



Bhutan

National progress report on the implementation of the Hyogo Framework for Action (2011-2013)

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Section 1: Outcomes 2011-2013

Strategic Outcome For Goal 1

Outcome Statement:

The establishment of the Department of Disaster Management under Ministry of Home & Cultural Affairs (MoHCA) as a National Coordinating Agency for Disaster Management in the Country was an important step in Bhutan to establish an institutional structure to manage disaster risks. This indicates a political commitment to disaster management in the country.

To help and create an enabling environment for Bhutan to be a disaster resilient country, the Bhutanese Parliament had enacted the Disaster Management Act 2013 in February this year. The Act provides the establishment and strengthening of Institutional capacity for disaster risk management, mainstreaming of disaster risk reduction and empowering the local communities' in disaster management. The Act also envisages delegation of authority and resources to Dzongkhags, Dungkhags and Gewogs for disaster risk reduction and management.

The National Pandemic Preparedness Plan (NIPPP) for the Country was formulated to support integrated planning and preparedness for pandemic influenza across all sectors of society and strengthen efforts of the Royal Government in pandemic preparedness and planning at the National, Dzongkhag and Sectoral levels.

The community based approaches to Disaster Risk Reduction recognizes the fact that in the immediate aftermath of a Disaster, the first response always comes from the community itself. The Community – Based DRR seeks ways to help amongst communities effectively by using local resources and capacities to better prepare for Disasters, and to adapt measures to reduce their vulnerability.

The school children are most vulnerable to the effect of disaster. In order to address this issue, the DDM carried out series of activities to educate and raise awareness on disaster risk reduction in schools. The "Workshop on Disaster Preparedness and Response for Safe School" aimed at building capacity of teachers on broad aspects of preparedness planning and testing of preparedness through evacuation drills was conducted in several dzongkhags. The workshop includes basic training on first aid and fire safety, identification of safe evacuation routes and helped to draw an evacuation plans based on existing hazards and vulnerabilities concerning school structures, non-structural mitigation techniques, continuing school education (education in emergencies) and disaster risk reduction concept in general.

Following the devastating fire on Wangduephodrang Dzong, risk of similar fire accidents exists in all other Dzongs, Monasteries and Lhakhangs. The urgency to enhance the disaster response and preparedness capacities for those structures has been recognized.

The Climate Change Council has been established to address the impacts of climate change, which is also responsible for mitigation and adaptation measures against adverse impacts of climate change. The National Climate Change Policy and a National Adaption

Program of Action (NAPA) has been developed. As a NAPA follow up project, Bhutan is currently implementing the “Reducing Climate Change-induced Risks and Vulnerabilities of GLOF (2008 – mid-2013)” project funded by GEF/LDCF fund through UNDP.

Strategic Outcome For Goal 2

Outcome Statement:

A vision of holistic DRM was established in the 2006 Disaster Risk Management (DRM) Framework. The DRM Framework is guided by an ex-ante, pro-active, DRM approach that seeks to mainstream DRM into the sectoral development agendas. To avoid redundancies and duplication of DRM activities across sectors, the RGoB created a formalized institutional structure that determines national and sub-national responsibilities for DRM. The Ministry of Home and Cultural Affairs (MoHCA) serves as the focal agency for DRM and is charged with coordinating activities along different administrative levels. The Department of Disaster Management (DDM), established in 2008 under MoHCA, leads all DRM activities in the country. The DM Act 2013 provides establishment of National Disaster Management Authority (NDMA) under the leadership of the Prime Minister at national level as the highest decision making body on disaster management in the country. On the sub national level, every Dzongkhag (District) administration shall constitute a Dzongkhag Disaster Management Committee under the leadership of the Dzongdag (Governor). The Disaster Information and Management System, database and independent website has been developed to enhance proper collection and dissemination of disaster information that will be useful for coordinating effective and efficient response during emergencies. The main objective is to have a smooth functioning online Disaster Information and Management System linking to Dzonkghags, Gewogs and South Asia Disaster Knowledge Network. IT officers and Disaster Focal persons of all the 20 Dzongkhags were given hands-on-training on usage of the DIMS database and how it would contribute to effective disaster management planning, decision making and information/data sharing (Website – www.ddm.gov.bt).

The DDM, along with relevant focal agencies and technical expertise from Geo-Hazards International (GHI) with funding from GFDRR has implemented two important projects. The first, Building Bhutanese Capacities for Seismic Resilience project has formulated Vulnerability Assessment Checklists for critical buildings such as schools and health facilities and trained more than 70 engineers (national and local levels) in the use of the checklist. The next step will be for the engineers to carry out the actual assessment in the field and recommend risk reduction and seismic strengthening measures.

The second project, National Action Planning Project for School and Hospital Safety, also implemented in coordination with GHI and funded by GFDRR has formulated long terms action plans for school and hospital/ BHU safety. The plans are formulated by the health and school working groups respectively, with a long term (10 years +) vision and with mitigation and preparedness activities covering structural and non- structural measures. Immediate recommendations from the action planning process has been presented to the two parent Ministries – Health and Education, most of which have already been incorporated in the 11th FYP.

Strategic Outcome For Goal 3

Outcome Statement:

Bhutan had also strengthened the Response mechanisms by establishing of Multi Sectoral Search and Rescue Teams at the National level; very soon, we will be setting up local level Search & Rescue teams. A 12-day Integrated Search and Rescue Training was coordinated for 30 participants from relevant agencies involved in disaster response with technical support from ABVIMAS, an Indian based institute. Similarly, a 4-day Basic Search and Rescue training was also conducted for participants from districts and central agencies by the International Federation of Red Cross and Red Crescent Societies (IFRC).

The Multi Sectoral Search and Rescue Teams members are adequately equipped with required personal Protective Equipments and few basic SAR gears such as ropes, carabineer, decender(figure of 8), ascender, Throwing bag etc. The NaSART will have dual function of a Master Trainers and Responder/rescuers during a disaster. As a master Trainers of SAR, NaSART will be involved with capacity development of first responders from the Local Government and other sectors.

An advance Search and Rescue Training with financial support from GFDRR through World Bank was conducted by the Falck - Nutec, a consultancy firm based in the Netherlands for NaSART.

Bhutan has also implemented the first National Adaptation Program for Action (NAPA) project in the Region funded by the Least developed Countries Fund on Climate Change Adaptation titled “ Reducing Climate Change Induced risks and vulnerability from glacial lake outburst floods” to enhance the adaptive capacity to prevent climate change-induced GLOF disaster in Bhutan. Under this project following are key achievements:-

1. The water level of potential dangerous Glacial Lake known as Thorthormi Lake located above the head water of Punatsangchu River has been reduced by 5 meters reducing the risk of overflowing and lake outburst.
2. The automatic Early Warning System (EWS) has been installed for vulnerable communities along the Punatsangchu River in Punakha-Wangdue valley by installation of siren towers and water level sensors.
3. The Community preparedness has been strengthened through various DRM program. The GLOF hazard zonation map for Chamkhar was prepared and based on hazard map; demarcation of hazard zone and identification of safe GLOF evacuation sites were also carried out in GLOF prone Dzongkhags.

In order to put in place a standard coordination mechanism for quick and effective response and relief during a disaster, the DDM with support from UNICEF developed Bhutan Disaster Assessment (BDA) Tools and Standard Operating Procedures (SOPs) for post disaster needs assessment. The Department also conducted the Training of Trainers Workshop on Bhutan Disaster Assessment Tool for all districts, all Ministries, relevant departments/sectors, NGOs, International organizations (like UNDP, UNICEF, WFP, WHO, Save the Children etc.). Further, the BDA tools (questionnaire) have been made into electronic format using Dev-Info and Bhutan-Info.

Section 2: Strategic goals

Strategic Goal Area 1

The more effective integration of disaster risk considerations into sustainable development policies, planning and programming at all levels, with a special emphasis on disaster prevention, mitigation, preparedness and vulnerability reduction.

Strategic Goal Statement:

Recognizing the close link of disaster and development, strong commitment to mainstream disaster risk reduction into sustainable development policies, planning and programming at all levels focusing on disaster prevention, mitigation, preparedness and vulnerability reduction is called for.

It has been endorsed in the National Disaster Risk Management Framework, 2006 “integrating risk reduction into development policies and plans at all level. Adoption of the National Disaster Risk Management Framework (NRDFM) in 2006 by the Royal Government of Bhutan keeping in mind all the five priorities of Hyogo Framework for Action has paved the way for mainstreaming DRR in Bhutan. NRDFM supports the need for adoption and promotion of risk reduction and disaster management rather than a reactive approach dealing with disaster response and relief. The Department of Disaster Management (DDM), which is the nodal coordinating agency for disaster management in the country, has always realized the importance of mainstreaming DRR into National Policies, Plan and development activities.

To establish linkages between disaster risk management and the other ongoing activities in different development sectors, DM Act 2013 provides for a comprehensive and mainstreamed Disaster Risk Reduction Approach with a set of appropriate sanctions and enforcement mechanisms.

The Government is at the moment, in the process of mainstreaming Disaster Risk Reduction initiatives into the Plans, Policies Programs in all the Development activities. I am pleased to inform that mainstreaming of DRR has been included as one of the 16 National Key Result Areas in our 11th FY Planning Guidelines. DRR is also reflected as an important crosscutting issue in the Local Development Planning Guidelines.

Strategic Goal Area 2

The development and strengthening of institutions, mechanisms and capacities at all levels, in particular at the community level, that can systematically contribute to building resilience to hazards.

Strategic Goal Statement:

The Royal Government of Bhutan adopted the National Disaster Risk Management Framework for Bhutan in 2006 and until today the Framework guides all disaster management activities of the Government. However, of late, Bhutan has witnessed numerous disasters such as earthquakes, floods, windstorms etc. in the wake of such occurrences it has become indispensable to formulate and enact legislation for Disaster Management in place. The Royal Government of Bhutan is making systematic efforts to move towards adopting a strategy of holistic disaster management involving and

encompassing every administrative wing as well as the common people to inculcate a mindset of disaster prevention, mitigation and preparedness in the pre-disaster phase while at the same time developing speedy and effective disaster response capabilities at all levels of administration and among the common people.

The National Disaster Management Act 2013 provides the establishment of National Disaster Management Authority (NDMA) under the leadership of the Prime Minister at national level as a highest decision making body on disaster management in the country. The Department of Disaster Management shall serve as the secretariat and executive arm of the NDMA and also function as the National Coordinating Agency for disaster management. The NDMA shall constitute an Inter-Ministerial Task Force comprising of technical experts from relevant Agencies. Every Dzongkhag (District) administration shall constitute a Dzongkhag Disaster Management Committee (DDMC). The DDMC may, if it considers necessary, constitute a subcommittee at the sub-district, Municipal and Block level to assist the DDMC in performance of its functions.

Strategic Goal Area 3

The systematic incorporation of risk reduction approaches into the design and implementation of emergency preparedness, response and recovery programmes in the reconstruction of affected communities.

Strategic Goal Statement:

The Disaster Management Act 2013 requires the establishment of Critical Disaster Management Facilities which are essential during response and relief operations such as Emergency Operation Centre, Early Warning System, Emergency Medical Service, Search and Rescue Team etc...

Emergency Operation Center (EOC) will set up at national and Districts level. Basic equipments such as computers, VHF sets were procured for National Emergency operation centre and for some districts. Later all EOC will be linked. Networks and facilities for EOC will be developed.

Dzongkha EOC operation manual will be implemented in all 20 districts and Contingency plans at different administrative level will be developed to enhance the capacity for effective emergency response and preparedness.

Bhutan Disaster Assessment Tools and mechanisms for post-disaster need assessment and SOP for relief, compensation and reconstruction developed. Robust communication system that can be used during emergency situations as well as during preparedness phase has also been taken up. Strengthened transport and logistics management mechanism are being linked up with enhanced emergency response capacities of communities at Dzongkhag, Dungkhag and Gewog levels.

In order to establish appropriate financial system for disaster management in the country, the need for adequate financial resources has been given high priority and hence the Disaster Management Act 2013 highlight the financial arrangement for disaster management, furthermore, it seeks to integrate it into the national plans and policies. The proposed enactment will facilitate effective steps for prevention and mitigating of disasters, prepare for and coordinate effective response, relief and recovery from disasters.

In order to develop the capacity and skills of the National Search and Rescue Team (NaSART), the Road Traffic Accident (RTA) and Urban Search and Rescue (USAR) training

was conducted during the first week of the January 2013, with the technical backstopping by the Falck-Nutec, a SAR firm from the Netherlands. The main purpose of the training was to build the capacity of NaSART members and make disaster response more effective. The NaSART being the multi-sectoral team will focus on rapid response during major disasters and also act as master trainers for Local SAR Teams.

While Bhutan experienced several disasters in the past, the Standard Assessment Tools and Standard Operating Procedures were lacking. The disaster reports were sent in different formats: inconsistent, incompatible and difficult to interpret and analyze, thus leading to delays in carrying out effective Response and Relief Operations in the affected Dzongkhags.

In order to overcome above difficulties, the BDA tools and mechanism system had been created and put in place, which is a standard tool for carrying out assessments after disasters across all Dzongkhags. The training enabled Dzongkhags disaster focal persons to build their capacity on how to use the Bhutan Disaster Assessment Tools to assess the needs of the people at the time of emergencies/disasters.

Section 3: Priority for action 1

Ensure that disaster risk reduction is a national and a local priority with a strong institutional basis for implementation.

Priority for action 1: Core indicator 1

National policy and legal framework for disaster risk reduction exists with decentralised responsibilities and capacities at all levels.

Level of Progress achieved: 3

Institutional commitment attained, but achievements are neither comprehensive nor substantial

Key Questions and Means of Verification

Is disaster risk taken into account in public investment and planning decisions?
Yes

National development plan	Yes
Sector strategies and plans	Yes
Climate change policy and strategy	Yes
Poverty reduction strategy papers	Yes
CCA/ UNDAF (Common Country Assessment/ UN Development Assistance Framework)	Yes
Civil defence policy, strategy and contingency planning	No

Have legislative and/or regulatory provisions been made for managing disaster risk? Yes

Description:

The National Disaster Management Framework (NDRMF), the first comprehensive multi-stakeholder strategy on disaster management in the country was formulated and endorsed by the Government in 2006. The framework is a holistic disaster management strategy emphasizing the need to institute strong decentralized multi-sector systems at all levels,

especially in the local communities. The framework is based on the principles and Five Priorities for Action espoused in the Hyogo Framework.

While there is no legislation/policy in Bhutan dealing specifically with disaster risk management, elements supportive to disaster reduction can be found in some Acts/Rules & Regulations/Policies existing in other development sectors. The Constitution of Bhutan includes an article on environment reaffirming the country's commitment to sustainable development. Article 5, section 1 and 2, outlines the responsibilities of every citizen and the government in relation to environment. Most importantly, the constitution of Bhutan outlines maintaining 60% forest cover for all times to come. At present, Bhutan has got 72% forest cover; 26% of the total area as protected areas and a further 9 % have been identified as Biological corridors.

The Constitution also stipulates that "A person shall have the responsibility to provide help, to the greatest possible extent, to victims of accidents and in times of natural calamity".

Bhutan Building Rules 2002, which apply to all declared urban areas, were elaborated with the hope of facilitating the property owners to plan and build their construction according to the prescribed technical specifications and expedite the process of approval by the implementing authorities. The purpose is to ensure minimum quality standards of construction and promote a healthy living environment for the safety of all occupants and properties.

Building Code of Bhutan 2003 lays down a set of minimum provisions designed to protect the safety of the public with regard to structural sufficiency (Part I: Structural design) and with regard to fire hazards as well as different services such as electrical installations, installation of lifts, lighting and ventilation, etc. (Part II: Building Services). This code refers to relevant Indian Standards and Codes of Practices, among which the application of the Indian Code IS: 1893 for seismic Zone V with regard to design for loads caused by earthquake is worth mentioning here.

Context & Constraints:

The Department of Disaster Management (DDM), MoHCA as the nodal agency needs to strengthen the managerial and technical capacity to function as the lead agency for disaster management in the country. Effective disaster risk management requires synthesis of technical as well as organizational capacities across a range of sectors. While Bhutan has a fairly elaborate organizational structure connecting national, intermediate(dzongkhags and dungkhags) and the local levels (gewogs and thromdes) that have proved very effective in responding to disaster events, technical capacities in areas such as meteorology, climatology, geophysics, seismology, geotechnical engineering and earthquake engineering are grossly inadequate. There is also a need to develop capacities at the dzongkhag, dungkhags, thromdes and the gewogs for basic disaster risk management initiatives.

There is a need to generate awareness on disaster management issues not only in the vulnerable communities but also at decision making levels. The commitment of the government is reflected in plans, policies and strategies but there is serious gap in terms of implementation of the programs primarily because of the lack of capacities at various levels.

More coordinated effort among different government line agencies are called for, thus, it is essential to establish an institutional system for Disaster Risk Management in line with the Disaster Management Act 2013.

Formulation of Disaster Management and Contingency Plan at National and Dzongkhag level as per the requirement of the Disaster Management Act 2013.

Priority for action 1: Core indicator 2

Dedicated and adequate resources are available to implement disaster risk reduction plans and activities at all administrative levels

Level of Progress achieved: 3

Institutional commitment attained, but achievements are neither comprehensive nor substantial

Key Questions and Means of Verification

What is the ratio of the budget allocation to risk reduction versus disaster relief and reconstruction?

	Risk reduction / prevention (%)	Relief and reconstruction (%)
National budget		
Decentralised / sub-national budget		

USD allocated to hazard proofing sectoral development investments (e.g transport, agriculture, infrastructure)

Description:

It is essential for the success of the national and sectoral initiatives for disaster risk management and response capability strengthening that appropriate funding mechanisms are assured to support and sustain these activities. The funding to disaster risk management activities at the dzongkhags, dunkhags, gewogs and the thromde levels is uncertain considering competing resource priorities in the country. As per the DM Act 2013, following types of funds have been envisaged:-

Response and Relief Expenditure

The District Disaster Management Committee shall be meeting an emergency measure the expenses for response and relief operation from the annual budget.

Budget for National Disaster Management Activities

There shall be a separate budget head to be called the budget for National Disaster Management Activities and it shall receive adequate budgetary allocation for immediate restoration of essential public infrastructure and service centers, which will be managed by the National Disaster Management Authority.

Department of Disaster Management Budget

There shall be a separate budget head to be called the Department of Disaster Management Budget mainly for capacity building, establishing and maintaining Critical Disaster

Management Facility including purchase of equipment and any other activity as may be required to strengthen the preparedness of the nation against disaster.

Recovery and Re-construction

The Government will allocate the fund for purpose of recovery and reconstruction once damage assessment of public assets and infrastructure completes.

The Public Finance Act of Bhutan 2007 also says that during an emergency or disaster, if there is urgent need for expenditure which cannot be postponed without detriment to public interest, the Ministry of Finance shall immediately authorize the use of public funds.

There are few other projects and programs for disaster risk management such as Reducing Climate Change Induced Risks and Vulnerabilities from GLOF in Punakha-Wangdue and Chamkhar Valley.

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Department of Disaster Management Budget

There shall be a separate budget head to be called the Department of Disaster Management Budget mainly for capacity building, establishing and maintaining Critical Disaster Management Facility including purchase of equipment and any other activity as may be required to strengthen the preparedness of the nation against disaster.

Recovery and Re-construction

The Government will allocate the fund for purpose of recovery and reconstruction once damage assessment of public assets and infrastructure completes.

The Public Finance Act of Bhutan 2007 also says that during an emergency or disaster, if there is urgent need for expenditure which cannot be postponed without detriment to public interest, the Ministry of Finance shall immediately authorize the use of public funds.

There are few other projects and programs for disaster risk management such as Reducing Climate Change Induced Risks and Vulnerabilities from GLOF in Punakha-Wangdue and Chamkhar Valley.

Context & Constraints:

The government system with regard to disaster risk management is still at an evolution stage. There are lack of clear understanding and financial support on adopting no regret approach to address disaster risk reduction issues as integral component of development. The government is required to mobilize resources, forge partnerships with international organizations to enhance disaster risk management efforts. Therefore it is important that efforts to build disaster risk management capacities in the country should be based on a pragmatic and low cost approach.

There are clear understanding with regards to the linkages among natural hazards, macro-economic performance and public finance in Bhutan context.

As of now, there is no budget allocation under the Dzongkhag annual budget to address the disaster risk reduction issues.

I. Recommendations

There is a need for resource tracking in order to harmonize the investments for overall development as well as for disaster risk reduction.

II. The options for incorporating potential disaster events into economic forecasting and other econometric model should be explored to support enhance economic planning and decision making.

III.

There is urgent need to implement a tracking system to monitor all disaster related expenditure including the phases of preparedness and response.

IV. Develop guidelines and tools to allocate budget dedicated for DRR at National, Dzongkhag and Gewog level.

V. Institutionalize the financial arrangement for all phase of disaster management as per DM Act 2013.

Priority for action 1: Core indicator 3

Community Participation and decentralisation is ensured through the delegation of authority and resources to local levels

Level of Progress achieved: 3

Institutional commitment attained, but achievements are neither comprehensive nor substantial

Key Questions and Means of Verification

Do local governments have legal responsibility and regular / systematic budget allocations for DRR? Yes

Legislation (Is there a specific legislation for local governments with a mandate for DRR?)

No

Regular budget allocations for DRR to local government

No

Estimated % of local budget allocation assigned to DRR

0

Description:

Every Dzongkhag (District) administration has an Interim Dzongkhag Disaster Management Committee (DDMC) chaired by Dasho Dzongda. The District Committee on Disaster Management implement cross-sectoral risk reduction initiatives at the dzongkhag level and administer the relief, response and carry out reconstruction activities after disaster. Further the DDMC develop capacities to respond to disasters in their respective areas with support from Central Government. The DDMC is also responsible for coordinating and managing all disaster management operations in the Dzongkhag under the direction and supervision of the Central Government.

The Local Government Act 2009 has provided local governance such as Dzongkhag Tshosdu, Gewog Tshode and Thromde Tshode with some responsibilities for DRR. According to the act, Dzongkhag, Gewog and Thromde Development committees are responsible for the construction and maintenance of village, municipal and district public infrastructure, including works to control natural calamities and to lessen related loss of life and property.

As per Disaster Management Act 2013, the Dzongkhag Disaster Management Committee shall perform following activities related to disaster management:

- 1) prepare, review, update and implement the Dzongkhag Disaster Management and Contingency Plan;
- 2) monitor and evaluate measures taken for prevention, mitigation, preparedness, response and capacity building by each sector in the Dzongkhag;
- 3) ensure establishment and functioning of Critical Disaster Management Facility;
- 4) ensure mainstreaming of disaster risk reduction into the development plan, policy, programme and project;
- 5) ensure compliance of the approved hazard zonation and vulnerability map;
- 6) ensure the enforcement of structural and non-structural measures;
- 7) ensure that information about an event or a disaster is promptly communicated to the National Disaster Management Authority, Department of Disaster Management and all concerned;
- 8) ensure that detailed reports and regular updates on disaster event is provided to the Department of Disaster Management upon completion of field assessment of the situation;
- 9) with the support of the Department of Disaster Management promote education, awareness, capacity building and community training on hazard, risk, vulnerability and measure to be taken by the community to prevent, mitigate and respond to disaster;
- 10) conduct regular mock drill;
- 11) report on a quarterly basis to the National Disaster Management Authority on the progress of implementation of its Disaster Management and Contingency Plan;
- 12) direct Dungkhag, Thromde and Gewog Disaster Management subcommittee, if any, on such matters as may be necessary for the effective implementation of this Act; and

Similarly in the gewog the Gewog Disaster Management Committee shall be constituted and discharged a similar set of responsibility for their respective areas. These show full involvement of the community in all the disaster management initiatives.

The Local Government Act, 2009 has provided local governance such as Dzongkhag Tshosdu, Gewog Tshode and Thromde Tshode with some responsibilities for DRR. According to the act, Dzongkhag, Gewog and Thromde Development committees are responsible for the construction and maintenance of village, municipal and district public infrastructure, including works to control natural calamities and to lessen related loss of life and property.

People's participation is ensured in the development activities and local disaster management committees have been established through Community based disaster management planning process.

The DDM has been facilitating training of trainers for Dzongkhag disaster management committees and Dzongkhag disaster management teams for all Dzongkhags.

Context & Constraints:

The challenges ahead are to enhance community capacity in multi hazard risk management and preparedness in vulnerable areas. It is also very important to build capacity and train in developing disaster preparedness plans at the community level. Support should be provided to people in order to enable them to develop their own community disaster management plans. It is also necessary to tap expertise from relevant organizations to facilitate the process.

Recommendations

Awareness raisings from decision/ policy making level to grass-root level; Development tools for community level to assess disaster resiliency of a project, contribution to disaster resiliency, impacts of hazards in a locality and impact of a project on lives and livelihoods of a community
Developing and mainstreaming of DRR policy into local level planning; Technical knowledge and network development by imparting skills and resource, providing on-the job training at local development activities.

Priority for action 1: Core indicator 4

A national multi sectoral platform for disaster risk reduction is functioning.

Level of Progress achieved: 2

Some progress, but without systematic policy and/ or institutional commitment

Key Questions and Means of Verification

Are civil society organizations, national finance and planning institutions, key economic and development sector organizations represented in the national platform? Yes

Civil society members (specify absolute number)

0

National finance and planning institutions (specify absolute number)	0
Sectoral organisations (specify absolute number)	0
Private sector (specify absolute number)	0
Science and academic institutions (specify absolute number)	0
Women's organisations participating in national platform (specify absolute number)	0
Other (please specify)	

Where is the coordinating lead institution for disaster risk reduction located?

In the Prime Minister's/President's Office	No
In a central planning and/or coordinating unit	No
In a civil protection department	No
In an environmental planning ministry	No
In the Ministry of Finance	No
Other (Please specify)	Ministry of Home & Cultural Affairs

Description:

The Royal Government of Bhutan is making systematic efforts to move towards adopting a strategy of holistic disaster management involving and encompassing every administrative wing as well as the common people to inculcate a mindset of disaster prevention, mitigation and preparedness in the pre-disaster phase while at the same time developing speedy and effective disaster response capabilities at all levels of administration and among the common people

The social, economic and cultural strands in the country indicate a strong mindset of interdependence and cohesive social system. This uniqueness is captured in the National Disaster Risk Management Framework. NDRFM recognize the respective roles of different organizations in disaster risk management and provide all possible support to their work within the national framework for disaster risk management

For instance the Department of Geology and mines under the Ministry of Economic Affairs is responsible for carrying out scientific studies and monitoring of natural hazards like Glacial Lake Outburst Flood (GLOF), earthquakes and landslides which are prevalent in the

Himalayan environment. Likewise the Ministry of agriculture is one of the most important stakeholders in managing disasters like when there is an outbreak of pests and diseases in agricultural field; the Department of Agriculture provides measures to control the outbreak. If the situation becomes worse and if there is severe food shortages then the DDM also provides direct food aid to the affected group for a limited duration as a temporary measure. Thus all stakeholders have been actively involved in all the disaster risk management activities initiated by the DDM, MoHCA.

Moreover there are a number of national and international organizationss which are implementing projects in partnership with Government agencies and have developed mutual confidence and mechanisms to jointly address the concerns and share experiences, these processes can be built upon to implement successful and wide ranging partnerships across a whole range of actors at the national and local levels including technical experts, community leaders, media and other significant players in the national and socio-economic life of the country.

Context & Constraints:

Bhutan has its own development priorities.. The health, education infrastructure etc. are some to the sectors where greater priority is given to create assets viz. hospitals, schools etc. without paying adequate attention to their ability to withstand natural hazards. Hence, it is critical challenge to intertwine disaster risk management concerns while determining development priorities.Mainstreaming disaster risk reduction holds the key in Bhutan context.

It has been noticed that different agencies have undertaken independent disaster management initiatives pertaining to their sectors. However these have not been properly coordinated leading to duplication and overlap of efforts. A properly coordinated mechanism would have led to confluence of competence, expertise and resources to achieve optimum results. Thus disaster management is cross sectoral and there is a need to garner support and coordination from all agencies/sectors; the sectors need to proactively initiate mainstreaming disaster management activities into their plans and programs.

The Royal Government of Bhutan is striving to convert these challenges into an opportunity to usher in a disaster resilient and safer nation.

Recommendations

The draft Disaster Management Bill needs to be adopted by the National Assembly, which will pave the ways for large scale mainstreaming efforts in the key development sectors.

Section 4: Priority for action 2

Identify, assess and monitor disaster risks and enhance early warning

Priority for action 2: Core indicator 1

National and local risk assessments based on hazard data and vulnerability information are available and include risk assessments for key sectors.

Level of Progress achieved: 2

Some progress, but without systematic policy and/ or institutional commitment

Key Questions and Means of Verification

Is there a national multi-hazard risk assessment with a common methodology available to inform planning and development decisions? No

Multi-hazard risk assessment	Yes
% of schools and hospitals assessed	0
Schools not safe from disasters (specify absolute number)	0
Gender disaggregated vulnerability and capacity assessments	No
Agreed national standards for multi hazard risk assessments	No
Risk assessment held by a central repository (lead institution)	No
Common format for risk assessment	No
Risk assessment format customised by user	No
Is future/probable risk assessed?	No
Please list the sectors that have already used disaster risk assessment as a precondition for sectoral development planning and programming.	Department of Geology & Mines, Department of Hydro-met Services, Ministry of Agriculture & Forest, Land Commission and all line agencies

Description:

The priority has been accorded to improve the access to synthesized information on disaster risks for policy and decision makers across different sectors and administrative levels. The efforts are made to enable policy and decision makers taking well informed disaster risk management decisions (such as where to invest in risk control measures, where to locate emergency response assets, where to locate critical families. Further, efforts are on to synthesize existing information on hazards, vulnerabilities and risks that is available with different organizations in such a form that it will be utilized for decision making for disaster risk management. It is with such perspective that a geo referenced disaster database is being set up to develop disaster related information resource at the gewog level, which could able to help in analyzing the existing and emerging patterns of disaster risk in different parts of the country.

As per the National Framework the government will develop a multi-hazard atlas for the country, covering those areas where human settlements are more significant. At present the Department of Geology and Mines has completed hazard zonation for GLOF in three most vulnerable districts.

Also during the nationwide housing and population census, the national Statistical Bureau has completed household mapping for the entire country. The risk assessment especially for earthquake in populated towns and in the capital has been completed.

The DDM has developed department's website and Disaster Information Management System for collecting and compiling information on disaster occurrence, impact and losses for the purpose of analysis and to inform the public and decision makers about the disaster trends.

The DDM through the inter-ministerial task force is planning to develop an integrated and comprehensive disaster management manual that would facilitate vulnerability and risk assessment at the national and local levels which could help in developing national and local disaster management plans.

Context & Constraints:

The challenges that lie ahead for disaster risk management are to compile existing hazard maps from different sources for each district in the country. Hazard maps do exist with some of the sectors such as geology and mines, forestry etc but the real need is to compile these maps (related to settlements, population density, land use etc) integrating multiple themes and attributes to use them as multi-hazard maps. There are lack trained people to take up such task and hence it is also important to train relevant staff to develop multi-hazard vulnerability and risk maps.

Accumulation of data alone is not enough as it needs to be processed into useful information and also equally important is to disseminate the information to communities at risk so that they can make decision for reducing the risk. In Bhutan context, there is considerable capacity gap to realize this.

Recommendation

Plans and strategies for addressing information gaps are necessary to integrate sector

specific hazard information into multi-hazard information base.

The plans should be more realistic based on the resources and limitation of the implementing agencies. So far the plans have been based on the table top exercises.

Building upon the successful initiatives, scaling up the activities from the pilot project level needs to be geared up.

Technical capacity of the government to conduct risk assessment and analysis needs to be developed.

Standard procedure and guideline have to be developed for multi-hazard risk assessment at local level so that different organizations speak the same language.

Priority for action 2: Core indicator 2

Systems are in place to monitor, archive and disseminate data on key hazards and vulnerabilities

Level of Progress achieved: 2

Some progress, but without systematic policy and/ or institutional commitment

Key Questions and Means of Verification

Are disaster losses and hazards systematically reported, monitored and analyzed? Yes

Disaster loss databases exist and are regularly updated Yes

Reports generated and used in planning by finance, planning and sectoral line ministries (from the disaster databases/information systems) No

Hazards are consistently monitored across localities and territorial boundaries Yes

Description:

The Department of Geology & Mines (DGM) is in process of developing the multi-hazard atlas for the country to improve decision-making and planning for Disaster Risk Management (DRM). However, DGM has completed hazard analysis for GLOF risk in three vulnerable districts and developed GLOF zonation maps for three GLOF risk Dzongkhags such as Punakha, Wangdi and Bumthang. In parallel, The DDM, along with relevant focal agencies and technical expertise from GeoHazards International (GHI) with funding from GFDRR is implementing two important projects. The first, Building Bhutanese Capacities for

Seismic Resilience project has formulated Vulnerability Assessment Checklists for critical buildings such as schools and health facilities and trained more than 70 engineers (national and local levels) in the use of the checklist. The next step will be for the engineers to carry out the actual assessment in the field and recommend risk reduction and seismic strengthening measures. The second project, National Action Planning Project for School and Hospital Safety, also implemented in coordination with GHI and funded by GFDRR, is working to formulate long terms action plans for school and hospital/ BHU safety. The plans are being formulated by the health and school working groups respectively, with a long term (10 years +) vision and with mitigation and preparedness activities covering structural and non- structural measures. Immediate recommendations from the action planning process has been presented to the two parent Ministries – Health and Education, most of which have already been incorporated in the 11th FYP. The final plans are expected to be completed by December, 2012.

To address the increasing GLOF risk, the Department of Hydro-met Services (DHMS) has installed the automatic early Warning System for GLOF in Punakha- Wamgdue Valley. In addition to these technical measures, communities are being trained to respond to early warnings. The DDM in collaboration with relevant technical agencies has been disseminating information about earthquake and its safety issues. SAARC regional Earthquake Risk Reduction Recovery Preparedness project carried out detailed earthquake hazard and vulnerability analysis in Thimphu, Samdrupjongkhar and Phuntsholing towns.

Context & Constraints:

Lack of systematic and scientific database system about hazards, vulnerabilities and risk at macro and micro level needs to be addressed. Few agencies at the central and district levels regularly publish and disseminate disaster related information. However, transparent and effective systems to monitor and archive of disaster related data are still to be institutionalized. Similarly, as of now the focus to collect information at any level is only limited to any disaster occurrence or post disaster situation.

There is no system in place to monitor, archive and disseminate information about other hazards such as landslides and floods

Recommendations

More research work on effective early warning system that can be installed, operated and managed by local communities is necessary.

Involvement of the communities for collection, compilation, processing and disseminating information not only ensures usefulness of the information but also contribute towards sustainability of the approach.

Awareness creating, sensitizing and capacity building of media in disaster risk reduction is necessary for effective use of the reach of media to the society.

Development of standard data collection process and collection of timely and reliable data has to be ensured through an institutional basis.

Priority for action 2: Core indicator 3

Early warning systems are in place for all major hazards, with outreach to communities.

Level of Progress achieved: 2

Some progress, but without systematic policy and/ or institutional commitment

Key Questions and Means of Verification

Do risk prone communities receive timely and understandable warnings of impending hazard events? Yes

Early warnings acted on effectively	Yes
Local level preparedness	Yes
Communication systems and protocols used and applied	Yes
Active involvement of media in early warning dissemination	Yes

Description:

The aim is to work towards development of a coherent, end to end early warning system that has both spatial coverage (covering all vulnerable areas) and a broad multi hazard focus to reduce risk from all natural events.

In Bhutan, the development of Early warning System,, especially in the case of Glacial Lake Outburst Floods (GLOF) is of utmost importance. The newly created Department of Hydro-met services is the nodal agency for flood and weather forecasting as well as for early warning in these areas. They are actively involved in flood warning and flood prevention measures through the 10 hydrological stations and 33 rainfall stations across the country.

The DDM in collaboration with Dzongkhags is carrying out community based disaster risk reduction measures such as establishment of basic community based EWS , capacity building measures such as trained manpower for rescue and relief; and Hazard, vulnerability and capacity assessment and mapping at communities level.

Media are actively involved in early warning dissemination and community awareness.

Context & Constraints:

Various agencies in Bhutan are organized according to specialized tasks for different hazards, with relatively little information sharing or partnerships with other agencies. It is these gaps that seek to address by bringing together all concerned agencies. It is also a challenge that the local and national level support activities should also be designed to integrate with regional and international early warning system development effort. To initiate a local approach to EWS it is important to motivate the direct participation of those who are likely to be exposed to such hazards. Involvement of local communities in all stages of EWS

will reinforce public understanding of the whole range of risks they face thus strengthening the desired preparedness actions and warning response.

Absence of national level mechanism to monitor hazard risk, forecast warning messages, dissemination and action continues to be one of the challenges for DRR. The media is less aware and involved in EWS which can be substantially improved through awareness and capacity building efforts.

Yet another challenge for early warning system is establishing communication protocol between technical authorities (like Department of Energy) and communities.

Recommendations

Institutionalization of EWS at community level and capacity building of communities for development, operation and maintenance of the system is necessary.

Multi-Hazard map for all areas of the country should be prepared and existing maps and information should be updated and made user-friendly .

Risk sensitive land-use planning for urban areas should be prioritized.

Identification of major hazards and institution to deal with such hazard, capacity of such identified agency for an effective and efficient early warning, networking with similar organization both within and outside country, appropriate policy and institutional mechanism will help to establish efficient and effective end to end early warning system.

Priority for action 2: Core indicator 4

National and local risk assessments take account of regional / trans boundary risks, with a view to regional cooperation on risk reduction.

Level of Progress achieved: 2

Some progress, but without systematic policy and/ or institutional commitment

Key Questions and Means of Verification

Does your country participate in regional or sub-regional actions to reduce disaster risk? Yes

Establishing and maintaining regional hazard monitoring	No
Regional or sub-regional risk assessment	No
Regional or sub-regional early warning	No
Establishing and implementing protocols for transboundary information sharing	Yes
Establishing and resourcing regional and sub-regional strategies and frameworks	No

Description:

The Earthquake of 1980 (6.1 on Richter scale with its epicenter in Sikkim (India) had caused several cracks in buildings in Thimphu, Phuntsholing, Geelphu, Samdrupjungkhar and Trashigang. The Earthquake of 1988(6.6 on Richeter Scale) and 2003 (5.5 on Richter scale) with epicenter in the Indo-Nepal border and Bhutan also caused similar damages to human settlement, institutional buildings and highways. These are examples of trans-boundary disasters affecting Bhutan, Nepal and India simultaneously.

Further, GLOF risk reduction efforts have been taken up taking into account trans boundary hazard issues of Himalaya beyond Bhutan. UNDP GLOF mitigation project and regional earthquake risk reduction project have been important initiatives in order to facilitate transboundary approach.

Further in this context, establishment of SAARC Disaster Management Center in 2007 is a positive step.

Context & Constraints:

The difference in economic development, in level of investment in infrastructure development and in advancement in technology applications at grassroots levels among the SAARC countries is manifested in different level of disaster response capacity of the countries. However, in terms of nature of hazards the countries face and in terms of their level of disaster preparedness, all of the countries in South Asia are equally vulnerable.

As the region shares same climate, ecological, geological and river system, regional cooperation mechanism can be very effective in disaster risk reduction. The need for regional cooperation and especially real time data sharing has been recognized by most stakeholders in different forums. Some initiatives have been taken place such as dialogue with India regarding inundation, regional flood information system initiative.

Recommendations

Strengthen inter-governmental cooperation for common trans-boundary issues
Effective use of SAARC Disaster Management Center and SAARC Meteorological Research Centre for early warning, risk reduction and emergency response
Development of procedure and standards for Rapid Damage and Need Assessment is to developed on operational basis.

Section 5: Priority for action 3

Use knowledge, innovation and education to build a culture of safety and resilience at all levels

Priority for action 3: Core indicator 1

Relevant information on disasters is available and accessible at all levels, to all stakeholders (through networks, development of information sharing systems etc)

Level of Progress achieved: 3

Institutional commitment attained, but achievements are neither comprehensive nor substantial

Key Questions and Means of Verification

Is there a national disaster information system publicly available? Yes

Information is proactively disseminated	Yes
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Established mechanisms for access / dissemination (internet, public information broadcasts - radio, TV,)	Yes
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Information is provided with proactive guidance to manage disaster risk	Yes
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Description:

The Department of Disaster Management has developed and launched its website and is publicly available. All information related to Disaster Management is available in the website. In addition different agencies involved in disaster management have web sites that are publicly available such as the Department of Geology and Mines, Department of Energy, Ministry of Agriculture, National Environment Commission etc. The Bhutan Broadcasting Service (national news channel) also gives information of weather updates every day after the news and it is also available on its website- www.bbs.com.bt

The newspapers in Bhutan also give regular information on disasters in the country and there are reports from the government agencies as well as the UN.

Bhutan Disaster Assessment tools and mechanism is a tool developed after the 2009 earthquake – a standard tool to undertake the damage and need assessment following any emergency in the country. All the ICT Officers, District Statistical Officer and District Disaster Focal persons of all the 20 districts have been trained on it.

Development and launch of DMIS – information/data bank for disaster management. Through the DMIS, information related to disaster incidents, death, no of affected people and

property loss both private and public can be collected. The system also has modules to maintain inventory of trained disaster management personnel and Resource Inventory and keep track of Fund and relief materials supplied to districts.

At present, relevant and updated information on disasters in the country are scattered and scanty. Through the support of UNDP, historical information on disaster occurrences has been collected from various sources especially Kuensel, the national newspaper starting from 1968. This data has yet to be uploaded into the DMIS.

Most of the information available in the country level are accessible; however, information not readily available and accessible by grass-root local level. Additionally, there is no comprehensive information sharing system to communities at risk.

The DDM has also initiated the establishment of National and District Emergency operation Centres in few selected all the 20 districts by providing with some basic necessary equipments.

DMIS (2010) and DesInventar (2011) BhutanInfo/Dev Info established

- Emergency Info established and baseline data collected (2010-2012)
- Inputs provided to SAARC Disaster Management Center.

Context & Constraints:

Although the DMIS can be used effectively to collect, analyze and disseminate disaster information, the data collection mechanism is not systematic. Similarly, there is no any established mechanism to share such available information. Likewise, in many instances, the available information are not utilized for new programmes/ activities design and implementation.

Although the EOC can be utilized effectively for collecting, collating, analyzing and disseminating information regularly on disasters and coordination of emergency response, at present the EOCs are not fully functional in most districts and trainings on how to operate the ECO needs to be imparted.

Further, giving disaster information/ warnings to communities needs to be worked upon.

Recommendations

Develop Standard Operating Procedures for disseminating information and warning of disaster occurrences to the local levels.

Information dissemination mechanism

Trainings on use of the DMIS and Integrate information system with EOC

Priority for action 3: Core indicator 2

School curricula , education material and relevant trainings include disaster risk reduction and recovery concepts and practices.

Level of Progress achieved: 3

Institutional commitment attained, but achievements are neither comprehensive nor substantial

Key Questions and Means of Verification

Is DRR included in the national educational curriculum? No

Primary school curriculum	No
Secondary school curriculum	No
University curriculum	No
Professional DRR education programmes	No

Description:

At present DRR as such is not included in National educational curriculum but it is incorporated into the Non- Formal Education (NFE) Curricula. The current textbooks include disaster risk reduction related content with regard to the protection of the environment and water resources. However, the DDM in collaboration with the Royal Education Council has initiated the incorporation of DRR as a chapter into the Higher Secondary School curriculum

More than 300 schools in Bhutan have prepared their disaster management plans according to the School Disaster Management Planning Guidelines issued by the Department of Disaster Management. - All the schools in Bhutan has the School Disaster Management Plans – Ministry of Education has made the schools to have the SDMP as mandatory –the SDMP will be an indicator to measure the performance of the schools

The DDM is also conducting mock drills and training of trainers for the teachers in safe school initiatives including first responder trainings in few districts. The need to have a guiding “Facilitators guide” was expressed. Accordingly the manual was developed and the Converged (SSI and EIE) all the training given to schools teachers/ principals and converged workshop for Disaster Preparedness and Response for Safe School completed for 17 districts out of 20 districts – all the 20 dzongkhags will be covered by end of March, 2013. Painting and essay competitions have been organized on disaster risk reduction on the International day for Disaster Risk Reduction in October since 2008. - Observing the International Day for Disaster Risk Reduction is observed since 2008 and in addition observing 21st September, every year as Mock Drill day all over Bhutan to commemorate the past Earthquake

Awareness campaign and development of awareness materials are done vigorously at all levels of audience to create awareness on impending threats and the ways and means to

manage those threats, to increase the preparedness and response capacity of the general public.

Awareness materials such as Emergency Safety and First Aid handbook and pamphlets on disaster risk reduction are distributed to all schools.

Although disaster risk reduction is included in text books at all levels, there is serious gap in capacity building of school teachers. The current effort to orient the teachers to the new content is very limited and scarce. In addition to the regular class work exercise, the schools need to develop school drr plan and conduct regular drills.

Context & Constraints:

Disaster Risk Reduction (DRR) in school curriculum needs to be incorporated in the future. The Department of Disaster Management is currently working together with Ministry of Education and Royal University of Bhutan to incorporate the DRR concern in school and college curriculum. Disaster Management is new discipline in Bhutan and thus importance of understanding the disaster management and risk reduction is very crucial.

Priority for action 3: Core indicator 3

Research methods and tools for multi-risk assessments and cost benefit analysis are developed and strengthened.

Level of Progress achieved: 1

Minor progress with few signs of forward action in plans or policy

Key Questions and Means of Verification

Is DRR included in the national scientific applied-research agenda/budget?

Yes

Research programmes and projects	Yes
Research outputs, products or studies are applied / used by public and private institutions	No
Studies on the economic costs and benefits of DRR	Yes

Description:

Some research activities on DRR especially with regard to glacial lake outburst flood, structure risk mitigation and Climate Change Adaptation are carried out by relevant agencies such as the SQCA, DGM and NEC. However, the research activities are sporadic and have not contributed significantly as research agenda are not implementation oriented and are not part of a comprehensive framework.

The DGM is in the process of setting up seismic station and micro zonation maps and DRR

included in the national scientific applied-research agenda/budget.

Building code, standards and guidelines are in place.

Context & Constraints:

Implementation oriented research is lacking in Bhutan. The research activities are scanty, sporadic and are based on funding support.

Lack of technical capacity in most agencies to carry out research in this area

Recommendations

Develop institution system for RA and planning based on RA

Incorporate RA system into development planning

Develop and disseminate guidelines

Promote implementation oriented research and mainstreaming of research into action

Build capacities of the relevant agencies in conducting research in this area.

Priority for action 3: Core indicator 4

Countrywide public awareness strategy exists to stimulate a culture of disaster resilience, with outreach to urban and rural communities.

Level of Progress achieved: 4

Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

Key Questions and Means of Verification

Do public education campaigns for risk-prone communities and local authorities include disaster risk? Yes

Public education campaigns for enhanced awareness of risk.	Yes
Training of local government	Yes
Disaster management (preparedness and emergency response)	Yes
Preventative risk management (risk and vulnerability)	Yes
Guidance for risk reduction	Yes
Availability of information on DRR practices at the community level	Yes

Description:

DDM in close collaboration with relevant organizations is carrying out series of awareness and training programs for capacity building and raising awareness of disasters risks and the importance of being prepared.

Further, it has initiated the community based disaster risk management planning in few districts whereby district level officials have been trained on this approach and they in turn train the block level officials and prepare the community based DM plans with involvement of the communities.

IEC materials on DRR developed in dzongkha, the national language and have been distributed to the districts for further distribution to the communities.

21st September has been observed as Mock Drill Day everythis year since 2010 commemorating the 2009 past earthquake in the affected districts. The IDRR day is observed each year at national level with involvement of agencies and schools.

Local radio and FM stations and FMs are covering wide areas to circulate general information about disaster risk reduction and specific emergency incidents.

Context & Constraints:

The awareness campaign has gained momentum recently after the May 2009 floods through out the country and the 21st September 2010 earthquake. The media also carry regular features on disaster management.

Most of the awareness activities, however, are focused in project areas that are funded by donor agencies. The activities are neither institutionalized nor internalized within the district mechanism.

Further, raising awareness alone is not enough. It should result in actions leading to a culture through self initiated preventive and resilience culture.

Recommendation

Community based disaster preparedness planning should be initiated in all districts and local levels to raise awareness, disseminate information and advocate measures for building resiliency of the communities.

Schools can play vital role in developing a sustainable mechanism for sustainability of DRR initiatives and it should be a part of formal and non-formal education.

Training and capacity building of local authority on the issue of DRR should be an integral part of any disaster preparedness plan

Use of innovative methods for information dissemination and awareness raising can be effective. Street drama and making use of cultural activities can be effective and sustainable way for knowledge and education in DRR.

Section 6: Priority for action 4

Reduce the underlying risk factors

Priority for action 4: Core indicator 1

Disaster risk reduction is an integral objective of environment related policies and plans, including for land use natural resource management and adaptation to climate change.

Level of Progress achieved: 3

Institutional commitment attained, but achievements are neither comprehensive nor substantial

Key Questions and Means of Verification

Is there a mechanism in place to protect and restore regulatory ecosystem services? (associated with wet lands, mangroves, forests etc) Yes

Protected areas legislation	Yes
Payment for ecosystem services (PES)	No
Integrated planning (for example coastal zone management)	Yes
Environmental impacts assessments (EIAs)	Yes
Climate change adaptation projects and programmes	Yes <ul style="list-style-type: none">• Reducing Climate Change Risks and Vulnerabilities from Glacial Lake Outburst Floods in Bhutan [DOC - 938.50 KB]• Reducing Climate Change Risks and Vulnerabilities from Glacial Lake Outburst Floods in Bhutan [DOC - 938.50 KB]• Reducing Climate Change Risks and Vulnerabilities from Glacial Lake Outburst Floods in Bhutan [DOC - 938.50 KB]• Reducing Climate Change Risks and Vulnerabilities from Glacial Lake Outburst Floods in Bhutan [DOC - 938.50 KB]• Reducing Climate Change Risks and Vulnerabilities from Glacial Lake Outburst Floods in Bhutan (2008) [DOC - 938.50 KB]• Reducing Climate Change Risks and Vulnerabilities from Glacial Lake Outburst Floods in Bhutan [DOC - 938.50 KB]• Reducing Climate Change Risks and Vulnerabilities from Glacial Lake Outburst Floods in Bhutan [DOC - 938.50 KB]• Reducing Climate Change Risks and Vulnerabilities from Glacial Lake Outburst Floods in Bhutan [DOC - 938.50 KB]• Reducing Climate Change Risks and Vulnerabilities from Glacial Lake Outburst Floods in Bhutan (2008) [DOC - 938.50 KB]• Reducing Climate Change Risks and Vulnerabilities from Glacial Lake Outburst Floods in Bhutan (2008) [DOC - 938.50 KB]

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- [Reducing Climate Change Risks and Vulnerabilities from Glacial Lake Outburst Floods in Bhutan](#) (2008) [DOC - 938.50 KB]

Description:

Bhutan experiences frequent hydro-meteorological disasters and the impact of Climate change will increase their frequency and severity. Climate change will also adversely impact lives and livelihoods of hundreds of thousands of people which will render them vulnerable to natural disasters. Moreover, as large share of the population is dependent on rain-fed agriculture, impact of climate change will be manifested in food shortage further aggravating the situation. Recognizing this issue, the NEC spearheaded the formulation of the National Adaptation Program of Action and Bhutan is currently implementing a project (Reducing Climate Change Induced Risks & Vulnerabilities from GLOF in Punakha-Wandue and Chamkhar Valleys' funded GEF/LDCF) from the NAPA.

The Constitution of Bhutan provides for maintaining 60% of the area under forest and protected areas and this is an important factor that guides all development activities.

The Dept. of Tourism has started Eco-tourism with the objective of generating revenue through the use of the environment.

Integrated Planning (Sustainable Land use Management and Strategic Environment Assessment)

The National Environment Commission conducts Environment Impact Assessment (EIAs) for all major developmental works and disaster concerns are taken into account to some extent.

The Ministry of Agriculture and Forest promotes community based forest whereby communities are handed with forest areas which they manage and protect.

Context & Constraints:

Although Bhutan has identified 9 adaptation projects in the NAPA, at present, we are implementing only one project.

Other challenges include:

- Translating policies into practice
- Community-based projects have limitations in terms of technical quality, resource availability, and operations & maintenance
- Inconsistent recorded data
- Inconsistency in the available information
- Wider areas and issues (hazards) to cover within limited resources.
- Resource availability and also maintenance
- Reaching out to the poorest of poor communities due to cost implication for such devices

Recommendation

A comprehensive framework for realizing the inter-linkage of Environmental Management,

Climate Change and DRR has to be established. The framework should have resonance with livelihoods of the people.

The development plans and policies need to integrate DRR, Climate Change adaptation and mitigation and environmental management comprehensively in development strategies. This comprehensive approach should also be reflected in the grass-root level implementation as well with the well established link to address the livelihoods of the people.

Priority for action 4: Core indicator 2

Social development policies and plans are being implemented to reduce the vulnerability of populations most at risk.

Level of Progress achieved: 2

Some progress, but without systematic policy and/ or institutional commitment

Key Questions and Means of Verification

Do social safety nets exist to increase the resilience of risk prone households and communities? Yes

Crop and property insurance	Yes
Temporary employment guarantee schemes	No
Conditional and unconditional cash transfers	No
Micro finance (savings, loans, etc.)	Yes
Micro insurance	No

Description:

Community Based Disaster Risk management (CBDRM) planning process is in process at village level to come up with CBDRM plan and build capacity.

Insurance scheme such as property and life insurance exists which is subsidized by the Government in the rural areas. At present no crop insurance exists but owing to the magnitude of the problem and the impact on the poor farmers who are solely dependent on crop for their livelihood, the Ministry of Agriculture has come up with a proposal and this is being discussed with the Ministry of Finance.

The Ministry of Home & Cultural Affairs and the Ministry of finance has also instituted His Majesty Relief Fund.

Poverty Reduction has been the focus of all five year development plans. Mainstreaming DRR into 11th Five Year Planning Guidelines

Microfinance is being provided by the Bhutan Development Finance Corporation whereby they cater to the credit needs of small entrepreneurs and farmers for industrial and agricultural development, both in urban and far-flung rural areas.

NGOs especially the Tarayana Foundation has been actively engaged in improving the lives and livelihoods of the poorest people living in remote areas through establishment of income generating activities using the local resources and also assisting in building their home.

However, there is no institutionalized safety net for loss of lives, loss of products and loss of livelihood support system.

Context & Constraints:

The existing micro-finance and cooperative structures are an asset to build safety net for vulnerable populations. Incorporating disaster risk reduction initiatives into these existing mechanism can enhance their effectiveness and ensure their long-term sustainability.

Recommendations

Develop and promote alternative and innovative financial instruments for addressing disaster risk reduction

Enhance involvement of Private Sector/ NGOs in DRR for use of financial instruments (micro finance, micro-credits, insurance etc)

Promote the development of financial risk-sharing mechanisms, particularly insurance and reinsurance against disasters.

Priority for action 4: Core indicator 3

Economic and productive sectorial policies and plans have been implemented to reduce the vulnerability of economic activities

Level of Progress achieved: 3

Institutional commitment attained, but achievements are neither comprehensive nor substantial

Key Questions and Means of Verification

Are the costs and benefits of DRR incorporated into the planning of public investment? Yes

National and sectoral public investment systems incorporating DRR.

No

**Please provide specific examples: e.g.
public infrastructure, transport and
communication, economic and productive
assets**

Investments in retrofitting infrastructures including schools and hospitals	Yes
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Description:

Presently different sectors involved in disaster management have their own sectoral plans with activities related to disaster management.

Investments in retrofitting infrastructures including schools and hospital are not available at present.

Context & Constraints:

There is limited technical capacity for carrying out retrofitting and There is limited technical capacity for carrying out retrofitting and strengthening of existing buildings. In addition the additional cost of retrofitting discourages building owners to take up the work.

Recommendations

Design and pursue empirical studies on the vulnerable economic activities, detail analysis. Involve public and private sectors in designing and carrying out such studies/ researches.

Recommendation

Develop, strengthen and multiply cooperative organizations which can support investment, insurance and deposit for small scale farmers and businesspersons.

Priority for action 4: Core indicator 4

Planning and management of human settlements incorporate disaster risk reduction elements, including enforcement of building codes.

Level of Progress achieved: 2

Some progress, but without systematic policy and/ or institutional commitment

Key Questions and Means of Verification

Is there investment to reduce the risk of vulnerable urban settlements? Yes

Investment in drainage infrastructure in flood prone areas	Yes
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Slope stabilisation in landslide prone areas	Yes
---	-----

Training of masons on safe construction technology	Yes
---	-----

Provision of safe land and housing for low income households and communities	No
---	----

Risk sensitive regulation in land zoning and private real estate development	No
---	----

Regulated provision of land titling	Yes
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Description:

The Ministry of Agriculture and Foreste and Ministry of Works and Human Settlement have been investing in drainage infrastructure in flood prone areas. Slope stabilization has also been carried out in landslide prone areas especially while construction of roads. Allocated fund in the annual budget for monsoon restoration

Training of masons and carpenters has been given to the eastern districts on safe construction technology (Building back better) by the SQCA.

His majesty has also been providing safe land grants for low income households and communities.

Building code, by law, standards and guidelines are in place and is mandatory for all building in the urban areas but there is weak enforcement.

However, landslide hazard mapping, prioritization of vulnerable areas and stabilization is still not being carried out.

Land-use planning is also taken into account in development work.

Context & Constraints:

A study carried out by the SQCA in Thimphu and Phuentsholing has identified most buildings surveyed as vulnerable to earthquakes. As the country is very high earthquake risk zone, and due to weak enforcement of building codes, the buildings are at very high risk. Earthquake safety of these existing buildings is of serious concern.

Although trained engineers and designer cannot be produced in coming few years to meet the demand of construction industry, the gap can be filled by raising awareness of house owners and developing trained contractors/ masons.

Recommendation

Up-scale the training to masons and contractors to cover all the building types particular to a geographic area

The training and awareness need to be extended also to house owners level as their decision for adopting earthquake safer houses is key to success of the program.

Link School Disaster Risk Reduction Initiatives with awareness raising and capacity building of local communities and local masons.

Ensure that all newly constructed school buildings, hospitals and public infrastructure comply with the seismic building codal provisions. For construction of new schools in remote areas, mandatory guidelines and standards should be developed in local language which can be followed by local artisans.

Priority for action 4: Core indicator 5

Disaster risk reduction measures are integrated into post disaster recovery and rehabilitation processes

Level of Progress achieved: 3

Institutional commitment attained, but achievements are neither comprehensive nor substantial

Key Questions and Means of Verification

Do post-disaster programmes explicitly incorporate and budget for DRR for resilient recovery? Yes

% of recovery and reconstruction funds assigned to DRR	0
DRR capacities of local authorities for response and recovery strengthened	Yes
Risk assessment undertaken in pre- and post-disaster recovery and reconstruction planning	Yes
Measures taken to address gender based issues in recovery	Yes

Description:

After the 21st September 2009 Earthquake and 18th September, 2011 Earthquake, the focus has also been rebuilding homes better along with restoring basic services (WASH, Health, and Education). The Ministry of Home and Cultural Affairs and the SQCA has also come up with a standard for rebuilding traditional homes with EQ resistant features and training on this has also been imparted to masons and carpenters of the affected districts – Building Back Better .

Support through His Majesty's Welfare Office has been provided to all affected families through distribution of relief materials, free materials for rebuilding homes and also labour contribution by the Royal Bhutan Army.

The Government also directed the RICB to release the life and rural insurance compensations as soon as possible.

Timely release of the life and rural insurance compensation from the Insurance Companies has contributed to the timely recovery of the affected victims.

Various donors have been actively involved in restoring livelihood of those affected through projects and activities in the affected areas. A project funded by the ADB has been initiated to rebuild 4 schools in Mongar and Trashigang and to take up community based and school based disaster risk management planning programs in both districts. Another project is also underway through support from World Bank to provide livelihood support, community based disaster management planning in three districts affected by the EQ.

The MoHCA spearheaded the preparation of a National Recovery and Reconstruction Plan

after the EQ involving the UN agencies, government sectors including all the affected districts and the districts are at present carrying out reconstruction activities under the plan. Psycho-social support and protection have been provided to Children & Women, Old people, disabled people by Department of Youth & Sports and Ministry of Health. Bhutan is rich in terms of cultural and religious heritage. However, a lot of it has been damaged in the EQ of 21st Sept, 2009 and 2011 , and a lot of resources are required to restore and in some cases build it back incorporating DRR.

Context & Constraints:

infrastructure and social development needs. With the limited budget, it is difficult to include DRR in reconstruction activities. This could lead to making the affected people more vulnerable but also to invest in infrastructure which increases vulnerability.

Recommendation

Involvement of community from planning to implementation in response, recovery and rehabilitation can ensure effective investment disaster resilient recovery.

Enforcement of seismic standards for new construction

Prepare system and mechanism for incorporating disaster risk reduction into post-disaster recovery

and rehabilitation (Build Back Better)

Ensure system for using opportunities during the recovery phase to develop capacities that reduce

disaster risk in the long term, including through the sharing of expertise, knowledge and lessons learned

Priority for action 4: Core indicator 6

Procedures are in place to assess the disaster risk impacts of major development projects, especially infrastructure.

Level of Progress achieved: 3

Institutional commitment attained, but achievements are neither comprehensive nor substantial

Key Questions and Means of Verification

Are the impacts of disaster risk that are created by major development projects assessed? Yes

Are cost/benefits of disaster risk taken into account in the design and operation of major development projects? Yes

Impacts of disaster risk taken account in Environment Impact Assessment (EIA)

Yes

By national and sub-national authorities and institutions

Yes

Description:

Environmental Impact assessment is a mandatory process for large scale project such as dams, irrigation schemes, highway, mining, tourist developments etc and the impact of disaster risk is taken into account to some extent in environment impact assessment however, there is no process established for Disaster Impact Assessment. There is growing acknowledgment to assess disaster resiliency of development projects.

Bhutan is at high earthquake risk but very few residential and public buildings have gone through vulnerability assessment. There is sincere awareness among government authorities, local authorities and, to some extent, among general public as well. However, the level of risk has not been assessed for buildings, infrastructures and lifelines.

Context & Constraints:

Government is aware of the need to incorporate and institutionalize disaster impact assessment (DIA) in major projects during its design phase such as EIA. However capacity is limited not only at the local levels but also at the central level. There is lack of tools for impact assessment and also for assessment of contribution of a particular project to the resiliency of communities.

Recommendations

Contribution to disaster resiliency should be one of the factors for prioritization of projects as it will be instrumental in building resiliency to nations and communities.

Establish a mechanism to assess disaster impact of development project.

Develop system and mechanism to include Disaster Impact Assessment (DIA) along with Environmental Impact Assessments (EIA) in all major projects; and incorporate disaster consideration in environmental and natural resources management.

Section 7: Priority for action 5

Strengthen disaster preparedness for effective response at all levels

Priority for action 5: Core indicator 1

Strong policy, technical and institutional capacities and mechanisms for disaster risk management, with a disaster risk reduction perspective are in place.

Level of Progress achieved: 2

Some progress, but without systematic policy and/ or institutional commitment

Key Questions and Means of Verification

Are there national programmes or policies for disaster preparedness, contingency planning and response? Yes

DRR incorporated in these programmes and policies	Yes
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The institutional mechanisms exist for the rapid mobilisation of resources in a disaster, utilising civil society and the private sector; in addition to public sector support.	Yes
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Are there national programmes or policies to make schools and health facilities safe in emergencies? Yes

Policies and programmes for school and hospital safety	Yes
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Training and mock drills in school and hospitals for emergency preparedness	Yes
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Are future disaster risks anticipated through scenario development and aligned preparedness planning? Yes

Potential risk scenarios are developed taking into account climate change projections	Yes
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Preparedness plans are regularly updated based on future risk scenarios	No
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Description:

The Department of Disaster Management is carrying out a series of activities to educate and raise awareness at all levels on disaster management, one of the priority area that we feel needs attention are the schools and the school children. In order to make schools better prepared the department has conducted the mock drill and ToT workshop in 7 17 districts out of 20 to equip the schools and teachers with capacity to not only be prepared but also respond during emergencies. The workshop focused on emergency first aid (both theory and practical), basic training on fire safety and evacuation and continuity of schools after an emergency.

Context & Constraints:

Develop Safe School Construction manual for different regions with special focus on reducing the risk from the major hazard in the area.
Implement mandatory provisions for following building safety regulations for construction any new schools and hospitals.
Assess vulnerability of school buildings throughout the country, rank the schools for actions to be taken (either to replace, retrofit or safe enough to continue operation) and prioritize the intervention according to the level of hazard.
Assess seismic safety of all the hospitals throughout the country and recommend safety measures for the hospitals.
Develop policy and mandatory regulations for structural and non-structural safety in case of major earthquake for all hospitals throughout the country.

Priority for action 5: Core indicator 2

Disaster preparedness plans and contingency plans are in place at all administrative levels, and regular training drills and rehearsals are held to test and develop disaster response programmes.

Level of Progress achieved: 2

Some progress, but without systematic policy and/ or institutional commitment

Key Questions and Means of Verification

Are the contingency plans, procedures and resources in place to deal with a major disaster? Yes

Plans and programmes are developed with gender sensitivities	Yes
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Risk management/contingency plans for continued basic service delivery	Yes
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Operations and communications centre	No
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Search and rescue teams	Yes
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Stockpiles of relief supplies	Yes
Shelters	Yes
Secure medical facilities	Yes
Dedicated provision for disabled and elderly in relief, shelter and emergency medical facilities	Yes
Businesses are a proactive partner in planning and delivery of response	No

Description:

The Department of Disaster Management has formulated Draft Disaster Management bill, the National Disaster Management Planning Guidelines, Dzongkhag Disaster Management Planning Guidelines, Integrated Disaster Management Manual, Rapid Assessment Guidelines, and Awareness Strategies.

The DDM plans to hold stakeholders workshop to discuss draft national disaster management plan. The Draft National Disaster Management Bill has been tabulated in both the Houses and is due to be enacted after tabulating in the joint sitting of both the houses, In line with the national plan Bill, each sectors and agencies will make their own disaster management plans. An inter-ministerial task force/steering committee will be formed to endorse such plans and guidelines for disaster management planning and capacity building at the local level.

At the local levels, the disaster management committee of Dzongkhag and the municipal disaster management committees will be trained to make their own disaster management plans in accordance to the national plans and as per their own risk and vulnerabilities.

Health Contingency plans in placedthe Ministry of Health has already developed the Health Contingency Plan and they are developing the National Action Plan for Hospital Safety. Family emergency kits in placed (stockpiles of relief supplies) in every districts. Secure medical facilities and food grains. The Department of Disaster Management, inline with the INSARG requirement, has constituted the National Search and Rescue Team (NaSART), who will be conducting the Search and Rescue after any emergencies and will function as National Trainer in for all the trainings related to SAR. However, The Royal Bhutan Army and Police Armed Forces plays vital role in SAR during emergency/disasters. However, the DDM is in process of forming SAR teams at every administrative level. Comprehensive and basic SAR training was also conducted to relevant sectors and armed forces.

Context & Constraints:

Due to lack of coordination, technical capability and resources, the formulation of plans were delayed. SAR teams should form at every administrative level. EOC should upgrade with existing system and wider coverage and extension of net work services.

Recommendations

All districts should prepare District Disaster Preparedness plan and DDM should take

leadership to ensure that the districts have technical capacities and resources to do so. The CBDRM planning process should be continued to other Districts.

Priority for action 5: Core indicator 3

Financial reserves and contingency mechanisms are in place to support effective response and recovery when required.

Level of Progress achieved: 2

Some progress, but without systematic policy and/ or institutional commitment

Key Questions and Means of Verification

Are financial arrangements in place to deal with major disaster? No

National contingency and calamity funds No

The reduction of future risk is considered in the use of calamity funds Yes

Insurance and reinsurance facilities Yes

Catastrophe bonds and other capital market mechanisms No

Description:

The Government has His Majesty's Relief Fund for relief, the utilization of which must be approved by His Majesty the King. The corpus of the fund shall be determined by the Lhengye Zhungtsho and maintained by the Ministry of Home and Cultural Affairs. The fund shall be utilized for providing relief grants in the form of ration, building materials, cash and such other relief to affected individuals and families; The fund shall be mobilized through voluntary contributions made by private sectors, civil societies, NGOs, as per government procedures and supplemented by annual budget from the government.

Context & Constraints:

The budgetary provision is insignificant in comparison with the depth and breadth of yearly disaster impact in the country. Moreover, there is no budgetary provision for rehabilitation and recovery. As disaster impact is witnessed in the loss of lives and loss of livelihoods of the poor strata of the population, a long-term rehabilitation and recovery package has to be designed and implemented to support the affected people.

The emergency response and recovery process should contribute towards risk mitigation and livelihood support to the communities with a 'building back better' approach. However, lack of institutional mechanism and capacity to deal with the disasters has rendered the emergency support ineffective to support the livelihoods of the people.

Priority for action 5: Core indicator 4

Procedures are in place to exchange relevant information during hazard events and disasters, and to undertake post-event reviews

Level of Progress achieved: 2

Some progress, but without systematic policy and/ or institutional commitment

Key Questions and Means of Verification

Has an agreed method and procedure been adopted to assess damage, loss and needs when disasters occur? Yes

Damage and loss assessment methodologies and capacities available	Yes
Post-disaster need assessment methodologies	Yes
Post-disaster needs assessment methodologies include guidance on gender aspects	No
Identified and trained human resources	Yes

Description:

The Department of Disaster Management compiles the damage and loss data from district offices on regular basis and disseminates it to the stakeholders.

In order to provide need based support to the affected people, cluster-wise information is collected through Multi-sectoral Initial Rapid Assessment.

The DDM has developed the DIM system to compile and collect the disaster related information and data.

Damage and loss assessment methodologies and capacities available but there is no agreed/approved system in place for damage assessment. Post disaster need assessment methodologies adopted. Conducted the workshop on rapid assessment to develop standard guidelines and tools .Identified and trained human resources all over the sectors Bhutan Disaster Assessment tools and mechanism is a tool developed after the 2009 earthquake – a standard tool to undertake the damage and need assessment following any emergency in the country. All the ICT Officers, District Statistical Officer and District Disaster Focal persons of all the 20 districts have been trained on it.

Context & Constraints:

Comprehensive disaster risk management is a recent development in Bhutan and the focus has been only in isolated emergency response and relief. Only recently, the need for integrated approach has been realized. However, there are still substantial gaps in the implementation of the realization for productive results. Similarly, the commitment of the government reflected in the paper seldom is translated into programs with enough budgetary allocations.

Formation of national and district levels forums to share knowledge, information and resources, is first step towards realizing integrated disaster risk management approach. Disaster information management systems should be decentralized to the district level for analysis and use for planning purpose.

Integrate advanced technology with community owned initiatives for affordable, effective and sustainable approach.

Section 8: Drivers of Progress

a) Multi-hazard integrated approach to disaster risk reduction and development

Levels of Reliance:

Partial/ some reliance: Full acknowledgement of the issue; strategy/ framework for action developed to address it; application still not fully implemented across policy and practice; complete buy in not achieved from key stakeholders.

Do studies/ reports/ atlases on multi-hazard analyses exist in the country/ for the sub region?: Yes

If yes, are these being applied to development planning/ informing policy?: Yes

Description (Please provide evidence of where, how and who):

While significant amount of information on natural hazards exists in Bhutan, it is dispersed across different institutions. A synthesis of the existing information in one place in an easily understandable and usable format will not only provide useful inputs to policy makers but also serve as an important advocacy tool. It is proposed that a technical working group of Bhutanese institutions be constituted to guide this process. After defining the scope of the hazard atlas and the methodology to develop it, the technical working group can then form sub-groups to synthesize information on each of the major hazards. This sub-component can also benefit from some of the recent international experience.

While most of the components are aimed at establishing a system for disaster risk management and establishing it as a relatively new area of practice in the country, it is aimed at recognizing and strengthening the role of all the different development sectors. It is also to be recognized that a number of sectors are already undertaking activities that work towards meeting the goals established in the National Disaster Risk Management Framework (NDRMF). Some of these initiatives activities include:

Mainstreaming DRR into national development planning guidelines for 11th Five Year Plan

- Glacial Lake Outburst Flood (GLOF)

- GLOF Hazard Zonation

Urban Sector

- Thimphu Valley Earthquake Risk Management

- Phuentsholing Disaster Management Plan

- Thimphu Disaster Management Plan

Ministry of Education

- School Disaster Management Plans – indicator to assess the performance of school

- National Action Plan for School Safety

Health Sector

- Avian Influenza preparedness – Updated multi-sectoral Pandemic Preparedness Plan

- Health Sector Contingency Plan

- National Action Plan for Hospital Safety

- Establishment of emergency medical teams (MoH) Initiative on health sector adaptation to climate change
- Environment
- National Adaptation Programme of Action
- EIA in support of risk reduction
- Agriculture and food security
- Sustainable Land Management Programme
- Emergency food supplies
- Transportation
- Land slide mitigation along major roads

b) Gender perspectives on risk reduction and recovery adopted and institutionalized

Levels of Reliance:

Partial/ some reliance: Full acknowledgement of the issue; strategy/ framework for action developed to address it; application still not fully implemented across policy and practice; complete buy in not achieved from key stakeholders.

Is gender disaggregated data available and being applied to decision-making for risk reduction and recovery activities?: Yes

Do gender concerns inform policy and programme conceptualisation and implementation in a meaningful and appropriate way?: Yes

Description (Please provide evidence of where, how and who):

Women empowerment in Bhutan is still an important issue considering the literacy rates, access to resources and access to political power. Therefore, mainstreaming gender, which basically needs to put emphasis on women focuses approach, into disaster risk reduction and climate change policy-making and implementation is essential for success and sustainability of the ongoing and planned efforts.

There is full acknowledgment of the issue at national level; however, a comprehensive assessment of acknowledgment of the issue at local level has yet to be done. The commitment of the government at central level is also reflected in 10 the Five Year Plans.

The need and success of gender sensitive DRR are yet to gain importance in Bhutan context. It is here in this context that mainstreaming gender, which basically needs to put emphasis on women focuses approach, into disaster risk reduction and climate change policy-making and implementation has been prioritized for for the success and sustainability of DRR strategy.

c) Capacities for risk reduction and recovery identified and strengthened

Levels of Reliance:

Significant and ongoing reliance: significant ongoing efforts to actualize commitments with coherent strategy in place; identified and engaged stakeholders.

Do responsible designated agencies, institutions and offices at the local level have capacities for the enforcement of risk reduction regulations?:
Yes

Are local institutions, village committees, communities, volunteers or urban resident welfare associations properly trained for response?: Yes

Description (Please provide evidence of where, how and who):

Disaster risk management as a discipline – in the government, in the private sector as well as in the civil society – is in its nascent phase in Bhutan. While there is a need to establish this as a discipline, there is equally an urgent need to mainstream disaster risk concerns across all sectors.

For Strengthening institutional mechanisms for disaster risk management there are two main elements

1. Human Resources- The professional capacities should be able to address all aspects of risk management – not only post-disaster response but also risk reduction -- and should have skills in the areas of: advocacy, networking and information sharing across agencies implementing risk reduction programmes; information management; and training and facilitation. Partnerships with regional and international training institutions may be developed to develop these capacities in Bhutan. However, it is imperative that such training inputs are tailored to meet the specific needs of the country. Skills training for staff should be conducted internally and abroad and should be linked to the roles and responsibilities of the officer and programme activities. Ultimately professional development activities for the staff of the national agency should be institutionalized within appropriate national centers.

2. Material resources and equipment: A key aspect of this would be an adequately resourced Emergency Operations Centre (EOC) within the national focal institution for disaster risk management. The EOC will have reliable communication links with all the Dzonkhag's and capacities to manage real-time information on disaster risk management.

A key aspect of establishing a national system for disaster risk management would be building the capacities of administrative systems at the Dzongkhag and Gewog levels. At these levels also there are three key elements: human resources; materials and equipment; and systems and procedures.

d) Human security and social equity approaches integrated into disaster risk reduction and recovery activities

Levels of Reliance:

Significant and ongoing reliance: significant ongoing efforts to actualize commitments with coherent strategy in place; identified and engaged stakeholders.

Do programmes take account of socio-environmental risks to the most vulnerable and marginalised groups?: Yes

Are appropriate social protection measures / safety nets that safeguard against their specific socioeconomic and political vulnerabilities being adequately implemented?: Yes

Description (Please provide evidence of where, how and who):

Human security covers a wide spectrum ranging from securing basic rights, needs, and livelihoods and to pursue opportunities for human fulfillment and development. Disasters do threaten human security aspects. Further, climate change and the potential for increased disasters related to extreme events also raise critical concerns for long-term human security. The 10th Five Plan of the Royal Govt of Bhutan has placed focus on some of these aspects.

Realizing the need to address specific issues of vulnerable, marginalized and poor strata of the society, the Royal Govt of Bhutan has attached highest priority on poverty alleviation issues in the 10th five year plan.

e) Engagement and partnerships with non-governmental actors; civil society, private sector, amongst others, have been fostered at all levels

Levels of Reliance:

Partial/ some reliance: Full acknowledgement of the issue; strategy/ framework for action developed to address it; application still not fully implemented across policy and practice; complete buy in not achieved from key stakeholders.

Are there identified means and sources to convey local and community experience or traditional knowledge in disaster risk reduction?: Yes

If so, are they being integrated within local, sub-national and national disaster risk reduction plans and activities in a meaningful way?: Yes

Description (Please provide evidence of where, how and who):

The DDM has started active engagement of DRR stakeholders at central level through regular Multi-stakeholders meeting.

At district level the Dzongkhag Disaster Management Committee is coordinating all activities related with disaster management. In all 20 districts DDMC has been formed with Governor as Chairperson.

These activities reflect that there is acknowledgement of the multi-stakeholders engagement. However, this has focus primarily on emergency response and relief rather than comprehensive disaster risk management package because of the limitation of the DM Act. The Disaster Management bill once enacted will ensure multi-stakeholder engagements in disaster risk reduction at various levels..

National Disaster Management Authority need to be established soon for smooth functioning of disaster management activities.

Further strengthen cooperation, collaboration and joint actions with UN and civil society organizations, private sectors and networks.

Contextual Drivers of Progress

Levels of Reliance:

Partial/ some reliance: Full acknowledgement of the issue; strategy/ framework for action developed to address it; application still not fully implemented across policy and practice; complete buy in not achieved from key stakeholders.

Description (Please provide evidence of where, how and who):

The emphasis put on DRR in National Plans from 10th five year to Disaster Management Bill reflects the awareness and acknowledgement of mainstreaming DRR in sustainable development agenda. However, the commitment in policies and plans are not met for different reasons. It is partly due legal instruments in line with the need to invest on preparedness and sound recovery.

2. More than 25 lives are claimed last year due to September 2009 earthquake and cyclone Aila induced flash floods in Bhutan. Rapid assessments for damage and needs were made to enhance the levels of disaster preparedness in the country.

3. Ministry of Education has been implementing safe school programmes not only in seismic strengthening of some schools in the country, but also in sensitizing the stakeholders on importance of safer schools. The initiative needs to be scaled up at country level and target should be fixed to make all the schools safer in coming days.

1. Bhutan United Nations Development Assistance Programme Framework (UNDAF) has also contributed significantly in risk reduction especially related to GLOF, seismic resilience programmes etc.

2. Mainstreaming DRR in sustainable development agenda.

Community based disaster management plans should be in placed in all 20 districts

3. Due to hydro-meteorological disasters and most of the losses occur during monsoon period, thus coherent and end to end EWS should be in place in all river basin.
4. EOCs need to be strengthen and put in place in all 20 Dzongkhags

Section 9: Future Outlook

Future Outlook Area 1

The more effective integration of disaster risk considerations into sustainable development policies, planning and programming at all levels, with a special emphasis on disaster prevention, mitigation, preparedness and vulnerability reduction.

Overall Challenges:

While there is recognition and strong commitment by the Royal Government of Bhutan for incorporating disaster risk reduction into development plans, there is however a mismatch between the DRR needs and budgetary allocations to implement these plans. One of the reasons for this is lack of tools to assess contribution of an investment in development sectors towards disaster resiliency of a community and/or nation besides lack of capacity at various levels . levels. There is necessity to devise mechanism to assess disaster resiliency of the project itself and also of its contribution toward disaster resiliency of a community.Incommunity. In this regard, the following initiatives, taken up by the Royal Govt of Bhutan, are of considerable significance:

- The mainstreaming DRR in to development plans, policies, programs and development activities should be give priority.
 - Enactment of Disaster Management Bill
 - Strengthen Resources, Organization and norms for implementing DRR activities
 - Preparedness, Response plans should be in place for all type of Disaster hazards
 - Development of multi-hazard risk assessment and mapping
-

Future Outlook Statement:

As the adverse impacts of climate change are being witnessed at various levels, their vulnerability to disasters is also increasing manifold. Additionally, the environmental and health risk pose substantial challenge to lives and livelihoods of people. Therefore, the policies, plans and institutions should be able to comprehend the combined risk to communities from these adversaries and devise policies to effectively reduce their negative effects. There is growing trend to compartmentalize disaster risk reduction, climate change, environmental and environmental risk and health hazards as separate domain. This approach will not only address the partial problem only but also will be detrimental to long term sustainability of development effort. Besides having multi-sectoral linkages and synergy to address climate change adaptation and disaster risk reduction, the intervention for the integrated approach need to have direct linkage with livelihoods of people to ensure community ownership of any development effort.

Future Outlook Area 2

The development and strengthening of institutions, mechanisms and capacities at all levels, in particular at the community level, that can systematically contribute to building resilience to hazards.

Overall Challenges:

The emergency response and relief approach is so entrenched in the current system that it will take time to mobilize the system to more comprehensive disaster risk management approach. The Disaster Management Bill has been envisaged to address this approach. Further, the Bill will also ensure sufficient budgetary provision and mechanism to spend on mitigation, preparedness and recovery as well as mainstreaming of disaster risk reduction in sectoral development planning including climate change adaptation

Future Outlook Statement:

Based on the recent experiences of dealing with Sept 2009 Earthquake and cyclone Aila induced flash floods, which led rapid assessment of damage and needs, it has been envisaged that there is need for more investment and concerted efforts in preparedness activities.

Future Outlook Area 3

The systematic incorporation of risk reduction approaches into the design and implementation of emergency preparedness, response and recovery programmes in the reconstruction of affected communities.

Overall Challenges:

While emergency response has been the main thrust of disaster risk management previously, still there have been considerable gaps in order to provide rescue and relief, development of SOP, situation analysis etc. Further, institutional mechanisms are not strong, relief funds are distributed on ad-hoc basis and there is no central emergency coordination mechanism. The newly established EOC will be one step towards a better response mechanism. However, there is need to develop network of EOC across the country from central to local level.

Future Outlook Statement:

Capacity development of emergency response team, development of standardized damage and loss estimation system such as those based on UNECLAC Damage and Loss Assessment (DaLA) methodology and post disaster needs assessment (PDNA), process to assess risk in advance of a disaster and information sharing mechanism are some of the challenges for emergency response.

Future Outlook Area 4

The United Nations General Assembly Resolution 66/199, requested the development of a post-2015 framework for disaster risk reduction. A first outline will be developed for the next Global Platform in 2013, and a draft should be finalized towards the end of 2014 to be ready for consideration and adoption at the World Conference on Disaster Reduction in 2015.

Overall Challenges:

Now, as we head towards the end of implementation of the current HFA, we have witnessed some concrete efforts made by various countries under the HFA Priorities. We now need to seriously identify Issues, Gaps, Opportunities and Recommendations, that would be carried forward into the Post-2015 Development Agenda.

Bhutan, a small land locked mountainous country located high up in the Eastern Himalayas with extremely high natural disaster risks, strongly aspires for the post 2015 with stand alone Goals and Indicators for the disaster risk management under the overall Framework of HFA -2. Bhutan would like to flag the following for inclusion into the Post-2015 Development agenda:-

1. DRR should be clearly identified as a priority activity to be integrated into infrastructure development projects by the funding agencies.
2. There should be institutionalized platform/forum for collection, analysis and distribution of information, data and knowledge among the countries/Stakeholders in the area of disaster risk assessment; reduction; prevention; preparedness and response.
3. It is important to build up the capacities of the least developed and land locked developing countries to assess the risks and carry out risk reduction and mitigation activities by the related Agencies/ stakeholders.
4. We need to promote and sanitizes all stakeholders on various Insurance schemes byway of Disaster Risk Transfer Mechanisms.

Section 10: Stakeholders

Organizations, departments, and institutions that have contributed to the report

Organization	Type	Focal Point
Department of Culture	Gov	Sangay Kinga, Sr. Draftperson
Department of Disaster Management	Gov	Namgay Wangchuk, Director General
Department of Disaster Management	Gov	Chencho Tshering
Department of Geology & Mines	Gov	Dawchu Drukpa, Chief Geologist
Department of Geology & Mines	Gov	Phuntsho Tshering, Geologist
Department of Hydro-met Service	Gov	Karma Drupchu, Hydrologist
Department of Roads	Gov	Dilip Thapa, Dy. Executive Engineer
Ministry of Education	Gov	Rinchen Dorji, Sr. Program Officer
Ministry of Health	Gov	Chador wangdi, Planning Officer
Ministry of Home & Cultural Affairs	Gov	Tashi Penjor, Planning Officer
National Environment Commission	Gov	Tshering Tashi
Response and Relief Division, Department of Disaster management	Gov	Keshap Moktan
Geo-Hazard International	Regl Inter-gov	Karma Doma Tshering, Country Coordinator
GFDRR, The World Bank	UN & Intl	Ms. Dechen Tshering, GFDRR Focal Point

