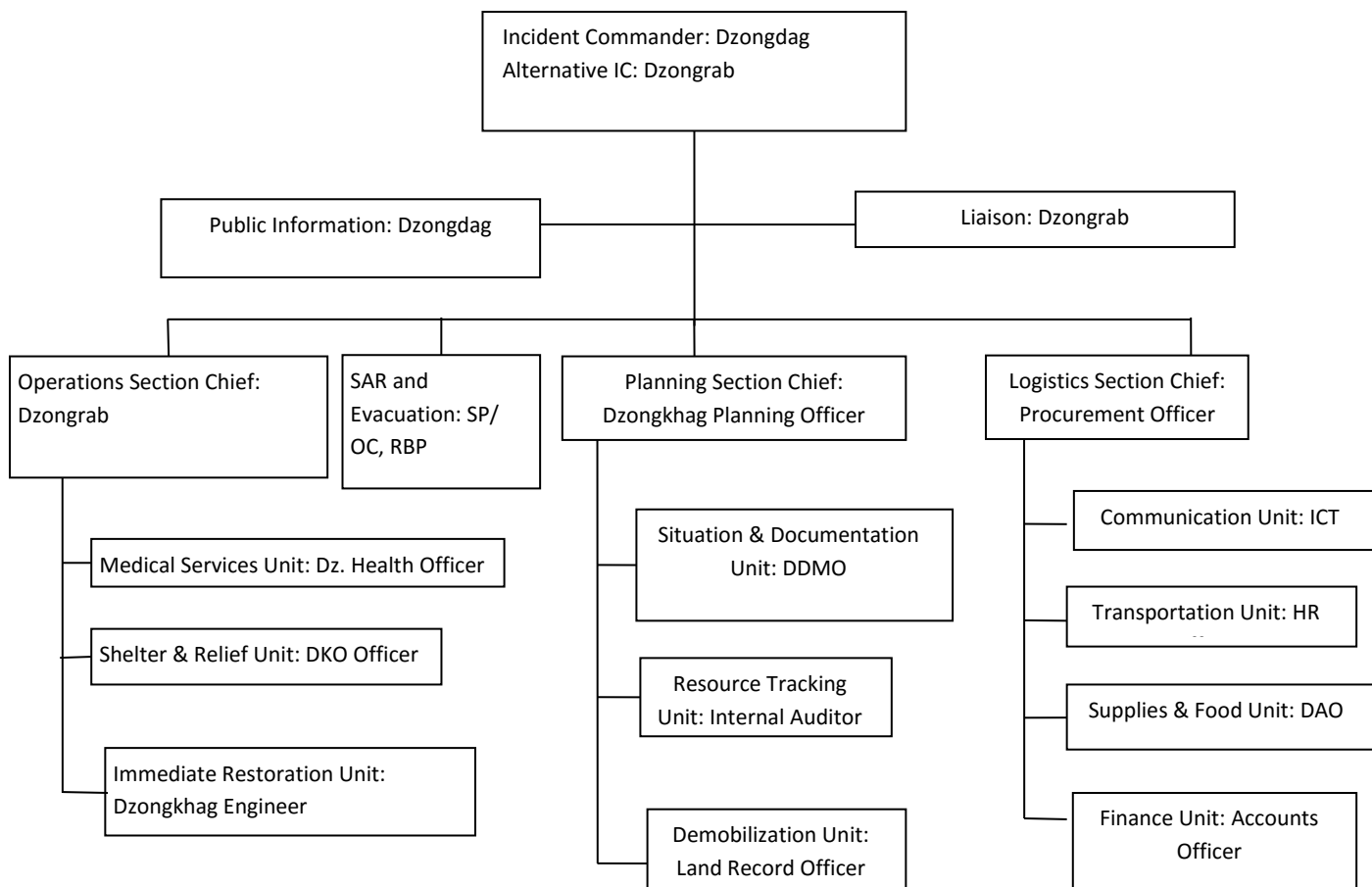


Issue: Insurance officials should be responsible for physical verification and for immediate payment based on damages (at present Insurance officials do not visit some of the gewogs).

5.2.2 Coordination and response structure for various disaster types

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 Types will be as follows:

Incident Command System Organization for Dzongkhag level (Incident Management Team)



Flow of information and communication- Unit/ team members to Unit/ team leaders, Unit/ team leaders to Section Chiefs, Section Chiefs to IC, IC to DDM/ NDMA

1. Rapid Assessment Team
2. SAR/ Evacuation Team
3. Medical Services Team
4. Shelter and Relief Team
5. Immediate Restoration Team
6. Debris Clearing Team
7. Dead Body Management team
8. Carcass Disposal Team

Operations section

Medical Team –Gyembo, 2nd in command is ADHO

1. 1 BHU in 7 Gewogs -3 staff Kawang 2BHUS(3 staff) 3 satellite clinics (4 staff each)

Note name and contact no of the medical teams

2. Relief and Shelter –Penjor, Officiating DKO

A. Coordinate with schools

B. Adm assistant

C. Coordinate with Gups and GAOs

D. DSO

E. Support staff

F. 3 Engineers

3. Immediate Restoration Unit: Chabilal Das, 2nd in Command –Dy. Chief Engineer

A. All engineers

4. SAR/evacuation team – RBP SP/OC

a. Police personnel

b. Dessups

5. Planning section –

a. Situation and Documentation Unit –Tandin Wangchuk

b. Resource tracking unit – Internal auditor and environment officer

6. Demobilization Unit –Tenzin Gayley , 2nd in command –Assistant Land Record Officer

a. All Surveyors

7. Logistics- Procurement Officer Gyeltsen, 2nd in command, 2nd in command Legal Officer

a. Communication- ICT officer, Munu Giri, ICT associate

b. Transportation- Singye Dorji T(HRO), Dorji Wangmo(Adm Assistant)

c. Food and supplies- DAO Dhodho, Tandin(ADAO) Extension officers (chang and kawang)

d. Finance- Tshering Deki, Accountants (7 Staff)

Note:

1. **identify alternative (sector heads)**
2. **Identify number of teams and team members in discussion with relevant stakeholders (include De-Suups/ regional offices/ private Sector, community volunteers) including how the private sector can support dzongkhag DM activities and disaster response.**

Roles and Responsibilities of the IMT:

1. IC:

- ❖ Overall management of the incident/ disaster
- ❖ Gives policy direction
- ❖ Will be responsible for all aspects of an emergency response
- ❖ Develop incident objectives and manage incident operations
- ❖ Application of the resources and responsibility for all persons involved

Concerned Person:

2. Public Information Officer:

- ❖ Communicate and share important incident response information with others responding units and/or organizations and the public.

Concerned Person:

3. Liaison Officer

- Liaise with other agencies supporting disaster response

4. SAR and Evacuation Team (identify team members and no of teams)

- ❖ Pre – identify members and leaders (including how many teams)
- ❖ Pre - Any other SAR teams, volunteers
- ❖ Pre – SAR teams to be trained (including code of conduct and emergency first aid) and equipped
- ❖ Pre – stockpiling of SAR equipment
- ❖ During – Contact and deploy, including other SAR teams and volunteers
- ❖ Pre-List of vehicles with names and contact details (Dzongkhag and regional Pool vehicle, private vehicle, school buses)

- ❖ Pre-identify people in each team based on identification of evacuation areas- identify team leader
- ❖ Pre-Identify volunteers from the communities
- ❖ **Pre-Evacuation areas:** identify evacuation areas for each location
- ❖ Pre-Awareness on the identification of evacuation centers and routes (based on specific hazard)
- ❖ **Pre-Pre-arrangement** with BoD for fuel supply
- ❖ **During** – Evacuation from the affected area to the nearest identified evacuation center/Medical center
- ❖ **During-** give priority to the vulnerable groups (injured, old, children, people with special needs, women)

Concerned Person:

5. Operations Section:

- ❖ Oversees and coordinates the entire operation.
- ❖ During recovery, all of the other recovery teams will report to this team on a regular basis.
- ❖ Advices the IC on issues regarding incident safety
- ❖ Ensures the safety of all incident personnel

Concerned Person:

Rapid Assessment Team

- ❖ Pre –Identify Rapid Assessment Team members and train and familiarize with assigned area
- ❖ Pre – Communication set-up (procure additional HF/VHF sets and distribution)
- ❖ Pre - Rapid assessment forms to be available in all gewogs and in the DEOC after the form is finalized by DDM.
- ❖ During - conduct immediate assessment of disaster in terms of no of people affected (dead, injured, without shelter, missing), people needing SAR, evacuation, medical assistance, extent of damage, road network and bridges
- ❖ After – Carry out periodic assessments as directed by team leader

Concerned Person:

Concerned Person:

Medical Teams

- a. Pre – Identify team members
- b. Pre –Training in emergency first aid for Dzongkhag/ gewog staff and residents

- c. During: Provide medical relief

Concerned Person:

Shelter and Relief Team

- d. 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

- e. Food and water-

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

During -Distribute food and water, ensure fair distribution

- f. Sanitation-

Pre-stockpile (health and hygiene kits)

During – distribute health and hygiene kits

- g. 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

- h. 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

Debris Clearing Teams

- i. **Pre-** no of teams- names of the team members, leader

- j. **Pre-**Make list of Machinery, excavators within the dzongkhag including private, DoR and corporate
- k. **Pre-**Identify the volunteers from communities
- l. **During-** Clear debris based on the rapid assessments (roads, buildings, bridges etc)

Concerned Person:

Immediate Restoration Team

- m. **Pre-** Identify required resources, stockpile, mapping of road network, bridges, water supply network
- n. **Pre-** pre-arrangement with services providers (BPC, RSTA, RBP, RBA, relevant stakeholders)

Mass Corpse Management Team:

- o. During – support families to transport body to cremation ground; support Dratshang Lhentshog and RBP to carry out mass cremation in case of unidentified bodies
- p. Pre – Clarify dead body management guidelines with MoH and DDM
- q. Pre - Clarify procedures at national level, including identification of locations and arrangements for dead body storage/ preservation; dead body handling/ labor at cremation sites – DDM and MoH
- r. Territorial/ Range Office to provide firewood

Carcass disposal Team

- s. Pre – clarify procedures for carcass disposal (MoAF – BAFRA, DoL)
- t. Pre – Identify locations and labors
- u. During – collect, transport and dispose carcass at identified locations in coordination with DoL and BAFRA

Team Leader-

6. Planning Section:

- ❖ Responsible for making the incident action plan
- ❖ Maintain proper documentation, reporting and accounts

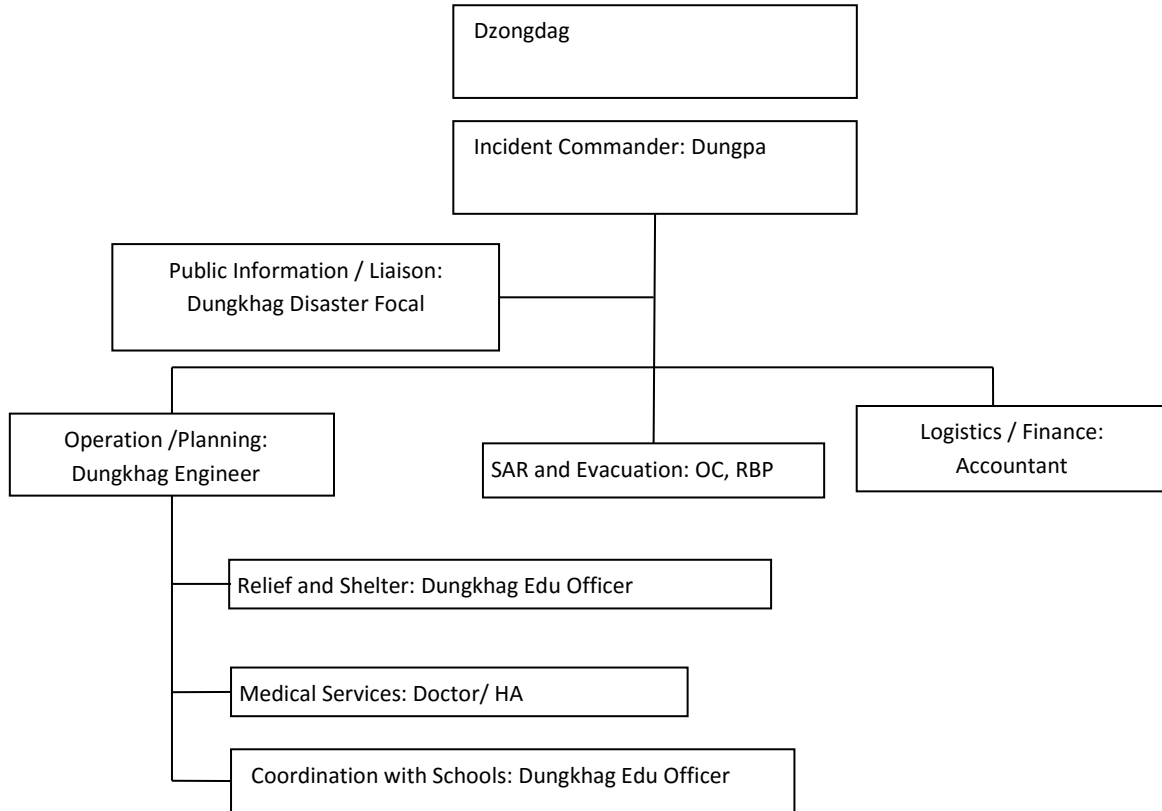
Situation and Documentation Unit: - responsible for the collection, organization, and analysis of incident status information, and for analysis of the situation as it progresses. Responsible for collecting, recording, and safeguarding all documents relevant to the incident.

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.

7. **Logistics Section:** responsible for providing facilities, services, and materials for the incident.
- ❖ Identify shops and items (based on guidelines issued by DDM)
 - ❖ Logistics team to be stationed at DEOC/ or strategic location depending on assessment
 - ❖ Request, maintain and distribute stockpiles of Equipment, Food, water, Tents, blankets and other emergency relief items
 - ❖ Provide logistics support to all operations teams
 - ❖ Responsible for all the matters related to finance during the disaster
 - ❖ Provide financial directives to DEOC
-
- **Communications Unit:** responsible for providing communication services at an incident.
 - **Transportation Unit:** responsible for the fuelling, maintaining, and repairing of vehicles, and the transportation of personnel and supplies.
 - **Supply Unit:** responsible for ordering equipment and supplies required for incident operations.
 - **Supplies and Food Unit:** responsible for providing meals for incident personnel and for providing food/ supplies for the Relief and Shelter Unit (for victims).
 - **Administration/Finance Unit: 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, and establishing local sources for obtaining equipment and supplies.

ICS organization at Dungkag level



5.3 Dzongkhag Emergency Operation Centre Management

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 (temporary): DDMO's Office (DDMO to establish interim DEOC immediately with equipment provided through the NAPA 2 Project)

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

1. Officer in charge: DDMO
2. 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 Act
2. Other sector experts to staff the DEOC
3. DDMC to meet in the DEOC to make critical decisions

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.

Financial Provisions as per the Disaster Management Act of Bhutan 2013

As per the Disaster Management Act 2013, there are 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 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, preparedness 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 disaster resilient features.

Response and Relief Expenditure

The Chairperson of DDMC shall, upon declaration of disaster, have the authority to use annual budget of the concerned Dzongkhag, to provide immediate 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 demands, as per section 89 of the DM Act 2013”. However, the dzongkhags may have an understanding with FCB located within the dzongkhag to procure immediate relief items for payment later.

- 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, at the earliest (**mention the no of days within which the bills need to be submitted**), 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 letter 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.

Annexure

1.

2. *Emergency Contact details of responsible Officers from Dzongkhag*

III. Dzongkhag SAR team:

IV. Fire-fighting (trucks, equipment, location, capacity)

V. Medical

Sr.	Name of hospital/	Location	Capacity/	Contact person	Phone
-----	-------------------	----------	-----------	----------------	-------

	BHU		number of patient that can be treated		
--	------------	--	--	--	--

(Note: IPD= In-patient Department, OPD= Out-patient Department)

VI. Contact details of Des-sups

Co-coordinator: Mr. Singye Dorji T HRO, Thimphu (Contact No:17615590)

Total Des-ups in Thimphu Dzongkhag as of current date

Sl.No	Name	Work Place	Mobile Number
1			
2			
3			
4			
5			
6			
7			

VII. Contact details of Principals of Thimphu Dzongkhag, 2017

Sl.No.	Name	Designation	Name of schools	Telephone No. (Office)	B-Mobile No.
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					

17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					

VIII. Contact details of Gewog Administrative Officers

Sl No	Name	Designation	Contact Number
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			

IX. List of participants for the DM and Contingency Plan Workshop held in Chhukha from 19-23 December 2016

S/N	Name	Sex	Designation	Gewog
1	Pema Tenzin	Male	Gewog Adm. Officer	Decheling
2	Keyzang Delma	Female	Gewog Adm. Officer	Norbugang
3	Tendri Gyeltshen	Male	Mangmi	Khar

4	Nima Tenzin	Male	ThungoTshogpa	Yurung
5	SonamDorji	Male	Offtg. Gewog Adm. Officer	Yurung
6	Thungsi Norbu	Male	Mangmi	Decheling
7	Trashhi Wangchuk	Male	Mangmi	Norbugang
8	Sangay Thinley	Male	Gup	Yurung
9	Namkha Dorji	Male	Mangmi	Chongshing
10	SonamJamtsho	Male	Gup	Nanong
11	YeshiWangdi	Male	Gup	Chimoong
12	Pema Dorji	Male	Gup	Zobel
13	SonamPhuntsho	Male	Gewog Adm. Officer	Dungmaed
14	Dorji	Male	Gewog Adm. Officer	Zobel
15	NgwangPalden	Female	Gewog Adm. Officer	Khar
16	Karma WangdiY	Male	Gewog Adm. Officer	Nanong
17	Sarita Gurung	Female	Gewog Adm. Officer	Chongshing
18	TsheltrimDorji	Male	Gup	Choekhorling
19	Tharchen	Male	Mangmi	Dungmaed
20	KezangLhadon	Female	Gewog Adm. Officer	Shumar
21	SangayChophel	Male	Gup	Shumar
22	YesheyWangmo	Female	Gewog Adm. Officer	Choekhorling
23	Sonam Tshering	Male	Teacher	PMSS
24	TandinDorji	Male	DDMO/DT Secretary	Dzongkhag Administration

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; or c) 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: Reinforcement 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.