

**DISASTER MANAGEMENT
AND CONTINGENCY PLAN OF THE
MINISTRY OF EDUCATION**

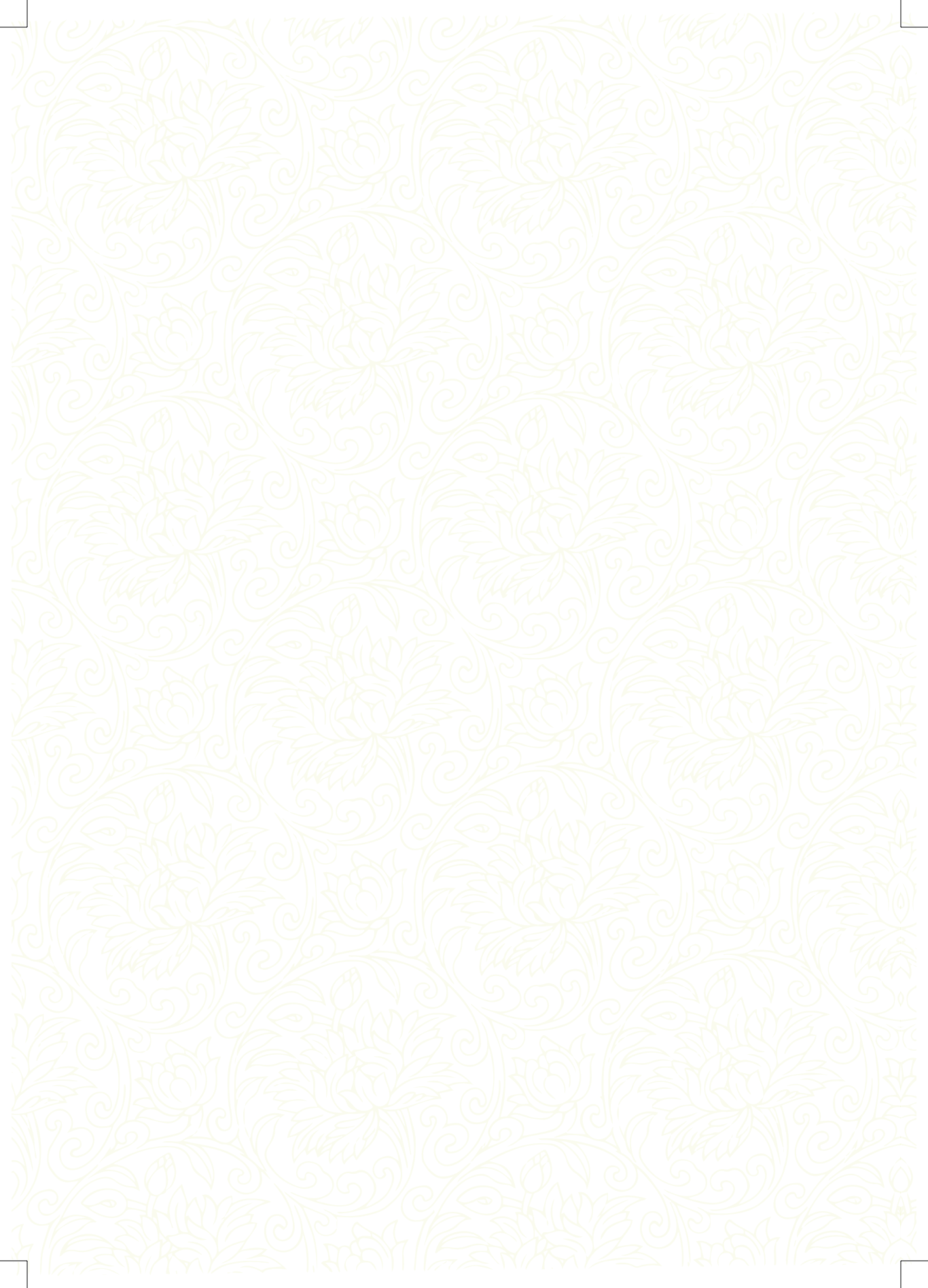
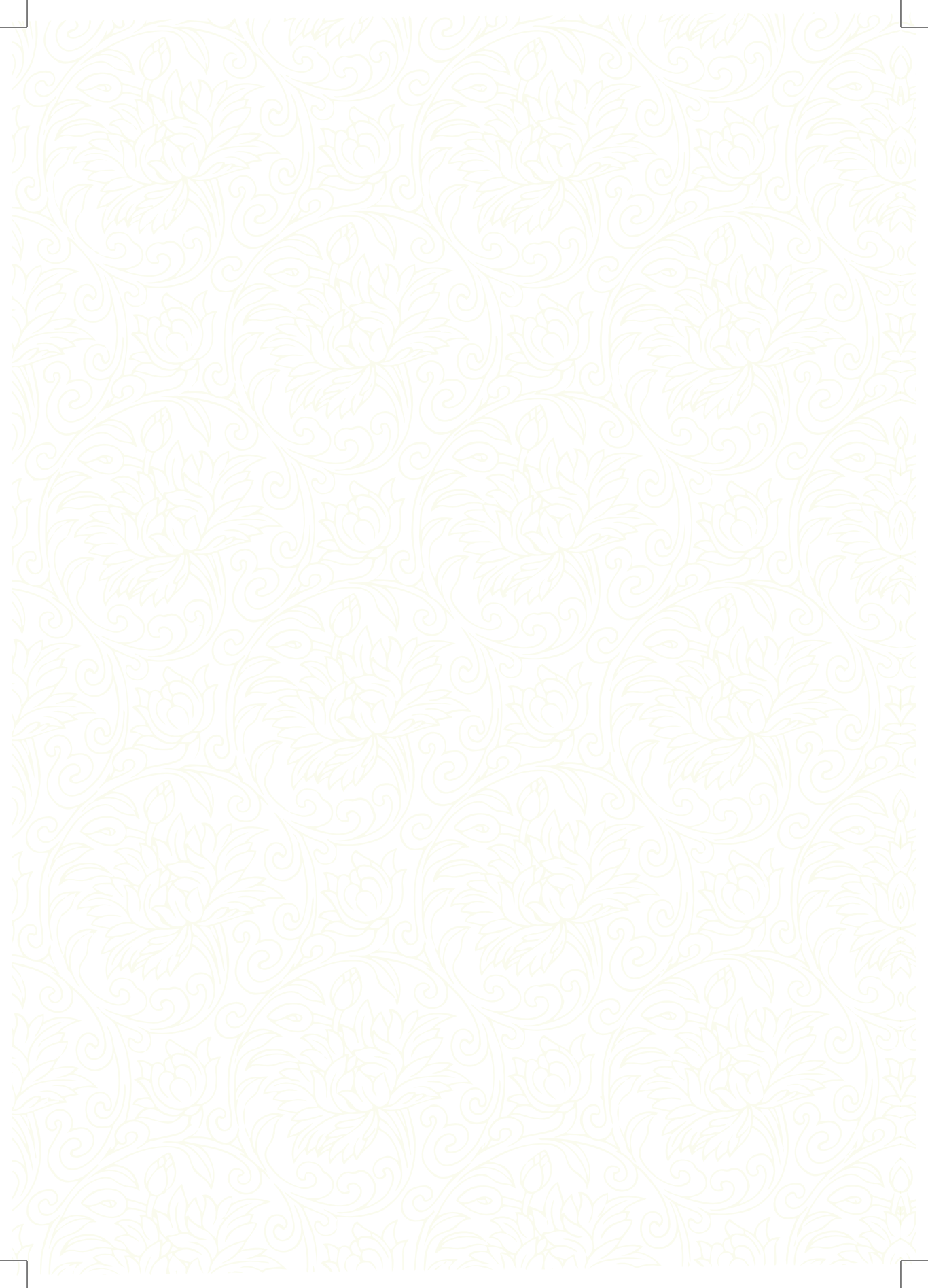


Table of Contents

Table of Contents	iii
List of tables	v
List of figures	v
Abbreviation list	vi
Foreword	vii
Acknowledgment	viii
Section 1: Background	1
1.1 The National Context	1
1.2. Prevailing Hazards in Bhutan	2
1.3. National Legislative Response	3
Section 2: Disaster Management and the Education Sector	6
2.1 Overview of the Education Sector	6
2.2 Disaster Management Policies relevant to the Education Sector	8
2.3 Existing Disaster Management Initiatives of the MoE	10
Section 3: Vision of the Plan	13
3.1. Overall vision and Guiding Principles	13
3.2. Scope and Purpose	13
Section 4: Risk Profile of the Education Sector	15
4.1. Hazard Assessment	15
4.2. Capacity Assessment	16
4.3. Vulnerability Assessment	19
4.4. Disaster risks in the education sector	20
Section 5: Disaster Risk Reduction and Preparedness Priorities	22
5.1 Priority 1- Strengthen disaster management institutional and policy framework	22
5.2 Priority 2 - Increase disaster management education and awareness	24
5.3 Priority 3 - Enhance risk reduction and mitigation	26
5.4 Priority 4 - Enhance preparedness, response and recovery levels	28
5.5 Priority 5 - Build Capacities for disaster management at all levels	30
Section 6: Education Sector Contingency Procedures and Arrangements	33
6.1 Education Disaster Response Coordination Mechanism	33
6.2 Roles and responsibilities	36
6.3 Standard operating procedures	40
Section 7: Implementation, Monitoring and Review Mechanisms	44



List of tables

Table 1. 1: <i>Key Statistics for Bhutan</i>	7
Table 2. 1: <i>Summary of key education statistics</i>	12
Table 4. 1: <i>Overall average ranking of risks by hazard type</i>	27
Table 5. 1: <i>Priority areas</i>	30
Table 5. 2: <i>Strengthen Disaster Management Institutional and Policy Framework</i>	31
Table 5. 3: <i>Increase Disaster Management Education and Awareness</i>	34
Table 5. 4: <i>Enhance Risk Reduction and Mitigation</i>	39
Table 5. 5: <i>Enhance Preparedness, Response and Recovery Levels</i>	42
Table 5. 6: <i>Build Capacities for Disaster Management</i>	46
Table 6. 1: <i>Education sector DM institutions</i>	50
Table 6. 2: <i>Roles and responsibilities for response and relief</i>	51

List of figures

Figure 1. 1: <i>DM Institutions in Bhutan</i>	10
Figure 2. 1: <i>Education Organogram</i>	14
Figure 4. 1: <i>Priority hazards ranked by schools</i>	23
Figure 4. 2: <i>School level capacities and initiatives</i>	25
Figure 4. 3: <i>Frequency of mock drills in schools</i>	26
Figure 6. 1: <i>Education sector disaster response mechanism</i>	50
Figure 6. 2: <i>Response mechanism for Ministry of Education</i>	51

Abbreviation list

AFD	<i>Administrative and Finance Division</i>
BCSEA	<i>Bhutan Council for School Examinations and Assessment</i>
CECD	<i>Career Education and Counselling Division</i>
CSSF	<i>Comprehensive School Safety Framework</i>
CTG	<i>Core Task group</i>
DAHE	<i>Department of Adult and Higher Education</i>
DEO	<i>Dzongkhag Education Officer</i>
DDM	<i>Department of Disaster Management</i>
DM	<i>Disaster Management</i>
DDMC	<i>Dzongkhag Disaster Management Committee</i>
DoS	<i>Directorate of Services</i>
DRR	<i>Disaster Risk Reduction</i>
DRM	<i>Disaster Risk Management</i>
DSE	<i>Department of School Education</i>
DT	<i>Dzongkhag Tshogdue</i>
DYS	<i>Department of Youth and Sports</i>
ECCD	<i>Early Childhood, Care and Development</i>
ECCD and SEN	<i>Early Childhood, Care and Development & Special Education Needs</i>
EEOC	<i>Education Emergency Operation Centre</i>
EiE	<i>Education in Emergencies</i>
FYP	<i>Five Year Plan</i>
GLOF	<i>Glacial Lake Outburst Flood</i>
GNH	<i>Gross National Happiness</i>
EDMC	<i>Education Disaster Response Coordination Committee</i>
HFA	<i>Hyogo Framework of Action</i>
HRD	<i>Human Resource Division</i>
IA	<i>Internal Audit</i>
MoAF	<i>Ministry of Agriculture and Forest</i>
MoE	<i>Ministry of Education</i>
MoEA	<i>Ministry of Economic Affairs</i>
MoH	<i>Ministry of Health</i>
MoLHR	<i>Ministry of Labour and Human Resources</i>
NATCOM for UNESCO	<i>National Commission for UNESCO</i>
NDMA	<i>National Disaster Management Authority</i>
NEOC	<i>National Emergency Operation Centre</i>
NFCED	<i>Non Formal & Continuing Education Division</i>
NKRA	<i>National Key Result Areas</i>
PPD	<i>Policy and Planning Division</i>
PSD	<i>Private School Division</i>
REC	<i>Royal Education Council</i>
RUB	<i>Royal University of Bhutan</i>
SAARC	<i>South Asian Association for Regional Cooperation</i>
SAR	<i>Search and Rescue</i>
SDGs	<i>Sustainable Development Goals</i>
SDMC	<i>School Disaster Management Committee</i>
SHND	<i>School Health and Nutrition Division</i>
SOPs	<i>Standard Operating Procedures</i>
SPBD	<i>School Planning and Building Division</i>
SPCD	<i>School Planning and Coordination Division</i>
TEO	<i>Thromde Education Officer</i>
TDMC	<i>Thromde Disaster Management Committee</i>
TLS	<i>Temporary Learning Shelters</i>
UN	<i>United Nations</i>



དཔལ་ལྷན་འགྲུག་གཞུང་། ཤེས་རིག་ལྷན་ཁག།
Royal Government of Bhutan
Ministry of Education
Department of School Education
School Planning and Coordination Division



DSE/SPCD/DMU(1)/2016/ 848

4 July 2016

FOREWORD

Located in the eastern Himalayas, one of the most seismically active regions of the world, Bhutan is extremely vulnerable to earthquakes. The two events M6.1 Earthquake of 21st September, 2009 in eastern Bhutan and the M6.8 Earthquake of 18th September, 2011 in Sikkim, India damaged 153 school buildings. Damage to some buildings was severe enough that students would have been injured or killed, had they been in the buildings at the time of the earthquake. In addition to earthquakes, with 2,674 glacial lakes, Bhutan is vulnerable to glacial lake outburst floods (GLOFs). Bhutan also faces recurrent hazards such as windstorms, floods and forest fires that is growing in frequency and intensity with climate change and pose an increasing risk to the Education Sector.

It is the responsibility of the Ministry of Education as mandated by the Disaster Management Act of Bhutan, 2013, to ensure the safety of over 170,000 students in 533 schools and 91 ECRs. There is an urgent need to build capacities and enhance disaster preparedness to ensure that all our learning spaces are safe from the impact of natural hazards. This would mean working to make certain that - our school building designs incorporate disaster resilient features; our education facilities are built as per design and to standard; our schools, ECCD centres and institutes have disaster management plans in place; our teachers and students are trained and know how to respond during a disaster or an emergency; and that policies and institutions are in place to support all this.

I believe that the Education Ministry's "Disaster Management and Contingency Plan" will guide the Education Sector to efficiently prioritize our risk reduction and preparedness activities, help us incorporate required mitigation measures in our plans and programmes and clearly outline roles and responsibilities, communication channels and decisions required to be made for effective response during disasters. Through our plan, we can not only reduce our risk and be more prepared, but also help in spreading awareness on the importance of disaster management and being prepared to families and communities through school children.

On behalf of the Ministry of Education, I thank Save the Children Bhutan Office for facilitating the development of this plan under their DiPECHO-Save Norway funded Comprehensive Disaster Management Project for the Education Sector. I would like to acknowledge the technical support provided by the Department of Disaster Management (MoHCA) in the entire plan formulation process and I also wish to applaud the consistent support and work put in by all the working group members in the drafting of this plan.

I look forward to working with my colleagues and our local and international development partners in the Education Sector to implement recommended interventions and to put in place institutional mechanisms and policies as required. I am confident that with sustained commitment and effort on all our parts, we will succeed in making all learning spaces in Bhutan disaster resilient.

(Norbu Wangchuk)
MINISTER

Acknowledgment

The Ministry of Education would like to firstly acknowledge the facilitation and financial support received from DiPECHO and Save Norway through Save the Children Bhutan Office for developing the Education Disaster Management and Contingency Plan.

The Ministry would also like to acknowledge and thank the technical and facilitation support provided by the Department of Disaster Management, Ministry of Home and Cultural Affairs, throughout the plan development process.

Lastly, the Ministry would like to acknowledge the continuous hard work and guidance provided by the national working group members (detailed out below) throughout the plan development process.

List of working group members

Yang T Dorji, School Planning and Coordination Division, DSE, MoE	Lalit Kumar Gurung, School Planning and Building Division, DoS, MoE
Phuntsho Wangdi, School Planning and Coordination Division, DSE, MoE	Tandin Norbu, School Planning and Building Division, DoS, MoE
Pelden Zangmo, Department of Disaster Management, MoHCA	Desang Dorji, School Health and Nutrition Division, DSE, MoE
Yeshey Lotay, Department of Disaster Management, MoHCA	Kuenley Tenzin, PPD, MoE
Keshap Moktan, Department of Disaster Management, MoHCA	Sonam Chokey, PMCD, GNH
Tshewang Norbu, Department of Disaster Management, MoHCA	Nidup Gyeltshen, Career Education Counseling Division, DYS, MoE
Sonam Deki, Department of Disaster Management, MoHCA	Jasraj Limbu, Thimphu City
Tenzin Choden, Department of Disaster Management, MoHCA	Wangchuk, Royal Education Council
Tshewang Dorji, Quality Assurance and Accreditation Division, DAHE, MoE	B.B Mishra, Education Program, UNICEF
Gyem Dorji, HRD, MoE	Karma Doma Tshering, Save the Children
Karma Norbu, ECCD and SEN Division, DSE, MoE	Sonam Pelden, Save the Children
Namgay Wangmo, School Planning and Coordination Division, DSE, MoE	Pem Tshering, Disaster Focal Officer, Disaster Management Unit, School Planning and Coordination Division, DSE, MoE
Karma Yangchen, EMD, MoE	

SECTION

1

BACKGROUND

1.1 The National Context

Bhutan is a landlocked country located on the southern slopes of the Eastern Himalayas with a total area of 38,394 square kilometres and rugged mountainous topography with elevations ranging from less than 100 metres above sea level to over 7,500 metres above sea level. The Himalayan arc of mountains straddles the collision between the Indian and Eurasian tectonic plates making Bhutan one of the most seismically active zones in the world. About 70 percent of Bhutan's land surface is covered with forest, 7 percent with year-round snow and glaciers, and 3 percent for cultivation and agriculture while the remaining 20 percent is either barren, rocky or scrub land.

Predictability of the seasonal pattern cannot be taken for granted with the prospect of significant weather variation being ever-present and unpredictability becoming more frequent as more severe consequences of climate change sets in. Bhutan's contribution to climate change is virtually zero but, as with many developing countries, it is being severely hit by global warming. The Himalayan glaciers are retreating fast. The seasonal strong winds are becoming a frequent hazard and cyclones and mini-cyclones, unheard of in earlier times given that Bhutan lies far away from the sea, are becoming a climatic feature. Subtropical diseases such as dengue fever and malaria, once restricted to the southern plains, are advancing into central Bhutan.¹

According to the 2017 census², Bhutan has a population of 681, 720. Some key statistics for Bhutan are as follows:

Table 1. 1: Key Statistics for Bhutan

Population growth rate	1.3%
Overall life expectancy	70.2 years
Population in urban areas	37.8%
Population in rural areas	62.2%
Median age of population	26.9 years
Birth rate	15.5 births per 1000 people
Death rate	6.7 deaths per 1000 people
Population density	19 people per square kilometre
Sex ratio	1.1 male for every female
Estimated household number	163,001
Average household family size	3.9 members
Literacy rate	71.4%

¹<http://www.adrc.asia/nationinformation.php?NationCode=64&Lang=en&NationNum=33>; <http://www.downtoearth.org.in/interviews/how-bhutan-is-grappling-with-climate-change-40310>; <http://www.everyculture.com/A-Bo/Bhutan.html>

² http://www.nsb.gov.bt/publication/files/PHCB2017_national.pdf

Bhutan's development philosophy is guided by the concept of Gross National Happiness (GNH) a holistic development approach placing equal emphasis on both economic growth and on non-economic aspects of wellbeing. The four pillars of GNH have been defined as - good governance, sustainable socio-economic development, cultural preservation and environmental conservation. Development is planned and implemented based on five-year plans. Planned development started in 1961 with the current 12th five year plan (2018 – 2023) underway. The current plan has 6 National Key Result Areas and “Carbon neutral, climate and disaster resilient Development” is one of them.

1.2. Prevailing Hazards in Bhutan

Lying atop the fault line caused by colliding Indian and Eurasian tectonic plates, Bhutan is located in one of the most seismically active zones in the world with the risk of earthquakes ever present. Moderate earthquakes of M6.1 in Eastern Bhutan in 2009 and M6.9 Sikkim earthquake in 2011 and the recent M7.9 Nepal earthquake of April 2015 are indicative of what might happen in terms of death, injury and destruction of property should a large earthquake occur with its epicentre located within or close to the country. History records some 30 moderate earthquakes, i.e. 4.5 to 6.75 on the Richter scale, occurring in Bhutan between 1937 and 1998.³ Recent scientific thinking suggests that, with increasing climate change the likelihood of earthquakes in seismically active mountain areas will grow as the heavy ice and snow that had long suppressed seismic activity thins.⁴

For schools, the 2009 and 2011 earthquakes had dire consequences. The two events caused extensive damages to school buildings and, had students been occupying the schools at the time, would have led to injury and even loss of life. A total of 153 schools were damaged in the two events, normal school functioning was disrupted and school officials reported traumatic impacts upon children.⁵

Another impending natural hazard facing Bhutan are Glacial Lake Outburst Floods (GLOF) and the risk is intensifying as the climate changes. GLOFs are caused due to breakage in the glacial ice or moraine dam holding the glacial lake. Global warming is leading to the rapid melting of glaciers resulting in the overflow or outburst of glacial lakes. A GLOF can also happen should earthquake shaking cause the moraine dam to crack or fail or cause an avalanche to overwhelm the lake. Bhutan has 2,674 glacial lakes, a recent study identifying 25 as carrying a GLOF threat. Since 1957 there have been four major GLOF events in Bhutan, with the most severe one occurring in 1994.⁶

There are also other recurring hazards, some seasonal, to be faced. Flash floods are a recurring phenomenon and can cause extensive damage during the monsoon months of June to September. They occur when heavy monsoon rain falls upon steep terrain or upon already saturated or excessively dry soil. Flash floods have been reported in many Dzongkhags causing damage to paddy and vegetable fields, bridges, irrigation channels, houses, roads and other infrastructure.

³GeoHazards International. 2014. *Current Knowledge about Bhutan's Earthquake Hazard*. November 30. 8.

⁴McGuire, B. (2012). *Waking the Giant: How a changing climate triggers earthquakes, tsunamis, and volcanoes*. Oxford: Oxford University Press.

⁵Ministry of Education, Royal Government of Bhutan. 2014. *Educating for GNH: Emergency Contingency Plan*. 5.

⁶Asian Disaster Preparedness Centre (2014) *Saving Lives and Property by Mainstreaming Disaster Risk Reduction into the Education Sector of Bhutan*, 3.

More widespread flooding can happen, as in 2009, when the tropical cyclone Aila struck from the south, causing damages worth more than 700 million Ngultrums.⁷

Landslides are a frequent occurrence in Bhutan, usually caused by heavy precipitation loosening soil from its anchor in the bedrock causing it to slide downhill or by rain-swollen streams and rivers undercutting mountain slopes to the point that they become unstable. Seismic activity can loosen slopes; forest fires can reduce soil stabilization effects of trees; and human encroachment and development activities such as road construction, timber extraction, mining, and canal construction carried out on an unsustainable basis can also cause landslides. Landslides can destroy surface transportation systems, disrupt internal and external movement of goods and supplies, destroy agricultural land and hit the economy of Bhutan hard.⁸

Forest fires, especially in dry months when trees are at their most combustible and when erratic wind conditions often prevail present another recurring, seasonal hazard in Bhutan. The Department of Forest and Park Services reported 868 cases of wildfire affecting 128,368 hectares of pristine forest within a span of thirteen years from 1993–2005.⁹ Most forest fires and fires on human settlement are human induced. Rugged terrain makes firefighting difficult.

Windstorms are becoming an annual feature of a climate-changing Bhutan putting traditional wooden architecture in jeopardy. Roofs of some 2,424 households in seventeen Dzongkhags were blown off or damaged in a 2011 windstorm, affecting people's livelihoods and at great compensation cost to government. A windstorm in December 2013 damaged over 979 homes, twelve schools, fifty religious establishments, three Gewog offices and eight health units in thirteen Dzongkhags.¹⁰

1.3. National Legislative Response

Disaster Management Act of Bhutan was enacted in 2013. The Act provides for the establishment and strengthening of decentralized disaster management institutions at all levels and aims to build institutional capacities for disaster management allied with an integral, multi-level and cross-sector approach focusing on community participation.

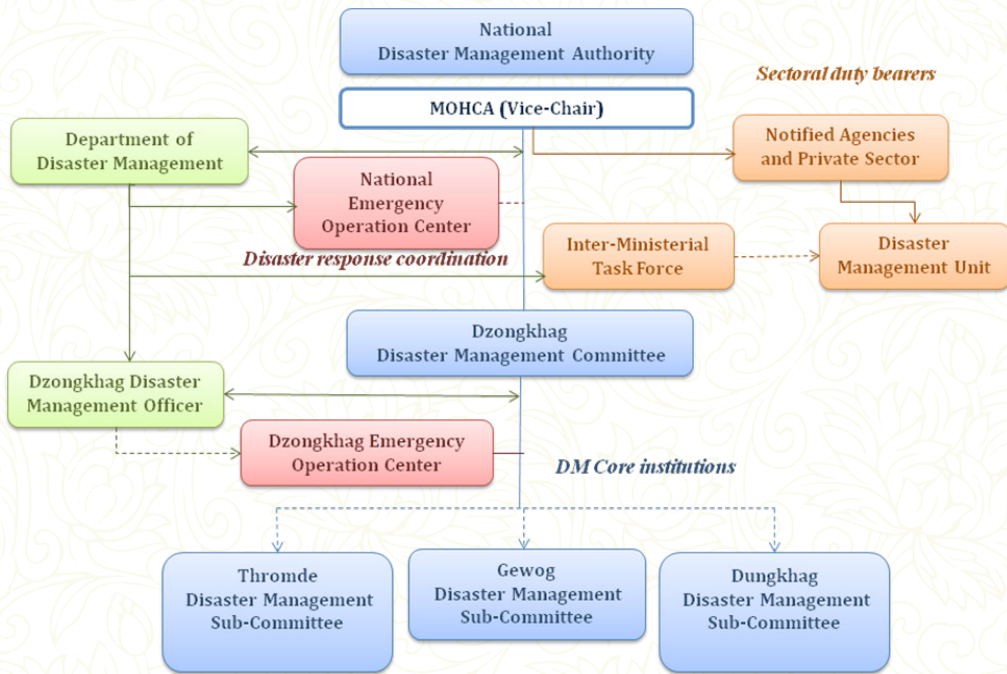
⁷<http://www.adrc.asia/nationinformation.php?NationCode=64&Lang=en&NationNum=33>; Department of Disaster Management. (2014). *Safer Schools*. 13; GeoHazards International. (2013). *National Action Plan for School Earthquake Safety*. 2; Bhutan Disaster Knowledge Network. (undated) *Disaster Profile*. http://www.saarc-sadkn.org/countries/bhutan/disaster_profile.aspx

⁸ http://www.saarc-sadkn.org/countries/bhutan/disaster_profile.aspx; Department of Disaster Management. (2014). *Safer Schools*. 18.

⁹ International Forest Fire News, no.34, *Fire Situation in Bhutan*. http://www.fire.uni-freiburg.de/iffn/iffn_34/07-IFFN-34-Bhutan.pdf.


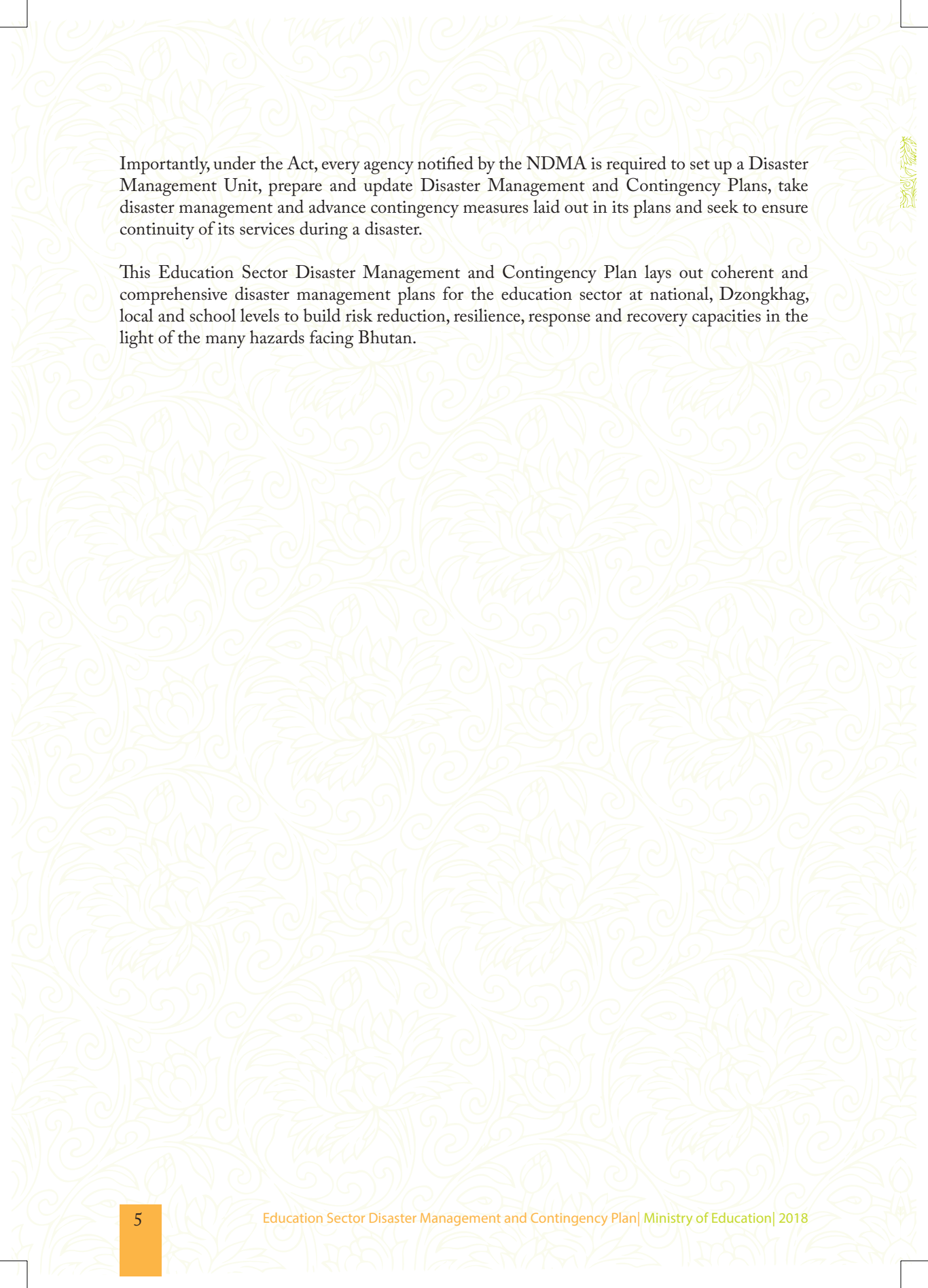
¹⁰ https://www.academia.edu/10829949/Windstorm_Damage_Assessment_and_Prevention_on_Traditional_Bhutanese_Roofs; <http://beforeitsnews.com/environment/2013/12/storm-in-bhutan-damages-over-300-houses-2487958.html>; <http://www.adrc.asia/nationinformation.php?NationCode=64&Lang=en&NationNum=33>

Figure 1. 1: DM Institutions in Bhutan



The National Disaster Management Authority (NDMA), chaired by the Prime Minister, is the highest decision-making body on disaster management in Bhutan. The NDMA is responsible for approving disaster management policies, plans, national guidelines, assessment tools and ensuring ministries and agencies embed disaster risk reduction into their planning and implementation. The Inter-Ministerial Task Force (IMTF) with multi-sector technical experts is supposed to provide technical guidance and support to the NDMA and to other sectors and agencies on their disaster management plans and activities. The Department of Disaster Management under the Ministry of Home and Cultural Affairs functions as the national coordinating body for disaster management and the Director is chairs the IMTF.

At Dzongkhag level, the Act formalizes establishment of Dzongkhag Disaster Management Committees (DDMCs), chaired by the Dzongdag. DDMCs are responsible for coordinating and managing disaster management operations, preparing and updating Dzongkhag Disaster Management and Contingency Plans, mainstreaming disaster management into plans and policies and promoting disaster education, awareness and capacity building in the communities. Similarly, Dungkhags and Gewogs would establish their own disaster management committees as per the discretion of the Dzongkhag. Thromdes would have their own Thromde Disaster Management Committee.



Importantly, under the Act, every agency notified by the NDMA is required to set up a Disaster Management Unit, prepare and update Disaster Management and Contingency Plans, take disaster management and advance contingency measures laid out in its plans and seek to ensure continuity of its services during a disaster.

This Education Sector Disaster Management and Contingency Plan lays out coherent and comprehensive disaster management plans for the education sector at national, Dzongkhag, local and school levels to build risk reduction, resilience, response and recovery capacities in the light of the many hazards facing Bhutan.

SECTION

2

DISASTER MANAGEMENT AND THE EDUCATION SECTOR

2.1 Overview of the Education Sector

Modern education system in Bhutan was introduced with the initiation of economic development plans in 1961. School-based education structure in Bhutan comprises of 11 years of free basic education, from Pre Primary (PP) to grade X divided into 7 years of primary education (PP-VI) and 4 years of secondary education (VII-X).

After class X, students either continue their general education in higher secondary (XI-XII), join a vocational training institute or enter the labour market. After completing class XII, graduates either continue their studies at tertiary level under one of the institutes of the Royal University of Bhutan for a diploma or bachelor's degree, or find employment.

Table 2. 1: Summary of key school education statistics¹¹

Early Childhood Care and Development		Government			Private			Total		
ECCD Centres		282			58			340		
School Education		Government			Private			Total		
1	Primary Schools	294			14			308		
2	Lower Secondary Schools	63			1			64		
3	Middle Secondary Schools	77			1			78		
4	Higher Secondary Schools	42			20			62		
5	Extended classrooms	79						79		
6	Central schools	63						24		
7	Autonomous school	40								
Number of students		Government			Private			Total		
		Boys	Total	Boys	Girls	Total	Boys	Girls	Total	
1	ECCD	3434	3421	6855	861	783	1644	4295	4204	8499
2	Primary	17944	17461	35405	1313	1263	2576	19257	18724	37981
3	Lower Secondary Schools	13947	13999	27946	70	52	122	14017	14051	28068
4	Middle Secondary Schools	25296	26727	52023	303	312	615	25599	27039	52638
5	Higher Secondary Schools	18517	19466	37983	4169	4516	8685	22686	23982	46668
6	ECRs	906	847	1753				906	847	1753

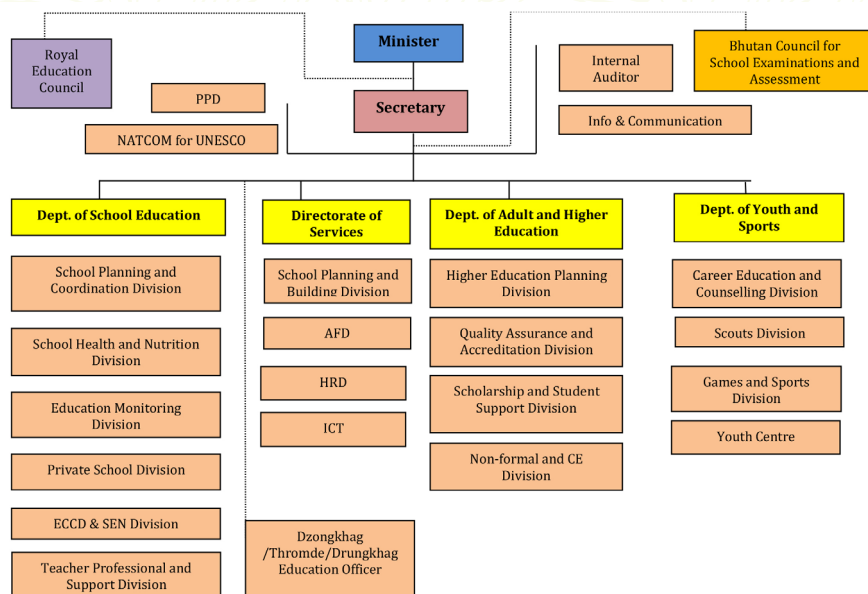
¹¹PPD, Ministry of Education (2018) *Annual Education Statistics 2018*

Total	76610	78500	155110	5855	6143	11998	82465	84643	167108
Number of Teachers Male	Government			Private			Total		
	Female	Total	Male	Female	Total	Male	Female	Total	
1 ECCD	42	494	536	12	216	228	54	710	764
2 Primary	1437	886	2323	61	127	188	1498	1013	2511
3 Lower Secondary Schools	825	741	1566	8	8	16	833	749	1582
4 Middle Secondary Schools	1585	1155	2740	20	26	46	1605	1181	2786
5 Higher Secondary Schools	1215	839	2054	313	187	500	1528	1026	2554
6 ECRs	107	34	141				107	34	141
Total	5169	3655	8824	402	348	750	5571	4003	9574

Responsibility for the administration of state education in Bhutan is shared between the Ministry of Education (MoE), the Ministry of Labour and Human Resources (MOLHR), the Royal University of Bhutan (RUB), Dzongkhag and Gewog and the Dratshang Lhentshog/ Central Monastic Body for monastic education. The Ministry of Education is responsible for policy planning and implementation and the administration of basic (primary to middle secondary), higher secondary, Early Childhood Care and Development (ECCD), special education and non-formal and continuing education. It is also responsible for higher education policy and liaising with the Royal University and affiliated higher education outlets.

The MoE is organised into three departments - the Department of School Education, the Department of Adult and Higher Education and the Department of Youth and Sports. Within the MoE, the Department of School Education is the agency responsible for strengthening disaster preparedness and response in the education.

Figure 2. 1: Education Organogram



Sector and there is a Disaster Management (DM) Unit under the School Planning and Coordination Division.

In 2014 the Ministry of Education reaffirmed its vision as one of fostering ‘...an educated and enlightened society of GNH, built and sustained on the unique

Bhutanese values of *tha dam-tshig ley gyu-drey*¹² and summarized its mission as threefold:

- Develop sound educational policies that enable the creation of a knowledge-based GNH society;
- Provide equitable, inclusive and quality education and lifelong learning opportunities for all children and harness their full potential to become productive citizens;
- Equip all children with appropriate knowledge, skills and values to cope with the challenges of the 21st century.¹³

Although education is centrally coordinated, its implementation is largely decentralized to Dzongkhag and local government level to allow for greater autonomy, accountability and dynamism in achieving desired educational outcomes.¹⁴ Dzongkhag and Gewog Administrations are thus entrusted with a range of education sector responsibilities including formal and non-formal education, school construction and maintenance, supply of learning and teaching materials, deployment of teachers across the Dzongkhags, and implementation of national and more specifically MoE policies.

2.2 Disaster Management Policies relevant to the Education Sector

At the global and international level, Bhutan is signatory to the Hyogo Framework for Action (HFA) 2005-2015¹⁵ and its successor, the Sendai Framework for Disaster Risk Reduction 2015-2030.¹⁶ HFA's five priority actions are to ensure that disaster risk reduction is a national and a local priority with a strong institutional basis for implementation; identify, access and monitor disaster risks and enhance early warning; use knowledge, innovation and education to build a culture of safety and resilience at all levels; reduce the underlying risk factors; and strengthen disaster preparedness for effective response at all levels.

In addition to HFA, the Sendai Framework lays out a number of guiding principles, such as ‘disaster risk reduction being essential to achieving sustainable development’ and highlighting the importance of addressing underlying disaster drivers, such as climate change, poverty and inequality, unplanned urbanization, poor land management and sustainable use of natural resources and declining ecosystem.¹⁷ The Framework calls for the building ‘a culture of prevention and education on disaster risk’ and believes that ‘children and youth are agents of change and should be given the space and modalities to contribute to disaster risk reduction, in

¹²PPD, Ministry of Education (2012) *12 Education policy guidelines and Instructions*

¹³<http://www.education.gov.bt/vision-mission>

¹⁴Gross National Happiness Commission (2013). *Eleventh Five Year Plan. 2013-2018*. 135.

¹⁵UNISDR (2005) *Hyogo Framework for Action 2005-2015: Building the Resilience of Nations and Communities to Disasters* <http://www.unisdr.org/we/inform/publications/1037>

¹⁶UNISDR (2015) *Sendai Framework for Disaster Risk Reduction 2015-2030*, http://www.preventionweb.net/files/43291_sendaiframeworkfordrren.pdf

¹⁷*Ibid.*

accordance with legislation, national practice and education curricula.¹⁸ States are called upon ‘to promote the incorporation of disaster risk knowledge, including disaster prevention, mitigation, preparedness, response, recovery and rehabilitation, in formal and non-formal education, in civic education at all levels, as well as professional education and training.’¹⁹

To advance the goals of the Sendai Framework and the HFA, the Global Alliance for DRR and Resilience in the Education Sector and the World wide Initiative for Safe Schools adopted the Comprehensive School Safety Framework (CSSF) in 2015. Goals of the CSSF are - to protect learners and education workers from death, injury, and harm in schools; to plan for educational continuity in the face of all expected hazards and threats; to safeguard education sector investments; and to strengthen risk reduction and resilience through education.²⁰ Comprehensive School Safety is addressed by education policy and practices aligned with disaster management at National, Regional, Dzongkhag, and school levels and rests on three pillars – Safe Learning Facilities; School Disaster Management; and Risk Reduction and Resilience Education.

Similarly, in terms of development, the Sustainable Development Goals (SDGs) was adopted by the UN and its member countries, including Bhutan in September, 2015. The 17 goals have been set to “end poverty, protect the planet and ensure prosperity for all.” Goal 13 – Take urgent action to combat climate change and its impacts, is particularly relevant to building disaster resilience and one its main target is to “strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries.”

Regionally, Bhutan as part of the South Asian Association for Regional Cooperation (SAARC) is a member of the SAARC Disaster Management Centre, with representation on the governing board. Bhutan has endorsed the SAARC DM Plan and its road map.²¹ The road map recommends the following in order to mainstream disaster management in the education sector - initiating school safety programmes; including disaster management in school curricula; conducting simulation drills and first aid training for students; preparing school level Disaster Management Plans.²²

At the national level the NDRMF 2006 for Bhutan was based on the principles of the Hyogo Framework of Action (HFA). Component 4 on disaster preparedness requires the formulation of disaster preparedness and response/contingency plans at national through local level for key sectors including education. Component 6 on public awareness and education calls for the introduction of modules on disaster management into school and college curricula ‘to promote a people-centric approach to mitigating disaster risks’.²³

¹⁸Ibid, 20

¹⁹Ibid, 11

²⁰*Comprehensive School Safety, A global framework for DRR and resilience in the Education Sector and The Worldwide Initiative for Safe Schools, 2015*

²¹*Bhutan: National Progress Report on the Implementation of the Hyogo Framework for Action (2013–2015)–Interim, 22*

²²SAARC (2011) *SAARC Road Maps of Disaster Risk Management in South Asia*, 38. <http://saarc-sdmc.nic.in/pdf/Publications/roadmap-saarc.pdf>

²³Department of Local Governance, Ministry of Home & Cultural Affairs, Royal Government of Bhutan. 2006. *National Disaster Risk Management Framework*. 43, 48. http://www.adrc.asia/documents/dm_information/Bhutan_DRMF_Final.pdf

The National Action Plan for School Earthquake Safety (2013) identifies five priority areas -Strengthening Earthquake Safety and Disaster Management Institutional and Policy Frameworks in the Education Sector; Education and Awareness; Risk Reduction and Mitigation; Preparedness, Response and Recovery; and Capacity Building, and provides guidance to the Ministry of Education and other key government departments regarding priority policies, mitigation and preparedness actions to undertake in the short, medium and long-term, to ensure that all schools in Bhutan are safe from the impact of earthquakes and other natural hazards.²⁴ The Disaster Management Act of Bhutan 2013 mandates the Ministry of Education as a key sector to mainstream disaster management policies and priorities into its planning and implementation at multiple levels.²⁵ Also as a notified agency MoE is required to develop and endorse a Disaster Management and Contingency Plan and ensure that local level education functionaries and schools fulfil their disaster management responsibilities.

MoE's 12th FYP priorities for disaster risk reduction and preparedness are to:

Conduct vulnerability assessments of all existing schools for disaster risks and retrofitting and re-construction of vulnerable schools;

Establishment of functional Education Emergency Operation Centre with Standard Operating Procedures and guidelines;

Develop and test Departmental safety plans and procedures within the Ministry of Education; Develop guidelines for structural and non-structural mitigation to enhance resilience and reduce risks; and

Build capacities of schools, ECCD, NFE and Youth centres and provisions of emergency equipment²⁶

The Emergency Contingency Plan, 2014 was formulated by the Department of School Education based on guidance provided in the Contingency Planning Guidelines for Bhutan, 2014 issued by the Department of Disaster Management. The Plan aims to: ensure an effective, appropriate and timely response system in emergency situations with clear roles and responsibilities; strengthen linkages with national disaster management institutions and mechanisms; and develop strategic partnerships. The plan focuses on pre-disaster, during disaster and post-disaster emergency response to earthquakes, flash floods, glacial lake outburst floods, and lays out the education sector contingency management structure in detail.²⁷

2.3 Existing Disaster Management Initiatives of the MoE

The Disaster Management Unit under the School Planning and Coordination Division in Department of School Education, Ministry of Education serves as the focal agency. In terms of national disaster management policies and plans, the MoE endorsed the National Action

²⁴GFDRR, Geohazards International & Department of Disaster Management (2013) *National Action Plan for School Earthquake Safety*

²⁵Karma Analysis and Research Services. (2014). *Needs Assessment for the DIPECHO Bhutan Project, 2014*. 13.

²⁶Karma Analysis & Research Service (2014) *Needs Assessment for the DIPECHO Bhutan Project 2014*, 15-16

²⁷Department of School Education. (2014). *Emergency Contingency Plan*.

Plan for School Earthquake Safety in 2013 and the coordination mechanism outlined in the Education Contingency Plan in 2013.

Awareness raising and capacity building activities for Safe School Initiatives, First Aid, Fire Safety and Education in Emergencies have been implemented since 2010. Facilitator and teacher training curriculum and materials have been developed and till date 819 Principals and school disaster focal teachers been trained in EiE and school based disaster management. Almost all schools in Bhutan now have School Disaster Management Plans are in place and implementation of the school disaster management plan is being monitored through the School Performance Monitoring System. All the Dzongkhag/Thromde Education Officers are familiarised with the revised Performance Management System for DRR in the schools. There are trained Core Group of Trainers in 13 Dzongkhags at present with objectives to implement DRR programmes at Dzongkhag level and to make the programmes sustainable. Recently 197 Principals and focal teachers along with 30 resource persons were trained in the use of the Teachers Handbook for DRR.

In terms of risk reduction and mitigation, schools carry out regular hazard hunts in classrooms and on campus and many schools have initiated non-structural/ falling hazard mitigation on their own. Having disaster-resilient school buildings is seen as a priority and the School Planning and Building Division (SPBD) have incorporated disaster resilient features in new school building designs. Based on experience from past earthquakes, existing school structures, especially non-engineered community-built structures are observed to be highly vulnerable and in this regard, vulnerability assessment checklist for schools have been developed, engineers trained and assessments carried out in at least eight Dzongkhags.

To enhance response and recovery, MoE has begun stockpiling of response and relief materials. Sirens and first aid kits have been distributed to schools and Search and Rescue (SAR) kits have been supplied to more than five Dzongkhags. Materials such as School in a Tent, basic family water kit, basic first aid kits, collapsible water tanks and Chlorine/pH, Pool tester kit for 250 tests have been stored in three regional warehouses, at Phuentsholing, Gelephu and Trashigang. The Dzongkhag/Thromde Education Officers have been sensitized to the needs of Education in Emergencies and the related standards and requirements.

The recent Disaster Management Programme Outcome Evaluation done by the Education Disaster Response Coordination Committee (EDMC) in 2014 notes the achievements made by the Ministry of Education in terms of:

- Building capacities of Principals and school disaster focal teachers;
- Developing training materials and models that cover important subjects such as school disaster management planning, mitigation, first aid, fire safety, search and rescue;
- Having school disaster management plans in place in almost all schools in Bhutan with conduct of regular mock drills; and
- Making an effort to put in place policies, plans and mechanisms for reducing risk and enhancing preparedness within the education system.

Correspondingly, issues and challenges noted were in terms of:

- Need for focused capacity building for Principals, focal teachers and the various schools disaster management teams;
- Limited availability and access to emergency stockpiles and other disaster management related materials and equipment;
- Lack of knowledge and skills to initiate DRM programmes for ECCDs and special needs;
- Inadequate capacities to provide trauma counselling and psycho-social support;
- The lack of maintenance of school buildings leading to heightened risks; and
- The need for disaster-resilient school structures.

SECTION

3

VISION OF THE PLAN

3.1. Overall vision and Guiding Principles

The overall vision of the Education Sector Disaster Management and Contingency Plan is – ‘to ensure safety, prepare for educational continuity during disasters, and strengthen risk reduction and resilience through education’. Following are the agreed guiding principles:

- Ensure first and foremost life safety of students and education functionaries;
- Ensure education as a first response to make sure that children have access to continued education in a safe and protected environment;
- Undertake a highly consultative process with all stakeholders and emphasise an integrated and cross-sectoral approach;
- Prioritize needs and perspectives of those most vulnerable (special needs, remote and orphaned)
- Value the voice and contribution of children and youth to disaster preparedness and mitigation and ensure opportunities for engagement;
- Build capacities at all levels within the education sector to take on designated roles and responsibilities and ensure synergies and coordination with other relevant stakeholders;
- Ensure linkages with school, ECCD, NFE, Youth Centre, community, Dzongkhag and other sector and national disaster management and contingency plans;
- Being sensitive to gender and special need considerations; and
- Be guided by the principles of Gross National Happiness and the vision of the Ministry of Education as laid out in the Bhutan Education Blueprint 2014-2024 and other important education policies.

3.2. Scope and Purpose

In line with a comprehensive approach to safety within the education sector, all the three pillars of the Comprehensive School Safety Framework (CSSF) will be encompassed to - ensure safe buildings and facilities; establish effective disaster management; and embed disaster risk reduction education into formal and informal learning programmes and processes.²⁸ There have been significant developments under each heading and the plan will ensure rounded development under each heading while optimizing synergies between and across the three pillars.

The plan will address all hazards, actual and potential, in Bhutan and will cover the whole disaster management cycle – risk reduction and risk management including awareness, mainstreaming and capacity building; and preparedness for effective response to ensure education continuity and early recovery.

²⁸http://www.preventionweb.net/files/31059_31059comprehensiveschoolsafetyframe.pdf

The purposes of the plan therefore are to:

- Prioritize and systematically reduce risk through mitigation and awareness;
- Enhance preparedness for effective response and recovery;
- Ensure establishment and smooth functioning of coordination mechanisms;
- Ensure effective capacity building for disaster risk management and preparedness at all levels; and
- Ensure implementation of the relevant education and Disaster Management related policies, plans and strategies, including the three pillars of Comprehensive School Safety Framework.

SECTION

4

RISK PROFILE OF THE EDUCATION SECTOR

A highly consultative process was undertaken at various levels, including questionnaire at school level, regional workshops and key informant interviews with Dzongkhag level officials and in-depth interviews with key informants at National level, to assess the hazards, vulnerabilities and capacities at various level and to determine the risk profile of the education sector. Data collected through literature review, consultation process and the priorities, issues, challenges and lessons shared during discussions have informed the assessments below.

4.1. Hazard Assessment

Education sector has proven to be increasingly vulnerable in past disaster events. In the recent 18 September 2011 M6.8 Sikkim earthquake, 36 schools were damaged. The Joint Rapid Assessment Team estimated the total loss due to earthquake damage to schools at Nu.50.18 million. The Assessment Team identified shock and anxiety experienced by the children especially those who witnessed damages to their homes and schools during and immediately after the earthquake, although there did not appear to have been any longer-term trauma.²⁹

Similarly in the 21 September M6.1 2009 earthquake in Eastern Bhutan, 117 schools were damaged (8 beyond repair, 26 requiring major repairs, 37 requiring partial repairs and 46 requiring minor repairs) including both community schools built by local masons and engineered schools designed and built under government supervision. The Joint Rapid Assessment Report estimated re-construction costs to the education sector at Nu.653 million.³⁰

Following the two earthquakes 51 schools were using Temporary Learning Shelters (TLS) as classrooms. The schools such as Lingzhi Primary School, Thimphu, Yangneer Primary School and Pam Primary School in Trashigang, Narang Primary School in Mongar and Tongmijangsa Lower Secondary School, Trashiyangtse functioned out of Temporary Learning Shelters (TLS).

Windstorms have been a recurring hazard impacting schools in the recent years. Between 2011–2015 more than 100 schools and early childhood care and development centres (ECCD) from various Dzongkhags have reported windstorm damages.³¹ In 2018, Soe ECR and Tashilakha Primary School's roof was blown away which was restored with the support from the Dzongkhag

²⁹Ibid. 6

³⁰GFDRR, Geohazards International & Department of Disaster Management (2013) *National Action Plan for School Earthquake Safety*, 5–6; Department of Disaster Management & ADPC (2014) *Saving Lives and Property by Mainstreaming Disaster risk Reduction into the Education Sector of Bhutan*.

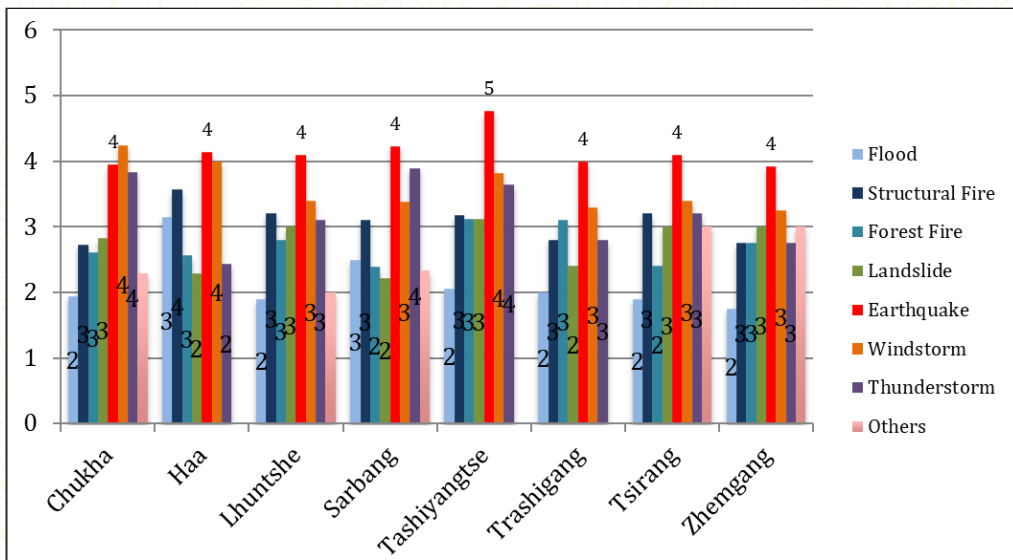
³¹Disaster Management Information System, DDM.

and the community. Ministry of Education provided winterised tents to Soe ECR till the roofs were maintained.

Bhutan is also vulnerable to seasonal flash floods and landslides, and events in the past have caused damages to schools buildings and even loss of children’s lives. Glacial lake outburst floods (GLOFs) are also among the most serious potential natural hazards for Bhutan, and in terms of risk for the education sector – in the Punatsangchu river basin alone, 4 schools and 2 vocational training institutes were among the 21 vulnerable communities identified in the GLOF red zone area during the GLOF hazard mapping.³²

Of the 104 schools that responded on the questionnaire, 66 schools reported experiencing disasters in the past. From the seven natural hazards prevalent in Bhutan (Flood, Structural fire, Forest fire, Landslides, Earthquake, Windstorm, and Thunder storm). Schools gave ‘Earthquake’ the highest risk ranking, followed by ‘Windstorms/ thunder storms’, ‘Fire’ and ‘Flood’.³³

Figure 4. 1: Priority hazards ranked by schools



4.2. Capacity Assessment

a. National level³⁸

At the National level, the National Disaster Risk Management Framework 2006 and the National Disaster Management Act, 2013 provides a clear strategy, and institutions to be set

³²Terminal Evaluation Report “Reducing Climate Change-Induced Risks and Vulnerabilities from Glacial Lake Outburst Floods in the Punakha, Wangdue and Chamkhar Valleys (GLOF)” Jean-Joseph Bellamy and Yeshey Penjor, 2014.

³³“Hazard, Vulnerability and Capacity Assessment for Education Sector” Tsering Lhamtsok for Save the Children Bhutan, 2015

up at national and local levels, and require key sectors like 'Education' to have in place disaster management and contingency plans, and to consciously integrate disaster risk management and preparedness into their policies, plans and programmes.

Within the Ministry of Education, there is strong commitment and policies in place such as formation of the DM unit under the Department of School Education and the formulation and implementation of school DM plans and school based DM activities as a priority.

Key informant interviews carried out during the consultation process, establishes the need to - have the DM unit strengthened to ensure more effective coordination, implementation and monitoring of DRM and preparedness activities; more advocacy and awareness at all levels to facilitate integration of DRM within various plans and programmes; institute clear response mechanism and procedures in place; and to strengthen monitoring of disaster management and preparedness activities at school and Dzongkhag levels.

The need to enhance capacities at all levels was also an evident issue during the consultation process, especially in terms of technical expertise to reduce both non-structural and structural risks.

b. Dzongkhag level³⁸

At the Dzongkhag level, there is a Dzongkhag Disaster Management Committee (DDMC) with the Dzongdag as the chairperson. As per the DM Act 2013, the DDMC is tasked with the planning, coordination and implementation of DM activities in the Dzongkhag; they are also responsible for facilitating, communicating, reporting and mobilizing both human resources and materials for effective response; and are also assigned with the responsibility of sharing information with other stakeholders and sensitizing communities on disaster risk management and preparedness.

DDMCs have been formed in almost all Dzongkhags and the community based disaster management planning training and process is ongoing in more than 10 Dzongkhags. The Dzongkhag Tshogdue (DT) secretaries have been formally identified as Dzongkhag DM officers. Some Dzongkhags have trained Search and Rescue (SAR) teams and basic emergency and relief equipment available.

In terms of the education sector, regional level resource groups for Education in Emergencies (EiE) and Safe School Initiative (SSI) have been formed and the Dzongkhag Education Officers (DEOs) have been trained in EiE and school based DM requirements.

Some of the needs expressed during the consultation process were – the need for clear response mechanism and procedures to be in place which would enhance multi-sectoral coordination and decision-making; the need to conduct vulnerability and risk assessments; establishing and using early warning systems; the need to integrate disaster risk reduction and preparedness into formal and non-formal education curriculum to promote the culture of resilience; and to have technical and financial capacities to carry out mitigation and undertake preparedness measures, including stock piling of response and relief items.

c. School level³⁸

At the School level, 98% of the school questionnaire respondents confirmed having School Disaster Management Plans in place. All 3 colleges that responded had no DM plans in place.

Schools reported conducting school based awareness programmes such as- literary competitions; DRR assemblies; and School-wide orientation on do's and don'ts during a hazard. 57 schools reported conducting awareness programmes in parent-teacher meetings, and few schools included parents during mock drills.

84% of responding schools had carried out non-structural risk assessment and mitigation (fire lines, evacuation routes, anchoring/ relocation of risky objects or falling hazards) and on an average each school conducted 4 mock drills per year (including for earthquake, fire and windstorm). 91% of the schools had School Disaster Management Committees (SDMC) with representation from local governments, parents, community leaders, teachers and staff and 83% had a disaster focal teacher with 71% having received some form of DM training. In terms of communication, schools reported having outlined communication procedures in their SDMPs and usually the protocol followed was to have the school disaster focal person report to the Incident Commander (IC)/Principal, who in turn would report to the DEO/TEO with information to gewog administration. The common modes of communication used are telephone, mobile phones, text messages and emails, followed by written information.

Figure 4. 2: School level capacities and initiatives

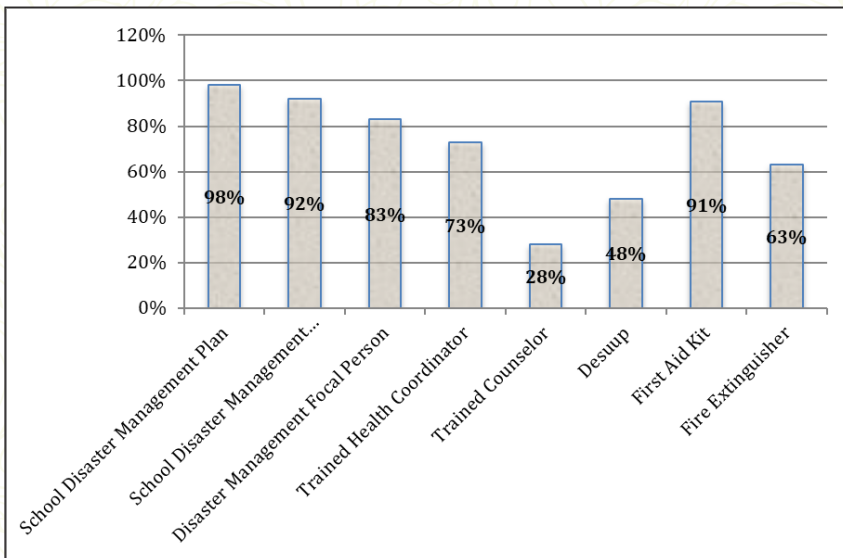
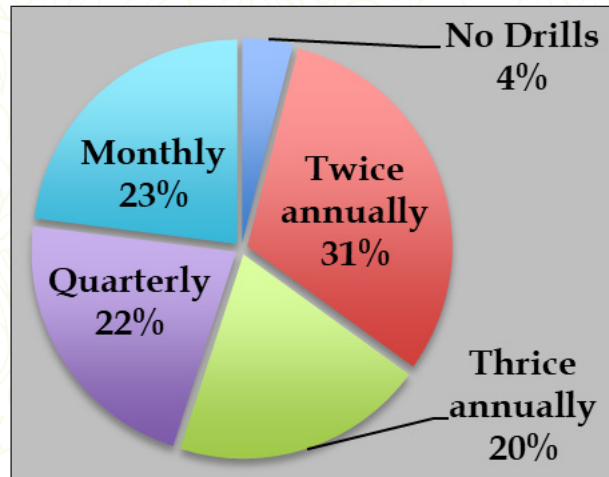


Figure 4. 3: Frequency of mock drills in schools

28% of the schools have a school counsellor, and 73% had trained health coordinators. 93% of the schools had first aid kits and these were usually replenished at the local basic health units. 63% of the schools had fire extinguishers, of which 73% reported regular maintenance.

At school level, the needs outlined were – to have focused/ specific trainings for focal teachers, Principals, SDMC member, School DM teams in areas such as fire safety, emergency management, psycho-



social support, non-structural mitigation, carrying out disaster risk assessments; the need to place standard disaster management materials and resources in all schools; the need for clear emergency procedures for schools to follow with linkages to Dzongkhag and education sector DM plans; the need for resources to carry out required maintenance of school structures and facilities, including furniture effectively on a timely basis; the need for disaster risk reduction and preparedness to be taught in schools as part of formal curriculum; and to complete vulnerability and disaster risk assessments leading to required retrofitting, replacement or mitigation, both non-structural and structural.

4.3. Vulnerability Assessment³⁸

In terms of physical vulnerabilities - there are many old and community-built, non-engineered school buildings that are extremely vulnerable to many hazards, especially to earthquakes and windstorms. Old schools also suffer from poor electrification and lack of general maintenance, which exacerbate the impact of natural hazards.

Remote rural schools are highly vulnerable due to lack of accessibility and communication facilities and often children have to walk to school through flowing rivers, deep ravines and other dangerous routes. Similarly many schools are vulnerably located in hazard prone areas, such as steep landslide prone areas, near thick forest and in flood zone areas with no access to hazard early warning systems.

Other physical vulnerabilities include roof structures vulnerable to recurrent wind storms, and having other hazards within school campus such as - dangerously located tall trees and electric poles; power transformers; and even live transmission lines running overhead. Schools reporting such hazards also expressed their inability to ensure proper precautionary and mitigation actions due to conflicting policies, and the lack of clear direction from agencies concerned.

In terms of economic and social vulnerabilities – it is usually remote rural schools that are not only most vulnerable in terms of location and structures but also in terms of being economically disadvantaged; on the other hand in urban schools new threats such as gang violence and other social threats have been perceived.

Vulnerability is also heightened for children requiring special needs and for schools that cater to children with special needs. As of 2017, there were 647 children with differing special needs studying in 16 schools/ institutes across the country including the private organisation. These special needs children and their teachers and caretakers should have the necessary skills, enabling infrastructure and knowledge to enhance safety levels and prepare for protection during disaster and emergency events.

In addition to this, disaster events and its impacts are likely to increase with global climate change. Bhutan is already exhibiting climate change impacts through glacial melts and glacial lake outburst floods. Increased frequency and intensity of natural hazards such as windstorms, thunderstorms, natural fires, changes in precipitation leading to landslides and flash floods are predicted impacts in a mountain ecosystem. This increased frequency and intensity of disasters suggest increased vulnerability of the education sector and its ability to provide safe and continued education.

4.4. Disaster risks in the education sector³⁸

The hazard, vulnerability and capacity assessment of the education sector reveals the need for a strong and effective disaster management system for the safety of its vast population of student body and teaching faculty, and to ensure education continuity in the face of recurring hazards and high vulnerabilities.

Earthquake and windstorms have been perceived as the highest risk hazards, while fire, thunder storms and landslides are seen as medium risks. Flood received a low risk ranking along with other recurrent and emerging hazards such as wildlife attacks, electrical shocks from transmission lines, traffic accidents, violence on campus and water-borne diseases due to inadequate water supply and WASH facilities.

Table 4. 1: Overall average ranking of risks by hazard type

Hazard	Flood	Structural Fire	Forest Fire	Land-slide	Earthquake	Wind storm	Thunder Storm	Others
Average Score	2	3	3	3	4	4	3	2

The underlying causes of disaster risks in the education sector is seen largely in part due to structural weaknesses in school buildings and inadequate maintenance of structures, including furniture and electrification. Most of the schools that reported partial or severe damages to school structures during earthquakes or windstorms identified a lack of construction standards and compliance to codes as the major reason behind damages. Respondents stressed largely on

the low quality of buildings, especially community built structures, and the use of sub-standard materials that increases vulnerability to fires and other natural hazards. Lack of maintenance was also cited as an underlying cause for increasing disaster risk and many schools reported the need for both financial and technical support to assess and retrofit or replace their schools buildings that are already under duress from the past disaster impacts.

Location of schools in hazard zones, unstable topography, and other hazard-prone areas were cited as another cause of increasing vulnerability to disaster risks. Similarly a dense school population leading to congestion in a limited space is another perceived cause of increasing disaster risks. The average density of student and teacher population in a primary school is 7071 per square kilometre and for a middle secondary school is estimated at 8602 per square kilometre. A large population in a small area could increase both fatalities and high rates of injuries following a disaster event.

Accessibility in terms of roads and communication also render schools more vulnerable and increases disaster risks. On average, students walk 1.5 hours to school on a daily basis, especially in the rural areas and 15 out of 104 schools responding reported having no road access. Children have to pass through dangerous routes – rivers, ravines, and threat of wild life attacks to get to schools and often without proper nourishment, which in turn impacts their academic performances.

Other causes are also the inability to create clear linkages between schools and the Dzongkhag, Sector and National level response systems and procedures, and the lack of resources for serious implementation and monitoring of school DM plans.

At the Ministry level, coordination and direction on institutionalisation of clear disaster response and management systems and integration into mainstream education policies, strategies and programmes need enhancement. Capacities within the DM unit need to be strengthened without delay to enable spearheading of DRM initiatives within the education sector.

While the education sector is highly vulnerable to disasters, it also offers opportunities to address disaster risks, foster a culture of disaster resilience, and enhance levels of response and preparedness.

SECTION

5

DISASTER RISK REDUCTION AND PREPAREDNESS PRIORITIES

Based on the needs and information collected through consultative process the following five priority areas for intervention have been identified. Under each priority area, expected outcomes, recommended interventions within certain timeline (Short – 1-3 years; Medium – within 3-5 year; Long – More than 5 years) along with performance indicators and responsible agencies have been outlined.

Table 5. 1: Priority areas

Priority 1	Strengthen disaster management institutional policy and framework
Priority 2	Increase disaster management education and awareness
Priority 3	Enhance risk reduction and mitigation
Priority 4	Enhance preparedness, response and recovery levels
Priority 5	Build capacities for disaster management at all levels

5.1 Priority 1- Strengthen disaster management institutional and policy framework

Under this priority various policies, guidelines, ministerial directives, etc. will be formulated and implemented for risk reduction and preparedness within the education sector. Priority 1 will also look at strengthening disaster management institutions within the education sector.

Table 5.2: Strengthen Disaster Management Institutional and Policy Framework

Outcome	Baseline	Interventions	Performance Indicators (PIs)	Source of Verification	Timeline / Target	Responsible Agency	Collaborating Agencies
1.1. Policies, guidelines and ministerial directives supporting disaster management in schools and within education sector	Facilitators' guide for Disaster Preparedness and Response for Safe Schools, 2011	1.1.1 Review and adopt education sector Disaster Management plan and contingency measures	Education Sector DM and Contingency Plan in place and endorsed by 2016	Endorsed DM and Contingency Plan Report/Minutes of the meeting of endorsement	SHORT	Lead –DM Unit, DSE Support: Education Disaster Management Committee (EDMC),	TDMCs/ DDMCs REC, RUB, MOLHR, EDMC
	National Action Plan for School Earthquake Safety, 2013	1.1.2 Issue ministerial directives for implementation and integrate priority activities into Education Sectoral annual/five year plans (relevant MoE departments, agencies and Thromde/ Dzongkhag Administrations)	Directives for implementation of Education DM and Contingency Plan issued by MoE within 2017	Copy of directive for implementation	SHORT		
	Disaster Management Act for Bhutan, 2013		Education Sector DM and Contingency Plan integrated in the five year plans of Ministry of Education	Five year Plan of MoE with plan priorities integrated	MEDIUM		
	Contingency Planning guidelines for Bhutan, 2014						
	Ministry of Education Emergency Contingency Plan, 2014	1.1.3 Adapt and implement non-structural mitigation manual/ guidelines	Manual/ Guidelines adapted and implemented in all schools by 2019	Copy of non-structural mitigation Manual/ Guidelines	SHORT	Lead: SPBD, DSE Support: EDMC	DDM
	Disaster Management Rules and Regulations, 2015	1.1.4 Review and adopt guidelines/standards for disaster resilient school/ECCD/ NFE/Youth centres, including safe location	Standards and guidelines for disaster resilient schools buildings endorsed and shared with all stakeholders	Copy of endorsed standard/ guidelines for disaster resilient school buildings	MEDIUM	Lead – SPBD, DoS Supporting agencies – DSE; DAHE	DDM
Draft National Disaster Risk Management Strategy 2016	1.1.5 Review common/important non-structural mitigation requirements (trees, electric poles, power transmission lines, etc.) and issue policy/ministerial directives as required	Directives issued by MoE to relevant agencies for non-structural mitigation to be carried out at school, ECCD, NFE and Youth Centre level	Copy of directives/ letters/ circular issued by MoE to relevant agencies	SHORT	Lead – DSE Support– EDMC	MoAF, BEA	
Teacher's Handbook for DRR, 2016	1.1.6 Formulation of a National guidance/ policy for school safety	School safety guideline/ policy endorsed and implemented in schools	Copy of endorsed school safety guideline/policy Monitoring reports Photographs	MEDIUM	Lead –DSE Support – EDMC		

1.2 DM institutions strengthened within the education sector	DM Unit formed under the DSE in 2012 School disaster management committees and teams formed in all schools DM coordination mechanisms put in place as per Education Emergency Contingency Plan, 2014	1.2.1 Strengthen DM unit in the DSE, MoE in relation to staffing and role clarification	TOR for DM Unit in place	Copy of TOR for DM unit		MEDIUM	Lead –DSE Supporting Agencies-EDMC, HRD, MoE	RCSC
		1.2.2 Institute agreed DRM institutions such as- EDMC, Core Task Group – and conduct regular meetings to review DM plan implementation	Need based staff recruited for the DM unit At least 2 meetings conducted per year and follow up decisions taken after each meeting	Minutes of meetings Documentation of decisions taken and follow up actions	MEDIUM	Lead – DSE Supporting agency – EDMC, CTG		
		1.2.3 Identify and train DM focal persons in all schools	Two DM focal persons per school trained	Database of trained DFTs Training Reports	SHORT	Lead – DSE Support – DEOs/TEOs, Schools, DAHE		
		1.2.4 Institute a mechanism to monitor, review and support formation of disaster management committees and teams in schools, ECCD/ NFE/Youth centres	Number of monitoring visits (at least once a year) by DM Unit, DEOs/TEOs (Dzongkhag Education Sector) using standard monitoring tools	Monitoring Reports Photographs/Videos	SHORT	Lead – DSE Support – EMD, DEOs/TEOs, Schools		
		1.2.5 Establish clear roles for relevant focal points at school level within the School Disaster Management Plan (SDMP) for example – Health coordinators, Desuups, counselors and scouts	School DM plan in place with clear roles and responsibilities of all relevant staff and teams	Copy of SDMP with clear roles and responsibilities	SHORT	Lead – DSE Support – DYS, HRD (MoE), DEOs/TEOs, Schools	Desuung HQ	

5.2 Priority 2 - Increase disaster management education and awareness

Promoting awareness and education at all levels is expected to make the sector build a culture of safety and resilience in schools and communities. Activities under this priority will aim to enhance knowledge, increase awareness and improve information sharing regarding natural hazards and associated risks and the need for disaster risk reduction and preparedness.

Table 5. 3: Increase Disaster Management Education and Awareness

Outcome	Baseline	Interventions	Performance Indicators (PIs)	Source of Verification	Timeline / Target	Responsible Agency	Collaborating Agencies
2.1 Strengthened disaster risk management education	Disaster risk management information and education carried out through past and ongoing capacity building programmes for Principals and disaster focal teachers	2.1.1 Integration of DRR, resilience and recovery concepts and practices in schools, ECCDs, and NFEs,	DRR, resilience and recovery concepts and practices consciously infused in schools-NFE and ECCD curriculum in accordance with DRR curriculum framework 2018.	Revised Curriculum Minutes of Meetings Reports Photos	LONG	Lead – REC for schools RUB-for colleges MoLHR-for institutes ECCD&SEN-ECCD Support – EDMC, DSE, DAHE, DYS	DDM, MoLHR, RUB,REC
		2.1.2 Development of emergency Teaching and Learning materials and training of teachers/ facilitators	Emergency Teaching and Learning materials developed and endorsed % of teachers trained on use of Emergency Teaching and Learning materials via SBIPs on DRR	Copy of TLM materials Training Reports	LONG TERM	Lead – RUB, REC, DSE Support – EDMC, DSE, DAHE	MoE, BCSEA, other relevant cross cutting agencies
		2.1.3 Conduct capacity building programmes for risk reduction and emergency preparedness for DFTs, Principals, SENCos, ECCD facilitators, NFE instructors	% of Principals, DFTs, SENCos, ECCD facilitators, NFE instructors trained in DRR and emergency preparedness Number of Principals, DFTs, SENCos, ECCD facilitators, NFE instructors participate in refresher trainings/ courses	Database of trained Principals, DFTs, SENCos, ECCD facilitators, NFE instructors Training Reports Photos/Videos Database of Principals, DFTs, SENCos, ECCD facilitators, NFE instructors attending refresher courses Training Reports Photos/Videos	MEDIUM	Lead: DSE Support– DAHE, TEOs/DEOs	
		2.1.4 Establish a platform for networking and sharing knowledge and practice of DRM among schools, colleges and institutions.	Number of schools, colleges and institutes in the network group	Network group members list	MEDIUM	Lead – DSE Support – DAHE, Schools, Colleges, RUB, DEOs/TEOs	RUB/ Dzongkhags/ Thromdes/ Media

2.2 Disaster risk reduction advocacy and awareness increased at all levels	Ongoing School/Centre based DRR activities for school and community International Day for Disaster Reduction observed on October 13 Annual mock drills to observe anniversary of September 21 2009 earthquake	2.2.1 Continue conducting School/Centre based DRR and awareness activities as per School/Centre DM plan such as - DRR assemblies, parent teacher meetings, mock drills within Schools/Centre and with communities, School/Centre based in-service programmes	Number of Disaster awareness activities conducted in the Schools/Centres	Monitoring reports	SHORT	Lead – Schools/Centres Support– DEOs/TEOs, DSE,HRD, TDMC/DDMC	
		2.2.2 Continue observation of International disaster reduction day and National mock drill day.	School/Centre aware of current and emerging disaster risk management themes % of schools/Centre observing International DRR day % of schools/Centre observing National mock drill Day	Pre-post test analysis report Monitoring reports Mock drill reports	SHORT	Lead – Schools/Centre Support – TEOs/DEOs, DSE, DDM, DAHE	
		2.2.3 Develop appropriate DRM training and related education materials for ECCD, NFE and Special Needs children	Number and types of DRM materials developed Number of ECCD facilitators, NFE instructors and SEN teachers trained on the use of the materials Number of children from ECCD Centres and SEN centres/schools benefitted Number of NFE learners benefitted	Copies of materials developed Database of trained personnel Training Reports Photos/Videos Children beneficiaries segregated by sex Adult beneficiaries segregated by sex	MEDIUM	Lead – DSE Support – DAHE, TEOs/DEOs, ECCD and NFE centers and special needs schools and institutes	
		2.2.4 Develop user-friendly awareness and education materials for Schools, ECCD and SEN centres/schools, and NFE centres	Number and types of information and education materials developed Number of schools, ECCD Centres, NFE Centres, SEN centres/schools receiving the materials (dissemination)	Copy of materials developed List of schools and details of materials disseminated	MEDIUM MEDIUM	Lead – DSE Supporting agencies – DEOs/TEOs, Schools	
		2.2.5 Conduct awareness on family preparedness for all education staff	Number of education staff having family disaster management plans in place	Staff Family DM plans	MEDIUM	Lead – DSE Supporting agencies – TEOs/DEOs, Schools	
							REC, DDM and CSOs

5.3 Priority 3 – Enhance risk reduction and mitigation

Reducing underlying risk factors, especially focusing on schools was identified as a priority disaster risk reduction measure during the HVCA consultation

process. This priority area will encompass activities to reduce loss of lives and property damage during a natural hazard event. Risk reduction and mitigation measures, especially at school level will depend on the school's location on the most prevalent hazard in the area, and should be specific to schools' structure, environment and needs.

Table 5. 4: Enhance Risk Reduction and Mitigation

Outcome	Baseline	Interventions	Performance Indicators (PIs)	Source of Verification	Timeline /Target	Responsible Agency	Collaborating Agencies
3.1 Structural risk reduction and mitigation	Vulnerability assessment checklist for schools developed and training provided, 2012	3.1.1 Carry out vulnerability assessment of existing structures to identify vulnerabilities and need for mitigation, replacement or retrofitting	Vulnerability assessment for all schools completed and report available	Vulnerability assessment report	LONG TERM	Lead – SPBD, DSE; Support – EDMC, DAHE, TEOs/DEOs, Schools	DES (MoWHS), DDM, DDMC/ TDMC
		Decisions on the recommendations for mitigation/ replacement/ retrofitting documented	Minutes of meetings				
	Existing School Planning and Building Division's designs include earthquake resilient features	3.1.2 Implement mitigation (e.g. protective infrastructure such as retaining walls, etc.) or retrofitting measures or replacement as required	Number of schools implementing mitigation/ replacement/ retrofitting plan	Monitoring visit report Photos/videos	LONG	Lead – SPBD, DSE; Support – EDMC, TEOs/ DEOs, Schools	DDMC/TDMC, Dzongkhag/ Thromdes, DES (MoWHS)
		3.1.3 Review school maintenance procedures and resources to allow schools to undertake regular maintenance	Mitigation and retrofitting for the most vulnerable schools implemented	Monitoring visit report Photos/videos	MEDIUM	Lead – SPBD, DSE Support– EDMC, TEOs, DEOs, PPD,	DES (MoWHS)
	3.1.4 Review and update existing guidelines for school construction and incorporate risk reduction concerns, including identification of sites outside of hazard zones	Updated standard disaster resilient schools design available	Number of schools with access to regular maintenance budget as per policy	Maintenance budget policy	MEDIUM	Lead – SPBD, DSE	DDM, DES (MoWHS)
			Number of schools undertaking maintenance work	Monitoring reports Photos/ videos	Support– EDMC, TEOs, DEOs, PPD, ECCD and SEN		
3.1.6 Institute construction quality control and monitoring mechanism for materials and adherence to standards and designs	Number of new schools constructed with revised school construction guidelines	Number of schools meeting construction quality and standards	Monitoring visit report Photos/videos	MEDIUM	Lead – SPBD, DSE Support– EDMC, EMD, DEOs/TEOs, Principals	DDMC/ TDMC, DES (MoWHS)	

3.2 Non-structural risk reduction and mitigation	All DEOs/TEOs, Principals, DFT, SENCos, ECCD facilitators, NFE instructors sensitized on the importance of non-structural mitigation	3.2.1 Identify and assess disaster risks and enhance/ institute early warning systems	% of Schools/Centres have early warning systems in place appropriate to their risks and needs	Monitoring reports Photos/Videos	MEDIUM	Lead – DM Unit, DSE Support – EDMC; DAHE, TEOs/DEOs, Schools/ECCD/ NFE/Youth Centres	DDMC/ TDMC, DDM, DHMS (MoEA)
	Schools/Centres carry out hazard hunts and basic anchoring and bracing of falling hazards	3.2.2 Identify hazards, assess non-structural mitigation needs and implement mitigation measures as per the non-structural guidelines in all schools/Centres	% of Schools/Centres implementing non-structural mitigation measures as per guidelines	Non-structural Mitigation guidelines Monitoring Reports Photos/Videos	MEDIUM	Lead – Schools Support– EDMC; DAHE, DEOs/TEOs, SPBD, DM Unit	DDMC/ TDMC
	Schools/Centres in GLOF hazard zone areas are aware if the early warning system in place and know what to do	3.2.3 Explore and institute insurance coverage for school buildings on priority basis	Number of prioritized school buildings insured	Insurance documents	LONG	Lead – DM unit, DSE; Supporting agencies - EDMC; DAHE, DEOs/TEOs, Schools	Insurance companies

5.4 Priority 4 – Enhance preparedness, response and recovery levels

Being in a high risk seismic zone with accessibility issues due to our difficult mountainous terrain, it is of great importance for schools and communities to be prepared and have the capacities to respond effectively during the initial period after a disaster before help from outside can reach. Priority 4 will outline activities to enhance preparedness, response and recovery capacities.

Table 5. 5: Enhance Preparedness, Response and Recovery Levels

Outcome	Baseline	Interventions	Performance Indicators (PIs)	Source of Verification	Timeline /Target	Responsible Agency	Collaborating Agencies
4.1 Strengthen preparedness planning and monitoring	School/Centre DM plans in place Education emergency contingency plan 2014	4.1.1 Raise awareness and sensitization on the education contingency procedures at all levels	Awareness raising on contingency plan and procedures completed at all levels within the Education Sector	Reports Photos/Videos Meeting Minutes	SHORT	Lead – DM Unit DSE Support– EDMC; CTG, DAHE, DEOs/ TEOs, Schools	DDM, DDMC/ TDMC
		4.1.2 Carry out table-top and simulation exercises to test contingency arrangements at all levels	Contingency procedures at various levels tested through simulation exercises Lessons learnt integrated into the procedures	Simulation Reports On site visit during simulation exercise Photos/videos Updated procedures in the contingency plan	MEDIUM	Lead – DM Unit DSE Support– EDMC; CTG, DAHE, DEOs/ TEOs, Schools	DDM, DDMC/ TDMC
	4.1.3 Ensure linkages with Dzongkhag/Thromde/ Gewog and National level contingency plans/ arrangements	Coordination and reporting mechanisms included in the various plans.	Copy of the plans with coordination and reporting mechanisms	MEDIUM	Lead – DM Unit DSE Support – EDMC; CTG, DAHE, DEOs/ TEOs, Schools	DDM, DDMC/ TDMC,	
	4.1.4. Develop standards and packages for EIE	INEE and SPHERE standards adapted and integrated in EIE package	Availability of adapted EIE package	LONG TERM	Lead-DSE Support-DYS, DAHE, BCSEA, REC, DoS	DDM	
	4.1.5 Establish a communication system for dissemination of emergency advisory and safety information related to education	MoE uses communication mechanism to provide advisories to students and parents both within and outside the country.	Copies of advisories issued by MoE through the communication system	SHORT TERM	Lead – DM Unit, DSE Support– EDMC; DAHE; DEOs/ TEOs; Schools, EMIS, IT Division, PPD	DDM, Media agencies, DDMC/TDMC,	

4.2 Strengthen Response, Relief and Recovery capacities	Search and rescue training conducted for Dzongkhag/Thromde teams	4.2.1 Maintain stockpile of materials required for emergency response and immediate recovery at strategic locations	Number of locations where stockpiles are prepositioned	Inventory of stockpiles List of materials (distributed/ damaged/ out of stock) Copy of EoC operational guidelines	MEDIUM	Lead – DM Unit DSE Support– EDMC; DEOs/TEOs	DDMC/TDMC, DDM,	
		Education in Emergencies training conducted for all DEOs/TEOs and Principals/ DFTs/SENCOs/ECCD facilitators/NFE instructors	One functional EEOC at the MoE	Situation reports compiled by the EEOC	LONG TERM	Lead – DM Unit DSE Support – EDMC, CTG, DAHE, DYS, DEOs/TEOs	DDMC/TDMC, DDM, MoIC	
	Stockpiling of few relief items maintained at designated regional stores	Number of times the EEOC is tested for functionality (at least once a year)	Report of the test on functionality with recommendations and follow up improvements					
	Distribution of standard safety materials to schools	4.2.3 Establish and institute emergency procurement procedures and guidelines	Written and endorsed procedures for procurement during emergency available	Copy of endorsed emergency procurement procedures	LONG TERM	Lead – DM Unit, DSE Support– EDMC; DAHE, DEOs/ TEOs, Schools	DDMC/ TDMC, MoF	
		4.2.4 Standardize safety and response materials required in schools, ECCD and NFE and ensure provision	% of schools/Centres with standardized basic disaster management equipment and materials	-List of basic disaster risk management equipment and materials -Monitoring reports -Photos/ videos	MEDIUM	Lead – DM unit, DSE Support – EDMC; DEOs/TEOs, Schools,	DDM, MoF, DDMC/TDMC	
		4.2.5 Develop standard designs for temporary learning spaces and ensure stockpile or pre-arrangements for emergency construction	Approved standard designs and stockpiles for emergency construction available	Standard design List of stockpiles	MEDIUM	Lead –SPBD, DSE Support – DM Unit, EDMC; DEOs/TEOs, Schools	DDMC/ TDMC, DES (MoWHS)	

5.5 Priority 5 - Build Capacities for disaster management at all levels

Human and materials capacities need to be developed at all levels to lead risk reduction and mitigation activities and enhance preparedness levels. The MoE in collaboration with the DDM and other partners have been working to raise awareness, impart knowledge and skills and provide training at various levels. Priority 5 will build on past actions and outline further capacity building requirements.

Table 5. 6 Build Capacities for Disaster Management

Outcome	Baseline	Interventions	Performance Indicators (PIs)	Source of Verification	Timeline / Target	Responsible Agency	Collaborating Agencies
5.1 Enhanced Risk reduction capacities	Vulnerability assessment forms training conducted for more than 75 engineers in 2012	5.1.1 Build capacities of engineers and maintenance staff to assess schools, ECCD, NFE and Youth centre buildings for vulnerability and safety	Number of Engineers and relevant staff trained in the use of vulnerability assessment tools and procedures (District Engineers and maintenance staff)	Training Reports Photos/ videos	MEDIUM	Lead – SPBD, DSE Support – DEOs/TEOs School, Centres	DES (MoWHS), DDM
		5.1.2 Build capacities of engineers and architects for retrofitting and seismic risk reduction techniques	Number of Engineers and relevant staff equipped with capacity to retrofit/strengthen existing schools and integrate disaster resilient features in school designs	Training Reports Photos/ videos	LONG	Lead –SPBD, DSE Support – Schools,	DES (MoWHS)
	Database on School/ Centres structures, accessibility, staff, students available	5.1.3 Build capacities of school administration to monitor school constructions to meet quality standards and requirements	Number of Principals and school administration staff equipped with the capacity to monitor school constructions	Database of trained principals and school administration staff Training Reports Photos/ videos	LONG	Lead – SPBD, DSE Support – DEOs/TEOs, Schools/Centre	DDMC/ TDMC
		5.1.4 Conduct comprehensive training on non-structural mitigation for School/Centre personnel and maintenance staff	Number of School/Centre personnel, and maintenance staff trained in non-structural measures	Database of trained School/Centre personnel and maintenance staff Training Reports Photos/ videos	MEDIUM	Lead – DM Unit DSE Support – SPBD, DEOs/ TEOs, Schools/ Centre	DDM

5.2 Enhanced preparedness and response capacities	Ongoing Safe School and Education in Emergencies (EIE) training programmes for DEOs, Principals, teachers, ECCD facilitators and NFE instructors	5.2.1 Provide comprehensive emergency management training for relevant education personnel at all levels	% of trained education personnel equipped with enhanced knowledge on emergency management	Database of trained school personnel and maintenance staff Training Reports Photos/ videos	MEDIUM	Lead – DM Unit, DSE Support – DEOs/TEOs, DYS, Schools/ Centres	REC, DDM, MoH, RBP
	Basic DRR and Search and Rescue training provided to Thromde and Dzongkhag teams	5.2.2 Provide training to Principals, disaster focal teachers, school DM teams and other relevant personnel on key response and Eie elements - first aid, fire safety, search and rescue, rapid assessment, emergency curriculum, psychosocial support, temporary learning spaces and child protection	% of trained Principals, teachers, school DM teams with increased knowledge and skills for effective response and on EIE and related standards and tools	Database of trained principals, teachers and DM teams Training Reports Photos/ videos	MEDIUM	Lead – DM Unit, DSE Support – DEOs/TEOs, DYS, Schools, Centre	DDM, MoH, RBP, REC
		5.2.3 Provide family preparedness planning training to all education staff, especially to Principals, school teachers, ECCD facilitators and NFE instructors	% of Principals, teachers, ECCD facilitators, NFE instructors and education staff with knowledge on family preparedness	Database of trained Principals, teachers and education staff Training Reports Photos/ videos Family DM plans	LONG	Lead – DM Unit, DSE Support – DEOs/TEOs, Schools,	DDM, DDMC/ TDMC
		5.2.4 Develop and deliver comprehensive disaster management training for scouts/ youth volunteer groups	Number of Scouts/ youth groups trained in disaster reduction and emergency skills	Database of trained scouts and youth volunteer groups Training Reports Photos/ videos	MEDIUM	Lead – DYS, DSE Support – DEOs/TEOs, Schools	Desuung HQ, DDM, YDF, CSOs

SECTION

6

EDUCATION SECTOR CONTINGENCY PROCEDURES AND ARRANGEMENTS

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

The education sector contingency procedures and arrangements outlined herein are based on the objectives of –

1. Safeguarding the lives of children and education staff;
2. Protecting educational property; and
3. Ensuring delivery of appropriate and timely Education in Emergencies (EiE) response.

The contingency procedures and arrangements will cover the response and early recovery phase –

- Before a disaster when/if early warning of an impending situation or an event is received;
- During a disaster when immediate response and relief measures need to be implemented; and
- After a disaster for measures to be taken in terms of relief and setting the recovery process in motion.

6.1 Education Disaster Response Coordination Mechanism

The Education Disaster Response Coordination Mechanism has been developed in accordance with the Incident Command System and National Disaster Response Coordination Mechanism endorsed by the NDMA.

Education Disaster Management Committee shall be the highest decision making body chaired by the education Minister. All response actions shall be coordinated from Education Emergency Operation Centre and manned by Core Task Group.

Figure 6. 1: Education Disaster Response Coordination Mechanism

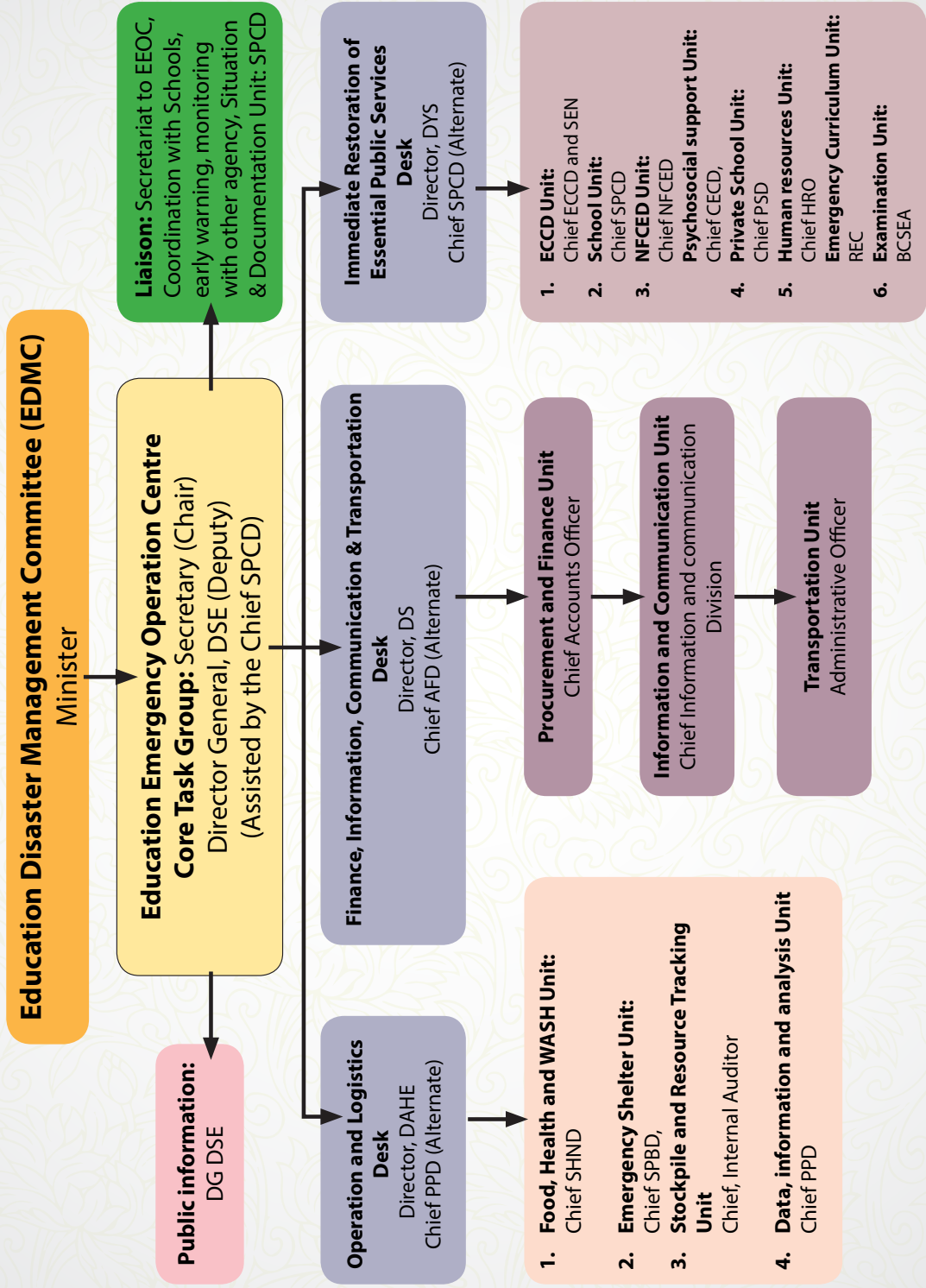


Table 6. 1: Education sector DM institutions

Education Disaster Response Coordination Committee (EDMC) Hon'ble Minister, Chairperson Secretary (Vice Chair) Director, DSE (Alternate Chair) Director, DAHE Director, REC Director, BCSEA Head, DM Unit	Core Task Group (CTG) Secretary, Chairperson, Director, DSE, Member Secretary (Vice Chair), Director DoS, Chief of SPCD (Alternate Chair), Chiefs of SPBD, SHND, ECCD & SEN, CECD, PSD, HRD, PPD, NFCED, AFD, DM Unit	Education Emergency Operation Centre (EEOC) The CTG will man the EEOC. The Secretary, MoE will be the Chair person. In absence of Secretary, the Director, DSE shall take the role of chair. In absence of both the role of Chair will be taken up by Chief of SPCD.
--	--	--

6.2 Roles and responsibilities

Roles and responsibilities of DM institutions and individual members within the education sector response system are as follows:

Table 6. 2: Roles and responsibilities for response and relief

	Position/ Group	Roles
1	EDMC	Take important policy decisions as required on education emergency. Direct and delegate authority to the CTG based on field reports Approve response, relief and recovery activities and ensure funding based on the report from the fields. Communicate decisions, needs, information to NDMA as required Highest decision making body on Disaster Management in Ministry of Education. The chair shall inform and update the Cabinet.
2	Core Task Group (CTG)	Function from the Education Emergency Operation Centre, Implement EDMC decisions, Maintain communication with National Emergency Operation Centre (NEOC), NDMA and provide updates as required, Communicate with Dzongkhag/Thromde Education Officers, Principals, School DM focal teachers for situation report, and School Rapid Education Assessments Compile situational/School Rapid Education Assessment reports and update EDMC, Formulate and coordinate response, relief and recovery activities as per EDMC directives. Provide Human Resources and financial approvals during emergency. Mobilise resources (emergency assistance/ relief support) from development partners through NEOC. Submit request to NEOC for emergency relief and flash appeals.
3	Minister	Convene and chair emergency EDMC meetings, Inform and update the Cabinet.

4	Secretary	Function as Deputy Chair or officiate as chair in the absence of the chair Chair emergency CTG, Report/update/seek directives from Chair, EDMC, Report /update/seek directives from NDMA, Activate CTG and EEOC, Relate NDMA/Chair's directives to the CTG, Provide HR & financial approvals, Mobilize resources (emergency assistance/ relief support) from development partners through NEOC/ DDM, Submit request to NEOC/DDM for emergency relief and flash appeals.
5	Director General/ Director, DSE	Function as Incident Commander and oversee Education EOC, Update the emergency information from the affected schools, ECCD/ NFE centres, Provide updates on rapid assessments of the affected schools to Chair of CTG and EDMC, Relate EDMC directives to the CTG, Function as chair of CTG in the absence of the Secretary, Coordination with Departments/Divisions in the MoE
6	Director General/ Director, DAHE	Liaise with RUB and update emergency information from the affected tertiary institutions and NFE Centres, Collaborate with Bhutan Students Associations to provide and gather emergency information/updates/ advisories for/from ex-country students and update to CTG, Relate EDMC directives to the tertiary institutions.
7	Director General/ Director, DYS	Provide updates/reports / seek directives on psychosocial supports & needs, Relate EDMC directives to respective divisions in the department, Mobilize/ deploy counsellors to affected schools.
8	Director General/ Director, REC	Provide emergency curricula in the times of emergencies based on EDMC directives, Support CECD in providing emergency curriculum.
9	Secretary, BCSEA	Liaise with MoE for conduct of board exams and related arrangements such as alternative exam centres, deployment of exam invigilators, supply of exam materials, if required
10	Director General/ Director, Directorate of Services	Support to conduct damage assessments and plan for early recovery and reconstruction of damaged schools, ECCD/ NFE Centres, Provide all logistical and other administrative support to CTG/EDMC, Ensure emergency procurements and post disaster assessments, Fund mobilisation and transportation, Ensure adequate deployment of human resources.

11	Disaster Focal Officer, Disaster Management Unit, MoE	<p>Function as Secretariat to EDMC. Shall be the member secretary to EDMC. Coordinate CTG/ EDMC meetings. Collect and collate emergency information/Rapid Education Assessment form from affected Schools, ECCD, NFE and Youth Centres. Update information to CTG/EDMC, including on existing emergency stockpiles and materials.</p> <p>Seek directives from EDMC/CTG. Coordinate flow of emergency relief and response activities in collaboration with CTG. Documentation of relief and response activities. Dissemination of information/materials to the Dzongkhags/Thromde/Schools/Centres levels.</p> <p>Liaise with the Dzongkhags/Thromdes/Drungkhag to provide educational continuity. Carry out monitoring of Disaster Management and Contingency Plans in the Schools/ Centres.</p> <p>Ensure safety of MoE, Schools, ECCD, NFE and Youth Centres. Carry out assessment of MoE/Schools/Centres during any disasters. Ensure that Departments/Divisions mainstream disaster risk reduction in their development plans, policies, programmes and projects. Formulate guidelines and standard operating procedures for disaster management. Develop and implement education, awareness and capacity building programme on disaster management for MoE, Dzongkhag/Thromdes, Schools, ECCD, NFE and Youth Centres.</p> <p>Ensure the implementation of Disaster Management and Contingency Plan and disaster management activities at all levels. Prepare evacuation plan and drill for Ministry of Education. Maintain disaster or emergency equipment. Liaise with other agencies for Disaster Risk Reduction. Observe National Earthquake Preparedness Drill and International Disaster Risk Reduction Day. Submit periodic report to the EDMC on all issues pertaining to disaster management.</p>
12	Chief, SPCD	<p>Meet all coordination and logistic requirements for CTG, Update/inform the affected schools on DRR activities, Facilitate resumption of schools, ECCD/ NFE Centres in collaboration with relevant Departments and Divisions, Assist in compilation of the School Rapid Education Assessment and respond to schools/ECCD/NFE/Departments/Divisions, Function as Incident Commander in absence of the Incident Commander, Update on the situation reports to the CTG and EDMC.</p>
13	Chief, SPBD	<p>Conduct post disaster assessments and submit reports to CTG, Make assessments for TLS, including designs and estimates, Conduct safety assessments and recommend appropriate mitigation measures, Conduct damage assessments and plan for early recovery and reconstruction of damaged schools, ECCD/ NFE Centres.</p>

14	Chief, SHND	Arrange food supplies as per assessment and nutrition requirements, Support WASH activities as per assessment requirements, Liaise with the MoH to provide first aid and health services as required, Coordinate with FCB to provide food supplies to schools, Report to CTG on health, nutrition and WASH status.
15	Chief, ECCD and SEN	Update information on the affected ECCD Centre's and SEN schools, Facilitate assessment of affected Centre's on their needs, Facilitate provision of assistive devices and early learning materials in affected Centre's, Report to CTG on the emergency situation in ECCD and School with SEN programmes.
16	Chief, CECD	Mobilize counsellors to affected schools to provide psychosocial support, Provide reports/ status updates with requirements of psychosocial support to CTG, Extend counselling services to the affected communities.
17	Chief, PSD	Conduct assessment of affected private schools, Compile the School Rapid Education Assessment of the Private schools and report to CTG, Liaise with SPBD, SPCD, SHND, CECD divisions to provide the required support to private schools.
18	Chief, NFCED	Conduct assessments of affected NFE Centres and report to CTG and DM unit, Facilitate resumption of NFE programmes.
19	Chief, HRD	Mobilize Human Resources/ re-deployment of staff as per requirement in the Schools/ ECCD/NFE Centres
20	Chief, PPD	Provide relevant data, information and analysis to support response and recovery planning, Coordinate for fund mobilization through MoE/EDMC.
21	Chief ICTD	Provide relevant data and information Documentation of the events
22	Chief, AFD	Facilitate resource mobilization, fund disbursement and material distribution, Emergency transportation, procurement and logistics.
23	Chief Internal Audit	Keep track of the resources issued, Fix the accountability of the resources
24	DEOS/TEOS/ Drungkhags Education Officers	Ensure schools carry out School Rapid Education Assessment after any events, District/Thromde Education Officer shall be the member to coordinate and manage education disaster management operations in the Dzongkhag/Thromde, Collate assessment information/data and report to Dzongdags/ Thrompons/Drungpas with information to DDMO/TDMO and DM Unit, SPCD, DSE, Liaise with DDMC/TDMC and other sector heads as required, Coordinate with SPCD and DDMC/ TDMC for early resumption of schools/ ECCD and NFE – TLSs, TLMs, emergency curriculum, WASH Psychosocial support, food and nutrition, safety, protection and community relationships.

25	Principals/ Schools/Centre	<p>Activate School/Centre DM committees,</p> <p>Conduct School/Centre Rapid Education Assessments and report to respective Gewog Administration with a copy to Gewog Livestock Extension Officer, DEOs/TEOs and from Dzongkhags/Thromdes to the DM unit, SPCD, DSE,</p> <p>Mobilize school disaster management committee and activate the teams,</p> <p>Secure School/Centre premises and evaluate further risks,</p> <p>Ensure safe evacuation, emergency first aid and medical help as required, re-unification of student with their families, protection and safety of children and school property and psychosocial support,</p> <p>Carry out emergency procurement in consultation with Dzongkhag/Thromde/ Drungkhag/Gewog,</p> <p>Coordinate with the community for response and relief support,</p> <p>Seek support from the community and Local government if need be,</p> <p>Disseminate disaster information within School/Centre and community,</p> <p>Ensure continued communication with DEOs/TEOs and DM Unit, SPCD, DSE to provide situation updates as required.</p> <p>Schools/Centres carries out mock drills.</p> <p>Ensure continued communication with DEOs/TEOs and DM Unit, SPCD, DSE to provide situation updates as required.</p> <p>Schools, ECCD, NFE and Youth Centres shall submit updated Disaster Management and Contingency Plan in the beginning of the academic year.</p>
----	-------------------------------	--

6.3 Standard operating procedures

The Standard procedures to be followed immediately after a disaster have been summarized below:

1. First 24 to 48 hours

a. At the School/Centre Level

- As soon as there is an incident or a disaster, School/Centre DMC shall be activated;
- Children and staff shall be evacuated to safe area;
- Head count shall be done and numbers (dead, injured, missing, trapped) reported to the School/ Centre incident commander;
- School/Centre DM teams and designated individuals shall carry out their responsibilities such as - providing counselling to students/staff with psychosocial trauma; administration of first aid; fire response; evacuation and transportation of injured to health facilities, and others – as required;
- Seek support from emergency response agencies (fire brigade; ambulance; search and rescue teams) and mobilize community members as required;
- IC shall ensure conduct of School/ Centre Rapid Education Assessment and submit assessment report to DEO/TEO and to the Gup/Livestock extension officer. ECCD, NFE centre and ECRs shall submit their assessment report to the parent school;
- In case of day-schools and for day-scholars, ensure safe-reunification of the children with their families/ authorized persons;
- In case of boarding schools and where families are unable to collect their children, ensure safe and protected shelter is provided in coordination with Gewog/ Dzongkhag/ Thromde;

- The School/ Centre DM Committee shall carry out emergency procurement in consultation with Dzongkhag/Thromde/Drungkhag/Gewog to ensure food, WASH and shelter requirements for staff and children.

b. At the DEO/TEO Level

- DEO/TEO start contacting schools for initial information;
- Receive and collate Rapid Education Assessment reports received from schools and Centres and develop a plan of action;
- Update Dzongkhag /Thromde DM Committee on the disaster situation in the education sector;
- Liaise with the Dzongkhag/Thromde Disaster Management Officers on the situation and to implement directives of the DDMC/TDMC;
- Ensure education is part of multi-sector needs assessment carried out at Dzongkhag/Thromde level;
- Inform/ update the DM Unit, DSE, with situation reports and information as and when received from the Schools/Centres;
- Coordinate implementation of response and relief actions for the education sector in their Dzongkhag/Thromde.

c. At the National Level

- The DM Unit shall inform the CTG on the situation reports received from the DEOs/TEOs and EDMC meeting shall be convened, as required;
- The Chair of the CTG shall direct activation of the Education Emergency Operation Centre (EEOC) as required and as per the operational guidelines;
- EEOC shall initiate communication with NEOC/DEOC and maintain regular updates from DEO/TEO;
- Education Secretary (chair of CTG) shall participate in National Disaster Response Coordination Committee meetings and report on damages in the education sector and on the relief/ response need requirements from Schools, ECCD, NFE and Youth Centres;
- Chair of CTG shall relay the directives of the NDRCC to the EEOC;
- Based on the situation reports and directives from the NEOC, the EEOC shall approve a plan of action and provide directives for response and relief in the education sector;
- Ensure education is part of multi-sector assessment team at the national level.

2. Within 72 Hours

a. At the School/ Centre Level

- Ensure school premises and evacuation areas are secure;
- Continue coordination with Gewog, Dzongkhag, Thromde for provision of food, WASH, shelter, first aid, and psychosocial support to children and staff as required;
- Continue providing situation reports and updated School/ Centre Rapid Education Assessment report to the DEO/ TEOs on losses and damages, response and relief needs and requirements;
- Continue emergency procurement in consultation with Dzongkhag/Thromde/Drungkhag/ Gewog;
- Mobilize further community support for relief and education continuity requirements such as – shelter, temporary learning spaces, WASH facilities, etc.

b. At the DEO/TEO Level

- Continue to collect situation reports from schools/ centres and update DEOC/TEOC and EEOC for support and directives;
- Update Dzongkhag education response plan of action;
- Coordinate provision of necessary support to affected schools/ centres, as required;
- Document response and relief support and resources provided to schools/ centres;
- Ensure provision of information on education emergency situation to support multi-sector assessment at Dzongkhag/ Thromde level.

c. At the National Level

- EEOC shall continue communication with DEOC/ TEOC and NEOC and maintain contact with DEOs/TEOs;
- Take stock of School/ Centre Rapid Education Assessment reports, response and relief materials provided and required submit response and relief needs to NEOC, as required;
- Update education response plan as per situation reports received and based on directives from the NEOC;
- Support deployment of search and rescue, medical emergency, rapid assessment and other response needs in schools/ centres, as required;
- Continue carrying out emergency procurement as required;
- Provide directives on suspending classes for a certain duration as required;
- Plan and take decisions on further response, recovery and continuity of education services;
- Ensure education is part of multi-sector needs assessment at national level.

3. 72 hours to 2 weeks

a. At the School/Centre Level

- Continue to ensure care and protection of children (food, WASH, counselling, psychosocial wellbeing);
- Initiate continuity of education services, such as establishment of safe and protected temporary learning spaces; provision of teaching and learning materials; mobilization of teachers/ staff, etc.;
- Continue carrying out emergency procurement in consultation with Dzongkhag / Thromde/ Drungkhag /Gewog;
- Continue liaison with Dzongkhag/Thromde/Drungkhag/Gewog, and DM unit on relief and recovery needs;
- Continue providing updated situation report to DEO/TEOs.

b. At the DEO/TEO Level

- Continue to ensure care and protection of children (food, WASH, counselling, psychosocial wellbeing);
- Continue liaison with DDMC/TDMC and DM unit on relief and recovery needs;
- Support actions to ensure continuity of education services, such as establishment of safe and protected temporary learning spaces; provision of teaching and learning materials; mobilization of teachers/ staff, etc.;
- Continue documentation, compiling and submission of updated situation reports to DDMC/TDMC and DM Unit.

c. **At the National Level**

- Continue submission of reports to NDMA and maintain contact with DEOs/TEOs;
- Continue providing reports on losses, damages, resource requirements and priorities in the education sector for mobilization of support and assistance;
- Continue to update and implement education response plan (recovery and continuity of education services), including training and deployment of additional teachers, counsellors, health coordinators, care givers, to the most affected areas, as per situation reports and School/ Centre Rapid Education Assessment reports and based on directives from the NDMA;
- Continue carrying out emergency procurement as required.

4. After 2 weeks

At the national level, Ministry of Education shall ensure priority education recovery and re-construction activities are incorporated in the National Recovery and Re-construction Plan.

Ministry of Education will formulate an Education in Emergencies plan, if required, that will include:

- o Damage and safety assessment of existing structures,
- o Setting up temporary learning spaces/shelters,
- o Supporting food and WASH facilities,
- o Psychosocial and protection support,
- o Emergency curriculum roll out ,
- o Alternative assessment/exam arrangements, if required,
- o Orientation and deployment of teachers/staff as required,
- o Resource mobilization to “build back better,”
- o “Back to School” campaign, if required.

SECTION

7

IMPLEMENTATION, MONITORING AND REVIEW MECHANISMS

The DM Unit in Department of School Education (DSE) will be the agency facilitating implementation of the Education DM and Contingency Plan.

The DM Unit will facilitate Core Task Group (CTG) meetings before annual and five year planning processes to discuss risk reduction, preparedness and capacity building activities in the plan and integrate priority activities in plans and programs of the concerned MoE Divisions and Departments.

Each MoE Division and Department shall be responsible for the formulation and implementation of their staff safety plans and procedures and for ensuring the required resources and capacities to meet their roles and responsibilities as outlined in the Education DM and Contingency Plan.

The DM Unit will coordinate EDMC meetings to present plan implementation progress and challenges for their directives and support MoE Divisions and Departments in the formulation of their respective staff safety plans.

The EDMC will meet annually to assess and monitor the plan implementation progress. Overall direction, prioritization, monitoring and guidance shall be provided by EDMC. The EDMC along with the CTG shall be responsible for facilitating resource mobilization for implementation of plan activities.

The Core Task Group (CTG) will be responsible for facilitating implementation of the prioritized plan activities and for ensuring that the activities are incorporated into their annual and five year plans.

The Education Monitoring Division, DSE will ensure and monitor implementation of priority activities at the Dzongkhag and school levels. The Dzongkhag and Thromde Education Officers will ensure implementation of priority disaster risk reduction, preparedness, awareness and capacity building activities in schools/ centres in their Dzongkhag and Thromdes.