



# Emergency and Humanitarian Action

Country Report

Bhutan





# Bhutan



## HAZARD PROFILE

### Natural disasters<sup>1</sup>

Bhutan lies in one of the most seismically active zones of the world. Besides, the rugged mountain terrain, fragile geological conditions and extreme climate make Bhutan inherently vulnerable to natural disasters such as flash floods, landslides and forest fires. Owing to the presence of a considerable number of glaciers in the north of the country, Bhutan is also highly vulnerable to the occurrence of glacial lake outburst floods (GLOF) with disastrous impacts.<sup>2</sup> There are 2674 glacial lakes in Bhutan, of which 562 are associated with glaciers, and 24 of them are “potentially dangerous”. For a country dissected by narrow valleys with steep slopes, natural dam formation is another danger for the areas downstream. In September 2003, landslides caused the formation of an artificial lake on Tsatichhu river. Such hazards will continue to prevail in Bhutan's rivers placing hydropower plants, farmlands and human settlements at risk.

Forest fires are a major problem for Bhutan with 72.5% of the country under forest cover. A series of fires break out in different parts of Bhutan every year, causing great loss to the kingdom – socially, economically and environmentally.<sup>3</sup> The forest fire in March 2006 destroyed thousands of acres of forest. Despite this, Bhutan is one of the few countries where forest cover is increasing.

### Human-induced disasters

- **Road accidents:** Because of the rugged terrain, motor roads are narrow and pass through dense forests and vertical cliffs. As the traffic is increasing in recent years, road accidents are becoming more frequent year by year.
- **Fire:** People are responsible for 99% of forest fires in the country.
- **Other occupational hazards** include falls and animal attacks, injuries during cutting timber, hazards from working in mines and manufacturing industries.
- **Chemical hazards** from insecticides.

### Factors contributing to vulnerability

- **Pressure on land and settlements:** People are dependent on agriculture and the increasing population requires more and more areas to be brought under cultivation, thereby denuding hill slopes.
- Rapid urbanization
- Environmental degradation due to the increasing population
- Unsafe construction practices
- Insufficient enforcement of building byelaws
- Socioeconomic factors: These force people to adopt livelihood patterns that tend to have



an adverse impact. People settle in hazard-prone areas such as steep slopes or flood-prone river beds.

- Lack of awareness of adequate incorporation of disaster risk-reduction concerns in the planning and development process
- Lack of preparedness for disasters.

### Humanitarian situation

In December 2003, Bhutan successfully flushed out foreign militant groups who had been hiding in the jungles of south Bhutan. Besides the military preparations for this emergency, the Ministry of Health (MoH) had to prepare for dealing with the casualties. The operation was successful and well-trained emergency medical teams were put in place. These teams undergo regular training and are kept ready for other emergencies.

### Health hazards

The threat of avian influenza is very real. Bhutan also had to prepare to deal with the threat of severe acute respiratory syndrome (SARS) during 2003 like the other countries in the Region, with WHO's technical guidance.

## EXISTING DISASTER MANAGEMENT SYSTEM

### National policies and institutional framework

There is no legislation/Act that specifically addresses disaster risk management. Article 8(6) of the draft Constitution of Bhutan states that it is the responsibility of every Bhutanese to provide help to victims of accidents and in times of natural calamities. Elementary provisions can be found in the Acts and Rules of various sectors and they now need to be put together in a comprehensive form so that there is no duplication and gaps are filled. Examples of sectoral provisions include the Environmental Acts and Policies, the Mines and Minerals Management Act, the Bhutan Water Policy, the Land Act and the Bhutan Building Rules, the Police Act. Further, the Royal Insurance Corporation of Bhutan provides a risk insurance facility as a mechanism to transfer risks related to small-scale disasters from fire, flood, earthquake, etc. However, a mechanism for large-scale disasters is needed and Bhutan is aware of it. It was mainly these concerns that led the Government to draw up the National Disaster Risk Management Framework in 2006 through a consultative process.

The Cabinet shall be the highest decision-making body and will lay down appropriate institutional, legislative and policy mechanisms addressing the entire gamut of issues relating to disaster prevention, mitigation, preparedness and response.<sup>4</sup> Disaster preparedness and response systems will be built into all government, public, private, corporate sectors and civil societies' developmental plans. Some of the key initiatives include the National Report on Disaster Management, Thimphu Valley Earthquake Risk Management Plan, National Disaster Management Strategy, and National Capacity Development for Disaster Risk Reduction.

### Disaster management in the health sector

The MoH has appointed focal units in the Ministry to deal with emergency health activities. With technical support from the WHO Regional Office, a general review of the situation took place in 2003 as a contribution to emergency preparedness in the



health sector. With WHO funding, a programme has been initiated on Emergency and Humanitarian Action (EHA) for the first time. Trauma units have been set up in at least three places with ICU, OT, laboratory and X-ray facilities. Blood banking facilities have also increased with identified live donors, as the storage facilities are not good.

The Department of Medical Services under the MoH instituted the Emergency Medical Services and developed an emergency medical response (EMR) policy to deal with outbreaks of diseases in times of disaster. Under the broad area of Emergency Medical Services, 244 Emergency Medical Technicians (EMTs) and about 94 hospital-based personnel were trained in trauma care from among various categories of health workers to back up the armed forces during the flushing-out operation of foreign militants in December 2003. During the process, various coordinators at different levels and a supreme Joint Task Force at the national level were formed, which still exist for activation at any time if the need arises.

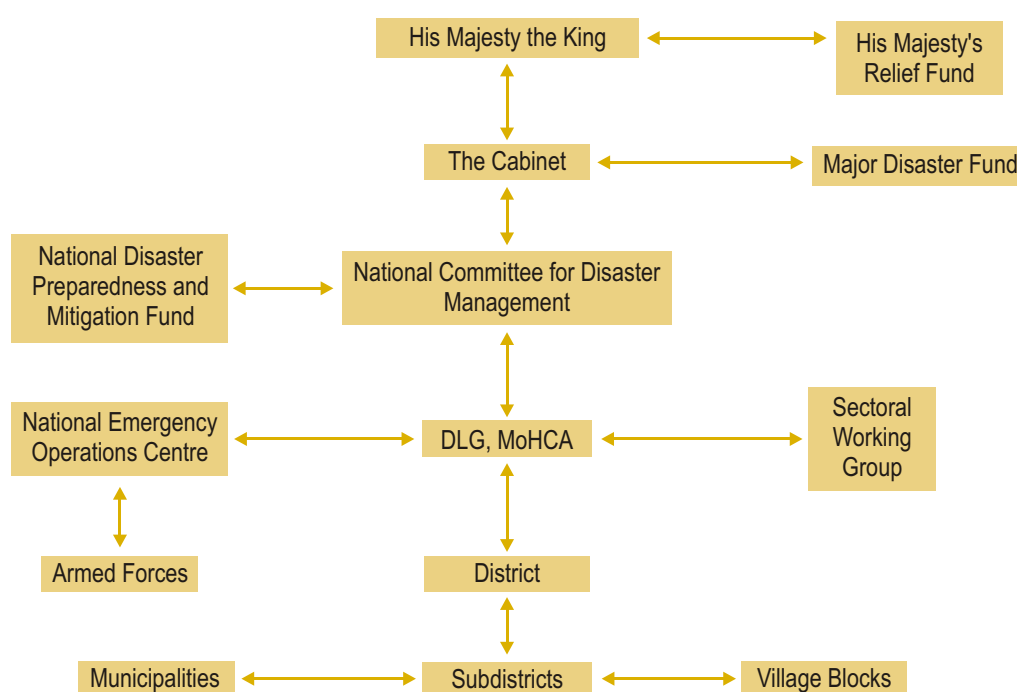
In November 2003, the policy on EMR was further refined as a policy directive on Disaster Management and Internal Displacement. Efforts will be mainly directed towards addressing all types of natural and human-induced disasters. Hospitals along the highways are being scaled up in terms of facilities for trauma care.

### Disaster management in the non-health sector

His Majesty the King is personally involved in the welfare and rehabilitation of affected people during times of disaster.

The Ministry of Home and Cultural Affairs (MoHCA) is the nodal agency at the national level as it has an established line of communication and coordination with the districts, subdistricts, village blocks and municipalities. Various sectors are involved in risk reduction and preventive activities, and relevant sectors contribute towards promoting disaster resilience.<sup>5</sup>

A National Emergency Operations Centre (EOC) has been designed and established. EOCs will be instituted at all levels and will requisition resources, manpower and assistance from ministries/agencies in emergencies.





## Financial arrangements

- His Majesty's Relief Fund is an Emergency Fund to address relief, rehabilitation and reconstruction for isolated and small disasters.
- The National Disaster Mitigation, Preparedness Budget shall finance risk mitigation projects and schemes at local levels.
- The Emergency Fund for Major Disasters will finance response and relief operations in the event of major disasters. Financial modalities need to be worked out by the Department of Local Governance (DLG), MoHCA, Ministry of Finance, and the private and public sectors.
- Risk transfer mechanisms need to be worked out by the DLG, MoHCA, and Ministry of Finance with the Royal Insurance Corporation of Bhutan and other concerned sectors.

## WORK OF WHO

Till the 1990s, emergency medical services had never been considered an important requirement for Bhutan. The requirement was strongly felt after some major road accidents occurred involving many passengers. In the meanwhile, Bhutan was also preparing to flush out foreign militants from the south of the country. WHO supported the endeavour by enhancing national capacity in terms of medical and laboratory services. Guidelines and training modules were also shared, together with experiences in other countries that had undergone such emergencies. As the capacity-building work progressed, WHO also helped in reviewing preparedness and guiding the Government further. The EMTs proved their worth during emergencies.

With specific regard to preparing for avian influenza (AI), laboratory capacity was strengthened through training and linkages developed between the Public Health Laboratory in Thimphu and the Referral Laboratory in Hong Kong. A clinical core group consisting of doctors, nurses and laboratory personnel was developed in the country and this group has already trained other groups in various districts to deal with AI. WHO also assisted the country in preparing a National Pandemic Preparedness Plan (PPP) and mobilizing resources. The country had already stockpiled some amount of oseltamivir and personal protective equipment (PPE). Assistance was provided for capacity development of the MoH and in pushing the health agenda in disaster preparedness through supporting the national workshop on disaster management in 2006. Training of health workers in emergency medical services continues every year. In 2006, the MoH was supported in developing a proposal on health response to climate change, which included dealing with emergencies from GLOF, new vector-borne diseases and vector-borne diseases encroaching into new areas.

Bhutan has undergone two rounds of Country Cooperation Strategy (CCS). Both these CCS documents do not spell out disasters as such but human resource development is considered one of the highest priorities. The current CCS is still in draft form and requires further consultations for its finalization. In this draft CCS, emergency preparedness is one of the seven priorities for WHO's work in Bhutan from 2008 to 2013. Capacity building for a quick response to natural and human-induced disasters is one aspect of the support. As the health agenda should be reflected strongly in the national policy frameworks, technical guidance for the health sector is very important.



Further, support will also be provided to prepare guidelines, procedures, and conduct exercises and drills. One key area of support will be to institute International Health Regulations (IHR)-related systems.

### FUTURE PLANS OF WHO

Future plans of WHO are mainly reflected in the CCS. The efforts of 2006, such as another national workshop on disaster management issues and training of health workers in new districts, will continue. National capacity building at the central level will also be supported. Efforts on IHR-related work will continue.

### PRIORITY NEEDS

- Work with the MoH and relevant partners to develop specific programmes for implementation of the Framework.
- Mobilize resources for disaster management, EPR and capacity building from national and international sources.
- Continue building on the previous team in line with the Framework.

#### Challenges

- Lack of resources
- Low-to-moderate technical capacity
- Competing developmental priorities
- Multisectoral coordination

#### Opportunities

- Plethora of existing initiatives
- Sound civil administration system
- Multisectoral approach



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<sup>1</sup>[http://www.searo.who.int/en/Section1257/Section2263/Section2301\\_12187.htm](http://www.searo.who.int/en/Section1257/Section2263/Section2301_12187.htm)

<sup>2</sup>[http://www.undp.org.bt/env/factsheets/thematic\\_env\\_fs06.pdf](http://www.undp.org.bt/env/factsheets/thematic_env_fs06.pdf)

<sup>3</sup>[http://icom.museum/disaster\\_preparedness\\_book/country/dargye.pdf](http://icom.museum/disaster_preparedness_book/country/dargye.pdf)

<sup>4</sup><http://www.janathakshan.org/sapd/pdf/KunzangDorjiBhutan.pdf>

<sup>5</sup>*National Disaster Management Framework, DMD, DLG, MoHCA, Royal Government of Bhutan*