

Thromde Disaster Management and Contingency Plan

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**Thromde Administration
Gelephu**

2019

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Acronyms

CBDRM	Community Based Disaster Risk Management
DDM	Department of Disaster Management
DM	Disaster Management
DM Act, 2013	Disaster Management Act of Bhutan, 2013
GNH	Gross National Happiness
GT	Gelephu Thromde
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
TDMC	Thromde Disaster Management Committee
TT	Thromde Tshogde
TEOC	Thromde Emergency Operation Centre

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Scope & Objectives

The Disaster Management and Contingency Plan for Gelephu Thromde is prepared as mandated by the Disaster Management Act of Bhutan 2013. The plan is endorsed by the Thromde Disaster Management Committee (TDMC) on and will serve as a document for reference by all relevant stakeholders and sectors under its jurisdiction for implementation of activities for risk reduction and preparedness. It will also guide the Thromde in response and relief operations in the event of any natural calamities.

The objectives of the Thromde Disaster Management Plan are:

- To ensure mainstreaming and facilitation for implementation of disaster risk reduction and preparedness activities in the Thromde;
- 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 Thromde;
- To establish a coordination mechanism for emergency response and relief operations.

The objectives of the Thromde Disaster Contingency Plan are:

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

Chapter 1: Overview of Gelephu Thromde

1.1: Geography & Background

History of Gelephu Thromde dates back to 1960s when primitive settlement was shifted from the banks of Mao Chhu to the present area, which used to be known as Hati - Sahar (Land of Elephant). Gelephu Thromde covers an area of about 11.8 sq. km with elevation ranging about 375 meters above sea level. The geographically Gelephu is located at 26:50° N Latitude 90:30° East Longitude, on the Global Position Coordinates System.

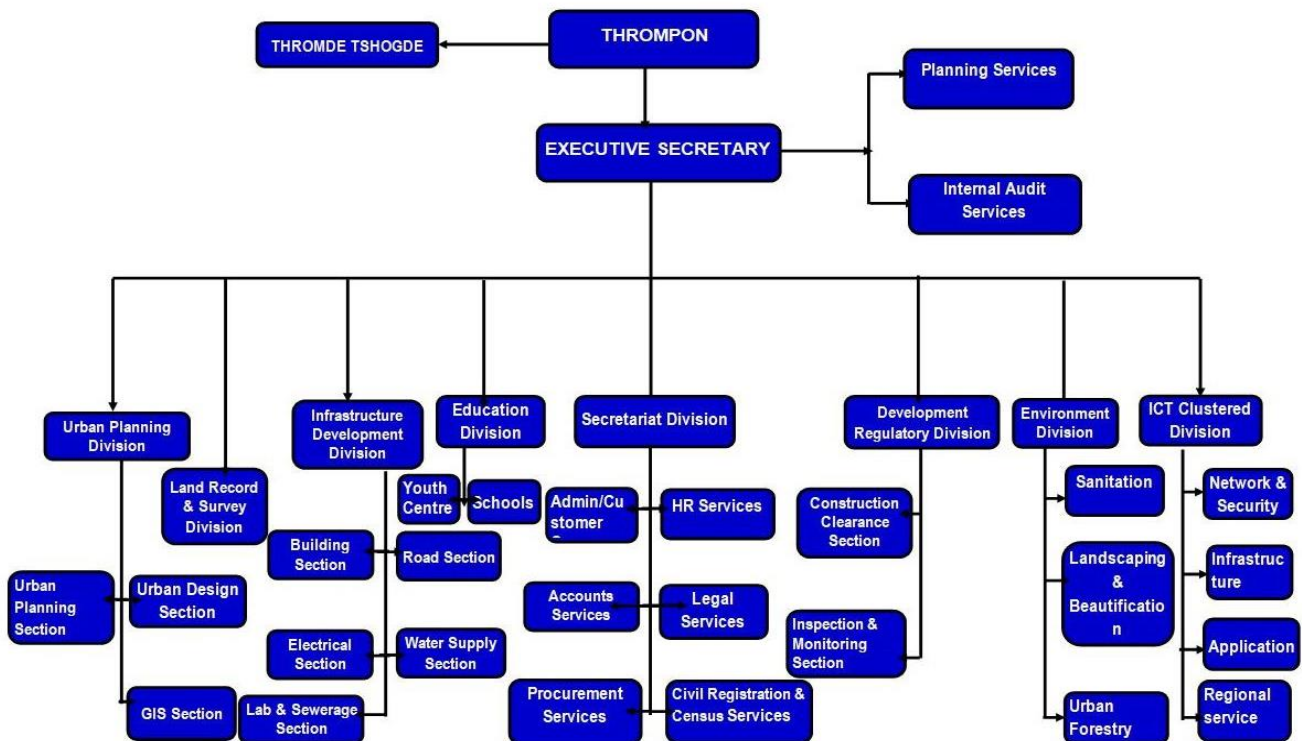
The geographical setting with relatively flat terrain, close proximity and well-established connectivity with India, and its location as Nodal Connection for Central parts of the country makes Gelephu as one of the preferred locations for development. The rapid urbanization is underway with after its initial declaration as Thromde class A in the year 2011. It is due to these advantages that the government initiated Strategic development proposals including industrial estate, rail head, airport, gigantic stupa at Phulhari etc.

1.2: Social and Administrative Profile

Gelephu Thromde was declared as a Class - A Thromde in the year 2011 headed by Thrompon (The Mayor) and Executive Secretary (Civil Servant).

The main sources of income for the people of Gelephu Thromde are from business and avenues provided by Thromde.

The Thromde is administratively supported by six Demkhongs (constituencies) namely, Jampeling, Namkhaling, Rabdheling, Sonam Gatshel, Samdrupling and Tashiling.



1.3: Table 1 – Key Demographics

Sl. No	Demkhong (Constituencies)	Area (Sq.km)	No. of Households	Population		Health Facilities			Schools		
				M	F	Hospital	VDPC	HISC	LSS	MSS	HSS
1	Samdrupling	1	646							1	
2	Namkhaling	3	980				1				
3	Jampeling	1	1554			1					
4	Rabdeyling	1	204								1
5	Trashiling	3	482								1
6	Sonam Gatshel	1	646					1	1		
Total			4512								

1.4: Weather and Climate

The Thromde has very hot and humid summer with moderate winter with very heavy rainfall during the peak summer season. An average annual rainfall records from 1000 mm to 3000 mm.

1.5: Economy

The commencement as a class - A Thromde for Gelephu has brought in a lot of changes in the economy of the region as well as the neighboring regions. The huge infrastructure development within Thromde has created avenues for the business community, tourism from the neighboring nations. It has also a great potentiality for cultivation of horticultural crops like cardamom, ginger, vegetables and tropical fruits

Chapter 2: Thromde Disaster Management System

2.1: Thromde Disaster Management Committee (TDMC)

Gelephu Thromde Disaster Management Committee (TDMC) is constituted as below in line with the provisions of the Disaster Management Act of Bhutan 2013.

S/n	Name	Designation/ Organization	Roles	Contact No
1	Mr. Tika Ram Kafley	Thrompon	Chair	17668336
2	Ms. Tashi Wangmo	Executive Secretary	Offtg. Chair/ Vice Chair	17614089
3	SP	RBP	Offtg. Chair/ Vice Chair	
4	All Thuemis	Demkhong Thuemis	Members	
5	Mr. Kenchog Tshering	Urban Planner	Member - Secretary	77255010
6	Mr. Ugyen Dorji	Chief IDD	Member	17752845
7	Mr. Jigme Tshering	Chief DRD	Member	17585453
8	Mr. Chhoephey Dorji	Head, UPD	Member	17636771
9	Mr. Kuenzang	Thromde Education Sector	Member	17120254
10	Mr. Paras Moktan	Head, Finance Section	Member	17715356
11	Mr. Jigme Tshendu	Sr. Technician	Member	17648440
12	Mr. Kuenga	Asst. Procurement Officer	Member	17347663

On the expiry of the term/ resignation of the Thrompon (Chair), the Executive Secretary (Vice-Chair) will take over the functions of the chair. In case of the expiry of term/ resignation of Thuemi, the Chair of the TDMC may temporarily designate an official from the local government as a member of the TDMC to serve until the vacancy is duly filled.

2.2: Functions of TDMC

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

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

- a. Prepare, review, update and implement the Thromde 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 Thromde

- c. Ensure establishment and functioning of the Thromde Emergency Operation Center
- d. Ensure mainstreaming of Thromde 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 TDMC may exercise all or any of the functions of the TDMC, subject to ex post facto ratification of the Committee.

The TDMC 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 TDMC shall exercise and discharge such functions of the TDMC 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 TDMC shall:
 - a. Regularly review and assess the effectiveness of DM Plan
 - b. Ensure decision and policy formulated by the TDMC 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.

Chapter 3: Disaster Risk Profile (HVCA)

Gelephu unlike any other region is more susceptible to both natural and man-made disasters. It mainly experiences the flooding during the summer season causing huge damages and loss to the economy as well as threat to human lives. This also includes earthquake, windstorm, fire, human trafficking, seasonal flooding, the vehicle accidents, diseases outbreak (malaria, water borne diseases, etc.).

The most notable disaster was the flooding during the peak summer season in the month of June in the year of 2016. It caused infrastructure damages to urban roads, drains, bridges, houses, and mainly the Thromde Water Treatment Plant which was almost covered underneath the flood debris leaving the whole Thromde cut off from the drinking water for more than a week.

Further with Gelephu sharing its boundary with India has been prone to security issues especially the human trafficking (kidnapping) where we experienced frequent kidnapping cases across the border. Even the cross-border infiltrations of illegal people were also felt with border being porous.

In terms of assessing the disaster risk of the Thromde for this plan, it is assessed by looking at the hazard, vulnerability and capacities at the Thromde as well as individual Demkhongs since disaster risk is a function of hazard, vulnerability and capacity of the community/Demkhong/Thromde. The HVCA is conducted by the Thuemis, TDMO, Divisions and other stakeholders under thromde jurisdiction. Finally, the Demkhongs' hazard is prioritized for action planning using the probability and impact matrix.

3.1: Hazard Assessment

SI/ No	Hazard	Secondary Hazard	When it could occur	Probability of Occurrence	History of Past Disaster	Impact
1	Flood	Fire Out Break, Landslide, building collapse, disease outbreak, debris flow	Monsoon (May-Aug)	High	<ul style="list-style-type: none"> • Prior to 2011 - annual event • 2012, 2013, 2014, 2016 & 2017 	<ul style="list-style-type: none"> • 5 private houses and 1 check post affected (including RBP colony at the check post) • 20 meters stretch of road washed away near check post. • 2 motor vehicle damaged • 2 streetlight poles destroyed • Several foot & mouth related diseases reported. • Boundary security wall being destroyed • Destruction to the drinking water facilities (pipes)
2	Earthquake	Fire, Landslide	Unpredictable	High	2009, 2011, 2014 and 2015	<ul style="list-style-type: none"> • Structural damage (private and Public building collapse) • Loss of lives • Loss of properties
3	Structure fire	Forest Fire, Electric short circuit	Dry and windy season (Dec)	High	2018	<ul style="list-style-type: none"> • Property damage and loss (Pvt. school closed) • Loss of lives
4	Windstorm	Fires, flood, collapse of trees, electrical and mobile posts	Nov, Dec, and Jan.	Medium	Not noted since 2007	<ul style="list-style-type: none"> • Structure fires • Loss of lives • Damage to properties
5	Human - Wild Life	-	September/ December	Medium	2013/2019	<ul style="list-style-type: none"> • Damaged cash crops and structures • Loss of lives

	Conflict					
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3.2: Vulnerability Assessment

Sl/ No	Hazard	Element at risk	Why they are at risk	How will they be affected	When it could occur
1	Flood	<ul style="list-style-type: none"> - Human and animal Lives, infrastructures (roads, drains, streetlights, bridges, bore wells, water reservoirs) - Private properties, - Developmental progress - Agricultural Land -Crops 	<ul style="list-style-type: none"> - No proper water/drainage management system -No proper river training wall - Landscape of the region/ geographical location - No proper control regulations for construction of infrastructures against floods. - Lack/weak awareness on floods. 	<ul style="list-style-type: none"> - Loss of human and animal lives - loss of public and Private Properties - Loss of Public and private Infrastructure Affects accessibility (road cut off) 	May to Aug (Peak monsoon season)
2	Earthquake	<ul style="list-style-type: none"> - Public and Private Structure (buildings), road and bridges, electric and telecom towers - Gas Station 	<ul style="list-style-type: none"> - Poor methods of construction, - not knowing dos and don'ts or not using the specified wiring - Fragile geological setting and land escape - Lack of proper urban planning for the infrastructure 	<ul style="list-style-type: none"> - Loss of lives - Loss of Properties 	Unpredictable

	Structure fire	<ul style="list-style-type: none"> - Old Private and Public Buildings (Lhakhangs, Schools, Workshops) - Gas Station 	<ul style="list-style-type: none"> - Poor electrification (using the electrical equipment without proper specification) - Lack of butter lamp case in the houses - Lack of adequate skills and educational background in tackling the fires - Lack of firefighting equipment 	<ul style="list-style-type: none"> - Loss of properties and lives - Explosion 	Unpredictable
4	Windstorm	<ul style="list-style-type: none"> - Private and Public houses, - Crops(Food and cash crops) - Infrastructure(Electrical Poles and Telecom Towers) 	<ul style="list-style-type: none"> - Poor roofing of houses - Poor enforcement of construction guidelines - Electrical and mobile posts not secured/not anchored properly - low level of awareness on windstorm safety 	<ul style="list-style-type: none"> - Loss of property and lives - Disruption of basic amenities (water/ electricity supply etc.) - Damage to crops and cash crops 	Monsoon season
5	Human wildlife conflict (Elephant)	<ul style="list-style-type: none"> - Human, livestock, crops, fruit trees, electric poles, weak houses 	<ul style="list-style-type: none"> - Deforestation - No fencing (electric & barbed) - Lack of urban level human-wildlife conflict action plans. - Stakeholders coordination issue - Settlement nearby thick Forests 	<ul style="list-style-type: none"> - Loss of lives and properties (houses) - Damage of cash crops 	Unpredictable

3.3: Capacity Assessment

Sl/No	Hazard	Physical capacity	Economic capacity	Social/Institutional capacity
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1	Flood	<ul style="list-style-type: none"> - Central Regional Referral Hospital located at Gelephu. - Raised road infrastructure network for easy transportation and road protection from flooding. - Proper roads, drains, streetlights, bridges, underground bore wells, and water reservoirs) - Good mobile network (BT & Tashi ISPs) connectivity for Gelephu. - Disaster SAR and relief kits available for emergency response. - Detention pond for flood/ stream water management. - Natural Plain Geographical landscape avoids flash floods. 	<ul style="list-style-type: none"> - Life and housing insurance - Majority of budget allotment by Thromde for public infrastructure development. - Thromde internal revenue for emergency financing. 	<ul style="list-style-type: none"> - Dratshang caters preventive rituals and kurims for the region. - RBA, RBP, Desuups, BRCS volunteers available during the disaster. - Thromde level Disaster Management Committee & Urban Search & Rescue group operational. - Water & drainage master plan proposed by Gelephu Thromde. - Revised road and drainage design in place to address flood water damages to road & infrastructures (e.g. raised road construction)
2	Earthquake	<ul style="list-style-type: none"> - Plain area and good road network/connections - USAR equipment available for rescue operation - Open space for evacuation 	<ul style="list-style-type: none"> - Located near the Indian towns 	<ul style="list-style-type: none"> - USAR equipment available for rescue operations.
3	Structure Fire	<ul style="list-style-type: none"> - Many open stream running through town - Reservoir Tank 	<ul style="list-style-type: none"> - Rural houses & people insured 	<ul style="list-style-type: none"> -RBA, RBP, Desuups, BRCS - RBP has fire brigade
4	Windstorm	<ul style="list-style-type: none"> - Maximum buildings built with proper concrete materials 	<ul style="list-style-type: none"> - Insurance, kidhu 	<ul style="list-style-type: none"> - RBP, RBA, Desuups and community available for rescue - CRRH established in the Thromde - SAR team trained and in place

5	Human -wildlife conflict	<ul style="list-style-type: none"> - Majority of the area has good road & streetlight coverage. - Electrical fencing in vulnerable area. - Availability of open space for emergency evacuation, shelter, etc. 	<ul style="list-style-type: none"> - Life and housing insurance. - Thromde internal revenue for emergency financing. - 	<ul style="list-style-type: none"> - Forestry and Park Offices located in the region taking the lead. - RBP & Forestry officials taking extra initiatives for night patrolling. - Mandatory requirements for plot owners to clear the bushes/jungles (Jungle Clearance). - Good support from general Public.
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3.4: Probability and impact matrix

Very probable				Earthquake / Flood	
Probable			Windstorm	Structural Fire	
Less probable			Human Wild Life Conflict		
Improbable					
Impact	Unimportant	Limited	Serious	Very serious	Catastrophic

Chapter 4: Disaster Management Action Plan (2019 – 2023)

This chapter details the action plan for Thromde to raise awareness, reduce risk and enhance preparedness and resilience for five years starting from 2019 to 2023 for the hazards, which were prioritized.

Sl. No	Priority Area	Key Activities	Target	Responsible Agency	Supporting Agency	Time Line (FY)	Budget (Nu.)
Flood	Awareness and Education	- Public advocacy program on flood safety	General Public,	Thromde DM Focal	Thromde RBP, , BBS, Local cable operator, DDM	2019, 2020	0.5
		- Conduct meetings and awareness programs at school	School children, teachers	Thromde DM Focal, TEO,	Thromde, principal, DDM	2019, 2020	0.3
	-Conduct trainings to the offices, NGOs, private organizations and business personnel	Tashi commercial, Telecom., FCB, shop owners	Thromde DM Focal	Thromde, Customs & BAFRA (for information sharing and coordination)	2019	0.2	

	Enhance risk reduction and mitigation	<ul style="list-style-type: none"> -Carry out vulnerability assessment of vulnerable areas. -Construct Flood protection work/wall -Form Community Volunteer Group -Establish Early Warning System 	Vulnerable road, offices, private buildings and houses, school,	Thromde DM Focal	Thromde, forest dept., construction companies, DDM	2020	10
	Enhance preparedness, response and recovery levels	<ul style="list-style-type: none"> - Procurement of machineries - Procurement of safety kit -Institute Thromde level Incident Command System 	General public under Demkhong	Thromde DM Focal	Thromde, GT, DDM, Regional heads, stake holders,	2019	10
	Awareness and Education	-Conduct Mock drill, - awareness campaigns	All households, schools and offices	Thuemi /principal	Thromde, RBP, teachers, DDM	2019-2020	0.2
		-Non-structural and structure Mitigation,				2019-2020	0

Earthquake	Enhance risk reduction and mitigation	-standard construction of the buildings and engineering structures as per the standard, - (emergency exits like back staircase, back door), -Implement Structure and Non-structure measures	Vulnerable households, school and offices and private residences	Thromde DM Focal	Thromde, RICBL, BPC, MoWHS		
	Enhance preparedness, response and recovery levels	Procurement of safety kits, -Form Response Team	Schools, Offices, Vulnerable community	Thromde DM Focal	Thromde, DDM	2019-2020	0.1
	Awareness and Education	Advocacy, awareness campaign on windstorm safety	General public	Thromde DM Focal	Thromde, Social medias, BBS, local cable operator, DDM	2019-2020	0.5
	Enhance risk reduction and mitigation	-construction of the buildings and engineering structures as per the standard,	school and offices and private and public structures	Thromde DM Focal	RICBL, BPC	2019,	0.5

Wind storm		-Proper roofing -Clearing hanging branches and debris					
	Enhance preparedness, response and recovery levels	-De-branching of Tress along the Electric line, other utility line and nearby houses -Form Volunteer groups in Demkhongs	In all Demkhongs	Thromde DM Focal	Thromde, Forest Department, DDM	2019	0.5
Wildlife Conflict	Enhance risk reduction and mitigation	-construction of the Electric Fencing. -Jungle Clearing -Creating Awareness	Vulnerable private residences	Thromde DM Focal	Thromde, Forest, Department, RBP, RBA ,BPC	2019	5
	Enhance preparedness, response and recovery levels	-Procurement of Equipment -Night Patrolling -Community Volunteer group	In all Demkhongs	Thromde DM Focal	Thromde, RBP, Forest Department	2019	0.1

Chapter 5: Thromde Disaster Contingency Plan

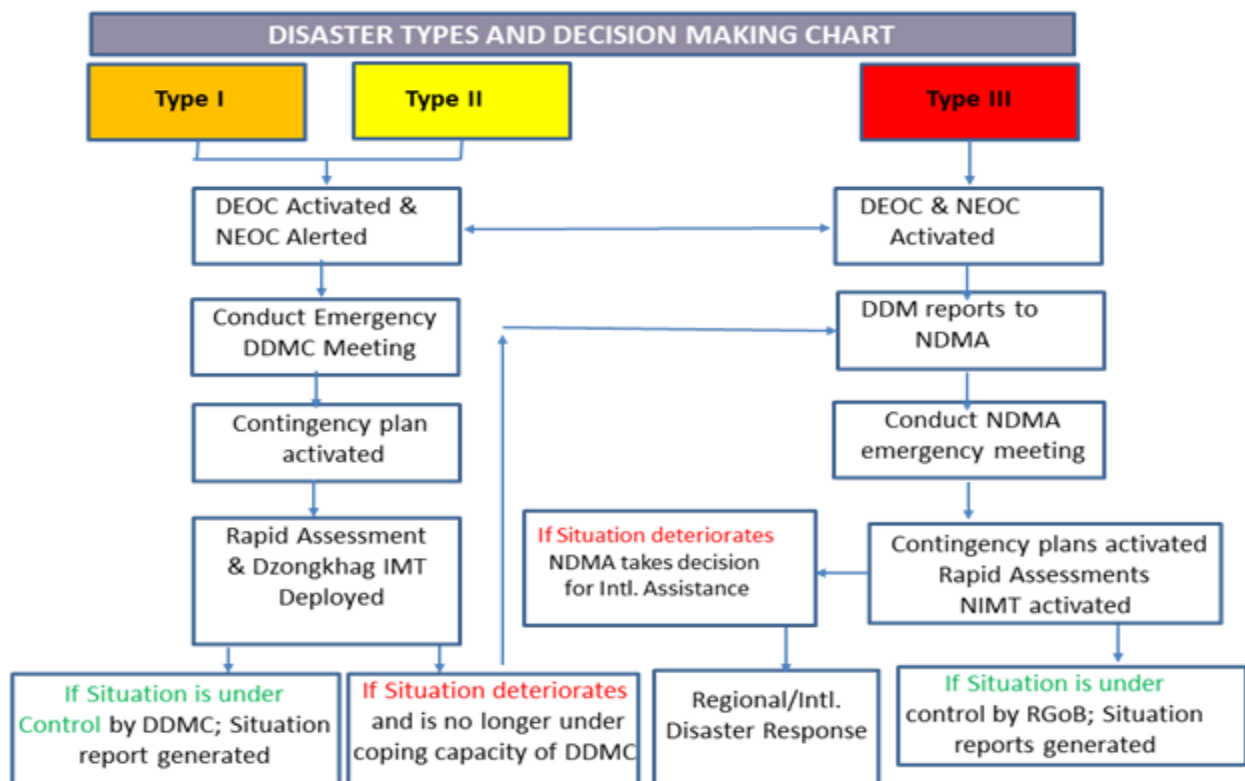
This chapter details the contingency plan of Gelephu Thromde including the response/coordination structure and standard operating procedures.

The contingency plan is developed to have the coordinated response and relief during the emergencies and the probable disaster (specifically Earthquake and flood) among the stakeholders within the Thromde. The key responsibilities and functions of the stakeholders are identified through the incident command system for the proper financial allocation, logistic arrangements and communication during the emergencies.

The incident command system will not be limited to the emergencies/disasters but can be applied for any events involving mass participation (e.g: cleaning campaign, important event celebrations).

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

5.1 General disaster decision making and information reporting chart:

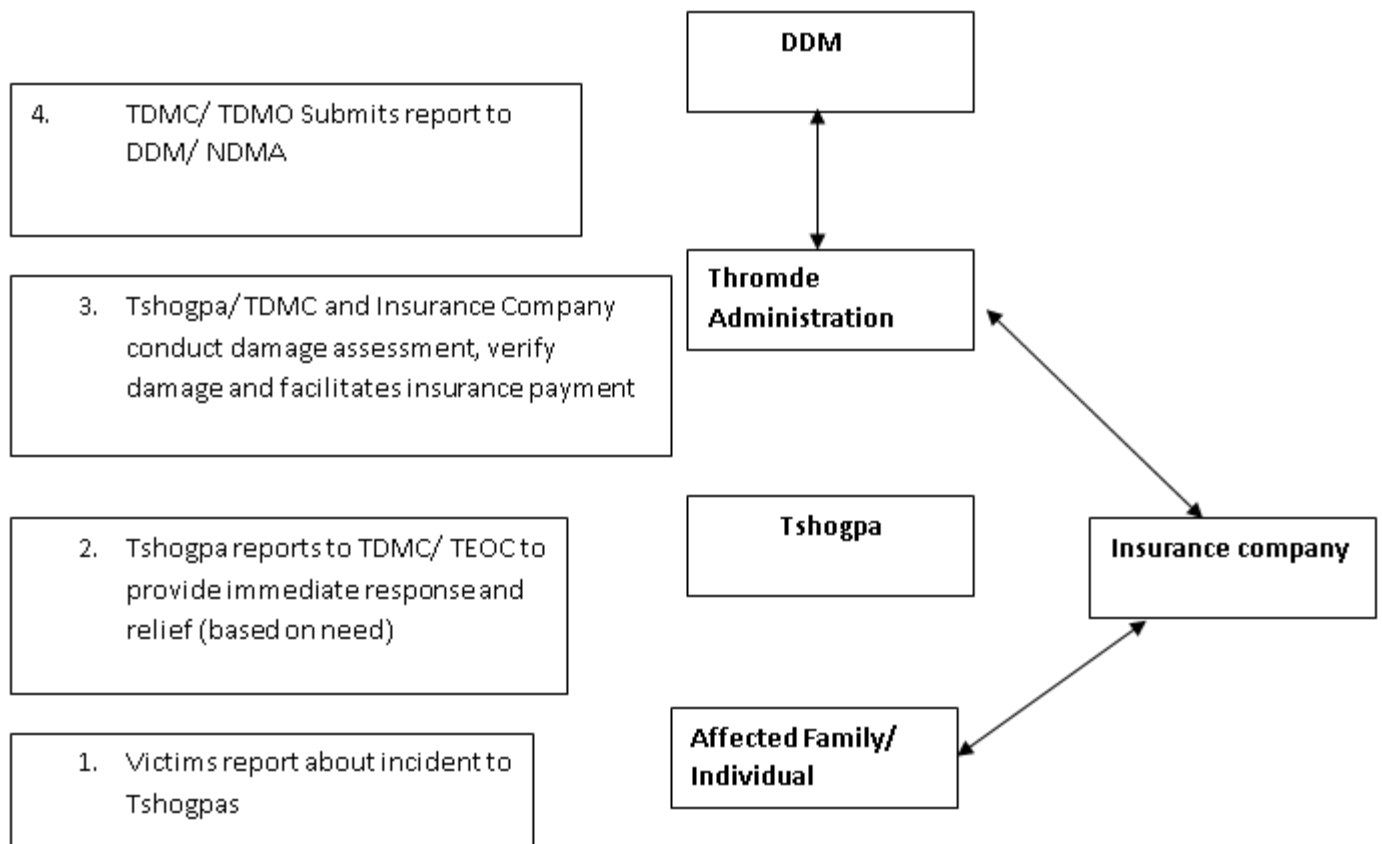


5.2 Standard Operating Procedure for Isolated local incidents

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.

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

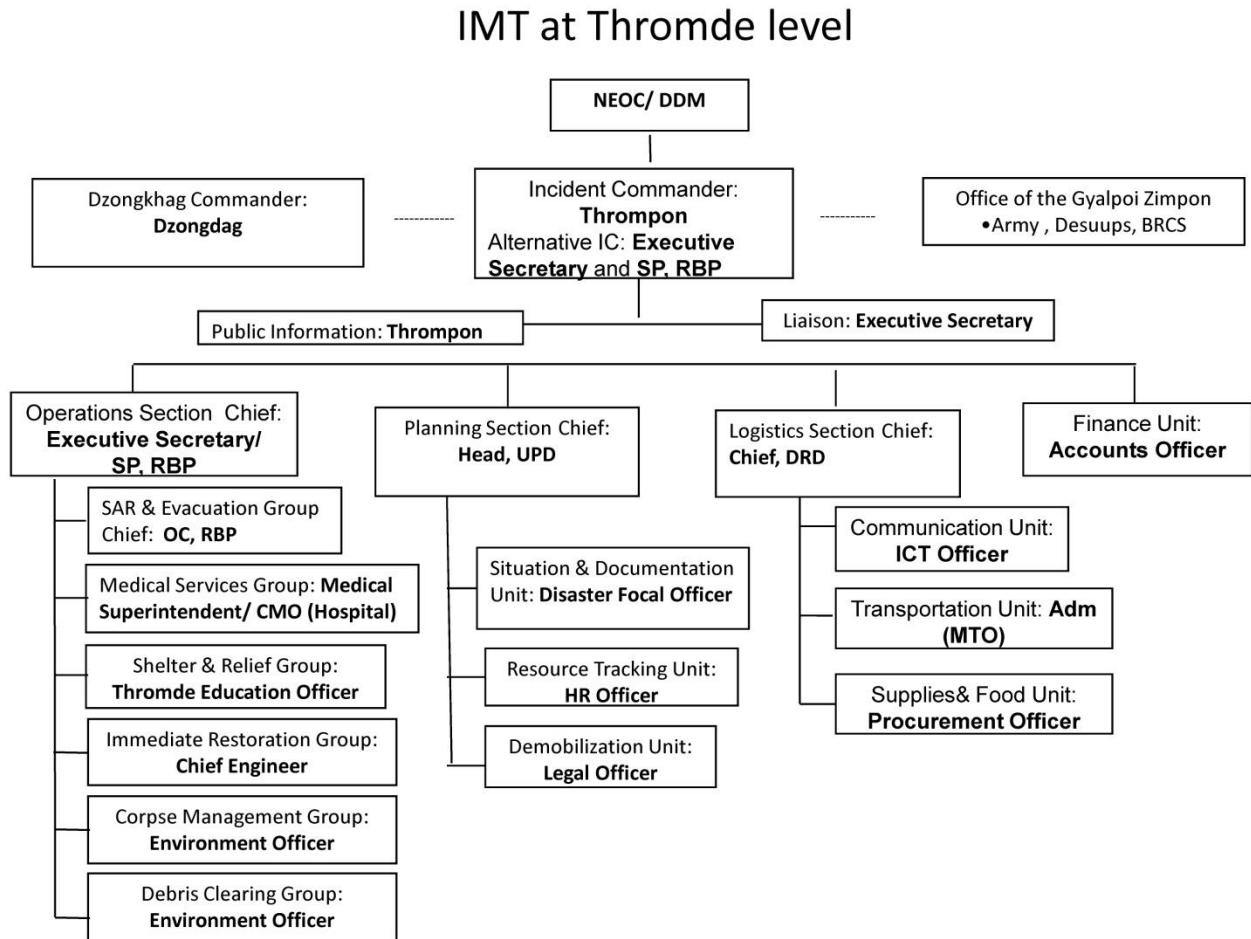
Figure 2 – Standard procedure for isolated local incidents



5.3 Coordination and response structure for disaster

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

Figure 3 – Thromde Response Coordination Structure (IMT):



5.4 Roles and Responsibilities of the members under TEOC:

1. Thromde Emergency Operation Center Commander:

- ❖ 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: *Thrompon / Executive Secretary*

2. Public Information Officer/ Liaison Officer:

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

Concerned Person: *Thrompon / Executive Secretary*

3. Operation Section Chief

- ❖ Oversees and coordinates the entire operation.
- ❖ During recovery, all of the other recovery teams will report to this team on a regular basis.
- ❖ Advises the TEOCC on issues regarding incident safety
- ❖ Ensures the safety of all incident personnel
- ❖ *Actions needed:* need to set up the TEOC – identify meeting point interim

Concerned Person: *Executive Secretary/ SP, RBP*

a) SAR team and Evacuation group

- ❖ 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 (Thromde 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 Fuel agency for fuel
- ❖ 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: *OC, RBP*

b) Medical Service group

- ❖ Pre – Identify team members
- ❖ Pre - Coordinate with IMTRAT and Military Hospital (need information on capacity-prearrangement)
- ❖ Pre –Training in emergency first aid for Thromde staff and city residents
- ❖ During: Provide medical relief
- ❖ During - Coordinate with IMTRAT and Military Hospital

Concerned Person: *MS/ CMO (CRRH)*

c) Shelter and Relief Group

- ❖ 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
- ❖ Sanitation-
Pre-stockpile (health and hygiene kits)
During – distribute health and hygiene kits

Concerned Person: *TEO, Gelephu Thomde*

d) Thomde Immediate Restoration Group

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

Concerned Person: *Chief Engineer*

e) Corpse and Carcass Management Group:

- ❖ **During** –Thomde will support families to transport body to cremation ground; Thomde will support Dratshang Lhentshog and RBP to carry out mass cremation in case of unidentified bodies
- ❖ **Pre** – Clarify dead body management guidelines with MoH and DDM
- ❖ **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
- ❖ NRDCL to provide firewood
- ❖ **Pre** – clarify procedures for carcass disposal (MoAF – BAFRA, DoL)
- ❖ **Pre** – Identify locations and labors
- ❖ **During** –Thomde in coordination with DoL and BAFRA to collect, transport and dispose carcass at identified locations

Concerned Person: *Environment Officer*

f) Debris Clearing Group

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

- ❖ Pre- make list of machinery, excavators with Thromde including private, DoR, CDCL, ABI, BCCI
- ❖ Pre-Identify the volunteers from communities
- ❖ During- Clear debris based on the rapid assessments (roads, buildings, bridges etc.)
- ❖ Gap: need Urban Search and Rescue equipment.

Concerned Person: *Environment Officer*

4. Planning Section Chief

- ❖ Responsible for making the incident action plan
- ❖ Thromde Finance/ Procurement Team Leader:
- ❖ Responsible for all the matters related to finance during the disaster
- ❖ Maintain proper documentation, reporting and accounts
- ❖ Provide financial directives to TEOCC

Concerned Person: *Head, UPD*

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.

Concerned Person: *TDMO*

b) Resource Tracking Unit:

- ❖ Responsible for maintaining the status of all assigned resources (primary and support) at an incident.

Concerned Person: *HRO*

c) Demobilization Unit:

- ❖ Responsible for assuring orderly, safe, and efficient demobilization of incident resources.

Concerned Person: *Legal Officer*

5. Logistics Unit Chief:

- ❖ Identify shops and items (based on guidelines issued by DDM)
- ❖ Thromde Logistics team to be stationed at TEOC/ 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

Concerned Person: *Chief, DRD*

a) Communications Unit:

- ❖ Responsible for providing communication services at an incident.

Concerned Person: *ICTO*

b) Transportation Unit:

- ❖ Responsible for the fuelling, maintaining, and repairing of vehicles, and the transportation of personnel and supplies.

Concerned Person: *ADMO (MTO)*

c) Supplies and Food Unit:

- ❖ Responsible for ordering equipment and supplies required for incident operations.
- ❖ Responsible for providing meals for incident personnel and for providing food/ supplies for the Relief and Shelter Unit (for victims).
- ❖ Food and water-
 - Pre- as per the minimum standards (individual or family) (FCB)
 - During -Distribute food and water, ensure fair distribution
- ❖ 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

Concerned Person: *Procurement Officer*

6. Finance Section

- ❖ 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.

Concerned Person: *Head, Finance Division*

5.5 Standard Operating Procedures for response to disaster:

In case of receiving early warning of an impending disaster situation, the TDMC Chairperson shall immediately activate the Thomde Emergency Operation Centre and relay the early warning to all the Thomde constituencies along with orders for evacuation, deployment of Search and Rescue Teams or any other response as required.

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 Operations Desk in TEOC
3. TDMC and all Thomde Teams to report to TEO Centre
4. Operations Desk to compile rapid assessment report and submit to Chairman
5. Formulate Incident Action Plan/ IAP (response strategy for a fixed duration) - Planning Desk
6. Based on the IAP initiate response actions -
 - a. Briefing of Team leaders by Desk leaders
 - b. Briefing of team members on their respective task by the team leaders (including area, timings, shift system, communication, etc.).
 - c. Briefing to all teams by Ops Desk on safety issues
 - d. Deployment of teams.
7. Chairman of TDMC to submit rapid assessment report and IAP to National Emergency Operation Centre through the Thomde Emergency Operation Centre
8. Logistics to mobilize resources as per the IAP
9. Outgoing team leaders to brief the incoming Team Leader and Chairman of TDMC on the status of ongoing operations.
10. Debrief of the day's response – At Team level, Desk level and EOC level
11. Planning Desk - based on de-brief information to plan for operations for the next day (detailed roles and responsibilities to be worked out)
12. Liaison officer to submit list of resources required to the NEOC
13. Liaison officer to depute volunteers based on needs in the field
14. Public information officer to provide timely press releases and advisories
15. Thomde shall conduct detailed damage assessment along with insurance companies for relief and early recovery and submit report to DDMC.
16. Thomde shall provide relief and early recovery support as per damage assessment using available funds at Thomde level and submit expenditure report and bills to DDMC for further submission to Ministry of Finance, with a copy to DDM, for reimbursement

5.6 Standard Operating Procedure (SOP) for Floods

As soon as there is a forecast of heavy rainfall and potential for flooding:

1. TDMC will inform Thuemis and general public on the heavy rainfall forecast and the areas likely to be affected;

2. TDMC will inform the Thuemis and responsible officials of Thromde to take preparedness measures (stockpiles of tarps, ensuring basic SAR equipment and team readiness, readiness of communication handsets etc.)
3. Thromde will issue advisory and order evacuation of settlements along the riverbanks, if necessary.
4. TDMC to monitor situation on the ground and inform DDM and other relevant Agencies.

In case of flooding event:

1. Convene emergency Thromde Disaster Management Committee meeting.
2. Activate TEOC and Incident Command System/TDMCP
3. Liaise with DDM (Focal point in DDM: Yang Dorji: 17650223/327319) and NCHM for further weather/ rainfall information
4. Develop an Initial Incident Action Plan (IAP) by the Planning Section Team in consultation with the IC and other section heads
5. Respond as per the IAP
6. Activate information, communication and reporting channels
7. Inform the Thromde Thuemi to inform town residents
8. Relay information to Thromde SAR, Emergency Medical Team (EMT) and RBP to be ready to move
9. Deploy the Thromde SAR team, EMT and RBP to the affected areas if required
10. Relay information to school to keep headcount of children and keep them in school till further notification or to close down the schools if there is high risk.
11. Inform RSTA to restrict movement of vehicles if required (Focal person in RSTA :)
12. Liaise BPC to cut the power supply (Focal person in BPC :)
13. Contact excavators and JCB owners and identify vehicles for transportation if required
14. Submit periodic reports and request for assistance to the NDMA/NEOC

Chapter 6: Implementation Mechanism

As per the DM Act 2013, the TDMC shall be responsible for the formulation, endorsement, implementation, monitoring and updating of the Thromde 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. Thromde administration will be responsible for implementation of the prioritized plan activities and for ensuring that the activities are incorporated into their annual and five-year plans.

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.

The Thromde Disaster Management Officer will facilitate incorporation of priority disaster risk reduction, preparedness, awareness and capacity building activities in annual and five-year development plans of the Thromde. As member secretary, the TDMO will keep record, maintain data, and assist the chairman of the TDMC in monitoring the DM plan activities. The TDMO shall present the plan's progress during TDMC meetings and update DM plan activities and budget annually. TDMO will also ensure that reports are submitted to the DDM and the NDMA on the implementation of the DM and Contingency Plan as required.

With regard to the financing of an activity, it will be governed by the Financial Arrangements under DM Act 2013 and subsequent guidelines for disaster financing 2017.

Annexes

I. Medical

Sl. No	Name of Hospital/ BHU	Location	Capacity/number of patient that can be treated	Contact person	Contact Number
1	CRRH	Jampeling Demkhong	150 bedded	Dr. Tapas Gurung, Medical Superintendent	17610160
2				Ms. Sonam Zangmo Drukpa, Staff Nurse	17714769
3				Mr. Sangay Dorji, AEMRO	17983590

II. Contact details of Principal of schools under Thromde

Sl. No	Name	Designation	Name of schools	Contact Number
1	Mr. Shambay Dawa	Principal	GHSS	17660772
2	Ms. Wangmo	Principal	GMSS	17617505
3	Mr. Kuenzang Dorji	Principal	GLSS	17632094
4	Mr. Norbu Gyeltshen	Principal	Kuendrup HSS	17696797

III. Contact details of Demkhong/Constituency Thuemis

Sl. No	Name	Demkhong/Constituency	Contact Number
1	Mr. Karchung	Samdrupling	17656734
2	Mr. Sanjog Pradhan	Namkhaling	17635858
3	Mr. Lok Bdr. Chhetri	Jampeling	17800779

4	Ms. Chimi	Rabdeyling	17656747
5	Mr. Chencho	Trashiling	17667717
6	Ms. Tika Maya Chhetri	Sonam Gatshel	17624100

IV. List of Desuups in Gelephu Thromde

Sl. No.	Name	Designation	Working Station	Contact Number
1	Mr. Sangay Phuntsho	Self Employee	Gelephu Throm	17423177
2	Mr. Tashi Wangchuk	Entrepreneur	Gelephu Throm	
3	Ms. Chhimi Dem	Self Employee	Gelephu Town	17918355
4	Ms. Sonam Dema	Asst. Manager, BOD	Gelephu Town	77225300
5	Mr. Kelzang Sherab	Teacher	Gelephu HSS	16922622
6	Ms. Namgyel Wangmo	Sr. Adm. & Fin. officer	Gelephu	17612344
7	Mr. Choney Dorji		BCCI, Gelephu	17699330
8	Mr. Tashi Tshering	Teacher	Gelephu LSS	17686859
9	Mr. Chimme Tshering	Researcher	Gelephu Forestry	
10	Ms. Dechen Tshomo	House Wife	House Wife	17455007
11	Mr. Tshering Dorji	Nil	Nil	17868693
12	Ms. Deki	House Wife	Nil	17714680
13	Ms. Pema Wangmo	Teacher	Gelephu HSS	17643564
14	Mr. Karma Wangda		Gelephu LSS	17260920
15	Ms. Dorji Wangmo			
16	Mr. Tshering Duba	GNM	CRRH, Gelephu	
17	Mr. Therchung Kencho	Ex. Dzongrab	Gelephu	17118810
18	Ms. Sangay Pelzom	Teacher	Gelephu LSS	17663073
19	Mr. Sonam Wangchuk	Acct Asst	RIO, Gelephu	17663157
20	Mr. Dambar Gurung	Sr. Ophthalmic Tech	CRRH, Gelephu	17693154
21	Mr. Sonam Tshering	Ex. Drungpa	Gelephu	17609989
22	Mr. Karma Kinga	CRNA	CRRH, Gelephu	17634727
23	Mr. Tobgyel	Program Analyst	VDCP, Gelephu	17605373
24	Mr. Rinzin Dukpa	Nurse Anesthesia	CRRH, Gelephu	17820742
25	Mr. Tandin Tshewang	CN	CRRH, Gelephu	17657543
26	Mr. Tshewang Phuntsho	Tax Officer	RRCO, Gelephu	17875025
27	Mr. Benita Tamang	Medical Tech	CRRH, Gelephu	17668256
28	Ms. Dawa Dem	Ward Asst	CRRH, Gelephu	17743898
29	Mr. Gyem Gyeltshen	Medical Tech	CRRH, Gelephu	17561998
30	Ms. Yangchen Choden	Menpa	CRRH, Gelephu	17407435
31	Mr. Karma Gyeltshen	Adm. Asst	Gelephu LSS	17693183

32	Ms. Sonam Choden	Bench Clerk	Gelephu	
33	Ms. Sonam Dema	Teacher	Kuendrup HSS, Gelephu	17872334
34	Mr. Jamtsho	Business	Gelephu Throm	
35	Mr. Ajay Drukpa	Business	Gelephu Throm	
36	Mr. Dorji Cheten	CEO, Lead Founder	Gelephu Throm	
37	Mr. Kinley Wangdi	CEO,	Gelephu Throm	
38	Mr. Tenzin Wangchuk	Revenue Officer	RRCO, Gelephu	
39	Mr. Tshering Dorji	Asst. Collector	RRCO, Gelephu	
40	Mr. Sonam Jurmi	Customs inspector	RRCO, Gelephu	
41	Mr. Drimi Wangda			
42	Ms. Tshering Uden	Customs inspector	RRCO, Gelephu	
43	Mr. Tshering Samdrup	Unemployed	Nil	
44	Ms. Yeshey Wangmo	No work	Gelephu	17550254
45	Mr. Tashi Dorji	Teacher	Gelephu SS	1785718

V. List of SAR equipment within the Thromde

Sl. No	Item	Quantity	Location of Store
1	Triangular Evacuation Harness	2 Nos.	Gelephu Thromde Garage
2	Rescue Ascender (in Pairs)	5 Pairs	Gelephu Thromde Garage
3	Water Rescue Throw Bags	10 Nos.	Gelephu Thromde Garage
4	Rope Gloves (in Pairs)	20 Pairs	Gelephu Thromde Garage
5	Tandem Double Sheave Pulley for Travers line/ Zip line on Rope	10 Nos.	Gelephu Thromde Garage
6	Ascend, Descend, fall arrester and Belay device	2 Nos.	Gelephu Thromde Garage
7	Hard hat	20 Nos.	Gelephu Thromde Garage
8	Spine Board	3 Nos.	Gelephu Thromde Garage
9	Basket Stretcher	3 Nos.	Gelephu Thromde Garage
10	Lifting bridle for basket stretcher	3 Nos.	Gelephu Thromde Garage
11	Safety belt for basket stretcher	3 Nos.	Gelephu Thromde Garage
12	Figure of 8 (descender)	20 Nos.	Gelephu Thromde Garage
13	Tandem Loop Prusik (in Pairs)	10 Nos.	Gelephu Thromde Garage
14	Prusik Cord (10m roll)	1 roll	Gelephu Thromde Garage
15	Tape Sling	1 roll	Gelephu Thromde Garage
16	Double Sheave Pulley	5 Nos.	Gelephu Thromde Garage
17	Full Body Harness	5 Nos.	Gelephu Thromde Garage
18	Easy Evacuation Stretcher	5 Nos.	Gelephu Thromde Garage
19	Anchor Plate	5 Nos.	Gelephu Thromde Garage
20	Static Rope (100m roll)	3 rolls	Gelephu Thromde Garage

21	Seat Harness	20 Nos.	Gelephu Thomde Garage
22	Search Light	5 Nos.	Gelephu Thomde Garage
23	Screw Carabineer for normal duty such as rock climbing and rappelling	30 Nos.	Gelephu Thomde Garage
24	Carabineer screw (D shaped) for heavy rigging and hauling	5 Nos.	Gelephu Thomde Garage
25	Life Vest	10 Nos.	Gelephu Thomde Garage
26	Adjustable extrication neck collar	5 Nos.	Gelephu Thomde Garage
27	Ambu Bag-Manual Resuscitator	5 Nos.	Gelephu Thomde Garage
28	Tripod Rescue System	2 Nos.	Gelephu Thomde Garage
29	USAR Knee Pads (in Pairs)	10 Pairs	Gelephu Thomde Garage
30	USAR elbow pads (in Pairs)	10 Pairs	Gelephu Thomde Garage
31	Easy Anchor Webbing	5 Nos.	Gelephu Thomde Garage
32	Easy Anchor Cable	5 Nos.	Gelephu Thomde Garage
33	Rescue Circular Saw	1 No.	Gelephu Thomde Garage
34	Cutting blades for Rescue Circular Saw	1 No.	Gelephu Thomde Garage
35	Hydraulic Rescue Combi Cutter and Spreader tool	1 No.	Gelephu Thomde Garage
36	Power Unit for hydraulic rescue equipment	1 No.	Gelephu Thomde Garage
37	Hydraulic RAM	1 No.	Gelephu Thomde Garage
38	Search Camera for collapsed structure search and rescue	1 No.	Gelephu Thomde Garage
39	Petrol Driven Jack Hammer	1 No.	Gelephu Thomde Garage
40	Lifting bag and accessories set	1 set	Gelephu Thomde Garage
41	Crib Block set to use with Rescue lifting bags	1 set	Gelephu Thomde Garage
42	Confine Space Rescue Stretcher	1 No.	Gelephu Thomde Garage
43	Self Contained Breathing Apparatus (SCBA) Set	1 set	Gelephu Thomde Garage
44	Spare 300 Bar cylinder for SCBA	2 Nos.	Gelephu Thomde Garage
45	Emergency Lighting Tower	1 No.	Gelephu Thomde Garage
46	VHF Handset	8 Nos.	Gelephu Thomde Garage
47	VHF Mobile Radios for Vehicle	1 No.	Gelephu Thomde Garage
48	VHF Base Station	1 No.	Gelephu Thomde Garage
49	Dynamic Rope (100m roll)	2 rolls	Gelephu Thomde Garage

Disaster Management Terms

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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